

GT Designer3

Integrated FA Software

Screen Design Manual
Fundamentals
(for GOT1000 Series)

SW1DNC-GTWK3-E

● SAFETY PRECAUTIONS ●

(Be sure to read these instructions before using the product)

Before using this product, read this manual and the relevant manuals introduced in this manual carefully and handle the product correctly with full attention to safety.

Note that these precautions apply only to this product.

In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".




DANGER

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



CAUTION

CAUTION Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Note that failure to observe the  CAUTION level instructions may also lead to serious results depending on the circumstances.

Be sure to observe the instructions of both levels to ensure personal safety.

Please keep this manual in accessible place and be sure to forward it to the end user.

[Test operation precautions]



DANGER

- When testing the operation (e.g. turning bit devices ON/OFF or changing a current word device value, a current or set timer/counter value, or a current buffer memory value), thoroughly read the relevant manual to fully understand the operating procedures.

When testing, never change the data of the devices that control the operation essential for the system.

Faulty output and malfunction may result in an accident.

CAUTIONS FOR USING THIS SOFTWARE

(1) Required memory of a personal computer and the free capacity of the hard disk

For required memory and the free capacity of the hard disk, refer to the following.

2.1 Operating environment

(2) Error messages displayed while starting and editing

"Operation will be terminated because of insufficient memory. Would you like to stop?"

If the above message appears, close other running application software or reboot Windows® in order to secure at least 50M bytes of free hard disk space.

(3) GT Designer3 and the GOT display

- (a) Precautions for displaying straight line other than full line (dotted line and others) in bold
When straight line other than full line is drawn in bold, the line may not be displayed with its actual line width on a personal computer.
However, it will be displayed correctly on GOT. This phenomenon does not mean data problem.
- (b) Display of end points of straight line/line freeform/polygon
As shown below, the end points of straight line, line freeform, or polygon is displayed differently between GT Designer3 and the GOT.

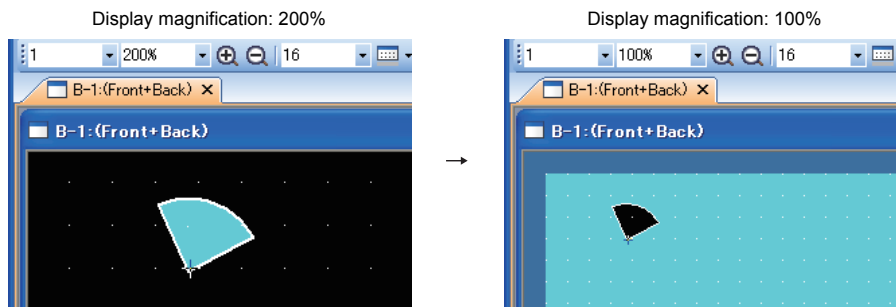
GT Designer3



On GOT



- (c) Start position for filling patterns
Some filling patterns may be differently displayed. For example, the start position may be different between GT Designer3 and the GOT.
- (d) Drawing of different type lines
The length of the dots varies in different dotted lines (for example: the chain lines).
- (e) Display of object
 - The display position of the scale value displayed in the graph is different between GT Designer3 and the GOT.
 - Even if the display-start-line of a comment is set, the comment is displayed from the first line on GT Designer3.
- (f) Display magnification
When display magnification is changed, the connected lines or figures may be separated or the filled-paint may be out of outline of the figure.
However, if they are displayed correctly on the preview screen, they will appear correctly on GOT as well.
Example: When filled-paint is out of the outline.



(4) Restrictions when the color setting is changed to the setting of less colors in the system environment (256 colors → 2 colors)

- The color palette for setting color will be changed according to the new settings.
- The color on the drawing screen will be kept the same as prior to the change.

If the color setting for a red rectangle-figure is changed to [2(mono)], the red color remains.

- The colors of the image data (BMP file or JPEG file) will be reduced when the project is stored, the screen is closed and that image data is double-clicked.

(5) When device type is changed

Confirm the device type when the set bit device is changed from bit device into word device. The device flag may be represented as "??", depending on the settings.

Example: D0.b0 → D0D0.b5 → ??

(6) OS setting

Set the font size to [Normal] when setting OS (Windows®) screens.

If the font size is set to other than [Normal], the GT Designer3 dialog box and others cannot be displayed correctly.

INTRODUCTION

Thank you for choosing Mitsubishi Graphic Operation Terminal (Mitsubishi GOT).

Read this manual and make sure you understand the functions and performance of the GOT thoroughly in advance to ensure correct use.

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MANUALS

The following table lists the manual relevant to this product.
Refer to each manual for any purpose.

Manual Name	Packaging	Manual Number (Model code)
GT Works3 Version1 Installation Procedure Manual	Enclosed in product	-
GT Designer3 Version1 Screen Design Manual (Fundamentals)	Stored in CD-ROM	SH-080866ENG (1D7MB9)
GT Designer3 Version1 Screen Design Manual (Functions) 1/2, 2/2	Stored in CD-ROM	SH-080867ENG (1D7MC1)
GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3	Stored in CD-ROM	SH-080868ENG (1D7MC2)
GOT1000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3	Stored in CD-ROM	SH-080869ENG (1D7MC3)
GOT1000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3	Stored in CD-ROM	SH-080870ENG (1D7MC4)
GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3	Stored in CD-ROM	SH-080871ENG (1D7MC5)
GOT1000 Series Gateway Functions Manual for GT Works3	Stored in CD-ROM	SH-080858ENG (1D7MA7)
GOT1000 Series MES Interface Function Manual for GT Works3	Stored in CD-ROM	SH-080859ENG (1D7MA8)
GT SoftGOT1000 Version3 Operating Manual for GT Works3	Stored in CD-ROM	SH-080860ENG (1D7MA9)
GT Simulator3 Version1 Operating Manual for GT Works3	Stored in CD-ROM	SH-080861ENG (1D7MB1)
GT Converter2 Version3 Operating Manual for GT Works3	Stored in CD-ROM	SH-080862ENG (1D7MB2)
GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3	Stored in CD-ROM	SH-080863ENG (1D7MB3)
GT16 User's Manual (Hardware)	Stored in CD-ROM	SH-080928ENG (1D7MD3)
GT16 User's Manual (Basic Utility)	Stored in CD-ROM	SH-080929ENG (1D7MD4)
GT15 User's Manual	Stored in CD-ROM	SH-080528ENG (1D7M23)
GT12 Supplementary Description	Stored in CD-ROM	SH-080864ENG (1D7MB7)
GT11 User's Manual	Stored in CD-ROM	JY997D17501 (09R815)
Handy GOT User's Manual	Stored in CD-ROM	JY997D20101 JY997D20102 (09R817)
GT10 User's Manual	Stored in CD-ROM	JY997D24701 (09R819)

QUICK REFERENCE

■ Creating a project

Obtaining the specifications and operation methods of GT Designer3	GT Designer3 Version1 Screen Design Manual (Fundamentals)
Setting available functions on GT Designer3	
Creating a screen displayed on the GOT	
Obtaining useful functions to increase efficiency of drawing	
Setting details for figures and objects	GT Designer3 Version1 Screen Design Manual (Functions) 1/2, 2/2
Setting functions for the data collection or trigger action	
Setting functions to use peripheral devices	
Simulating a created project on a personal computer	GT Simulator3 Version1 Operating Manual for GT Works3

■ Connecting a controller to the GOT

Obtaining information of Mitsubishi products applicable to the GOT	GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3
Connecting Mitsubishi products to the GOT	
Connecting multiple controllers to one GOT (Multi-channel function)	
Establishing communication between a personal computer and a controller via the GOT (FA transparent function)	
Obtaining information of Non-Mitsubishi products applicable to the GOT	• GOT1000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 • GOT1000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3
Connecting Non-Mitsubishi products to the GOT	
Obtaining information of peripheral devices applicable to the GOT	GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3
Connecting peripheral devices including a barcode reader to the GOT	

■ Transferring data to the GOT

Writing data to the GOT	GT Designer3 Version1 Screen Design Manual (Fundamentals)
Reading data from the GOT	
Verifying a editing project to a GOT project	

■ Others

Obtaining specifications (including part names, external dimensions, and options) of each GOT	<ul style="list-style-type: none">• GT16 User's Manual (Hardware)• GT16 User's Manual (Basic Utility)• GT15 User's Manual• GT11 User's Manual• Handy GOT User's Manual• GT10 User's Manual
Installing the GOT	
Operating the utility	
Configuring the gateway function	GOT1000 Series Gateway Functions Manual for GT Works3
Configuring the MES interface function	GOT1000 Series MES Interface Function Manual for GT Works3
Configuring the extended function and option function	GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3
Using a personal computer as the GOT	GT SoftGOT1000 Version3 Operating Manual for GT Works3

ABBREVIATIONS AND GENERIC TERMS

■ GOT

Abbreviations and generic terms			Description
GOT1000 Series	GT1695	GT1695M-X	Abbreviation of GT1695M-XTBA, GT1695M-XTBD
	GT1685	GT1685M-S	Abbreviation of GT1685M-STBA, GT1685M-STBD
	GT1675	GT1675M-S	Abbreviation of GT1675M-STBA, GT1675M-STBD
		GT1675M-V	Abbreviation of GT1675M-VTBA, GT1675M-VTBD
		GT1675-VN	Abbreviation of GT1675-VNBA, GT1675-VNBD
	GT1672	GT1672-VN	Abbreviation of GT1672-VNBA, GT1672-VNBD
	GT1665	GT1665M-S	Abbreviation of GT1665M-STBA, GT1665M-STBD
		GT1665M-V	Abbreviation of GT1665M-VTBA, GT1665M-VTBD
	GT1662	GT1662-VN	Abbreviation of GT1662-VNBA, GT1662-VNBD
	GT16		Abbreviation of GT1695, GT1685, GT1675, GT1672, GT1665, GT1662
	GT1595	GT1595-X	Abbreviation of GT1595-XTBA, GT1595-XTBD
	GT1585	GT1585V-S	Abbreviation of GT1585V-STBA, GT1585V-STBD
		GT1585-S	Abbreviation of GT1585-STBA, GT1585-STBD
	GT157□	GT1575V-S	Abbreviation of GT1575V-STBA, GT1575V-STBD
		GT1575-S	Abbreviation of GT1575-STBA, GT1575-STBD
		GT1575-V	Abbreviation of GT1575-VTBA, GT1575-VTBD
		GT1575-VN	Abbreviation of GT1575-VNBA, GT1575-VNBD
		GT1572-VN	Abbreviation of GT1572-VNBA, GT1572-VNBD
	GT156□	GT1565-V	Abbreviation of GT1565-VTBA, GT1565-VTBD
		GT1562-VN	Abbreviation of GT1562-VNBA, GT1562-VNBD
	GT155□	GT1555-V	Abbreviation of GT1555-VTBD
		GT1555-Q	Abbreviation of GT1555-QTBD, GT1555-QSBD
		GT1550-Q	Abbreviation of GT1550-QLBD
	GT15		Abbreviation of GT1595, GT1585, GT157□, GT156□, GT155□
	GT115□	GT1155-Q	Abbreviation of GT1155-QTBDQ, GT1155-QSBDQ, GT1155-QTBDA, GT1155-QSBDA, GT1155-QTBD, GT1155-QSBD
		GT1150-Q	Abbreviation of GT1150-QLBDQ, GT1150-QLBDA, GT1150-QLBD
	Handy GOT	GT1155HS-Q	Abbreviation of GT1155HS-QSBD
		GT1150HS-Q	Abbreviation of GT1150HS-QLBD
	GT11		Abbreviation of GT115□, GT11 Handy GOT,
	GT105□	GT1055-Q	Abbreviation of GT1055-QSBD
		GT1050-Q	Abbreviation of GT1050-QBBD
	GT104□	GT1045-Q	Abbreviation of GT1045-QSBD
		GT1040-Q	Abbreviation of GT1040-QBBD
	GT1030		Abbreviation of GT1030-LBD, GT1030-LBD2, GT1030-LBL, GT1030-LBDW, GT1030-LBDW2, GT1030-LBLW, GT1030-LWD, GT1030-LWD2, GT1030-LWL, GT1030-LWDW, GT1030-LWDW2, GT1030-LWLW
	GT1020		Abbreviation of GT1020-LBD, GT1020-LBD2, GT1020-LBL, GT1020-LBDW, GT1020-LBDW2, GT1020-LBLW, GT1020-LWD, GT1020LWD2, GT1020-LWL, GT1020-LWDW, GT1020-LWDW2, GT1020-LWLW
	GT10		Abbreviation of GT105□, GT104□, GT1030, GT1020
	GT SoftGOT1000		Abbreviation of GT SoftGOT1000
GOT900 Series			Abbreviation of GOT-A900 series, GOT-F900 series
GOT800 Series			Abbreviation of GOT-800 series

■ Communication unit

Abbreviations and generic terms		Description
Bus connection unit		GT15-QBUS, GT15-QBUS2, GT15-ABUS, GT15-ABUS2, GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L
Serial communication unit		GT15-RS2-9P, GT15-RS4-9S, GT15-RS4-TE
RS-422 conversion unit		GT15-RS2T4-9P, GT15-RS2T4-25P
Ethernet communication unit		GT15-J71E71-100
MELSECNET/H communication unit		GT15-J71LP23-25, GT15-J71BR13
MELSECNET/10 communication unit		GT15-75J71LP23-Z ^{*1} , GT15-75J71BR13-Z ^{*2}
CC-Link IE controller network communication unit		GT15-J71GP23-SX
CC-Link communication unit		GT15-J61BT13, GT15-75J61BT13-Z ^{*3}
Interface converter unit		GT15-75IF900
Serial multi-drop connection unit		GT01-RS4-M
Connection Conversion Adapter		GT10-9PT5S

*1 A9GT-QJ71LP23 + GT15-75IF900 set

*2 A9GT-QJ71BR13 + GT15-75IF900 set

*3 A8GT-J61BT13 + GT15-75IF900 set

■ Option unit

Abbreviations and generic terms		Description
Printer unit		GT15-PRN
Video/RGB unit	Video input unit	GT16M-V4, GT15V-75V4
	RGB input unit	GT16M-R2, GT15V-75R1
	Video/RGB input unit	GT16M-V4R1, GT15V-75V4R1
	RGB output unit	GT16M-ROUT, GT15V-75ROUT
Multimedia unit		GT16M-MMR
CF card unit		GT15-CFCD
CF card extension unit ^{*1}		GT15-CFEX-C08SET
External I/O unit		GT15-DIO, GT15-DIOR
Sound output unit		GT15-SOUT
Fingerprint unit		GT15-80FPA

*1 GT15-CFEX + GT15-CFEXIF + GT15-C08CF set.

■ Option

Abbreviations and generic terms		Description
CF card		GT05-MEM-16MC, GT05-MEM-32MC, GT05-MEM-64MC, GT05-MEM-128MC, GT05-MEM-256MC, GT05-MEM-512MC, GT05-MEM-1GC, GT05-MEM-2GC
Memory card adaptor		GT05-MEM-ADPC
Option function board		GT16-MESB, GT15-FNB, GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT11-50FNB, GT15-MESB48M
Battery		GT15-BAT, GT11-50BAT
Protective Sheet	For GT16	GT16-90PSCB, GT16-90PSGB, GT16-90PSCW, GT16-90PSGW, GT16-80PSCB, GT16-80PSGB, GT16-80PSCW, GT16-80PSGW, GT16-70PSCB, GT16-70PSGB, GT16-70PSCW, GT16-70PSGW, GT16-60PSCB, GT16-60PSGB, GT16-60PSCW, GT16-60PSGW
	For GT15	GT15-90PSCB, GT15-90PSGB, GT15-90PSCW, GT15-90PSGW, GT15-80PSCB, GT15-80PSGB, GT15-80PSCW, GT15-80PSGW, GT15-70PSCB, GT15-70PSGB, GT15-70PSCW, GT15-70PSGW, GT15-60PSCB, GT15-60PSGB, GT15-60PSCW, GT15-60PSGW, GT15-50PSCB, GT15-50PSGB, GT15-50PSCW, GT15-50PSGW
	For GT11	GT11-50PSCB, GT11-50PSGB, GT11-50PSCW, GT11-50PSGW, GT11H-50PSC

Abbreviations and generic terms	Description
Protective Sheet	For GT10 GT10-50PSCB, GT10-50PSGB, GT10-50PSCW, GT10-50PSGW, GT10-40PSCB, GT10-40PSGB, GT10-40PSCW, GT10-40PSGW, GT10-30PSCB, GT10-30PSGB, GT10-30PSCW, GT10-30PSGW, GT10-20PSCB, GT10-20PSGB, GT10-20PSCW, GT10-20PSGW
Protective cover for oil	GT05-90PCO, GT05-80PCO, GT05-70PCO, GT05-60PCO, GT05-50PCO
USB environmental protection cover	GT16-UCOV, GT15-UCOV, GT11-50UCOV
Stand	GT15-90STAND, GT15-80STAND, GT15-70STAND, A9GT-50STAND, GT05-50STAND
Attachment	GT15-70ATT-98, GT15-70ATT-87, GT15-60ATT-97, GT15-60ATT-96, GT15-60ATT-87, GT15-60ATT-77, GT15-50ATT-95W, GT15-50ATT-85
Backlight	GT16-90XLTT, GT16-80SLTT, GT16-70VLTN, GT16-60VLTN, GT15-90XLTT, GT15-80SLTT, GT16-70SLTT, GT16-70VLTT, GT16-60SLTT, GT16-60VLTT, GT15-70SLTT, GT15-70VLTT, GT15-70VLTN, GT15-60VLTT, GT15-60VLTN
Multi-color display board	GT15-XHNB, GT15-VHNB
Connector conversion box	GT11H-CNB-37S
Emergency stop sw guard cover	GT11H-50ESCOV
Memory loader	GT10-LDR
Memory board	GT10-50FMB

■ Software

Abbreviations and generic terms	Description
GT Works3	Abbreviation of the SW□DNC-GTWK3-E and SW□DNC-GTWK3-EA
GT Designer3	Abbreviation of screen drawing software GT Designer3 for GOT1000 series
GT Simulator3	Abbreviation of screen simulator GT Simulator3 for GOT1000/GOT900 series
GT SoftGOT1000	Abbreviation of monitoring software GT SoftGOT1000
GT Converter2	Abbreviation of data conversion software GT Converter2 for GOT1000/GOT900 series
GT Designer2 Classic	Abbreviation of screen drawing software GT Designer2 Classic for GOT900 series
GT Designer2	Abbreviation of screen drawing software GT Designer2 for GOT1000/GOT900 series
iQ Works	Abbreviation of iQ Platform compatible engineering environment MELSOFT iQ Works
MELSOFT Navigator	Generic term for integrated development environment software included in the SW□DNC-IQWK (iQ Platform compatible engineering environment MELSOFT iQ Works)
GX Works2	Abbreviation of SW□DNC-GXW2-E and SW□DNC-GXW2-EA type programmable controller engineering software
GX Simulator2	Abbreviation of GX Works2 with the simulation function
GX Simulator	Abbreviation of SW□D5C-LLT-E(-EV) type ladder logic test tool function software packages (SW5D5C-LLT (-EV) or later versions)
GX Developer	Abbreviation of SW□D5C-GPPW-E(-EV)/SW D5F-GPPW-E type software package
GX LogViewer	Abbreviation of SW□DNN-VIEWER-E type software package
PX Developer	Abbreviation of SW□D5C-FBDQ-E type FBD software package for process control
MT Works2	Abbreviation of motion controller engineering environment MELSOFT MT Works2 (SW□DNC-MTW2-E)
MT Developer	Abbreviation of SW□RNC-GSV type integrated start-up support software for motion controller Q series
MR Configurator	Abbreviation of MRZJW□-SETUP□E type Servo Configuration Software
FR Configurator	Abbreviation of Inverter Setup Software (FR-SW□-SETUP-WE)
NC Configurator	Abbreviation of CNC parameter setting support tool NC Configurator
FX Configurator-FP	Abbreviation of parameter setting, monitoring, and testing software packages for FX3U-20SSC-H (SW□D5C-FXSSC-E)
FX3U-ENET-L Configuration tool	Abbreviation of FX3U-ENET-L type Ethernet module setting software (SW1D5-FXENETL-E)
RT ToolBox2	Abbreviation of robot program creation software (3D-11C-WINE)
MX Component	Abbreviation of MX Component Version□ (SW□D5C-ACT-E, SW□D5C-ACT-EA)
MX Sheet	Abbreviation of MX Sheet Version□ (SW□D5C-SHEET-E, SW□D5C-SHEET-EA)

■ License key (for GT SoftGOT1000)

Abbreviations and generic terms	Description
License	GT15-SGTKEY-U, GT15-SGTKEY-P

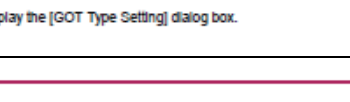
■ Others

Abbreviations and generic terms	Description
IAI	Abbreviation of IAI Corporation
OMRON	Abbreviation of OMRON Corporation
KEYENCE	Abbreviation of KEYENCE CORPORATION
KOYO EI	Abbreviation of KOYO ELECTRONICS INDUSTRIES CO., LTD.
SHARP	Abbreviation of Sharp Manufacturing Systems Corporation
JTEKT	Abbreviation of JTEKT Corporation
SHINKO	Abbreviation of Shinko Technos Co., Ltd.
CHINO	Abbreviation of CHINO CORPORATION
TOSHIBA	Abbreviation of TOSHIBA CORPORATION
TOSHIBA MACHINE	Abbreviation of TOSHIBA MACHINE CO., LTD.
HITACHI IES	Abbreviation of Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI	Abbreviation of Hitachi, Ltd.
FUJI FA	Abbreviation of Fuji Electric FA Components & Systems Co., Ltd.
PANASONIC	Abbreviation of Panasonic Corporation
PANASONIC EW	Abbreviation of Panasonic Electric Works Co., Ltd.
FUJI SYS	Abbreviation of Fuji Electric Systems Co., Ltd.
YASKAWA	Abbreviation of YASKAWA Electric Corporation
YAMATAKE	Abbreviation of Yamatake Corporation
YOKOGAWA	Abbreviation of Yokogawa Electric Corporation
ALLEN-BRADLEY	Abbreviation of products manufactured by Rockwell Automation, Inc.
GE FANUC	Abbreviation of GE Fanuc Automation Corporation GE Fanuc Automation Corporation
LS IS	Abbreviation of LS Industrial Systems Co., Ltd.
SCHNEIDER	Abbreviation of Schneider Electric SA
SICK	Abbreviation of SICK AG
SIEMENS	Abbreviation of Siemens AG
RKC	Abbreviation of RKC INSTRUMENT INC.
HIRATA	Abbreviation of Hirata Corporation
PLC	Abbreviation of programmable controller
Temperature controller	Generic term for temperature controller manufactured by each corporation
Indicating controller	Generic term for indicating controller manufactured by each corporation
CHINO controller	Abbreviation of indicating controller manufactured by CHINO CORPORATION
PC CPU module	Abbreviation of PC CPU Unit manufactured by CONTEC CO., LTD
GOT (server)	Abbreviation of GOTs that use the server function
GOT (client)	Abbreviation of GOTs that use the client function
Windows® font	Abbreviation of TrueType font and OpenType font available for Windows® (Differs from the True Type fonts setttable with GT Designer3)
Intelligent function module	Indicates the modules other than the PLC CPU, power supply module and I/O module that are mounted to the base unit.
MODBUS®/RTU	Generic term for the protocol designed to use MODBUS® protocol messages on a serial communication.
MODBUS®/TCP	Generic term for the protocol designed to use MODBUS® protocol messages on a TCP/IP network.

HOW TO USE THIS MANUAL

The following symbols are used in this manual.

4.1 GOT Type Setting



Shows whether the GT16, GT15, GT11, GT10, and GT SoftGOT1000 are applicable or not.

- : Applicable
- × : Not applicable

4.1.1 Settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog box.

HINT

Settings relevant to functions
For the common settings in a project data, some settings are relevant to multiple GOT functions. For each setting relevant to the GOT functions, refer to the following.

Appendix Relevant Settings

POINT

Refers to information required for operation.

HINT

Refers to information useful for operation.

Shows a chapter, section, relevant manual, or others of relevant information.

- (Fundamentals): GT Designer3 Version1
Screen Design Manual (Fundamentals)
- (Functions): GT Designer3 Version1
Screen Design Manual (Functions)

■ Setting for each screen

- Select a screen editor to set a key window, and select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog box.
- Select the [Key Window Basic Setting] tab or the [Key Window Advanced Setting] tab, and set the required items.


HINT

Settings relevant to functions
For the key window settings, some settings are relevant to multiple GOT functions. For each setting relevant to the GOT functions, refer to the following.

Appendix Relevant Settings

Shows the operation steps.
Operate the steps from the step 1.

(1) Key Window Basic Setting tab

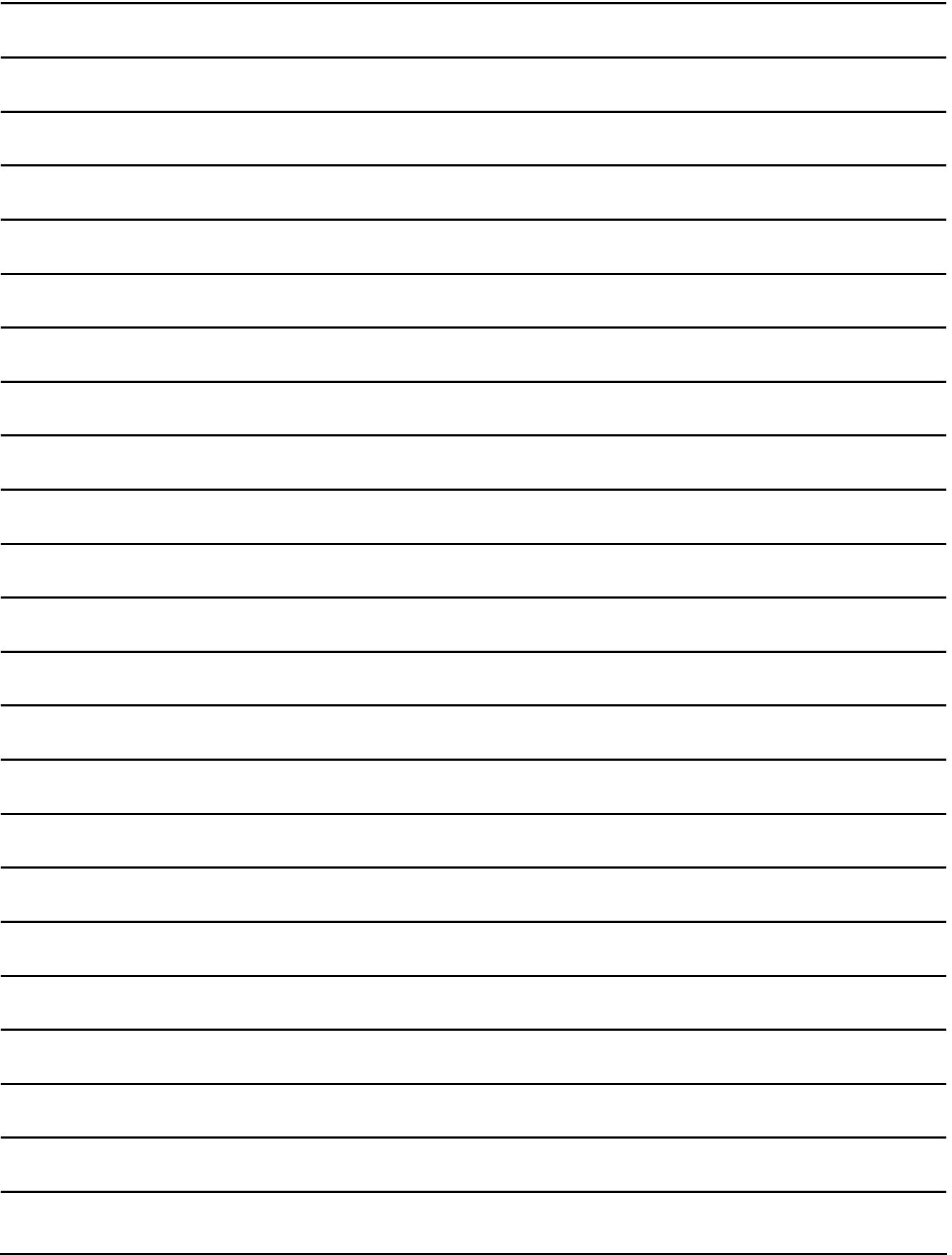


Basic / Key Window Basic Setting / Key Window Advanced Setting / Dialog Window / Option Selection

Item	Description	Model
	Prioritize screen setting over project setting Select this item to give the setting for each screen priority over the setting for each project.	
Key Window	This item is available when [Prioritize screen setting over project setting] is selected for [Key Window Setting]. (Standard Key Window/User-created Key Window)	
	This item is available when [User-created Key Window] is selected for [Key Window]. Select this item to change the key window display in synchronization with the value of language switching device. After selecting this item, select the value (1 to 10) of the language switching device for [Language]. (Set display screen to be fixed) in synchronization with.	
Key Window Setting	Change display screen in conjunction with Language Switching ¹⁾	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> GOT16 GOT15 GOT11 GOT10 GT Soft GOT1000 </div> <div> Shows whether the GT16, GT15, GT11, GT10, and GT SoftGOT1000 are applicable or not. • Black: Applicable • Gray: Not applicable </div> </div>

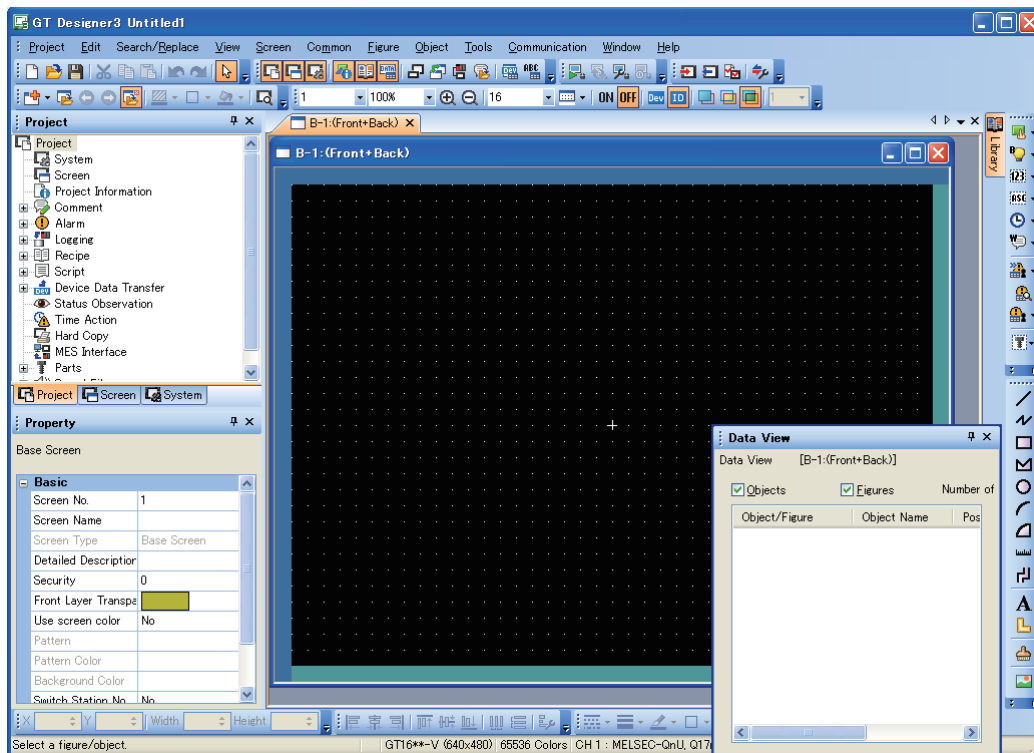
The above is different from the actual page, as it is provided for explanation only.

REGARDING GT Designer3

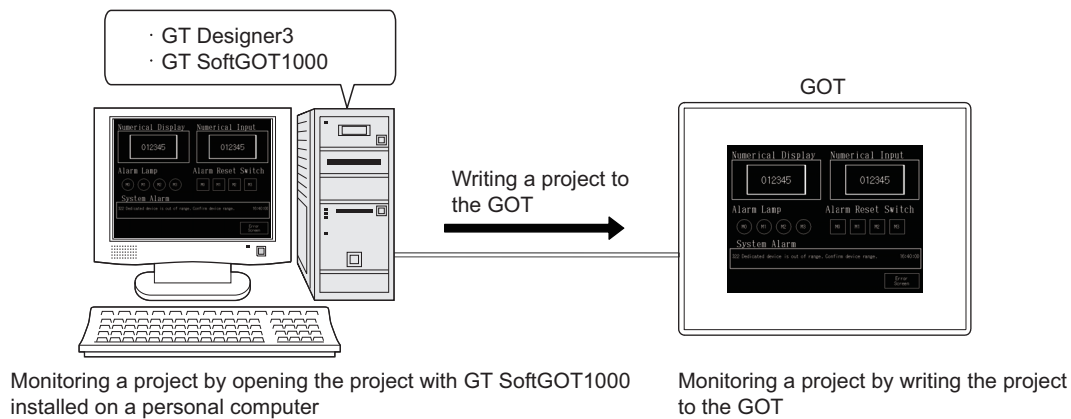


1. OVERVIEW

GT Designer3 is software to create a project for the GOT1000 series.

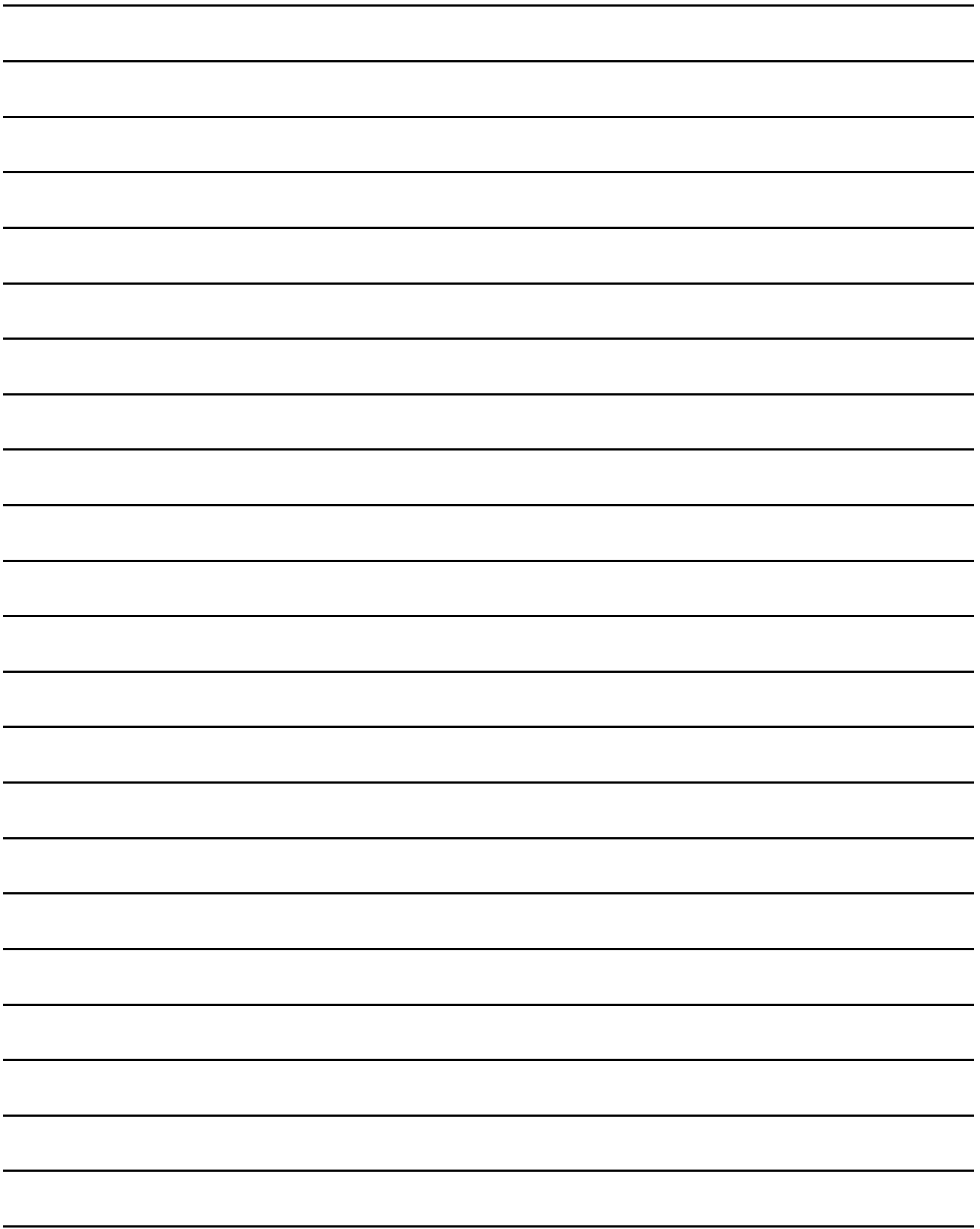


The created project can be displayed by being written to the GOT or opened with GT SoftGOT1000.

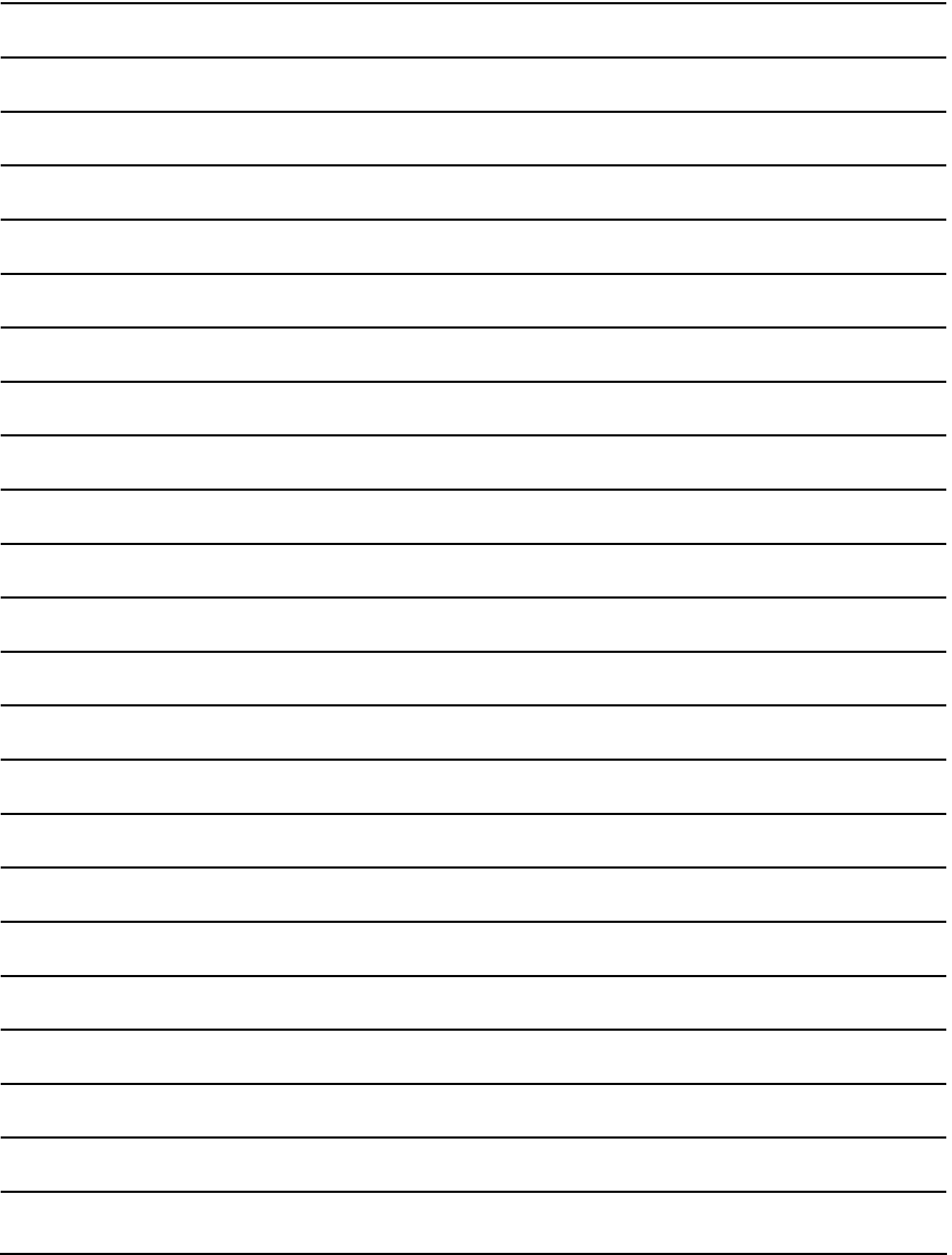


Project creation/edit for GOT900

When creating or editing the project for GOT900, use GT Designer2 Classic.
GT Designer2 Classic can be installed from GT Works3 CD-ROM.



GT Designer3 SPECIFICATIONS



2. GT Designer3 SPECIFICATIONS

2.1 Operating environment

Item	Description	
Personal computer	PC/AT compatible personal computer that the following OSs run on.	
Operating system	<ul style="list-style-type: none"> • Microsoft® Windows® 2000 Professional Service Pack4 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*1} • Microsoft® Windows® XP Professional Service Pack2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*1}^{*3}^{*4} • Microsoft® Windows® XP Home Edition Service Pack2 or later (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*1}^{*3}^{*4} 	<ul style="list-style-type: none"> • Microsoft® Windows Vista® Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4} • Microsoft® Windows Vista® Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4} • Microsoft® Windows Vista® Business (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4} • Microsoft® Windows Vista® Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4} • Microsoft® Windows Vista® Home Basic (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4} • Microsoft® Windows® 7 Ultimate (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4}^{*7} • Microsoft® Windows® 7 Enterprise (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4}^{*7} • Microsoft® Windows® 7 Professional (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4}^{*7} • Microsoft® Windows® 7 Home Premium (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4} • Microsoft® Windows® 7 Starter (English, Simplified Chinese, Traditional Chinese, Korean, German versions)^{*2}^{*3}^{*4}
CPU	1GHz or more recommended	
Memory	512MB or more recommended	1GB or more recommended
Display	Resolution XGA (1024×768 dots) or more	
Hard disk space	For installation: 1.6GB or more recommended For execution: 512MB or more recommended	
Display color	High Color(16 bits) or more	
Software	When using the simulation function and simulating with one personal computer, either of the following software is required. <ul style="list-style-type: none"> • GX Simulator2 (included in GX Works2 Version1.12N or later)^{*6} • GX Simulator Version5.00A or later^{*6} 	
Others	The mouse, key board, printer, CD-ROM drive, sound function (sound card) ^{*5} , or speaker ^{*5}	

*1 When installing, the administrator authority is required.


When simulating the GOT-A900, the administrator authority is required.

*2 When installing, the administrator authority is required.

When using, the standard user or administrator account is required.

To interact GT Designer3 with other MELSOFT applications, use GT Designer3 under the administrator authority when the other MELSOFT applications are used under the administrator authority.

When simulating the GOT-A900, the administrator authority is required.

- *3 The following functions are not supported.
 - Compatibility mode
 - Fast user switching
 - Change your desktop themes (fonts)
 - Remote desktop
- *4 Only the 32-bit OS is available.
- *5 Only when the simulation function is used
- *6 Applicable software version of GX Works2 and GX Simulator varies according to the PLC CPU that is simulated. For the applicable software version of GX Works2 and GX Simulator for each PLC CPU, refer to the following..
 -  GT Simulator3 Version1 Operating Manual for GT Works3
- *7 Windows XP Mode is not supported.

POINT

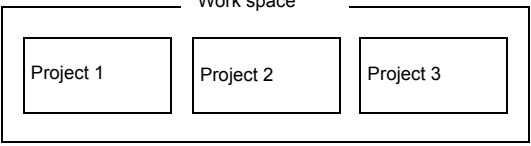
Operating environment on iQ Works

When starting GT Designer3 from MELSOFT Navigator, the operating environment of GT Designer3 is same as that of MELSOFT Navigator.

For the operating environment of MELSOFT Navigator, refer to the following.

 iQ Works Installation Instructions

2.2 Project Format Handled with GT Designer3

Project format	Description	Available operation on GT Designer3		
		Open	Reading other project	Save
GT Designer3 project	Format of the project registered in the work space. More than one project can be registered for the work space. 	○	○	○
Compressed file(*.GTW)	Compressed format of GT Designer3 project.	○	○	○
G1 format (*.G1) (Created by GT Designer3)	Format of the project written to the GOT or CF card.	○	×	×
G1 format (*.G1) (Created by GT Designer2)		○	×	×
GTE format (*.GTE)	Format of the project created by GT Designer2.	○	○	×
GTD format (*.GTD)*1		○	×	×

*1 Change the GOT type for the project to the GOT1000 series in GT Designer2 before opening in GT designer3.
The projects created with FX-PCS-DU/WIN and resaved by GT Designer2 cannot be opened.

■ Configuration of GT Designer3 project file

GT Designer3 project is configured with multiple files.

Files and folders of GT Designer3 project can be operated (file move, file rename, file copy, or file deletion) by GT Designer3.

When operating the files and folders of GT Designer3 project with personal computer tools including Explorer, GT Designer3 project cannot be opened in GT Designer3.

For the file and folder operation in GT Designer3, refer to the following.

 3.16 Saving Project

3.17 Deleting Project

■ Configuration of compression file

A compressed file is a single file.

The compressed file can be opened in GT Designer3 even after moving or renaming the file.

It is useful when copying and duplicating the project file or others.

■ Project format that can be handled with iQ Works

For iQ Works, the following project format is available.

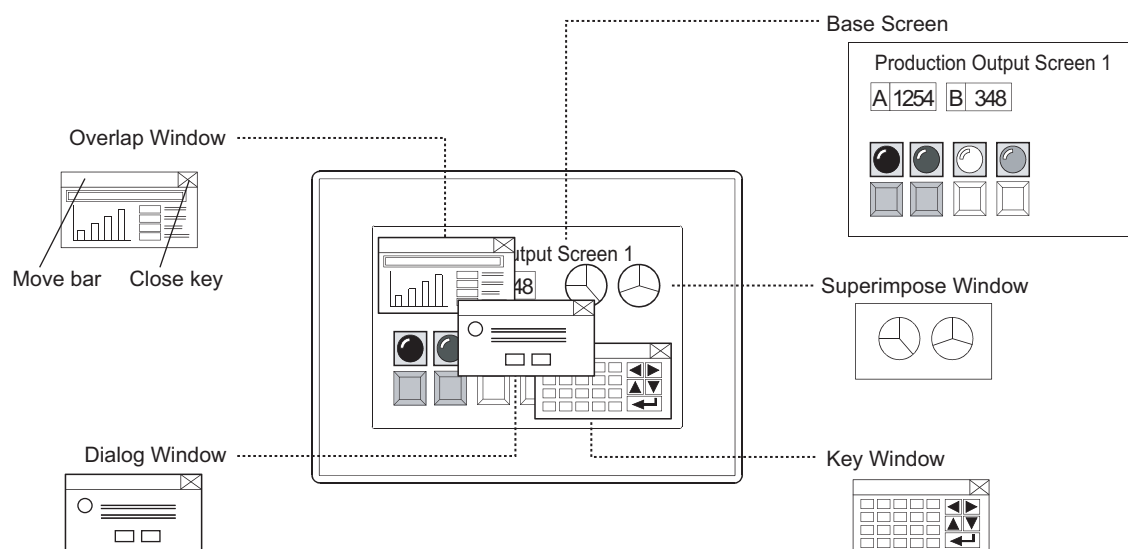
- GT Designer3 project

 3.6.2 Opening/closing a project

2.3 Types and Number of Creatable Screens

The following shows screens that can be created by GT Designer3.

The screen type and number of screens that can be created differ according to the GOT to use.



Screen	Description		Model
Base Screen	A base screen of the GOT screen display.		
Window Screen	A screen overlaid on the base screen. The created window screen can be displayed on the GOT as the overlap window, superimpose window, key window, or dialog window.		
	Overlap Window	A pop-up window that appears over the base screen. With the close key displayed, the window can be moved or closed manually. For displaying the overlap window, refer to the following. 4.2 Screen Switching Device Setting	
	Superimpose Window	A composite window placed on the base Screen. If super impose window is switched, the corresponding parts of the base screen will be changed. Figures and objects for the superimpose window are arranged in the free area of the base screen. For displaying the superimpose window, refer to the following. 4.2 Screen Switching Device Setting	GT16 GT15 GT11 GT10 SoftGOT 1000
	Key Window	A pop-up window for inputting numerical values and others to be displayed on the base screen. There are two types of the key window: default key window and user-created key window. For displaying the key window, refer to the following. 4.5 Key Window Setting	
	Dialog Window	A window that displays errors and warnings as a system. The dialog window can be displayed instead of the system message displayed by the GOT. For displaying the dialog window, refer to the following. 4.4 Setting Message to be Displayed on GOT	GT16 GT15 GT11 GT10 SoftGOT 1000
Report Screen	A screen for creating the format output by the report function.		GT16 GT15 GT11 GT10 SoftGOT 1000

2.3.1 Screen specifications for each GOT type

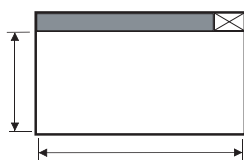
■ Base screen specifications

GOT	Screen size (width×height, dots)	Max. number of registered screens	Applicable screen No. range
GT16**-X(1024×768)	1024×768	4096 (screens)	1 - 32767
GT16**-S(800×600)	800×600		
GT16**-V(640×480)	640×480		
GT15**-X(1024×768)	1024×768	4096 (screens)	1 - 32767
GT15**-S(800×600)	800×600		
GT15**-V(640×480)	640×480		
GT155*-V(640×480)			
GT15**-Q(320×240)	320×240		
GT11**-Q(320×240)	Horizontal display: 320×240 Vertical display: 240×320	4096 (screens)	1 - 32767
GT11**-Q*BDA(Built-in A Bus) (320×240)			
GT11**-Q*BDQ(Built-in Q Bus) (320×240)			
GT10**-Q(320×240)	Horizontal display: 320×240 Vertical display: 240×320	1024 (screens)	1 - 32767
GT1030(288×96)	Horizontal display: 288×96 Vertical display: 96×288		
GT1020(160×64)	Horizontal display: 160×64 Vertical display: 64×160		
GT SoftGOT1000	640×480 - 1920×1200	4096 (screens)	1 - 32767

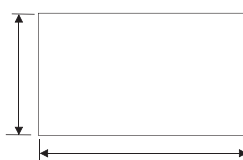
■ Window screen specifications

GOT	Screen size (width×height, dots) ^{*1}		Max. number of registered screens	Applicable screen No. range
	Close key displayed	Close key hidden		
GT16**-X(1024×768)	16×2 - 1022×751	16×2 - 1024×768	1024 (screens)	1 - 32767
GT16**-S(800×600)	16×2 - 798×583	16×2 - 800×600		
GT16**-V(640×480)	16×2 - 638×463	16×2 - 640×480		
GT15**-X(1024×768)	16×2 - 1022×751	16×2 - 1024×768	1024 (screens)	1 - 32767
GT15**-S(800×600)	16×2 - 798×583	16×2 - 800×600		
GT15**-V(640×480)	16×2 - 638×463	16×2 - 640×480		
GT155*-V(640×480)				
GT15**-Q(320×240)	16×2 - 318×223	16×2 - 320×240		
GT11**-Q(320×240)	Horizontal display: 16×2 - 318×223 Vertical display: 16×2 - 238×303	Horizontal display: 16×2 - 320×240 Vertical display: 16×2 - 240×320	1024 (screens)	1 - 32767
GT11**-Q*BDA(Built-in A Bus) (320×240)				
GT11**-Q*BDQ(Built-in Q Bus) (320×240)				
GT10**-Q(320×240)	Horizontal display: 16×16 - 320×224 Vertical display: 16×16 - 240×304	Horizontal display: 16×16 - 320×240 Vertical display: 16×16 - 240×320	512 (screens)	1 - 32767
GT1030(288×96)	Horizontal display: 16×16 - 288×80 Vertical display: 16×16 - 94×271	Horizontal display: 16×16 - 288×96 Vertical display: 16×16 - 96×288		
GT1020(160×64)	Horizontal display: 16×16 - 160×48 Vertical display: 16×16 - 62×143	Horizontal display: 16×16 - 160×64 Vertical display: 16×16 - 64×160		
GT SoftGOT1000	16×2 - 1918×1193	16×2 - 1920×1200	1024 (screens)	1 - 32767

*1 The following shows the screen size (width × height) with the close key displayed or hidden.



Displaying the close key



Hiding the close key

For setting of the close key display, refer to the following.

☞ 4.2 Screen Switching Device Setting

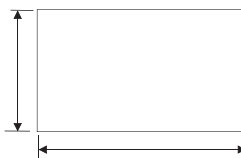
(1) Overlap window specifications

GOT	Screen size (width×height dots)* ¹		Number of screens displayed in one base screen
	Close key displayed* ²	Close key hidden	
GT16**-X(1024×768)	16×2 - 1022×751	16×2 - 1024×768	5 (screens)
GT16**-S(800×600)	16×2 - 798×583	16×2 - 800×600	
GT16**-V(640×480)	16×2 - 638×463	16×2 - 640×480	
GT15**-X(1024×768)	16×2 - 1022×751	16×2 - 1024×768	2 (screens)
GT15**-S(800×600)	16×2 - 798×583	16×2 - 800×600	
GT15**-V(640×480)	16×2 - 638×463	16×2 - 640×480	
GT155*-V(640×480)			
GT15**-Q(320×240)	16×2 - 318×223	16×2 - 320×240	
GT11**-Q(320×240)	Horizontal display: 16×2 - 318×223 Vertical display: 16×2 - 238×303	Horizontal display: 16×2 - 320×240 Vertical display: 16×2 - 240×320	2 (screens)
GT11**-Q*BDA(Built-in A Bus) (320×240)			
GT11**-Q*BDQ(Built-in Q Bus) (320×240)			
GT10**-Q(320×240)	Horizontal display: 16×16 - 320×224 Vertical display: 16×16 - 240×304	Horizontal display: 16×16 - 320×240 Vertical display: 16×16 - 240×320	2 (screens)
GT1030(288×96)	Horizontal display: 16×16 - 286×78 Vertical display: 16×16 - 94×271	Horizontal display: 16×16 - 288×96 Vertical display: 16×16 - 96×288	
GT1020(160×64)	Horizontal display: 16×16 - 158×47 Vertical display: 16×16 - 62×143	Horizontal display: 16×16 - 160×64 Vertical display: 16×16 - 64×160	
GT SoftGOT1000	16×2 - 1918×1193	16×2 - 1920×1200		5 (screens)

*1 The following shows the screen size (width×height) with the close key displayed or hidden.



The close key is displayed.



The close key is hidden.

For setting of the close key display, refer to the following.

➞ 4.2 Screen Switching Device Setting

*2 To display the close key, set the width of the overlap window at 24 dots or more.
The close key is not available if the width of the overlap window is set at 23 dots or less.
For setting of the window display size, refer to the following.

➞ 3.7.1 Creating a new screen


(2) Superimpose window specifications

GOT	Screen size (width×height dots)	Number of screens displayed in one base screen
GT16**-X(1024×768)	16×2 - 1024×768	2 (screens)
GT16**-S(800×600)	16×2 - 800×600	
GT16**-V(640×480)	16×2 - 640×480	
GT15**-X(1024×768)	16×2 - 1024×768	2 (screens)
GT15**-S(800×600)	16×2 - 800×600	
GT15**-V(640×480)	16×2 - 640×480	
GT155*-V(640×480)		
GT15**-Q(320×240)	16×2 - 320×240	
GT11**-Q(320×240)	Horizontal display: 16×2 - 320×240 Vertical display: 16×2 - 240×320	2 (screens)
GT11**-Q*BDA(Built-in A Bus) (320×240)		
GT11**-Q*BDQ(Built-in Q Bus) (320×240)		
GT10**-Q(320×240)	Horizontal display: 16×16 - 320×240 Vertical display: 16×16 - 240×320	2 (screens)
GT1030(288×96)	Horizontal display: 16×16 - 288×96 Vertical display: 16×16 - 96×288	
GT1020(160×64)	Horizontal display: 16×16 - 160×64 Vertical display: 16×16 - 64×160	
GT SoftGOT1000	16×2 - 1920×1200	2 (screens)

(3) Key window specifications

GOT	Screen size (width×height dots)		
	Default Key Window		User-created Key Window*1
	Value currently inputting/value before inputting/hiding input range	Value currently inputting/value before inputting/displaying input range	
GT16**-X(1024×768)	318×159	318×207	16×2 - 1022×751
GT16**-S(800×600)	318×159	318×207	16×2 - 798×583
GT16**-V(640×480)	318×159	318×207	16×2 - 638×463
GT15**-X(1024×768)	318×159	318×207	16×2 - 1022×751
GT15**-S(800×600)	318×159	318×207	16×2 - 798×583
GT15**-V(640×480)	318×159	318×207	16×2 - 638×463
GT155*-V(640×480)	318×335	318×383	16×2 - 638×463
GT15**-Q(320×240)	318×159	318×207	16×2 - 318×223
GT11**-Q(320×240)	Horizontal display: 318×159 Vertical display: 190×127(For decimal input)	Horizontal display: 318×207 Vertical display: 190×159(For decimal input)	Horizontal display: 16×2 - 318×223 Vertical display: 16×2 - 238×303
GT11**-Q*BDA(Built-in A Bus) (320×240)	222×127(For hexadecimal input)	222×159(For hexadecimal input)	
GT11**-Q*BDQ(Built-in Q Bus) (320×240)			
GT10**-Q(320×240)	128×160(For decimal input) 160×160(For hexadecimal input)		Horizontal display: 16×16 - 320×224 Vertical display: 16×16 - 240×304
GT1030(288×96)	288×96		16×16 - 288×96
GT1020(160×64)	160×64		16×16 - 160×64
GT SoftGOT1000	318×159	318×207	16×2 - 1918×1183

*1 Set the width of the user-created key window at 24 dots or more.
The close key is not available if the width of the overlap window is set at 23 dots or less.
For setting of the window display size, refer to the following.


 3.7.1 Creating a new screen

(4) Dialog window specifications

GOT	Screen size (width×height dots)
GT16**-X(1024×768)	16×2 - 320×240
GT16**-S(800×600)	
GT16**-V(640×480)	
GT15**-X(1024×768)	16×2 - 320×240
GT15**-S(800×600)	
GT15**-V(640×480)	
GT155*-V(640×480)	
GT15**-Q(320×240)	Horizontal display: 16×2 - 320×240 Vertical display: 16×2 - 240×320
GT11**-Q(320×240)	
GT11**-Q*BDA(Built-in A Bus) (320×240)	
GT11**-Q*BDQ(Built-in Q Bus) (320×240)	16×2 - 320×240
GT SoftGOT1000	

Report screen specifications

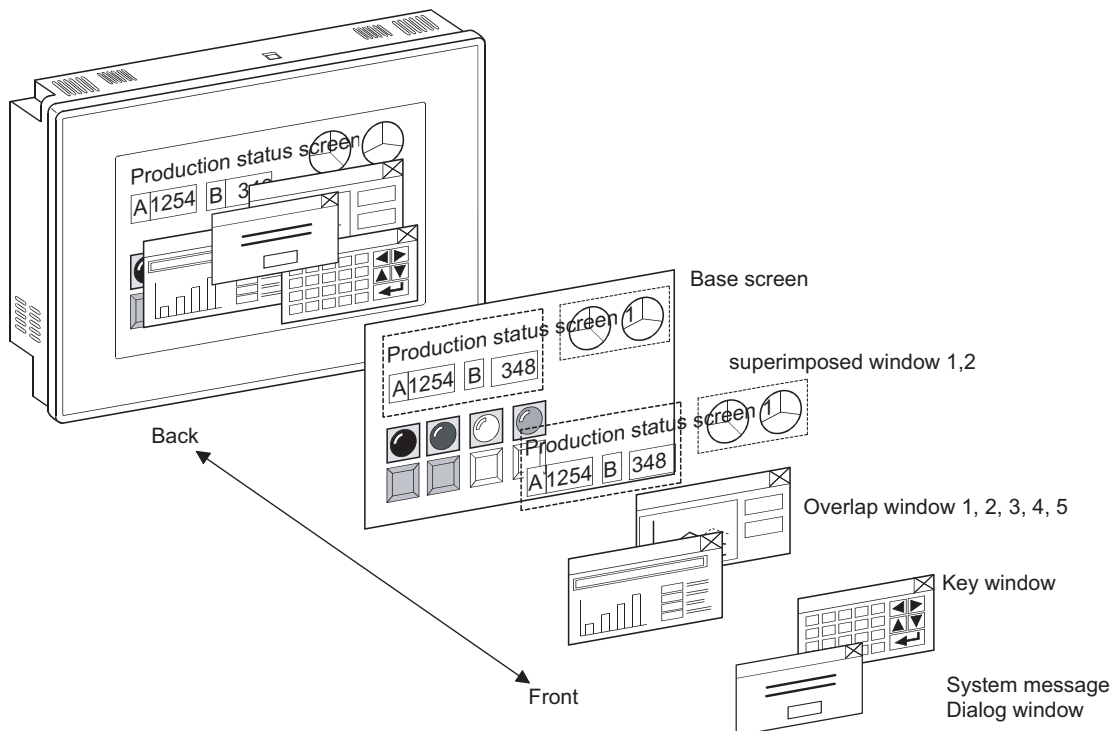
The report screen is a screen for creating the format output by the report function.
For the report screen specifications, refer to the following.

 (Functions) 36. REPORT FUNCTION

2.3.2 Relations of base screen and window screen

■ Screen laying

The screens are layered by type and displayed as shown below.



Type of screen	Screen laying
Base screen	Located at the back.
Superimposed window	Superimposed window overlaid in front of the base screen is displayed as a base screen. When two superimpose windows are displayed, the later appeared window is brought to the front.
Overlap window	Located in front of the superimpose window. The objects of the base screen arranged in the rear of the overlap window are not displayed. To confirm or operate the rear objects, close or move the overlap window. When multiple overlap windows are displayed, the later appeared or operated window is displayed in the front. (When switching the rear overlap window by the screen switching device, the window is not brought to the front.)
Key window	Located in the front of an overlap window.
Dialog window	Located in the top front of displayed windows.

■ Overlap-display of figures and objects

Overlapping figures and objects are displayed according to the order of layer.

On the base screen and superimposed window, the object being changed is brought to the front.

■ Input object (touch switches, numerical input, ASCII input) operation

(1) Overlap-display of base screen and superimpose window

The input objects in the base screen located behind the superimpose window can be operated.

If the touch switches on the superimposed window and base window overlap, both touch switches are available by touching.

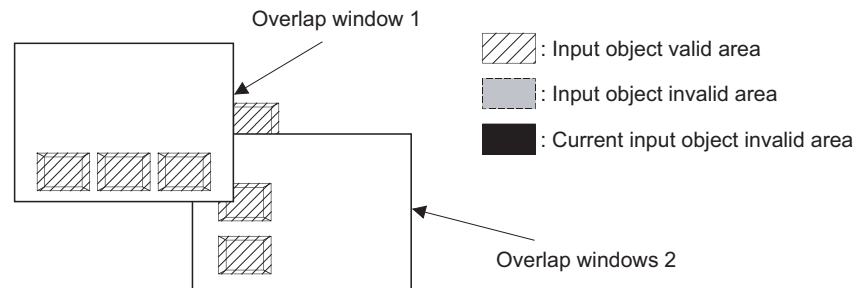
(If the touch time is not long enough, only the touch switches on the superimposed window may operate.)

(2) Overlap-display of base screen and overlap window

The input objects in the base screen on which an overlap window is overlaid can not be operated.

The area around the overlap window is invalid even when touching the input objects, depending on the overlap window size.

To eliminate the invalid area, it is recommended to use the overlap window that is multiples of 16 dots in size and does not display the close key.



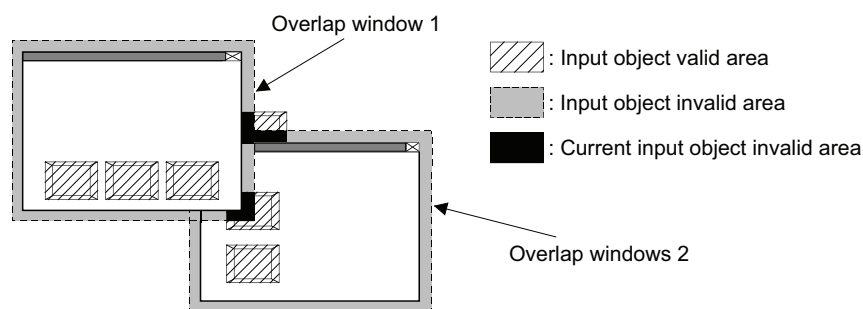
If an overlap window other than recommended above is displayed, the part of input object inside 16-dot area around the overlap window is invalid and do not operate.

(a) When close key and movement bar are displayed

The invalid area refers to 16-dot areas including areas where the window part in the 16-dot area is smaller than 16-dot area, and the surrounding 16-dot areas.

Example) When 10 dots are insufficient

The range of 10 dots + 16 dots is the invalid area.

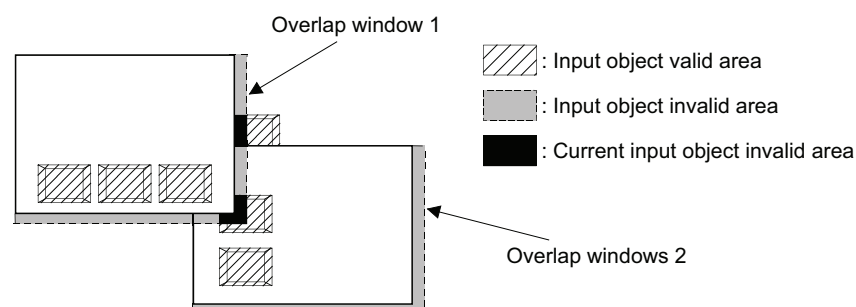


(b) When neither close key nor movement bar is displayed

The invalid area refers to 16-dot areas including areas where the window part in the 16-dot area is smaller than 16-dot area.

Example) When 10 dots are insufficient

The range of 10 dots is the invalid area.

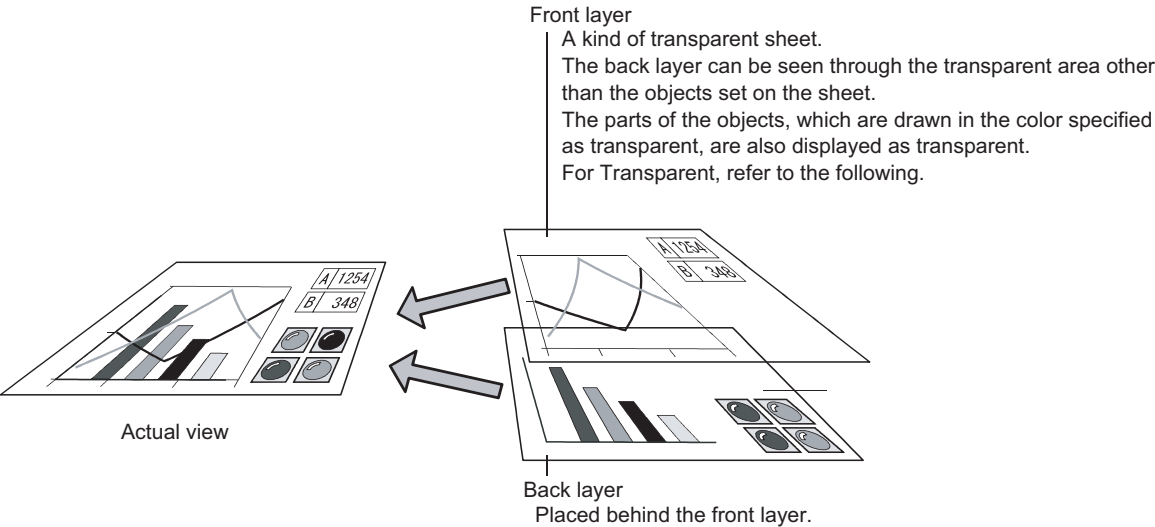


■ Overlapping the quota objects

Make sure not to set more than two System Alarm Display in one screen using the overlap window or superimpose window.

2.3.3 Layer

The base screen and window screen consist of two layers (the front layer and back layer). Set the objects on either of the two layers (front layer or back layer). Then, overlay the two layers to superimpose the set objects.



The following shows the figures and objects that can be arranged in each layer.

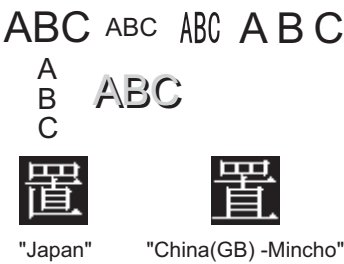
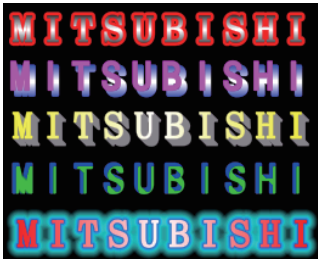

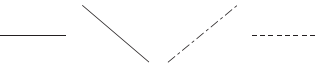
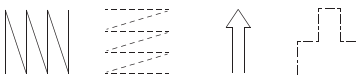


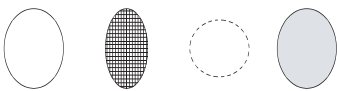
Layer	Figure and object that can be arranged
Front layer	Figures (only the piping figures with the lamp attribute used) and object
Back layer	Figures and objects

For layered figures and superimposed objects, refer to the following.

 5.3.7 Superimposition setting

2.4 Figures and Data Capacity

Figure specifications

Figure	Drawing examples	Data capacity (byte) ^{*1}	Model
Text ^{*2}	 <p>"Japan" "China(GB) -Mincho"</p>	<p>The data capacity differs according to the font set.</p> <ul style="list-style-type: none"> Standard font $28 + NR \times 8 + NT \times 2$ HQ font $Y + 128 \times NT$ TrueType font $Y + 24 + (8 \times NR) + (NT \times NS \times K)$ Windows[®] font Varies according to the font or font size used^{*3} Stroke font $Y + 12$ <p>NR: Number of lines NT: Number of characters NS: Character size K: Single byte character : 2, Double byte character : 4 Y: Capacity of standard font</p>	
Logo Text		<p>96+character information+effect +(character width×character height)</p> <p>Character information: $[2 + (2 \times N)] + 24 + W$</p> <p>Effect:</p> <ul style="list-style-type: none"> Outline: 16 Solid: 20 3D: 16 Stamp: 16 Neon: 32 <p>N: Number of characters One line feed is counted as two characters. When the number of characters is an even, the number of characters is rounded up to an odd.</p> <p>W: Windows[®] font information size TrueType font is 0. For Windows[®], the data capacity varies according to the font or font size used.^{*3}</p>	
Line ^{*2}		24	
Line Freeform		20×4 number of vertexes	
Rectangle		<p>The data capacity differs according to the figure type set.</p> <ul style="list-style-type: none"> Rectangle, Rectangle (Rounded): 28 Rectangle (Octagonal): 56 	
Polygon		$20 + 4 \times (\text{number of vertexes} + 1)$ Start point and end point counted as one vertex	
Circle		28	

(Continued to next page)

Figure	Drawing examples	Data capacity (byte) ^{*1}	Model
Arc		36	
Sector		40	
Scale		28	<div>Gr16 Gr15</div> <div>Gr11 Gr10</div> <div>ScrGOT 1000</div>
Piping		32+4(the number of vertices×3+1) Start point and end point counted as one vertex (Data capacity when all the corners are right angles.)	
Paint		20	
Import Image(BMP format)		28+data capacity of imported bit map file	
Import Image(JPEG format)		32+data capacity of imported JPEG file	<div>Gr16 Gr15</div> <div>Gr11 Gr10</div> <div>ScrGOT 1000</div>
Import DXF data		Varies according to the contents of an image.	<div>Gr16 Gr15</div> <div>Gr11 Gr10</div> <div>ScrGOT 1000</div>
Import IGES data			<div>Gr16 Gr15</div> <div>Gr11 Gr10</div> <div>ScrGOT 1000</div>

*1 When the lamp attribute is set, the size of the data increases as below.

Data size of one figure + 156

*2 When setting for the report screen, the data size of figures is included in the report setting capacity.
For the report setting capacity, refer to the following.



2.6 Specifications of Available Functions Set with GT Designer3

*3 Confirm the data capacity before writing the project to the GOT.

For drawing and setting of figures, refer to the following.



(Functions) 1. FIGURES, 4. GRAPHIC CHARACTERS



GOT-compatible text

Texts that are displayed in the screen editor of GT Designer3 can be displayed on the GOT.

The following texts are not displayed on the GOT.

- The texts that are not displayed in the screen editor after being input and defined
- The texts that are covered with specified color after being input and defined
- The texts of which text sizes are changed after being input and defined

■ BMP/JPEG/DXF/IGES file specifications handled with GT Designer3

POINT

(1) How to use BMP/JPEG/DXF/IGES files

For how to read BMP/JPEG/DXF/IGES files to GT Designer3 and precautions for use, refer to the following.

 GT Designer3 Version1 Screen Design Manual (Functions)

(2) The image quality when using JPEG files

The image quality of JPEG files may be deteriorated than that of BMP files.


To avoid the image quality deterioration, use BMP files.

(3) Difference between data available for BMP/JPEG file parts and registered parts

The BMP/JPEG file specifications that can be stored in a CF card (BMP/JPEG file parts) differ from the BMP/JPEG file that can be used in GT Designer3 (registered parts).

The data used as a registered part in GT Designer3 may not be used as a BMP/JPEG file part.

For the BMP/JPEG file that can be used as BMP/JPEG file parts, refer to the following.

 4.13.1 Specifications for BMP/JPEG files that can be stored in a CF card and displayed as parts

(1) BMP file

The number of displayed colors is reduced to the colors supported by the used GOT.

Item	Description
BMP data	65536 colors *1, 256 colors, 16 colors or monochrome
Resolution*2	2000×1600 or more: Display the BMP data reduced to a resolution of 2000×1600 or less on GT Designer3. When the data is reduced, the resolution for vertical and horizontal is the same ratio. 2000×1600 or less: Display without changing the resolution.

*1 For GOTs that have 65536-color display capacity, refer to the following.

 User's Manual for the GOT used

*2 Errors may occur when a personal computer has insufficient memory for reading the BMP data.
When errors occur, the BMP data is not displayed on a screen for GT Designer3.

(2) JPEG file

The number of displayed colors is reduced to the colors supported by the used GOT.

Not supported by the GT11 and GT10.

Item	Description
File format	JFIF, EXIF
Data format	Base line, progressive
Number of colors	Full-color, gray-scale
Resolution*1	2000×1600 or more: Display the BMP data reduced to a resolution of 2000×1600 or less on GT Designer3. When the data is reduced, the resolution for vertical and horizontal is the same ratio. 2000×1600 or less: Display without changing the resolution.

*1 Errors may occur when a personal computer has insufficient memory for reading the JPEG files.
When errors occur, the JPEG files are not displayed on a screen for GT Designer3.

(3) DXF file

Item	Description
DXF data	Release 12, Release 13, Release 14
Resolution	2048×1536 or less

(4) IGES file

Not supported by the GT10.

Item	Description
File format	IGS, IGE, and IGES data (wire frame format) created with Autodesk's Autodesk Inventor

2.5 Specifications of Applicable Characters

■ Font

Font specifications		Font image	Model
Classification	Type		
Standard font	6×8 dot(Gothic)	6x8dot	
	12dot Standard(Gothic)* ¹	12dot Standard(Gothic)	
	16dot Standar(Mincho)* ²	16dot Standard(Mincho)	
	16dot Standar(Gothic)* ²	16dot Standard(Gothic)	
HQ font	12dot HQ Mincho	12dot HQ Mincho	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
	12dot HQ Gothic	12dot HQ Gothic	
	16dot HQ Mincho	16dot HQ Mincho	
	16dot HQ Gothic	16dot HQ Gothic	
TrueType font	TrueType Mincho	TrueType Mincho	
	TrueType Gothic	True Type Gothic	
	TrueType Numerical(Gothic)* ³	12345	
	TrueType Numerical(7-Segment)* ³	12345	
Stroke font	Stroke	Stroke	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Windows® font	TrueType font and OpenType font displayable on the personal computer (other than vertical font)	Windows font	Gr16 Gr15 Gr11 Gr10 SerGOT 1000

*1 Not supported by the GT1020

*2 Set the font type for 16 dot Standard (Mincho/Gothic) in project units.

☞ 4.1 GOT Type Setting

*3 Set the font type for TrueType Numerical (Gothic/7-Segment) in project units.

☞ 4.1 GOT Type Setting

POINT

Usable font for object

Some fonts cannot be used depending on the object.

Confirm the usable fonts by referring to each object setting.

For the object setting, refer to the following.

☞ GT Designer3 Version1 Screen Design Manual (Functions)

■ KANJI region

Some Chinese characters look different depending on the region where Chinese characters are used, for example, Japan, China (GB) or China (Big5).

The GOT displays the Chinese characters according to the selected region.

Selectable KANJI regions are shown below.

KANJI region	Font image	Model
Japan		
China (GB)		GT16 GT15 GT11 GT10 SARGOT 1000
China (Big5)		

2.5.1 Fonts

This section describes the specifications of fonts applicable to GOT and how to display them.

■ Font specifications

The specifications of fonts applicable to the GOT are provided below.

○ : Available - : Not available

Font type	Character size			Character pitch	Character color	Text style	Effects	Storage area* ³
	HS	FS	DS					
6×8 dot	○	-	-	Fixed	○	○	-	System area/ User area* ³
12dot Standard(Gothic)	○	○	○			○	-	
16dot Standar(Mincho/Gothic)	○	○	○			○	-	
12dot HQ Mincho	○	○	○			○	-	User area
12dot HQ Gothic						○	-	
16dot HQ Mincho	○	○	○			○	-	
16dot HQ Gothic						○	-	
TrueType Mincho* ¹	○	○	○	Proportiona* ²		○	-	
TrueType Gothic* ¹						○	-	
TrueType Numerical* ¹	○	-	○			-	-	System area
Stroke* ¹	○	○	○	Fixed		○	-	User area
Windows ^a font* ¹	○	○	○	Depend on the Windows ^a fonts selected		○	○	

*¹ Horizontal writing only.

*² Different depending on characters.

The number of the characters in a line varies according the arranged characters.

*³ Standard fonts (Standard) are stored in the system area while standard fonts (Option) are stored in the user area.

(1) Standard font



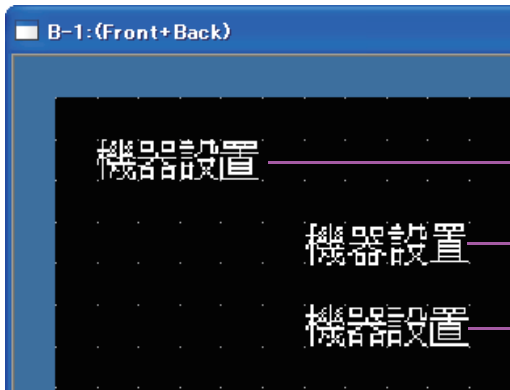
Font Selection

For font selection, refer to the following.

2.5.4 Font selection

(1) Standard font

The standard font includes the following types.



Standard font (Standard)

The standard font (Standard) is the basic font for the entire project.

When fonts can be set for objects and figures, the standard font (Standard) is displayed with specifying the standard font or HQ font.

- Required OS: Standard monitor OS (Standard font)
- Setting item: Standard font in the [GOT Type Setting] dialog box

Standard font (Option)

Set the standard font (Option) for displaying Chinese characters other than the Chinese character specified for the standard font (Standard). With setting [Kanji Region] for objects and figures, Chinese characters other than the Chinese character set as the standard font (Standard) can be displayed.

- Required OS: Option OS (Standard font)
- Setting item: [Kanji Region]

The following describes details of the standard font.

(a) Standard font (Standard)

Standard font (Standard) includes the following fonts.

Item	Description	Font image	Model
Japanese	Fonts of Unicode 2.1 European characters (Latin-1 Supplement, Latin Extended-A, Basic Greek and Cyrillic)*1 are displayed in 2-byte characters. Japanese Kanji characters are displayed.	ABC Ā Č 置	
Japanese (supporting Europe)	Fonts of Unicode 2.1 European characters (Latin-1 Supplement, Latin Extended-A, Basic Greek and Cyrillic)*1 are displayed in 1-byte characters. Japanese Kanji characters are displayed.	ABCĀČ置	
Chinese (Simplified)	Fonts of Unicode 2.1 European characters (Latin-1 Supplement, Latin Extended-A, Basic Greek and Cyrillic)*1 are displayed in 2-byte characters. Simplified Chinese characters are displayed.	ABC Ā Č 置	
Chinese (Simplified) (supporting Europe)*2	Fonts of Unicode 2.1 European characters (Latin-1 Supplement, Latin Extended-A, Basic Greek and Cyrillic)*1 are displayed in 1-byte characters. Simplified Chinese characters are displayed.	ABCĀČ置	
Chinese(Traditional) (supporting Europe)	Fonts of Unicode 2.1 European characters (Latin-1 Supplement, Latin Extended-A, Basic Greek and Cyrillic)*1 are displayed in 1-byte characters. Traditional Chinese characters are displayed.	ABC Ā Č 置	

*1 In this manual, Latin-1 Supplement, Latin Extended-A, Basic Greek and Cyrillic are collectively expressed as European characters.

*2 European characters are not included in the Chinese government approved fonts.
To use the Chinese government approved fonts including European characters, use Chinese (Simplified).

- (b) Standard font (Option)
Standard font (option) includes the following fonts.

Item ^{*1}	Description	Font image	Model
Chinese (Simplified)	Displays Chinese characters of Chinese (Simplified) region.		
Chinese (Traditional)	Displays Chinese characters of Chinese (Traditional) region.		GT16 GT15 GT11 GT10 SoftGOT 1000
Japanese	Displays Chinese characters of Japanese region.		

*1 Specification of multiple kinds is possible.

HINT

(1) Usage of standard fonts

For details, refer to the following.

■ Installing font data

(2) Example of standard font display

For details on how to display fonts, refer to the following.

2.5.4 Font selection

(2) HQ font

The HQ font is a standard font (12 dots or 16dots) with a HQ character (Mincho or Gothic).

Note that setting of HQ font is not allowed depending on objects.

For the fonts that can be set for the individual objects, check the setting item of each object.

The settings for displaying European characters and the kanji region are the same as those for the standard font.

(3) TrueType font

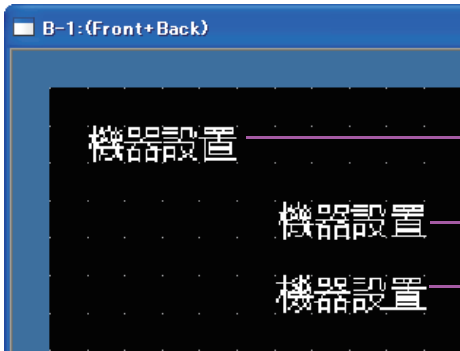
TrueType fonts can be set for the individual objects.

Note that setting of TrueType font is not allowed depending on objects.

For the fonts that can be set for the individual objects, check the setting item of each object.

(4) Stroke font

The stroke font includes the following types.



Stroke standard font (Extended)

The font can be set for each object.

- Required OS: Extended function OS (Stroke standard font)
- Setting item: [Font Setting](select [Stroke])

Stroke font (Option)

Set the stroke font (Option) for displaying Chinese characters other than the Chinese character specified for the stroke standard font (Extended). With setting [Kanji Region] for objects and figures, Chinese characters other than the Chinese character set as the stroke standard font (Extended) can be displayed.

- Required OS: Option OS (Stroke font)
- Setting item: [Font Setting] (select [Stroke]), [Kanji Region]

The following describes details of the stroke font.

(a) Stroke standard font (Extended)

Depending on the object to be used, the stroke font cannot be selected.

For the stroke font applicable to each object, refer to the setting items for each object.

The stroke standard font (Extended) includes the following types.

Item ^{*1}	Description	Model
Stroke Font Support Data	When the stroke standard font is installed, the item is installed with the font.	
Stroke Standard Font(JPN)	Unicode 2.1 font Only the following fonts can be used on the GOT. • Basic Latin • Latin-1 Supplement • Thai ^{*1} • Basic Greek • Hiragana ^{*2} • Katakana ^{*2} • Unified CJK Ideographs Hangul characters cannot be displayed. Japanese Kanji characters are displayed.	
Stroke Standard Font(JPN)(supporting Hangul)	Unicode 2.1 font Only the following fonts can be used on the GOT. • Basic Latin • Latin-1 Supplement • Thai ^{*1} • Basic Greek • Hiragana ^{*2} • Katakana ^{*2} • Unified CJK Ideographs Hangul characters cannot be displayed. Japanese Kanji characters are displayed.	
Stroke Standard Font(China GB)	Unicode 2.1 font Only the following fonts can be used on the GOT. • Basic Latin • Latin-1 Supplement • Thai ^{*1} • Basic Greek • Hiragana ^{*2} • Katakana ^{*2} • Unified CJK Ideographs Hangul characters cannot be displayed. Simplified Chinese characters are displayed.	
Stroke Standard Font(China GB)(supporting Hangul)	Unicode 2.1 font Only the following fonts can be used on the GOT. • Basic Latin • Latin-1 Supplement • Thai ^{*1} • Basic Greek • Hiragana ^{*2} • Katakana ^{*2} • Unified CJK Ideographs Hangul characters are displayed. Simplified Chinese characters are displayed.	



^{*1} Thai characters are complicated. If the character size is small, the characters can be hard to read.

For Thai, it is recommended that the character size is set to 20 dots or more.

^{*2} Some characters of hiragana and katakana cannot be used.

Confirm the applicable characters in GT Designer3.

(Characters correctly displayed in GT Designer3 are also displayed on the GOT.)

(b) Stroke font (Option)

The stroke font (Option) includes the following types.

Item*1	Description	Font image	Model
Chinese (Simplified)	Displays Chinese characters of Chinese (Simplified) region.		
Chinese (Traditional)	Displays Chinese characters of Chinese (Traditional) region.		
Japanese	Displays Chinese characters of Japanese region.		

*1 Multiple items can be specified.

(5) Windows® font

For Windows® fonts, TrueType font or OpenType fonts installed on the personal computer is displayed (other than vertical fonts).

Note that setting of Windows® font is not allowed depending on objects.

For the fonts that can be set for the individual objects, check the setting item of each object.

POINT

(1) When opening a project which uses Windows® fonts on other personal computer

The Windows® fonts used in the project have to be installed in the personal computer.

If operations other than character shifting and character color change are performed when Windows® fonts are not installed, fonts will be changed to the ones installed in the personal computer.

(2) When Windows® fonts were installed during GT Designer3 activation

Restart GT Designer3 to use Windows® fonts installed during GT Designer3 activation.

■ Relationship between the message displaying language selectable by the utility and the standard font

The language to be selected by the utility, used for displaying a message, varies depending on the standard font installed to the GOT.

Message displaying language selectable by utility	Required standard font		
	GT16, GT15	GT11	GT10
Japanese	Install one of the following fonts. Standard font (Standard): Japanese font, Japanese (supporting Europe) font Standard font (Option): Japanese font	Install one of the following fonts. Standard font (Standard): Japanese font, Japanese (supporting Europe) font	Install one of the following fonts. Standard font (Standard) Japanese font, Japanese (supporting Europe) font
English	Selectable independently of the installed standard font.		
Chinese (Simplified)	Install one of the following fonts. Standard font (Standard) Chinese (Simplified) font, Chinese (Simplified) (supporting Europe) font Standard font (Option) Chinese (Simplified) font	Install one of the following fonts. Standard font (Standard) Chinese (Simplified) font, Chinese (Simplified) (supporting Europe) font	Install one of the following fonts. Standard font (Standard) Chinese (Simplified) font, Chinese (Simplified) (supporting Europe) font
Chinese (Traditional)	Install one of the following fonts. Standard font (Standard) Chinese (Simplified) font, Chinese (Simplified) (supporting Europe) font Standard font (Option) Chinese (Simplified) font	Install the following font. Standard font (Standard) Chinese (Simplified) (supporting Europe) font	Install the following font. Standard font (Standard) Chinese (Simplified) (supporting Europe) font
Korean	Selectable independently of the installed standard font.	Selectable independently of the installed standard font.	Not selectable
German	Install one of the following fonts. Standard font (Standard) Japanese (supporting Europe) font Chinese (Simplified) font Chinese (Simplified) (supporting Europe) font		

■ Font magnification and character size

The applicable magnification varies depending on the fonts used.

The following table shows font magnification and size.

(1) Standard font, HQ font

Set character sizes by setting the ratio of horizontal size and vertical size.

Font	Character size magnification	
	Width magnification (times) ^{*1}	Height magnification (times) ^{*1}
6×8 dot	1	0.5
12dot Standard(Gothic)	1 to 8	1 to 8
16dot Standar(Mincho/Gothic)	0.5, 1 to 8	0.5, 1 to 8
12dot HQ Mincho	2, 4, 6, 8	2, 4, 6, 8
12dot HQ Gothic		
16dot HQ Mincho		
16dot HQ Gothic		

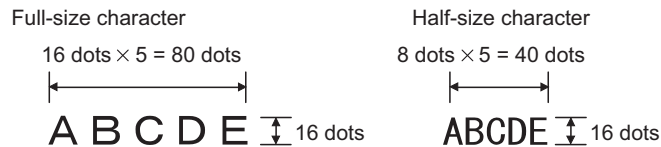
^{*1} Horizontal size and vertical size can be set by selecting [Other] for size.

(2) TrueType font, Stroke font, Windows® font

Set character sizes by setting font sizes (dot).

Font	Size (dot)
TrueType Mincho* ¹	8 to 128, in 1-dots unit.
TrueType Gothic* ¹	
TrueType Numerical* ¹	24 to 128, in 4-dots unit.
Stroke* ¹	8 to 128, in 1-dots unit.
Windows® font* ¹	

Example) Displaying five double-size characters in the 16-dot Standard (Gothic) font.



When fonts were changed

When the set fonts are changed, the display size of characters may be changed.

Text color

Only one can be specified from maximum of 256 colors. (The GOT will select the nearest color match when an incompatible color is specified.)

Text style

The following text styles are available.

Regular	Bold	Solid	Raised	Rotate	Raised/Rotate

Effects

The following character effects can be set.

Regular	Italic	Underline	Both

■ To display the font on GOT

The following explain how to use each font.

For how to communicate with the GOT, refer to the following.

☞ 7. COMMUNICATION WITH GOT



Font data size

Font data are stored in the system area or user area within the built-in memory.(Data size varies depending on the font.)

It is recommended to confirm the capacity (data size) required for installation by referring to the [Communicate with GOT] dialog box in advance.

For how to display the [Communicate with GOT] dialog box, refer to the following.

☞ 7. COMMUNICATION WITH GOT

(1) Standard font

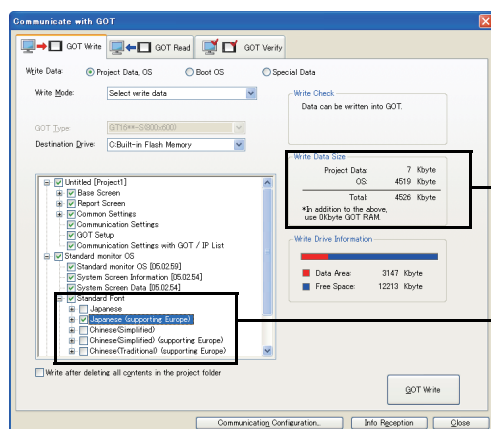
(a) Standard font (Standard)

1. Select the used standard font in [Standard Font] of the [GOT Type Setting] dialog box.

☞ 4.1 GOT Type Setting

2. Install the same font data as the set standard font to the GOT using the [Communicate with GOT] dialog box.

☞ 7. COMMUNICATION WITH GOT

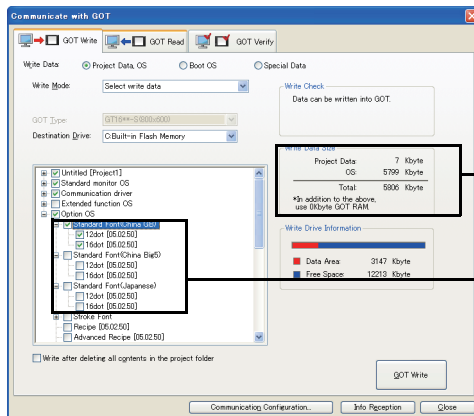


Confirm [Write Data Size].

Select [Standard monitor OS], and then select one standard font. When using the 16dot standard font and selecting [Japanese] or [Japanese(Supporting Europe)], select the same font as set for [12dot Standard] in the [GOT Type Setting] dialog box.

(b) Standard font (Option)

Install the font data to the GOT using the [Communicate with GOT] dialog box.

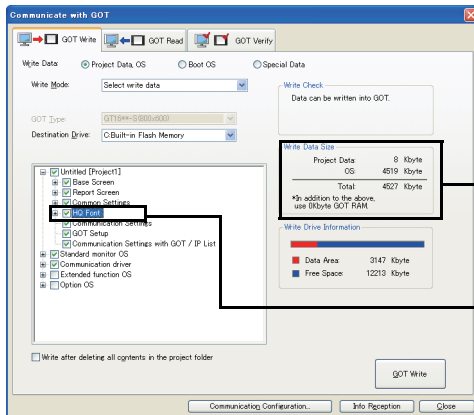


Confirm [Write Data Size].

Select [Option OS], and then select the standard font. Multiple fonts can be selected.

(2) HQ font

Install the font data to the GOT using the [Communicate with GOT] dialog box.



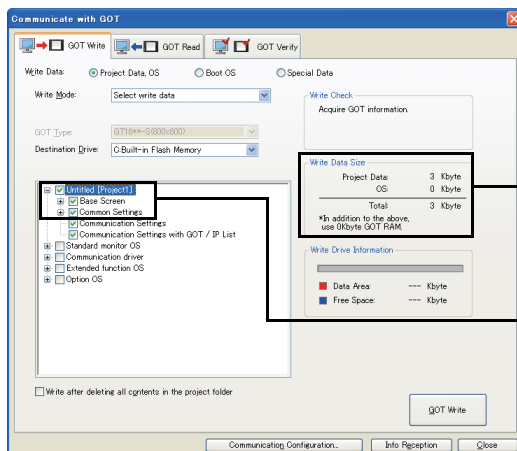
Confirm [Write Data Size].

Select [HQ Font].
(Checking one will automatically select all the fonts. These fonts are displayed only when the project data includes them.)

(3) TrueType font

(a) TrueType Mincho, TrueType Gothic

Install the font data to the GOT using the [Communicate with GOT] dialog box.
(The font data are included in the screen data.)

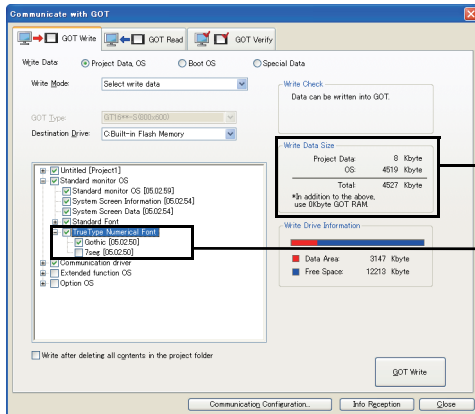


Confirm [Write Data Size].

Select the screen to be written to the GOT.

(b) TrueType Numerical

1. Select the used TrueType numerical font in [TrueType Numerical Font] of the [GOT Type Setting] dialog box.
☞ 4.1 GOT Type Setting
2. Install the same font data as the set TrueType numerical font to the GOT using the [Communicate with GOT] dialog box.

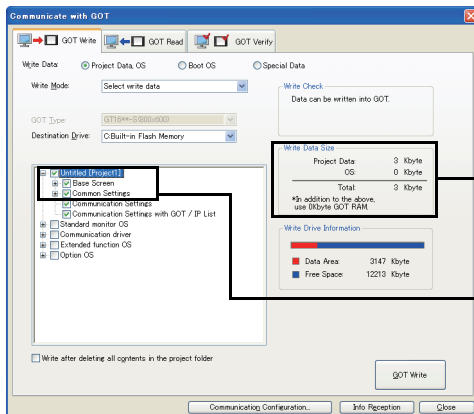


Confirm [Write Data Size].

Select [Standard monitor OS], and then select one TrueType numerical font.
Select the same font as set for [TrueType Numerical Font] in the [GOT Type Setting] dialog box.

(4) Windows® font

Install the font data to the GOT using the [Communicate with GOT] dialog box.
(The font data are included in the screen data.)



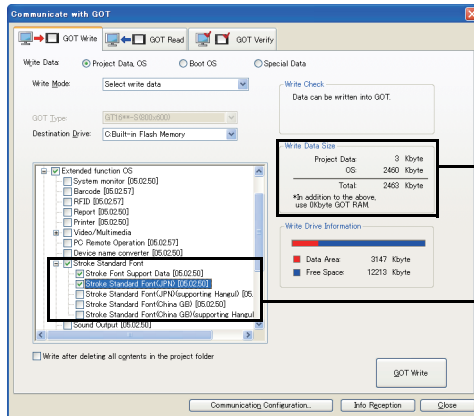
Confirm [Write Data Size].

Select the screen to be written to the GOT.

(5) Stroke font

(a) Stroke standard font (Extended)

Install the extended function OS (Stroke Standard Font) to the GOT using the [Communicate with GOT] dialog box.



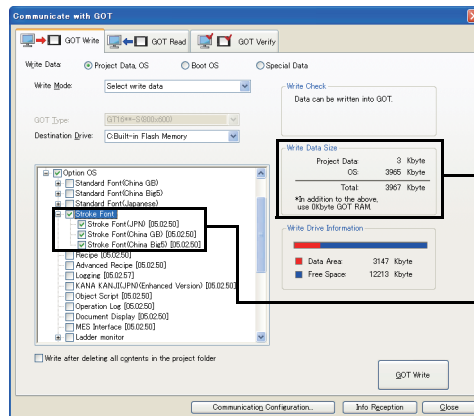
Confirm [Write Data Size].

Select [Extended function OS], and then select [Stroke Standard Font].

[Stroke Font Support Data] is automatically selected.

(b) Stroke font(Optional)

Install the option function OS (Stroke Font) to the GOT using the [Communicate with GOT] dialog box.



Confirm [Write Data Size].

Select [Option OS], select [Stroke Font].
Multiple fonts can be selected.

2.5.2 KANJI regions

Set the kanji region for displaying the Chinese characters other than the Chinese characters set for the standard font (Standard) and the stroke standard font (Extended).



Displaying Kanji in Windows® fonts

On the object which Windows® fonts can be specified, characters in the region corresponds to the selected Windows® fonts can be displayed.

➡ 2.5.1 ■Font specifications

■ Installing font data

For using the Chinese character specified for [Kanji Region], install the standard font data (Option) and the stroke font data (Option) to the GOT when the OS is installed.

■ Character strings that can be displayed

(1) Japanese characters

Chinese characters of the Shift JIS coding system are displayed.

Those other than the Shift JIS coding system are displayed in the manner shown below.

Item	Description
Kanji characters mapped in Unicode2.1	Kanji characters mapped in Unicode 2.1 are displayed. (For Kanji characters for which the same codes are used by Japanese Kanji characters, Japanese Kanji characters are displayed.)
Kanji characters not mapped in Unicode 2.1	Not displayed.

(2) China (GB) characters

Chinese characters of GB2312 code are displayed.

Kanji characters, other than GB2312 code, are displayed as shown below.

Item	Description
Kanji characters mapped in Unicode2.1	Kanji characters mapped in Unicode 2.1 are displayed. (For Kanji characters for which the same codes are used by Japanese Kanji characters, Japanese Kanji characters are displayed.)
Kanji characters not mapped in Unicode 2.1	Not displayed.

Characters shown below, which are not mapped in Unicode 2.1, are not displayed.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
082								α	μ	ν	ξ	η	g							
100		!	"	#	¥	%	&	'	(	)	*	+	,	-	.	/	0	1	2	3
102	4	5	6	7	8	9	:	;	<	=	>	?	@	A	B	C	D	E	F	G
104	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	[
106	\	\]	^	_	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
108	p	q	r	s	t	u	v	w	x	y	z	{	|	}						
110		ā	á	ă	à	ē	é	ě	è	ī	í	ĭ	ì	ō	ó	ö	ò	ū	ú	ŭ
112	ù	ū	ú	ŭ	ù	ü	ê	α	μ	ν	ξ	η	g	g						

The fonts of various countries are mixed depending on the character string.

As the font of China(GB) is Mincho, characters are displayed in Mincho even if Gothic has been selected for the font.

(3) China (Big5) characters

Chinese characters of Big5 code are displayed.

Kanji characters other than Big5 code, are displayed as shown below.

Item	Description
Kanji characters mapped in Unicode2.1	Kanji characters mapped in Unicode 2.1 are displayed. (For Kanji characters for which the same codes are used by Japanese Kanji characters, Japanese Kanji characters are displayed.)
Kanji characters not mapped in Unicode 2.1	Not displayed.

Characters shown below, which are not mapped in Unicode 2.1, are not displayed.

	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
A150											—					
A1C0				-		—										
A1F0																
A240	／															
A2C0													十		卅	
F9D0							碁	鏽	裏	墻	恒	粧	嫵	𠂇	𠂈	𠂉
F9E0	𠂊	𠂋	𠂌	𠂍	𠂎	𠂏	𠂐	𠂑	𠂒	𠂓	𠂔	𠂕	𠂖	𠂗	𠂘	𠂙
F9F0	𠂚	𠂛	𠂜	𠂝	𠂞	𠂟	𠂠	𠂡	𠂢	𠂣	𠂤	𠂥	𠂦	𠂧	𠂨	𠂩

The fonts of various countries may be mixed depending on character string.

As the font of China (Big5) is Gothic, characters are displayed in Gothic even if Mincho has been selected for the font.

■ TrueType font

The kanji region settings are inapplicable.

To specify a kanji region item, use a font other than TrueType.

■ Stroke fonts

The kanji region can be set.

For specifying the kanji region, install the option OS (Stroke font).

■ Windows® fonts

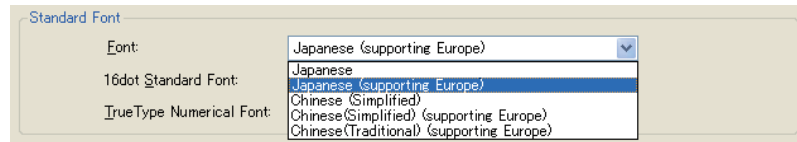
The kanji region settings are inapplicable. (setting is not necessary)

When specifying Windows® fonts item, characters in the region corresponding to the selected fonts can be displayed.

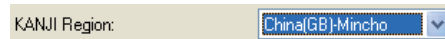
2.5.3 Application example

■ To display Japanese (supporting Europe) in the entire project while displaying Chinese (Simplified) characters for specific objects

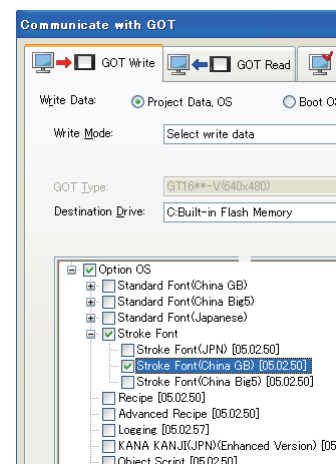
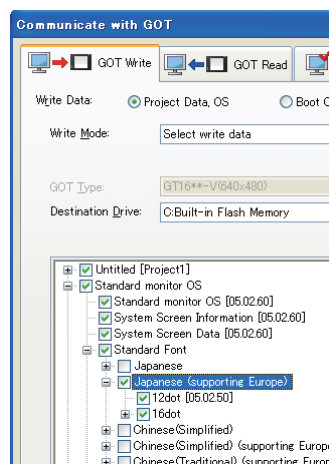
1. Select [Japanese (supporting Europe)] for [Font] in the [GOT Type Setting] dialog box.
☞ 4.1 GOT Type Setting



2. Create a screen.
For objects on which Chinese(Simplified) is displayed, set [Chinese(Simplified)] for [Kanji Region].
Setting of [Kanji Region] is required for each object.



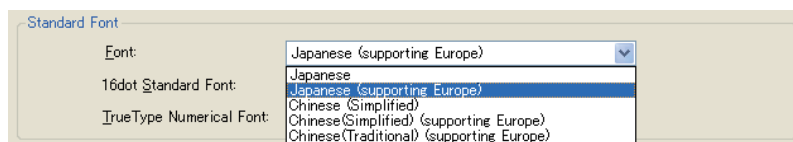
3. Install the font data to the GOT.
☞ 2.5.1 ■To display the font on GOT
For Standard Font(Standard), select [Japanese (supporting Europe)].
For Standard Font(Optional), select [China GB].



■ To display HQ fonts (1-byte European characters)

1. Select either of the following for [Font] in the [GOT Type Setting] dialog box.
 - [Japanese(supporting Europe)]
 - [Chinese(Simplified)(supporting Europe)]
 - [Chinese(Traditional)(supporting Europe)]

☞ 4.1 GOT Type Setting

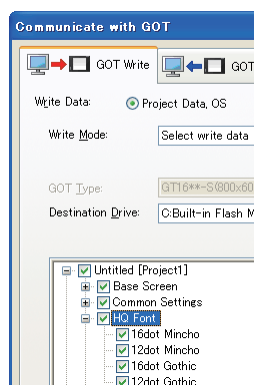


2. Create a screen data.
For objects on which HQ font should be displayed, select the HQ font for [Font].



3. Install the font data to the GOT.

☞ 2.5.1 ■To display the font on GOT



Displaying HQ font European characters in 2-byte characters

To display European characters in 2-byte characters, select [Japanese] or [Chinese(Simplified)] for [Font] in the [GOT Type Setting] dialog box.

☞ 4.1 GOT Type Setting

2.5.4 Font selection

Fonts applicable to the GOT varies depending on purposes.
Select the suitable font corresponding to the change method for font type.
The font selection guide is shown below.

Application	Font	
	Changing text size by 1-dot units	Changing text size by integral multiple rate
Non-switching the displayed text Example) Display texts with graphic characters	<ul style="list-style-type: none">• TrueType Mincho• TrueType Gothic• Stroke• Windows[®] font	<ul style="list-style-type: none">• 66×8 dot• 12dot Standard(Gothic)• 16dot Standar(Mincho/Gothic)• 12dot HQ Mincho• 12dot HQ Gothic• 16dot HQ Mincho• 16dot HQ Gothic
Switching and displaying the text with comments Example) Display comments that is switched by the comment display	<ul style="list-style-type: none">• Stroke	<ul style="list-style-type: none">• 12dot Standard(Gothic)• 16dot Standar(Mincho/Gothic)• 12 dot HQ Mincho• 12 dot HQ Gothic• 16 dot HQ Mincho• 16 dot HQ Gothic
Display the text with the numeric display, numeric input, date display, or time display.	<ul style="list-style-type: none">• TrueType Gothic• TrueType Numerical(Gothic/7-Segment)• Stroke	<ul style="list-style-type: none">• 66×8 dot• 12dot Standard(Gothic)• 16dot Standar(Mincho/Gothic)• 12dot HQ Mincho• 12dot HQ Gothic• 16dot HQ Mincho• 16dot HQ Gothic
Display the text with the ASCII display or ASCII input.	<ul style="list-style-type: none">• Stroke	<ul style="list-style-type: none">• 66×8 dot• 12dot Standard(Gothic)• 16dot Standar(Mincho/Gothic)

POINT

Precautions for using stroke font

Compared with other fonts, the stroke font requires extra time to display on the screen.

Note that switching the display with frequency or displaying many texts may cause the delay of screen-displayed.

2.5.5 Precautions

■ Precautions on drawing

- (1) **When the setting for the [GOT Type Setting] dialog box and the installed font data to the GOT are different**
Characters are displayed in Standard Font (Standard) installed to the GOT.
- (2) **When using Chinese (Simplified) (supporting Europe) for the standard font (Standard)**
European characters are not included in the Chinese government approved fonts.
To use the Chinese government approved fonts including European characters, select Chinese (Simplified) for the standard font (Standard).
- (3) **When using Japanese or Chinese (Simplified) for the standard font (Standard)**
It is not possible to select German for the system language that displays the utility.
To select German, set any of the following for the standard font (Standard).
 - Japanese (supporting Europe)
 - Chinese (Simplified) (supporting Europe)
 - Chinese (Traditional) (supporting Europe)
- (4) **Displaying objects on which KANJI region is set without installing option function board (GT15 only)**
The Chinese characters selected for the standard font (Standard) are displayed.
- (5) **When both of 2-byte and 1-byte characters exist in European characters of standard font and HQ font**
Install Standard Font (Standard), which has been set in the [GOT Type Setting] dialog box of GT Designer3, to the GOT.
If the Standard Font (Standard) installed to the GOT and the Standard Font (Standard) set in the [GOT Type Setting] dialog box of GT Designer3 are different, 2-byte and 1-byte characters may exist in the European characters of standard font and HQ font.
- (6) **Displaying symbols**
Symbols are included in the standard font (Standard).
The standard font (Option) includes only Chinese characters.
To display region dependent symbols correctly, select the font of the corresponding regions in the standard font (Standard).
- (7) **Character form difference when using Chinese (Simplified or Traditional)**
Some character forms may differ whether the stroke font is used or the other font is used.

16dot HQ Gothic:



Stroke font:



■ Precautions on hardware

To use the KANJI region with the GT15, mount an option function board to the GOT.
No option function board is required for GT16.
For GOTs with built-in option function boards, refer to the following.

 Appendix8 Precautions for Option Function Board

2.6 Specifications of Available Functions Set with GT Designer3

2.6.1 Specifications

POINT

- (1) **Difference of specifications depending on GOT type**
The specifications and precautions for each function may differ depending on the used GOT type.
- (2) **Maximum number of objects that can be set**
Up to 1024 objects can be set in one screen.
Up to 1024 input objects can be displayed, however, 1001th object or later will not operate.
1025th object or later is invalid. (The object will not operate.)
- (3) **Maximum number of objects in which trigger has been set to sampling**
Up to 100 objects can be set in one screen.
101st object or later is invalid. (The object will not operate.)

HINT

Data capacity for each function

For the data capacity when setting each function on GT Designer3, refer to the following.

➞ Appendix1 DATA CAPACITY LIST

■ Touch Switches

➞ (Functions) 2. TOUCH SWITCH

Function	Max. No. of setting objects in one screen	Model
Switch	GT16, GT15, GT11, GT SoftGOT1000: 1000 objects GT10: 50 objects (For objects in which maximum number of actions has been set: up to 10, for objects in which on delay and off delay has been set: up to 100)	GT16 GT15 GT11 GT10 SoftGOT 1000
Switch(Bit Switch)		
Switch(Word Switch)		
Switch(Go To Screen Switch)		
Switch(Change Station No. Switch)		GT16 GT15 GT11 GT10 SoftGOT 1000
Switch(Special Function Switch)		
Switch(Key Window Display Switch)		
Switch(Key Code Switch)		




■ Lamps

➞ (Functions) 3. LAMP

Function	Max. No. of setting objects in one screen	Model
Lamp(Bit Lamp)	1000 objects (including the figures with the lamp attribute)	GT16 GT15 GT11 GT10 SoftGOT 1000
Lamp(Word Lamp)		
Lamp(Lamp Area)		






■ Numeric value, character

☞ (Functions) 5. to 9.

Function	Max. No. of setting objects in one screen	Model
Numerical Display	1000 objects	
Numerical Input	1000 objects	
ASCII Display	1000 objects	
ASCII Input	1000 objects	
Data List Display	1 object	
Data Display	2 objects	
Time Display	2 objects	
Comment Display(Bit Comment)	1000 objects	
Comment Display(Word Comment)	1000 objects	
Comment Display(Simple Comment)	1000 objects	
Basic comment	32767 comments (for each project)	
Comment group	32767 comments (for each comment group)	

■ Alarms

☞ (Functions) 10. ALARM

Function	Max. No. of setting objects in one screen	Model
Advanced Alarm Display	1 object	
Advanced System Alarm Display	1 object	
Alarm History Display	1 object	
User Alarm Display	<ul style="list-style-type: none"> • GT16/GT15/GT11/GT SoftGOT1000: 24 objects (For objects with the memory storage setting: up to 16) • GT10: 1 object 	
System Alarm Display	1 object	
Advanced Alarm Popup Display	1 setting (For each project)	
Alarm Flow	1 setting (For each project)	

■ Graphs, meters

☞ (Functions) 11. to 19.

Function	Max. No. of setting objects in one screen	Model
Level	1000 objects	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Panelmeter	1000 objects	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Line Graph	32 (For objects with the locus mode settings: 1 for each project.)	
Trend Graph	24 (For objects with the memory storage setting: up to 16)	
Bar Graph	1000 objects	
Statistics Bar Graph	32 objects	
Statistics Pie Graph	32 objects	
Scatter Graph	24 objects (For objects with the memory storage setting: up to 16)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Historical Trend Graph	8 objects	Gr16 Gr15 Gr11 Gr10 SerGOT 1000

■ Parts

☞ (Functions) 20. to 21.

Function	Max. No. of setting objects in one screen	Model
Parts Display(Bit Parts)	1000 objects	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Parts Display(Word Parts)	1000 objects	
Parts Display(Fixed Parts)	1000 objects	
Parts Movement(Bit Parts)	1000 objects	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Parts Movement(Word Parts)	1000 objects	
Parts Movement(Fixed Parts)	1000 objects	

■ Data collection

☞ (Functions) 22. to 23.

Function	Max. No. of setting objects in one screen	Model
Operaton Log	1 setting (For each project)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Logging	32 settings (For each project)	

■ Recipe

☞ (Functions) 24. RECIPE

Function	Max. No. of setting objects in one screen	Model
Recipe	256 settings (For each project)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Advanced Recipe	2048 settings (For each project)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000

Trigger actions

☞ (Functions) 25. to 27.

Function	Max. No. of setting objects in one screen	Model
Device Data Transfer	255 settings (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Status Observation	512 settings (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Time Action	32 settings (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000

Scripts

☞ (Functions) 28. SCRIPT FUNCTION

Function	Max. No. of setting objects in one screen	Model
Script	256 settings (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Object Script Symbol		GT16 GT15 GT11 GT10 SoRGOT 1000
Object script function	-	GT16 GT15 GT11 GT10 SoRGOT 1000

Peripherals

☞ (Functions) 29. to 38.

Function	Max. No. of setting objects in one screen	Model
Bar Code	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
RFID	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Remote personal computer operation (Serial)	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Remote personal computer operation (Ethernet)	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Video/RGB Input	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Multimedia	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Operation Panel/External I/O	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
RGB output	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Report	8 screens (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Hard Copy	1 setting (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000
Sound Output	100 settings (For each project)	GT16 GT15 GT11 GT10 SoRGOT 1000

■ Useful functions

☞ 9. USEFUL FUNCTIONS FOR USING GOT

Function	Max. No. of setting objects in one screen	Model
Document Display	1 object	<div> <div>Gr16</div> <div>Gr15</div> <div>Gr11</div> <div>Gr10</div> <div>SoftGOT 1000</div> </div>
Set overlay screen	GT16, GT15, GT11, GT SoftGOT1000: 2047 objects GT10: 5 objects	<div> <div>Gr16</div> <div>Gr15</div> <div>Gr11</div> <div>Gr10</div> <div>SoftGOT 1000</div> </div>

■ Other functions


☞ GOT1000 Series Gateway Functions Manual for GT Works3 GOT1000 Series MES Interface Function Manual for GT Works3

Function	Max. No. of setting objects in one screen	Model
Gateway	Server, client function: 1 setting (For each project) Mail send function: 1 setting (For each project)	<div> <div>Gr16</div> <div>Gr15</div> <div>Gr11</div> <div>Gr10</div> <div>SoftGOT 1000</div> </div>
MES Interface	1 setting (For each project)	

2.7 Clock Function Specifications

GOT	Description
GT16, GT15, GT11, GT105□, GT104□, GT1030	The clock data of the GOT or controller is used.
GT1020	The clock data of the controller is used.
GT SoftGOT1000	The clock data of the personal computer is used.

For setting the clock data control of the GOT, refer to the following.

 4.9 GOT Display and Operation Setting


POINT

Clock function

(1) When controller has a clock

When the controller has a clock, match the GOT clock and controller clock.

For how to match the GOT clock and controller clock, refer to the following.

 4.9 GOT Display and Operation Setting

(2) When controller has no clock



For the GT16, GT15, GT11, GT105□, GT104□, and GT1030, use the GOT clock when the controller has no clock.

In this case, set the clock of the GOT with the utility.

For operating the utility, refer to the following.

 User's Manual for the GOT used

2.8 Supported Devices

Device type	Description	
GOT internal device	Devices located inside the GOT. They can be used regardless of a connection type of the GOT. (However, they cannot be controlled in sequence programs of the controller.) The GOT internal device includes the GOT bit register, GOT data register, and GOT special register.	
	GOT bit register (GB)	Bit register located inside the GOT and used as bit devices.
	GOT data register (GD)	Data register located inside the GOT and used as word devices.
	GOT special register (GS)	Special register located inside the GOT, which stores internal information, communication statuses, error information, and others. By monitoring GS with the object function, various information of the GOT can be checked.
Controller device	Device located in a controller. The controller device can be monitored with the GOT. For details of controller devices that can be set with GT Designer3, refer to the following.  Appendix.2.2 Device of Controllers	
System label	Label used commonly to each project in the workspace for iQ Works. Assign a controller device to a system label before using the system label. For setting the system label, refer to the following.  5.3.2 Label setting	

■ Setting range of GOT internal device

Device name		Setting range		Notation for device number
		GT16, GT SoftGOT1000	GT15, GT11	
Bit device	GOT bit register (GB)	GB0 to GB65535		GB0 to GB255
Word device	GOT data register (GD)	GD0 to GD65535		GD0 to GD127
	GOT special register (GS)	GS0 to GS2047	GS0 to GS1023	

For details of the GOT internal device that can be set with GT Designer3, refer to the following.

 Appendix.2.1 GOT internal devices

POINT

(1) Unusable GOT internal devices

When using GB and GS, do not set the reserved GOT internal devices.
 For the reserved GOT internal devices, refer to the following.

 Appendix.2.1 GOT internal devices

(2) Value in GOT internal device when the GOT is turned off or reset

When the GOT is turned off or reset, "0" is stored in the internal GOT.
 When writing the project data to the GOT, the value is held.
 When writing the controller setting to the GOT, "0" is stored.

HINT

Application of GB and GD


GB and GD are useful for processing in the areas where the devices do not have to be used in the controller.

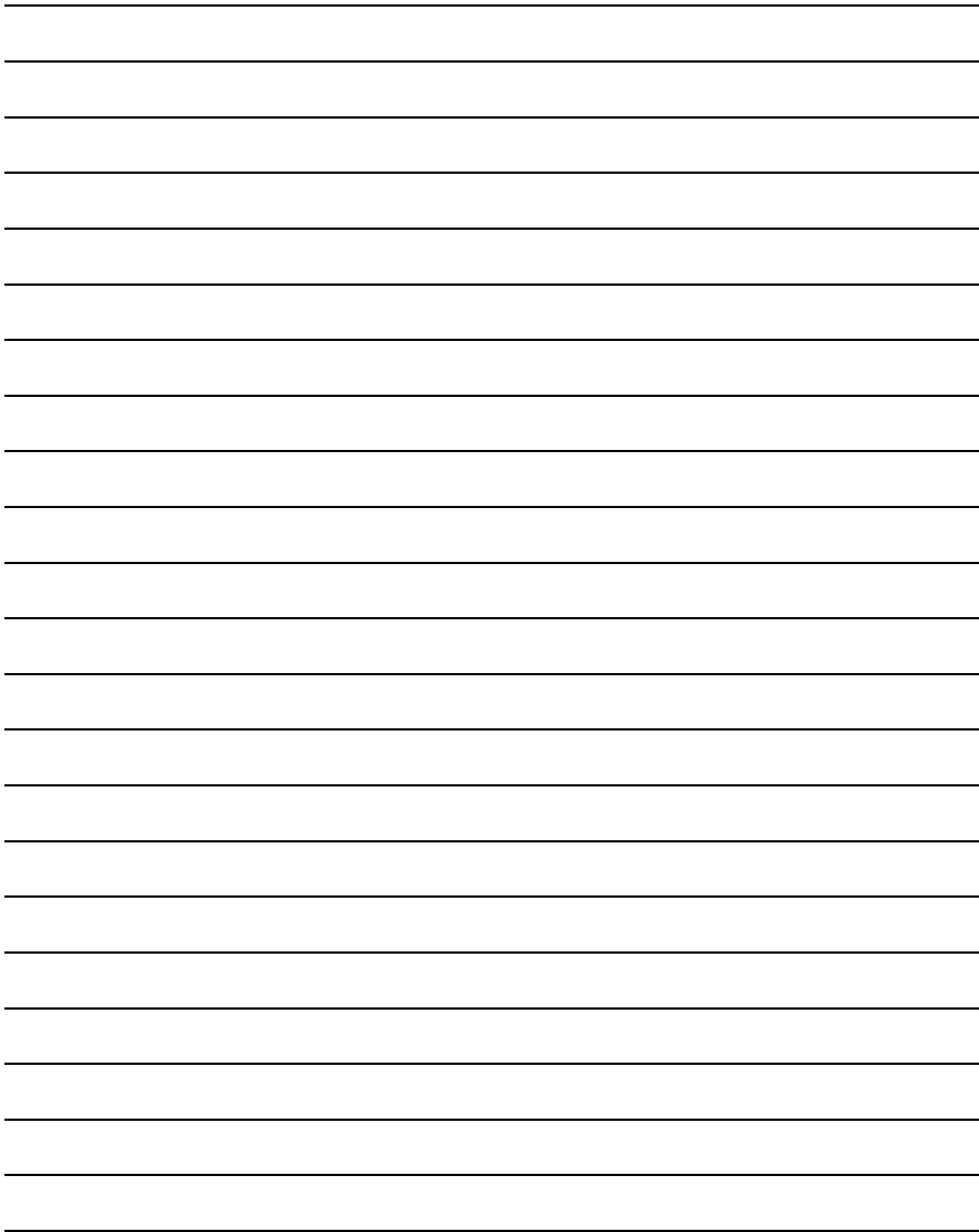
- Device for screen switching
- Work area for the script function
- Storage area for bar code read values etc

2.9 Available Numeric Data

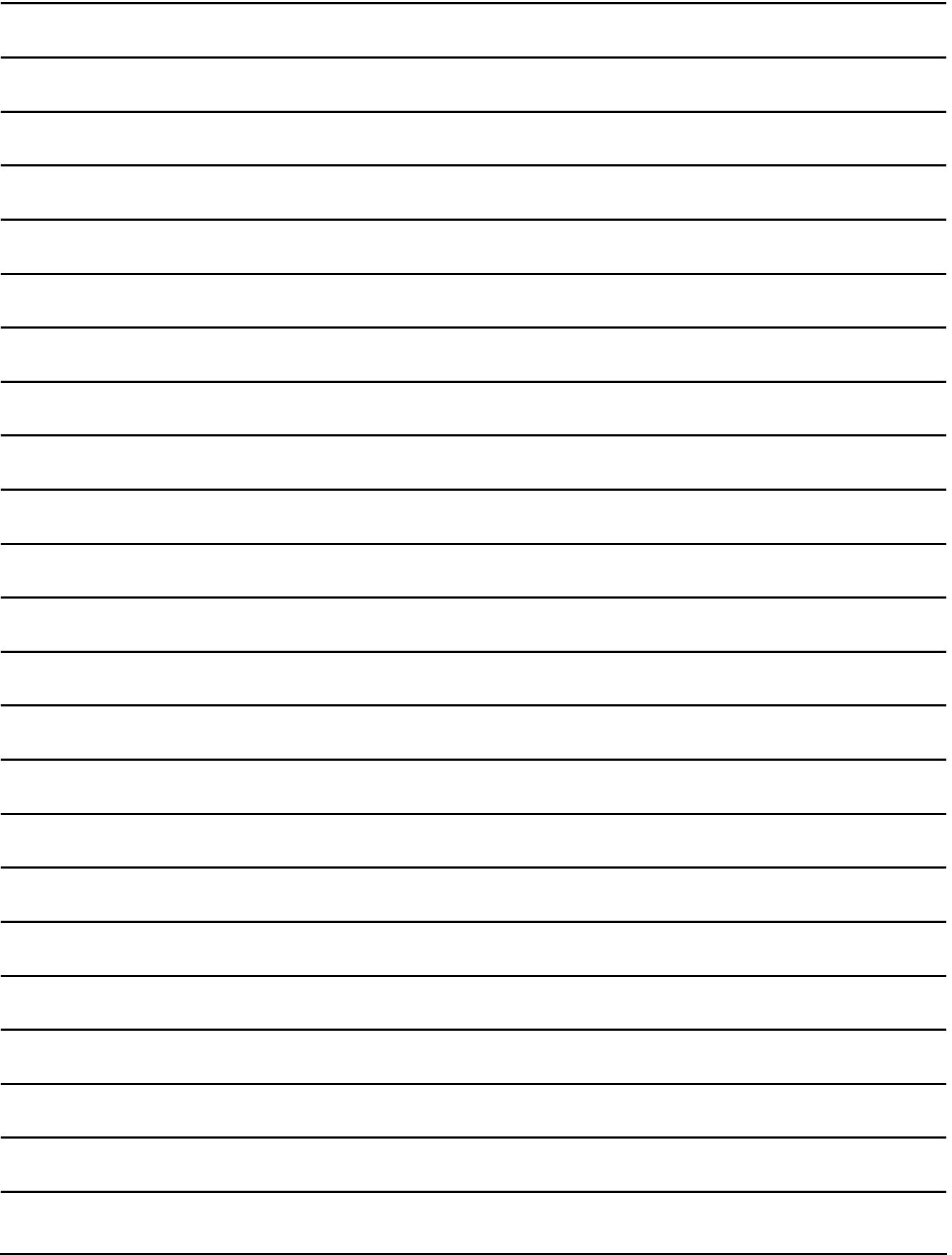
The following shows the numeric data type and data range that can be handled with GT Designer3.

Data type	Description	Data length	Data range
Signed BIN16	Binary value including a sign	16 bits	-32768 to 32767
Signed BIN32		32 bits	-2147483648 to 2147483647
Unsigned BIN16	Binary value including no sign	16 bits	0 to 65535
Unsigned BIN32		32 bits	0 to 4294967295
BCD16	Binary Coded Decimal	16 bits	0 to 9999
BCD32		32 bits	0 to 99999999
Real	Floating point type real	32 bits	Signed 13-digit notation (floating point format only)*1

- *1 The real number precision is given up to the sixth decimal place.
The accuracy of the 7th and later decimal places cannot be guaranteed.
If a number having 7th and later digits is displayed on GOT, there are cases the displayed value differs from the value displayed on programming software of controller.
Example: When the value of a real number (floating point data) of the controller is 4.123
- Display on programming software of controller : 4.123000
 - Display on GOT (display of up to 6th digit) : 4.123000
 - Display on GOT (display of up to 13th digit) : 4.1230001449585
- For details of real number (floating point data), refer to the following.
-  QCPU User's Manual (Function Explanation, Program Fundamentals)



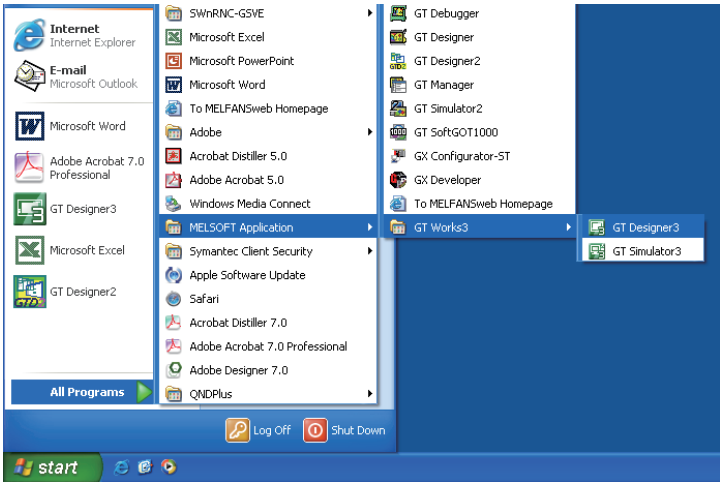
GT Designer3 OPERATION



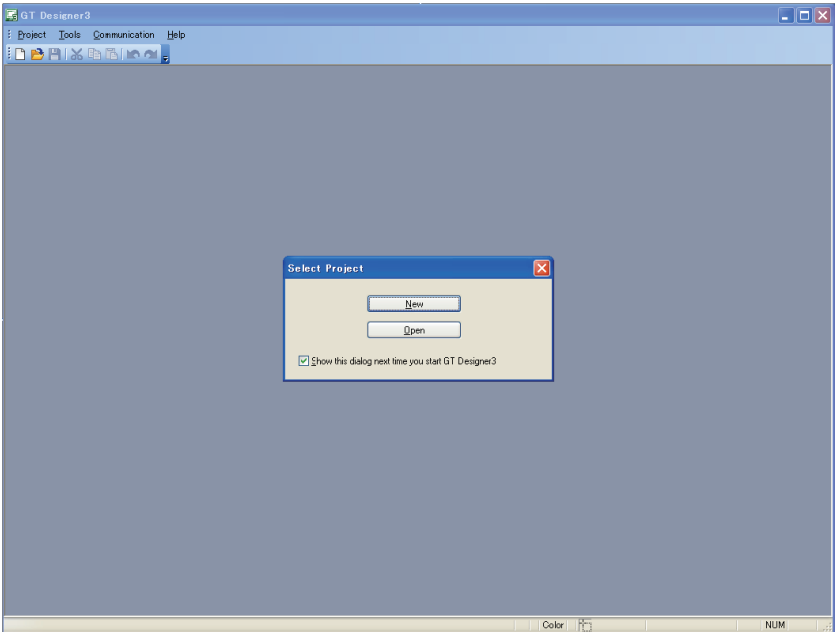
3. GT Designer3 OPERATION





3.1 Starting GT Designer3

1. Select [Start] → [All Programs] → [MELSOFT Application] → [GT Works3] → [GT Designer3] to start GT Designer3.



2. GT Designer3 is started and the [Select Project] dialog box is displayed. Select whether to create a new project or to open the existing project.



Item	Description
	Click this button to create a new project. For subsequent procedures, refer to the following.  3.6.1 Creating a new project
	Click ct this button to open the existing project. For subsequent procedures, refer to the following.  3.6.2 Opening/closing a project
Show this dialog next time you start GT Designer3	Clear this item not to display the [Select Project] dialog box next time GT Designer3 is started.

POINT

Starting GT Designer3 on iQ Works

For iQ Works, start GT Designer3 from MELSOFT Navigator.

When GT Designer3 is not started from MELSOFT Navigator, some functions of iQ Works are disabled.

For starting GT Designer3 from MELSOFT Navigator, refer to the following.

 Help for MELSOFT Navigator


HINT

Setting of displaying Select Project dialog box

Whether to display the [Select Project] dialog box or not when starting GT Designer3 can be set by selecting the following item in the [Options] dialog box.

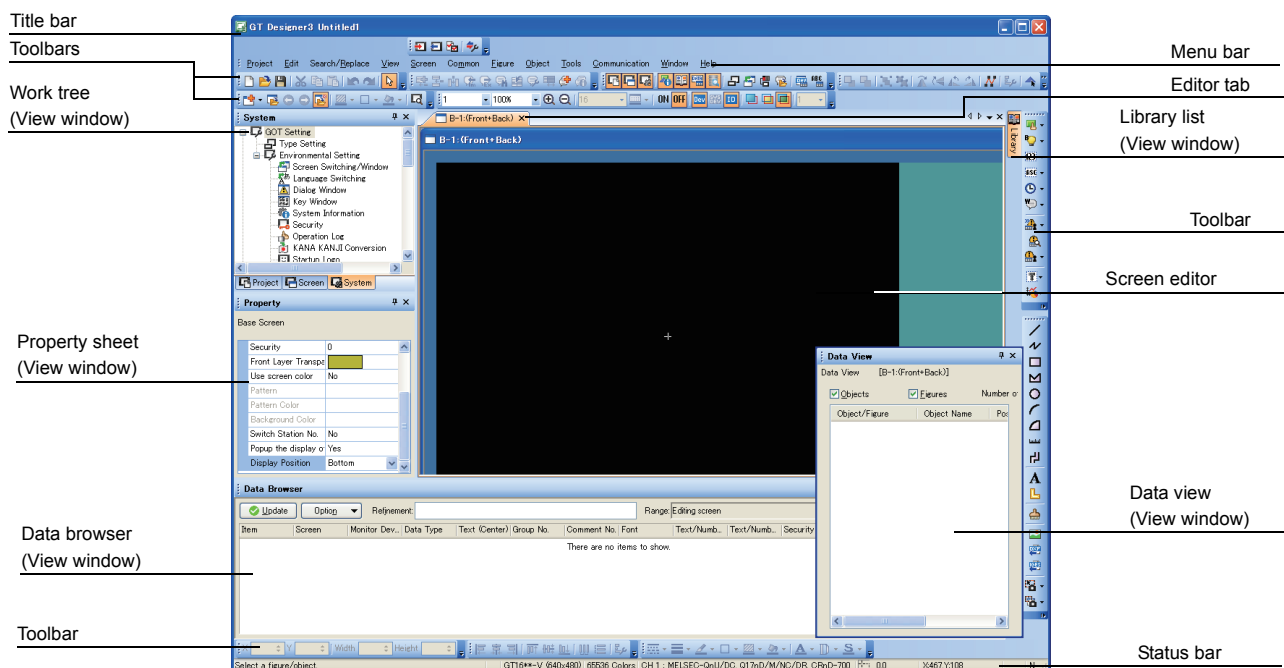
- [Display the project selection dialog at the time of startup] in the [Operation] tab

For the [Options] dialog box, refer to the following.

 3.5.3 Customizing actions and default value of GT Designer3

3.2 Screen Configuration of GT Designer3

The following shows the screens, toolbars, and screen configurations for windows of GT Designer3.



Item	Model		Reference
Title bar	Names of software, project, or project file is displayed.		-
Menu bar	GT Designer3 can be operated from the drop down menu.		3.3
Toolbar	GT Designer3 can be operated by selecting icons.		3.4
Editor tab	Tabs of opened screen editor, the [GOT Type Setting] dialog box, or the [Environmental Setting] dialog box are displayed.		3.2.1
Screen editor	Screens displayed on the GOT can be created. Arrange figures and objects in the screen editor.		3.7
View window	The view window includes the following.		-
	Work tree	The work tree includes the project tree, screen list tree, and system tree. The work tree is combined by default.	3.2.2
	Property sheet	The screen, figure, or object settings can be displayed and edited as a list. The property sheet is combined by default. ☞ 3.5.1 Customizing screen configuration	8.4
	Library list	Figures or objects registered in the library can be displayed as a list. The library list is combined by default. ☞ 3.5.1 Customizing screen configuration	6.
	Controller type list	The controller settings can be displayed as a list.	-
	Data view	Figures or objects arranged in the screen can be displayed as a list.	3.5.3
	Screen image list	The thumbnail display, screen creation, or screen edit of base screen/window screen is available.	3.7.2
	Category list	Figures or objects can be displayed for each category.	8.5.1
	Parts image list	Figures registered as a part can be displayed as a list. Also registering and editing parts is available.	4.12
Status bar	Data browser	Figures or objects used for a project can be displayed as a list. The figures or objects in the list can be searched or edited.	8.5.6
	The explanation of the menu or icon on which a cursor is placed, and the GT Designer3 status are displayed.		-

3.2.1 Operating editor tab

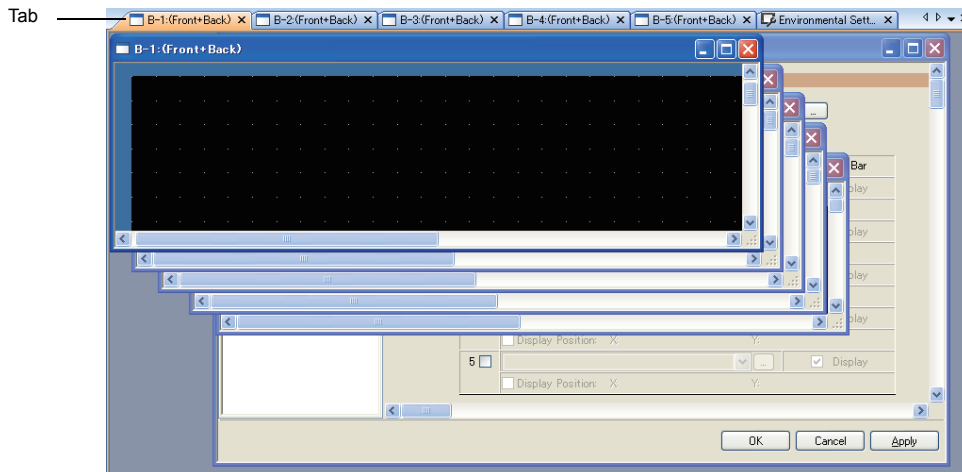
The editor tab displays tabs of the currently displayed screen editor, the [Environmental Setting] dialog box, the [Controller Setting] dialog box, or others.

The screen to be edited can be brought to the top front by selecting the tab.

The screen can be closed by closing the tab.

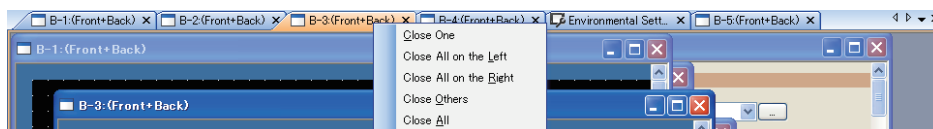
■ Basic operation of editor tab

(1) Editor tab



Item	Description
Tab	Displays tabs of currently opened screen editor or others. The display order of tabs can be switched by dragging the tab.
	Click this button to scroll the tabs to the left or right. This item is enabled when the tabs are full in the editor tab.
	Click this button to display the currently opened screen editor or others in the drop down menu. To bring the screen to the top front, select the screen in the drop down menu.
	Click this button to close the selected tab.

(2) Menu displayed by right-clicking on the tab



Item	Description
Close One	Closes the right-clicked tab.
Close All on the Left	Closes all the tabs displayed to the left of the right-clicked tab.
Close All on the Right	Closes all the tabs displayed to the right of the right-clicked tab.
Close Others	Closes all the tabs other than the right-clicked tab.
Close All	Closes all tabs.



Editor tab display (displayed or hidden)

The editor tab can be displayed or hidden with [Editor Tab] displayed by selecting [View] from the menu.

➞ 3.5.1 Customizing screen configuration

3.2.2 Operating work tree


The work tree displays the common settings for a project or created screens for each data type in the tree structure. The data of the overall project can be managed or edited easily. The work tree includes the following.

Type	Description
Project Tree	The overall project settings are displayed in the tree structure.
Screen List Tree	Screens existing in the currently-creating project are displayed respectively for the base screen, window screen, and report screen in the tree structure.
System Tree	The settings for the GOT, peripherals, or controllers are displayed in the tree structure.



Customizing the view window

For customizing the view window, refer to the following.

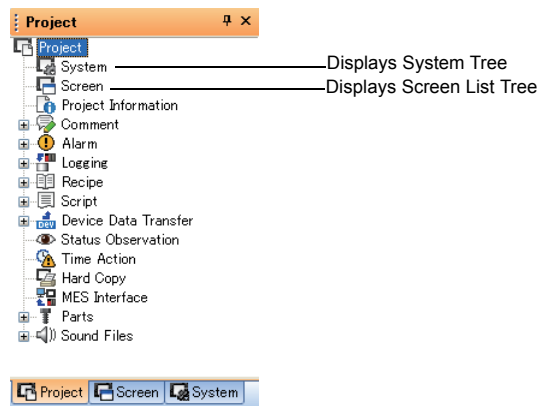
 3.5.1 Customizing screen configuration

■ Basic operation of work tree

(1) Project Tree

The common settings for project are displayed in the tree structure.

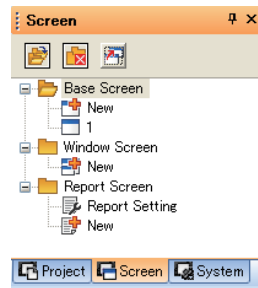
The creation and edit of settings, or switching of the work trees are available by double-clicking or with the menu displayed by right-clicking.



(2) Screen List Tree

Screens existing in the currently-creating project are displayed respectively for the base screen, window screen, and report screen in the tree structure.

The creation and copy of screens is available by double-clicking or with the menu displayed by right-clicking.

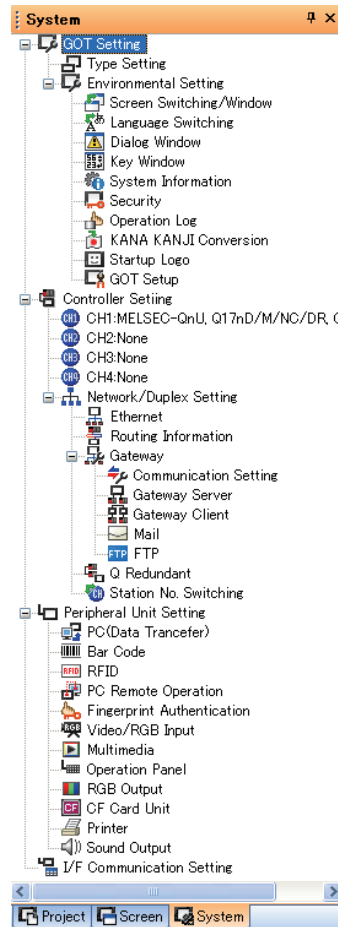


Item	Description
	Click this button to display all screens existing in a project respectively for the base screen, window screen, and report screen.
	Click this button to hide all screens existing in a project respectively for the base screen, window screen, and report screen.
	Click this button to display or hide the name of the called screen. 9.2 Changing Screen According to Situation (Set Overlay Screen)

(3) System Tree

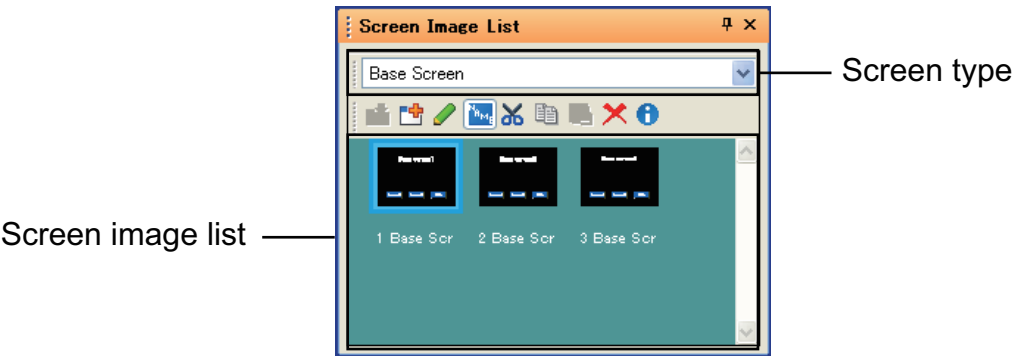
GOT Type Setting, Environmental Setting, Controller Setting, and Peripheral Unit Setting are displayed in the tree structure.










Each setting dialog box is displayed by double-clicking.




3.2.3 Operation of screen image list

Select [View] → [View Window] → [Screen Image List] from the menu to display the [Screen Image List] window.



Item	Description
Screen type	Select the screen type to be displayed as thumbnails in the screen image list.
	Creates a new screen, and arranges the selected figure and object on the new screen. → 3.7.1 Creating a new screen
	Creates a new screen of the same screen type selected for the screen type. → 3.7.1 Creating a new screen
	Displays the selected screen on the screen editor.
	Switches the display type of screen number or title for each screen in the screen image list (display or non-display).
	Cuts the selected screen.
	Copies the selected screen.
	Pastes the copied or cut screen.
	Deletes the selected screen.
	Displays the [Screen Property] dialog box for the selected screen. → 3.9 Changing Screen Property
Screen image list	Displays screen images of the same screen type selected for the screen type.

3.3 Menu Configuration


 Project Edit Search/Replace View Screen Common Figure Object Tools Communication Window Help

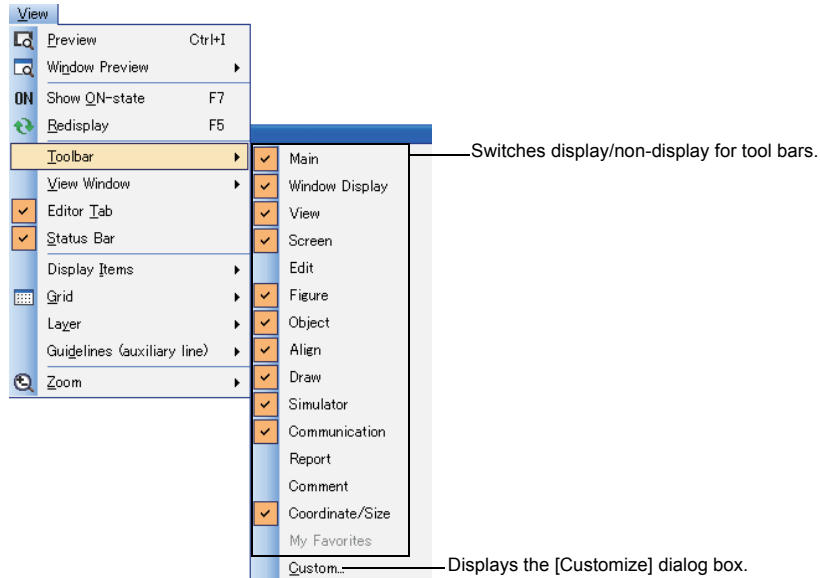
Item	Description
Project	Contains the following functions and others: Creating/saving projects, opening existing projects, setting project information, or printing.
Edit	Contains the following functions and others: Copying/pasting/deleting arranged figures and objects, or redoing edit operation.
Search/Replace	Contains the following functions and others: List display/searching/batch editing of devices and texts set in a project.
View	Contains the following functions and others: Displaying previews, or selecting whether to display or hide the toolbar/view window/editor tab/status bar.
Screen	Contains the following functions and others: Utilizing/creating screens, opening/closing screens, or editing screens.
Common	Contains the following functions and others: Setting for overall project including type setting of the used GOT, controller setting, or comment.
Figure	Contains the following functions and others: Drawing figures, painting figures, or installing image data.
Object	Contains the following functions and others: Setting for objects arranged in the screen including touch switches and lamps.
Tools	Contains the following functions and others: Data error check, data size check, system label update or check, starting GT Simulator3, or customizing the drawing environment.
Communication	Contains the following functions and others: Writing data to the GOT, reading data from the GOT, or project verification between the GOT and a personal computer.
Window	Contains the following function and others : Aligning the screen editors.
Help	Contains the following functions and others: Viewing the PDF manual regarding GT Designer3, or checking the software version.

The menu configuration varies according to the selected GOT type.

3.4 Type of Tool Bars and Short Cut Keys













The following types of toolbars are available.

Whether to display or hide the tool bars can be set with the [View] from the menu. (For the displayed tool bar,  is displayed to the left.)





























■ Main



Icon	Description	Shortcut key
	Creates a new project.  3.6.1 Creating a new project	Ctrl+N
	Opens an existing project.  3.6.2 Opening/closing a project	Ctrl+O
	Overwrites the project currently being edited.  3.16.1 Saving GT Designer3 project	Ctrl+S
	Cuts the selected figures, objects, and others.	Ctrl+X
	Copies the selected figures, objects, and others.	Ctrl+C
	Pastes the selected figures, objects, and others.	Ctrl+V
	Cancels the last operation to recover the status before change.	Ctrl+Z
	Redoes the canceled operation.	Ctrl+Y
	Selects figures and objects.	-

■ Window Display



Icon	Description	Shortcut key
	Switches the display type of the project tree (display or non-display).  3.2.2 Operating work tree	Alt+0
	Switches the display type of the screen list tree (display or non-display).  3.2.2 Operating work tree	-
	Switches the display type of the system tree (display or non-display).  3.2.2 Operating work tree	-
	Switches the display type of the property sheet (display or non-display).  8.4 Displaying in List and Editing Screen/Figure/Object Settings (Property sheet)	Alt+1
	Switches the display type of the library list window (display or non-display).  6. LIBRARY	F9
	Switches the display type of the data view window (display or non-display).  8.5.3 Selecting overlapped figure (Data view)	-
	Switches the display type of the data browser (display or non-display).  8.5.6 Searching and editing figures/objects in project data (Data browser)	-
	Displays the [GOT Type Setting] dialog box.  4.1 GOT Type Setting	-
	Displays the [Environmental Setting] dialog box (Screen Switching/Window).  4.2 Screen Switching Device Setting	-
	Displays the [Controller Setting] dialog box.  GOT1000 Series Connection Manual for GT Works3 and a controller used	-
	Displays the [Open Comment Group] dialog box.  4.11 Comment Setting	-
	Displays the [Device List] dialog box.  8.5.4 Checking devices in use (Device list)	-
	Displays the [Text List] dialog box.  8.5.5 Checking text in use (Text list)	-

View



Icon	Description	Shortcut key
	Snap movement of the cursor is set.	
	Screen display magnification of the screen editor is set (50% to 400%).	
	Screen display magnification of the screen editor can be zoomed in by 10% increments.	Ctrl+Num+
	Screen display magnification of the screen editor can be zoomed out by 10% increments.	Ctrl+Num-
	Grid spacing of the screen editor is set.	
	Grid color of the screen editor is set.	-
	Switches screen images of the screen editor when a device is turned on or turned off.	F7/F8
	Switches the display type of devices (display or non-display).	-
	Switches the display type of a device assigned to a system label (display or non-display).	-
	Switches the display type of object IDs (display or non-display).	-
	Displays the front layer. 3.8.2 Layer display switching operation	-
	Displays the back layer. 3.8.2 Layer display switching operation	-
	Displays with the front layer and back layer overlaid. 3.8.2 Layer display switching operation	-
	The preview column No. of the language switching is set. 4.3 Language Switching Device Setting	-

Screen


















Icon	Description	Shortcut key
	Creates a new screen. 3.7.1 Creating a new screen	-
	Opens closed screens. 3.7.2 Opening/closing a screen	-
	Opens a screen of which screen No. is smaller by one than that of the screen currently being edited.	-
	Opens a screen of which screen No. is larger by one than that of the screen currently being edited.	-
	When opening screens with Left or Right arrow button, switches the display type of the closed screens (opening or closing the closed screens). 3.7.2 Opening/closing a screen	-
	Sets the color of screen back ground pattern of screen.	-
	Sets the back ground pattern of screen.	-
	Sets the back ground color of screen.	-
	Displays a preview window of screen. 3.11 Viewing Created Screen Image	Ctrl+I

■ Edit



☞ 5.2 Editing Figure and Object

Icon	Description	Shortcut key
	Places the selected figures and objects in the front.	-
	Places the selected figures and objects in the back.	-
	Groups the selected figures and objects.	Ctrl+G
	Cancels grouping of the selected figures and objects.	Ctrl+U
	Flips the selected figures horizontally.	Ctrl+H
	Flips the selected figures vertically.	Ctrl+J
	Rotates the selected figures 90 degrees to the right.	Ctrl+R
	Rotates the selected figures 90 degrees to the left.	Ctrl+L
	Changes the length of freeform lines or polygon lines.	-
	Aligns the selected figures and objects.	-
	Selects only figures.	-
	Selects only objects.	-
	Selects both figures and objects.	-
	Selects whether the overlay screen is selected or not.	-
	Selects whether [Adjust Direct Text Size] is valid or invalid.	-

Figure














GT Designer3 Version1 Screen Design Manual (Functions)

Icon	Description	Shortcut key
	Draws a line.	-
	Draws a continuous line.	-
	Draws a rectangle.	-
	Draws a polygon.	-
	Draws a circle.	-
	Draws an arc.	-
	Draws a sector.	-
	Draws a scale.	-
	Draws a piping figure.	-
	Sets a text.	-
	Sets a logo text.	-
	Paints with a selected color and pattern.	-
	Imports and pastes BMP or JPEG file on the screen editor.	-
	Imports and pastes DXF file on the screen editor.	-
	Imports and pastes IGES file on the screen editor.	-
	Captures the specified rectangular range area in BMP/JPEG format, and pastes it on the screen editor.	-
	Captures the specified window in BMP/JPEG format, and pastes it on the screen editor.	-

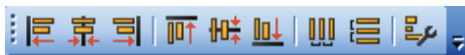
Object












☞ GT Designer3 Version1 Screen Design Manual (Functions)

Icon	Description	Shortcut key
	Sets a touch switch. ☞ (Functions) 2. TOUCH SWITCH	-
	Sets a lamp.	-
	Sets the numerical display or numerical input.	-
	Sets the ASCII display or ASCII input.	-
	Sets the date display or time display.	-
	Sets the comment display.	-
	Sets the advanced alarm display.	-
	Sets the alarm history.	-
	Sets the alarm display.	-
	Sets the parts display.	-
	Sets a graph.	-

Align



☞ 5.2 Editing Figure and Object

Icon	Description	Shortcut key
	Aligns selected figures and objects with the leftmost figure or object.	-
	Aligns selected figures and objects at the center horizontally.	-
	Aligns selected figures and objects with the rightmost figure or object.	-
	Aligns selected figures and objects with the uppermost figure or object.	-
	Aligns selected figures and objects at the center vertically.	-
	Aligns selected figures and objects with the lowermost figure or object.	-
	Aligns selected figures and objects evenly in the horizontal direction.	-
	Aligns selected figures and objects evenly in the vertical direction.	-
	Displays the [Align] dialog box.	-

■ Draw



☞ GT Designer3 Version1 Screen Design Manual (Functions)

Icon	Description	Shortcut key
	Sets the line style of figures.	-
	Sets the line width of figures.	-
	Sets the line color of figures.	-
	Sets the pattern of figures.	-
	Sets the color of figure patterns.	-
	Sets the background color of figures.	-
	Sets the text color of figures.	-
	Sets the text style of figures.	-
	Sets the text solid color of figures.	-

■ Simulator



☞ 8.10 Starting Up Simulator (GT Simulator3)

Icon	Description	Shortcut key
	Starts GT Simulator3.	-
	Updates the project being simulated with GT Simulator3 by the project being edited with GT Designer3.	-
	Changes the GT Simulator3 setting and others.	-
	Ends GT Simulator3.	-

■ Communication



☞ 7. COMMUNICATION WITH GOT

Icon	Description	Shortcut key
	Writes data to the GOT.	-
	Reads out data from the GOT.	-
	Verifies projects between the GOT and a personal computer.	-
	Configure the communication setting.	-

■ Report



☞ (Functions) 36. REPORT FUNCTION

Icon	Description	Shortcut key
	Draws a line (rectangle).	-
	Sets a text.	-
	Sets the numerical value for printing.	-
	Sets the comment (Bit) for printing.	-
	Sets the comment (Word) for printing.	-
	Sets the header row.	-
	Sets the repeat row.	-
	Selects only the report rows.	-

■ Comment

For the comment toolbar, refer to the following.

☞ 4.11.2 Basic operations for comment registration

■ Coordinate/Size



☞ 5.2 Editing Figure and Object

Icon	Description	Shortcut key
	The X coordinate that is on the top-left of selected figure or object is set.	-
	The Y coordinate that is on the top-left of selected figure or object is set.	-
	The width of selected figure or object is set.	-
	The height of selected figure or object is set.	-

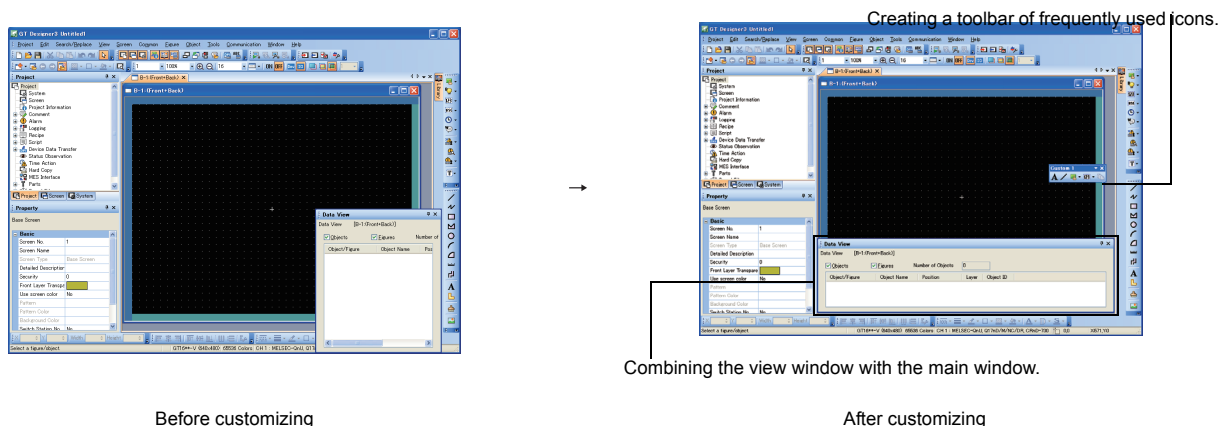
■ My favorites

My favorites can be displayed by registering data of my favorites in the library.

The registered figures and objects in my favorites can be displayed as my favorites toolbar.

3.5 Customizing Screen Configuration and Toolbars

Screen configuration and toolbars can be customized on the GT Designer3 to facilitate operation by users.



POINT

Customized screen on GT Designer3

(1) At the next start-up

GT Designer3 memorizes the customized settings of the screen configuration.
At the next start-up, the previously customized status screen is displayed.

(2) When setting the security for project

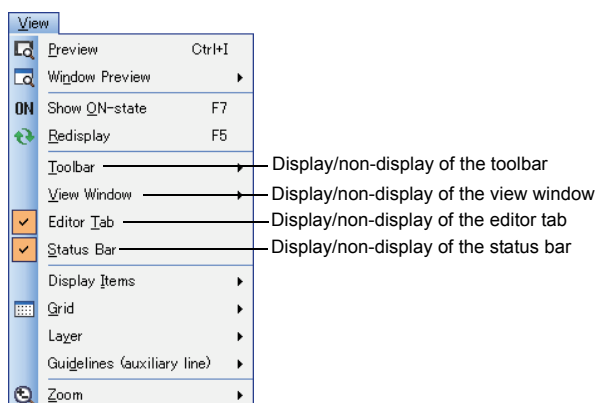
When registering a user for a project, GT Designer3 memorizes the customized settings for each user.
The customized settings for grids can be memorized in project units.

☞ 3.5.3 Customizing actions and default value of GT Designer3

3.5.1 Customizing screen configuration

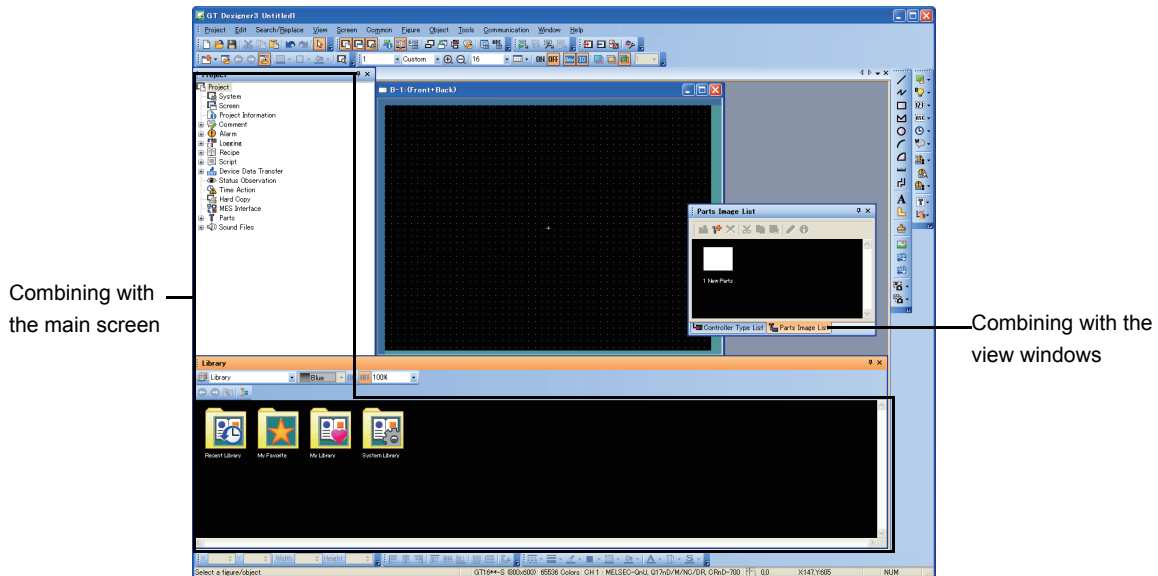
■ Switching of display/non-display

Toolbars and view windows can be switched between displayed and hidden by [View] selecting from the menu.



■ Combining view windows

The view window can be combined with other view window or the main screen on GT Designer3.
The combined view windows can be displayed or hidden as required.

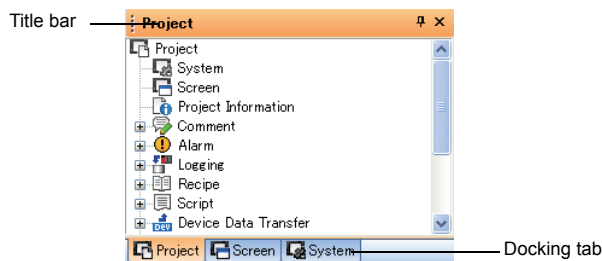






For types of the view windows, refer to the following.

☞ 3.2 Screen Configuration of GT Designer3

(1) Basic operation of the view window

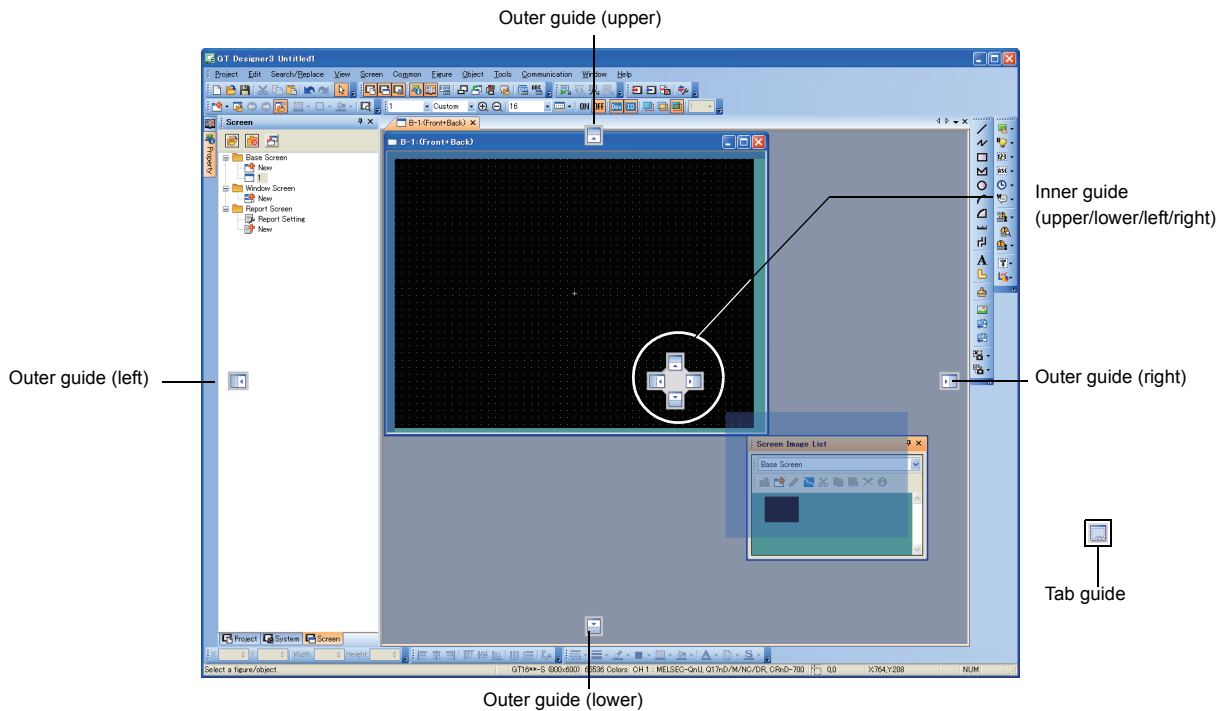
The following shows the basic operation of the view window using the work tree as an example.



Item	Description
Title bar	Dragging the title bar moves the view window. A guide line for combining (docking guide) is displayed when dragging.
 (Pushpin icon)	Switching between enabled and disabled of autohide for the view window. <ul style="list-style-type: none">  : Autohide disabled  : Autohide enabled
	Hides the view window. To redisplay the view window, use [View] selecting from the menu.
Docking tab	Clicking the docking tab switches the view windows. The docking tab appears when the view windows are combined. To release the combined windows, drag the docking tab.

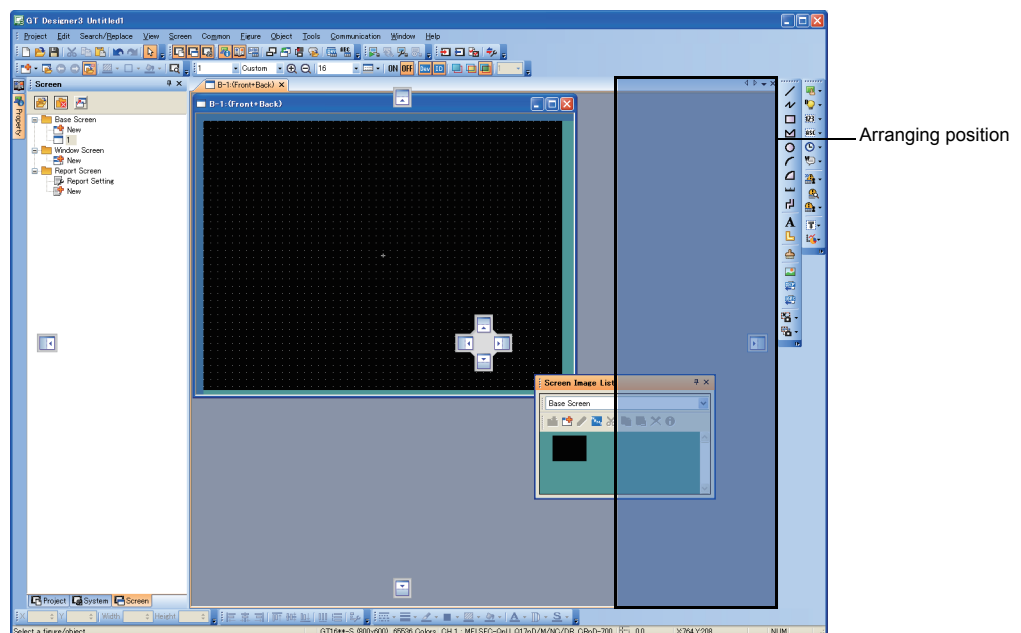
(2) Operation for combining

1. To display the docking guide, drag the title bar of the view window to be combined. The docking guide includes the inner guide, tab guide, and outer guide.

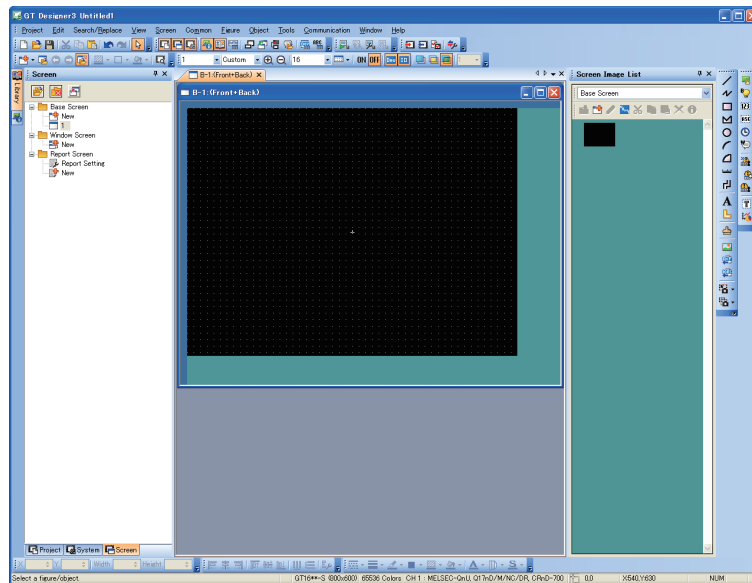


Item	Description
Inner guide (upper/lower/left/right)	Combines the view window to inner side than a already-combined view window.
Tab guide	The tab guide is displayed in the center of the inner guide when dragging to other view windows. Combines one view window to other view window.
Outer guide (upper/lower/left/right)	Combines the view window to outer side than a already-combined view window.

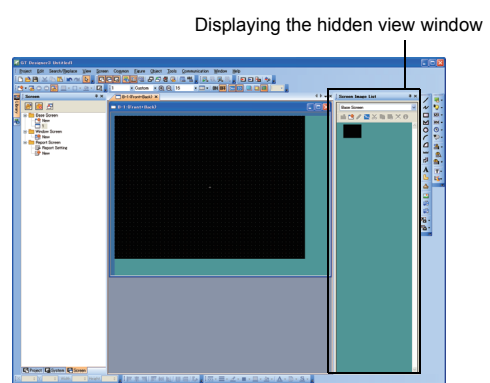
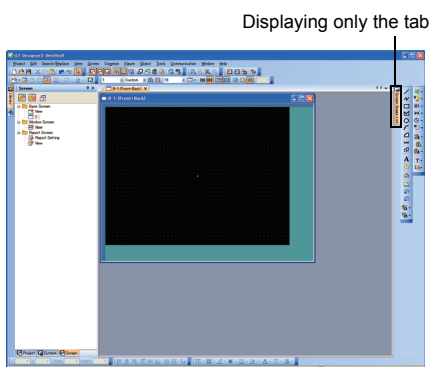
2. To display the arranged position of the view window when combined, place the cursor to the docking guide while dragging the view window.



3. To combine the view window in the position where the arranged position is displayed, drop the view window on the docking guide.



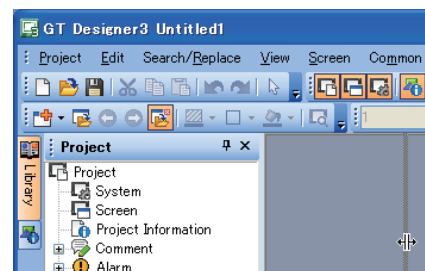
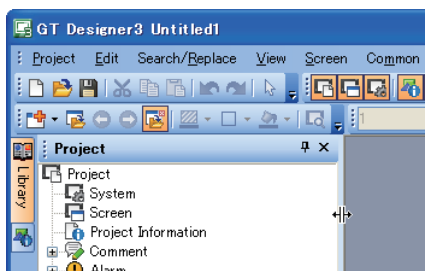
4. When the autohide is enabled by the pushpin icon (📌), only the tab is displayed. To display the combined view window, place the cursor to the tab.



- (3) **Operation for combining release**
 Disable the autohide (📌) of the combined view windows.
 To release the combining, drag the title bar of the combined view window.
 (Also, the combining can be released by double-clicking the title bar.)
 To release the combining of the view windows, drag the docking tab.
 (Also, the combining can be released by double-clicking the docking tab.)

■ Changing the view window size

To change the view window size, place the cursor to the view window frame and drag.



3.5.2 Customizing the toolbars

Switching of display/non-display for toolbars, addition/deletion of icons, and others are available.

■ Setting

Select [Tools] → [Customize] from the menu to display the [Customize] dialog box.

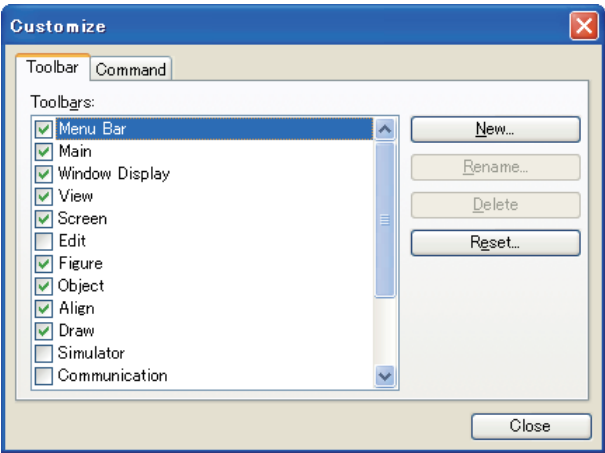
POINT


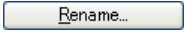
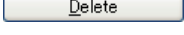
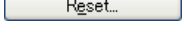
Timing when setting of the Customize dialog box is reflected

The contents set with the [Customize] dialog box are reflected immediately after the operation.
This operation cannot be cancelled.

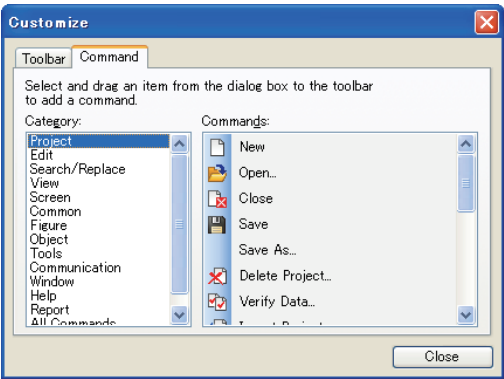
(1) Toolbar tab

Toolbars can be created or edited.



Item	Description	Model
Toolbars	Toolbars are displayed as a list. Select the toolbars to be displayed on GT Designer3.	<div>GT16GT15 GT11GT10 SoftGOT 1000</div>
	Click this button to display the [New Toolbar] dialog box. To create a toolbar, enter [Toolbar name] and then click the [OK] button.	
	Clicking this button displays the [Rename Toolbar] dialog box and enables to change the name of toolbar. This button is available only for user-created toolbars. To change the name of toolbar, enter [Toolbar name] and then click the [OK] button.	
	Click this button to delete toolbars. This button is available only for user-created toolbars.	
	Click this button to reset the selected toolbar to default status. This button is available only for toolbars setting on GT Designer3 by default.	

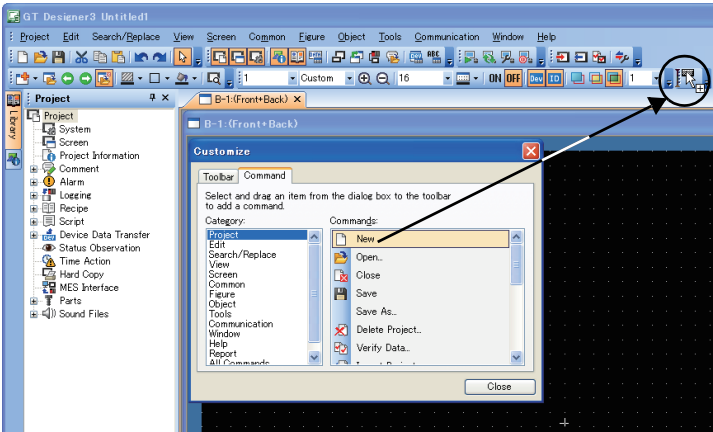
- (2) **Command tab**
Icons of toolbars are added or deleted.



Item	Description	Model
Category	Displays a category of icons.	Gr16Gr15
Commands	Displays icons according to the selected item in [Category].	Gr11Gr10 SoftGOT1000

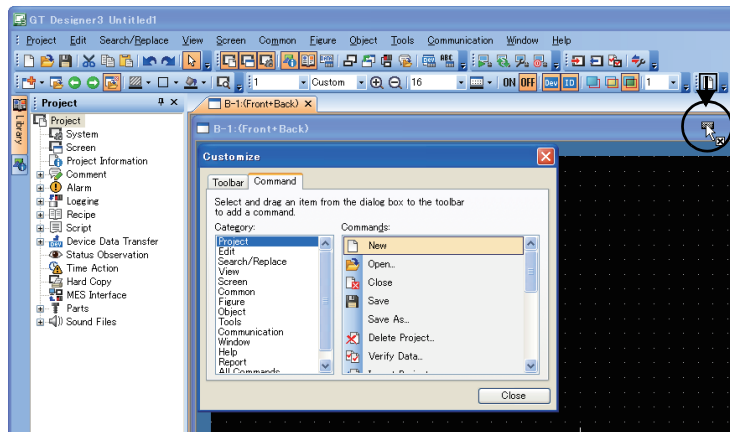
- **Operation of editing icons**
Editing icons is available only when the [Customize] dialog box is displayed.
Close the [Customize] dialog box after editing icons.

- (1) **Adding icons**
Drag the icon to be added to the toolbar.



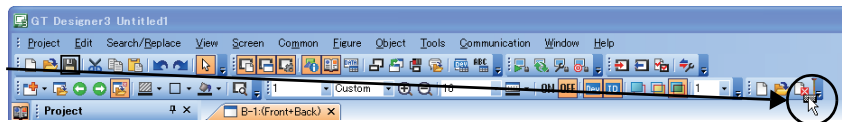
(2) Deleting icons

Drag the icon to be deleted out of the toolbar.



(3) Moving icons

Drag the icon to the toolbar where the icon is placed.



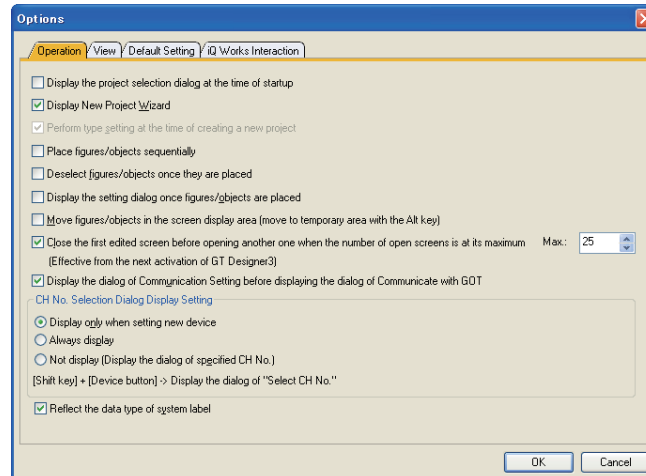
3.5.3 Customizing actions and default value of GT Designer3

Displayed information, actions, and others when drawing can be customized.

■ Setting




Select [Tools] → [Option] from the menu to display the [Options] dialog box.

(1) Operation tab



Item	Description	Model
Display the project selection dialog at the time of startup	Select this item to display [Select Project] dialog box (creating a new project or opening an existing project can be selected) when starting GT Designer3.	
Display New Project Wizard	Select this item to display [New Project Wizard] when creating a new project.	
Perform type setting at the time of creating a new project	Select this item to display the [GOT Type Setting] dialog box when creating a new project.	
Place figures/objects sequentially	Select this item to place figures or objects sequentially. (To stop this operation, right-click or press the [ESC] key.)	
Deselect figures/objects once they are placed	Select this item to deselect figures or objects after placing the figures or objects.	
Display the setting dialog figures/objects are placed	Select this item to display the setting dialog box automatically after placing figures or objects.	GT16 GT15 GT11 GT10 SoftGOT 1000
Move figures/objects in the screen display area (move to temporary area with the Alt key)	Select this item to place figures or objects only in the screen display area of the screen editor. Figures or objects can be placed in the temporary area with the figures or objects moved pressing the [ALT] key.	
Close the first edited screen before opening another one when the number of open screens is at its maximum (Effective from the next activation of GT Designer3)	Select this item to close the first-opened screen when the maximum screen number set for the screen editors of the base screen, window screen, and report screen is opened. After the selection, set [Max]. (1 to 25) The setting is enabled at the next start-up.	
Display the dialog of Communication Setting before displaying the dialog of Communicate with GOT	Select this item to display the [Communication Configuration] dialog box before the [Communicate with GOT] dialog box.	GT16 GT15 GT11 GT10 SoftGOT 1000

(Continued to next page)

Item	Description	Model
CH No. Selection Dialog Display Setting	Select whether to display or hide the [Select CH No.] dialog box when setting a device. The [Select CH No.] dialog box is displayed when two channels or more are set with the [Controller Setting] dialog box.  5.3.1 Device setting	
	Display only when setting new device	
	Always display	
	Not display (Display the dialog of specified CH No.)	
Reflect the data type of system label	Select this item to reflect the data type of system label to the data type of GT Designer3 when setting a system label for a device setting.*1	

*1 The data type of device that corresponds to the data type of system label

The data type of system label is reflected to the data type of device as follows.

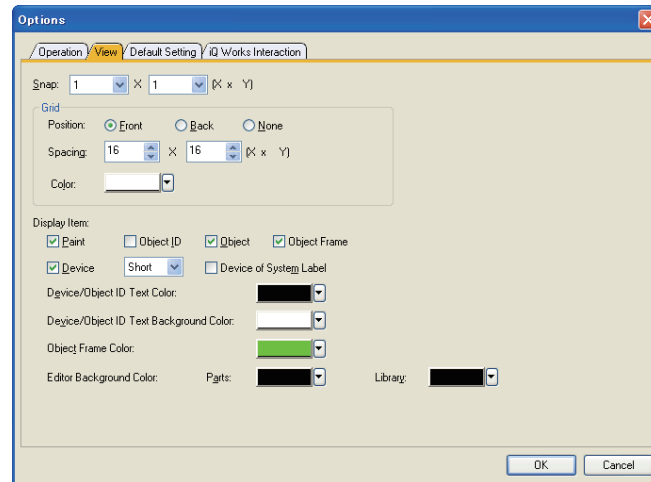
Data type of system label	Data type of device	Notation of system label
Bit	Bit	System label name
Word[Signed]	Signed BIN16	
Word[Unsigned]/Bit[16bit]	Unsigned BIN16	
Double Word[Signed]	Signed BIN32	
Double Word[Unsigned]/Bit[32Bit]	Unsigned BIN32	
Timer	Signed BIN16	System label name
	Bit	System label name/T
		System label name/C
Counter	Signed BIN16	System label name
	Bit	System label name/T
		System label name/C
Retentive Timer	Signed BIN16	System label name
	Bit	System label name/T
		System label name/C
FLOAT[Single Precision]	Real	System label name
FLOAT[Double Precision]	Not reflected	Not reflected
String		
Pointer		
Time		

POINT

System label with data type of [Timer], [Counter], and [Retentive Timer]

For a system label with the data type of [Timer], [Counter], and [Retentive Timer], MELSOFT Navigator processes the data as one system label. However, GT Designer3 processes the data as three label data (current value (system label name), contact (system label name/T), and coil (system label name/C)).

(2) View tab



Item	Description		Model
Snap	Select the interval between figures or objects (X and Y) when they are arranged or moved in the screen editor. (1,2,4,8,16 (dots))		
Grid	Position	Select the display position of grid.(Front,Back, or None) When selecting [Front] or [Back], [Spacing] and [Color] can be selected.	
	Spacing	Set the grid spacing (X and Y). (2 to 64)	
	Color	Select the display color of grid.	GT16 GT15 GT11 GT10 SeriGOT 1000
Display Item	The information to be displayed on the screen editor of GT Designer3 can be set.		
	Paint	Select this item to display the filled status of the painted area.	
	Device	Select this item to display the set device on the object. After the selection, the display type of the device can be selected. • Short: Displaying only the device. • Full: Displaying the CH No., NW No., PC station number, and device.	
	Device of System Label	Select this item to display the device name, which is assigned to a system label, on the object.	GT16 GT15 GT11 GT10 SeriGOT 1000
	Object ID	Select this item to display the object ID on the object.	
	Object	Select this item to display the object on the screen editor.	
	Object Frame	Select this item to display the object frame on the screen editor.	
	Device/Object ID Text Color	Select the text color of device or object ID displayed on the object. This selection is available when [Device] or [Object ID] is selected.	GT16 GT15 GT11 GT10 SeriGOT 1000
	Device/Object ID Text Background Color	Select the back ground color of device or object ID displayed on the object. This selection is available when [Device] or [Object ID] is selected.	
	Object Frame Color	Select the display color of [Object Frame].	
	Editor Background Color	Displays the back ground color of the parts editor and library editor. Parts: Set the back ground color of the parts editor. Library: Set the back ground color of the library editor.	

POINT

Customizing the grid

The grid can be set for GT Designer3, not for each project.

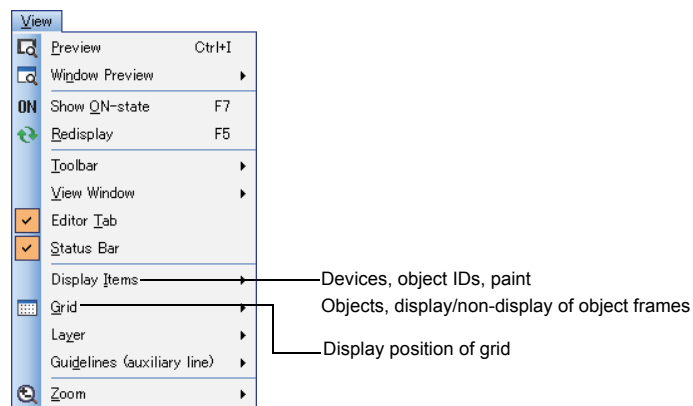
The customized grid is enabled regardless of the project to be opened.

HINT

Changing from menu bar or toolbar

Items set in the [View] tab can be changed from the menu bars or toolbars.

(1) Changing from menu bar



(2) Changing from toolbar

For the changing method from toolbars, refer to the following.

☞ 3.4 ■ View

(3) Default Setting tab

The default value can be set when figures or objects are newly set.

The set default value is reflected after the subsequent GT Designer3 start-up.

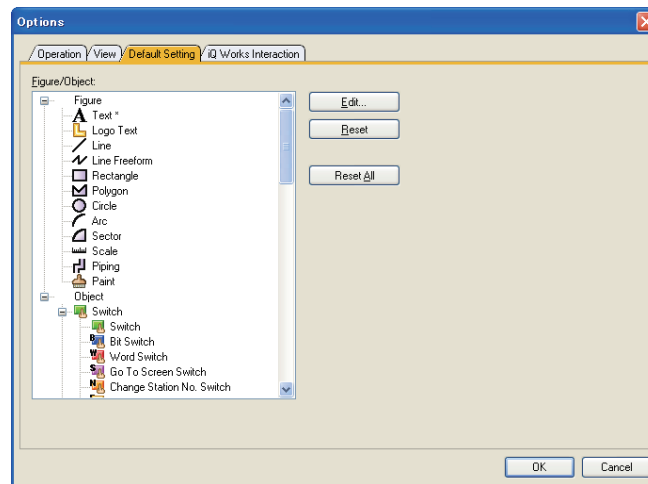
POINT






Setting of default value

The default value is a setting when figures or objects are arranged (initial status).

The initial setting of devices, figures, fonts, text colors, or others can be customized by changing the default value. Save time and steps of changing the setting for arranged figures or objects by setting the often-used setting as the default value beforehand.

However, the default value cannot be set for some items (including [Lamp] for figures) depending on the figure or object.



Item	Description	Model
Figure/Object	Figures and objects are displayed in a tree structure. * is displayed to the right of item name, for the item which the default value is changed. Double-clicking the item also displays the setting dialog box.	
	Click this button to display the setting dialog box of figures or objects selected in [Figure/Object]. Click the [OK] button to change the default value. For each setting dialog box, refer to the following.  GT Designer3 Version1 Screen Design Manual(Functions)	
	Click this button to reset the default value of figures or objects selected by [Figure/Object] to the initial value.	
	Click this button to display the confirmation dialog box. To reset default values of all figures or objects to initial values, click the [Yes] button. To retain default values of figures or objects, click the [No] button.	



(1) Exporting or importing the setting of default values

The setting of default values can be exported or imported as follows.

(a) Export

1. Select [Tools] → [Default Setting] → [Export Default Setting] from the menu.
2. The [Save As] dialog box appears.
Set the save location and name of the file in which the default value setting is written.
3. Click the [Save] button.

(b) Import

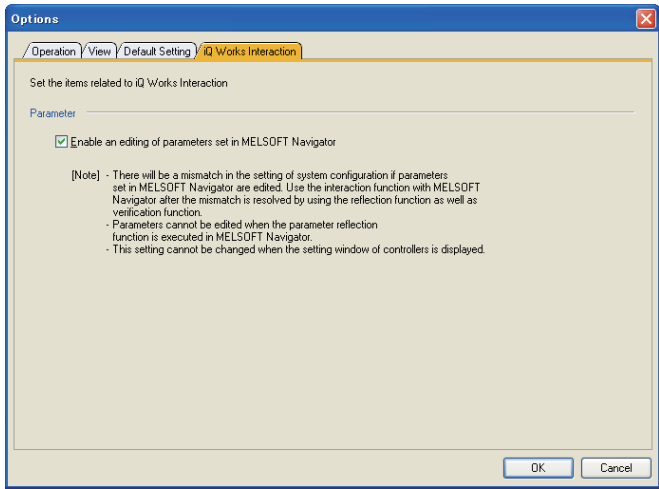
1. Select [Tools] → [Default Setting] → [Import Default Setting] from the menu.
2. The [Open Default Setting File] dialog box appears.
Set the save location and name of the file in which the default value setting is written.
3. Click the [Open] button.

(2) Setting the default value with using figures or objects

Setting the default value is also available by selecting [Set to Default] from the menu displayed by right-clicking the figures or objects on the screen editor.

(1) **iQ Works interaction tab**

The setting regarding GT Designer3 operation when interacting with MELSOFT Navigator can be changed.



Item	Description	Model
Enable an editing of parameters set in MELSOFT Navigator	Select this item to edit parameters reflected from MELSOFT Navigator with GT Designer3.	GT16 GT15 GT11 GT10 SoftGOT 1000

POINT

Editing the reflected parameters

When editing parameters reflected from MELSOFT Navigator, change the setting contents for MELSOFT Navigator likewise.
If the setting contents between MELSOFT Navigator and GT Designer3 differ, communication between the GOT and controllers may not be executed after sending a project data to the GOT.
Match the setting contents between MELSOFT Navigator and GT Designer3 using [Parameter Reflection] and [Verification of System Configuration Information and Parameters] of MELSOFT Navigator.
For how to use MELSOFT Navigator, refer to the following.

 [Help for MELSOFT Navigator](#)

3.6 Creating/Editing Project

3.6.1 Creating a new project

When creating a project, the following settings are required. (The setting can be changed after creating the project.)

- Setting of GOT type to be used
- Communication setting
- Screen switching device setting of the base screen

The required setting for creating the new project can be configured accordingly with [New Project Wizard]. Also, a project can be created without using [New Project Wizard].

POINT

Operating on iQ Works

A new project cannot be created with GT Designer3 when GT Designer3 is started from MELSOFT Navigator. Create a new project with MELSOFT Navigator.


For MELSOFT Navigator operation, refer to the following.

 [Help for MELSOFT Navigator](#)

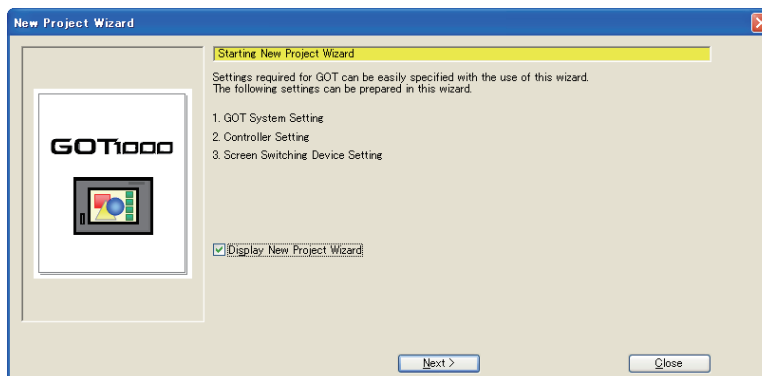
■ With [New Project Wizard]

When using [New Project Wizard], select [Display New Project Wizard] in the [Operation] tab of the [Options] dialog box.

(Selected by initial status.)

 3.5.3 Customizing actions and default value of GT Designer3

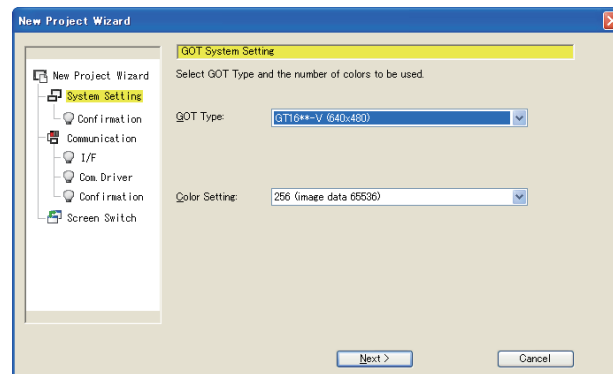
1. To display [New Project Wizard], perform either of the following operations.
 - Click the [New] button of the [Project Select] dialog box.
 - Select [Project] → [New] from the menu.























To hide the wizard for the next time a new project is created, clear [Display New Project Wizard].

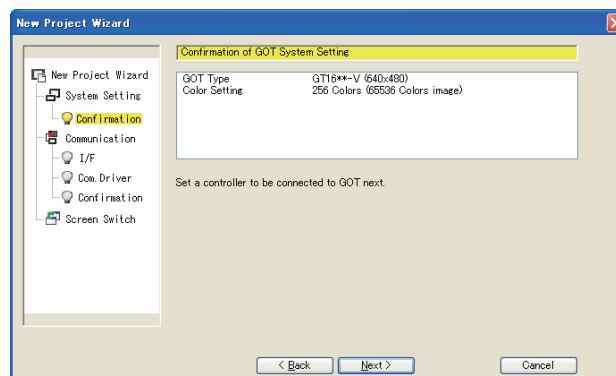
Click the [Next] button.

2. Select the GOT type to be used and color setting. Click the [Next] button.



Item	Description	Model
GOT Type	Select the appropriate GOT type to be used.	    
Setup Direction	Select the setup direction of the GOT. (Horizontal or Vertical)	    
Resolution	Select the resolution according to GT SoftGOT1000 to be used. (X and Y)	    
Color Setting	Select the number of colors displayed on the GOT according to the GOT to be used. The number of colors available on GT Designer3 is set to the selected number of colors.	    

3. Confirm the setting contents selected in the step 2. Click the [Next] button.

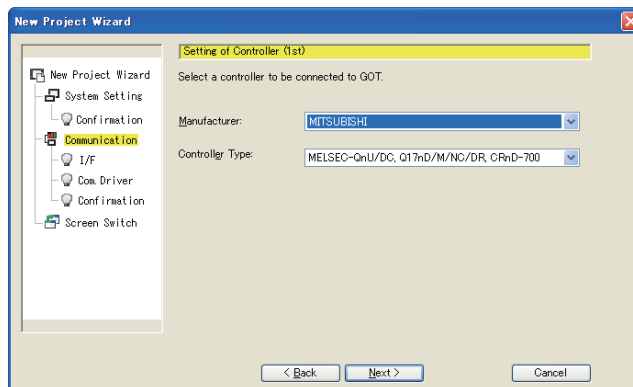


Changing the GOT type setting

The GOT type setting can be changed with the [GOT Type Setting] dialog box.

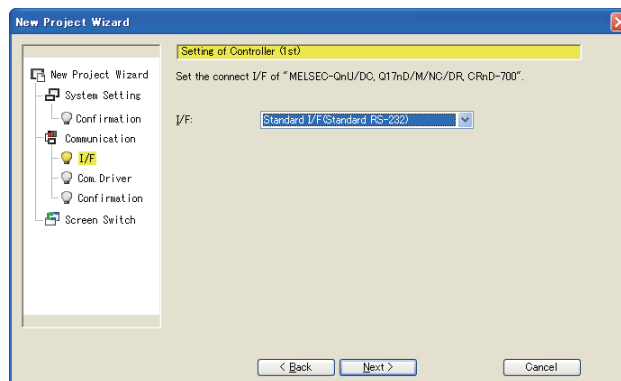
➞ 4.1 GOT Type Setting

4. Select the controller to be connected to the GOT. Click the [Next] button.



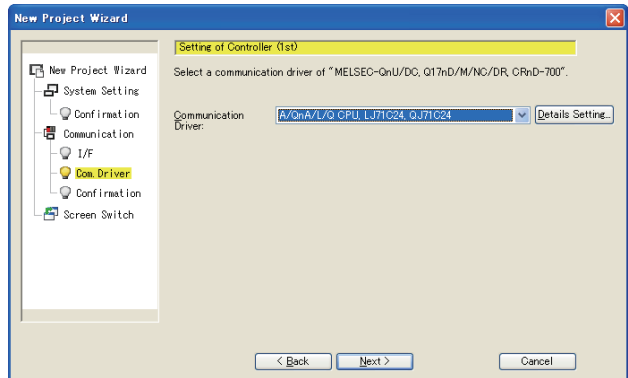
Item	Description	Model
Manufacturer	Select the manufacturer of the controller connected to the GOT.	GT16 GT15 GT11 GT10 SOTGOT 1000
Controller Type	Select the controller type connected to the GOT. ☞ GOT1000 Series Connection Manual for GT Works3 and a controller used	


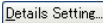
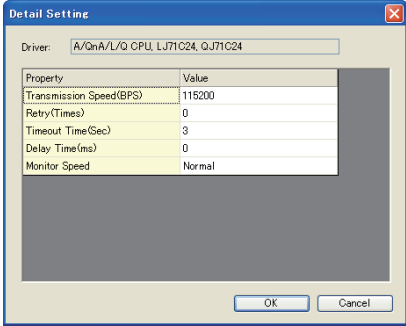

5. Select the interface to connect the controller. Click the [Next] button.



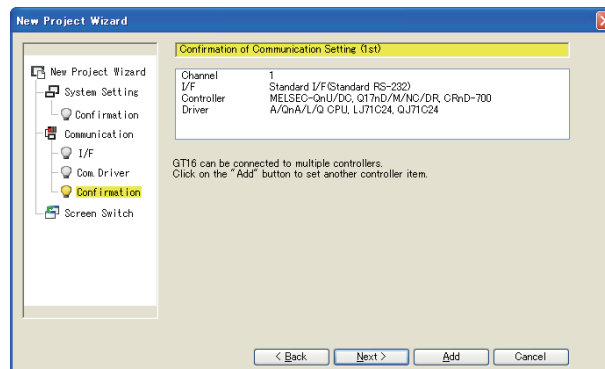
Item	Description	Model
I/F	Select the interface to connect the controller. ☞ GOT1000 Series Connection Manual for GT Works3 and a controller used	GT16 GT15 GT11 GT10 SOTGOT 1000

6. Select the communication driver to be used. Click the [Next] button.



Item	Description	Model
Communication Driver	Select the communication driver to be installed on the GOT.  GOT1000 Series Connection Manual for GT Works3 and a controller used	
	Click this button to display the [Detail Setting] dialog box. The setting items differ depending on the selected communication driver. Example) When selecting [A/QnA/L/Q CPU, LJ71C24, QJ71C24] for [Communication Driver]. 	

7. For the GT16 or GT15, the second and later controllers can be set using the multi-channel function. When connecting to more than one controller, click the [Add] button. Click the [Next] button on completion of controller setting.



POINT

Multi-channel function

The multi-channel function installs multiple communication drivers on the GOT and monitors up to four controllers (four channels) by one GOT.

➞ GOT1000 Series Connection Manual(Mitsubishi Products) for GT Works3

HINT

Changing the communication setting

The communication setting can be changed in the [Controller Setting] dialog box.

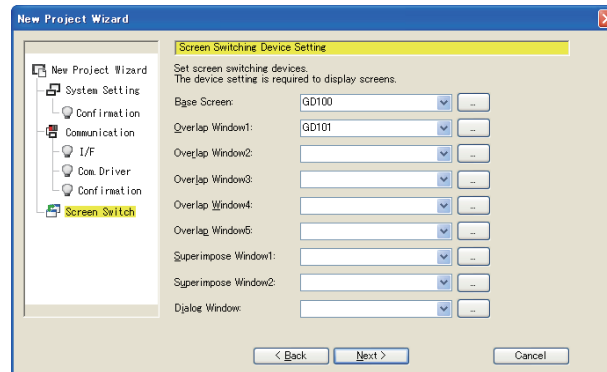
➞ GOT1000 Series Connection Manual for GT Works3 and a controller used

8. Set screen switching devices for the base screen and required screens. Click the [Next] button. For the screen switching device, refer to the following.

☞ 4.2 Screen Switching Device Setting

For the device setting, refer to the following.

☞ 5.3.1 Device setting



Item	Description	Model
Base Screen	Set the screen switching device for the base screen.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Overlap Window1	Set the screen switching device for the overlap window 1.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Overlap Window2	Set the screen switching device for the overlap window 2.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Overlap Window3	Set the screen switching device for the overlap window 3.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Overlap Window4	Set the screen switching device for the overlap window 4.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Overlap Window5	Set the screen switching device for the overlap window 5.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Superimpose Window1	Set the screen switching device for the superimpose window 1.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Superimpose Window2	Set the screen switching device for the superimpose window 2.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Dialog Window	Set the screen switching device for the dialog window.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

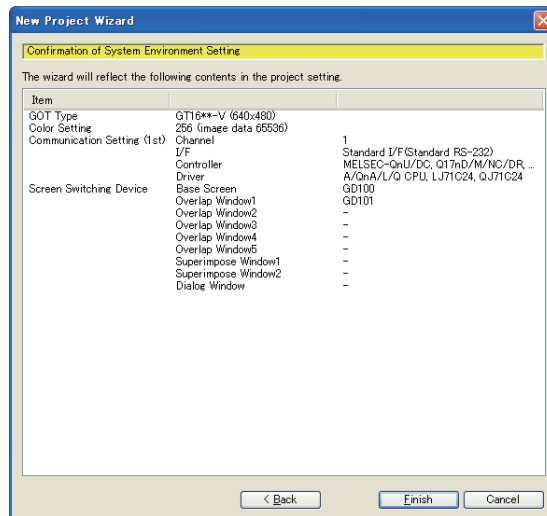


Changing the screen switching device

The screen switching device can be changed in the [Environmental Window] dialog box (Screen Switching/Window).

☞ 4.2 Screen Switching Device Setting

9. Confirm the contents set with [New Project Wizard]. Click the [Finish] button to complete the setting.



■ Without [New Project Wizard]

When creating a project without [New Project Wizard], clear [Display New Project Wizard] in the [Operation] tab of the [Options] dialog box.

☞ 3.5.3 Customizing actions and default value of GT Designer3

To display the [GOT Type Setting] dialog box and [Controller Setting] dialog box in the step 1 and 2, select [Perform type setting at the time of creating a new project] in the [Operation] tab of the [Options] dialog box. (Selected by initial status.)

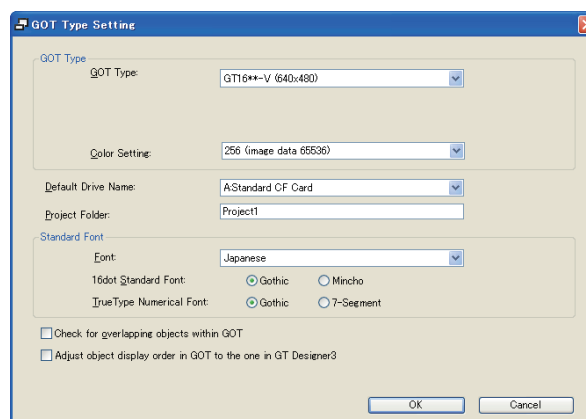
When [Perform type setting at the time of creating a new project] is cleared, the project is created with the setting of previously created project.

1. To display the [GOT Type Setting] dialog box, perform either of the following operations.

- Click the [New] button in the [Select Project] dialog box.
- Select [Project] → [New] from the menu.

For the [GOT Type Setting] dialog box, refer to the following.

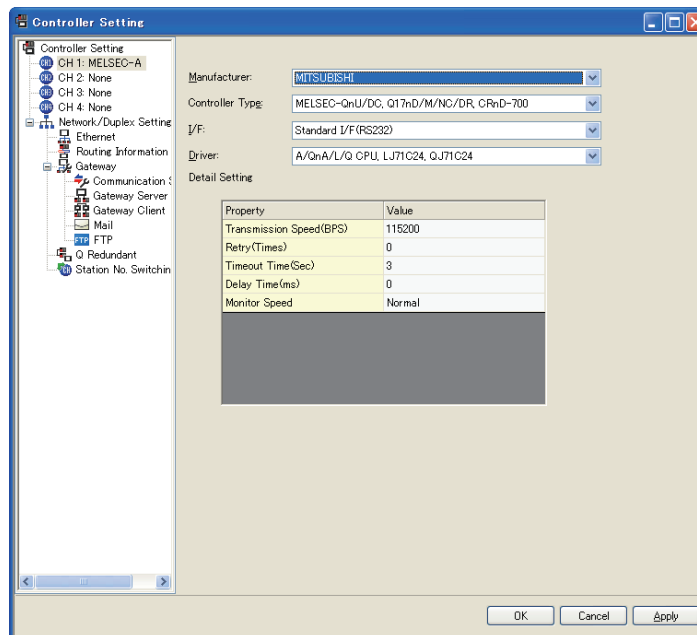
☞ 4.1 GOT Type Setting



Set the required items, and then click the [OK] button.

2. A project is created and the [Controller Setting] dialog box appears.
Select the manufacturer, type, GOT interface, and communication driver for the controller to be connected.
For the [Controller Setting] dialog box, refer to the following.

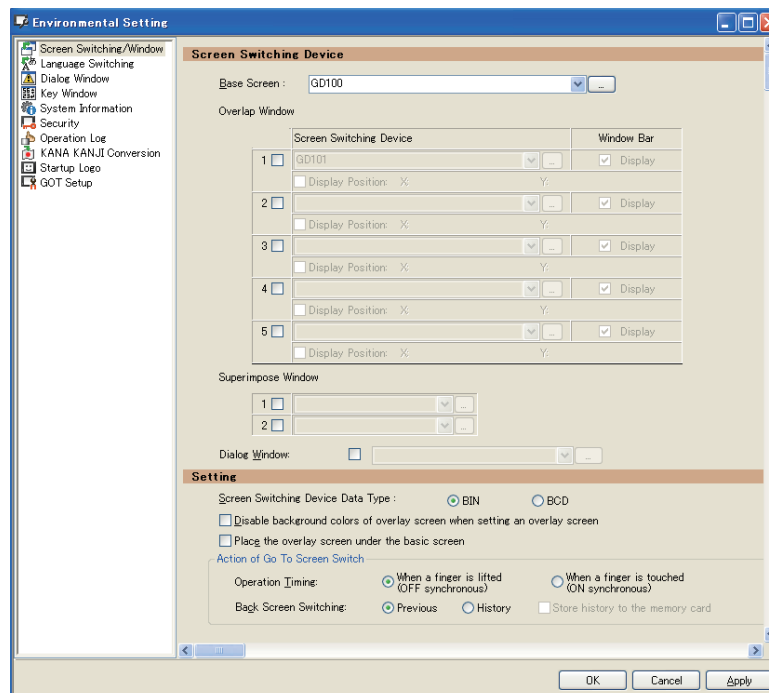
☞ GOT1000 Series Connection Manual for GT Works3 and a controller used



Set the required items, and then click the [OK] button.

3. Select [Common] → [GOT Environmental Setting] → [Screen Switching/Windows] from the menu.
The [Environmental Window] dialog box (Screen Switching/Window) appears.
For the [Environmental Window] dialog box (Screen Switching/Window), refer to the following.

☞ 4.2 Screen Switching Device Setting



Set screen switching devices for the base screen and required screens. Click the [OK] button.

3.6.2 Opening/closing a project

Opening method of project differs depending on the project format.
For the project format handled with GT Designer3, refer to the following.

2.2 Project Format Handled with GT Designer3

Operation	Project format	Reference
Opening a project	GT Designer3 project	■Opening GT Designer3 project
	GTW format (*.GTW)	■Reading compressed file (GTW format)
	GTE format (*.GTE), GTD format (*.GTD)*1, G1 format (*.G1)	■Reading GT Designer2/G1 format project
Closing a project	-	■Closing project

*1 Change the GOT type for the project to the GOT1000 series in GT Designer2 before opening in GT Designer3.
The projects created with FX-PCS-DU/WIN and resaved by GT Designer2 cannot be opened.

POINT

(1) When a project to be opened is secured

When security is set for a project to be opened, the user authentication is required.
For the user authentication, refer to the following.

3.14 Securing Project

(2) Operating on iQ Works

(a) Opening a project

A project cannot be opened with GT Designer3 when GT Designer3 is started from MELSOFT Navigator.
Open a project with MELSOFT Navigator.
For MELSOFT Navigator operation, refer to the following.

Help for MELSOFT Navigator

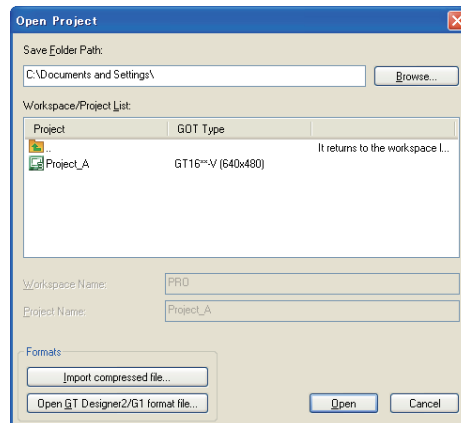
(b) Project format



When GT Designer3 is started from MELSOFT Navigator, the project format that can be handled with GT Designer3 is GT Designer3 project only.
Other project format data become available by saving it as a GT Designer3 project in the workspace created in MELSOFT Navigator as follows.

1. Open a project with GT Designer3 (not from MELSOFT Navigator).
2. Select [Project] → [Save As] from the menu to save the project in the workspace created in MELSOFT Navigator.

■ Opening GT Designer3 project

1. Select [Project] → [Open] from the menu to display the [Open Project] dialog box.



Item	Description
Save Folder Path	Enter the path of the location where the workspace is stored. The save destination path can be set by the [Browse] button also. Up to 200 characters can be entered.
Workspace/Project List	Displays the workspace or project existing in the same path entered for [Folder path to save]. Double-click the workspace to be opened to display projects stored in the workspace. Select the project to be opened.
Workspace Name	Displays the workspace name where the project selected in [Workspace/Project List] is stored.
Project Name	Displays the project name selected in [Workspace/Project List].
	Click this button to open a compressed file (GTW format). After clicking this button, the [Open] dialog box appears. Select a GTW format file and open a project.
	Click this button to open a GTE format (*.GTE), GTD format (*.GTD), or G1 format (*.G1) project. After clicking this button, the [Open] dialog box appears. Select the file type in [Files of type]. Then, select a file and open a project.

POINT

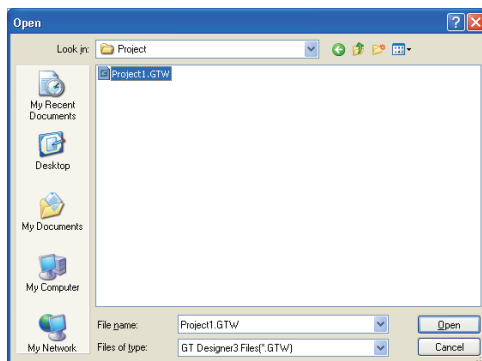
Maximum number of text for [Save Folder Path], [Workspace Name], and [Project Name]

Set the total number of text for [Folder path to save], [Workspace Name], and [Project Name] at 200 characters or less. ("\" placed at the end of the project name is not included.)

2. Select the project to be opened in [Workspace/Project List]. Click the [Open] button to open the selected project.

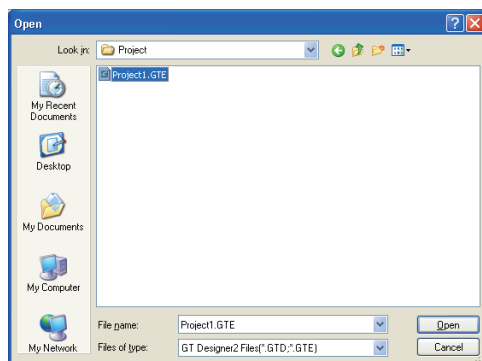
■ Reading compressed file (GTW format)

1. Select [Project] → [Compressed File Handling] → [Import compressed file] from the menu to display the [Open] dialog box.
2. Select a project to be opened. Click the [Open] button to open the selected project.



■ Reading GT Designer2/G1 format project

1. Select [Project] → [Import GT Designer2/G1 format file] from the menu to display the [Open] dialog box.
2. Select a project to be opened. Click the [Open] button to open the selected project.

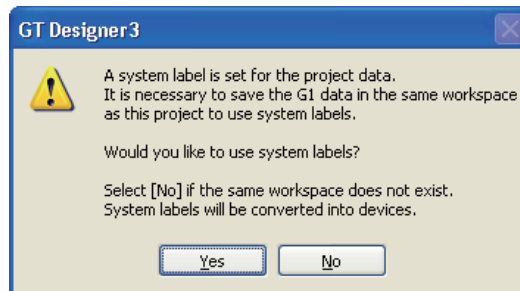


POINT

Reading G1 format project data for which a system label is set

A system label cannot be used if the data of workspace where a G1 format project is created does not exist. When using a system label, resave the project in the workspace as follows.

1. Read G1 format project data for which a system label is set, and then the following dialog box appears. Click the [Yes] button.



2. Select [Project] → [Save As] from the menu to save the project in the workspace where the G1 format project is created. The system label can be used properly again.

■ Closing project

Select [Project] → [Close] from the menu to close a project.

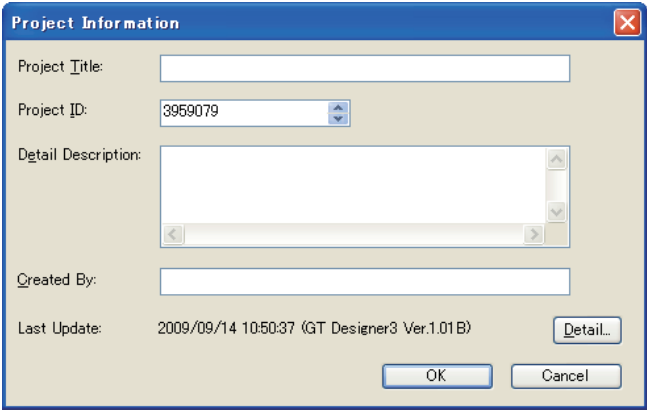
When GT Designer3 is started from MELSOFT Navigator, [Close] cannot be selected from the menu.


Click the [x] button to close the window.

3.6.3 Setting the project title

The title, ID, and others can be set for a project.

1. Select [Project] → [Project Information] from the menu to display the [Project Information] dialog box.
2. Set the required items and click the [OK] button. The set contents are reflected in the project.



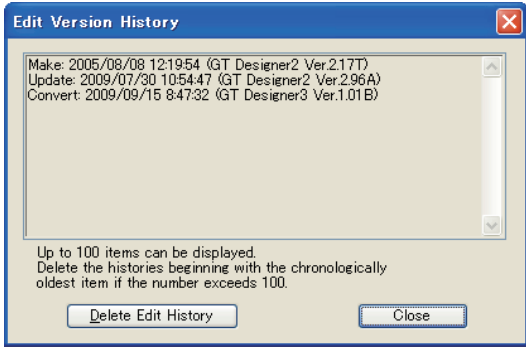
Item	Description
Project Title	Set the project title as necessary. Up to 32 characters can be entered.
Project ID ^{*1}	The project ID is automatically set when creating the project. The project ID can be changed within the range from 1 to 4294967295.
Detail Description	Enter the explanation for the screen as necessary. Up to 512 characters can be entered. (A line feed is counted as two characters.)
Created By	Set the author name as necessary. Up to 8 characters can be entered.
Last Update	Displays the latest date and time of the project saved and the software version. <div>2009/09/14 10:50:37 (GT Designer3 Ver.1.01B)</div> <div>Year Month Date Time Version information</div> Click the [Detail] button to display the [Edit Version History] dialog box.  3.6.3 (1) Edit Version History dialog box

^{*1} When a part of the screen in the project is written to the GOT, the Project ID is verified with the one registered in the GOT. If it results in the ID mismatch, a message appears to urge the user to take caution. (The project data can be written.) It is recommended to register different project IDs for each machine, as this allows the caution message to appear when a part of the project data with an incorrect ID is written by mistake.

(1) Edit Version History dialog box

The edit history of project is displayed.

To delete the edit history, click the [Delete Edit History] button.



3.7 Creating/Opening/Closing Screen

3.7.1 Creating a new screen

Creating method differs depending on a screen.

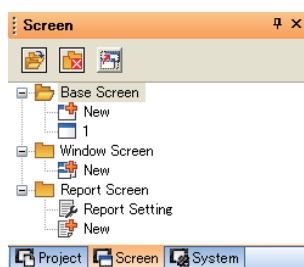
■ Creating the base window and window screen

1. Select [Screen] → [New] → [Base Screen] or [Window Screen] from the menu to display the [Screen Property] dialog box.



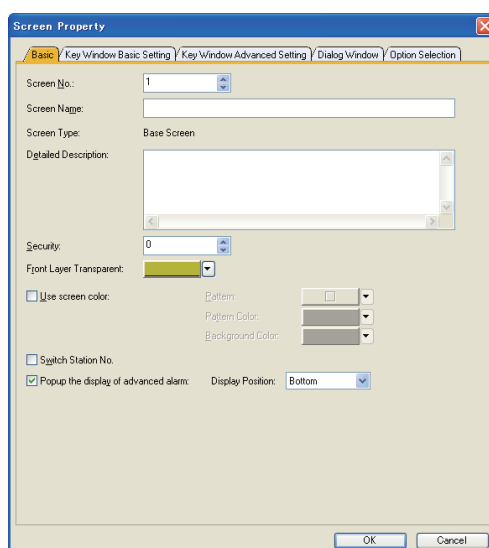
Operating by the screen view tree

The [Screen Property] dialog box appears also by double-clicking [New] of [Base Screen] or [Window Screen] in the screen view tree.







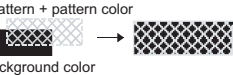





2. Set the required items. Click the [OK] button to create a new screen.

(1) Basic tab

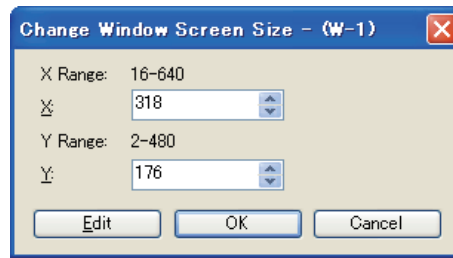


Item	Description	Model
Screen No.	Set the screen number.	
Screen Name	Set the screen title. Up to 32 characters can be entered.	
Screen Type	Displays the screen type to be created.	

(Continued to next page)

Item	Description		Model
Detail Description	Enter the explanation for the screen as necessary. Up to 512 characters can be entered. (A line feed is counted as two characters.)		
Security	Set the security level of the screen. (0 to 15) When the security function is not used, set to "0". For details of the security function, refer to the following.  4.7 Security Setting		GT16 GT15 GT11 GT10 SoftGOT 1000
Front Layer Transparent	The front layer transparent can be set only for the base screen. Select the color to be transparent among all colors assigned to the objects placed on the front layer. The back layer can be seen through the parts specified as transparent. For the transparent color, refer to the following.  5.3.7 Superimposition setting		GT16 GT15 GT11 GT10 SoftGOT 1000
Use screen color	Select this item to enable the setting for [Pattern], [Pattern Color], and [Background Color].		GT16 GT15 GT11 GT10 SoftGOT 1000
	Pattern	Select the pattern, pattern color, and background color for the screen.	
	Pattern Color	The pattern is displayed over the background.	
	Background Color	(Example) Background color :  Pattern + pattern color :  →  Pattern :  Pattern color :  Background color : 	
Switch Station No.	Select this item to switch station numbers by each screen.		GT16 GT15 GT11 GT10 SoftGOT 1000
Specify the touch area	Select this item to set the touch area and a figure separately. Not supported by GT1020.		GT16 GT15 GT11 GT10 SoftGOT 1000
Popup the display of advanced alarm	Select this item to enable the advanced alarm popup display.		GT16 GT15 GT11 GT10 SoftGOT 1000
	Display Position	Select the position to display the advanced alarm popup display on the screen.(Top/Center/Bottom)	
Display alarm flow	Select this item to enable the alarm flow.		GT16 GT15 GT11 GT10 SoftGOT 1000
	Display Position	Select the position to display the alarm flow on the screen.(Top/Center/Bottom)	
Backlight	Select the backlight color.		GT16 GT15 GT11 GT10 SoftGOT 1000
Blink Backlight	Select whether to blink the backlight or not.		GT16 GT15 GT11 GT10 SoftGOT 1000
	Click this button to display the [Change window Screen Size] dialog box.  (a) Change Window Screen Size dialog box		GT16 GT15 GT11 GT10 SoftGOT 1000

(a) Change Window Screen Size dialog box



Item	Description	Model
X	Horizontal window screen size is set.	
Y	Vertical window screen size is set.	
	This button is displayed only when editing the window screen that has been already created. (Not displayed when creating a new window screen.) Click this button to display the handle on the screen editor. Drag the handle to change the window screen size. When the screen becomes appropriate size, move the cursor off the handle and click to determine the window screen size.	

(2) Key Window Basic Setting tab

For the [Key Window Basic Setting] tab, refer to the following.

4.5 Key Window Setting

(3) Key Window Advanced Setting tab

For the [Key Window Advanced Setting] tab, refer to the following.

4.5 Key Window Setting

(4) Dialog Window tab

For the [Dialog Window] tab, refer to the following.

4.4 Setting Message to be Displayed on GOT

(5) Option Selection tab

For the [Option Selection] tab, refer to the following.

(Functions) 6. ASCII DISPLAY/ASCII INPUT

■ Creating the window screen (Dialog Window)

For creating the window screen (dialog window), refer to the following.

4.4 Setting Message to be Displayed on GOT

■ Creating the report screen

For creating the report screen, refer to the following.

(Functions) 36. REPORT FUNCTION

3.7.2 Opening/closing a screen

■ Opening a screen

POINT

Maximum number of screens that can be opened

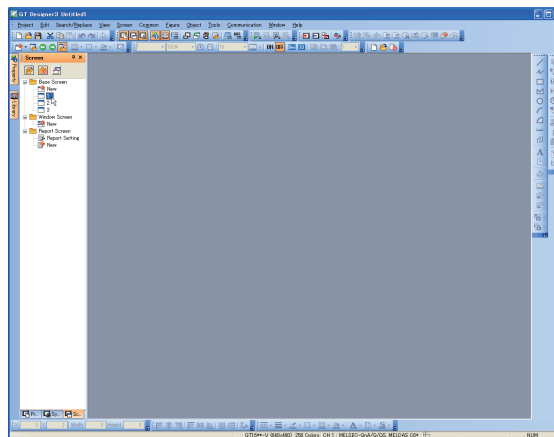
Up to 25 screen editors can be opened.

The maximum number can be changed in the [Operation] tab of the [Options] dialog box.

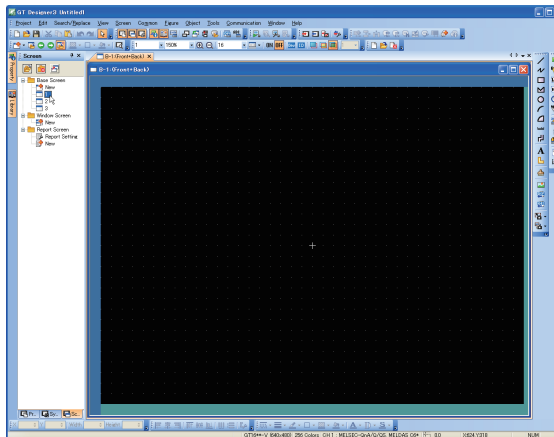
☞ 3.5.3 Customizing actions and default value of GT Designer3

(1) Opening by the screen view tree

1. Double-click the screen to be opened in the screen list tree.



2. The double-clicked screen is opened.



HINT

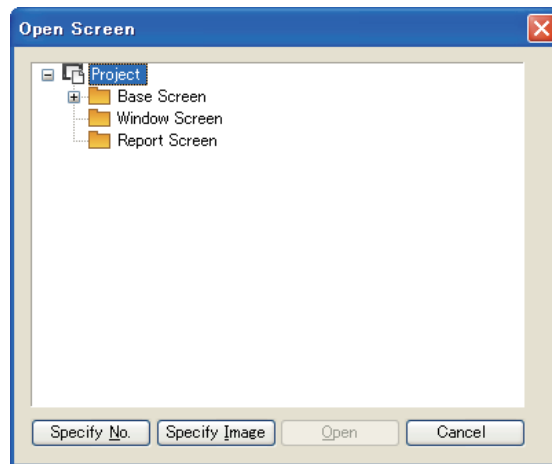
Opening multiple screens at a time

Select multiple screens to be opened by either of the following method. Select [Open] from the menu displayed by right-click, and then the selected screens are opened.

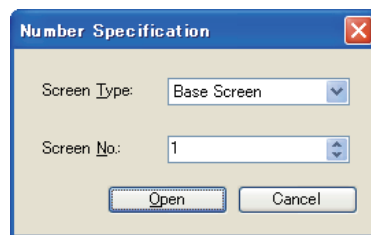
- Select screens with holding down the [Shift] key.
- Select screens with holding down the [Ctrl] key.

(2) Opening from the menu

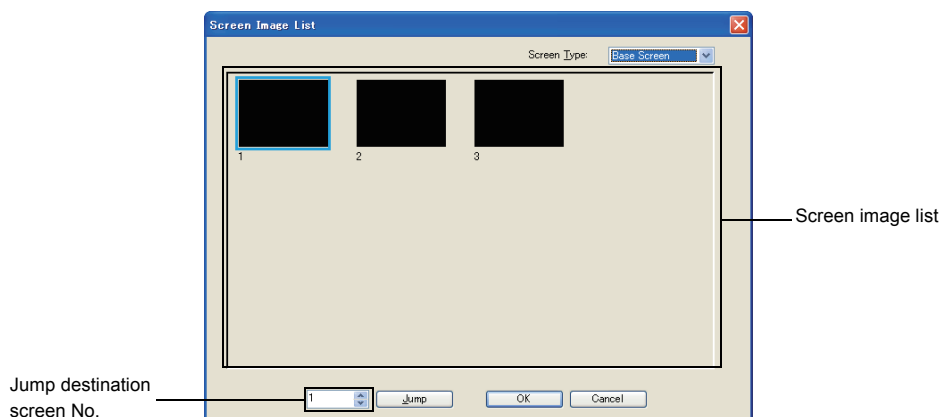
1. Select [Screen] → [Open] from the menu to display the [Open Screen] dialog box.
(Double-clicking the screen to be opened in the [Open Screen] dialog box also opens a screen.)



2. Perform either of the following operations.
 - Click the [Specify] button.
The [Specify] dialog box appears.
Set [Screen Type] and [Screen No.]. Click the [Open] button to open the set screen.



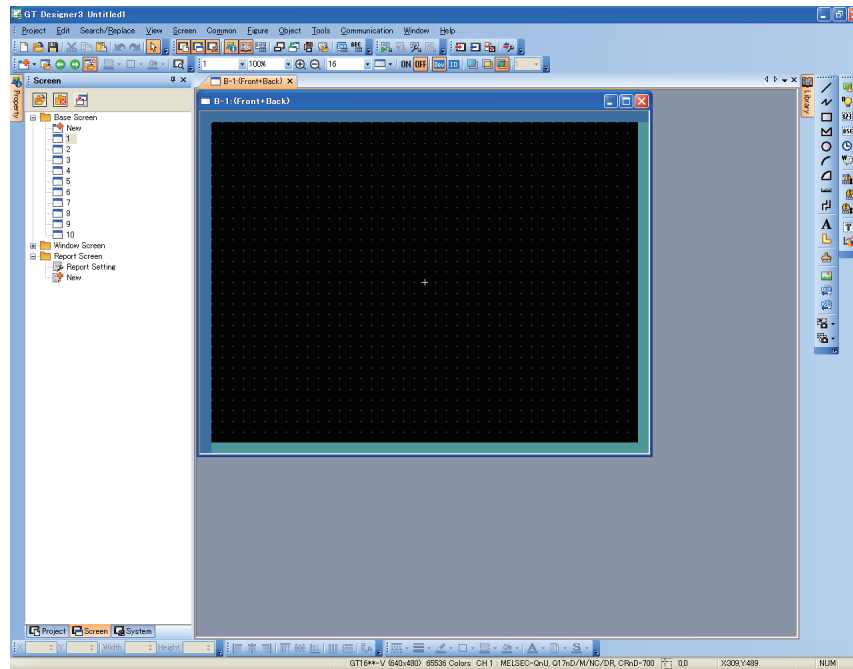
- Click the [Specify Image] button.
The [Screen Image List] dialog box appears.
Select [Screen Type] and the screen image to be opened. Click the [OK] button to open the selected screen.







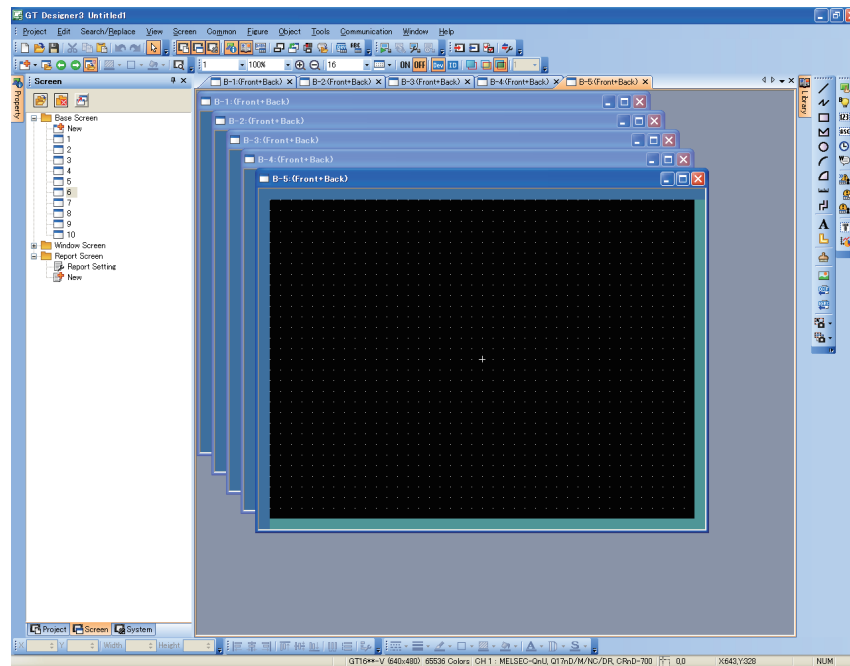
Item	Description	Model
Screen Type	Select the screen type to be displayed in the screen image list.	GT16 GT15 GT11 GT10 SoftGOT 1000
Screen image list	Screen images of the screen type selected for [Screen Type] are displayed. (Double-clicking the screen image also opens a screen.)	
Jump destination screen No.	Set a screen No. where the screen jumps to. Click the [Jump] button, and then the screen set for the jump destination screen No. is selected.	

(3) Opening same type of screen (base screen/window screen) consecutively

1. Open a screen to be opened continuously.




2. Enable  in the screen toolbar ().
3. Click / in the screen toolbar to open the previous or next screen of opened screen one by one.



■ Closing a screen

(1) Closing a screen

Perform either of the following operations to close a screen being edited.

- Select [Screen] → [Close] from the menu.
- Click  in the title bar of each screen.

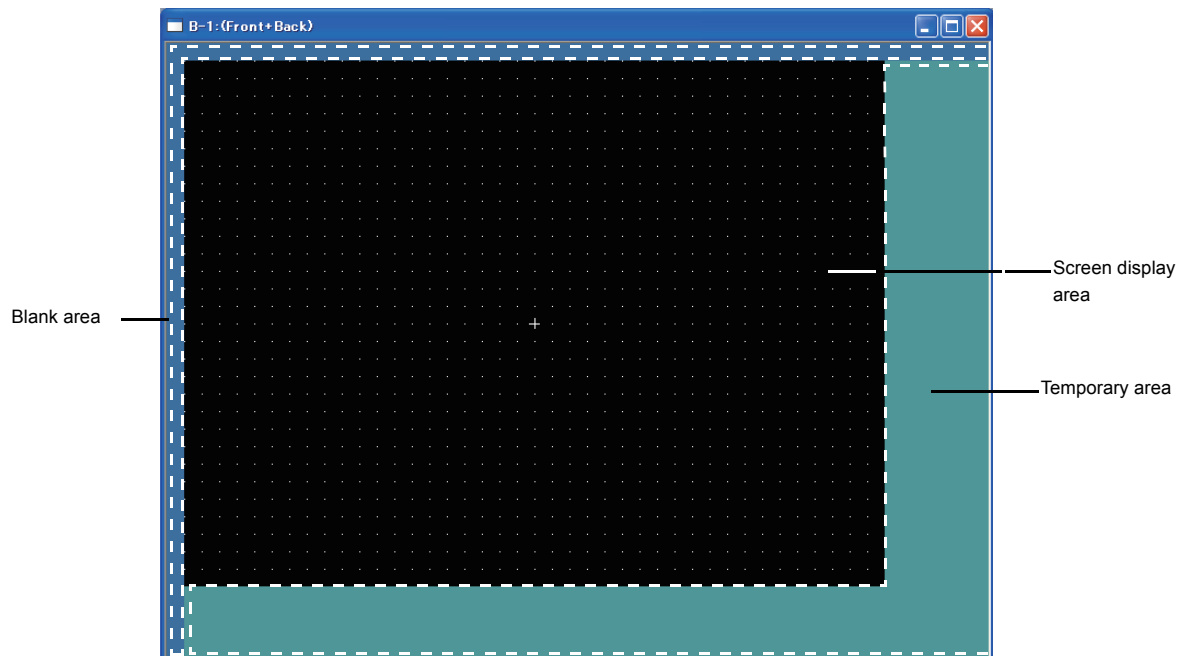
(2) Closing all screens

Select [Screen] → [Close All] from the menu to close all screens.

3.8 Basic Operation of Drawing Screen

3.8.1 Relation of the screen editor and the screen displayed on the GOT

The screen editor of base screen and window screen includes the following areas.



Area	Description
Screen display area	Area displayed on the GOT. Figures and objects to be displayed on the GOT can be arranged.
Blank area	Area not displayed on the GOT. Figures and objects cannot be arranged.
Temporary area	Area not displayed on the GOT. Figures and objects can be arranged temporarily. Figures and objects arranged in the temporary area are included in the data size of the base screen. Before writing the project data to the GOT, delete the figures and objects arranged in the temporary area.

For arranging and setting figures and objects, refer to the following.

5. EDITING AND SETTING FIGURES AND OBJECTS

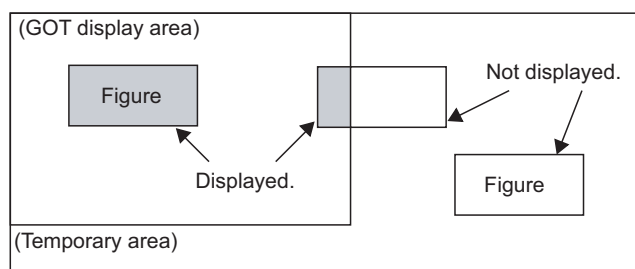
POINT

Figures or objects placed on the area boundary

When placed on a boundary between the screen display area and temporary area, figures and objects are displayed as described below.

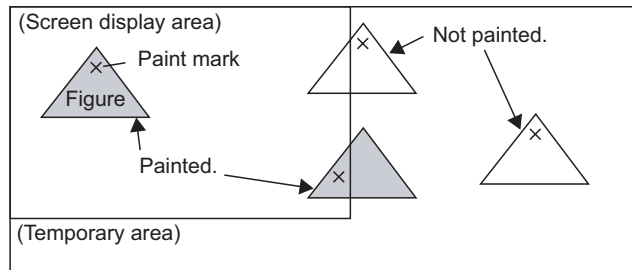
(1) Displaying figures

Only figures and a part of figures arranged in the screen display area can be displayed.



(2) Displaying paints

When paint marks (" x " shown below) are placed in the screen display area, the marked figures are painted.



(3) Displaying objects

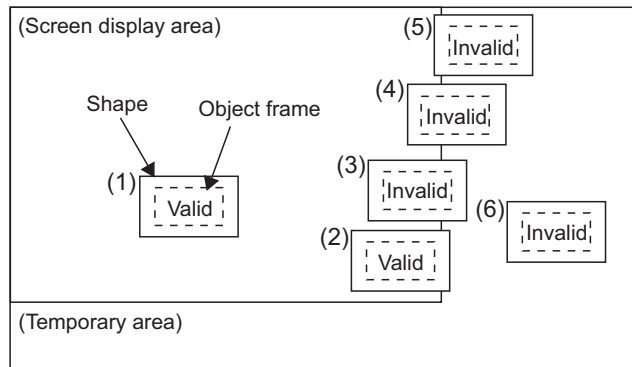
The object is displayed on the GOT if its entire object frame is inside the screen display area (1), 2)).

The object is not displayed on the GOT if any part of its object frame is outside the screen display area (3), 4), 5), 6)).

The conditions for displaying historical trend graphs are different from those for displaying other graphs.

If the scale of historical trend graphs is out of the screen display area, the entire graph cannot be displayed on the GOT.

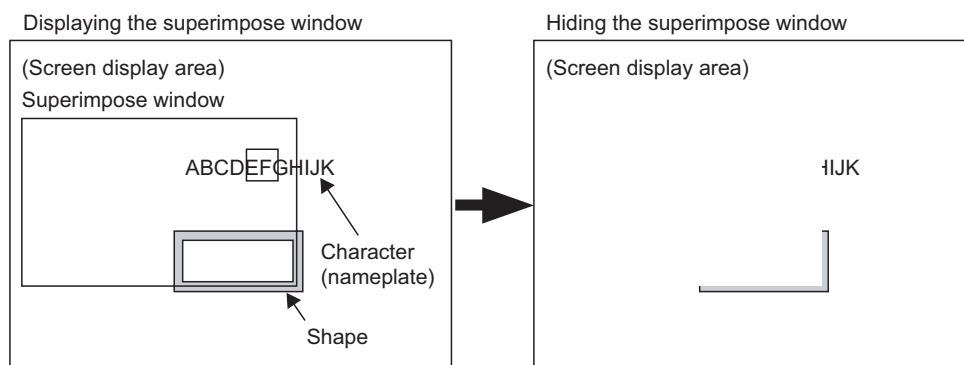
(Other graphs can be displayed because the scale of other graphs is not included in the object frame.)



(4) Using the superimpose window

If a character (nameplate) or shape arranged in the window screen protrudes to the temporary area, the protruding part is left on the base screen after the superimpose window is displayed then hidden.

(Switching the base screen erases the remaining character (nameplate) or shape.)



When arranging the object, display the object and shape with GT Designer 3 to check for protrusion in the temporary area.

Use the data check function of GT Designer 3 to check.


When performing the above check, select the longest comment among those, which are displayed as a character string (nameplate), in the preview number.

3.8.2 Layer display switching operation

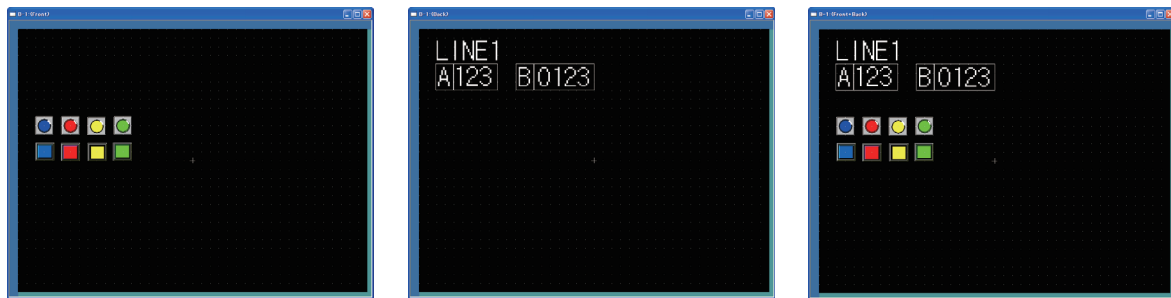
This section explains how to switch the layer of the drawing screen.

Normally select [Front + Back] for drawing.

For overlapping figures and objects using the layer, refer to the following.

 5.3.7 Superimposition setting

1. Select the screen editor of which the layer display is switched.
2. Select [View] → [Layer] → [All Screens], [Front], [Back], or [Front + Back] from the menu to switch the displayed layers.



Front

Back

Front + Back

Item	Description
All Screens	Select whether to set the layer setting for each screen or common to all screens. Select this item to reflect the layer setting on all screens.
Front	Displays the front layer.
Back	Displays the back layer.
Front + Back	Displays the front layer and back layer overlapped.

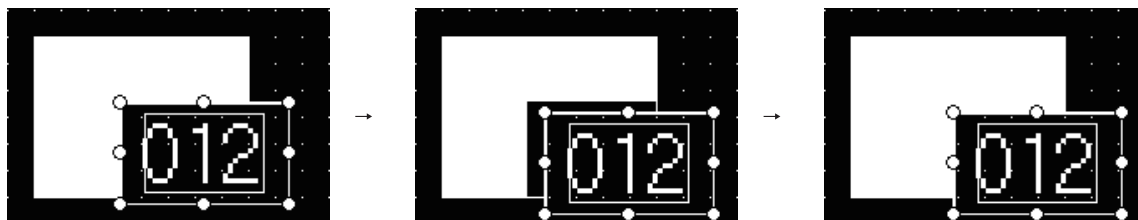
3.8.3 Redisplaying the screen editor

In some cases, use of Paint may cause some area to remain unpainted.

The screen can be displayed correctly by redisplaying the screen editor.

1. Select the screen editor to be redisplayed.
2. Select [View] → [Redisplay] from the menu to redisplay the contents of the selected screen editor.

Example) When the object placed on the figure marked with Paint is moved



The object Placed on the figure marked with Paint is moved.

Some area remains unpainted in the figure.

Select [View] → [Redisplay] from the menu to redisplay.

3.8.4 Selecting the screen editor to be edited

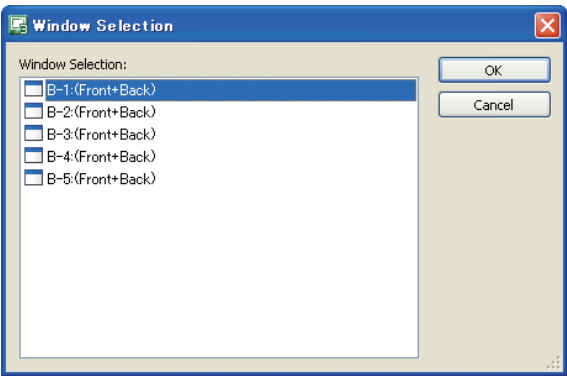
Selecting the screen editor to be edited is available by clicking any part of the screen editor. The selected screen editor is brought to the top front. When multiple screens are opened, the following method is useful.

■ Selecting with the editor tab

1. Perform either of the following operations.
 - In the editor tab, select the tab of the screen editor to be edited.
 - Click ▾ of the screen editor, and then select the screen editor to be edited from the dropdown menu.
2. The selected screen editor is brought to the top front.

■ Selecting with the Window Selection dialog box

1. Select [Window] → [Select Windows] from the menu to display the [Window Selection] dialog box.

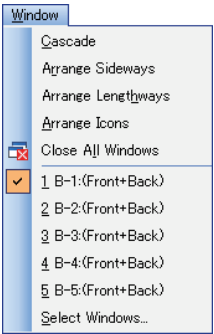


2. Select the screen editor to be edited. Click the [OK] button to display the screen editor in top front.



Record of the screen editor

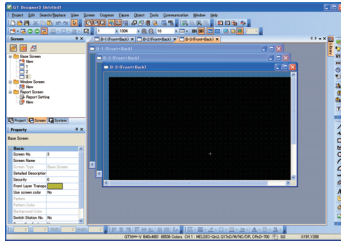
Up to nine screen editors currently opened are displayed in the dropdown menu by selecting [Window] from the menu. Also, the screen editor can be selected in the dropdown menu by selecting [Window] from the menu.



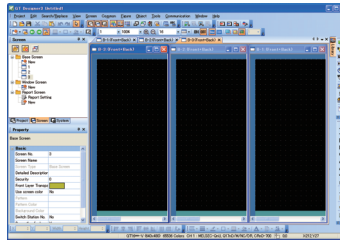
3.8.5 Displaying opened screen editors overlapped/aligned

The following shows how to align the screen editors when multiple screen editors are opened.

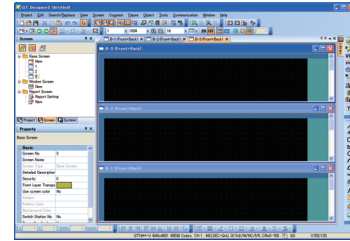
1. Select [Window] → [Cascade], [Arrange Sideways], or [Arrange Lengthways] from the menu.
2. The opened screen editors are aligned.



Cascade



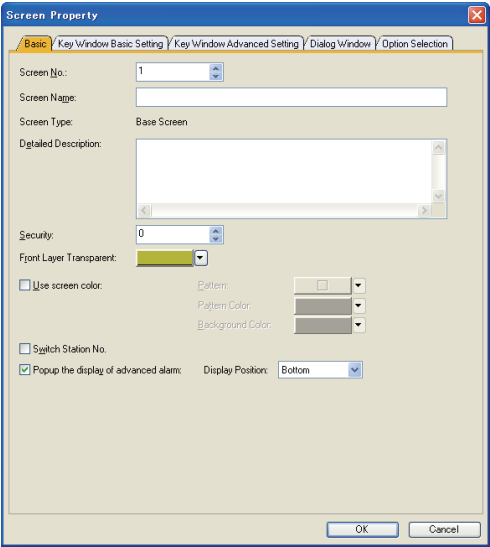
Arrange Sideways



Arrange Lengthways

3.9 Changing Screen Property

The screen number, screen title, and others can be changed.
Select the screen editor to change its setting. Select the [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog box.



- (1) **Basic tab**
For the [Basic] tab, refer to the following.
→ 3.7.1 Creating a new screen
- (2) **Key Window Basic Setting tab**
For the [Key Window Basic Setting] tab, refer to the following.
→ 4.5 Key Window Setting
- (3) **Key Window Advanced Setting tab**
For the [Key Window Advanced Setting] tab, refer to the following.
→ 4.5 Key Window Setting
- (4) **Dialog Window tab**
For the [Dialog Window] tab, refer to the following.
→ 4.4 Setting Message to be Displayed on GOT
- (5) **Option Selection tab**
For the [Option Selection] tab, refer to the following.
→ GT Designer3 Version1 Screen Design Manual(Functions)

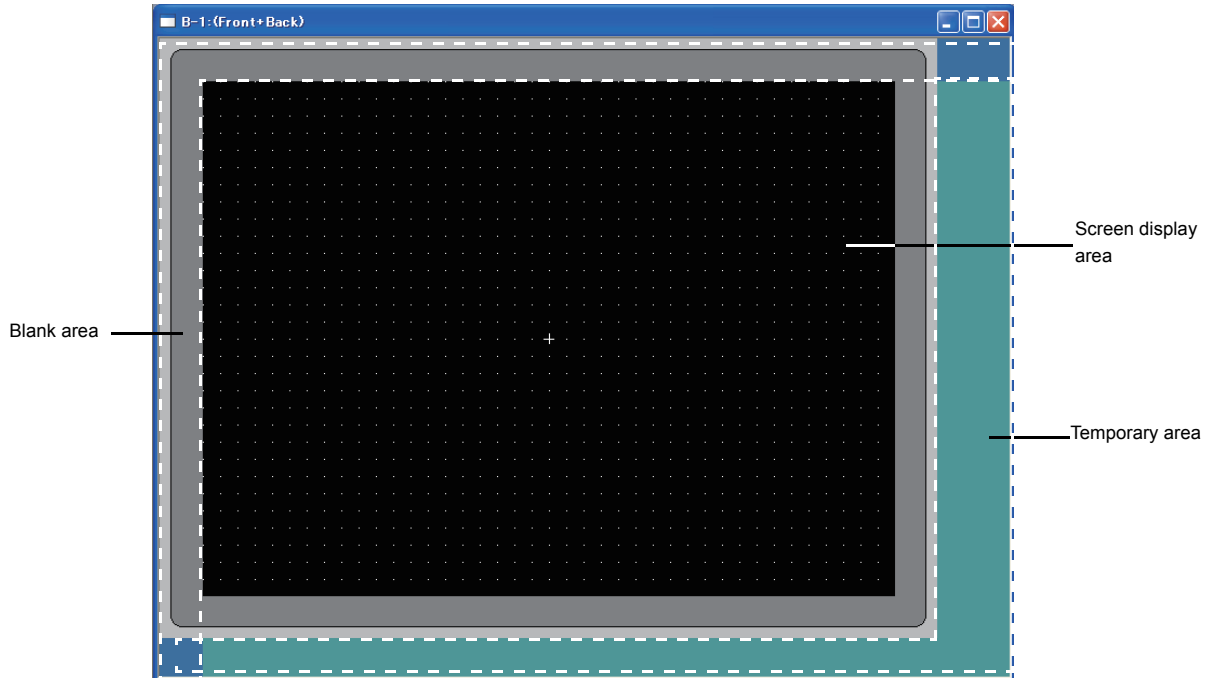


Screen property changing of the report screen
For screen property changing of the report screen, refer to the following.
→ GT Designer3 Version1 Screen Design Manual(Functions)

3.10 Displaying Frame on Screen Editor

This function displays an outer frame, which looks like the GOT frame, on the screen editor of the base screen. With this function, a screen can be created as if it is displayed on the GOT.

Select [View] → [Display Items] → [Frame] from the menu to display the frame.



Area	Description
Screen display area	Area displayed on the GOT. Figures and objects to be displayed on the GOT can be arranged.
Blank area	Area not displayed on the GOT. Figures and objects cannot be arranged.
Temporary area	Area not displayed on the GOT. Figures and objects can be arranged temporarily. Figures and objects arranged in the temporary area are included in the data size of the base screen. Before writing the project data to the GOT, delete the figures and objects arranged in the temporary area.

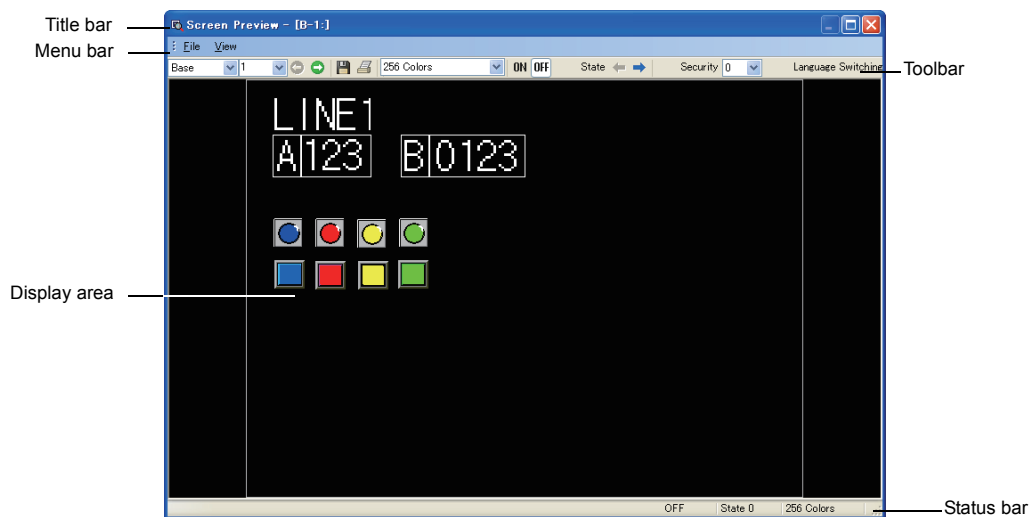
3.11 Viewing Created Screen Image

Created screen image displayed on the GOT can be checked.

3.11.1 Displaying a preview

■ Displaying the preview window

Select [View] → [Preview] from the menu to display the preview window.



POINT

Precautions for preview

(1) Objects not displayed on the preview window

The preview window does not display the parts display if the parts type is set to the base screen or window screen.

The GOT displays the set base screen or window screen.

(2) Objects displayed only on the preview window

The items displayed on the preview window (including display/non-display of object, object ID, or device) can be changed in the [View] tab of the [Options] dialog box.

The object ID and device displayed on the preview window are not displayed on the GOT.

■ Operating method of the preview window

(1) Menu bar

(a) File

File		
Save	_____	Saves the display area image.
Print	_____	Prints the display area image.
Printer Settings	_____	Displays the setting dialog box for printer.
<input checked="" type="checkbox"/> Output in reverse	_____	Reverses black and white when printing based on the printer/file setting.
Fill Black at Text BG	_____	Fills the text color in white and background in black when printing based on the printer/file setting.
Dithering	_____	Adds intermediate color to the two-tone monochrome screen when printing based on the printer/file setting.
Copy Screen Image to the Clipboard	_____	Copies the display area image.
Close	_____	Closes the preview window.

(b) View

View		
<input checked="" type="checkbox"/> Menu and Title	_____	Switches display/non-display of the title bar and menu bar.
<input checked="" type="checkbox"/> Toolbar	_____	Switches display/non-display of the toolbar.
<input checked="" type="checkbox"/> Status Bar	_____	Switches display/non-display of the status bar.
Next Screen	_____	Switches screens to be displayed in ascending order.
Previous Screen	_____	Switches screens to be displayed in descending order.
<input checked="" type="checkbox"/> Use Preview No.	_____	Switches whether to use the preview No. for the comment group column No.
ON Image	_____	Switches On/Off images of the object to be displayed.
Next State	_____	Switches the states of object to be displayed in ascending order.
Previous State	_____	Switches the states of object to be displayed in descending order.
<input checked="" type="checkbox"/> Overlap1	_____	Switches display/non-display of the overlap window1.
<input checked="" type="checkbox"/> Overlap2	_____	Switches display/non-display of the overlap window2.
<input checked="" type="checkbox"/> Overlap3	_____	Switches display/non-display of the overlap window3.
<input checked="" type="checkbox"/> Overlap4	_____	Switches display/non-display of the overlap window4.
<input checked="" type="checkbox"/> Overlap5	_____	Switches display/non-display of the overlap window5.
<input checked="" type="checkbox"/> Superimpose1	_____	Switches display/non-display of the superimpose window1.
<input checked="" type="checkbox"/> Superimpose2	_____	Switches display/non-display of the superimpose window2.
<input checked="" type="checkbox"/> Key Window	_____	Switches display/non-display of the key window.
Dialog Window	_____	Switches display/non-display of the dialog window.
256 Colors	_____	Switches the color settings.
<input checked="" type="checkbox"/> 65536 Colors	_____	

(2) Toolbar



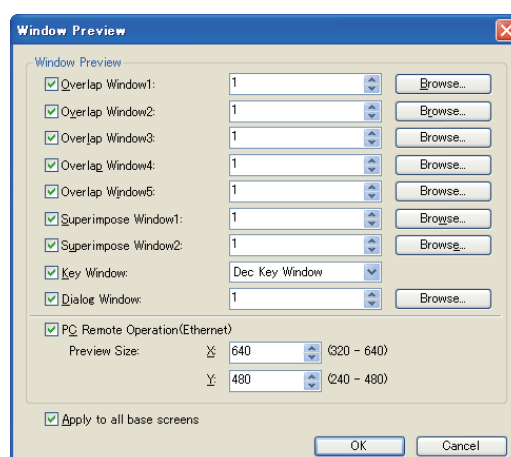
Icon	Description
Base 1	Select the screen type and screen No. to be displayed.
	Switches the screens to be displayed.
	Saves the screen displayed in the display area as BMP file. Click this item to display the [Save As] dialog box.
	Prints the screen displayed in the display area. Click this item to display the [Print] dialog box.
65536 Colors	Select the color setting to be displayed in the display area.
ON OFF	Switches between on and off image of objects or figures to be displayed in the display area.
State	Switches the states of objects or figures to be displayed in the display area.
Security 0	Select the security level of objects to be displayed in the display area.
Language Switching 1	Select the column No. of the comment group to be displayed in the display area.


3.11.2 Displaying the window screen preview in the screen editor of the base screen

When the window position is placed in the screen editor of the base screen, the window screen preview can be displayed.

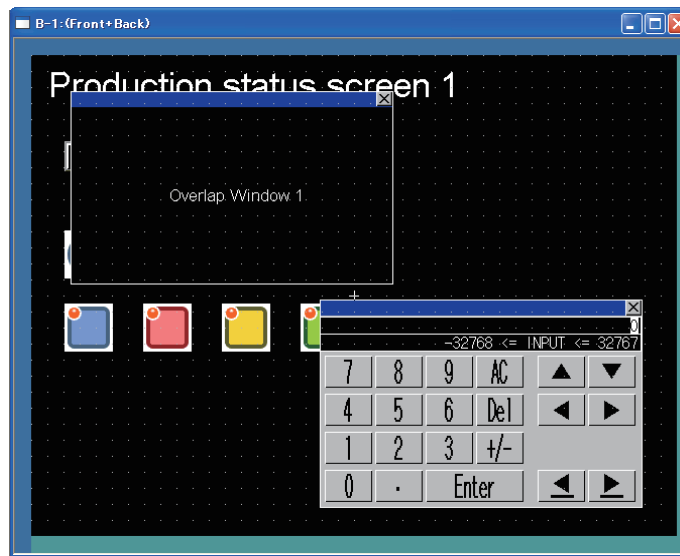
The position of the window screen can be adjusted easily.

1. Select [View] → [Window Preview] → [Custome] from the menu to display the [Window Preview] dialog box.
2. Set the window screens to be displayed, and then click the [OK] button.



Item	Description	
Window Preview	Set the window screen to be displayed on the screen editor of the base screen. Select the windows to display the preview. Set the screen No. of window screen for previewing as each window. Setting with the [Screen Image List] dialog box by clicking the [Browse] button is also available.	
	Overlap Window1	After selecting, set the screen No. of the window screen to display the preview as overlap window1.
	Overlap Window2	After selecting, set the screen No. of the window screen to display the preview as overlap window2.
	Overlap Window3	After selecting, set the screen No. of the window screen to display the preview as overlap window3.
	Overlap Window4	After selecting, set the screen No. of the window screen to display the preview as overlap window4.
	Overlap Window5	After selecting, set the screen No. of the window screen to display the preview as overlap window5.
	Superimpose Window1	After selecting, set the screen No. of the window screen to display the preview as superimpose window1.
	Superimpose Window2	After selecting, set the screen No. of the window screen to display the preview as superimpose window2.
	Key Window	After selecting, select the default key window to display the preview.
	Dialog Window	After selecting, set the screen No. of the window screen to display the preview as dialog window.
PC Remote Operation(Ethernet)	Set the preview display size of a personal computer screen on the GOT operated by the remote personal computer operation function. For details of the remote personal computer operation (Ethernet), refer to the following.  Remote Personal Computer Operation (Ethernet)	
	Preview Size	Set the horizontal and vertical size of the preview display for a personal computer screen on the GOT.
Apply to all base screens	Select this item to apply the setting of [Window Preview] to all base screens.	

3. The window screen preview is displayed in the position where the window position is placed in the screen editor.



3.12 Copying/Deleting Screen

3.12.1 Copying a screen

1. Right-click the screen to be copied in the screen view tree. Select [Copy] from the menu.

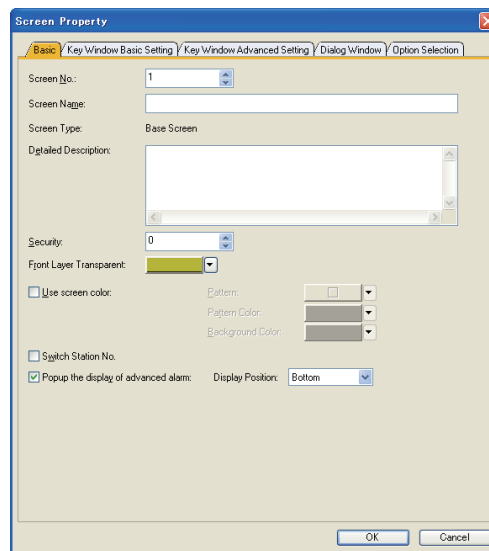


Copying multiple screens at a time

Multiple screens can be selected by either of the following methods.

- Select screens with holding down the [Shift] key.
- Select screens with holding down the [Ctrl] key.

2. Right-click [Base Screen] in the screen view tree, and then select [Paste] from the menu.
3. The [Screen Property] dialog box appears.



For the [Screen Property] dialog box, refer to the following.



3.7.1 Creating a new screen

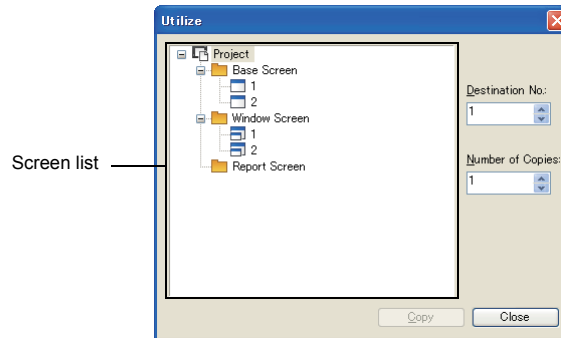
4. Set the required items. Click the [OK] button to copy the screen.
(The [Screen Property] dialog box is displayed as many as the copied screens.)



Copying screens continuously

One screen can be copied to multiple screens by either of the following method.

1. Select [Screen] → [Utilize] from the menu to display the [Utilize] dialog box.



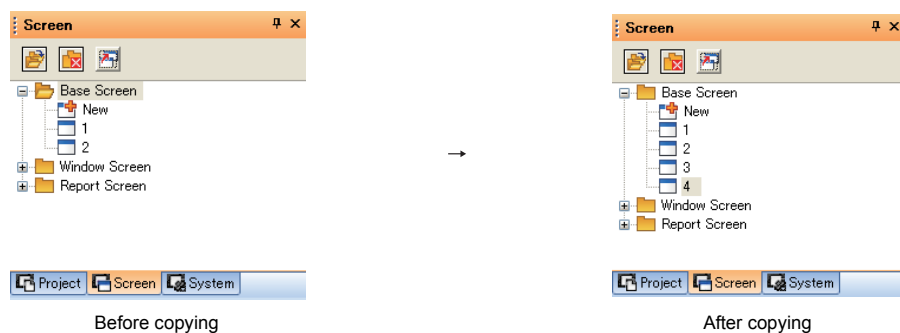
Item	Description
Screen list	Select the screen to be copied. Up to 25 screens can be selected at a time.
Destination No.	Set the screen No. of the screen created by copying (1 to 32767).
Number of Copies	Set the number of copies (1 to 100).

2. Select the screen to be copied. Set [Destination No.] and [Number of Copies], and then click the [Copy] button.

The selected screen is copied.

Example: When setting the screen to be copied to "base screen 1", [Destination No.] to "3", and [Number of Copies] to "2"

The base screen 1 is copied, and the base screen 3 and 4 are created.



3.12.2 Deleting a screen

1. Select the screen to be deleted in the screen view tree.
2. Right-click the screen to be deleted, and then select [Delete] from the menu.



HINT

Deleting multiple screens at a time

Multiple screens to be deleted can be selected by either of the following methods.

- Select screens with holding down the [Shift] key.
- Select screens with holding down the [Ctrl] key.

3. The confirm dialog box for deletion appears. Click the [Yes] or [Delete All] button.
 - [Yes] button: Deletes the selected screen one by one.
 - [Delete All] button: Deleted all the selected screens.

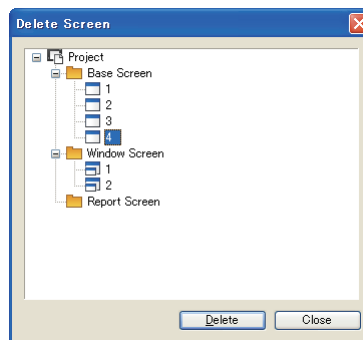


HINT

Deleting with the Delete Screen dialog box

Screens can be deleted with the [Delete Screen] dialog box also.

1. Select [Screen] → [Delete] from the menu to display the [Delete Screen] dialog box.

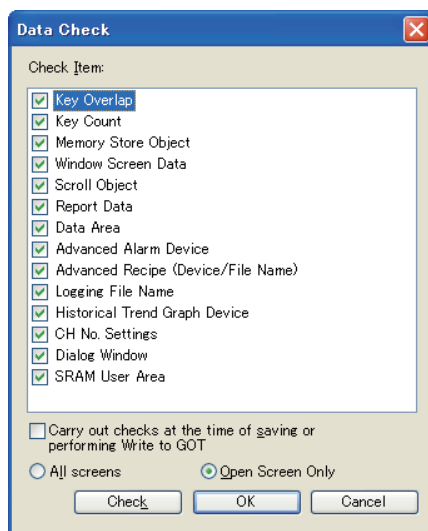


2. Select the screen to be deleted. Click the [Delete] button to delete the selected screen.


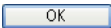

3.13 Data Check

Whether the created project data has an error or not can be checked.

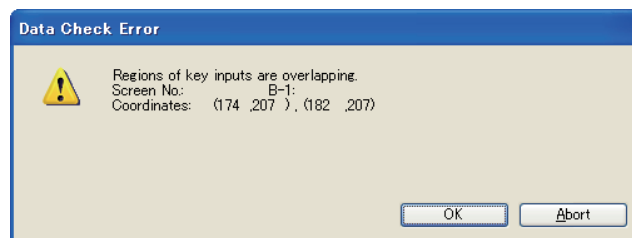
1. Select [Tools] → [Data Check] from the menu to display the [Data Check] dialog box.
2. Select the items and screens to be checked, and then click the [Check] button.



Item	Description		Model
Check Item	Select the items to enable the data check.		
	Touch Area	Checks the following. <ul style="list-style-type: none"> • The touch switches are overlapped each other. • Numerical input or ASCII input is overlapped with the touch switches. 	GT16 GT15 GT11 GT10 SeriGOT 1000
	Key Count	Checks whether more than 1000 touch switches are placed in the screen display area for each screen (front layer and back layer).	
	Memory Store Object	Checks whether the number of the following objects, which the memory storage or locus is set, exceeds maximum number. <ul style="list-style-type: none"> • User alarm display (memory storage): up to 16 per project • Line graph (locus): up to 1 per project • Trend graph (memory storage): up to 16 per project • Scatter graph (memory storage): up to 16 per project 	GT16 GT15 GT11 GT10 SeriGOT 1000
	Window Screen Data	Checks whether the data list display and alarm history display are arranged on the window screen. (The data list display and alarm history display are inapplicable to the window screen.)	
	Scroll Object	Checks whether multiple objects that need to be scrolled are set on a single screen. <ul style="list-style-type: none"> • Data List Display • Alarm History Display • User Alarm Display 	GT16 GT15 GT11 GT10 SeriGOT 1000
	Report Data	Checks the following. <ul style="list-style-type: none"> • The setting of the [Printing] tab and [Data Collection] tab in the [Screen Property] dialog box. • The setting of the [Header/Repeat] dialog box. 	GT16 GT15 GT11 GT10 SeriGOT 1000
	Data Area	Checks whether any of the objects is arranged outside the screen range.	GT16 GT15 GT11 GT10 SeriGOT 1000

Item	Description		Model
Check Item	Advanced Alarm Device	Checks for incorrect alarm device and alarm range settings.	GT16 GT15 GT11 GT10 SoRGOT 1000
	Advanced Recipe (Device and File Name)	Checks the following. • Consistency of the external control device and external notification device common for the advanced recipe with the screen switching device, station No. switching device and device specified in the system data • Duplication of the advanced recipe file name of each piece of advanced recipe data	
	Logging File Name	Checks that the set logging file name does not already exist.	
	Historical Trend Graph Device	Checks that there are no bugs in the logging settings and historical trend graph device settings.	GT16 GT15 GT11 GT10 SoRGOT 1000
	CH No. Setting	Checks that the channel No. set to [None] in the [Controller Setting] dialog box is not set for the following items. • [Adjust CH No.] or [Broadcast CH No.] in the [Clock Setting] tab of the [Environmental Setting] dialog box (GOT Setup) • [Controller CH No.] in the [Transparent] tab of the [Environmental Setting] dialog box (GOT Setup) • [CH No. for Station No.] of the [Controller Setting] dialog box (Station No. Switching)	
		Checks that there are no settings invalid in the CH No.Settings.	
	Dialog Window	Checks the following. • Dialog window • Whether the set window screen size (width × height) exceeds the maximum size (320 × 240). (GT15 and GT16 only)	GT16 GT15 GT11 GT10 SoRGOT 1000
Carry out checks at the time of saving or performing Write to GOT	SRAM User Area	Checks the following. • The number of settings for retaining data under power failure in the SRAM user area is less than or equal to 10 each for the advanced alarm and logging function. • The total capacity of the SRAM user area used for retaining data under power failure is 500KB or less.	GT16 GT15 GT11 GT10 SoRGOT 1000
	Select this item to automatically execute the data check when saving the project or communicating with the GOT.		GT16 GT15 GT11 GT10 SoRGOT 1000
	All Screens	Select this item to enable the data check on all screens.	
	Open Screen Only	Select this item to enable the data check on open screen.	
		Click this button to execute the data check.	
		Click this button to determine the setting and close the [Data Check] dialog box.	
		Click this button to cancel the setting and close the [Data Check] dialog box.	

3. If an error is detected, the following dialog box appears.
Example: When touch switches are overlapped



Click the [OK] button to continue the data check for any other error.
Click the [Cancel] button to cancel the data check.

3.14 Securing Project

Browsing of project by non-registered user can be avoided by registering users for a project.
The access authority can be set for users, so that reading or overwriting of a project is restricted for each user.

■ Registering users for project

Security is set by registering users for a project.

For the first time security is set, user registration with the administrators access level is necessary.

 3.14.2 ■When setting security for the first time

■ Customizing reading/overwriting restriction for each user

The user access authority is determined depending on the access level (enabled or disabled for reading/enabled or disabled for writing) set for the user.

The following access levels are provided for a project.

Access level	
Administrators	High ↑ ↓ Low
Developers (Level3)	
Developers (Level2)	
Developers (Level1)	
Users	Low

For Developers (Level 3), Developers (Level 2), Developers (Level 1), and Users, the access authority (enabled or disabled for reading/enabled or disabled for writing) can be customized.


■ Managing users

Adding users, deleting users, registering user information, changing password, and others are available.

 3.14.2 ■User management

■ Logging into project

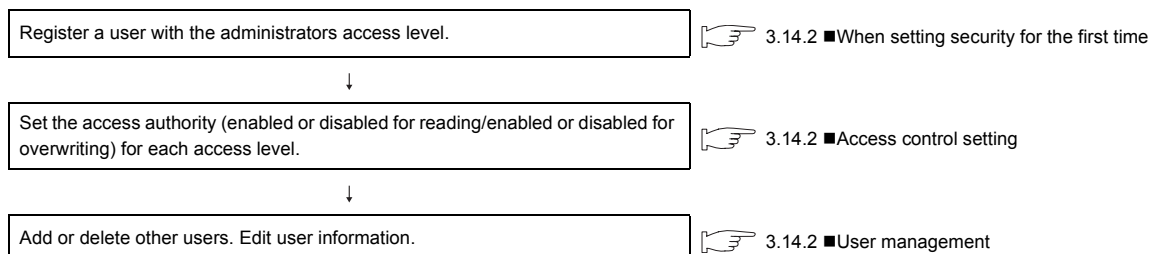
When opening the project for which the user is registered, the user authentication is required for login.

 3.14.3 Logging into project

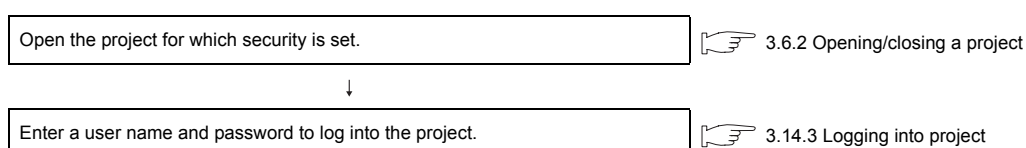
3.14.1 Procedures for setting security

■ Security setting procedures for project

The following shows the setting security procedures for a project.



■ Login procedures for project





3.14.2 Settings

■ When setting security for the first time

When setting security for a project, user registration with the administrator access level is required beforehand. Up to 128 users can be registered.

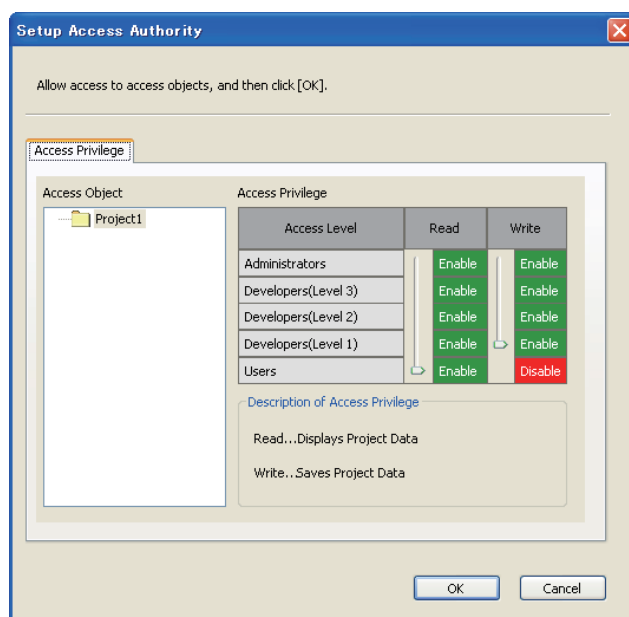
1. For the project for which a user is not registered, select [Project] → [Security] → [User Management] from the menu to display the [User Addition] dialog box.
(When security is already set, click the [Add] button of the [User Management] dialog box to display the [User Addition] dialog box.)
2. Set [User Name], [Access Level] (fixed to [Administrators]), [Password], and [Re-enter Password]. Click the [OK] button to register a user.
(When security is already set, [Access Level] can be set.)

Item	Description	Model
User Name	<p>Set a user name to be registered for the project.</p> <p>The user name must include 1 to 20 one-byte characters. (No two-byte or one-byte space can be input at the end of the user name.)</p> <p>The following shows characters applicable to the user name. (Uppercase and lowercase characters are recognized, respectively.) (space)!\"#\$%&()*+,-./:;<=>@[\\\]^_`{|}~0123456789 AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz</p>	
Access Level	<p>Set the access level of the user registered for the project.</p> <p>For the project for which a user is not registered, only [Administrators] can be selected.</p> <ul style="list-style-type: none"> • Administrators: All the functions are available. • Developers(Level3): Certain operations are restricted. • Developers(Level2): Certain operations are restricted. • Developers(Level1): Certain operations are restricted. • Users: Only browsing data is available. <p>Developers(Level1), Developers(Level2), Developers(Level3) have the same default setting. Changing the access authority is available in the [Setup Access Authority] dialog box.</p> <p> ■ Access control setting</p>	
Password	<p>Set the password used for user authentication when opening the project. (The password is displayed as *.)</p> <p>The password must include 6 to 32 one-byte characters.</p> <p>The following shows characters applicable to the password. (Uppercase and lowercase characters are recognized, respectively.) (space)!\"#\$%&'()*+,-./:;<=>@[\\\]^_`{|}~0123456789 AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz</p>	
Re-enter Password	<p>Re-enter the password set for [Password]. (The password is displayed as *.)</p> <p>Check consistency between [Password] and [Re-enter Password].</p>	

■ Access control setting

Set the access authority for a project according to each access level.

Select [Project] → [Security] → [Data Security Setting] from the menu to display the [Setup Access Authority] dialog box.



Item	Description	Model
Access Object	Displays the target project for the access control.	
Access Privilege*1	Set [Enable] or [Disable] for [Read] and [Write] for each access level. <ul style="list-style-type: none"> • Read: Restricts reading the project. • Write: Restricts overwriting the project. For setting the access levels, refer to the following. ■ User management	

For *1, refer to the following.

*1 Access Authority

The access authority setting has restrictions according to the access level of the login user.

The following shows settable access levels and access authority.

○ : Settable × : Not settable

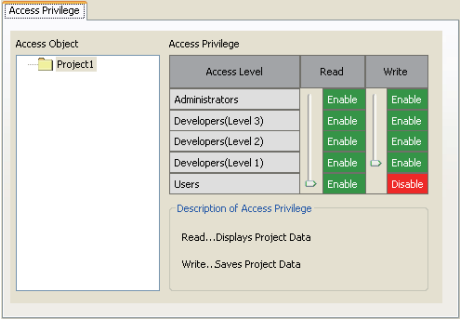
Access level (Login user)		Access authority setting (enable/disable)					Remark
		Administrators	Developers (Level3)	Developers (Level2)	Developers (Level1)	Users	
High Low	Administrators	×	○	○	○	○	[Read] and [Write] are fixed to [Enable].
	Developers(Level3)	×	×	○	○	○	-
	Developers(Level2)	×	×	×	○	○	-
	Developers(Level1)	×	×	×	×	○	-
	Users	×	×	×	×	×	[Write] is fixed to [Disable].

POINT

Restrictions on settable access authority

The user can set the access authority of users with the access levels below the login user level. The following shows a setting example.

○ : Settable × : Not settable

Setting example of access level and access authority	Access level	Access authority setting	
		Read	Write
Example) Login user access level: Developers(Level2) Access authority: Read permitted/write prohibited 	Administrators	× (Fixed)	× (Fixed)
	Developers(Level3)	×	×
	Developers(Level2)	× *1	× *1
	Developers(Level1)	○	×
	Users	○	× (Fixed)


*1 The login user cannot change the user's access authority.

■ User management

Adding or deleting users and changing user information or password are available.

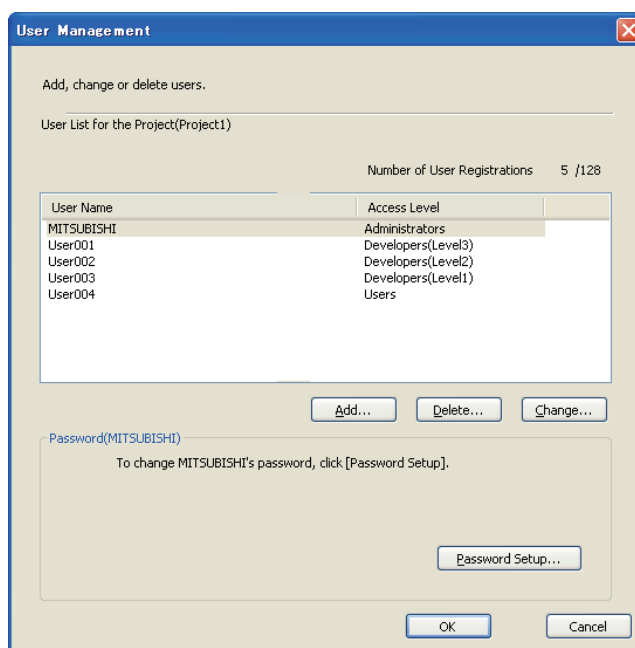
(1) When no users are registered







Select [Project] → [Security] → [User Management] from the menu to display the [User Addition] dialog box.

 ■When setting security for the first time

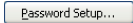


(2) When users are already registered

1. Select [Project] → [Security] → [User Management] from the menu to display the [User Management] dialog box.
2. Click each button to register, delete, or edit the user.
3. After registering, deleting, or editing the user, click the [OK] button. The changed contents are determined, and the [User Management] dialog box is closed.



Item	Description	Model
User List for the Project	Displays the target project name for the user management.	
Number of User Registrations	Displays the numbers of registered users and registerable users. Up to 128 users can be registered.	
User Name	Displays the user names registered for the project.	
Access Level	Displays the access levels set for the users.	
 *1	Click the [Add] button. The [User Addition] dialog box appears, and add a user.  ■When setting security for the first time	
 *1	Delete a registered user. Select a user to be deleted, and then click the [Delete] button to delete the user. Deleting all registered users clears the security setting.	
 *1	Change the user information. Select a user with the user information to be changed, and then click the [Change] button. The [Change User Data] dialog box appears, and change the user information.  (a) Change User Data dialog box	

(Continued to next page)

Item	Description	Model
 *1	Change the password for a user. Select a user with the password to be changed, and click the [Change Password] button. The [Change Password] dialog box appears, and change the password.  (b) Change Password dialog box	

For details of *1, refer to the following.

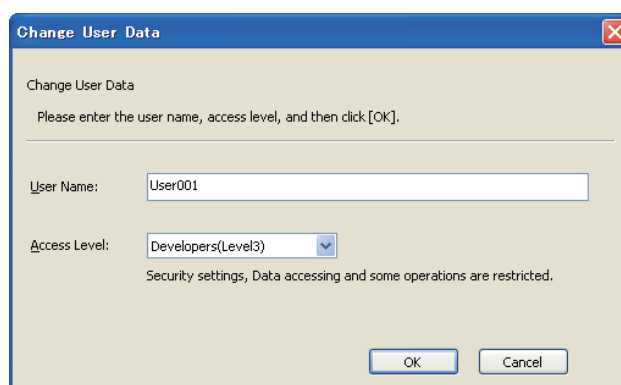
*1 Restrictions

The user management setting has restrictions according to the access level of the login user.

The following shows the settable user management setting according to each access level.




Access level (Login user)	User management setting				
	Administrators	Developers(Level3)	Developers(Level2)	Developers(Level1)	Users
Administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developers(Level3)	Not settable	Not settable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developers(Level2)	Not settable	Not settable	Not settable	<input type="radio"/>	<input type="radio"/>
Developers(Level1)	Not settable	Not settable	Not settable	Not settable	<input type="radio"/>
Users	Not settable	Not settable	Not settable	Not settable	Not settable

(a) Change User Data dialog box



The dialog box is titled "Change User Data". It contains the following fields and controls:

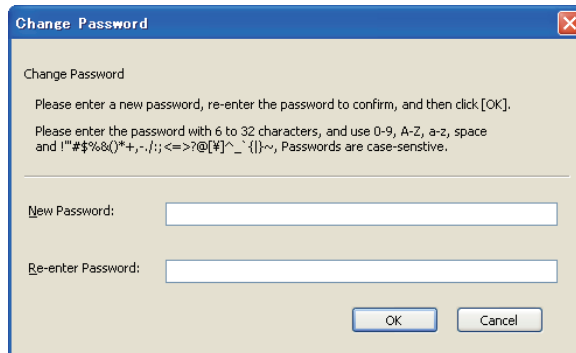
- User Name:** A text input field containing "User001".
- Access Level:** A dropdown menu currently set to "Developers(Level3)".
- Message:** "Security settings, Data accessing and some operations are restricted." (This message is only visible when the Access Level is set to Developers or Users).
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Item	Description	Model
User Name	Set the name of a user to be added to the GT Designer3 project. The following shows characters applicable to the user name.  ■ When setting security for the first time	
Access Level	Set the access level for the user added to the GT Designer2 project. Changing the access authority is available in the access control setting. For the access control setting, refer to the following.  ■ When setting security for the first time	



(b) Change Password dialog box

Change the password of a user selected in [User List for the Project] of the [User Management] dialog box.
For changing the password of the login user, refer to the following.

 ■ Changing password of login user



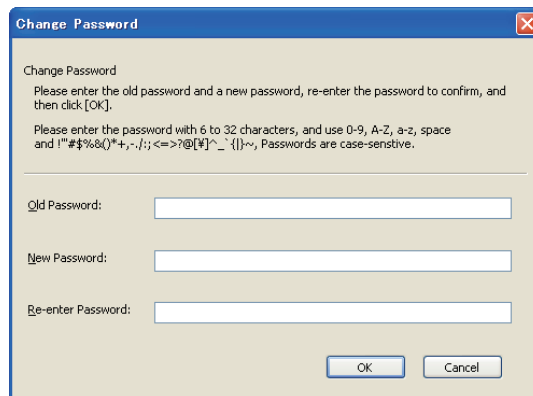
The dialog box is titled "Change Password" and contains the following text: "Change Password", "Please enter a new password, re-enter the password to confirm, and then click [OK].", and "Please enter the password with 6 to 32 characters, and use 0-9, A-Z, a-z, space and !\"#\$%&()*+,-./:;<=>?@[\\]^_`{|}~. Passwords are case-sensitive." There are two input fields: "New Password:" and "Re-enter Password:". At the bottom are "OK" and "Cancel" buttons.

Item	Description	Model
New Password	Set a new password. (The password is displayed as *.) For details of characters applicable to the password, refer to the following.  ■ When setting security for the first time	
Re-enter Password	Re-enter the password set for [New Password]. (The password is displayed as *.) Check consistency between [New Password] and [Re-enter Password].	



■ Changing password of login user

Change the password of the login user.

Select [Project] → [Security] → [Change Password] from the menu to display the [Change Password] dialog box.

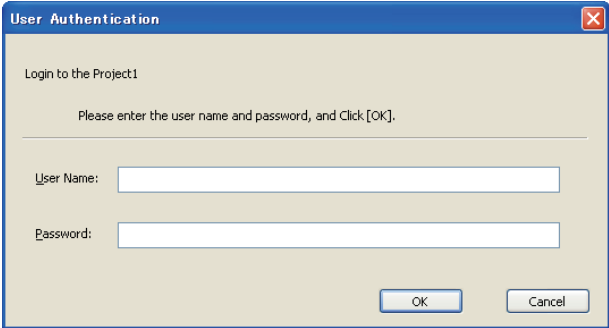


The dialog box is titled "Change Password" and contains the following text: "Change Password", "Please enter the old password and a new password, re-enter the password to confirm, and then click [OK].", and "Please enter the password with 6 to 32 characters, and use 0-9, A-Z, a-z, space and !\"#\$%&()*+,-./:;<=>?@[\\]^_`{|}~. Passwords are case-sensitive." There are three input fields: "Old Password:", "New Password:", and "Re-enter Password:". At the bottom are "OK" and "Cancel" buttons.

Item	Description	Model
Old Password	Set the old password. (The password is displayed as *.)	
New Password	Set a new password. (The password is displayed as *.) For details of characters applicable to the password, refer to the following.  ■ When setting security for the first time	
Re-enter Password	Check consistency between [New Password] and [Re-enter Password]. (The password is displayed as *.)	

3.14.3 Logging into project

1. Open a project with security, and the [User Authentication] dialog box appears.
☞ 3.6.2 Opening/closing a project
2. Enter [User Name] and [Password] of a registered user. Click the [OK] button to log into the project.



Item	Description	Model
User Name	Set the user name for login.	GT16 GT15 GT11 GT10 SeriGOT 1000
Password	Set the user password for login. (The password is displayed as *.)	

3.14.4 Precautions

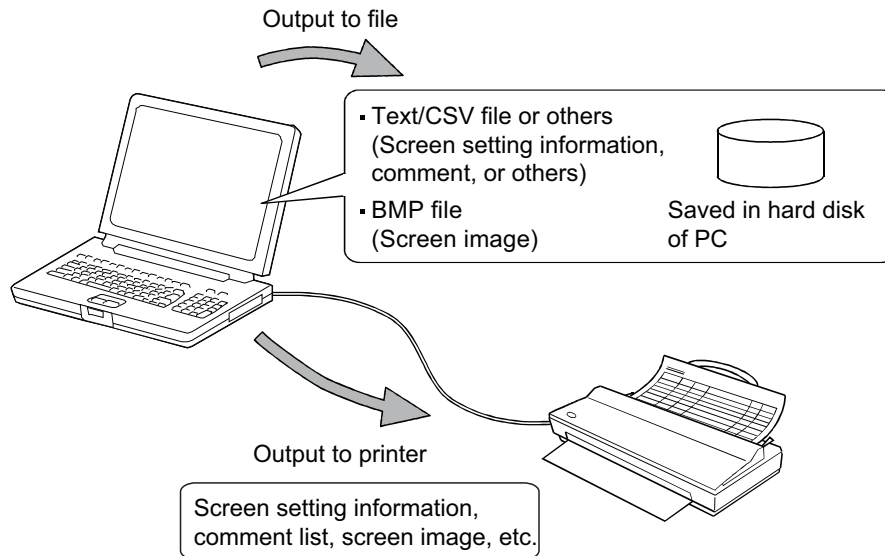
■ When user forgets user name and password

When the user forgets the user name and password, the user cannot open the corresponding project with the security.
Delete the project, and then create a new project.

3.15 Printing Project/File Output

Settings or screen image of created project can be output to a file or printer.

The data output to a file can be used for various documents after editing with a commercially available word processor software.



POINT

Print setting

- (1) Papers are printed in the portrait mode.
 - (2) Font and font size for printing cannot be changed.
 - (3) The header information (date, file name) are automatically printed when output to a printer.
-

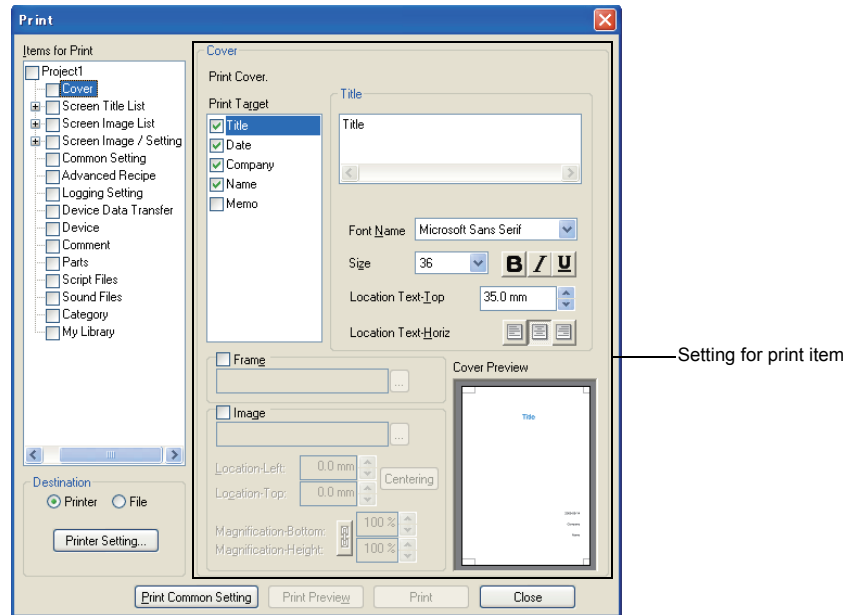
3.15.1 Print setting

The setting dialog box differs depending on the set contents as follows.

Setting contents	Setting dialog box
Setting for output target	The [Print] dialog box
Setting for layout/color tone of screen image when outputting	The [Print Common Setting] dialog box

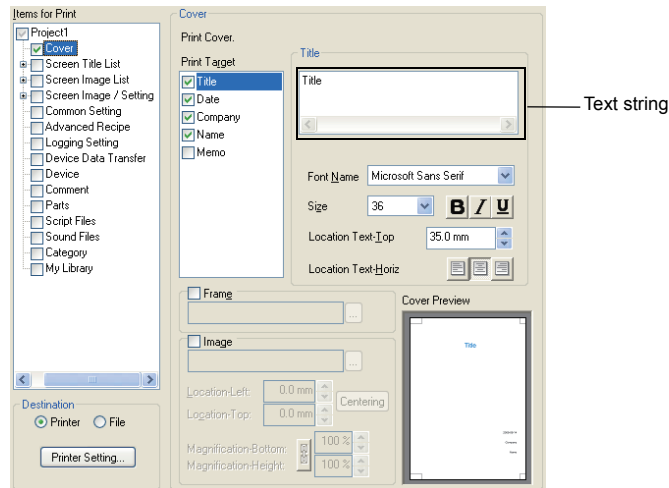
■ Print dialog box











Select [Project] → [Print] from the menu to display the [Print] dialog box.



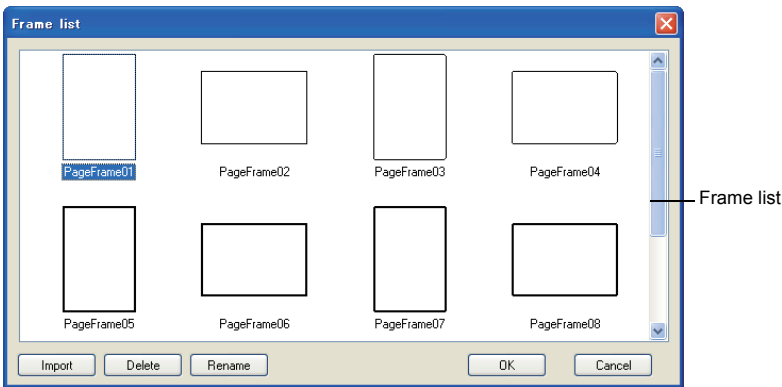
Item	Description	Model
Items for Print	Select items to enable the output. For output images and files for each item, refer to the following. ☞ 3.15.3 Outputting examples	
Destination	Select the output destination. • Printer: Set the output destination to [Printer]. Click the [Printer Setting] button for the printer setting. The printer setting differs depending on the printer driver for used OS. • File : Set the output destination to [File]. Set [File Format] (CSV/TXT) and [Image Format] (BMP/JPEG).	
Setting for print item	When selecting either of the following items in [Items for Print], relevant setting items are displayed. • Cover ☞ (1) Cover • Screen Image List-Base Screen/Window Screen ☞ (2) Screen Image List (Base Screen/Window Screen) • Screen Image/Setting-Base Screen/Window Screen/Report Screen ☞ (3) Screen Image/Setting (Base Screen/Window Screen/Report Screen) • Advanced Recipe/Logging Setting/Device Data Transfer/Comment/Category ☞ (4) Advanced Recipe/Logging Setting/Device Data Transfer/Comment/Category • Device ☞ (5) Device	GT16 GT15 GT11 GT10 SoftGOT 1000
	Click this button to display the [Print Common Setting] dialog box. ☞ ■ Print Common Setting dialog box	
	Click this button to display the print preview window. ☞ 3.15.2 Previewing print image	
	Click this button, and the setting contents set in [Destination] is output to a printer or file.	
	Click this button to close the [Print] dialog box.	

(1) Cover



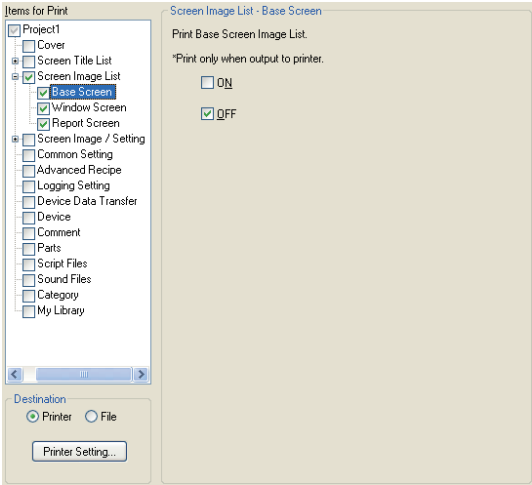
Item	Description		Model
Items for Print	Select items to enable the output.		
Title/ate/Company/ Name/Memo	The display changes according to the set items in [Print Target].		
	Text string	Set the text to be displayed.	
		Enters today's date in the text.	
	Font Name	Select the font.	
	Size	Select the text size.	
		Set the text style to bold.	
		Set the text style to italic face.	
		Apply an underscore to the font.	
	Location Text-Top	Set the vertical display position of the text based on the top of the print area. (0.0mm to 999.9mm)	
	Location Text Horiz	Set the horizontal display position of the text. (Left Align/Center Align/Right Align)	
Frame	Select this item to display a page frame on the cover. Click the [...] button, and select the frame in the [Frame List] dialog box.  (a) Frame List dialog box		
Image	Select this item to display the image file on the cover. Click the [...] button. The [Select Image] dialog box appears, and set the image file.		
	Loc-Left	Set the horizontal display position of the image based on the left of the header or footer area. (-999.9mm to 999.9mm)	
	Loc-Top	Set the vertical display position of the image based on the top of the header or footer area. (-999.9mm to 999.9mm)	
	Loc-Width	Set the display magnification for the width of the image. (0% to 100%)	
	Loc-Height	Set the display magnification for the height of the image. (0% to 100%)	
		Select whether the [Mag-Width] and [Mag-Height] setting to be linked () or not to be linked ().	
		Click this button to set the image display position to the center of the header or footer.	
Cover	Displays the preview of the setting contents.		

(a) Frame List dialog box



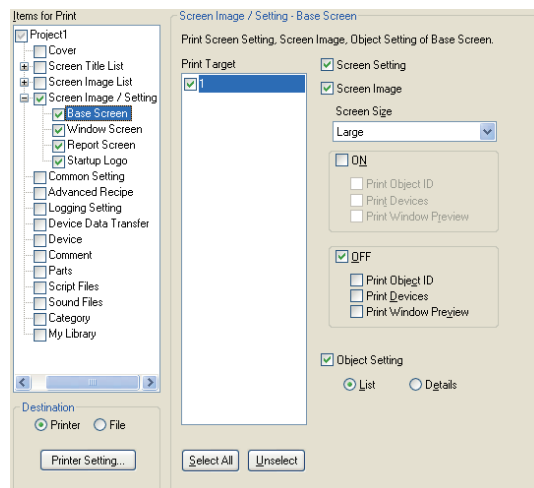
Item	Description	Model
Frame list	Frame images are displayed.	GT16GT15 GT11GT10 SoftGOT1000
	Click this button to display the [Import frame image] dialog box. The image file (WMF format or EMF format) used as frame image can be imported. The imported image is displayed in the frame list.	
	Click this button to delete the frame image selected in the frame list.	
	Click this button to change the file name of the frame image selected in the frame list.	
	Click this button to set the frame image selected in the frame list as a cover page frame.	
	Click this button to close the [Frame List] dialog box.	

(2) Screen Image List (Base Screen/Window Screen)



Item	Description	Model
ON	Select this item to output the image when the device is turned on. Applicable only when setting to [Printer] in the [Destination].	GT16GT15 GT11GT10 SoftGOT1000
OFF	Select this item to output the image when the device is turned off. Applicable only when setting to [Printer] in the [Destination].	

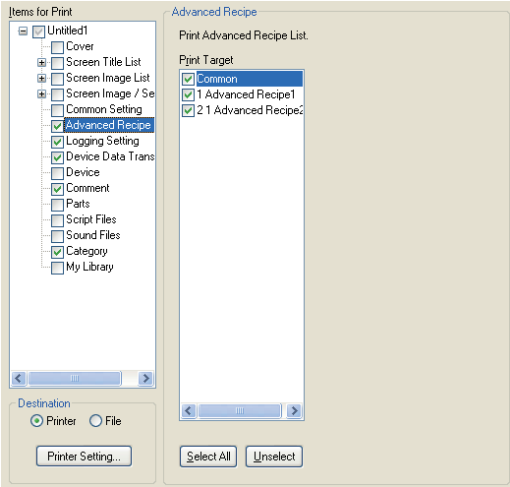
(3) Screen Image/Setting (Base Screen/Window Screen/Report Screen)



Item	Description		Model
Items for Print	Select items to enable the output.		<div>GT16GT15</div> <div>GT11GT10</div> <div>Sei/GOT 1000</div>
<div>Select All</div>	Click this button to select all items in [Print Target].		
<div>Unselect</div>	Click this button to clear all items in [Print Target].		
Screen Setting	Select this item to enable the output of the screen setting.		
Screen Image	Select this item to enable the output of the screen image.		
	Screen Size	Select the screen image size. (Large/Medium/Small)	
	ON/OFF	Select this item to enable the output of the setting when the device is turned on or off. Displaying [OFF] is applicable only when [Base Screen] or [Window Screen] of [Screen Image/Setting] in [Items for Print] is selected.	
	Print Object ID	Applicable only when [ON] or [OFF] is selected. Select this item to display object IDs on the screen image when the device is turned on or off.	
	Print Devices	Applicable only when [ON] or [OFF] is selected. Select this item to display the device on the screen image when the device is turned on or off.	
	Print Window Preview	Applicable only when [ON] or [OFF] is selected. Select this item to display the window screen preview on the screen image when the device is turned on or off. Applicable only when [Base Screen] of [Screen Image/Setting] in [Items for Print] is selected.	
Object Setting	Select this item to enable the output of the object setting. After selecting, select the contents to be output. (List/Details)		

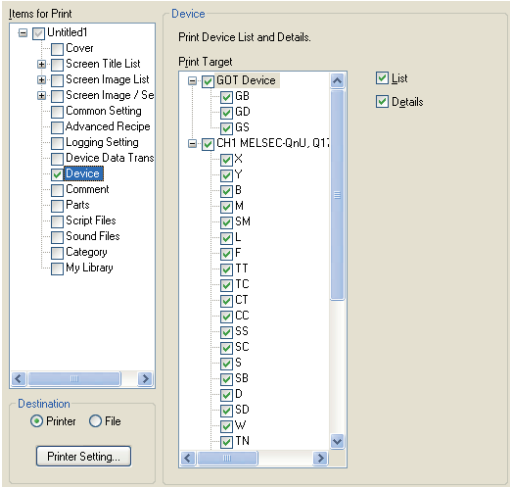
(4) Advanced Recipe/Logging Setting/Device Data Transfer/Comment/Category

The advanced recipe, logging setting, and device data transfer are applicable only for the GT16, GT15, and GT SoftGOT1000.



Item	Description	Model
Items for Print	Select items to enable the output.	<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
<div>Select All</div>	Click this button to select all items in [Print Target].	
<div>Unselect</div>	Click this button to clear all items in [Print Target].	

(5) Device



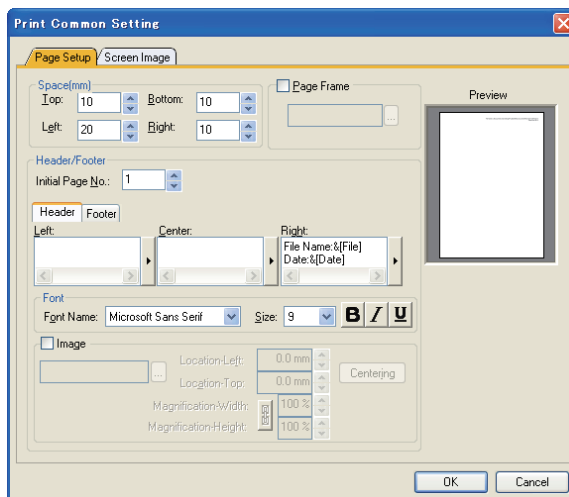
Item	Description	Model
Print Target	Select items to enable the output.	<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
List	Select this item to enable the output of the list of devices.	
Detail	Select this item to enable the output of the details for devices.	

■ Print Common Setting dialog box

Select [Project] → [Print Common Setting] from the menu to display the [Print Common Setting] dialog box.

(1) Page Setup tab

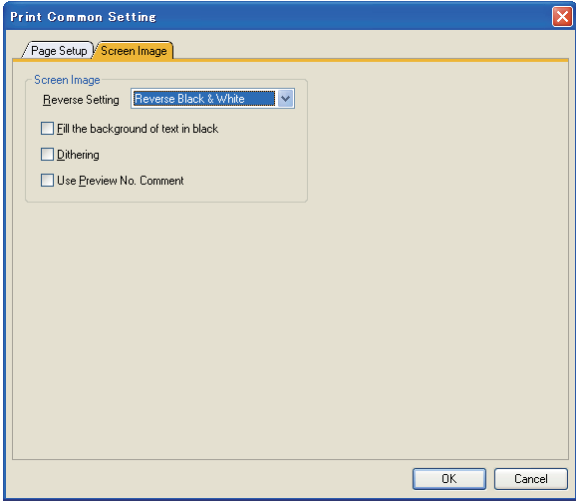
The layout setting when outputting is available.



Item	Description		Model
Space(mm)	Set the margin for top, bottom, left, and right of the page. (0mm to 100mm)		<div><div>GT16</div><div>GT15</div><div>GT11</div><div>GT10</div></div> <div>Set/GO1</div> <div>1000</div>
Page Frame	Select this item to display a page frame on the cover. Click the [...] button. The [Frame List] dialog box appears, and set the page frame. ■Print dialog box (1) (a) Frame List dialog box		
Header/Footer	Initial Page No.	Set the initial page number. (1 to 9999)	
	Header/Footer	Switches the item to be set (header/footer) by the tab.	
	Left/Center/Right	Set the text displayed in [Left], [Center], or [Right] of the header or footer. Click the button. The auto-text list appears, and select the auto-text.	
	Font	Set the font name, text size, or text style of the header or footer. The font setting is common to [Left], [Center], or [Right]. <ul style="list-style-type: none">Font name: Select the font.Size: Select the text size. : Set the text style to bold. : Set the text style to italic face. : Apply an underscore to the font.	
	Image	Select this item to display the image file in the header or footer. The image is displayed behind the text set in [Left], [Center], or [Right]. Click the [...] button. The [Select Image] dialog box appears, and set the image file. <ul style="list-style-type: none">Location-Left: Set the horizontal display position of the image based on the left of the header or footer area. (-999.9mm to 999.9mm)Location-Top: Set the vertical display position of the image based on the top of the header or footer area. (-999.9mm to 999.9mm)Magnification-Width: Set the display magnification for the width of the image. (0% to 100%)Magnification-Height: Set the display magnification for the height of the image. (0% to 100%) : Select whether the [Magnification-Width] and [Magnification-Height] setting to be linked () or not to be linked ().: Click this button to set the image display position to the center of the header or footer.	
Preview	Displays the preview of the set contents.		

(2) **Screen Image tab**

The color tone setting of screen image when outputting is available.



Item	Description		Model
Screen Image	Reverse Setting	Select the inverting process for the color tone of the screen image. Not Reverse : No inverting is processed. Reverse Black & White : Outputs with black and white inverted. Reverse Negative & Positive: Outputs with all color tone inverted.	GT16 GT15 GT11 GT10 SoftGOT 1000
	Fill the background of text in black	Select this item to output with the text color filled in white and background filled in black.	
	Dithering	Select this item to output with the intermediate color added to the two-tone monochrome screen.	
	Use Preview No. Comment	Select this item to output with the comment of the comment column No. set for the preview No. displayed.	

3.15.3 Outputting examples

Printer output

Cover

Sample Project

2009-05-26

Screen Title List

File:Project11
Data:2009-11-12

[Base Screen Title List]	
1	[Base Screen1]
2	[Base Screen2]
3	[Base Screen3]

[Window Screen Title List]	
1	[Window Screen1]
2	[Window Screen2]
3	[Window Screen3]

Screen Image List

File:Project11
Data:2009-11-12

[Base Screen Image List]	[Base Screen1(OFF)]	[Base Screen2(OFF)]	[Base Screen3(OFF)]
	<div>Base screen1</div>	<div>Base screen2</div>	<div>Base screen3</div>

Screen Image/Setting

File:Project11
Data:2009-11-12

[Screen Image / Setting]	
Base Screen1	
[Base Screen Details]	
Screen Name	[Base Screen1]
Size	640x480
Detailed Description	-
Security	0
User screen color	RG
Pattern	-
Pattern Color	-
Background Color	-
Front Layer Transparency	Dark Yellow
Switch Screen etc.	No
Popup the display of advanced alarm	Yes
Display Position	Bottom

[Key Window Setting]	
Key Window Setting	
[Key Window Setting]	Same as the project setting

[Key Window Type]	
[Key Window/Cursor Display Setting]	Same as the project setting

[Key Window/Cursor Display Setting]	
When operating conditions are satisfied	
[Key Window/Cursor Display Setting]	Same as the project setting

[Key Window/Cursor Movement]	
[Key Window/Cursor Movement]	Same as the project setting

[Display Window]	
[Display Window]	Same as the project setting

[JANA RANJ] Conversion]	
Option Selection Window Setting	Same as the project setting

Common Setting

FileProject11
Data 2009-11-12

[Common Setting]

Project information
[Project Title]
Sample

[Project ID]
2175542

[Detail Description]
-

[Created By]
-

GOT Setting
GOT Type Setting
[GOT Type]
GT 10m-V (540x490)

[Color Setting]
256 (image data 65536)

[Default Drive Name]
A:Standard C.F. Card

[Project Folder]
Project1

[Font]
Japanese(supporting Europe)

[Bolder Standard Font]
Gothic

[TrueType Numerical Font]
Gothic

[Check for overlapping objects within GOT]
No

[Adjust object display order in GOT to the one in GT Designer3]
No

[Use system labels in conjunction with MELSOFT Navigator]
No

Environmental Setting
[Screen Switching Window]

Screen Switching Device	X Display Position	Y Display Position	Window Bar
Master Screen	0100	-	-
Overlap Window1	0101	-	Yes
Overlap Window2	0102	-	Yes
Overlap Window3	0103	-	Yes
Overlap Window4	0104	-	Yes
Overlap Window5	0105	-	Yes
Superimpose Window1	0111	-	-
Superimpose Window2	0112	-	-
Display Window	-	-	-

Setting
[Screen Switching Device Type]
BIN

[Enable background colors of overlay screen when setting a in overlay screen]
No

Advanced Recipe

FileProject11
Data 2009-11-12

[Advanced Recipe Common]

External Control Device	0900
File Conversion External Control	No
External Notification Device	-

[Advanced Recipe]

No. 1

Recipe Name	Advanced Recipe1
Recipe File	Use
Drive Name	A:Standard C.F. Card
Folder Name	Project1
File Name	AR000001.GTP
Write Trigger Device1	-
Write Trigger Device2	-
Read Trigger Device1	-
Read Trigger Device2	-
Record No. Device	-
Convert Format	-
Destination	-
Drive Name	-
Folder Name	-
File Name	-
Device Number	1
Block Number	1
Record Number	1

Logging Setting

FileProject11
Data 2009-11-12

[Logging]

Logging ID : 1

Logging Name	-
Logging Mode	File Save
Number of Files	1
Number of Log a file	1
File Terminal Trigger	-
File Terminal Notification Device	-
Logging Trigger	Sampling1
Logging Notification Device	-
Logging Count Device	-
Retain data in the embedded memory in GOT even when the power goes off (The battery will be required)	No
Log Storage Number	1(number of items)
Block Number	-3 ~ 1 Kbyte of the memory to be used
File Output Attribute	Yes
Drive Name	A:Standard C.F. Card
Folder Name	Project1\LOG00001
File Name	LOG000001
Add date information to file name	No
Save Trigger	None
Additional File Type	None
Destination	-
Drive Name	-
Folder Name	-
File Name	-
Specify File Output Time Information Format	No
Writing Notification Device	-
Writing Error Notification Device	-

Device Data Transfer

FileProject11
Data 2009-11-12

[Device Data Transfer]

Device Data Transfer ID : 1

Device Data Transfer Name	Device Data Transfer1
Trigger Type	Sampling 100x100ms
External Control Device	0900
Trigger Device	0900.10
Transfer Inverting Flag Device	0900.11
External Notification Device	-
Device Data Transfer Notification Signal	-
Device Data Transfer Error Notification Signal	-
Device Number	1
Block Number	1

Device (List)

File:Project11
Data:2009-11-12

[Device List]

[GOT Device]
[Word Device]
[G0 List]

Device
G0 FF G0100 G0101

[CH1:MELSEC-QnAQIOS, MELDAS C9]

[B8 Device]
[J List]

Device
B8 FF J0001

[Word Device]
[D List]

Device
D FF D102 D103 D104 D105 D111 D112 D300 D300 D300 D400 D500 D550 D600 D610 D620

Device (Details)

File:Project11
Data:2009-11-12

[Device Details]
[GOT Device]
[Word Device]
[G0 Details]

Device	Point	Screen Number	Object	Coordinates	Object ID
G0 FF	G0100	Common Setting	Screen Switching	-	-
	G0101	Common Setting	Script No.1	-	-

[CH1:MELSEC-QnAQIOS, MELDAS C9]

[B8 Device]
[J Details]

Device	Point	Screen Number	Object	Coordinates	Object ID
B8 FF	J0001	Common Setting	Script Trigger	-	-

[Word Device]
[D Details]

Device	Point	Screen Number	Object	Coordinates	Object ID
D FF	D102	Common Setting	Screen Switching	-	-
	D103	Common Setting	Screen Switching	-	-
	D104	Common Setting	Screen Switching	-	-
	D105	Common Setting	Screen Switching	-	-
	D111	Common Setting	Screen Switching	-	-
	D112	Common Setting	Screen Switching	-	-
	D300	Common Setting	Language Switching	-	-
	D300	3	Common Setting	System Information	-
	D350	12	Common Setting	System Information	-
	D400	1	Common Setting	Logging Setting	-
	D500	3	Common Setting	Advanced Recipe Common Setting	-
	D550	1	Common Setting	Advanced Recipe Setting	-
	D600	Common Setting	Device Data Transfer	-	-
	D610	1	Common Setting	Device Data Transfer	-
	D620	1	Common Setting	Device Data Transfer	-

Comment

File:Project11
Data:2009-11-12

[Comment List]

Basic Comment

Comment
1. Basic Comment1
2. Basic Comment2
3. Basic Comment3

Basic Comment

Comment
1. Text Color White Reverse No Blink Name Right Font No Style Regular
2. Text Color White Reverse No Blink Name Right Font No Style Regular
3. Text Color White Reverse No Blink Name Right Font No Style Regular




Parts

File:Project11
Data:2009-11-12

[Parts Setting]

Setting	Value
Show overlapping areas of shapes in XOR when Display Mode of Parts Display is XOR	Yes
Show image files in the memory card at the time of specifying Parts No. 9001-9999	No

[Parts]

Circle	Triangle	Rectangle
		

Script Files

FileProject11
Data 2009-11-12

[Script]

No.	Comment	Modified	Script Name
1		2009/05/25 16:16:00	Script1

[Script Options]

Script Data Storage Verification	Project Date
Display the script data update confirmation message when processing write to GOT	
Script Editor Type	Script Editor
Editor Path	
Option	Low -> High
Print Handling Function Storage Order	
Cancel internal device (GOT/GS) assignment delay	Yes

Sound Files

FileProject11
Data 2009-11-12

[Sound Files Setting]

The Sound File is used for the touch key sound	No
Prioritize the sound output of a switch	

[Sound File]

No.	File Name
1	gdt.wav

Category

FileProject11
Data 2009-11-12

[Category]

[Switch]	Screen	Coordinates
Special Function Switch	S-1	443,368
Go To Screen Switch	S-1	80,368
Go To Screen Switch	S-1	254,368
Special Function Switch	S-2	443,368
Go To Screen Switch	S-2	80,368
Go To Screen Switch	S-2	254,368
Special Function Switch	S-3	443,368
Go To Screen Switch	S-3	80,368
Go To Screen Switch	S-3	254,368





[Other]	Screen	Coordinates
Text	S-1	176,65
Text	S-2	177,64
Text	S-3	176,65
Text	W-1	40,32
Text	W-2	40,32
Text	W-3	40,32

My Library

FileProject11
Data 2009-11-12

[My Library]

1 my library Folder

1 New Library data	2 New Library data	3 New Library data	4 New Library data
			

■ File output

(1) Files to be output

In file output, the following files are output to the specified folder.

(a) Text file

The file format (CSV/TXT) can be selected in the [Print] dialog box.

☞ 3.15.1 ■Print dialog box

Item	File	Remark
Cover	• Cover.CSV/TXT	-
Screen Title List	• Screen Title List.CSV/TXT	-
Screen Image / Setting	• Screen Image Setting.CSV/TXT	-
Common Setting	• Common Setting.CSV/TXT	-
Advanced Recipe	• Advanced Recipe Common.CSV/TXT	-
	• Advanced Recipe Setting-****.CSV/TXT	Substitute "*****" with a recipe number.
Logging Setting	• Logging Settings-****.CSV/TXT	Substitute "*****" with a logging ID.
Device Data Transfer	• Device Data Transfer-****.CSV/TXT	Substitute "*****" with a device data transfer ID.
Device	• Device List-CH*.CSV/TXT	Substitute "*" with a channel number.
	• Device List-GOT.CSV/TXT	
	• Device Details-CH*.CSV/TXT	Substitute "*" with a channel number.
	• Device Details-GOT.CSV/TXT	
Comment	• Comment List.CSV/TXT	-
	• Comment List-***.CSV/TXT	Substitute "*****" with a comment group number.
Parts	• Parts.CSV/TXT	-
Script Files	• Script.CSV/TXT	-
Sound Files	• Sound Files.CSV/TXT	-
Category	• Category.CSV/TXT	-
My Library	• My Library.CSV/TXT	-

(b) Image file

The file format (BMP/JPEG) can be selected in the [Print] dialog box.

☞ 3.15.1 ■Print dialog box

Item	File	Remark
Screen Image List (Base Screen)	• BaseON-****.BMP/JPG • BaseOFF-****.BMP/JPG • BaseONObjectID-****.BMP/JPG • BaseOFFObjectID-****.BMP/JPG • BaseONDevice-****.BMP/JPG • BaseOFFDevice-****.BMP/JPG	Substitute "*****" with a screen number.
Screen Image List (Window Screen Image List)	• WindowON-****.BMP/JPG • WindowOFF-****.BMP/JPG • WindowONObjectID-****.BMP/JPG • WindowOFFObjectID-****.BMP/JPG • WindowONDevice-****.BMP/JPG • WindowOFFObjectID-****.BMP/JPG	Substitute "*****" with a screen number.
Parts	• Parts-****.BMP/JPG	Substitute "*****" with a part number.
My Library	• My Library-***-***.BMP/JPG	Substitute "****-****" with "a library folder number-library data number".

(2) Output image (When set to CSV file)

Cover.CSV

	A	B	C	D	E	F	G	H	I
1	[Cover]								
2									
3		Title	Sample Project						
4		Date	2009/5/26						
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									

Screen Title List.CSV

	A	B	C	D	E	F	G	H	I
1	[Screen Title List]								
2									
3	[Base Screen Title List]								
4		1	Base Screen1						
5		2	Base Screen2						
6		3	Base Screen3						
7									
8	[Window Screen Title List]								
9		1	Window Screen1						
10		2	Window Screen2						
11		3	Window Screen3						
12									
13									
14									
15									
16									
17									

Screen Image Setting.CSV

	A	B	C	D	E	F	G	H	I
1	[Screen Image / Setting]								
2									
3	Base Screen1								
4	[Base Screen Details]								
5		Screen No	Base Screen1						
6		Size	640X480						
7		Detailed De-							
8		Security	0						
9		Use screen No							
10		Pattern	-						
11		Pattern Co-							
12		Background	-						
13		Front Layer	Dark Yellow						
14		Switch Sta	No						
15		Popup the	Yes						
16		Display Pos	Bottom						
17									

Common Setting.CSV

	A	B	C	D	E	F	G	H	I
1	[Common Setting]								
2									
3	Project information								
4	[Project Title]								
5	Sample								
6									
7	[Project ID]								
8	2175542								
9									
10	[Detail Description]								
11	-								
12									
13	[Created By]								
14	-								
15									
16	GOT Setting								
17	GOT Type Setting								

Advanced Recipe Setting-****.CSV

	A	B	C	D	E	F	G	H	I
1	[Advanced Recipe]								
2	No. 1								
3		Recipe Name	Advanced Recipe1						
4		Recipe File Use							
5		Drive Name	A:Standard CF Card						
6		Folder Name	Project1						
7		File Name	ARP00001.G1P						
8		Write Trigger	-						
9		Write Trigger	-						
10		Read Trigger	-						
11		Read Trigger	-						
12		Record No.	-						
13		Convert Fc	-						
14		Destination	-						
15		Drive Name	-						
16		Folder Name	-						
17		File Name	-						

Logging Settings-*****.CSV

	A	B	C	D	E	F	G	H	I
1	[Logging]								
2									
3	Logging ID : 1								
4		Logging Name	Logging1						
5		Logging Method	File Save						
6		Number of	1						
7		Number of	1						
8		File Termination	-						
9		File Termination	-						
10		Logging Trigger	Sampling/1						
11		Logging No.	-						
12		Logging Co-	-						
13		Log Storage (number of items)	--> 1 Kbyte of the memory to be used						
14		Block Number	1						
15		File Output	Yes						
16		Drive Name	A:Standard CF Card						
17		Folder Name	Project1\LOG00001						

Device Data Transfer-*****.CSV

	A	B	C	D	E	F	G	H	I
1	[Device Data Transfer]								
2									
3	Device Data Transfer ID : 1								
4		Device Data	Device Data Transfer1						
5		Trigger Type	Sampling 100(x1.00ms)						
6		External Cx	D600						
7		Trigger De	D600.b0						
8		Transfer In	D600.b1						
9		External Nc	-						
10		Device Data	-						
11		Device Data	-						
12		Device Num	1						
13		Block Num	1						
14									
15		No.	Device Type	Points	Source De	Destination	Comment	Offset	
16		1	Signed BIN	1	D610	D620	-	None	
17									

Device List-CH*.CSV

	A	B	C	D	E	F	G	H	I
1	[Device List]								
2									
3	[CH1: MELSEC-QnA/Q/GS, MELDAS C6*]								
4	[Bit Device]								
5	[X List]								
6			Device						
7		0-FF	X0001						
8									
9	[Word Device]								
10	[D List]								
11			Device						
12		0-FF	D102	D103	D104	D105	D111	D112	D200
13			D300	D350	D400	D500	D5		
14									
15									
16									
17									

Device Details-CH*.CSV

	A	B	C	D	E	F	G	H	I
1	[Device Data Transfer]								
2									
3	Device Data Transfer ID : 1								
4		Device Data Device Data Transfer1							
5		Trigger Typ(Sampling 100(x100ms)							
6		External CcD600							
7		Trigger De+D600.b0							
8		Transfer Ir+D600.b1							
9		External Nc-							
10		Device Dat-							
11		Device Dat-							
12		Device Nui	1						
13		Block Num	1						
14									
15		No.	Device Typ	Points	Source De	Destination	Comment	Offset	
16		1	Signed BIN	1	D610	D620	-	None	
17									

Comment List.CSV

	A	B	C	D	E	F	G	H	I
1	[Comment List]								
2									
3	Basic Comment								
4			1 Basic Comment1						
5			2 Basic Comment2						
6			3 Basic Comment3						
7									
8	Basic Comment								
9			1 Text Color:White/Reverse.No/Blink:None/HQFont.No/Style Regular						
10			2 Text Color:White/Reverse.No/Blink:None/HQFont.No/Style Regular						
11			3 Text Color:White/Reverse.No/Blink:None/HQFont.No/Style Regular						
12									
13									
14									
15									
16									
17									

Parts.CSV

	A	B	C	D	E	F	G	H	I
1	[Parts Setting]								
2									
3		Show over:Yes							
4		Show imag:No							
5									
6	[Parts]								
7		1 Circle							
8		2 Triangle							
9		3 Rectangle							
10									
11									
12									
13									
14									
15									
16									
17									

Script.CSV

	A	B	C	D	E	F	G	H	I
1	[Script]								
2									
3	[Script File]								
4		No.	Comment	Modified	Script Name				
5		1	-	2009/5/26 16:16	Script1				
6									
7	[Script Options]								
8		Script Date:Project Data							
9		Display the-							
10		Script Edit:Script Editor							
11		Editor Path-							
12		Option -							
13		File HandlerLow --> High							
14		Cancel intoYes							
15									
16									
17									

Sound Files.CSV

	A	B	C	D	E	F	G	H	I
1	[Sound Files Setting]								
2									
3		The SoundNo							
4		Prioritize ti-							
5									
6	[Sound Files]								
7		No.	File Name						
8		1	a01.wav						
9									
10									
11									
12									
13									
14									
15									
16									
17									

Category.CSV

	A	B	C	D	E	F	G	H	I
1	[Category]								
2									
3	[Switch]								
4			Screen	Coordinates					
5		Special FurB-1		448,368					
6		Go To ScrB-1		80,368					
7		Go To ScrB-1		264,368					
8		Special FurB-2		448,368					
9		Go To ScrB-2		80,368					
10		Go To ScrB-2		264,368					
11		Special FurB-3		448,368					
12		Go To ScrB-3		80,368					
13		Go To ScrB-3		264,368					
14									
15	[Other]								
16			Screen	Coordinates					
17		Text	B-1	176,65					

My Library.CSV

	A	B	C	D	E	F	G	H	I
1	[My Library]								
2									
3	1 my library Folder								
4		1 New Library data							
5		2 New Library data							
6		3 New Library data							
7		4 New Library data							
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									

3.16 Saving Project

On GT Designer3, a project is saved in the GT Designer3 project format.
A compressed file can be created by compressing the GT Designer3 project.
The saving method differs depending on the saving format.

Saving format	Saving method
GT Designer3 project	Overwriting a file
	Saving under a new file name
Compressed file (*.GTW)	Creating a compressed file

For the project format, refer to the following.

 2.2 Project Format Handled with GT Designer3

POINT

(1) Simulating a project

When simulating the saved project with GT Simulator3, the saving format should be the GT Designer3 project.
GT Simulator3 cannot open a compressed file.

(2) Project used for GT SoftGOT1000

When using GT SoftGOT1000, the saving format should be the GT Designer3 project.
GT SoftGOT1000 cannot open a compressed file.

3.16.1 Saving GT Designer3 project

■ Overwriting a file

Select [Project] → [Save] from the menu to overwrite a project.

When a project is never saved in the GT Designer3 project format, the [Save As Project] dialog box appears.

For the [Save As Project] dialog box, refer to the following.

 3.16.1 ■ Saving as a new file

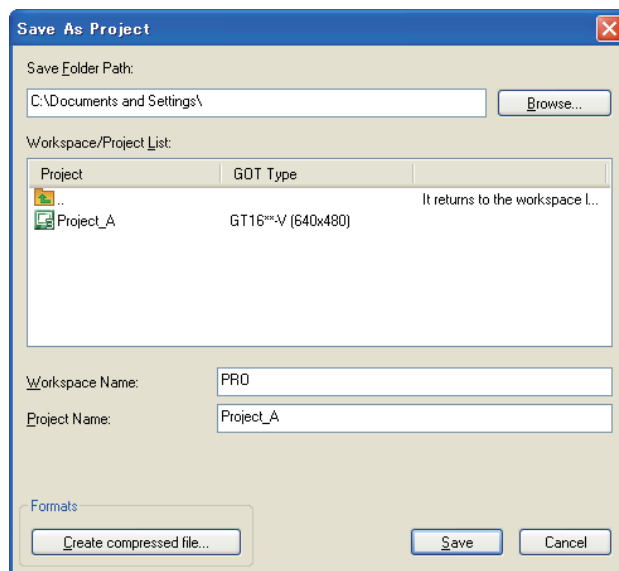
POINT



When opening a project other than GT Designer3 project

When opening a project other than GT Designer3 project (including a compressed file), the project is handled as never saved before.


■ Saving as a new file

1. Select [Project] → [Save As] from the menu to display the [Save As Project] dialog box.
2. Set [Save Folder Path], [Workspace Name], and [Project Name]. Click the [Save] button to save the project in the workspace.



Item	Description
Save Folder Path	Set the path for the workspace where the project is saved. Also, the save destination path can be set in the [Browse For Folder] dialog box displayed by clicking the [Browse] button.
Workspace/Project List	The workspace or project is displayed existing in the path set for [Folder path to save].
Workspace Name	Set the workspace name where the project is saved. If the set workspace does not exist in the [Workspace/Project List], the workspace is created when saving.
Project Name	Set the project name of a project to be saved.
	Click this button to create a compressed file.  3.16.2 Creating compressed file

POINT

- (1) **Maximum number of text for [Save Folder Path], [Workspace Name], and [Project Name]**
Set the total number of text for [Save Folder Path], [Workspace Name], and [Project Name] at 200 characters or less. ("\" placed at the end of the project name is not included.)
- (2) **When a project already exists**
When saving a project as a new file, the same name for other project already existing cannot be used. Save under other name, or delete the project that has the same name.
 3.17 Deleting Project
- (3) **Operating on iQ Works**
Save a project with a different name, a project cannot be saved with a different name.
Only overwriting is available.
To save a project with a different name, save the project with the workspace from MELSOFT Navigator.




Handling a folder or file of GT Designer3 project


The GT Designer3 project cannot be opened with GT Designer3 when handling a file or folder (move, rename, copy, or delete) of GT Designer3 project using personal computer tools including Explorer.

Processing a file or folder of GT Designer3 project is available as follows.

(1) Move

1. Open a GT Designer3 project to be moved.
2. Select [Project] → [Save As] from the menu. Change [Folder path to save] to a path where a file or folder is saved, and save the project.
3. Delete the project saved in the previous folder.
 3.17 Deleting Project

(2) Rename

1. Open a GT Designer3 project to be renamed.
2. Select [Project] → [Save As] from the menu. Change the name, and save the project.
3. Delete the project saved in the previous folder.
 3.17 Deleting Project

(3) Copy

1. Open a GT Designer3 project to be copied.
2. Select [Project] → [Save As] from the menu. Change the name, and save the project.

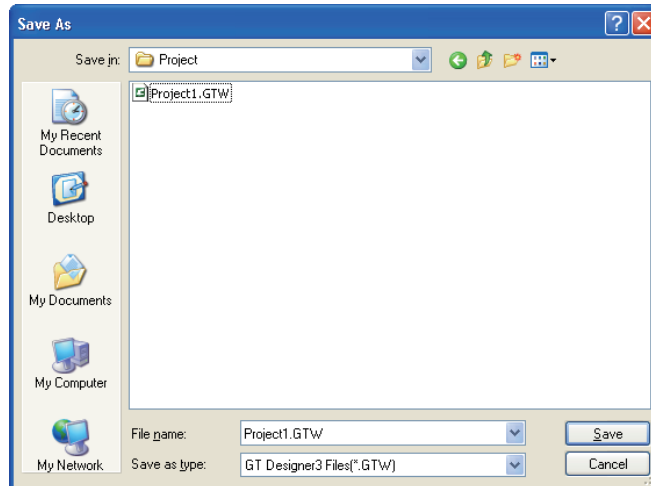
(4) Delete

For deleting a GT Designer3 project, refer to the following.

 3.17 Deleting Project

3.16.2 Creating compressed file

1. Select [Project] → [Compressed File Handling] → [Create compressed file] from the menu to display the [Save As] dialog box.
2. Set [Save in] and [File name]. Click the [Save] button to save the editing project in GTW format.



Item	Description
Save in	Select the location where a project is saved.
File name	Set the file name for a project.
Save as type	Displays the saving format of a file.



HINT

Overwriting a compressed file

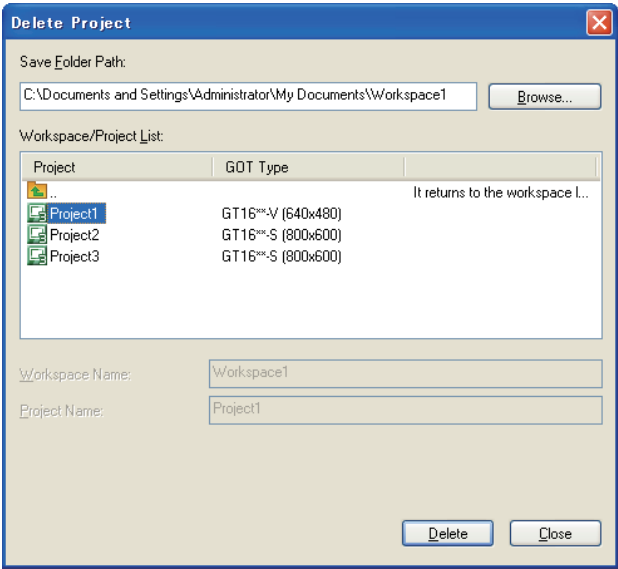
Compressed files cannot be overwritten by selecting [Save] from the menu on GT Designer3.

To overwrite a compressed file, create another compressed file with the same file name in the location where the compressed file is stored.

3.17 Deleting Project

This section explains how to delete a GT Designer3 project registered in the workspace.


- 1. Select [Project] → [Delete Project] from the menu to display the [Delete Project] dialog box.
- 2. Select the project to be deleted in [Workspace/Project List]. Click the [Delete] button to delete the selected project.



Item	Description
Folder path to save	Set a path for the workspace where a project is stored. Also, the save destination path can be set in the [Browse For Folder] dialog box displayed by clicking the [Browse] button.
Workspace/Project List	The workspace or project existing in the path set for [Folder path to save] is displayed. Select a project to be deleted.
Workspace Name	Displays the workspace name where the project selected in [Workspace/Project List] is stored.
Project Name	Displays the project name selected in [Workspace/Project List].

3.18 Ending GT Designer3

To end GT Designer3, perform either of the following operations.

- Select [Project] → [Exit] from the menu.
- Click  in the title bar.

3.19 How to Use Help

This section explains how to view the PDF manuals relevant to GT Designer3, confirm the version of GT Designer3, and others.

3.19.1 Viewing PDF manuals

POINT

Before viewing the PDF manuals

To view the PDF manuals, install GT Manual3 and Adobe® Reader® on the personal computer.

■ Viewing from the help

Select the PDF manual to be viewed from the [Help] in the menu bar. The selected manual is displayed.

Item	Description
Screen Design Manual (Fundamentals)	The GT Designer3 Version1 Screen Design Manual (Fundamentals) is displayed.
Screen Design Manual (Functions)	The GT Designer3 Version1 Screen Design Manual (Functions) is displayed.
Index	The INDEX MENU is displayed. Viewing the manuals relevant to GT Designer3 is available from the INDEX MENU.

(1) Selecting Screen Design Manual (Fundamentals)/Screen Design Manual (Functions)

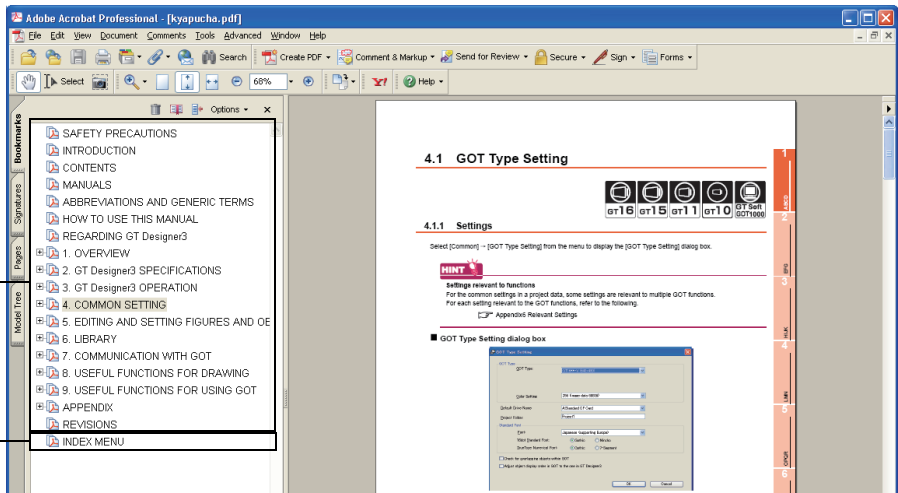
For operating Adobe® Reader®, refer to the [help] for Adobe® Reader®.

Click the INDEX MENU to display a list of manuals.

➡ (2) Selecting Index

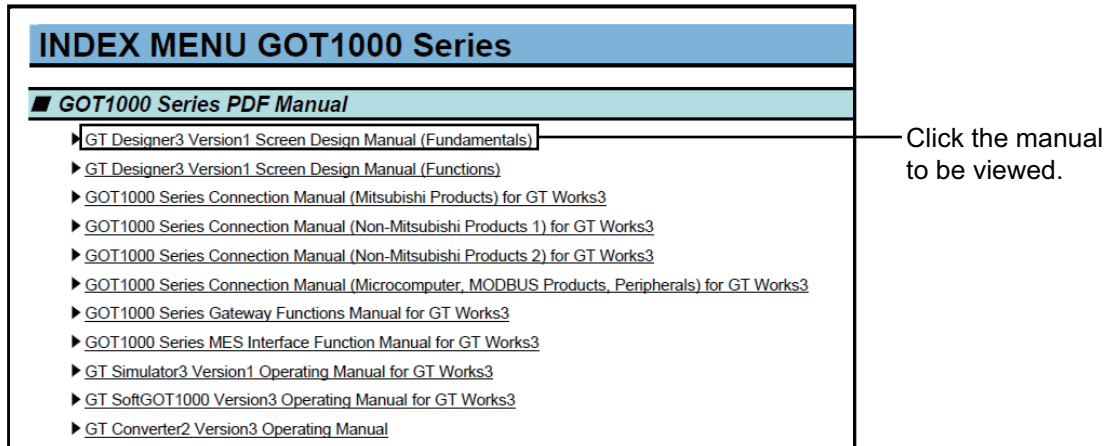
Displays the page of
the selected item.

Displays the
INDEX MENU.

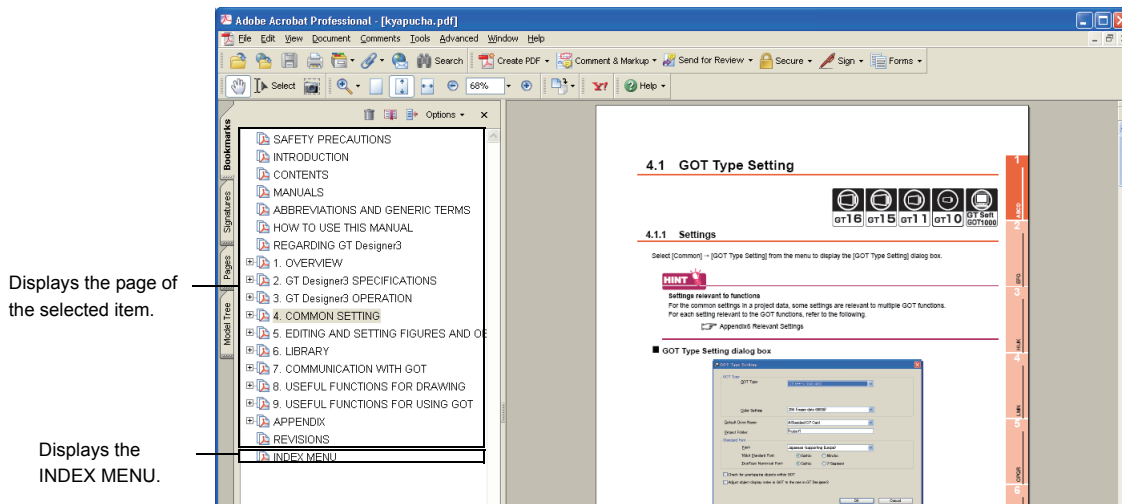


(2) Selecting Index

1. Click the manual to be viewed in the INDEX MENU.



2. The clicked manual is displayed.

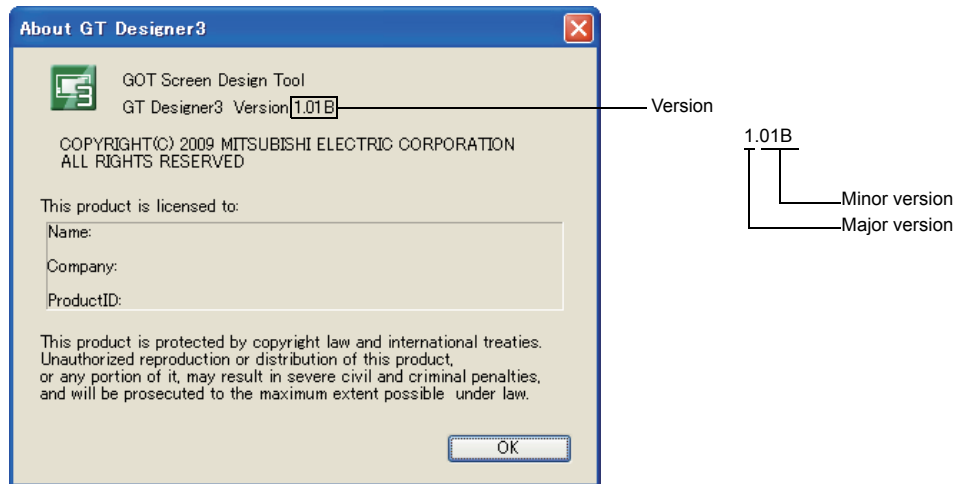


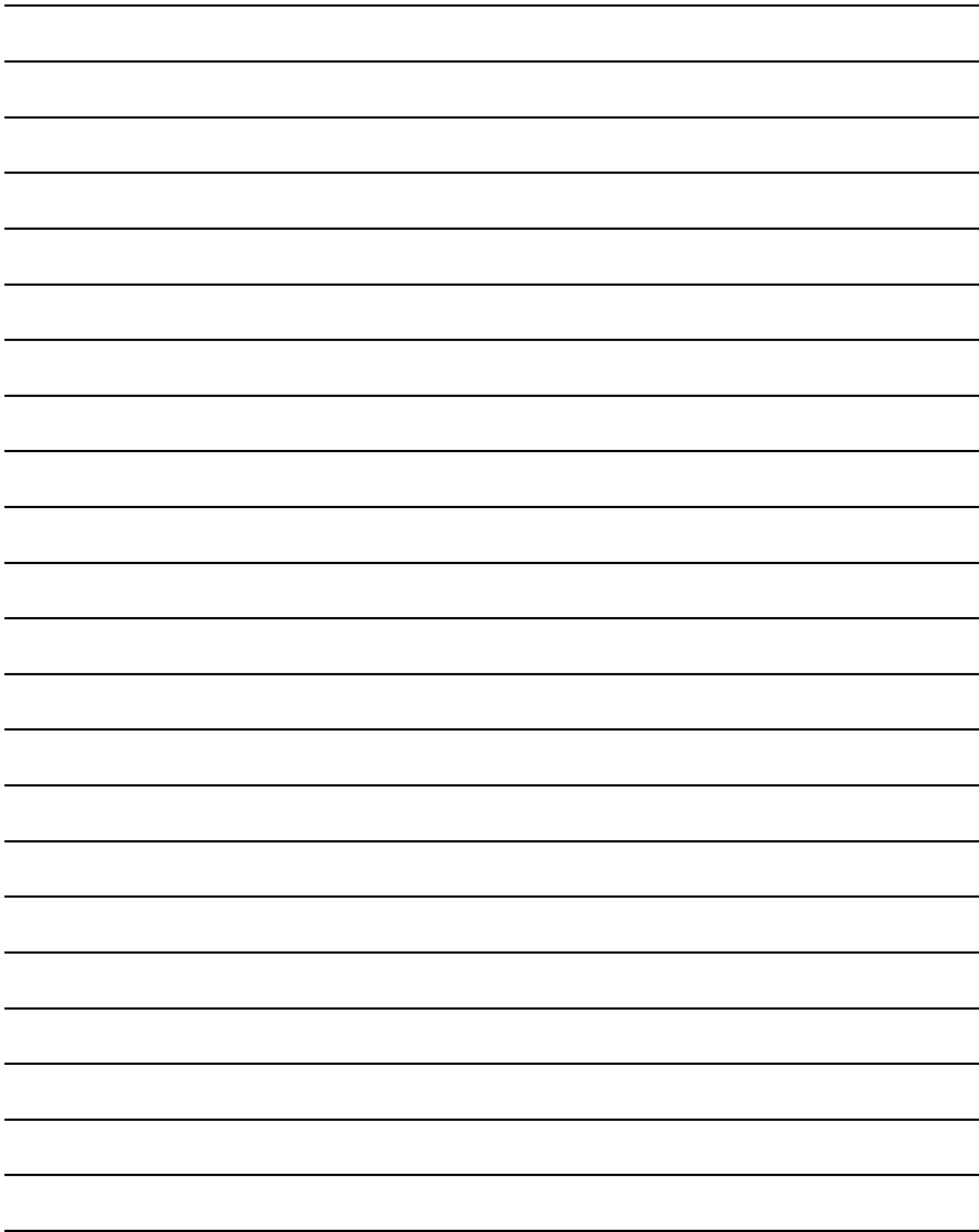
3.19.2 Connecting to MELFANSweb

Select [Help] → [Connect to MELFANSweb] from the menu to display the Information site for Mitsubishi industrial automation products (MELFANSweb website).

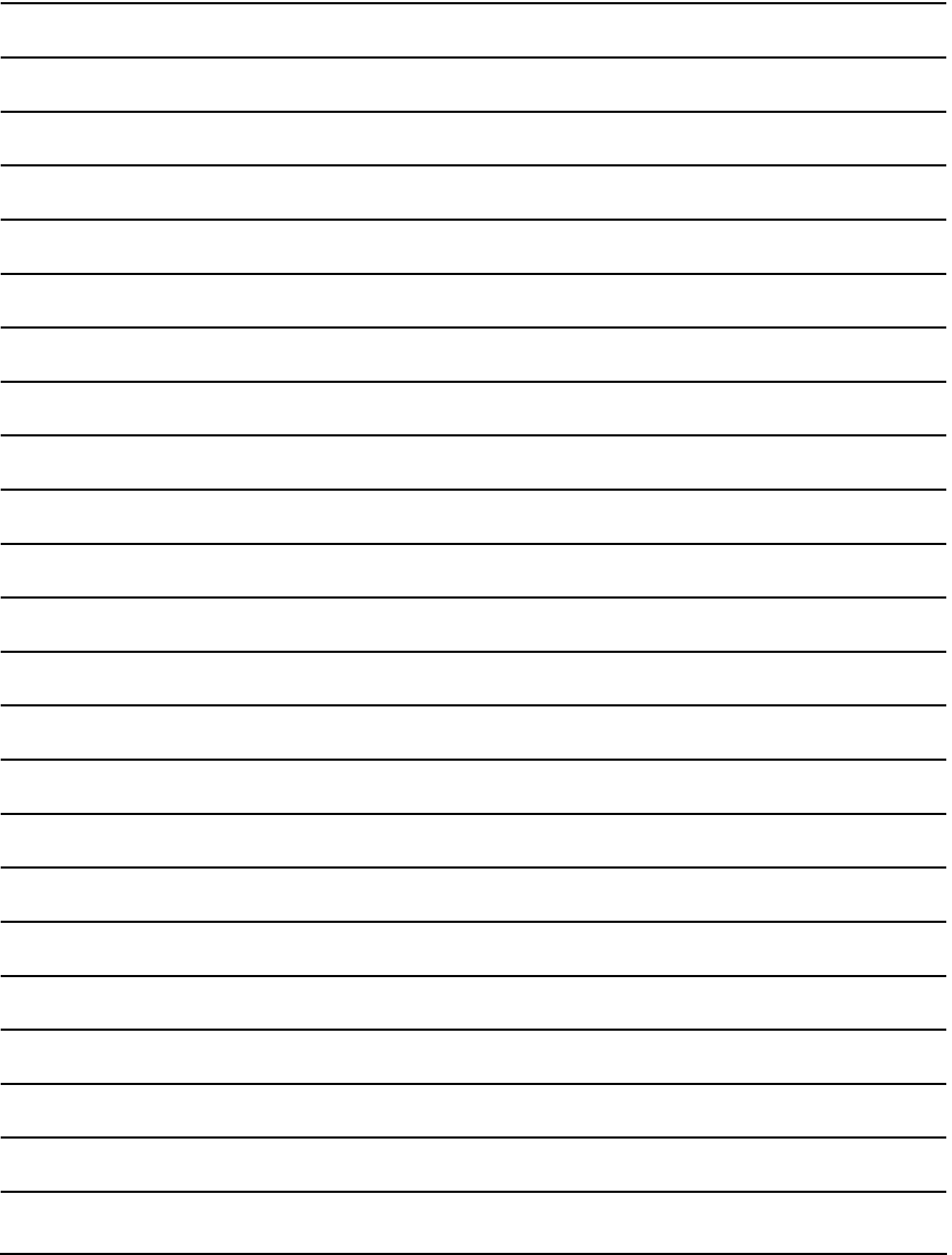
3.19.3 Confirming GT Designer3 version

Select [Help] → [About GTD3] from the menu to display the [About GT Designer3] dialog box.




















COMMON SETTING



4. COMMON SETTING

Item		Model	Reference
GOT Type Setting			4.1
GOT Environmental Setting	Screen Switching/Window	GT16 GT15 GT11 GT10 SPrGOT 1000	4.2
	Language Switching		4.3
	Dialog Window	GT16 GT15 GT11 GT10 SPrGOT 1000	4.4
	Key Window	GT16 GT15 GT11 GT10 SPrGOT 1000	4.5
	System Information	GT16 GT15 GT11 GT10 SPrGOT 1000	4.6
	Security		4.7
	Operation Log	GT16 GT15 GT11 GT10 SPrGOT 1000	(Functions) 22. OPERATION LOG FUNCTION
	KANA KANJI Conversion	GT16 GT15 GT11 GT10 SPrGOT 1000	(Functions) 6. ASCII DISPLAY/ASCII INPUT
	Startup Logo	GT16 GT15 GT11 GT10 SPrGOT 1000	4.8
	GOT Setup	GT16 GT15 GT11 GT10 SPrGOT 1000	4.9
Controller Setting	CH*	GT16 GT15 GT11 GT10 SPrGOT 1000	GOT1000 Series Connection Manual for GT Works3 and a controller used
	Ethernet	GT16 GT15 GT11 GT10 SPrGOT 1000	GOT1000 Series Connection Manual for GT Works3 and a controller used
	Routing Information	GT16 GT15 GT11 GT10 SPrGOT 1000	GOT1000 Series Connection Manual for GT Works3 and a controller used
	Gateway	GT16 GT15 GT11 GT10 SPrGOT 1000	GOT1000 Series Gateway Functions Manual for GT Works3
	Q Redundant	GT16 GT15 GT11 GT10 SPrGOT 1000	GOT1000 Series Connection Manual for GT Works3
	Station No. Switching	GT16 GT15 GT11 GT10 SPrGOT 1000	4.10
Peripheral Setting	PC (Data Transfer)	GT16 GT15 GT11 GT10 SPrGOT 1000	7.1
	Bar Code	GT16 GT15 GT11 GT10 SPrGOT 1000	(Functions) 29. BARCODE FUNCTION
	RFID	GT16 GT15 GT11 GT10 SPrGOT 1000	(Functions) 30. RFID FUNCTION
	PC Remote Operation	GT16 GT15 GT11 GT10 SPrGOT 1000	(Functions) 31. REMOTE PERSONAL COMPUTER OPERATION FUNCTION
	Fingerprint Authentication	GT16 GT15 GT11 GT10 SPrGOT 1000	GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3
	Video/RGB Input		(Functions) 32. VIDEO DISPLAY FUNCTION

(Continued to next page)

Item		Model	Reference
Peripheral Setting	Multimedia		(Functions) 33. MULTIMEDIA FUNCTION
	Operation Panel		(Functions) 34. OPERATION PANEL FUNCTION/EXTERNAL I/O FUNCTION
	RGB Output		(Functions) 35. RGB DISPLAY FUNCTION
	CF Card Unit		GT Designer3 Version1 Screen Design Manual (Functions)
	Printer		GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3
	Sound Output		GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3
	GOT(Extended Computer)		GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3
I/F Communication Setting			GOT1000 Series Connection Manual for GT Works3 and a controller used
Comment			4.12
Alarm			(Functions) 10. ALARM
Logging			(Functions) 23. LOGGING FUNCTION
Recipe			(Functions) 24. RECIPE
Script			(Functions) 28. SCRIPT FUNCTION
Device Data Transfer			(Functions) 25. DEVICE DATA TRANSFER FUNCTION
Status Observation			(Functions) 26. STATUS OBSERVATION FUNCTION
Time Action			(Functions) 27. TIME ACTION FUNCTION
Hard Copy			(Functions) 37. HARD COPY FUNCTION
MES Interface			GOT1000 Series MES Interface Function Manual for GT Works3
Parts			4.13
Sound			(Functions) 38. SOUND OUTPUT FUNCTION

4.1 GOT Type Setting



4.1.1 Settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog box.

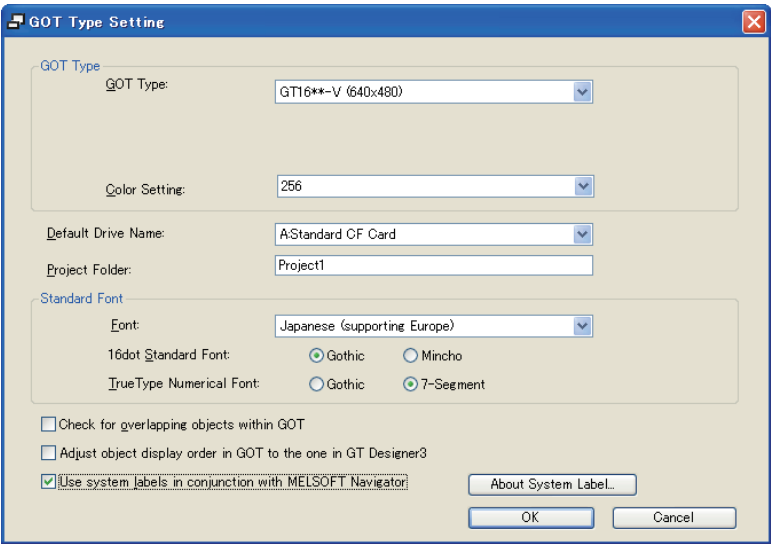


Settings relevant to functions

For the common settings in a project data, some settings are relevant to multiple GOT functions.
For each setting relevant to the GOT functions, refer to the following.



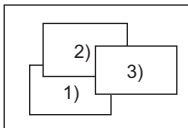
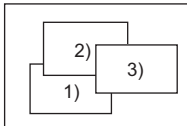
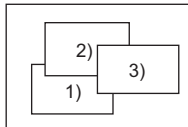

Appendix6 Relevant Settings

■ GOT Type Setting dialog box



Item	Description		Model
GOT Type	GOT Type	Select the type of the GOT used. The type can be changed after creating a project. When the GOT type that screen size differs from the old screen size is changed, and the [OK] button is clicked, a conversion setting dialog box appears. (1) Conversion setting dialog box	
	Setup Direction	Select the direction to install the GOT. (Horizontal/Vertical)	
	Resolution	Select the resolution (horizontal or vertical) according to GT SoftGOT1000 to be used.	
	Color Setting	Select the number of colors displayed on the GOT in accordance with the GOT display color. The selected number of colors is set as the number of colors applicable to GT Designer3.	

(Continued to next page)

Item	Description		Model
Default Drive Name	Select a default drive for functions that use a CF card. The selected drive is set for the default setting of each function available for the drive setting.		GT16 GT15 GT11 GT10 SERGOT 1000
Project Folder ^{*1*2}	This is indispensable for creating a project. Specify it without fail. Set a folder name of a folder created in the GOT or a CF card when operating any of the followings. • Writing a project from GT Designer3 to the GOT or a CF card • Uploading a project from the GOT to a CF card ASCII characters can be entered from 1 to 32 characters.		GT16 GT15 GT11 GT10 SERGOT 1000
Standard Font	Font	Select the font to be used in all projects.  2.5.1 Fonts	GT16 GT15 GT11 GT10 SERGOT 1000
	16dot Standard Font	Select the font type of the 16-dot standard font. (Gothic/Mincho)	
	TrueType Numerical Font	Select a font type of the TrueType numerical font. (Gothic/7-Segment)	
Check for overlapping objects within GOT	Select this item to display the message on the GOT if the objects are overlapping each other. This item is not available when [Adjust object display order in GOT to the one in GT Designer3] is selected.		GT16 GT15 GT11 GT10 SERGOT 1000
Adjust object display order in GOT to the one in GT Designer3	Select this item to adjust the order of displaying objects on the GOT to the order of the overlapped objects on GT Designer3. (The superimposition of layers in the overlap windows is enabled.) For the overlapping of the figures and objects, refer to the following.  5.3.7 Superimposition setting This item is not available when [Check for overlapping objects within GOT] is selected. Example) When objects that are overlapped on one layer with GT Designer3 are displayed on the GOT  3)...Third placed object (Top) 2)...Second placed object (Middle) 1)...First placed object (Bottom) • When the order of displaying objects on the GOT is adjusted to that of the overlapped objects on GT Designer3  The object 1) is updated. All the objects are redrawn, and the order of displaying objects on the GOT is adjusted to that of the overlapped objects on GT Designer3. • When the order of displaying objects on the GOT is not adjusted to that of the overlapped objects on GT Designer3  The object 1) is updated. Only the object 1) is redrawn, and the object is displayed at the top on the GOT. (The order of displaying objects on the GOT differs from that of the overlapped objects on GT Designer3.)		
	Select this item to use a system label for GT Designer3 device setting. For the system label setting, refer to the following.  5.3.2 Label setting Clear this item when a system label is not used. When this item is cleared, the system label update/check is executed. When no error occurs, a system label is converted to a device name to which the system label is assigned. When any error occurs, a system label is not converted to a device name to which the system label is assigned. Therefore, this item is not cleared. Check or modify the system label setting, and clear this item again.		
Use system labels in conjunction with MELSOFT Navigator	Click this button to display an explanation for a system label.		GT16 GT15 GT11 GT10 SERGOT 1000
<div>About System Label...</div>			

*1 The following shows the available ASCII characters.

ASCII characters available for project folder name
--

#, \$, %, &, ', (,), +, -, ., 0 to 9, =, @, A to Z, [,], ^, _, a to z, {, }, *, space.
(The character "," is not applicable.)

The following character strings are not available for the project folder name.

Character strings not available for project folder name

COM1 to COM9, com1 to com9, LPT1 to LPT9, lpt1 to lpt9, AUX, aux, CON, con, NUL, nul, PRN, prn, CLOCK\$, clock\$, name starting with "G1" , "g1" or "." (period), name ending with "." (period), name consisting of "." (one period) or ".." (two periods)

*2 Do not change the directory path of the folder for [Project Folder] created in a CF card on the personal computer.

Example) Changing the directory path of the A drive

- Before change: A/Project1
- After change: A:/abc/XYZ/Project1

When the directory path is changed as shown above and the project is downloaded to the C drive on the GOT, the abc/XYZ folder is not deleted from the GOT, even if the project folder is deleted from the GOT utility.

To delete the above folder, the BootOS must be installed on the GOT again.

POINT

(1) Color setting and number of colors available on the GOT

For [Color Setting], set the number of colors available for the GOT used.

When more than the number of colors available for the GOT is set, the number of colors on the GOT screen is reduced.

(2) Displaying image data

For the following GOT types, even when [256 (image data 65536)] is selected for [Color Setting], the number of colors for image data on the GOT screen is reduced to 4096.

(On the screen editor of GT Designer3, the image data is displayed as the same number of colors set for [Color Setting]).

- GT1675-VN
- GT1555-QSBD

1

OVERVIEW

2

GT Designer3
SPECIFICATIONS

3

GT Designer3
OPERATION

4

COMMON SETTING

5

EDITING AND
SETTING FIGURES
AND OBJECTS

6

LIBRARY

7

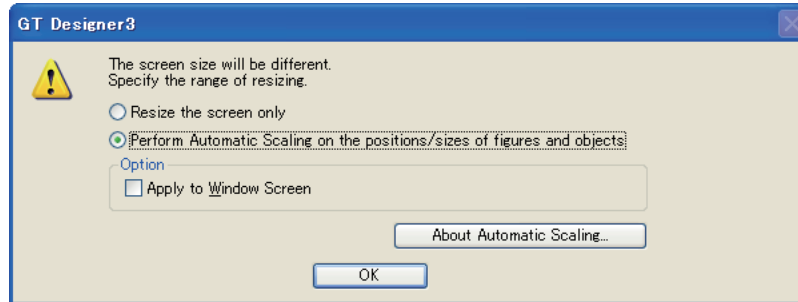
COMMUNICATION
WITH GOT

8

USEFUL
FUNCTIONS FOR
DRAWING

(1) Conversion setting dialog box

Select whether to automatically adjust the positions or sizes of the figures and objects arranged on the screen editor.



Item	Description	Model
Resize the screen only	Select this item to change the screen size only. After changing, the positions and sizes of the figures and objects on the screen are not changed.	
Perform Automatic Scaling on the positions/sizes of figures and objects	Select this item to automatically change the positions and sizes of the figures and objects to adjust those of the changed GOT type.	
Apply to Window Screen	This item is available when [Perform Automatic Scaling on the positions/sizes of figures and objects] is selected. Select this item to automatically adjust the positions and sizes of figures and objects on the screen editor for the window screen.	
About Automatic Scaling...	Select this item to display the explanation for the automatic scaling.	

POINT

(1) Specifications of the scaling for each screen

Screen	Specification
Base screen	Figures and objects are zoomed in or zoomed out automatically corresponding to the GOT screen size.
Window screen	When the used GOT type is changed to a smaller type, the window screen is zoomed out automatically. (The window screen is not zoomed in.) The figures and objects are zoomed out automatically corresponding to the maximum size of the window screen.

(2) Objects restricted on the scaling

The following shows the objects restricted on the scaling.

Object	Restriction
Numerical Display/Input, Ascii Display/Input, Date/Time Display	<ul style="list-style-type: none"> The numerical size is zoomed in or zoomed out within the available display range set for GT Designer3. When [6 × 8dot] is set for the fonts, the object area is not zoomed in or zoomed out. When the frame format is set, figures set for objects are zoomed in or zoomed out and the object area is not zoomed in or zoomed out.
Data List, Advanced User Alarm Display, Advanced System Alarm Display, Alarm History Display	<p>The object area is not zoomed in or zoomed out.</p> <p>When the frame format is set, only figures are zoomed in or zoomed out.</p>
Parts Movement	The objects are zoomed in or zoomed out only when [Line] is set for the movement method.
Parts Display, Set Overlay Screen, Window Position	<p>For the parts display and the set overlay screen, objects and the screen size are not zoomed in or zoomed out.</p> <p>For the window position, the position set on the base or window screen is not changed.</p>

4.1.2 Precautions

■ Precautions for changing the GOT type

If GOT type is changed, this may change or delete the some function settings or affect the figure/frame settings. Therefore, change GOT type while paying full attention to followings.
(Also, make sure to check other settings.)

POINT

Before changing the GOT type

Before changing the GOT type, copying the project data is recommended not to delete the settings by mistake.

(1) History of [Undo] and [Redo]

The settings of [Undo] and [Redo] are reset when the GOT type is changed.

(2) Figures and objects not supported by the changed GOT type

After GOT type is changed, some settings, figures and objects may be deleted, if they are not supported by the GOT currently set.

Even if the [GOT Type] setting is changed to the previous one, the deleted settings are not restored.

(3) Device range not applicable to the changed GOT type

For the device range that is not applicable to the changed GOT type, GT Designer3 displays the devices out of the range as [??]. Configure the device settings again.

Some device types (BCD, real number) of the devices may be deleted, as the devices are not supported by the changed GOT type.

(4) Some setting items must be set after GOT type change is completed, as they are not included in the previous GOT type. Note that default values are set for these setting items.

(5) Shape set for the object

When the same shape is not included in the shapes for the changed GOT type, the shape is changed to a shape set at the top of the [Shape] combo box.

(6) Figures and objects set out of the display range for the screen editor

Figures and objects set out of the display range are not automatically zoomed in or zoomed out.

Relayout figures and objects into the display range when figures and objects are out of the display range.

(7) User defined libraries will not be changed.

The data within user defined libraries are usable even after GOT type is changed. However, if they include figures or objects that are not supported by the GOT, the libraries cannot be used.

(8) Setting the logo image

When [GOT Type] is changed to the GOT type of which screen size is different, the size of the logo image may be changed.

(When [GOT Type] is changed from the GOTGT1030 and GT1020 to other than the GOTGT1030 and GT1020, the start-up logo setting is deleted.)

When the size of the logo image is changed, set the logo image again.

(9) Changing GOT types from GT11 or GT10 to GT16, GT15, or GT SoftGOT1000

The settings in the [Alarm Flow] dialog box correspond to the changed GOT type settings of the advanced user alarm observation and the advanced alarm popup display, respectively.

(10) Setting a system label

The system label setting is retained if the GOT type is changed.

However, if changed to the GOT type for which a system label cannot be used, the check box of [Use system labels in conjunction with MELSOFT Navigator] in the [GOT Type Setting] dialog box is cleared.

The system label update/check is executed at this time.

When no error occurs, a system label is converted to a device name to which the system label is assigned, and the GOT type is changed.

When any error occurs, a system label is not converted to a device name to which the system label is assigned. Therefore, the GOT type cannot be changed.

4.2 Screen Switching Device Setting



The GOT switches base screens or displays window screens by using the screen switching device.
The screen switching device can be set for the following screens.

Screen
Base screen, Overlap window 1 to 5, Superimpose window 1 to 2, Dialog window

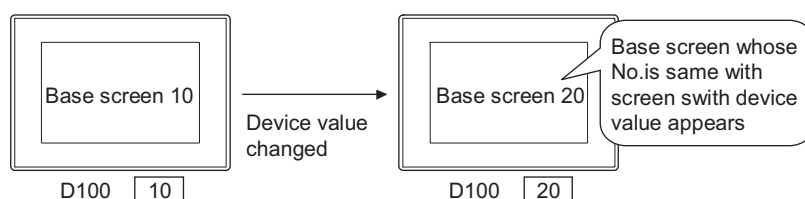
Switching base screens

The GOT displays a base screen with the screen number that is stored in the screen switching device for the base screen.

By setting a value for the screen switching device for the base screen, the GOT switches the displayed base screens. There are the following two methods for specifying the base screen No. At using these methods, the screen No. is stored into the switching screen device.

- (1) Storing the screen number in the screen switching device for the base screen
- (2) Switching screens by a touch switch (go to screen switch).

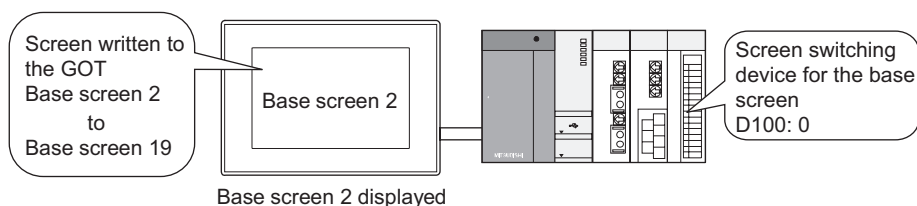
Example) Setting the screen switching device for the base screen to D100



Storing the screen number that is not written to the GOT in the screen switching device for the base screen

When the value of the screen switching device for the base screen is 0 or the screen number that is not written to the GOT is stored, the GOT displays the base screen with the smallest number among the base screens that is written to the GOT.

(System alarms are not displayed.)



■ Displaying, closing, or moving window screen

(1) Overlap window, superimpose window

The GOT displays the window screen with a screen number that is stored in the screen switching device for the window screen.

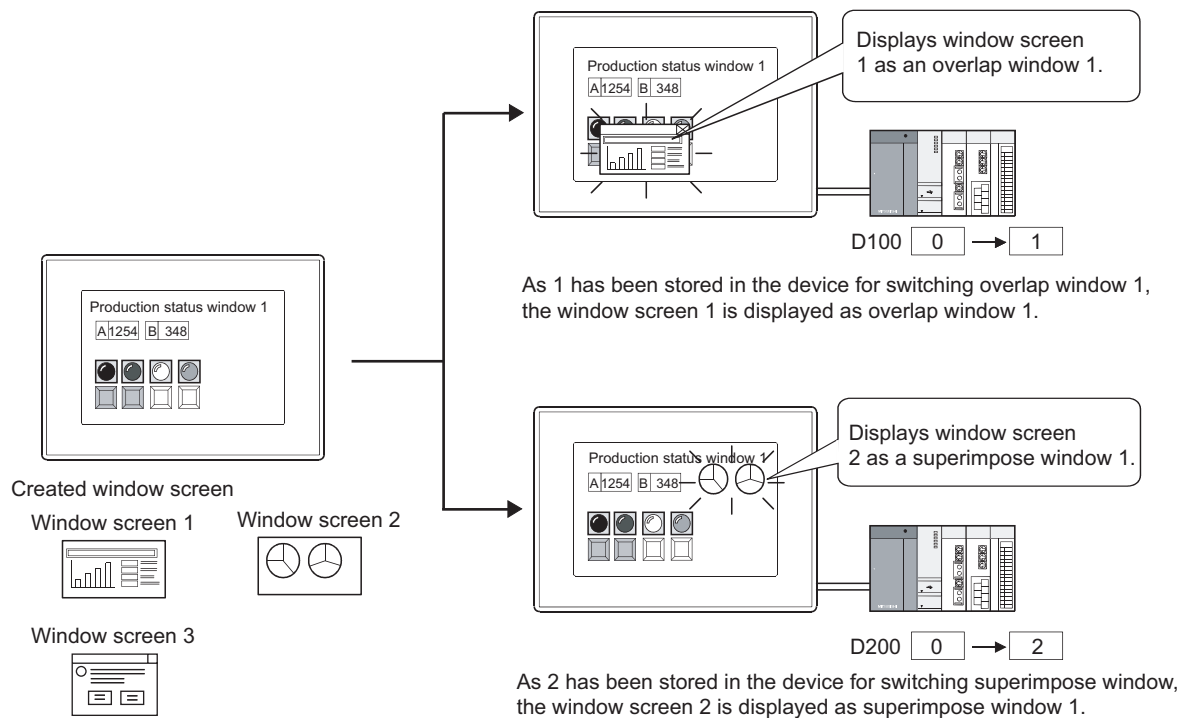
When "0" is stored in the screen switching device, the window screen is closed.

There are the following two methods for specifying the window screen No. At using these methods, the screen No. is stored into the switching screen device.

- Storing a screen number in the screen switching device for the window screen
- The screen is switched by the touch switch (go to screen switch).

Example: Relation between created window screen and device for switching window screen.

Screen switching device	Settings
Screen switching device for overlap window 1	D100
Screen switching device for superimposed window	D200



When the close key is displayed on an overlap window, touching the close key closes the overlap window. ("0" is stored in the screen switching device for the closed overlap window.)

☞ 4.2.2 Settings

(2) Dialog window

The following two types show how to display a created dialog window.

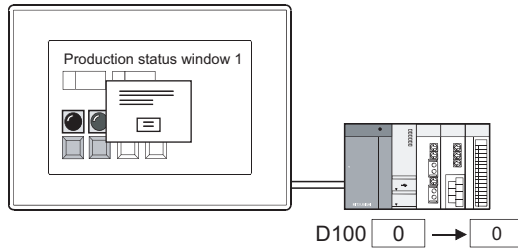
(a) Displaying a created dialog window instead of a GOT system message

For how to display a created dialog window instead of a GOT system message, refer to the following.

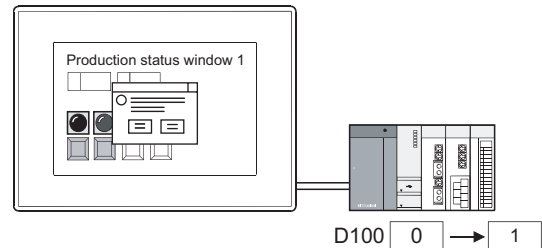
4.4 Setting Message to be Displayed on GOT

When a created dialog window is displayed, the displayed dialog window screen number is stored in the screen switching device (Dialog Window).

When a GOT system message is displayed



When a dialog window is displayed instead of a system message



(b) Displaying a created dialog window as a new message

The created dialog window is displayed when the dialog window screen number is stored in the screen switching device for the window screen (Dialog Window).

When a device value is changed during displaying a dialog window, the GOT does not switch the displayed dialog windows.



(1) Setting for a display position of a window screen

Set a display position of a window screen by GT Designer3.

(A display position of a dialog window cannot be set because the display position is fixed.)

- Overlap window, superimpose window

4.2.1 Display position of window screen

- Key window

4.5.3 How to operate key window

(2) Switching screen device setting

Switching screen device is set as the following.

(a) GOT internal device

It is recommended to use this device only for switching the screen by the touch switch (go to screen switch).

Screen switching cannot be controlled by the controller.

However, screen switching of only base screens can be controlled by the controller with the script function.

(Example)[w:GD10]=[w:D10]; //D10 value is stored into GD10.

(b) Controller device

It is recommended to use this device to control screen switching from the controller.

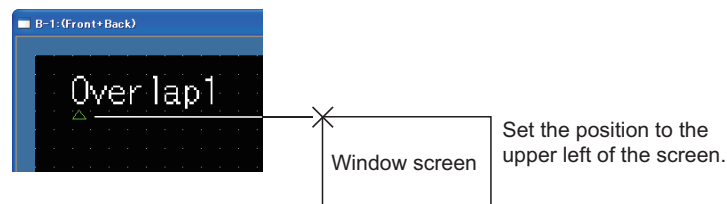
The GOT can switch the screens by the go to screen switch.

4.2.1 Display position of window screen

■ Setting for a display position of a window screen

The GOT displays an overlap window or a superimpose window on the middle of the screen by default. A display position of the window can be set by the following procedure.

1. Select [Object] → [Window Position] → [Overlap1]/[Overlap2]/[Overlap3]/[Overlap4]/[Overlap5]/[Superimpose1]/[Superimpose2] from the menu.
2. Click the mouse on the display position to display an overlap window or a superimpose window. When using other than the GT16, GT1595-X, GT SoftGOT1000, or GT1020, set a multiple of 16 for X- and Y-coordinates for an overlap window. When setting a value other than a multiple of 16, a remainder of 7 or less is rounded down, and a remainder of 8 or more is rounded up.



POINT

(1) Disabling a display position of a window screen

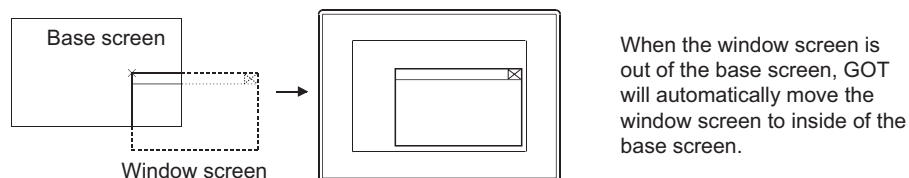
The setting for a display position of a window screen is enabled only for the base screen. When the screen where the display position has been set is called and displayed by the set overlay screen function, the display position setting is ineffective.

👉 9.2 Changing Screen According to Situation (Set Overlay Screen)

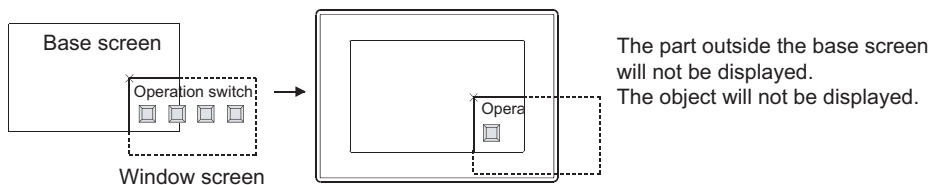
(2) Setting a display position of a window screen out of a base screen

The window screen size will not be checked when setting its display position. Make sure to set the display position of a window screen while considering its screen size.

- Overlap window



- Superimpose window



HINT

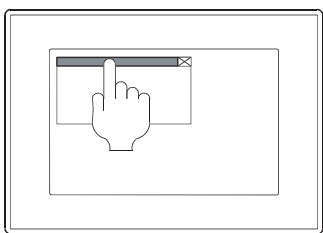
Controlling a display position of an overlap window with a device value

The display position of an overlap window can be controlled with a device value.

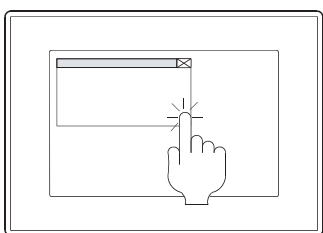
👉 4.2.2 Settings

■ Methods of moving window screen

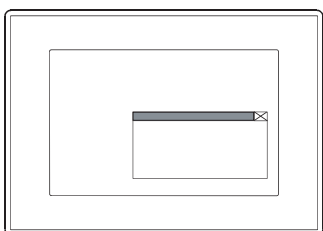
A display position of an overlap window displayed on the GOT can be moved.
(A superimpose window cannot be moved.)



1. Touch the position at top of the window to highlight the movement key.
While the movement key is highlighted, the GOT is the window move mode with beeping the buzzer.



2. Touch the position where the window is moved within three seconds.
When the object is touched within less than three seconds, the object does not act.
With three seconds or more, the movement mode of the key window is canceled.




3. The window is moved to the touched position.



(1) Buzzer volume settings

To set whether the buzzer beeps, configure the setting in GT Designer3 or the GOT utility.
For the settings in GT Designer3, refer to the following.

 4.9 GOT Display and Operation Setting

For the setting in the GOT utility, refer to the following.

 User's Manual for the GOT used

(2) Display position when the moved and closed overlap window is displayed again

The overlap window appears at the last closed position.

4.2.2 Settings

Select [Common] → [GOT Environmental Setting] → [Screen Switching/Window] from the menu to display the→ [Environmental Setting] dialog box.

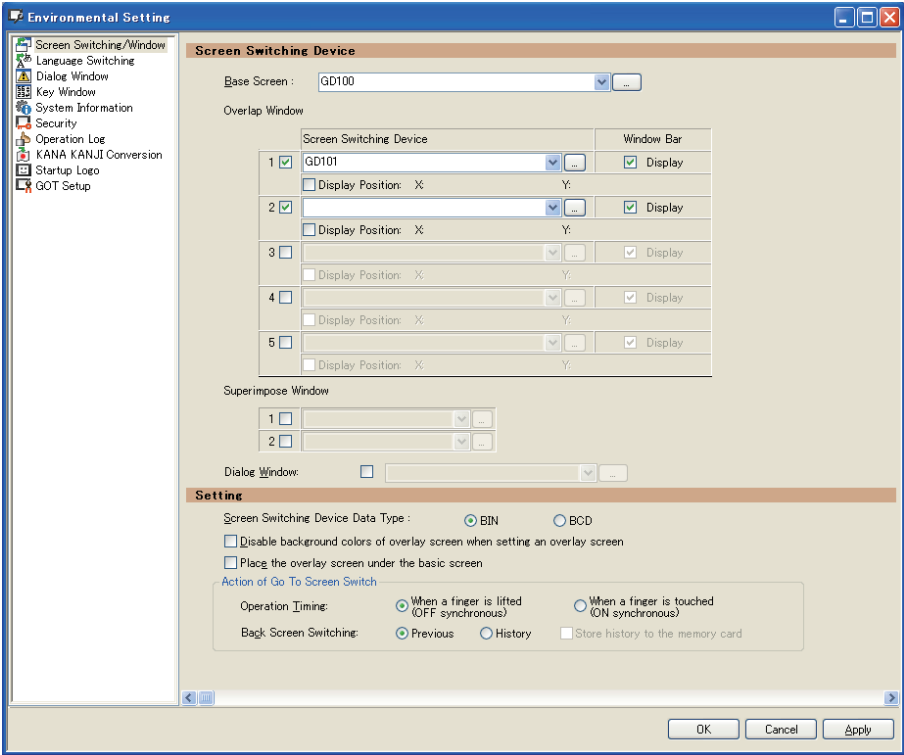


Settings relevant to functions

For the common settings in a project data, some settings are relevant to multiple GOT functions.
For each setting relevant to the GOT functions, refer to the following.

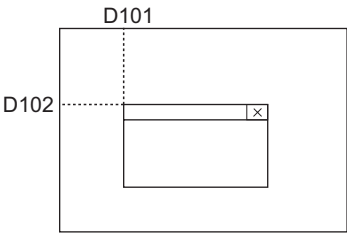
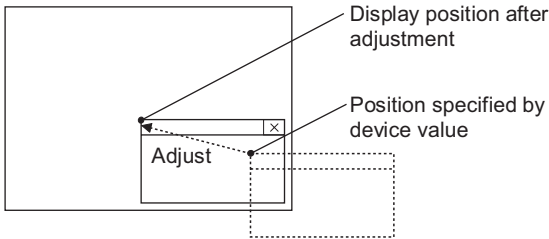

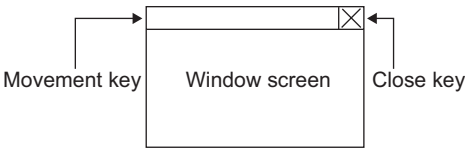




Appendix6 Relevant Settings

Screen Switching/Window

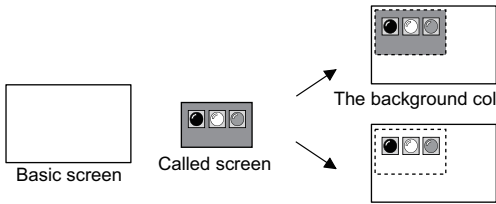
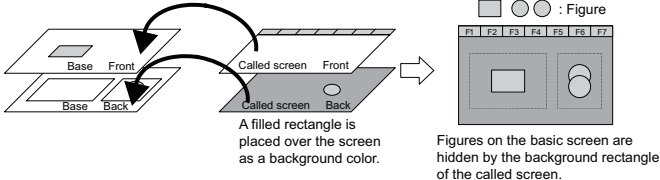
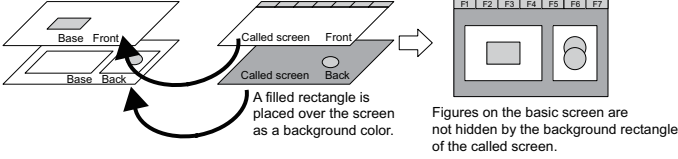


Item	Description		Model
Base Screen	Set the screen switching device for base screen. 5.3.1 Device setting		
Overlap Window	1 to 5	Select this item to set a screen switching device to display each overlap window. The available overlap window differs according to the GOT used. • GT16, GT SoftGOT1000: Overlap window 1 to 5 • GT15, GT11, GT10: Overlap window 1 to 2	<div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT1000</div>
	Screen Switching Device	Set the screen switching device for the overlap window. 5.3.1 Device setting	

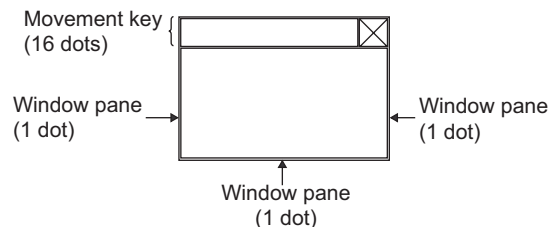
(Continued to next page)

Item	Description		Model
Overlap Window	Display Position	<p>Select this item to be set the device with specifying the display position (horizontal and vertical) of the overlap window.</p> <p>For the display position specification device, selecting this item sets the subsequent devices with starting from the device set in the screen switching device.</p> <p>When using other than the GT16, GT1595-X, GT1020, or GT SoftGOT1000, set a multiple of 16 for the display position of the overlap window.</p> <p>When specifying a value that cannot be divided by 16, a remainder of 7 or less is rounded down, and a remainder of 8 or more is rounded up. If the result of rounding is the same coordinate as the original one, re-drawing is not made.</p> <p>Example: In the case that switching screen device is set to D100. Display position (horizontal): D101, Display position (vertical): D102 The display position of the window screen is specified as shown below.</p>  <p>If the device value exceeding the range for display in GOT is stored as the device value that stores display position, the GOT will automatically adjust the display position and then display the window screen. The device value will not be updated with the above adjustment.</p> 	
	Window Bar ^{*1}	<p>Select this item to display the close key and movement key on the overlap window.</p> <p>The overlap window with displaying the close key and movement key can be moved or closed by manual.</p>  <p>To move or close the overlap window without displaying the close key and movement key, use the display position specification device or screen switching device.</p>	
Superimpose Window	1 to 2	<p>Select this item to set a screen switching device to display each superimpose window.</p> <p> 5.3.1 Device setting</p>	
Dialog Window	<p>Select this item to set a screen switching device to display the dialog window.</p> <p> 5.3.1 Device setting</p>		
Screen Switching Device Data Type	<p>Select the data type of the screen switching device.</p> <ul style="list-style-type: none"> • BIN: Processes the screen switching device value as binary value. The screen switching device can store the values (screen numbers) from 1 to 32767. • BCD: Processes the screen switching device value as a binary-coded decimal number. The screen switching device can store the values (screen numbers) from 1 to 9999. 		

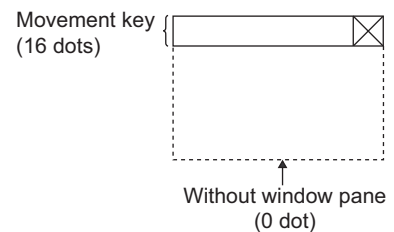
(Continued to next page)

Item	Description		Model
Disable background colors of overlay screen when setting an overlay screen	<p>Select this item to disable the background colors of a called screen.</p>  <p>Basic screen Called screen</p> <p>The background color of a called screen is enabled.</p> <p>The background color of a called screen is disabled.</p>		GT16 GT15 GT11 GT10 SoftGOT 1000
Place the overlay screen under the basic screen	<p>Select this item to place the screen called by the set overlay screen under the basic screen.</p> <ul style="list-style-type: none"> • Not selected (Placing the called screen on the basic screen) The called screen front layer is placed over the basic screen front layer. The called screen back layer is placed over the basic screen back layer.  <p>Base Front Called screen Front</p> <p>Base Back Called screen Back</p> <p>A filled rectangle is placed over the screen as a background color.</p> <p>Figures on the basic screen are hidden by the background rectangle of the called screen.</p> <ul style="list-style-type: none"> • Selected (Placing the called screen under the basic screen) The called screen front layer is placed under the basic screen front layer. The called screen back layer is placed under the basic screen back layer.  <p>Base Front Called screen Front</p> <p>Base Back Called screen Back</p> <p>A filled rectangle is placed over the screen as a background color.</p> <p>Figures on the basic screen are not hidden by the background rectangle of the called screen.</p>		GT16 GT15 GT11 GT10 SoftGOT 1000
Action of Go To Screen Switch	Operation Timing	<p>Select timing when the touch switch (Go To Screen Switch) is operated.</p> <ul style="list-style-type: none"> • When a finger is lifted (OFF synchronous): Switches screens when the finger is released from the switch. • When a finger is touched (ON synchronous): Switches when the finger is touched on the switch. 	
	Back Screen Switching	<p>Select operation of the touch switch (Go To Screen Switch) that is selected for [Back (Previous/History)] in [Next Screen].</p> <ul style="list-style-type: none"> • Previous: Operates by the previous mode. • History: Operates by the history mode. 	
	Store history to the memory card	<p>Set this item when [History] is selected for [Back Screen Switching]. Select this item to store the history of the screen switching in a CF card.</p>	

*1 The window pane is displayed on an overlap window that displays the close key and the movement key.
For the GT10, the window pane is not displayed.



GT16, GT15, GT11, GT SoftGOT1000



GT10

4.2.3 Precautions

This section explains the precautions for the screen switching device.

■ Precautions for drawing

- (1) **Device set for the screen switching device**
Use a device set for the screen switching device only when switching the GOT screens.
- (2) **Default setting of the screen switching device for the base screen**
The default value of the screen switching device for the base screen is set to GD100.
Change the setting of the switching screen device for the base screen when GD100 is used in another object or others.
- (3) **Window display restrictions when a line graph is arranged**
When a line graph with [Locus] is arranged on the base screen, some windows cannot be displayed.
The following shows the windows that cannot be displayed on each GOT.

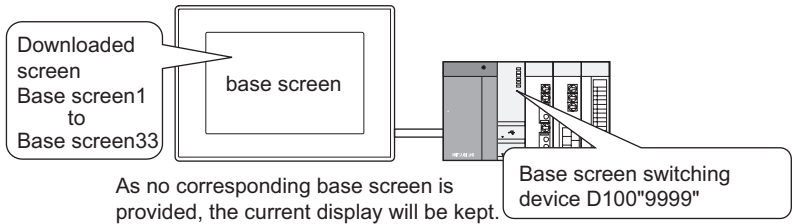
GOT	Windows that cannot be displayed
GT16, GT SoftGOT1000	Overlap window 5
GT15, GT11, GT10	Overlap window 2

■ Precautions for use

If the screen No. that is not written to the GOT is stored as the value of the screen switching device, the GOT continues to display the current screen. (A system alarm occurs.)

This action is common in the base screen, overlap window, and superimpose window.

Example: In case of base screen



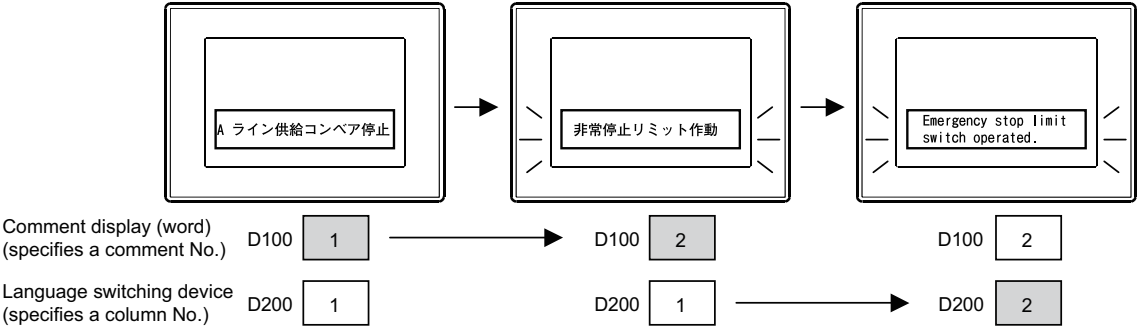
4.3 Language Switching Device Setting



The GOT switches comments displayed on the object according to a value (column number of comment group) in the language switching device.
If registering messages of Japanese, English, Chinese and other language in each column of comment group, the language of the comment displayed can be switched.
For the comment registration, refer to the following.

4.11 Comment Setting

Example: When switching language by Comment display (Word):

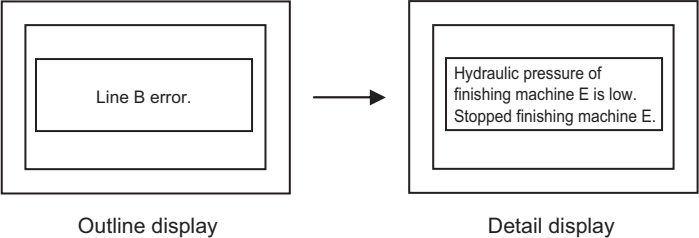


No. 1 Comment Group 1 Comment List			
Column No.			
Comment No.	1	2	3
1	Aライン供給コンベア停止。	A-line supply conveyer stopped.	A生产线的补给输送带停止
2	非常停止リミット作動。	Emergency stop limit switch operated.	紧急停止装置启动
3	加工品リミット油圧低下	Product limit switch does not operate.	加工启动装置不工作
4	加工機-1の油圧低下。	Hydraulic pressure of finishing machine 1 is low.	加工机-1的油压下降

POINT

Application usage of switching languages

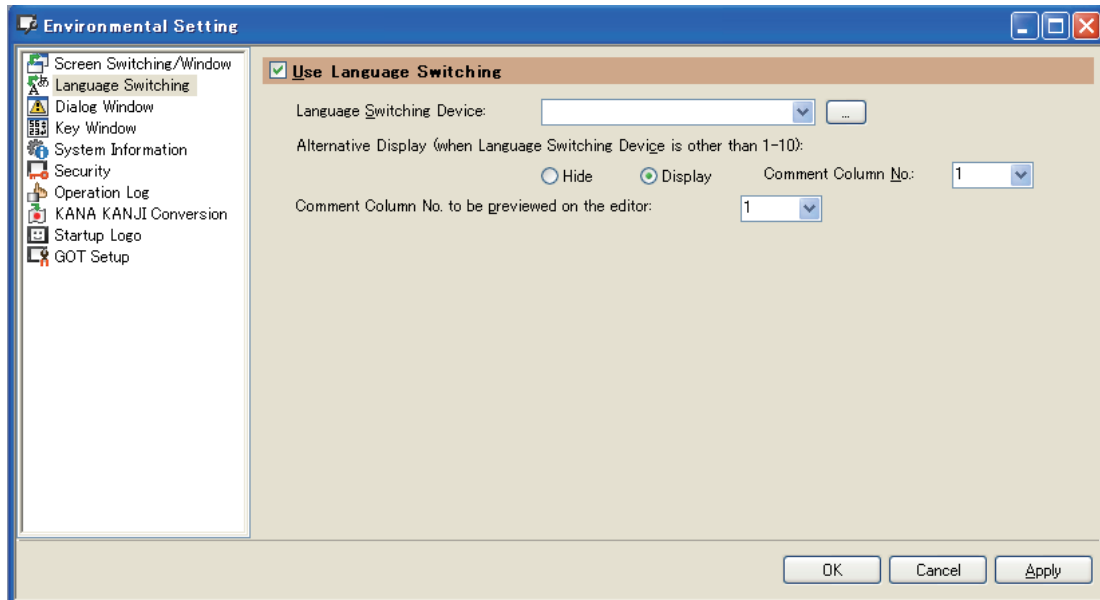
The language switching function other than switching languages is available.
For example, when outlines (English) are registered in the column No.1 and details (English) are registered in the column No.2, the appropriate comments can be displayed according to the usage of the user.





4.3.1 Settings

Select [Common] → [GOT Environmental Setting] → [Language Switching] from the menu to display the [Environmental Setting] dialog box.

■ Language Switching



Item	Description	Model
Use Language Switching	Select this item to set the language switching device.	
Language Switching Device	Set the language switching device.  5.3.1 Device setting	
Alternative Display (when Language Switching Device is other than 1-10)	Set this item to select whether to display the comments when the language switching device value is set to other than 1 to 10. When selecting [Display], the column number of the comment set for [Comment Column No.] is displayed.*1 When selecting [Hide], the comment of the comment column displayed until then is displayed.	
Comment Column No. to be previewed on the editor	Set the column No. of the comments to be previewed in the screen editor on GT Designer3.	

*1 At GOT startup, the comment of the comment column specified for [Comment Column No.] is displayed until the communication is established.
If the communication is interrupted while the GOT is in operation, the comment of the comment column displayed until then is displayed.



Device value of the language switching device

The comment column number registerable for a comment group is 1 to 10.

Set the value specified for the comment column No. for the language switching device.

4.3.2 Precautions

■ Precautions for drawing

(1) **Language switching device setting**

The language switching device can be set for each project.
It cannot be set up for each screen.


(2) **Comment group registration without setting the language switching device**

In this case, register comments in the column No.1 of comment group.
Even if comments are registered in the column No.2-10 of comment group, they cannot be displayed.


(3) **When switching to Chinese characters of standard font (Option) (GT16, GT15 only)**

Mounting an option function board or installing the corresponding font data is required according to the GOT.
When the option function board is not mounted or the font data is not installed on the GOT, Chinese characters of the standard font (Standard) are displayed.


The following shows which GOT requires an option function board or option function OS.

GOT	Option function board	Option function OS
GT16	Not required	Required
GT15	Required (No option function board is required for GOTs with built-in option function boards.) For GOTs with built-in option function boards, refer to the following.  Appendix8 Precautions for Option Function Board	Required

For the standard font (Standard), refer to the following.

 2.5.1 Fonts

For the installation method of the option function board, refer to the manual below.

 User's Manual for the GOT used

(4) **Objects available for the language switching function**

The language switching function is available only for objects that are supported by comment group.
For the objects supported by comment group, refer to the following.

 4.11 Comment Setting

■ Precautions for use

(1) **Operation when a column number of an unregistered comment group No. is stored in the language switching device**

If a column number of an unregistered comment group is stored in the language switching device, the comment is not displayed correctly at each object.

When "0" is stored, display varies depending on the specification of the object to be used.

For details of display at each object, refer to the following.

 GT Designer3 Version1 Screen Design Manual(Functions)

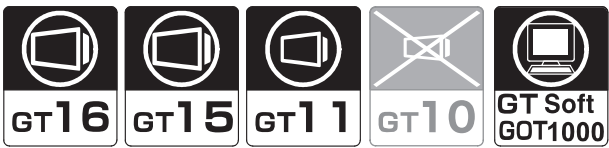
(2) Influence on objects when language switching is performed

When language switching is performed during GOT monitoring, the currently displayed screen is displayed again, so that the display of objects may be influenced.

Be careful if the following objects are arranged on the screen being monitored when switching language.

Object	Description
Trend Graph	If store memory is not set, the historical information is erased.
Scatter Graph	
User Alarm Display	If store memory is not set, the occurrence time of alarm is changed to the time of language switching. If display is being scrolled, data are displayed from the top.
Data List Display	If display is being scrolled, data are displayed from the top.
Advanced User Alarm Display, Advanced System Alarm Display	
Alarm History Display	
Parts Movement	If the display mode is set to Locus, the locus is erased.

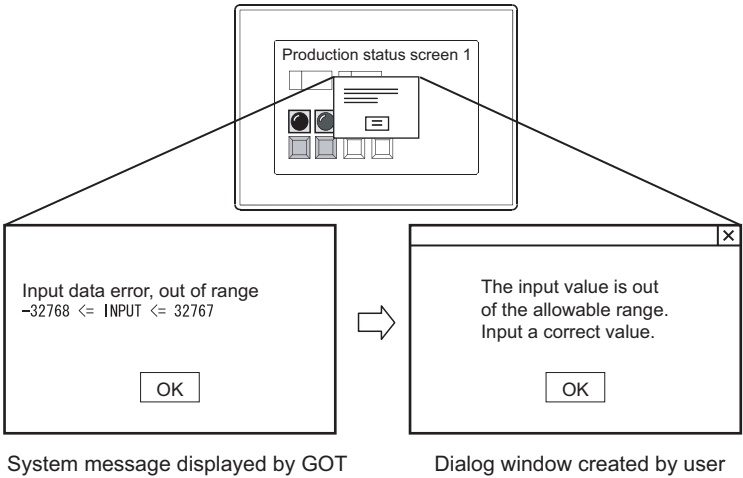
4.4 Setting Message to be Displayed on GOT



By using a user-created dialog window, a system message displayed on the GOT can be replaced by the window, or a new system message can be created.

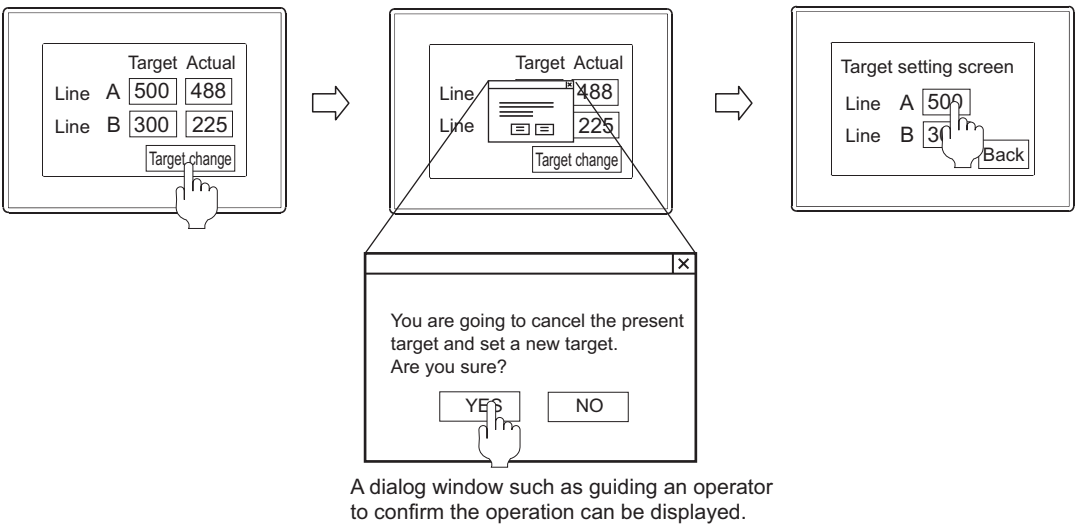
■ Replacing a system message displayed on the GOT with a user-created dialog window

A system message displayed on the GOT can be replaced with a created dialog window.
The GOT can display more specific and system-matched message.



■ Displaying a user-created dialog window as a new system message

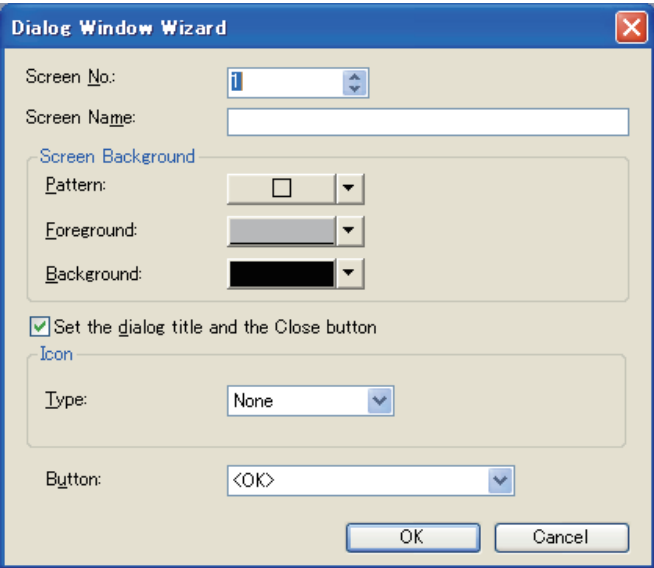
By creating a dialog window for an error or warning as a system, the GOT can display the dialog window as a system message.
Creating the dialog window enables the GOT to display the window that does not allow displaying of the next screen unless a response to the displayed message is input, and to display the window that requires the operator to confirm the information, and others.







A dialog window such as guiding an operator to confirm the operation can be displayed.

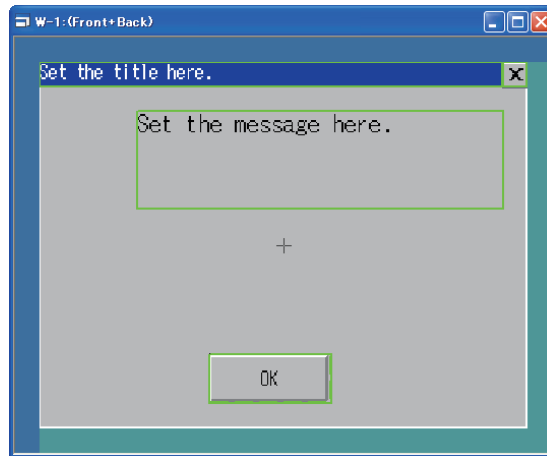
4.4.1 Creating a dialog window

1. Select [Screen] → [New] → [Dialog Window Wizard] from the menu.
2. In the dialog window wizard, set the required items and click the [OK] button.



Item	Description		Model
Screen No.	Set a screen number.		
Screen Name	Set a screen title. Up to 32 characters can be input (either in 2-byte characters or in 1-byte characters).		
Screen Background	Pattern	Select the pattern, pattern color and background color of the screen The pattern is displayed over the background. Example) Background color :  Pattern :  Pattern color :  Background color	
	Foreground		
	Background		
Set the dialog title and the Close button		Select this item to display the title bar, and close button on the dialog window.	
Icon	Type	Select the type of icon to be displayed on the dialog window.	
Button	Select the type of button to be displayed on the dialog window.		

3. The dialog window is created and the screen editor appears.
Set a title, message, object, and others.



HINT

(1) Screens displayed as dialog windows

Not only dialog windows, window screens can be also used as dialog windows.

(2) Changing the dialog window setting

The dialog window setting can be changed for the [Screen Property] dialog box.

For the [Screen Property] dialog box, refer to the following.

☞ 3.7.1 Creating a new screen

(3) Changing a title bar, icon, and button

To change a title bar, icon, and button, use the data in the library.

For the library, refer to the following.

☞ 6. LIBRARY

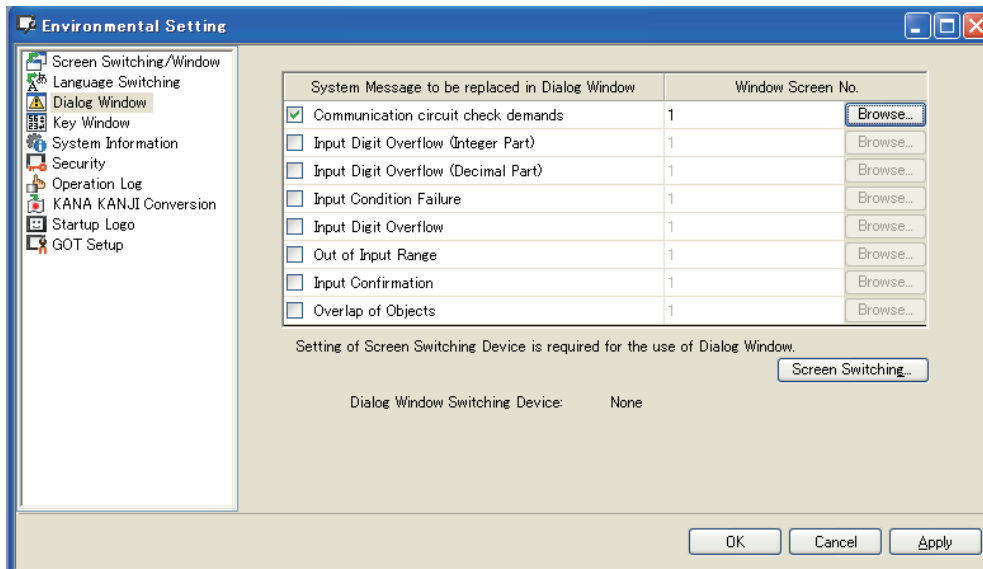
4.4.2 Settings

■ Replacing GOT system messages with created window screens

The setting to replace a system message with a created window screen can be configured for each project or screen.

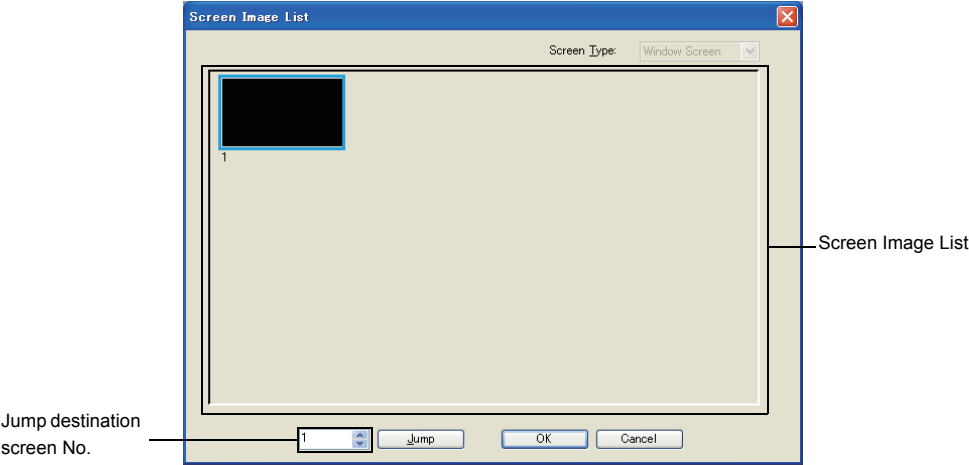
(1) Setting for each project

Select [Common] → [GOT Environmental Setting] → [Dialog Window] from the menu to display the [Environmental Setting] dialog box.



Item	Description	Model
System Message to be replaced in Dialog Window	Select this item to configure the setting for replacing each GOT system message with a created window screen. After selecting this item, set [Window Screen No.].	
Window Screen No.	Set a screen number of a window screen to be replaced with a system message. Click the [Browse] button to display the [Screen Image List] dialog box. 4.4.2 ■ Replacing GOT system messages with created window screens (1) (a) Screen Image List dialog box	
	Displays [Screen Switching] for the [Environmental Setting] dialog box. 4.2 Screen Switching Device Setting	
Dialog Window Switching Device	Displays the screen switching device for the dialog window.	

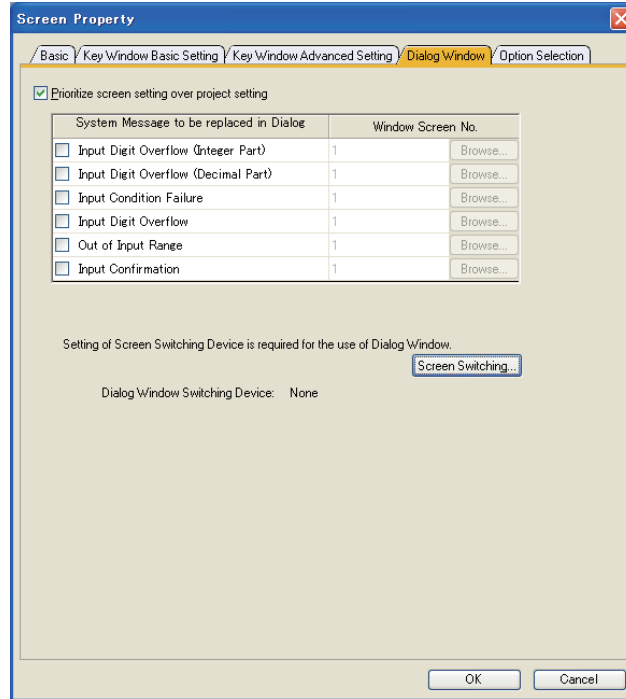
(a) Screen Image List dialog box



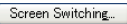



Item	Description	Model
Screen Image List	Displays the screen image of the screen type selected for [Screen Type]. Select the screen image and click the [OK] button to set the selected screen number for [Window Screen No.]. (The setting is available by double-clicking the screen image.)	GT16GT15 GT11GT10 SoftGOT 1000
Jump destination screen No.	Set a screen number of a screen to jump to the set screen number. By clicking the [Jump] button, the screen set for the screen number to jump to the screen is the selected status.	

(2) Setting for each screen

1. Select the screen editor to be set, and then select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog box.
2. Select the [Dialog Window] tab and set the required items.



Item	Description	Model
Prioritize screen setting over project setting	Select this item to give the setting for each screen priority over the setting for each project.	
Select the System Message that replace in dialog	Select this item to configure the setting for replacing each GOT system message with a created window screen. After selecting this item, set [Window Screen No.].	
Window Screen No.	Set a screen number of a window screen to be replaced with a system message. Click the [Browse] button to display the [Screen Image List] dialog box.  4.4.2 ■Replacing GOT system messages with created window screens (1) (a) Screen Image List dialog box	
	Click this button to close the [Screen Property] dialog box and display [Screen Switching] of the [Environmental Setting] dialog box.  4.2 Screen Switching Device Setting	
Dialog Window Switching Device	Displays the screen switching device for the dialog window.	

■ Displaying a user-created dialog window as a new system message

The GOT can display a dialog window by storing the screen number of the window screen in the screen switching device of the dialog window.

To set the screen switching device, refer to the following.

 4.2 Screen Switching Device Setting

4.4.3 Precautions

■ Precautions for drawing

(1) Before using a dialog window

To use a dialog window, set a screen switching device for the dialog window.
To set the screen switching device, refer to the following.

 4.2 Screen Switching Device Setting

(2) Maximum number of objects that can be arranged on one screen

Up to 32 objects can be arranged on one screen.

If 33 or more objects are arranged, the objects are not displayed on the GOT.

Objects for the key window ([Input Value Area Setting], [Input Range Area Setting], [Input Maximum Value Area Setting], [Input Minimum Value Area Setting]) are excluded.

(3) Figures and objects that can be arranged on the dialog window

The following shows figures and objects that can be arranged on the dialog window.

Figure, Object	Description
Figures	All figures
Objects	Touch switch, Numerical Display, Comment Display, Key Window Object (Input Value Area Setting, Input Range Area Setting, Input Maximum Value Area Setting, Input Minimum Value Area Setting)

(4) Restrictions relevant to the object setting

- (a) Available display conditions of the input value area setting, input maximum value area setting, and input minimum value area setting.

The GOT can display the above objects for the key window only when replacing the following messages with the dialog window.

· Input digits over(Integer part) · Input digits over(Decimal part) · Input digits over
· Input out of range · Input confirmation

- (b) Restrictions relevant to the touch switch, numerical display, and comment display arranged on the dialog window

For the setting dialog box of the touch switch, numerical display, and comment display, only the following tabs are available.

Some of the functions in the tabs cannot be used.

Object		Settable tab	Precautions
Touch switch	Switch	Action	Extended Action cannot be set. Key codes other than 000DH (execute) and 001BH (cancel) cannot be used. Lamp function cannot be used.
		Style	-
		Text	-
		Extended	Only the category is available.
	Bit Switch	Device	Lamp function cannot be used.
		Style	-
		Text	-
		Extended	Only the category is available.
	Word Switch	Device	Lamp function cannot be used.
		Style	-
		Text	-
		Extended	Only the category is available.

(Continued to next page)

Object		Settable tab	Precautions
Touch switch	Go To Screen Switch	Next Screen	Lamp function cannot be used.
		Style	-
		Text	-
		Extended	Only the category is available.
	Change Station No. Switch	Next Station	Lamp function cannot be used.
		Style	-
		Text	-
		Extended	Only the category is available.
	Key Code Switch	Key Code	Key codes other than 000DH (execute) and 001BH (cancel) cannot be used.
		Style	-
		Text	-
		Extended	Only the category is available.
Numerical Display		Device/Style	Blink cannot be used.
		Extended	Only the category is available.
		Operation/Script	The script function is not available.
Comment Display	Bit Comment, Word Comment	Device/Style	-
		Comment	Blink cannot be used.
		Extended	Only the category is available.

- (c) System dialog replacement settings on base screens and window screens
When displaying a window screen as a superimpose window or called screen (set overlay screen function), the replacement settings for each screen set in the window screens are invalid.
- When displaying system dialog as a superimpose window
The system dialog replacement settings of the base screen on which the superimpose window is displayed is valid.
 - When displaying system dialog as a called screen (Set Overlay Screen)
The system dialog replacement settings of the basic screen is valid.
- (d) Other precautions
- Overlaying of objects is not allowed.
 - The settings relevant to the dialog window are enabled only when the settings are configured in [Dialog Window] for the [Environmental Setting] dialog box or in the [Dialog Window] tab for the [Screen Property] dialog box.
 - When setting a key code (000DH (execute) or 001BH (cancel)) in a touch switch, configure the setting so that 0 is stored to a screen switching device for the dialog window.
 - The function for the screen script is not available.


(5) Displaying of a dialog window

- (a) Objects on a dialog window
The device status of an object is the same as when the dialog window has been displayed.
Even if a device value is changed while the object is displayed on the dialog window, the display of the object on the dialog window is not changed.
- (b) Displaying system message and dialog window
System message and dialog window cannot be displayed simultaneously.
When an attempt is made to display them simultaneously, a system message is displayed.
- (c) Base/window screen switching and dialog window display
Do not switch the screen display between base screen and window screen at the same time a dialog window is displayed.
Switching of base/window screen display may be delayed.
(Base/window screen switching takes place after the dialog window is closed.)

(6) Applicable range for changing the dialog window size

Change the dialog window screen size (horizontal × vertical) in the range of 16 × 2 dots to 320 × 240 dots.
When the range of the dialog window screen size is changed to other than the above, the GOT does not display the dialog window correctly.

For the dialog window specifications, refer to the following.

 2.3 Types and Number of Creatable Screens

(7) Setting for closing a dialog window

Configure a setting to close a dialog window (including the setting of a touch switch to close the window and a program to write "0" to the screen switching device for the dialog window).

Operation of a monitor screen or the utility is disabled on the GOT unless the dialog window is closed.

■ Precautions for use

(1) Display priority between a currently displayed dialog window and a newly occurred system message

- (a) When a newly occurred system message is created by the user
The currently displayed dialog window remains displayed.
The occurred system message is not displayed.
- (b) When the occurred system message is a system message that is set for GOT
The currently displayed dialog window closes and "0" is stored in the screen switching device for the dialog window.
After that a new system message is displayed.
If a button is arranged on the currently displayed dialog window, the following processing is executed before the dialog window closes.
 - For the dialog window where only the [OK] button is arranged, the same processing as the one for touching the [OK] button is executed.
 - For the dialog window where the [Cancel] button exists, the same processing as the one for touching the [Cancel] button is executed.

(2) Communications between the GOT and GT Designer3

While a dialog window is displayed, the GOT may not communicate with GT Designer3.

For the above case, close the dialog window.

4.5 Key Window Setting



This section explains how to operate a key window for the numerical input or ASCII input, and how to create a user-created key window.

4.5.1 Key window type

Key window can be classified into two types: GOT original key window (Default key window) and key window created by user (User-created key window).

■ Default key window

A default key window is automatically displayed according to the data type of an input area (hexadecimal, decimal, octal, binary, or ASCII).

(1) Key window for numeric values

When the data type of an input area is in hexadecimal, octal, or binary format, a key window for hexadecimal numbers is displayed.

When the data type of an input area is in decimal format, a key window for decimal numbers is displayed.



Example) Key window for decimal

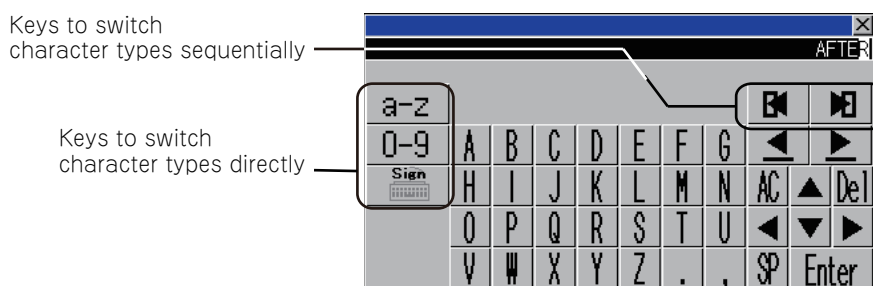


Example) Key window for hexadecimal

(2) Key window for ASCII characters

When the data type of an input area is in ASCII format, a key window for ASCII characters is displayed.

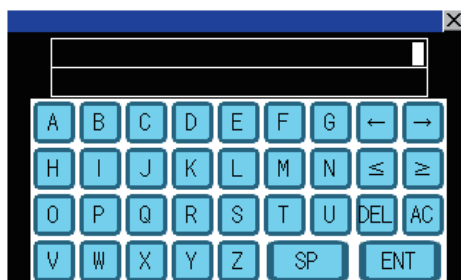
Character types of the key window can be switched by either the keys to switch character types sequentially or keys to switch character types directly.



Example) key window for ASCII characters (uppercase alphabetic characters)

■ User-created key window

User's original key window can be created by registering a user-created window as key window.
To use ASCII input function, create a key window with a user-created key window.



Example) User-created key window(Created for ASCII input)



Example) User-created key window(Created for numeric input (decimal))



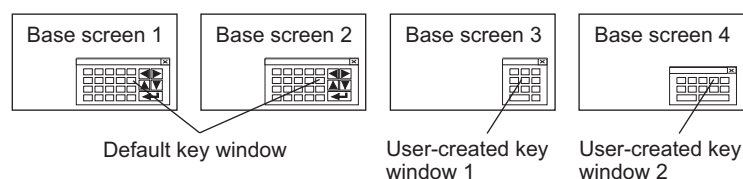
(1) Key window to be displayed

A key window to be displayed can be set in project unit or screen unit.

A suitable key window for each screen can be displayed from multiple key windows created beforehand.

For the setting of the key window to be displayed, refer to the following.

☞ 4.5.5 Settings



(2) Switching key windows for ASCII characters

By setting multiple key windows for ASCII characters, the user can use an appropriate key window according to the character type to be input.

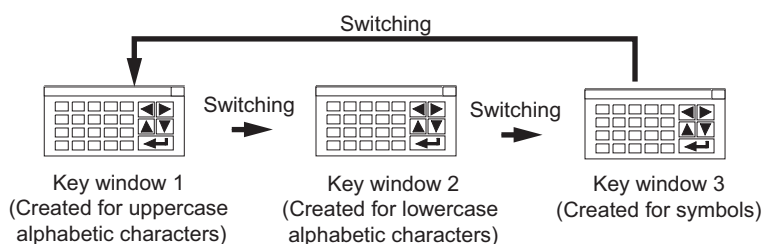
To switch the key windows, use the key code switch assigned with the key code for switching key windows.

For the setting of the key window to be displayed, refer to the following.

☞ 4.5.5 Settings

For the setting method of a key code switch to be arranged on the key window, refer to the following.

☞ (Functions) 2.8Setting Key Code Switch



4.5.2 Buttons on default key window and display items

■ Default key window for the GT16, GT15, GT11, and GT SoftGOT1000












(1) Key window for numeric values




Example) Key window for decimal



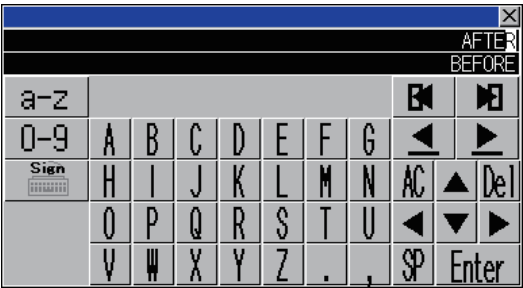
Example) Key window for hexadecimal

Item	Description
 *1	Displays the input value.
 *1	Displays the current value.
 *1	Displays the numerical input range. INPUT : Indicates the input value. <(>) : The value at the left (right) term is smaller than the value at the right (left) term. = : The value at the left (right) term is the same as the value at the right (left) term. <=(>=) : The value at the left (right) term is equal to or smaller than the value at the right (left) term. != : The value at the left (right) term is different from the value at the right (left) term. When conditions are set, the input range of the condition with the smallest number is displayed.
	Inputs numeric values and decimal points.
	Changes the sign (+ or -) of the input value.
	Moves the input cursor.
	Moves the cursor in the object being input. If move the cursor while range check is performed during a numeric value input, the range check is performed not during inputting but after determining the input value. To perform a range check while inputting a value, hide the cursor (cancel inputting of the numeric value) and reinput the numeric value.
	The key to delete the least significant digit of the numeric value being input and shift the whole numeric value to right by one digit.
	Clears all input numeric values.
	Writes the input numeric value to a device. (Enter key)
	Closes the key window.

*1 The input value, current value, and input range are displayed on the key window in that order.
Each area can be set to be hidden.

 4.5.5 Settings

(2) Key window for ASCII characters



Example) key window for ASCII characters (uppercase alphabetic characters)

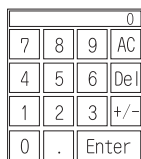
Item	Description
	Displays the character string currently being input.
	Displays the current value of a device.
	Keys to switch character types sequentially Switches the character types of the key window one by one in sequential order.
	Keys to switch character types directly Switches the character types of the key window as specified by the key. (A-Z: uppercase alphabetic characters/a-z: lowercase alphabetic characters/0-9: numeric characters/Sign: symbols)
	Inputs characters in the object. Keys displayed in a key window differ according to the character type to be selected.
	Moves the input cursor.
	Moves the cursor in the object being input.
	Deletes the character on the cursor.
	Clears the character string currently being input.
	Writes the input character string to a device. (Enter key)
	Closes the key window.

*1 Displayed in order of the character string currently being input and the current value of a device.
 Each area can be set to be hidden.

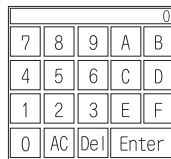
4.5.5 Settings

Key window for GT10

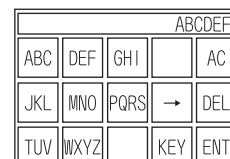
The following explains keys of a default key window and display items.



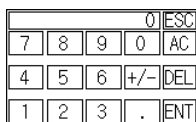
Example) Decimal key window for GT105 and GT104



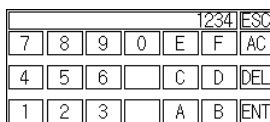
Example) Hexadecimal key window for GT105 and GT104



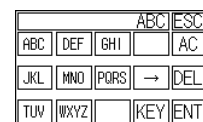
Example) ASCII key window for GT105 and GT104



Example) Decimal key window for GT1030 and GT1020



Example) Hexadecimal key window for GT1030 and GT1020



Example) ASCII key window for GT1030 and GT1020

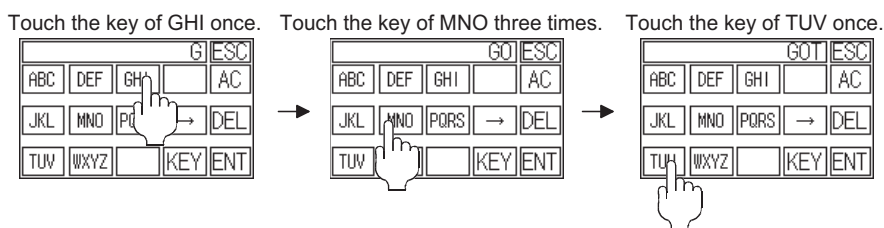
Item	Description
	Displays input values.
	Inputs numeric values or characters.
	Closes the key window.
	Clears all numeric values or characters.
	Clears the least significant digit of input numeric values or characters and shifts all numeric values or characters to the right by one digit.
	Writes the input numeric values or characters to a device. (Enter key)
	Moves the input cursor.
	Switches a button type (alphabet, numeric character, or symbol) every time the button is touched.
	Closes the key window.



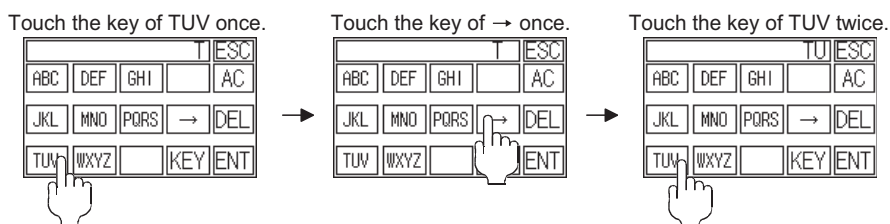
(1) How to input characters with key window for ASCII input

Multiple characters are assigned to one button on a key window for the ASCII input for the GT10. With touching the same button several times, characters to be input are switched.

- When inputting "GOT"



- When inputting "TU"



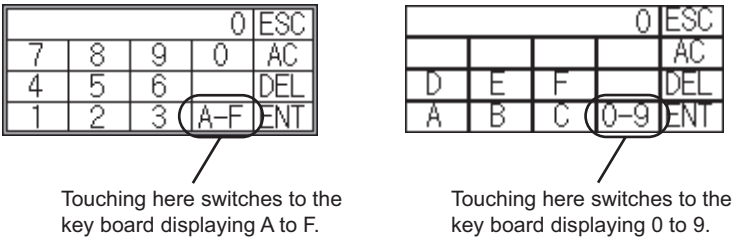
(2) Display items of key windows for the GT10

Key windows for the GT10 do not display the input range or the button to move the cursor.

(3) Key window for hexadecimal with GT1020

With the GT1020, the key window for hexadecimal cannot display all buttons on the same key window. Switch the displays by touching the [A-F] or [0-9] button.

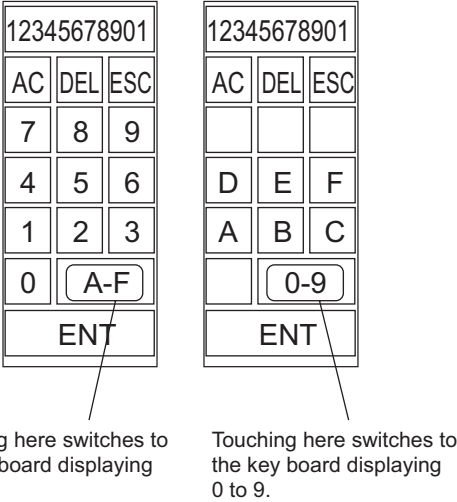
Key window for hexadecimal with GT1020



(4) Key window for hexadecimal in vertical type (Only GT10)

The key window for hexadecimal in vertical type cannot display all buttons on the same key window. Switch the displays by touching the [A-F] or [0-9] button.

Key window for hexadecimal in vertical display



4.5.3 How to operate key window

■ How to display a key window

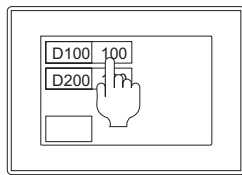
A key window appears when the numerical input or the ASCII input is touched on the GOT, or the other cases.
For the setting of the key window display, refer to the following.

☞ 4.5.5 Settings

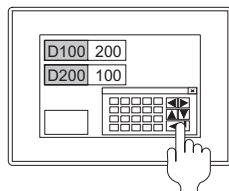
■ Basic operation method

In the following procedure, the numerical input function is used to explain key window operation on the GOT as an example.

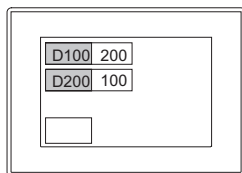
(The operation is the same as when ASCII input function is used.)



1. Touch the numerical input to input a numeric value.



2. In the key window, input the numeric value.
After inputting, touch the [Enter] button or the [ENT] button (Enter key). The numeric value is written to a device.



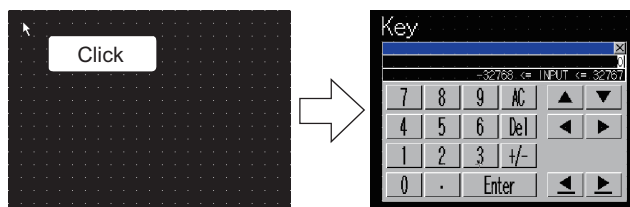
3. The value in the numerical input is updated, and the key window is closed.



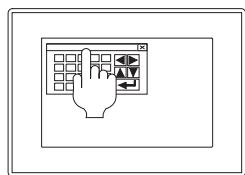
Key window position setting

By default, a key window is displayed on the lower-right of the GOT screen.
Key window position can be set as follows.

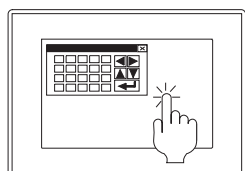
1. Select [Object] → [Window Position] → [Key Window] from the menu.
2. Click the position with a mouse to display a key window.



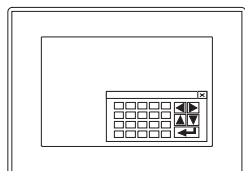
■ Method of moving key window



1. If touch the upper part of key window, the bar is highlighted.



2. Touch the position where the key window is moved within three seconds.
When the object is touched within less than three seconds, the object does not act.
With three seconds or more, the movement mode of the key window is canceled.




3. The key window moves to the specified position.


HINT

Buzzer volume setting

In the GOT utility or GT Designer3, set whether to beep the buzzer when moving a window.
For the setting in GT Designer3, refer to the following.

 4.9 GOT Display and Operation Setting

For the setting in the GOT utility, refer to the following.

 User's Manual for the GOT used

4.5.4 How to create user-created key window

To use a user-created key window, arrange touch switches on a window screen and set the screen as a key window.



To create key window quickly

The touch switches for the numerical input or ASCII input are registered in the library.

A user-created key window can be created quickly by utilizing the above touch switches.

(The touch switches other than the following types are registered.)




Example) Touch switch for numerical input



Example) Touch switch for ASCII input

For the library, refer to the following.

 6. LIBRARY

■ Outline procedure

1. Select [Screen] → [New] → [Window Screen] from the menu and create a window screen.
By double-clicking [New] for [Window Screen] in the screen list tree, the window screen can be created.

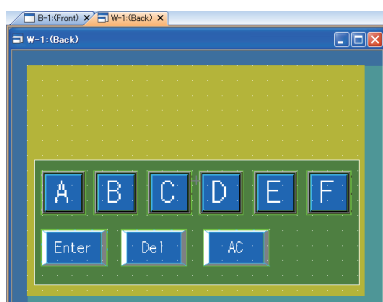
☞ 3.7.1 Creating a new screen

2. According to the purpose of using the key window, assign a key code to a key code switch and arrange it on the screen editor of the window screen.

☞ (Functions) 2. TOUCH SWITCH

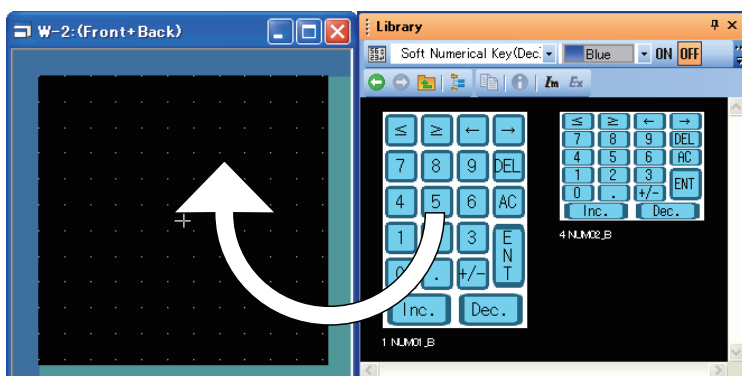
For the precautions of creating the user-created window, refer to the following.

☞ 4.5.7 Precautions



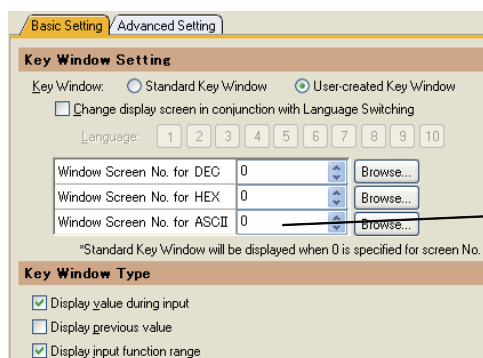
Utilizing the library

By utilizing the buttons for numerical input or ASCII input in the library, the key windows can be easily set.



3. Configure the setting to use the created window screen as a key window.

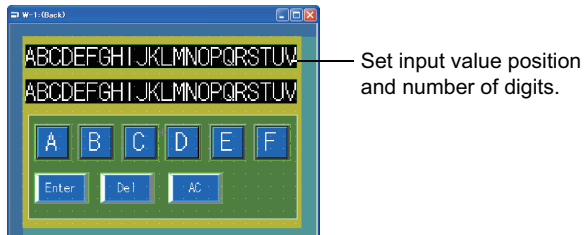
☞ 4.5.5 Settings



Select a window screen to be used as a key window

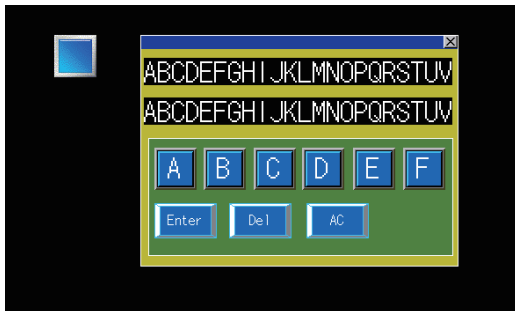
4. Set the view format and position of input value and input range.

☞ ■Display of the input value area setting, input range area setting, and previous value area setting



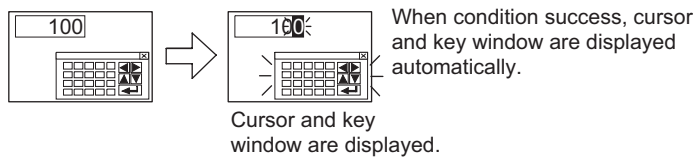
5. Check the display image on GT Designer3.

☞ 3.11 Viewing Created Screen Image



6. Set the key window display method, cursor action, and others if required.

☞ 4.5.5 Settings



■ **Display of the input value area setting, input range area setting, and previous value area setting**

Set an area for a user-created key window to display a value being input, the input range area, and a previous value before inputting.
 The applicable key settings differ according to the GOT type.

The diagram shows a GOT key window interface. At the top, there's a display area showing '1234' and '0'. Below this is a keypad with buttons for digits 0-9, letters A-F, and function keys like DEL, ←, →, ↑, ↓, AC, and ENT. Labels with arrows point to specific areas: 'Input value area' points to the '1234' display; 'Previous value area' points to the '0' display; 'Input range area' points to the '0 <= INPUT <= FFFFFFFF' display; 'Input maximum value area' points to the 'FFFFFFF' part of the range display; and 'Input minimum value area' points to the '0' part of the range display.

Input value area : Displays the value being input.

Previous value area : Displays the current value.

Input range area : Displays the allowable range of input.
(Display example: 0 <= INPUT <= FFFF)

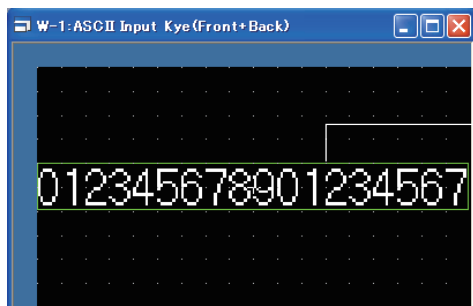
Input maximum value area : Displays only the maximum value that can be input.
(Display example: FFFF)

Input minimum value area : Displays only the minimum value that can be input.
(Display example: 0)

○: Applicable ×: Not applicable

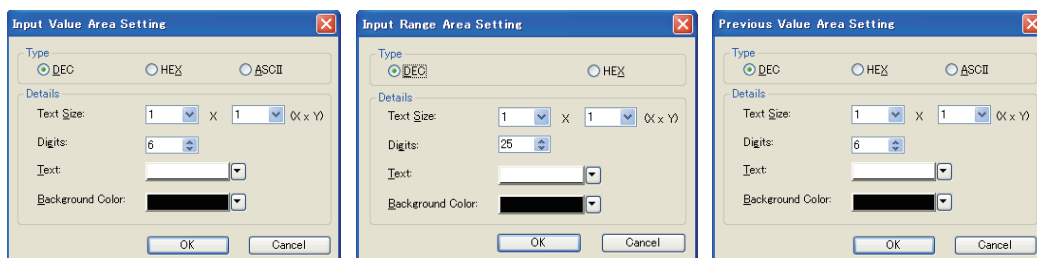
GOT type	Key Window Object				
	Input value area setting	Input range area setting	Input maximum value area setting	Input minimum value area setting	Previous value area setting
GT16	○	○	○	○	○
GT15	○	○	○	○	○
GT11	○	○	○	○	○
GT10	○	×	○	○	×
GT SoftGOT1000	○	○	○	○	○

1. Select [Object] → [Key Window Object] from the menu, and select an object to be arranged on a window screen as shown below.
 - [Input Value Area Setting] · [Input Range Area Setting] · [Input Maximum Value Area Setting]
 - [Input Minimum Value Area Setting] · [Previous Value Area Setting]
2. Click the position where the object is displayed to complete the object arrangement.



The input value area, input range area, or previous value area is placed by clicking.

3. Double-click the arranged objects for the input value area setting, input range area setting, or previous value area setting. The setting dialog box appears.



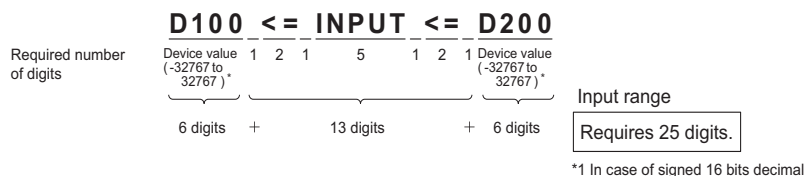
Item	Description		Model
Type	Select the view format of the input value to be displayed. DEC: Select this item when a decimal key window has been created. HEX: Select this item when a hexadecimal key window has been created. ASCII: Select this item when a key window for ASCII input has been created.		
Details	Text Size	Select character size of the input value to be displayed.	
	Digits	<ul style="list-style-type: none"> • When setting Input Value Area Set the number of digits for displaying input value. DEC: 1 to 32 digits (1 to 20 digits for GT10) HEX: 1 to 8 digits ASCII: 1 to 100 digits • When setting Input Range Area Set the number of digits for displaying input range DEC/HEX: 15 to 78 digits • When setting Input Maximum Value and Input Minimum Value Areas Set in the number of digits of the maximum and minimum values. DEC: 1 to 32 digits HEX: 1 to 8 digits • When setting the previous value area Set the number of digits for displaying the current value. DEC: 1 to 32 digits HEX: 1 to 8 digits ASCII: 1 to 100 digits 	
	Text	Select the color of text to be displayed.	
	Background Color	Select the background color of text.	

POINT

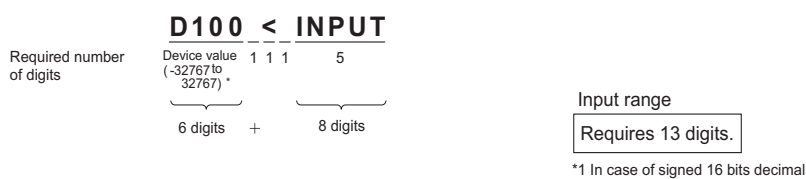
Input range area setting

If a device is specified in a range equation and the device value exceeds the preset number of digits, "?" may be displayed. Specify the input range in consideration of the potential device value with reference to the following example.

Example 1) If $D100 \leq INPUT \leq D200$



Example 2) If $D100 < INPUT$



4.5.5 Settings

Set a key window to be used for a whole project or for each screen.

■ Setting for each project

Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display the [Environmental Setting] dialog box.



Settings relevant to functions

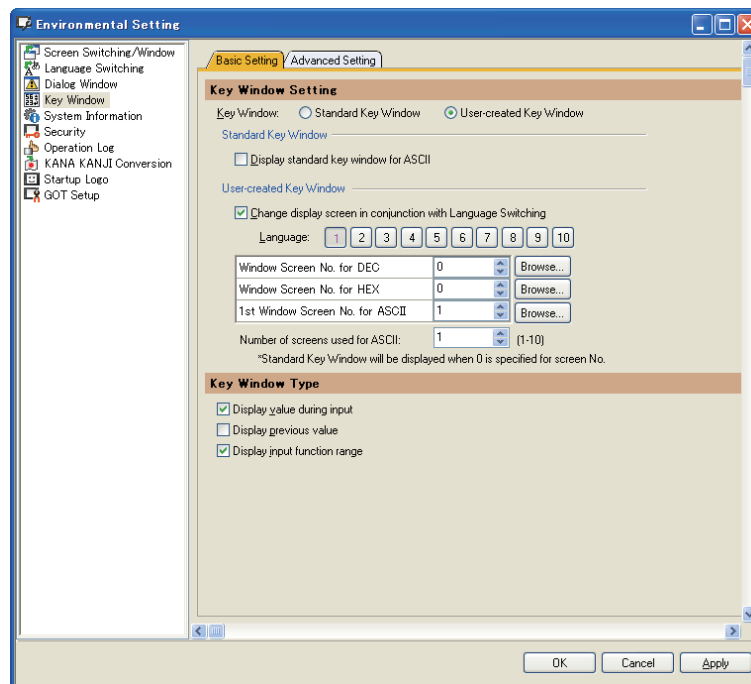
For the key window settings, some settings are relevant to multiple GOT functions.

For the common settings in a project data, some settings are relevant to multiple GOT functions.

For each setting relevant to the GOT functions, refer to the following.







➞ Appendix6 Relevant Settings

(1) Basic Setting tab



Item	Description		Model
Key Window Setting	Key Window	Select the type of the key window to be used. (Standard Key Window/User-created Key Window)	<div> GT16GT15 GT11GT10 SoftGOT 1000 </div>
	Display standard key window for ASCII	Select this item to display the default key window at ASCII input.	<div> GT16GT15 GT11GT10 SoftGOT 1000 </div>
	Change display screen in conjunction with Language Switching ^{*1}	<p>This item is available when [User-created Key Window] is selected for [Key Window].</p> <p>Select this item to change the key window display in synchronization with the value of language switching device. After selecting this item, select the value (1 to 10) of the language switching device for [Language].</p> <p>Set window screens to be displayed in synchronization with each value.</p> <p>When the setting is changed, the color of each value for [Language] is changed.</p>	<div> GT16GT15 GT11GT10 SoftGOT 1000 </div>

(Continued to next page)

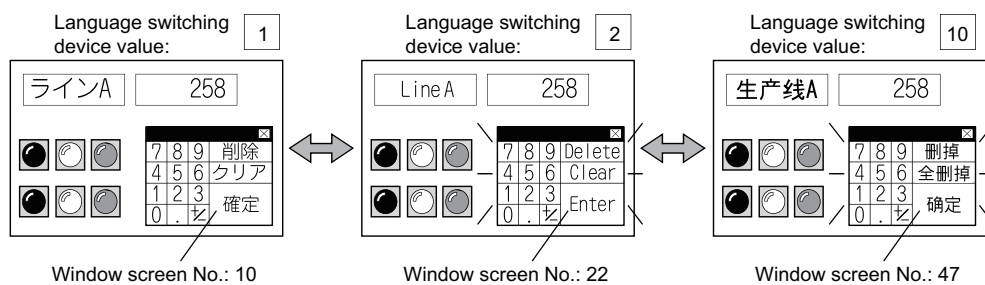
Item	Description		Model
Key Window Setting	Window Screen No. for DEC	To input a decimal number, set a window screen number displayed as a key window. By clicking the [Browse] button, the window screen can be selected in the [Screen Image List] dialog box.	
	Window Screen No. for HEX	To input a hexadecimal number, set a window screen number displayed as a key window. By clicking the [Browse] button, the window screen can be selected in the [Screen Image List] dialog box.	
	1st Window Screen No. for ASCII	To input a ASCII character, set a window screen number displayed as a key window. Starting with the screen number set for this item, as many screens as set in [Number of screens used for ASCII] are available for key windows for ASCII characters. To display the default key window, set "0" for the screen number.* ² By clicking the [Browse] button, the window screen can be selected in the [Screen Image List] dialog box.	
	Number of screens used for ASCII	Set the number of window screens used for key windows for ASCII characters. (1 to 10) When multiple key windows for ASCII characters are set, the key windows can be switched by the key code switch (key window switching). For details of key code switches, refer to the following.  (Functions) 2.9 Setting Key Code Switch	
Key Window Type	Display value during input	Select this item to display the value being input on the key window. To display the input value on a user-created key window, the input value area setting must be arranged on the window screen.  4.5.4 ■Display of the input value area setting, input range area setting, and previous value area setting	
	Display previous value	Select this item to display the value before input. To display the value before input on a user-created key window, the previous value area setting must be arranged on the window screen.  4.5.4 ■Display of the input value area setting, input range area setting, and previous value area setting	
	Display input function range	Select this item to display the input range on a key window. To display the input range on a user-created key window, the input range area setting must be arranged on the window screen.  4.5.4 ■Display of the input value area setting, input range area setting, and previous value area setting	

*1 In synchronization with the language switching device value, the screen window set for [Language] is displayed as a key window. The following shows the GT Designer3 settings relevant to the language switching actions on the GOT.

Example) Switching key windows for a decimal number in synchronization with the value of language switching device
• GT Designer3 setting

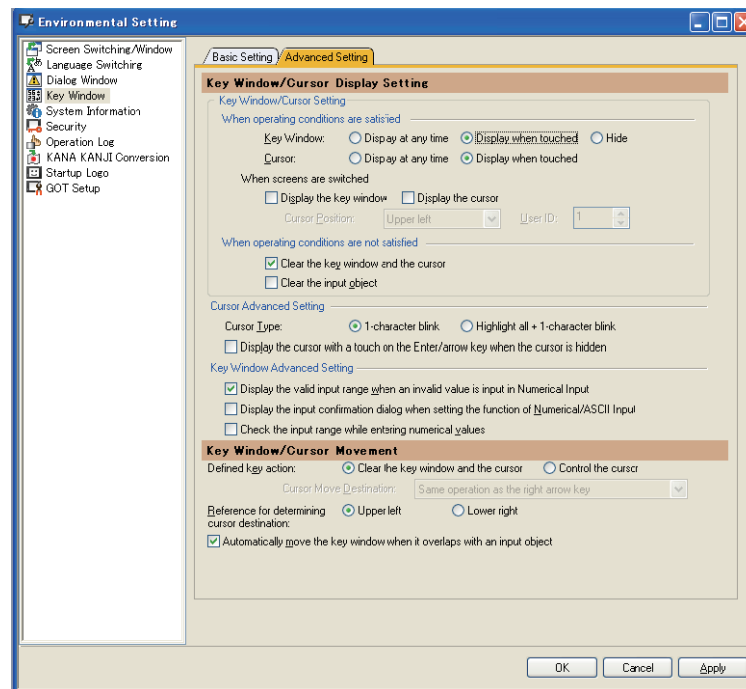
Select language	DEC key sheet No.	Description
1	10	Window screen 10 is displayed for the key window when the language switching device value is "1".
2	22	Window screen 22 is displayed for the key window when the language switching device value is "2".
3	0	The standard key window is displayed when the language switching device value is "3".
10	47	Window screen 47 is displayed for the key window when the language switching device value is "10".

• Language switching on the GOT



*2 When setting "0" for the screen number, select [Display standard key window for ASCII]. Otherwise, the key window is not displayed.

(2) Advanced Setting tab



Item	Description		Model
Key Window/Cursor Display Setting	Key Window/Cursor Setting	Set the action of the key window and cursor when operating conditions are satisfied or not satisfied. (a) Key Window/Cursor Setting	GT16 GT15 GT11 GT10 SoftGOT 1000
	Cursor Advanced Setting	Set the action of the cursor. (b) Cursor Advanced Setting	
	Key Window Advanced Setting	Set the action of the key window. (c) Key Window Advanced Setting	GT16 GT15 GT11 GT10 SoftGOT 1000
Key Window/Cursor Movement	Defined key action	Set the action of the key window and cursor when touching the enter key. (Clear the key window and the cursor/Control the cursor) Select [Cursor Move Destination] for [Control the cursor]. Cursor Move Destination: Select the position where the cursor moves. (Same operation as the right arrow key/Same operation as the down arrow key/Not move/Move in order of User IDs (not move if it cannot shift)	GT16 GT15 GT11 GT10 SoftGOT 1000
	Reference for determining cursor destination	Select the reference to determine the position where the cursor moves. (Upper left/Lower right)	
	Automatically move the key window when it overlaps with an input object	Select this item to display the key window without overlapping the key window on an input target object.	GT16 GT15 GT11 GT10 SoftGOT 1000

(a) Key Window/Cursor Setting

Key Window/Cursor Setting

When operating conditions are satisfied

Key Window: ☐ Display at any time ☒ Display when touched ☐ Hide

Cursor: ☐ Display at any time ☒ Display when touched

When screens are switched

☐ Display the key window ☐ Display the cursor

Cursor Position: User ID:

When operating conditions are not satisfied

☒ Clear the key window and the cursor

☒ Clear the input object

Item	Description		Model
When operating conditions are satisfied	Key Window	Set the action of the key window when operating conditions for the numerical input or ASCII input is satisfied. (Display at any time/Display when touched/Hide)	GT16 GT15 GT11 GT10 SerGOT 1000
	Cursor	Set the action of the cursor when operating conditions for the numerical input or ASCII input is satisfied. (Display at any time/Display when touched)	GT16 GT15 GT11 GT10 SerGOT 1000
	When screens are switched	This item is available when [Display when touched]/[Hide] is selected for [Key Window], or [Display when touched] is selected for [Cursor]. Set the action of the key window and cursor when switching screens.	
	Display the key window	Select this item to display the key window when switching screens.	GT16 GT15 GT11 GT10 SerGOT 1000
	Display the cursor	Select this item to display the cursor when switching screens. After selecting this item, set [Cursor Position]. Cursor Position: Select the display position of the cursor when switching screens. (Upper left/User ID minimum/User ID specification) To select [User ID specification], set the user ID for [User ID].	
When operating conditions are not satisfied	Clear the key window and the cursor	Select this item to clear the key window and cursor when conditions of the input object are not satisfied.	GT16 GT15 GT11 GT10 SerGOT 1000
	Clear the input object	This item is available only when selecting [Clear the key window and the cursor]. Select this item to clear the input object as well as the cursor and key window when conditions of the input object are not satisfied.	GT16 GT15 GT11 GT10 SerGOT 1000

(b) Cursor Advanced Setting

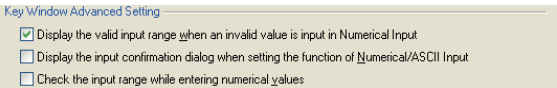
Cursor Advanced Setting

Cursor Type: ☒ 1-character blink ☐ Highlight all + 1-character blink

☐ Display the cursor with a touch on the Enter/arrow key when the cursor is hidden

Item	Description	Model
Cursor Type	Set the action of the cursor to be displayed on the input area. • 1-character blink: Blinks the area for one character in the input area. • Highlight all + 1-character blink: Highlights characters displayed in the input area, and blinks the area for one character.	GT16 GT15 GT11 GT10 SerGOT 1000
Display the cursor with a touch on the Enter/arrow key when the cursor is hidden	Select this item to display the cursor with a touch on the enter or arrow key while the cursor is hidden.	GT16 GT15 GT11 GT10 SerGOT 1000

(c) Key Window Advanced Setting



Item	Description	Model
Display the valid input range when an invalid value is input in Numerical Input	Select this item to display the dialog box for the valid input range when an invalid value is input for the numerical input area.	
Display the input confirmation dialog when setting the function of Numerical/ASCII Input	Select this item to display the confirmation dialog box when inputting the numerical input or ASCII input.	
Check the input range while entering numerical values	Select this item to check the range while the numeric value is input. Deselecting this item checks the range when the numerical input is completed.	

1	OVERVIEW
2	GT Designer3 SPECIFICATIONS
3	GT Designer3 OPERATION
4	COMMON SETTING
5	EDITING AND SETTING FIGURES AND OBJECTS
6	LIBRARY
7	COMMUNICATION WITH GOT
8	USEFUL FUNCTIONS FOR DRAWING

■ Setting for each screen

1. Select a screen editor to set a key window, and select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog box.
2. Select the [Key Window Basic Setting] tab or the [Key Window Advanced Setting] tab, and set the required items.

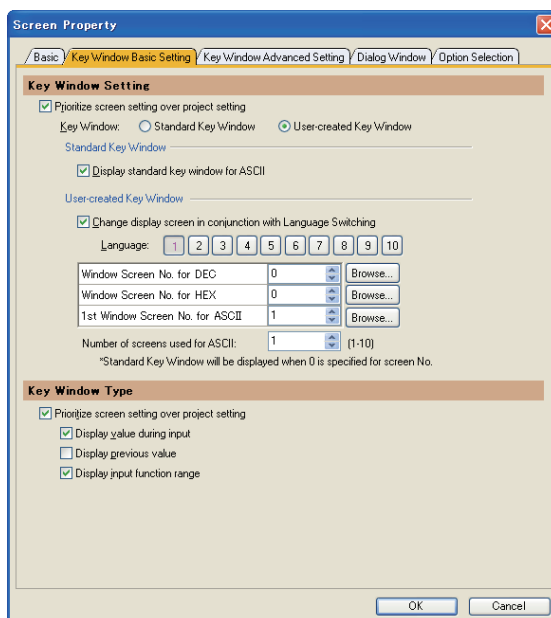


Settings relevant to functions

For the key window settings, some settings are relevant to multiple GOT functions.
For each setting relevant to the GOT functions, refer to the following.







➡ Appendix6 Relevant Settings

(1) Key Window Basic Setting tab



Item	Description		Model
Key Window Setting	Prioritize screen setting over project setting	Select this item to give the setting for each screen priority over the setting for each project.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
	Key Window	This item is available when [Prioritize screen setting over project setting] is selected for [Key Window Setting]. (Standard Key Window/User-created Key Window)	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
	Display standard key window for ASCII	Select this item to display the default key window at ASCII input.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
	Change display screen in conjunction with Language Switching ^{*1}	This item is available when [User-created Key Window] is selected for [Key Window]. Select this item to change the key window display in synchronization with the value of language switching device. After selecting this item, select the value (1 to 10) of the language switching device for [Language]. Set window screens to be displayed in synchronization with each value. When the setting is changed, the color of each value for [Language] is changed.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

(Continued to next page)

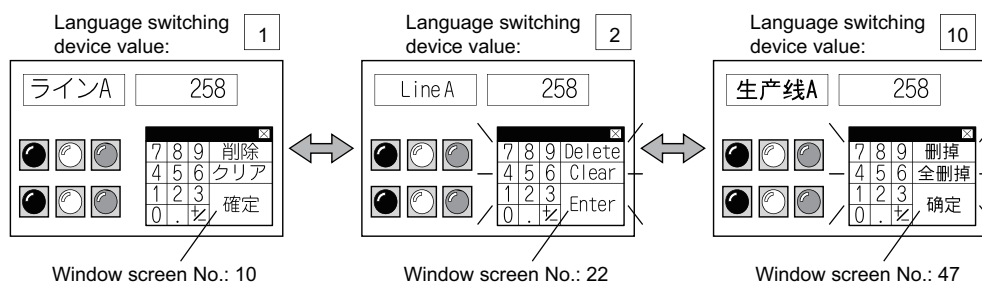
Item	Description		Model
Key Window Setting	Window Screen No. for DEC	To input a decimal number, set a window screen number displayed as a key window. By clicking the [Browse] button, the window screen can be selected in the [Screen Image List] dialog box.	
	Window Screen No. for HEX	To input a hexadecimal number, set a window screen number displayed as a key window. By clicking the [Browse] button, the window screen can be selected in the [Screen Image List] dialog box.	
	1st Window Screen No. for ASCII	To input a ASCII character, set a window screen number displayed as a key window. Starting with the screen number set for this item, as many screens as set in [Number of screens used for ASCII] are available for key windows for ASCII characters. To display the default key window, set "0" for the screen number.*2 By clicking the [Browse] button, the window screen can be selected in the [Screen Image List] dialog box.	
	Number of screens used for ASCII	Set the number of window screens used for key windows for ASCII characters. (1 to 10) When multiple key windows for ASCII characters are set, the key windows can be switched by the key code switch (key window switching). For details of key code switches, refer to the following.  (Functions) 2.9 Setting Key Code Switch	
Key Window Type	Prioritize screen setting over project setting	Select this item to give the setting for each screen priority over the setting for each project.	
	Display value during input	Select this item to display the value being input on the key window. To display the input value on a user-created key window, the input value area setting must be arranged on the window screen.  4.5.4 ■ Display of the input value area setting, input range area setting, and previous value area setting	
	Display previous value	Select this item to display the value before input. To display the value before input on a user-created key window, the previous value area setting must be arranged on the window screen.  4.5.4 ■ Display of the input value area setting, input range area setting, and previous value area setting	
	Display input function range	Select this item to display the input range on a key window. To display the input range on a user-created key window, the input range area setting must be arranged on the window screen.  4.5.4 ■ Display of the input value area setting, input range area setting, and previous value area setting	

*1 In synchronization with the language switching device value, the screen window set for [Language] is displayed as a key window. The following shows the GT Designer3 settings relevant to the language switching actions on the GOT.
Example) Switching key windows for a decimal number in synchronization with the value of language switching device

- GT Designer3 setting

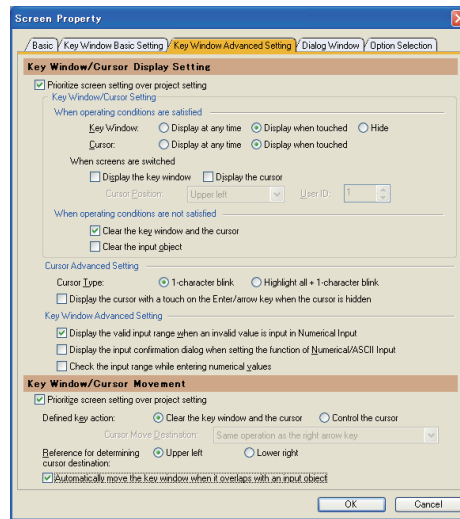
Select language	DEC key sheet No.	Description
1	10	Window screen 10 is displayed for the key window when the language switching device value is "1".
2	22	Window screen 22 is displayed for the key window when the language switching device value is "2".
3	0	The standard key window is displayed when the language switching device value is "3".
10	47	Window screen 47 is displayed for the key window when the language switching device value is "10".




• Language switching on the GOT



*2 When setting "0" for the screen number, select [Display standard key window for ASCII]. Otherwise, the key window is not displayed.

(2) Key Window Advanced Setting tab



Item	Description		Model
Key Window/Cursor Display Setting	Prioritize screen setting over project setting	Select this item to give the setting for each screen priority over the setting for each project.	
	Key Window/Cursor Setting	Set the action of the key window and cursor when operating conditions are satisfied or not satisfied.  (a) Key Window/Cursor Setting	GT16 GT15 GT11 GT10 SoRGOT 1000
	Cursor Advanced Setting	Set the action of the cursor.  (b) Cursor Advanced Setting	
	Key Window Advanced Setting	Set the action of the key window.  (c) Key Window Advanced Setting	GT16 GT15 GT11 GT10 SoRGOT 1000
Key Window/Cursor Movement	Prioritize screen setting over project setting	Select this item to give the setting for each screen priority over the setting for each project.	
	Defined key action	Set the action of the key window and cursor when touching the enter key. (Clear the key window and the cursor/Control the cursor) Select [Cursor Move Destination] for [Control the cursor]. Cursor Move Destination: Select the position where the cursor moves. (Same operation as the right arrow key/Same operation as the down arrow key/Not move/Move in order of User IDs (not move if it cannot shift))	GT16 GT15 GT11 GT10 SoRGOT 1000
	Reference for determining cursor destination	Select the reference to determine the position where the cursor moves. (Upper left/Lower right)	
	Automatically move the key window when it overlaps with an input object	Select this item to display the key window without overlapping the key window on an input target object.	GT16 GT15 GT11 GT10 SoRGOT 1000

(a) Key Window/Cursor Setting

Key Window/Cursor Setting

When operating conditions are satisfied

Key Window: ☐ Display at any time ☒ Display when touched ☐ Hide

Cursor: ☐ Display at any time ☒ Display when touched

When screens are switched

☐ Display the key window ☐ Display the cursor

Cursor Position: User ID:

When operating conditions are not satisfied

☒ Clear the key window and the cursor

☒ Clear the input object

Item	Description		Model
When operating conditions are satisfied	Key Window	Set the action of the key window when operating conditions for the numerical input or ASCII input is satisfied. (Display at any time/Display when touched/Hide)	GT16 GT15 GT11 GT10 SeriGOT 1000
	Cursor	Set the action of the cursor when operating conditions for the numerical input or ASCII input are satisfied. (Display at any time/Display when touched)	GT16 GT15 GT11 GT10 SeriGOT 1000
	When screens are switched	Set the action of the key window and cursor when switching screens.	GT16 GT15 GT11 GT10 SeriGOT 1000
	Display the key window	Select this item to display the key window when switching screens.	
	Display the cursor	Select this item to display the cursor when switching screens. After selecting this item, set [Cursor Position]. Cursor Position: Select the display position of the cursor when switching screens. (Upper left/User ID minimum/User ID specification) To select [User ID specification], set the user ID for [User ID].	
When operating conditions are not satisfied	Clear the key window and the cursor	Select this item to clear the key window and cursor when conditions of the input object are not satisfied.	GT16 GT15 GT11 GT10 SeriGOT 1000
	Clear the input object	This item is available only when selecting [Clear the key window and the cursor]. Select this item to clear the input object as well as the cursor and key window when conditions of the input object are not satisfied.	

(b) Cursor Advanced Setting

Cursor Advanced Setting

Cursor Type: ☒ 1-character blink ☐ Highlight all + 1-character blink

☐ Display the cursor with a touch on the Enter/arrow key when the cursor is hidden

Item	Description	Model
Cursor Type	Set the action of the cursor to be displayed on the input area. <ul style="list-style-type: none"> 1-character blink: Blinks the area for one character in the input area. Highlight all + 1-character blink: Highlights characters displayed in the input area, and blinks the area for one character. 	GT16 GT15 GT11 GT10 SeriGOT 1000
Display the cursor with a touch on the Enter/arrow key when the cursor is hidden	Select this item to display the cursor with a touch on the enter or arrow key while the cursor is hidden.	GT16 GT15 GT11 GT10 SeriGOT 1000

(c) Key Window Advanced Setting

Key Window Advanced Setting

☒ Display the valid input range when an invalid value is input in Numerical Input
 ☐ Display the input confirmation dialog when setting the function of Numerical/ASCII Input
 ☐ Check the input range while entering numerical values

Item	Description	Model
Display the valid input range when an invalid value is input in Numerical Input	Select this item to display the dialog box for the valid input range when an invalid value is input for the numerical input area.	<div> <div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div> </div>
Display the input confirmation dialog when setting the function of Numerical/ASCII Input	Select this item to display the confirmation dialog box when inputting the numerical input or ASCII input.	
Check the input range while entering numerical values	Select this item to check the range while the numeric value is input. Deselecting this item checks the range when the numerical input is completed.	

4.5.6 Relevant settings

The key window is available for the relevant settings other than the specific settings.
The following shows the functions that are available by relevant settings.

■ GOT environment settings (System information)

☞ 4.6 System Information Setting

Function	Set description	Model
Disabling all key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]	<div> <div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div> </div>
Notifying the key input (Write device: System signal 2-1.b3)	[System Signal 2-1]	
Notifying that the input is completed (Write device: System signal 2-1.b4)	[System Signal 2-1]	
Notifying that the key window is on the screen (Write device: System signal 2-1.b11)	[System Signal 2-1]	
Notifying the user ID of the completed numerical input (Write device)	[Numeric Value Input Number]	
Notifying the key code set on the touched key (Write device)	[Key Code Input]	<div> <div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div> </div>
Notifying the value before the change (32 bits) (Write device)	[Previous Numeric Value Input(32bit)]	<div> <div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div> </div>
Notifying the completed input value (32 bits) (Write device)	[Current Numeric Value Input(32bit)]	

■ GOT internal devices

☞ Appendix2 Supported Devices

Function	Setting item	Model
Displaying the confirmation dialog box when the numerical input or ASCII input are completed	GS450.b0	<div> <div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div> </div>
Displaying the confirmation dialog box that notifies the input value for the numerical input is out of range	GS450.b1	

4.5.7 Precautions

■ Precautions for using default key window and user-created key window.

A key window cannot be displayed when details of alarm are displayed on a comment window by using the alarm history display, user alarm display, or system alarm display.

■ Precautions for creating user-created key window

(1) Precautions for using GT10

Set a touch switch for the [ESC] key. (Key code 001BH (Cancel))

(2) Object that can be set on user-created key window

On a user-created key window, set only the switches assigned with key codes for numerical input/ASCII input or key code switches.

Other objects are not displayed on the key window.

(3) Action of the touch switch set on a user-created key window

- (a) In the action setting for the switches, even if other actions as a bit or word are set together, only the action of key code is available.
- (b) Even if ON/OFF shape is set, a touch switch is displayed in OFF shape.
- (c) For setting touch switches on a user-created key window, arrange the switches on the back layer. When placing the switches on the front layer, the GOT does not display the touch switches. Additionally, the switches do not operate even when touching the positions that the switches are placed.
- (d) Only [Text] is available for [Text Type].
[Indirect Text(Basic Comment)] and [Comment Group] are not displayed even if they are set.
- (e) Only [KANJI Region] is available for the setting of the [Extended] tab.
Other setting items than [KANJI Region] are not available.
- (f) The setting of the [Trigger] tab is not available even if the setting is configured.



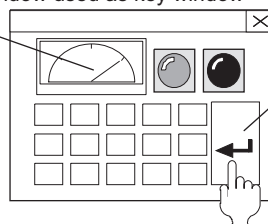
How to create a key window that includes functions the above (2) and (3)

When creating a key window with a key that includes the above functions, use a normal window screen as a key window without making the settings for displaying the key window.

Example) Normal overlap window used as key window

Example: Normal overlap window used as key window

- Set the objects except Numerical input and ASCII input.



- Turn ON the other device (bit SET) simultaneously with RETURN (0000H).

(4) Size of user-created key window

The key window size is same with the size of set window screen.

It can be changed by changing the size of window screen.

For changing the size of the window screen, refer to the following.

☞ 3.7 Creating/Opening/Closing Screen

The applicable size of window screen is different according to the status of close key and move key, i.e., whether they are displayed or not.

☞ 2.3.1 Screen specifications for each GOT type

(5) Number of settings for the input value area setting, input range area setting, or previous value area setting

Multiple settings of [Input Value Area Setting], [Input Range Area Setting], or [Previous Value Area Setting] are not available for one window screen.

4.6 System Information Setting



A device to store system information is set. By setting the device, the GOT can control GOT operations (including the screen closing, disabling key input) by a controller, or notify the GOT status to controllers.

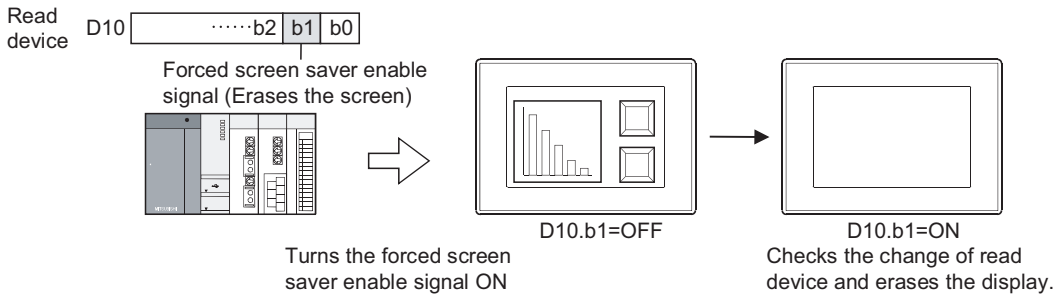
The two types of devices that store system information are shown below.

- Read device: controls GOT operation via controller
- Write device: notifies controller of GOT operation status

Controlling GOT operations by controllers (Read device)

A controller writes a value to the read device for controlling the GOT operations. Doing so enables the GOT to control the GOT operations.

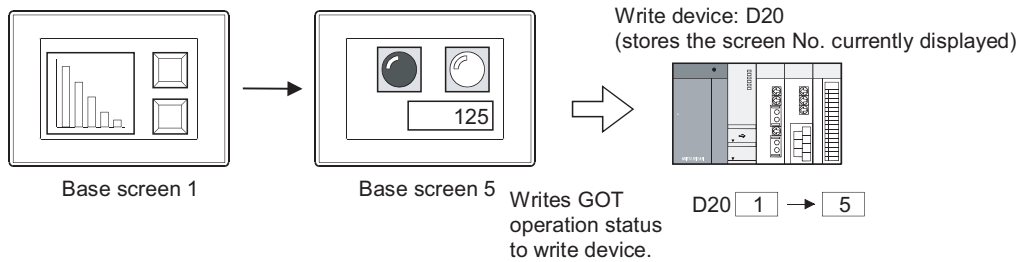
Example) Turning the GOT to screen save mode forcibly by controller.



Notifying the GOT status to controllers (Write device)

The GOT writes a value to the write device for notifying the GOT status. Doing so enables the GOT to notify the GOT status to a controller.

Example) Notifying the base screen No. currently displayed on the GOT to a controller



POINT

Monitoring system information device or update timing

The following explains monitoring the read device set in the system information and deciding the timing to update the write device.

Device	Monitoring/update timing
Read device	Monitored at intervals of GOT monitor period. The read device value needs to be longer compared to the interval of GOT monitor period. The monitor period value is stored in the GOT internal device (GS8). Appendix.2.1 GOT internal devices
Write device	Updated when the GOT operation status has changed.

4.6.1 Settings

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog box.

For the function of the read device and write device for the system information, refer to the following.

☞ 4.6.2 Details of system information



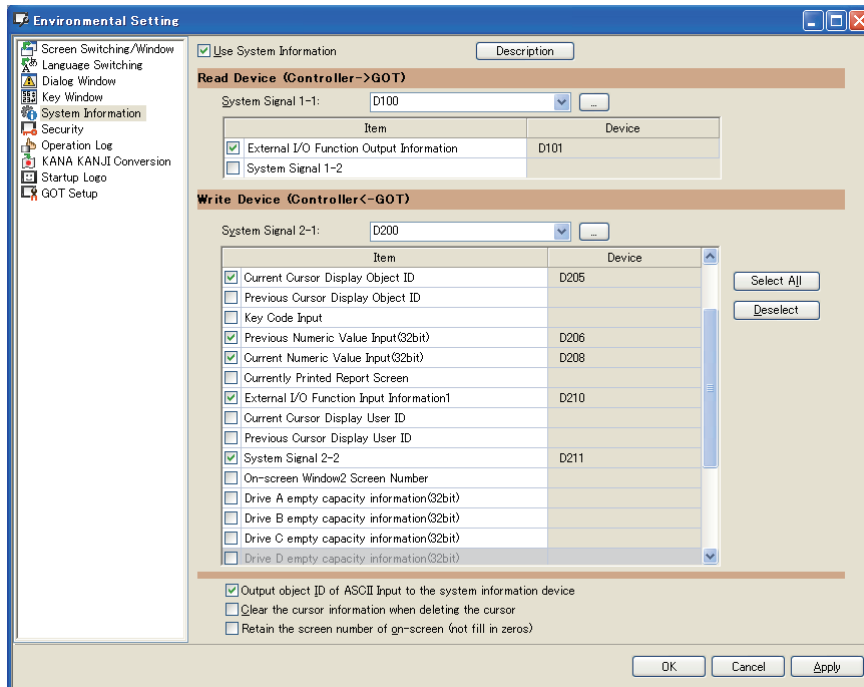
Settings relevant to functions

For the common settings in a project data, some settings are relevant to multiple GOT functions.

For each setting relevant to the GOT functions, refer to the following.


☞ Appendix6 Relevant Settings

■ System Information



Item	Description		Model
Use System Information	Select this item to set a device to store system information.		<div><div>GT16</div><div>GT15</div><div>GT11</div><div>GT10</div><div>SERIES GOT 1000</div></div>
Read Device	Set a read device to control the GOT.		
	System Signal 1-1	Set a start device of the read device.	
	Item	For the selected items, this item sets the subsequent devices of the device set for [System Signal 1-1] in sequential device order.	
	Device		
Write Device	Set a write device to notify the GOT status.		
	System Signal 2-1	Set a start device of the write device.	
	Item	For the selected items, this item sets the subsequent devices of the device set for [System Signal 2-1] in sequential device order.	
	Device		
	<div>Select All</div>	Click this item to select all the items for the write device.	
	<div>Unselect</div>	Click this item to clear all the items for the write device.	

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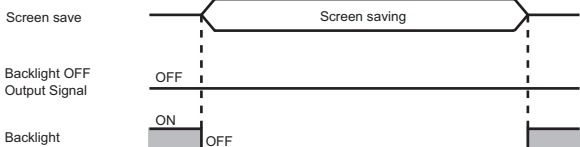
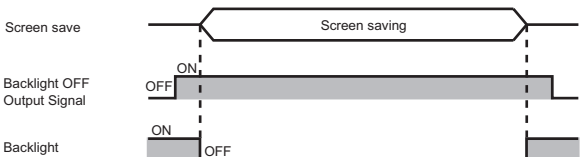
Item	Description	Model
Output object ID of ASCII Input to the system information device	Select this item so that the ASCII input is the output target for the following devices. · Numeric Value Input Read Complete Signal (System Signal 1-1.b4) · Numeric Value Input Signal (System Signal 2-1.b4) · Numeric Value Input Number · Current Cursor Display User ID · Previous Cursor Display User ID	
Clear the cursor information when deleting the cursor	Select this item to store "0" in the following devices when deleting the cursor. · Current Cursor Display Object ID · Previous Cursor Display Object ID · Previous Cursor Display User ID	
Retain the screen number of on-screen (not fill in zeros)	Select this item to hold the following device values while the screens are switched. ("0" is not stored.) · On-screen Base Screen Number · On-screen Window1 Screen Number · On-screen Window2 Screen Number · On-screen Window3 Screen Number · On-screen Window4 Screen Number · On-screen Window5 Screen Number	

4.6.2 Details of system information

This section explains the read device and write device of system information.

■ Read device

(1) System Signal 1-1

Bit No.	Signal name	Description	Model
b0	Automatic Screen Saver Disable Signal	Turning on this signal disables the screen saver function (turning off the monitor screen display).	GT16 GT15 GT11 GT10 SoftGOT 1000
b1	Forced Screen Saver Enable Signal	Turning on this signal forcibly turns the GOT into the screen saver mode.	
b2	Forced Screen Saver Touch-cancel Signal	Turning on this signal disables the screen saver when the screen is touched even during forced screen saving. The operation condition of the Forced screen saver enable signal (System signal 1-1.b1) differs according to on or off of this signal. • ON: Operates at the rising. • OFF: Operates during on.	
b3	Key Code Read Complete Signal	Turning on this signal turns off the Key input signal (System signal 2-1.b3).	
b4	Numeric Value Input Read Complete Signal	Turning on this signal turns off the Numeric value input signal (System signal 2-1.4). This signal is available for the ASCII input when configuring any of the following settings. • Selecting [Output object ID of ASCII Input to the system information device] for the [Environmental Setting] dialog box in [System Information] • Turning on the GOT internal device (GS450.b2) For the GT10, the signal is always used for the numerical input and ASCII input.	GT16 GT15 GT11 GT10 SoftGOT 1000
b5	Barcode Input Disable Signal (CH8)	Turning on this signal disables the barcode function for the channel No. 8.	
b6	External device I/O complete signal (CH8)	Turning on this signal turns off the External device I/O signal (CH8) (System signal 2-1.b6).	
b7	Backlight OFF Output Signal	Turning on this signal turns on the backlight during screen saving. The backlight behaves differently depending on the setting of [Screen Save Backlight] for the [Environmental Setting] dialog box in [GOT Setup]. • When [Screen Save Backlight] is [OFF] The setting of the utility is preceded. The backlight is not turned on even if this signal is turned off.  • When [Screen Save Backlight] is [ON] The setting of this signal is preceded. The backlight is turned off when this signal is turned on. 	GT16 GT15 GT11 GT10 SoftGOT 1000


(Continued to next page)

Bit No.	Signal name	Description	Model
b8	Buzzer Threeshot Output Signal	Turning on this signal outputs the buzzer three times. The buzzer length can be set by the followings. <ul style="list-style-type: none"> [Display/Operation] tab for the [Environmental Setting] dialog box (GOT Setup) <ul style="list-style-type: none"> 4.9 GOT Display and Operation Setting Settings relevant to the utility operation User's Manual for the GOT used When [None] is set, the buzzer sound length is the same as [Long]. 	GT16 GT15 GT11 GT10 SoftGOT 1000
b9	Key-In Disable Signal	Turning on this signal disables all key-input.	
b10	Hard copy setting validate signal	Turning on this signal enables the hard copy output.	GT16 GT15 GT11 GT10 SoftGOT 1000
b11	-	Use prohibited	GT16 GT15 GT11 GT10 SoftGOT 1000
b12	Hard copy white/black reverse signal	Turning on this signal highlights the white and black display of the monitor screen when the hard copy is output.	GT16 GT15 GT11 GT10 SoftGOT 1000
b13	GOT Error Reset Signal	Turning on this signal processes the followings. <ul style="list-style-type: none"> Storing "0" to the GOT error code storage area (Write Device) Turning off the GOT error detection signal (System signal 2-1, b13) Clearing system alarm messages 	GT16 GT15 GT11 GT10 SoftGOT 1000
b14	Buzzer Output Signal	While turning on this signal, the buzzer sound is output. Even if [Buzzer] is set to [None] for the [Display/Operation] tab in the [Environmental Setting] dialog box, the buzzer sound is output.	
b15	Buzzer Oneshot Output Signal	Turning on this signal outputs the buzzer once. The buzzer length can be set by the followings. <ul style="list-style-type: none"> [Display/Operation] tab for the [Environmental Setting] dialog box (GOT Setup) <ul style="list-style-type: none"> 4.9 GOT Display and Operation Setting Settings relevant to the utility operation User's Manual for the GOT used When [None] is set, the buzzer sound length is the same as [Long]. 	GT16 GT15 GT11 GT10 SoftGOT 1000




(2) External input and output function and output function

Functions for each signal differ depending on the GOT used.

(a) GT16 and GT15

Bit No.	Signal name	Description	Model
b0 to b15	Output signal Y0 to YF	With writing data to be output into the bits, external outputs (lamps and relays) can be executed.	

(b) GT11 and GT10

Bit No.	Signal name	Description	Model
b0 to 5	Operation switch LED control signal	Turning on this signal turns on operation switch LEDs (L1 to L6) for the GT11 Handy GOT.	
b6	Grip switch LED control signal	Turning on this signal turns on the grip switch LED. This signal only enables when the following settings are configured in the [Handy GOT] tab for the [Environmental Setting] dialog box. • Selecting [Depend on ON/OFF state of System Signal] for the on or off operation of the grip switch LED Do not use this signal when the above settings are not configured.	
b7 to b11	-	Use prohibited	
b12	Backlight control enable bit	Turning on this signal enables the backlight control (blinking, color specification).	
b13	Backlight blinking	Turning on this signal blinks the backlight.	
b14 to b15	Backlight color specification	Controls the backlight color. The backlight color differs according to the GOT used. • GT1030 and GT1020 with 3 colors LED backlight (green, red, and orange) b14:OFF and b15:OFF: Not lit b14:OFF and b15:ON: Red b14:ON and b15:OFF: Green b14:ON and b15:ON: Orange • GT1030 and GT1020 with 3 colors LED backlight (white, red, and pink) b14:OFF and b15:OFF: Not lit b14:OFF and b15:ON: Red b14:ON and b15:OFF: White b14:ON and b15:ON: Pink • Other GT10 This signal is invalid.	

(3) System Signal 1-2

Bit No.	Signal name	Description	Model
b0	File Access Error Reset Signal	Turning on this signal resets all the File access error signals (System signal 2-2.b7, b8, b9) in the drive A, B, D, or E. During turning on this signal, the next File access error signal does not turn on.	GT16 GT15 GT11 GT10 SoRGOT 1000
b1	RFID request signal (CH8)	By turning on this signal, the GOT requests to read the data with the channel No. 8.	GT16 GT15 GT11 GT10 SoRGOT 1000
b2	Barcode input disable signal (CH5)	Turning on this signal disables the barcode function for the channel No. 5.	GT16 GT15 GT11 GT10 SoRGOT 1000
b3	External device I/O complete signal (CH5)	Turning on this signal turns off the External device I/O signal (CH5) (System signal 2-3.b0).	
b4	RFID request signal (CH5)	By turning on this signal, the GOT requests to read the data with the channel No. 5.	
b5	Barcode input disable signal (CH6)	Turning on this signal disables the barcode function for the channel No. 6.	
b6	External device I/O complete signal (CH6)	Turning on this signal turns off the External device I/O signal (CH6)(System signal 2-3.b1).	
b7	RFID request signal (CH6)	By turning on this signal, the GOT requests to read the data with the channel No. 6.	
b8	Barcode input disable signal (CH7)	Turning on this signal disables the barcode function for the channel No. 7.	
b9	External device I/O complete signal (CH7)	Turning on this signal turns off the External device I/O signal (CH7)(System signal 2-3.b2).	
b10	RFID request signal (CH7)	By turning on this signal, the GOT requests to read the data with the channel No. 7.	
b11	Enabling RFID control during external authentication signal	Turning on this signal enables the device input/output of the RFID reading results, control signal, and notification signal during the operator authentication by an external authentication device (RFID).	
b12	-	Use prohibited	GT16 GT15 GT11 GT10 SoRGOT 1000
b13	D drive automatic recovery confirmation complete signal	Turning on this signal turns off the D drive automatic recovery signal (System signal 2-2.b13). This signal is not available for the GT1020.	GT16 GT15 GT11 GT10 SoRGOT 1000
b14	-	Use prohibited	GT16 GT15 GT11 GT10 SoRGOT 1000
b15	Print abort signal	<p>Turning on this signal aborts printing (printing for the hard copy function or report function) when this signal rises. In response to the abort of printing, the GOT turns off the Printing signal (System Signal 2-2.b15). The user must turn off this signal after confirming that the Printing signal (System Signal 2-2. b15) is turned off.</p> <p>Print abort signal (System Signal 1-2.b15)</p> <p>Printing signal (System Signal 2-2.b15)</p> <p>Executed by GOT</p> <p>Executed by the user</p>	GT16 GT15 GT11 GT10 SoRGOT 1000

■ Write device

(1) System Signal 2-1

Bit No.	Signal name	Description	Model
b0	Screen saving signal	Turns on while the GOT is in screen save mode.	
b1	GOT Ready Signal	Shows the GOT status when the GOT is powered on. • ON: Normal • OFF: Abnormal If this signal does not turn on by resetting the GOT, the hardware error may occur in the GOT. Consult your local Mitsubishi service center or representative.	
b2	-	Use prohibited	
b3	Key Input Signal	Shows whether the key is input or not. • ON: The key is input. • OFF: The key is not input.	GT16 GT15 GT11 GT10 SerGOT 1000
b4	Numeric Value Input Signal	Turns on when a value is input in the numerical input, and the value is completed. By setting any of the followings, this signal is available for the ASCII input. (For the GT10, the signal is always used for the numerical input and ASCII input.) • Selecting [Output object ID of ASCII Input to the system information device] for the [Environmental Setting] dialog box (System Information) • Turning on the GOT internal device (GS450.b2) The signal does not switch when a numerical value is input with the numerical input that the user ID is set to out of range (1 to 65535). (For the GT10, the signal switches when a numerical value is input with the numerical input that the user ID is set to out of range.)	
b5	Human Sensor Detection Signal	Turns on when the human sensor is detected human motion. This signal turns ON for approx. 60 seconds after GOT startup due to the sensor's characteristic. Applicable to only GT1595-X, GT1585V-S, and GT1585-S.	GT16 GT15 GT11 GT10 SerGOT 1000
b6	External device I/O signal (CH8)	Available when the channel No. 8 is used for the barcode function.* ³ Turns on when the data read by the barcode reader is stored in the specified device.	GT16 GT15 GT11 GT10 SerGOT 1000
		Available when the channel No. 8 is used for the RFID function.* ^{2*3} Turns on when the data read by the RFID reader/writer is stored in the specified device. (With the dedicated protocol) Turns on when the data transfer to the RFID controller is completed. (With the nonprocedural protocol) Turns off when the External device I/O complete signal (CH8) (System signal 1-1.b6) turns on.	GT16 GT15 GT11 GT10 SerGOT 1000
b7	Hard copy output signal	Turns on during printing by the hard copy function.	GT16 GT15 GT11 GT10 SerGOT 1000
b8	Report output signal	Turns on during printing by the report function.	GT16 GT15 GT11 GT10 SerGOT 1000
b9	-	Use prohibited	
b10	Recipe Processing Signal	Turns on during recipe process (Write/Read operation).	GT16 GT15 GT11 GT10 SerGOT 1000
b11	Key window Output Signal	Turns on during displaying the key window.	
b12	Hardcopy Sub-signal	Turns on when the number of files (file number) for screen data stored in a CF card by the hard copy function is 9900 to 9999.	GT16 GT15 GT11 GT10 SerGOT 1000

(Continued to next page)

Bit No.	Signal name	Description	Model
b13	GOT Error Detection Signal	Turns on when an error occurs in the GOT (error data are stored in the GOT error code).	
b14	Numeric Value Error Detection Signal	Turns on when the value exceeding the input range is stored in the write target device of the numerical input. (This signal is checked when screens are switched.) When no input range formula is preset to the numerical input, detection is not performed.	GT16 GT15 GT11 GT10 SoftGOT 1000
b15	Printer error detection signal	Turns on when a printer error occurs during printing because of the powered off printer, cable disconnection, no paper, paper jam, and others.	GT16 GT15 GT11 GT10 SoftGOT 1000

(2) GOT Error Code

The data of the error occurred in the GOT are stored.
Not available for the GT10.

(3) On-screen Base Screen Number

The base screen being displayed is stored.
The stored screen number is as follows.

Display status	Data format of the screen switching device	
	BIN	BCD
When displaying other than usercreated screens (utility, RGB and others)	-1	Stores the number of the user-created base screen previously displayed
During screen switching	0	
Base screen being displayed	1 to 32767	1 to 9999

(4) On-screen Window 1 Screen Number

The number of the window screen currently displayed is stored as the overlap window 1.
The stored screen number is as follows.

Display status	Data format of the screen switching device	
	BIN	BCD
Not displayed or during screen switching	0	
The number of overlap window 1 being displayed	1 to 32767	1 to 9999

Confirm the display status of the superimpose window 1 by the screen switching device.

(5) Numeric Value Input Number

The user ID number of the numerical input is stored when the input value is determined.
By setting any of the followings, this signal is available for the ASCII input.

- Selecting [Output object ID of ASCII Input to the system information device] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b2)

For the GT10, the signal is always used for the numerical input and ASCII input.

(6) Current Cursor Display Object ID

The object ID No. of the object on which the cursor is currently displayed is stored.
By setting any of the followings, "0" is stored when the cursor is deleted.

- Selecting [Clear the cursor information when deleting the cursor] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b3)

(7) Previous Cursor Display Object ID

The object ID No. of the object on which the cursor is previously displayed is stored.
By setting any of the followings, "0" is stored when the cursor is deleted.

- Selecting [Clear the cursor information when deleting the cursor] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b3)

(8) Key Code Input

When inputting values with the input key (Touch switch, numerical input, or ASCII input), the specified key code is stored.

When a key code is stored, the Key Input Signal (System Signal 2-1.b3) is turned on.

Not available for the GT10.

(9) Previous Numeric Value Input (32bit)

When a value is input in the numerical input, the value before the change (32 bits) is stored.

Effective only for the numerical input object to which the user ID is set.

(10) Current Numeric Value Input (32bit)

The input value (32 bits) determined in the numerical input.

Effective only for the numerical input to which the user ID is set.

(11) Printing report number

The screen number of the report screen currently printed is stored.

Not available for the GT11 and GT10.

(12) External I/O function/input information 1

Bit No.	Signal name	Description	Model
b0 to b7	Input signal X0 to X7	Input data are written in the bits. An external input can take up to three seconds to write data in a bit. For avoiding the delay time, use GOT internal devices (GB10 to GB25, GB30 to GB37, GB50 to GB57).	GT16 GT15 GT11 GT10 SsRGOT 1000
b8	Power status notification signal	Turns on when the power is not supplied to an external I/O device.	
b9 to b15	-	Use prohibited	GT16 GT15 GT11 GT10 SsRGOT 1000

(13) Current Cursor Display User ID

The user ID No. of the object on which the cursor is currently displayed is stored.

By setting any of the followings, this signal is available for the ASCII input.

- Selecting [Output object ID of ASCII Input to the system information device] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b2)

For the GT10, the signal is always used for the numerical input and ASCII input.

By setting any of the followings, "0" is stored when the cursor is deleted.

- Selecting [Clear the cursor information when deleting the cursor] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b3)

(14) Previous Cursor Display User ID

The user ID No. of the object on which the cursor is previously displayed is stored.


- Selecting [Output object ID of ASCII Input to the system information device] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b2)

For the GT10, the signal is always used for the numerical input and ASCII input.

By setting any of the followings, "0" is stored when the cursor is deleted.

- Selecting [Clear the cursor information when deleting the cursor] for the [Environmental Setting] dialog box (System Information)
- Turning on the GOT internal device (GS450.b3)

(15) System Signal 2-22

Bit No.	Signal name	Description	Model
b0	Drive A File Accessing Signal	Turns on during file accessing in the drive A.	GT16 GT15 GT11 GT10 SoftGOT 1000
b1	Drive B File Accessing Signal	Turns on during file accessing in the drive B.	GT16 GT15 GT11 GT10 SoftGOT 1000
b2	Drive C File Accessing Signal	Turns on during file accessing in the drive C.	GT16 GT15 GT11 GT10 SoftGOT 1000
b3	Drive D File Accessing Signal	Turns on during file accessing in the drive D. Not available for the GT1020.	GT16 GT15 GT11 GT10 SoftGOT 1000
b4	Drive A Full Signal	Turns on when the empty capacity of the drive A is less than 1k byte.	GT16 GT15 GT11 GT10 SoftGOT 1000
b5	Drive B Full Signal	Turns on when the empty capacity of the drive B is less than 1k byte.	GT16 GT15 GT11 GT10 SoftGOT 1000
b6	Drive D Full Signal	Turns on when the empty capacity of the drive D is less than 1k byte.	GT16 GT15 GT11 GT10 SoftGOT 1000
b7	Drive A File Access Error Signal	Turns on while an access error with a file in the drive A occurs.	GT16 GT15 GT11 GT10 SoftGOT 1000
b8	Drive B File Access Error Signal	Turns on while an access error with a file in the drive B occurs.	GT16 GT15 GT11 GT10 SoftGOT 1000
b9	Drive D File Access Error Signal	Turns on while an access error with a file in the drive D occurs.	GT16 GT15 GT11 GT10 SoftGOT 1000
b10	-	Use prohibited	
b11	Cursor Displaying Signal	Turns on during displaying the numerical input or ASCII input cursor.	
b12	Built-in Battery Voltage Drop Signal	Turns on when a voltage drop of the GOT built-in battery is detected. The battery backup data is guaranteed within the data backup time after this signal switches ON, however, replace the battery immediately. For the data backup time, refer to the following.  User's Manual for the GOT used	GT16 GT15 GT11 GT10 SoftGOT 1000
b13	D drive automatic recovery signal	Turns on when the drive D is recovered automatically. Not available for the GT1020.	GT16 GT15 GT11 GT10 SoftGOT 1000
b14	Backlight Shutoff Detection Signal	Turns on when a blown backlight bulb of the GOT is detected. Not available for the GT104□, GT1030, and GT1020.	GT16 GT15 GT11 GT10 SoftGOT 1000
b15	Printing signal	Turns on during printing (printing by the hard copy function or report function)	GT16 GT15 GT11 GT10 SoftGOT 1000

(16) On-screen Window 2 screen number

The number of the window screen currently displayed is stored as the overlap window 2.
The screen number to be stored is as follows.

Display status	Data format of the screen switching device	
	BIN	BCD
Not displayed or during screen switching	0	
The number of overlap window 2 being displayed	1 to 32767	1 to 9999

Confirm the display status of the superimpose window 2 by the screen switching device.

(17) Drive A empty capacity information (32bit)

The data for the empty capacity (32 bits) of the drive A is stored. (Unit, byte)
Not available for the GT10.

(18) Drive B empty capacity information (32bit)

The data for the empty capacity (32 bits) of the drive B is stored. (Unit, byte)
Not available for the GT11 and GT10.

(19) Drive C empty capacity information (32bit)

The data for the empty capacity (32 bits) of the drive C is stored. (Unit, byte)
Not available for the GT10.

(20) Drive D empty capacity information (32bit)

The data for the empty capacity (32 bits) of the drive D is stored. (Unit, byte)
Not available for the GT16, GT15, GT11, and GT SoftGOT1000.

(21) External I/O function/input information 2

Bit No.	Signal name	Description	Model
b0 to b7	Input signal X8 to XF	Input data are written in the bits. An external input can take up to three seconds to write data in a bit. For avoiding the delay time, use GOT internal devices (GB10 to GB25, GB30 to GB37, GB50 to GB57).	GT16 GT15 GT11 GT10 SoftGOT 1000
b8 to b15	-	Use prohibited	GT16 GT15 GT11 GT10 SoftGOT 1000

(22) On-screen Window 3 screen number

The number of the window screen currently displayed is stored as the overlap window 3.
The screen number to be stored is as follows.

Display status	Data format of the screen switching device	
	BIN	BCD
Not displayed or during screen switching	0	
The number of overlap window 3 being displayed	1 to 32767	1 to 9999

Not available for the GT15, GT11, GT10.

(23) On-screen Window 4 screen number

The number of the window screen currently displayed is stored as the overlap window 4.
The screen number to be stored is as follows.

Display status	Data format of the screen switching device	
	BIN	BCD
Not displayed or during screen switching	0	
The number of overlap window 4 being displayed	1 to 32767	1 to 9999

Not available for the GT15, GT11, GT10.


(24) On-screen Window 5 screen number

The number of the window screen currently displayed is stored as the overlap window 5.
The screen number to be stored is as follows.

Display status	Data format of the screen switching device	
	BIN	BCD
Not displayed or during screen switching	0	
The number of overlap window 5 being displayed	1 to 32767	1 to 9999

Not available for the GT15, GT11, GT10.

(25) Extended Drive Information (E and subsequent drives)

Bit No.	Signal name	Description	Model
b0	Drive E File Accessing Signal	Turns on during file accessing in the drive E.	
b1	Drive E Full Signal	Turns on when the empty capacity of the drive E is less than 1k byte.	
b2	Drive E File Access Error Signal	Turns on while an access error with a file in the drive E occurs.	
b3 to b15	-	Use prohibited	


Not available for the GT15, GT11, GT10.

(26) Drive E empty capacity information (32bit)

The data for the empty capacity (32 bits) of the drive E is stored. (Unit, byte)

Not available for the GT15, GT11, GT10.


(27) System Signal 2-3

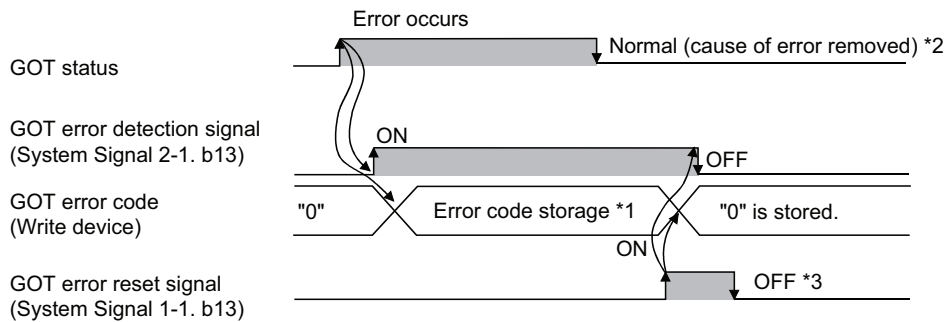
Bit No.	Signal name	Description	Model
b0	External device I/O signal (CH5)	Available when the channel No. 5 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	
		Available when the channel No. 5 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device. (With the dedicated protocol) Turns on when the data transfer to the RFID controller is completed. (With the nonprocedural protocol) Turns off when the External device I/O complete signal (CH5) (System signal 1-2.b3) turns on.	
b1	External device I/O signal (CH6)	Available when the channel No. 6 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	
		Available when the channel No. 6 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device. (With the dedicated protocol) Turns on when the data transfer to the RFID controller is completed. (With the nonprocedural protocol) Turns off when the External device I/O complete signal (CH6) (System signal 1-2.b6) turns on.	
b2	External device I/O signal (CH7)	Available when the channel No. 7 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	
		Available when the channel No. 7 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device. (With the dedicated protocol) Turns on when the data transfer to the RFID controller is completed. (With the nonprocedural protocol) Turns off when the External device I/O complete signal (CH7) (System signal 1-2.b9) turns on.	
b3 to b15	-	Use prohibited	

4.6.3 Application example

■ Confirm the error occurred in GOT

The code of the error occurred in GOT can be confirmed.
The error codes within the range of error code 300 to 699 are displayed.
For the details of error code, refer to the following manuals.

 User's Manual for the GOT used



*1 When multiple errors occur simultaneously, the latest error code will be stored.

*2 The GOT error code (Write device) is not cleared automatically even if removing the error source.
Clear the error code by using the GOT error reset signal (System signal 1-1.b13).

*3 Check that the GOT error detection signal (System signal 2-1.b13) turns off, and then turn off the GOT error reset signal (System signal 1-1.b13).
If the GOT error reset signal (System signal 1-1.b13) turns on, the GOT error code will be reset when an error occurs at the next.

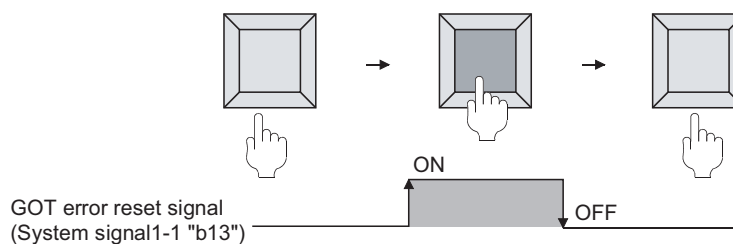


Error Reset Method

An error can be reset by using GOT as explained below.

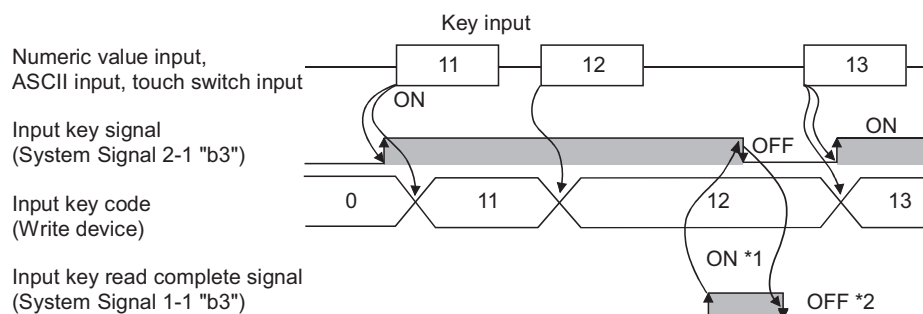
When the cause of error is removed, the error can be reset by touching the touch switch.

Example) Create the touch switch (bit momentary) that turns on the GOT error reset signal only while the touch switch is touched.



■ Confirm the input key code by input key

The input key code can be confirmed by input key (Touch switch, numerical input, or ASCII input).



*1 When key input is completed, the stored key code is held.

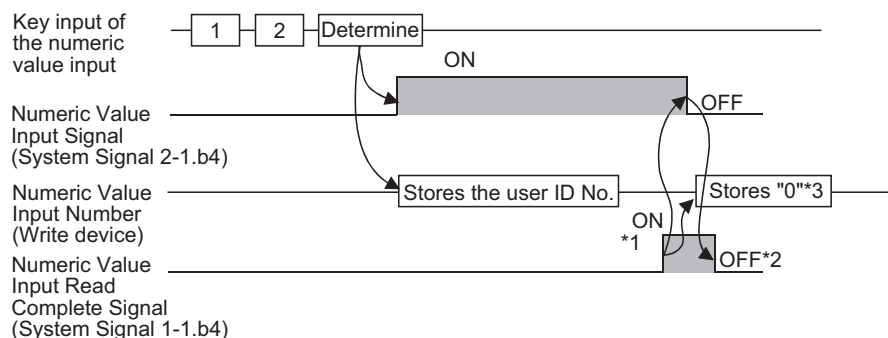
When the Key code read complete signal (System signal 1-1.b3) turns on, the Input key signal (System signal 2-1.b3) turns off.

*2 Check that the Input key signal (System signal 2-1.b3) turns off, and then turn off the Key code read complete signal (System signal 1-1.b3).

If the Key code read complete signal (System signal 1-1.b3) turns on, the stored key code will be reset at the next key input.

Confirmation of the numeric value input determination timing

The timing of which the input value was determined can be confirmed with the user ID written in the numerical input No.



- *1 After the numeric value input determination, the stored user ID No. is held.
The Numeric value input signal is cleared when the Numeric value input read complete signal (System signal 1-1.b4) turns on.
- *2 Check that the Numeric value input signal (Write device) turns off, and then turn off the Numeric value input read complete signal (System signal 1-1.b4).
If the Numeric value input read complete signal (System signal 1-1.b4) turns on, the user ID will not be stored or the Numeric value input signal cannot be turned on when the value is input and completed at the next time.
- *3 For GT10, the device does not store "0". (The value stored in the numeric value input number does not change.)

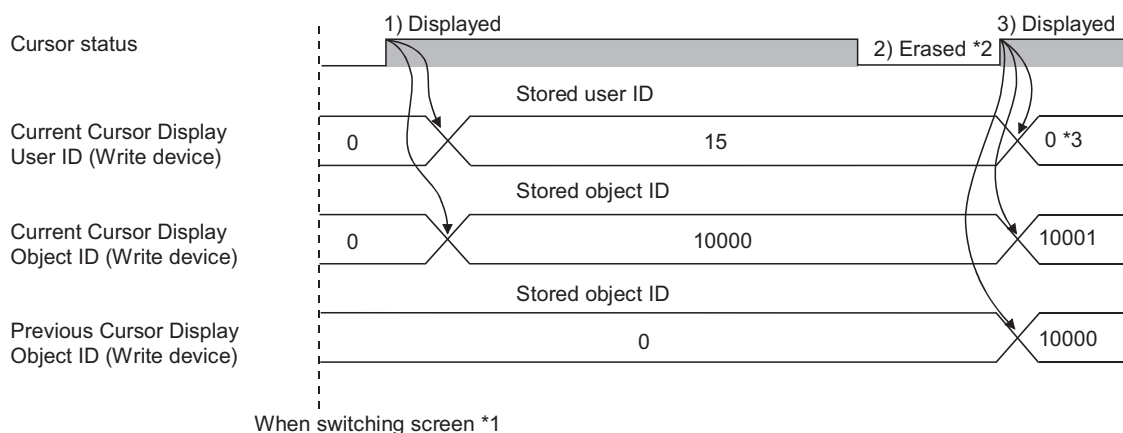
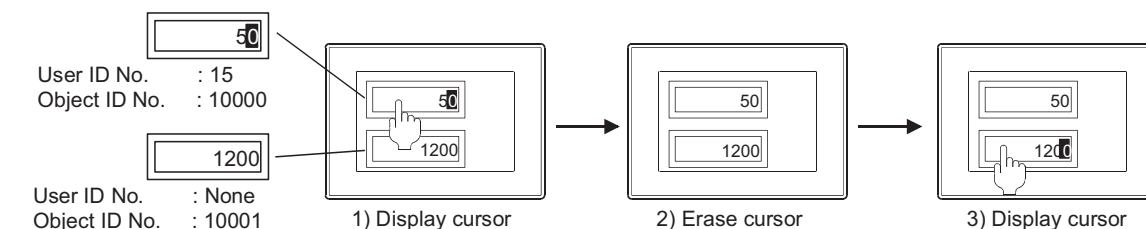
Confirm cursor's display position

The cursor's display position can be confirmed by writing the data of the object (numeric value input function, ASCII input function) in which cursor is located into the device.

The object information to be written are classified into the following types

- User ID : Can be set to any object.
Set user ID on setting dialog box of each object.
- Object ID: Automatically set when setting an object with GT Designer3.

Example) Operation example of cursor display



- *1 When switching screen
- *2 If a cursor is not displayed when switching screens, "0" will be stored.
- *3 The stored user ID and object ID can be held even if a cursor is erased.
- *4 If a cursor is displayed at the object (numeric input function, ASCII input function) with a user ID unset, the cursor position numeric value input will be "0".
- *5 The Current or Previous Cursor Display User ID operates with the ASCII input function if the GOT internal device GS450.b2 is switched ON.



(1) How to delete the stored user ID and object ID when a cursor is deleted

Turn on the GOT internal device (monitor common control: GS450.b3) to delete the user ID and object ID when a cursor is deleted. ("0" is stored.)

For details of GOT internal devices, refer to the following.

☞ Appendix.2.1 GOT internal devices

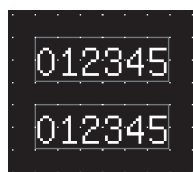
(2) Setting and confirmation of the object ID

Object ID will be set automatically when object is set.

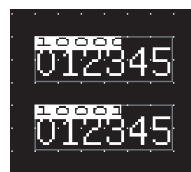
The object ID cannot be changed by user.

(a) Method of confirming object ID

Select [View] → [Display Items] → [Object ID] from the menu to display the object ID in an object arranged on the screen editor.



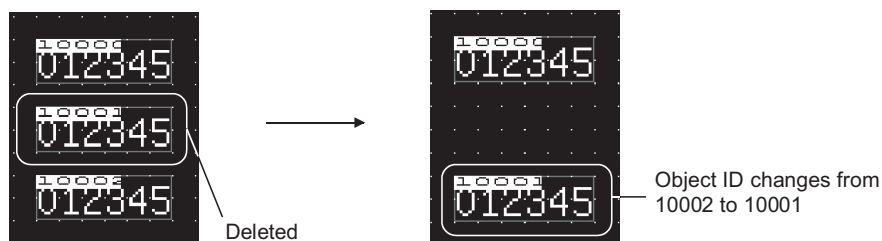
Object ID not displayed



Object ID displayed

(b) Methods of changing object ID

If the arranged object is deleted, the object ID will change automatically.



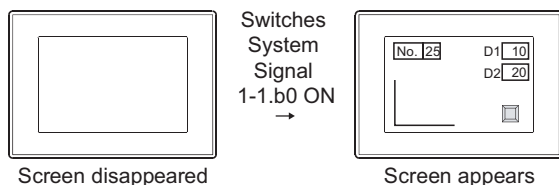
■ Control of Screen Display

(1) Disable screen saver function

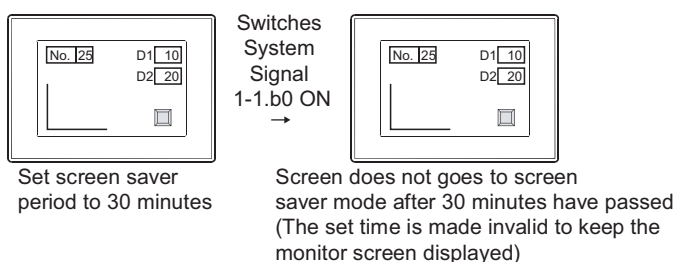
The screen saver function, which is set within the GOT utility, is designed to turn off the screen display if the GOT is not touched within a specified time. This function prevents the screen performance from deteriorating over its operable life.

By turning Automatic screen saver disable signal ON in the system information, the function that is set within the GOT utility (Setup) is disabled

Example 1) Display the monitor screen erased by automatic screen saver function



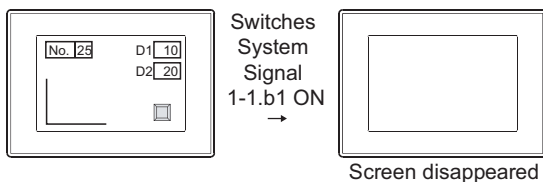
Example 2) Disables screen saver function to start even after the specified period has passed.



(2) Erase screen

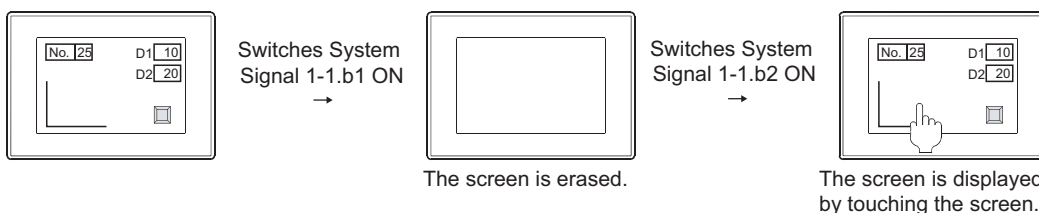
By turning [Forced screen saver enable signal] ON, the displayed monitor screen can be erased. While the bit is ON, monitor screen will not appear even when the GOT screen is touched.

Example) Erase displayed monitor screen



In addition, the monitor screen can be displayed by switching the "Forced Screen Saver Touchcancel Signal" ON and touching the screen to cancel the forced screen saver function started with the "Forced Screen Saver Enabled Signal".

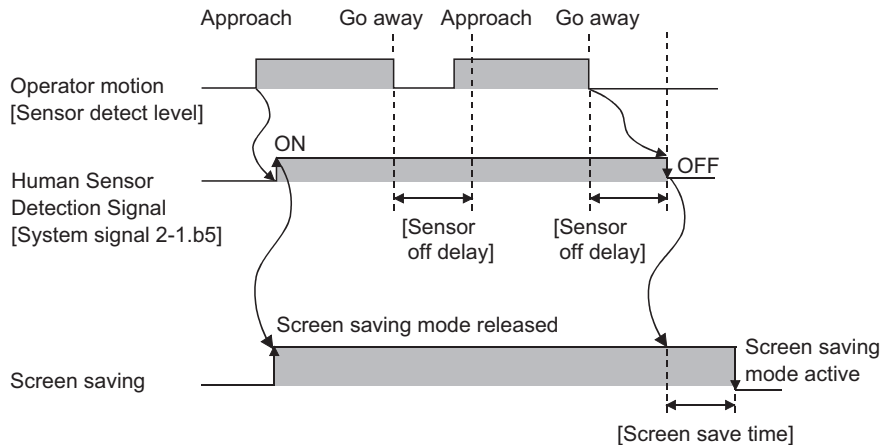
Example) Displaying the monitor screen that is forcibly erased



(3) Display control by human sensor (Specific to GT1695M-X, GT1685M-S, GT1595-X, GT1585V-S and GT1585-S)

The human sensor is a function that releases the GOT from the screen saving mode without the necessity to touch the GOT.

This function releases the GOT from the screen saving mode when the operator has come closer to the GOT.



When no operator is not around the GOT for the time set as [Sensor off delay], the Human sensor detection signal (System signal 2-1.b5) turns off.

When the time set as [Screen save time] elapses after the Human sensor detection signal (System signal 2-1.b5) turns off, the GOT enters the screen saving mode.

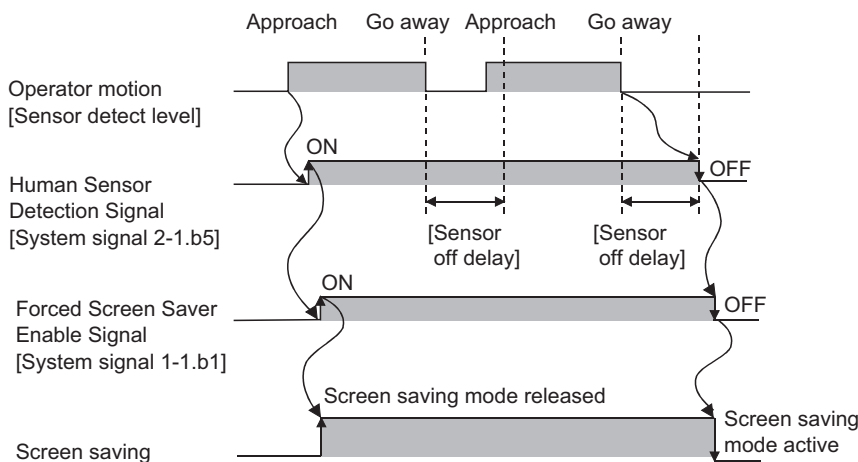
Make the human sensor settings (including [Sensor detect level] and [Sensor off delay]) using the GOT utility. Refer to the following manual for the GOT utility.

User's Manual for the GOT used



(1) How to make the settings so that the GOT releases the screen save mode only when human movement is detected

By disabling the GOT to release the screen save mode with the touch or external operation, the GOT can release the screen save mode only when human movement is detected.



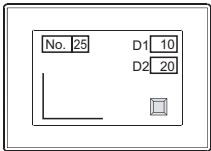
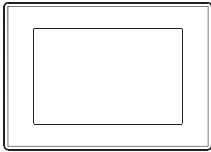
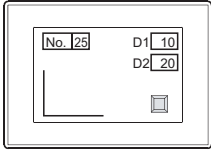
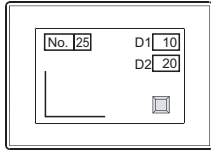
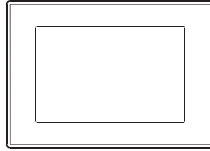
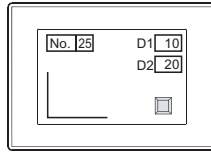
Associate [Human Sensor Detection Signal] with [Forced Screen Saver Enable Signal] in the sequence program to control the screen saving mode.

With this setting, the GOT enters the screen saving mode after the Sensor OFF delay time elapses, regardless of the screen saving time.

(2) GOT Screen Control

The following shows the priority among functions that control the screen status (Displayed/ Not displayed):

Low ————— Priority —————> High

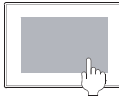

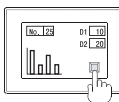
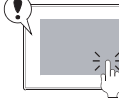


Display Screen	Screen Saver Function (Utility)	Screen Saver Disable Signal	Forced Screen Saver Enable Signal	Forced Screen Saver Touch-cancel Signal
	 With screen saver function  Without screen saver function	 ON Screen save function of utility is disabled.	 ON Forces the screen to go into the screen saver mode. The screen saver settings, the status of screen saver disable signal and human sensor are irrelevant.	 ON Forcibly cancels the screen saver mode by touching. The status of forced screen saver enable signal is irrelevant.

! DANGER

- Incorrect operation of the touch switch(s) may lead to a serious accident if the GOT backlight is gone out. When the GOT backlight goes out, the display turns black and causes the monitor screen to appear blank, while the input of the touch switch (s) still remains active. This may confuse an operator in thinking that the display is in "screensaver" mode, who then tries to release the GOT display from this mode by touching the display screen, which may cause a touch switch to operate. Note that the following occurs on the GOT when the backlight goes out.
 - The monitor screen disappears even when the screensaver mode is not set.
 - The monitor screen will not come back on by touching the display, even if the GOT is in screensaver mode.
 The screensaver operation status can be confirmed by the display status of the POWER LED.
 - Lit in green: Power is correctly supplied
 - Lit in orange: Screen saving and backlight off
 - Blinks in orange/green: Blown back light bulb
 - Not lit: Power is not supplied

(4) Relation between screen saver functions and Key-In Disable Signal

The relation between screen saver functions and Key-In Disable Signal is as follows.

Forced screen saver enable signal	Key-in disable signal	Screen saver function	Screen status
ON	ON/OFF	ON/OFF	The GOT screen goes into the screen saver status.  No response to touching
OFF	ON	ON	When the key-in disable signal turns on, the GOT screen does not go into the screen saver status. When the key-in disable signal turns on while the GOT screen is in the screen saver status, the screen saver status is canceled.  No response to touching
		OFF	The GOT screen does not go into the screen saver status.  No response to touching
	OFF	ON	The GOT screen goes into the screen saver status.   Touch the screen, and then the screen saver status is canceled.
		OFF	The GOT screen does not go into the screen saver status.  Touch the object, and then the object responds to touching.

4.6.4 Precautions

■ Precautions for drawing

Do not use a special register as a read device or write device, as it is an internal device of which specifications are defined within PLC CPU, and cannot be used as a normal internal device for system information.

If a special registered is used as described above, GOT may not operate correctly.

■ Precautions for using system information

Do not write data to a device set as a write device for the system information directly from a controller.

The write device information saved in the internal of the GOT will be overwritten.

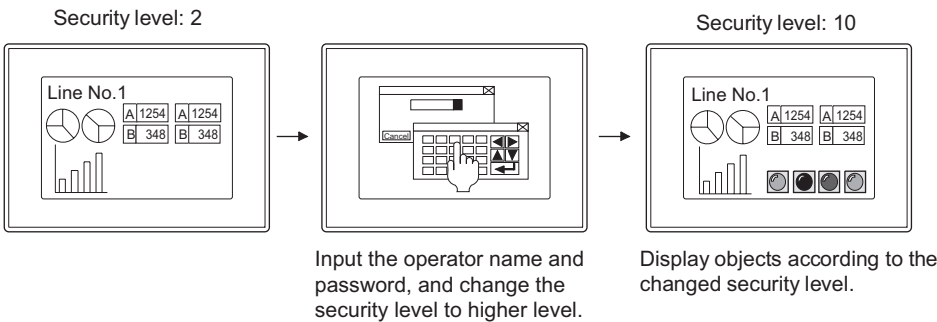
4.7 Security Setting



The security setting is available for objects, the screen display or operation, the upload operation, and the utility operation.
The security setting restricts users.

Restricting the object and screen display/operation

With setting the security level (0 to 15) per object and screen, the screen display can be changed according to the user's security level.
The authentic method for changing security levels includes the operator authentication and the password authentication.



(1) Operator authentication

The operator authentication is an authentic method with the operator information of the user when the security level is changed.

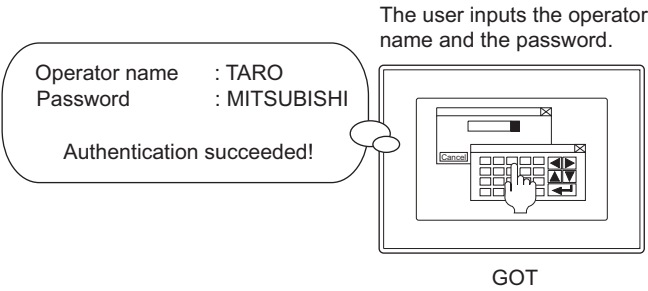
5.3.5 Security setting

With the operation log function, the user information can be stored as a history.
With setting the automatic logout and the password expiration date, the security can be enhanced.
The operator authentication includes the following the authentic types.

(a) Operator authentication with a password



With the operation log function, the user information can be stored as a history.
For using the operator authentication with a password, install the extended function OS (Operator authentication) on the GOT.



(b) Operator authentication with an external authentication device

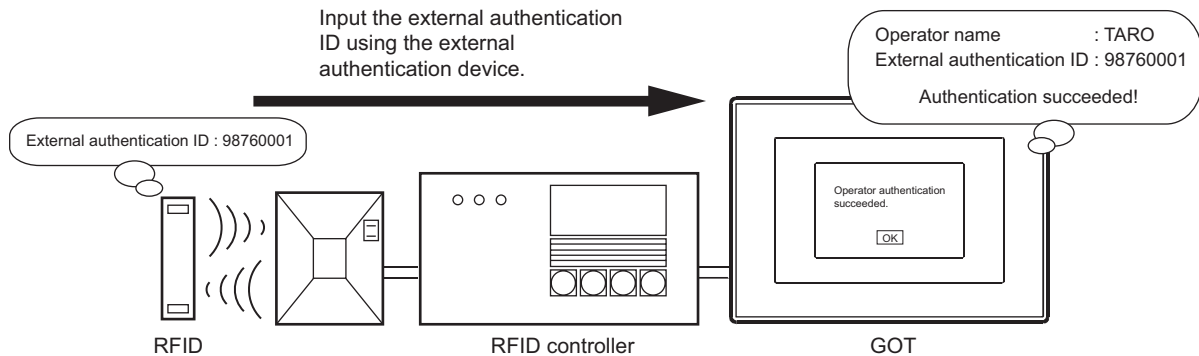
GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

The authentication is executed by the external authentication ID that is input using an external authentication device.

For using the operator authentication with an external authentication device, the following external authentication device can be used.

- RFID

For using the operator authentication with an external authentication device, install the extended function OS (Operator authentication, RFID) on the GOT.



(c) Operator authentication with a fingerprint unit

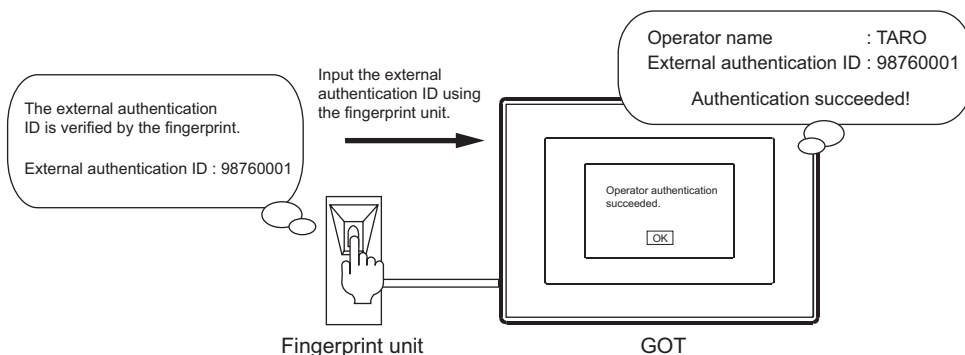
GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

The authentication is executed by the external authentication ID identified by the fingerprint information that is input using the fingerprint unit.

Up to 100 pieces of fingerprints authentication information can be registered.

Up to two fingerprints can be registered for a piece of fingerprint authentication information.

For using the operator authentication with the fingerprint unit, install the extended function OS (Operator authentication, Fingerprint Authentication) on the GOT.



Auxiliary authentication

For the operator authentication with an external authentication device or fingerprint unit, the operator authentication may not be properly executed due to a device failure, injured finger or others.

Enable the auxiliary authentication beforehand so that the authentication is executed by switching to the operator authentication with a password.

For setting the auxiliary authentication, refer to the following.

User's Manual for the GOT used

(2) Password authentication

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

The security level authentication is an authentic method with a password for each security level when security levels are changed.

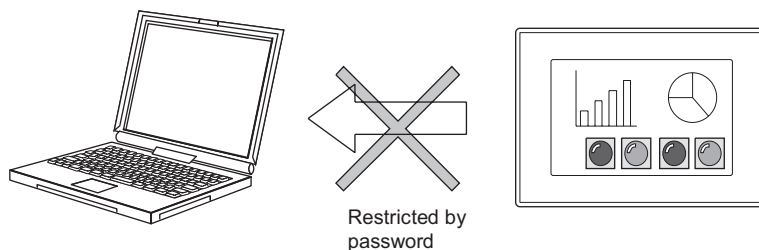
➞ 5.3.5 Security setting

■ Restricting the upload operation

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

The security authentication can restrict the screen data upload operation.
For details of data transmission operation, refer to the following.

➞ 7. COMMUNICATION WITH GOT

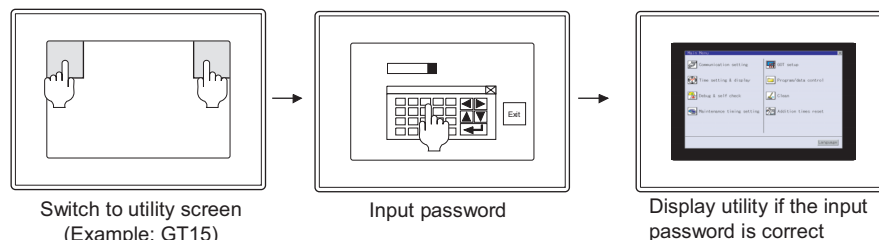


■ Restricting the utility operation

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

When starting the utility, the authentication for security prevents the user from unnecessary utility operations.
For details of utility operation, refer to the following manual.

➞ User's Manual for the GOT used



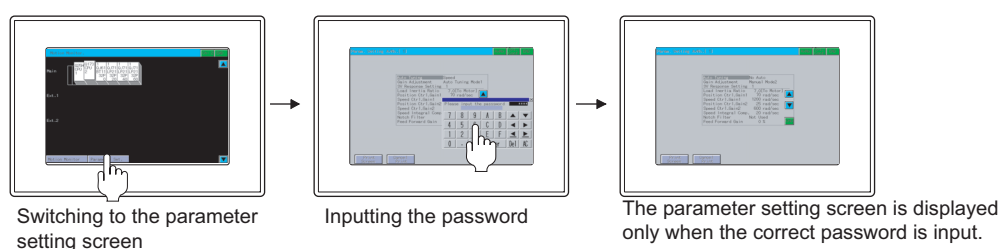
■ Restricting parameter setting screen display

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

When displaying the parameter setting screen of the Q motion monitor or the servo amplifier monitor, the input of a preset password is requested so that inadvertent changing of the parameter settings in the targeted motion controller CPU (Q series)/servo amplifier can be avoided.

For details of the servo amplifier monitor function and the Q motion monitor function, refer to the following manual.

➞ GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3



■ Restricting the ladder editor

The security authentication can restrict unnecessary ladder editor operations.

The following operations can be restricted.

- Displaying the ladder editor screen
- Operation of the device test

For details of the ladder editor function, refer to the following.

➞ GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3

The ladder editor can be restricted by the authentication with a device, authentication with a password, or authentication with a device and password combined.

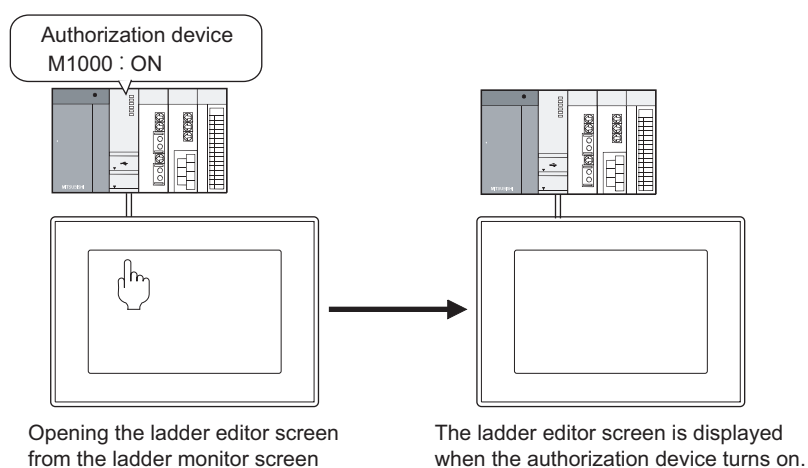
Select the authentication method according to the purpose.

(1) Authentication with an authorization device

While an authorization device of the ladder editor or device test turns on, the operation is permitted.

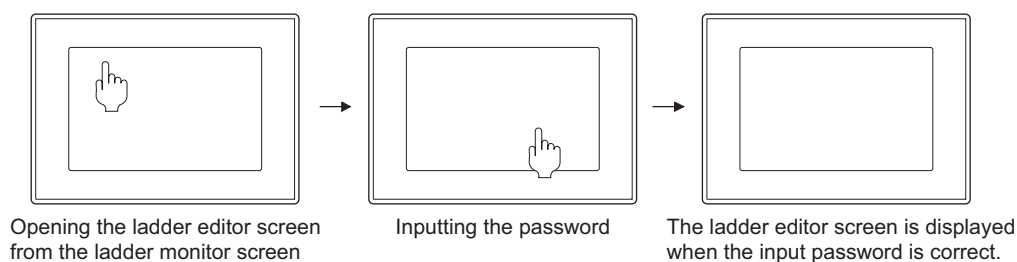
For the authorization device setting, refer to the following.

➞ 4.7.1 ■ Security Level Authentication tab



(2) Authentication with a password

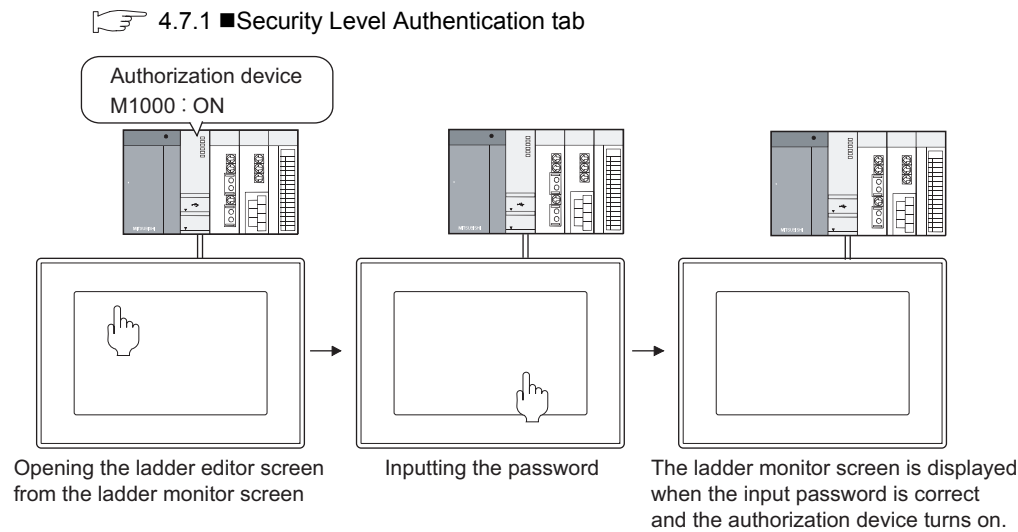
When the input password matches the set password, the operation is permitted.



(3) Authentication with an authorization device and password combined

When the input password matches the set password and an authorization device turns on, the operation is permitted.

For the authorization device setting, refer to the following.

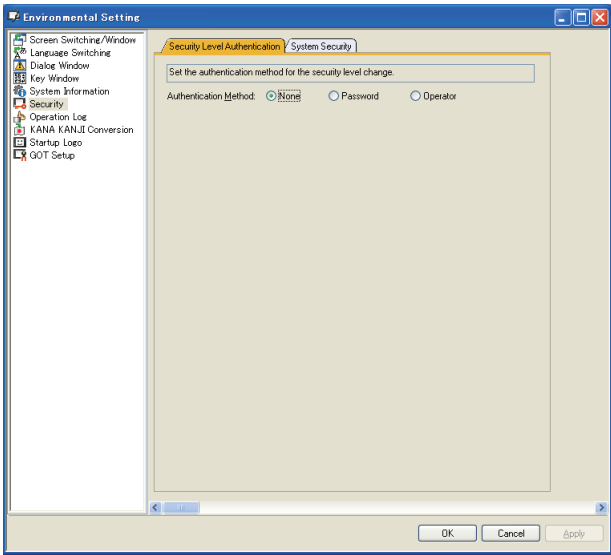


4.7.1 Settings

Select [Common] → [GOT Environmental Setting] → [Security] from the menu to display the [Environmental Setting] dialog box.

■ **Security Level Authentication tab**

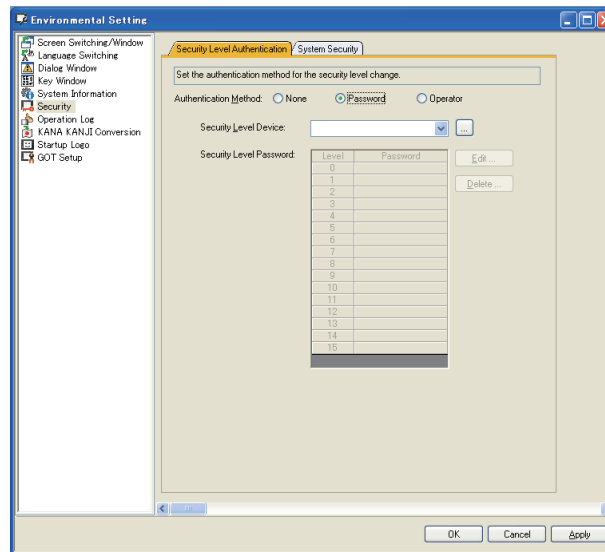
Select the security level authentic method.

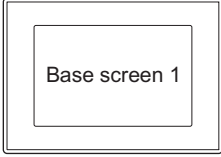
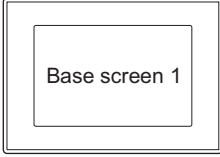







Authentication	Description	Model
None	The security level authentication is not performed.	GT16 GT15 GT11 GT10 SoftGOT 1000
Password	The security level is changed only with the password.	GT16 GT15 GT11 GT10 SoftGOT 1000
Operator	The security level is changed with an operator name and a password, or the external authentication ID.	GT16 GT15 GT11 GT10 SoftGOT 1000

The setting items differ depending on the selected authentic method.
The setting items for each authentic method are shown in the next page.

(1) Password authentication

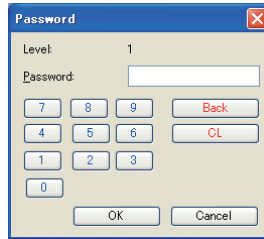


Item	Description	Model
Security Level Device	<p>Set the device to store the security level value for a screen displayed on the GOT.</p> <p>By setting the device, a password for each level for [Security Level Password] can be set. The security level can be changed by changing the level device value from the controller.</p> <p>Example: Level device: D10</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>D10: 3</p> <p>↓</p> <p>Set to security level 3</p> </div> <div style="text-align: center;">  <p>D10: 8</p> <p>↓</p> <p>Set to security level 8</p> </div> </div> <p>If the level device is not controlled by a controller, set the GOT internal device (GD).</p>	
Security Level Password	<p>Passwords for changing the security level are listed. (Passwords are displayed as [*****].)</p> <p>Select the security level and click the [Edit] button or the [Delete] button to edit or delete the selected security level.</p> <ul style="list-style-type: none"> • Security level 0: The security function is not set. • Security level 1: Low ↓ • Security level 15: High 	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">GT16</div> <div style="border: 1px solid black; padding: 2px;">GT15</div> </div> <div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">GT11</div> <div style="border: 1px solid black; padding: 2px;">GT10</div> </div> <div style="border: 1px solid black; padding: 2px;">SetGOT 1000</div> </div>
	<p>For the selected security level, set a new password or edit a password. Set different passwords for each security level.</p> <p>When the password is not set for the selected security level, the [Password] dialog box appears.</p> <p> 4.7.1 nSecurity Level Authentication tab (1) (a) Password dialog box</p> <p>When the password is already set for the selected security level, the [Edit Password] dialog box appears.</p> <p> 4.7.1 nSystem Security tab (1) (b) Edit Password dialog box</p>	
	<p>Click this button to display the [Delete Password] dialog box.</p> <p> 4.7.1 nSystem Security tab (1) (c) Delete Password dialog box</p>	

(a) Password dialog box

Enter a password [Password], and click the [OK] button.

Up to 8 one-byte numeric characters can be entered for the password.

A dialog box titled "Password" with a close button (X) in the top right corner. It contains a "Level:" label with the value "1" next to it. Below this is a "Password:" label followed by a text input field. Under the input field is a numeric keypad with buttons for digits 0-9. To the right of the keypad are two buttons: "Back" (highlighted in red) and "CL" (highlighted in red). At the bottom of the dialog are "OK" and "Cancel" buttons.

(b) Edit Password dialog box

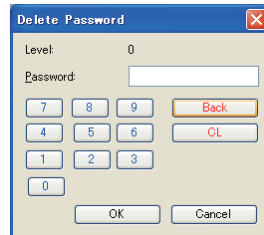
Enter an old password in [Old Password], and enter a new password in [New PasswordNew Password] or [Reentry], and then click the [OK] button.

Up to 8 one-byte numeric characters can be entered for the password.

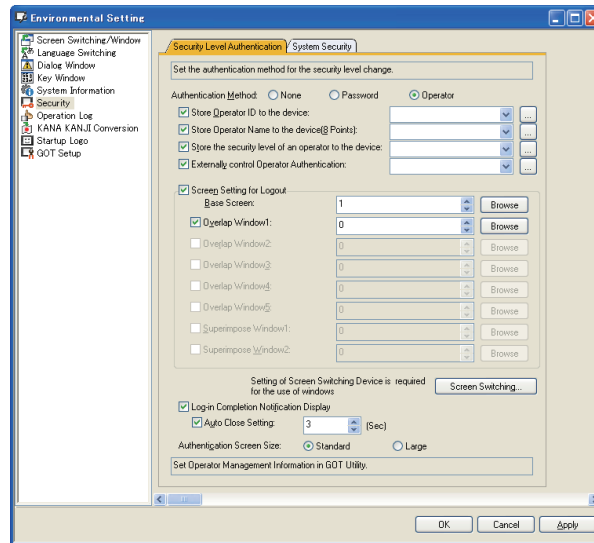
A dialog box titled "Edit Password" with a close button (X) in the top right corner. It contains a "Level:" label with the value "0" next to it. Below this are three labels: "Old Password:", "New Password:", and "Reentry:", each followed by a text input field. Under the input fields is a numeric keypad with buttons for digits 0-9. To the right of the keypad are two buttons: "Back" (highlighted in red) and "CL" (highlighted in red). At the bottom of the dialog are "OK" and "Cancel" buttons.


(c) Delete Password dialog box

Enter an old password, and click the [OK] button.

A dialog box titled "Delete Password" with a close button (X) in the top right corner. It contains a "Level:" label with the value "0" next to it. Below this is a "Password:" label followed by a text input field. Under the input field is a numeric keypad with buttons for digits 0-9. To the right of the keypad are two buttons: "Back" (highlighted in red) and "CL" (highlighted in red). At the bottom of the dialog are "OK" and "Cancel" buttons.

(2) Operator



Item	Description		Model
Store Operator ID to the device	Select this item to set a device to store an operator ID for a login operator (Operator ID external notification device). Set the operator ID in the operator information management screen of the utility.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
Store Operator Name to the device(8 Points)	Select this item to set a device to store an operator name for a login operator (Operator name external notification device).		
Store the security level of an operator to the device	Select this item to set a device to store a security level for a login operator (Operator level external notification device). Set the security level in the operator information management screen of the utility.		
Externally control Operator Authentication	Select this item to set a device to externally control the operator information (Operator authentication external control device*1). • Settable device: Word device		
Screen Setting for Logout	Set a screen displayed when logging out of the GOT. Select each window screen to set a window screen displayed when logging out of the GOT. To set a window screen, set the screen switching device. Timing to display the set screen differs according to operation when logging out of the GOT. • Logging out of the GOT by a touch switch (special function switch) or the automatic logout function After logging out of the GOT, the set screen appears. • Logging out of the GOT by the utility After logging out of the GOT, the utility screen appears. After changing the utility screen to a user-created screen, the set screen appears.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
<div>Screen Switching</div>	Displays [Screen Switching/Window] for the [Environmental Setting] dialog box.  4.2 Screen Switching Device Setting		
Log-in Completion Notification Display	Select this item to display the login completion notification dialog box when logging in the GOT.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
	Auto Close Setting	Select this item to set the time period between displaying the login completion notification dialog box and closing the dialog box. (1 to 60 seconds)	
Authentication Screen Size	Select the size for the authentication screen size. (Standard/Large)		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>

For details of *1, refer to the following.

*1 Operator authentication external control device


Bit No.	Signal name	Description
.b0	Forced logout signal	Turning on this signal forcibly logs out a user currently logging in. The Forced logout signal behaves at the signal rising. Therefore, this signal does not behave even if it is always turned on. Also, without the user login, this signal does not behave even if it is turned on.
.b1 to .b15	-	Use prohibited

POINT

(1) Settings of operator information

Set the operator information, including the operator ID and level, the operator information management screen of the utility.

For the operator information management screen, refer to the following.

 User's Manual for the GOT used

(2) Timing to turn off the Forced logout signal

Confirm the completion of logout before turning off the Forced logout signal (.b0).

To confirm the completion of logout, check the value of the operator ID external notification device.

When the device value is "0", logout is completed.

(3) Security level after the forced logout

When a user security level becomes lower than the one set for the currently-displaying screen after the Forced logout, each screen behaves as follows.

- (a) Base screen
The login screen is displayed.
- (b) Window screen
The window screens (overlap windows and superimposed windows) are deleted.

1

OVERVIEW

2

GT Designer3
SPECIFICATIONS

3

GT Designer3
OPERATION

4

COMMON SETTING

5

EDITING AND
SETTING FIGURES
AND OBJECTS

6

LIBRARY

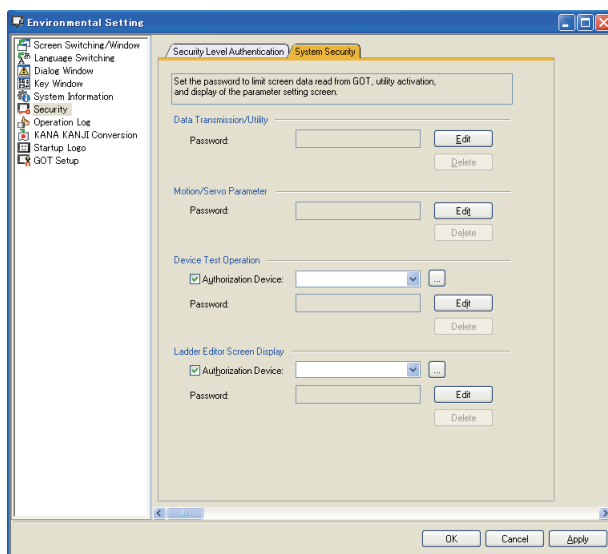
7

















COMMUNICATION
WITH GOT

8








USEFUL
FUNCTIONS FOR
DRAWING

System Security tab



Item	Description		Model
Data Transmission/Utility		Set a new password or edit a password to restrict reading the GOT screen data and the utility screen display. (The password is displayed as [*****].) When no password is set, the [Password] dialog box appears.  (1) Password dialog box When the password is already set, the [Edit Password] dialog box appears.  (2) Edit Password dialog box	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>SaRGOT 1000</div> <div>GT10</div> </div>
		Click this button to display the [Delete Password] dialog box.  (3) Delete Password dialog box	
Motion/Servo Parameter		Set a new password or edit a password to display the parameter setting screen of the Q motion monitor or the servo amplifier monitor. (The password is displayed as [*****].) When no password is set, the [Password] dialog box appears.  (1) Password dialog box When the password is already set, the [Edit Password] dialog box appears.  (2) Edit Password dialog box	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>SaRGOT 1000</div> <div>GT10</div> </div>
		Click this button to display the [Delete Password] dialog box.  (3) Delete Password dialog box	
Device Test Operation	Authorization Device	Select this item to set the authorization device for the device test operation. A bit device can be set for the authorization device. ON: Device test operation permitted OFF: Device test operation prohibited  5.3.1 Device setting	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>SaRGOT 1000</div> <div>GT10</div> </div>
		Set a new password or edit a password to permit the device test operation for the ladder editor. The password is displayed as [*****]. When no password is set, the [Password] dialog box appears.  (1) Password dialog box When the password is already set, the [Edit Password] dialog box appears.  (2) Edit Password dialog box	
		Click this button to display the [Delete Password] dialog box.  (3) Delete Password dialog box	

(Continued to next page)

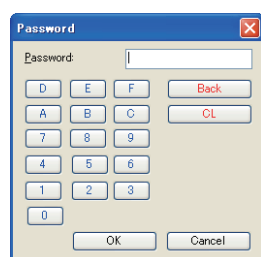
Item	Description		Model
Ladder Editor Screen Display	Authorization Device	Select this item to set the authorization device for the ladder editor screen display. A bit device can be set for the authorization device. ON: Display of ladder editor screen permitted OFF: Display of ladder editor screen prohibited  5.3.1 Device setting	
		Set a new password or edit a password to permit the ladder editor screen display. The password is displayed as [*****]. When no password is set, the [Password] dialog box appears.  (1) Password dialog box When the password is already set, the [Edit Password] dialog box appears.  (2) Edit Password dialog box	
		Click this button to display the [Delete Password] dialog box.  (3) Delete Password dialog box	

(1) Password dialog box

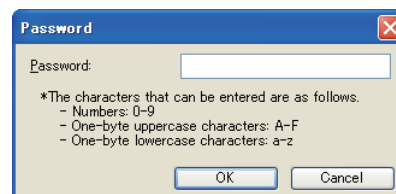
Enter a password [Password], and click the [OK] button.

For the data transmission/utility and motion/servo parameter, up to 8 one-byte alphanumeric characters can be entered for the password (0 to 9, A to F).

For the device test operation and ladder editor screen display, up to 8 one-byte alphanumeric characters can be entered for the password (0 to 9, A to F, a to z).



Data transmission/utility, motion/servo parameter



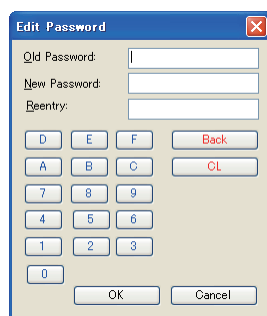
Device test operation, ladder editor screen display

(2) Edit Password dialog box

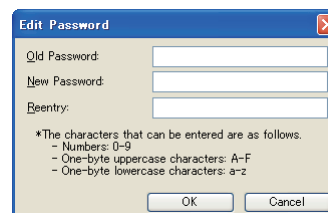
Enter an old password in [Old Password], and enter a new password in [New PasswordNew Password] or [Reentry], and then click the [OK] button.

For the data transmission/utility and motion/servo parameter, up to 8 one-byte alphanumeric characters can be entered for the password (0 to 9, A to F).

For the device test operation and ladder editor screen display, up to 8 one-byte alphanumeric characters can be entered for the password (0 to 9, A to F, a to z).

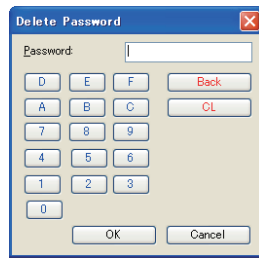


Data transmission/utility, motion/servo parameter

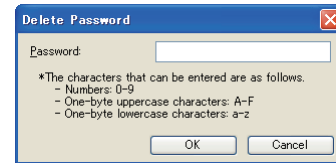


Device test operation, ladder editor screen display

- (3) **Delete Password dialog box**
Enter an old password, and click the [OK] button.



Data transmission/utility, motion/servo parameter



Device test operation, ladder editor screen display

4.7.2 Relevant settings

The security function is available for the relevant settings other than the specific settings.
The following shows the functions that are available by the relevant settings.

■ GOT internal devices

➡ Appendix2 Supported Devices

Function	Set description	Model
Notifying that the authentication by the external authentication device or fingerprint unit succeeds	GS240.b0	
Notifying that the authentication by the external authentication device or fingerprint unit fails	GS240.b1	
Notifying that the login screen or operator re-authentication screen is being displayed regardless of authentic method.	GS240.b13	
Notifying that the login screen for the external authentication device or fingerprint unit is displayed	GS240.b14	
Notifying that the external authentication ID input key window is displayed	GS240.b15	
Notifying the screen that cannot be displayed because of the insufficient security level	GS241.b1 to b4, b8 to b12	
	GS1241.b0 to b2, b8 to b10	

4.7.3 Authentic method and setting procedure

This section explains the setting procedure for the authentication by the operator authentication and password authentication.

■ Operator authentication

Set the information of an operator (Operator information) for the operator authentication.

The operator information can be exported to a CF card, and the operator information can be imported with another GOT.

When the operator authentication is set, the operator information (operator name and operator ID) can be stored as a history with the operation log function.

 (Functions) 22. OPERATION LOG FUNCTION

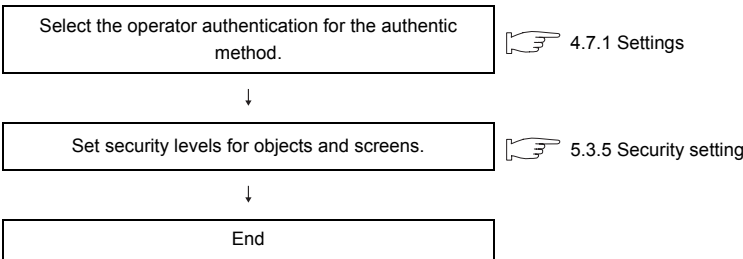
With setting the following functions, the security can be enhanced.

- Automatic logout function: Automatically logging out of the GOT when the GOT is not operated for a certain period
- Password expiration date: The expiration date can be set for a password.

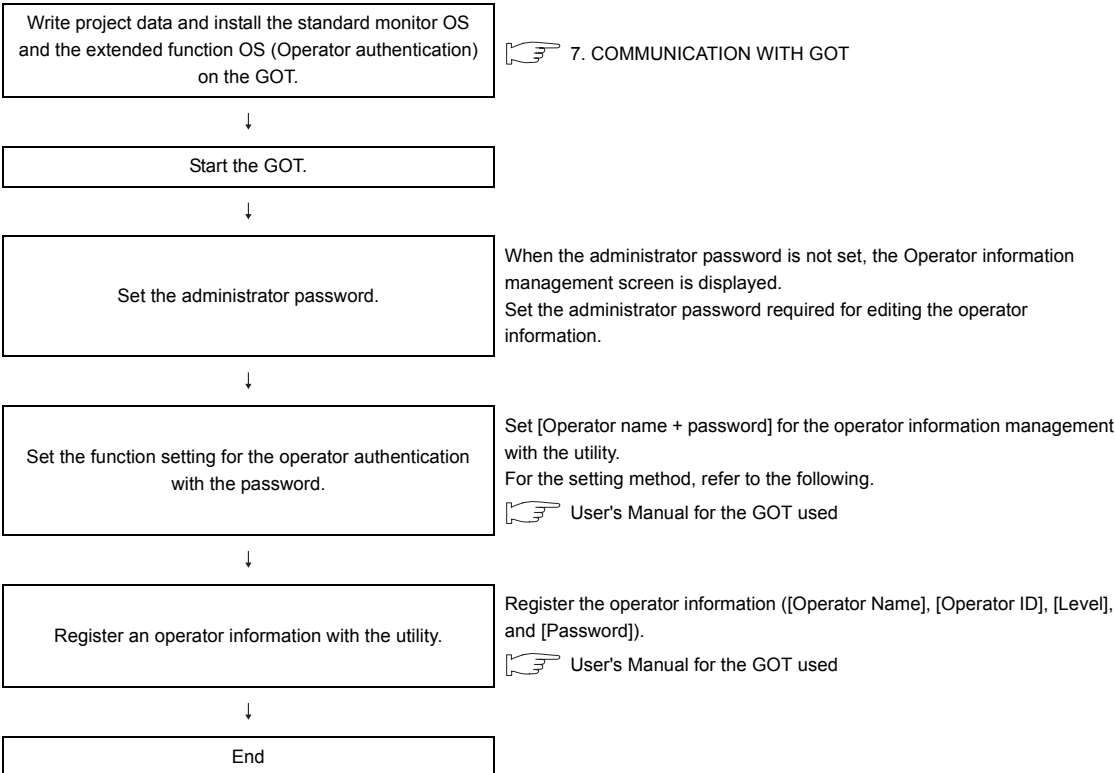
(1) Settings for the operator authentication with the password

Set the following for the password authentication with the password by using GT Designer3 and the GOT utility.

(a) Settings with GT Designer3



(b) Settings with utility



POINT

Login of administrator

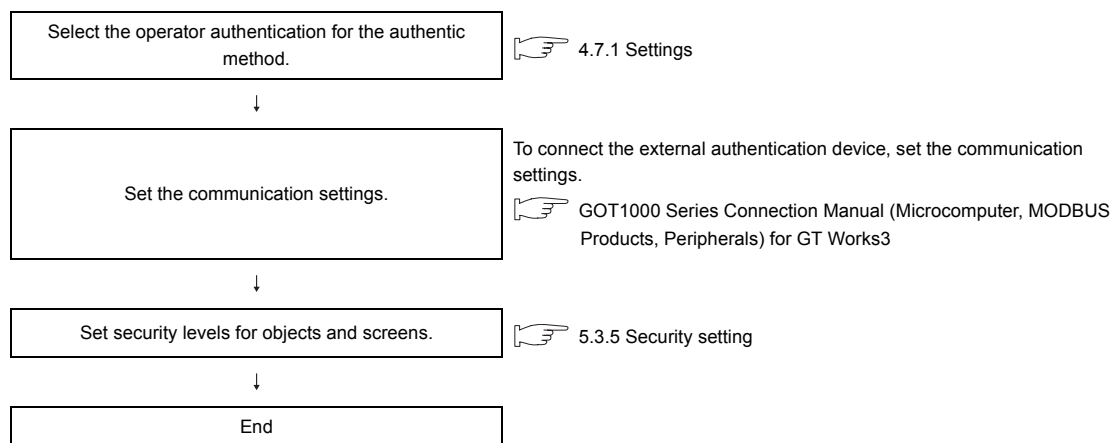
Logging into the GOT with the operator name of administrator cannot be executed.

Log into the GOT with the operator registered in the utility.

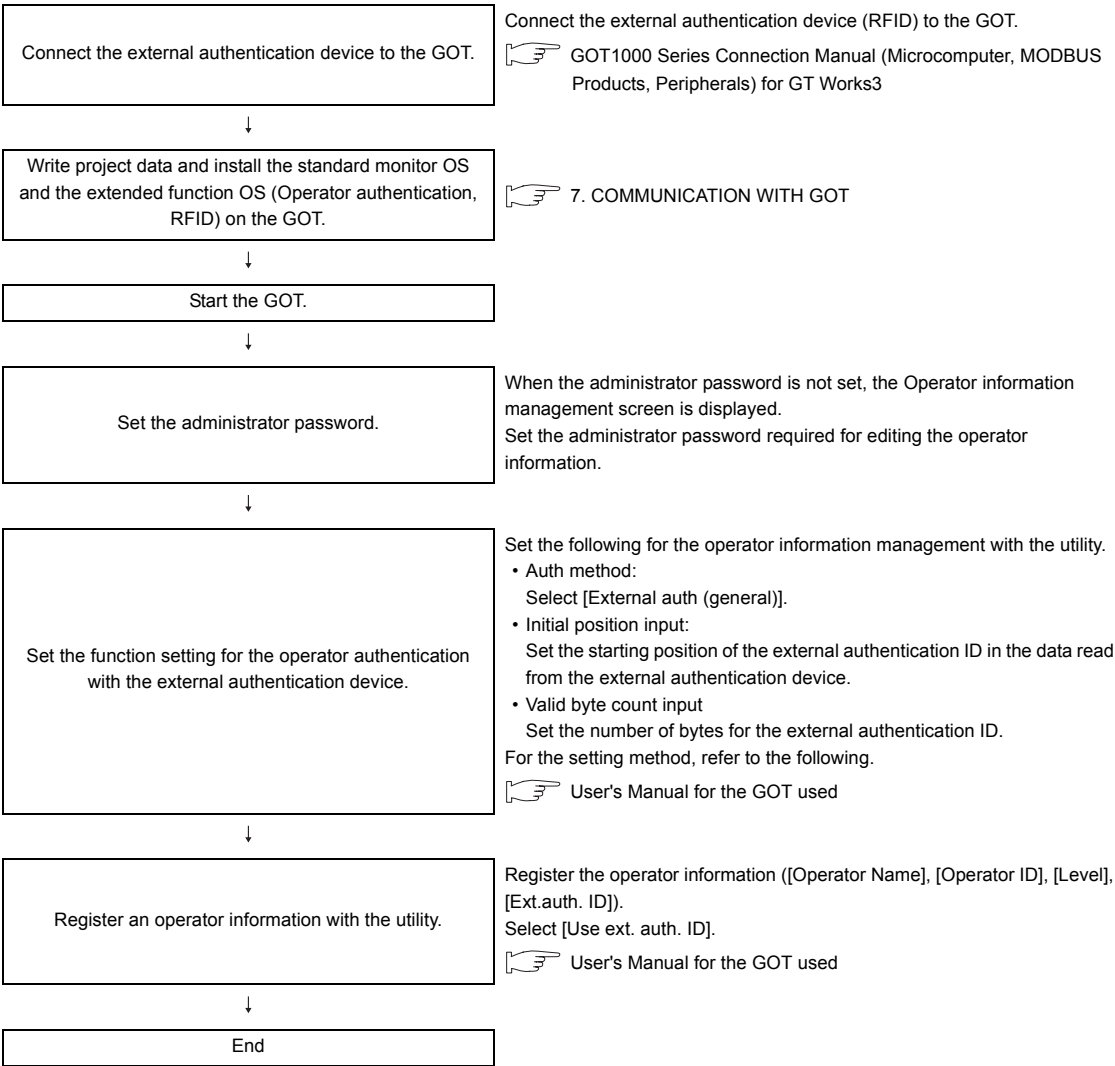
(2) Settings for the operator authentication with the external authentication device

Set the following for the operator authentication with the external authentication device by using GT Designer3 and the GOT utility.

(a) Settings with GT Designer3



(b) Settings with the utility



POINT

Registration of external authentication ID

For using the operator authentication with the external authentication device, register the external authentication ID for the operator information.

For how to register the operator information, refer to the following.

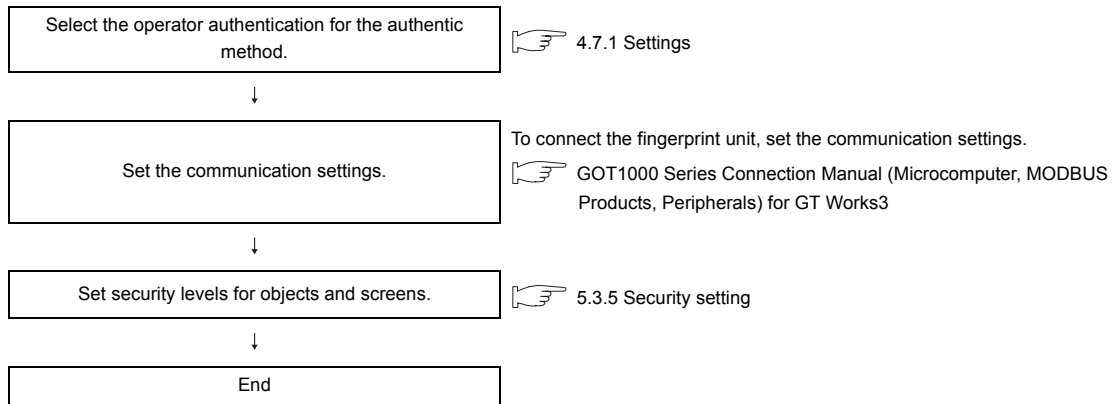
User's Manual for the GOT used

1	OVERVIEW
2	GT Designer3 SPECIFICATIONS
3	GT Designer3 OPERATION
4	COMMON SETTING
5	EDITING AND SETTING FIGURES AND OBJECTS
6	LIBRARY
7	COMMUNICATION WITH GOT
8	USEFUL FUNCTIONS FOR DRAWING

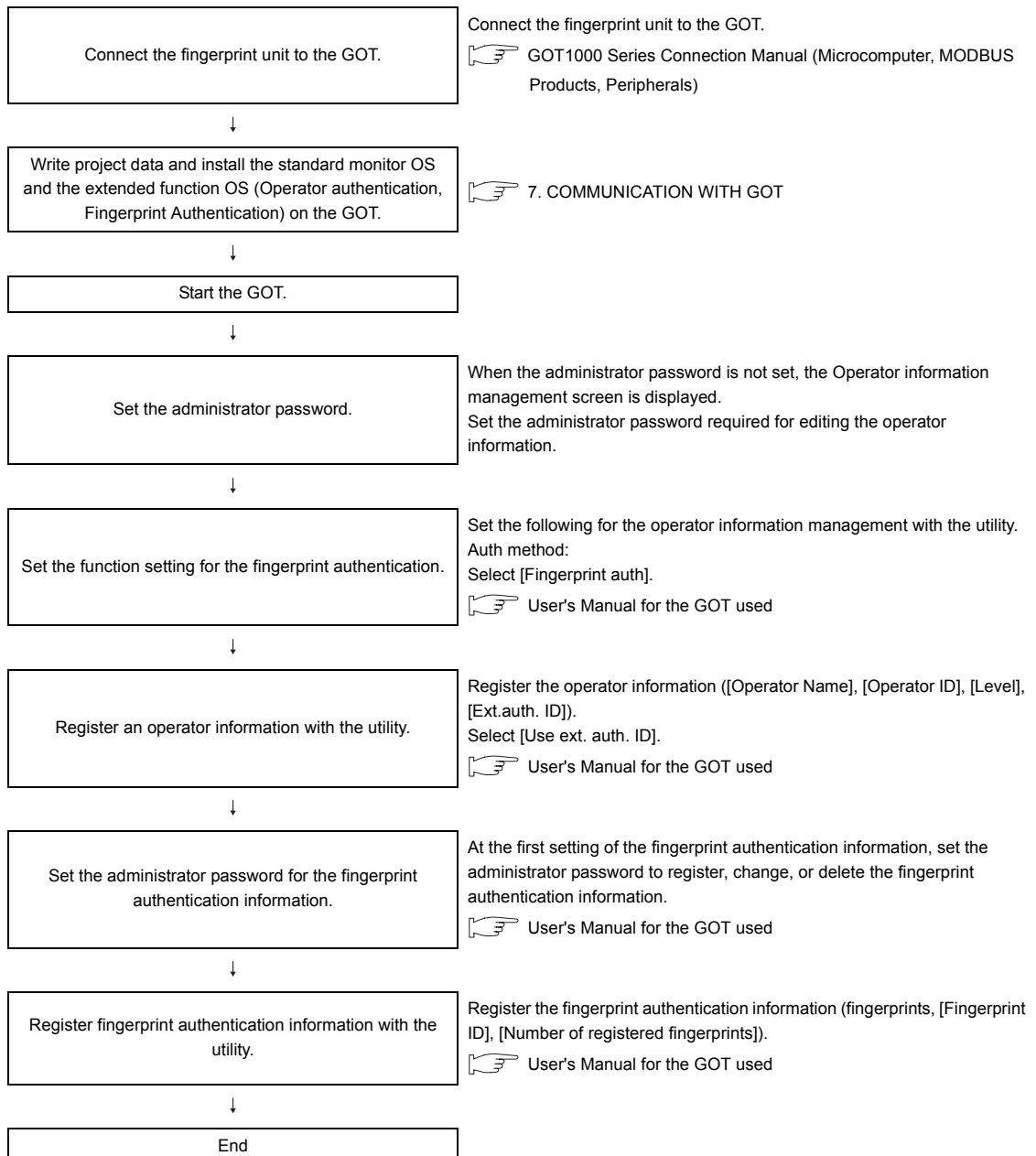
(3) Operator authentication with the fingerprint unit

Set the following for the operator authentication with the fingerprint unit by using GT Designer3 and the GOT utility.

(a) Settings with GT Designer3



(b) Settings with the utility



POINT


(1) Registration of external authentication ID

For using the operator authentication with the fingerprint unit, register the external authentication ID for the operator information.

For registering the operator information, the number of bytes for the external authentication ID must be 7 bytes or less.

For using the fingerprint authentication, the number of valid bytes for the external authentication ID must be in the range of 4 bytes to 7 bytes.

For how to register the operator information, refer to the following.

 User's Manual for the GOT used

(2) Setting for fingerprint registration ID

The number of the fingerprint registration ID must be the same as that of the external authentication ID.


For the operator authentication with the fingerprint unit, the user is specified by verifying the fingerprint ID and the external authentication ID.

When the ID number of the fingerprint registration ID and the external authentication ID does not match, the user cannot log into the GOT using the fingerprint authentication.

(4) Common settings for operator authentication

Set the following for the automatic logout time and the password expiration date.

- Function setting with the utility (automatic logout time, password expiration date)


 User's Manual for the GOT used

(5) How to change security levels

The security level can be changed on screens for login and logout.

The screens for login and logout can be displayed with touch switches (special function switch) or the utility.

For changing security levels, refer to the following.

 5.3.5 Security setting

■ Password authentication

Set passwords for each security level for the password authentication.

(1) Settings

Set the following for the password authentication on GT Designer3.


- Setting security levels for objects and screens
- Setting passwords for each security level in the [Environmental Setting] dialog box

(2) How to change security levels

The security level can be changed on a screen for the password input.

The screen for the password input can be displayed with touch switches (special function switch) or the utility.

For changing security levels, refer to the following.

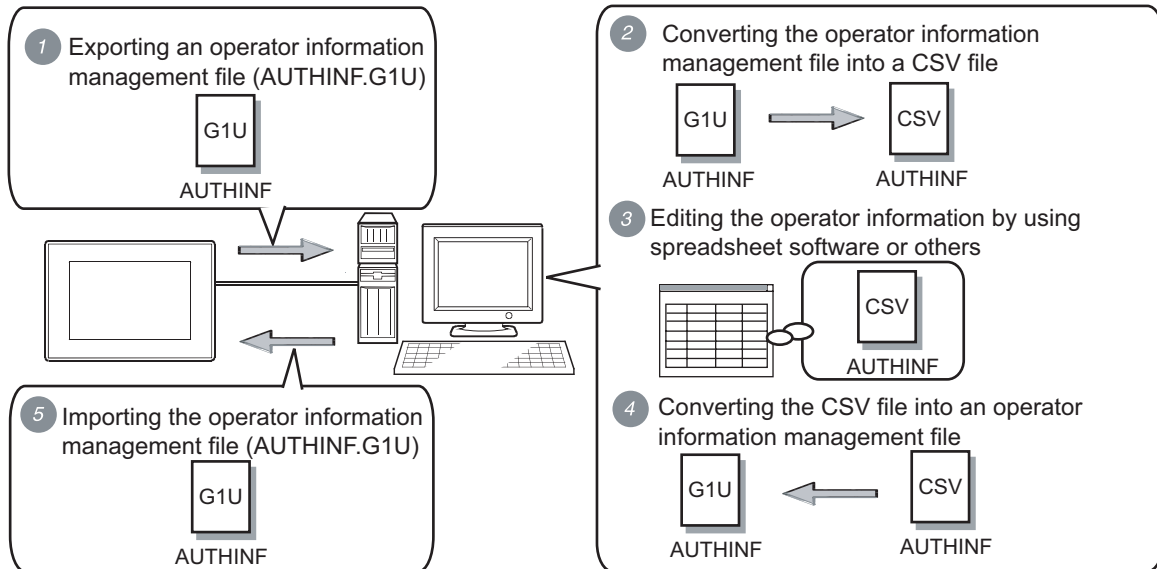
 5.3.5 Security setting

4.7.4 GOT operator management information conversion tool

With the GOT operator management information conversion tool, an operator information management file (AUTHINF.G1U) exported from the GOT can be converted into a CSV file.

After the CSV file is edited on the personal computer, the CSV file can be converted into an operator information management file.

By converting the edited CSV file into an operator information management file and importing the file to the GOT, a lot of operator information can be registered, changed, or deleted at a time.



■ How to obtain software

Obtain the software with either of the following.

- (1) GT Works3 CD-ROM (Disc2)
Folder name: OperatorMgrInfoConv
File name: GTOperatorInfoConv.exe
- (2) Download the software from the MITSUBISHI ELECTRIC FA NETWORK SERVICE (MELFANSweb) website.
(MELFANSweb website: <http://wwwf2.mitsubishielectric.co.jp/melfansweb/english/index.html>)

■ Operating environment

Item	Description
OS	<ul style="list-style-type: none"> • Microsoft® Windows® 2000 Professional Operating System Service Pack4 (English version) • Microsoft® Windows® XP Professional Operating System Service Pack2 (English version)*² • Microsoft® Windows® XP Home Edition Operating System Service Pack2 (English version)*² • Microsoft® Windows Vista® Ultimate Operating System (English version)*^{1,2} • Microsoft® Windows Vista® Enterprise Operating System (English version)*^{1,2} • Microsoft® Windows Vista® Business Operating System (English version)*^{1,2} • Microsoft® Windows Vista® Home Premium Operating System (English version)*^{1,2} • Microsoft® Windows Vista® Home Basic Operating System (English version)*^{1,2} • Microsoft® Windows® 7 Ultimate (English versions)*^{1,2,3} • Microsoft® Windows® 7 Enterprise (English versions)*^{1,2,3} • Microsoft® Windows® 7 Professional (English versions)*^{1,2,3} • Microsoft® Windows® 7 Home Premium (English versions)*^{1,2} • Microsoft® Windows® 7 Starter (English versions)*^{1,2}
Computer	Compatible with the operating environment for the above OS.* ⁴
Display	Resolution of 800 × 600 dots or more
Hard disk space	500MB or more (Excluding operator information management files)
Disk drive	CF card drive or USB drive (Not required when the GOT is connected to the personal computer)
Display color	True Color or more
Others	The mouse, keyboard, and printer must be compatible with the above OS.

*1 The standard user or administrator account is required for using the GOT operator management information conversion tool.

*2 Only the 32-bit OS is available.

*3 Windows XP Mode is not supported.

*4 For the operating environment for each OS, refer to the following.

 User's manual for Windows® used

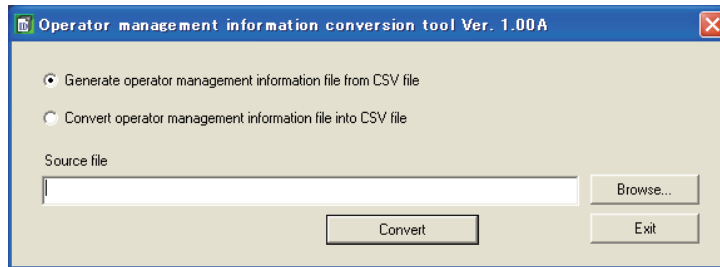
■ How to start

Installing GOT operator management information conversion tool is not required.

Copy the execution file (GTOperatorInfoConv.exe) in a folder, and then execute the file in the folder.

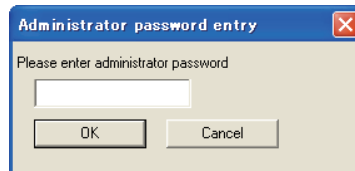
■ Converting an operator information management file

1. Start the GOT operator management information conversion tool.
The following dialog box appears.

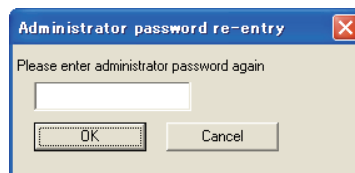


Item	Description
Generate operator management information file from CSV file	Selecting this item and clicking the [Convert] button create an operator management information file from the CSV file specified for [Source file].
Convert operator management information file into CSV file	Selecting this item and clicking the [Convert] button convert an operator management information file into the CSV file specified for [Source file].
Source file	Specify a path of the conversion source file. By clicking the [Browse] button, the path of the conversion source file can be specified in the [Open CSV file] dialog box.
Convert	Click this button to execute the file conversion.

2. Set the required setting items, and click the [Convert] button to display the [Administrator password entry] dialog box.



- To create an operator information file from a CSV file
Enter the Administrator password, and click the [OK] button to display the [Administrator password re-entry] dialog box.



Enter the Administrator password again, and click the [OK] button. The operator information management file (AUTHINF.G1U) is created in the folder that stores the conversion source file.

- To convert an operator information file into a CSV file
Enter the password set for an operator information management file to be converted, and click the [OK] button. The CSV file (AUTHINF.CSV) is created in the folder that stores the conversion source file.

■ CSV file (AUTHINF.CSV)

A CSV file contains the data as shown below.

Set each setting item without changing the order of the items as shown in the tables below.


In the following cases, the data format is invalid and a CSV file is not converted into an operator information management file.

- When any of the setting items is deleted
- When the order of the setting items is changed
- When any of the settings is incorrect

(1) Header part

In the header part, configure the common setting for each operator information.

GOT_OPERATOR_AUTHENTICATION_INFO		1)
DATA_VERSION	0	2)
AUTH_TYPE	ID_PASS	3)
PASS_TYPE	ENCRYPTED	4)
AUTO_LOGOUT_TIME	0	5)
PASS_EXP_DATE	20	6)
EXT_AUTH_ID_TOP	0	7)
EXT_AUTH_ID_LEN	7	8)
EXT_UNIT_CH	8	9)

No.	Item	Description
1)	GOT_OPERATOR_AUTHENTICATION_INFO	Keyword to declare that the file is an operator information management file.
2)	DATA_VERSION	Set the version of the CSV file. Setting range: 0
3)	AUTH_TYPE	Set the authentic type of the operator authentication. Set any of the following. <ul style="list-style-type: none"> • ID_PASS: Set this item when the authentic type is the operator authentication with the password. • EXT_AUTH: Set this item when the authentic type is the operator authentication with the external authentication device. • EXT_FP: Set this item when the authentic type is the operator authentication with the fingerprint unit.
4)	PASS_TYPE	Set the password type. Set any of the following. <ul style="list-style-type: none"> • ENCRYPTED: Set this item to specify an encrypted password for [PASSWD] in the data part. Even if an unencrypted password is specified for [PASSWD], the file is correctly converted. For the password encryption, refer to the following.  ■Precautions for GOT operator management information conversion tool • PLAIN: Set this item to specify an unencrypted password for [PASSWD] in the data part.
5)	AUTO_LOGOUT_TIME	Set the automatic logout time. Setting range: 0 (Automatic logout disabled)/1 to 60 (minute)
6)	PASS_EXP_DATE	Set the password expiration. Setting range: 0 (No expiration)/1 to 1000 (day)


(Continued to next page)

No.	Item	Description
7)	EXT_AUTH_ID_TOP	Set the initial position of the external authentication ID. When converting a CSV file into an operator information management file, 0 is set in the following cases. <ul style="list-style-type: none"> When nothing or invalid value is set When [AUTH_TYPE] (Authentic type) is set to [EXT_FP] Setting range: 0 to 1998 (byte) The total set value of [EXT_AUTH_ID_TOP] and [EXT_AUTH_ID_LEN] must be 2000 or less. If the total set value exceeds 2000, the file cannot be converted correctly.
8)	EXT_AUTH_ID_LEN	Set the number of bytes for the external authentication ID. When converting a CSV file into an operator information management file, the set value varies depending on the case as shown below. <ul style="list-style-type: none"> When nothing or invalid value is set: 4 When [AUTH_TYPE] (Authentic type) is set to [EXT_FP]: 7 Setting range: 2 to 16 (byte) The total set value of [EXT_AUTH_ID_TOP] and [EXT_AUTH_ID_LEN] must be 2000 or less. If the total set value exceeds 2000, the file cannot be converted correctly.
9)	EXT_UNIT_CH	Set the channel for connecting an external authentication device. Setting range: 8 (CH)

(2) Data part

In the data part, set the individual operator information.

1) OPE_ID	2) OPE_NAME	3) LEVEL	4) PASSWD	5) IS_PASSWD_EXP	6) IS_EXT_AUTH	7) EXT_AUTH_ID
3	ICHIRO@	5	MITSUBISHI0001	0	1	31323334353637@
2	JIRO@	1	MITSUBISHI0002	0	1	30303030303136@
1	SABURO@	9	MITSUBISHI0003	1	1	30303039393939@

No.	Item	Description
1)	OPE_ID	Set the operator ID. Setting range: 1 to 32766
2)	OPE_NAME	Set the operator name. Setting range: 1 to 16 one-byte alphanumeric characters (A to Z, a to z, 0 to 9)
3)	LEVEL	Set the security level of the operator. Setting range: 0 to 15
4)	PASSWD	Set the password for the operator. Setting range: 0 to 16 one-byte alphanumeric characters (A to Z, a to z, 0 to 9) Setting range for an unencrypted password. For the password encryption, refer to the following.  ■Converting an operator information management file
5)	IS_PASSWD_EXP	Set whether to set the password expiration. Setting range: 0 (Without expiration)/1 (With expiration)
6)	IS_EXT_AUTH	Set whether to set the external authentication ID. Setting range: 0 (Without setting)/1 (With setting)
7)	EXT_AUTH_ID	Set the external authentication ID. The number of bytes for the external authentication ID is the value set for [EXT_AUTH_ID_LEN]. The setting method varies depending on the setting for [AUTH_TYPE]. <ul style="list-style-type: none"> When [AUTH_TYPE] is set to [ID_PASS] (Password authentication) The external authentication ID setting is not required. When converting an operator information management file exported from the GOT into a CSV file, the external authentication ID is displayed with ASCII characters. However, the ID is not recognized. When [AUTH_TYPE] is set to [EXT_AUTH] (External authentication) Set the external authentication ID with hexadecimal numbers. When [AUTH_TYPE] is set to [EXT_FP] (Fingerprint authentication) Set the external authentication ID with decimal numbers.

■ Precautions for GOT operator management information conversion tool

(1) Precautions for editing a CSV file

(a) Password encryption

To encrypt the password ([PASSWD]) of a CSV file edited on the personal computer, execute the following procedures.

1. Create an operator information management file from the CSV file by using the GOT operator management information conversion tool.
2. Convert the created operator information management file into a CSV file to encrypt the password.

(b) Displaying an unencrypted password

To set an unencrypted password for [PASSWD], handle the CSV file carefully.

The unencrypted password is displayed as it is.

To not to leak the password, set nothing for [PASSWD] and set the password on the GOT, or encrypt the file by using the method shown in (a) above.

(c) How to input a value beginning with zeros

When editing a CSV file by using spreadsheet software, the leading zeros of a value beginning with zeros can be removed.

To input a value beginning with zeros, add @ to the beginning or end of the value.

@ is not recognized as a value during conversion.

(2) Precautions for converting a file

(a) Automatic addition of @

When converting an operator information management file into a CSV file, @ may automatically be added to the set values of some setting items to not to remove zeros by using spreadsheet software.

When converting the CSV file into an operator information management file, @ is not recognized as a value. Therefore, deleting @ is not required.

4.7.5 Precautions

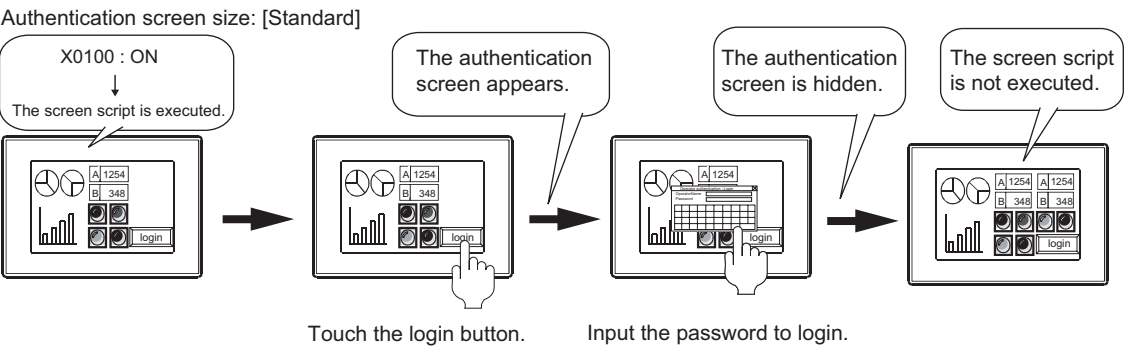
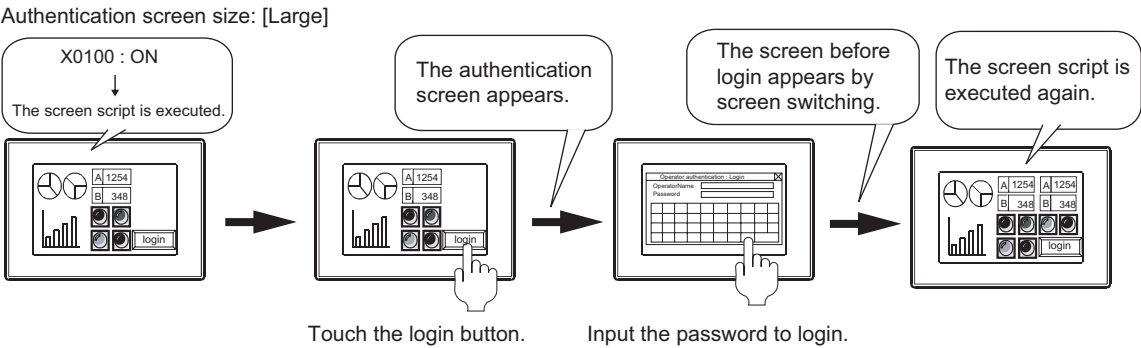
■ Precautions on drawing

(1) Operator authentication

- (a) Security level of the screen displayed at logout
When a security level (1 or more) is set for the screen displayed when logging out of the GOT, the screen for login is displayed after logging out of the GOT.
Set the security level of 0 for the screen displayed when logging out of the GOT.

☞ 4.7.1 Settings

- (b) When the authentication screen size is set to [Large]
When a login or logout touch switch is placed on a screen, do not set the screen script and the status observation function that operate with screen switching for the screen.
After authentication, the screen that is displayed before login appears again by screen switching.
Therefore, the screen script and the status observation function may be executed without intention if the functions are set for the screen.



(2) Password authentication

When the security level device value is changed with the numerical input, the key window used for the value input is deleted after the input is completed, regardless of the following settings.

- Selecting [Clear the key window and the cursor] of [Defined key action] in the [Advanced Setting] tab for the [Environmental Setting] dialog box (Key Window)

When configuring any of the following settings, the key window is redisplayed.

- Selecting [Display when touched] for [Key Window] in the [Advanced Setting] tab for the [Environmental Setting] dialog box or in the [Key Window Advanced Setting] tab for the [Screen Property] dialog box
- Selecting [Display the key window] in the [Advanced Setting] tab for the [Environmental Setting] dialog box or in the [Key Window Advanced Setting] tab for the [Screen Property] dialog box

The cursor position to redisplay the key window is the same position set for [Cursor Position] of [When screens are switched] in the [Advanced Setting] tab for the [Environmental Setting] dialog box (Key Window) or in the [Key Window Advanced Setting] tab for the [Screen Property] dialog box.

 4.5 Key Window Setting

■ Precautions on OS

(1) Operator authentication

For using the operator authentication, the required extended function OS varies according to the authentic type.

Authentic type	Required extended function
Operator authentication with password	Operator authentication
Operator authentication with external authentication device	Operator authentication, RFID
Operator authentication with fingerprint unit	Operator authentication, Fingerprint Authentication

(2) Password authentication

For using the password authentication, do not install the extended function OS (Operator authentication) on the GOT.

When the extended function OS (Operator authentication) is installed on the GOT, the password authentication cannot be used.

When the extended function OS (Operator authentication) is already installed on the GOT, delete the OS.

■ Precautions for hardware

(1) Connectable channel No.

To use the operator authentication (with the external authentication device or fingerprint unit), the external authentication device or fingerprint unit can be connected to the RS-232 interface built in the GOT (Channel No.8) only.

Do not set any channel number other than the channel No.8 in the communication settings.


Multiple external authentication devices or fingerprint units cannot be connected to one GOT.

(2) Temporary measures for failure of the external authentication device

When the external authentication device or fingerprint unit breaks down for the operator authentication (with the external authentication device or fingerprint unit), changing the authentic type to the operator authentication with the password using the utility is available in an emergency.

To change authentic types, the administrator password is required.

For how to change authentic types, refer to the following.

 User's Manual for the GOT used

■ Precautions for use

(1) Registration of external authentication ID

To use the operator authentication (with the external authentication device or fingerprint unit), set the external authentication ID for the operator information.

When the external authentication ID is not set, the corresponding user cannot log into the GOT.

When the authentic type is changed from [External auth (general)] to [Fingerprint auth] with the utility, all the external authentication IDs are deleted.

In that case, set the IDs again.

(2) Registration of fingerprint information


For the operator authentication (fingerprint authentication), a fingerprint can be registered for multiple fingerprint registration IDs.

Unauthorized login is possible depending on the usage. Before the registration, consider the operational rules for registering fingerprints.

■ Management of password and external authentication ID

(1) Solutions when forgetting the password or external authentication ID

(a) Operator authentication

Situation	Solution
When forgetting the password of an operator	Delete the operator information with the forgotten password, and register an operator information again.
When forgetting the external authentication ID When losing the external authentication device	<ul style="list-style-type: none">• Operator authentication with the external authentication device Check the operator information on the Operator information management screen, and then set the external authentication ID for the external authentication device again.• Operator authentication with the fingerprint unit Check the operator information on the Operator information management screen, and then set the fingerprint registration ID again on the Fingerprint information management screen.
When forgetting the administrator password or system security password	Install CoreOS. When CoreOS is installed, the built-in flash memory of the GOT is formatted. (Each OS, project data, and others are deleted.) Upload data to be backed up to a personal computer and memory card before installing CoreOS. For installing CoreOS, refer to the following.  User's Manual for the GOT used

(b) Password authentication

Create a project data again. (Only passwords cannot be reset.)

OVERVIEW

2 SPECIFICATIONS

3. DESIGNING OPERATION

4 COMMON SETTING

SETTING FIGURES AND OBJECTS

LIBRARY 6

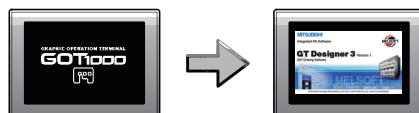
- WITH GOT

FUNCTIONS FOR DRAWING

4.8 GOT Startup Logo Setting



The GOT can display a BMP screen at the GOT startup.

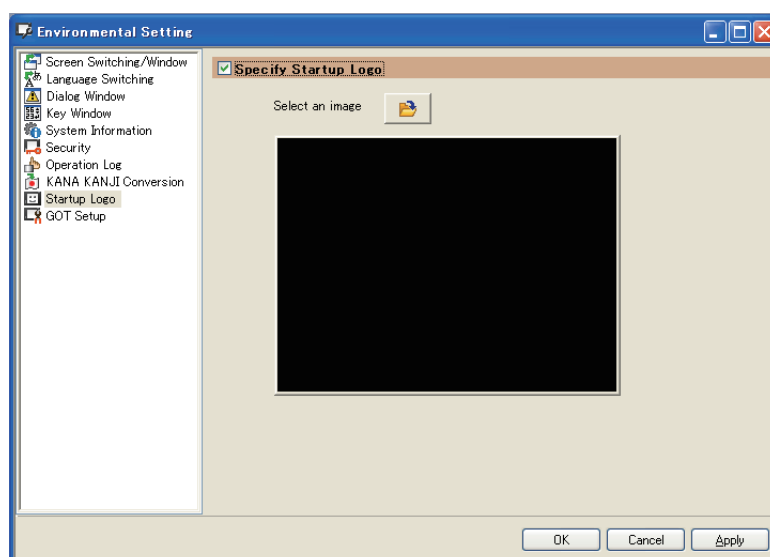


The BMP screen specified is displayed at the GOT startup.

4.8.1 Settings

Select [Common] → [GOT Environmental Setting] → [Startup Logo] from the menu to display the [Environmental Setting] dialog box.

■ Startup logo



Item	Description		Model
Specify Startup Logo	Select this item to set a BMP file to be displayed at the GOT startup. After selecting this item, set a BMP file to be displayed at the GOT startup in [Select an image].		
	Select an image	Click the button to display the [Open a file] dialog box. Select the BMP file to display the preview.	



Setting the startup logo displaying time

The startup logo displaying time can be set in the following items for the [Environmental Setting] dialog box (GOT Setup).

- [Title Display Time] in the [Display] or [Operation] tab

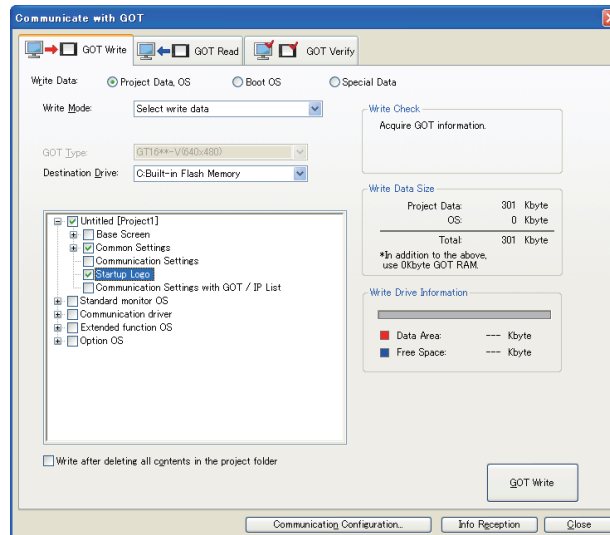
➞ 4.9 GOT Display and Operation Setting

4.8.2 Setting/deleting procedure

■ Startup logo setting procedure

(1) GT16, GT15, GT11, or GT10

1. Set a BMP file to be displayed at the GOT startup in the [Environmental Setting] dialog box (Startup Logo).
☞ 4.8.1 Settings
2. Select [Startup Logo] in the [GOT Write] tab of the [Communicate with GOT] dialog box, and write the project data in the GOT.
☞ 7.1.4 Writing and installing on GOT



3. The specified BMP file is displayed as the startup logo at the GOT startup.

(2) GT SoftGOT1000

1. Set a BMP file to be displayed at the GOT startup in the [Environmental Setting] dialog box (Startup Logo).
☞ 4.8.1 Settings
2. Start up GT SoftGOT1000, and open the created project data to display the set BMP file at the GOT startup.

■ Startup logo deleting procedure

(1) GT16, GT15, GT11, or GT10

POINT

When OS boot drive is set to [A:Standard CF Card]

When the OS boot drive is set to [A:Standard CF Card], the startup logo cannot be deleted with the method described in (b).

The startup logo can be deleted with the method described in (a) or with writing project data without the startup logo set and the OS into the CF card.

(a) How to delete the startup logo when writing the project data to the GOT

1. Clear [Specify Startup Logo] for the [Environmental Setting] dialog box (Startup Logo).
☞ 4.8.1 Settings
2. Select [Write after deleting all contents in the project folder] in the [GOT Write] tab for the [Communicate with GOT] dialog box, and write the project data with the changed settings to the GOT.
☞ 7.1.4 Writing and installing on GOT

(b) How to delete the startup logo on the drive information

1. Select [Drive Information] in the [GOT Read] tab for the [Communicate with GOT] dialog box.
☞ 7.1.5 Reading from GOT
2. Select [Startup Logo] in the tree structure, and click the [Delete] button.

(2) GT SoftGOT1000

Clear [Specify Startup Logo] for the [Environmental Setting] dialog box (Startup Logo).

☞ 4.8.1 Settings

4.8.3 Precautions

■ Precautions on drawing

(1) BMP file screen size and GOT screen size

Use the BMP file screen size smaller than the GOT screen size.

If using the BMP file screen size larger than the GOT screen size, only the portion fitted in the screen is displayed.

(2) Number of colors for displaying the startup logo

(a) When using GT16, GT15, GT11, or GT10

The colors not displayable on the GOT in use are subtracted.

Also, the startup logo is displayed in 256 colors even when the BMP file uses 256 colors or more.

(b) When using GT SoftGOT1000

The BMP file used as the startup logo is displayed in the maximum of 65536 colors.

4.9 GOT Display and Operation Setting

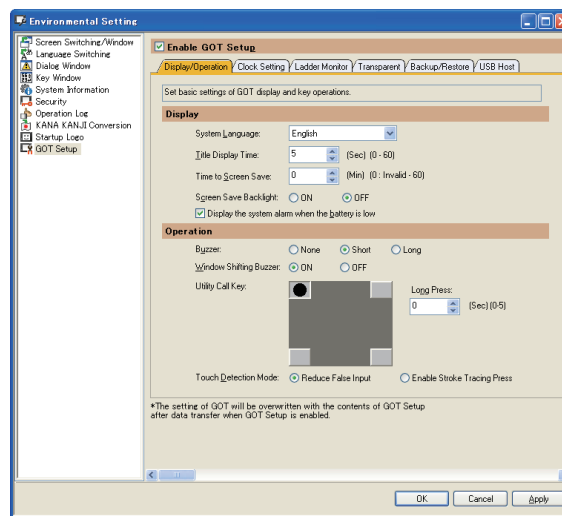


This setting is available for screen save time, whether to set the clock setting, and the buzzer sound length long or short. The settings can be configured in the utility.

4.9.1 Settings

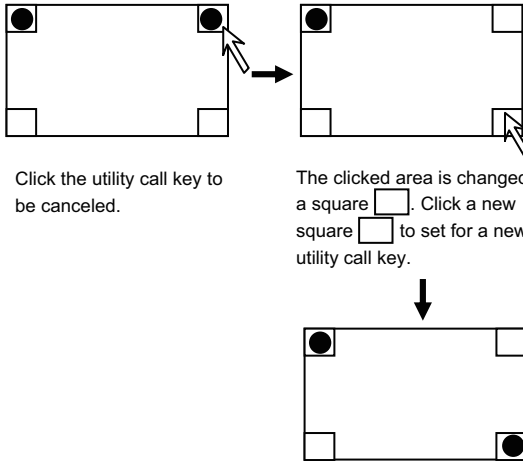
Select → [Common] → [GOT Environmental Setting] → [GOT Setup] to display the [Environmental Setting] dialog box.

■ Display/Operation tab



Item	Description		Model
Enable GOT Setup	Select this item to set the display/operation setting, the clock setting, and others for the GOT.		
Display	System Language	Select the language used for the display of system messages, utility and system alarm. (Korean is not available for the GT10.) • Japanese • English • Chinese(Simplified) • Chinese(Traditional) • Korean • German	GT16 GT15 GT11 GT10 Soft GOT 1000
	Title Display Time	Set the opening screen time when the GOT is started up. (0 to 60 seconds)	
	Time to Screen Save	Set the time to turn off the display of the monitor screen by the screen saving function. (0 to 60 minutes)	
	Screen Save Backlight	Set whether to turn off the backlight by the screen saving function in synchronization with turning off the display of the monitoring screen. • ON: Does not turn off the backlight. • OFF: Turns off the backlight. This setting behaves differently depending on the setting of the Backlight OFF output signal (System Signal 1-1.b7). 4.6 System Information Setting	GT16 GT15 GT11 GT10 Soft GOT 1000

(Continued to next page)

Item	Description		Model
Display	Display the system alarm when battery is low	Select this item to display the system alarm when the battery voltage is low.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
Operation	Buzzer	Set the length of buzzer sound when holding down the button. (None/Short/Long)	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
	Window Shifting Buzzer	Set whether to sound buzzer or not when moving a window. <ul style="list-style-type: none"> • ON: Beeps the buzzer. • OFF: Does not beep the buzzer. 	
	Utility Call Key	<p>Specify the key area for calling the utility from the monitoring screen. Specify one or two points at the four corners of the screen image. (Only one point for GT16, GT1595-X, GT SoftGOT1000, and GT1020)</p> <p>The black circle ● shows that the utility call key is specified in this area.</p> <p>By clicking a square □ area at the four corners of the screen image, the black circle ● is displayed on the clicked square □.</p> <p>By clicking the square □ with the black circle ●, the utility call key specification is canceled.</p> <p>To change the specified key area to another key area, perform the following procedure.</p>  <p>Click the utility call key to be canceled.</p> <p>The clicked area is changed to a square □. Click a new square □ to set for a new utility call key.</p> <p>The clicked area is changed to ●, and the area is set for the new utility call key.</p> <p>When the key area is set at one point, the displayed screen is switched to the utility screen by setting [Long Press].</p>	
	Long Press	When the key area is set at one point, set the time for [Utility Call Key] to switch the displayed screen to the utility screen. (0 to 5 seconds) This item is available when only one key area is set.	
	Key Reaction	Set the touch key reaction speed. (Standard,/+10ms/+20ms/+40ms/+80ms/+120ms) Configure the setting so that the GOT does not recognize the touch operation with holding down the key during the set time. Doing so can reduce the number of malfunctions when touching the touch panel unnecessarily.	
	Touch Detection Mode	For GT16 and GT1595-X, incorrect inputs (responses of parts other than the touched part) when more than 2 points are touched simultaneously on the GOT screen can be reduced. Reduce False Input: False Input Reduction: Responses of parts other than the touched part are reduced. Enable Stroke Tracing Press: Responses of parts other than the touched part are not reduced.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>

POINT

Precautions when specifying a utility call key (GT16, GT1595-X only)

When [Display Position Switching] is set to [Switch] in the [Advanced Alarm Popup Display] dialog box, set either of the following for [Utility Call Key].

- Setting the position of the utility call key to the upper-right or lower-left corner
- Setting [Long Press] of the utility call key to one or more seconds

When [Long Press] is set to 0 and the key position is set to the upper-left or lower-left corner, the operation is as described below.

If the positions of the key and the advanced alarm popup display overlap, the utility screen appears by switching the display position of the advanced alarm popup display.

For the advanced alarm popup display, refer to the following.

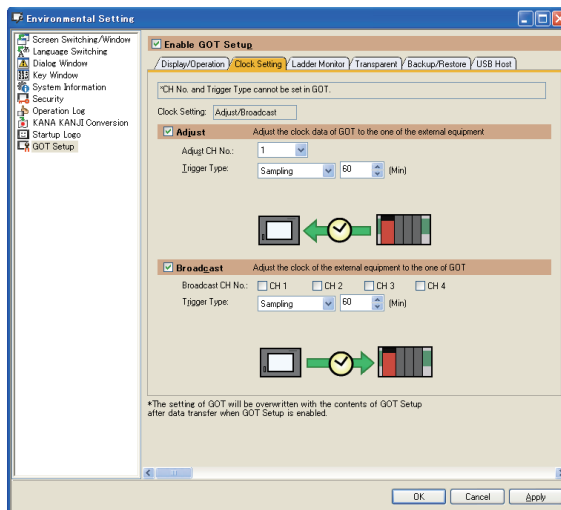
 (Functions) 10.8 Advanced Alarm Popup Display

■ Clock Setting tab

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

For how to match the clock data between the GOT and controllers, refer to the following.

 4.9.2 How to match clock data between the GOT and controllers



Item	Description		Model
Clock Setting	Displays the management method of a set clock.		GT16 GT15 GT11 GT10 Soft GOT 1000
Adjust	Select this item to adjust the GOT clock data to a controller clock data.		
	Adjust CH No.	Select the channel No. of a controller connected to the GOT to adjust the GOT clock data to the controller.	GT16 GT15 GT11 GT10 Soft GOT 1000
	Trigger Type	Select the trigger type to adjust the GOT clock data to the controller. <ul style="list-style-type: none"> • Rise: Adjusts the GOT clock data to the controller when the device rises. After selecting this item, set a trigger device. • Fall: Adjusts the GOT clock data to the controller when the device falls. After selecting this item, set a trigger device. • Sampling: Adjusts the GOT clock data to the controller by the sampling cycle. After selecting this item, set the sampling cycle. (1 to 1440 minutes) 	GT16 GT15 GT11 GT10 Soft GOT 1000

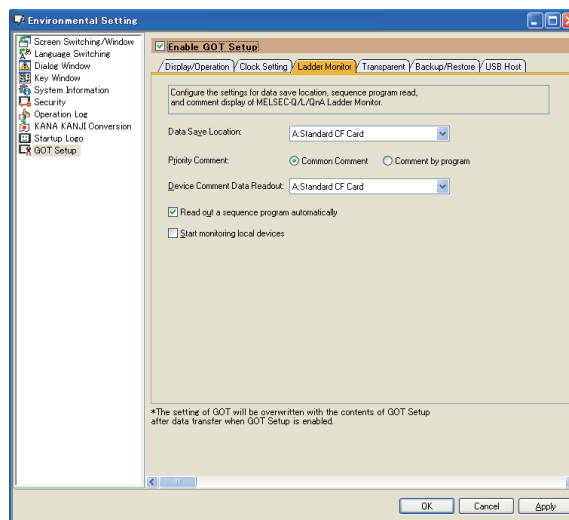
(Continued to next page)

Item	Description		Model
Broadcast	Select this item to adjust a controller clock data to the GOT clock data. This item is not available for the GT1020.		GT16 GT15 GT11 GT10 Soft GOT 1000
	Broadcast CH No.	Select the channel No. of a controller connected to the GOT to adjust the controller clock data to the GOT clock data.	GT16 GT15 GT11 GT10 Soft GOT 1000
	Trigger Type	Select the trigger type to adjust the GOT clock data to the controller. <ul style="list-style-type: none"> Rise: Adjusts the GOT clock data to the controller when the device rises. After selecting this item, set a trigger device. Fall: Adjusts the GOT clock data to the controller when the device falls. After selecting this item, set a trigger device. Sampling: Adjusts the GOT clock data to the controller by the sampling cycle. After selecting this item, set the sampling cycle. (1 to 1440 minutes) 	GT16 GT15 GT11 GT10 Soft GOT 1000

■ Ladder Monitor tab

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

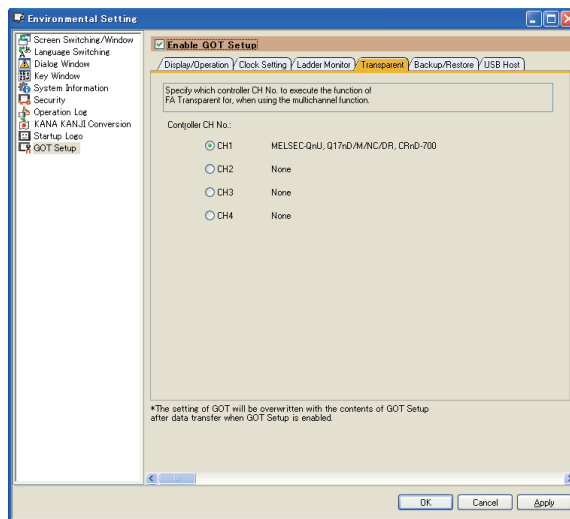
This setting is not available for the GT1555-Q, and GT1550-Q.




Item	Description	Model
Data Save Location	Set a data save location for the ladder monitor.	GT16 GT15 GT11 GT10 Soft GOT 1000
Priority Comment	Select the priority comment when a common comment and each program comment are set for one device in the sequence program.	
Device Comment Data Readout	Select the drive to be used for collectively reading device comment data stored in a CF card.	
Read out a sequence program automatically	Select this item to enable the GOT to automatically read the sequence program by a controller when starting the ladder monitor.	
Start monitoring local devices	Select this item to start monitoring local devices when starting the ladder monitor.	

■ Transparent tab

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

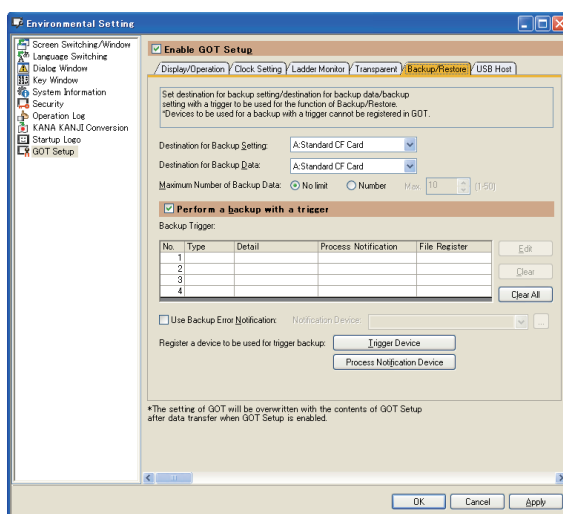







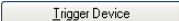



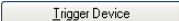


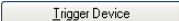



Item	Description	Model
Controller CH No.	To use the multi-channel function, select the target channel No. for the FA transparent function. For the FA transparent function, refer to the following.  GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3	GT16 GT15 GT11 GT10 Soft GOT 1000

1	OVERVIEW
2	GT Designer3 SPECIFICATIONS
3	GT Designer3 OPERATION
4	COMMON SETTING
5	EDITING AND SETTING FIGURES AND OBJECTS
6	LIBRARY
7	COMMUNICATION WITH GOT
8	USEFUL FUNCTIONS FOR DRAWING

■ Backup/Restore tab

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000



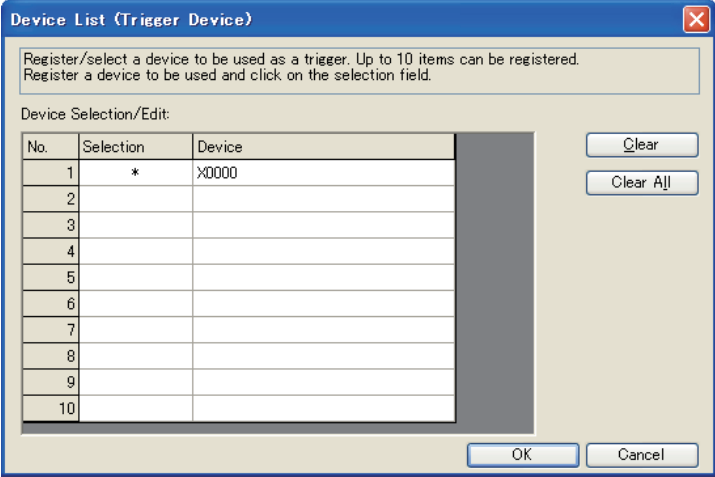
Item	Description	Model			
Destination for Backup Setting	Set the storage locations for the backup settings.				
Destination for Backup Data	Set the storage location that the setting data for backups is stored.				
Maximum Number of Backup Data	Select the maximum stored number of the backup data. <ul style="list-style-type: none">• No limit: Backups the data in the specified drive selected for [Destination for Backup Data] up to maximum data capacity.• Number: Backups the data up to the set number of the backup data. After selecting this item, set the maximum stored number. (1 to 50)				
Perform a backup with a trigger	Select this item to set a backup trigger.				
Backup Trigger	Displays the backup trigger settings in the list.  : Click this button to display the [Trigger Setting] dialog box. The selected backup trigger setting can be edited.  (1) Trigger Setting dialog box  : Click this button to delete the selected backup trigger setting.  : Click this button to delete all the trigger settings.				
Use Backup Error Notification	Select this item to store the backup trigger number in the notification device if an error occurs during the backup. After selecting this item, set [Notification Device].				
Register a device to be used for trigger backup	Register the devices used for the backup trigger. Up to 10 devices can be registered for the trigger devices and process notification device, respectively. <table><tr><td></td><td>Click this button to display the [Device List(Trigger Device)] dialog box.  (2) Device List dialog box</td></tr><tr><td></td><td>Click this button to display the [Device List(Process Notification Device)] dialog box.  (2) Device List dialog box</td></tr></table>			Click this button to display the [Device List(Trigger Device)] dialog box.  (2) Device List dialog box	
	Click this button to display the [Device List(Trigger Device)] dialog box.  (2) Device List dialog box				
	Click this button to display the [Device List(Process Notification Device)] dialog box.  (2) Device List dialog box				


(1) Trigger Setting dialog box

Item	Description		Model
No.	Displays the editing backup trigger setting ID.		
Trigger Type	Select the trigger type of the backup trigger. <ul style="list-style-type: none"> • Rise: Backups the data when the trigger device rises. Set [Trigger Device]. • Time: Backups the data with the time that is specified in the time setting. Set [Time Setting]. 		
	Trigger Device	Select the trigger device from devices that is set in the [Device List(Trigger Device)] dialog box. Click the [Edit] button to display the [Device List(Trigger Device)] dialog box. (2) Device List dialog box	
	Time Setting	Set the time and days that the GOT executes the backup. Multiple days can be set. Click the [Daily] button to select all days.	
Set Process Notification Device	Select this item to select a device to notify that the backup is on processing. Select the process notification device from devices that is set in the [Device List(Trigger Device)] dialog box. Click the [Edit] button to display the [Device List((Process Notification Device))] dialog box. (2) Device List dialog box		
Target File Register for Difference Check	Select this item to check if data stored in file registers are changed when the backup is executed. QCPU User's Manual (Function Explanation, Program Fundamentals) For file registers, refer to the following. QCPU User's Manual (Function Explanation, Program Fundamentals)		

(2) **Device List dialog box**

Set and select devices used as the trigger device or the process notification device.



Item	Description	Model
Selection	Select devices used as the trigger device and the process notification device. Selected devices are displayed with [*]. This item is available only when opening by the [Trigger Setting] dialog box.	<div><div>GT16GT15</div><div>GT11GT10</div><div>SerGOT1000</div></div>
Device	Select devices used as the trigger device and the process notification device. Up to 10 devices can be set.  5.3.1 Device setting	
<div>Clear</div>	Click this item to delete the clicked No. of settings.	
<div>Clear All</div>	Click this item to delete all of settings.	

USB host tab

GT 16

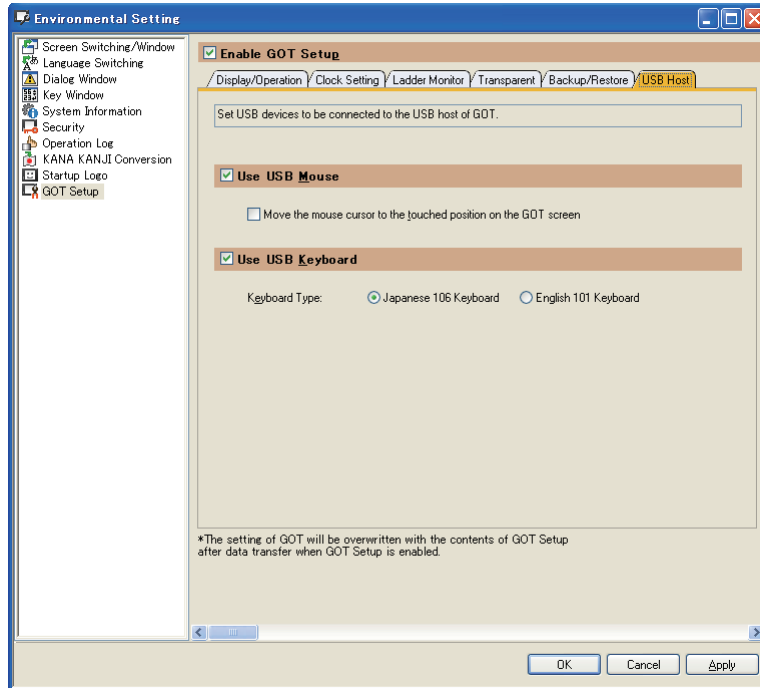
GT 15

GT 11

GT 10

Soft GOT 1000

Setting of a USB mouse or USB keyboard actions when using the USB mouse/keyboard function is available.



Item	Description		Model
Use USB Mouse	Select this item to enable the USB mouse connected to the USB interface (host) of the GOT.		<div><div>GT16</div><div>GT15</div><div>GT11</div><div>GT10</div><div>SoftGOT1000</div></div>
	Move the mouse cursor to the touched position on the GOT screen	Select this item to move the cursor to the position where the user touched on the GOT screen.	
Use USB Keyboard	Select this item to enable the USB keyboard connected to the USB interface (host) of the GOT.		
	Keyboard Type	Select the keyboard type to be connected to the USB interface (host) of the GOT. (Japanese 106 Keyboard/English 101 Keyboard)	

Handy GOT tab

GT 16

GT 15

GT 11

GT 10

Soft GOT 1000

This setting is available only when using the GT1155HS-QSBD and GT1150HS-QLBD.
For functions and settings relevant to Handy GOT, refer to the following.

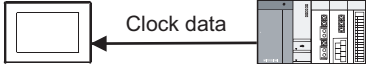
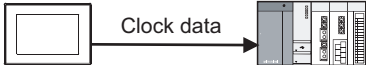
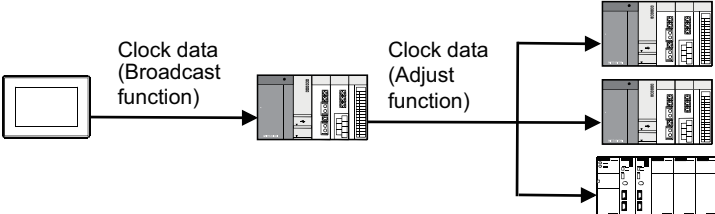
[Handy GOT User's Manual](#)

4.9.2 How to match clock data between the GOT and controllers

■ GOT clock management

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

The following types show the GOT clock management method.

Clock management	Description	Model
Adjust	Adjusts the GOT clock data to the controller clock data. 	
Broadcast	Notifies the controller clock data to the GOT clock data. Not available for the GT1020. 	GT16 GT15 GT11 GT10 Soft GOT 1000
Adjust/Broadcast	Uses the adjust function and the broadcast function. 	

POINT

Controllers available for the adjust function or the broadcast function

Only controllers equipped with a clock are available for the adjust function or the broadcast function.
For controllers equipped with a clock and the connection type, refer to the following.

☞ GOT1000 Series Connection Manual for GT Works3 and a controller used

(1) Adjust function

The time of the GOT clock data is adjusted to that of the controller clock data when the GOT is turned on.
No battery is required because the GOT does not hold the clock data while the GOT is turned off.
To set the controller clock data, refer to the manual of the controller used.

(2) Broadcast function

The time of the controller clock data is adjusted to that of the GOT at the timing of triggering.
A battery must be installed because the GOT must hold the clock data while the GOT is turned off.
To set the GOT clock data, use the utility.
☞ User's Manual for the GOT used
To use the multi-channel function, the clock data of multiple controllers can be adjusted to the GOT clock data.

HINT

How to hold the clock data while the GOT is turned off

To hold the GOT clock data while the GOT is turned off, install a battery on the GOT.

(3) Adjust/Broadcast function

The following shows an example when using the adjust function and the broadcast function.

- To use the multi-channel function, adjust the clock data of the GOT and multiple controllers to that of one controller.
- Set triggers for the adjust function and the broadcast function, respectively, and use the functions according to the situation.

■ Changing clock data by using GOT special register (GS)



The GOT constantly writes clock data into the GOT special register (GS).

The GOT clock data can be changed from the numerical input by using the clock data stored in the GOT special register (GS) and the Time change signal.

(1) GOT special register (GS)

(a) Read device

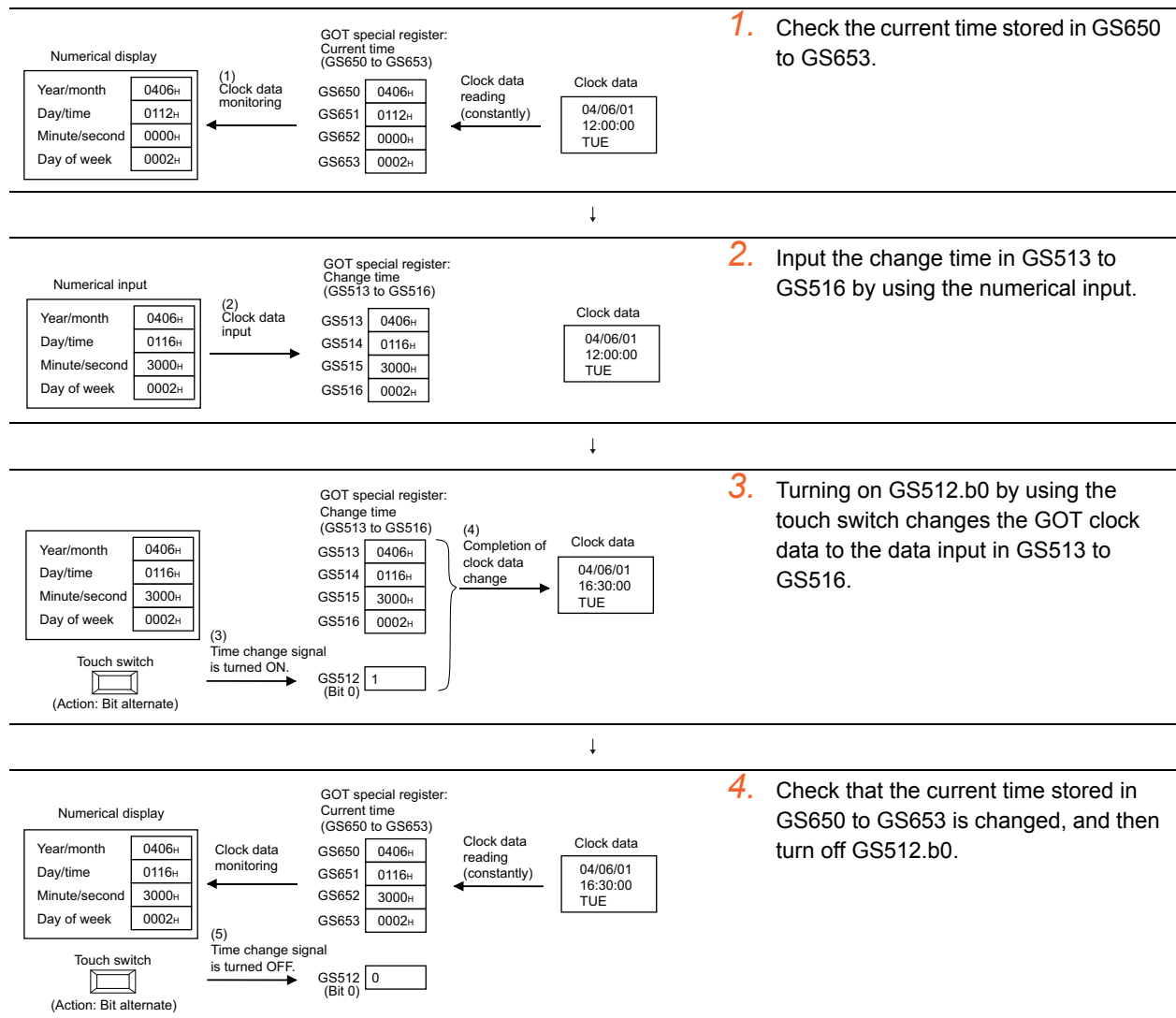
Function	Device	Bit number	Description	Model
Time change signal	GS512	b0	Turning on the bit changes the GOT clock data to the data set for the change time (GS513 to GS514).	
Change time	GS513	b8 to b15	lower 2 digits of the year (data format: BCD)	
		b0 to b7	month (data format: BCD)	
	GS514	b8 to b15	day (data format: BCD)	
		b0 to b7	hour (data format: BCD)	
	GS515	b8 to b15	minute (data format: BCD)	
		b0 to b7	second (data format: BCD)	
	GS516	b8 to b15	None	
		b0 to b7	Day of week (data format: BCD) 0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday	

(b) Write device

Function	Device	Bit number	Description	Model
Current time	GS650	b8 to b15	lower 2 digits of the year (data format: BCD)	
		b0 to b7	month (data format: BCD)	
	GS651	b8 to b15	day (data format: BCD)	
		b0 to b7	hour (data format: BCD)	
	GS652	b8 to b15	minute (data format: BCD)	
		b0 to b7	second (data format: BCD)	
	GS653	b8 to b15	None	
		b0 to b7	Day of week (data format: BCD) 0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday	

(2) Changing clock data by using GOT special register

The following shows an example for changing clock data by using the numerical display and numerical input.



Adjusting clock data between GT SoftGOT1000 and controller

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

Because GT SoftGOT1000 uses the clock data of a personal computer, the adjust function and broadcast function are not available.

To adjust the clock data between GT SoftGOT1000 and a controller, the user must adjust the time.

The clock data of GT SoftGOT1000 is always written to a GOT special register (GS).

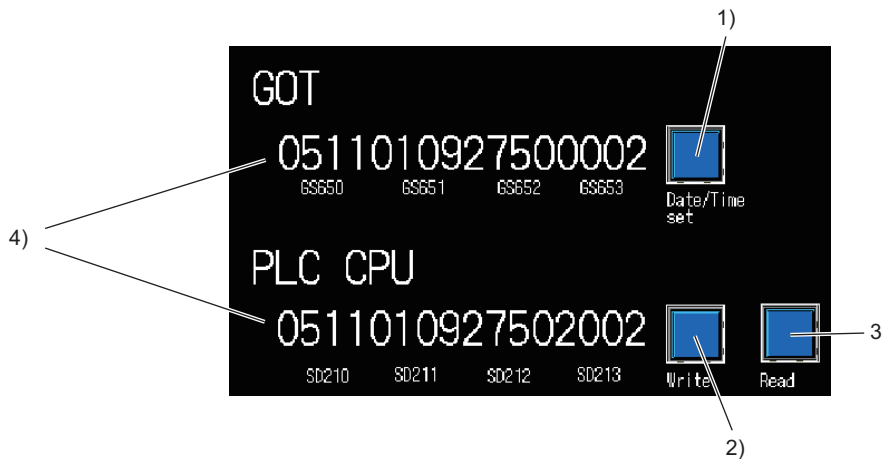
By writing the clock data stored in a GOT special register (GS) to the controller, the time of the controller can be adjusted to that of GT SoftGOT100.

An example of time adjustment operation is explained below using the method to display the clock data of GT SoftGOT1000 and the controller on the same screen.

Example) When connecting the GT SoftGOT1000 to a QCPU (Q mode)

(1) Screen image

9h 27' 50", November 1, 2005 Tuesday








Number	Description
1)	Touching this switch stores the GOT clock data (GS650 to GS653) in the devices (SD210 to SD213) of the controller.
2)	Touching this switch writes the set clock data to the controller.
3)	Touching this switch reads the current clock data from the controller.
4)	Displays the GOT clock data and the controller clock data. Year (lower two digits), Month, Day, Hour, Minute, Seconds, Year (upper two digits) (with GOT, "00" is always displayed), Day of week

(2) Operation

1. Touch the switch 3) to display the controller clock data in 4).
2. Touch the touch switch 1) to store the GOT clock data (GS650 to GS653) to the devices (SD210 to SD213) in the controller.
In 4), the values for GS650 to GS653, and SD210 to SD213 are displayed.
3. Touch the touch switch 2) to change the controller clock data.

(3) Setting details

Item	Object	Description
	Switch	Set the following operations in the [Action] tab. <ul style="list-style-type: none"> • Operation1: word Device: SD210, Data Type: BCD16, [Indirect] of [Type](GS650) • Operation2: word Device: SD211, Data Type: BCD16, [Indirect] of [Type](GS651) • Operation3: word Device: SD212, Data Type: BCD16, [Indirect] of [Type](GS652) • Operation4: word Device: SD213, Data Type:BCD16, [Fixed] of [Type](2000), [Indirect] of [Type](GS653)
	Bit switch	Set the following items in the [Device] tab. <ul style="list-style-type: none"> • Device: SM213 • [Action]: Alternate • [Bit] of [Lamp](SM213)
	Bit switch	Set the following items in the [Device] tab. <ul style="list-style-type: none"> • Device: SM210 • Action: Alternate • [Bit] of [Lamp](SM210)
	Numerical Input	Set the following items in the [Device/Style] tab. <ul style="list-style-type: none"> • Device: GS650 to GS653 • Data Type: BCD16 • Unsigned decimal number • Digits: 4 • Data type: 2 × 2
	Numerical Input	Set the following items in the [Device/Style] tab. <ul style="list-style-type: none"> • Device: SD210 to SD213 • Data Type: BCD16 • Format: Unsigned decimal number • Digits: 4 • Size: 2 × 2

4.9.3 Precautions

■ GT Designer3 settings and GOT settings

The items set in [GOT Setup] for the [Environmental Setting] dialog box can be changed with the GOT utility. After changing the settings with the utility, write project data in the GOT. Doing so enables the data set for the [Environmental Setting] dialog box in GT Designer3.

After writing project data to the GOT, change the settings with the utility. Doing so enables the data changed with the utility.

When the project data are read by the GOT, the data set in the utility are reflected.

4.10 Station No. Switching Device Setting



The GOT switches the monitored station numbers by using the station No. switching device.

In a system with the same controlled multiple machines to a network, the multiple machines can be monitored on the same monitor screen by switching the station numbers.

As the number of object to be set can be reduced, the built-in memory of GOT can be saved.

Switching station No. can be carried out for the station No. that can be monitored by GOT.

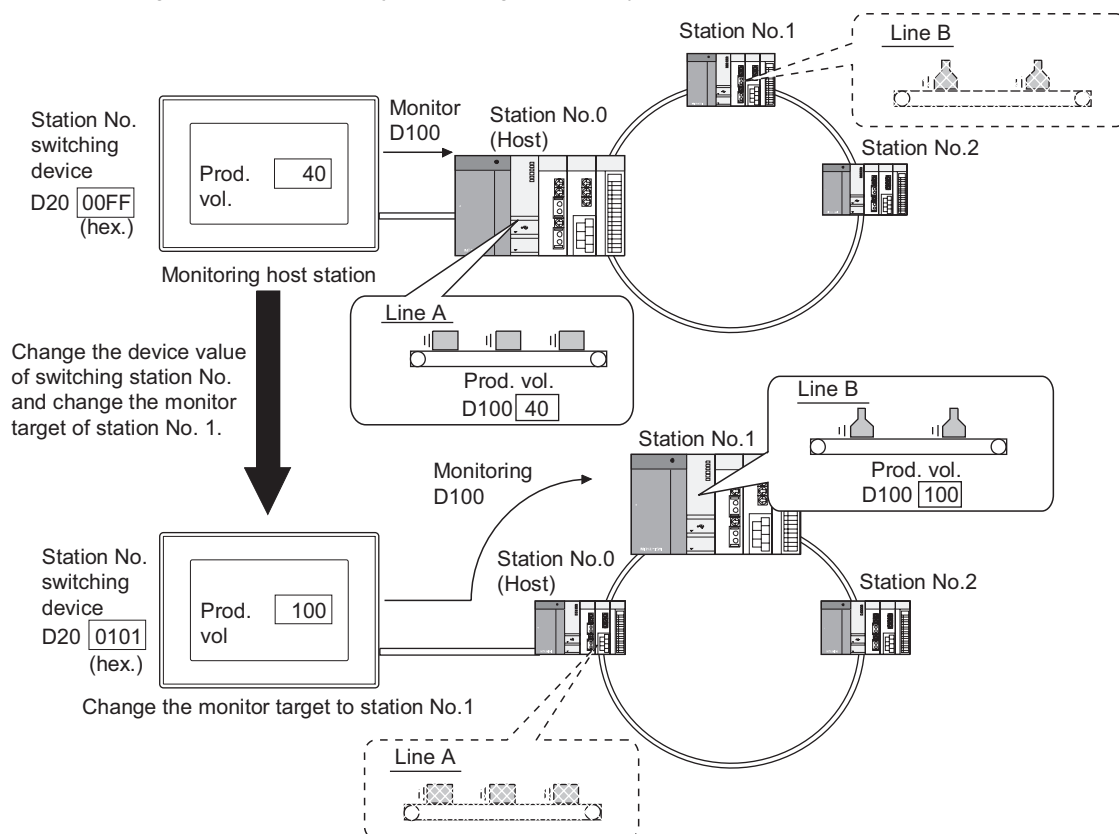
For more information on station No. that can be monitored by GOT (accessible range), Refer to the following.

➞ GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3

■ Switching station numbers

The GOT monitors a station No. with a value stored in the station No. switching device.

When switching station numbers, objects and figures displayed on the GOT are redrawn.



The station No. can be specified in either of the following methods. The station No. is stored into the station No. switching device by the methods.

- Storing a station No. in the station No. switching device
- Switching station numbers with a touch switch (Change Station No, Switch)

POINT

Controllers connected to the GOT and types for specifying station numbers

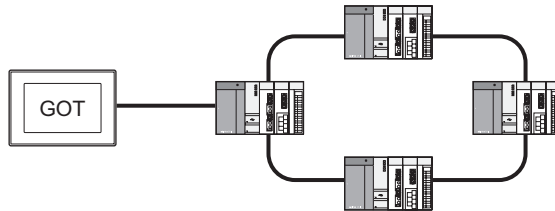
The types for specifying station numbers differ according to controllers connected to the GOT.

➞ Appendix.2.3 Setting device of each controller

(1) Storing a station No. in the station No. switching device

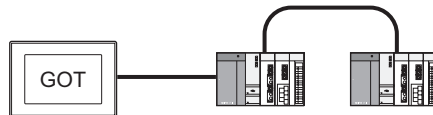
Station No. can be switched if a value is stored in the device for switching station No. as follows:.

- When GOT has been incorporated into the data link system (MELSECNET/B, (II)) or CC-Link system



Switching target	Storage value (hexadecimal)
Master station	0000H
Local station (1 to 64)	0001H to 0040H
Station No. set for each object (The same monitor target is set if "Switching station No." has not been set.)	00FEH
Host (connection target) monitor	00FFH

- When the GOT is included in a network system (MELSECNET/H, MELSECNET/10) or Ethernet system



Switching target	Storage value (hexadecimal)
Network No. (1 to 255)	Relation between change target and storage value is as follows: When monitoring PLC station No: 18, network No.: 1 0112H └─ PLC station No. └─ Network No.
PLC station No. (1 to 64)	
Station No. set for each object (The same monitor target is set if "Switching station No." has not been set.)	00FEH
Host station (connection target) monitor	00FFH

POINT

Setting when connecting Ethernet

For the Ethernet connection, the Ethernet setting is required on GT Designer3.

Refer to the following manual for details of the setting method.

☞ GOT1000 Series Connection Manual for GT Works3 and a controller used

(2) Switching station numbers with a touch switch (Change Station No, Switch)

Touch the touch switch dedicated to switching station No. to switch the station No.

☞ (Functions) 2. TOUCH SWITCH

POINT

When using GOT data register (GD) for switching station No. device

Module connected to station No.0 of network No.0 is monitored until setting the value of switching station No. device (GD) after turning on GOT.

Therefore, the system alarm [402 Communication timeout. Confirm communication pathway or modules.] occurs depending on the connection type.

To not occur the system alarm, create the initial displaying screen and set the value to switching station No. device in the screen.

4.10.1 Settings

1. Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] dialog box.
2. Select [Station No. Switching], and set the required items.

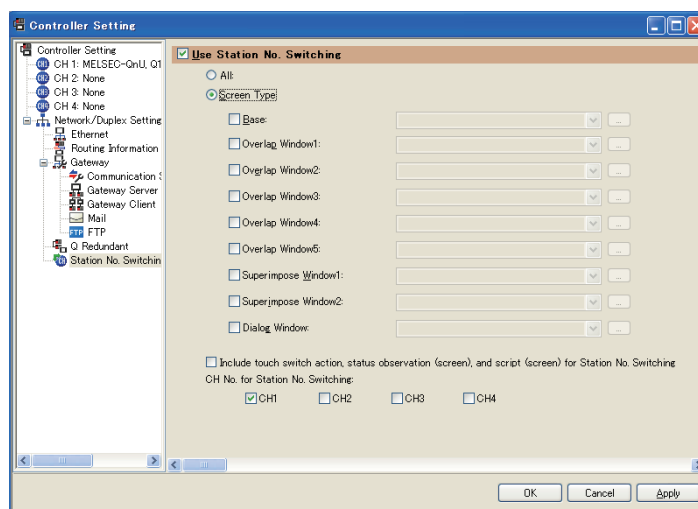
POINT

Before setting station No. switching device

To switch station numbers, set whether to enable or disable the function of the switching station No. for each base screen or window screen.




To use the function, select [Switch Station No.] for the [Screen Property] dialog box for each screen.

☞ 3.7 Creating/Opening/Closing Screen



Item	Description	Model
Use Station No. Switching	Select this item to use the station No. switching device.	GT16 GT15 GT11 GT10 SoRGOT 1000
All	Select this item to set the station No. switching device for each project.	
Screen Type	<p>Select this item to set the station No. switching device for each screen. Set the station No. switching device for the selected screen. Example) Monitoring different station numbers between a base screen and an overlap window 1</p> <p>Example:</p> <p>Switching station No. device (hexadecimal)</p> <ul style="list-style-type: none"> ● Base screen : 00FFH → : 0101H ● Overlap window1 : 00FFH → : 0103H 	
Base	Select this item to set the station No. switching device for the base screen.	
Overlap Window1	Select this item to set the station No. switching device for the overlap window 1.	
Overlap Window2	Select this item to set the station No. switching device for the overlap window 2.	

(Continued to next page)

Item	Description		???
Screen Type	Overlap Window3	Select this item to set the station No. switching device for the overlap window 3.	
	Overlap Window4	Select this item to set the station No. switching device for the overlap window 4.	
	Overlap Window5	Select this item to set the station No. switching device for the overlap window 5.	
	Superimpose Window1	Select this item to set the station No. switching device for the superimpose window 1.	
	Superimpose Window2	Select this item to set the station No. switching device for the superimpose window 2.	
	Dialog Window	Select this item to set the station No. switching device for the dialog window.	
Include touch switch action, status observation (screen), and script (screen) for Station No. Switching	Select this item to be targets a touch switch, status observation (for each screen), and script (for each screen) for switching station numbers.		
CH No. for Station No. Switching	To use the multi-channel function, the selected channels are the target channels for switching station numbers.		

POINT

Actions of the touch switch function, status observation function, or script function

When using the device of which station No. has been switched to perform all actions of the touch switch function, status observation function, and script function, select [Include touch switch action, status observation (screen), and script (screen) for Station No. Switching].

Object	Function	Monitor/Action object
Touch switch function	ON/OFF figure to display status	Device of which station No. has been switched.
	Device for indirect comment	
	Action at touch	
Status observation function (screen)	Trigger device	Device of which station No. has been switched.
	Action when condition success	Device of which station No. set in GT Designer3
Script function	Screen script, object script	Device of which station No. has been switched.
	Script function monitor device	
	Script function write device	Device of which station No. set in GT Designer3


4.10.2 Relevant settings

The station No. switching is available for the relevant settings other than the specific settings. The following shows the function that is available by the relevant settings.

■ GOT Environmental Setting(Key Window)/Screen Property

The function can be set in each screen (Screen Property).

 3.7 Creating/Opening/Closing Screen

Function	Setting item	Model
Setting whether to switch station numbers for each screen	[Switch Station No.] on the [Basic] tab	

4.10.3 Precautions

■ Controller compatible with "Switching station No."

"Station No. switching" is available only when a controller shown below is monitored.

- | | | | |
|---|------------------|--------------------------|------------|
| • MELSEC-Q | • MELSEC-L | • MELSEC-QnA | • MELSEC-A |
| • Third party PLCs (Only via the Ethernet connection) | | • Temperature controller | • Inverter |
| • Servo amplifier | • CNC connection | • Robot controller | |

■ Functions not available for switching screen numbers

The devices of the following functions are not compatible with "Switching station No."

GOT monitors the device of the station No. set in each function.

Note that if the object compatible with "Switching station No." has been set in the same screen, GOT will monitor the different station No. depending on the object when carrying out "Switching station No."

- | | | | |
|------------------------------------|---|---------------------------------|--------------------------------|
| • Screen switching function | • Switching station No. function | • Clock function | • System information function |
| • Advanced user alarm observation | • Advanced system alarm observation | • Alarm history display | • Advanced alarm popup display |
| • User alarm display ^{*1} | • Line graph ^{*2} | • Trend graph ^{*1} | • Scatter graph ^{*1} |
| • Historical Trend Graph | • Operation log function | • Logging function | • Recipe function |
| • Advanced recipe function | • Status observation function ^{*3} | • Script function ^{*4} | • Video/RGB display function |
| • Report function | • Hard copy function | • Gateway function | • MES interface function |

^{*1} When [Store Memory] is not set, the GOT monitors the device of the station No. set as the switching target.

When [Store Memory] is not set, the GOT monitors the device of the station No. set in the object.

^{*2} When [Locus] is not set, the GOT monitors the device of the station No. set as the switching target.

When [Locus] is set, the GOT monitors the device of the station No. set as the object.

^{*3} Only when the settings have been made for each project, GOT monitors the device of the station No. set in the object.

GOT monitors the device of the station No. set as the switching target when the settings have been made for each screen.

^{*4} The screen script and object script monitor the device of the station No. after switching.

The project script monitors the device of the station No. set at the object.

■ Re-drawing the screen after switching station

The screen objects are re-drawn immediately after switching the station No. Thus, the object displaying speed may decrease temporarily.

■ Switching station No. during input operation

When inputting a numeric value or ASCII, finish the input operation before switching the station No.

If station No. is switched during inputting operation, the correct data may not be written in the monitored device.

To write a station No. from the controller to a station No. switching device, use the Key window output signal (system signal 2-1. b11), and complete the input operation.

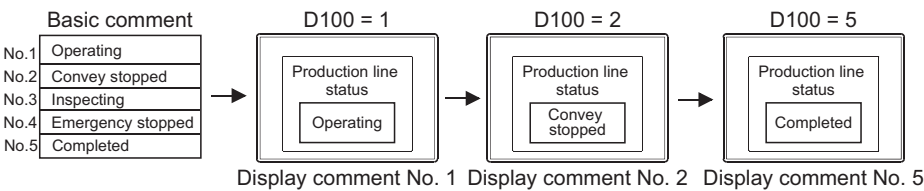
The key window output signal is turned on while the key window is displayed.

4.11 Comment Setting



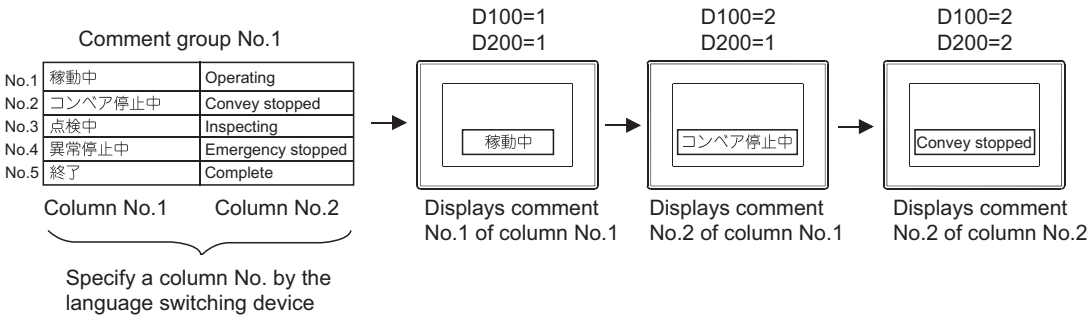
Comments are character strings registered by the user using GT Designer3.
 Comments can be displayed with objects by registering the objects as a basic comment or a comment group in advance.

Example 1) Displaying comments registered in basic comments by the comment display
 The comments registered as basic comments are displayed.
 The comment No. corresponding to the monitored device value is displayed.



Example 2) Displaying comments registered in a comment group by the comment display
 The comments registered in comment group are displayed.
 The comment No. corresponding to the monitored device value is displayed.
 The column of the comment displayed can be switched by the language switching device.

4.3 Language Switching Device Setting



■ Specifications of basic comments and comment groups

The following shows the specifications of the basic comment and comment group.

Item	Specifications	
	Basic comment	Comment group
Max. No. of groups	1	Up to 255
Max. No. of comments	Up to 32767	Up to 3276 for each comment group
No. of comment columns	1	10 for each comment group
Title	Change not allowed (Fixed as [Basic Comment])	Can be changed (Up to 32 characters regardless of 1byte or 2byte characters)
KANJI region specification	None (Japan only)	Japan, China (GB) - Mincho, China (Big5) - Gothic
[Edit Comment] dialog box	Up to 10 of basic comments and comment groups can be displayed simultaneously (This number varies depending on the performance of the personal computer used.)	
Applicable object	Touch switch, Comment display, Data list, Alarm history, User alarm display, Report function	Touch switch, Lamp (Bit/Word), Comment display, Advanced user alarm display, Alarm history display, Advanced alarm popup display, Report function
Font	16dot (Standard/HQ Mincho)	12dot (Standard/HQ Mincho/HQ Gothic) 16dot (Standard/HQ Mincho/HQ Gothic)
Comment	Up to 512 characters for each comment regardless of 1byte or 2byte characters	
Type of importable or exportable file	Test file, CSV file, Unicode text file	CSV file, Unicode text file

Up to 32767 comments can be registered.

Comment No.	Comment	Text	Invert	Blink	HQ	Style	Solid
1	LINE A Normal operation	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>
2	LINE B Normal operation	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>
3	LINE A Emergency stop	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>
4	LINE B Emergency stop	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>

Basic Comment

Up to 255 groups can be registered.

Up to 32767 comments can be registered.

Column No.	Comment No.	Comment	Text	Invert	Blink	High Quality Font	Style	Solid
1	1	Aライン提供コンベア停止	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>
2	2	非常停止リミット作動	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>
3	3	加工品リミット作動せず	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>
4	4	加工機-1の油圧低下	<input type="checkbox"/>	No	None	<input type="checkbox"/>	Regular	<input type="checkbox"/>

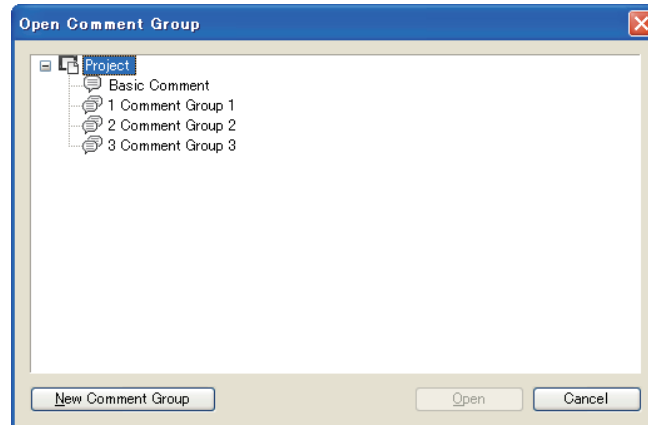
Up to 10 columns can be set

Comment Group

4.11.1 Displaying the [Comment List] dialog box

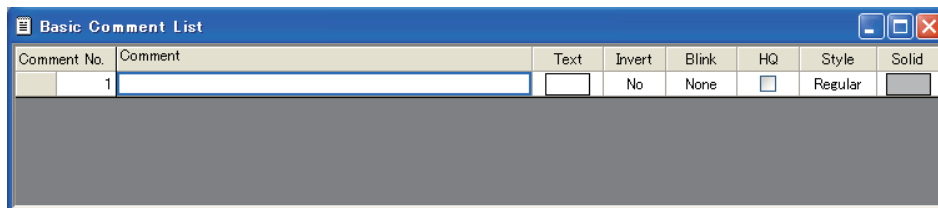
■ Basic comment

1. Select [Common] → [Comment] → [Open] from the menu to display the [Open Comment Group] dialog box.



2. Select [Basic Comment], and click the [Open] button to display the [Basic Comment List] dialog box. For operation of the [Basic Comment List] dialog box, refer to the following.

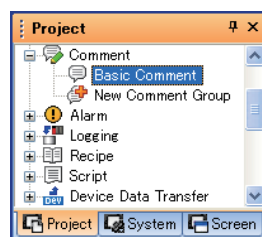
☞ 4.11.2 Basic operations for comment registration



HINT

Operating by the project tree

Double-click [Basic Comment] in the project tree to display the [Comment List] dialog box.



■ Comment group

(1) Creating a new comment group

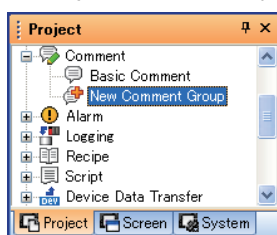
1. Select [Common] → [Comment] → [New Comment Group] from the menu to display the [Comment Group Property] dialog box.

☞ 4.11.2 ■Basic operations for comment registration (1) Comment Group Property dialog box



Operating by the project tree

Double-click [New Comment Group] in the project tree to display the [Comment Group Property] dialog box.



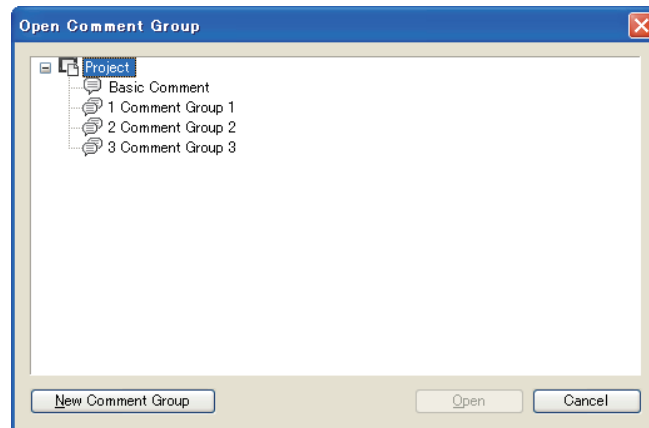
2. Set the required items, and click the [OK] button to display the [Comment List] dialog box. For operation of the [Comment List] dialog box, refer to the following.

☞ 4.11.2 Basic operations for comment registration

Column No.	Comment No.	Text	Invert	Blink	High Quality Font					
					12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid
1	1		No	None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Regular	<input checked="" type="checkbox"/>


(2) Displaying a existing comment group

1. Select [Common] → [Comment] → [Open] from the menu to display the [Open Comment Group] dialog box.



2. Select a comment group to be opened, and click the [OK] button to display the [Comment List] dialog box for the selected comment group.

For operation of the [Comment List] dialog box, refer to the following.

 4.11.2 Basic operations for comment registration

No. 1 Comment Group 1 Comment List											
Column No.						High Quality Font					
Comment No.	1	2	Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid
1	Aライン提供コンベア停止	A-Line supply conveyer stopped.	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>
2	非常停止リミット作動	Emergency stop limit switch operate.	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>
3	加工品リミット作動せず	Product limit does not operate.	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>
4	加工機-1の油圧低下	Hydraulic pressure of finishing machine 1 is low.	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>

OVERVIEW



SPECIFICATIONS



4 COMMON SETTING

(1) Comment Group Property dialog box

Select [Common] → [Comment] → [New Comment Group] from the menu to display the [Comment Group Property] dialog box.

Item	Description	Model
Group No.	Set a group No. of the comment group.	Gr16 Gr15 Gr11 Gr10
Title	Set a title of the comment group (up to 32 characters).	SoftGOT 1000
Column No.	Select the column No. to set multiple comment columns.	
KANJI Region	<p>Select the kanji region used for each comment.</p> <p>☞ 2.5 Specifications of Applicable Characters</p> <p>Japan: Japanese kanji characters are displayed.</p> <p>China(GB)-Mincho: Chinese characters (simplified) are displayed.</p> <p>China(Big5)-Gothic: Displays traditional Chinese characters.</p> <p>Example: Difference between "Japan" and "China (GB) - Mincho"</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Japan </div> <div style="text-align: center;">  China (GB) - Mincho </div> </div>	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

POINT

Kanji region setting

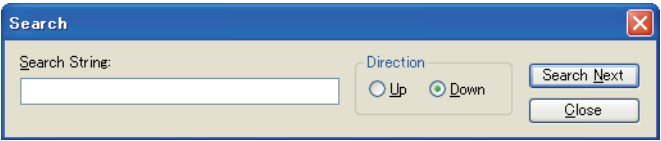
This setting is necessary when using kanji for each comment column.

However, because this is not the language setting, you do not have to change the setting from the default (Japan) if using a language irrelevant to kanji (e.g. English).

Column No.	Comment No.	Comment
1	1	Aライン供給コンベア停止。 A-line supply conveyer stopped.
2	2	非常停止リミット作動。 Emergency stop limit switch operated.
3	3	加工品リミット油圧低下。 Product limit switch does not operate.
4	4	加工機-1の油圧低下。 Hydraulic pressure of finishing machine 1 is low.

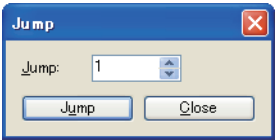
English can be entered and displayed even if the kanji region is set to Japan.

(2) Search dialog box



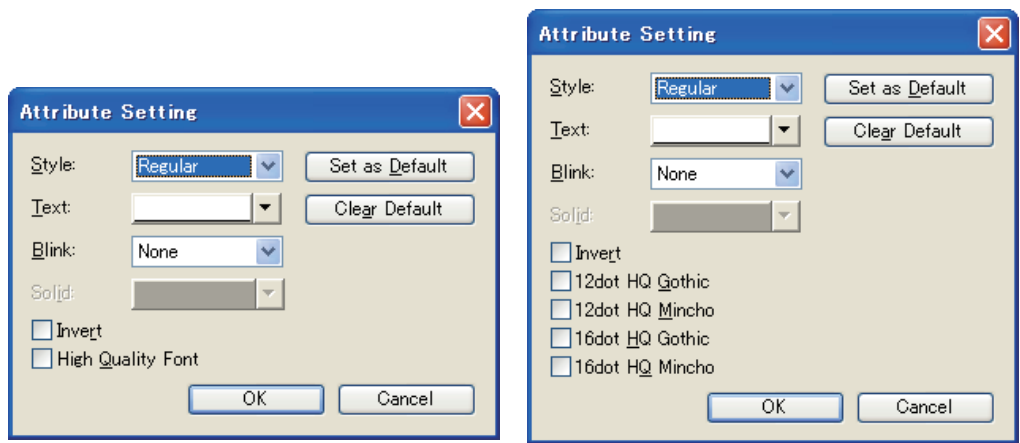
Item	Description	Model
Search Setting	Enter character strings to be searched.	<div>GT16GT15</div> <div>GT11GT10</div> <div>SONGOT</div> <div>TODD</div>
Direction	Select the search direction.	
<div>Search Next</div>	Searches for the character strings entered in [Search Next].	
<div>Close</div>	Closes the [Search] dialog box.	

(3) Jump dialog box





Item	Description	Model
Jump	Specify a jumping target comment No.	<div>GT16GT15</div> <div>GT11GT10</div> <div>SONGOT</div> <div>TODD</div>
<div>Jump</div>	Changes the row of the comment No. specified in [Jump] to the selected status.	
<div>Close</div>	Closes the [Jump] dialog box.	

- (4) **Attribute Setting dialog box**
 Set comment attributes (e.g. style, text color).



Attribute Setting Dialog box for Basic Comment Attribute Setting dialog box for Comment Group

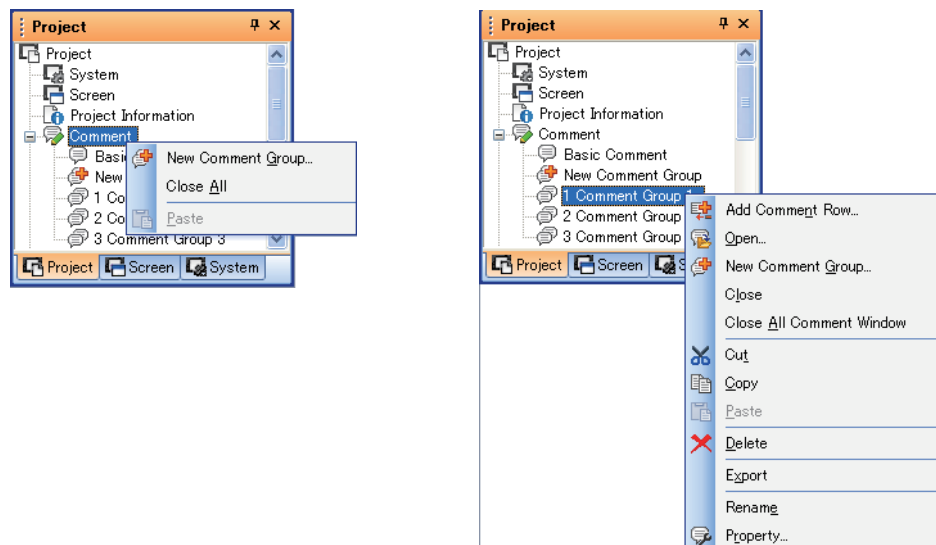
Item	Description	Model
Style	Select a style (font) of the comment.  Regular Bold Solid Raised	
Text	Select a color of the comment.	
Blink	Select this item to select how to blink the comment. (None/Low/Middle/High)	
Solid	Select a shadow color when [Solid] or [Raised] is selected for [Style].	
Invert	Select this item to highlight the comment.	
High Quality Font	Select this item to display the comment as the HQ characters.	
12dot Gothic	Select this item to display the comment as the 12-dot HQ Gothic characters. Not available for the GT1020.	
12dot HQ Mincho	Select this item to display the comment as the 12-dot HQ Mincho characters. Not available for the GT1020.	
16dot HQ Gothic	Select this item to display the comment as the 16-dot HQ Gothic characters.	
16dot HQ Mincho	Select this item to display the comment as the 16-dot HQ Mincho characters.	
Set as Default	Click this button to set the changed attributes as a specified setting.	
Clear Default	Click this button to return the changed attributes to the default setting.	






Basic operation in the project tree

Comments can be managed by the project tree.

Right-click the items to be operated, the menu appears.

The menu options displayed vary depending on the selected target.

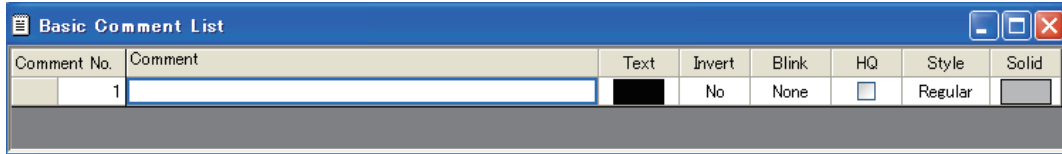


Item	Description	Model
Add Comment Row	Displays the [Comment List] dialog box for the selected basic comment and comment group, and adds a comment row.  ■Comment List dialog box	
Open	Displays the [Comment List] dialog box for the selected comment group.  ■Comment List dialog box	
New Comment Group	Creates a new comment group. After selecting this item, the [Comment Group Property] dialog box appears. Set a group No., title, and KANJI region of a comment group.  ■Basic operations of toolbar (Comment list setting) (1) Comment Group Property dialog box	
Close	Closes the selected [Comment List] dialog box.	
Close All Comment Window	Closes all the displayed [Comment List] dialog box.	
Close All		
Cut	Cuts all selected comment groups.	
Copy	Copies the selected comment group.	
Paste	Pastes the copied or cut comment group.	
Delete	Deletes the selected comment group.	
Export	Stores the selected basic comments and comment groups in a text file or CSV file.	
Rename	Change the comment group name.	
Property	Select this item to display the [Group Property] dialog box, and change the settings of the group No., title, and KANJI region.  ■Basic operations of toolbar (Comment list setting) (1) Comment Group Property dialog box	



■ Comment List dialog box

This dialog box is displayed by operations from the project tree or the [Open Comment Group] dialog box. Add new comments with the toolbar or the menu displayed by right-clicking the mouse.

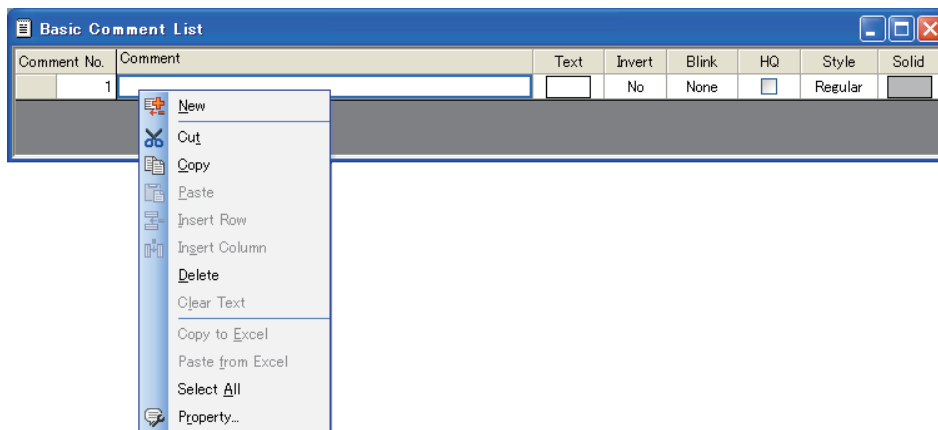
(1) Comment List dialog box for Basic Comment



(a) Setting items for Basic Comment List

Item	Description	Model
Comment No.	Displays the comment number.	
Comment	Enter a comment.	
Text	Select a display color of the comment.	
Invert	Check this when making the comment highlighted.	
Blink	Specify how the comment is to be blinked (None/Low/Middle/High).	
HQ	Check this when displaying the comment in a HQ font.	
Style	Select a style (font) to display the comment.  Regular Bold Solid Raised	
Solid	Select a shadow color when [Solid] or [Raised] is selected in [Style].	

(b) Menu displayed by right clicking



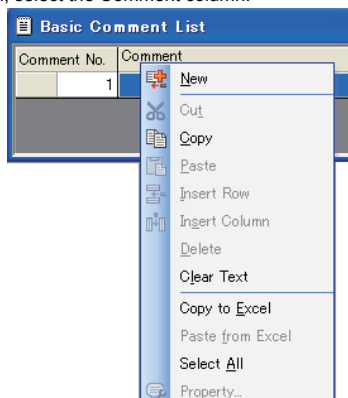
Item	Description	Model
New	Adds a new comment row.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>Software 1000</div>
Cut ^{*1}	Cuts a comment selected.	
Copy	Copies a comment selected.	
Paste	Pastes a comment copied or cut.	
Insert Row	Inserts a row to the row selected.	
Insert Column	Inserts a column to the selected column. Not available for the [Basic Comment List] dialog box.	
Delete ^{*1}	Deletes a comment selected.	
Clear Text	Clears a comment of the row or column selected. ^{*3}	
Copy to Excel	Copies a comment selected to Excel. Copy a comment in row or column unit. ^{*3} After copying, paste the comment on Excel.	
Paste from Excel	Pastes a comment selected from Excel. Copy or cut a comment on Excel and paste it on the [Basic Comment List] dialog box.	
Select All	Selects all comments in Basic Comment List.	
Property	Displays the Attribute Setting dialog box of the comment selected. ^{*2}	

*1 Disabled for an entire column.

*2 For the Attribute Setting dialog box, refer to the following.

☞ ■Basic operations of toolbar (Comment list setting) (4) Attribute Setting dialog box

*3 When selecting a column, select the Comment column.





(1) How to select more than one comment

If there is more than one comment, all the comments can be selected by the operations below.

- Clicking the left-upper cell ([Comment No.])
- Selecting [Select All] from the menu displayed by right-clicking

(2) Reusing comments between different projects

Comments can be pasted to the different project comment with the drop-down menu displayed by right-clicking.

■ Comment List dialog box (1) (b) Menu displayed by right clicking

(3) Batch setting of Text, Rev, Blink, High Quality Font, Style or Solid

You can apply the same setting to all comments simultaneously by selecting a column before making a setting.

Comment No.	Comment	Text	Invert	Blink	HQ	Style	Solid
1	Line A error		No	None	<input type="checkbox"/>	Regular	
2	Line B error		No	None	<input type="checkbox"/>	Regular	
3	Line C error		No	None	<input type="checkbox"/>	Regular	
4	Line D error		No	None	<input type="checkbox"/>	Regular	
5	Line E error		No	None	<input type="checkbox"/>	Regular	

1. Select a column.

Comment No.	Comment	Text	Invert	Blink	HQ	Style	Solid
1	Line A error		Yes	None	<input type="checkbox"/>	Regular	
2	Line B error		No	None	<input type="checkbox"/>	Regular	
3	Line C error		No	None	<input type="checkbox"/>	Regular	
4	Line D error		No	None	<input type="checkbox"/>	Regular	
5	Line E error		No	None	<input type="checkbox"/>	Regular	

2. Make a setting with the column selected.

Comment No.	Comment	Text	Invert	Blink	HQ	Style	Solid
1	Line A error		Yes	None	<input type="checkbox"/>	Regular	
2	Line B error		No	None	<input type="checkbox"/>	Regular	
3	Line C error		No	None	<input type="checkbox"/>	Regular	
4	Line D error		No	None	<input type="checkbox"/>	Regular	
5	Line E error		No	None	<input type="checkbox"/>	Regular	

3. All comments are batch set to the same.

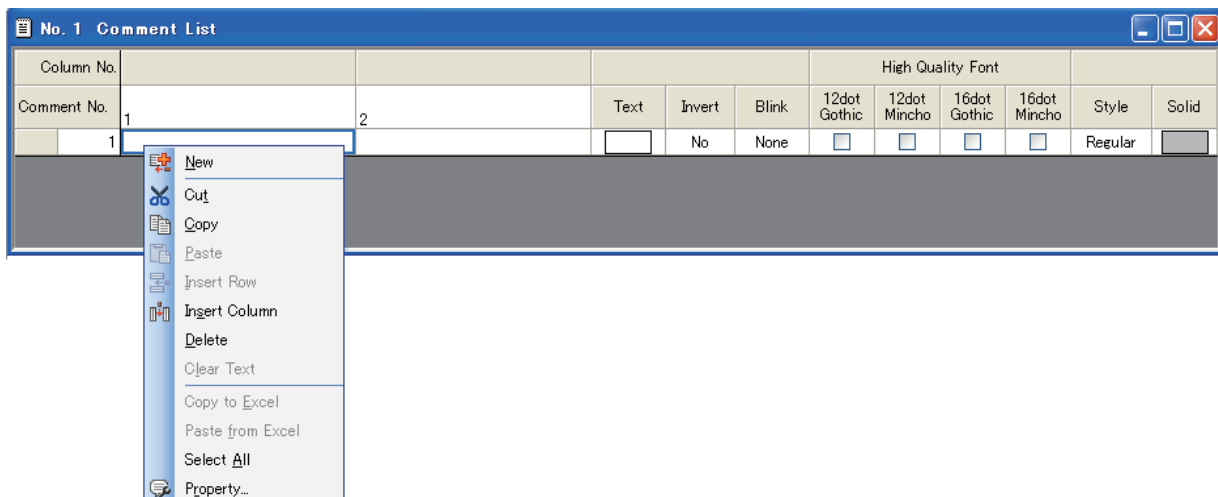
(2) Comment List dialog box for comment groups

Comment No.	Column No.	Text	Invert	Blink	High Quality Font				Style	Solid
1	2	[Color Box]	No	None	<input type="checkbox"/> 12dot Gothic	<input type="checkbox"/> 12dot Mincho	<input type="checkbox"/> 16dot Gothic	<input type="checkbox"/> 16dot Mincho	Regular	[Grey Box]

(a) Setting items for Comment List

Item	Description	Model
Comment No.	Set a comment No.	
Column No.	Set a comment column No.	
Text	Select a color of the comment.	
Invert	Check this when making the comment highlighted.	
Blink	Specify how the comment is to be blinked (None/Low/Middle/High).	
High Quality Font	<p>Check this when displaying the comment in a HQ font. This setting enables the GOT to display a comment with the HQ characters for an object. (When setting the HQ characters that is not set in the comment list for an object, the comment cannot be displayed as the HQ characters.) Example: When comments are registered, only [16dot Gothic] is selected</p> <div> <p>When the font is specified to 16dot HQ Gothic. The comment is displayed in 16dot HQ Gothic.</p> <p>When the font is specified to 12dot HQ Gothic. The comment is displayed in 12dot regular because 12dot HQ Gothic was not checked in comment registration.</p> </div>	<div> GT16 GT15 GT11 GT10 SoftGOT 1000 </div>
	12dot Gothic	Check this when displaying the comment in 12-dot HQ Gothic. Not available for the GT1020.
	12dot Mincho	Check this when displaying the comment in 12-dot HQ Mincho. Not available for the GT1020.
	16dot Gothic	Check when displaying the comment in 16-dot HQ Gothic.
	16dot Mincho	Check when displaying the comment in 16-dot HQ Mincho.
Style	<p>Select a style (font) to display the comment.</p> <div> </div> <p>Regular Bold Solid Raised</p>	
Solid	Select a shadow color when [Solid] or [Raised] is selected in [Style].	

(b) Menu displayed by right clicking



Item	Description	Model
New	Adds a new comment row.	
Cut ^{*1}	Cuts a comment selected.	
Copy	Copies a comment selected.	
Paste	Pastes a comment copied or cut.	
Insert Row	Inserts a row to the row selected.	
Insert Column	Inserts a column to the row selected.	
Delete ^{*1}	Deletes a comment selected.	
Clear Text	Clears a comment of the row or column selected. ^{*3}	
Copy to Excel	Copies selected comments to Excel. Copy comments in a row or column unit. ^{*3} After copying, paste the comments on Excel.	
Paste from Excel	Pastes selected comments from Excel. Copy or cut comments on Excel and paste them on the [Comment List] dialog box.	
Select All	Selects all the comments in the comment list.	
Property	Displays the Attribute Setting dialog box of the comment selected. ^{*2}	

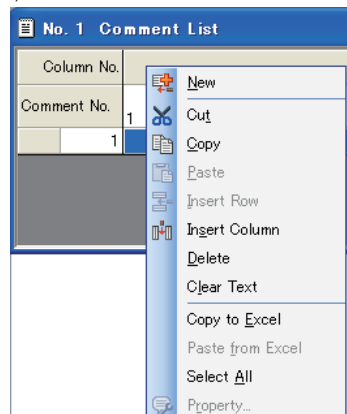
^{*1} Disabled for an entire column.

^{*2} For the Attribute Setting dialog box, refer to the following.



■ Basic operations of toolbar (Comment list setting) (4) Attribute Setting dialog box

^{*3} When selecting a column, select the Comment column.



HINT

(1) How to select more than one comment

If more than one comment exist, all the comments can be selected by the operation below.

- Clicking the upper-left cell ([Column No.] area)
- Selecting [Select All] from the menu displayed by right-clicking

(2) Reusing comments between different projects



Comments can be pasted to the different project comment with the drop-down menu displayed by right-clicking.



■ Comment List dialog box (2) (b) Menu displayed by right clicking

(3) Batch setting of Text, Rev, Blink, High Quality Font, Style or Solid



You can apply the same setting to all comments simultaneously by selecting a column before making a setting.

No. 1 Comment List											 	
Column No.							High Quality Font					
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid		
1	ラインA異常	Line A error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
2	ラインB異常	Line B error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
3	ラインC異常	Line C error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
4	ラインD異常	Line D error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
5	ラインE異常	Line E error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		

1. Select a column.

No. 1 Comment List												
Column No.		High Quality Font										
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid		
1	ラインA異常	Line A error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
2	ラインB異常	Line B error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
3	ラインC異常	Line C error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
4	ラインD異常	Line D error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
5	ラインE異常	Line E error	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		

2. Make a setting with the column selected.

No. 1 Comment List											 	
Column No.		High Quality Font										
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid		
1	ラインA異常	Line A error	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
2	ラインB異常	Line B error	<input type="checkbox"/>	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
3	ラインC異常	Line C error	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
4	ラインD異常	Line D error	<input type="checkbox"/>	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		
5	ラインE異常	Line E error	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>		

3. All comments are batch set to the same.

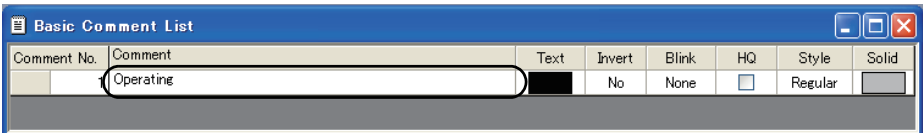
4.11.3 Comment registration

■ Register comments displayed by the object functions.

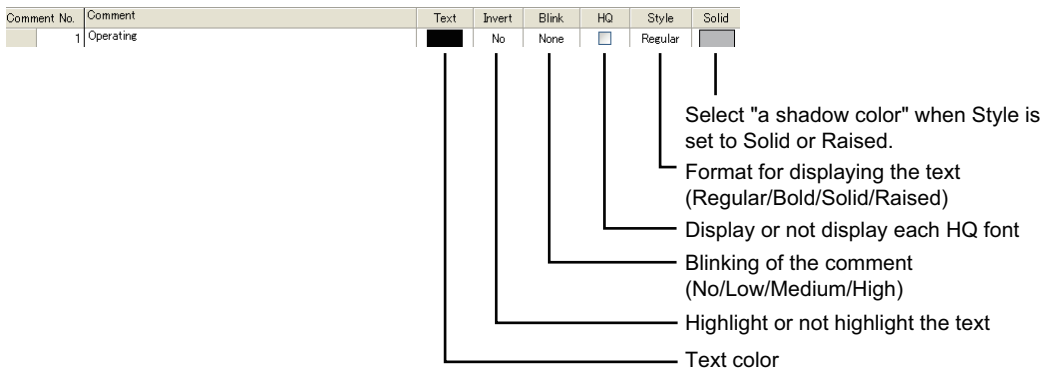
1. Click the comment field of the comment No. to which the comment is to be registered.



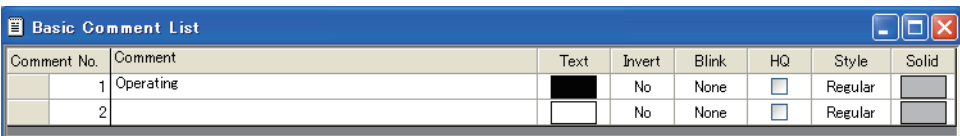
2. Enter a comment in the comment text box.



3. Set the display attributes of the comment.



4. After the comment registration, select [Common] → [Comment] → [New Row] from the menu to display the next comment column.



5. When all the comment registration is completed, click the  button to close the [Comment List] dialog box.

■ Registering comments as comment group

1. Click the comment field of the comment No. to which the comment is to be registered.

Column No.		High Quality Font								
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid
1			No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>

2. Enter the comment in the comment text box.

Column No.		High Quality Font								
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid
1	Line A in operation		No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>

3. Set the display attributes of the comment.

Column No.		High Quality Font								
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid
1	Line A in operation		No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>

Select "a shadow color" when Style is set to Solid or Raised.
 Format for displaying the text (Regular/Bold/Solid/Raised)
 Display or not display each HQ font
 Blinking of the text (No/Low/Medium/High)
 Highlight or not highlight the text
 Text color

4. After the comment registration, select [Common] → [Comment] → [New Row] from the menu to display the next comment column.

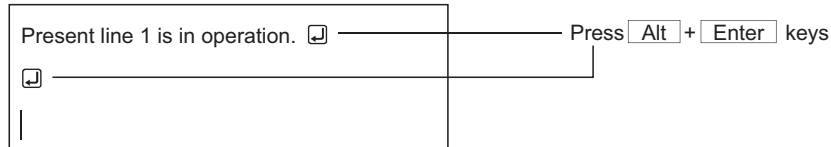
Column No.		High Quality Font								
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid
1	Line A in operation		No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>
2			No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>

5. When all the comment registration is completed, click the button to close the [Comment List] dialog box.

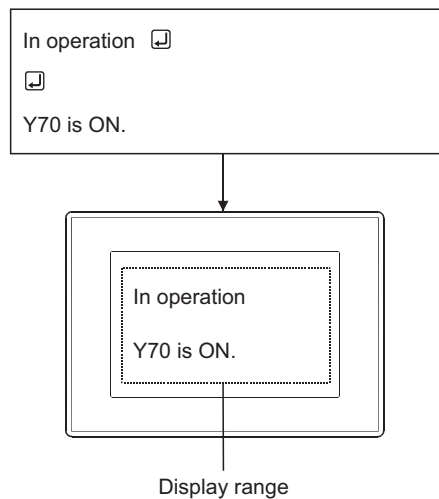


(1) Creating a multi-line comment

- (a) To start a new line, press the [Alt] + [Enter] keys at the end of the current line.



- (b) A comment composed of multiple lines is displayed on the GOT as follows.



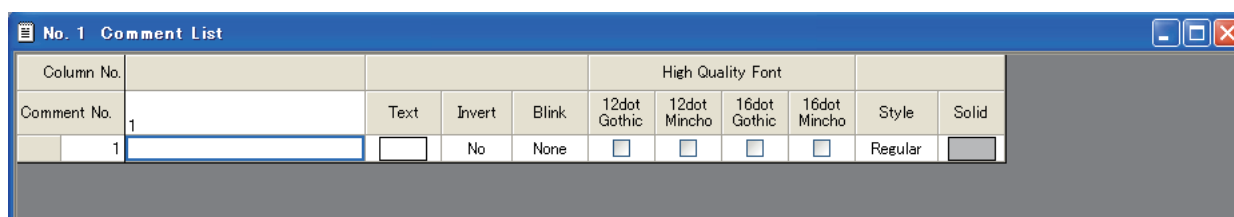
(2) Creating comments by keyboard

Because the cursor in the Comment List dialog box moves when the keys shown below are pressed, comments can be entered without using the mouse. (Comment numbers are added by the [Alt] + [N] keys.)

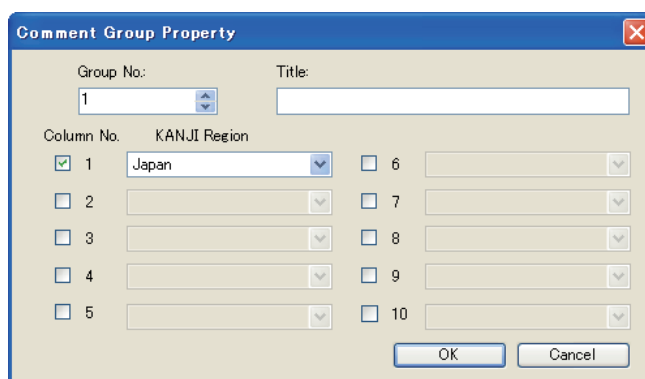
- (a) When a cell is selected
- [→]key: Move to the right cell.
 - [←]key: Move to the left cell.
 - [↑]key: Move to the upper cell.
 - [↓]key: Move to the lower cell.
- (b) When a line is selected
- [→]key: Move to the comment cell in the same line.
 - [←]key: Move to the comment cell in the same line.
 - [↑]key: Move to the comment cell in the upper line.
 - [↓]key: Move to the comment cell in the lower line.

4.11.4 Registering comment group columns

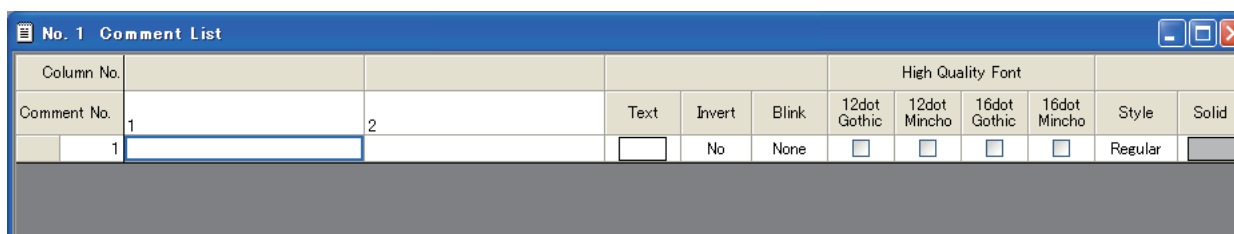
1. Display the [Comment List] dialog box.
☞ 4.11.1 Displaying the [Comment List] dialog box



2. Select [Common] → [Comment] → [Comment Group Property] from the menu to display the [Comment Group Property] dialog box.



3. Select the column No. to be added, select [KANJI Region], and click the [OK] button.
The column is registered.



POINT

Registering columns by insert column

By clicking [Common] → [Comment] → [Insert Column] from the menu, a column can be added. However, there are the following restrictions:

(1) KANJI Region setting for an added column

The KANJI Region setting for a column added by [Insert Column] is set to [Japan].

The setting for the Kanji region can be changed in the comment group property dialog box.

(2) Column No. setting

Because the column No. setting is not available for a column added by [Insert Column], the column No. that is already registered may be changed.

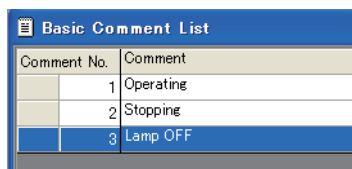
Be careful about this if the language switching device has been set.

☞ 4.3 Language Switching Device Setting

4.11.5 Copying or cutting a comment

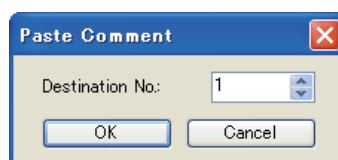
■ Copying or cutting a comment for another comment No.

1. Select a comment row to be copied or cut, and select [Edit] → [Copy] or [Cut] from the menu.



Comment No.	Comment
1	Operating
2	Stopping
3	Lamp OFF

2. Select [Edit] → [Paste] from the menu to display the [Paste Comment] dialog box.

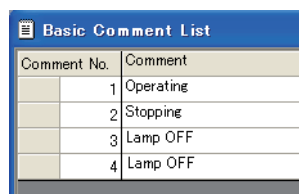


Paste Comment

Destination No.: 1

OK Cancel

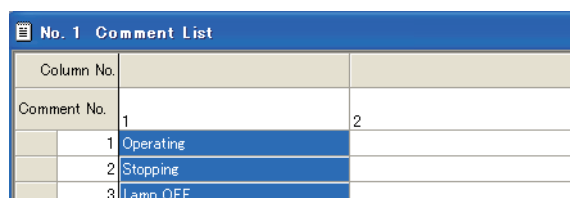
3. Set [Destination No.], and click the [OK] button to paste the comment.



Comment No.	Comment
1	Operating
2	Stopping
3	Lamp OFF
4	Lamp OFF

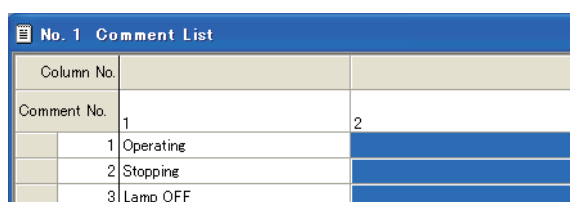
■ Copying or cutting a comment for another column

1. Select a comment column to be copied or cut, and select [Edit] → [Copy] or [Cut] from the menu.



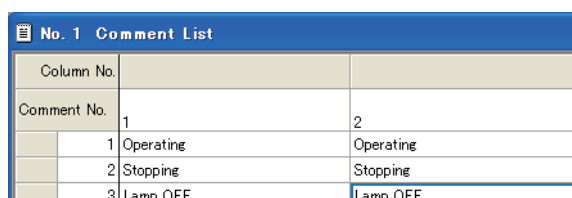
Column No.	Comment No.
1	Operating
2	Stopping
3	Lamp OFF

2. Select a column where the comment is pasted, and select [Edit] → [Paste] from the menu.



Column No.	Comment No.
1	Operating
2	Stopping
3	Lamp OFF

3. The comment is pasted.

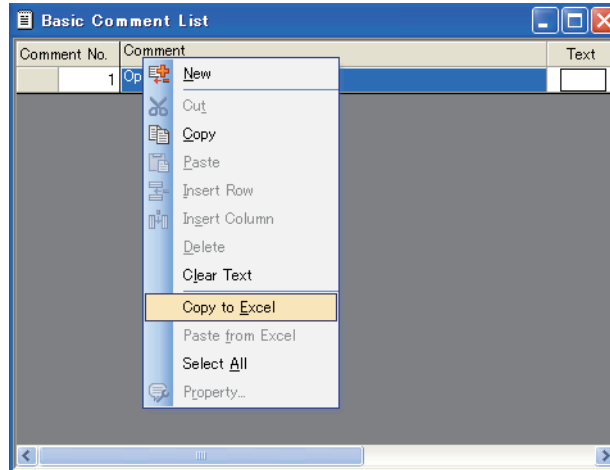


Column No.	Comment No.
1	Operating
2	Stopping
3	Lamp OFF

■ Copying/pasting a comment to/from Excel

(1) Copying to Excel

1. Select a comment row or column to be copied or cut, and select [Copy to Excel] from the menu by right-clicking.



2. Perform the paste operation on the Excel, and the comments are pasted.

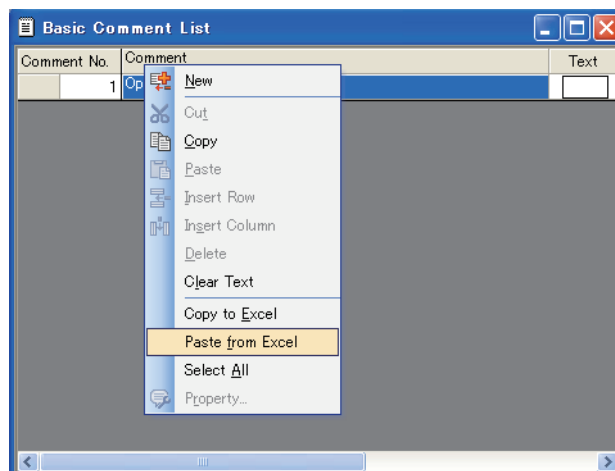
	A	B	C
1		1 Operating	
2			
3			

(2) Pasting from Excel

1. Copy comments on Excel.

	A	B	C
1		1 Operating	
2		2 Stopping	
3		3 Lamp ON	

2. Select the comment row or column to be pasted, and select [Paste from Excel] by right-clicking.



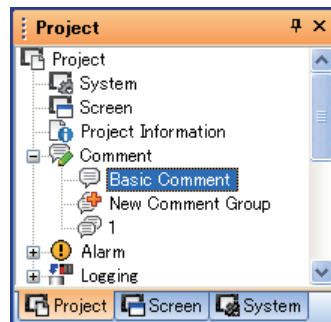
3. The comment is pasted.

Basic Comment List		
Comment No.	Comment	Text
1	Operating	
2	Stopping	
3	Lamp OFF	

POINT

(1) Copying a comment or comment group in the project tree

By copying a folder of a comment or comment group in the project tree, a basic comment or comment group can be copied.



1. Select [Copy] from the menu by right-clicking.
 2. Select [Paste] from the menu by right-clicking.
 3. Enter a comment group No. and title in the [Comment Group Property] dialog box, and click the [OK] button.
- ### (2) Copying comments among comment groups
- Comments can be copied from the basic comment to a comment group or from comment group No.1 to No.2.
1. Select a comment to be copied.
 2. Select [Copy] from the menu by right-clicking.
 3. Open the [Comment List] dialog box of the basic comment or the comment group where the comment is pasted.
Select [Paste] from the menu by right-clicking to copy the comment.
 4. When copying the comment for each row, the [Paste Comment] dialog box appears. Set [Destination No.] and click the [OK] button to copy the comment.
- ### (3) Cutting columns
- Columns can be cut only when there are two or more columns in the comment group.
For Basic Comment, any column cannot be cut.
- ### (4) Copying/cutting columns of comment groups
- The setting of KANJI Region is also copied/cut.
- ### (5) In the case that pasting an entire row is disabled
- Pasting may be disabled according to the comments of the pasting destination when copying/cutting and paste an entire row.
In such a case, copy/cut the relevant cells one by one or directly input the comment to the pasting destination.

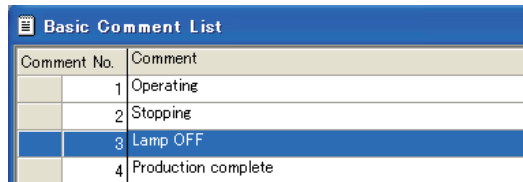
4.11.6 Deleting a comment or clearing a text

■ Deleting comments

This section explains how to delete a comment in a row unit.

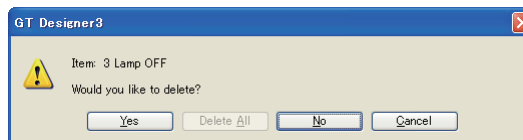
When deleting a comment in a column unit, follow the method below.

1. Select a comment to be deleted.

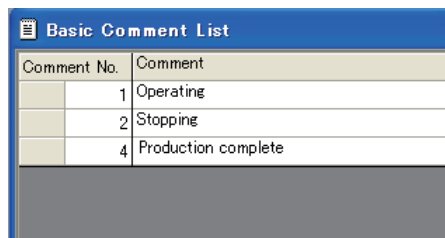


Comment No.	Comment
1	Operating
2	Stopping
3	Lamp OFF
4	Production complete

2. Select [Edit] → [Delete] from the menu to display the confirmation dialog box.



3. Click the [Yes] button to delete the selected comment.

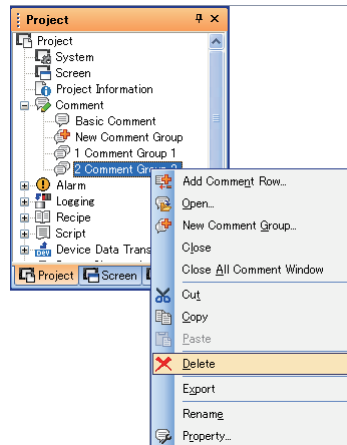


Comment No.	Comment
1	Operating
2	Stopping
4	Production complete

POINT

(1) Deletion in the project tree

Comment groups can be deleted in the project tree.



1. Select [Delete] from the menu by right-clicking, the confirmation dialog box appears.

2. Click the [Yes] button, the comment group is deleted.

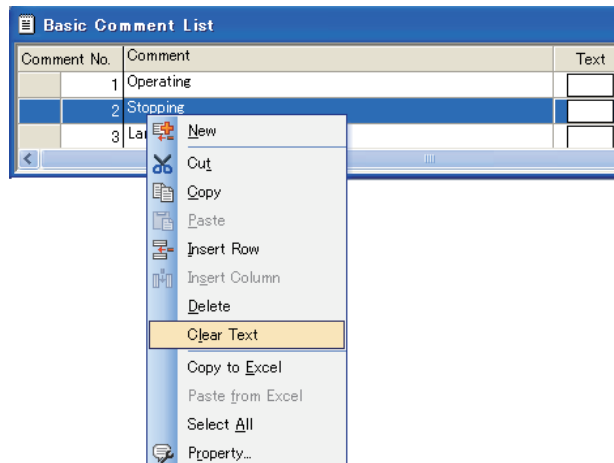
(2) Deleting a comment in a column unit

Deleting a comment in a column unit is enabled only for a comment group with two or more columns.

■ Clearing texts

The comment texts are cleared in a row or column unit.

1. Select [Clear Text] from the displayed menu.

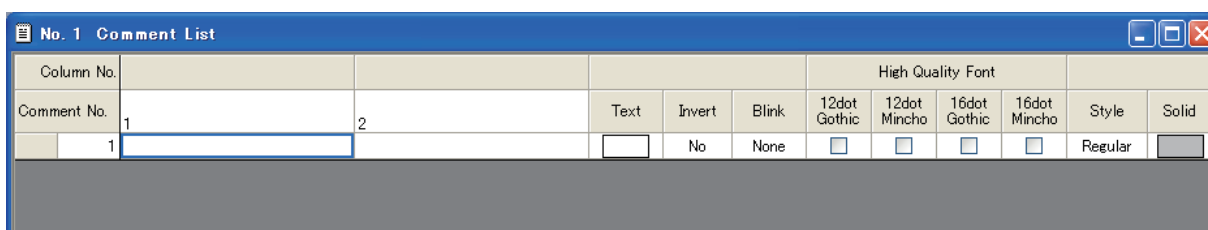


2. Select [Clear Text] from the menu by right-clicking, the texts can be cleared.

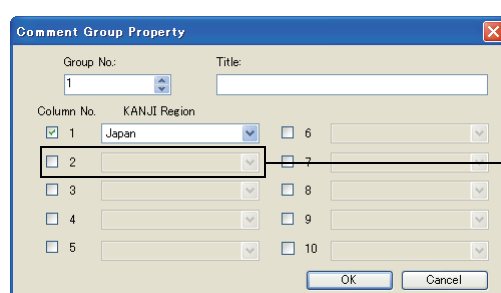
Basic Comment List		
Comment No.	Comment	Text
1	Operating	
2		
3	Lamp OFF	

4.11.7 Deleting columns in comment group

1. Display the [Comment List] dialog box.
☞ 4.11.1 Displaying the [Comment List] dialog box

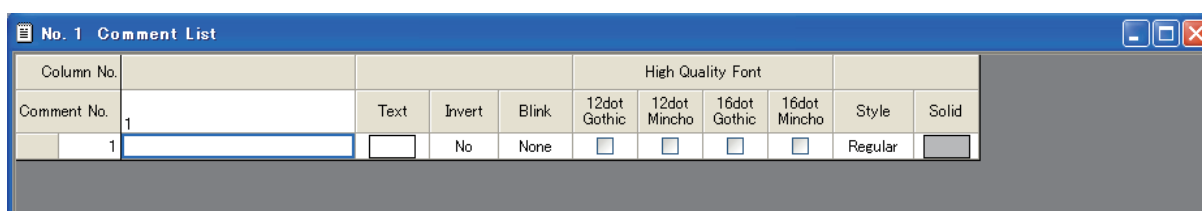


2. Select [Common] → [Comment] → [Comment Group Property] from the menu to display the [Comment Group Property] dialog box.



Uncheck the Column No. to delete the column.

3. Uncheck the column No. of the column to be deleted, and click the [OK] button.



HINT



Deletion of columns

Columns of a comment group can be deleted by the [Comment List] dialog box.

☞ 4.11.6 Deleting a comment or clearing a text

4.11.8 Changing comment settings

Change the text, comment No. and display attributes of a registered comment.

1. Select the target comment.

Basic Comment List	
Comment No.	Comment
1	Operating
2	Stopping
3	Lamp OFF
4	Production complete

2. Change the comment settings.
- Basic comment

Comment No.	Comment	Text	Invert	Blink	HQ	Style	Solid
1	Operating		No	None		Regular	

Select "a shadow color" when Style is set to Solid or Raised.

Format for displaying the text (Regular/Bold/Solid/Raised)

Display or not display each HQ font

Blinking of the text (No/Low/Medium/High)

Highlight or not highlight the text

Text color

Comment text

Comment No.

- Comment group

Column No.				High Quality Font							
Comment No.		Text	Invert	Blink	12dot Gothic	12dot Mincho	16dot Gothic	16dot Mincho	Style	Solid	
	1	Line A in operation	<input type="checkbox"/>	No	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regular	<input type="checkbox"/>

Select "a shadow color" when Style is set to Solid or Raised.

Format for displaying the text (Regular/Bold/Solid/Raised)

Display or not display each HQ font

Blinking of the text (No/Low/Medium/High)

Highlight or not highlight the text

Text color

3. After changing the comment settings, click the  button to close the [Comment List] dialog box.

POINT

Changing settings in the project tree

The settings of a comment group can be changed in the project tree.

1. Select [Property] from the menu by right-clicking to display the [Comment Group Property] dialog box.
2. Change the comment group settings, and click the [OK] button.

4.11.9 Saving/Reading comments as file

Registered comments can be saved as a text file (*.TXT), Unicode text file (*.TXT), or CSV file (*.CSV). In addition, the file created by a commercial word-processor or spreadsheet software (text/CSV file) can be read as comments.

Comment No.	Comment	Text	Invert	Blink
1	During preparation		No	None
2	Emergency stop		No	None
3			No	None

GT Designer3

Save
(Export)
→
←
Read
(Import)

	A	B	C	D	E	F	G
1			Color	Reverse	Blink	HQ Font	SI
2	1	During pre	Blue	No	No	No	Ni
3	2	Emergenc	Red	No	No	No	Ni
4	3		Black	No	No	No	Ni

Commercial word-processor/spreadsheet software

POINT

(1) Operations for adding/overwriting comments when importing them from a file

The comment Nos. in the file to be imported are compared with those that have already registered, and the data are handled as follows:

- If the comment No. is different each other, the comment in the file is added.
- If the comment No. is the same, the comment in the file is overwritten.

	A	B
1		
2	1	Conveyer1 normal operation
3	2	Conveyer2 normal operation
4	3	Conveyer3 normal operation
5	5	Conveyer5 normal operation
6		
7		

CSV file

Import
→

Comment No.	Comment
1	Conveyer 1 normal
4	Conveyer 2 normal
6	Conveyer 3 normal

GT Designer3

→

Comment No.	Comment
1	Conveyer 1 in normal operation
2	Conveyer 2 in normal operation
3	Conveyer 3 in normal operation
4	Conveyer 2 normal
5	Conveyer 5 in normal operation
6	Conveyer 3 normal

GT Designer3

Overwrite
Add
Add
Add

Comments can be created efficiently by predetermining each comment No. and sharing the creation by multiple persons.

(2) Precautions for exporting comments from GT Designer3

If comments are exported from GT Designer3, all the registered comments are reflected on the file. If the file is overwritten during export, all the comments saved in the past are lost.

HINT

(1) Unicode text file

The Unicode text file is used when importing/exporting comments by the multi-language input function. For the multi-language input function, refer to the following manual.

→ 8.6 Entering Multiple Languages (Multi-Language Input Function)

(2) How to save/read comments in a row or column unit in/from the Excel

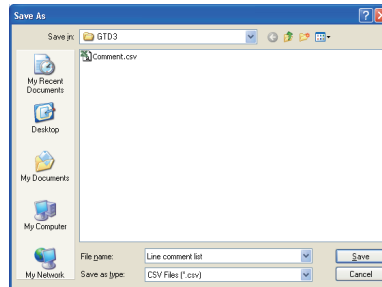
Refer to the following for details.


→ 4.11.5 Copying or cutting a comment

■ Saving comments as file (Export)

Save registered comments as a text file, Unicode text file, or CSV file.

1. Select [Common] → [Comment] → [Export] from the menu to display the [Save As] dialog box.




2. Select a file type for [Save As Type]. (txt: text file or Unicode text file, csv: CSV file)
3. Enter a file name, select a place to save the file, and click the [Save] button.
4. When the comments writing is completed, click the  button to close the [Comment List] dialog box.

POINT

When multilingual comments are registered

The comment group that includes multilingual comments cannot be saved correctly in a CSV file.
Save the comment group in a Unicode text file.

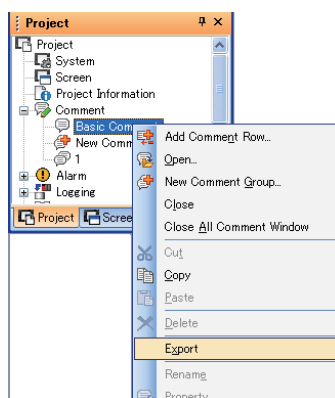
 ■ Reading text file, unicode text file, or CSV file (Import)

HINT

Saving comments in the project tree

To save comments as a file in the project tree, perform the following operations.

1. Select [Export] from the menu by right-clicking.

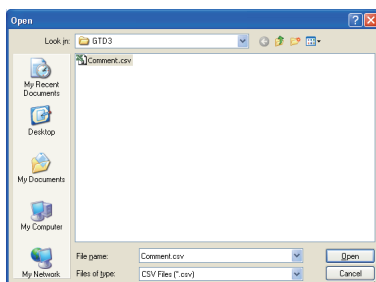



2. The [Save As] dialog box appears.
Enter a file name, select a place to save the file, and click the [Save] button.

■ Reading text file, unicode text file, or CSV file (Import)

Read a text file, Unicode text file, or CSV file as comments.

1. Select [Common] → [Comment] → [Import] from the menu to display the [Open] dialog box.



2. Select a file type for [Save As Type]. (txt: text file or Unicode text file, csv: CSV file)
3. Select a file to be read, select a place to save the file, and click the [Open] button.
4. If the comments are already registered, a dialog box to confirm overwriting appears. Click the [Yes] button.
5. When the comment reading is completed, click the  button to close the [Comment List] dialog box.

4.11.10 Editing comment saved as Text/CSV file

This section explains how to edit the comments saved in a Text/CSV file.

■ **Text file (Basic Comment only)**

Edit the comment saved/read as a text file by a text editor as follows.

//1		Comment No.
"In operation now"		Comment text
166,0,2,1,3,0,		Display attributes

1. Before entering a comment, enter the [/] [/] key in one-byte characters, and a comment No., and then press the key.

//1	

2. Enter the comment.
Enclose the comment with the one-byte double-quotation symbols ["] key, and then enter the comma symbol [,] key.
Press the [Enter] key at the last.
Create a comment text within 1 to 512 characters regardless of whether the character size is one-byte or two-byte.

//1	
"In operation now"	

3. Set the comment attributes.

//1	
"In operation now"	
166,0,2,1,3,0,	|

Enter all as one-byte characters.

	,		,		,		,		,			
												Solid (Set a color using No. of text color.)
												Style (0: Regular 1: Bold 2: Solid 3: Raised)
												Use a HQ font (0: No, 1: Yes)
												Blink (0: No 1: Low 2: Middle 3: High)
												Reverse (0: No, 1: Yes)
No. of text color												
255: white 109: dark white 0: black 182: gray 3: blue 2: dark blue												
224: red 160: dark red 227: purple 162: dark purple 28: green 20: dark green												
31: aqua 22: dark aqua 252: yellow 180: dark yellow												
For other color numbers, select [More Colors] for [Text] in the [Comment List] dialog box, and confirm the color in the color list.												

POINT

(1) Cautions for saving a file

The edited file must be saved in the text file (*.txt) format.

(2) Cautions for entering a comment

Do not enter only a sequence of a double-quotation ["], a comma [,] and a return mark [↵] as a comment text because data will not be imported correctly.

If such a case is identified, correct the comment on the text file, and then import it again.

HINT

Writing a multiple-line comment

When writing a multiple-line comment, press the [Enter] key at the end of a line.

When providing a line of space, press the [Enter] key at the line.

```
//1  [↵]  
"In operation now[↵]  
[↵]  
Y70 is ON"  [↵]
```

The entry of the [/], [/], [1], and [Enter] key are processed as comment No. 1.

//1 [↵]	Processed as comment No.1
"In operation now [↵]	
[↵]	
Y70 is ON" [↵]	
[↵]	
X30 is ON [↵]	
250, 0, 0, 1, 1, [↵]	
//2 [↵]	Processed as comment No.2
"In stop now" [↵]	
150, 1, 3, 1, 1, [↵]	
//3 [↵]	Processed as comment No.3
"Operation start", [↵]	
101, 0, 1, 0, 1, [↵]	

■ CSV format file

When saving or reading comments as a CSV format file, edit them as explained below.

(1) When editing comments by spreadsheet software

Create each setting item as follows on the spreadsheet.

(The following is an example when Microsoft® Excel is used.)

(a) Basic comment

	A	B	C	D	E	F	G	H
1			Color	Reverse	Blink	HQ Font	Style	Solid
2	1	During preparation	Blue	Normal	No	No	Normal	
3	2	Emergency stop	Red	Normal	No	No	Normal	

Solid (Set a color using No. of text color.)
 Style (0: Regular 1: Bold 2: Solid 3: Raised)
 Use a HQ font (0: No, 1: Yes)
 Blink (0: No 1: Low 2: Middle 3: High)
 Reverse (0: No, 1: Yes)
 Name or No. of text color (white, dark white, gray, dark blue, red, dark red, purple, dark purple, green, dark green, aqua, dark aqua, yellow, dark yellow) For other color numbers, select [More Colors] for [Text] in the [Comment List] dialog box, and confirm the color in the color list.
 Comment text
 Comment No.

(b) Comment group

Comment Group No.

	A	B	C	D	E	F	G	H	I	J	K	L
1	1	1	1									
2	1	1	2	Color	Reverse	Blink	12dot Goth	12dot Minc	16dot Goth	16dot Minc	Style	Solid
3	1	稼働中	Operating	Blue	Normal	No	Yes	Yes	Yes	Yes	Regular	
4	2	点検中	Inspecting	Green	Normal	No	Yes	Yes	Yes	Yes	Regular	

Column No

Solid (Set a color using No. of text color.)
 Style (0: Regular 1: Bold 2: Solid 3: Raised)
 Use 16dot HQ Mincho (No/Yes)
 Use 16dot HQ Gothic (No/Yes)
 Use 12dot HQ Mincho (No/Yes)
 Use 12dot HQ Gothic (No/Yes)
 Blink (0: No 1: Low 2: Middle 3: High)
 Reverse (0: No, 1: Yes)
 Name or No. of text color (white, dark white, gray, dark blue, red, dark red, purple, dark purple, green, dark green, aqua, dark aqua, yellow, dark yellow)
 For other color numbers, select [More Colors] for [Text] in the [Comment List] dialog box, and confirm the color in the color list.
 Comment text
 Comment No.

(2) When editing comments by text editor

The comment data saved in a CSV file is configured as follows on the text.

(a) Basic comment

A character string is enclosed with double-quotation marks (" ").

	,	Color	,	Rev	,	Blink	,	HQ Font	,	Style	,	Solid	
1		"During preparation"		Blue		No		No		No		Regular	
2		"Line A, supply stop"		Red		No		No		No		Solid	Red

7 fields delimited by 6 commas (,).
Commas in a string are recognized as characters.

Added if the style is "Solid" or "Raised."

Comment
Line A, supply stop

(b) Comment group

Comment group No.

①	1	1	.....
①, ②	Text	Rev	Blink	12dot HQ Gothic, , Style, Solid
1	"稼働中"	"(Operating)"	Blue	No, No, Yes, Yes, Yes, Yes, Regular,
2	"点検中"	"(Inspecting)"	Green	No, No, Yes, Yes, Yes, Yes, Regular,

Comment column No.

POINT

Precaution for saving a file

The edited file must be saved in the CSV file (*.csv) format.

HINT

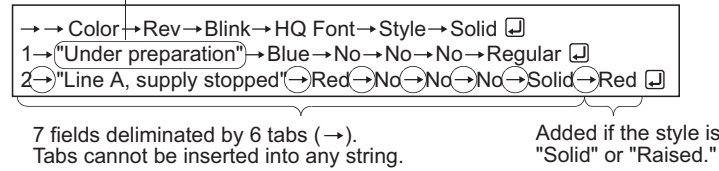
When the display attributes of the comment are not read

If the number of commas and their positions in the CSV file are not correct, the display attributes will not be read. Before reading them, confirm the number of commas and their positions.

■ Unicode text file

When saving the comments as a Unicode text file or reading out the comments to GT Designer3, edit the comments as explained below.

A character string is enclosed with double-quotation marks (" ").



POINT

(1) Displayed language

When Unicode text files are edited in multiple languages, comment strings are displayed in the language that the user entered.

Attributes (color, reverse, blink and so on) are displayed in English.

For entering multiple languages, refer to the following manual.

☞ 8.6 Entering Multiple Languages (Multi-Language Input Function)

(2) Caution for saving the file

The edited file must be saved in the Unicode text file (*.txt) format.

(3) Precautions for using Unicode text file

Refer to the following for the precautions when using a Unicode text file.

☞ Appendix7 Precautions for Using Unicode Text File

4.11.11 Precautions

■ Maximum number of registerable comments

- (1) **Basic comment**
Up to 32767 comments can be registered.
- (2) **Comment group**
Up to 255 comment groups can be registered, and each group can include comments of up to 32767 lines×10 columns.

■ Maximum number of characters registerable in a comment

A comment can be created with 1 to 512 characters regardless whether they are one- or two-byte characters. One line feed equals to two characters.

■ Character size for displayed comments




Specify the character size for the displayed comments in the dialog box provided for each object setting.


























■ Display attributes of comments



Some display attributes set to comments are not available depending on the object function. For the restriction on the comment display for each object function, refer to the relevant section of each object function.

 GT Designer3 Version1 Screen Design Manual(Functions)

The following list shows the attributes set for the registered comments and each object.

- : Displayed according to the attributes registered with the comment. They can be changed at each object setting.
- : Displayed according to the attributes registered with the comment. They can not be changed at each object setting.
- : The attributes registered by the comment are not displayed. They are set at each object setting.
- - : Not used.

Object	Display attribute					
	Text Color	Reverse	Blink	HQ Font	Style	Solid
Touch Switch	*1	-	-		*1	*1
Lamp (Bit/Word)		-	-			
Data List Display	-	-	-		-	-
Comment Display						
Advanced User Alarm Display		-	-			
Advanced System Alarm Display						
Alarm History Display	-	-	-	-	-	-
User Alarm Display			-			
System Alarm Display						
Advanced Alarm Popup Display		-	-			

*1 When [Text] or [Indirect Text (Basic Comment)] is selected for [Text Type]:, when [Comment Group] is selected for [Text Type]:

■ HQ font of Chinese (GB, Big5)

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

(1) Chinese (GB) characters

The Chinese (GB) characters will not be displayed in 12dot HQ Gothic or 16dot HQ Gothic setting. If 12dot HQ Gothic or 16dot HQ Gothic is checked in comment registration, the characters are displayed as 12dot HQ Mincho or 16dot HQ Mincho.

(2) Chinese (Big 5) characters

The China (Big 5) characters will not be displayed in 12dot HQ Mincho or 16dot HQ Mincho setting. If 12dot HQ Mincho or 16dot HQ Mincho is checked in comment registration, the characters are displayed as 12dot HQ Gothic or 16dot HQ Gothic.

4.12 Registering Parts

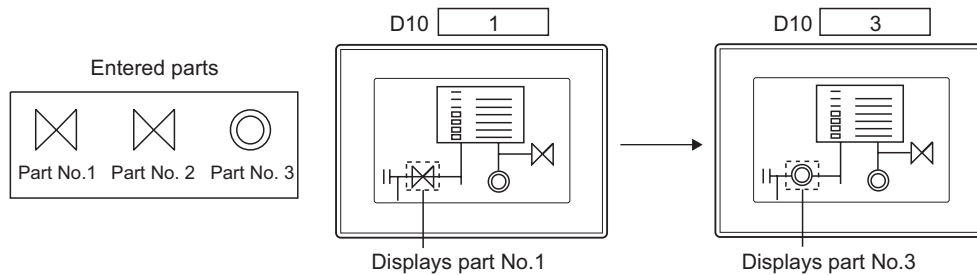


User-created figures are registered as parts.

The registered parts can be displayed as objects for the parts display or the parts movement.
(Objects that can be displayed as parts differ according to how to register parts.)

Example) Parts display

The several kinds of figures can be displayed by changing a monitor device value.



The following two types show how to register parts.

- Registering parts by GT Designer3
- Registering BMP/JPEG files for parts in a CF card

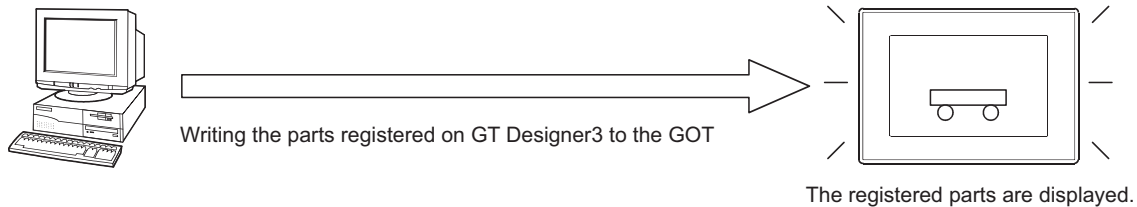
This section explains how to register parts by GT Designer3.

For how to register BMP/JPEG files for parts in a CF card, refer to the following.

4.13 Registering BMP/JPEG Files for Parts in CF Card

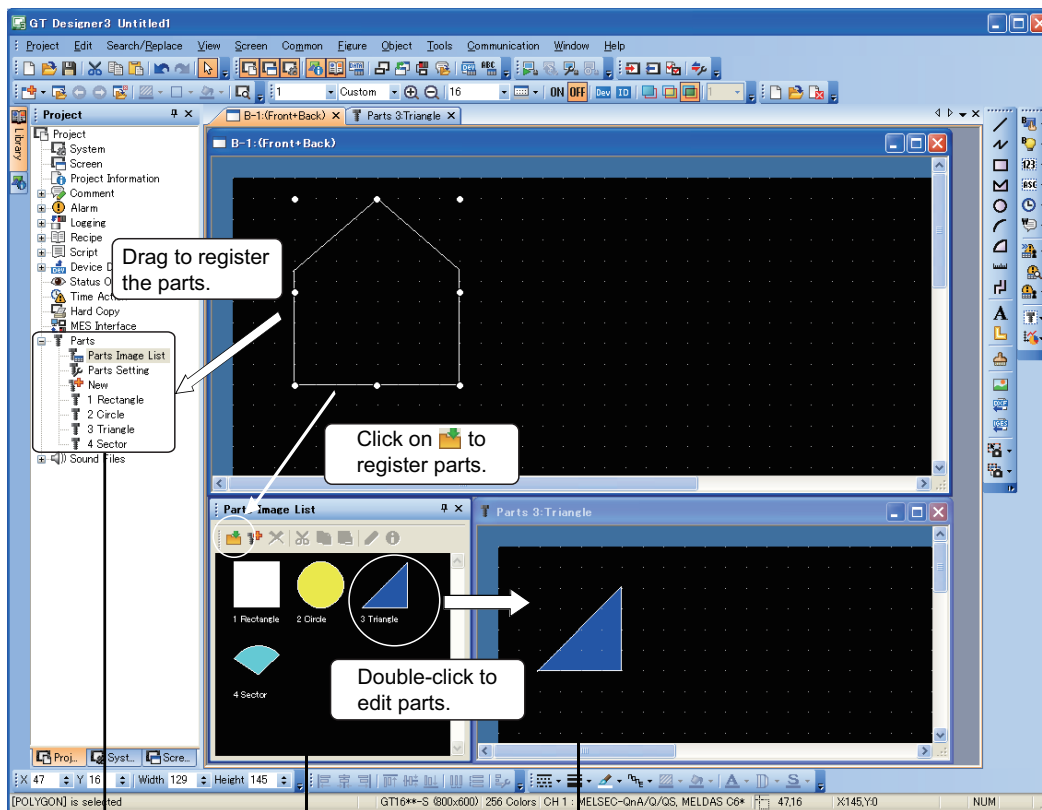
■ How to register parts by GT Designer3

Registering figures as parts by GT Designer3



4.12.1 Basic operation for registering parts

Parts can be registered or edited by the following screen.



Parts editor

- Registered parts can be edited on the dedicated editor of parts.

Parts image list window

- By clicking [icon], figures can be registered as parts.
- Images of registered figures can be checked.

Project tree

- By dragging figures from the screen editor to the tree, the figures can be registered as parts.
- The parts image list window or the parts editor can be displayed.



Setting editor background color

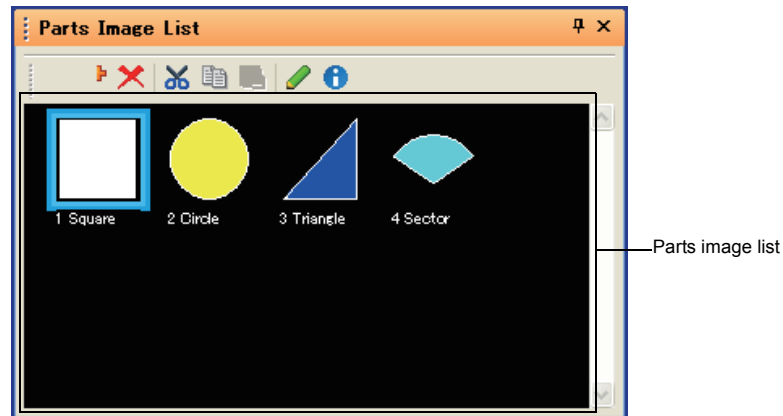
The background color of the parts editor can be set in the [Options] dialog box.



3.5.3 Customizing actions and default value of GT Designer3

■ Basic operation for the [Parts Image List] window

Select [Common] → [Parts] → [Parts Image List] from the menu to display the [Parts Image List] window.

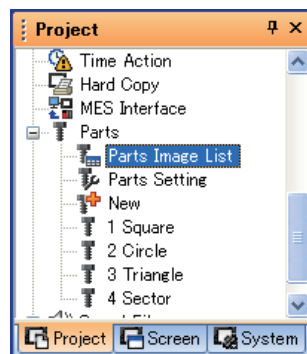


Items	Description	Model
	Register selected figure to parts.	Gr16 Gr15 Gr11 Gr10 Screenshot 1000
	Register a new part.	
	Delete the selected parts.	
	Cut the selected parts.	
	Copy the selected parts.	
	Paste the copied or cut parts.	
	Edit the selected parts by the parts editor.	
	Change the selected parts number and name. 4.12.6 Changing part numbers and names	
Parts Image List	Displays the registered parts thumbnail, number, and name.	



Operating by the project tree

Double-click [Parts Image List] in the project tree to display the [Parts Image List] window.

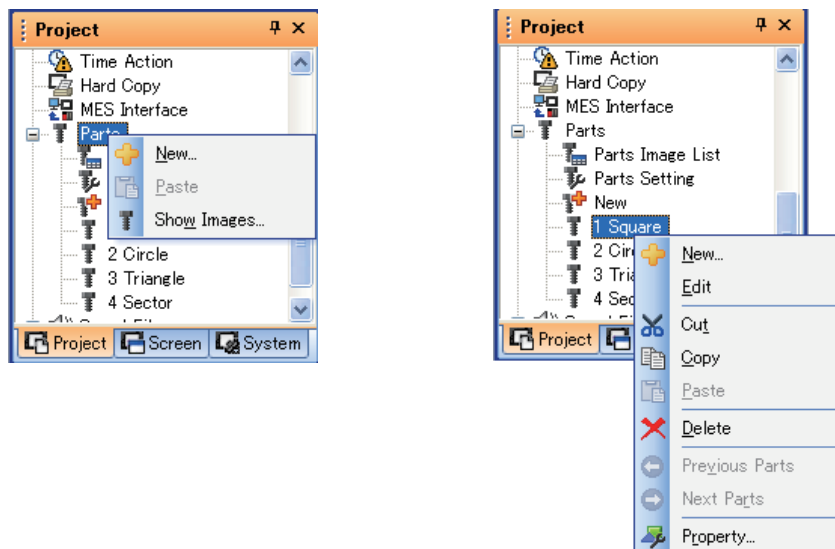


■ Basic operation for the project tree

Parts can be managed by the project tree.

By right-clicking the items to be operated, the menu appears.

The items to be displayed differ according to the selected items.

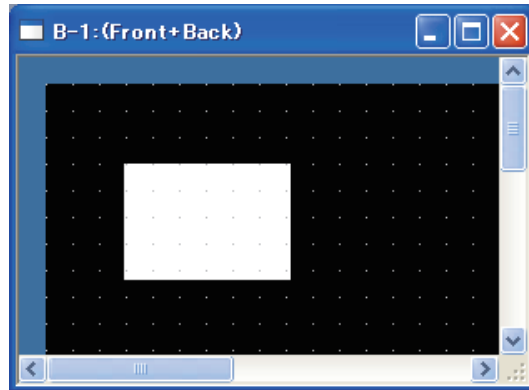



Item	Description	Model
New	Register a new part.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SONGOT 1000</div> </div>
Edit	The selected parts can be edited by the parts editor.	
Cut	Cut the selected parts.	
Copy	Copy selected parts.	
Paste	Paste the copied or cut parts.	
Delete	Delete the selected parts.	
Previous Parts	The last number of the part before the selected part is displayed on the parts editor. Available only during displaying the parts editor.	
Next Parts	The next number of the part currently selected is displayed on the parts editor. Available only during displaying the parts editor.	
Property	Change the selected part number and name. ☞ 4.12.6 Changing part numbers and names	
Show Images	Displays the [Parts Image List] window. ☞ ■ Basic operation for the [Parts Image List] window	

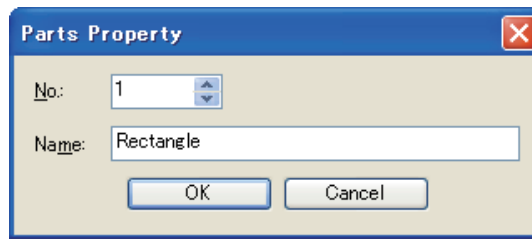
4.12.2 Registering parts

■ How to register figures on the screen editor as parts

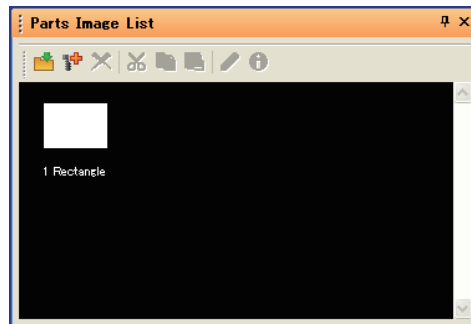
1. Select a figure to be registered as a part.



2. Click  in the [Parts Image List] window to display the [Parts Property] dialog box.
4.12.1 ■ Basic operation for the [Parts Image List] window



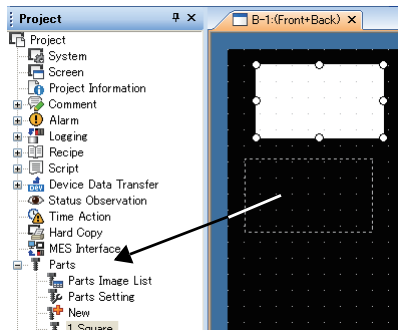
3. Enter [No.] and [Name], and click the [OK] button to register the figure as the part.



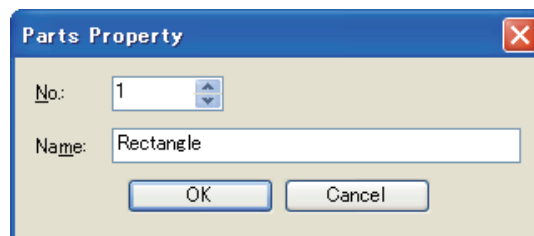
HINT

Operating by the project tree

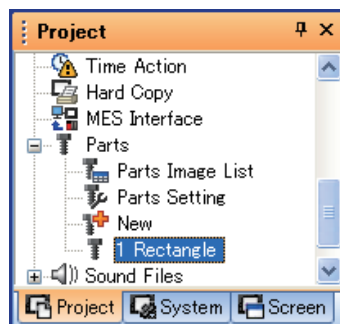
1. Drag the figure to be registered as a part in the project tree.



2. In the [Parts Property] dialog box, enter [No.] and [Name], and click the [OK] button.

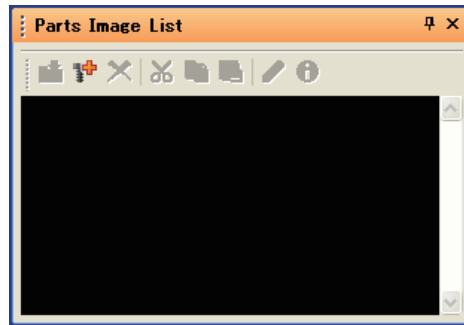


3. The figure is registered as the part.



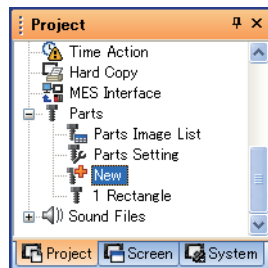
■ How to register parts by drawing a figure on the parts editor

1. Click  in the [Parts Image List] window.

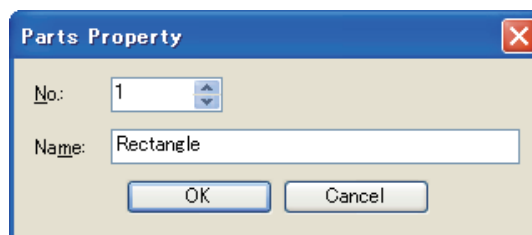


Operating by the project tree

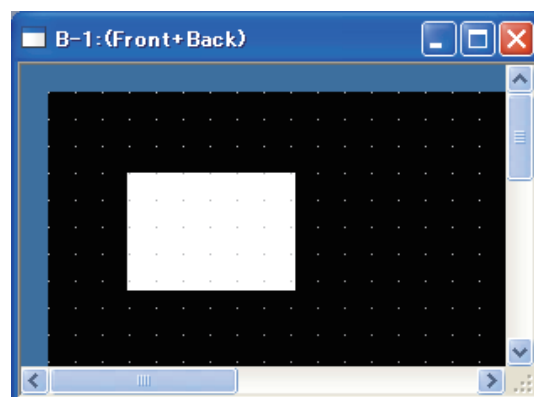
Double-click [Parts]-[New] in the project tree to display the [Parts Property] dialog box.




2. In the [Parts Property] dialog box, enter [No.] and [Name], and click the [OK] button.



3. In the parts editor, draw a figure to be registered as a part.

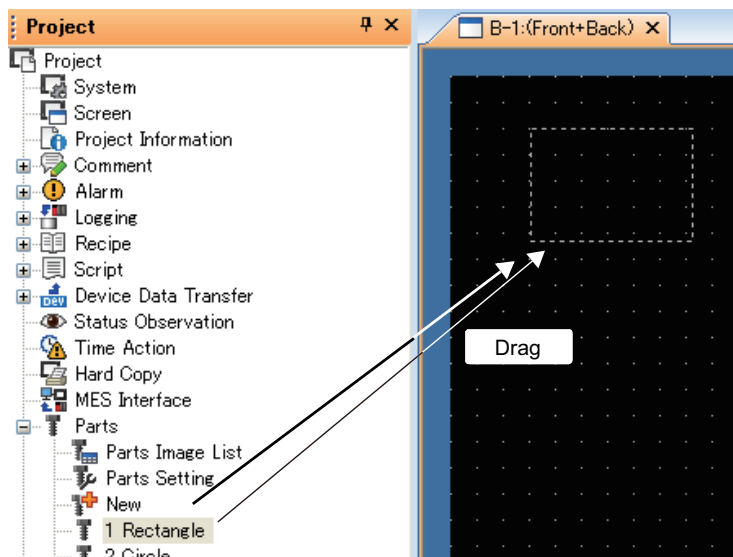


4. After drawing the figure, click the  button to close the parts editor.

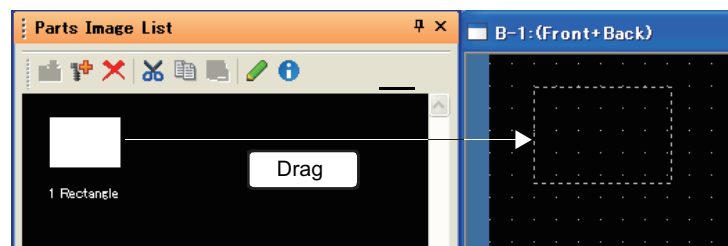
HINT

(1) Pasting a figure registered as a part on the screen editor

- (a) Pasting the figure by the project tree
Drag the part in the project tree on the screen editor



- (b) Pasting the figure by the [Parts Image List] window
Drag the part in the [Parts Image List] window on the screen editor.




(2) The figure that can be registered as parts

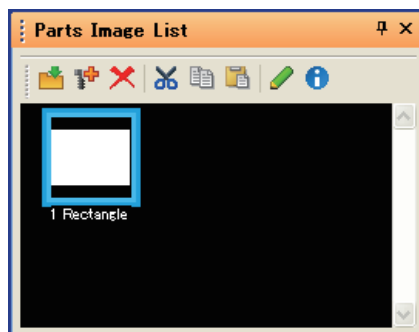
The BMP file /JPEG file *1 /DXF file/IGES file data imported as a figure can also be registered by the same procedure as figures.


*1 JPEG files can be registered for GT16 and GT15 only.

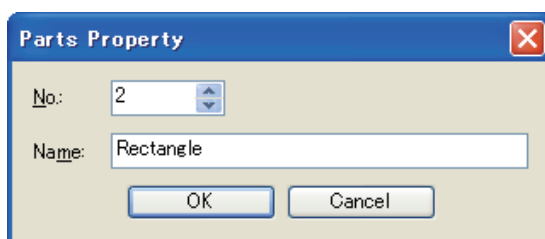
☞ (Functions) 1. FIGURES

4.12.3 Copying parts

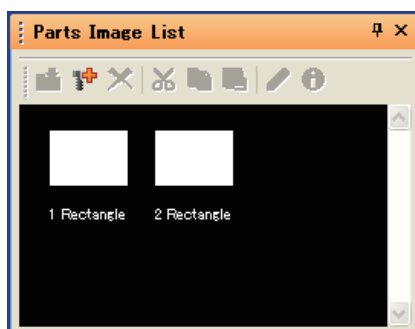
1. In the [Parts Image List] window, select the part to be copied, and click .



2. Click  to display the [Parts Property] dialog box.



3. Change [No.] and [Name], and click the [OK] button to copy the part.





Operating by the project tree

Parts can be copied in the project tree.

4.12.1 ■Basic operation for the project tree

(1) Copying a part in the project tree

1. Select a part to be copied in the project tree, and select [Copy] from the menu by right-clicking.
2. Select [Paste] from the menu by right-clicking again to display the [Parts Property] dialog box.
3. Change [No.] and [Name], and click the [OK] button to copy the part.

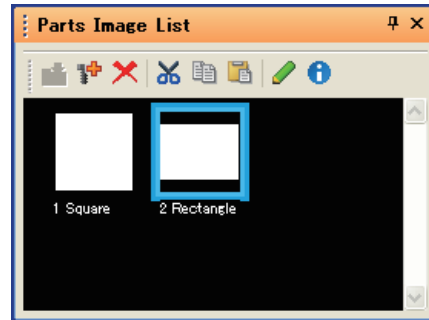
(2) Copying multiple parts simultaneously

Multiple parts can be copied in the project tree.

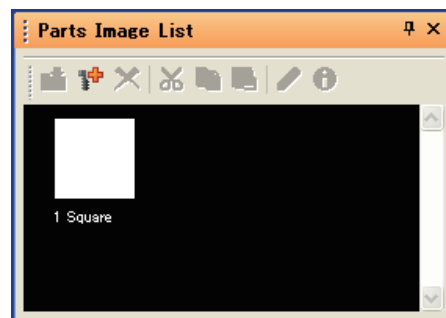
1. Select multiple parts to be copied by any of the following methods.
 - Selecting multiple parts with holding down the [Shift] key
 - Selecting multiple parts with holding down the [Ctrl] key
2. Select [Copy] from the menu by right-clicking the selected parts.
3. Select [Paste] from the menu by right-clicking again to display the [Parts Property] dialog box for the copied parts.
4. Change [No.] and [Name], and click the [OK] button to copy the parts.
(The [Parts Property] dialog box is displayed for each copied part.)

4.12.4 Deleting parts

1. In the [Parts Image List] window, select the part to be deleted, and click .



2. In the confirmation dialog box, click the [Yes] button to delete the selected part.



HINT

Operating by the project tree

Parts can be deleted in the project tree.

 4.12.1 ■ Basic operation for the project tree

(1) Deleting a part in the project tree


1. Select a part to be deleted in the project tree, and select [Delete] from the menu by right-clicking.
2. In the confirmation dialog box, click the [Yes] button to delete the selected part.

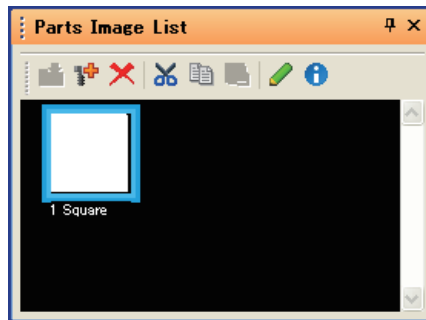
(2) Deleting multiple parts simultaneously

Multiple parts can be deleted simultaneously in the project tree.

1. Select multiple parts to be deleted by any of the following methods.
 - Selecting multiple parts with holding down the [Shift] key
 - Selecting multiple parts with holding down the [Ctrl] key
 2. Select [Delete] from the menu by right-clicking the selected parts.
 3. In the confirmation dialog box, click the [Yes] or [Yes to All] button.
 - [Yes] button: Deletes the selected parts one by one.
 - [Yes to All] button: Deletes all the selected parts.
-

4.12.5 Editing parts

1. In the [Parts Image List] window, select the part to be edited, and click .



HINT

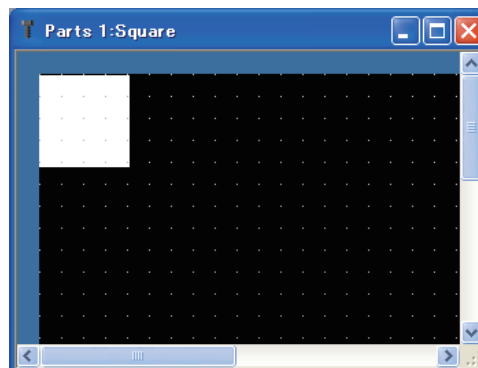


Operating by the project tree

Select a part to be edited in the project tree, and select [Edit] from the menu by right-clicking to display the parts editor.

 4.12.1 ■ Basic operation for the project tree

2. In the parts editor, edit the part.

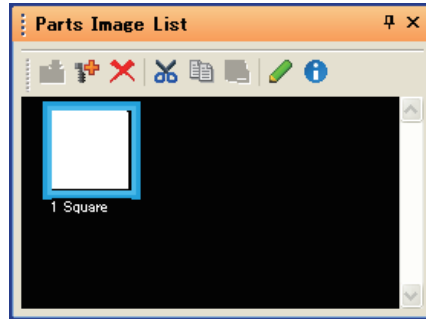


3. After editing the part, click  to close the parts editor.

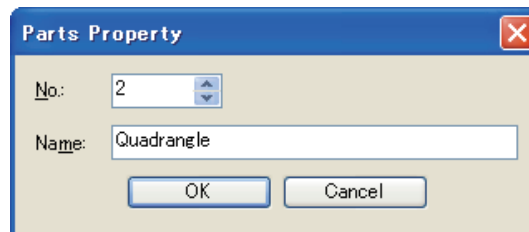
4.12.6 Changing part numbers and names

Registered part numbers and names can be changed.

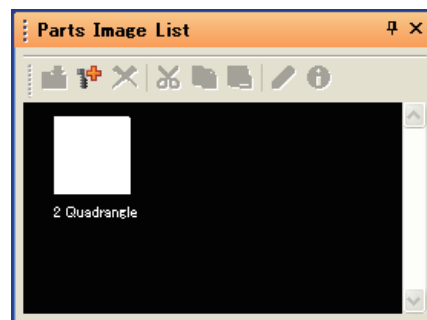
1. In the [Parts Image List] window, select a part to change the number and name, and click .



2. In the [Parts Property] dialog box, change [No.] and [Name], and click the [OK] button.



3. The number and name are changed.



Operating by the project tree

Part numbers and names can be changed in the project tree.

 4.12.1 ■ Basic operation for the project tree

1. Select a part to change a number and name in the project tree by right-clicking [Property] from the menu.
 2. In the [Parts Property] dialog box, change [No.] and [Name], and click the [OK] button to apply the change.
-

4.12.7 Precautions

■ Maximum number of Parts that can be registered

Up to 32767 parts can be registered.

■ Data capacity required for parts

It is same with memory capacity for drawing figure.

☞ 2.4 Figures and Data Capacity

■ Display restrictions for registering figures as parts

(1) Line width of figure outline frame

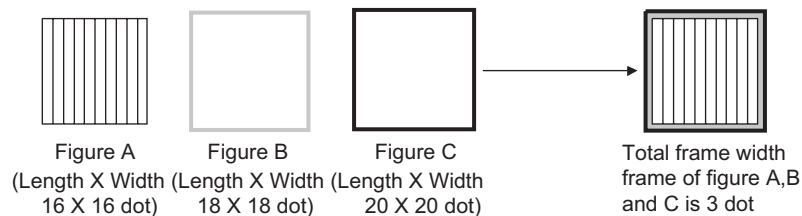
For a figure to be registered as parts, its frame must be drawn in 1-dot line.

If drawn in 2-dot or wider line, it may not appear in actual width on GOT.

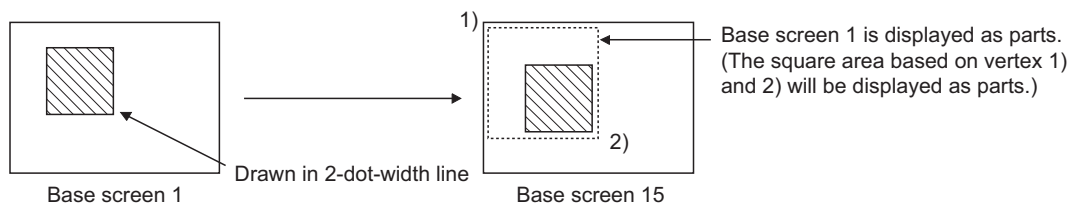
However, the frame of 2-dot or wider line can be displayed by following the steps below.

(a) When display with changing the color of figure (figure displayed as mark)

Example) Combine three figures drawn in 1-dot line to make one figure with 3-dot-wide frame.



(b) Set a figure drawn in 2-dot or wider line on an unused base screen and display the base screen as parts using parts display function.



(2) Line width (except slant lines)

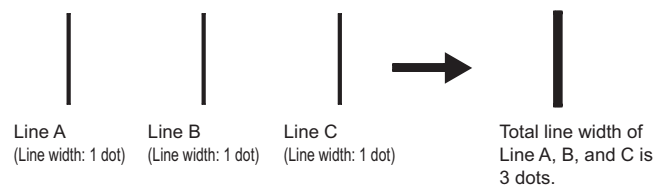
When the width of a line (except slant lines) to be registered as a part is 2 to 7 dots, the line may not be displayed with the set width on a GOT.

When displaying a 2-dot or more line on a GOT, refer to the following steps.

(a) Creating a rectangle (filled) and dragging the rectangle to change into the shape of a line

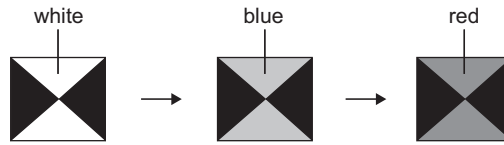
(b) Drawing a 2-dot or more line with 1-dot lines

Example) Combine three 1-dot lines and make a part with 3-dot line width.



(3) Changing the color of a figure on the screen (figure marked as a mark)

The white area of a part displayed as a mark by Parts Display/Parts Movement, can be changed to another color.



Change the area color from white to other colors.

Register the part displayed as a mark as below.

- Draw the color changing area of the figure in white.
- Do not use any figure read from the BMP/JPEG format file.

The above figures will not change in color even if displayed as a mask.

4.13 Registering BMP/JPEG Files for Parts in CF Card



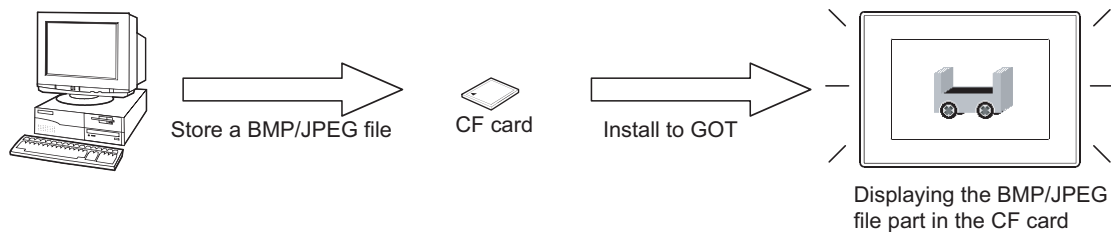
This section explains how to register BMP/JPEG files for parts in a CF card.
For how to register parts by GT Designer3, refer to the following.

4.12 Registering Parts

■ How to register BMP/JPEG files for parts in a CF card

The parts of the BMP/JPEG files stored in a CF card (herein after referred to as BMP/JPEG file parts) can be displayed as parts in the parts display or parts movement.

By registering parts in the CF card, the size of the project data size written to the GOT can be reduced.



For how to display parts as BMP/JPEG file parts in the CF card by the parts display or parts movement, refer to the following.

(Functions) 20. PARTS DISPLAY, 21. PARTS MOVEMENT

4.13.1 Specifications for BMP/JPEG files that can be stored in a CF card and displayed as parts

■ How to display BMP/JPEG file parts

Item	BMP/JEPG fils part (object units)	BMP/JEPG fils part (project units)
Overview	Specifying the BMP/JEPG file part stored in the CF card in each object setting of parts display or parts movement	Specifying part numbers from 9001 as the numbers used for BMP/JEPG file parts only and displaying the parts for parts display or parts movement
Storage folder name	Any folder name	Fixed
Storage file name	Any file name	Fixed
Available drive	A drive, B drive	A drive
Effective setting range	Object units	Project units
Number of settable parts	Max, 65536	Max, 999
Image	<p>Parts are managed by object.</p>	<p>Parts are managed by project.</p>

■ The BMP/JPEG files that can be displayed

POINT

Specification differences between BMP/JPEG files and BMP/JPEG file parts handled by GT Designer3

For the specifications for BMP/JPEG files handled by GT Designer3, refer to the following.

2.4 Figures and Data Capacity

The specifications of the BMP/JPEG file that can be stored in the CF card (BMP/JPEG file parts) differs from the BMP/JPEG file available for GT Designer3 (registered parts).

The data registered as parts by GT Designer3 may not be used as BMP/JPEG file parts.

(1) BMP file

Item	Description
Data format	The BMP data ^{*1} of 24-bit, 8-bit, 4-bit or 1-bit
Number of colors ^{*2}	65536 colors ^{*3} , 256 colors, 16 colors or monochrome
Resolution ^{*4}	Max.: GT SoftGOT1000: 1600×1200, 1280×1024, 1024×768, 800×600, 640×480 GT1695M-X, GT1595-X: 1024×768 GT1685M-S, GT1675M-S, GT1665M-S, GT1585V-S, GT1585-S, GT1575V-S, GT1575-S: 800×600 GT1675M-V, GT1675-VN, GT1672-VN, GT1665M-V, GT1662-VN, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V: 640×480 GT1555-Q and GT1550-Q: 320×240 Min.: 1×1 dot

^{*1} The BMP data compressed by compression software cannot be used.

When using the compressed BMP data, the system alarm of [536 Image file error or invalid file format.] occurs.

^{*2} For the BMP files stored in the CF card, the number of colors is reduced to the number supported by the GOT in use.

^{*3} For the GOT types that allow display in 65536 colors, refer to the following.

 User's Manual for the GOT used

^{*4} When specifying an image file larger than the display size of the GOT in use, the system alarm of [536 Image file error or invalid file format.] occurs.

(2) JPEG file

Item	Description
File format	JFIF
Data format	Base line
Number of colors ^{*1*2}	Full-color, gray-scale
Resolution ^{*3}	Max.: GT SoftGOT1000: 1600×1200, 1280×1024, 1024×768, 800×600, 640×480 GT1695M-X, GT1595-X: 1024×768 GT1685M-S, GT1675M-S, GT1665M-S, GT1585V-S, GT1585-S, GT1575V-S, GT1575-S: 800×600 GT1675M-V, GT1675-VN, GT1672-VN, GT1665M-V, GT1662-VN, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V: 640×480 GT1555-Q and GT1550-Q: 320×240 Min.: 1×1 dot

^{*1} For the JPEG files stored in the CF card, the number of colors is reduced to the number supported by the GOT in use.

^{*2} For the GOT types that allow display in 65536 colors, refer to the following.

 User's Manual for the GOT used

^{*3} When specifying an image file larger than the display size of the GOT in use, the system alarm of [536 Image file error or invalid file format.] occurs.



(1) **DXF/IGES data**

DXF/IGES files cannot be displayed as parts even when the files are stored in a CF card.

To use DXF/IGES files as parts, import the files to GT Designer3.

(2) **Time taken to display a BMP/JPEG file part (reference)**

The length of time necessary for a BMP/JPEG file part to be displayed on the GOT screen is indicated below for each GOT type.

Depending on the project data to be used, the time may differ from the time shown below.

GOT Type	Data range of BMP file to be displayed		Time taken to display a part (Reference, sec.)	
	Resolution (dots)	Number of colors (colors)	BMP file part	JPEG file part ^{*1}
GT1695M-X/GT1595-X	1024×768	24-bit full color	3.2	1.54
		256	1.68	1.55
		Monochrome	0.62	1.52
GT1685M-S/GT1675M-S/ GT1665M-S/GT1585V-S/ GT1585-S/GT1575V-S/ GT1575-S	800×600	24-bit full color	1.16	2.0
		256	0.69	1.86
		Monochrome	0.3 or less	1.95
GT1675M-V/GT1675-VN/ GT1665M-V/GT1575-V /GT1565-V	640×480	24-bit full color ^{*2}	1.22	0.80
		256	0.82	0.72
		Monochrome	0.3 or less	0.77
GT1575-VN	640×480	256	0.78	0.55
		Monochrome	0.3 or less	0.57
GT1672-VN/GT1662-VN/ GT1572-VN/GT1562-VN	640×480	16	0.78	0.55
		Monochrome	0.3 or less	0.57
GT1555-V	640×480	24-bit full color	1.14	0.61
		256	0.67	0.61
		Monochrome	0.3 or less	0.59
GT1555-Q	320×240	24-bit full color ^{*2}	0.45	0.41
		256	0.40	0.39
		Monochrome	0.32	0.44
GT1550-Q	320×240	Monochrome	0.35	0.46
GT SoftGOT1000	1280×1024	24-bit full color	0.62	0.92
		256	0.67	0.8
		Monochrome	0.65	0.78

^{*1} Values measured using a JPEG file part, by converting the BMP format into JPEG format.

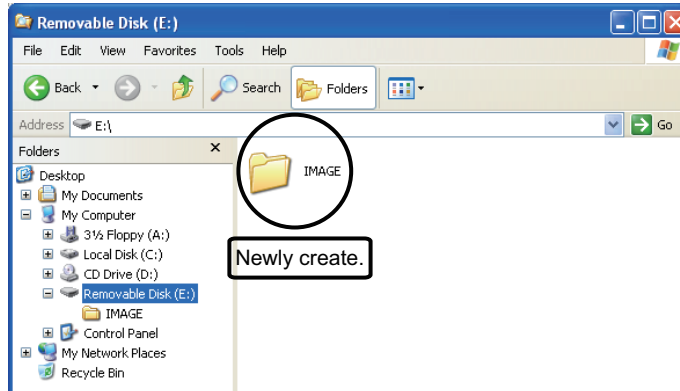
^{*2} For the following GOT types, the number of colors on the GOT screen is reduced to 4096.

- GT1675-VN
- 1555-QSBD

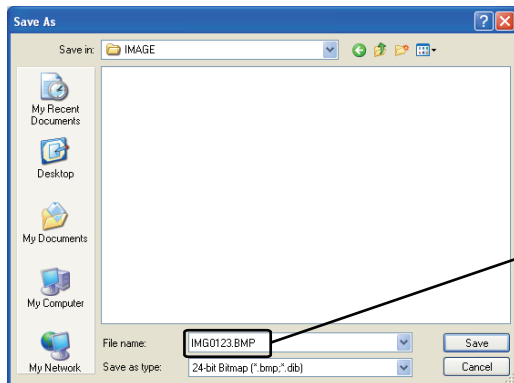
4.13.2 Storing BMP/JPEG file parts in a CF card

■ Displaying BMP/JPEG files (object units)

1. Create a folder to store a BMP/JPEG file part in the CF card.
Use a folder name set in each object.



2. Store a BMP/JPEG file to be used as a part in the created folder.
Use a BMP/JPEG file name that has been set in each object.
Example) In a case where file name: IMG, part number. : 0123, digits: 4



<How to name a file>

IMG0123.BMP

└─ Part number

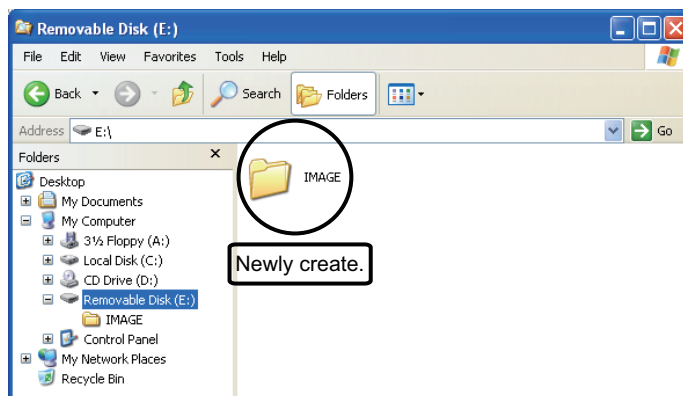
└─ Name set for each object

The part number varies depending on the number set for [Digits] in each object.

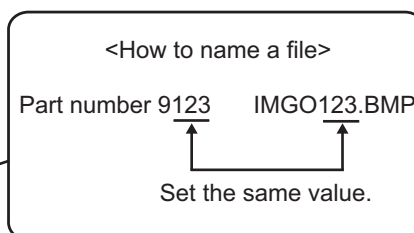
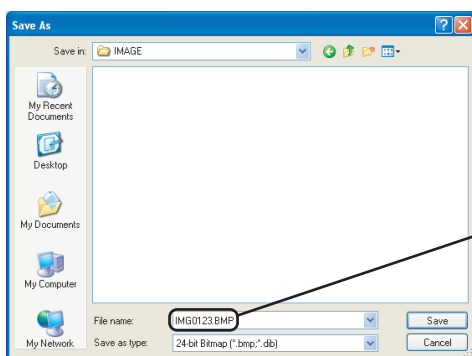
- 5 digits :00001 to 65535
- 4 digits :0001 to 9999
- 3 digits :001 to 999
- 2 digits :01 to 99
- 1 digits :1 to 9

■ Displaying BMP/JPEG files (project units)

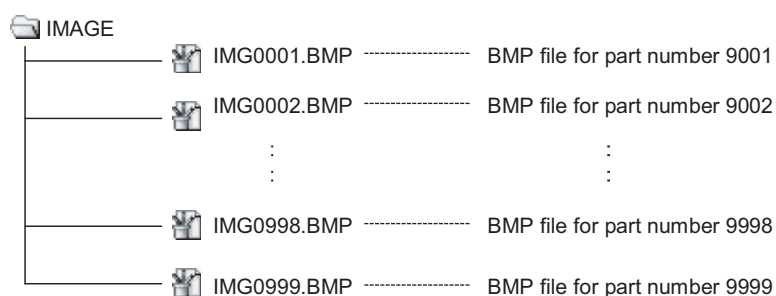
1. Create a folder named "IMAGE" to store BMP/JPEG file parts in the CF card.
If storing BMP/JPEG file parts in other than "IMAGE" folder, the BMP/JPEG file parts will not be displayed in Parts Display/Parts Movement.



2. Store a BMP/JPEG file to be used as a part in the "IMAGE" folder for the CF card by naming the file with "IMG****. BMP" or "IMG****. JPG". (Assign "****" with a number from 0001 to 0999.)
The lower 3 digits of "****" corresponds to those of part numbers.
Example) Naming the BMP file to be displayed as a part of the part number 9123.



- Structure in the CF card (for BMP files)



POINT

- (1) **When storing a BMP file and JPEG file of the same file name**
The JPEG file part is preceded.
- (2) **Previewing a BMP/JPEG file part to be registered**
The BMP/JPEG file parts stored in the CF card can be previewed on the screen in GT Designer3.
If the display of a BMP/JPEG file becomes unclear due to the color reduction or other reasons, adjust the BMP/JPEG file.

4.13.3 Precautions

■ The size of the BMP/JPEG file parts stored in the CF card

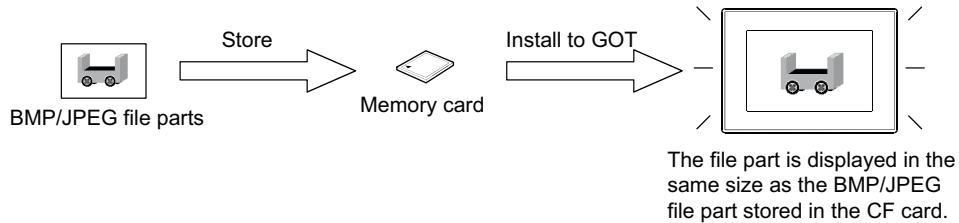
(1) Size of the BMP/JPEG file parts stored in the CF card

The BMP/JPEG file parts displayed on the GOT is the same size as the BMP/JPEG file parts stored in the CF card.

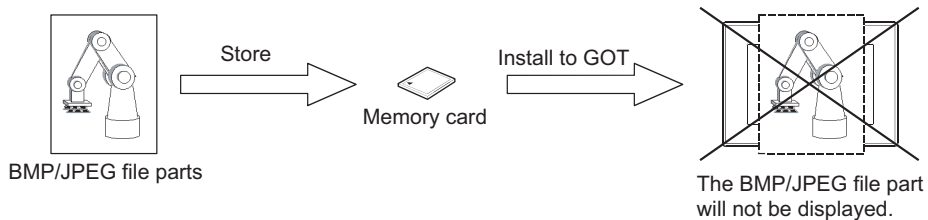
Any BMP/JPEG file part larger than the GOT display size cannot be displayed.

To store the BMP/JPEG file parts in the CF card, use BMP/JPEG file parts smaller than the display size of the GOT.

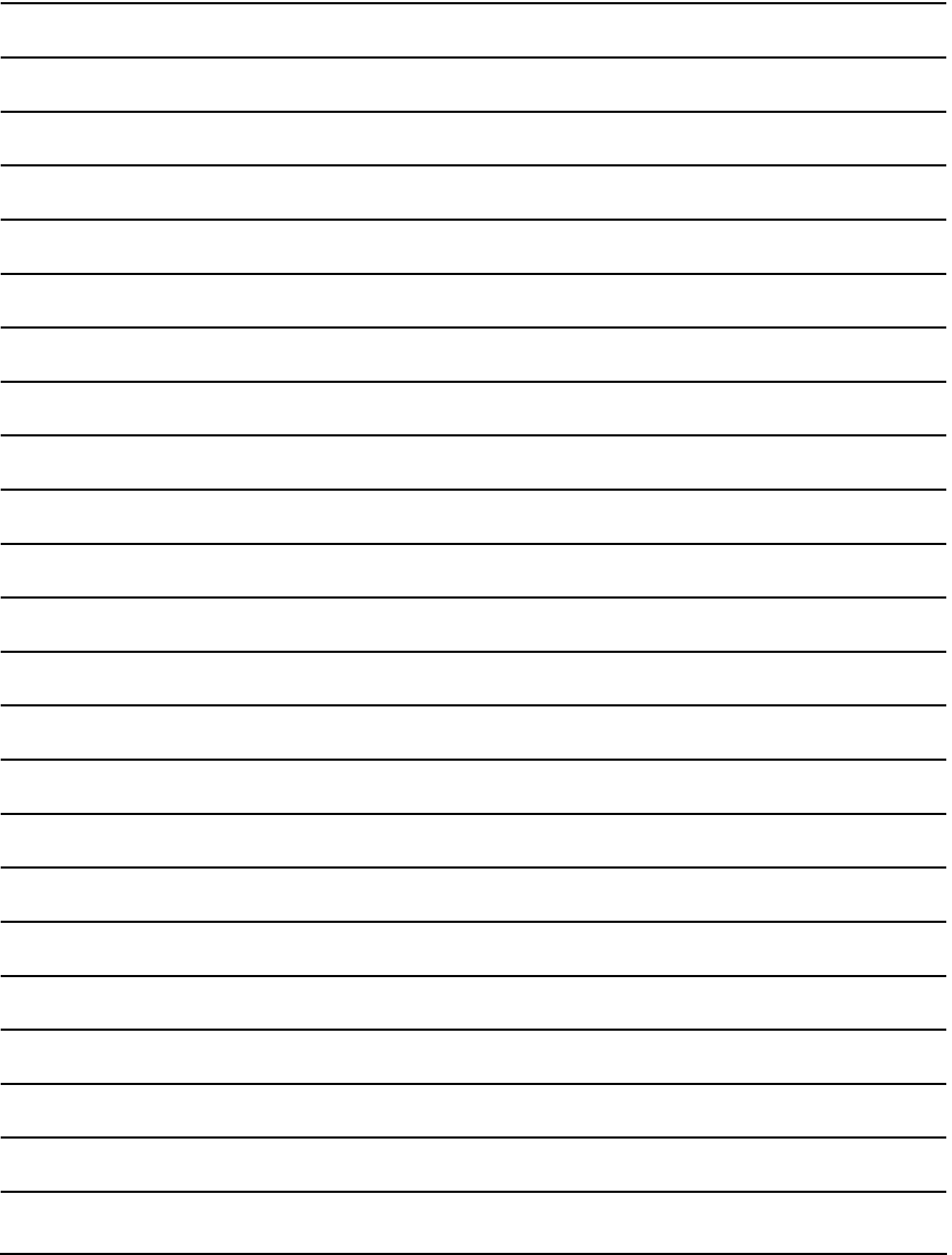
- When the BMP/JPEG file part is the same size or smaller than the GOT display size



- When the BMP/JPEG file part is larger than the GOT display size



EDITING AND SETTING FIGURES AND OBJECTS



5. EDITING AND SETTING FIGURES AND OBJECTS

This chapter explains how to arrange, edit and set figures and objects.

■ Outline of figures and objects

Both figures and objects are used by arranging on the screen.
The following shows the features of figures and objects.

(1) Figure

Used for describing a text or shape.

A figure does not change according to the device or setting value status. Its function is exclusively to display texts or shapes.

For the figures available in GT Designer3 and its setting methods, refer to the following.

 (Functions) 1. FIGURES

(2) Object

Used for describing a device setting value or text/shape.

Each object has specific functions, and varies according to the device or setting value status.

For the objects available in GT Designer3 and its setting methods, refer to the following.

 2.6 Specifications of Available Functions Set with GT Designer3

GT Designer3 Version1 Screen Design Manual (Functions)

5.1 Arranging Figures and Objects



This chapter explains how to arrange figures and objects.

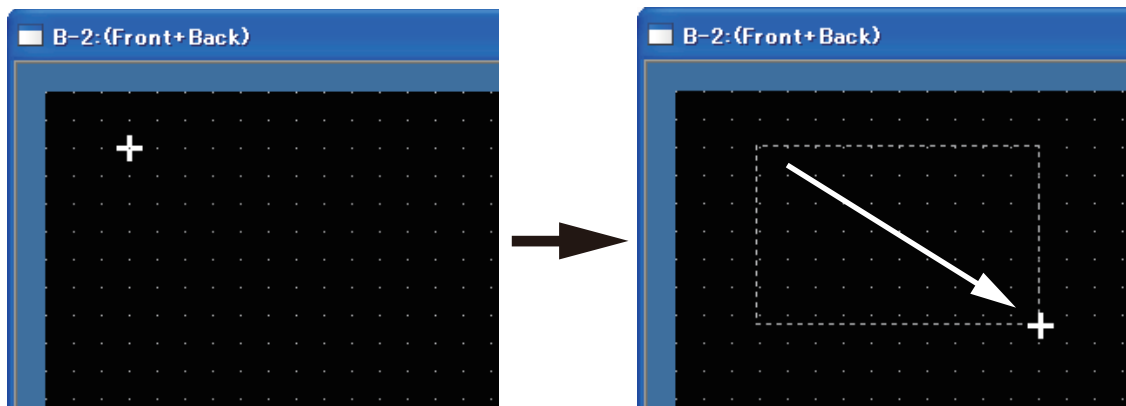
■ Arranging a figure or object while changing its size

1. Select a figure or object to be allocated from the [Figure] or [Object] menu, and switch the mouse pointer to the arrangement mode (+).

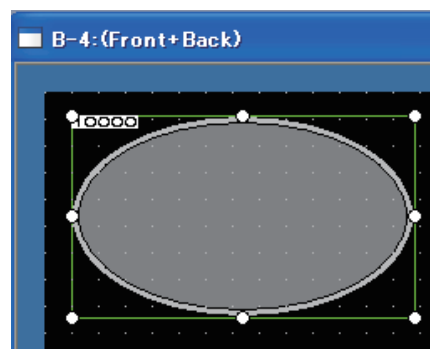


2. Move the mouse pointer to the point where the object is to be arranged on the screen editor.

3. Click the position to arrange the object and drag the pointer to any position.




4. Release the mouse button. The object with the size changed is arranged.

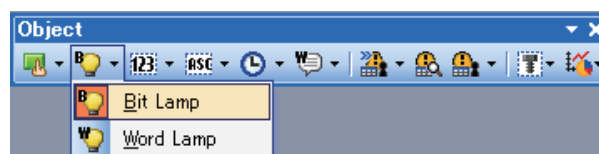


HINT

(1) Selecting the figure/object

The figure and object to be arranged on the screen editor can also be selected from the toolbar icon. For how to use the toolbar and icon list, refer to the following.

 3.4 Type of Tool Bars and Short Cut Keys



(2) Operation with the keyboard

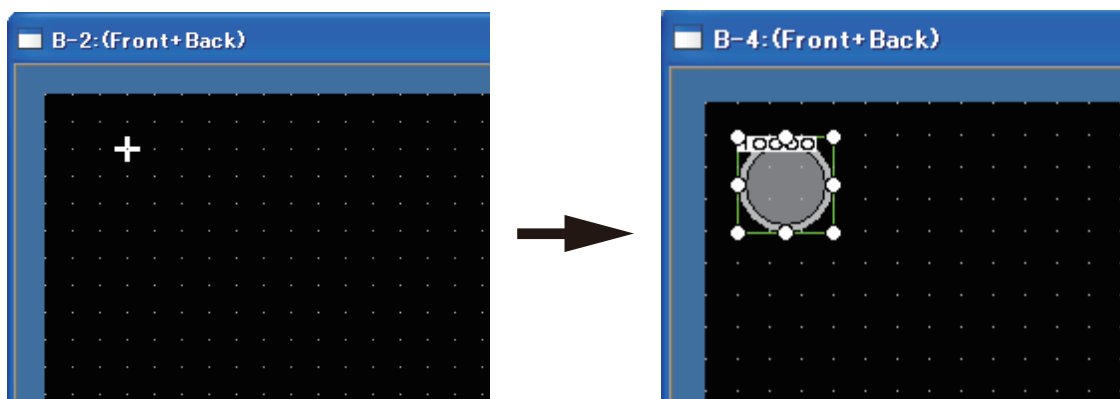
1. Select a figure or object, and move the mouse pointer to the point where the figure or object is to be arranged with cursor keys
2. Press the [Enter] key once to change the size.
Change the figure or object size with cursor keys.
3. Press the [Enter] key again to arrange the figure or object with the size changed.

■ Arranging figures or objects without changing the size

1. Select a figure or object to be allocated from the [Figure] or [Object] menu, and switch the mouse pointer to the arrangement mode (+).



2. Move the mouse pointer to the point where the object is to be arranged on the screen editor.
3. Click the position to arrange the object.
The object in the default size is arranged.

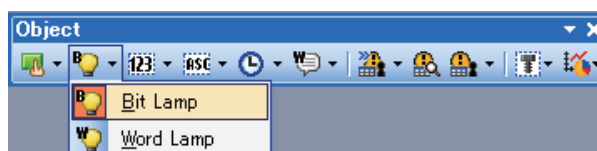


HINT

(1) Selecting figures or objects

The figures or objects to be arranged on the screen editor can also be selected from the icons on the tool bar. For how to use the tool bar and for the list of icons, refer to the following.

☞ 3.4 Type of Tool Bars and Short Cut Keys



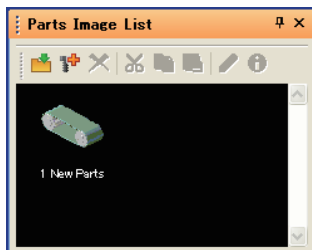
(2) Operation by keyboard

1. Select the object and move the mouse pointer with the cursor keys to the point where the object is to be arranged.
2. Press the [Enter] key twice.
The object in the default size is arranged.

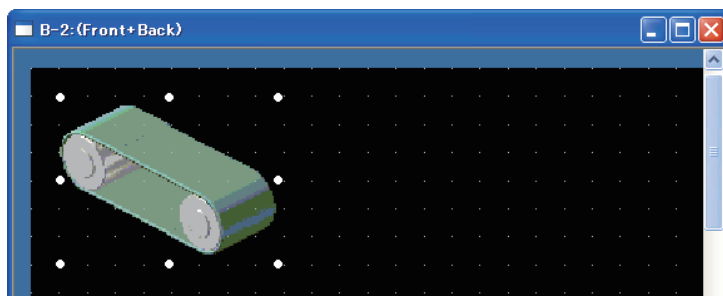
■ Arranging from Parts Image List

If the part to be used is previously registered, the part can be selected and arranged on the screen from the Parts Image List.

1. If the Parts Image List is not displayed, select [View] → [View Window] → [Parts Image List] from the menu to display the parts image list.



2. Click the object to be arranged from the Parts Image List.
Move the mouse pointer on the screen editor, to the position where the object is to be arranged.
3. Click the position to arrange the object.
The selected part is arranged.

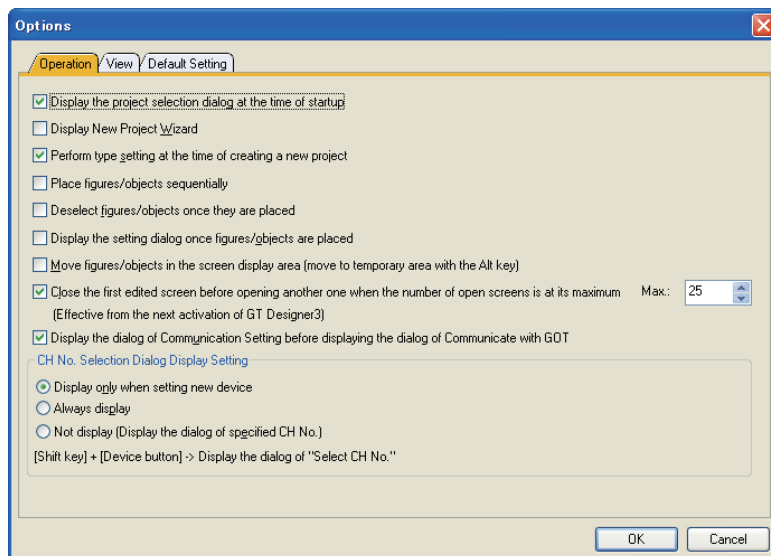


■ Changing the operation for figure/object arrangement

Change the operations for arrangement by configuring the following settings on the [Operation] tab of the [Options] dialog box.

- Arranging figures/objects repeatedly.
- Clearing the selection status after arranging figures/objects.
- Displaying the setting dialog box after arranging figures/objects.
- Moving the figures/objects inside the screen display area (Moving to the temporary area by the ALT key)

Select [Tools] → [Option] from the menu to display the [Options] dialog box.



For the setting contents of the Options dialog box, refer to the following.



3.5.3 Customizing actions and default value of GT Designer3

5.2 Editing Figure and Object


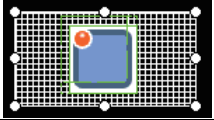

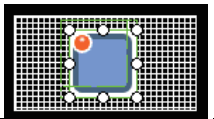




This chapter explains how to edit figures and objects.

5.2.1 Selecting figure and object

■ Selecting target

The selection targets for the screen editor can be selected from [Figure], [Object], or [Figure+Object].
(Default: [Figure+Object])

Selection target	Description	Selection operation
Figure	<p>Use this setting when selecting only figures.</p>  <p>Only figures can be selected.</p>  <p>When a figure and an object are overlapped, only the figure is displayed.</p>	<ul style="list-style-type: none"> Select [Edit] → [Object of Selection] → [Figure] from the menu.
Object	<p>Use this setting when selecting only objects.</p>  <p>Only objects can be selected.</p>  <p>When a figure and an object are overlapped, only the object is displayed.</p>	<ul style="list-style-type: none"> Select [Edit] → [Object of Selection] → [Object] from the menu.
Figure+Object	<p>Use this setting when selecting figures and objects.</p>  <p>Both figures and objects can be selected.</p>  <p>When a figure and an object are overlapped, the object is displayed with priority.</p>	<ul style="list-style-type: none"> Select [Edit] → [Object of Selection] → [Figure+Object] from the menu.



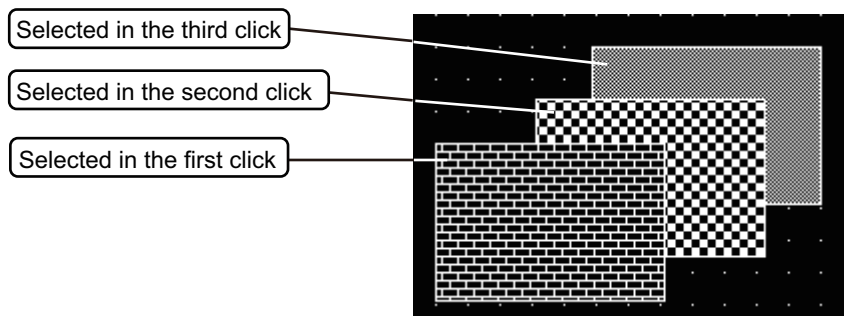
Selecting set overlay screen

When the selecting target is [Object] or [Figure+Object], switch whether to execute or not set overlay screen. Switch with the following operations

- Select [Edit] → [Object of Selection] → [Overlay Screen] from the menu.

Selecting figures and objects in the background

Click the part where figures or objects are overlapped while pressing the [Ctrl] key. The selected figure shifts by each click.

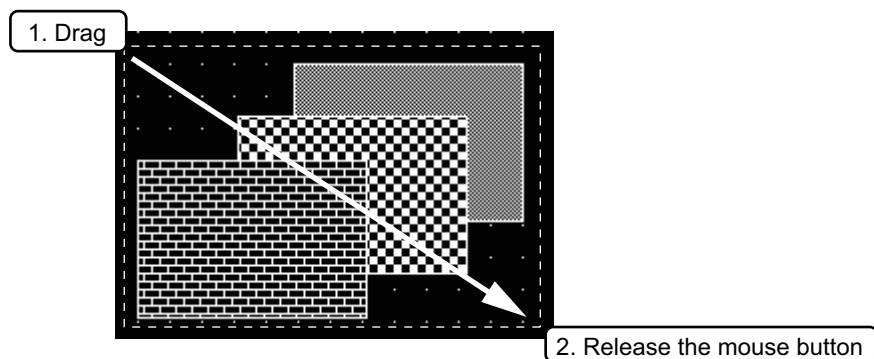


Selecting multiple figures and objects

(1) By the drag operation of the mouse

Select the area around the figures or objects by the mouse drag function.

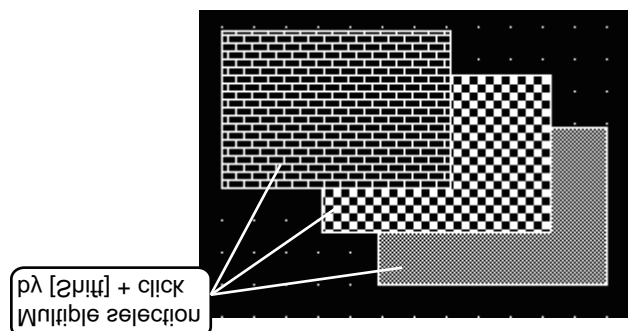
Release the mouse button. Multiple figures and objects in the selected area are selected.



(2) By the [Shift] key + mouse operation

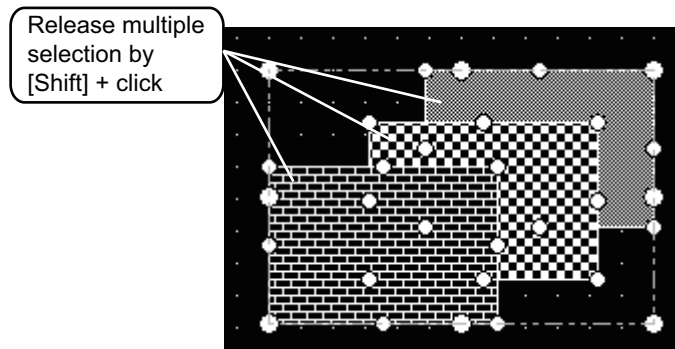
Click the figure or object to be selected while pressing the [Shift] key.

The clicked figure or object is selected.



■ Releasing multiple-selected figures and objects

Click figures and objects to be released from the multiple selected ones while pressing the [Shift] key. The clicked figure or object is released.



HINT

(1) Selecting figure or object from the data list

Using the data list, the figures and objects on the screen can be displayed in a list.


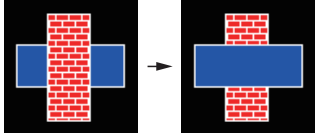
The figure or object selected in the data list is also selected on the screen editor.

For how to use the data list, refer to the following.

 8.5.3 Selecting overlapped figure (Data view)

5.2.2 Editing figure and object

1. Select the figure or object to be edited.
2. Perform the following operations, according to the editing contents.

Function	Description	Operation
Cut	Figures and objects are cut.	• Select [Edit] → [Cut] from the menu.
Copy	Figures and objects are copied.	• Select [Edit] → [Copy] from the menu.
Paste	The cut/copied figures and objects are pasted.	• Select [Edit] → [Paste] from the menu.
Delete	Figures and objects are deleted.	• Select [Edit] → [Delete] from the menu.
Bring to Front or Front Layer /Send to Back or Back Layer	The front-to-back sequence of objects is changed within the screen. (Ex.) The selected objects are changed in front-to-back sequence.	• Select [Edit] → [Stacking Order] → [Move to Front of Front Layer] from the menu.
		• Select [Edit] → [Stacking Order] → [Move to Back of Back Layer] from the menu.
Bring to Front of Layer /Sent to Back of Layer	The front-to-back sequence of figures/objects is changed within the same layer. (Ex.) The selected figure is moved to the front.	• Select [Edit] → [Stacking Order] → [Move of Front of Layer] from the menu.
		• Select [Edit] → [Stacking Order] → [Move to Back of Layer] from the menu.
Flip Vertical /Flip Horizontal	The selected figure is flipped. (Not available for objects) (Ex.) Flipping selected figure vertically	• Select [Edit] → [Rotate/Flip] → [Flip Vertical] from the menu. • Select [Edit] → [Rotate/Flip] → [Flip Horizontal] from the menu.
RotateLeft /Rotate Right	Figure is rotated 90 degrees to right/left. (Not available for objects) (Ex.) Rotating selected figure 90 degrees to left	• Select [Edit] → [Rotate/Flip] → [Rotate Left] from the menu. • Select [Edit] → [Rotate/Flip] → [Rotate Right] from the menu.



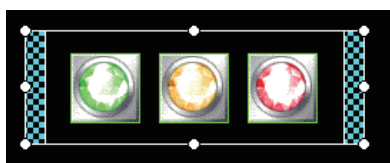
Operation with icons or shortcut keys

The operations above can also be performed with icons on the toolbar or shortcut keys.
For the list of toolbar icons and shortcut keys, refer to the following.

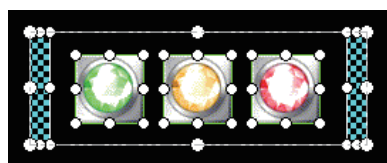
 3.4 Type of Tool Bars and Short Cut Keys

5.2.3 Grouping multiple figures and objects

The grouping of multiple figures and objects enables users to handle them as a single figure.



Group



Ungroup

1. Select the figures or objects to be grouped or ungrouped.
2. Perform the following operations, depending on the editing content.

Function	Description	Operation
Group	Multiple figures and objects are grouped.	• Select [Edit] → [Group] from the menu.
Ungroup	Multiple figures and objects are ungrouped.	• Select [Edit] → [Ungroup] from the menu.



Operation with icons or shortcut keys

The operations above can also be performed with icons on the toolbar or shortcut keys.
For the list of toolbar icons and shortcut keys, refer to the following.

 3.4 Type of Tool Bars and Short Cut Keys

5.2.4 Undo, redo

The edition of figures or objects can be reversed.
Also, reversed operations can be re-executed.

■ Undo

Select [Edit] → [Undo] from the menu.
The last action is reversed.

■ Redo

Select [Edit] → [Redo] from the menu.
The operation reversed with [Undo] is re-executed.



Operation with icons or shortcut keys

The operations above can also be performed with icons on the toolbar or shortcut keys.
For the list of toolbar icons and shortcut keys, refer to the following.

 3.4 Type of Tool Bars and Short Cut Keys

5.2.5 Aligning figures and objects

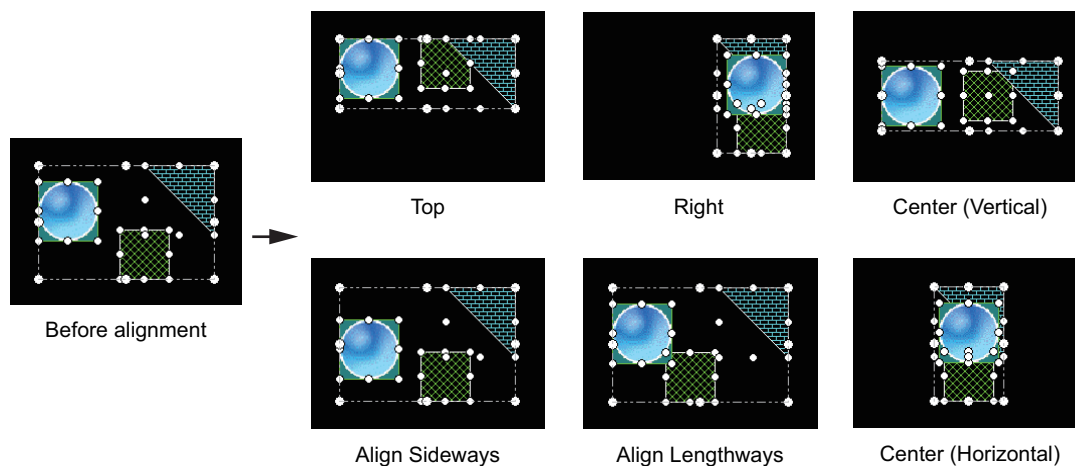
Multiple figures and objects can be aligned.

■ Aligning in one direction

1. Select the figures or objects to be aligned.
2. Perform the following operations according to the alignment.

Function	Description	Operation
Left	Figures and objects are aligned to the left.	• Select [Edit] → [Align] → [Left] from the menu.
Center (Horizontal)	Figures and objects are aligned at the center in the horizontal direction	• Select [Edit] → [Align] → [Center (Horizontal)] from the menu.
Right	Figures and objects are aligned to the right.	• Select [Edit] → [Align] → [Right] from the menu.
Top	Figures and objects are aligned to the top.	• Select [Edit] → [Align] → [Top] from the menu.
Center (Vertical)	Figures and objects are aligned at the center in the vertical direction	• Select [Edit] → [Align] → [Center (Vertical)] from the menu.
Bottom	Figures and objects are aligned to the bottom.	• Select [Edit] → [Align] → [Bottom] from the menu.
Align Sideways	Figures and objects are equally aligned in the horizontal direction.	• Select [Edit] → [Align] → [Align Sideways] from the menu.
Align Lengthways	Figures and objects are equally aligned in the vertical direction.	• Select [Edit] → [Align] → [Align Lengthways] from the menu.

(Example) Aligning example of figures and objects



Operation with toolbar icons

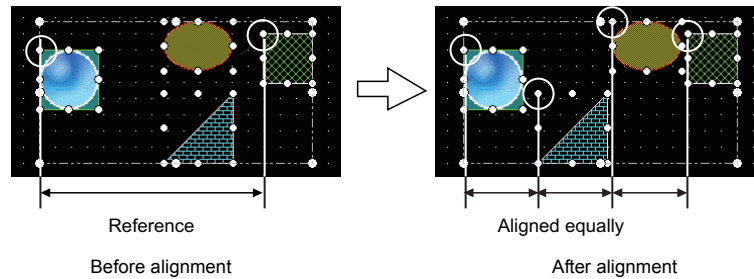
The operations above can also be performed with icons in the toolbar.
For toolbar icons, refer to the following.

☞ 3.4 Type of Tool Bars and Short Cut Keys

POINT

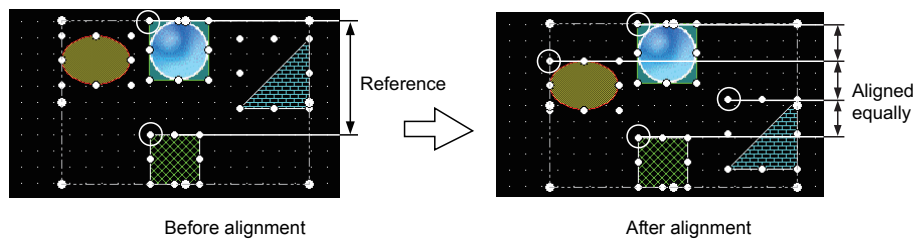
(1) Align Sideways

When [Align Sideways] is selected, the figures and objects are aligned equally based on the top-left coordinates of the leftmost and rightmost figures or objects.



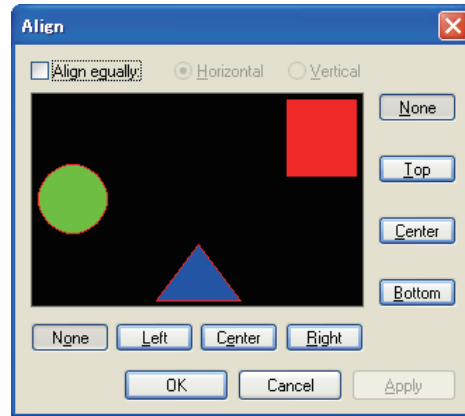
(2) Align Lengthways

When [Align Lengthways] is selected, the figures and objects are aligned equally based on the top-left coordinates of the uppermost and lowermost figures or objects.



■ Alignment in combination of multiple directions


1. Select the figures and objects to be aligned.
2. Select [Edit] → [Align] → [Custom] from the menu.
3. The [Align] dialog box is appears.
Select the alignment direction and click the [OK] button.



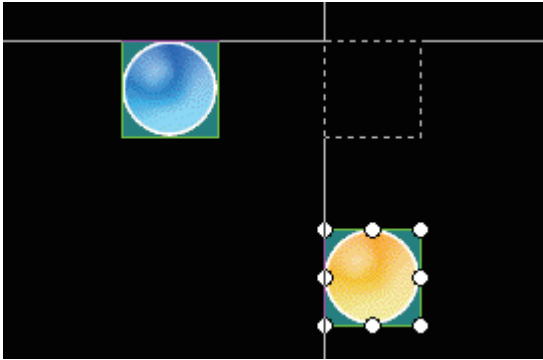
Item	Description	
None	Figures and objects are not aligned to the selected direction.	
Top	Figures and objects are aligned to the top.	
Bottom	Figures and objects are aligned to the bottom.	
Left	Figures and objects are aligned to the left.	
Right	Figures and objects are aligned to the right.	
Center	Figures and objects are aligned at the center of selected direction.	
Align equally	Select this item to align figures equally.	
	Horizontal	Figures and objects are aligned equally in the horizontal direction.
	Vertical	Figures and objects are aligned equally in the vertical direction.

■ Alignment using the Guidelines (auxiliary line)

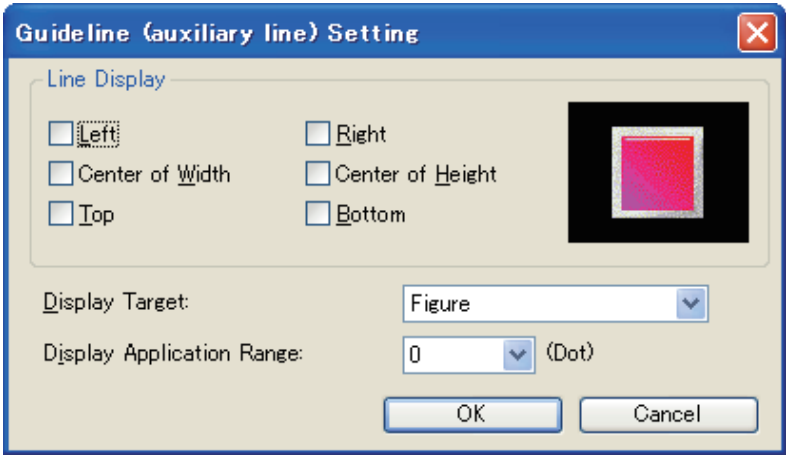
1. Select [Dieplay] → [Guidelines (auxiliary line)] and any of the following from the menu.

Item	Description
Display	Displays the guideline.
Figure	The guideline is displayed for figures.
Object	The guideline is displayed for objects.
Figure + Object	The guideline is displayed for figures and objects.
Same Type	The guideline is displayed for the same type of data of the selected figure or object.
Custom	Displays the guideline setting dialog box.  (1) Guidelines (auxiliary line) Setting dialog box

2. Drag and move the figure or object.
The Guidelines (auxiliary line) is displayed if some display target is placed in the horizontal or vertical direction.
Take the Guidelines (auxiliary line) as a reference and determine the position to move.



(1) Guidelines (auxiliary line) Setting dialog box



Item	Description	
Line Display	Set the lines to be displayed as Guidelines (auxiliary line).	
Display Target	Select the target for the moving figure or object to display the guideline.	
	Figure	The guideline is displayed for figures.
	Object	The guideline is displayed for objects.
	Figure + Object	The guideline is displayed for figures and objects.
	Same Type	The guideline is displayed for the same type of data of the selected figure or object.
Display Application Range	Specify the displaying distance of the figure or object.	



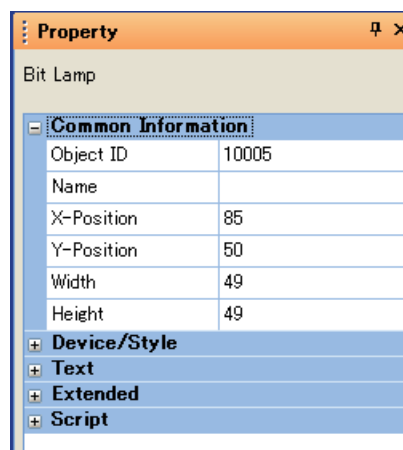
Precautions for Guidelines (auxiliary line)

- When [Center of Width] or [Center of Height] is selected, the Guidelines (auxiliary line) is displayed at the center of the width or height of the display target.
- Grouped figures and objects displays the Guidelines (auxiliary line) for grouped figures and objects regardless of the contents of the group.
- Guidelines (auxiliary line) is not displayed in the touch area of touch switches.
- The Guidelines (auxiliary line) is not displayed when operating the keyboard.


5.2.6 Changing attributes of figures and objects

■ Changing attributes with property sheet

1. Select [View] → [View Window] → [Propertysheet] from the menu.
After selecting, the property sheet is displayed.



2. Select the figure or object.
After selecting, the attributes of the selected figure or object are displayed in the property sheet.
3. Change the attributes of the figure or object.
For how to use the property sheet, refer to the following.

 8.4 Displaying in List and Editing Screen/Figure/Object Settings (Propertysheet)



(1) Changing attributes of multiple figures/objects in a batch

The type of figures or objects to be changed must be the same.

Attributes of different types of figures and objects cannot be changed in a batch.

Also, if different types of figures and objects are grouped, those attributes cannot be changed.

Ex.) Touch switch and lamp, Bit lamp and word lamp, Circle and rectangle

(2) Object shape setting

Shapes cannot be set for objects in the property sheet.

When selecting whether to set or not shapes, set it from the dialog box of each object.

(3) Width and height of figures and objects

Item	Setting range
Width	1 to 2000
Height	1 to 1600

■ Changing attribute with dialog box

1. Double-click the figure or object.
2. The setting dialog box of the figure or object is displayed.
Change the attributes of the figure or object.
For how to set the setting dialog box of each figure or object, refer to the following.

 GT Designer3 Version1 Screen Design Manual (Functions)



How to display the setting dialog box

The setting dialog box of each figure or object can be displayed by the following methods.

- (1) **Display from the right-click menu**
Select [Setting] from the menu displayed by right-clicking the figure or object.
- (2) **Display from the toolbar menu**
Select the figure or object, and select [Edit] → [Setting] from the menu.

5.2.7 Changing size of figures/objects

POINT

Handle types

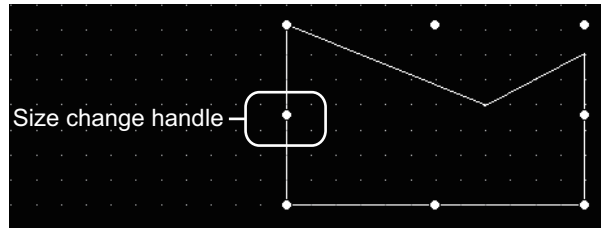
When selecting figures or objects, the points displayed around are called handle.

Select [Edit] → [Edit Vertices] from the menu to switch the handle type.

The following types of handle are available.

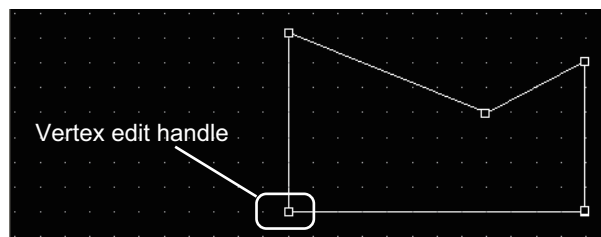
(1) Size change handle

Use this to change the size of figures or objects



(2) Vertex edit handle

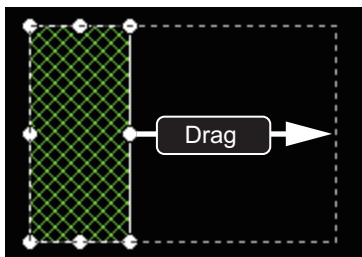
Use this to edit the length of specified side of figures or objects.



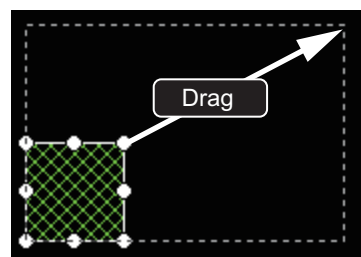
■ Scaling up/down figures.

The overall size can be scaled up or down.

1. Select the figure.
2. The handle is displayed on the figure.
When the handle type is vertex edit handle, select [Edit] → [Edit Vertices] from the menu, and switch to the size change handle.
3. Drag the handle, and change the figure size.



Ex.) Changing vertical and horizontal sizes



Ex.) Changing vertical and horizontal sizes from corner

HINT

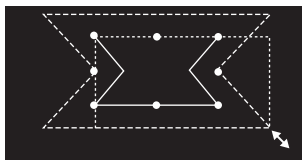
(1) Operation in combination with the [Ctrl] key and [Shift] key.

The method for changing the size can be changed by a combined operation of the [Ctrl] and [Shift] keys.

(a) When changing sizes without changing the vertical/horizontal ratio

Drag the handle while pressing the [Shift] key.

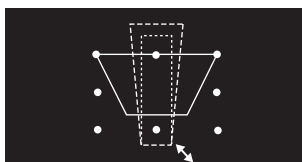
The figure size can be changed, without changing the vertical/horizontal ratio.



(b) When changing the vertical and horizontal sizes from the center

Drag the handle while pressing the [Ctrl] key.

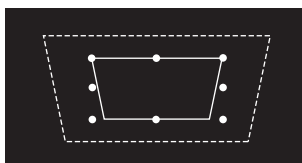
The figure size can be changed to the vertical or horizontal directions from the center.



(c) When changing sizes from the center without changing the vertical/horizontal ratio

Drag the handle while pressing the [Ctrl] and [Shift] keys.

The figure size can be changed without changing the vertical/horizontal ratio from the center.

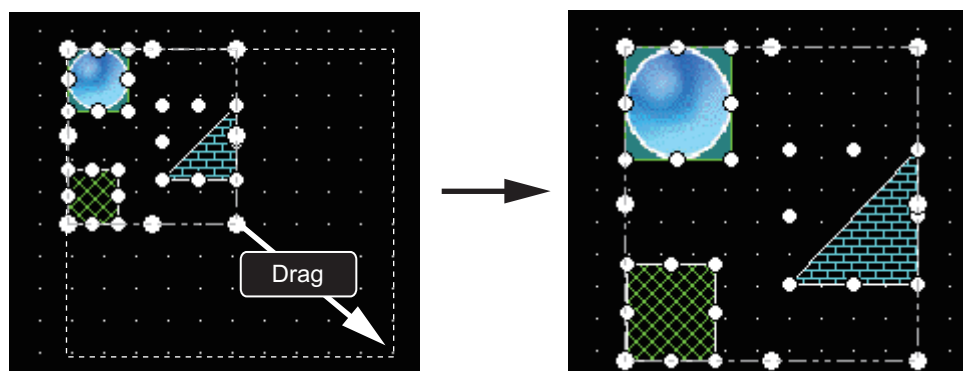


Texts can be resized by performing the operations (a) to (c) above.

However, when high-quality or True Type font is used, the text may not be resized as intended, since they are restricted in the applicable size.

(2) Changing attribute with dialog box

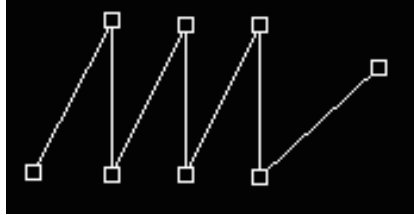
Multiple figures and objects can also be selected and enlarged or reduced in a batch.



■ Editing figure vertex

The length of a specified side can be changed.

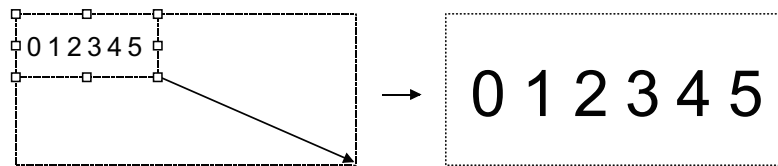
1. Select a figure.
2. The handle is displayed on the figure.
When the handle type is size change handle, select [Edit] → [Edit Vertices] from the menu to switch to the vertex edit handle.
3. Drag the handle, and change the vertex position.
Ex.) Vertex edit of Line free form



■ Enlarging or reducing objects

(1) Overall size

1. Select an object.
2. The handle is displayed on the object.
3. Drag the handle, and change the object size.



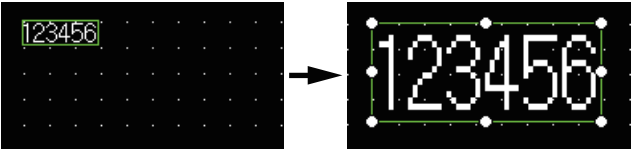
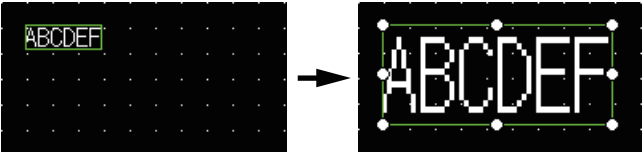
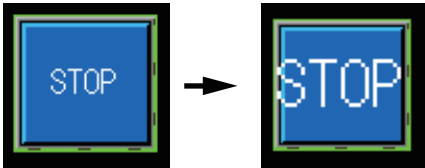
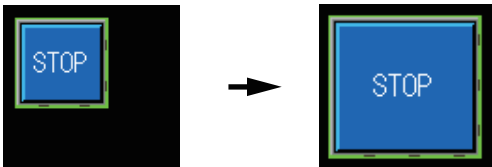
Objects whose size cannot be changed by mouse operation.

Text size can be automatically adjusted to fit a character string by setting Adjust Direct Text Size.
Refer to the following manual for the target object and setting for Adjust Direct Text Size.

(2) Text size

(a) Text set to an object

Size of texts other than direct input texts are changed according to the object size changing.
The changing details are different according to object types.

Change of text size	Object	Details of change
Changeable	Numerical display Numerical input	The text size is enlarged 0.5 to 8 times from the original object size. 
	ASCII display ASCII input	The text size is enlarged 0.5 to 8 times from the original object size. 
Unchangeable	Touch switch Lamp (Bit/Word) Alarm list Comment display Data list display Alarm history display Trend graph Line graph Bar graph Statistics graph Scatter graph Panel meter	The text size can be changed by setting text size from the dialog box of each object. The text size is not changed even if the object size is changed, Example: When the text size setting is changed (Touch switch)  Example: When the object size is changed 

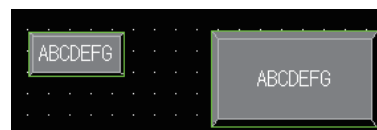
(b) Text set as direct input text

When [Adjust Direct Text Size] is enabled, the direct input text is automatically enlarged or reduced according to the object size.

Select [Edit] → [Adjust Direct Text Size] from the menu to switch whether to enable or disable the automatic sizing of direct input text.



When [Adjust Direct Text Size] is enabled



When [Adjust Direct Text Size] is disabled

The Adjust Direct Text Size is available for the following objects.

- Touch switch
- Lamp (Bit/Word)
- Panelmeter

(c) Text set for comment group

The size of text set for comment group is automatically changed then [Adjust Text Size] on the dialog box of each object is enabled.

The font size of texts exceeding the object display frame is automatically adjusted, according to the object display frame.

Also, the minimum font size when adjusting the text can be set at [Minimum Size].

When using high quality fonts, the displayed font may be changed depending of the size after changing.




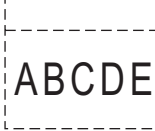



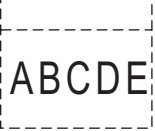
So, after changing the object size, confirm if the displayed font is not changed.

If the font is changed, adjust the object size to enable the display of the high quality font.

The [Adjust Text Size] is available for the following objects.

- Touch switch
- Lamp (Bit/Word)
- Comment Display
- Advanced Alarm

The following explains operations when [Adjust Text Size] is enabled and disabled.

When the text string is not fit in the display frame		Enabled	Disabled
Display frame			
Text string displayed	 ABCDEFGH	When the text string is not fit in the display frame, the character size is adjusted automatically so that the text string is fit in the display frame.	Line feed is performed for the text string.
Display frame			
Text string displayed	 ABCDEFGHIJK	When the text string is not fit in the display frame even with the set minimum text size, the text string is aligned to the left and overflowed text part are not displayed.	When the text string is not fit in the display frame even when line feed is performed, the overflowed text part is not displayed.

(3) Shapes set to objects

Shapes set to objects are enlarged or reduced according to the object.

- (a) Shape with fixed frame width when the object is enlarged (Frame width fixed shape)
When the object is enlarged or reduced, the frame width does not change.

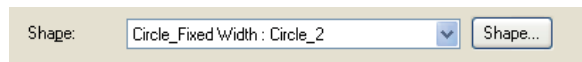


- (b) Shape with increasing frame width when the object is enlarged
When the object is enlarged, the frame width is also enlarged.
When the object is reduced, the frame width is narrowed.



Frame width fixed shape

A frame width fixed shape is included in basic figures and the name of the shape includes [Fixed Width].

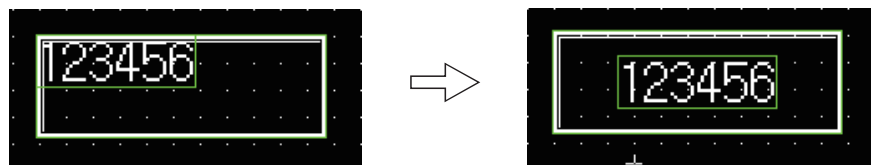


(4) Touch area

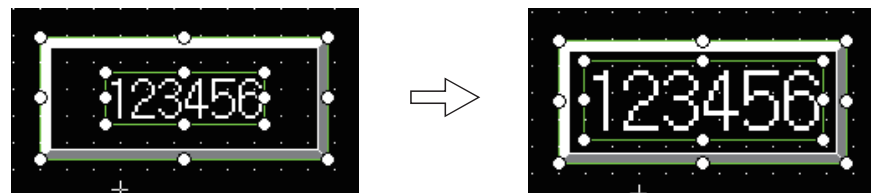
When changing the size of objects to which shape is set, the size of touch area and shape, and the display position of both may become misaligned.

When the object and shape are not aligned, select the object and perform the following operations to adjust the display position.

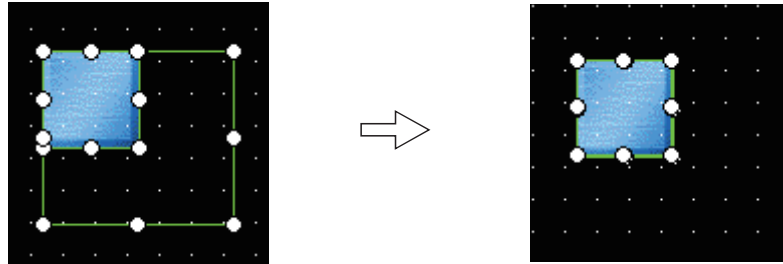
- (a) Center the touch area in its shape
Right-click the object and select [Centering] from the displayed menu.
The touch area moves to the center of the shape.



- (b) Edit the touch area and shape separately
Select the object and then select [Edit] → [Edit Touch Area/Frame Region] → [Edit Touch Area/Frame Region] from the menu.
After selecting, the display position/size of the touch area and shape can be edited separately.



- (c) Matching the touch switch shape and touch area
Select the touch switch and then select [Edit] → [Edit Touch Area/Frame Region] → [Touch Area Auto Adjustment] from the menu.
After selecting, the shape and touch area are matched.



Always adjust the touch area automatically

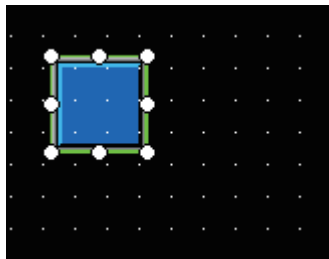
For matching the shape and touch area always, enable [Constant Touch Area Auto Adjustment].

Select [Edit] → [Edit Touch Area/Frame Region] → [Constant Touch Area Auto Adjustment] from the menu to switch whether to enable or disable the function.

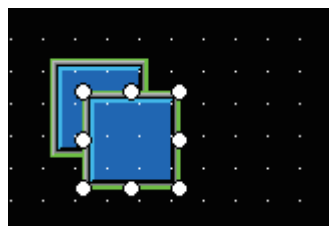
5.2.8 Copying figures and objects

Figures or objects can be copied at a time.

1. Select the figure or object to be copied.



2. Select [Edit] → [Duplicate] from the menu.
A copy of the selected object is arranged.



Operation with icons or shortcut keys

The operation above can also be performed with icons on the toolbar or shortcut keys.

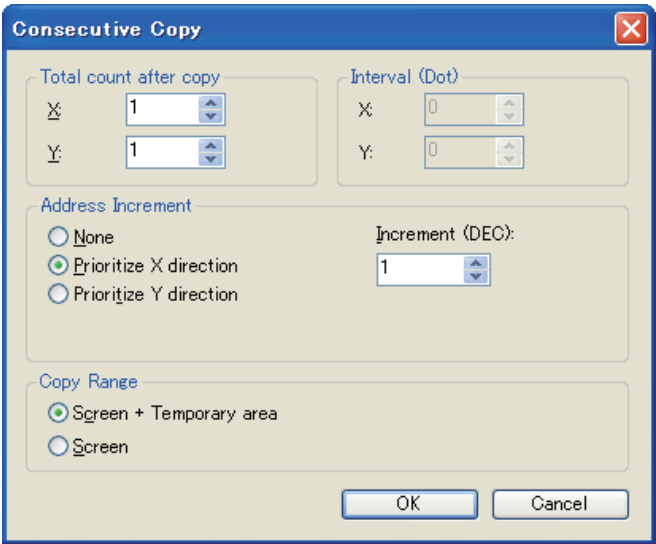
For the list of toolbar icons and shortcut keys, refer to the following.

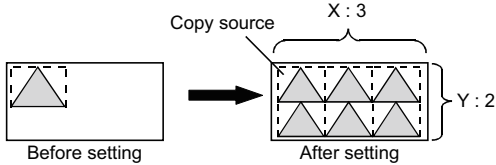
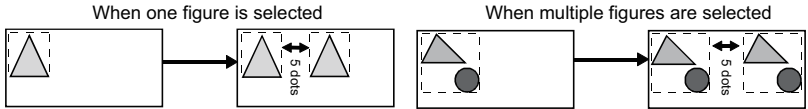
☞ 3.4 Type of Tool Bars and Short Cut Keys

5.2.9 Copying figures and objects consecutively

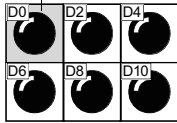
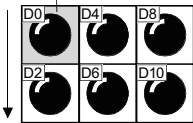
Figures and objects can be copied at a time.

1. Select the desired figure or object for consecutive copies.
2. Select [Edit] → [Consecutive Copy] from the menu.
The Consecutive Copy dialog box appears.
After setting the copy details, click the [OK] button to make copies.



Item	Description	
Total count after copy	Set the number of figures (copy source + its copies) that will appear on the screen. For example, when "2" is set, two figures, i.e., the copy source and its one copy appears on the screen. Example) Number is set to X: 3 and Y: 2.	
		
	X	Set the number of figures or objects in the X direction (rightward from the copy source). (1 to 100)
	Y	Set the number of figures or objects in the Y direction (downward from the copy source). (1 to 100)
Interval (Dot) ^{*1}	Set the interval (dots) between the copy source and its copies. Example) Interval is set to X: 5 dots.	
		
	X	Set the interval (dots) between figures in the X direction (rightward from the copy source). (0 to 100)
	Y	Set the interval (dots) between figures in the Y direction (downward from the copy source). (0 to 100)

(Continued to next page)

Item	Description
Address Increment	<p>It is set to offset the device of the object to the device number for the increments when copying a object.</p> <p>For a touch switch, the write device only for the bit/word operation is applicable.</p> <ul style="list-style-type: none"> • None : Increment is not performed. • Prioritize X direction: Incremented in the X direction (right) • Prioritize Y direction: Incremented in the Y direction (down) <p>After selecting the priority direction, set the device No. increment.</p> <p>Increment(DEC): -10000 to 10000</p> <p>Ex. 1: Priority in the X direction (Number of increments: 2) Ex. 2: Priority in the Y direction (Number of increments: 2)</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Copy source</p>  <p>Priority is given to the X direction (right).</p> </div> <div style="text-align: center;"> <p>Copy source</p>  <p>Priority is given to the Y direction (down).</p> </div> </div>
Coopy Range	Select the copy range from [Screen + Temporary area] and [Screen].

*1 If a figure/object is copied with 0 interval, the pasted figure/object is overlapped with the source by 1 dot. Set the interval to 1 or more to avoid overlapping of figures or objects.
Ex.)



Copying with 0 interval.



Copying with the interval of 16

5.3 Common Settings of Objects



This chapter describes the items to be set commonly for objects.

5.3.1 Device setting



■ Device that can be set by GT Designer3

For details on the device type and setting range, please refer to the following.

Appendix2 Supported Devices

■ Device usable for controller monitoring

The device range available for setting by GT Designer3 depends on the controller type.

For details setting the controller type, refer to the following.

GOT1000 Series Connection Manual for GT Works3 and a controller used

In addition, the device range set by GT Designer3 may be different with the usable range in controller.

GT Designer3 does not check whether the device settings (device name, device No.) are actually available for the target controller.

For the availability, check it as follows:

(1) Check when setting the controller

For the device type and setting range available for the controller, refer to the following.

User's Manual of the connected controller

(2) Check the following when drawing

For the device type and setting range available for setting by GT Designer3, refer to the followings.

GOT1000 Series Connection Manual for GT Works3 and a controller used

GT SoftGOT1000 Version3 Operating Manual for GT Works3

(3) Check when monitoring

Check the device name and range with the system alarm.

If try to monitor the device name or device range that cannot be used by a controller, a system alarm occurs.

(System alarm: "322 Dedicated device is out of range.")



Device setting for iQ Works

For iQ Works, system labels can be set instead of setting devices.

For setting the system label, refer to the following.

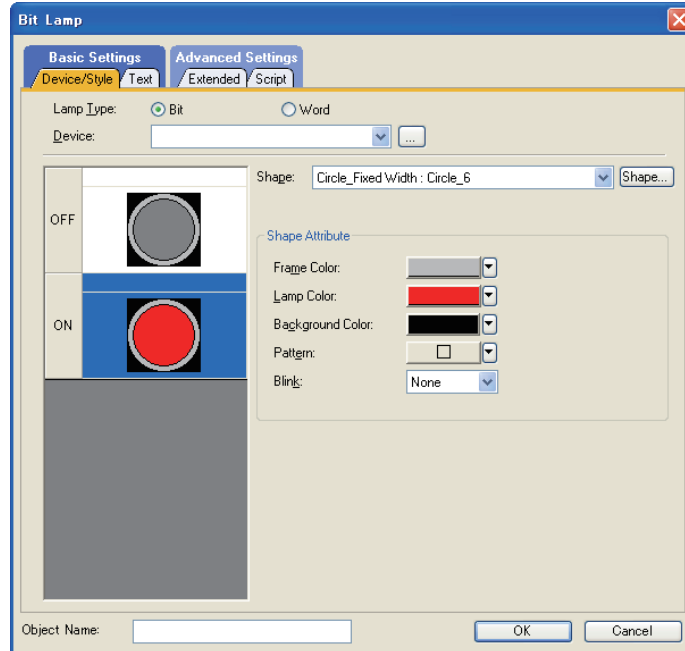
5.3.2 Label setting

■ Settings

Set a device using the setting dialog box provided for each object.

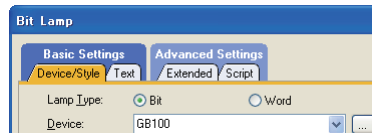
Example: Setting a device to be monitored by "Bit lamp"

1. Click the [...] button on the Device/Style tab. The setting dialog box is displayed.



(1) Direct input of a device

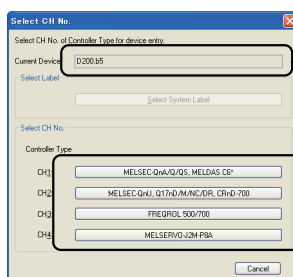
The device can be input directly from the keyboard.



(2) Select CH No. dialog box

According to the option setting on GT Designer3, the [Select CH No.] dialog box is displayed when the [...] button is clicked.

Click the [...] button in the setting dialog box of each object function while pressing the [Shift] key of the personal computer. The [Select CH No.] dialog box is displayed independently of the option setting.



Displays the presently set device.

@ 2 : 1-5 / 2 D200 . b5

Bit position
Device No.
Device name
CPU Machine
PLC station No.
NW No.
Channel No.

Displays the channel No. and type name of the controller.

The display condition of the [Select CH No.] dialog box can be changed using [CH No. Selection Dialog display Setting] in the [Options] dialog box.

To display the [Options] dialog box, select [Tools] → [Option] from the menu.

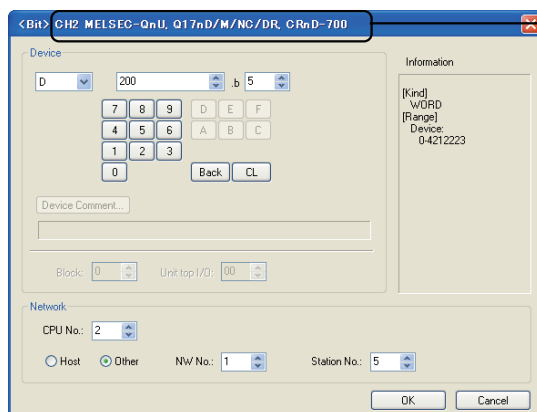
For how to change the settings, refer to the following.



3.5.3 Customizing actions and default value of GT Designer3

2. Click a button from Controller Type, and the [device setting] dialog box is displayed.
Select the device to be set and click the [OK] button.
The device is set to the object.
For the settings of the [device setting] dialog box, refer to the following.

Appendix.2.3 Setting device of each controller



Displays the channel No. and type name of the controller, which are set presently.

Device setting dialog box

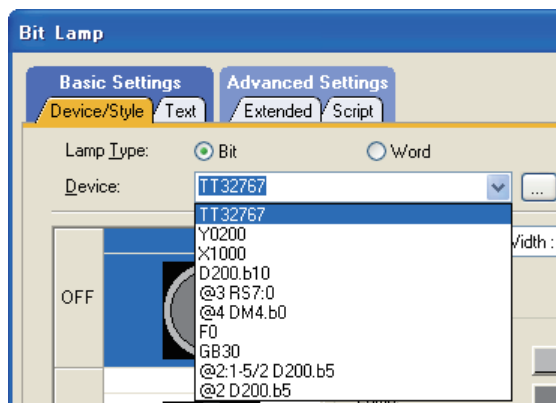
POINT

(1) Changing the communication settings

After setting a device, do not change the channel setting to None in the communication settings.
If changed, the device of the channel No. set to None must be set again.

(2) Setting of frequently-used device.

Once a device is set, it can be selected from the displayed list for setting from the next time.
Maximum 10 device names can be added to the list. If more than 10 devices are kept, the device name will be deleted from the oldest one.



5.3.2 Label setting



For iQ Works, system labels can be used instead of setting devices on GT Designer3. The system labels can be registered in the system label database by GT Designer3.



(1) System label

A system label is a character string with a controller device assigned.
The system label can be used among projects in the workspace of iQ Works.
The system label cannot be used for other than iQ Works.

(2) System label database

The system label database is a database to manage system labels.
When a workspace is saved in MELSOFT Navigator, a system label database is created in the workspace.
When the system label database does not exist in the workspace, system labels cannot be used.

■ Conditions for use of system labels

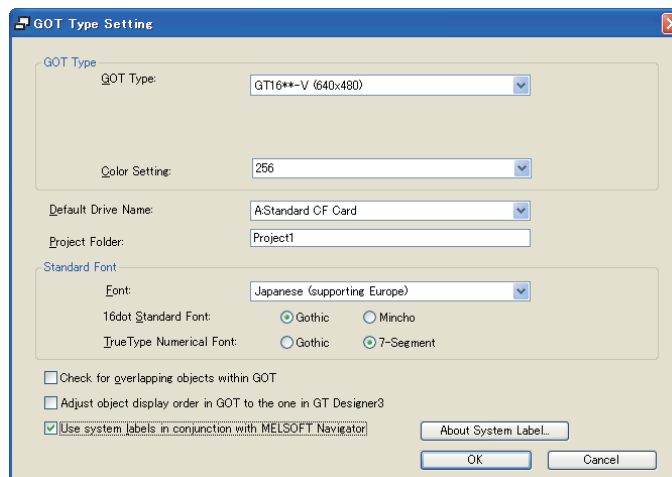
(1) Conditions for projects

System labels can be used only a workspace saved in MELSOFT Navigator.
A system label database is not created for a GT Designer3 project in a workspace created by GT Designer3 (not started from MELSOFT Navigator). Therefore, the system labels cannot be used.
To use the system labels, save the GT Designer3 project in a workspace created by MELSOFT Navigator.

(2) Conditions for GT Designer3 settings

(a) GOT type setting

System labels can be used only [Use system labels in conjunction with MELSOFT Navigator] is selected for [GOT Type Setting].



For how to configure the GOT type setting, refer to the following.

 4.1 GOT Type Setting

(b) Controller setting

When any of the following types are not set for [Controller Setting], system labels cannot be used.

Manufacturer	Controller type	Model
Mitsubishi	MELSEC-QnU/DC, Q17nD/M/NC/DR, CRnD-700	GT16 GT15 GT11 GT10 SoftGOT 1000
	MELSEC-QnA/Q/QS, MELDAS C6*	
	MELSEC-Q(Multi)/Q-Motion	GT16 GT15 GT11 GT10 SoftGOT 1000
	MELSEC-L	GT16 GT15 GT11 GT10 SoftGOT 1000
	MELSEC-QnU/DC, Q17nD/M/NC/DR	GT16 GT15 GT11 GT10 SoftGOT 1000
	MELSEC-QnA/Q, MELDAS C6*	GT16 GT15 GT11 GT10 SoftGOT 1000
	MELSEC-QnU/DC	
	MELSEC-QnA/Q	GT16 GT15 GT11 GT10 SoftGOT 1000
	MELSEC-Q(Multi)	

For how to configure the controller setting, refer to the following.

 GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3

■ Applicable system labels

The GOT can use system labels that satisfy the following conditions.

System labels not applicable to the GOT are recognized as incorrect labels.

The incorrect labels can be set for GT Designer3, however the labels cannot be written to the GOT or a CF card.

(1) System label name

The GOT can use system labels that satisfy the following conditions.

System labels that do not satisfy the following conditions cannot be set for GT Designer3.

- Regardless of two-byte or one-byte characters, up to 32 characters are set for system labels.
- One-byte kana characters are not used.
- The following one-byte symbols are not used.
., , , [,] , : , ! , " , # , \$, % , & , ' , (,) , * , + , ; , < , = , > , ? , \ , ^ , ` , { , | , } , ~ , ?
- A system label name is not the same as a device name.
- Reserved characters are not used.

For reserved characters, refer to the following.

 GX Works2 Version1 Operating Manual (Common)


(2) Registering system labels in a system label database

System labels that are not registered in a system label database are recognized as incorrect labels. For how to register the system labels in the system label database, refer to the following.

- Registering system labels by MELSOFT Navigator

 Help for MELSOFT Navigator

- Registering system labels by GT Designer3

 ■Registering system labels

(3) Data types

System labels with the following data types are recognized as incorrect system labels.


Do not set the system labels with the following data types.

- [Time] • [String] • [Pointer] • [FLOAT[Double Precision]]



Reflecting data type of system labels on GT Designer3 settings

When [Reflect the data type of system label] on the [Operation] tab for the [Options] dialog box is selected, the data type of system label is reflected to GT Designer3 settings.

 3.5.3 Customizing actions and default value of GT Designer3

(4) Devices assigned to system labels

Assign devices that can be monitored by the GOT to system labels.

The following system labels are recognized as incorrect labels.

- System labels with devices assigned that cannot be monitored by the GOT
- System labels without devices assigned

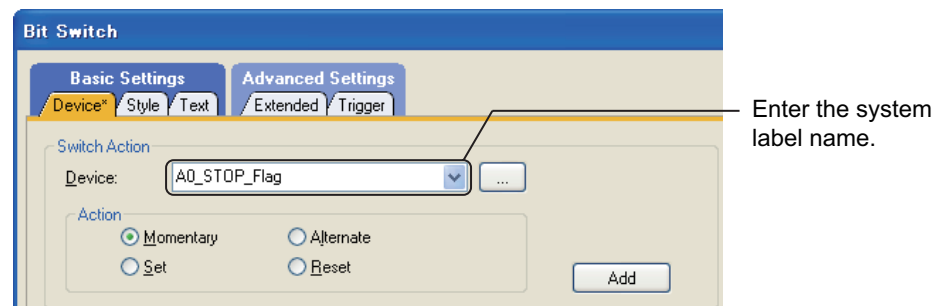
■ System label setting

As well as devices, system labels are set for each object setting dialog box.

System labels can be set by entering a system label name directly, or selecting system labels from the system label list.

(1) Entering system label name directly

Enter a system label name directly to [Device] for the dialog box of objects or others.



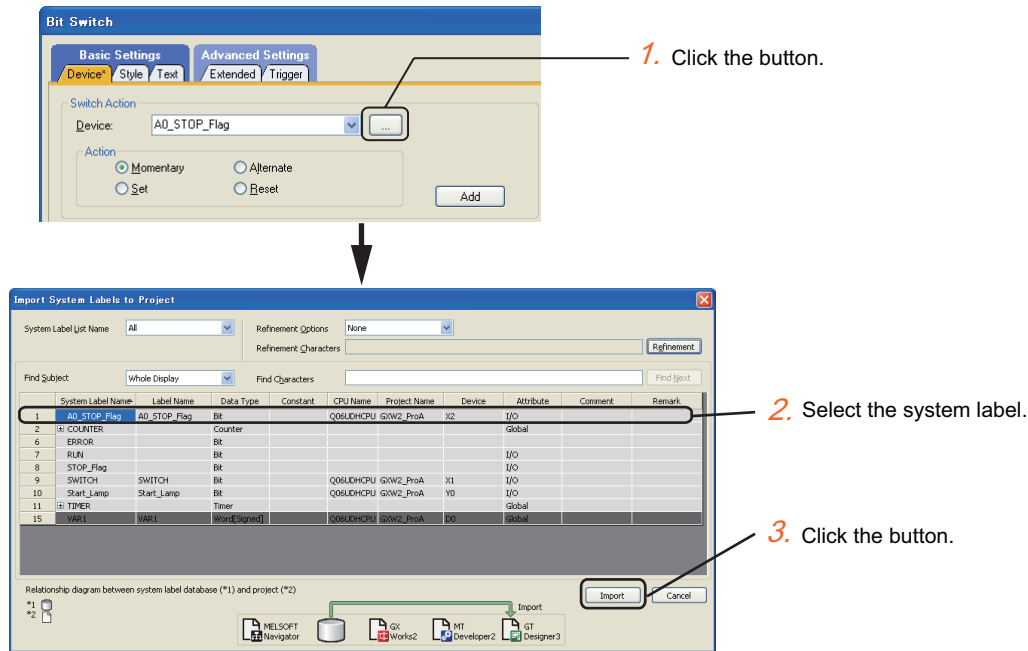
When incorrect label names including a system label name that is not registered in the system label database is entered, ?? is added to just before the system label name.

Check the system label setting, and then configure the setting again, or register the system label in the system label database.

 ■System label update/check

(2) Selecting system labels in the system label list

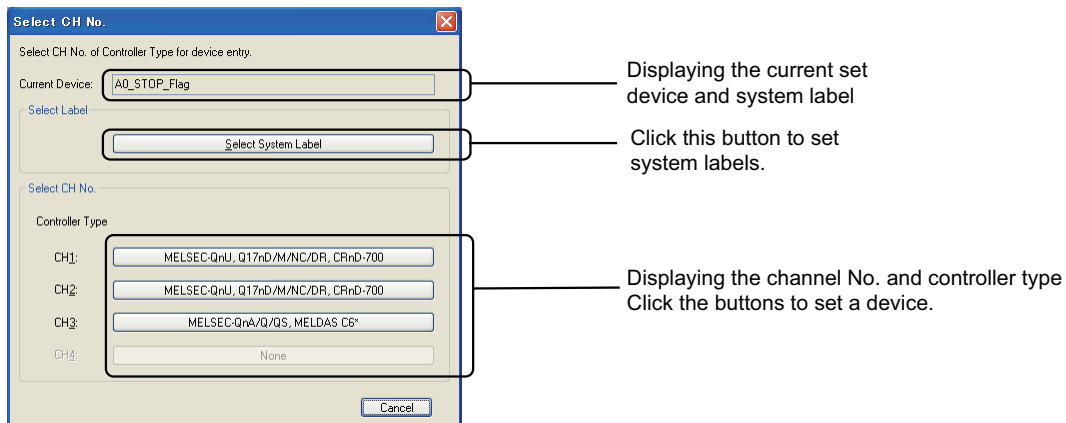
1. Click the [...] button in the setting dialog box of objects and others.
The [Import System Labels to Project] dialog box appears.
According to the option setting on GT Designer3, the [Select CH No.] dialog box or the [Device Setting] dialog box for the specified CH No. is displayed.
2. Select a system label in the system label list.
3. Click the [Import] button to set the system label for [Device].



(1) Select CH No. dialog box

According to the option setting on GT Designer3, the [Select CH No.] dialog box is displayed when the [...] button is clicked.

Click the [...] button in the setting dialog box of each object function while pressing the [Shift] key of the personal computer. The [Select CH No.] dialog box is displayed independently of the option setting.



The display condition of the [Select CH No.] dialog box can be changed using [CH No. Selection Dialog display Setting] in the [Options] dialog box.

To display the [Options] dialog box, select [Tools] → [Option] from the menu.

For how to change the settings, refer to the following.



3.5.3 Customizing actions and default value of GT Designer3

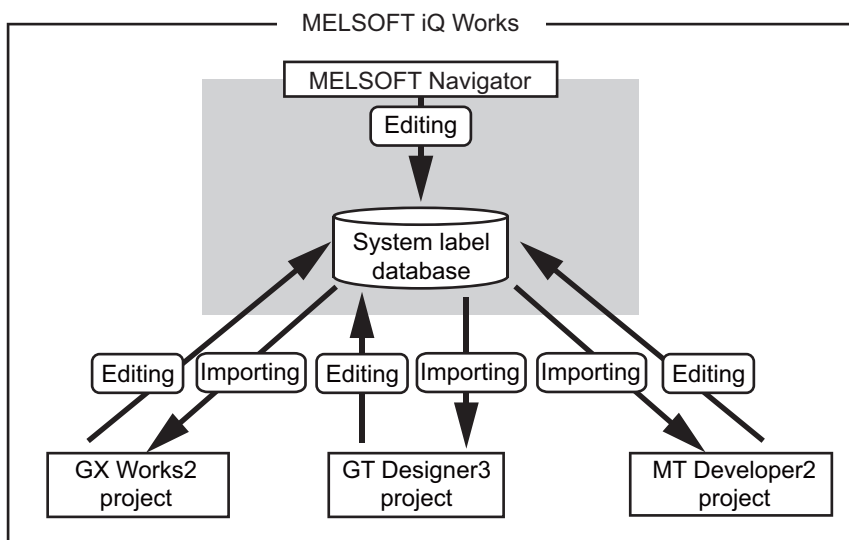
■ System label update/check

Data of a system label database can be edited by each software for iQ Works.

Therefore, system labels used with GT Designer3 settings may not be updated.

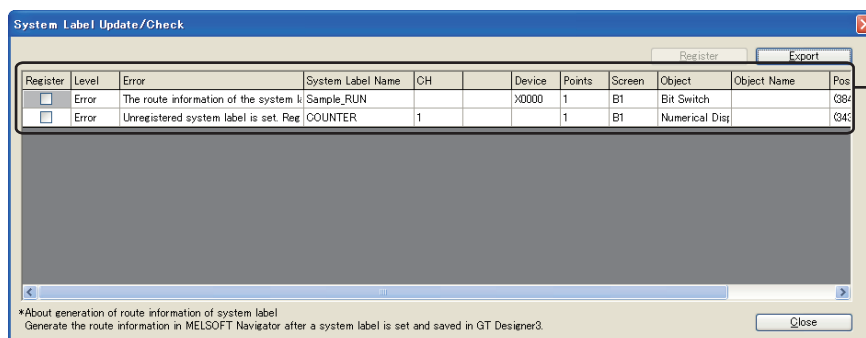
When the system label update/check is executed, GT Designer3 project data are updated by importing data in the system label database. And then the set system labels are checked whether the labels are applicable.

When registering, changing, or deleting data in the system label database by MELSOFT Navigator or others, execute the system label update/check and import the latest system labels.



(1) Operating procedure

1. Select [Tools] → [System Label Update/Check] from the menu to update and/or check system labels.
2. When the system label settings are incorrect, the [System Label Update/Check] dialog box appears. Refer to the following to remove errors.



Item	Description	Model
Register	Click this button to register the system label selected for the error list in the system label database. ■Registering system labels	<div> GT16GT15 GT11GT10 SoftGOT 1000 </div>
Export	Click this button to export the result of the system label update/check. Click this button to display the [Save As] dialog box. Set the save location, file name, and file type, and then save the check result.	
Error list	Displays error messages and error occurred system label names and others. For errors, causes, and corrective actions, refer to the following. (3) Error messages To register an unregistered system label in the system label database, select [Register].	

HINT

System label update notification

When system labels set for a GT Designer3 project are changed in the system label database, the system label update notification icon is displayed on the status bar.

Right-click the system label update notification icon, and then select [System Label Update/Check] to update and/or check system labels.



System label update notification icon

(2) Automatically executing the system label update/check

To match a project data and another project data, GT Designer3 automatically executes the system label update/check in the following operations.

- Open a GT Designer3 project.
- Save a GT Designer3 project.
- Select [Communication] → [Write to GOT], [Transfer to Memory Card], or [Communicate with GT10-LDR] from the menu.
- Select or clear [Use system labels in conjunction with MELSOFT Navigator] for the GOT type setting.
- Start or update GT Simulator3.
- Clear the applicable controller type for the controller setting.




■Conditions for use of system labels

(3) Error messages

The following table shows the errors, causes, and corrective actions for the system label update/check.

Error	Cause	Corrective action
Controller and this project are not allocated in MELSOFT Navigator. Allocate this project with the controller and save in MELSOFT Navigator.	<ul style="list-style-type: none"> • The current used project is not assigned to the system configuration diagram. 	<ul style="list-style-type: none"> • Assign the current used project to the controller, and then save the project by MELSOFT Navigator. Help for MELSOFT Navigator
Device setting of the system label or controller setting of GT Designer3 is incorrect. Check the device setting of the system label and controller setting.	<ul style="list-style-type: none"> • A device that cannot be monitored by the GOT is set. • The device number of a device set for the system label is out of range or invalid. 	<ul style="list-style-type: none"> • Check the device setting of the device assigned to the system label. ■Applicable system labels Appendix.2.2 Device of Controllers Help for MELSOFT Navigator
	<ul style="list-style-type: none"> • A value out of the range is specified for an element of array. • A label name of the structure that does not exist is specified. • /T, /S, or /C is specified for a system label with the data type other than [Timer], [Counter], and [Retentive Timer]. 	<ul style="list-style-type: none"> • Check the data type assigned to the system label. Help for MELSOFT Navigator
	<ul style="list-style-type: none"> • A system label with an unavailable channel No. is set. 	<ul style="list-style-type: none"> • Check the controller setting for each channel. GOT1000 Series Connection Manual (Mitsubishi Products) for GT Works3
	<ul style="list-style-type: none"> • A system label that is set for GT Designer3 does not exist in the system label database. 	<ul style="list-style-type: none"> • Register the system label in the system label database. ■Registering system labels

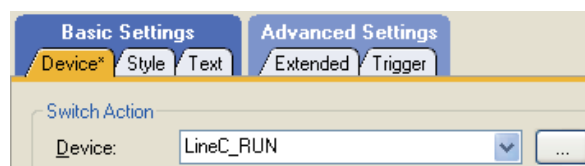
(Continued to next page)

Error	Cause	Corrective action
A system label of unavailable data type is selected. Set the device again.	<ul style="list-style-type: none"> A system label with the data type ([Time], [Pointer], [String], or [FLOAT[Double Precision]]) not available for GT Designer3 is set. 	<ul style="list-style-type: none"> Set a system label with the data type available for GT Designer3 to the device setting. <p>  <ul style="list-style-type: none"> ■Applicable system labels ■System label setting </p> <p>Help for MELSOFT Navigator</p>
The device of the system label cannot be obtained. Allocate the device to the system label in MELSOFT Navigator.	<ul style="list-style-type: none"> A device of the system label cannot be obtained. 	<ul style="list-style-type: none"> Assign a device to the system label. <p>  </p> <p>Help for MELSOFT Navigator</p>
The routing information of the system label cannot be acquired. Generate the routing information of the system label in MELSOFT Navigator.	<ul style="list-style-type: none"> The route information cannot be obtained with MELSOFT Navigator. The system configuration diagram of MELSOFT Navigator does not match the controller setting of the Designer3 project. 	<ul style="list-style-type: none"> Generate the route information of the system label, and then save a workspace. After saving the workspace, execute the system label update/check again. Generate the route information of the system label by MELSOFT Navigator, and then reflect parameters on the GT Designer3 project. <p>  </p> <p>Help for MELSOFT Navigator</p>

■ Registering system labels

The following procedure shows how to register system labels in the system label database by GT Designer3.

1. Enter a system label name to be registered directly to the text box in [Device] for the dialog box of objects.

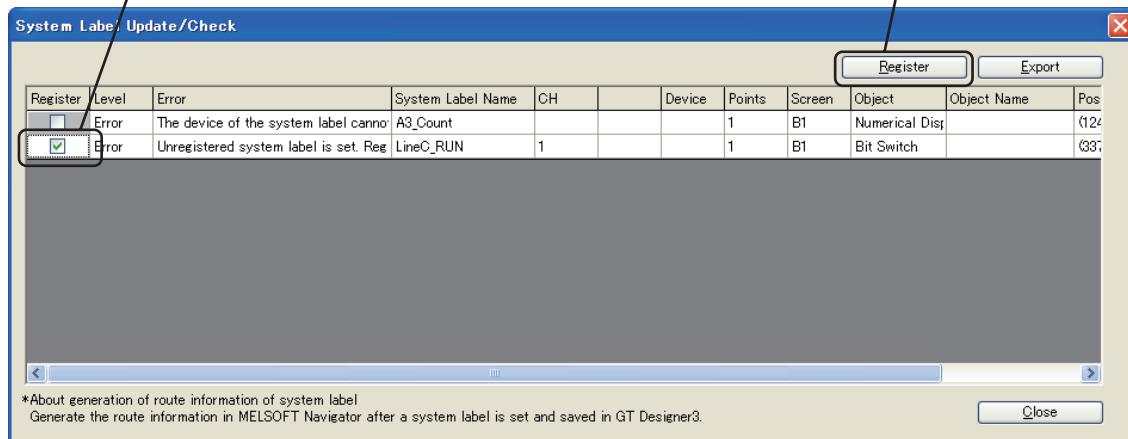


2. Select [Tools] → [System Label Update/Check] from the menu to update and/or check system labels.
3. The error list appears in the [System Label Update/Check] dialog box. Select [Register] to register the target system label in the system label database.

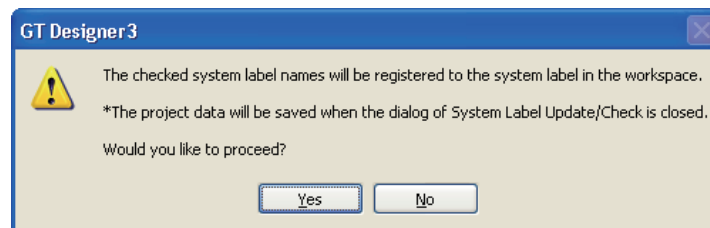
4. Click the [Register] button.

3. Select the box.

4. Click the button.



5. The confirmation dialog box appears.
Check the message and click the [Yes] button.
Click this button to register the selected system label in the system label database.



6. Close the [System Label Update/Check] dialog box to automatically save the GT Designer3 project.
7. After registering the system label, update the system label list by MELSOFT Navigator.
When the system label list is not updated, the registered data are not reflected in the system label database.
For how to operate MELSOFT Navigator, refer to the following.

 Help for MELSOFT Navigator

■ Precautions

(1) Changing a system configuration diagram by MELSOFT Navigator

The route information of the system label is manually generated by the system configuration diagram for MELSOFT Navigator.

When changing the system configuration diagram for MELSOFT Navigator, generate the route information again by MELSOFT Navigator.


After generating the route information, reflect parameters with the route information on a GT Designer3 project by MELSOFT Navigator.

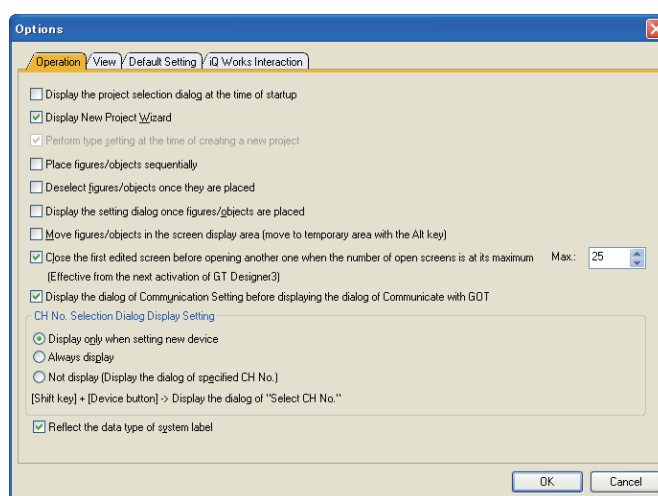
For how to operate MELSOFT Navigator, refer to the following.

 Help for MELSOFT Navigator

(2) Data type of system labels and data type of devices

When [Reflect the data type of system label] on the [Operation] tab for the [Options] dialog box is selected, the data type of system label is reflected to GT Designer3 settings.

 3.5.3 Customizing actions and default value of GT Designer3



(3) System label with data type of [Timer], [Counter], and [Retentive Timer]

For a system label with the data type of [Timer], [Counter], and [Retentive Timer], MELSOFT Navigator processes the data as one system label. However, GT Designer3 processes the data as three label data (current value, contact, and coil).

Data type of system label	Data type of device	Notation of system label	Remark
Timer	Signed BIN16	System label name	Current value of timer
	Bit	System label name/T	Contact of timer
		System label name/C	Coil of timer
Counter	Signed BIN16	System label name	Current value of counter
	Bit	System label name/T	Contact of counter
		System label name/C	Coil of counter
Retentive Timer	Signed BIN16	System label name	Current value of retentive timer
	Bit	System label name/S	Contact of retentive timer
		System label name/C	Coil of retentive timer

(4) Class for system label

To use a system label with [VAR_GLOVAL_CONSTANT] set for the class, use the system label with a bit device assigned. When the system label with other than a bit device assigned, the system label is not applicable to GT Designer3.

(5) System label names that can be set for consecutive devices

To set consecutive devices, system label names that are not registered in the system label database cannot be entered.

Enter a system label name that is registered in the system label database.

5.3.3 Shape setting

GT 16 GT 15 GT 11 GT 10 Soft
GOT 1000

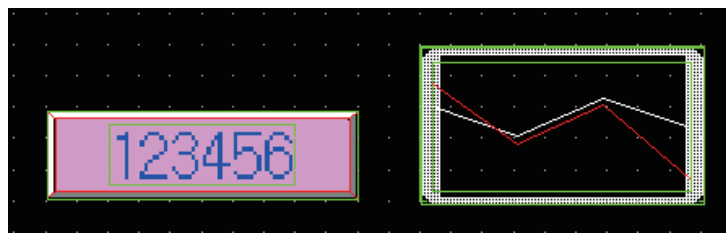
Shapes can be set to objects in order to fit its display.

There are two types of shapes: One is set as the external shape for lamps and others. The other is set as frames for numerical display, graph, or others.

Shapes set as external shapes:



Shapes set as frames:



■ Settings

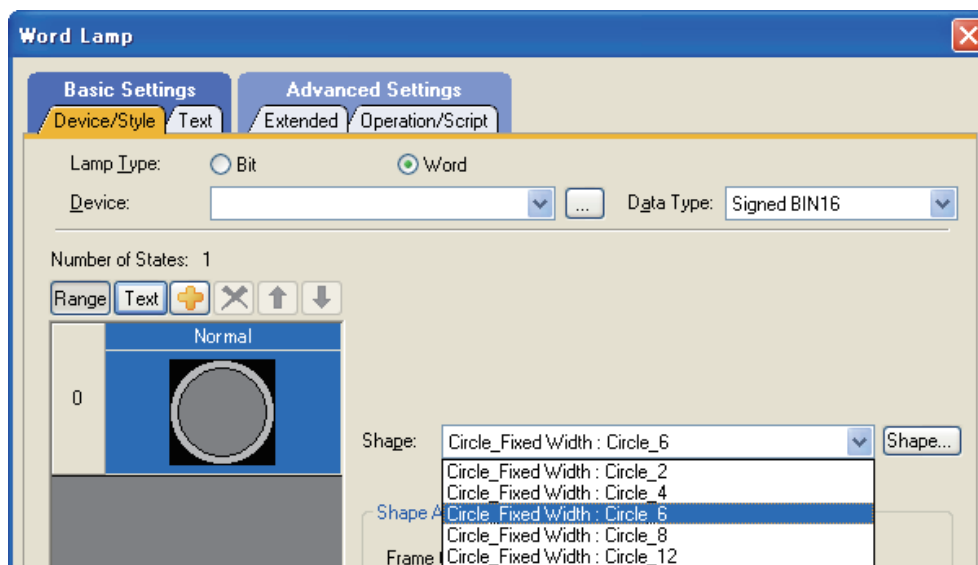
This section explains how to set figures to objects.

1. Display the setting dialog box of each object with either of the following operations.
 - Click an object and select [Edit] → [Setting].
 - Right-click an object and select [Setting].
 - Double-click an object.
2. Select a figure to set as a figure on the [Style] tab.

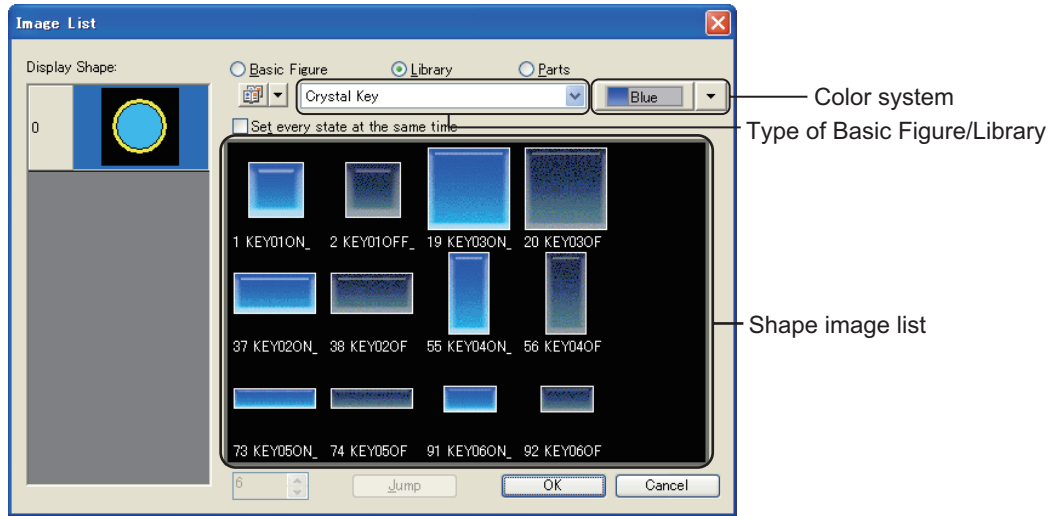
The following figures can be selected from the [Shape] pull down menu.



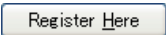

 - None
 - Basic figure (5 types)
 - Figure already selected before (5 types)

When selecting figures other than the above, click the [Shape] button.



- Click the [Shape] button, and the [Image List] dialog box is displayed.
Select the shape to set to an object from the shape image list.



Items	Description
Display Shape	Displays the object images that are displayed in the GOT screen. Select the shapes according to the state, from the shape image list. (For bit switch and bit lamp, images can be selected at the time of switching ON/OFF) Mixed selecting of [Basic Figure], [Library], and [Parts] for one object is not allowed. Select any of [Basic Figure], [Library], or [Parts].
Basic Figure	Select this item when setting basic shapes registered for each project.
Library	Select this item when setting shapes registered in the library (My favorite, user library, system library).
Parts	Select this item when setting shapes registered as parts.
	Select the library type. Only the selected library is displayed on the pull down menu on the right side of the item.
Type of Basic Figure/Library	Select the basic shape type or library type from the pull down menu. After selecting, the shapes of the selected type are displayed in the shape image list.
	Switches the ON or OFF status of the shapes displayed in the shape image list. This setting is available for the bit switch and the bit lamp.
	Click this button when registering shapes selected in the shape image list to favorites or user library.
Color system	Switch the color system of the shape to display in the figure image list. The color system switching of figures or objects can be used only in the system library.
Set OFF and ON at the same time	Select this item to set the same shape for the on and off status, when selecting [Library] or [Parts]. When Basic Figure is selected, different shapes cannot be set to on and off status. (The item is always selected) This item can be set only for bit switch and bit lamp.
Set every state at the same time	Select this item to set the same shape for all states. When [Basic Figure] is selected, different shapes cannot be set to on and off status. (The item is always selected) This item can be set only for bit switch and bit lamp.
Shape image list	Select a shape to set to the object. The selected shape is displayed in [Display Shape].
	Input the number of a shape and click [Jump]. The shape whose number is set is selected in the shape image list. The selected shape is displayed in [Display Shape].

5.3.4 State setting

Setting the state, the ON/OFF status of bit device can be changed as well as the color of object shape according to the word device value.

The following states can be set to objects.

- Word device value being monitored by object.
- Any bit device ON/OFF.
- Any word device value.

The types of object to which state can be set and the conditions that can be set to object are listed in the following table.

○ : Applicable × : N/A

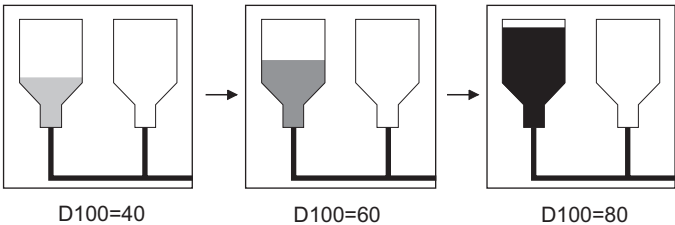
Object type	Conditions that can be set for objects		
	Word device value being monitored by object	Selected device	
		Bit device ON/OFF	Word device value
Numerical display			
Parts display (Word parts)	○	○	○
Parts movement (Word parts)			
Word lamp			
Numerical input			
Data list			
Comment display (Word comment)	○	×	○ *1
Level			
Panel meter			
Scatter graph			

*1 The word device value being monitored must be set as the condition for display change.

(1) Display changes according to the word device value being monitored.

Example) Level display function

- Word device D100 being monitored.



Display color changes according to the word device value being monitored.

(2) Display changes according to word device ON/OFF.

Example) Numerical display function

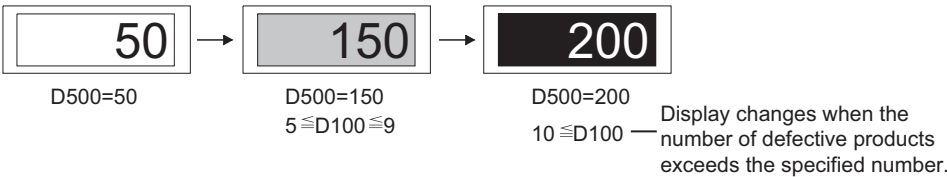
- Bit device D500 (temperature) being monitored
- Bit device M10 (ON in error occurrence) for display changing



(3) Display changes according to word device value

Example) Numerical display function

- Word device D500 (production output) being monitored.
- Word device D100 (defective products) for display changing

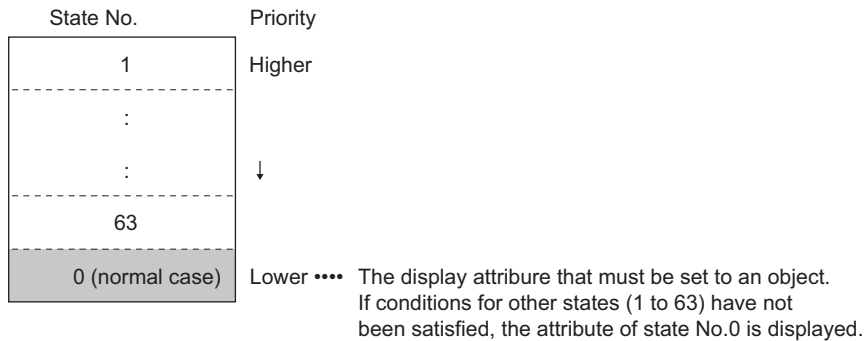


■ Display priority

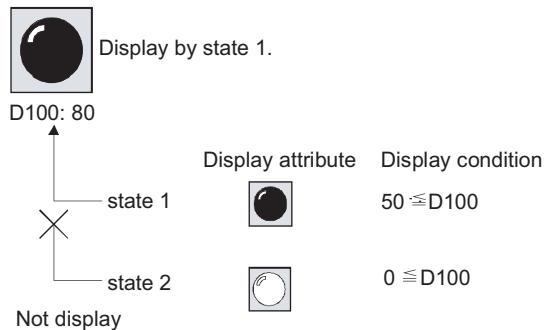
Up to 64 (0 to 63) states can be set to one object.

When display change conditions overlap, the state of the smaller No. is displayed with priority.

[Display priority]

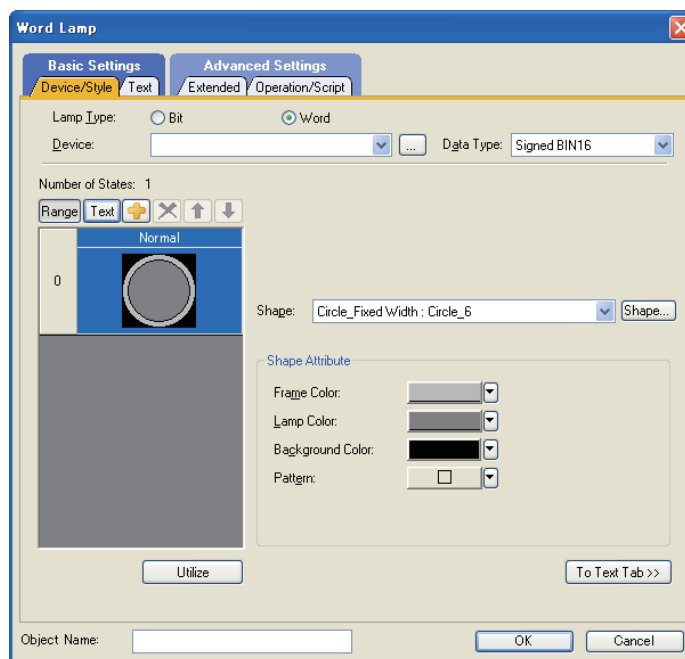


Example: When conditions for displaying state 1 and 2 occur simultaneously.



■ Setting

1. Open the setting dialog box of the object to set a state.



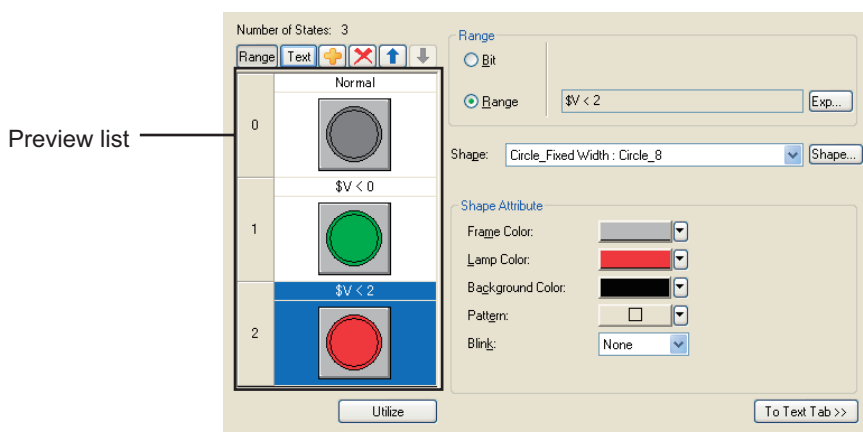
2. Display the following tabs according to the object.

Object	Tab	Reference
Word lamp	<ul style="list-style-type: none"> • [Device/Style] tab • [Text] tab 	(Functions) 3.2 Setting Word Lamp
Numerical display	<ul style="list-style-type: none"> • [Display Case] tab 	(Functions) 5.1 Setting Numerical Display
Numerical input	<ul style="list-style-type: none"> • [Input Case] tab • [Display Case] tab 	(Functions) 5.2 Setting Numerical Input
Data list display	<ul style="list-style-type: none"> • [Style] tab 	(Functions) 7.1 Settings
Comment display (Word comment)	<ul style="list-style-type: none"> • [Device/Style] tab • [Comment] tab 	(Functions) 9.2 Setting Word Comment
Level	<ul style="list-style-type: none"> • [Device/Style] tab 	(Functions) 11.1 Settings
Panel meter	<ul style="list-style-type: none"> • [Range] tab 	(Functions) 12.1 Settings
Scatter graph	<ul style="list-style-type: none"> • [Point/Line Attribute] tab^{*1} 	(Functions) 18.1 Settings
Parts display (Word parts)	<ul style="list-style-type: none"> • [Device/Style] tab 	(Functions) 20.2 Word Parts Settings
Parts movement (Word parts)	<ul style="list-style-type: none"> • [Device/Style] tab 	(Functions) 21.2 Word Parts Settings

*1 The setting value of [Attribute Switching] is [Signed BIN16] or [BCD16], a preview list is displayed.





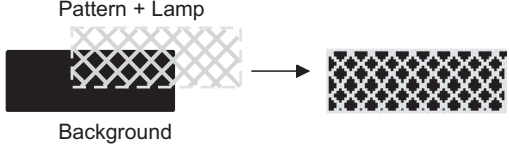
3. The preview list is displayed in each tab.
Set the states referring to the references above.

Example) Word lamp preview list

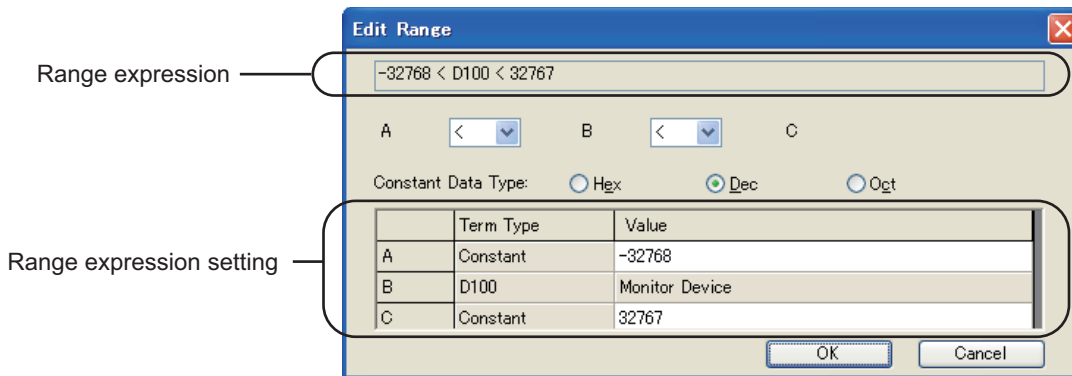


Items	Description	Model
Preview list	Displays status set for each state. Up to 64 states can be set (including the normal case). (state No. 0 indicates the normal case)	
	Creates a new state.	
	Deletes a specified state.	
	Changes the priority of the state.	
	Creates a new state to reuse the setting of the selected state.	
Range	Set conditions to establish each state. <ul style="list-style-type: none"> • Bit: If the set device is turned on or off, the state is established. After checking this item, set a bit device and the condition (on or off) to establish the state. • Range: When the current value of the specified word device is within the specified range, the state is established. After checking this item, click the [Range] button to specify the condition to establish the state. (1) Edit Range dialog box 	GT16 GT15 GT11 GT10 SoftGOT 1000

(Continued to next page)

Item	Description		Model
Shape Attribute	Frame Color	Select the frame color of the lamp figure.	
	Lamp Color	Select the color of the lamp figure. When a figure in the [Library] (Except my favorites) is set for [Shape], the set figure can be changed to the same figure with a different color, by changing the lamp color.	
	Background	Select the pattern and background color of the lamp figure. The selected pattern in the lamp color is displayed on the background color.	
	Pattern	<p>Example: Background :  Pattern :  Lamp : </p> 	
	Blink	Select the blinking pattern of the Lamp. (None/Low/Medium/High)	
	Blink Scope	Select a blink area. (Shape and Text/Shape only)	

(1) Edit Range dialog box

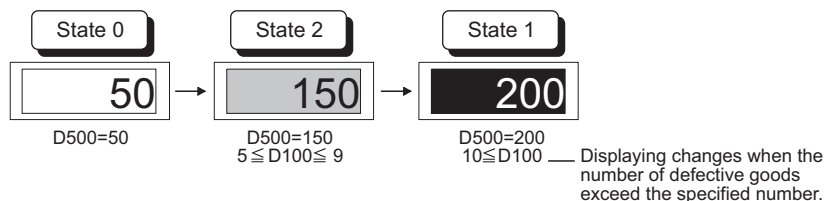


Item	Description		Model
Range expression	Displays the set range expression.		<div>GT16GT15 GT11GT10 SoftGOT 1000</div>
<div><▼</div>	Set the relational operator of the range expression. < : Left value is smaller than right value == : Left value is equal to right value <= : Left value is smaller than or equal to right value != : Left value is not equal to right value None: Without comparison		
Constant Data Type	When setting the fixed value to each item of the range expression, select the data type of the fixed value. (Hex/Dec/Oct)		
Range expression setting	Term Type	Set the details of each range expression item (A to C). <ul style="list-style-type: none">Constant: Select this item when operating with fixed values. Select either of [Hex], [Dec], or [Oct] for [Constant Data Type].\$V : Select when operating the value of word device set as the monitoring target or writing target. This item must be set once in an expression.Other device: Set this item when operating the word device value. The data type is the same of the monitoring device (\$V).	
	Value	Set the setting values of each range expression item (A to C). The setting target varies according to the [Term Type] settings. <ul style="list-style-type: none">[Constant]: Set the value.[\$V]: The monitor device is set.[Other device]: Set the intended device. Click the [...] button to set from the [Device setting] dialog box.	

■ Example of state setting operation

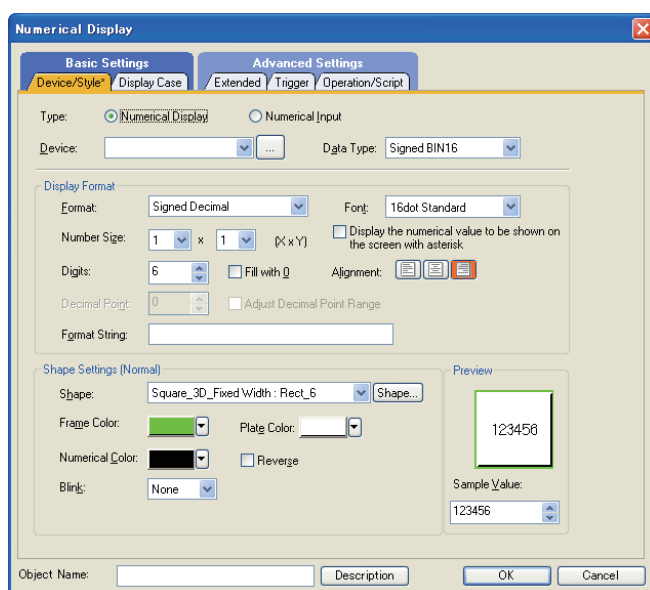
This section explains the state setting operation with an example of numerical display setting.

- The monitor word device D500 (productivity)
- The word device for display changes D100 (the number of defective goods)



1. Set the state 0 on the [Device/Style] tab.

The figure setting set on the [Device/Style] tab is displayed except when the conditions set for state 1, 2 are applied.



Set the display attribute of state 0.

The figure setting set here is changed when each state is satisfied.

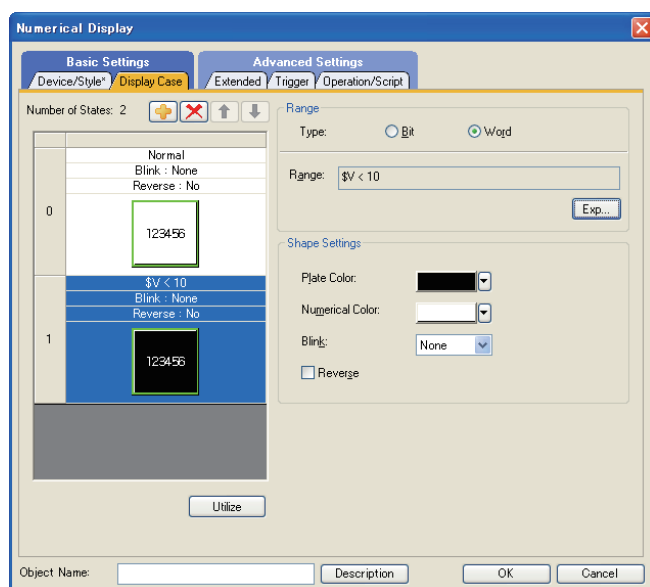
Numerical Color : Black

Blink : None

Reverse : Unchecked

Plate Color : White

2. Set state 1 on the [Display Case] tab.



Click the button to create state 1.

Set the conditional expression to display state 1.

Others (10 ≤ D100)

Set the display attribute of state1.

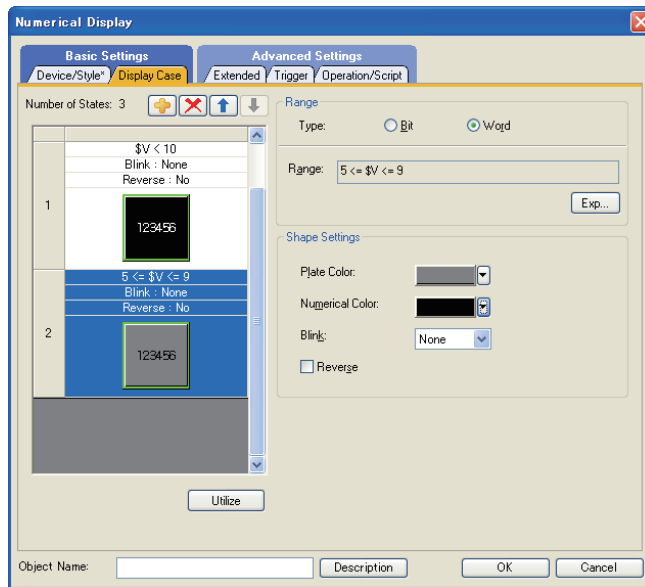
Numerical Color : White


Blink : None

Reverse : Unchecked

Plate Color : Black

3. Set state 2.



Click the  button to create state 2.

Set the conditional expression to display state 2.

Others ($5 \leq D100 \leq 9$)

Set the display attribute of state 2.

Numerical Color : White

Blink : None

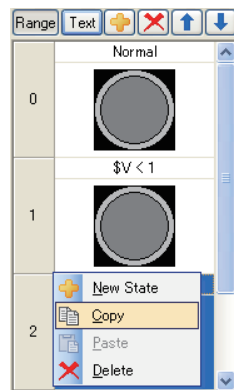
Reverse : Unchecked

Plate Color : Gray Color



Operations of preview list

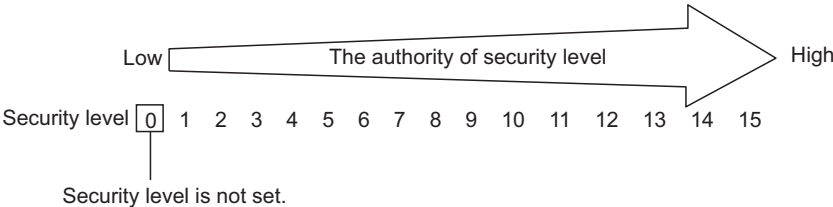
The preview list can also be operated from the right-click menu.



5.3.5 Security setting

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

This function determines which screen is displayed depending on the security level.
The security level can be changed by inputting the password corresponding to each level.
The security level (0 to 15) can be set for each screen and object.
The security level can be set to each object function (excluding document display), window screen and base screen.



POINT

Authentic method

The authentic method for changing security levels includes the following types.

- Operator authentication
- Security level authentication

For the authentic method, refer to the following.

4.7 Security Setting

Security function setting

When the security function is used, the following settings are needed.

(1) Setting authentic method

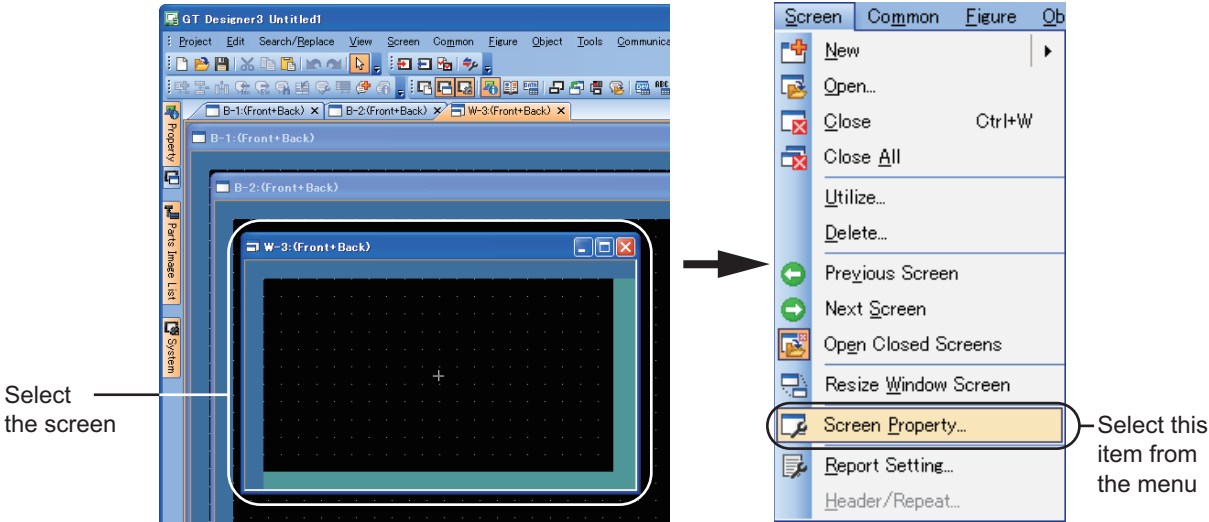
Set the authentic type of the security.
Select an authentic method, and then set the settings for the authentic method.

4.7 Security Setting

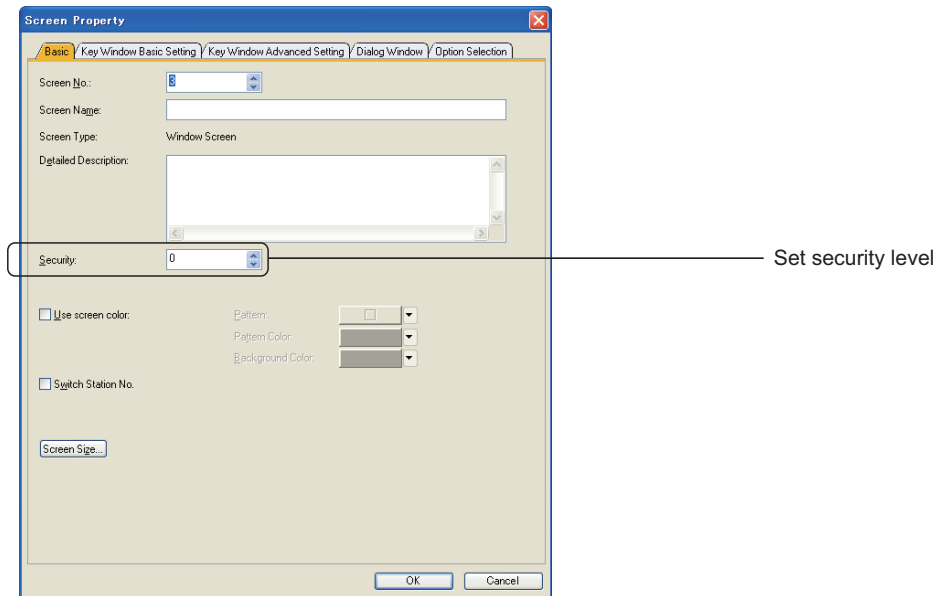
(2) Setting the security level of screen and object

(a) Setting on screen

1. Select the screen to which the security level is set, and select [Screen] → [Screen Property] from the menu.



2. The screen property dialog box appears.
Set the security level (that is set to the screen) in [Security] on the [Basic] tab.



- (b) Setting on object
Set the security level of the object in the [Extended] tab of the setting dialog box.
For how to set each object, refer to the following.

 GT Designer3 Version1 Screen Design Manual (Functions)

■ Change method of the security level on the GOT

The method for changing security levels differs depending on authentic methods.

The following shows the method for changing security levels for each authentic method.

(1) Operator authentication

To change security levels, log out of the GOT and log in the GOT again using an operator name with a different security level.

The screens for login and logout can be displayed with the following.

- Touch a touch switch (special function switch: Log-in/Log-out (Operator Authentication)) for switching to screens for login and logout.
- Display the GOT utility and touch [Login/Logout].

The following shows how to change security levels.

1. The screen for logout is displayed, and then touch the [OK] button.
2. The screen for login is displayed.
3. Log into the GOT as an operator with a different security level.

The method for login varies according to the authentic type.

- Operator authentication by password
Input the operator name and the password, and then touch [Enter].
- Operator authentication by external authentication device
Input the external authentication ID using the external authentication device.
When switching to the operator authentication by password, touch [Password].
- Operator authentication by fingerprint unit
Press the finger on the fingerprint reader of the fingerprint unit.
When switching to the operator authentication by password, touch [Password].



Auxiliary authentication

For the operator authentication with an external authentication device or fingerprint unit, the operator authentication may not be properly executed due to a device failure, injured finger or others.

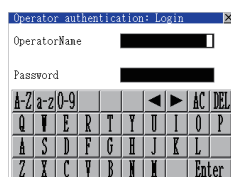
Enable the auxiliary authentication beforehand so that the authentication is executed by switching to the operator authentication with a password.

For setting the auxiliary authentication, refer to the following.

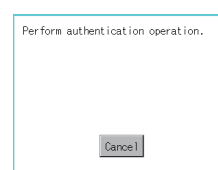
 User's Manual for the GOT used

4. To close the screens for login and logout, perform the following operation.
The operation varies according to the authentic type.

- Operator authentication by password
Touch [×] at the top-right of the screens for login and logout.
- Operator authentication by external authentication device or fingerprint unit
Touch [Cancel].



Screen for login
(Operator authentication by password)



Screen for login
(Operator authentication by external authentication device or fingerprint unit)

(2) Password authentication

In order to change the security level, the password of each security level needs to be input on the security level change screen.

Either of the following methods is available to display the security level change screen.

- Touch a touch switch (special function switch: password (security level)) for switching to the security level change screen.

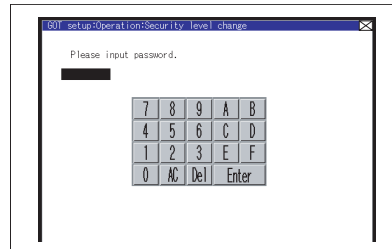
☞ (Functions) 2.6 Setting Special Function Switch

- Display the GOT utility, and touch the [security level change] button.

☞ User's Manual for the GOT used

The following indicates how to change the security level.

1. Display the security level change screen.
2. On the security level change screen, enter the password for the target security level and touch the [Enter] key.
3. To close the security level change screen, touch the [×] button at the top-right of the password display window.



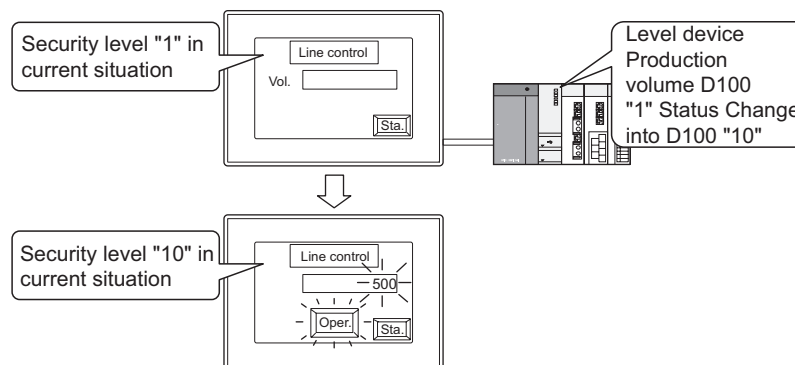
POINT

Changing security levels with controllers (Password authentication only)

The level of security is stored in the device storing "security level status" (Level device)

(☞ 4.7 Security Setting)

Current security level can be changed by directly changing the level device value from the controller.



Change the display according to the changed security level.

When the value stored in the level device is set to below the security level for the base screen currently displayed, a screen for changing security levels is displayed.

For returning to the previous screen, input the password for the set security level or higher.

HINT

(1) To undo temporarily-raised security level (Password authentication only)

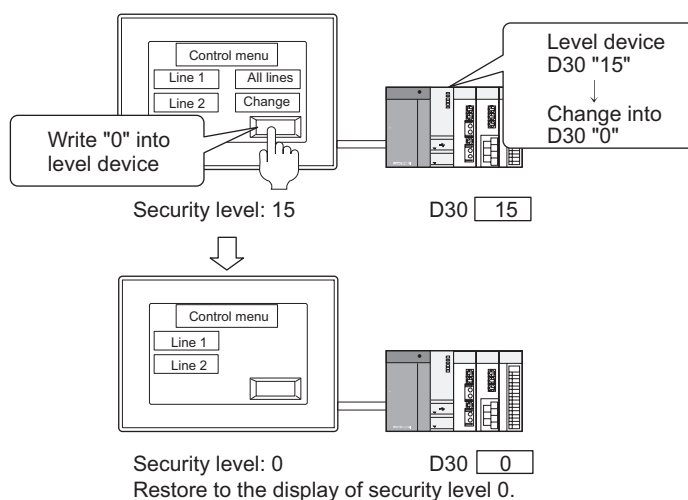
The security level that is increased temporarily for maintenance and inspection tasks can be restored back to its original state easily.

(a) Inform the users of the normal security level password to restore the security level through the normal password input operation.

(b) Create the touch switch for restoring the security level to normal level.

Example) When changing the security level to "0" with the touch switch.

- Level device: D30
- Touch switch: Write "0" into level device D30



(2) Forced logout

Turning on the forced logout signal (.b0) of the operator authentication external control device forcibly logs out a user currently logging in.

The forced logout signal behaves at the signal rising. Therefore, this signal does not behave even if it is always turned on.

Also, without the user login, this signal does not behave even if it is turned on.

For the operator authentication external control device setting, refer to the following.

➡ 4.7.1 Settings

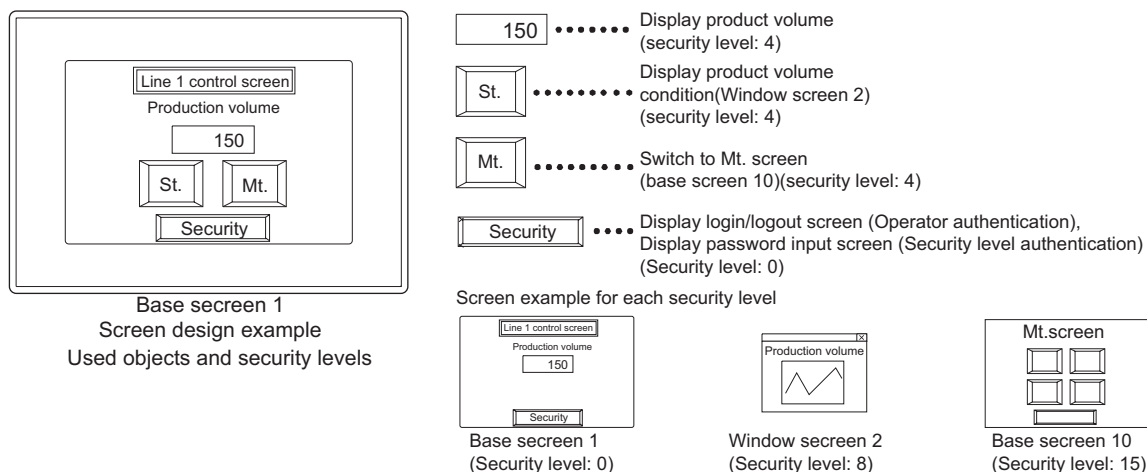
■ Example of security function

Change the contents that can be operated by each user in the screen for setting plural objects.

The switch action set for the special function switch that is used for changing user's security level varies according to the authentic method.

For special function switches, refer to the following.

☞ (Functions) 2.6 Setting Special Function Switch



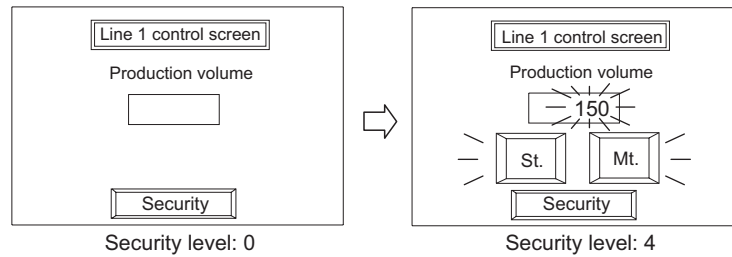
○ : Enabled, × : Not enabled

User	User's security level	150	St.	Mt.	Security	Production volume	Maintenance screen
Operator	4	○	○	○	○	×	×
Supervisor	8	○	○	○	○	○	×
Maintenance staff	15	○	○	○	○	○	○
Others	0	×	×	×	○	×	×

(1) Operation example

(a) Changing displays and operations of objects with changing security levels

The following example shows the object display and operation changed from 0 to 4 of the security level.



Security level status	Screen	Operation contents
Level 0	<p>Line 1 control screen</p> <p>Production volume</p> <p>Security</p> <p>Base screen 1</p>	<p>The object function on the screen cannot be used, because the security level is in a low status</p> <ul style="list-style-type: none"> Base screen 1 (security level 0) Each object function (security level 4)
Level 0	<p>Line 1 control screen</p> <p>Production volume</p> <p>Security</p> <p>Base screen 1</p>	<p>Touch a touch switch, and then the screen for changing security levels is displayed.</p> <ul style="list-style-type: none"> Operator authentication <ul style="list-style-type: none"> The first touch: Log out of the GOT. The second touch: The screen for login is displayed. Security level authentication <ul style="list-style-type: none"> The screen for changing security levels is displayed. <p>(Change method of the security level on the GOT)</p>
Level 0 ↓ Level 4	<div> <p>Input the operator name and password of the security level 4.</p> <p>Operator authentication by password</p> </div> <div> <p>Input the external authentication ID of the security level 4 operator.</p> <p>Operator authentication by external authentication device</p> </div> <div> <p>Input a fingerprint of the security level 4 user.</p> <p>Operator authentication by fingerprint unit</p> </div> <div> <p>Input the password of security level 4.</p> <p>Password authentication</p> </div> <p>(Continued to next page)</p>	<ul style="list-style-type: none"> Operator authentication by password: <ul style="list-style-type: none"> Input the operator name and password of the security level 4 to login. Operator authentication by external authentication device: <ul style="list-style-type: none"> Input the external authentication ID of the security level 4 using the external authentication device to login. Operator authentication by fingerprint unit: <ul style="list-style-type: none"> Input a fingerprint of the security level 4 user using the fingerprint unit to login. Password authentication: <ul style="list-style-type: none"> Input the password, and change the security level into 4.

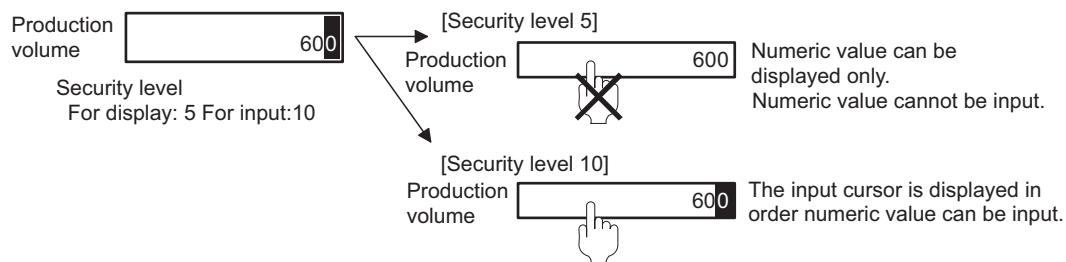
Security level status	Screen	Operation contents
Level 4	<p>(From previous page)</p> <p>Line 1 control screen</p> <p>Production volume</p> <p>150</p> <p>St. Mt.</p> <p>Security</p> <p>Base screen 1</p> <p>Numeric value display</p> <p>Display touch switch</p>	Display the object function corresponding to security level 4.



(1) The security level set in the numerical input, the ASCII input and the touch switch

2 types of security levels (for input and display) can be set in the numerical input, the ASCII input and the touch switch.

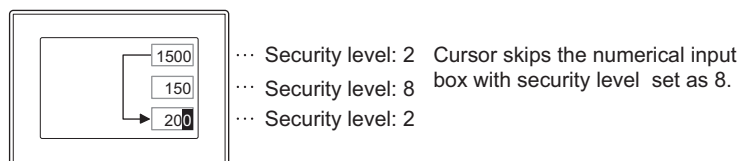
Example) When the security level is set in the numerical input function.



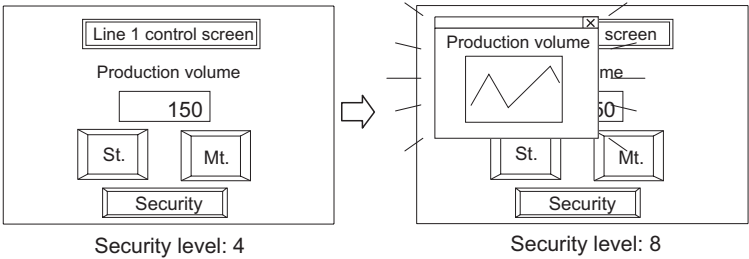
(2) The movement of the input cursor when setting the security function

The cursor will move to the currently available numerical input box or ASCII input box, when setting security level respectively in plural numerical input and ASCII input.

Example) Input numeric value when the base screen security level is "2".



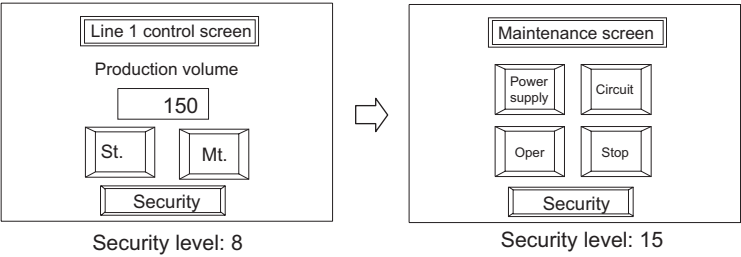
(b) Displaying window screen with changing security levels
 The following example shows the object display and operation changed from 4 to 8 of the security level.



Security level status	Screen	Operation contents
Level 4	<p>Base screen 1</p>	Base screen 1 (security level 4) ↓ Window screen 2 (security level 8)
Level 4	<p>Base screen 1</p>	Do not display the window screen.
Level 4	<p>Base screen 1</p> <p>(Continued to next page)</p>	Touch a touch switch, and then the screen for changing security levels is displayed. <ul style="list-style-type: none"> Operator authentication The first touch : Log out of the GOT. The second touch: The screen for login is displayed. Password authentication: The screen for changing security levels is displayed. (Hand icon) ■Change method of the security level on the GOT)

Security level status	Screen	Operation contents
Level 4 ↓ Level 8	<p>(From previous page)</p> <p>Operator authentication by password</p> <p>Operator authentication by external authentication device</p> <p>Operator authentication by fingerprint unit</p> <p>Password authentication</p> <p>Window screen 2</p>	<ul style="list-style-type: none"> Operator authentication by password: Input the operator name and password of the security level 4 to login. Operator authentication by external authentication device: Input the external authentication ID of the security level 4 using the external authentication device to login. Operator authentication by fingerprint unit: Input a fingerprint of the security level 4 user using the fingerprint unit to login. <p>Display a window screen.</p>
Level 8		

(c) Switching base screen with changing security levels
 The following example shows the object display and operation changed from 8 to 15 of the security level.



Security level status	Screen	Operation contents
Level 8	<p>Line 1 control screen</p> <p>Production volume</p> <p>150</p> <p>St. Mt.</p> <p>Security</p> <p>Security level: 8</p>	<p>Base screen 1 (security level 8)</p> <p>↓</p> <p>Base screen 10 (security level 15)</p>
Level 8 ↓ Level 15	<div> <p>Operator authentication by password</p> <p>Input the operator name and password of the security level 15.</p> </div> <div> <p>Operator authentication by external authentication device</p> <p>Input the external authentication ID of the security level 15 operator.</p> </div> <div> <p>Operator authentication by fingerprint unit</p> <p>Input a fingerprint of the security level 15 user.</p> </div> <div> <p>Password authentication</p> <p>Input the password of security level 15.</p> </div>	<ul style="list-style-type: none"> Operator authentication by password: The screen for login is displayed automatically. Input the operator name and password of the security level 4 to login. Operator authentication by external authentication device: The screen for login is displayed automatically. Input the external authentication ID of the security level 4 using the external authentication device to login. Operator authentication by fingerprint unit: The screen for login is displayed automatically. Input a fingerprint of the security level 4 user using the fingerprint unit to login. Password authentication: The security level change screen is displayed automatically. Input the password, and change the security level into 15.
Level 15	<p>Maintenance screen</p> <p>Power supply Circuit</p> <p>Oper Stop</p> <p>Password</p> <p>Base screen 10</p>	<p>Switch to base screen 10</p>

■ Precautions

(1) Precautions for drawing

When the GOT is started up, a screen always appears regardless of the screen security settings and security level.

Make sure to design screens so that the screen without security settings will appear at GOT start up and it will be switched to the screen with security settings by performing screen switching.


(2) Making a note of the password

The already registered password cannot be checked later. Therefore, always make a note of the password.

When passwords are forgotten, the following operations cannot be executed.

- Changing security levels on the GOT
- Deleting or changing passwords on GT Designer3
- Deleting or changing the operator information on the GOT

For solutions when forgetting passwords, refer to the following.

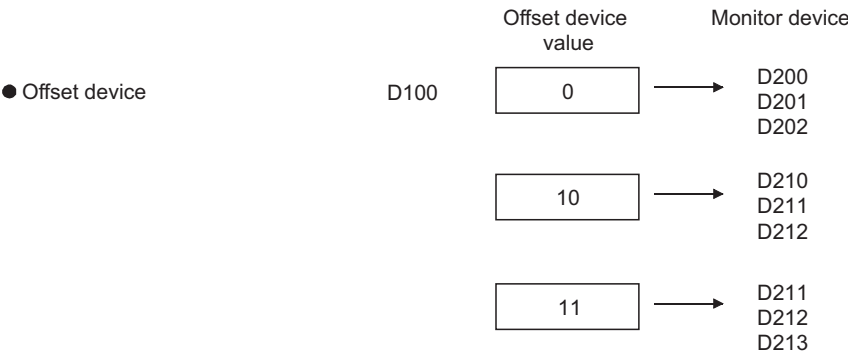
 4.7.5 Precautions

5.3.6 Offset setting

Plural devices can be switched and monitored by setting a single device.
(In the user alarm display, multiple comments can be switched and displayed by setting a single device.)

Example: When switching and monitoring multiple device statuses by a single device
The value set in the device using the offset (hereinafter referred to as offset device) is added to the device set in each object function.

- Device set in each object function D200, D201, D202



Switch the monitor device according to the value stored in offset device.

This offset is available for the following objects and functions.

- | | | | |
|----------------------|-------------------|--------------------------------|----------------------|
| • Touch switch* | • Lamp (Bit/Word) | • Numerical Display | • Numerical Input |
| • ASCII Display | • ASCII Input | • Data List Display | • Comment Display |
| • User alarm display | • Level | • Panelmeter | • Line Graph |
| • Trend Graph | • Bar Graph | • Statistics bar and pie graph | • Scatter Graph |
| • Parts Display | • Parts Movement | • Script | • Status Observation |

* The offset device value is added to the device set in the action setting.

Settings

(1) Setting offset for object


Set the offset on the [Extended] tab of the setting dialog box of the object.
For how to configure setting for each object, refer to the following.

 GT Designer3 Version1 Screen Design Manual (Functions)

(2) Setting offset for script and status observation

For how to set the offset, refer to the following.

- Script

 (Functions) 28. SCRIPT FUNCTION

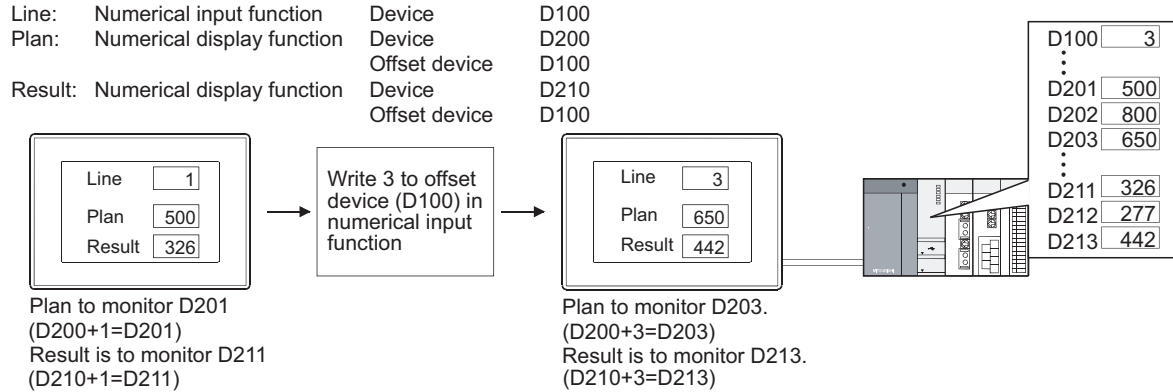
- Status observation

 (Functions) 26. STATUS OBSERVATION FUNCTION

Examples of offset

(1) Switching and monitoring multiple line statuses with a single numerical display (Numerical display)

☞ (Functions) 5. NUMERICAL DISPLAY/NUMERICAL INPUT



(2) Switching and displaying multiple comments by a single device (User alarm display)

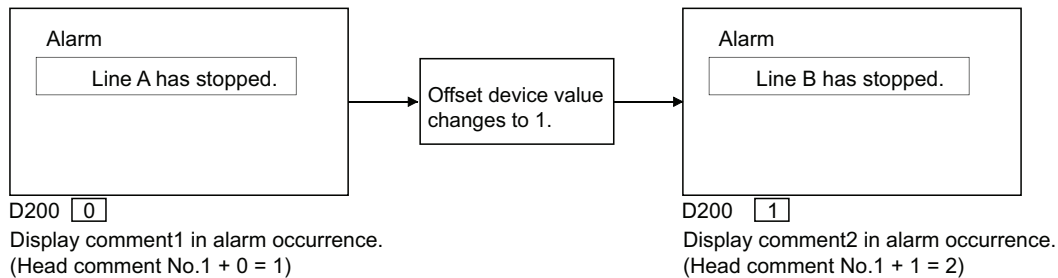
The offset device value is added to the comment set in the user alarm display.

In a normal user alarm display, bit devices for the number of displayed comments needs to be set. However, by using the offset, multiple comments can be switched and displayed by a single device.

(a) Offset of display setting

The offset device value is added to the number of the comment to be displayed.

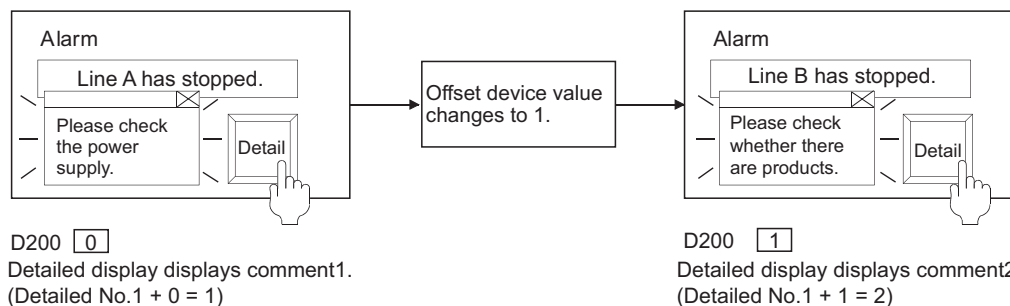
Head comment No. : 1
Comment No. offset : D200



(b) Offset of detailed display setting

The offset device value is added to the numbers of comment (comment window), window screen and base screen to be displayed as details.

Detailed display : Comment window
Detailed No. of alarm device : 1
Detailed No. offset : D200



HINT

When executing offset of detailed display setting

When executing offset of detailed display setting, the comment for detailed display is changed regardless of the message on user alarm display.

To relate the message to the comment, adjust comment and the message displayed by using offset of display setting.

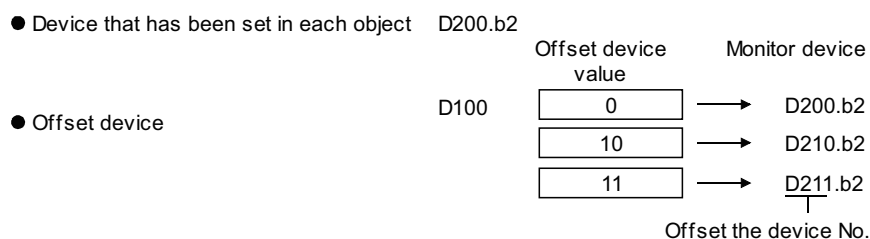
■ Precautions

The following describes the precautions for using the offset.

(1) Precautions for drawing

- When monitoring the trigger device in sampling by the status observation function
When offsetting the trigger device in a constant sampling, set the offset sampling longer than the monitor sampling.
Example) Changing cycle (7 s) of offset device value > Status observation function sampling (5 s)
- Abnormal operation of the status observation cycle setting (e.g. uncollected data by affecting the timing shift)
If an offset-specified object is arranged on the monitor screen, the condition device for the status observation is delayed. Do not set offset-specified objects on the monitor screen at using the status observation.
- Device setting
The offset function is not available for the bit device word specification.
For the word device bit specification, the device No. is offset.

Example)



The data format of offset devices is fixed to the signed 16-bit binary data.

(2) Precautions for use

- Offset value change
The monitor device will be read as the offset value changes; so do not change the offset value frequently.
If the offset value is changed frequently, the monitor speed will become low.
- When the offset device No. exceeds the PLC word range trigger
When the offset device No. exceeds the PLC device range, monitoring and writing will not be executed.
Error will be displayed in alarm list (system alarm), if it is set in advance.
When monitoring plural devices with a single graph, the display method is determined by the setting method of monitored device.
 - Trend graph, line graph, bar graph and statistics graph
When setting the device consecutively: Holds the previous display.
When setting the device at random: Holds the previous display only when the displaying exceeds word range trigger.
For the display other than the above, the offset device will be monitored.
 - Scatter graph
When setting the device consecutively: Holds the previous display.
When setting the device at random: Holds the previous display.

5.3.7 Superimposition setting

Figures or objects can be superimposed in the following methods

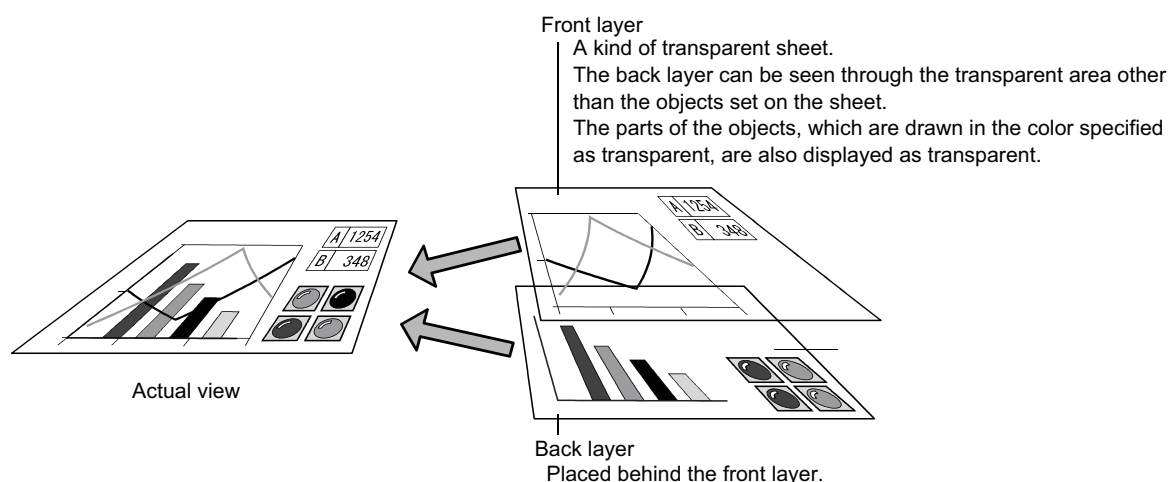
- Superimposition using layers
- Superimposition using no layer
- Special superimposition of touch switch, numerical input, and ASCII input

■ Superimposition using layers

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

Each of the base screen and window screen consists of two layers; front layer and back layer.

By arranging objects separately on each layer, the objects can be superimposed.



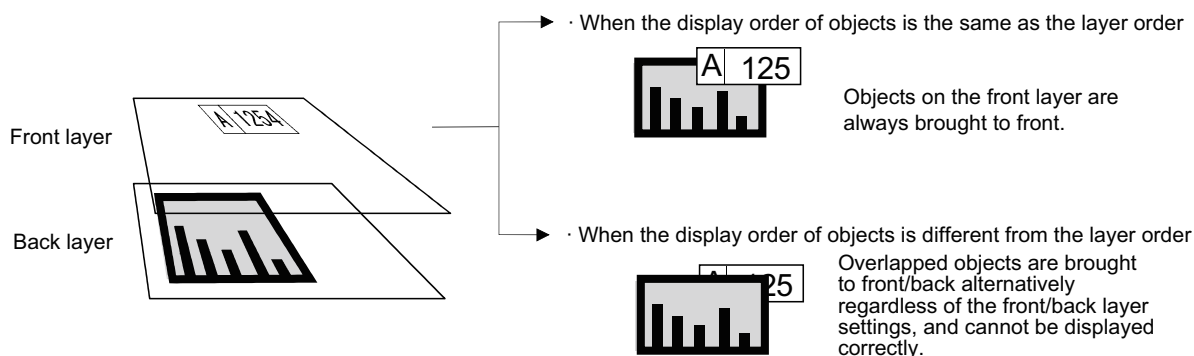
(1) Figures and objects that can be arranged on each layer

The following shows figures and objects that can be arranged on each layer.

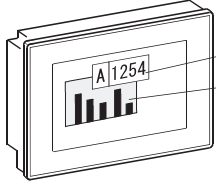
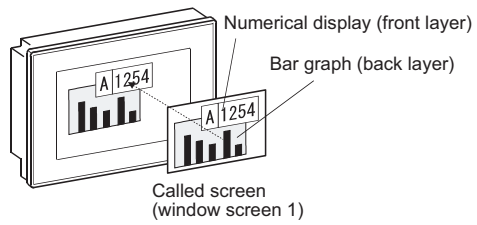
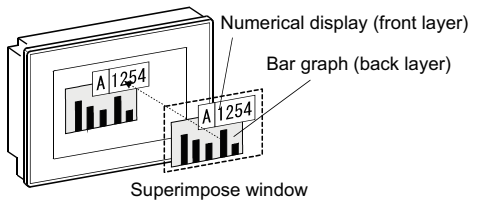
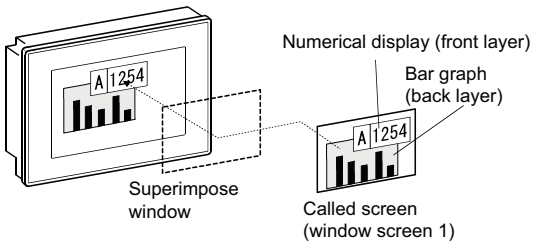
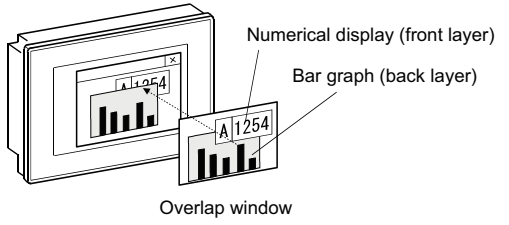
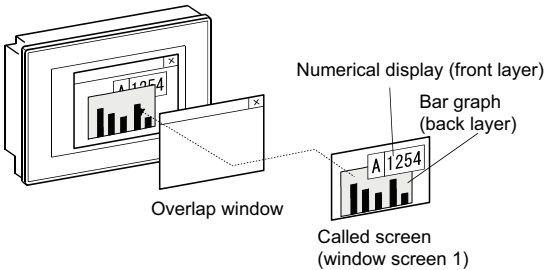
Layer	Figures and objects that can be arranged
Front layer	Figures (Piping figures with lamp attribute only) and objects
Back layer	Figures and objects

(2) Display order of objects arranged on front and back layers


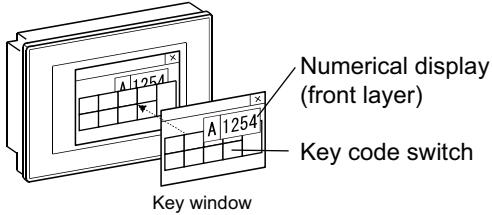

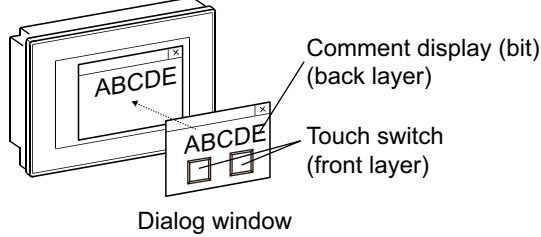
The display order in the GOT of objects arranged on the front and back layers differs depending on the screen type; same as the layer superimposition order or different from it.



The following shows the display order of objects on each screen.

Screen type	Object display order in the GOT
Base screen	<p>Display order is the same as the layer superimposition order.</p>  <p>Numerical display (front layer) Bar graph (back layer)</p> <p>Base screen</p>
Screen called to the base screen by the set overlay screen function	<p>Display order is the same as the layer superimposition order.</p>  <p>Numerical display (front layer) Bar graph (back layer)</p> <p>Called screen (window screen 1)</p>
Superimpose window	<p>Display order is the same as the layer superimposition order.</p>  <p>Numerical display (front layer) Bar graph (back layer)</p> <p>Superimpose window</p>
Screen called to the superimpose screen by the set overlay screen function	<p>Display order is the same as the layer superimposition order.</p>  <p>Numerical display (front layer) Bar graph (back layer)</p> <p>Called screen (window screen 1)</p>
Overlap window*1	<p>Display order is different from the layer superimposition order.</p>  <p>Numerical display (front layer) Bar graph (back layer)</p> <p>Overlap window</p>
Screen called to the overlap screen by the set overlay screen function*1	<p>Display order is different from the layer superimposition order.</p>  <p>Numerical display (front layer) Bar graph (back layer)</p> <p>Called screen (window screen 1)</p>

(Continued to next page)

Screen type	Object display order in the GOT
Key window	<p>Display order is different from the layer superimposition order.  4.5 Key Window Setting)</p> 
Dialog window	<p>Only the back layer is displayed.  4.4 Setting Message to be Displayed on GOT)</p> 

- *1 When the following item is selected, the object display order in the overlap window is the same as the layer superimposition order.
- [Adjust object display order in GOT to the one in GT Designer3] checkbox in the [GOT Type Setting] dialog box


For how to configure setting in the [GOT Type Setting] dialog box, refer to the following.

 4.1 GOT Type Setting



Set overlay screen function

For how to use the set overlay screen function, refer to the following.

 9.2 Changing Screen According to Situation (Set Overlay Screen)

(3) Transparent color

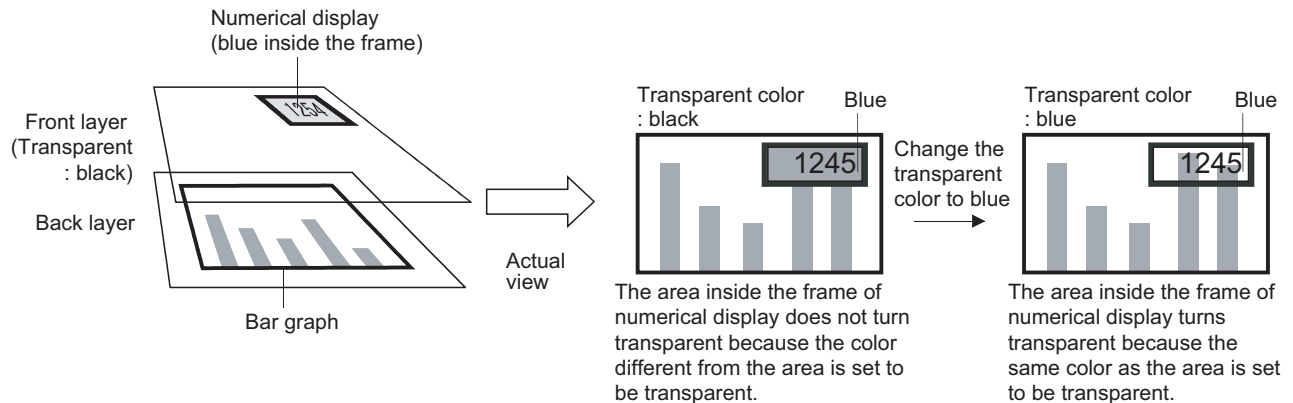
The transparent color settings are specific to the front layer.

The parts of objects arranged on the front layer, which are drawn in the same transparent color as the transparent color of the front layer, are displayed as transparent.

To display some parts of objects as transparent, change the color specified as transparent of the front layer according to the target parts.

(The transparent color is set to dark yellow by default.)

Example) Displaying the bar graph on the back layer through the numerical display.



Set the transparent color of the front layer in the [Screen Property] dialog box of the base screen.

For how to configure settings in the [Screen Property] dialog box, refer to the following.

☞ 3.7.1 Creating a new screen

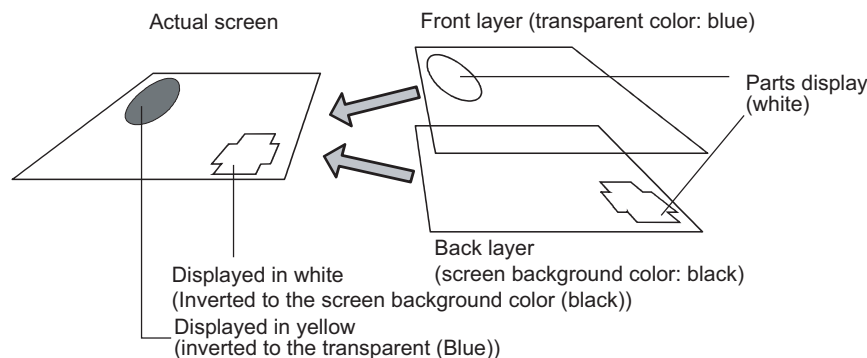
POINT

Precautions for inverting an object (display mode: XOR)

The following shows the precautions for inverting an object (display mode: XOR) using the touch switch, numerical display, comment display, and parts display.

(1) When arranging an object on the front layer

If no figure or other object is arranged below the target object, the object is inverted to the transparent color of the front layer.



(2) When inverting an object to a shape (display mode: XOR)

Arrange the object on the back layer.

(4) Precautions

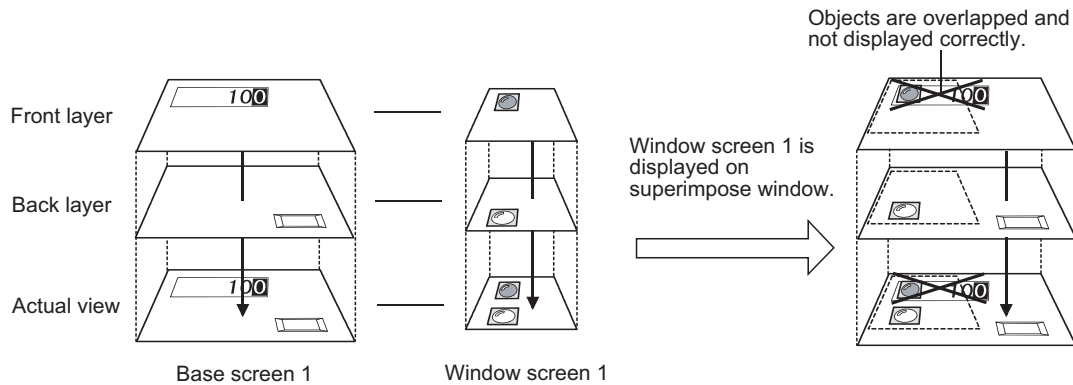
When superimposing multiple screens using the superimpose windows and set overlay screen function, design the screen while paying full attention to the following.

(a) Layer settings

Front layers and back layers of screens will be integrated into a single front layer and back layer, respectively, when the screens are overlaid.

Arrange and place objects on each layer so that they will not be overlapped between the integrated front layers or between the integrated back layers.

Overlapped objects may not be displayed or operate correctly.



(1) The object that can be superimposed with another on the same layer

Some of the composite objects set on a single layer can be displayed and operate correctly.

For the object that can be superimposed with another on a single layer, refer to the following.

5.3.7 ■ Superimposition using no layer

(2) How to arrange objects so that the objects on the base screen and those on the superimpose window are not overlapped

(a) Check whether the objects are overlapped or not.

Check whether the objects on the base screen and those on the superimpose window are not overlapped each other by previewing the superimpose window.

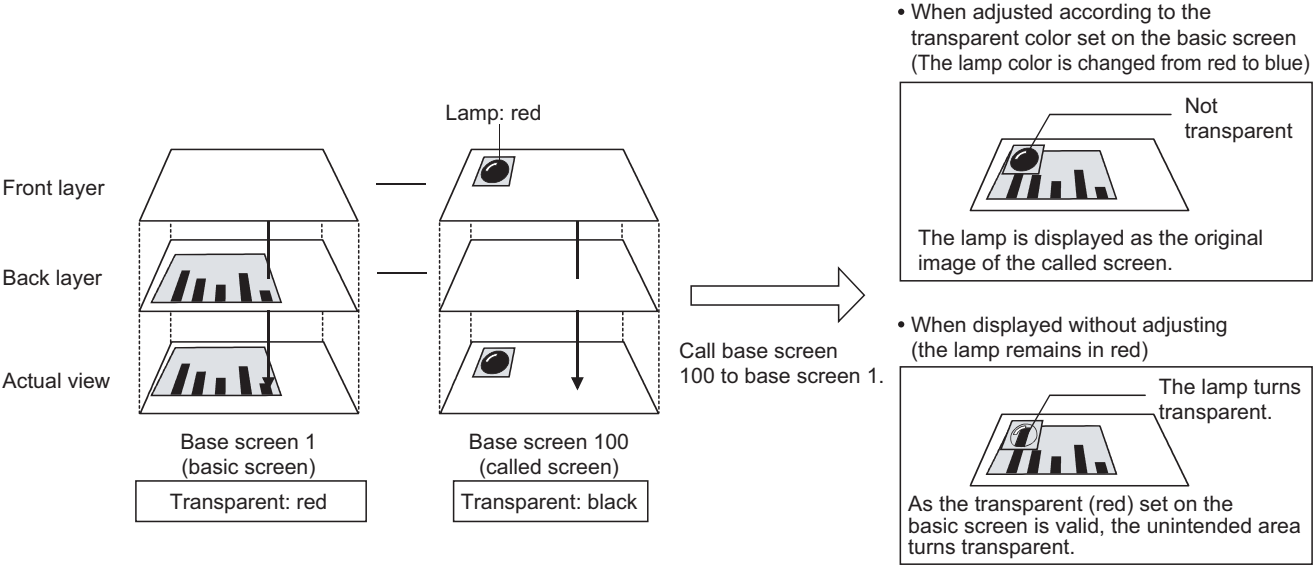
Preview screen can be displayed by selecting [View] → [Window Preview] → [Custom] from the menu.

(b) Rearrange the superimpose window

If objects are overlapped, rearrange the superimpose window by selecting the [Object] → [Window Position] → [Superimpose1] or [Superimpose2] from the menu.

(b) Transparent color settings

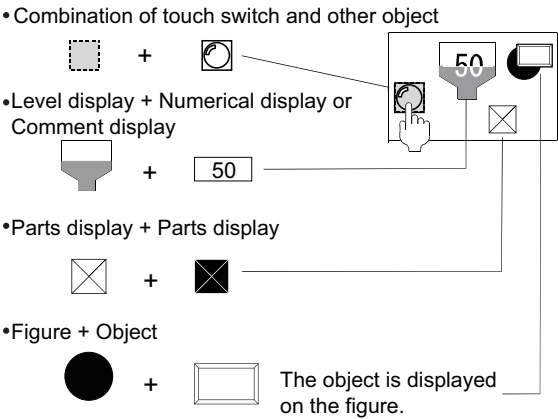
The transparent color of called screen is invalid, but that of the basic screen is valid.
The transparent color is based on the corresponding settings of a base screen, as window screen (superimpose window) does not include the settings.
Therefore, set the object colors on the front layer of the called screen considering the transparent color set on the basic screen.



■ Superimposition using no layer



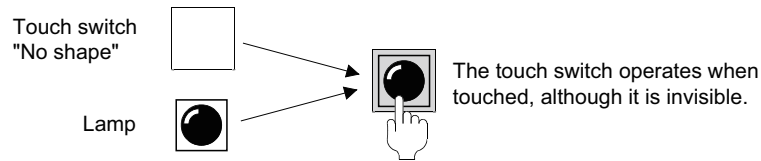
Some objects can be superimposed on the same layer.
The following shows the possible combinations of objects that can be superimposed on the same layer.



Combination	Reference
Touch switch and other object (Except numerical input and ASCII input)	(1) Superimposition with touch switch
Level and numerical display or comment display	(2) Superimposition with level
Parts display and parts display	(3) Superimposition with parts display

(1) Superimposition with touch switch

Touch switches with no figure and text set can be superimposed with other objects.



(a) Objects that can be superimposed with touch switch

Objects that can be superimposed with touch switch
Lamp, Numerical Display, ASCII Display, Data List Display, Date/Time Display, Comment Display, Alarm history display ^{*1} , User alarm display ^{*1} , System alarm display, Level, Panelmeter, Line Graph, Trend Graph, Bar Graph, Statistics Bar Graph, Statistics Pie Graph, Scatter Graph, Historical Trend Graph, Parts Display, Parts Movement
^{*1} Cannot be superimposed with a touch switch If one touch is enabled for alarm history display or user alarm display. For how to set the alarm history display and user alarm display, refer to the following. GT Designer3 Version1 Screen Design Manual(Functions)



Superimposition of touch switch and numerical input or ASCII input

Arrange the touch switch and the numerical input or ASCII input on different layers to superimpose them. For how to set superimposition using the layer, refer to the following.

5.3.7 ■ Superimposition using layers

(b) Settings for superimposing touch switch and object

When superimposing the touch switch and object, do not configure the following settings.

- Selecting the item other than [None] for [Shape] in the [Style] tab
- Selecting [Text] for [Text Type] on the [Text] tab, and entering text to [Text]

For how to set the touch switch, refer to the following.

(Functions) 2. TOUCH SWITCH

(2) Superimposition with level

(a) Objects that can be superimposed with level

Objects that can be superimposed with level
Numerical display, Comment display

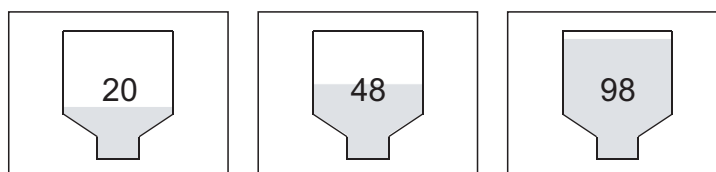
(b) Condition for superimposing object with level

One numerical display or comment display can be superimposed with a single level.

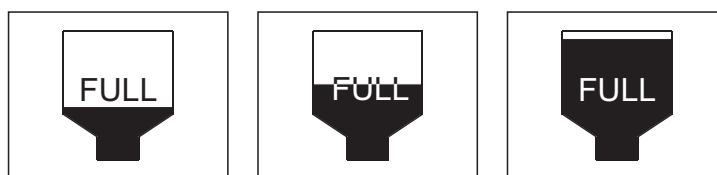
(c) Setting example

Example 1: When [Transparent] is selected in [Display Mode] for the numerical display or comment display The numeric value and text will be displayed in the original color.

Suitable for the color-display GOT.



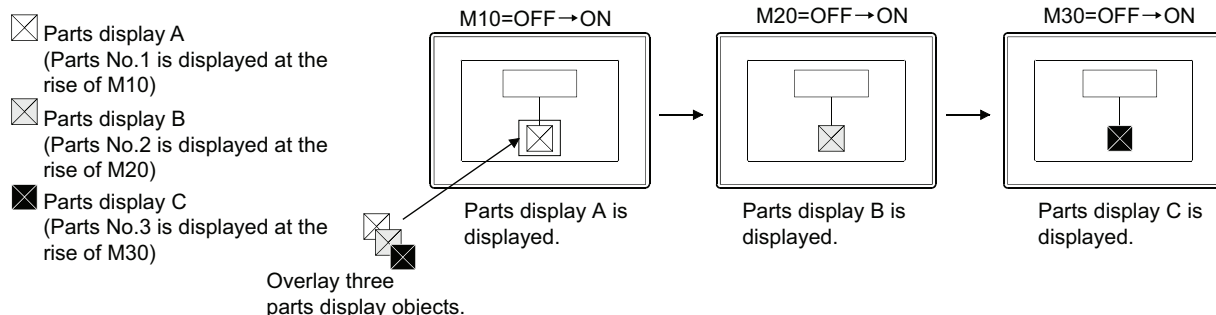
Example 2: When [XOR] is selected in [Display Mode] for the numerical display or comment display
The area overlapped with the filled color of level will be inverted.
Suitable for the monochrome-display GOT.



(3) Superimposition with parts display

Multiple fixed displays can be superimposed.

Example: Displaying the composite of three parts displays (with [Overwrite] selected for [Display Mode])



■ Special superimposition of touch switch, numerical input, and ASCII input

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

Up to 8 objects such as the touch switch set to each screen, numerical input, and ASCII input can be superimposed using the superimpose windows or set overlay screen function.

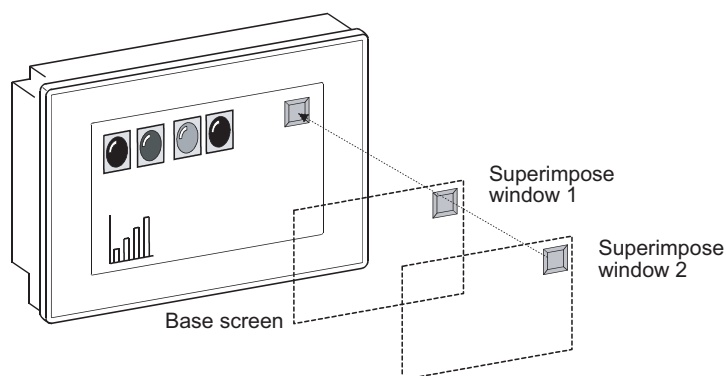
(1) How to specially superimpose touch switch, numerical input, and ASCII input

(a) Superimposition by Superimpose Windows

The superimpose windows are placed in the front of the base screen as a single screen.

For specifications of the superimpose window, refer to the following.

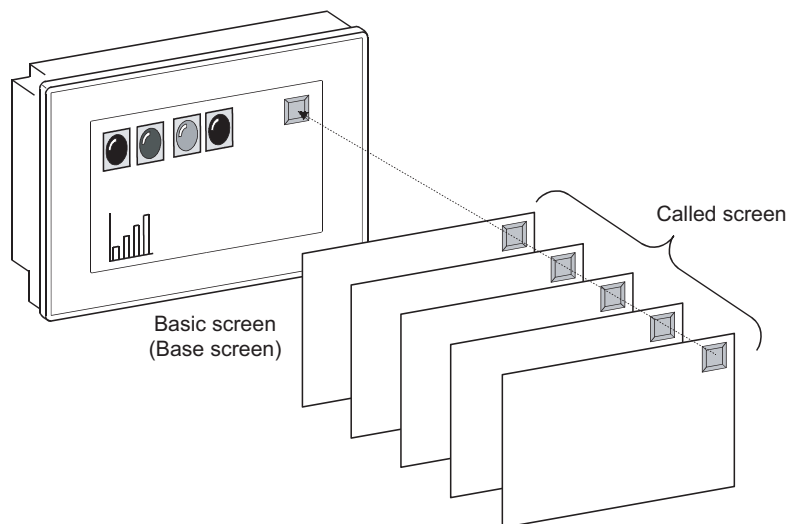
2.3.1 Screen specifications for each GOT type



(b) Superimposition by set overlay screen

The set overlay screen function brings other base screens and window screens onto a basic screen (base screen or superimpose window), and superimpose and displays them as a single (composite) screen. For how to set the set overlay screen function, refer to the following.

☞ 9.2 Changing Screen According to Situation (Set Overlay Screen)




POINT

(1) Setting multiple operations to a single touch switch

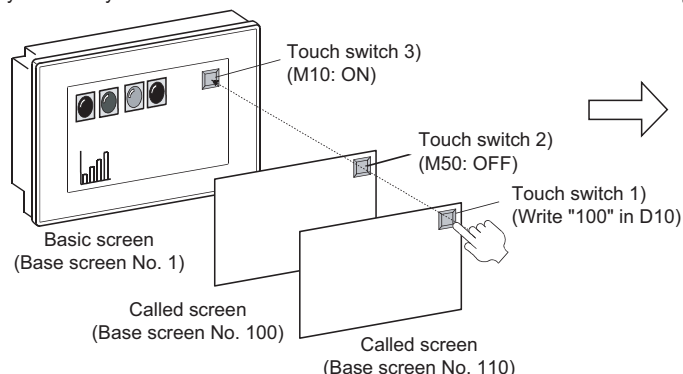
The settings can be easily made, so that a single touch switch operates as several touch switches that are superimposed using superimpose windows or set overlay screen function.

For how to set the touch switch, refer to the following.

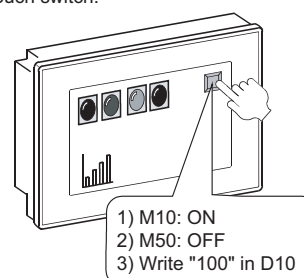
 (Functions) 2. TOUCH SWITCH

Example) Execute three operations by touching once

When superimposing three touch switches by set overlay screen:



When setting three operations to a touch switch:



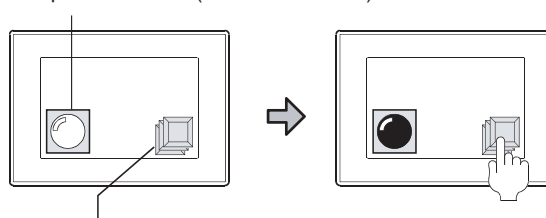
(2) Precautions for superimposing multiple touch switches

(a) The superimposed touch switches operate in priority order (From high to low).

Therefore, the switch may not operate if touched too short.

To confirm the operations of the touch switches, set a lamp, which will turn on when the touch switch with the lowest priority operates.

Lamp for operation check (lit when M10: ON)



Operation settings of the touch switch with the lowest priority

1) D10

2) M50 ☐

3) M10 ☐

The lamp will turn on when the touch switch operates.


1) D10

2) M50 ☐

3) M10 ☒

Add the operation of turning on the bit for operation check (M10).

For the operation priority order of the touch switch, refer to the following.

 (Functions) 2. TOUCH SWITCH

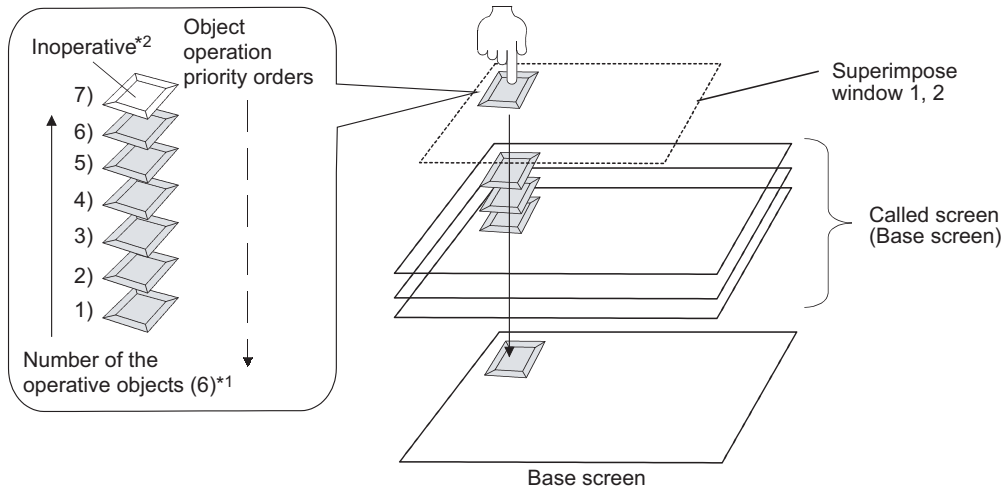
(b) If the simultaneous pressing prohibition key is overlapped with other key, the key does not operate even when touched.

(2) Operations of superimposed touch switch, numerical input, and ASCII input

(a) Number of operative objects

Up to 6 of the objects (the touch switch, numerical input, and ASCII input are superimposed) superimposed by the set overlay screen function can operate. When superimpose windows 1 and 2 are additionally used, up to 8 objects can operate.

If objects (touch switch, numerical input, and ASCII input) are set over the above number, they do not operate.



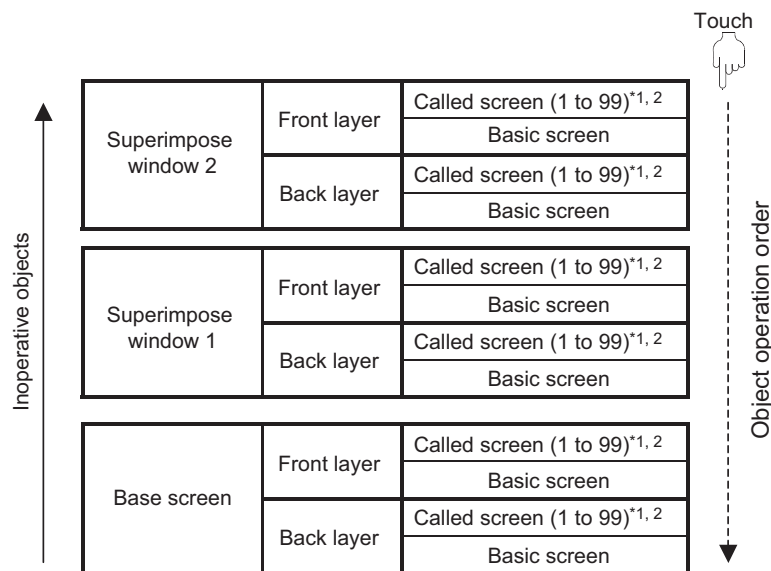
*1 Up to 8 objects can operate according to the combination of the composite screens.

*2 When [Display when touched] is selected for the key window operation on the key window [Key Window Advanced Setting] tab of the [Screen Property] dialog box, if multiple objects of numerical input or ASCII input are overlapped, only the first touched and turned valid calls the key window.

Therefore, the following objects do not operate.

(b) Priority order based on the combination of composite screens

The following shows the priority order in which the touch switch, numerical input, and ASCII input can operate, based on the combination of composite screens.



*1 The touch switches can operate in the order in which the screens are displayed by the set overlay screen function. For the order in which screens are called by the set overlay screen function, refer to the following.

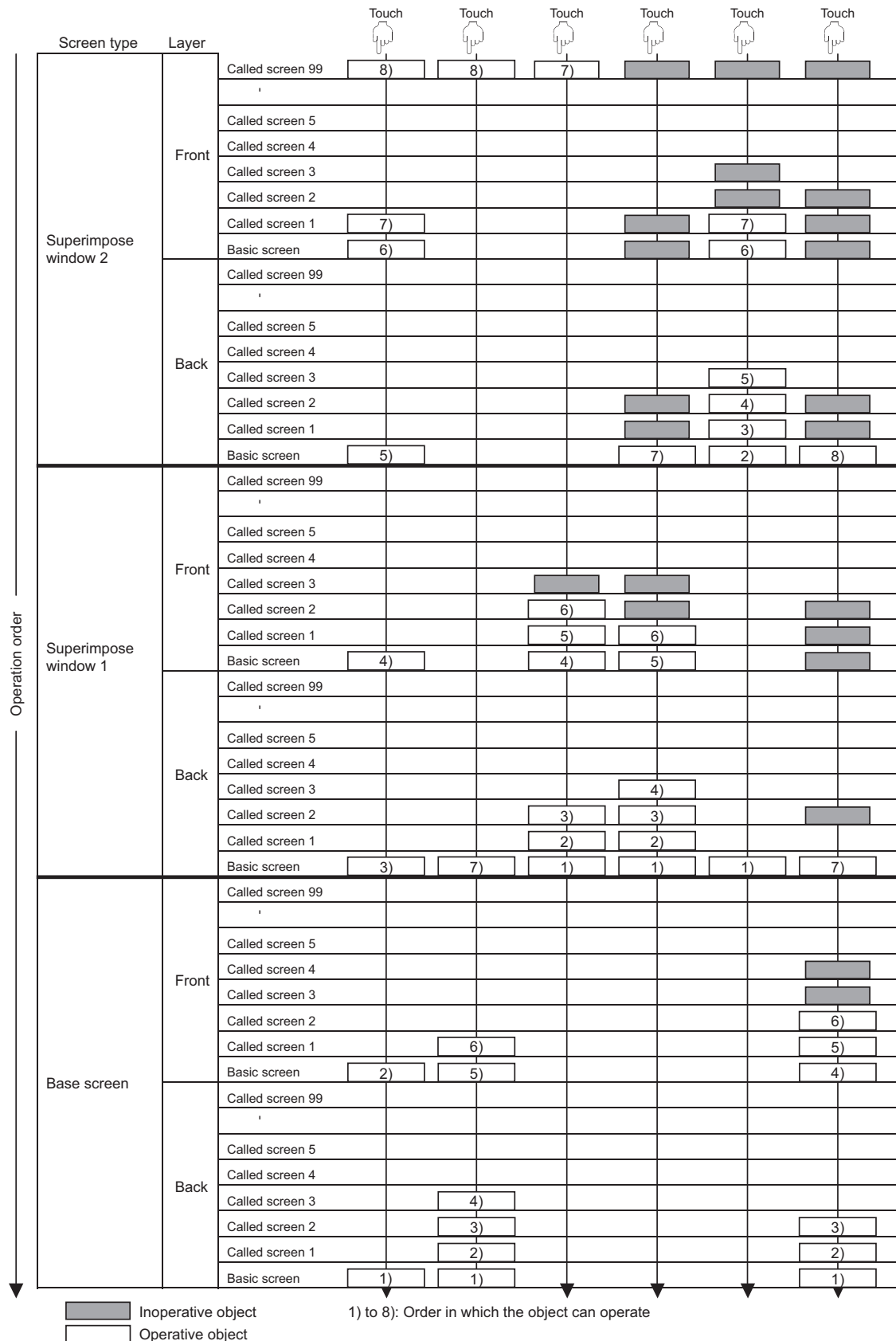
➡ 9.2 Changing Screen According to Situation (Set Overlay Screen)

*2 The superimposed touch switch, numerical input, and ASCII input operate on up to 99 called screens.

If 100 or more screens are called, the touch switch, numerical input, and ASCII input objects set on the called screen of No.100 or higher do not operate.

(c) Application example

The following shows the operation range of the touch switch, numerical input, and ASCII input set on multiple screens.



*1 The No. 1 to 99 shown in the figure above indicate the order of calling the screens to the base screen or window screen. (In the calling order set on GT Designer3).

5.3.8 Trigger Setting

GT 16 GT 15 GT 11 GT 10 Soft
SOT 1000

The following triggers can be set for monitoring and writing operations of each object function.

(1) Trigger (for display)

Set for the object that monitors device.

When the trigger is not satisfied, the object will stop device monitor or disappear.

(2) Trigger (for write)

Set for the object that writes to device.

When the trigger is not satisfied, the object operation will be disabled and/or the display will be held.

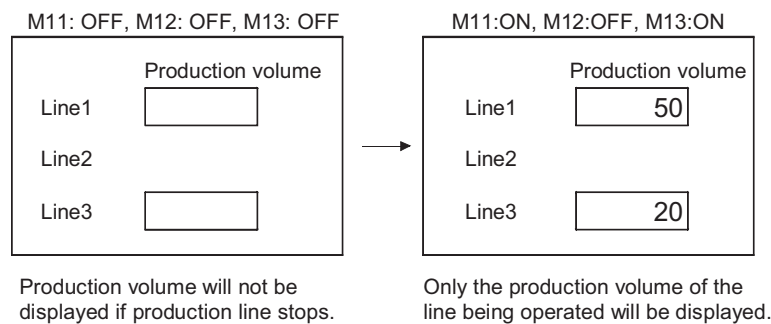
(3) Trigger (for script execution)

Set for the script function.

When the trigger is not satisfied, the script is not executed.

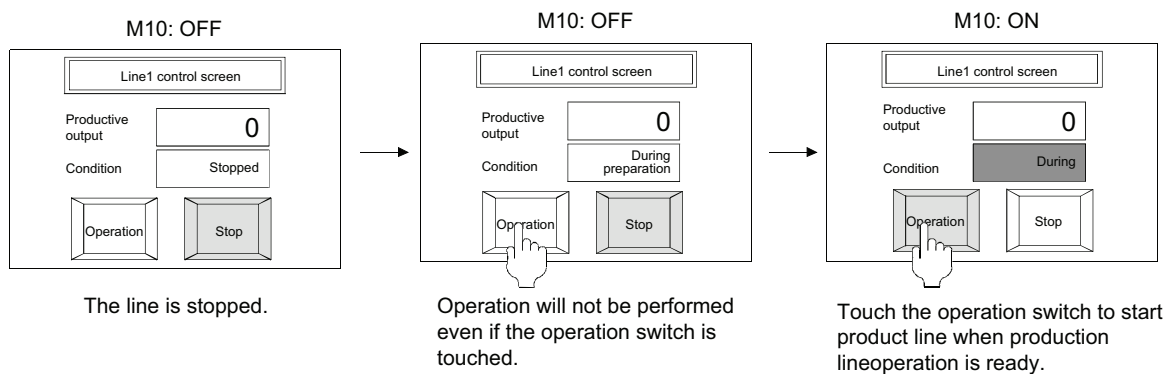
Example 1) Only the numerical display functions that are monitoring the production line are displayed.

Production start signal (line1: M11, line2: M12, line3: M13)





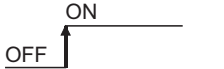
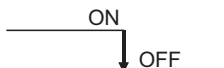
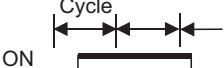
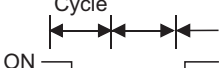
Example 2) Set an interlock device for a touch switch

Line operation ready signal: M10



■ Applicable conditions and actions

(1) Triggers (for display and action)

Trigger type	Execution trigger	Actions when condition is satisfied	
		Display condition	Action condition
Ordinary	None	<ul style="list-style-type: none"> The device is monitored at the monitor sampling of the GOT. 	<ul style="list-style-type: none"> The action set to the object can be executed at the monitor sampling of the GOT.
ON		<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored at the monitor sampling of the GOT. When trigger is not satisfied: Select or not the [Hold Display] item in the display condition setting to choose the display action. Selected: The previous object display is retained. Not selected: The object display is erased. 	<ul style="list-style-type: none"> When trigger is satisfied: The action set to the object can be executed. When trigger is not satisfied: The previous object display is retained. To clear the object display, select [Clear the input object] of the [Advanced Setting] tab for the [Environmental Setting] dialog box (Key Window), or select the [Key Window Advanced Setting] tab of the [Screen Property] dialog box.
OFF		<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored at the monitor sampling of the GOT. When trigger is not satisfied: Select or not the [Hold Display] item in the display condition setting to choose the display action. Selected: The previous object display is retained. Not selected: The object display is erased. 	<ul style="list-style-type: none"> When trigger is satisfied: The action set to the object can be executed. When trigger is not satisfied: The previous object display is retained. To clear the object display, select [Clear the input object] of the [Advanced Setting] tab for the [Environmental Setting] dialog box (Key Window), or select the [Key Window Advanced Setting] tab of the [Screen Property] dialog box.
Rise		<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored only once. When trigger is not satisfied: The previous object display is retained. 	Not applicable.
Fall		<ul style="list-style-type: none"> When trigger is not satisfied: To monitor the device and display the object at screen switching, set [Initial display] in the display condition. 	
Sampling	Sampling	<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored at each preset sampling. Setting range: 0.1 to 3600 seconds (every 100ms), 1 to 3600 seconds (every one second) When trigger is not satisfied: The previous object display is retained. 	Not applicable.
Range	Word device value	<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored at the monitor sampling of the GOT. When trigger is not satisfied: The previous object display is retained. 	<ul style="list-style-type: none"> When trigger is satisfied: The action set to the object can be executed. When trigger is not satisfied: The previous object display is retained. To clear the object display, select [Clear the input object] of the [Advanced Setting] tab for the [Environmental Setting] dialog box (Key Window), or select the [Key Window Advanced Setting] tab of the [Screen Property] dialog box.
Bit Trigger	Logical operation result of ON/OFF condition of the set multi bit device	<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored at the monitor sampling of the GOT. When trigger is not satisfied: The previous object display is retained. 	<ul style="list-style-type: none"> When trigger is satisfied: The action set to the object can be executed. When trigger is not satisfied: The previous object display is retained. To clear the object display, select [Clear the input object] of the [Advanced Setting] tab for the [Environmental Setting] dialog box (Key Window), or select the [Key Window Advanced Setting] tab of the [Screen Property] dialog box.
ON Sampling		<ul style="list-style-type: none"> When trigger is satisfied: The device is monitored at both of the satisfied trigger (the specified device is ON or OFF) and each preset sampling. Setting range: 0.1 to 3600 seconds (every 100ms), 1 to 3600 seconds (every one second) When trigger is not satisfied: The previous object display is retained. 	Not applicable.
OFF Sampling		<ul style="list-style-type: none"> When trigger is not satisfied: The previous object display is retained. 	

(a) Actions of multi bit condition

As trigger, 2 to 8 bit devices and its ON/OFF statuses.

Operate logical AND or logical OR based on the preset ON/OFF status of the multi bit device.

Example) When M10, M11 and M12 are used as the display condition

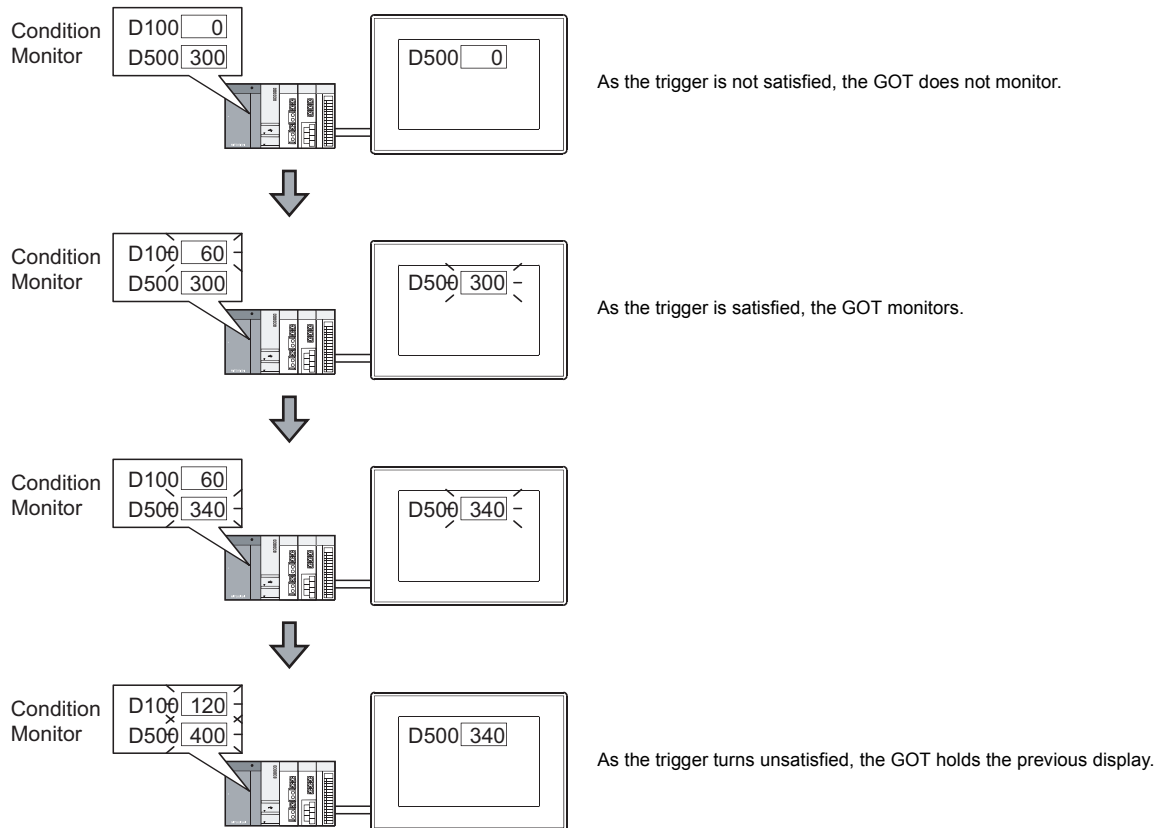
Area where trigger is satisfied ○ : Trigger satisfied × : Trigger not satisfied

Display condition	M10 is ON	M11 is OFF	M12 is ON	Operation result	
				Logical AND	Logical OR
Upper: ON/OFF status Lower: Satisfied/ Not satisfied	OFF ×	OFF ○	OFF ×	×	○
	ON ○	OFF ○	OFF ×	×	○
	OFF ×	ON ×	OFF ×	×	×
	ON ○	ON ×	OFF ×	×	○
	OFF ×	OFF ○	ON ○	×	○
	ON ○	OFF ○	ON ○	○	○
	OFF ×	ON ×	ON ○	×	○
	ON ○	ON ×	ON ○	×	○

(b) Trigger and display on GOT

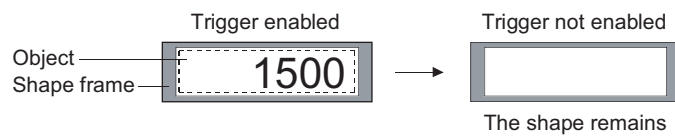
In the case of [ON], [OFF], and [Bit Trigger], the GOT does not monitor when the condition is not satisfied. If the trigger is satisfied once and then unsatisfied, the previous display is held.

Example) • Condition: range (D100: 50 to 100) • Display: D500 is numerically displayed



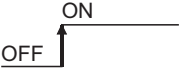
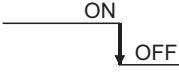
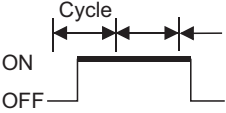
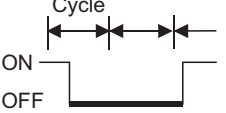


(c) Object placed into shape

In the case of [ON], [OFF], and [Bit Trigger], the object shape remains when the object is erased.



(2) Triggers for script execution

Trigger type	Execution trigger	Actions when trigger is satisfied
Ordinary	Executed always	
ON		
OFF		
Rise		
Fall		
Sampling	Sampling	
ON sampling		<ul style="list-style-type: none"> • When the trigger is satisfied: The script is executed. • When the trigger is not satisfied: The script is not executed.
OFF sampling		
View change	When the object display changes.	
Synchronized display trigger	The same trigger for display as set for object	
Key code input	<p>When the key code below is input.</p> <ul style="list-style-type: none"> • 0008_H (the least significant digit is cleared and entire data is shifted right by 1 digit.) • 0088_H (the contents being input are cleared.) • 002D_H (the code is inverted.) • 002E_H (.) • ASCII code, shift JIS, Kanji code 	
At the establishment of input	When the input data is written to a device by key code 000D _H .	
Device writing	When the bit SET / word SET is executed by a touch switch.	

■ Objects that support trigger condition

The following shows the object types that can be set by a condition.

The trigger type varies according to object types.

(1) Trigger (for display)

○ : Applicable × : N/A

Object type	Trigger type						
	Ordinary	ON/OFF	Rise/Fall	Sampling	Range	Bit trigger	ON Sampling/ OFF Sampling
<ul style="list-style-type: none"> Numerical display Data list display^{*1} ASCII display Comment display User alarm display Parts display^{*2} Parts movement^{*3} Level display Line graph Bar graph Statistics graph 	○ (Default)	○	○	○	○	○	×
<ul style="list-style-type: none"> Trend graph Line graph^{*4} Scatter graph 	×	×	○	○ (Default)	×	×	○
<ul style="list-style-type: none"> User alarm display^{*5} 	×	×	×	○ (Default)	×	×	×
<ul style="list-style-type: none"> Advanced alarm display 	○ (Default)	○	×	×	×	×	×
<ul style="list-style-type: none"> Historical trend graph 	○ (Default)	×	×	×	×	×	×

*1 When conditions are not met in the data list, the comment and data are deleted while the frame and title are displayed.

*2 The displaying condition of the fixed parts display is rise/fall only.

When conditions are not met in the parts display, the object is deleted only when the display mode is set to "replace" ([Hold Display] is not selected).

In other cases, the fixed parts are displayed.

*3 When conditions are not met in the parts movement display, the object is displayed if either (or both) of [Locus] in the [Device/Style] tab and [Hold Display] in the [Trigger] tab is specified.

*4 The trigger for the line graph when [Locus] is selected.

*5 The trigger for the user alarm display when [Store Memory] is selected.

(2) Trigger (for write)

○ : Applicable × : N/A

Object type	Trigger type						
	Ordinary	ON/OFF	Rise/Fall	Sampling	Range	Bit trigger	ON Sampling/ OFF Sampling
<ul style="list-style-type: none"> Touch switch Numerical input ASCII input 	○ (Default)	○	×	×	○	○	×
<ul style="list-style-type: none"> Logging function 	×	×	○ (Default)	○	×	×	○

(3) Triggers for script execution

○ : Applicable × : N/A

(a) Project script and screen script

Object type	Trigger type									
	Ordinary	ON/OFF	Rise/Fall	Sampling	ON sampling/ OFF sampling	View change	Synchron ize display trigger	Key code input	Input fixation	Device writing
<ul style="list-style-type: none"> Project script Screen script 	○	○	○	○	○	×	×	×	×	×

(b) Object script

• Input object script

Object type	Trigger type									
	Ordinary	ON/OFF	Rise/Fall	Sampling	ON sampling/ OFF sampling	View change	Synchron ize display trigger	Key code input	Input fixation	Device writing
<ul style="list-style-type: none"> Numerical input ASCII input 	○	○	○	○	○	×	×	○	○	×

• Display object script

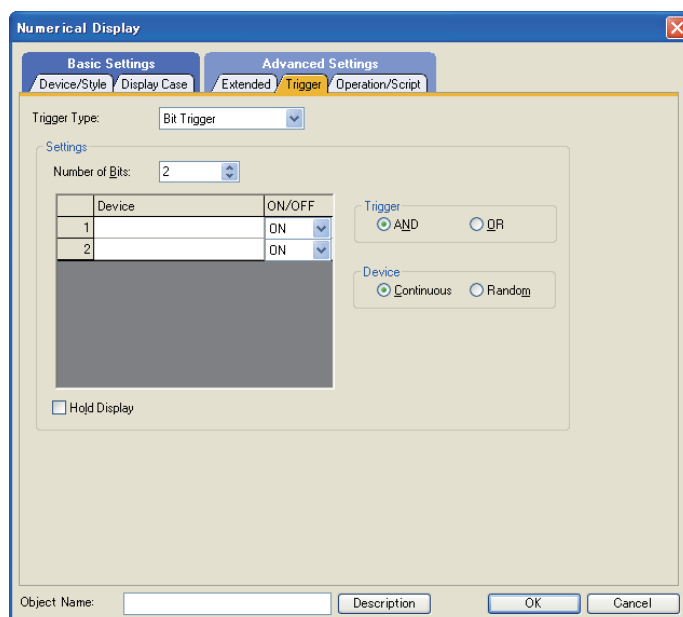
Object type	Trigger type									
	Ordinary	ON/OFF	Rise/Fall	Sampling	ON sampling/ OFF sampling	View change	Synchron ize display trigger	Key code input	Input fixation	Device writing
<ul style="list-style-type: none"> Numerical display Numerical input ASCII display ASCII input Comment display Parts display Parts movement Level display Trend graph Line graph Bar graph Statistics graph Scatter graph 	○	○	○	○	○	○	○	×	×	×
<ul style="list-style-type: none"> Lamp (Bit/Word) Clock display (date display and time display) Panel meter 	○	○	○	○	○	○	×	×	×	×

• Switch object script

Object type	Trigger type									
	Ordinary	ON/OFF	Rise/Fall	Sampling	ON sampling/ OFF sampling	View change	Synchron ize display trigger	Key code input	Input fixation	Device writing
<ul style="list-style-type: none"> Touch switch (Switch) 	○	○	○	○	○	×	×	×	×	○

■ Settings

Set the trigger on the [Trigger] tab of the setting dialog box for each object.



Item	Description		Model
Trigger Type	Select the trigger for displaying/operating the object. When [Sampling] is selected, the cycle is set in second unit (1 to 3600s). • Ordinary • ON • OFF • Sampling • Range • Rise • Fall • Bit Trigger • ON Sampling • OFF Sampling		GT16 GT15 GT11 GT10 SoftGOT 1000
Settings	The setting content differs depending on the trigger type.		
	Ordinary	No setting content.	
	ON/OFF	☞ (1) ON/OFF	
	Rise/Fall	☞ (2) Rise/Fall	GT16 GT15 GT11 GT10 SoftGOT 1000
	Sampling	☞ (3) Sampling	GT16 GT15 GT11 GT10 SoftGOT 1000
	Range	☞ (4) Range	
	Bit Trigger	☞ (5) Bit Trigger	GT16 GT15 GT11 GT10 SoftGOT 1000
	ON Sampling/ OFF Sampling	☞ (6) ON Sampling/OFF Sampling	

POINT

Conditions settable for trigger type for each object

Conditions that can be set for a trigger type differ depending on the used object or the GOT type setting.
 For conditions settable for a trigger type for each object, refer to the following.


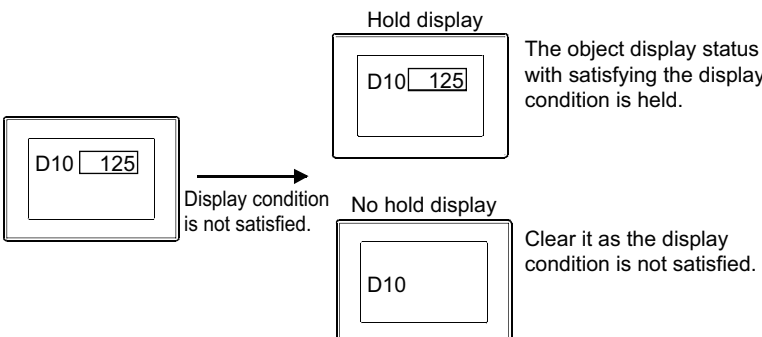
☞ GT Designer3 Version1 Screen Design Manual (Functions)

(1) ON/OFF

Settings

Trigger Device:

☐ Hold Display


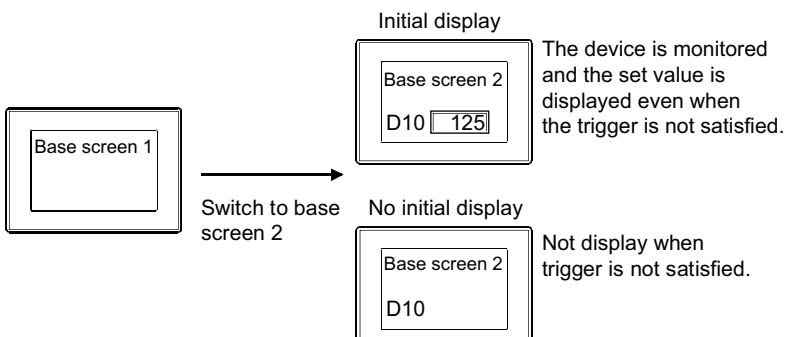
Item	Description	Model
Trigger Device	Click the [...] button to set the device to be a trigger.  5.3.1 Device setting	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Hold Display	<p>Select this item to hold the object display even when the display condition is not satisfied anymore, after satisfying once. Without this item selected, the object is cleared when the condition is not satisfied.</p> 	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

(2) Rise/Fall

Settings

Trigger Device:

☐ Initial Display

Item	Description	Model
Trigger Device	Click the [...] button to set the device to be a trigger.  5.3.1 Device setting	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Initial Display	<p>Select this item to monitor and display the device even if the initial condition of the screen switch is not satisfied.</p> 	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

(3) Sampling

Settings

Sampling: (Sec)

Item	Description	Model
Sampling	Set the cycle for monitoring the trigger device condition. (1 to 3600s)	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

(4) Range

Settings

Data Type: Signed BIN16

Trigger Device: D100

Range: -32768 < D100 < 32767

Exp...

Item	Description	Model
Data Type	Select the data type of word device. Signed BIN : Treats the word device value as a signed binary value. Unsigned BIN : Treats the word device value as an unsigned binary value. Real : Treats the word device value as a floating point type real number.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
Trigger Device	Click the [...] button to set the device to be a trigger. 5.3.1 Device setting	
Range	Click the [Exp] button to display the [Edit Range] dialog box. Set the trigger device range. (a) Edit Range dialog box	

(a) Edit Range dialog box

Edit Range

Range expression: -32768 < D100 < 32767

Range expression setting: A < B < C


Constant Data Type: Hex Dec Oct

	Term Type	Value
A	Constant	-32768
B	D100	Monitor Device
C	Constant	32767

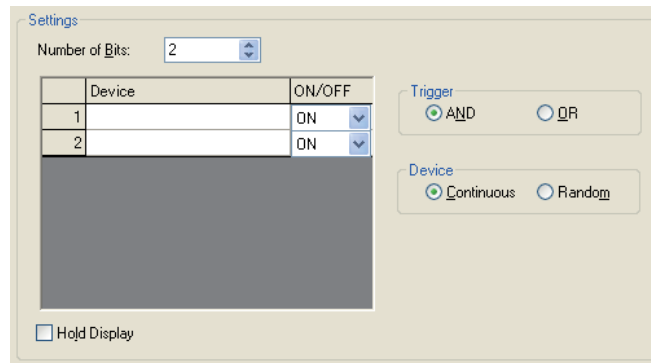
OK Cancel

Item	Description	Model
Range expression	Displays the set range expression.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
<	Set the relational operator of the range expression. < : Left value is smaller than right value == : Left value is equal to right value <= : Left value is smaller than or equal to right value != : Left value is not equal to right value None: Without comparison	
Constant Data Type	When setting the fixed value to each item of the range expression, select the data type of the fixed value. (Hex/Dec/Oct)	

(Continued to next page)

Items	Description		Model
Range expression setting	Term Type	<p>Set the details of each range expression item (A to C).</p> <ul style="list-style-type: none"> Constant: <ul style="list-style-type: none"> Select this item when operating with fixed values. Select either of [Hex], [Dec], or [Oct] for [Constant Data Type]. \$V : <ul style="list-style-type: none"> Select when operating the value of word device set as the monitoring target or writing target. This item must be set once in an expression. Other device: <ul style="list-style-type: none"> Set this item when operating the word device value. The data type is she same of the monitoring device (\$V). 	
	Value	<p>Set the setting values of each range expression item (A to C). The setting target varies according to the [Term Type] settings.</p> <ul style="list-style-type: none"> [Constant]: <ul style="list-style-type: none"> Set the value. [\$V]: <ul style="list-style-type: none"> The monitor device is set. [Other device]: <ul style="list-style-type: none"> Set the intended device. Click the [...] button to set from the [Device setting] dialog box. 	

(5) Bit Trigger



Settings



Number of Bits: 2

	Device	ON/OFF
1		ON
2		ON

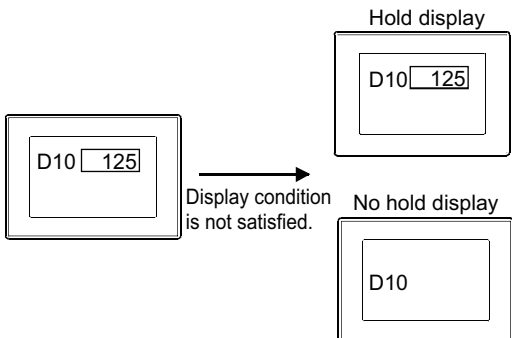

Trigger: ☒ AND ☐ OR

Device: ☒ Continuous ☐ Random

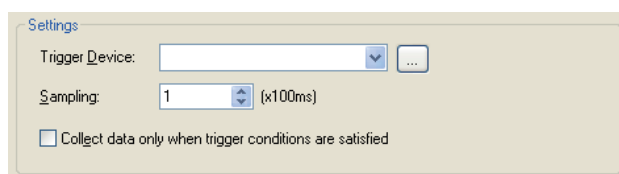
☐ Hold Display




Items	Description	Model
Number of Bits	Specify the number of the multi bit trigger. (1 to 10)	
Device	<p>The devices preset as multi bit trigger are listed. Click the Device bar to display the [...] button. Open the [Device setting] dialog box to set the device.</p> <p> 5.3.1 Device setting</p>	
ON/OFF	Select whether ON or OFF status of bit device will be set as the trigger condition.	
Trigger	<p>Select the definition for multi bit trigger condition.</p> <p>AND : If all triggers that are specified based on the bit device ON/OFF statuses are satisfied, the multi bit trigger is set.</p> <p>OR : If any of the triggers specified based on the bit device ON/OFF statuses are satisfied, the multi bit trigger is set.</p>	
Device	<p>Select the method of setting device.</p> <p>Continuous : Set the specified number of devices continuously starting from the set device automatically.</p> <p>Random : Randomly set the specified number of devices.</p>	

(Continued to next page)

Items	Description	Model
Hold Display	<p>Select this item to hold the object display even when the display condition is not satisfied anymore, after satisfying once. Without this item selected, the object is cleared when the condition is not satisfied.</p> 	

(6) ON Sampling/OFF Sampling



Item	Description	Model
Trigger Device	Click the [...] button to set the word device to be a trigger.  5.3.1 Device setting	
Sampling	Set the cycle of monitoring the trigger device condition. (1 to 3600s)	
Collect data only when trigger conditions are satisfied	Select this item to collect the data only when the display condition is satisfied.  (Functions) GRAPH, METER	

■ Precautions

(1) Object of which trigger has been set to sampling

Up to 100 objects can be set on one screen, of which the trigger type was been set to [Sampling].
In this case, change the trigger type to [Sampling] and adjust the sampling cycle to 2 seconds or longer.

(2) Setting of trigger for line graph

When many devices are monitored in line graph form, and the trigger is set to [Ordinary], the object processing may be delayed.

In this case, change the trigger type to [Sampling] and adjust the sampling cycle to 2 seconds or longer.

5.3.9 Data operation setting

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

If data operation function has been set, each object executes the operations set in [Data operation] the preset word device values, and monitors based on the results.

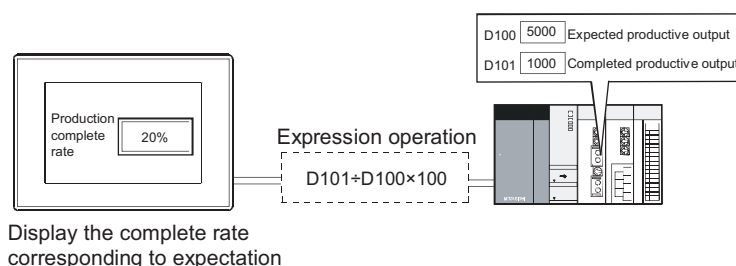
Data operation function is applicable to the following objects.

Object name					
Lamp (Bit/Word), Panelmeter, Scatter Graph,	Numerical Display, Line Graph, Historical Trend Graph,	Numerical Input ^{*1} , Trend Graph, Parts Display,	Data List Display, Bar Graph, Parts Movement,	Comment Display, Statistics Bar Graph, Report	Level, Statistics Pie Graph,

*1 If bit mask operation is used for numerical input function, only logical (AND) is applicable. Logical add (OR) and exclusive logical add (XOR) are not applicable.

Example: Data operation is used in numerical display function.

Monitored device: D101



Bit operation

This function executes operation of the word device value in bit unit.

(1) Bit mask

Executes a logical operation of the word device value by the preset pattern value.

(a) Logical AND (AND)

The operation result is "1" when the corresponding bits of both the device value and pattern value are "1".
The operation result is "0" in other cases.

(b) Logical OR (OR)

The operation result is "0" when the corresponding bits of both device value and pattern value are "0".
The operation result is "1" in other cases.

(c) Exclusive logic XOR (XOR)

The operation result is "0" when the corresponding bits of device value and pattern value are equivalent;
"1" when not equivalent.

Example: When logical AND (AND) is operated

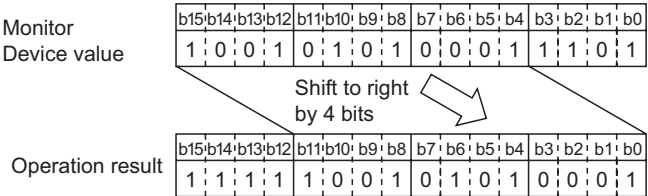
Monitor device value	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
AND																
Pattern value (Hexadecimal)	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
↓																
Operation result	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0

(2) **Bit shift**

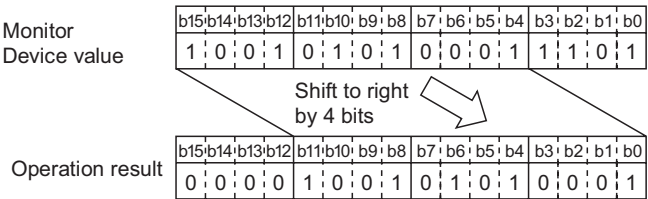
Shifts the word device value to the right or left in bit unit to execute an operation on the value.
(It becomes arithmetic shift when it comes to the signed monitor format of device.)

Example: Shift right for 4 bits

(a) Signed



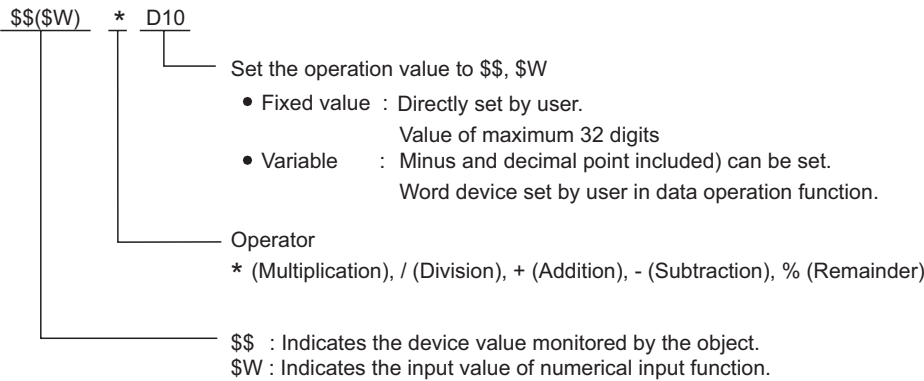
(b) Unsigned



(3) **Data operation**

Executes the preset data operation on the word device value.
Select and set the data operation format from the 9 types.
The operation is executed based on the following conditions:

Example:



■ Procedure for operation processing

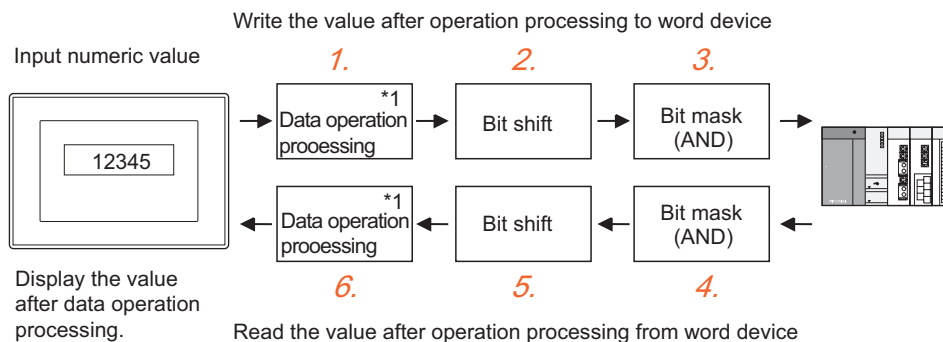
The operation processing for device monitoring and numerical inputting is shown as follows.

(1) When monitoring device

The following shows the order of priority of each processing.

1. Bit mask
2. Bit shift
3. Data operation processing

(2) When using numerical input function



*1: Other data operations can be set for write destination device during monitoring and writing.

- Write the value after operation processing to word device>

1. Data operation processing

The input value by the preset operation expression for writing device value is calculated.

2. Bit shift

Shifts the input value in the set direction (right / left)

3. Bit mask

Executes bit mask (logical AND) on the input value by the preset value.

To write the bit and mask the remaining, carry out the following.

Operation data

(Write value) = {(Input value) AND (Pattern value)} OR {(Current value) AND (Reverse pattern value)}

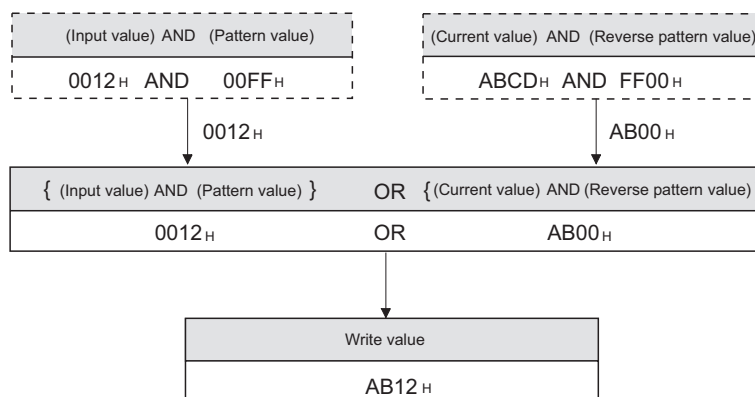
Example: Writing 12_H to the lower two digits of the current value ABCD_H

Input value (value input by user) : 0012_H

Current value (value before write) : ABCD_H

Pattern value (value set by user) : 00FF_H

Reverse pattern value (value created for GOT operation) : FF00_H



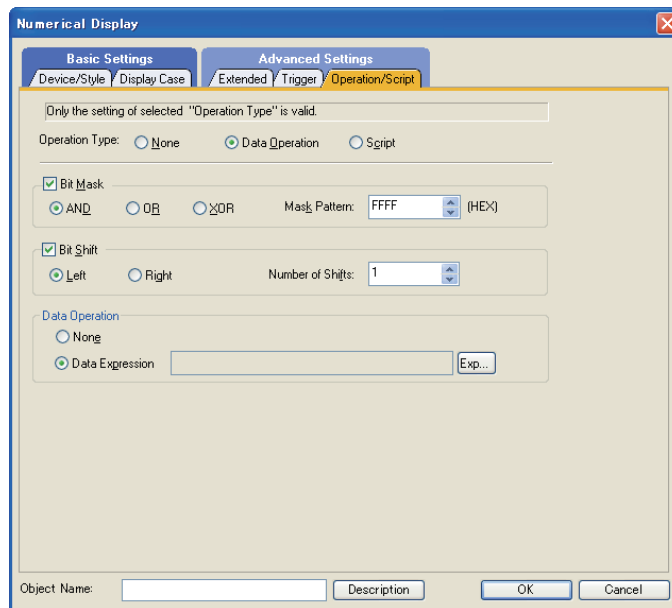
- Read the word device value after operation processing


4. Bit mask
Executes bit mask (logical (AND) of the device value by the preset pattern value.
5. Bit shift
Shifts the device value in the reverse direction.
6. Data operation processing
Calculates and displays the written device value by the preset operation expression for reading device value.

■ Settings

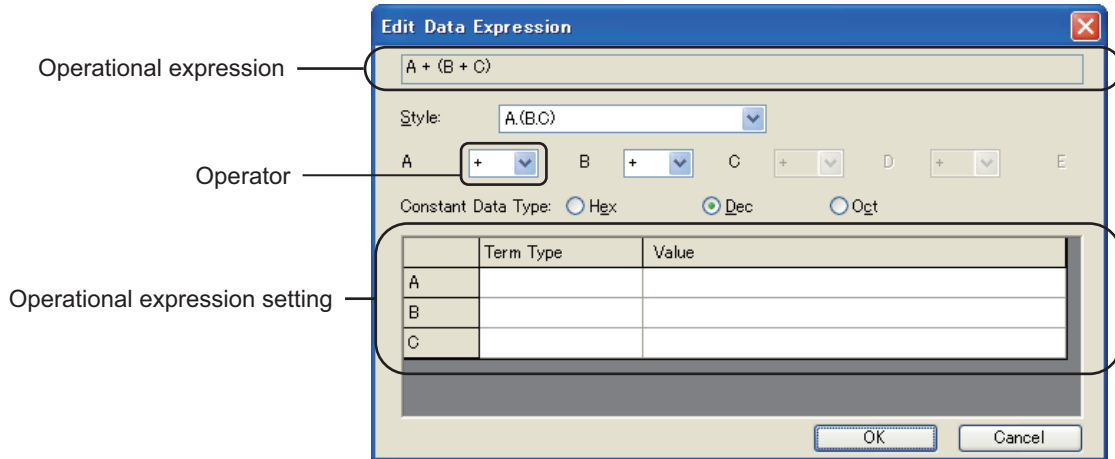
The data operation is set on the [Operation/Script] tab of each object.

An example of numerical display is provided here for explanation of the data operation setting.



Item	Description	Model
Operation Type	Select the type of operation to be set to the object. None : Select this item when not executing operation. Data Operation : Select this item to execute the operation by data operation. Script : Select this item to execute the operation by script.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div> </div>
Bit Mask	Select this item to execute the bit mask operation. Select the bit mask type and set the mask pattern value in [Mask Pattern] in hexadecimal format. AND : Executes logical product. OR : Executes logical add. XOR : Executes exclusive logical add. Mask Pattern: At data length of 16 bits (0 to FFFF), at 32 bits (0 to FFFFFFFF)	
Bit Shift	Select this item to execute the bit shift operation (for monitoring/writing). Select the shift direction and set the number of bits to shift in [Number of Shifts]. Left : Shift left Right : Shift right Number of Shifts: At data length of 16 bits (1 to 15), at 32 bits (1 to 31)	
Data Operation	Select whether or not to execute the data operation. None : Select this item when not executing data operation. Data Expression : Select this item when executing data operation. Click the [Exp] button to display the [Edit Data Expression] dialog box. Set the operational expression referring to the following.  (1) Edit data expression dialog box	

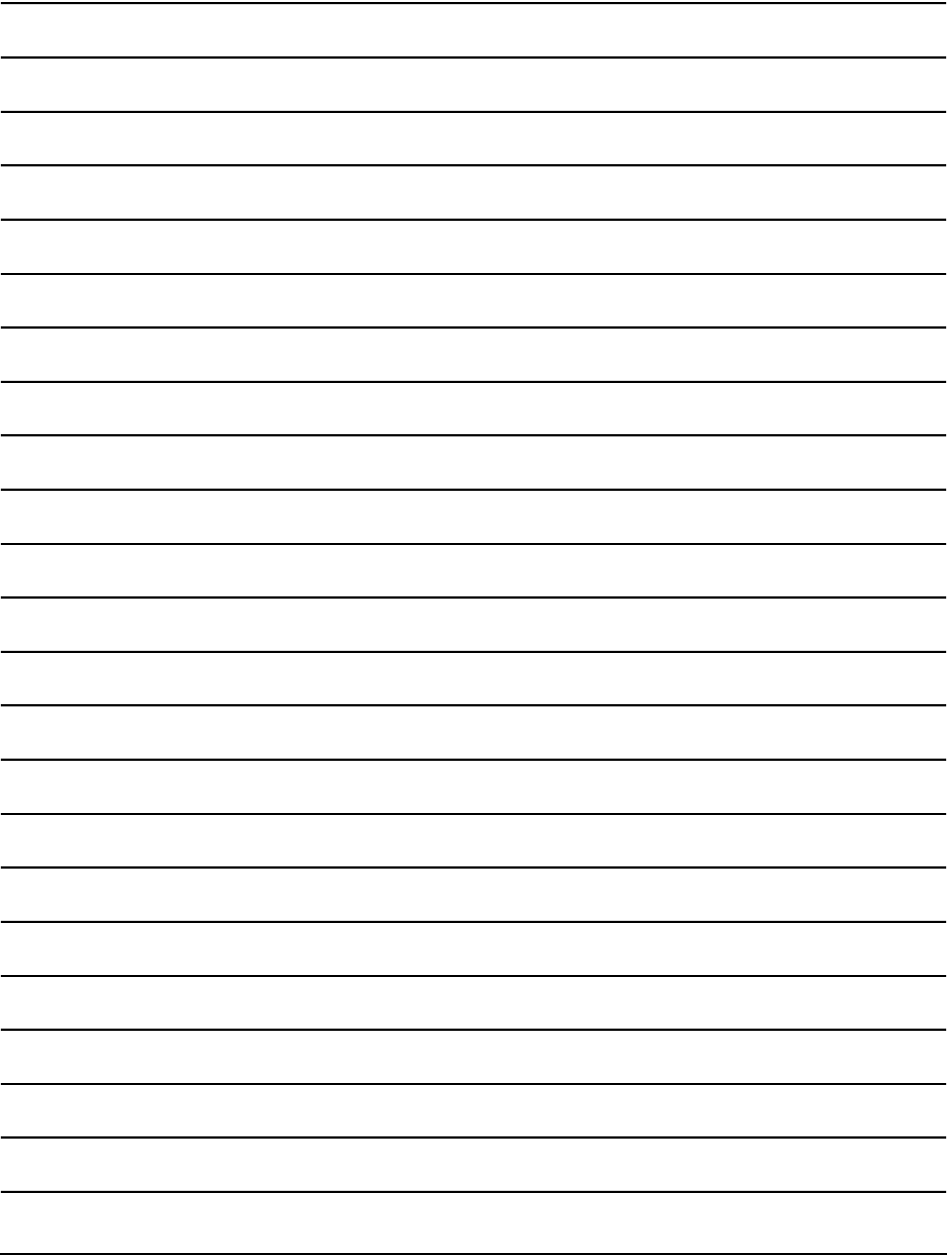
(1) Edit data expression dialog box
Set the expression for data operation.



Item	Description	Model
Operational expression	The set operational expression is displayed.	
Style	<p>Set the operational expression format.</p> <p>$A \cdot B$</p> <p>Fixed value, variable (represented as "\$\$", "SW", respectively; any word device set for operation)</p> <p>Operator</p> <p>Select from the following 9 types.</p> <p>A, (A · B) · C, ((A · B) · C) · (D · E)</p> <p>A · B, A · ((B · C) · D), (A · B) · ((C · D) · E)</p> <p>A · (B · C), A · (B · (C · D)), ((A · B) · (C · D)) · E</p>	
Operator	<p>Select the operators to connect items of the operational expression.</p> <p>+ : Add * : Multiply % : Remainder^{*1}</p> <p>- : Subtract / : Divide</p>	
Constant Data Type	When setting fixed value to each item of the operational expression, select the data format of fixed value. (Hex/Dec/Oct)	
Operational expression setting	Set the term type and value of each item of the operational expression.	<div style="border: 1px solid black; padding: 2px;"> Gr16 Gr15 Gr11 Gr10 Section 1000 </div>
	<p>Set each item (A to E) of the operational expression.</p> <ul style="list-style-type: none"> Fixed value: Select this item when using fixed value to execute the operation. Select [Constant Data Type] from [Hex], [Dec], and [Oct]. \$\$: Select this item to execute the operation of the word device value that has been set as monitor and write destination. Be sure to set one. Other device: Select this item to execute the operation of the word device value. Data type is the same as the monitor device (\$\$). 	
	<p>Set the setting value of each item of the operational expression. The target of setting is restricted by on the setting of [Term Type].</p> <ul style="list-style-type: none"> [Constant]: Set the value. [\$\$]: The monitor device is set. [Other Device]: Set the intended device. Click the [...] button to set the device from the [Device] dialog box. 	

^{*1} The left value is divided by the right value and the remainder is the result.
Example: 100 % 3 = 1 (100 / 3 = 33 remainder is 1)

USING LIBRARY



6. LIBRARY

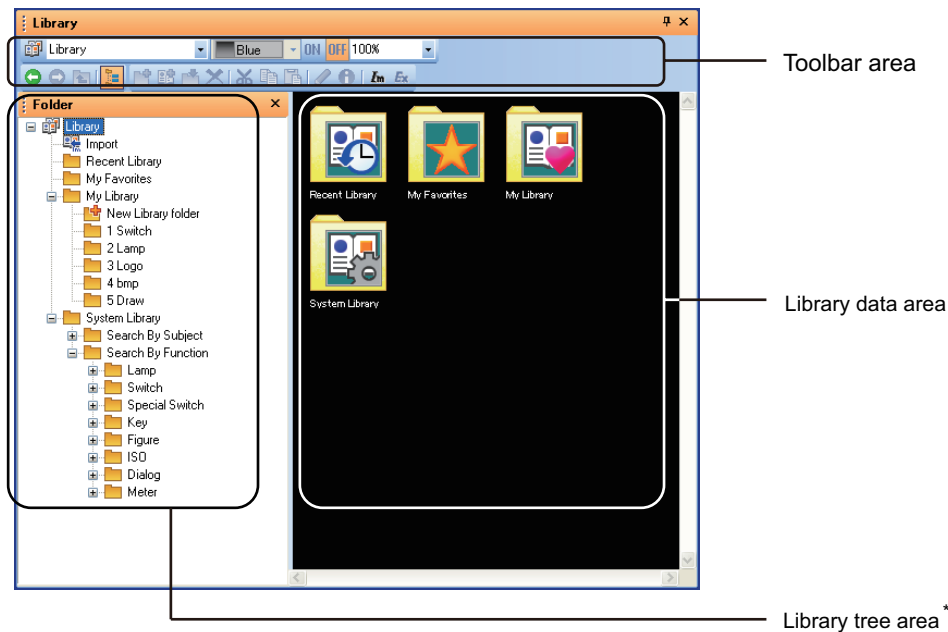


Figures and objects are registered in the library.
The registered figures and objects can be easily pasted on the screen editor.
Figures and objects created by the user can be registered in the library.

■ Screen configuration of library

(1) Library list window

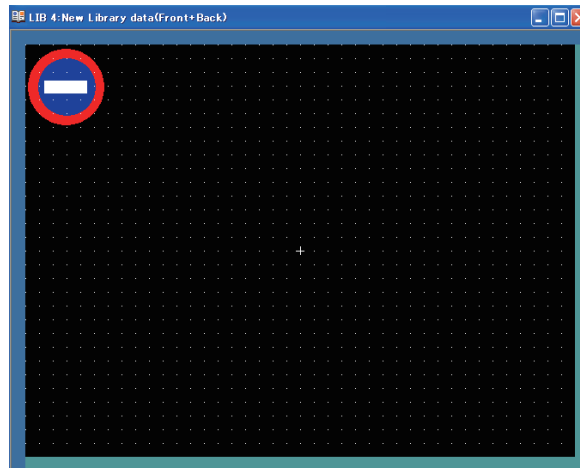
Figures and objects registered in the library can be read, registered, or edited in the library list window.
The [Library] window is configured by the toolbar area, library tree area, and library data area.



*1 The library data area is not displayed by default.

(2) Library data editor

Data are registered in [My Favorites] and [My Library], or data are edited in the library data editor.



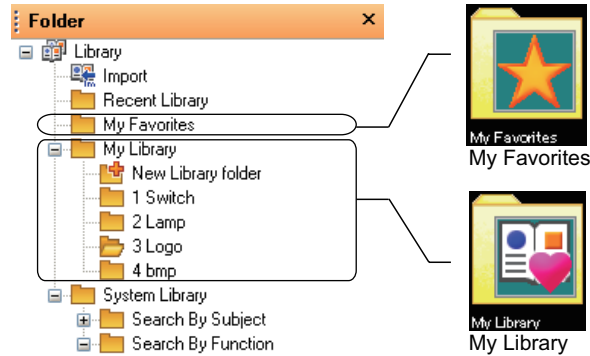
Library types

The library types are shown as below.

(1) User-created library

Figures and objects created by the user can be registered.

The user-created library types are shown as below.



(a) My Favorites

The commonly-used figures and objects are registered.

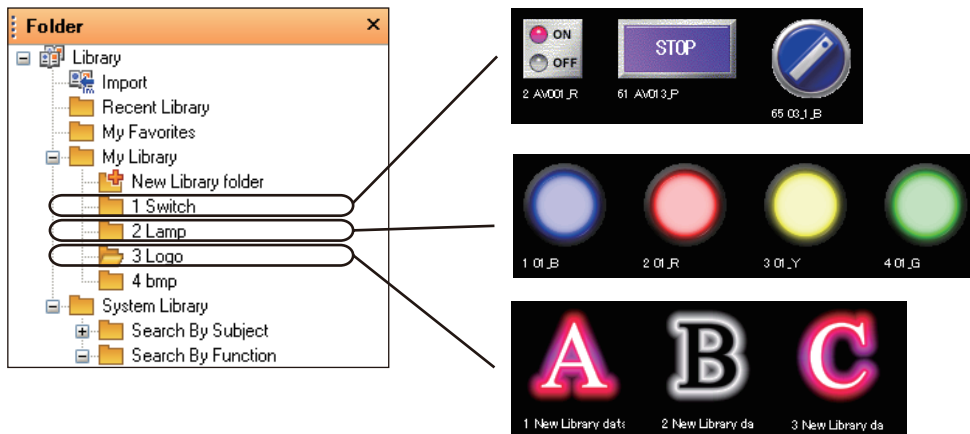
Registered figures and objects in [My Favorites] are registered in the [My Favorites] toolbar.



(b) My Library

The user-created figures and objects are registered.

When the library folders are classified for each type, it is convenient to use them.



For how to register figures and objects in [My Favorites] or [My Library], refer to the following.

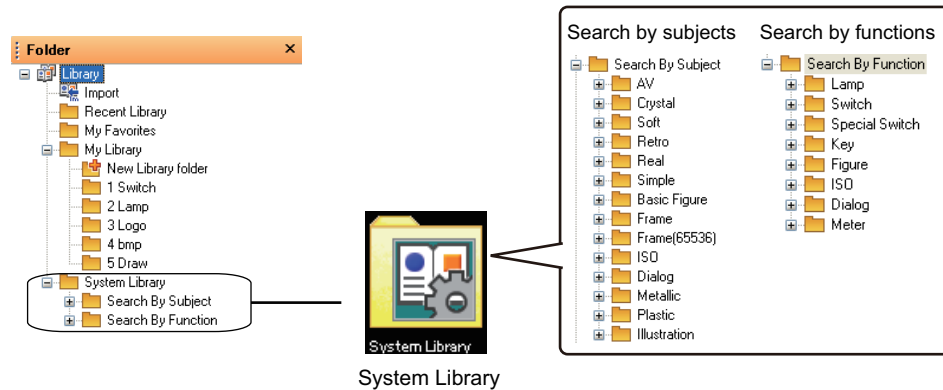
➡ 6.3 Editing User-Created Library

(2) System Library

Figures and objects are registered as the library data.

By reading out the registered library data and arranging the data on the screen, figures and objects can be set.

The library folders or library data in [System Library] cannot be registered, deleted or changed for the attributes.



Search By Subject/Search By Function

Select whether to search target figures and objects with subjects or to search the targets with functions.

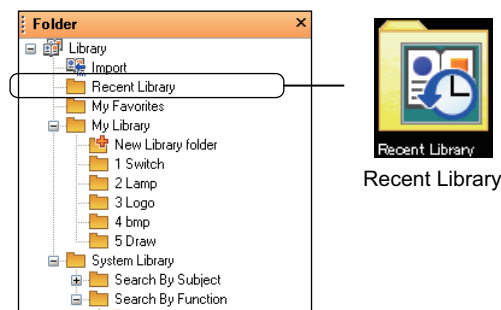
Select the method according to the purpose.

The terminal folder for [Search By Subject] stores the same library data as those of the terminal folder for [Search By Function].

(3) Recent Library

Up to 10 data that are recently used by the user are recorded.

The library data are not directly registered, deleted, or changed for the attributes.



Maximum library data that can be registered

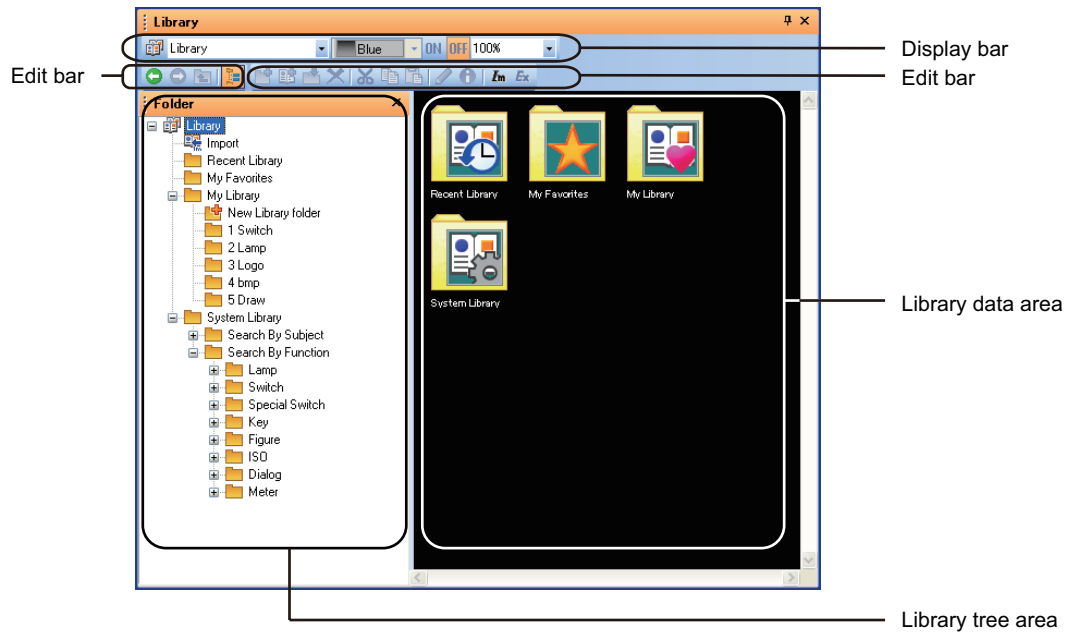
Up to 250 data can be created in [My Library].

In one library folder, up to 255 library data can be registered.

6.1 Operation of Library List

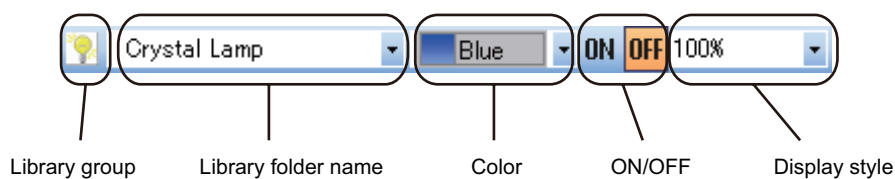
Library list window

Select [View] → [View Window] → [Library List] from the menu to display the library list window.



Item	Description	Reference	Model
Display bar	Displays the display status of the library data area.	(1) Display bar	
Movement bar	Moves currently displayed folders.	(2) Movement bar	
Edit bar	Operates the library tree and library data.	(3) Edit bar	
Library tree area	Displays the library as the tree structure.	(4) Library tree area	
Library data area	Displays the data of the selected library folder.	(5) Library data area	

(1) Display bar



Item	Description	Model
Library group	Select the type of the library to be displayed on the library data area. Select this item to display the library data in the library data area.	
Library folder name	Select a library folder in the library selected for the library group. Select this item to display the selected library folder data in the library data area.	
Color	Switches the figure colors to be displayed on the library data area. Switching the figure and object colors is only available in the system library. • All Color • Blue • Red • Yellow • Green • Orange • Cyan • Purple • Pink • Gray • Gold • Silver • Black • White	
ON/OFF	Switches between on and off of figures to be displayed on the library data area.	
Display style	Select the display style of figures displayed on the library data area. • 150%, 100%, 75%, 50%: Displays the library data with the selected rate. • Thumbnail: Displays the library data with the fixed size. • Detail: Displays the library data and the attribute value with the fixed size.	

(2) Movement bar




Item	Description		Model
	Back	Opens the previous folder.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>SoftGOT 1000</div> </div>
	Forward	Opens the next folder.	
	Up One Level	Opens the parent folder.	
	Display Tree	Selects whether to display or hide the library tree.	

(3) Edit bar

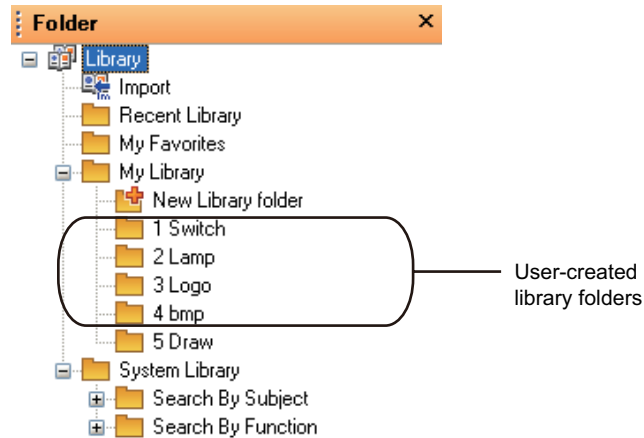



Item	Description		Model
	New Library folder	Creates a new library folder.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>SoftGOT 1000</div> </div>
	New Library data	Creates the new library data.	
	Register Data	Registers the library data of the library data editor.	
	Delete	Deletes the library folder or library data.	
	Cut	Cuts the library folder or library data.	
	Copy	Copies the library folder or library data.	
	Paste	Pastes the library folder or library data.	
	Edit Data	Edit the selected library data.	
	Edit Property	Change the selected library data attributes. Displays the property of the library data when the library data in the system library are selected.	
	Import	Imports a library file or image file.	
	Export	Exports a selected library folder.	

(4) Library tree area

The library tree area enables the GOT to switch between the display and hide of the library tree by clicking the  button.

(a) Configuration of library tree



Item	Description		Model
Import	Double-click this item to import a user-created library or image file.  6.3.9 Importing library		<div><div>Gr16Gr15</div><div>Gr11Gr10</div><div>SoftGOT 1000</div></div>
Recent Library	Displays the library data recently used by the user are displayed on the library data area.		
My Favorites	Registers the commonly-used figures and objects. Opening a folder displays the registered library data on the library data area.		
My Library	Stores a user-created library folder.		
	New Library Folder	Double-click this item to create a new user-created library folder.	
	User-created library folders	Stores the user-created library data. Any folder name can be set for each library folder.	
System Library	Stores figures and objects registered by default.		
	Search By Subject	Classifies the library data in different folders according to the appearance differences of figures and objects. The library data stored in the terminal folder is the same as the folder stored in [Search By Function].	
	Search By Function	Classifies the library data in different folders according to the function differences of figures and objects. The library data stored in the terminal folder is the same as the folder stored in [Search By Subject].	

(b) Operation with the movement bar or edit bar

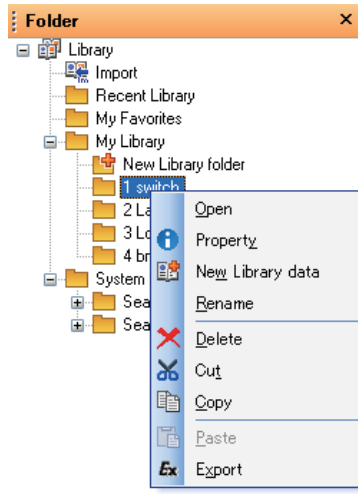
The library tree can be operated with the icons in the movement bar or edit bar.

 (2) Movement bar

(3) Edit bar

(c) Operation with the right-click

The library tree can be operated with the menu opened by the right-click.



Menu	Description	Model
Open	Displays the library folder data on the library data area.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div> </div>
Expand	Opens library folders in the library tree by one hierarchy.	
All expand	Opens library folders in the library tree by all hierarchies.	
Reduce	Closes the opened library folders by one hierarchy. Subfolders are not closed.	
All reduce	Closes all the opened library folders. Subfolders are closed.	
New Library folder* ¹	A new library folder is created in [My Library]. The available folder number is assigned to the new created library folder. The folder name is [New Folder].	
Save MyLibrary* ¹	Stores the data for [My Favorites] and [My Library]. ☞ 6.3.7 Saving library	
Load MyLibrary* ¹	Opens a folder for [My Library] created by other project. ☞ 6.3.8 Opening library	
Property	Edit a library folder number and name. ☞ 6.3.6 Changing library attribute Displays the number and name when the system library is selected. (Cannot be changed.)	
New Library Data* ¹	The new library data are created in [My Favorites] and [My Library]. ☞ 6.3.1 Registering library data	
Rename* ¹	Change a library folder name.	
Delete* ¹	Deletes a library folder. ☞ 6.3.4 Deleting library	
Cut* ¹	Cuts a library folder.	
Copy	Copies a library folder.	
Paste* ¹	Pastes the copied library folder.	
Export* ¹	Exports a library folder.	

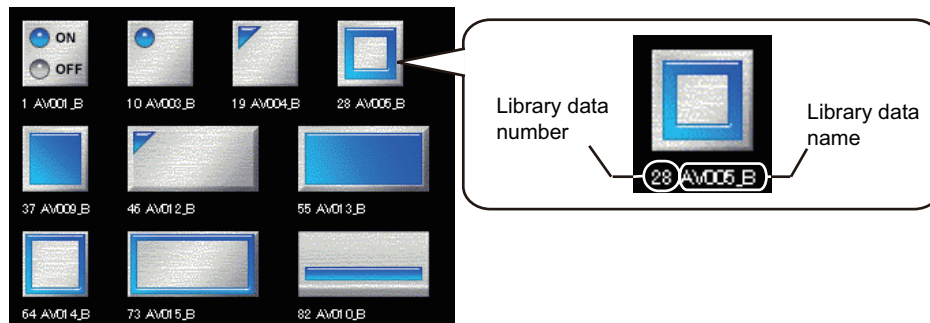
*¹ Not available for the system library.

(5) Library data area

The library data in the currently selected library folder is displayed.

By switching between on and off display settings of the display bar, the image displayed on the library data area is changed according to the setting.

The library data in the library folder are displayed as shown below.



(a) Operation with the movement bar or edit bar

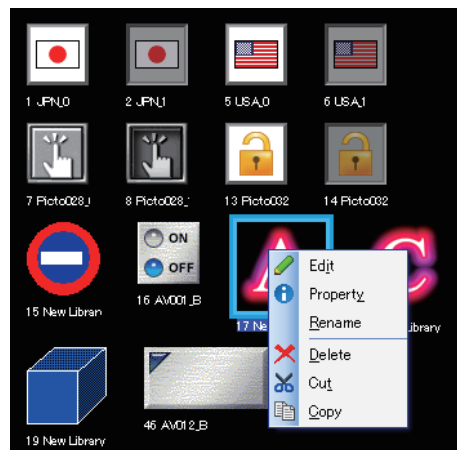
The library tree can be operated with the icons in the movement bar or edit bar.

(2) Movement bar

(3) Edit bar

(b) Operation with the right-click

The library data area can be operated from the menu opened by the right-click.



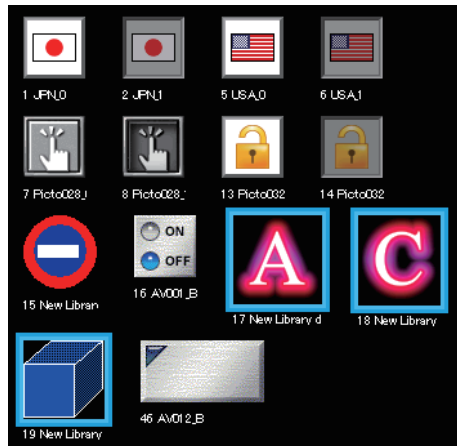
Menu	Description	Model
Edit* ¹	Edit the library data. Select this item to display the library data editor. 6.3.5 Editing library data	
Property	Edit the library data number and name. 6.3.6 Changing library attribute Select [System Library] to display the number and name. (Cannot be changed.)	
Rename* ¹	Change the library data name.	
Delete* ¹	Deletes the library data. 6.3.4 Deleting library	
Cut* ¹	Cuts the library data.	
Copy	Copies the library data.	
New Library Data* ¹	The new library data are created in [My Favorites] and [My Library]. 6.3.1 Registering library data	
Paste* ¹	Pastes the copied library data.	
Export* ¹	Exports the library data.	

*¹ Not available for the system library.

HINT

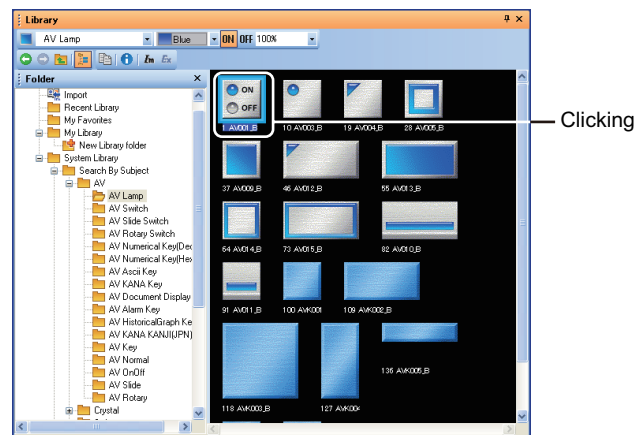
(1) Multiple library data selections

By clicking the library data with holding down the [Ctrl] key, multiple library data can be selected. By selecting multiple library data, the library data can be copied, cut, or dragged at one time.

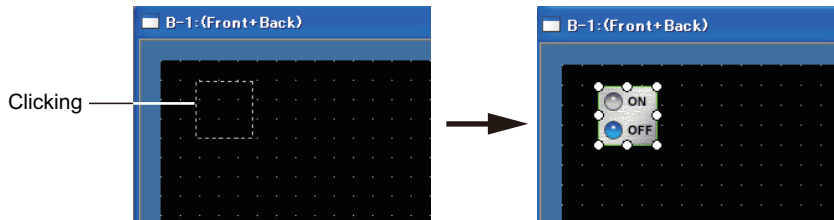


6.2 Pasting Figures and Objects by Library

1. In the library data area, click the library data to be pasted on the screen editor.

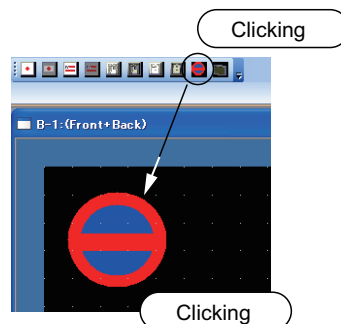


2. Click the position on the screen editor to paste the library data.
The library data are pasted on the screen editor.



(1) Pasting the data by [My Favorites]

Figures and objects registered in [My Favorites] can be pasted by using the [My Favorites] toolbar.



(2) Changing the data size and pasting the data

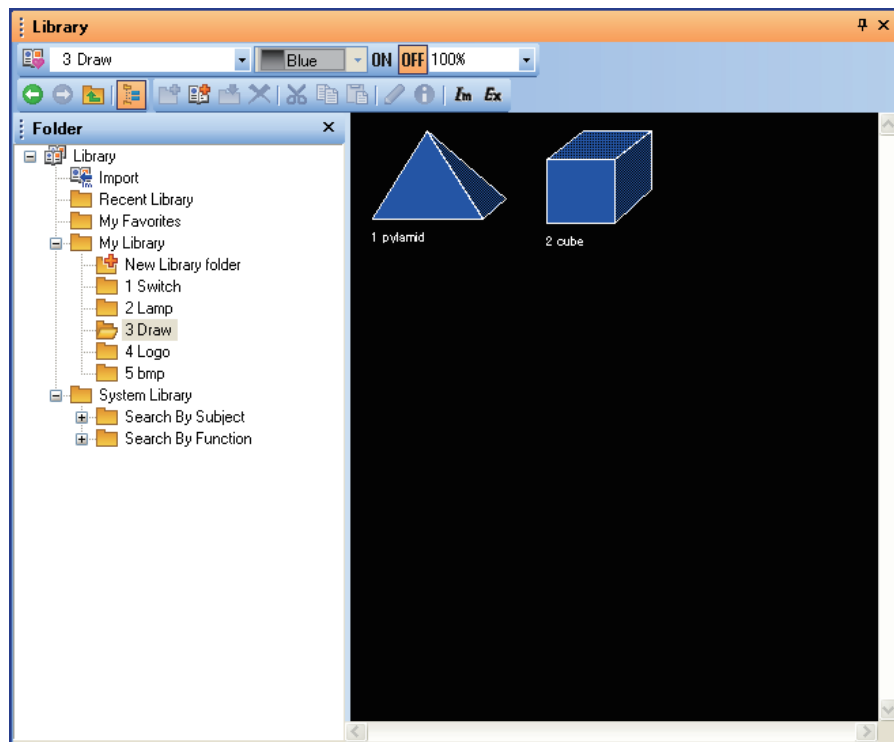
To paste the library data on the screen editor, drag the mouse so that the library data size can be changed and the data arranged on.


6.3 Editing User-Created Library

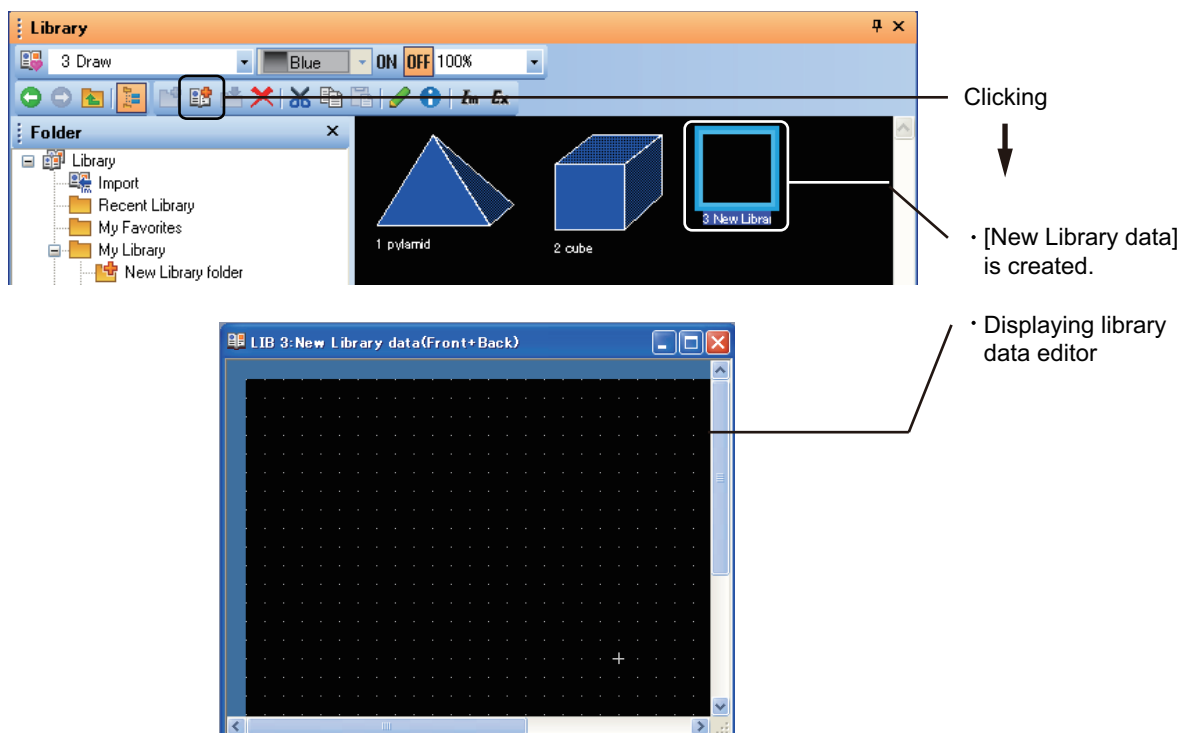
6.3.1 Registering library data

■ Creating new library data

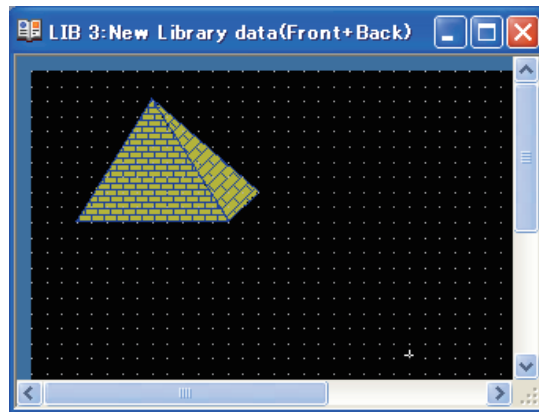
1. In the library list window, select a library folder where figures and objects are registered.



2. Click the  (New Library data) button.
Clicking this button creates [New Library data] in the library folder, and the library data editor appears.




3. Create the library data by arranging or editing figures and objects on the library data editor.



For how to edit the library data, refer to the following.

➡ 6.3.5 Editing library data

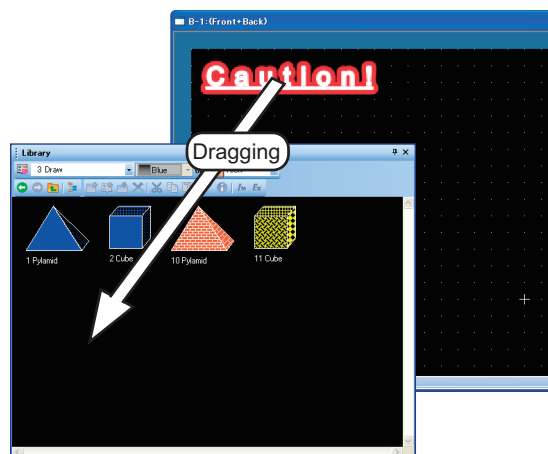
4. After creating, click the  button to close the library data editor.
5. To change the library data number and name, refer to the following.

➡ 6.3.6 Changing library attribute



Library registration for figures and objects by drag operation

Figures and objects can be registered in the library by the drag operation on the screen editor. Figures and objects can be registered only in [My Favorites] and a library folder in [My Library]. If no library folder is created in [My Library], the figures and objects cannot be registered.



■ Importing library data

The following library data can be created by importing the data.

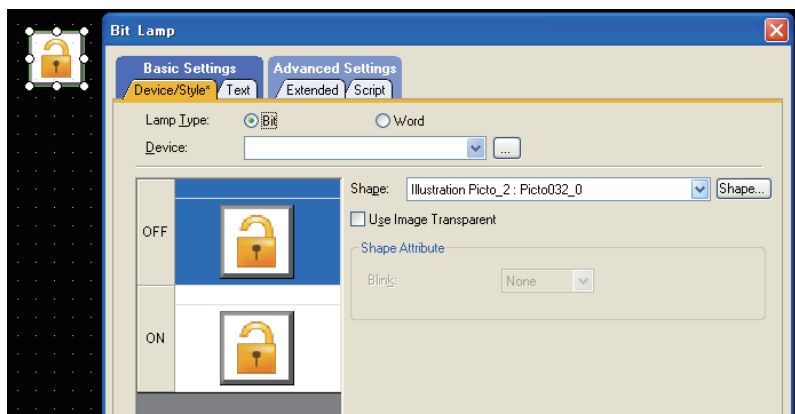
- Image data (.bmp/.jpg/.jpeg/.jpe)
- Library data in [My Favorites] created by other project

For how to import the library data, refer to the following.

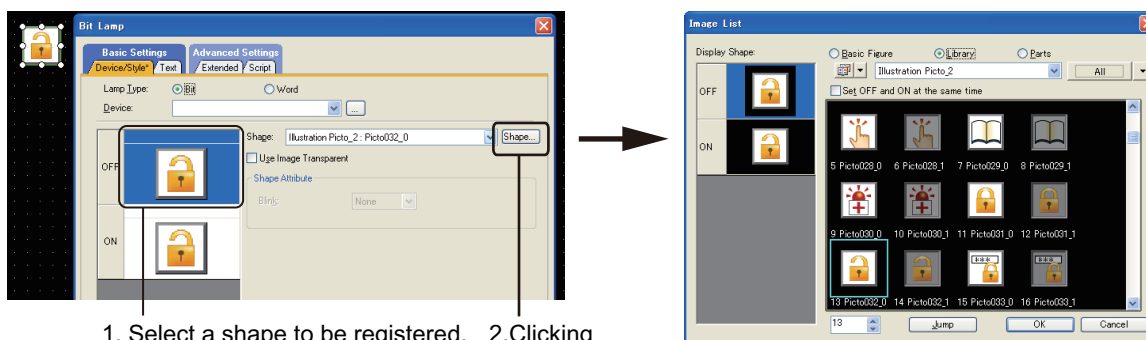
➡ 6.3.9 Importing library

6.3.2 Registering shapes for objects in library

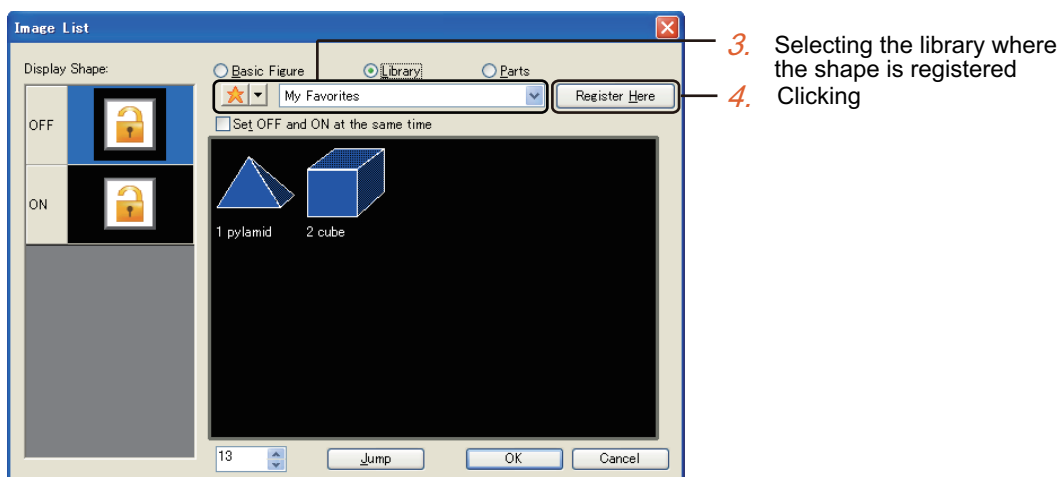
1. Display the object setting dialog box.



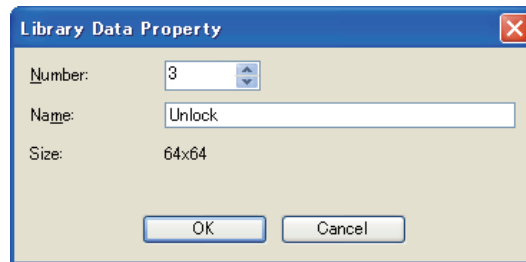
2. Select the shape to be registered in the preview list, and click the [Shape] button. The [Image List] dialog box appears.



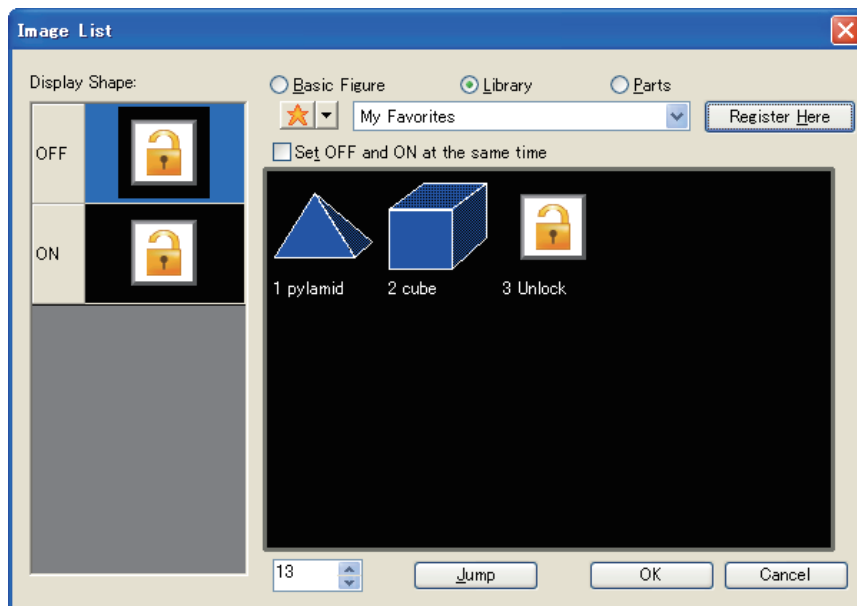
3. Select a library folder where the shape is registered. [System Library] cannot be selected for the library folder. Select [My Favorites] or [MyLibrary].
4. In [Display Shape], select the shape to be registered, and click the [Register Here] button.



5. The [Library Data Property] dialog box appears.
Enter the library data number and name.



6. The shape is registered in the library folder.



7. To change the library data number and name, refer to the following.

➞ 6.3.6 Changing library attribute

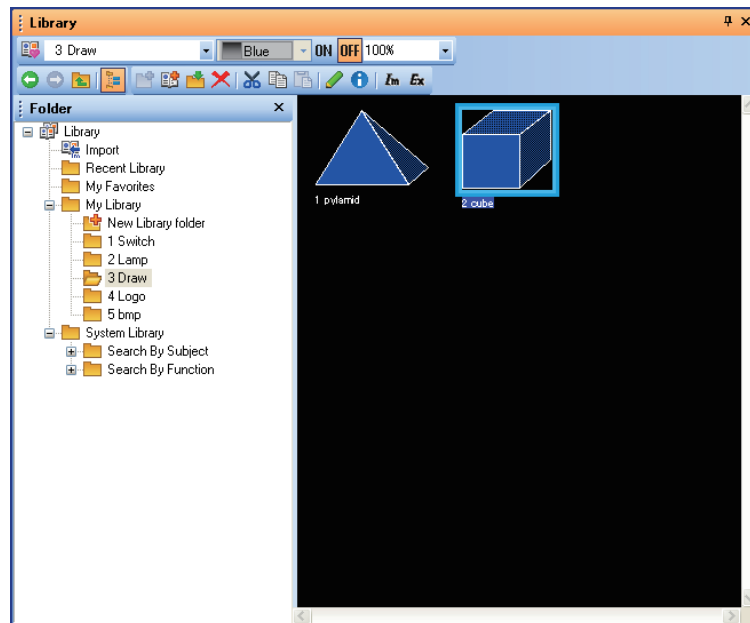


Library registration for objects set for system labels

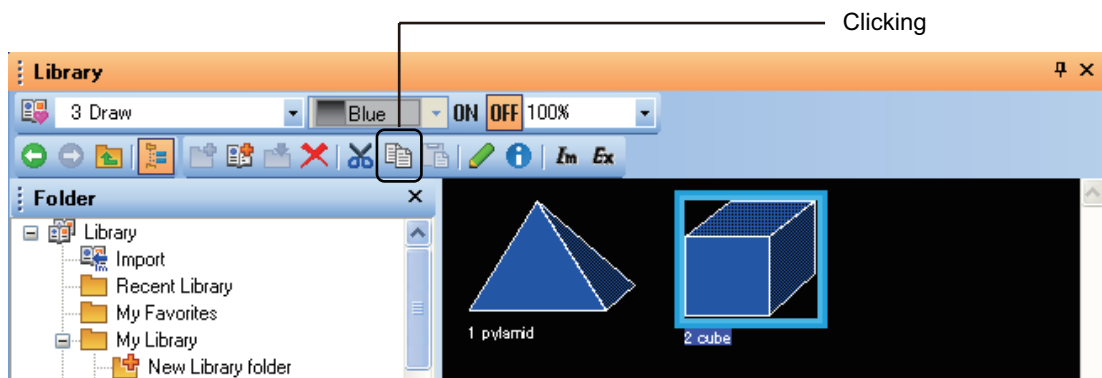
System labels can be set for objects, and the objects can be registered in the library.
For system labels with objects registered in the library, the system label update/check is not executed.
Check whether the system labels are updated or not.


6.3.3 Copying library

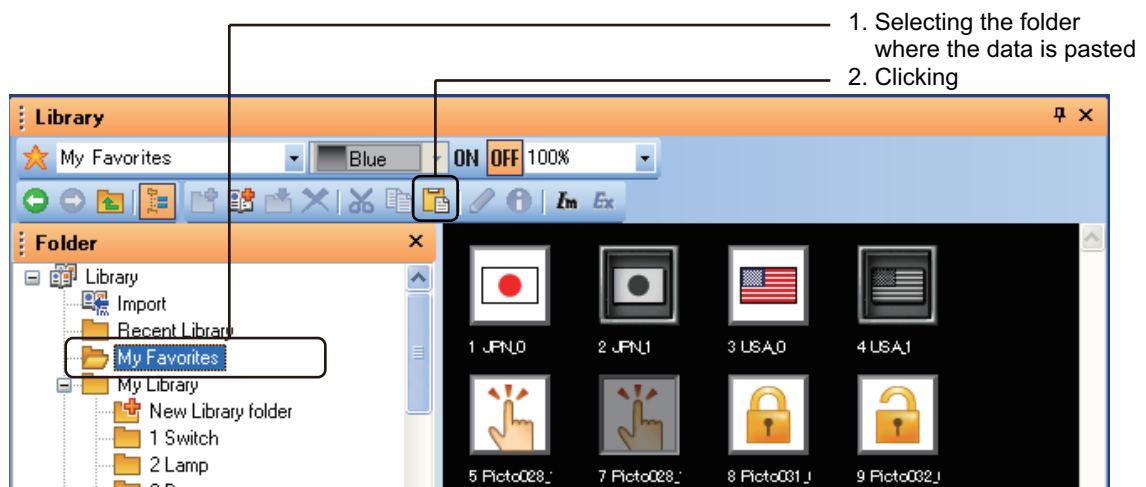
1. Select the library folder or library data to be copied.



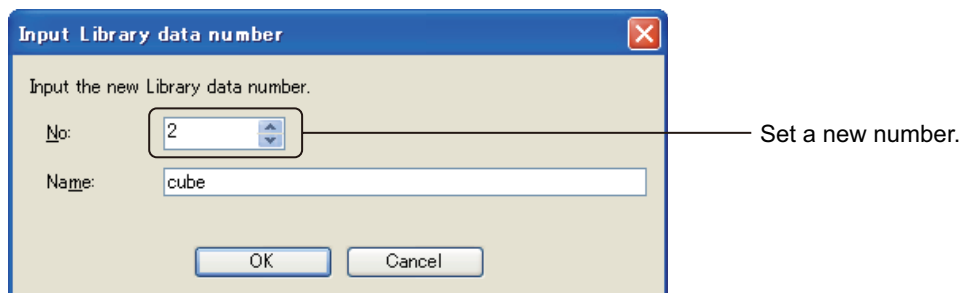
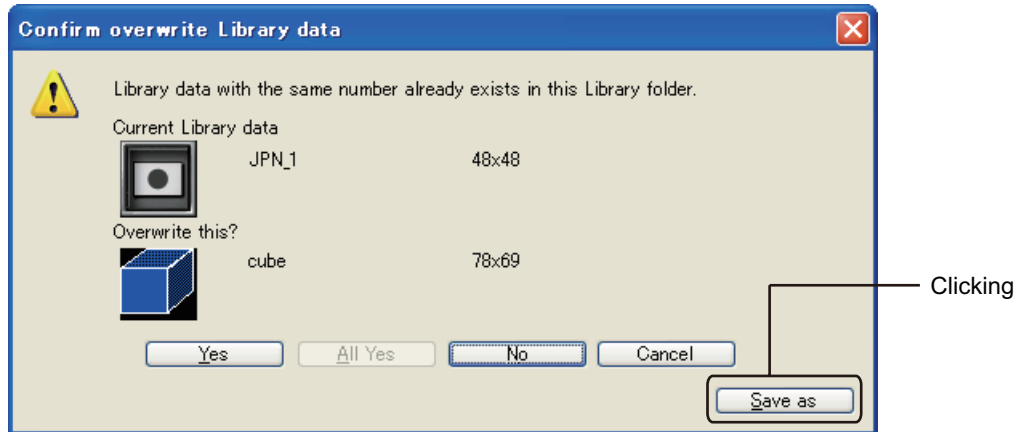
2. Click the  (Copy) button.



3. Select a folder where the data is pasted, and click the  (Paste) button.

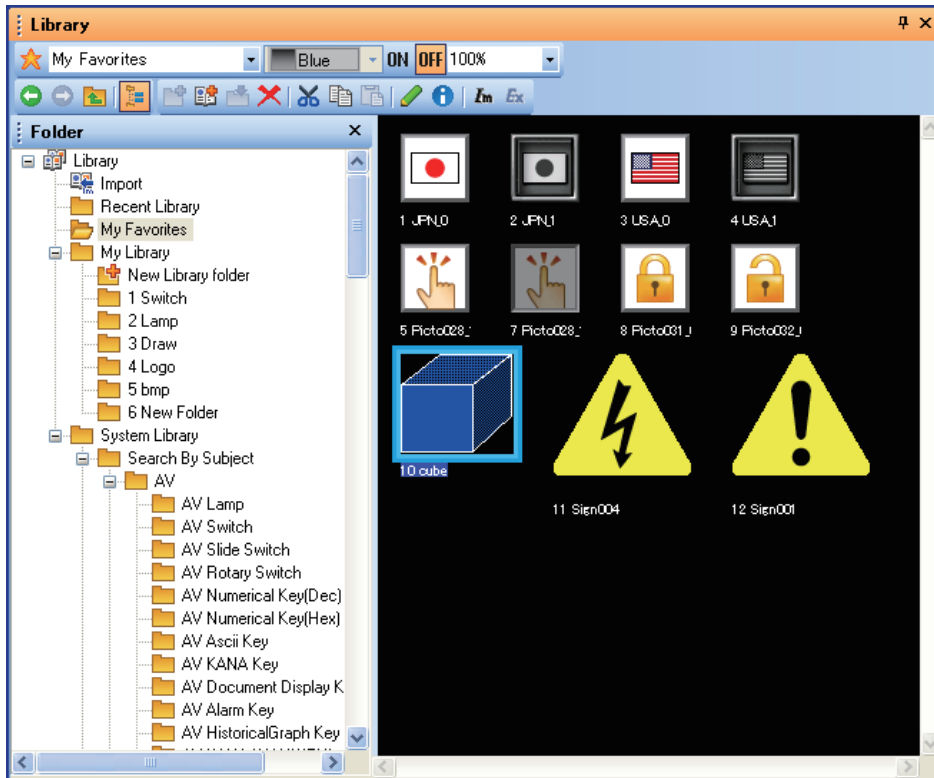


4. The following dialog box appears when the copied data number is the same as the library data number.
- To overwrite the library data, click the [Yes] button.
 - To overwrite all the library data, click the [All Yes] button.
 - To register the copied data as other number, click the [Save as] button and set a new number.
 - To cancel the registration, click the [No] button.
 - To cancel the overwriting of multiple library data, click the [Cancel] button.

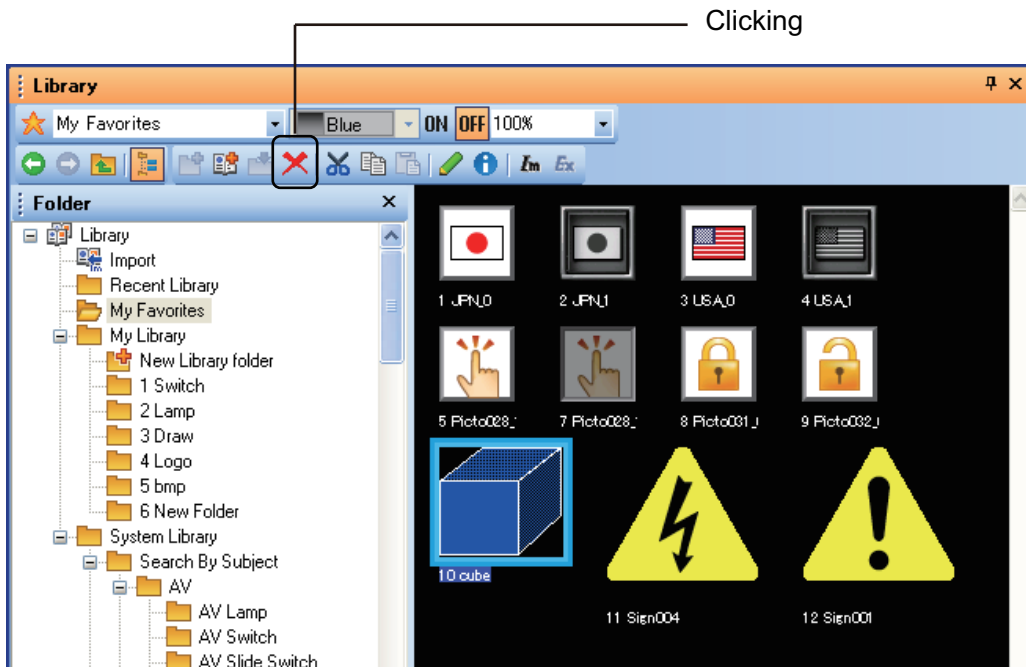


6.3.4 Deleting library

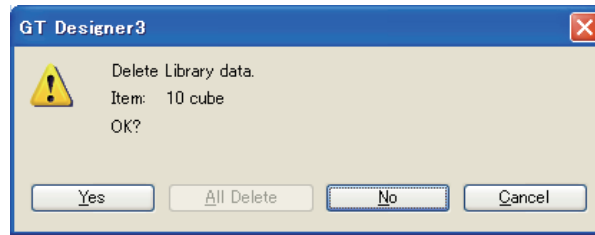
1. Select the library folder or library data to be deleted.



2. Click the  (Delete) button.



3. In the following dialog box, click the [Yes] button to delete the library folder or library data.



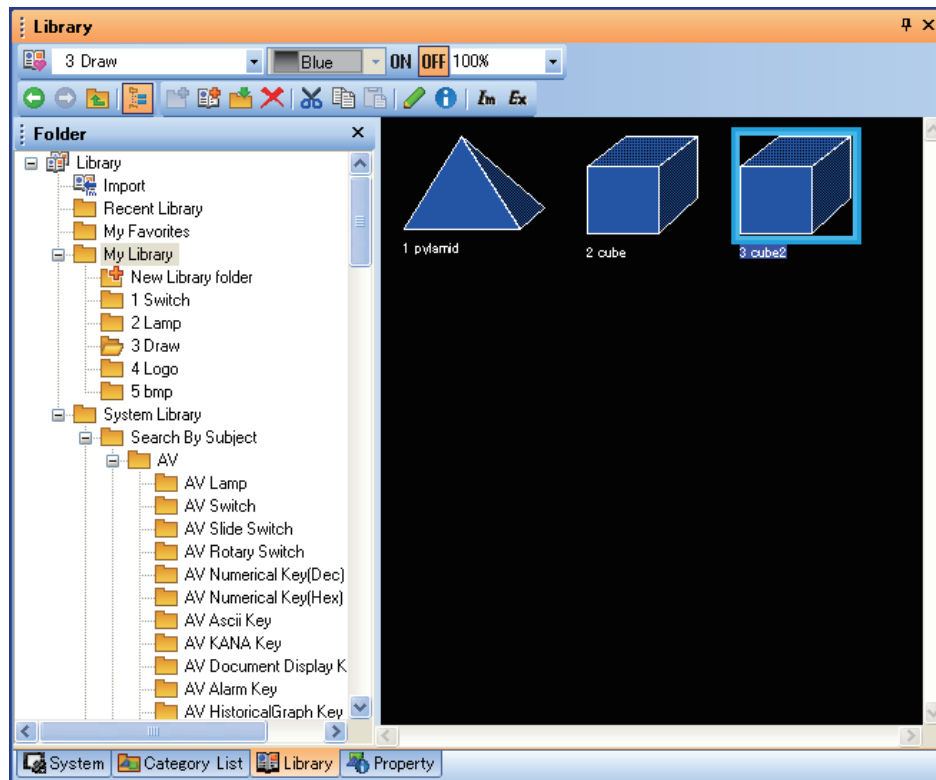
POINT

Deleting library folder

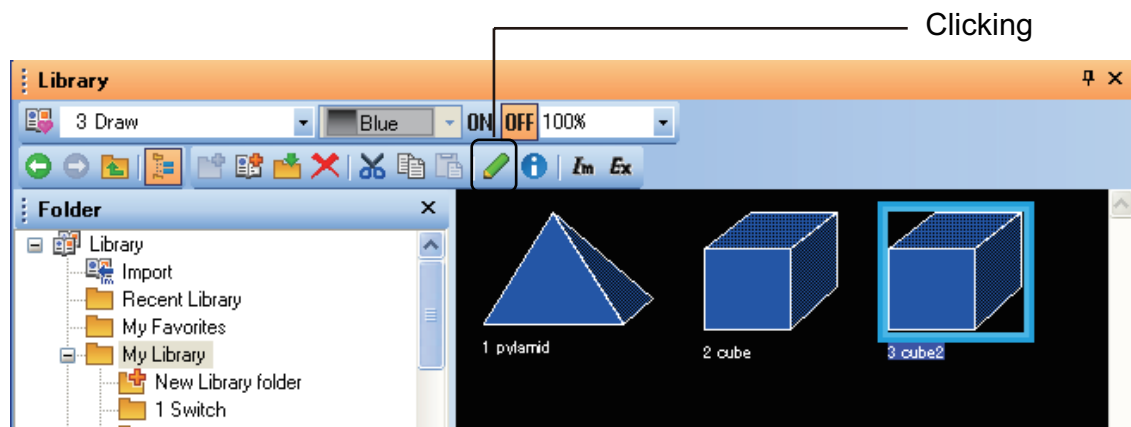
Note that deleting the library folder deletes all library data registered in the library.


6.3.5 Editing library data

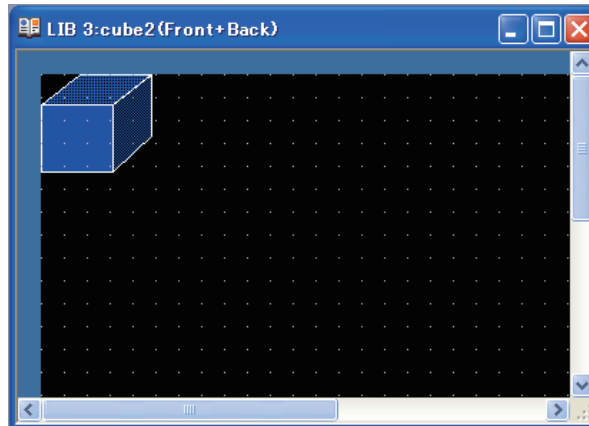
1. Select the library data to be edited.



2. Click the  (Edit Data) button.



3. The library data editor appears.
Arrange figures and objects on the library data editor, and edit the library data.
The edited data are reflected soon.
To clear the incorrect edited data, cancel operation by clicking the  (Undo) button before closing the library data editor.
After closing the library data editor, operation cannot be restored.



HINT


(1) Utilizing library data

The library data can be utilized and edited by the following methods.

- (a) Copying figures and objects
Figures and objects on the screen editor can be copied on the library data editor.
(Moving the figures and objects is not available by drag operation.)
- (b) Utilizing other library data
Other library data can be pasted on the library data editor.

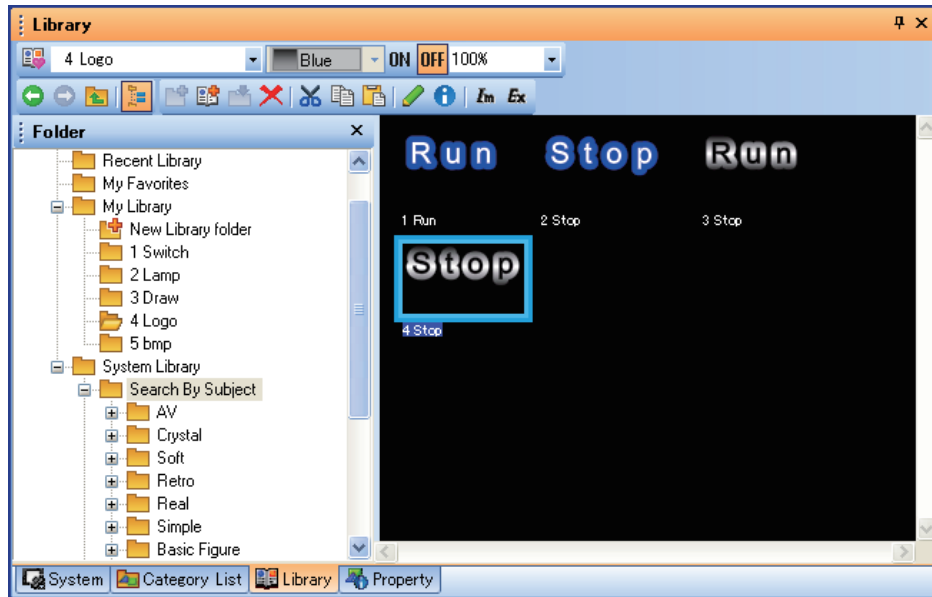
(2) Displaying the library data editor with double-click


The library data editor appears by double-clicking the library data in the library data area.

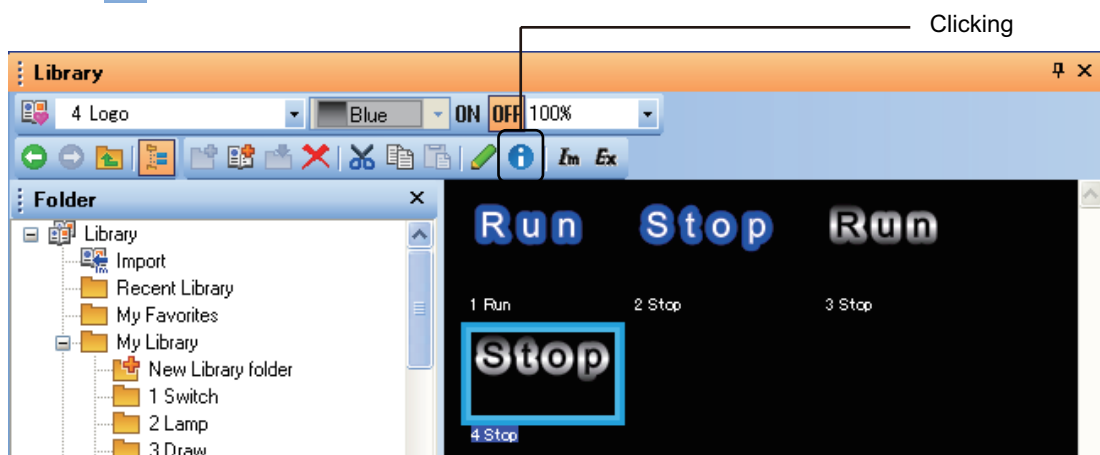
4. After editing the library data, click the  button on the upper-right of the library data editor to close the library data editor.

6.3.6 Changing library attribute

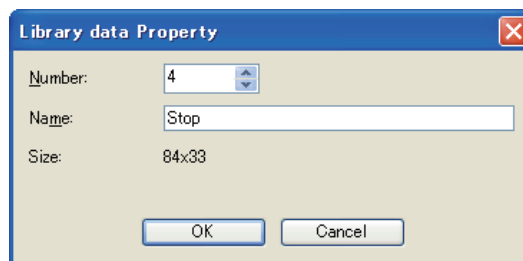
1. Select the library folder or library data to change the attribute.



2. Click the  (Edit Property) button.



3. The [Library folder Property] dialog box or the [Library data Property] dialog box appears. Set the number and name of the library folder or library data to be changed. After setting, click the [OK] button to change the attribute of the library folder or library data.

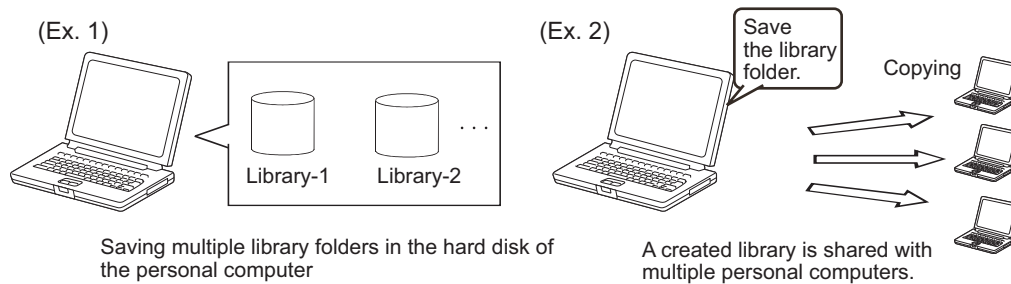


6.3.7 Saving library

The data in the user-created library can be saved in a separate folder from the currently used library. Multiple user-created libraries can be stored in the hard disk on the personal computer. The user can use the multiple user-created libraries.

6.3.8 Opening library

Copying the user-created library in a personal computer enables the computer to share the library among multiple personal computers.

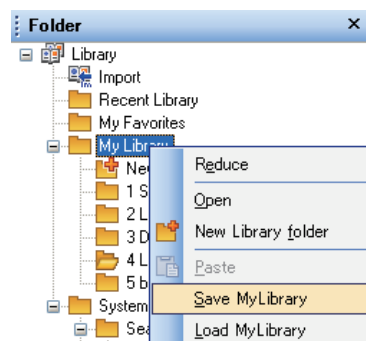


Overwriting currently used user-created library

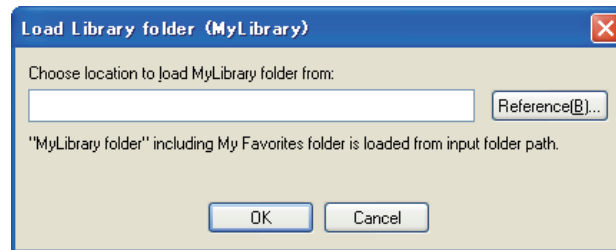
Overwriting a project overwrites the currently used user-created library.

■ Operating procedure

1. Right-click [My Library], and click [Save MyLibrary] from the menu in the library tree.



2. The [Save Library folder (MyLibrary)] dialog box appears.
Click the [Reference] button to specify the location where the data in [My Library] is saved.
After the specification, click the [OK] button.



POINT

Saving multiple libraries

The folder name of the user-created library is fixed to [My Library].

To save the data in the same folder among multiple libraries, the data are overwritten. Save the data in each folder.

3. The folder for [My Library] is automatically created in the specified folder. The created folder saves the file (*.mlb) for [MyLibrary].
The file for [My Favorites] is saved as "000_My Favorites.mlb".
The file for [My Library] can be named with the library folder number and name.

Example) Library folder number: 1, Name: abc

0 0 1 _ a b c . m l b

Folder name

Folder number

POINT

Saved library file

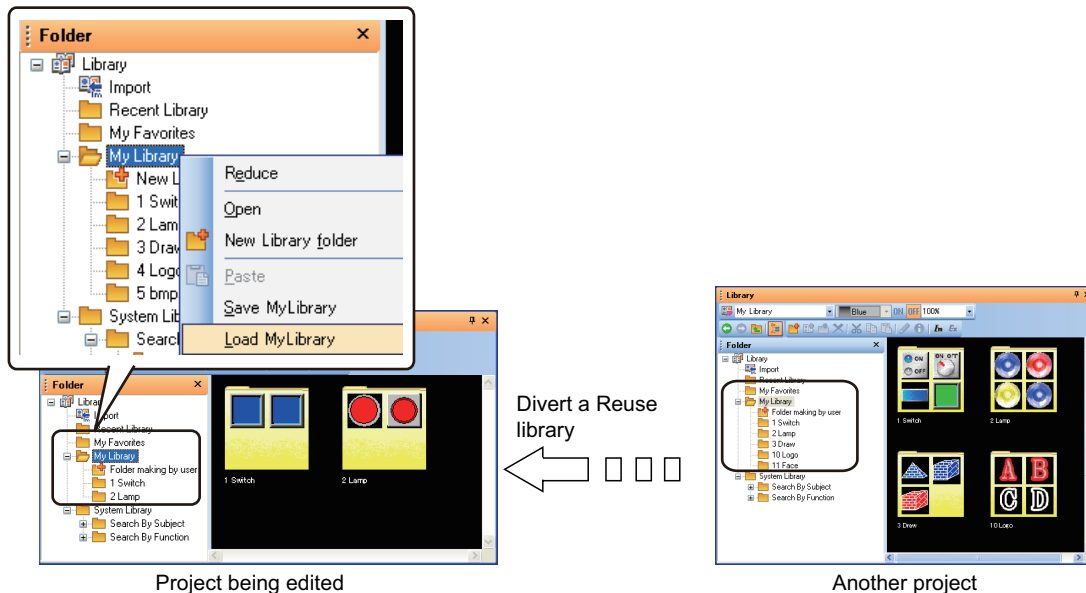
Do not operate the folder for [My Library] saved in a personal computer (including adding, deleting files, or changing the file name).

Failure to do so may not enable GT Designer3 to read the library correctly.

6.3.8 Opening library

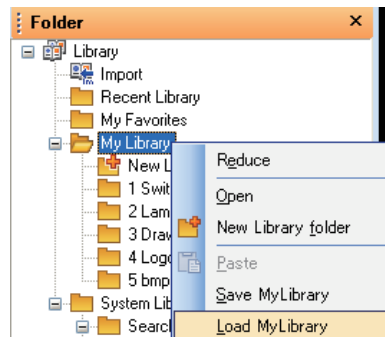
By opening a user-created library saved in other project, the library is available for the currently created project. The currently used library is changed to the user-created library saved in other project.

Example) Loading the library of another project to the project being edited

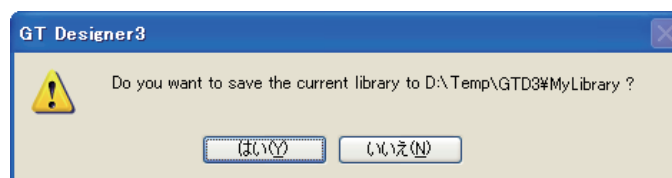


■ Operating procedure

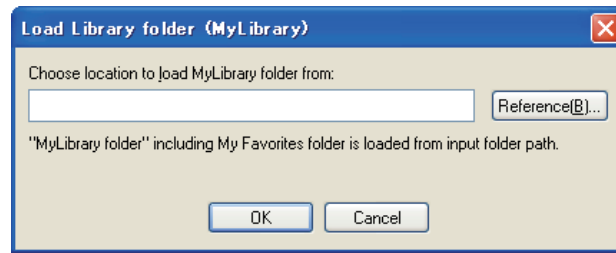
1. Right-click [My Library] in the library tree, and select [Load MyLibrary] from the menu.



2. While editing the library, the conformation dialog box appears whether the currently edited library data are saved. To save the data, click the [Yes] button, and not to save the data, click the [No] button.

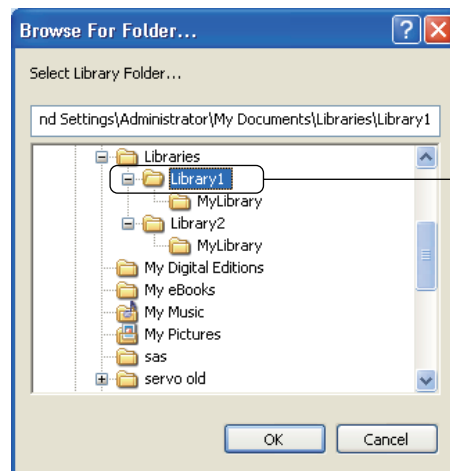


3. The [Load Library folder (MyLibrary)] dialog box appears.



Click the [Reference] button, and specify the folder (one-upper hierarchy folder) that stores the library data (MyLibrary) to be read.

After specifying the folder, click the [OK] button to switch between [My Favorites] and [My Library].



Folder for one-upper hierarchy in [MyLibrary]

6.3.9 Importing library

The data in [My Favorites] or [My Library] created in other project can be imported and used.
Image files can be imported and registered as library data.
The following shows files that can be imported.

(1) My library file (.mlb/.lbe)

The file is exported by the user-created library.

- mlb file: Exported by GT Designer3.
- lbe file: Eexported by GT Designer2.

(2) Import library file (.ilb)

A file for the system library

Import library files can be downloaded from the MITSUBISHI ELECTRIC FA NETWORK SERVICE (MELFANSweb) website.

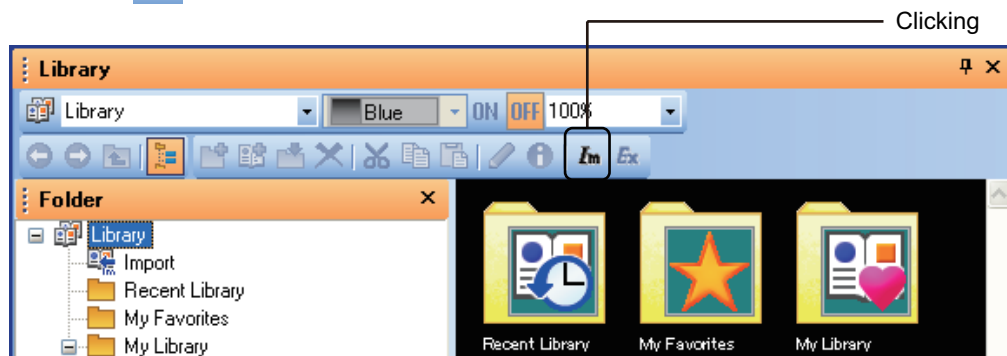
MELFANSweb website: <http://wwwf2.mitsubishielectric.co.jp/english/index.html>

(3) Image file (.bmp/.jpg/.jpeg/jpe)

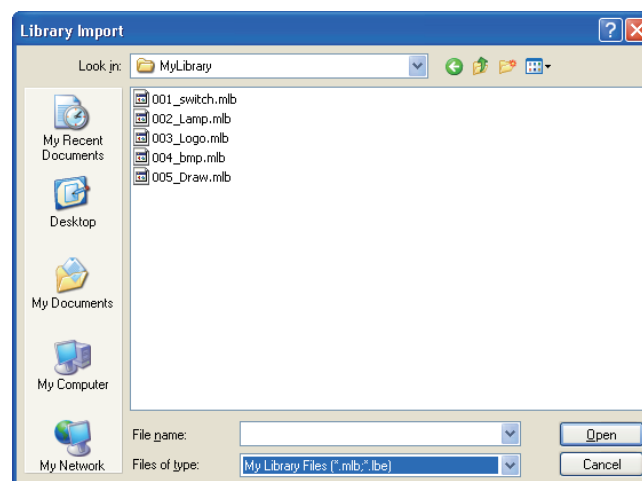
An image file used as library data

■ Importing library

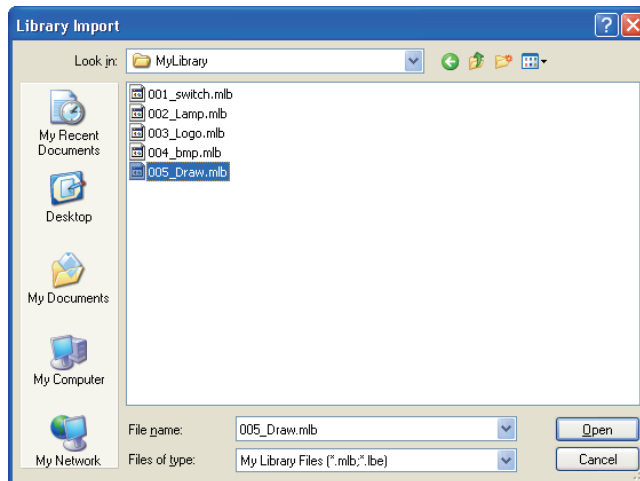
1. Click the  (Import) button.



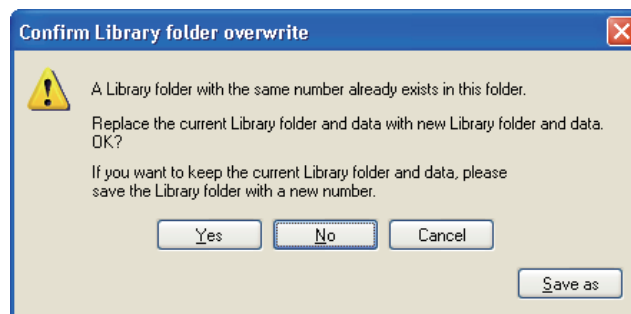
2. Select [MyLibrary Files (*.mlb;*.lbe)] or [Import Library Files (*.ilb)] for the file type of a file to be imported.



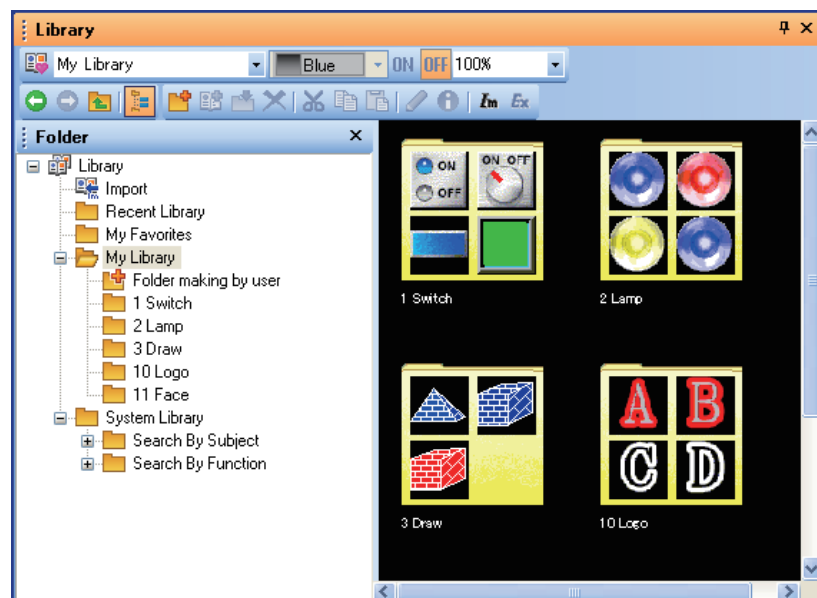
3. Select a file to be imported, and click the [Open] button.



4. The following dialog box appears when the imported library folder number is the same as the library folder number.
 - To overwrite the number, click the [Yes] button.
 - Not to overwrite the number, click the [No] button.
 - To cancel the overwriting of multiple library folder numbers, click the [Cancel] button.
 - To register the imported library folder number as other folder number, click the [Save as] button, and set a new number.



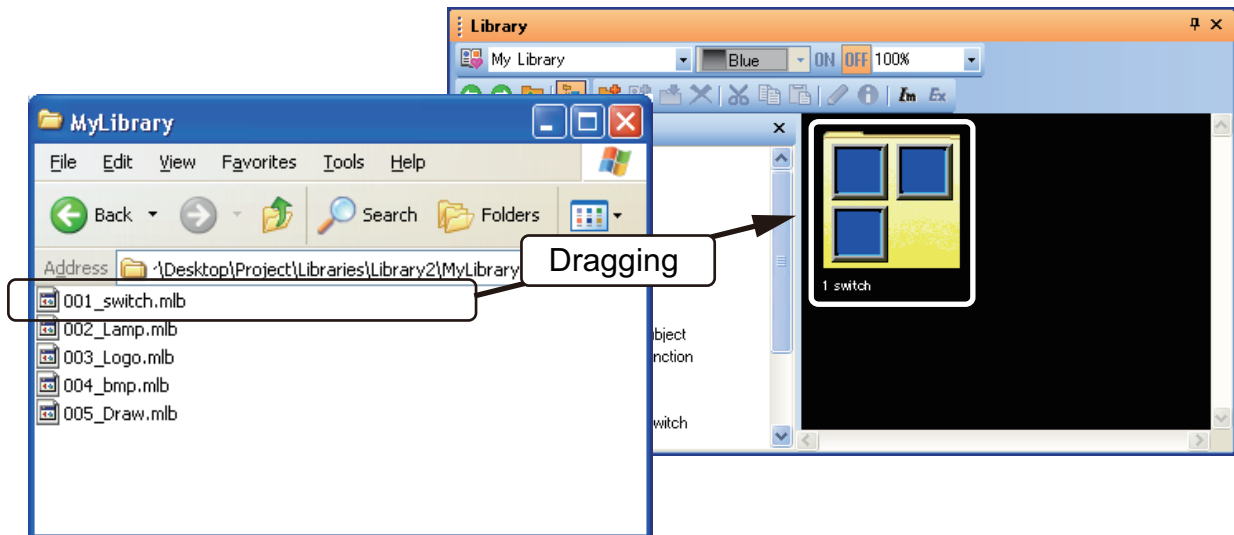
5. My library file is added to [My Library]. Import library file is added to [System Library]. When the folder for [My Favorites] is imported, the folder is automatically assigned to a spare library number. The imported library data are added. The existing library data are not overwritten.





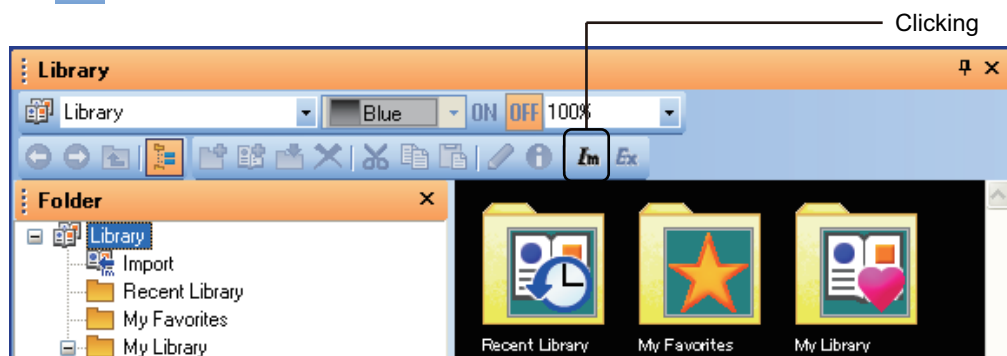
Importing by drag operation

A library file can be imported by drag operation.

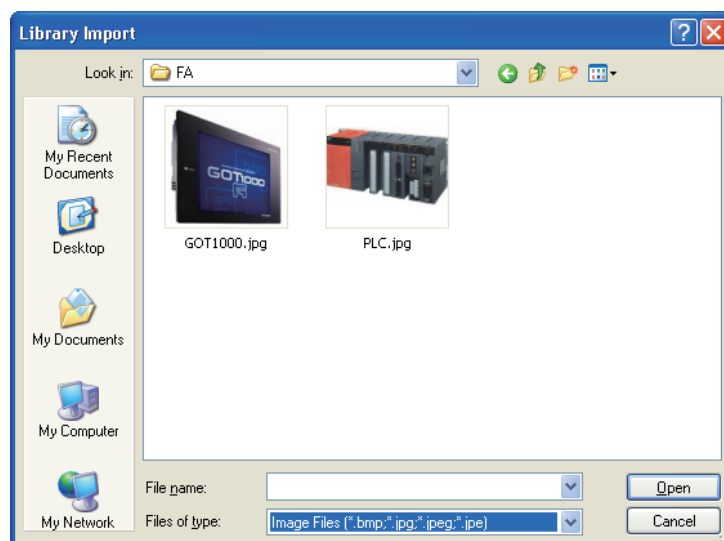


■ Importing image data

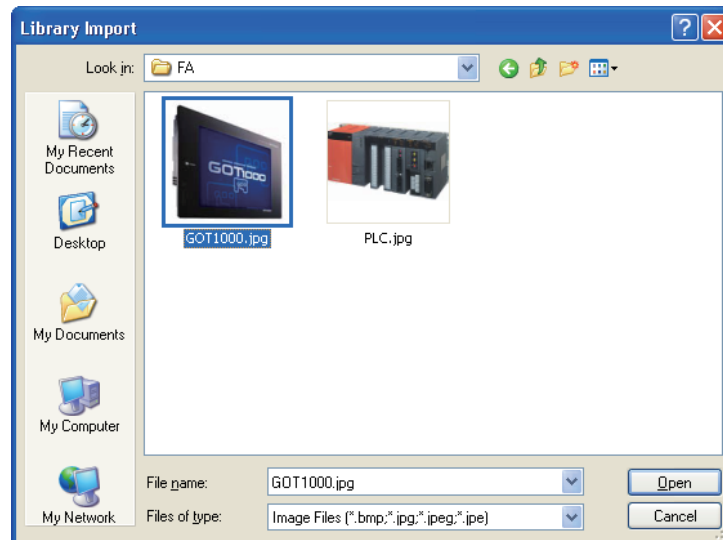
1. Click the  (Import) button.



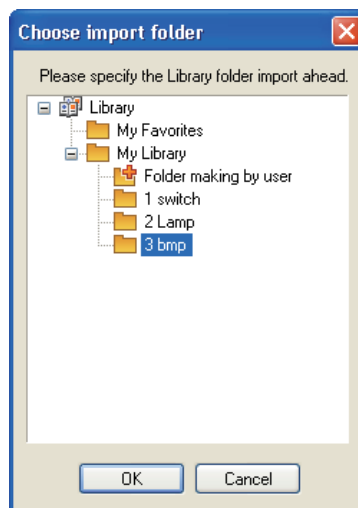
2. Select [Image Files (*.bmp;*.jpg;*.jpeg;*.jpe)] for the file type of a file to be imported.



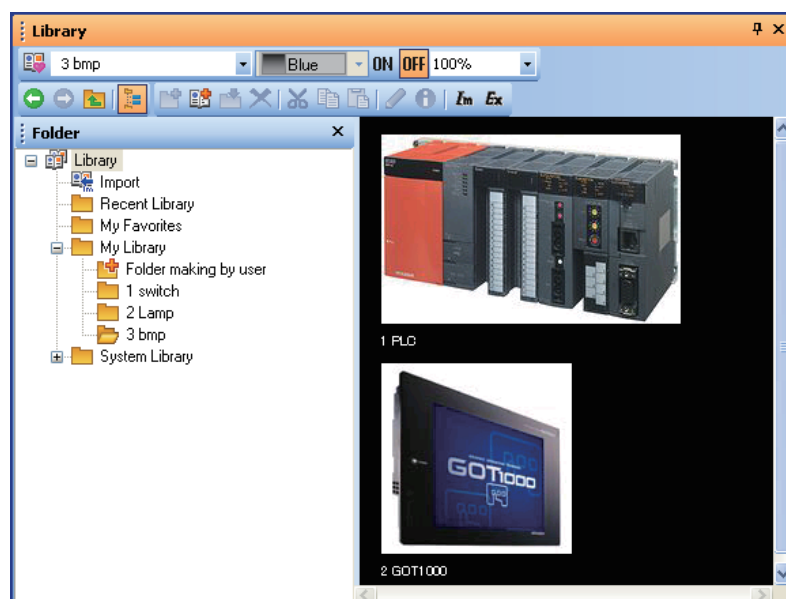
3. Select the file to be imported, and click the [Open] button.



4. The [Choose import folder] dialog box appears.
Select the library folder where the image data are saved, and click the [OK] button.

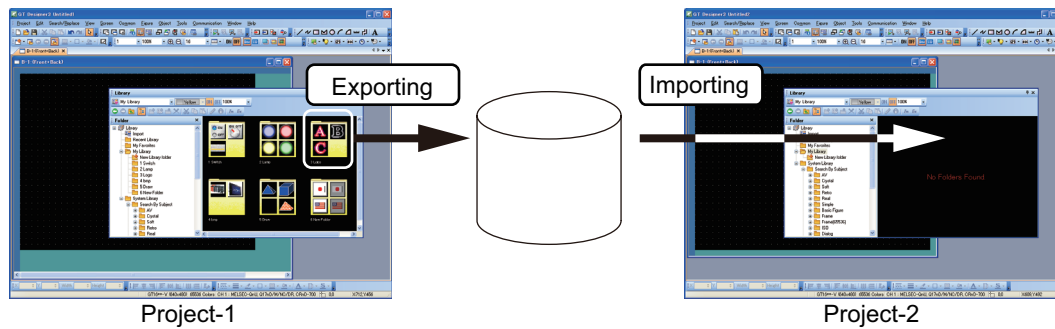


5. The image data are saved in the specified library folder.

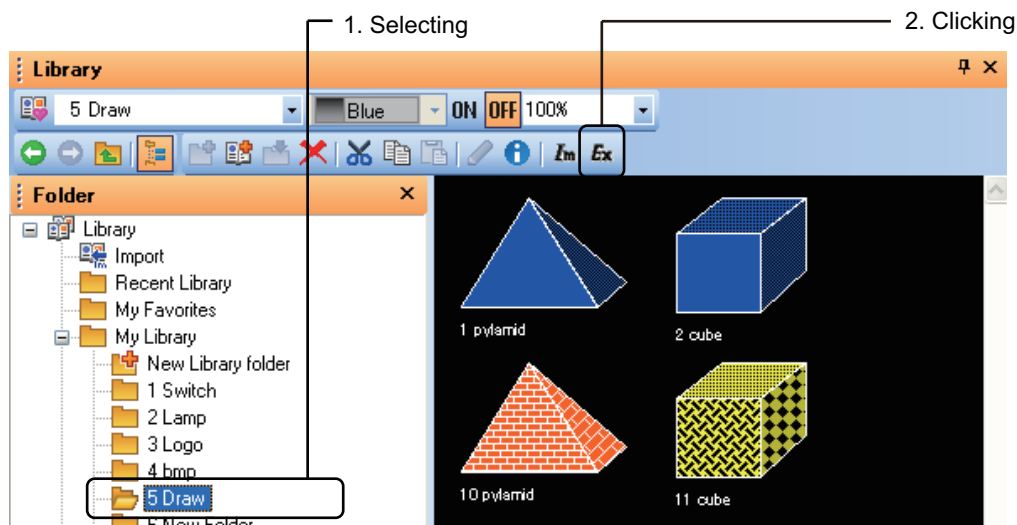


6.3.10 Exporting library

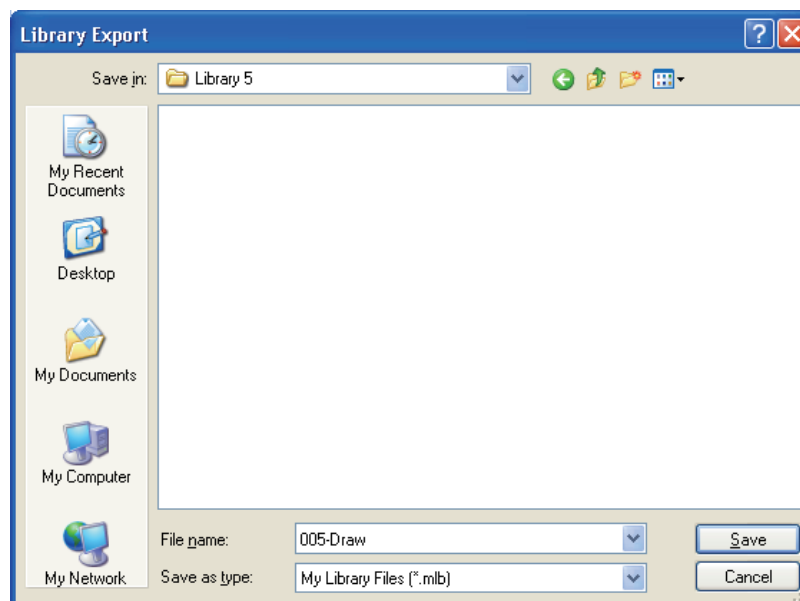
The user-created data for [My Library] can be exported, and the library data can be used with other project. The data in [My Favorites] and [System Library] cannot be exported.



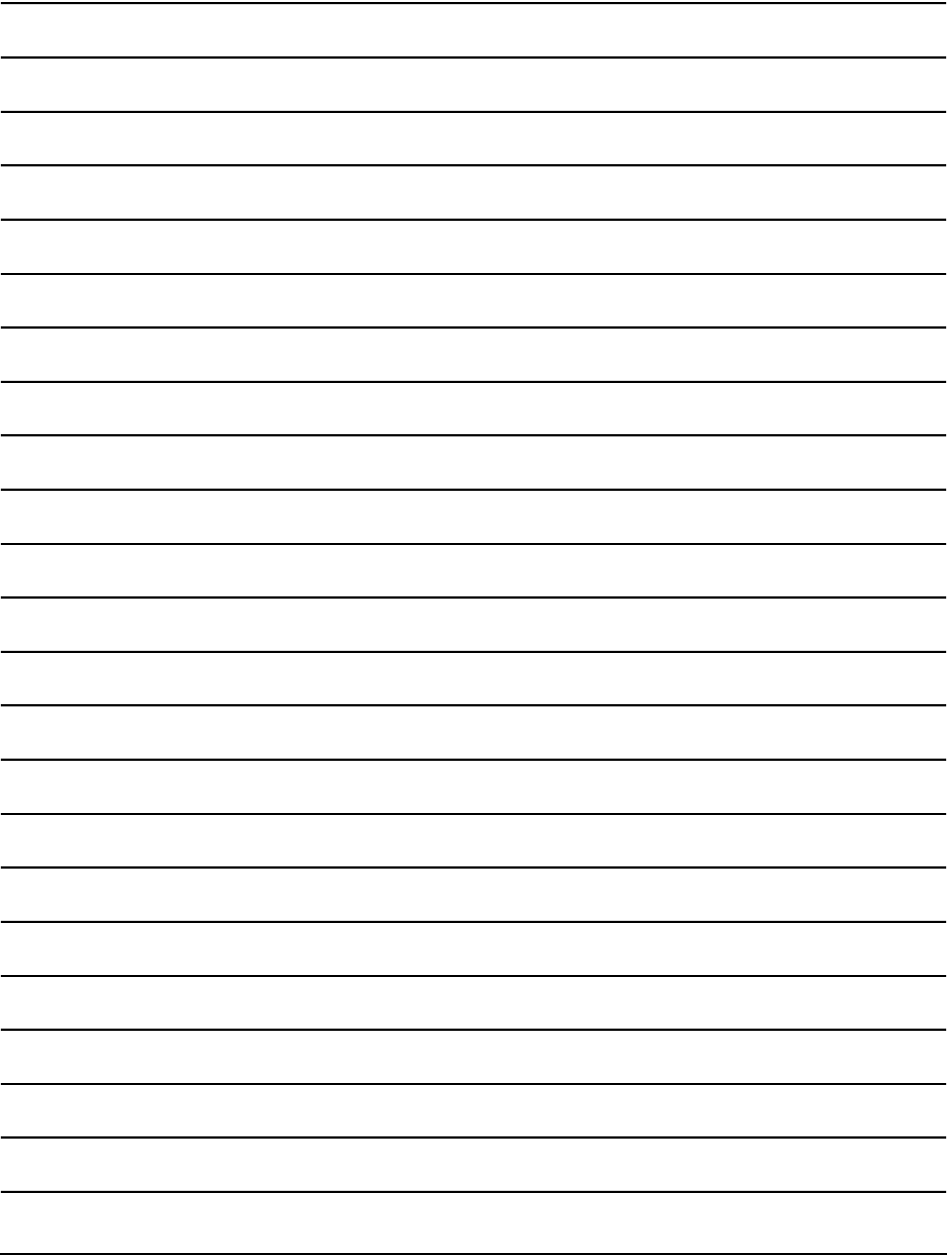
1. In the library tree, select the library data to be exported, and click the **Ex** (Export) button.



2. The [Library Export] dialog box appears. Set a storage location path and file name, and click the [Save] button.



COMMUNICATION WITH GOT



7. COMMUNICATION WITH GOT

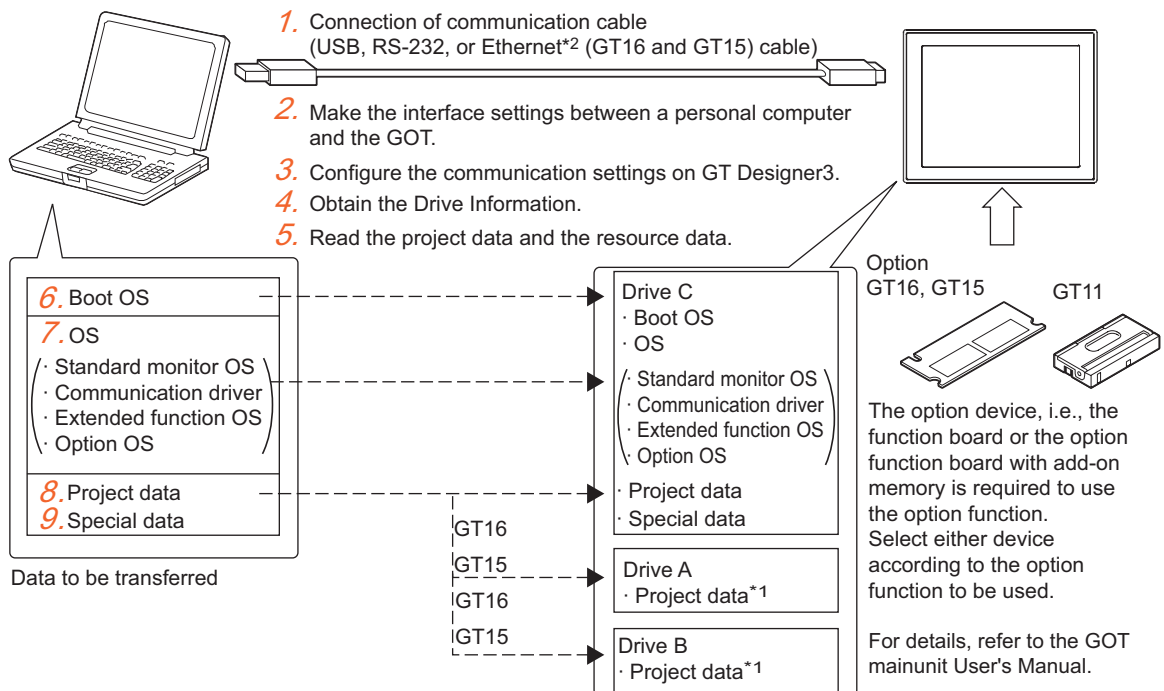


7.1 Transferring Data between GOT and Personal Computer

This section explains how to transfer data between the GOT and the personal computer.

■ Data transfer procedure

Data is transferred in the following procedure.



*1 For the GT16 and GT15, the project data can be stored in Drive A and started from there.

*2 The Ethernet communication unit must be installed on the GOT to use the Ethernet cable. (GT15)

1. Connect the communication cable.

7.1.1 Connecting personal computer and GOT with cable

2. Make the interface settings between a personal computer and the GOT.

7.1.2 Interface setting of the GOT

3. Configure the communication settings on GT Designer3.

7.1.5 ■Reading drive information(GOT to personal computer)

4. Obtain the drive information.

7.1.5 ■Reading project data (GOT to personal computer)

5. Read the project data and resource data from the GOT.
 - Transferring directly the read project data from the GOT to the personal computer
 - ☞ 7.1.5 Reading from GOT
 - Transferring the read project data to the personal computer via CF card or USB memory
 - ☞ 3.6.2 ■Reading GT Designer2/G1 format project
 - Transferring the read resource data to the personal computer.
 - ☞ 7.1.5 Reading from GOT
6. Install the Boot OS on the GOT. (This operation is required at the time of the Boot OS upgrade and the GOT initialization.) (GT16, GT1, and GT11)
 - Installing directly the Boot OS on the GOT from the personal computer.
 - ☞ 7.1.4 ■Installing Boot OS (Personal computer to GOT)
 - Installing the Boot OS on the GOT via CF card or USB memory.
 - ☞ 7.2.2 Transferring Boot OS to memory card
7. Install the OS (standard monitor OS, communication driver, extended function OS, and option OS) on the GOT.
 - Installing directly the OS on the GOT from the personal computer.
 - ☞ 7.1.4 ■Installing the OS (Personal computer to GOT)
 - Installing the OS on the GOT via the CF card or USB memory.
 - ☞ 7.2.1 Transferring project data, OS, and special data to memory card
8. Write the project data to the GOT.
 - Writing directly the project data from the personal computer to the GOT.
 - ☞ 7.1.4 ■Writing project data and installing OS (Personal computer to GOT)
 - Writing the project data to the GOT via the CF card or USB memory.
 - ☞ 7.2.1 Transferring project data, OS, and special data to memory card
9. Write the special data to the GOT. (GT16 and GT15)
 - Writing directly the special data from the personal computer to the GOT.
 - ☞ 7.1.4 ■Writing special data (Personal computer to GOT)
 - Writing the special data to the GOT via the CF card or USB memory.
 - ☞ 7.2.1 Transferring project data, OS, and special data to memory card

■ Precautions

(1) Transfer cable

Check if the connector of the cable is securely connected to the one of the GOT and the personal computer.

(2) Specification of the read destination at read

When [Destination] is specified as a project of GT Designer3, all data in the specified project are deleted. (Even for a partial reading (comment data, etc.), all data in the file are also deleted.)

For details of the read destination, refer to the following.

☞ 7.1.5 Reading from GOT

(3) Data transfer timing

Communication from the personal computer is not accepted while the message [Booting] or [Booting project data] is on the GOT at power-on.


Transfer the data after the message has gone.

(4) GOT operation

In the following cases, the GOT operation is required.

- (a) Transferring the project data to the GT11 via RS-232 cable.
When the standard I/F-2 (RS-232 interface) is set to other than the host personal computer in the communication settings, change the channel No. of the RS-232 interface to "9" in [Standard I/F Setting] in [Communication Setting] of the GOT.
- (b) Transferring the project data to the GT10.
When the standard I/F-2 (personal computer connection interface) is set to other than the host personal computer in the communication settings, select the personal computer transfer in the GOT communication settings.

For details of each operation, refer to the following.

 User's Manual for the GOT used


(5) Ethernet transfer (GT16 and GT15)

Only project data write/read, OS installation, special data write, and resource data read is available with the Ethernet transfer. (The Boot OS cannot be installed.)

Before transferring the data via Ethernet, configure the following settings on the GOT so that communication via Ethernet become available.

- Write the Boot OS and standard monitor OS.
- Configure the setting for the Ethernet download in the communication setting.

For how to check the setting, refer to the following.

 User's Manual for the GOT used

POINT

Precautions for Ethernet transfer operation

(1) Advance notice of installing the OS and writing project data

To install the OS and write project data via Ethernet, determine rules of the Ethernet transfer operation including the advance notice to GOT operators.

Change in the OS and project data without any notice may affect the GOT operation.

(2) Ensuring of data restoration measures

If the controller setting is changed when the OS is installed, and when project data is written, the GOT may not communicate with GT Designer3.

Prepare a CF card or other measures to restore the data on the GOT.

(6) Project data write

The project data must have been opened on GT Designer3 to write the project data.

The other data (Boot OS, standard monitor OS, communication driver, extended function OS, and option OS) can be transferred even when the project data has not been opened on GT Designer3.

(7) Detailed explanation and category set on the project data or screen

Detailed explanation and category set on the project data or screen are not written to the GOT.

They are not set when the project data written to the GOT once is read again from the GOT to the personal computer.

(8) Data within the GOT

When the data already existing in the GOT is the same as the project data to be written to the GOT (both the project folder name and the project ID are the same), it will be overwritten during write.

Checking [Write after deleting all contents in the project folder] in the [Communicate with GOT] dialog box will allow a new program write after deleting the project data folder.

For installing the Boot OS or OS on the GOT, refer to the following.

 7.1.5 Reading from GOT

(9) Power saving function of the personal computer

When data is transferred with the GOT connected, turn off the power saving function of the personal computer and Windows®.

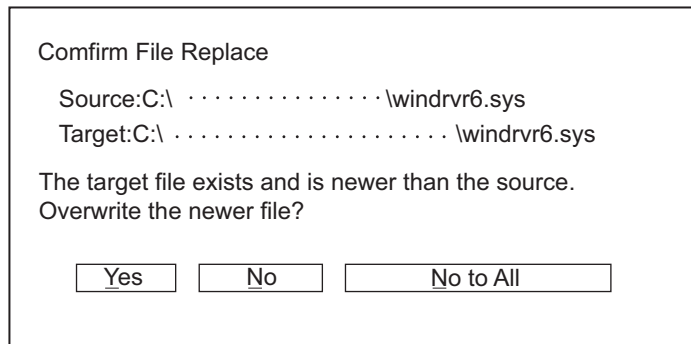
For details of the power saving function setting, refer to the personal computer manual or Windows® Help.

(10) Installation of the USB driver of another company product

When installing the USB driver of other company products, the “Confirm File Replace” message of the USB driver file (windrvr6.sys) may be displayed.

When a newer file already exists, click the [No] button to discontinue the overwriting processing.

If the file is overwritten, USB communication between GT Designr3 and the GOT may not be made correctly.



(11) Precautions for using the USB cable

- When performing data transfer between the personal computer and the GOT connected via the USB cable, do not set the resume function, suspend function, power-saving function, and standby mode of the personal computer.

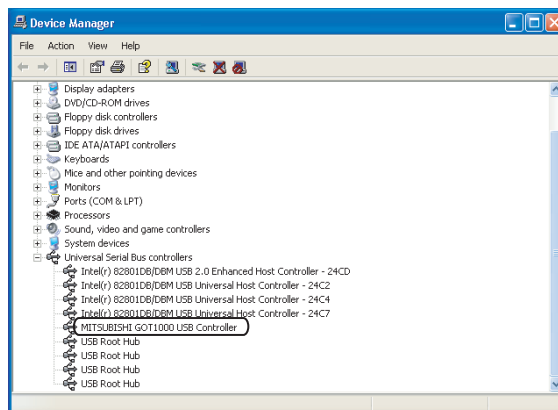
For the setting details of the resume function, suspend function, power-saving function, and standby mode, refer to the personal computer manual or Windows® Help.

- If the USB cable is disconnected/reconnected during the data transfer, the GOT is reset or powered off/on, which may result in a unrecoverable communication error.

In this case, perform either of the following operations.

- (a) The Personal Computer will check for a USB connection.

Please check that MITSUBISHI GOT1000 USB Controller is displayed in the Universal Serial Bus controllers.



- (b) After disconnecting the USB cable from the GOT for more than 5 seconds, reconnect the cable and restart communication.

- (c) After turning on the GOT again, restart the communication.

(12) Precautions for communicating with the GOT via modem

- (a) The setting of GOT Modem Connection Tool, a modem, and the GOT
When communicating with the GOT via a modem, make sure to set all the communication settings for GOT Modem Connection Tool, a modem, and the GOT correctly.
If the settings are not configured correctly, communication with the GOT via a modem is not executed.
- (b) The telephone circuit that is not connectable
Do not connect to the call-waiting circuit.
Failure to do so disrupts data by an in-coming call or disconnects the circuit automatically.
- (c) Disconnection of the telephone circuit
When communication with the GOT ends, make sure to disconnect the telephone circuit using GOT Modem Connection Tool or the GOT.
Otherwise, communication between modems remains connected even if communication between the GOT and GT Designer3 is disconnected.
- (d) Transmission speed of modem
Configure the setting of the transmission speed between modems same as that of the transmission speed between the personal computer/GOT and a modem.
If the settings of transmission speed differ, an error may occur at communication.
- (e) Communication via a modem in an incorrect setting
For communication via a modem, make settings and connections according to the method in the manuals.
Communication via a modem may be established using a method that is not described in the manuals.
However, the performance is not guaranteed.
- (f) Confirmation of the initialization command
Check that the initialization command is correct before executing communication between modems using GOT Modem Connection Tool.
If the initialization command is incorrect, a modem may automatically disconnect the circuit at data transfer from GT Designer3 even when communication between modems is established.
- (g) Executing a connection test
When executing a connection test, check that the GOT can send or receive data using both GOT Modem Connection Tool and GT Designer3.
- (h) The Modem initialization signal and the Modem circuit disconnect signal
Do not turn on the Modem initialization signal (GS448.b0) and the Modem circuit disconnect signal (GS448.b1) in the following cases.
Even if GS448.b0 and GS448.b1 turn on, the connection between modems cannot be disconnected.
 - While the GOT communicates with GX Works2 or GX Developer by using the FA transparent function
 - While the GOT communicates with GT Designer3
- (i) The communication setting between the personal computer/GOT and a modem
Configure the communication setting between the personal computer and a modem, and the communication setting between the GOT and a modem before executing communication between modems. Do not change the setting after the setting is configured.
The communication port setting for a modem cannot be changed after communication between modems is established.
The communication setting on the personal computer and the GOT should be identical.
If the communication settings differ, an error may occur at communication.
- (j) Interface between the personal computer and the GOT
When [Host(Modem)] is selected in the interface setting between the personal computer and the GOT, do not directly connect the personal computer and the GOT using the RS-232 cable.
Communication is not established if the personal computer and the GOT are directly connected.
- (k) Assignment of personnels
When communicating with the GOT via a modem, assign personnels both for the personal computer and the GOT to take action for an accident including a circuit fault.

(13) Communication error that may occur when the PLC is not connected to the GOT

If the GOT and the PLC are not connected but the relevant connection settings are already made on the GOT, the GOT performs retry communication processing as it cannot communicate with the PLC. If the following operations are performed on GT Designer3 in this status, a communication error may occur (error No.: 8011000a).

- OS installation
- Project data writing
- OS, project data, or resource data deletion
- Drive formatting

For the corrective action, refer to the following.

➡ 7.6 Error Messages Displayed at Data Transfer

(14) When a communication error occurs

A communication error, such as a time-out error, may occur due to the communication port settings on the personal computer.

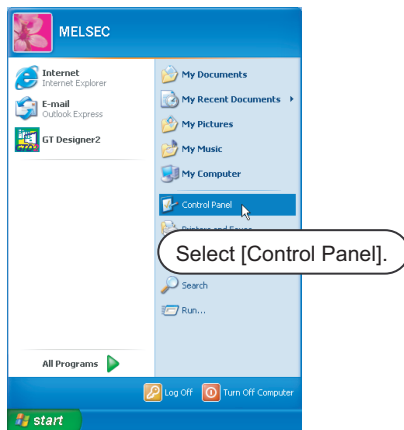
When the port for the Ethernet communication is blocked by the firewall, a communication error occurs.

Disable the firewall or configure the setting to open the port.

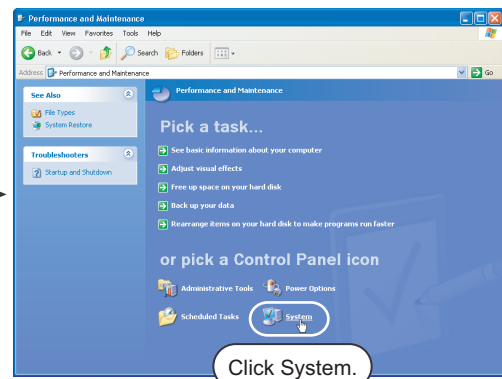
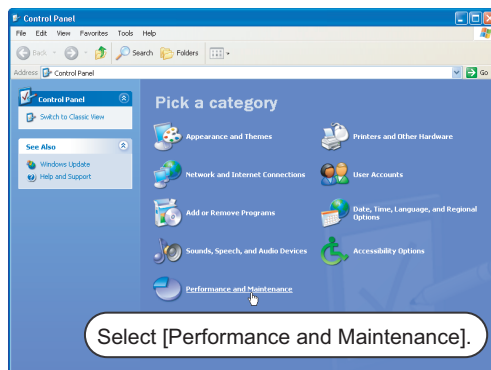
Check and change the settings in the following procedure.

The following items may not be present depending on the used personal computer.

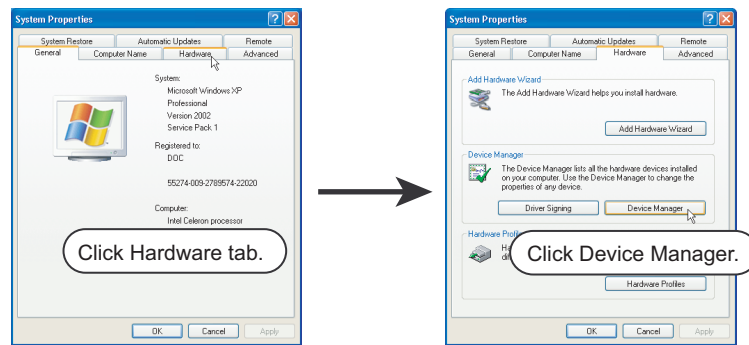
1. Select [Start] → [Control Panel] from the menu.



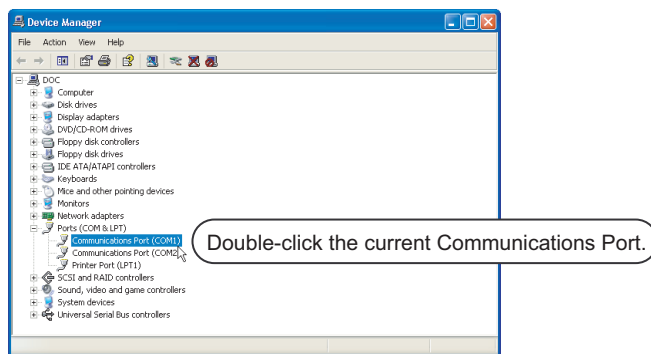
2. Select [Performance and Maintenance] and click the [System] icon.



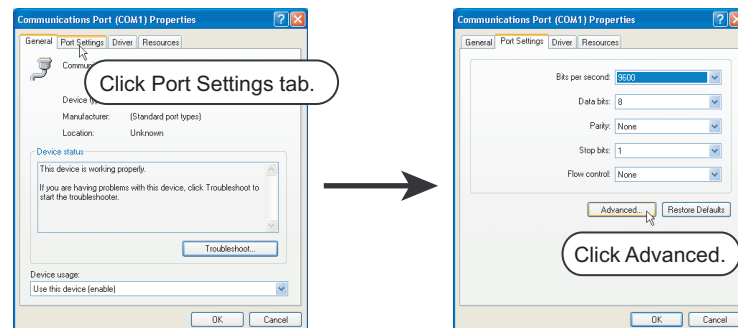
3. The [System Properties] dialog box appears. Click the [Device Manager] button in the [Hardware] tab.



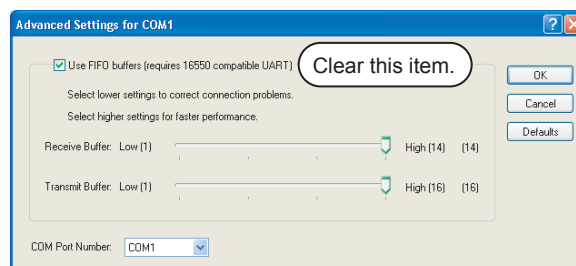
4. Device Manager appears. Select [Ports] and double-click the current [Communications Port] icon. (In the following, an example using the communication port (COM1) is described.)



5. The [Communications Port (COM1) Properties] dialog box appears. Click the [Advanced] button in the [Port Settings] tab.



6. The [Advanced Settings for COM1] dialog box appears. Clear [Use FIFO buffers].



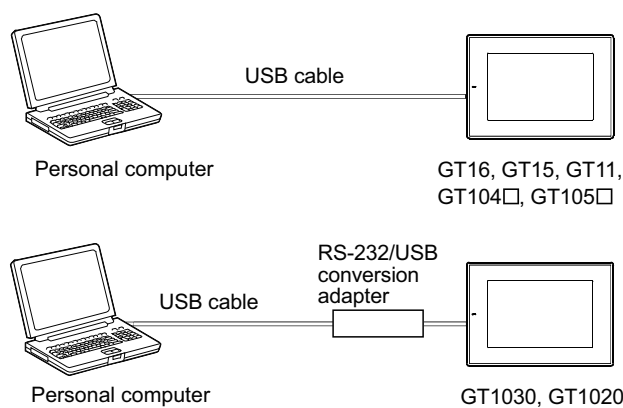
7.1.1 Connecting personal computer and GOT with cable

■ Connecting personal computer and GOT with USB cable

(1) System configuration and applicable cable

The following shows the system configuration and applicable cables to connect the personal computer and the GOT with the USB cable.

(a) System configuration



(b) USB cable

Model	Manufacturer	Compatible model
GT09-C20USB-5P (A↔mini B type)	Mitsubishi Electric System & Service Co., Ltd.	GT16, GT15, GT11, GT105□, GT104□
GT09-C30USB-5P (A↔mini B type)	Mitsubishi Electric System & Service Co., Ltd.	GT16, GT15, GT11, GT105□, GT104□, GT1030*1, GT1020*1

*1 Use the cable and the RS-232/USB conversion adapter in combination.

(c) RS-232/USB conversion adapter

Model	Manufacturer	Compatible model
GT10-RS2TUSB-5S	Mitsubishi Electric	GT1030, GT1020

(2) Connecting with the USB cable

Connect the personal computer and the GOT with the USB cable in the following procedure.

1. Connect the USB cable to the USB connector of the personal computer.
2. Connect the USB cable to the USB connector of the GOT.
For USB connector of each GOT, refer to the following.

☞ User's Manual for the GOT used

(3) Installing the USB driver

To communicate with the GOT with the USB cable, the USB driver must be installed on the personal computer.

Windows®	USB driver installation	Necessity of Administrator authority at USB driver installation	Operation during USB driver installation
Windows® 7	○ (Required for each USB connector)	○ (Required)	Not required (Installed when Personal computer and GOT are connected with USB cable.)
Windows Vista®	○ (Required for each USB connector)	○ (Required)	Not required (Installed when Personal computer and GOT are connected with USB cable.)
Windows® XP	○ (Required for each USB connector)	○ (Required)	Operation required (Refer to next page)
Windows® 2000 Professional	○ (Required for each USB connector)	○ (Required)	Not required (Installed when Personal computer and GOT are connected with USB cable.)

POINT

(1) Warning message displayed on Windows Vista®, Windows® 7

When installing the USB driver, [Windows can't verify the publisher of this driver software] is displayed as a warning message.

To continue the USB driver installation, click [Install this driver software anyway].

The [Program Compatibility Assistant] window may be displayed during installation.

In this case, click [This program installed correctly].

(2) When using GT Designer3 on Windows® 2000 Professional by the user authority other than the administrator authority

When the personal computer has multiple USB connectors, the USB driver must be installed on each USB connector. As the USB driver cannot be installed by the user authority other than the administrator authority, it is recommended to install the USB driver on all USB connectors that may be used by the administrator authority, at the first installation of the USB driver.

(3) When the USB driver cannot be installed

(a) When Windows® XP is used

Select [Start] → [Control Panel] from the menu and select [Performance and Maintenance] of the [Control Panel] window and click [System].

Then, the [System Properties] dialog appears. Click the [Driver Signing] button of the [Hardware] tab.

If [Block - Never install unsigned driver software] has been selected, the USB driver may not be installed.

Select [Ignore - Install the software anyway and don't ask for my approval] or [Warn - Prompt me each time to choose an action] and install the USB driver.

(b) When Windows® 2000 Professional is used

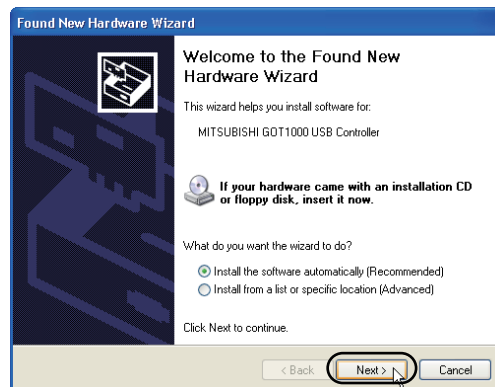
Select [Start] → [Settings] → [Control Panel] from the menu and double-click [System] of the [Control Panel] window.

Then, the [System Properties] dialog appears. Click the [Driver Signing] button of the [Hardware] tab.

If [Block - Prevent installation of unsigned files] has been selected, the USB driver may not be installed.

Select [Ignore - Install all files, regardless of file signature] or [Warn - Display a message before installing an unsigned file] and install the USB driver by the administrator authority.

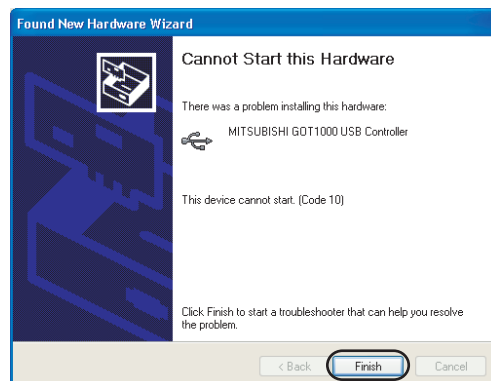
- (a) USB driver installation when Windows® XP Professional or Windows® XP Home Edition is used
The following shows a USB driver installation procedure.



1. When the personal computer and the GOT are connected with the USB cable for the first time, the left screen appears. Select [Install the software automatically (Recommended)], and click the [Next] button.



2. The left screen appears, but click the [Continue Anyway] button to continue installation.
(Mitsubishi Electric has concluded that proper operation is performed without any problems.)



3. When the left screen appears, this indicates that the installation is completed. Click the [Finish] button to end the installation.

- (b) Reinstalling the USB driver
The following shows the reinstallation procedure of the USB driver.

1. Uninstall GT Designer3.
☞ GT Works3 Version1 Installation Procedure Manual
2. Install GT Designer3.
☞ GT Works3 Version1 Installation Procedure Manual
3. Install the USB driver.
☞ 7.1.1 Connecting personal computer and GOT with cable

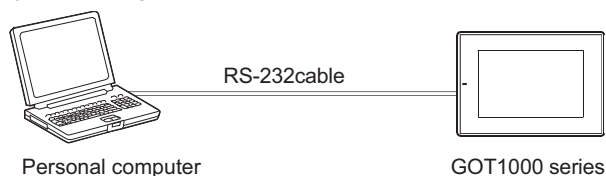
■ Connecting personal computer and GOT with RS-232 cable

Connect the personal computer and the GOT with the RS-232 cable in the following procedure.

(1) System configuration and applicable cables

The following shows the system configuration and applicable cables to connect the personal computer and the GOT with the RS-232 cable.

(a) System configuration



(b) RS-232 cable

Model	Manufacturer	Compatible model
GT01-C30R2-9S (9-pin female ↔ 9-pin female)	Mitsubishi Electric	GT16, GT15, GT11, GT105 □ GT104 □
GT01-C30R2-6P (9pin female ↔ 6pin male)	Mitsubishi Electric	Handy GOT, GT1030, GT1020

(2) Connecting with the RS-232 cable

1. Connect the RS-232 cable to the communication port of the personal computer.
2. Connect the RS-232 cable to the RS-232 connector of the GOT.
For RS-232 connector of each GOT, refer to the following.

 User's Manual for the GOT used

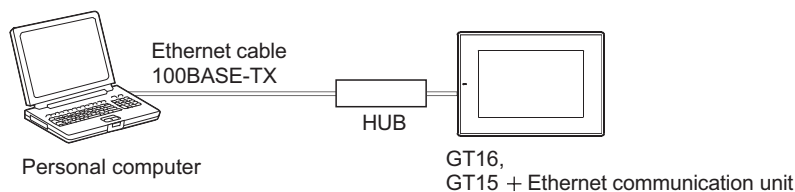
■ Connecting personal computer and GOT with Ethernet cable

Connect the personal computer and the GOT with the Ethernet cable in the following procedure.

(1) System configuration and applicable cable

The following shows the system configuration and the applicable cable to connect the personal computer and the GOT with the Ethernet cable.

(a) System configuration



(b) Communication unit

Model	Manufacturer	Compatible model
GT15-J71E71-100	Mitsubishi Electric	GT15

(c) Ethernet cable

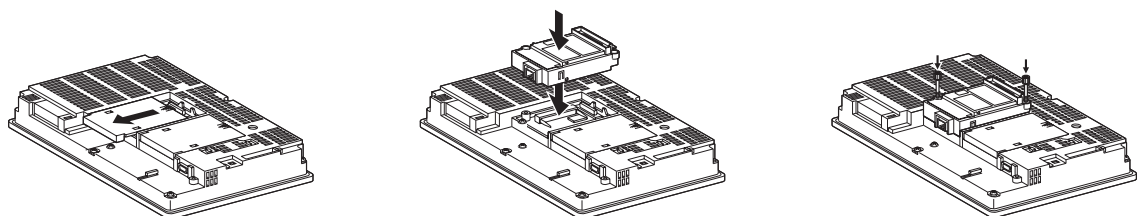
Model	Manufacturer	Compatible model
100BASE-TX	-	GT16, GT15

(2) Installing the Ethernet communication unit (GT15)

Install the Ethernet communication unit to the expansion unit installation connector of the GT15.

For details of the Ethernet communication unit, refer to the following.

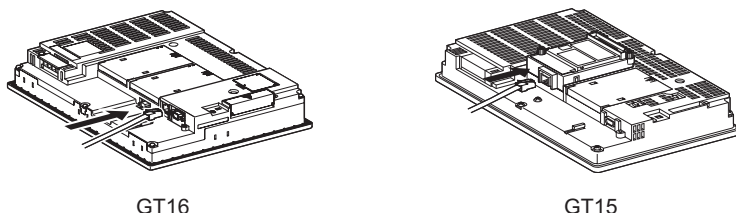
GT15 Ethernet communication unit User's Manual



1. Remove the extension unit cover.
2. Push in the Ethernet communication unit.
3. Secure the unit by tightening the installation screw with the specified torque.

(3) Connecting with the Ethernet cable (GT16 and GT15)

Connect the Ethernet cable to the GOT of the GT16 and the Ethernet communication unit of the GT15.



POINT

Precautions for installing the unit and connecting the cable

Shut off all phases of the GOT before installing the communication unit or connecting the cable.

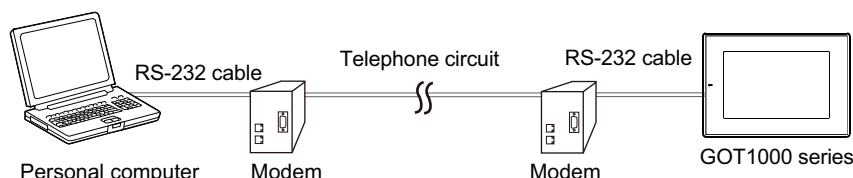
■ Connecting personal computer and the GOT via modem

Connect a personal computer, a modem, and the GOT using a RS-232 cable.

(1) System configuration and applicable cable

The following shows a system configuration of connecting a personal computer and the GOT via a modem, and applicable cables.

(a) System configuration



(b) Modem and RS-232 cable

The personal computer built-in modem is not applicable.

Applicable RS-232 cable differs depending on a modem type.

For applicable modems and RS-232 cables, refer to “List of Valid Devices Applicable for GOT1000 Series” (GOT-A0010) separately available.

The Technical News above is available as a reference at the MITSUBISHI ELECTRIC FA NETWORK SERVICE (MELFANSweb) website.

(MELFANSweb website: <http://wwwf2.mitsubishielectric.co.jp/english/index.html>)

(c) Telephone circuit

Refer to the user's manual for the modem used.

(2) Connecting with RS-232 cable

Connect a personal computer and a modem, and the GOT and a modem using a RS-232 cable.

(a) Connecting personal computer and modem

1. Connect a RS-232 cable to the communication port of a personal computer.
2. Turn on the modem.
3. Connect the RS-232 cable which is connected to the personal computer and the RS-232 connector of the modem.
For connecting a RS-232 cable to a modem, refer to the following.
☞ User's manual for the modem used
4. Connect the modem to the telephone circuit.
For connecting to the telephone circuit, refer to the following.
☞ User's manual for the modem used

(b) Connecting the GOT and modem

1. Connect the RS-232 cable to the RS-232 connector of the GOT.
For RS-232 connectors of each GOT, refer to the following.
☞ User's Manual for the GOT used
2. Turn on the modem.
3. Connect the RS-232 cable which is connected to the GOT and the RS-232 connector of the modem.
For connecting a RS-232 cable to a modem, refer to the following.
☞ User's manual for the modem used
4. Connect the modem to the telephone circuit.
For connecting to the telephone circuit, refer to the following.
☞ User's manual for the modem used

7.1.2 Interface setting of the GOT

1. Configure the interface setting between a personal computer and the GOT before executing communication with the GOT.

☞ ■Interface setting of the GOT

For communication using a USB cable, a RS-232 cable, and an Ethernet cable, the interface setting is completed. Configure the communication setting by referring to the following.

☞ 7.1.3 Setting communication

2. When communicating with the GOT via a modem, initialize the modem of the GOT.
For the communication setting between the GOT and a modem, refer to the following.

☞ User's manual for the modem used

3. Establish communication between modems using GOT Modem Connection Tool.

☞ ■Establishing communication between modems (GOT Modem Connection Tool)

The interface setting is completed.

Configure the communication setting by referring to the following.

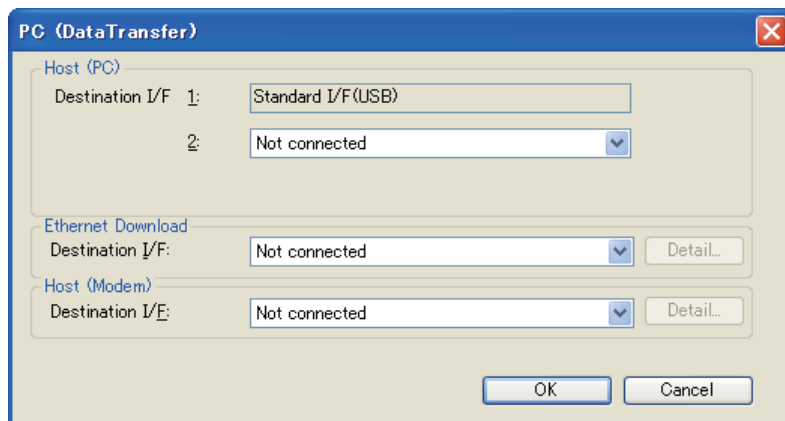
☞ 7.1.3 Setting communication

■ Interface setting of the GOT

Select [Common] → [Peripheral Setting] → [PC (Data Transfer)] from the menu.

The setting dialog box appears.

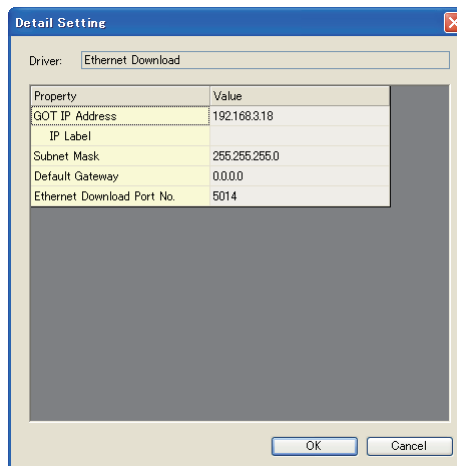
Set the GOT interface used for communication with a personal computer.




Example: GT16

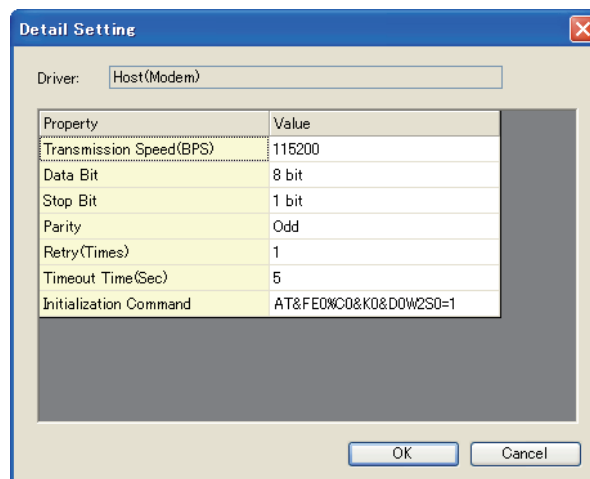
Item	Description	Model
Host (PC)	When the communication is executed with the GOT and a personal computer directly connected, set the GOT interface used for communication with a personal computer.	GT16 GT15 GT11 GT10 SeriGOT 1000
Ethernet Download	When communicating with the GOT via Ethernet, set the GOT interface used for communication with the personal computer. Click the [Detail] button to display the [Detail Setting] dialog box. Configure the connection setting between a personal computer and the GOT by referring to the following. ☞ (1) Detail setting (Ethernet download)	GT16 GT15 GT11 GT10 SeriGOT 1000
Host (Modem)	When communicating with the GOT via a modem, set the GOT interface used for communication with the modem. Click the [Detail] button to display the [Detail Setting] dialog box. Configure the connection setting between the modem and the GOT by referring to the following. ☞ (2) Detail setting (host (modem))	GT16 GT15 GT11 GT10 SeriGOT 1000

(1) Detail setting (Ethernet download)



Item	Description	Setting range
GOT IP Address	Set the IP address of the GOT.	0.0.0.0 to 255.255.255.255
IP Label	Set the IP label of the detail setting. The set IP label is registered in the IP label list.  7.1.3 ■ IP Label List	-
Subnet Mask	When the subnetwork is used, set the subnet mask. (Via a router only.) (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255
Default Gateway	Set the router address of the default gateway to which the GOT is connected. (Via a router only.) (Default: 0.0.0.0)	0.0.0.0 to 255.255.255.255
Ethernet Download Port No.	Set the port No. used by the GOT for Ethernet download. (Default: 5014)	1024 to 65534

(2) Detail setting (host (modem))



Item	Description	Setting range
Transmission Speed(BPS)	Set the transmission speed at communication. (Default: 115200)	9600/19200/38400/57600/115200
Data Bit	Set the data length at communication. (Default: 8 bit)	7bit/8bit
Stop Bit	Set the stop bit length at communication. (Default: 1 bit)	1bit/2bit

(Continued to next page)

Item	Description	Setting range
Parity	Set the type to check parity at communication. (Default: Odd)	None/Even/Odd
Retry(Times)	Set the number of retries at communication. (Default: 1 time)	1 time
Timeout Time(Sec)	Set the timeout time at communication. (Default: 5 seconds)	5 seconds
Initialization Command	Set AT commands for initializing a modem. (Default: AT&FE0%C0&K0&D0W2S0=1)	Up to 255 one-byte alphanumeric characters ^{*1}

^{*1} The maximum number of characters of AT commands differs depending on the modem specification.
When the maximum number of characters of AT commands applicable for the modem is 255 or less, set the initialization command according to the modem.



AT command

The AT command is the command system to control modems and terminal adapters.
When the AT command is used, a personal computer can control modems.
For details of the AT command, refer to the user's manual for the modem used.



AT command settings

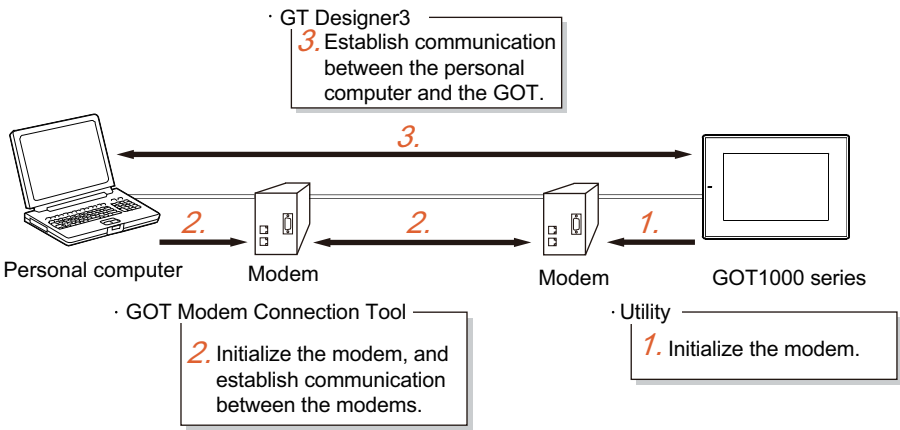
For communication between the GOT and a personal computer via modems, set the AT commands as shown below.

If the settings are incorrect, the GOT cannot communicate with the personal computer via modems.

- Command echo setting: Disabled (Setting example: E0)
- Result code setting: Enabled (Setting example: Q0)
- Display format of the result code: Word format (Setting example: V1)
- Extended result code setting: Displaying the transmission speed between modems (Setting example: W2)
- DTR signal control: Ignoring the DTR signal and always turning on the signal (Setting example: &D0)
- Flow control for a personal computer: Flow control disabled (Setting example: &K0)
- Data compression function setting: Data compression disabled (Setting example: %C0)
- S register setting: Setting the auto-answer to be enabled, and setting the number of rings required before the modem answers to one (Setting example: S0=1)

Establishing communication between modems (GOT Modem Connection Tool)

GOT Modem Connection Tool is the software to establish communication between modems by using a personal computer.
 To communicate with the GOT via modems, make sure to establish the communication between modems by using GOT Modem Connection Tool, and then connect GT Designer3 to the GOT.




(1) How to obtain software

- Obtain the software with either of the following methods.
- The software is stored in the GT Works3 CD-ROM.
The stored location of the software is written in ReadmeJ.txt. (File name: GTModemConnector.exe)
Copy the software on the hard disk of a personal computer, and use the software.
 - Download the software from the MITSUBISHI ELECTRIC FA NETWORK SERVICE (MELFANSweb) website.
(MELFANSweb website: <http://wwwf2.mitsubishielectric.co.jp/english/index.html>)

(2) Operating environment

The following shows the operating environment.

Item	Description
OS	Same as the operating environment of GT Designer3  2.1 Operating environment
Computer	Compatible with the operating environment for the above OS.
Hard disk space	2MB or more
Display color	High Color (16 bits) or more
Resolution	Resolution of 800 × 600 dots or more
Others	The mouse and keyboard must be compatible with the above OS. GT Designer3 Version1.06G or more must be installed.

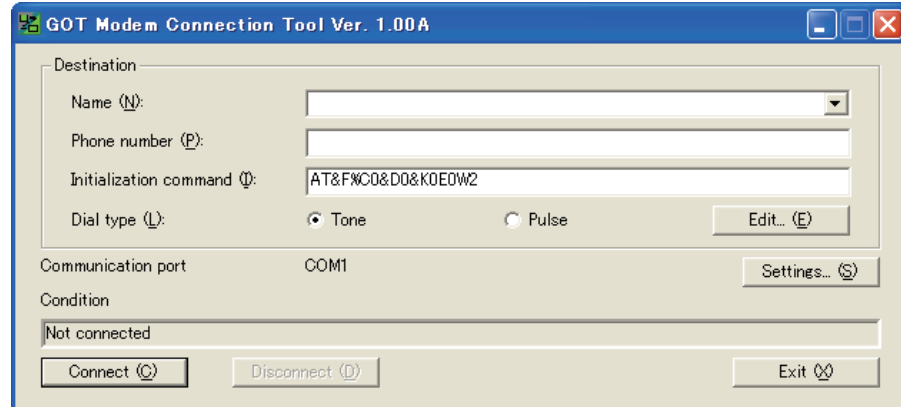
(3) How to start software






Installing GOT Modem Connection Tool is not required.
 Execute GTModemConnector.exe.

(4) Establishing communication between modems





Establish the communication between modems by the following procedure.

1. Execute GTModemConnector.exe, and start GOT Modem Connection Tool.
2. Refer to the following to set a destination to be connected to a modem.



Item	Description		Model
Destination	Set a destination to be connected to a modem. The data of the destination can be entered directly, or can be selected for the destination list.		
	Name	Displays the name of the destination registered in the destination list. Select the destination. By selecting the destination, a phone number, initialization command, and dial type registered in the destination list are displayed.	
	Phone number	When the destination is selected for [Name], the registered phone number is displayed. When entering the data of the destination directly, enter a phone number with only numerical values. No hyphen is required between the values.	
	Initialization command	When the destination is selected for [Name], the registered initialization command is displayed. When entering the data of the destination directly, set AT commands to initialize the modem. For details of AT commands, refer to the following.  User's manual for the modem used	
	Dial type	Select the dial type. • Tone: Select this item to dial using the touch-tone circuit. • Pulse: Select this item to dial using the dial circuit.	
	 Edit... (E)	Click this button to edit the destination list. Click this button to display the [Destination list] dialog box. Refer to the following to edit the destination.  (a) Destination list dialog box	
Communication port	Set the communication port to communicate with a personal computer via modems. Click the [Settings] button to display the [Communication settings] dialog box. Refer to the following to set the communication port.  (b) Communication settings dialog box		

(Continued to next page)

Item	Description	Model
Condition	Displays the connection status between modems.	
 Connect (C)	Click this button to connect to the modem set to [Destination].	
 Disconnect (D)	Click this button to disconnect the connection between modems.	
 Exit (X)	Click this button to exit GOT Modem Connection Tool.	



AT command

The AT command is the command system to control modems and terminal adapters. When the AT command is used, a personal computer can control modems. For details of the AT command, refer to the user's manual for the modem used.



AT command settings

For communication between the GOT and a personal computer via modems, set the AT commands as shown below.

If the settings are incorrect, the GOT cannot communicate with the personal computer via modems.

- Command echo setting: Disabled (Setting example: E0)
- Result code setting: Enabled (Setting example: Q0)
- Display format of the result code: Word format (Setting example: V1)
- Extended result code setting: Displaying the transmission speed between modems (Setting example: W2)
- DTR signal control: Ignoring the DTR signal and always turning on the signal (Setting example: &D0)
- Flow control for a personal computer: Flow control disabled (Setting example: &K0)
- Data compression function setting: Data compression disabled (Setting example: %C0)
- S register setting: Setting the auto-answer to be enabled, and setting the number of rings required before the modem answers to one (Setting example: S0=1)

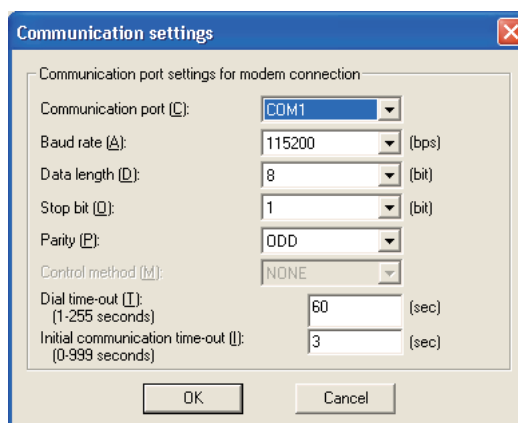
3. After setting the destination, click the [Connect] button.
The connection between modems starts.

(a) Destination list dialog box

Register a new destination, or change/delete a destination registered in the destination list.

Item	Description		Model
Destination	Set the destination to be registered in the destination list.		
	Name	Set a registered name for the destination.	
	Phone number	Set a phone number of the destination with only numerical values. (No hyphen is required.)	
	Initialization command	Set AT commands to initialize the modem. For details of AT commands, refer to the following. User's manual for the modem used	
	Click this button to copy the destination selected for [Destination list], and copy the selected destination to [Destination]. The selected destination is not deleted from [Destination list]. Use this button to utilize the registered destinations.		
	Click this button to display the destination selected for [Destination list]. The selected destination is deleted from [Destination list]. To restore the deleted destination in [Destination list], click the [Register] button, and register the destination again.		
	Click this button to register the settings entered in [Destination]. When the name entered in [Destination] exists in [Destination list], the settings are not registered.		
Destination list	Registered destinations are displayed in a list. Up to 500 data of the destination are registered.		
		Click this button to import a destination list. In the [Import destination list (Unicode Text file)] dialog box, select the destination list to be imported.	
		Click this button to export a destination list. In the [Export destination list (Unicode Text file)] dialog box, select the destination list to be exported.	
		Click this button to delete all the destinations registered in the destination list.	
		Click this button to delete the destination selected for the destination list.	

- (b) Communication settings dialog box
Set the communication method between a personal computer and a modem.



Item	Description	Model
Communication port	Set the communication port of a personal computer connected to the modem. (COM1 to COM63)	
Baud rate	Set the transmission speed. (9600/19200/38400/57600/115200)	
Data length	Set the data length. (7 bits/8 bits)	
Stop bit	Set the stop bit length. (1 bit/2 bits)	
Parity	Set the type to check parity. (EVEN/ODD/NONE)	
Control method	Displays the control method for the communication port of the personal computer. (1 to 255 seconds)	
Dial time-out (1-255 seconds)	Set the time required for the dial response to time out. (0 to 999 seconds)	
Initial communication time-out (0-999 seconds)	To use GX Works2 or GX Developer, set the time for the initial communication time-out. (0 to 999 seconds)	

POINT

- (1) **Transmission speed of modem**
Configure the setting of the transmission speed between modems same as that of the transmission speed between the personal computer/GOT and a modem.
If the settings of transmission speed differ, an error may occur at communication.
- (2) **Initial communication time-out setting**
To use the FA transparent function via modems, the initial communication between a PLC and GX Works2/GX Developer may take time, and a time-out may occur.
Set the time for the initial communication time-out longer than the set time.

(5) Precautions


- (a) Communication between the GOT and GT Designer3
For the communication between the GOT and GT Designer3, connect GT Designer3 to the GOT when the connection status is [Communicating] for GOT Modem Connection Tool.
If the communication between modems is not established by GOT Modem Connection Tool, the GOT cannot communicate with GT Designer3.
- (b) Unintended disconnection of the telephone circuit
When the telephone circuit is disconnected by the following statuses during communication using GOT Modem Connection Tool, the software cannot detect the disconnection.
- Telephone circuit disconnection with the bad connection
 - Telephone circuit disconnection by the GOT telephone circuit
- In the above cases, the connection status is [Communicating] for GOT Modem Connection Tool.
To connect to the telephone circuit again, click the [Disconnect] button, and then click the [Connect] button.
- (c) Destination list import
When importing a destination list, the existing destination list is overwritten.
To hold the existing destination list, export the list, and then import a new destination list.
- (d) Communication settings between the personal computer/GOT and a modem
Configure the communication setting between the personal computer and a modem, and the communication setting between the GOT and a modem before executing the communication between modems. Do not change the setting after the setting is configured.
The communication port setting for a modem cannot be changed after the communication between modems is established.
The communication setting on the personal computer and the GOT should be identical.
If the communication settings differ, an error may occur at communication.
- (e) Disconnection of the telephone circuit
When the communication with the GOT ends, make sure to disconnect the telephone circuit using GOT Modem Connection Tool or the GOT.
Otherwise, the communication between modems remains connected even if the communication between the GOT and GT Designer3 is disconnected.


■ Relevant settings

For communication between the GOT and a personal computer via modems, the relevant settings other than the specific settings are available.

The following shows the functions that are available by the relevant settings.

(1) GOT internal devices

 Appendix2 Supported Devices

Function	Setting item	Model
Notifying that a modem is during the initialization process	GS248.b0	
Notifying that the modem initialization process is completed	GS248.b1	
Notifying that the circuit connection status of a modem	GS248.b14	
Notifying that the modem initialization process is succeeded or failed	GS248.b15	
Notifying a transmission speed when connecting to the circuit	GS249	
Outputting initialization AT commands to a modem	GS448.b0	
Outputting AT commands for the circuit disconnection to a modem	GS448.b1	
Prohibiting reading data from the GOT via modems	GS448.b12	
Prohibiting writing data to the GOT via modems	GS448.b13	
Prohibiting the modem connection	GS448.b15	

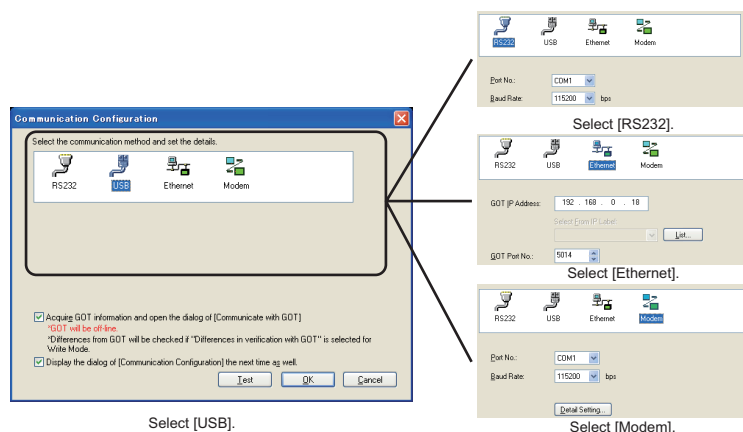
7.1.3 Setting communication





Configure the communication setting to transfer data from the personal computer to the GOT.

There are two ways to configure the setting; selecting [Communication Configuration] from the menu to configure the setting in the [Communication Configuration] dialog box, or selecting [Write to GOT], [Read form GOT], or [Verify GOT] from the menu to display the [Communication Configuration] dialog box and configure the setting.



■ Communication settings

1. Perform either of the following operation.
 - Select [Communication] → [Communication Configuration] from the menu.
 - Select [Communication] → [Write to GOT], [Read form GOT], or [Verify GOT] from the menu.
2. The [Communication Configuration] dialog box appears.



Item	Description
Connection Method	Select the connection method of the personal computer and the GOT. If [RS232], [Ethernet] ^{*1} , or [Modem] is selected, the detail setting is required.
Port No.	Select the communication port of the personal computer connected to the GOT. (Configure this setting when [RS232], or [Modem] is selected.)
Baud Rate	Set the transmission speed to transfer data to the GOT. Set the rate suitable for the personal computer. (Configure this setting when [RS232] or [Modem] is selected.) (Setting range: 115200bps, 57600bps, 38400bps, 19200bps, 9600bps)
	Display the [Detail Setting] dialog box to configure the communication setting between the personal computer and the modem. (Configure this setting when [Modem] is selected.)  ■Detail Setting dialog box
GOT IP Address	Enter the IP address of the GOT. (Enter it when [Ethernet] is selected.)
	Displays the [IP Label List] dialog box to select the IP address from the list of the registered IP address of the GOT. (Configure this setting when [Ethernet] is selected.) For details of the [IP Label List] dialog box, refer to the following.  ■IP Label List
GOT Port No.	Enter the port No. to connect with the GOT. (Enter it when [Ethernet] is selected.)
Acquire GOT information and open the dialog of [Communicate with GOT]	When [Write to GOT], [Read form GOT], or [Verify GOT] is selected from the menu, set whether the information of the connected GOT is obtained or not before the [Communicate with GOT] dialog box is opened.
Display the dialog of [Communication Configuration] the next time as well.	When [Write to GOT], [Read form GOT], or [Verify GOT] is selected from the menu, set display/non-display of the [Communication Configuration] dialog box. The setting can be made when the [Communication Configuration] dialog box is displayed by selecting [Write to GOT], [Read form GOT], or [Verify GOT] from the menu. To display the dialog after the setting of non-display, select [Tools] → [Option] from the menu to display the [Options] dialog box and configure the display setting.

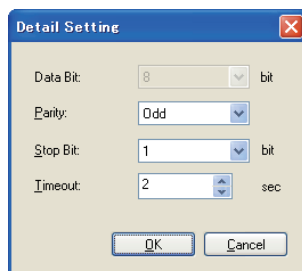
(Continued to next page)

Item	Description
	Performs the Test with the GOT. When [RS232], [USB], or [Modem] is selected, the test is started. When [Ethernet] is selected, the [Test] dialog box appears. For details of the [Test] dialog box, refer to the following.  ■Test

- *1 In the Ethernet transfer, only project data write/read, special data write, and resource data read can be performed.
 *2 For the data transfer via modems, only writing/reading project data and resource data to/from the GOT is available.

■ Detail Setting dialog box

To connect a personal computer to the GOT via modems, refer to the following to configure the communication settings between the personal computer and the GOT.



Item	Description
Parity	Set the type to check parity. (Odd/Even/None)
Stop Bit	Set the stop bit length. (1 bit/2 bits)
Timeout	Set the time required for communication to time out. (1 to 90 seconds)

POINT

(1) Transmission speed of modem

Configure the setting of the transmission speed between modems same as that of the transmission speed between the personal computer/GOT and a modem.

If the settings of transmission speed differ, an error may occur at communication.

(2) Communication setting when using FA transparent function

When using the FA transparent function for communication via modems, the communication setting differs according to a controller.

Configure the setting as shown below.

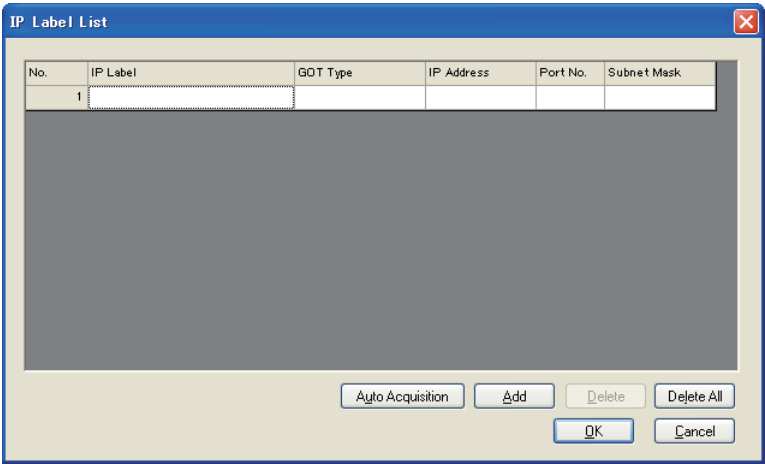
Controller connected to GOT	Setting item	Setting target				
		GT Designer3	GX Works2	GX Developer	GOT Modem Connection Tool	GOT controller setting
QCPU	Data Bit	8bit				
	Parity	Odd				
	Stop Bit	1bit				
FXCPU	Data Bit	8bit	7bit		8bit	
	Parity	None	Even		None	
	Stop Bit	1bit				

■
 IP Label List

In the Ethernet communication, the IP address can be selected from that of GOTs registered in the [IP Label List] dialog box.

Register the IP address with the following procedure.

- Click the [List] button in the [Communication Configuration] dialog box.
- The [IP Label List] dialog box appears.



Item	Description
IP Label	Enter the GOT name.
GOT Type	Select the GOT type.
IP Address	Set the IP address.
Port No.	Set the port No. (Setting range: 1024 to 65534)
Subnet Mask	Set the subnet mask.
<div>Auto Acquisition</div> *1	Obtains automatically GOT type, IP address, GOT port No., and subnet mask of GOTs on the network. Obtaining processing of the GOT is stopped when search time (2 seconds) is over, or the list reaches its registration capacity (256). The obtained GOT is registered in the list with the IP Label [New GOT + number].
<div>Add</div>	Adds a line to be registered to the list.
<div>Delete</div>	Deletes the settings in the selected line.
<div>Delete All</div>	Deletes the settings in all lines.

*1 Only the GT16 can use this function.

POINT

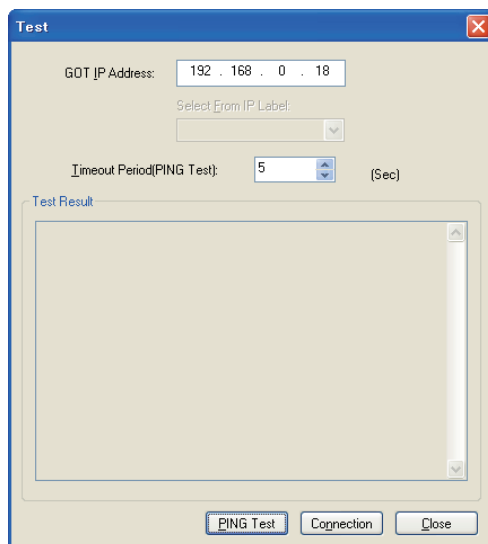
- IP Label**
Duplicate IP Labels cannot be registered.
- Auto Acquisition**
To use the auto acquisition, use the same subnet mask to both of the personal computer and GOT. The IP address of the GOT on other networks cannot be automatically obtained.
- Using the project data at another personal computer**
The entered IP label and IP address are not saved in the project data. They are saved in the personal computer.
To use the project data at another personal computer, enter the IP label and IP address again.
- Setting the firewall**
When the port for the Ethernet communication is blocked by the firewall, a communication error occurs. Disable the firewall or configure the setting to open the port.



Test

When performing the communication test of the Ethernet communication, the communication test method can be selected from [PING Test] and [Connection] in the [Test] dialog box.

Perform the test with the following procedure.

1. Click the [Test] button in the [Communication Configuration] dialog box.
2. The [Test] dialog box appears. Click the [PING Test] or [Connection] button to start the communication test. After the communication test is completed, the test result is displayed.



Item	Description
GOT IP Address	Enter the IP address of the GOT.
Select From IP Label	When the IP address is registered in [IP Label List], select it from [IP Label List]. Selection cannot be made when no IP address is registered.
Timeout Period (PING Test)	Set the timeout interval of [PING Test]. (Setting range: 1 to 30 seconds)
Test Result	The result of the communication test is displayed. When [PING Test] or [Connection] is performed again, the result of the previous test is reset.
	Performs the communication test by the specified IP address and PING.
	Checks if the device located at the specified IP address is GOT1000 series.

POINT

Test of the RS232 and USB

Click the [Test] button in the [Communicate with GOT] dialog box to start the communication test. After the communication test is completed, the test result is displayed.

7.1.4 Writing and installing on GOT

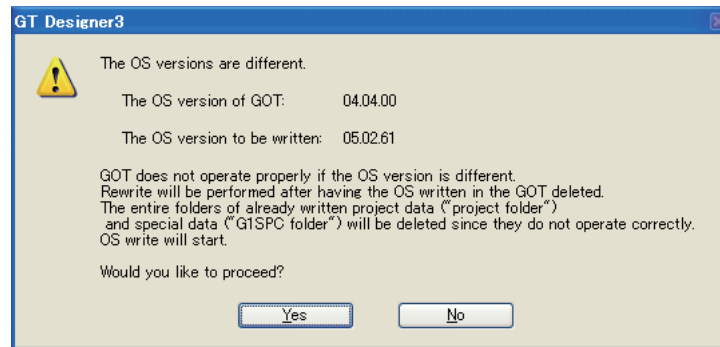
■ Writing project data and installing OS (Personal computer to GOT)

Write the project data and install the OS on the GOT from GT Designer3.

POINT

(1) When the OS version in the GOT differs from the one of GT Designer3

The following dialog box appears when the OS version of GT Designer3 differs from the one in the GOT.



The project data does not operate properly when the OS version of GT Designer3 differs from the one in the GOT. Therefore, click the [Yes] button to install the OS.

When installing the OS, the OS in the GOT is deleted once before the OS of GT Designer3 is installed. Therefore, the OS file types and number of OSs in the GOT may change. (When the OS is downgraded, unsupported OSs are deleted.)

To stop the installation, click the [No] button.

(2) Precautions for writing the project data

Do not perform the following operations while project data is being written.

- Power off the GOT.
- Press the reset button of the GOT.
- Disconnect the communication cable.
- Turning off the personal computer

Performing the operations listed above during the project data write may stop writing. If writing fails, use the utilities function of the GOT to delete the project data, and then write the project data again.

(3) Execution of parameter verification (iQ Works only)

Before writing a project data to the GOT, execute [Verification of System Configuration Information and Parameters] by MELSOFT Navigator to check whether the system configuration diagram and the GT Designer3 controller setting are matched.

When the system configuration diagram does not match the GT Designer3 controller setting, the GOT may not monitor a controller correctly.

For MELSOFT Navigator operation, refer to the following.

 [Help for MELSOFT Navigator](#)

(1) Writing the project data and installing the OS (Personal computer to GOT)

The following explains how to write the project data and install the OS.

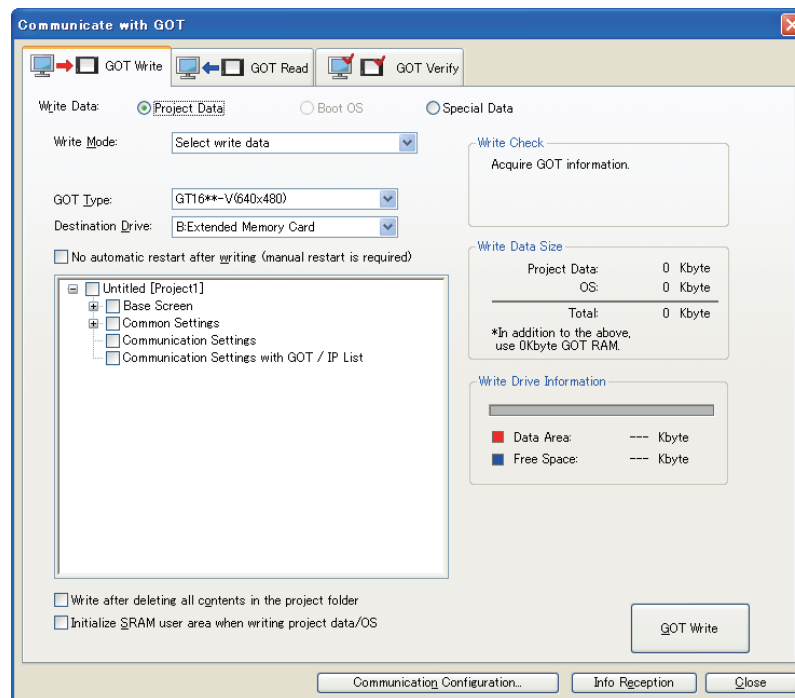
POINT

To make a communication between the GOT and PLC

The installation of the communication driver and writing of the communication settings are required.
For the installation the communication driver and writing of the communication settings, refer to the following.



☞ GOT1000 Series Connection Manual for GT Works3 and a controller used

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.
☞ 7.1.3 Setting communication
2. Select [Communication] → [Write to GOT] from the menu.
When system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the project data cannot be written to the GOT.
When errors exist in the system label settings, check the settings, and remove the errors.
3. The [GOT Write] tab of the [Communicate with GOT] dialog box appears.
Configure the setting for the data written to the GOT by referring to the following.



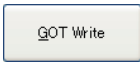


Item	Description
Write Data	<p>Select the data type to be written to the GOT.</p> <ul style="list-style-type: none"> • Project Data, OS: Select this item when writing or installing the project data, standard monitor OS, communication driver, extended function OS, or option OS. • Boot OS: Select this item when writing the Boot OS. • Special Data: Select this item when writing the intelligent module monitor data, Q motion monitor data, or servo amplifier monitor data.

(Continued to next page)

Item	Description
Write Mode	<p>Select the mode to write the project data and install the OS on the GOT.</p> <p>The display of the [Tree view] check box differs depending on the selected [Write Mode].</p> <ul style="list-style-type: none"> • Difference in verification with GOT For details, refer to the following.  (2) Writing the changed project data (Personal computer to GOT) • Difference after the previous write For details, refer to the following.  (2) Writing the changed project data (Personal computer to GOT) • Project data OS batch write All the project data and OS required by the project data to be written are selected. (Selected items cannot be changed.) • Select write data As no checkbox is selected, select the project data to be written and the OS.
Include required OS in the project data	<p>When [Difference in verification with GOT] or [Difference after the previous write] is selected in [Write Mode], select this item to install the OS required by the extracted changed data.</p> <p>The setting cannot be made when [Project data OS batch write] or [Select write data] is selected.</p>
GOT Type	<p>The GOT type set in [GOT Type Setting] for project data is displayed.</p> <p>When [GT16**-V(640x480)] is selected for the GOT type, select any of the followings.</p> <ul style="list-style-type: none"> • GT16**-V(640x480): The utility screen, key window, extended function screen, and option function screen are displayed in standard. (Color) • GT16**-VNB*(640x480): The utility screen, key window, extended function screen, and option function screen are displayed in high contrast. (Monochrome) (The GT1672-VN and GT1662-VN are recommended for setting.) <p>When [GT15**-V(640x480)] is selected for the GOT type, select any of the followings.</p> <ul style="list-style-type: none"> • GT15**-V(640x480): The utility screen, key window, extended function screen, and option function screen are displayed in standard. (Color) • GT15**-VNB*(640x480): The utility screen, key window, extended function screen, and option function screen are displayed in high contrast. (Monochrome) (The GT1575-VN, GT1572-VN, and GT1562-VN are recommended for setting.)
Destination Drive	<p>Select the GOT drive in which the project data and OS are to be written or installed.</p> <ul style="list-style-type: none"> • For GT16 and GT15 Select the drive from [A:Standard CF Card], [B:Extended Memory Card], and [C:Built-in Flash Memory]. • For GT11 and GT10 The drive is fixed to [C:Built-in Flash Memory].
No automatic restart after write (manual restart is required)	<p>Prevents the automatic restart of the GOT after the project data is written to the GOT. (The setting can be made only if the GOT is connected to the personal computer with [Ethernet].)</p> <p>As the GOT is in the restart standby status after writing, restart the GOT manually.</p>
Tree view	<p>When the personal computer and the GOT are connected with [Ethernet], the project data is displayed in the tree.</p> <p>When the personal computer and the GOT are connected with [RS232] or [USB], the project data, Standard monitor OS, Communication driver, Extended function OS, and Option OS is displayed in the tree.</p> <p>The OS cannot be installed when a drive other than [C:Built-in Flash Memory] is selected in [Destination Drive]. In this case, only the project data is displayed in the tree.</p>
Write after deleting all contents in the project folder	<p>Select this item to delete all the data in the project folder before the data is written to the GOT. Valid if [Project data OS batch write] or [Select write data] is selected in [Write Mode].</p> <p>This item is always selected when [Project data OS batch write] is selected, and the setting can be changed when [Select write data] is selected.</p>
Initialize SRAM user area when writing project data/OS	Select this item to initialize the SRAM user area when data is written to the GOT.
Write Check	The writing and installation status of the GOT is displayed.
Write Data Size	The size of the data to be written and installed on the GOT is displayed.
Write Drive Information	<p>The information of the drive specified in [Destination Drive] is displayed.</p> <p>In the graph, the data area is shown in red and the free space is shown in blue.</p>

(Continued to next page)

Item	Description
	Displays the [Communication Configuration] dialog box.
	Communicates with the GOT to obtain the information. The obtained information is displayed in [Write Check].
	Writes the project data and installs the OS on the GOT.

POINT

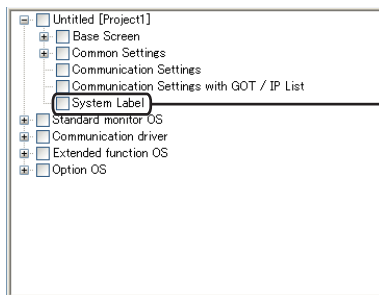
Precautions when selecting write data (iQ Works only)

When system labels are written and [System Label] is cleared for target data, system labels are deleted from a target project, and the labels are changed to devices.

The system labels changed to devices cannot be restored.

To hold the system label settings, do not clear [System Label] for the write target data.

When clearing [System Label] for the write target data, check the device setting.



When the box is cleared, system labels are deleted from the project.

4. Click the [GOT Write] button.

When installing the OS, the dialog box appears to check the OS version.

Check the OS version already installed on the GOT and the version which is to be installed from GT Designer3.

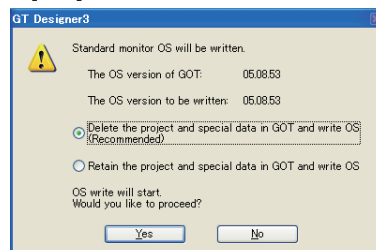
At the OS installation, the user can select whether to hold or delete the project data and special data in the GOT when the following standard monitor OS is installed on the GOT.

- Standard monitor OS with version 05.08.**

When installing the OS on the GOT with OS version 05.08.00 or later, the user can select whether to hold or delete the project data and special data in the GOT.

To hold the project data and special data, select [Retain the project and special data in GOT and write OS (The functions that the OS does not support will no longer be available)].

To install the OS, click the [Yes] button. To cancel the OS installation, click the [No] button.



When the OS version in the GOT is the same as the one of GT Designer3

HINT

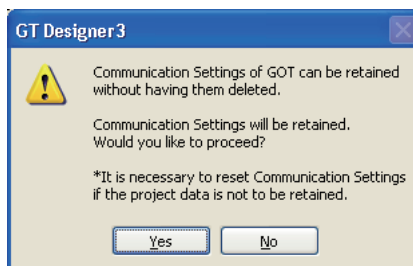
Holding the project data and special data

To install only the OS, without deleting or changing the project data and special data, select [Retain the project and special data in GOT and write OS (The functions that the OS does not support will no longer be available)].

5. When [Delete the project and special data in GOT and write OS (Recommended)] is selected in the step 4. without selecting [Communication Settings] for the data to be written in the step 3., the following dialog box appears.

To hold the controller setting of the GOT, click the [Yes] button.

To delete the controller setting of the GOT, click the [No] button.



POINT

(1) GOT that cannot hold the project data and special data

At the OS installation, the user cannot select whether to hold or delete the project data and special data in the GOT when the following standard monitor OS is installed on the GOT.

- Standard monitor OS with version 05.07.** or earlier
- Standard monitor OS with version 05.09.**

When the standard monitor OS above is installed, the project data and special data are all deleted.

It is recommended to back up the project data and special data as necessary.

☞ 7.1.5 Reading from GOT

(2) Holding the controller setting (at OS installation via Ethernet)

At the OS installation via Ethernet, the GOT may not communicate with GT Designer3 when the controller setting of the GOT is deleted or changed.

Check the controller setting to be written in the GOT, and then delete or change the controller setting of the GOT.

6. The OS is started to be installed.
After the installation is completed, the GOT automatically restarts.

(2) Writing the changed project data (Personal computer to GOT)

Use of this function during project data debugging or editing, only the screens and settings changed since the last write can be selected. The write time can be reduced by writing only the selected items.

1. Select [Communication] → [Communication Configuration] from the menu to configure the Communication Configuration in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.

☞ 7.1.3 Setting communication

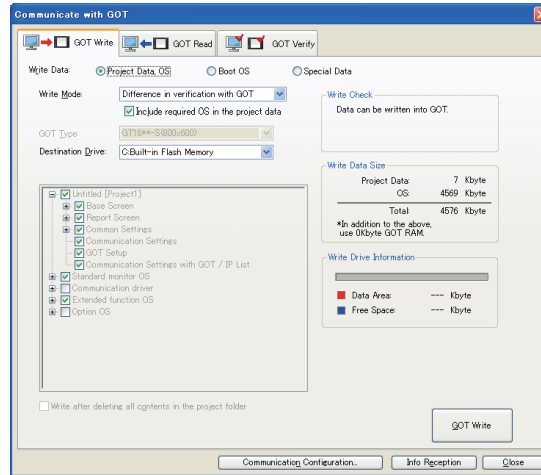
2. Select [Communication] → [Write to GOT] from the menu.
When the If errors exist in the system label settings, the project data cannot be written to the GOT.
When errors exist in the system label settings, check the settings, and remove the errors.setting for using system labels is configured, the system label update/check is executed.
3. As the [GOT Write] tab of the [Communicate with GOT] dialog box appears, select [Destination Drive] and set [Write Mode] as follows.
Select either of [Difference in verification with GOT] or [Difference after the previous write], since the difference to be extracted varies depending on [Write Mode].
- Difference in verification with GOT
Only the difference between the project data written in the GOT and that in GT Designer3 is written.
The check box of the data changed from the project data written in the GOT is selected in the tree.
 - Difference after the previous write
Only the difference between the project data previously written and that of GT Designer3 is written.
The check box of the data changed from the project data written previously is selected in the tree.

Even if either [Write Mode] is selected, the check boxes of the changed data and the OS required by the project data to be written are selected.

To prevent the OS from being installed, clear [Include required OS in the project data] to clear the selected OS.

For the setting items in the [Communicate with GOT] dialog box, refer to the following.

☞ (1) Writing the project data and installing the OS (Personal computer to GOT)



When [Difference in verification with GOT] is selected in [Write Mode].

4. Click the [GOT Write] button to start writing the project data and installing the required OS. If dialog boxes appear, refer to the following.

☞ (1) Writing the project data and installing the OS (Personal computer to GOT)

After the write and installation are completed, the GOT automatically restarts.

POINT

Writing the difference

The write history to be the target of [Difference after the previous write] is the write performed from the startup to the exit of GT Designer3.

The previous write history is deleted at the exit of GT Designer3. To write only the difference at the next startup, perform [Difference in verification with GOT].

■ Installing the OS (Personal computer to GOT)

When the OS is required for a function which is not included in the project data, select and install only the required OS on the GOT from GT Designer3.

The installing method differs depending on the GOT type.

POINT

(1) Standard monitor OS is not installed on the GT16, 15, and GT11.

If the standard monitor OS is not installed on the GT16, GT15, and GT11, depending on the Boot OS version, only the standard monitor OS may be installed on the GT16, GT15, and GT11 from GT Designer3. For such case, install the communication driver and write the optional function after installing the standard monitor OS.

(2) Standard monitor OS and Communication driver of the GOT

The standard monitor OS and communication driver are installed on the GT10 by default.

Only the communication driver can be installed from GT Designer3.

(3) Data written in the GOT

At the OS installation, the user can select whether to hold or delete the project data and special data in the GOT when the following standard monitor OS is installed on the GOT.

- Standard monitor OS with version 05.08.**

When installing the standard monitor OS on the GOT with OS version 05.08.00 or later, the user can select whether to hold or delete the project data and special data in the GOT.

When deleting the project data and special data, it is recommended to back up the project data and special data before the standard monitor OS installation.

Read the project data to a personal computer, CF card, or USB memory.

Read the special data to a CF card or USB memory.

The special data cannot be read to a personal computer.

For reading each data, refer to the following.

 7.1.5 Reading from GOT

(4) Precautions for installing the OS

Once the OS is started to be installed, the processing cannot be interrupted.

Do not perform the following operations during the OS installation, as it may disable the GOT from operating.

- Turning off the GOT.
- Pressing the reset button of the GOT.
- Disconnecting the communication cable.
- Turning off the personal computer.

If the GOT has been disabled from operating by any of the above operations during the OS installation, install the OS again in the following procedure.

1. Turn off the GOT.
2. When the CF card has not been set, proceed to the step 3.
When the CF card has been set, turn off the CF card access switch, and remove the CF card.
While the CF card access LED is on, do not remove the CF card or turn off the GOT.
3. Turn on the GOT.
4. As the [Please install the Standard OS] message appears on the GOT, install the standard monitor OS from GT Designer3.
If the above message does not appear, please contact a service representative.
5. After the standard monitor OS installation is completed, the GOT automatically restarts.

(1) Installing the OS (Standard monitor OS, communication driver, extended function OS, and option OS) to the G16, G15, and G11

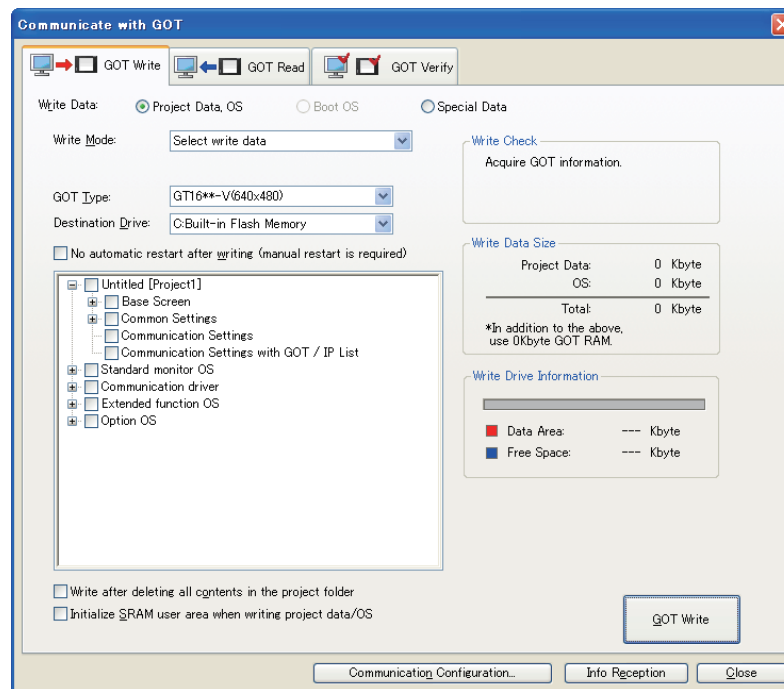
The following shows how to install the OS on the GT16, GT15, and GT11.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.

For details of the [Communication Configuration] dialog box, refer to the following.



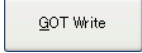
☞ 7.1.3 Setting communication

2. Select [Communication] → [Write to GOT] from the menu.
As the [Communicate with GOT] dialog box appears, select [Destination Drive] and set [Include required OS in the project data] to [Select write data].
3. Select the OS required to be installed from the tree.



Item	Description
Write Data	Select the type of the data to be written to the GOT. Select [Project Data, OS].
Write Mode	Select the mode to install the OS on the GOT. For details, refer to the following. ☞ ■Writing project data and installing OS (Personal computer to GOT)
Destination Drive	Select the GOT drive in which the OS is to be installed.
Tree view	The project data, Standard monitor OS, Communication driver, Extended function OS, and Option OS are displayed in the tree.
Write Check	The writing and installation status of the GOT is displayed.
Write Data Size	The size of the data to be written to the GOT is displayed.
Write Drive Information	The information of [C-Built-in Flash Memory] is displayed. In the graph, the data area is shown in red and the free space is shown in blue.
Write after deleting all contents in the project folder	Select this item to delete all the data in the project folder before the data is written to the GOT. Valid if [Project data OS batch write] or [Select write data] is selected in [Write Mode]. This item is always selected when [Project data OS batch write] is selected, and the setting can be changed when [Select write data] is selected.
Initialize SRAM user area when writing project data/OS	Select this item to initialize the SRAM user area when data is written to the GOT.

(Continued to next page)

Item	Description
	Displays the [Communication Configuration] dialog box.
	Communicates with the GOT to obtain the information. The obtained information is displayed in [Write Check].
	Installs the OS on the GOT.

4. Click the [GOT Write] button.
The OS is started to be installed.
If dialog boxes appear, refer to the following.



■Writing project data and installing OS (Personal computer to GOT)

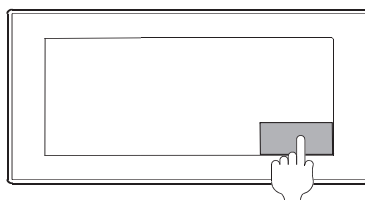
(1) Writing the project data and installing the OS (Personal computer to GOT)

After the installation is completed, the GOT automatically restarts.

(2) Installing the OS (Standard monitor OS and communication driver) to the GT10

The following shows how to install the OS on the GT10.

1. Turn on the power while the down-right corner of the display on the GT10 is touched.



Touch the bottom-right

2. The OS installation screen appears.



POINT

OS installation screen

The OS can be installed on the following GOT from GT Designer3 without displaying the OS installation screen.

Model	Boot OS version
GT105□, GT104□	Applicable from the first version
GT1030, GT1020	Boot OS version F or later

For how to check the Boot OS version, refer to the following.



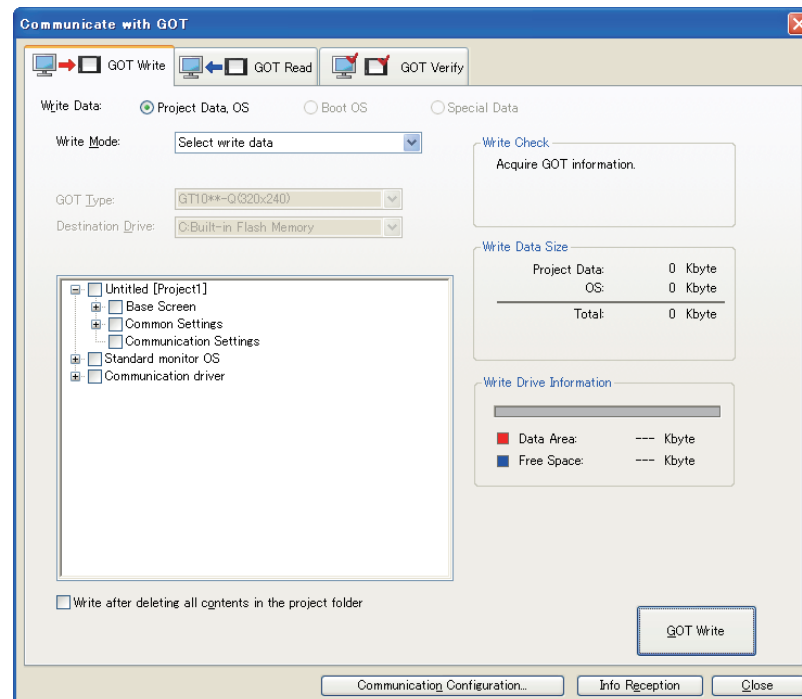
GT10 User's Manual

3. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.

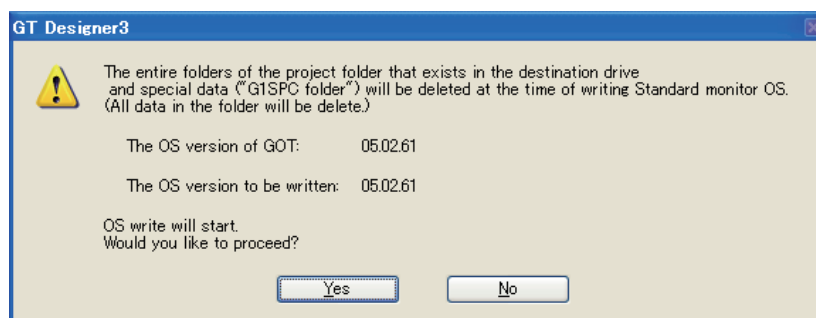


7.1.3 Setting communication

4. Select [Communication] → [Write to GOT] from the menu.
As the [GOT Write] tab of the [Communicate with GOT] dialog box is displayed, set [Write Mode] to [Select write data].
For the setting items in the [Communicate with GOT] dialog box, refer to the following.
 - (1) Installing the OS (Standard monitor OS, communication driver, extended function OS, and option OS) to the G16, G15, and G11
5. Select the OS required to be installed from the tree.



6. Click the [GOT Write] button.
Check the OS version already installed on the GOT and the version which is to be installed from GT Designer3.
To install, click the [Yes] button.
To cancel the installation, click the [No] button.



7. The OS is started to be installed.
After the installation is completed, the GOT automatically restarts.

POINT

Selection of the standard monitor OS

It takes a long time to install the entire standard monitor OS of the GT10.
Select and install the necessary standard monitor OS.

■ Installing Boot OS (Personal computer to GOT)



The Boot OS is installed on the GOT by default.

However, the Boot OS needs to be upgraded (installed) to use the function unsupported by the Boot OS version in the GOT.

To return the GOT to the factory-shipped condition, install the Boot OS to initialize it.

POINT

(1) Installing the Boot OS

The Boot OS may not be installed if the GOT is in its factory-shipped condition.
Install the standard monitor OS before starting the Boot OS installation.

(2) Overwriting the Boot OS in the GOT with the older version

The Boot OS cannot be overwritten with the older version.
During the Boot OS installation, the Boot OS version in the GOT is compared with the one to be installed for check. If the latter one is older, the installation will be discontinued.

(3) Data written in the GOT

When the Boot OS is installed, the project data, OS (standard monitor OS, communication driver, extended function OS, option OS), and special data in the GOT are all deleted.

If the project data backup is necessary, read the project data to a personal computer, CF card, or USB memory before installing the Boot OS.

The special data cannot be read to a personal computer: read the special data to a CF card or USB memory.
For reading each data, refer to the following.

 7.1.5 Reading from GOT

(4) Precautions when installing the Boot OS


Once the Boot OS is started to be installed, it cannot be interrupted.

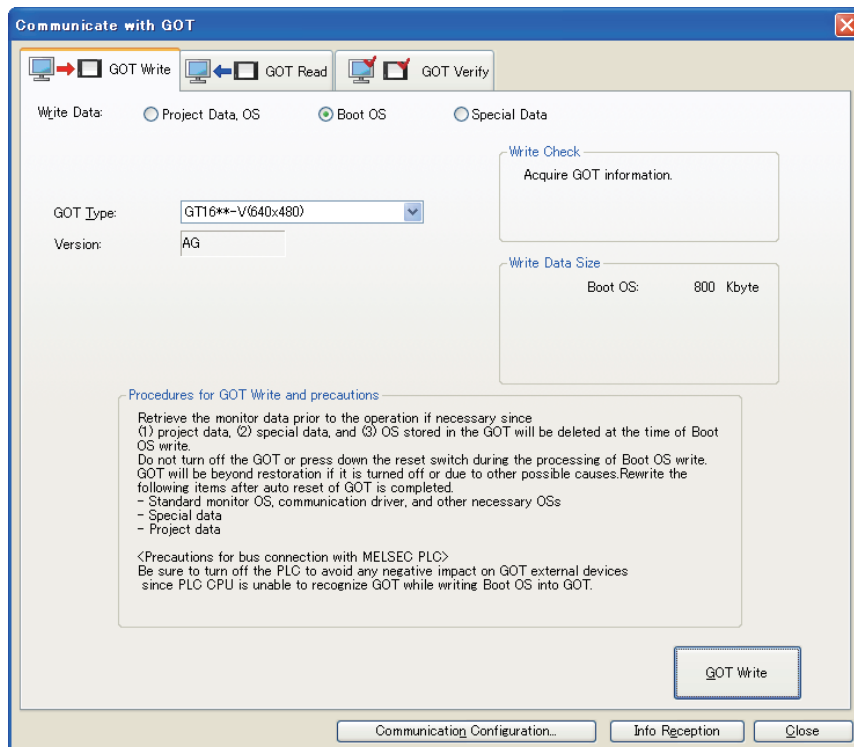
Do not perform the following operations during the Boot OS installation, as it may disable the GOT from operating.

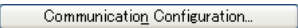
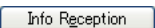
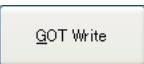
- Turning off the GOT.
- Pressing the reset button of the GOT.
- Disconnecting the communication cable.
- Turning off the personal computer.

If the GOT does not operate, please contact a service representative.

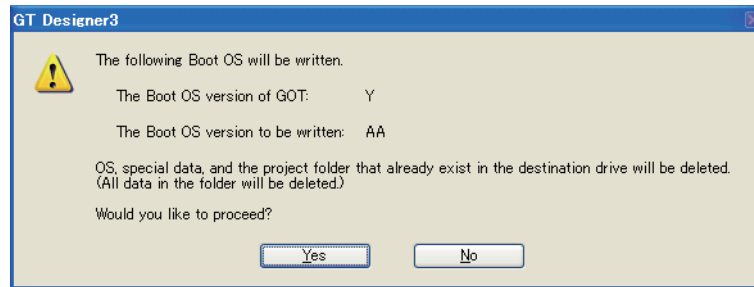
The following shows how to install the Boot OS.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.
 7.1.3 Setting communication
2. Select [Communication] → [Write to GOT] from the menu.
The [GOT Write] tab of the [Communicate with GOT] dialog box appears.
3. Select [Boot OS] in [Write Data].
4. Check [Procedures for GOT Write and precautions] and click the [GOT Write] button.



Item	Description
Write Data	Select the type of the data to be written to the GOT. Select [BootOS].
GOT Type	Select the GOT type of the installation destination.
Version	Select the version of the Boot OS to be installed on the GOT.
Procedures for GOT Write and precautions	The procedure and precautions for installing the Boot OS is displayed. Make sure to read them before installing.
Write Check	The installation status of the GOT is displayed.
Write Data Size	The size of the Boot OS to be installed on the GOT is displayed.
	Displays the [Communication Configuration] dialog box.
	Communicates with the GOT to obtain the information. The obtained information is displayed in [Write Check].
	Installs the Boot OS to the GOT.

5. Check the Boot OS version already installed on the GOT and the one which is to be installed from GT Designer3.
To install, click the [Yes] button.
To cancel the installation, click the [No] button.



6. The Boot OS is started to be installed.
After the installation is completed, the GOT automatically restarts. Then, write the project data and special data, and install the OS (standard monitor OS, communication driver, extended function OS, option OS) to the GOT.

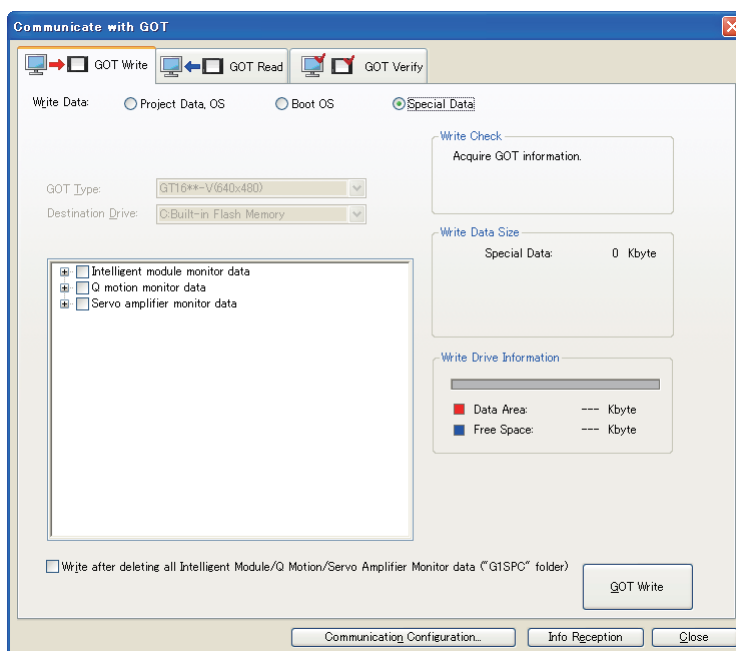
■ Writing special data (Personal computer to GOT)

The following shows how to write the special data.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.

7.1.3 Setting communication

2. Select [Communication] → [Write to GOT] from the menu.
As the [GOT Write] tab of the [Communicate with GOT] dialog box appears, select [Special Data] in [Write Data].
3. Select the special data to be written from the tree, and click the [GOT Write] button.



Item	Description
Write Data	Select the type of the data to be written to the GOT. Select [Special Data].
Tree view	The Intelligent module monitor data, Q motion monitor data, and Servo amplifier monitor data is displayed in the tree view. Select the data to be written to the GOT.
Write after deleting all Intelligent Module/Q Motion/Servo Amplifier Monitor data ("G1SPC" folder)	The intelligent module/Q motion/servo amplifier monitor (GISPC folder) are deleted before writing data to the GOT.
Write Check	The writing status of the GOT is displayed.
Write Data Size	The size of the data to be written to the GOT is displayed.
Write Drive Information	The information of the drive specified in [Destination Drive] is displayed. In the graph, the free space is shown in red and the data area is shown in blue.
	Displays the [Communication Configuration] dialog box.
	Communicates with the GOT to obtain the information. The obtained information is displayed in [Write Check].
	Writes the special data to the GOT.

POINT

Installing the option OS

When the special data is used, the special data and option OS must be written or installed.
Write both special data to be used and option OS.

7.1.5 Reading from GOT

■ Reading project data (GOT to personal computer)

When the Boot OS or OS is installed on the GOT, the project data in the GOT are deleted.
To back up the project data, perform read and save the project data in the GOT once into the hard disk of the personal computer or other.

POINT

When the OS version in the GOT differs from the one of GT Designer3

When the OS version of GT Designer3 differs from the one in the GOT, the read will be performed differently as shown below.

(1) When the OS major version in the GOT is older than the one of GT Designer3

The project data can be read by GT Designer3 without any problem.

However, the OS information of the project data will be changed to the version of GT Designer3 in which the project data has been read.

(2) When the OS major version in the GOT is newer than the one of GT Designer3

The project data cannot be opened on the GT Designer3, but can be read as the GOT1000 series binary file (*.G1).

To open this project data, GT Designer3 of the same OS version as the one in the GOT or newer is required.

(3) When the OS minor version in the GOT is newer than the one of GT Designer3 (When the major versions are the same)

The project data can be read and opened on GT Designer3. However, note that the unsupported functions are deleted.

It is recommended to read the project data again using GT Designer3 of the same OS version as the one in the GOT or newer

For how to check the OS version in the GOT, refer to the following.



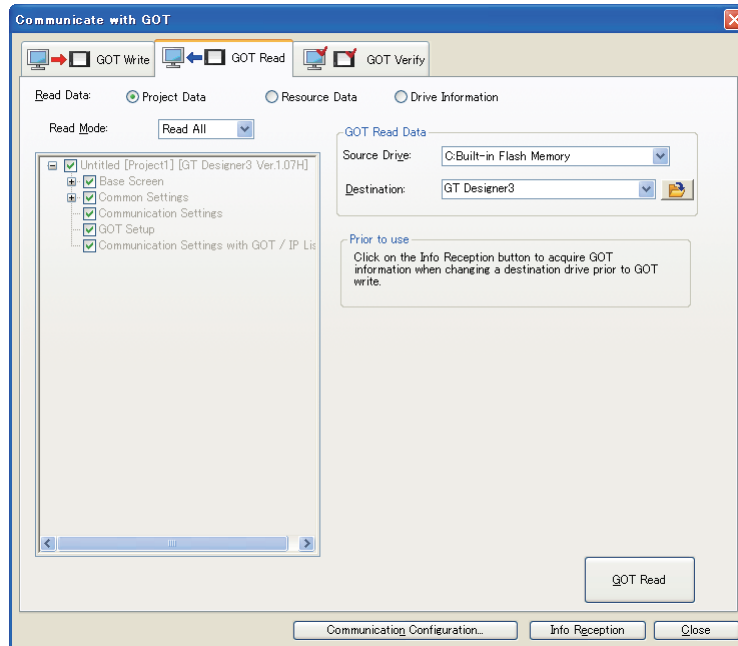
User's Manual for the GOT used

The following shows how to read the project data.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.

☞ 7.1.3 Setting communication

2. Select [Communication] → [Read from GOT] from the menu.
The [GOT Read] tab of the [Communicate with GOT] dialog box appears.



Item	Description
Read Data	Select the type of the data to be read to the GOT. Select [Project Data].
Read Mode	Select the mode to read. When [Read All] is selected, all the data are selected. (Selected items cannot be changed.) When [Preference] is selected, the data to be read are selected in the tree.
Tree view	The project data of the GOT is displayed.
GOT Read Data	In [Source Drive], select the drive to be read. In [Destination], set the save destination of the read data.
Prior to use	Precautions before using are displayed.
Communication Configuration...	Displays the [Communication Configuration] dialog box.
Info Reception	Communicates with the GOT to obtain the information. When the project data is not displayed in the tree, click the [Info Reception] button to obtain the project data information from the GOT.
GOT Write	Reads the project data from the GOT.

POINT

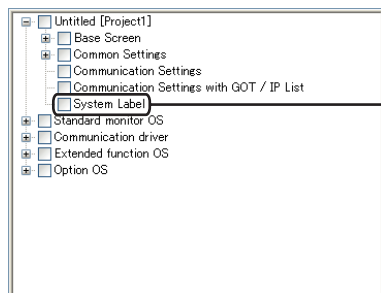
Precautions when selecting read data (iQ Works only)

When system labels are read and [System Label] is cleared for target data, system labels are deleted from a target project, and the labels are changed to devices.

The system labels changed to devices cannot be restored.

To hold the system label settings, do not clear [System Label] for the read target data.

When clearing [System Label] for the read target data, check the device setting.



When the box is cleared, system labels are deleted from the project.

3. In [GOT Read Data], select [Source Drive] and set [Destination].
4. Select [Read Mode] to select the project data to be read in the tree, and click the [GOT Read] button.
5. The project data is started to be read.

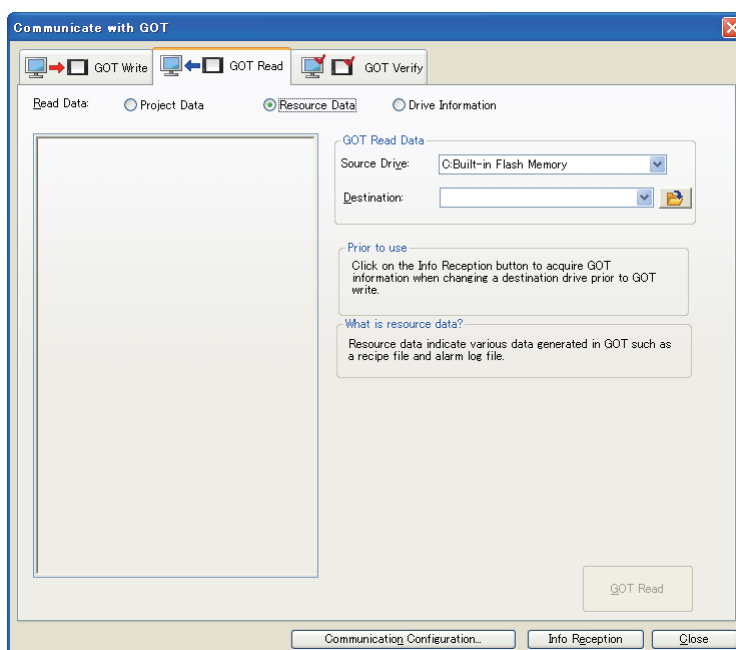
■ Reading resource data (GOT to personal computer)

The following shows how to read the resource data.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.

☞ 7.1.3 Setting communication

2. Select [Communication] → [Read from GOT] from the menu.
The [GOT Read] tab of the [Communicate with GOT] dialog box appears.
3. Select [Resource Data] in [Read Data].



Item	Description
Read Data	Select the type of the data to be read to the GOT. Select [Resource Data].
Tree view	The resource data of the GOT is displayed.
GOT Read Data	In [Source Drive], select the drive to be read. In [Destination], select the save destination of the read data.
Prior to use	Precautions before using are displayed.
What is resource data?	The explanation of the resource data is displayed.
	Displays the [Communication Configuration] dialog box.
	Communicates with the GOT to obtain the information. When the resource data is not displayed in the tree, click the [Info Reception] button to obtain the resource data information from the GOT.
	Reads the resource data from the GOT.

4. In [GOT Read Data], select [Source Drive] and set [Destination].
5. Select the resource data to be read in the tree view, and click the [GOT Read] button.
6. The resource data is started to be read.

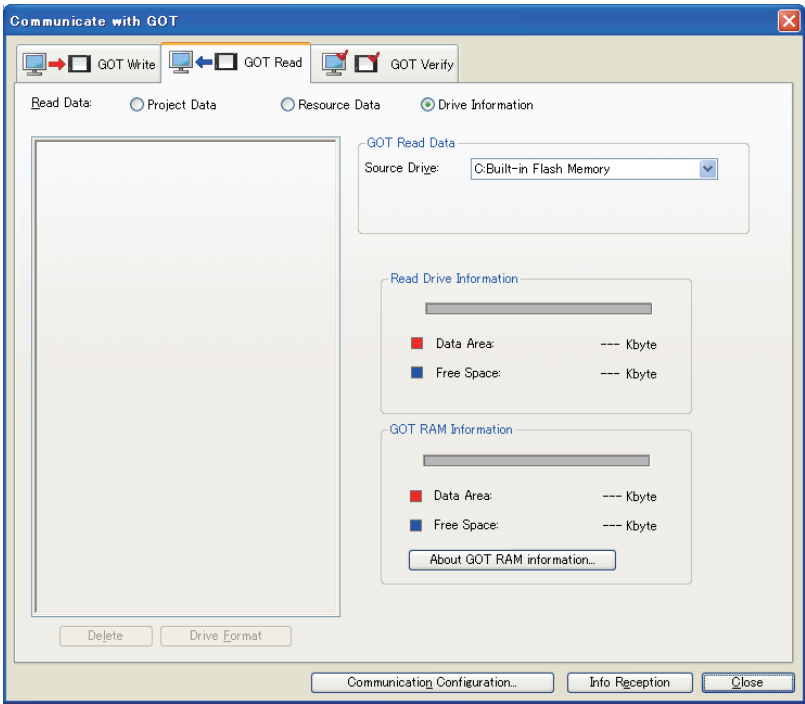
■ Reading drive information(GOT to personal computer)

The following shows how to read the drive information.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.

☞ 7.1.3 Setting communication

2. Select [Communication] → [Read from GOT] from the menu.
The [GOT Read] tab of the [Communicate with GOT] dialog box appears.
3. Select [Drive Information] in [Read Data].



Item	Description
Read Data	Select the type of the data to be read to the GOT. Select [Drive Information].
Tree view	The drive information of the GOT is displayed.
<div>Delete</div>	Deletes data selected in the tree (the Boot OS excluded).
<div>Drive Format</div>	Initializes a drive selected in [Source Drive]. Applicable only when [A:Standard CF Card] or [B:Extended Memory Card] is selected in [Source Drive].
GOT Read Data	Select a drive to be read in [Source Drive].
Read Drive Information	[Data Area] and [Free Space] of a driver selected in [Source Drive] are displayed.
GOT RAM Information	[Data Area] and [Free Space] of the user memory (RAM) are displayed. Click the [About GOT RAM information] button to display the explanation of the GOT RAM information.
<div>Communication Configuration...</div>	Displays the [Communication Configuration] dialog box.
<div>Info Reception</div>	Communicates with the GOT to obtain the information. When the drive information is not displayed in the tree, click the [Info Reception] button to obtain the drive information from the GOT.

4. In [GOT Read Data], select [Source Drive] and then click the [Info Reception] button.
5. The drive information is started to be read.

7.1.6 Verifying with GOT

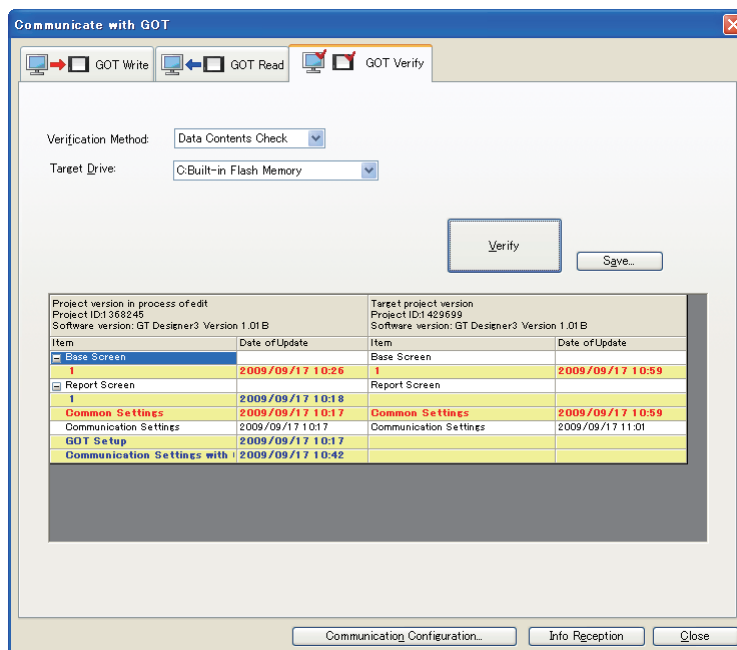
■ Verifying project data (Personal computer : GOT)

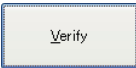



Verify the project data located at the GOT against the one opened by GT Designer3.
The following shows how to verify the project data.

1. Select [Communication] → [Communication Configuration] from the menu to configure the communication setting in the [Communication Configuration] dialog box.
For details of the [Communication Configuration] dialog box, refer to the following.

☞ 7.1.3 Setting communication

2. Select [Communication] → [Read from GOT] from the menu.
The [GOT Read] tab of the [Communicate with GOT] dialog box appears.



Item	Description
Verification Method	Select the verification method with the GOT. When [Data Contents Check] is selected, the data is verified by contents. When [Time Stamp Check] is selected, the data is verified by date/time information.
Target Drive	Select the target drive where the project data is verified.
	Verifies with the project data in the GOT.
Verification result	The result of verification is displayed.
	Saves the verification result as a Unicode text file.
	Displays the [Communication Configuration] dialog box.
	Communicates with the GOT to obtain the information.

3. In [Verification Method], select the verification method.
4. In [Target Drive], select the drive where the project data is verified.
5. Click the [Verify] button to display the verification result.
6. To save the verification result, click the [Save] button to specify the save destination.
The result is saved as a Unicode text file.

POINT

(1) Time Stamp Check

When verifying with [Time Stamp Check], the update date/time of the following data is changed to the date/time when the verification is performed.

- Communication settings
- Setup
- MES setting
- Startup logo

(2) Major versions of GT Designer3 and the project data to be verified

Even if the major version of GT Designer3 differs from the one of the project data to be verified, the verification is performed.

1

OVERVIEW

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GT Designer3
SPECIFICATIONS

3

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OPERATION

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EDITING AND
SETTING FIGURES
AND OBJECTS

6

LIBRARY

7

COMMUNICATION
WITH GOT

8

USEFUL
FUNCTIONS FOR
DRAWING

7.2 Transferring Data to Memory Card

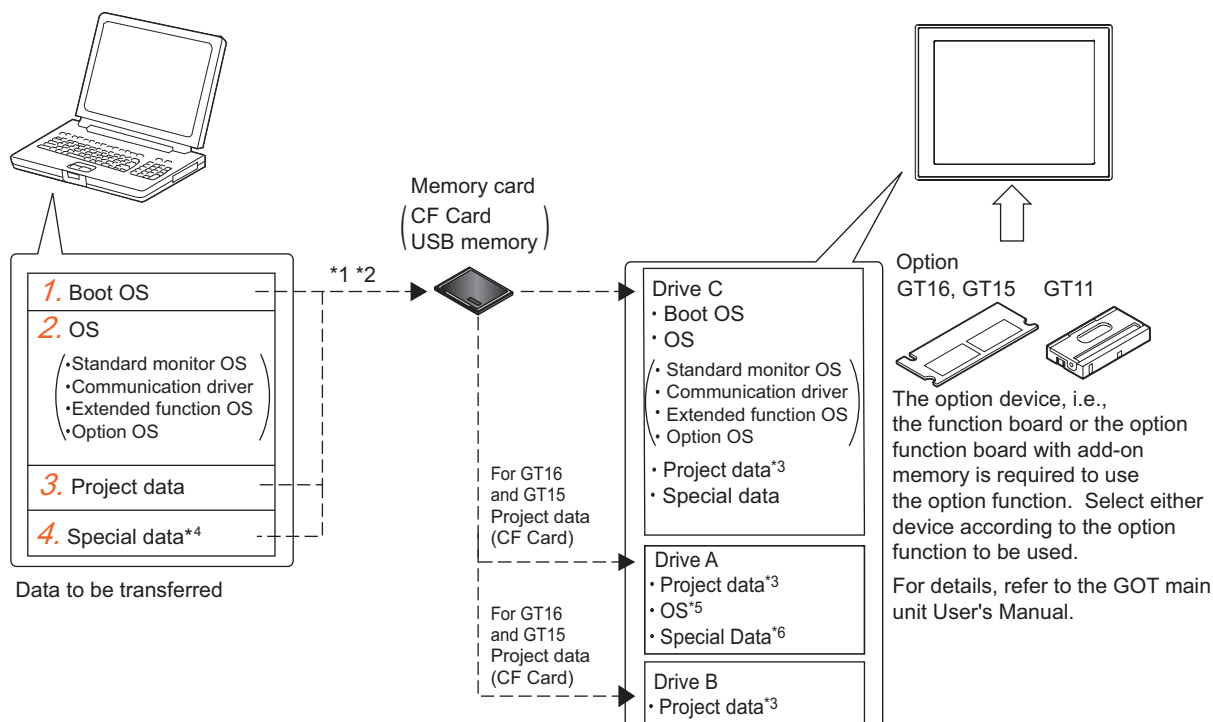
GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

This section explains how to transfer data using a memory card

Use of memory card eliminates the necessity to carry the personal computer and cable when writing the project to multiple GOTs.

■ Data transferring procedure

Data is transferred in the following procedure.



*1 Boot OS and OS (Standard monitor OS, Communication driver, Extended function OS, and Option OS), Project data, or Special data cannot be transferred to the same memory card.

*2 Depending on the capacity of the memory card, OS (Standard monitor OS, Communication driver, Extended function OS, and Option OS), Project data, and Special data can be transferred simultaneously.

*3 The GT16 and GT15 can start from Drive A or Drive B by storing the project data on these drives.

*4 For the GT16 and GT15 only.

*5 The GT16 and GT15 can start from Drive A by storing the OS on this drive.

*6 The GT16 and GT15 can start from Drive A by storing the Special Data on this drive.

1. Write the Boot OS to the memory card.

➡ 7.2.2 Transferring Boot OS to memory card

2. Write the OS (standard monitor OS, communication driver, extended function OS, and option OS) to the memory card.

➡ 7.2.1 Transferring project data, OS, and special data to memory card

3. Write the project data to the memory card.

➡ 7.2.1 Transferring project data, OS, and special data to memory card

4. Write the special data to the memory card. (GT16 and GT15)

➡ 7.2.1 Transferring project data, OS, and special data to memory card

POINT

Transferring the project data to the memory card

The project data must be opened on GT Designer3 to transfer the project data from the personal computer to the memory card.

Other data can be transferred even if the project data is not open on GT Designer3.

■ Precautions

(1) Detailed explanation and category set on the project or screen

Detailed explanation and category set on the project or screen are not written to the GOT.

After writing, they are not saved when they are read again from the GOT.

(2) Transferring the project data to the memory card

Make sure to transfer the project data from GT Designer3 to the memory card. When it is copied using Explorer of the personal computer, the GOT cannot recognize the data in the memory card.

(3) Data in the GOT and memory card

When the project data of the same name as the write target data has already been within the GOT or memory card, write or read it after the folders (G1BOOT, S1SYS, and project data folder) in the GOT or memory card are deleted.

(4) Memory card formatting

Prior to use, make sure to format the memory card in either of the following methods.

(a) Using a personal computer (CF card).

Format the CF card using a personal computer that satisfies the following conditions.

- Includes the CF card drive.
- Windows® 98, Windows® Millennium Edition, Windows® 2000 Professional, Windows® XP Professional/Home Edition, Windows Vista®, or Windows® 7 is installed. (The CF card cannot be formatted when Windows NT® 4.0 is used.)

(b) For details of the utility menu used for Program/data control (Memory card Format) of the utility menu, refer to the following manual.



User's Manual for the GOT used

(5) Time for transfer (write) to memory card

The time for transferring data from GT Designer3 to the memory card depends on the environment of the personal computer.

Hence, more time may be taken depending on the used memory card and the personal computer OS (Windows®).

POINT

(1) Folders and files in the memory card

When the OS or project data is transferred to the memory card, multiple folders and files are created.

Do not delete or edit these folders and files as they are managed by the GOT.

If they are deleted or edited, the GOT will not operate normally.

(2) When using a personal computer for formatting

Set the format type to FAT16 or FAT32 to format a CF card to be used on the GOT.

If the format type is set to FAT32, use the CF card with up to 32GB capacity.

7.2.1 Transferring project data, OS, and special data to memory card

■ Writing project data and installing OS (Personal computer to memory card to GOT)

Write the project data and installing the OS from GT Designer3 to the memory card.

POINT

(1) Using a CF card or USB memory (GT16)

When writing or reading the project data or OS to a memory card, do not store any other data to that memory card.

The other data are all deleted when the project data or OS is written or read.

(2) Data written in the GOT

When the OS is installed, the project data stored in the project folder in the GOT is deleted.

When it is necessary to back up the project data, read the data to a personal computer, CF card, or USB memory (GT16) before installing the OS.

(3) Precautions for installing the OS

The OS installation cannot be interrupted.

Do not do any of the following operations to interrupt the installation, as it may disable the GOT from operating.

- Removing the CF card
- Removing the USB memory
- Turning off the GOT
- Pressing the reset button of the GOT

If the GOT has been disabled from operating due to any of the above operations during the installation, install the Boot OS again by using the 2-point presses installation method provided in the following section.

➡ 7.2.2 Transferring Boot OS to memory card

The following shows how to write the project data and install the OS.


(1) How to write to the memory card

POINT

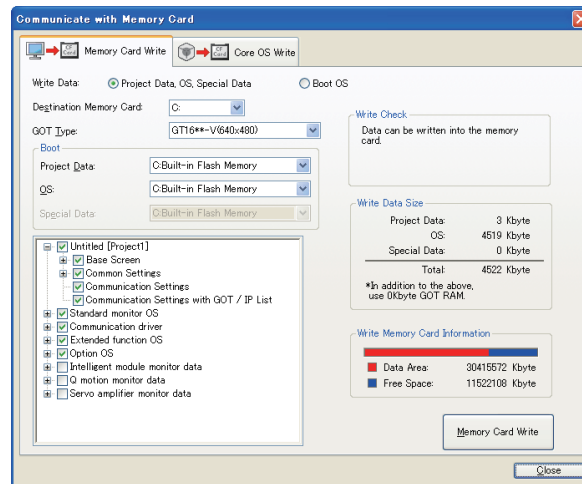
To make communication between the GOT and PLC

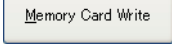
The installation of the communication driver and writing the communication settings are required.

For the installation of the communication driver and writing of the communication settings, refer to the following.

 GOT1000 Series Connection Manual for GT Works3 and a controller used

1. Select [Communication] → [Transfer to Memory Card] from the menu.
When system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the project data cannot be written to a CF card.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Memory Card Write] tab of the [Communicate with Memory Card] dialog box appears, select the project data to be written and click the [Memory Card Write] button.



Item	Description
Write Data	Select the type of the data to be written to the memory card. Select [Project Data, OS, Special Data, Boot OS].
Destination Memory Card	Select the memory card drive in which the data is to be written.
GOT Type	Select the GOT type of the project data to be written to the memory card.
Boot ^{*1*}	Select the Boot drive of the [Project Data] and [OS].
Tree View	The project data, Standard monitor OS, Communication driver, Extended function OS, Option OS, and Special Data are displayed in the tree.
Write Check	The writing status of the memory card is displayed.
Write Data Size	The size of the data to be written to the memory card is displayed.
Write Memory Card Information	The information of the drive specified in [Destination Memory Card] is displayed. In the graph, the data area is shown in red and the free space is shown in blue.
	Writes the project data and OS to the memory card.

*1 In the GT16 and GT15, when [A:Standard CF Card] is selected for the OS Boot drive, the project data and special data in the Boot drive are fixed to [A:Standard CF Card].

*2 In GT11, the Boot drive for the OS is fixed to [C:Built-in Flash Memory].

3. The project data and the required OS are started to be written.

POINT

(1) When A:Standard CF Card is selected in the Boot drive

- (a) When [A:Standard CF Card] is selected in the Boot drive, the GOT can start with the standard CF card.
For details, refer to the following.

☞ 9.4 Starting GOT with CF card

- (b) The communication driver, extended function OS, and option OS that exceed the limit of the user area capacity (C drive) can be used.

For details, refer to the following.

☞ 7.5.2 Drive capacity required for data transfer

- (c) To display the startup logo written to the CF card, the Boot OS version of [03.09.**.S] or later must be installed on the GOT.

For how to check the Boot OS version installed on the GOT, refer to the following.

☞ User's Manual for the GOT used

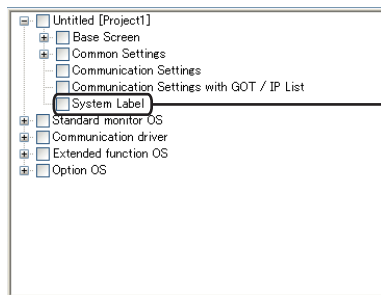
(2) Precautions when selecting write data (iQ Works only)

When system labels are written and [System Label] is cleared for target data, system labels are deleted from a target project, and the labels are changed to devices.

The system labels changed to devices cannot be restored.

To hold the system label settings, do not clear [System Label] for the write target data.

When clearing [System Label] for the write target data, check the device setting.



When the box is cleared, system labels are deleted from the project.

(2) How to write the project data and install the OS on the GOT

The project data and OS can be written and installed on the GOT in either of the following methods.

- Writing and installing while the GOT is turned on
- Writing and installing by the utility (Program/data control) function of the GOT

- (a) How to write and install while the GOT is turned on

The messages displayed on the GOT during write and installation differ, depending on if the standard monitor OS is installed or not.

The instructions below are based on the assumption that the standard monitor OS is installed on the GOT. If a request message is displayed on the screen, follow the screen's request.

(If the standard monitor OS and project data is written to the CF card, the project data will be written after the standard monitor OS is installed.)

1. Turn off the GOT and also turn off the CF card access switch.
2. Insert the CF card in which the project data is written to the A drive of the GOT.
(B drive cannot be used for the write.)
For how to write the project data to the CF card, refer to the following.
☞ (1) How to write to the memory card
For how to insert the CF card, refer to the following.
☞ User's Manual for the GOT used

3. Turn on the CF card access switch of the GOT.

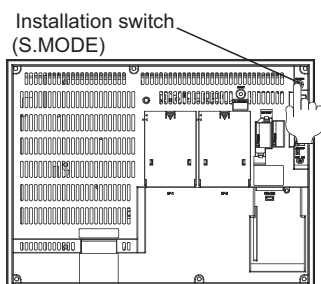
4. Turn on the GOT.

- For the GT16 and GT1595-X

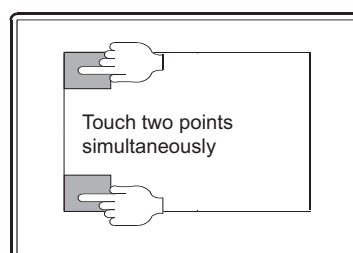
Turn on the GOT while pressing the GOT installation switch (S.MODE switch) on the rear of the GOT. (The 1-point press installation function)

- For the GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1555-V, GT1562-VN, GT1555-Q, GT1550-Q, and GT11

Turn on the GOT while touching the lower and upper portions of the left side of the GOT screen. (The 2-point presses installation function)

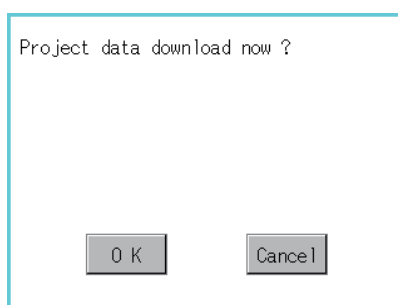


For GT16 and GT1595-X



For the GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V, GT1555-Q, GT1550-Q, and GT11

5. As the following screen appears, touch the [OK] button to start downloading (writing) the project data.



The CF card access LED is lit during the installation and download (write). Do not perform the following operation while the CF access LED is lit.

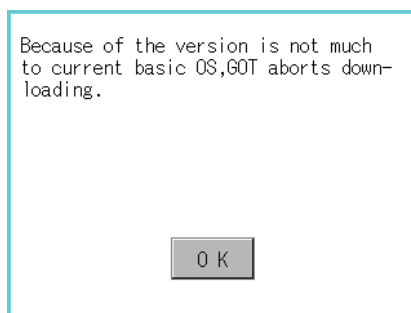
- Removing the CF card
- Turning off the CF card access switch
- Turning off the GOT
- Pressing the reset button of the GOT

POINT

If the OS version in the GOT differs from the GT Designer3 OS version in which the project data was created

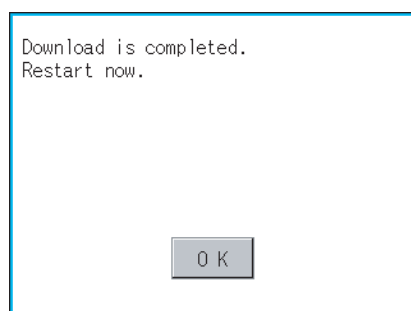
If the OS major version in the GOT differs from the GT Designer3 OS major version in which the project data was created, the project data may not function properly on the OS in the GOT.

Therefore, the appropriate OS installation is recommended when the project data is written to the memory card. However, as the OS is deleted before writing the project data again, the OS file types and numbers of OSs in the GOT can change. (When the OS is downgraded, the unsupported OS is deleted)




6. After the download (write/installation) is completed, the following screen appears. Touch the [OK] button to commence the restart.

After the GOT is restarted, turn off the CF card access switch of the GOT. Then, check that the CF card access LED is off and remove the CF card from the GOT.



- (b) How to write by the utility (Program/data control) function of the GOT
For how to write, refer to the following.

 User's Manual for the GOT used

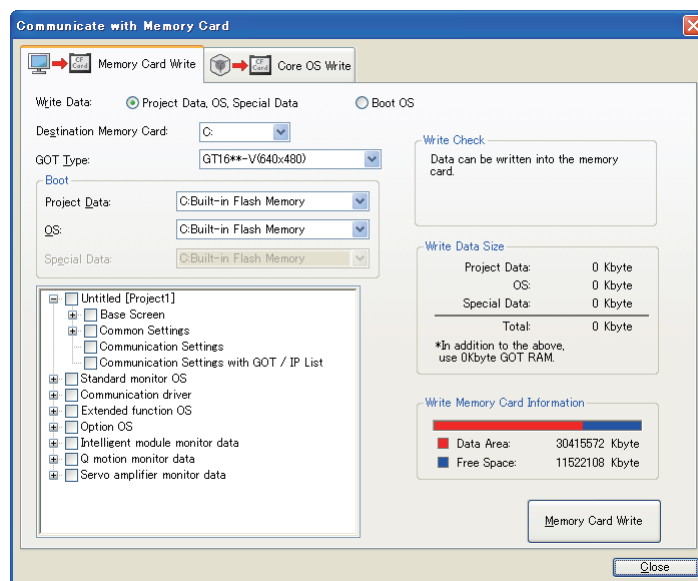
■ Writing special data (Personal computer to memory card to GOT)

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

The following shows how to write the special data.

(1) How to write to the memory card

1. Select [Communication] → [Transfer to Memory Cord] from the menu.
2. As the [Memory Card Write] tab of the [Communicate with Memory Card] dialog box appears, select the special data to be written and click the [Memory Card Write] button.



Item	Description
Write Data	Select the type of the data to be written to the memory card. Select [Project Data, OS, Special Data].
Destination Memory Card	Select the memory card drive in which the data is to be written.
GOT Type	Select the GOT type of the special data to be written to the memory card.
Boot ^{*1}	Select the Boot drive of [Project Data] and [OS]. The Boot drive of [Special Data] is fixed to [C:Built-in Flash Memory].
Tree View	The project data, Standard monitor OS, Communication driver, Extended function OS, Option OS, and Special Data are displayed in the tree.
Write Check	The writing status of the memory card is displayed.
Write Data Size	The size of the data to be written to the memory card is displayed.
Write Memory Card Information	The drive information of the drive specified in [Destination Memory Card]. In the graph, the data area is shown in red and the free space is shown in blue.
Memory Card Write	Writes the project data to the memory card.

^{*1} When [A:Standard CF Card] is selected in the OS in the Boot drive, the project data and special data in the Boot drive are fixed to [A:Standard CF Card].

POINT

Installing the option OS

To use the special data, both the special data and the option OS must be installed.
Write the special data to be used and install the option OS.



(2) How to write the special data to the GOT

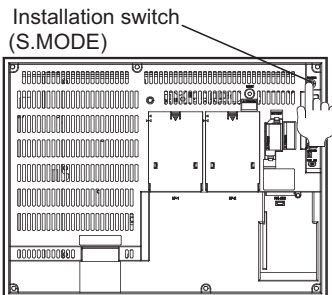
The special data can be written to the GOT in either of the following methods.

- Writing while the GOT is turned on
- Writing by the utility (Program/data control) function of the GOT

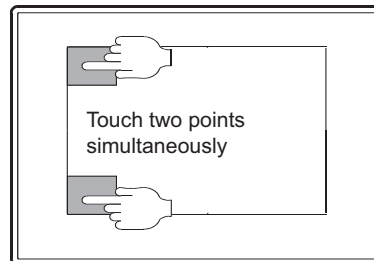
(a) How to write while the GOT is turned on

The messages displayed during the write are based on the assumption that the standard monitor OS is installed on the GOT. If a request message is displayed on the screen, follow the screen's request.

1. Turn off the GOT and turn off the CF card access switch.
2. Insert the CF card in which the special data is written to the A drive of the GOT.
(B drive cannot be used for the write.)
For how to write the special data to the CF card, refer to the following.
 (1) How to write to the memory card
For how to insert the CF card, refer to the following.
 User's Manual for the GOT used
3. Turn on the CF card access switch of the GOT.
4. Turn on the GOT.
 - For the GT16 and GT1595-X
Turn on the GOT while pressing the GOT installation switch (S.MODE switch) on the rear of the GOT. (the 1-point press installation function)
 - For the GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1555-V, GT1562-VN, GT1555-Q, and GT1550-Q
Turn on the GOT while touching the lower and upper portions of the left side of the GOT screen.
(the 2-point presses installation function)

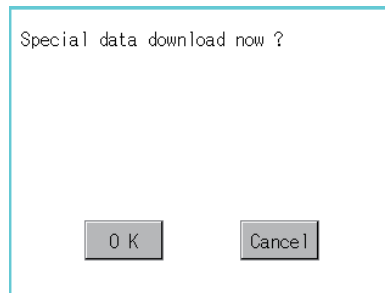


For the GT16□□, and GT1595-X



For the GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V, GT1555-Q, GT1550-Q and GT11

5. As the following screen appears, touch the [OK] button to start downloading (writing) the special data. If the special data is not written in the memory card, this download (write) processing is not performed.



The CF card access LED is lit during the installation and download (write).
Do not perform the following operation while the CF card access LED is lit.

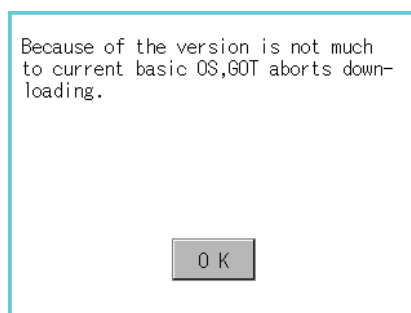
- Removing the CF card
- Turning off the CF card access switch
- Turning off the GOT
- Pressing the reset button of the GOT

POINT

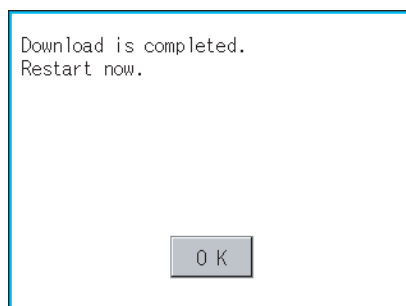
If the OS version in the GOT differs from the GT Designer3 OS version in which the special data was created

If the OS major version in the GOT differs from the GT Designer3 OS major version in which the special data was created, the special data may not function properly on the OS in the GOT.


Therefore, the appropriate OS installation is recommended when the special data is written to the memory card. However, as the OS is deleted before writing the special data again, the OS file types and numbers of OSs in the GOT can change. (When the OS is downgraded, the unsupported OS will be deleted)



6. After the download (write) is completed, the following screen appears. Touch the [OK] button to commence the startup.
After the GOT is restarted, turn off the CF card access switch of the GOT. Then, check that the CF card access LED is off and remove the CF card from the GOT.



- (b) How to write by the utility (Program/data control) function of the GOT
For how to write, refer to the following.

 User's Manual for the GOT used

7.2.2 Transferring Boot OS to memory card

■ Installing Boot OS (Personal computer to memory card to GOT)

POINT

(1) When using a memory card

When writing the Boot OS to a memory card, do not store any other data to the memory card.
The other data are all deleted when the Boot OS is written.


(2) Data written in the GOT

When the Boot OS is installed, the project data, OS (standard monitor OS, communication driver, extended function OS, and option OS), and special data folder in the GOT are deleted.

When it is necessary to back up the project data, read the data to a personal computer, CF card, or USB memory before installing the Boot OS.

As the special data cannot be read to a personal computer, read the special data to a CF card or USB memory.

For reading each data, refer to the following.

 7.1.5 Reading from GOT

(3) Precautions for installing the Boot OS on the GOT

Once the Boot OS is started to be installed, the processing cannot be interrupted.

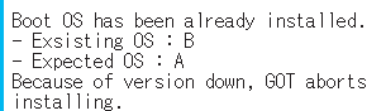
Do not perform the following operations during the OS installation, as it may disable the GOT from operating.

- Removing the memory card
- Turning off the GOT
- Pressing the reset button of the GOT

If the GOT does not operate, please contact a service representative.

(4) When the Boot OS versions are different

During the Boot OS installation, the Boot OS version is checked against the preinstalled one to prevent the newer one from being overwritten. The installation is interrupted when the versions are different (when the Boot OS version in the memory card is older).



```
Boot OS has been already installed.
- Existing OS : B
- Expected OS : A
Because of version down, GOT aborts
installing.
```



OK

(5) Initializing the GOT (Returning the GOT to factory-settings)

Installing the Boot OS returns the GOT to the factory-settings.

Note that when the Boot OS is installed, the project data and OS (standard monitor OS, communication driver, extended function OS, and option OS) in the GOT are deleted.

When it is necessary to back up the project data, read the data to a personal computer or memory card (CF card or USB memory) before installing the Boot OS.

- To a personal computer

☞ 7.1.5 ■ Reading project data (GOT to personal computer)

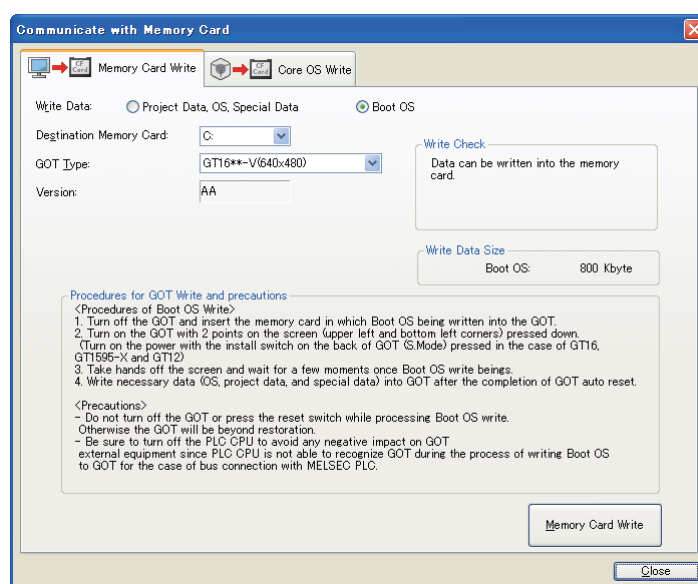
- To a memory card (CF card or USB memory)

☞ User's Manual for the GOT used

The following shows how to install the Boot OS

(1) How to write to the memory card

1. Select [Communication] → [Transfer to Memory Card] from the menu.
2. The [Memory Card Write] tab of the [Communicate with Memory Card] dialog box appears.
3. Select [Boot OS] in [Write Data].
4. Check [Procedures for GOT Write and precautions] and click the [Memory Card Write] button.



Item	Description
Write Data	Select the type of the data to be written to the memory card. Select [BootOS].
Destination Memory Card	Select the memory card drive in which the data is to be written.
GOT Type	Select the GOT type of the Boot OS to be written to the memory card.
Version	The version of the Boot OS to be installed on the GOT is displayed.
Procedures for GOT Write and precautions	The procedure and precautions for writing the Boot OS are displayed. Make sure to read them before writing.
Write Check	The writing status of the memory card is displayed.
Write Data Size	The size of the Boot OS to be written to the memory card is displayed.
Memory Card Write	Writes the Boot OS to the memory card.

(2) How to install on the GOT

The Boot OS can be installed on the GOT in either of the following methods.

- Installing while the GOT is turned on
For how to install, refer to the following.

☞ (a) How to install while the GOT is turned on

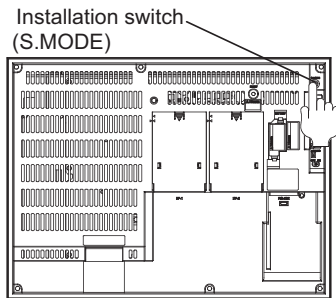
- Installing by the utility (Program/data control) function of the GOT
For how to install, refer to the following.

☞ User's Manual for the GOT used

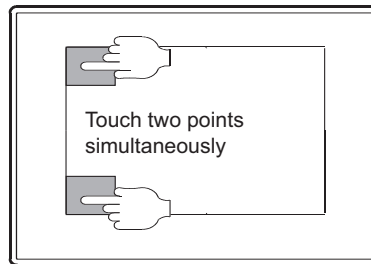
(a) How to install while the GOT is turned on

The messages displayed on the GOT during the installation differ depending on the condition of the standard monitor OS installation.

If a message requesting an operation is displayed on the screen, follow the instructions on the screen.



For GT16 and GT1595-X



For the GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V, GT1555-Q, GT1550-Q and GT11

- When installing with the CF card

1. Turn off the GOT and turn off the CF card access switch.

2. Insert the CF card in which the Boot OS is written to the A drive of the GOT.
(B drive cannot be used for the installation.)

For how to write the Boot OS to the CF card, refer to the following.

☞ (1) How to write to the memory card

For how to insert the CF card, refer to the following.

☞ User's Manual for the GOT used

3. Turn on the CF card access switch of the GOT.

4. Turn on the GOT.

- For the GT16 and GT1595-X

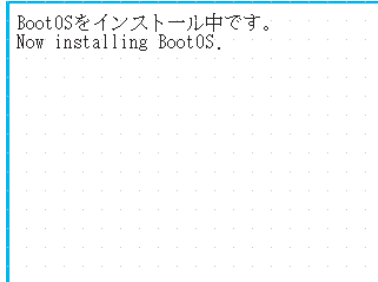
Turn on the GOT while pressing the GOT installation switch (S.MODE switch) on the rear of the GOT. (the 1-point press installation function)

- For the GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1555-V, GT1562-VN, GT1555-Q, GT1550-Q, and GT11

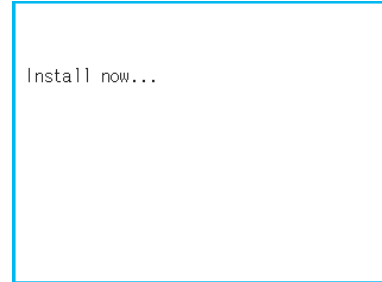
Turn on the GOT while touching the lower and upper portions of the left side of the GOT screen. (the 2-point presses installation function)

5. Install the Boot OS on the built-in flash memory (C drive).
The CF card access LED is lit during the installation.
Do not perform the following operations while the CF Card access LED is on.
 - Removing the CF card
 - Turning off the CF card access switch
 - Turning off the GOT
 - Pressing the reset button of the GOT

When Standard monitor OS is not yet installed



When Standard monitor OS is already installed



6. After the installation is completed, the GOT automatically restarts.
(When the standard monitor OS is already installed, touch the [OK] button to restart the GOT.)
After the GOT is restarted, turn off the CF card access switch of the GOT. Then, check that the CF card access LED is off and remove the CF card from the GOT.
7. Transfer the OS or project data.


- When installing with the USB memory (GT16)

1. Turn off the GOT, and install the USB memory where the Boot OS, standard monitor OS, or project data is stored in the USB interface of the GOT.
The BootOS cannot be stored in the USB memory where the standard monitor OS or project data is stored.
2. Turn on the GOT.
Turn on the GOT while pressing the install switch (S.MODE switch) on the back of the GOT. (1-point press installation function)
3. The Boot OS and standard monitor OS are installed on the built-in flash memory.
The USB memory access LED is lit during the installation.
Do not remove the USB memory or turn off the GOT while the USB memory access LED is lit.

Now installing BootOS.

4. After the installation is completed, the GOT automatically restarts.
(When the standard monitor OS is already installed, the GOT restarts by touching the [OK] button.)

Reboot.

5. After confirming normal restart, confirm that the USB memory access LED is not lit, and remove the USB memory from the USB interface of the GOT.
For how to remove the USB memory, refer to the following.
 GT16 User's Manual (Hardware)

7.2.3 Transferring CoreOS to memory card

■ Installing CoreOS (personal computer to memory card to GOT)

Install the CoreOS only if the GOT is not in its factory-shipped condition after the reinstallation of the Boot OS. Normally, the installation is not required.

POINT

(1) Precautions for installing the CoreOS

The installation cannot be interrupted.

Do not perform the following operations during the CoreOS installation, as it may disable the GOT from operating.

- Turning off the GOT
- Pressing the reset button of the GOT
- Turning on the CF card access switch
- Removing the CF card

(2) Drive to install the CoreOS

The CoreOS can be installed only on the A drive.

The B drive cannot be used to install the CoreOS.

If the GOT is not recovered even after installing the CoreOS, there may be a hardware problem. Please consult your nearest sales office or FA Center, explaining a detailed description.

(1) Before installing the CoreOS

(a) How to install the CoreOS

The CoreOS can only be installed with the memory card.

It cannot be installed via a USB, RS-232, or Ethernet connection.

(b) Applicable CF card

Use a CF card with at least 32 MB of memory.


(c) BootOS

When the CoreOS is installed, the Boot OS is also automatically installed.

(d) When installing the CoreOS

When installing the CoreOS, remove all units mounted on the extended I/F.

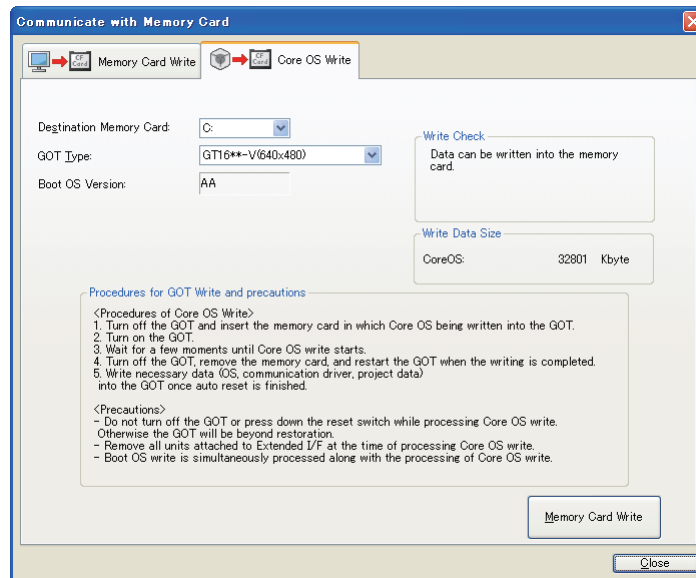
For how to remove the unit, refer to the following.

 User's Manual for the GOT used

(2) How to install the CoreOS

The following shows how to install the CoreOS.

1. Select [Communication] → [Transfer to Memory Card] from the menu.
2. As the [Memory Card Write] tab of the [Communicate with Memory Card] dialog box appears, select the [Core OS Write] tab.
3. Check [Procedures for GOT Write and precautions] and click the [Memory Card Write] button.



Item	Description
Destination Memory Card	Select the memory card drive in which the data is to be written.
GOT Type	Select the GOT type of the CoreOS to be written to the memory card.
Boot OS Version	The version of the Boot OS to be installed on the GOT.
Procedures for GOT Write and precautions	The procedure and precautions for writing the CoreOS are displayed. Make sure to read them before writing.
Write Check	The writing status of the memory card is displayed.
Write Data Size	The size of the CoreOS to be written to the memory card.
Memory Card Write	Writes the CoreOS to the memory card.



(3) If the CoreOS cannot be installed

If the CoreOS cannot be installed, check the following items.

If the CoreOS still cannot be installed even after checking these items, there may be a hardware problem. Please consult your nearest sales office or FA Center, explaining a detailed description.

Item	Contents
Even though the CF card is inserted into the GOT, CoreOS cannot be installed.	<ul style="list-style-type: none">• Check if the GOT's CF card access switch is OFF. If the switch is OFF, set the switch to ON.• It is possible that data was not written correctly to the memory card from GT Designer3. Write to the memory card from GT Designer3 again.
The following message is displayed at the GOT. [GOT error. Consult your local sales office.]	The GOT is broken. Please consult your nearest sales office or FA Center, explaining a detailed description.
The following message is displayed at the GOT. [CF card error. Installation will be canceled. Check whether the CF card can be used.]	There is an abnormality in the CF card. <ul style="list-style-type: none">• Perform the operation again after formatting the CF card.• Replace the CF card.
The following message is displayed at the GOT. [Optional unit has been connected to extension I/F slot.]	Turn OFF the GOT and remove the communication unit or others mounted on the extended I/F, and then re-execute the CoreOS installation.
The following message is displayed at the GOT. [GOT type and OS version do not match.]	Re-execute the CoreOS installation with the installation function of CoreOS of the correct model.
The following message is displayed at the GOT. [The version of OS is not acceptable to this GOT.]	Re-execute the CoreOS installation with the installation function of the newer version of CoreOS.
The following message is displayed at the GOT. [Memory card access switch is off.]	Set the CF card access switch to ON, and then execute the CoreOS installation again.

(4) How to install on the GOT

1. Turn off the GOT and turn off the CF card access switch.
2. Insert the CF card in which the CoreOS is written to the A drive of the GOT.
For how to write the CoreOS to the CF card, refer to the following.
 (2) How to install the CoreOS
For how to insert the CF card, refer to the following.
 User's Manual for the GOT used
3. Turn on the CF card access switch of the GOT.
4. Turn on the GOT to display the installation performing screen. Then, turn off the CF access switch to start installing the CoreOS.
5. Install the CoreOS on the built-in flash memory (C drive).
The CF card access LED is lit during the installation.
Do not perform the following operations while the CF card access LED is lit.
 - Removing the CF card
 - Turning on the CF card access switch
 - Turning off the GOT
 - Pressing the reset button of the GOT
6. When the installation is completed, the power LED of the GOT starts to flash. Turn off the GOT, remove the CF card, and then turn on the GOT again.
7. Transfer the OS, project data and special data.

7.3 Transferring Data Using GT10-LDR

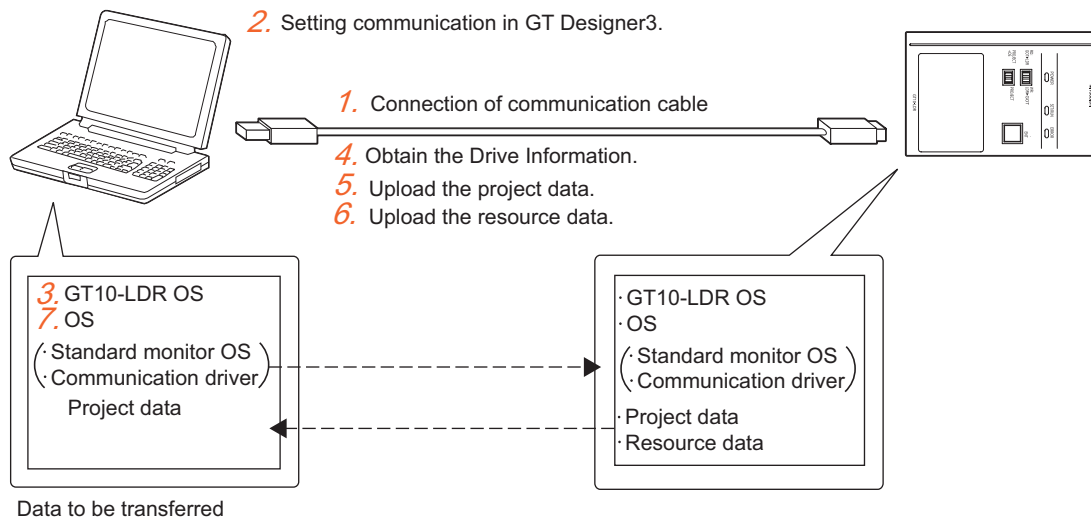
GT 16 GT 15 GT 11 GT 10 Soft
GOT 1000

7.3.1 Preparation for data transfer

The GT105□ and GT104□ does not support GT10-LDR

■ Data transfer procedure

Data is transferred in the following procedure.



1. Connect the communication cable.

➞ 7.3.2 Connecting cable

2. Configure the communication setting of GT Designer3.

➞ 7.3.3 Setting communication

3. Install the GT10-LDR OS.

➞ 7.3.4 Installing GT10-LDR OS

4. Obtain the built-in memory information.

➞ 7.3.6 Obtaining memory information

5. Read the project data. (GT10-LDR → personal computer (project))

➞ 7.3.7 Reading project data

6. Read the resource data. (GT10-LDR → personal computer (resource))

➞ 7.3.8 Reading resource data

7. Install the OS (standard monitor OS and communication driver) and write the project data. (Personal computer → GT10-LDR (OS/project))

➞ 7.3.5 Writing project data and installing OS

■ Precautions

(1) Transfer cable

Make sure that the connector of the used USB, RS-232, or Ethernet cable is securely connected to that of the GOT and personal computer.

(2) Read destination at read

When the read destination is specified as a project file of GT Designer3, all data in the specified project file are deleted. (Even for a partial reading (comment data, etc.), all data in the file are also deleted.)

(3) Detailed explanation and category set on the project or screen

Detailed explanation and category set on the project or screen are not written to the GT10-LDR. Therefore, they are not saved if they are read again from the GT10-LDR after writing.

(4) Data within the GT10-LDR

When data is written to the GT10-LDR from GT Designer3, perform writing after all data within the GT10-LDR are deleted.

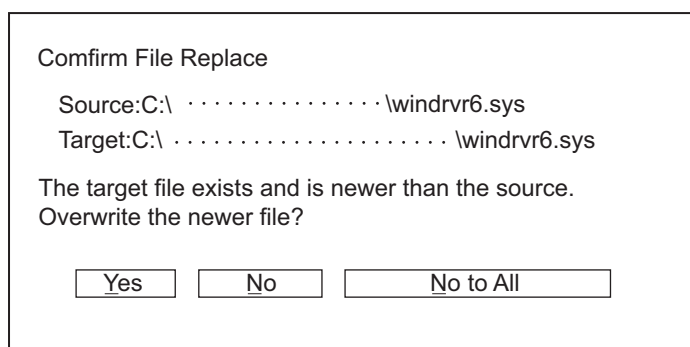
 7.3.5 Writing project data and installing OS

(5) Precautions for installing the USB driver of the other company product

When installing the USB driver of the other company product, the "Confirm File Replace" message of the USB driver file (windrvr6.sys) may be displayed.

When a newer file already exists, click the [No] button to discontinue the overwriting processing.

If the file is overwritten, USB communication between GT Designer3 and GT10-LDR may not be made correctly.

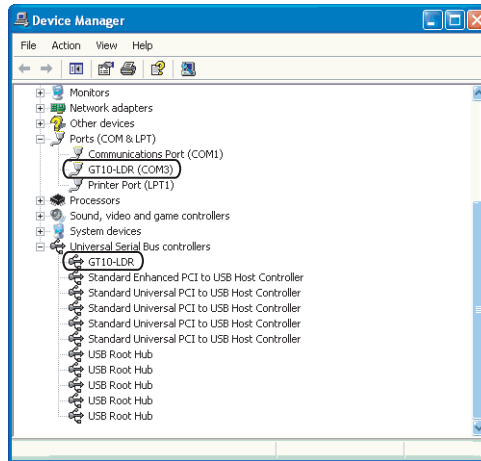


(6) Precautions for using the USB cable

- When performing data transfer between the PC and GT10-LDR connected via the USB cable, do not set the resume function, suspend function, power-saving function and standby mode of the PC.
For the setting details of the resume function, suspend function, power-saving function and standby mode, refer to the PC manual or Windows® Help.
- If the USB cable is disconnected/reconnected during the data transfer, the GT10-LDR is reset or powered off/on, which may result in a unrecoverable communication error.
In this case, perform either of the following operations.

(a) The Personal Computer will check for a USB connection.

Please check that GT10-LDR is displayed in the Universal Serial Bus controllers and Port (COM/LPT).



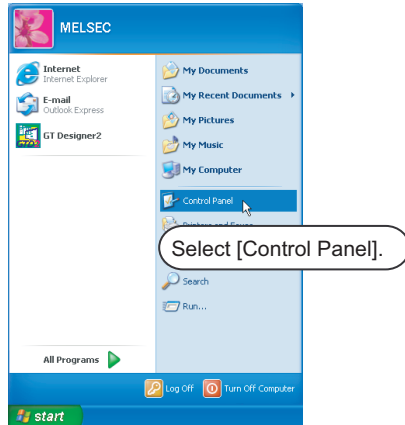
(b) After disconnecting the USB cable from GT10-LDR for more than 5 seconds, reconnect the cable and restart communication.

(7) When a communication error has occurred

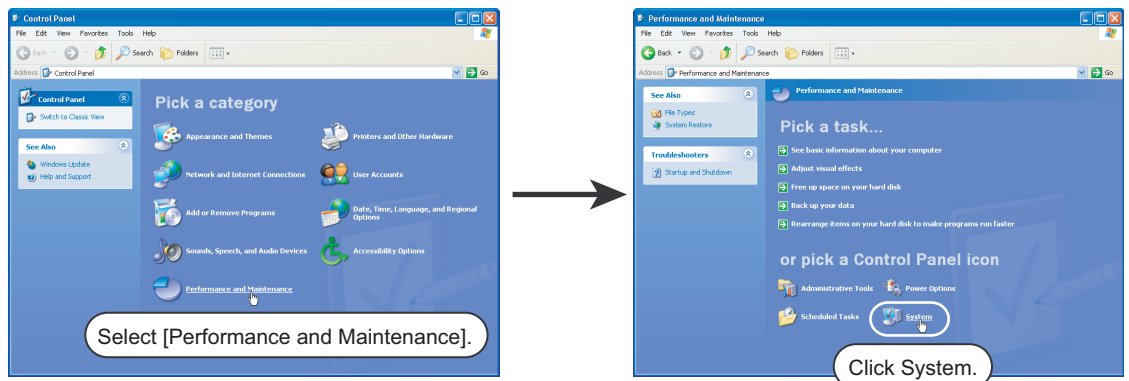
A communication error, such as a time-out error, may occur due to the communication port settings on the PC. Check and change the settings in the following procedure.

The following items may not be present depending on the PC used.

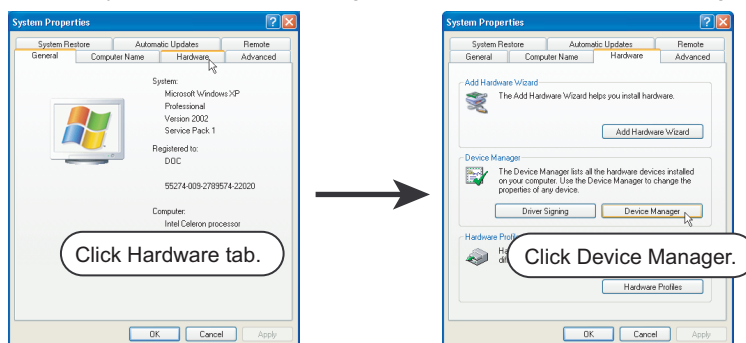
1. Select [Start] → [Control Panel] from the menu.



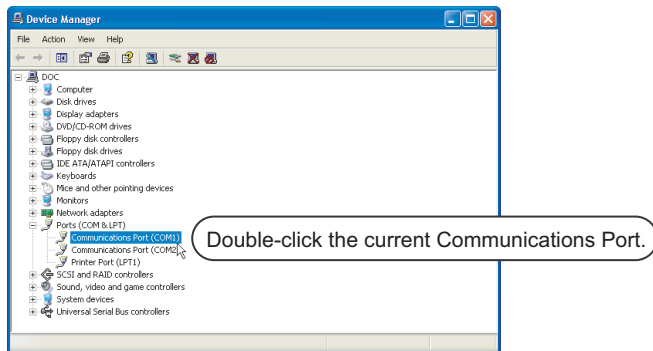
2. Select [Performance and Maintenance] and click the [System] icon.



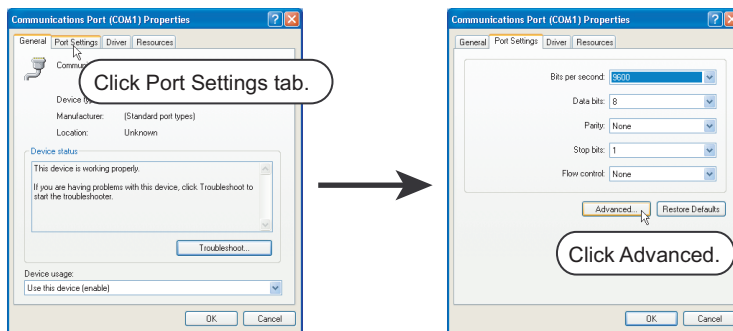
3. As the [System Properties] dialog box appears, click [Device Manager] on the [Hardware] tab.



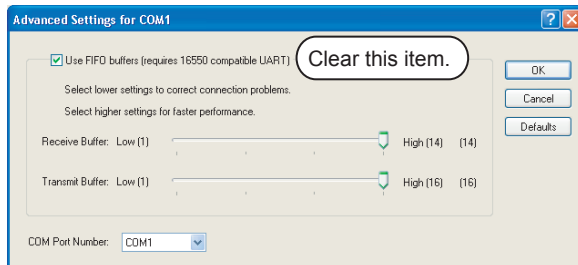
4. As Device Manager appears, double-click the current [Communications Port] icon in [Ports]. (In the following, an example using the communication port (COM1) is described.)



5. As the [Communications Port(COM1) Properties] dialog box appears, click the [Advanced] button on the [Port Settings] tab.



6. As the [Advanced Settings for COM1] dialog box appears, clear the [Use FIFO buffers] item.



7.3.2 Connecting cable

Make sure to follow the procedures to securely connect the USB cable to the PC and GT10-LDR.

1. Connect the USB cable to the USB Type-A connector of the PC.
2. Connect the USB cable to the USB connector of the GT10-LDR.
When the PC and GT10-LDR are USB connected, install the USB driver into the PC.
Refer to the following for the installation of the USB driver.

■ Installing the USB driver

To make the USB communication with the GT10-LDR using the USB cable, the USB driver must be installed.

Windows®	USB driver installation	Necessity of Administrator authority at USB driver installation	Operation during USB driver installation
Windows® 7	○ (Required for each USB connector)	○ (Required)	Operation required (Refer to next page)
Windows Vista®	○ (Required for each USB connector)	○ (Required)	
Windows® XP	○ (Required for each USB connector)	○ (Required)	
Windows® 2000 Professional	○ (Required for each USB connector)	○ (Required)	

POINT

(1) When using GT Designer3 on Windows® 2000 Professional by the user authority other than the administrator authority

When the PC has multiple USB connectors, the USB driver must be installed to each USB connector. As the USB driver cannot be installed by the user authority other than the administrator authority, it is recommended to install the USB driver to all USB connectors, that may be used by the administrator authority, at the first installation of the USB driver.

(2) When the USB driver cannot be installed

(a) When Windows® XP is used

Select [Start] → [Control Panel] from the menu. Then, select [Performance and Maintenance] in the [Hardware] tab to click [System].

As the [System Properties] appears, click the [Driver Signing] button in the [Hardware] tab.

If [Block - Never install unsigned driver software] is selected, the USB driver may not be installed.

Select [Ignore - Install the software anyway and don't ask for my approval] or [Warn - Prompt me each time to choose an action] and install the USB driver.

(b) Windows® 2000 Professional is used

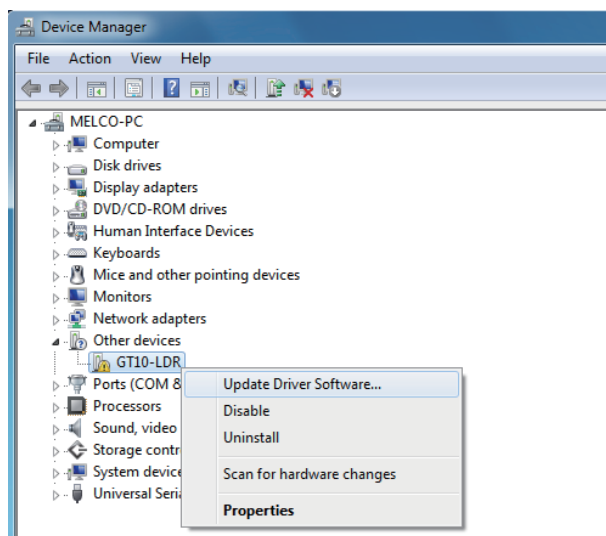
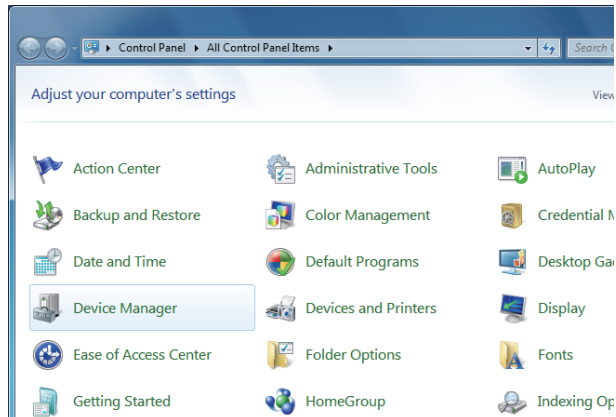
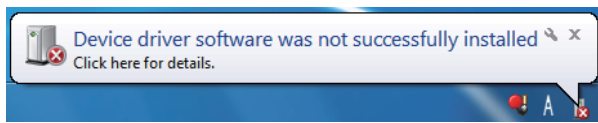
Select [Start] → [Settings] → [Control Panel] from the menu. Then, double-click [System] in the [Control Panel] window.

As the [System Properties] appears, click the [Driver Signing] button in the [Hardware] tab.

If [Block - Prevent installation of unsigned files] is selected, the USB driver may not be installed.

Select [Ignore - Install all files, regardless of file signature] or [Warn - Display a message before installing an unsigned file] and install the USB driver by the administrator authority.

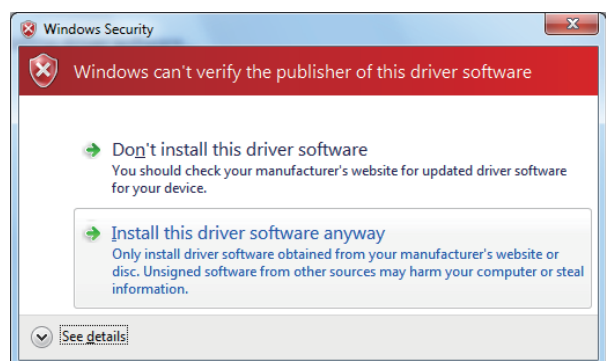
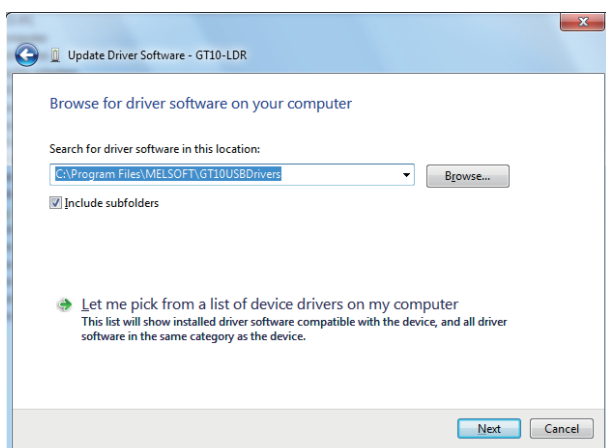
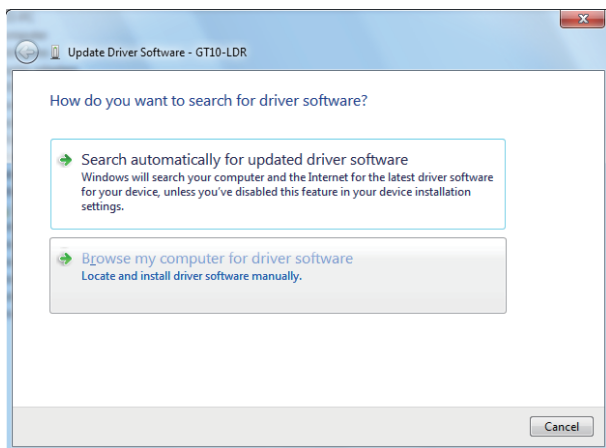
(1) USB driver installation when Windows® 7 is in use



1. When the PC and GT10-LDR are connected with the USB cable for the first time, the left screen appears.

2. Open the [Device Manager] window from [Control Panel] to install the USB driver.

3. Right-click [GT10-LDR], and then select [Update Driver Software].

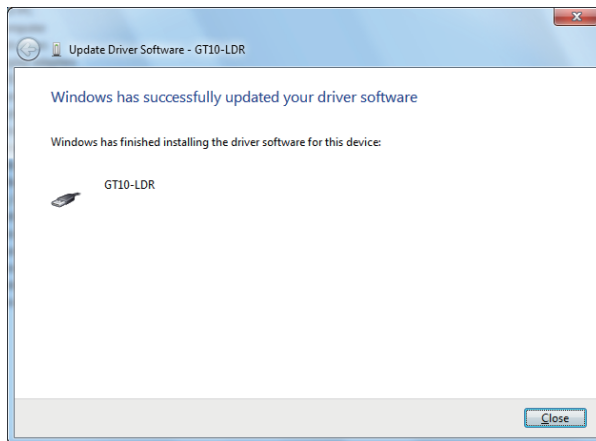


4. The left screen appears.
Click [Locate and install driver software manually.]

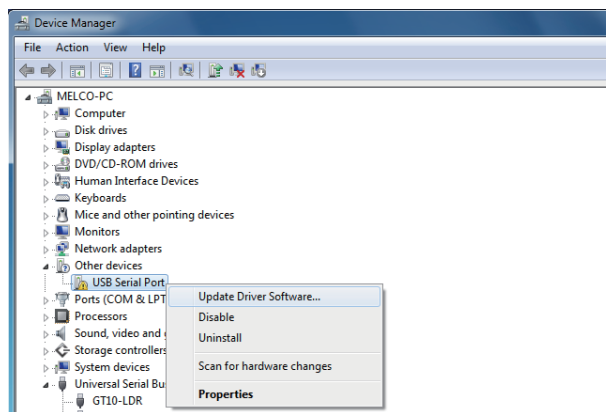
5. Specify the following folder, which is in the same folder as GT Designer3 is installed.

\\MELSOFT\GT10USBDrivers

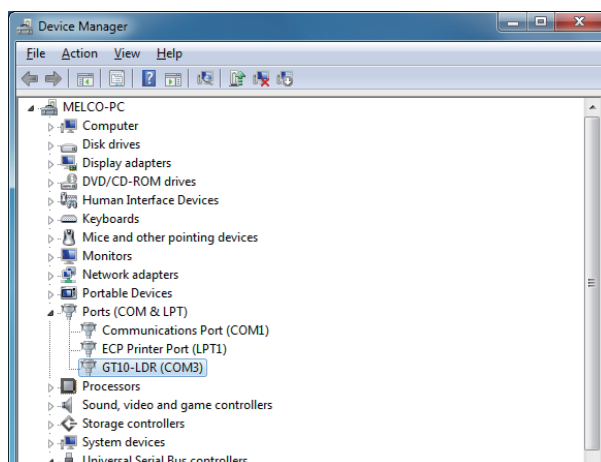
6. Click [Install this driver software anyway].
Clicking this item starts the driver installation.



7. When the USB driver installation is completed, click the [Close] button.

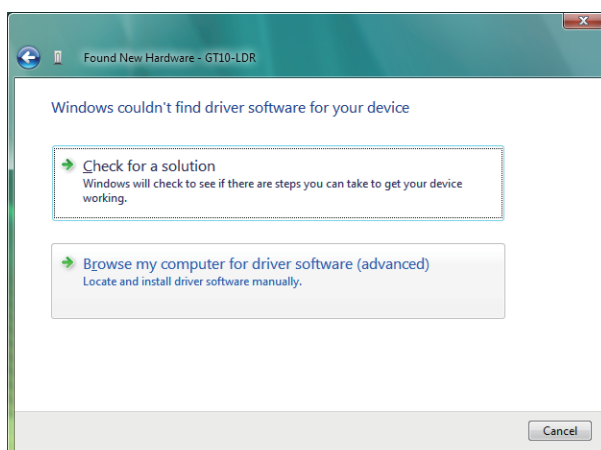
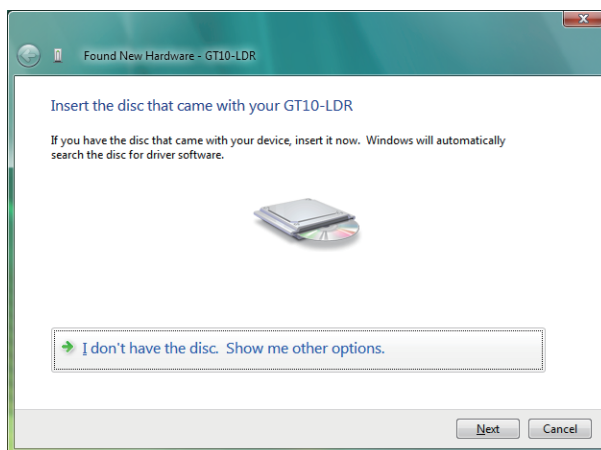
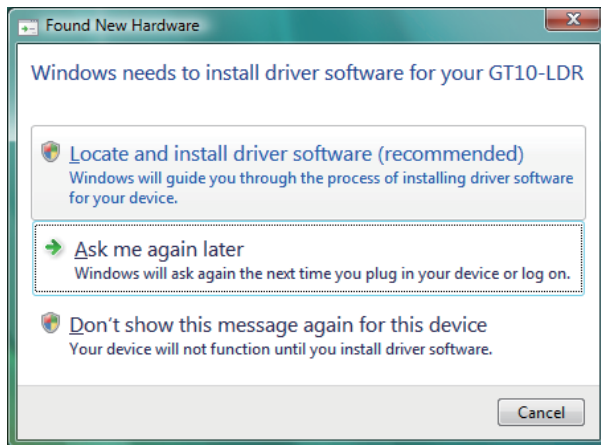


8. Right-click [USB Serial Port] in the [Device Manager] window, and then select [Update Driver Software]. The window in the step 4. appears. Install the communication port driver according to the step 4. to 7.



9. In the [Device Manager] window, check that the following driver is added. Then, the installation is completed.
 - GT10-LDR

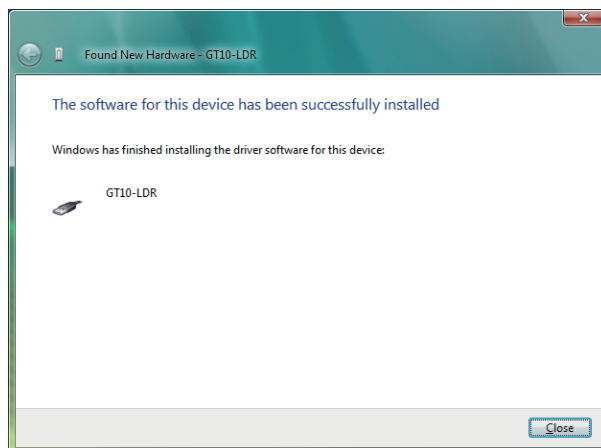
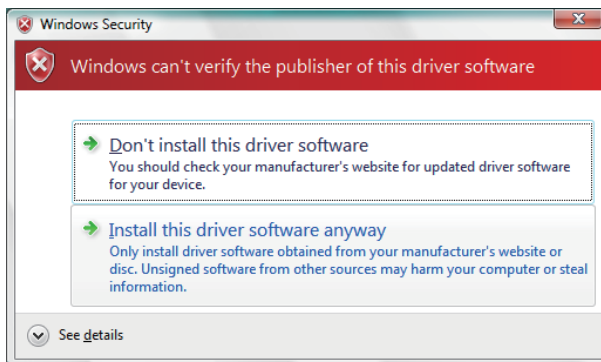
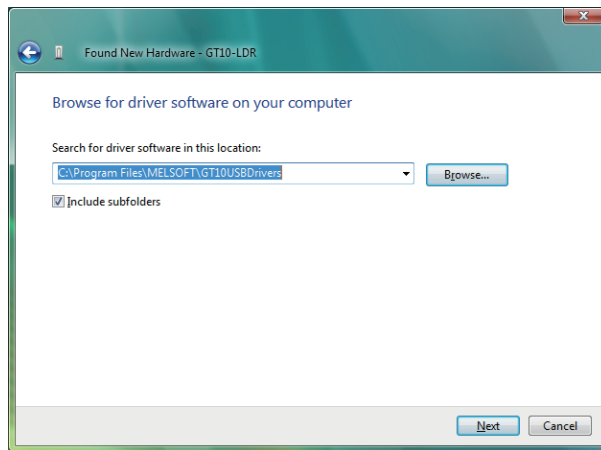
(2) USB driver installation when Windows Vista® is in use



1. When the PC and GT10-LDR are connected with the USB cable for the first time, the left screen appears. Click [Locate and install driver software (recommended)] to install the USB driver.

2. Click [I don't have the disc. Show me other options.]

3. Click [Browse my computer for driver software (advanced)].

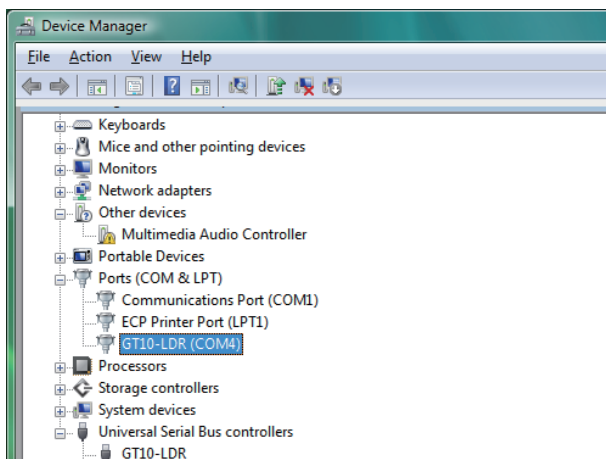


4. Specify the following folder, which is in the same folder as GT Designer3 is installed.

\\MELSOFT\GT10USBDrivers

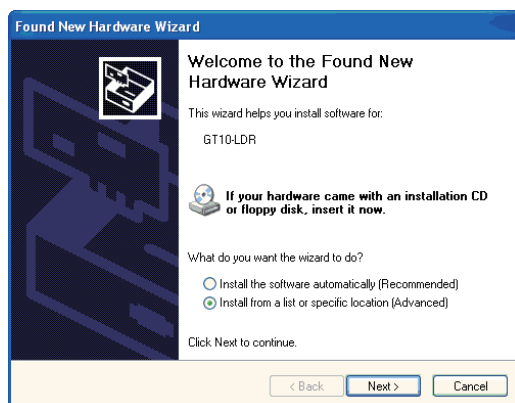
5. Click [Install this driver software anyway]. Clicking this item starts the driver installation.

6. When the USB driver installation is completed, click the [Close] button. The window in the step 2. appears. Install the communication port driver according to the step 2. to 6.



(3) USB driver installation when Windows® XP is in use

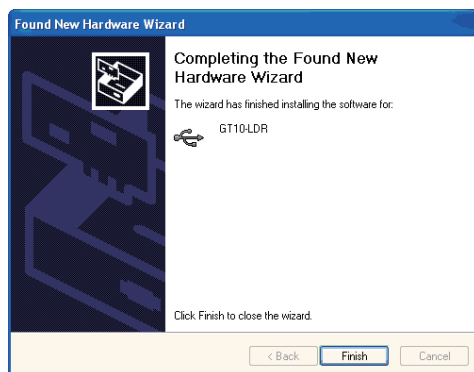
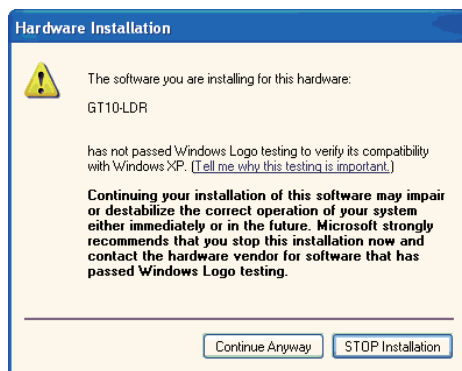
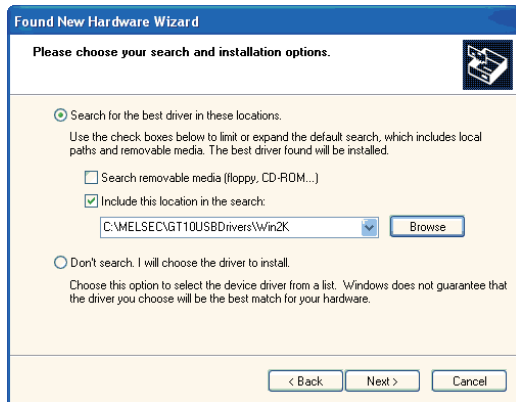
The following describes USB driver installation procedures.



7. In the [Device Manager] window, check that the following driver is added. Then, the installation is completed.
 - GT10-LDR

1. When the PC and GT10-LDR are connected with the USB cable for the first time, the left screen appears. Select [No, not this time], and click the [Next] button.

2. When the left screen appears, select [Install from a list of specific location [Advanced]], and click the [Next] button.

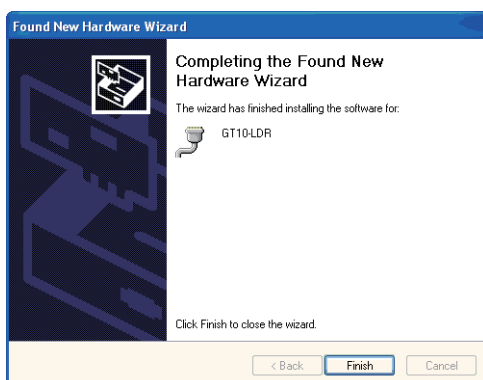
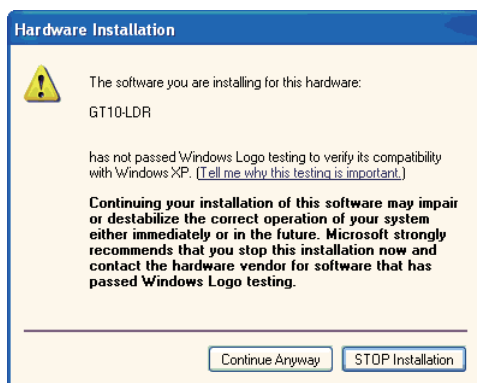
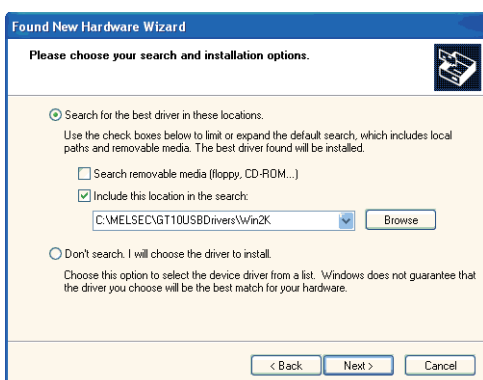
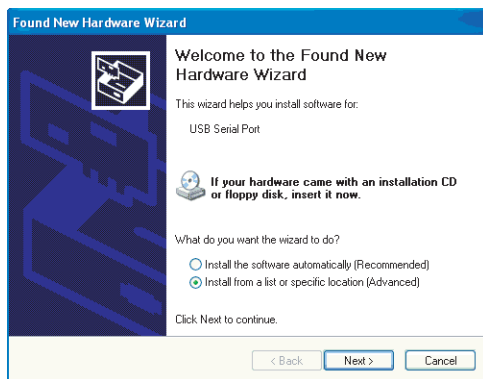


3. When the left screen appears, select the [Include this location in the search] and click the [Browse] button. Then, select "GT Designer3 install path"^{*1} "GT10USBDrivers", and click the [Next] button.

^{*1} The place specified by user when installing GT Designer3 is selected. For standard, "C:\Program Files\MELSOFT" is selected.

4. The left warning screen appears, but click the [Continue Anyway] button to continue the installation. (Mitsubishi Electric has concluded that proper operation is performed without any problems.)

5. When the left screen appears, this indicates that the installation is completed. Click the [Finish] button.



6. Next, the left screen appears. Select the [Install from a list or specific location [Advanced]] and click the [Next] button.

7. When the left screen appears, select [Include this location in the search] and click the [Browse] button. Then, select "GT Designer3 install path^{*1}\GT10USBDrivers \Win2K^{*2}", and click the [Next] button.

^{*1} The place specified by user when installing GT Designer3 is selected. For standard, "C:\Program Files\MELSOFT" is selected.

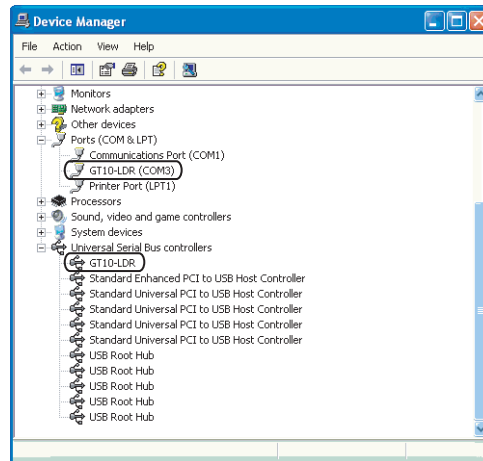
8. The left warning screen appears, but click the [Continue Anyway] button to continue the installation. (Mitsubishi Electric has concluded that proper operation is performed without any problems.)

9. When the left screen appears, this indicates that the installation is completed. Click the [Finish] button to end the installation.

POINT

Confirmation of driver installation

The device manager of Windows® can confirm that the driver is installed properly

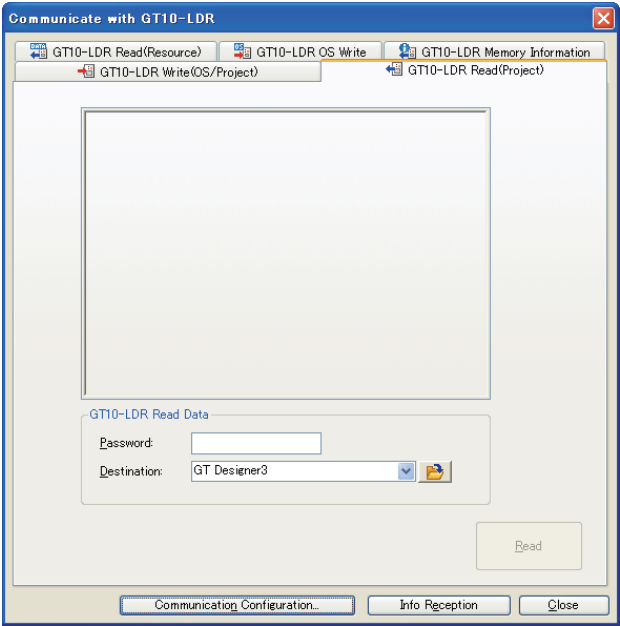


7.3.3 Setting communication

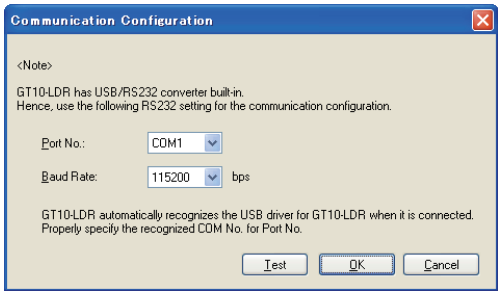
The communication setting of the PC, which transfers the data to GT10-LDR.
Configure the setting in the [Communicate with GT10-LDR] dialog box.

■ Communication setting procedure


1. Select [Communication] → [Communicate with GT10-LDR] from the menu.
When the GOT type is set to the GT1020 or GT1030, and system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the GOT cannot communicate with the GT10-LDR.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Communicate with GT10-LDR] dialog box appears, click the [Communication Configuration] button.
3. The [Communication Configuration] dialog box appears.



[Communicate with GT10-LDR] dialog box

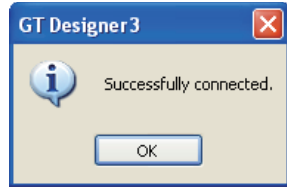


[Communication Configuration] dialog box

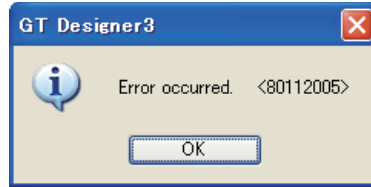
Item	Description
Port No.	PC port connected to GT10-LDR is selected. (Select the COM number that USB driver for GT10-LDR recognizes.)
Baud Rate	Set the transmission speeds on the PC and GT10-LDR. The transmission speed setting must be consistent with that of the PC.
	Communication test with GT10-LDR is performed.

■ Communication test procedure

1. After the settings in the [Communication Configuration] dialog box are configured, click the [Test] button to start the communication test.
2. The test result is displayed.



Communication succeeded

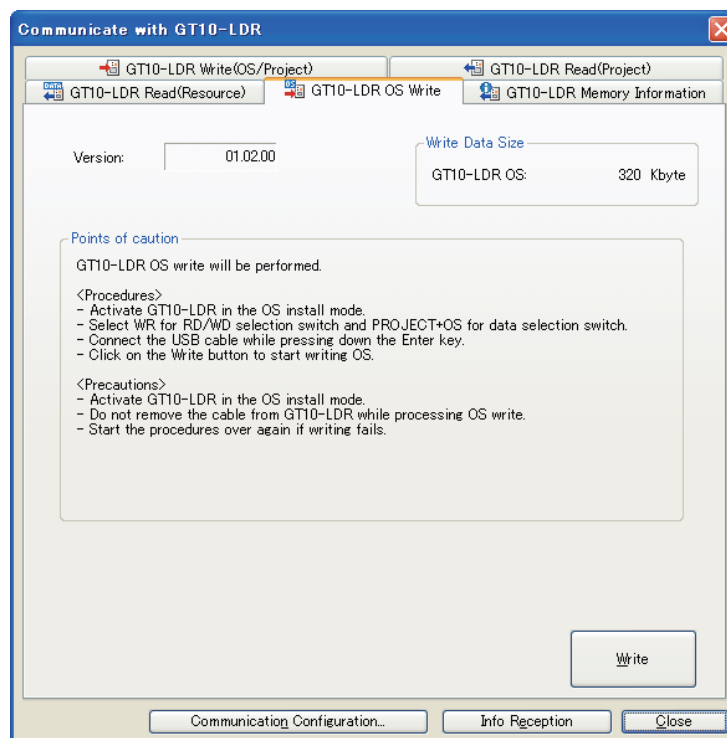


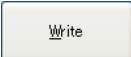
Communication failed

7.3.4 Installing GT10-LDR OS

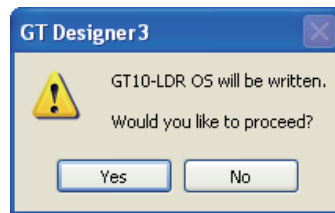
The following explains how to install GT10-LDR OS.

1. Select [Communication] → [Communicate with GT10-LDR] from the menu.
When the GOT type is set to the GT1020 or GT1030, and system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the GOT cannot communicate with the GT10-LDR.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Communicate with GT10-LDR] dialog box appears, select the [GT10-LDR OS Write] tab.
3. Check [Points of caution] and click the [Write] button.

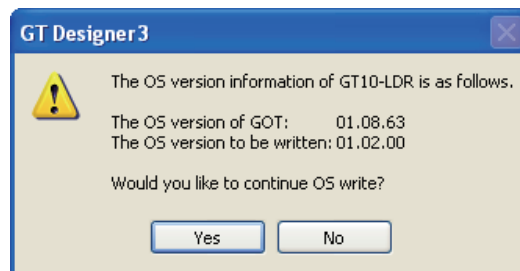


Item	Description
Version	The version of the GT10-LDR OS to be installed on the GT10-LDR is displayed.
Write Data Size	The data size of the GT10-LDR OS to be installed on the GT10-LDR.
Points of caution	The precautions for installing the GT10-LDR OS are displayed. Make sure to read them before installing.
	Installs the GT10-LDR OS on the GT10-LDR.

4. Clicking the [Write] button displays the message confirming the installation.
Click the [Yes] button to start the installation.
Click the [No] button to cancel the installation.



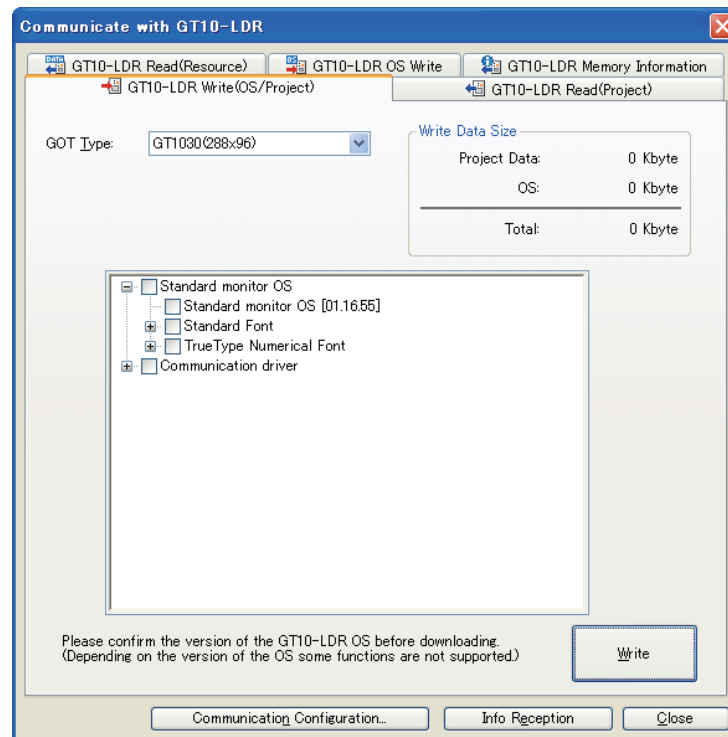
5. Clicking the [Yes] button checks the OS version in the GT10-LDR against the GT Designer3 OS version.
Click the [Yes] button to continue the installation.
Click the [No] button to cancel the installation.

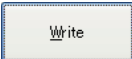


7.3.5 Writing project data and installing OS

The following shows how to install the OS and write the project data.

1. Select [Communication] → [Communicate with GT10-LDR] from the menu.
When the GOT type is set to the GT1020 or GT1030, and system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the GOT cannot communicate with the GT10-LDR.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Communicate with GT10-LDR] dialog box appears, select the [GT10-LDR Write(OS/Project)] tab.
3. Select the project data and OS to be written or installed, and click the [Write] button.

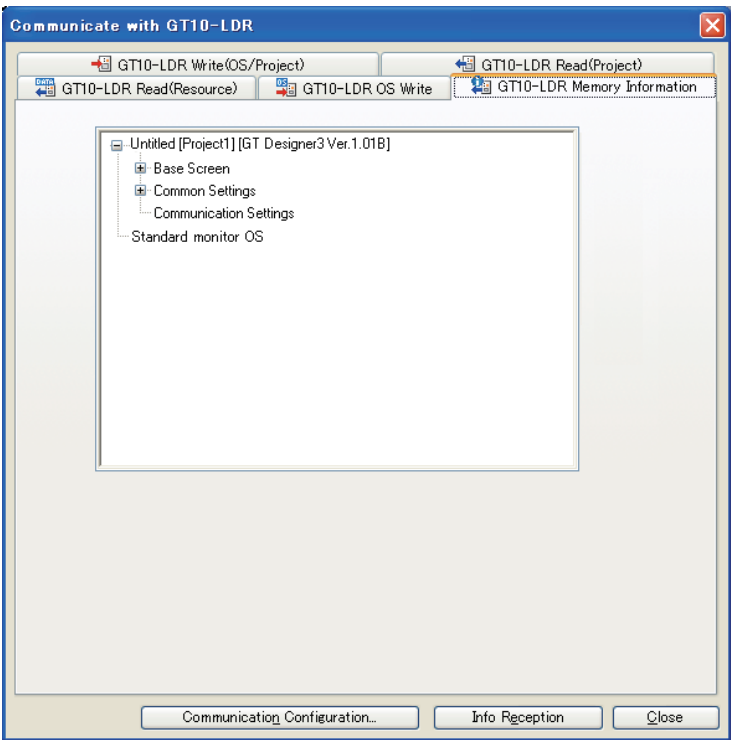



Item	Description
GOT Type	Select the GOT type of the OS and project data to be written or installed on the GT10-LDR. This item can be selected when a project data other than GT10 is opened or the project data has not been created.
Folder	The folder name of the write and installation destination is displayed.
Project ID	The ID of the project data to be written is displayed.
Write Data Size	The size of the OS and project data to be written or installed on the GT10-LDR is displayed.
Tree view	The project data, Standard monitor OS, and Communication driver are displayed in the tree. Select the data to be written.
	Writes the project data and installs the OS on the GT10-LDR.

7.3.6 Obtaining memory information

The following explains how to confirm the memory information.

1. Select [Communication] → [Communicate with GT10-LDR] from the menu.
When the GOT type is set to the GT1020 or GT1030, and system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the GOT cannot communicate with the GT10-LDR.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Communicate with GT10-LDR] dialog box appears, select the [GT10-LDR Memory Information] tab.
3. Click the [Info Reception] button to display the data stored in the built-in memory of the GT10-LDR.

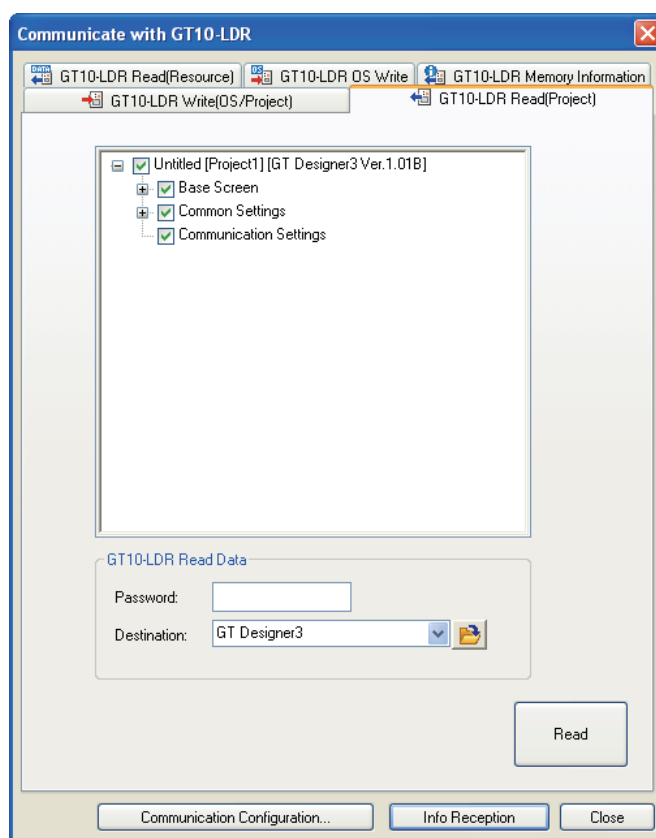


Item	Description
Tree view	The project data, OS, and others stored in the built-in memory of the GT10-LDR in the tree.
	Memory information is read out from GT10-LDR.

7.3.7 Reading project data

The following shows how to read the project data.

1. Select [Communication] → [Communicate with GT10-LDR] from the menu.
When the GOT type is set to the GT1020 or GT1030, and system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the GOT cannot communicate with the GT10-LDR.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Communicate with GT10-LDR] dialog box appears, select the [GT10-LDR Read(Project)] tab.
3. Click the [Info Reception] button to display the project data written in the GT10-LDR.
(This operation is not required when the project data of the read target has already been displayed.)
4. Select the data to be read, and click the [Read] button.



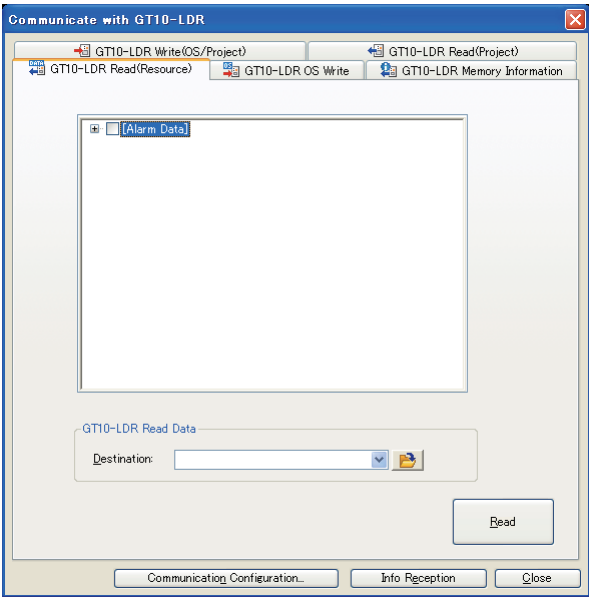
Item	Description
Tree view	Project data stored in the GT10-LDR is displayed in a tree structure.
Password	When a password has been set in the project data stored in the GT10-LDR, enter the password . The entered password is indicated with asterisks (*).
Destination	Set the storage destination of the read project data. (Up to five past specified destinations are held.) When the project data is read with the default (GT Designer3) settings, the read data will be imported to the currently open GT Designer3.
Info Reception	Reads the built-in memory information from the GT10-LDR.
Read	Read the items selected*1 in the tree from the GT10-LDR. The reading is interrupted if the read destination has run out of space.


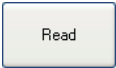
*1 Items cannot be selected individually, as they are selected by the package acquisition.

7.3.8 Reading resource data

The following shows how to read the resource data.

1. Select [Communication] → [Communicate with GT10-LDR] from the menu.
When the GOT type is set to the GT1020 or GT1030, and system labels are used, the system label update/check is executed.
If errors exist in the system label settings, the GOT cannot communicate with the GT10-LDR.
When errors exist in the system label settings, check the settings, and remove the errors.
2. As the [Communicate with GT10-LDR] dialog box appears, select the [GT10-LDR Read(Resource)] tab.
3. Click the [Info Reception] button to display the resource data written in the GT10-LDR.
(This operation is not required when the resource data of the read target has already been displayed.)
4. Select the data to be read, and click the [Read] button.



Item	Description
Tree View	The list of resource data stored in GT10-LDR is displayed. Select the data to be read.
Destination	Set the storage destination of the read resource data. (Up to five past specified destinations are held.)
	Reads the resource data from the GT10-LDR.
	Reads the items selected in the tree from the GT10-LDR. The reading is interrupted if the read destination has run out of space.

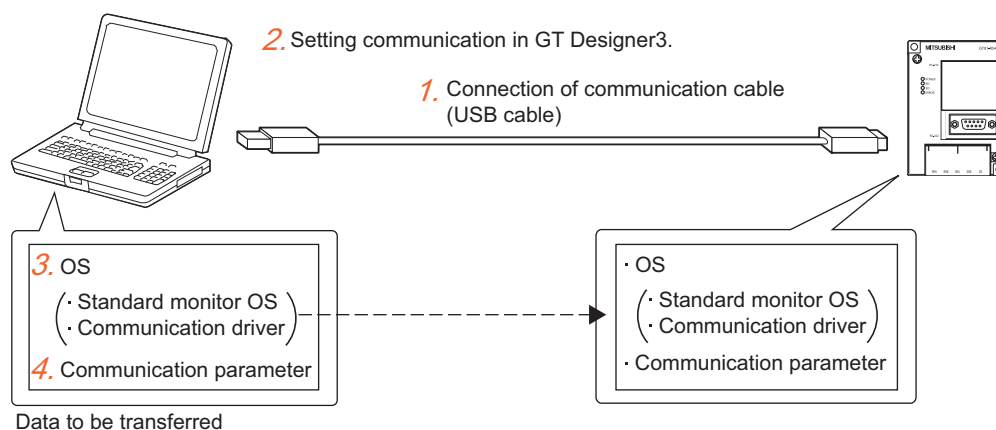
7.4 Transferring Data Using GT01-RS4-M

GT 16 GT 15 GT 11 GT 10 Soft GOT 1000

7.4.1 Preparation for data transfer

■ Data transfer procedure

Data is transferred in the following procedure.




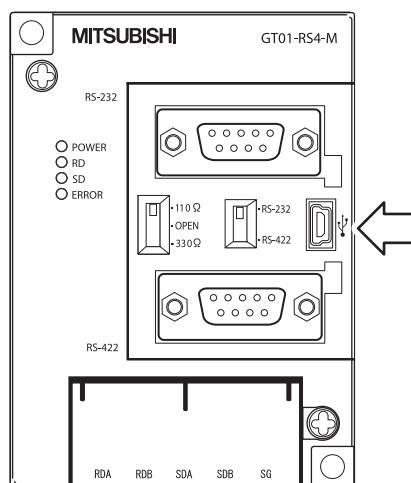
1. Connect the communication cable to the GT01-RS4-M.
 ☞ 7.4.2 Connecting the PC and GT01-RS4-M via USB cable
2. Configure the communication setting of GT Designer3.
 ☞ 7.4.3 Setting communication
3. Install the OS on the GT01-RS4-M.
 ☞ 7.4.4 Installing OS to GT01-RS4-M
4. Write the communication parameter to the GT01-RS4-M.
 ☞ 7.4.5 Writing communication parameter to GT01-RS4-M
5. Write the communication driver (multi-drop (slave)) to the GOT.
 ☞ 7.1.4 Writing and installing on GOT
 When writing the driver via memory card
 ☞ 7.2.1 Transferring project data, OS, and special data to memory card
6. Write the communication detail settings to the GOT.
 ☞ 7.1.4 Writing and installing on GOT
 When writing the settings via memory card
 ☞ 7.2.1 Transferring project data, OS, and special data to memory card
 For the communication detail settings, refer to the following.
 ☞ GOT1000 Series Connection Manual for GT Works3 and a controller used

7.4.2 Connecting the PC and GT01-RS4-M via USB cable

Please follow the procedures to securely connect the USB cable to the GT01-RS4-M and GOT.

1. Connect the USB cable to the USB Type-A connector of the PC.
2. Connect the USB cable to the USB connector of the GT01-RS4-M.
When the PC and GT01-RS4-M are USB connected, install the USB driver into the PC.
Refer to the following for the installation of the USB driver.

 7.1.1 Connecting personal computer and GOT with cable

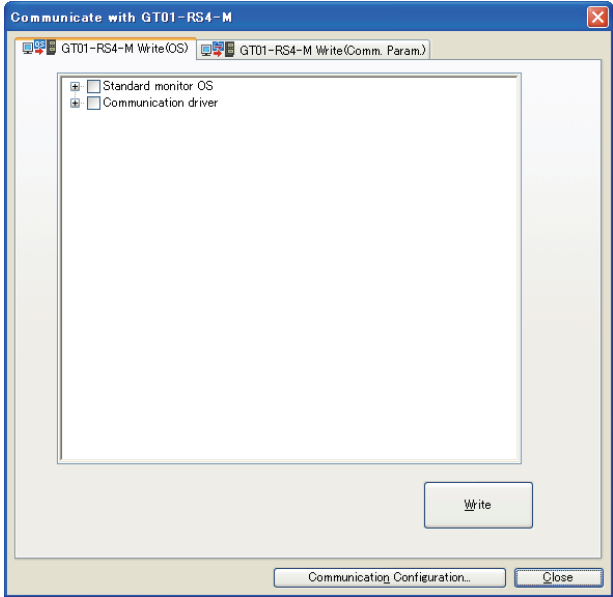


7.4.3 Setting communication

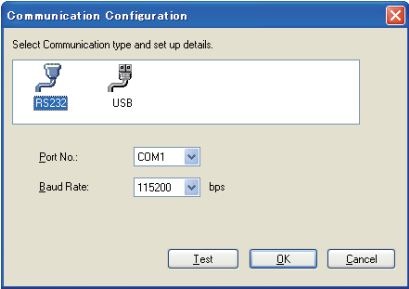
Communication settings of the PC, which transfers the data to GT01-RS4-M.
To communicate with GT01-RS4-M a dialog box is used for the settings.

■ Communication setting procedure

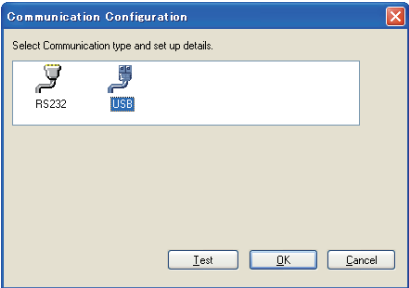
1. Select [Communication] → [Communicate with GT01-RS4-M] from the menu.
2. As the [Communicate with GT01-RS4-M] dialog box appears, click the [Communication Configuration] button.
3. The [Communication Configuration] dialog box appears.



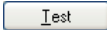
[Communicate with GT10-LDR] dialog box



[Communication Configuration] dialog box (RS232)

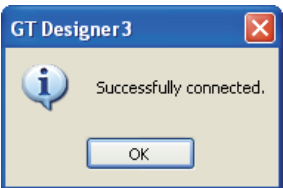


[Communication Configuration] dialog box (USB)

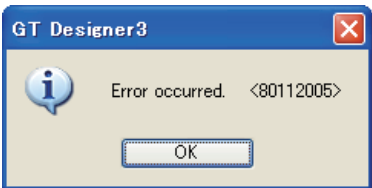
Item	Description
Communication method	Select the method to connect the personal computer with the GT01-RS4-M.
Port No.	PC port connected to GT01-RS4-M is selected. (Configure this setting when connected with RS232.)
Baud Rate	Set the transmission speeds on the PC and GT01-RS4-M. The transmission speed setting must be consistent with that of the PC. (Configure this setting when connected with RS232.)
	Starts the communication test with the GT01-RS4-M.

■ Communication test procedure (RS232, USB)

1. After the settings in the [Communication Configuration] dialog box are completed, click the [Test] button to start the communication test.
2. The test result is displayed.



Communication succeeded



Communication failed

7.4.4 Installing OS to GT01-RS4-M

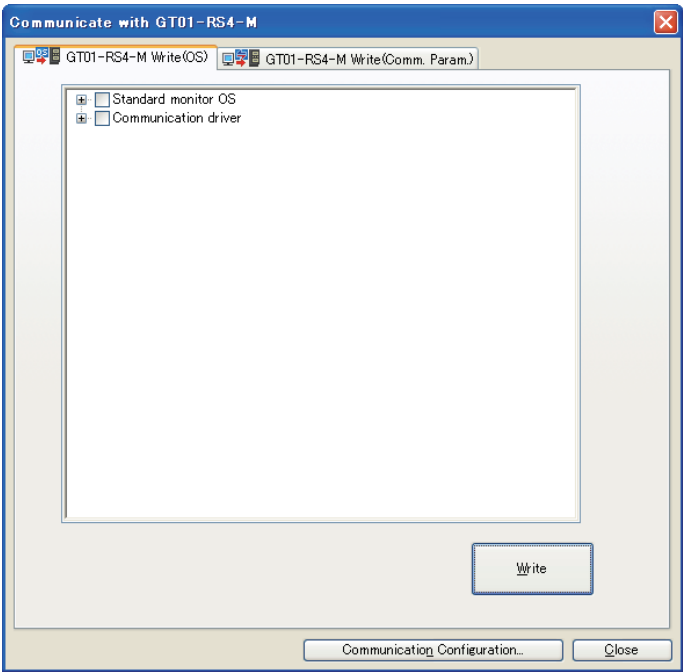
POINT

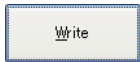
When installing the standard monitor OS and the communication driver

The standard monitor OS and communication driver (MELSEC-FX) are installed in the GT01-RS4-M by default. Typically, the standard monitor OS does not need to be installed. However, install the driver for the connected PLC as a communication driver.

How to install the OS (standard monitor OS and communication driver)

1. Select [Communication] → [Communicate with GT01-RS4-M] from the menu.
2. As the [GT01-RS4-M Write(OS)] tab of the [Communicate with GT01-RS4-M] dialog box appears, select the OS to be installed (standard monitor OS and communication driver) and click the [Write] button.

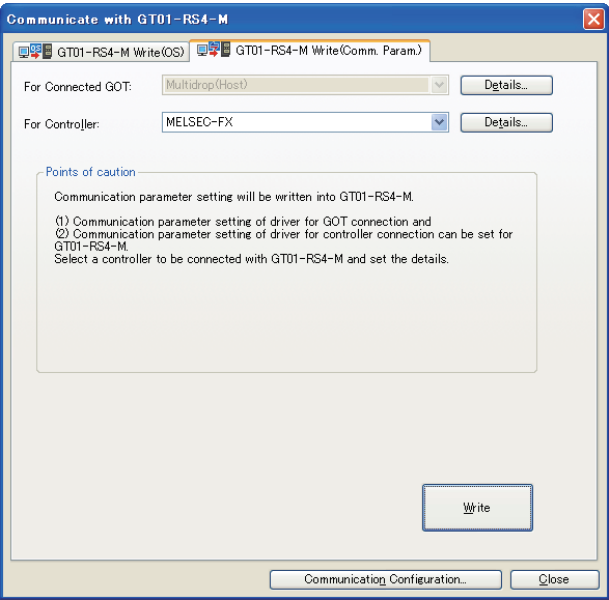


Item	Description
Tree view	The OS (standard monitor OS and communication driver) are shown in the tree. Select the data to be written.
	Installs the OS (standard monitor OS and communication driver) on the GT01-RS4-M.

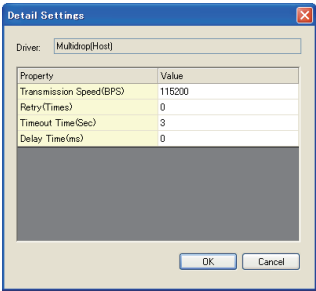
7.4.5 Writing communication parameter to GT01-RS4-M

How to write the communication parameter.

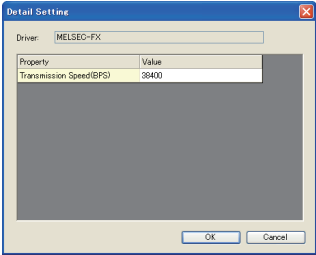
1. Select [Communication] → [Communicate with GT01-RS4-M] from the menu.
2. As the [Communicate with GT01-RS4-M] dialog box appears, select the [GT01-RS4-M Write(Comm. Param.)] tab.
3. Check [Points of caution] and click the [Write] button.



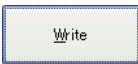
[Communicate with GT01-RS4-M] dialog box



[Details] dialog box
(For communication with GOT)



[Details] dialog box
(For communication with controllers)

Item	Description
For Connected GOT	Fixed to Multidrop (HOST). Click the [Details] button to configure the communication detail settings of the GT01-RS4-M and the GOT.
For Controller	Select the controller to be connected. Click the [Details] button to configure the communication detail settings of the controller and the GOT.
Points of Caution	The precautions for writing the communication parameter are displayed. Make sure to read it before writing.
	Writes the communication parameter to the GT01-RS4-M.

7.5 Data Types and Sizes Transferred to the GOT

7.5.1 Data types and storage destinations

■ Data types and storage destinations

The following data are in the GOT.

The Boot OS, standard monitor OS, and communication driver are necessary data to operate the GOT and must be installed before the created project data is written to the GOT.

The standard monitor OS and communication driver are preinstalled on the GT10 and do not need to be installed.

However, the communication driver may need to be replaced depending on the system configuration. In such a case, install the communication driver.

For the storage destination of each data in each GOT, refer to the following.

■Data storage destinations in the GOT

Data type		Storage destination drive				Reference
		GT16	GT15	GT11	GT10	
BootOS		C: Built-in Flash Memory (system area)	C: Built-in Flash Memory (system area)	C: Built-in Flash Memory (system area)	-	■BootOS
OS	Standard monitor OS	A: Standard CF Card or C: Built-in Flash Memory (system area)	A: Standard CF Card or C: Built-in Flash Memory (system area)	C: Built-in Flash Memory (system area)	C: Built-in Flash Memory (system area)	■Standard monitor OS
	Communication driver (First)	A: Standard CF Card C: Built-in Flash Memory (system area)	A: Standard CF Card C: Built-in Flash Memory (system area)	C: Built-in Flash Memory (system area)	-	■Communication driver
	Communication driver (From the second) Extended function OS Option OS, etc.					■Communication driver ■Extended function ■Option function
Project data		A: Standard CF Card or B: Extended Memory Card or C: Built-in Flash Memory (system area)	A: Standard CF Card or B: Extended Memory Card or C: Built-in Flash Memory (system area)	A: Standard CF Card or C: Built-in Flash Memory (system area)	C: Built-in Flash Memory (system area)	■Project data
Special data		A: Standard CF Card C: Built-in Flash Memory (system area)	A: Standard CF Card C: Built-in Flash Memory (system area)	-	-	7.1.4 ■Writing special data (Personal computer to GOT)
Resource data		A: Standard CF Card or B: Extended Memory Card	A: Standard CF Card or B: Extended Memory Card	A: Standard CF Card or D: Built-in SRAM	GT1020 C: Built-in Flash Memory Other than GT1020 D: Built-in SRAM	■Resource data

POINT

(1) Writing the project data and special data

If the OS (standard monitor OS, communication driver, extended function, and option OS) used by GT Designer3 in writing the project data and special data is newer than the OS installed on the GOT, new functions may be unavailable. Reinstalling the OS on the GOT is recommended when writing the project data and special data to the GOT.

(2) Installing the OS (standard monitor OS, communication driver, extended function, and option OS)

Make sure that OS (standard monitor OS, communication driver, extended function OS, option OS) are of the same major version and minor version.

If their version numbers are different, the GOT will not operate.

(Example 1)

Standard monitor OS : [01.00.00]
Communication driver : [01.00.00]
Extended function OS : [01.00.00]
Option OS : [01.00.00]

GOT operates.

(Example 2)

Standard monitor OS : [01.00.00]
Communication driver : [02.00.00]
Extended function OS : [01.00.00]
Option OS : [01.00.00]

GOT does not operate.

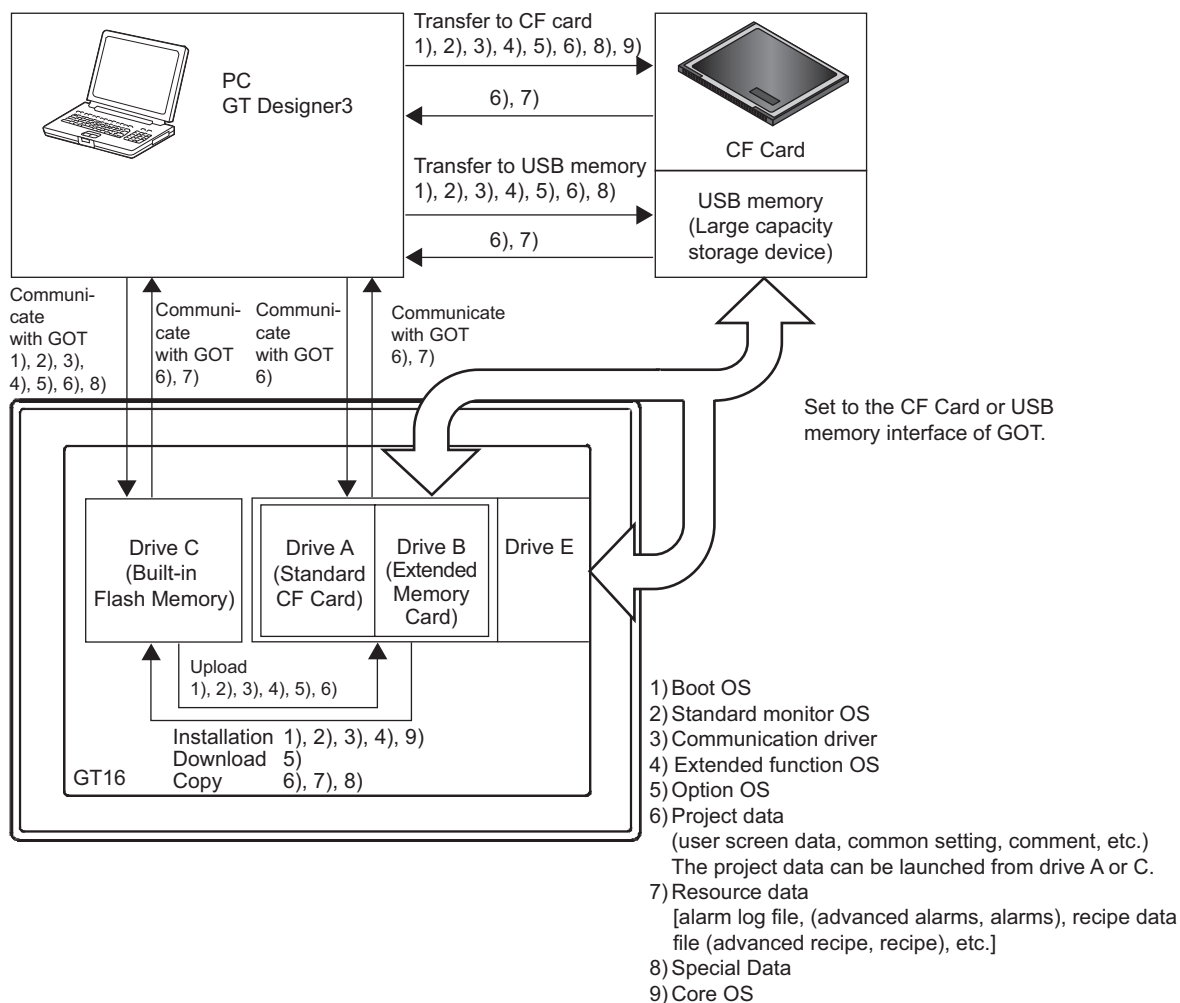
For how to check the OS version, refer to the following.

 ■ BootOS (3) Property of OS information

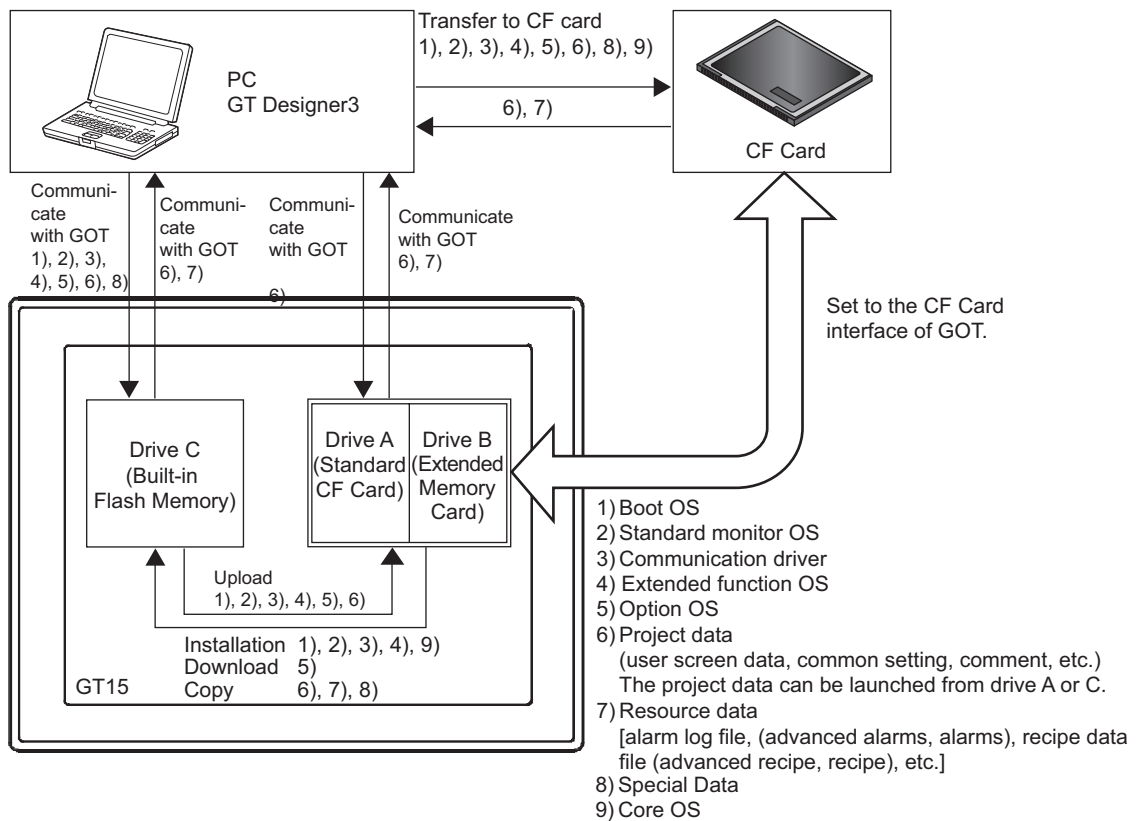
■ Data storage destinations in the GOT

The data storage drives change depending on the GOT model.

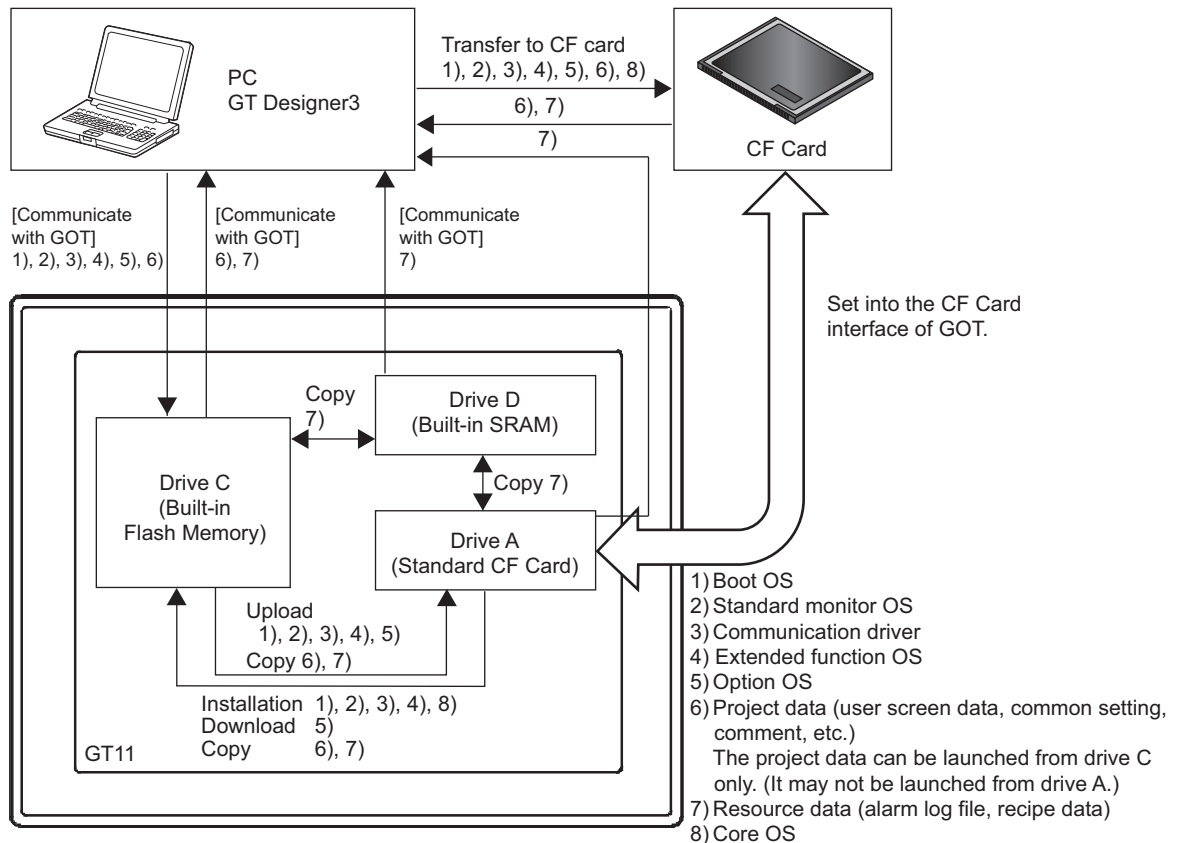
(1) GT16



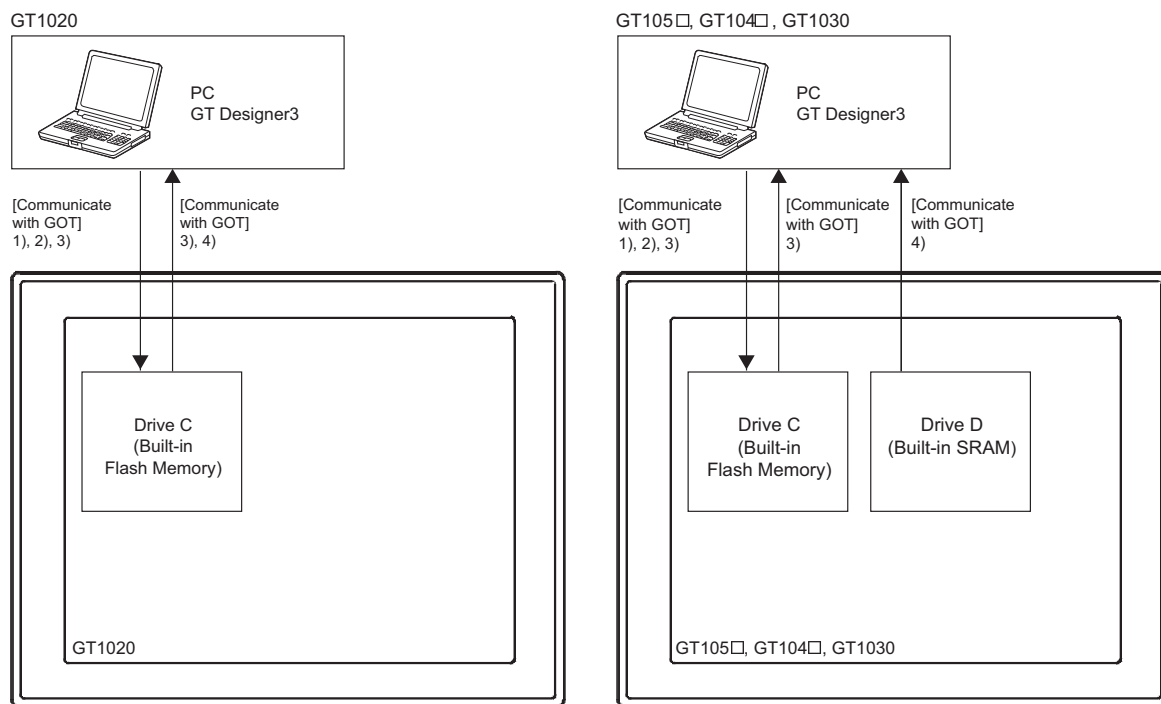
(2) GT15



(3) GT11



(4) GT10



- 1) Standard monitor OS
- 2) Communication driver
- 3) Project data (user screen data, common setting, comment, etc.)
- 4) Resource data (alarm log file, recipe data)

■ BootOS

This is the program needed to control GOT hardware, and during communication between GOT and PCs. Boot OS is installed on the GOT at factory shipment.

However, if functions not supported by the Boot OS version are used in the GOT, Boot OS must be upgraded (installed).

The GOT can be initialized to the factory preset condition by install the Boot OS.

(The Boot OS cannot be installed on the GT10.)

(1) File name and storage destination in GOT

Data type	File name	Storage destination*1
BootOS	G1OSBTOS.OUT	C:\G1BOOT\

*1 The storage destination folder in the GOT is created when the Boot OS is installed.

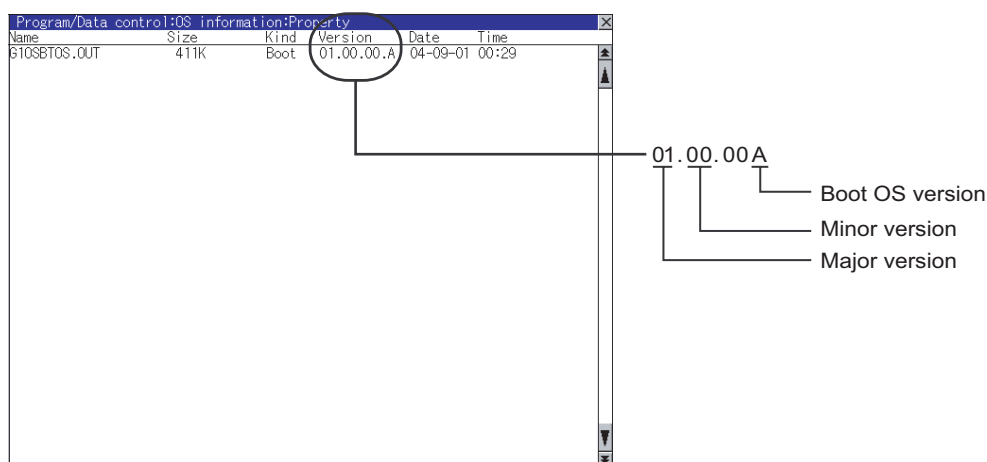
(2) Boot OS version

The version of the Boot OS installed on the GOT can be checked from the property of OS information or rating plate of the GOT.

However, if the Boot OS has been updated (installed) by the user, the actual version may differ from the one given on the rating plate. Therefore, it is recommended to check it from the property of OS information.

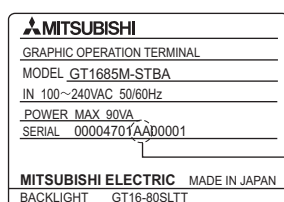
Immediately after purchase of the product, the version may be checked with the rating nameplate.

(a) Property of OS information



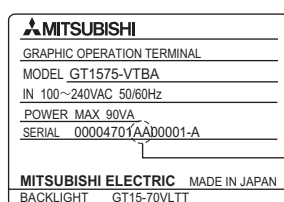
(b) Rating plate

For GT16



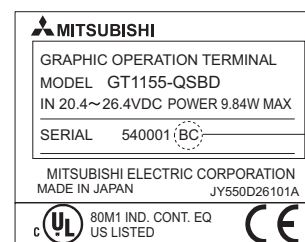
AA
Boot OS version

For GT15



AA
Boot OS version

For GT11



BC
Boot OS version

POINT

Checking the Boot OS version of the GT10


In the GT10, the Boot OS installed on the GOT at factory shipment cannot be upgraded. However, the Boot OS version of the GOT can be checked.

For how to check the Boot OS version of the GT10, refer to the following.


➞ GT10 User's Manual

(3) Property of OS information

The property of OS information can be displayed by the following operation.
For details of how to startup and operate the utility, refer to the following.

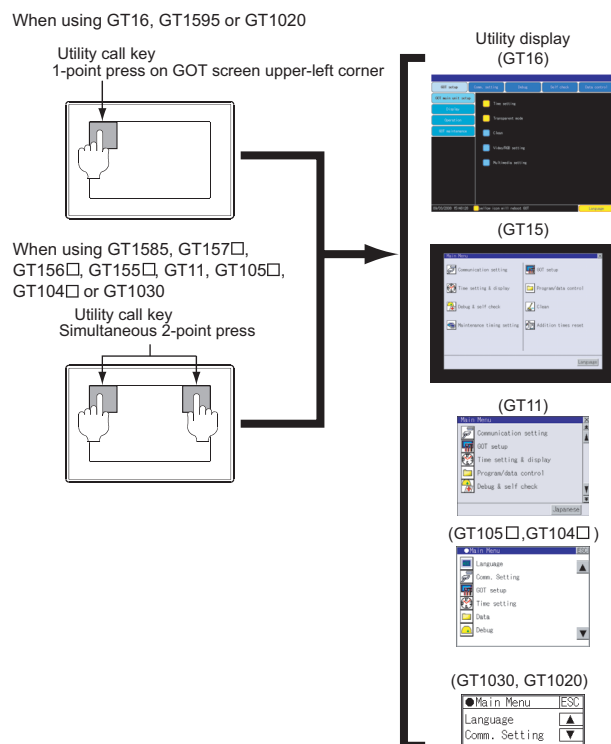
 User's Manual for the GOT used

1. Touch the utility call key or the special function switch (utility).
(Touch the above key or switch after installing the standard monitor OS on the GOT from GT Designer3.)
 - Using the utility call key
While the user-created screen is being displayed, touch the utility call key to display the main menu.
The utility call key can be set using the GOT's utility screen or GT Designer3.
For the setting method, refer to the following.

 User's Manual for the GOT used

4.9 GOT Display and Operation Setting

How to display the utility (at factory shipment)



POINT

If the Utility Call Key is set in one place

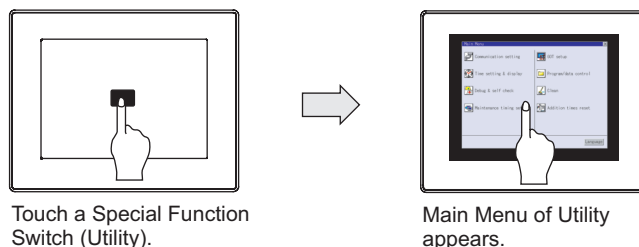
If the [Pressing time] on the utility call key setting screen is set to non-zero value, hold the utility call key continuously until the beeper sounds.

For the utility call key setting, refer to the following.

 User's Manual for the GOT used

- Using the special function switch (Utility)
While the user-created screen is being displayed, touch the special function switch (Utility) to display the main menu.
For details of the special function switch (Utility), refer to the following.

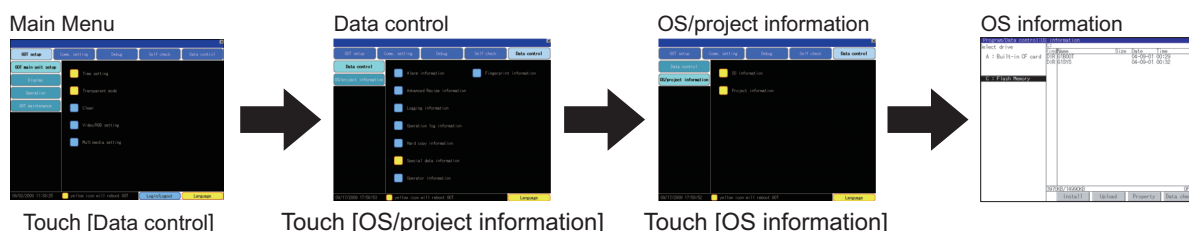
☞ (Functions) 2.6 Setting Special Function Switch



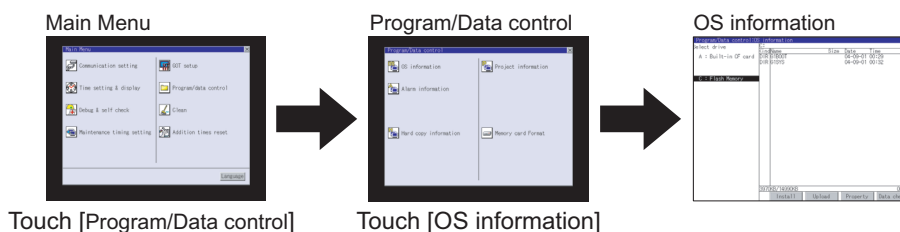
2. Display [OS information] from the utility main menu.
For details of the operation to display [OS information], refer to the following.

☞ User's Manual for the GOT used

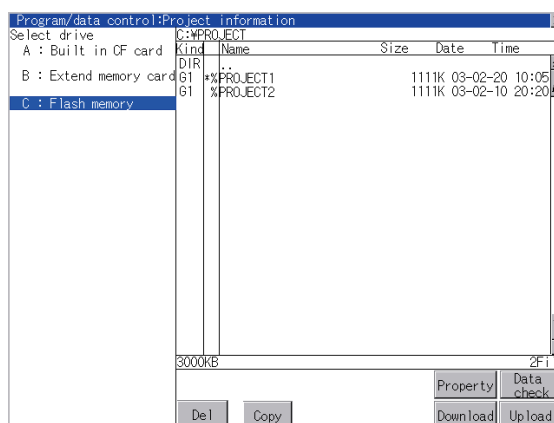
Utility operation of GT16



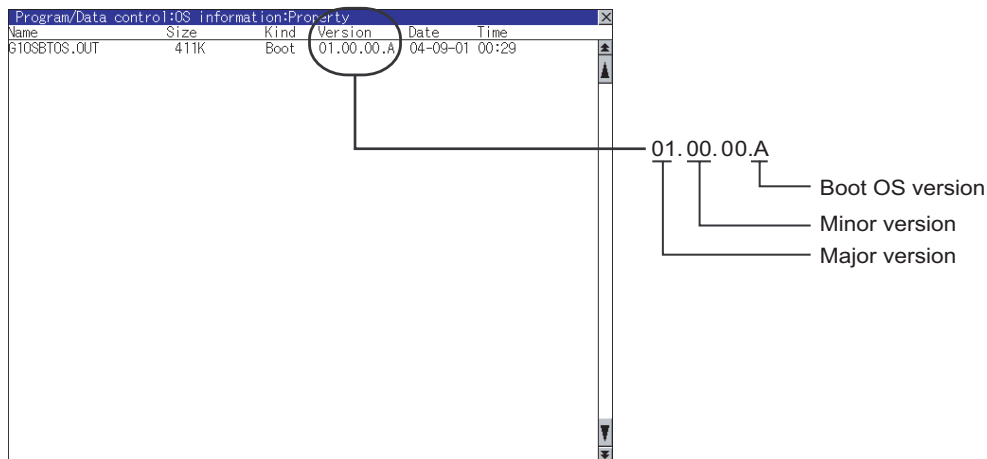
Utility operation of GT15



3. The [OS information] screen appears.
Select a drive in [Select drive]. Then, select a file and touch the [Property] button.



4. The [Property display] screen appears.



(4) **How to install**

The Boot OS is installed on the GOT by default. When the upgrade of the Boot OS or initialization of the GOT is required, install the Boot OS.

The Boot OS can be installed in either of the following methods.

- (a) Installing the Boot OS on the GOT using the USB or RS-232 cable

➡ 7.1.4 ■ Installing Boot OS (Personal computer to GOT)

- (b) Installing the Boot OS on the GOT via the CF card of USB memory

➡ 7.2.2 Transferring Boot OS to memory card

POINT

Initializing the GOT (Returning the GOT to factory-settings)

When the Boot OS is installed to initialize the GOT (return the GOT to factory-settings), the OS and project data in the GOT are automatically deleted.

If the project data backup is required, read the project data to a personal computer, CF card or USB memory before installing the Boot OS.

If the GOT is not initialized even after installing the Boot OS, install the CoreOS.

➡ 7.2.2 Transferring Boot OS to memory card

7.2.3 Transferring CoreOS to memory card

Standard monitor OS

The standard monitor OS includes the standard monitor OS, standard font, standard OS system screen data, and standard OS system screen information.

They are programs that operate the GOT, e.g. interface control, OS/screen data write and installation, OS/project data deletion, touch key control, and screen/guidance display functions.

On the GT10, the standard monitor OS, 12dot (except GT1020) standard font Japanese (supporting Europe), and 16dot standard font (Gothic) are preinstalled.

Check the standard monitor OS version when using the standard font.

(1) File names that are used by GT16, GT15, and GT11 and storage destination folder in GOT

Data type			File name	Storage destination*1
Standard monitor OS	6 × 8 dot Font (ASCII character)		G1OSMONT.OUT	C:\G1SYS\
	24dot Numerical HQ Font			
	32dot Numerical HQ Font			
Standard Font	Japanese	12dot*2	G1F12STG.FON	
		16dot (Mincho)*2	G1F16STM.FON	
		16dot (Gothic)*2	G1F16STG.FON	
	Japanese (supporting Europe)	12dot*2	G1F12SLG.FON	
		16dot (Mincho)*2	G1F16SLM.FON	
		16dot (Gothic)*2	G1F16SLG.FON	
	Chinese (Simplified)	12dot*2	G1F12SGM.FON	
		16dot (Mincho)*2	G1F16SGM.FON	
	Chinese (Simplified) (suppoting Europe)	12dot*2	G1F12SBM.FON	
		16dot (Mincho)*2	G1F16SBM.FON	
	Chinese (Traditional) (suppoting Europe)	12dot*2	G1F12SFG.FON	
		16dot (Gothic)*2	G1F16SFG.FON	
	True Type Numerical Font Gothic		G1FTTNMG.FON	
	True Type Numerical Font 7-seg		G1FTTNM7.FON	
System Screen Data			G1OSMONT.G1	
System Screen Information			G1OSMONT.G1D	

*1 The storage destination folder in the GOT is created when the standard monitor OS is installed.

*2 Install the font to be used onto the main body of GOT.

The font to be used on the GOT needs to be the same as standard font in the model setting on GT Designer3.

(2) File names that are used by GT10 and storage destination folder in GOT

Data type			File name	Storage destination
Standard monitor OS	6 × 8 dot Font (ASCII character)		-	C:
	24dot Numerical HQ Font			
	32dot Numerical HQ Font			
Standard Font	Japanese	12dot* ¹		
		16dot (Mincho)* ¹		
		16dot (Gothic)* ¹		
	Japanese* ² (supporting Europe)	12dot		
		16dot (Gothic)		
	Chinese (Simplified)	12dot* ¹		
		16dot (Mincho)* ¹		
	Chinese (Simplified) (suppoting Europe)	12dot* ¹		
		16dot (Mincho)* ¹		
	Chinese (Traditional) (suppoting Europe)	12dot* ¹		
		16dot (Gothic)* ¹		
	True Type Numerical Font Gothic			
	True Type Numerical Font 7-seg* ³			

- *¹ Install the font to be used onto the main body of GOT.
The font to be used on the GOT is required to be the same as the standard font in the GOT type setting on GT Designer3.
- *² Standard Font [Japanese (supporting Europe)] is preinstalled on the GT10.
(12dot Standard font is installed only onto the GT105□, GT104□ and GT1030.)
- *³ Install this font to the GOT of the Boot OS version [01.11.**.G] or later.

POINT

Installing the standard font

- (1) In the case of 16dot standard font, either Mincho or Gothic can be installed.
Make sure to install the font specified in the system settings.
(With the write item in the standard monitor OS cleared, select the font other than the 16dot standard font again. This will select the font specified in the system setting.)
- (2) If the 16dot standard font specified in the system setting differs from the font to be installed on the GOT, the GOT uses the installed font to display.
The text or object text of the 16dot standard font will look differently from the one drawn on GT Designer3.
- (3) When the standard font Japanese or Chinese (Simplified) is installed, some characters in the European languages (characters with a mark on the top or bottom of the alphabet) are displayed as two-byte characters. When Japanese (supporting Europe), Chinese (Simplified) (supporting Europe), or Chinese (Traditional) (supporting Europe) is installed, some characters in the European languages (characters with a mark on the top or bottom of the alphabet) are displayed as one-byte-characters.
- (4) Install the same standard font as that specified in the system setting. If the font language specified in the system setting differs from the standard font to be install on the GOT, note that the text will look differently from the one drawn on GT Designer3, as the GOT uses the installed standard font to display.
- (5) To select German for the language to display in the GOT utility, install the font supporting Europe.
- (6) When the font certified by Chinese government must be displayed, install Chinese (Simplified).
- (7) The TrueType numerical font 7-seg can be used in the GOT of the following Boot OS versions or later.
 - GT16, GT15, and GT11: [04.00.00.U]
 - GT10: [01.11.**.G]



Displaying Simplified Chinese or Traditional Chinese

Perform the following three steps to display Simplified Chinese characters or Traditional Chinese characters on the GT16 or GT15.

- (1) Install the following fonts (Option OS) while installing the OS.

Standard font [China GB] 12-dot characters	The Simplified Chinese (GB) font is a GB2312-encoded font mainly used on mainland China.
Standard font [China GB] 16-dot characters	
Standard font [China Big5] 12-dot characters	The Traditional Chinese (Big5) font is a Big5-encoded font mainly used in Taiwan.
Standard font [China Big5] 16-dot characters	

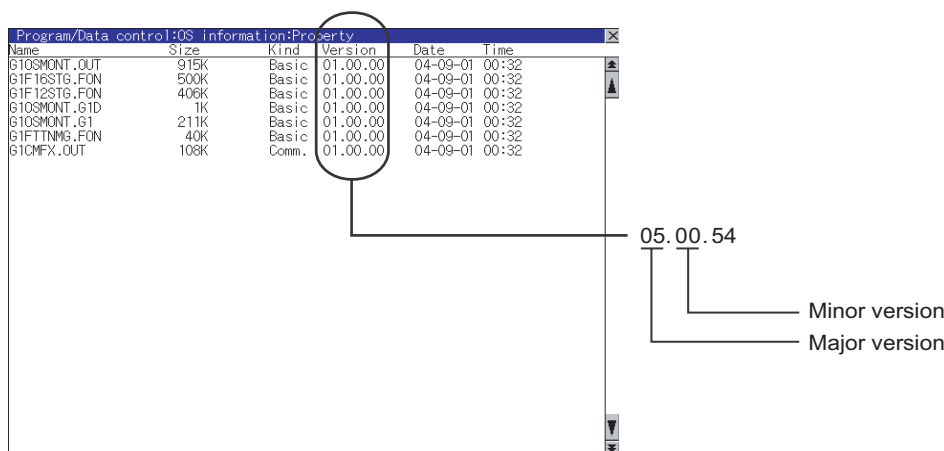
- (2) Set each shape and object's [KANJI Region] to [China(GB)-Mincho] or [China(Big5)-Gothic].
- (3) Insert the option function board into the GOT. (GT15)
If the option function board is not inserted (GT15), or if the font (option OS) is not installed, Japanese characters will be displayed.

(3) Standard monitor OS version

The version of the standard monitor OS installed on the GOT can be checked from the property of OS information of the GOT.

For how to display the property of OS information, refer to the following.

■BootOS (3) Property of OS information



(4) Installation method

The standard monitor OS has not been installed on the GOT at factory shipment. Therefore, make sure to install it before writing the project data in either of the following methods.

- (a) Installing the OS on the GOT using the USB or RS-232 cable

7.1.4 ■Writing project data and installing OS (Personal computer to GOT)

- (b) Installing the OS on the GOT via the CF card or USB memory

7.2.1 Transferring project data, OS, and special data to memory card


■ Communication driver

The communication driver performs communication between the GOT and the controller. Always select and install a communication driver that is appropriate for the controller's protocol. Up to four communication drivers can be installed on the GT16, GT15, and GT11.

Communication driver (MELSEC-FX) is preinstalled on the GT10.

The following file names in the table are used by the GT16, GT15, and GT11.

For details of the connection protocol and controller settings, refer to the following.

 GOT1000 Series Connection Manual for GT Works3 and a controller used

(1) File names that are used by GT16, GT15, and GT11 and storage destination folder in GOT

Connection method used		Communication driver name	File name	Storage destination*1
Bus connection	QCPU (Q mode)	Bus (Q)	G1CMQBUS.OUT	C:\G1SYS\
	A/QnACPU	Bus (A/QnA)	G1CMABUS.OUT	
CPU direct connection	A/QnA/L/QCPU	A/QnA/L/Q CPU, LJ71C24, QJ71C24	G1CMAQDR.OUT	
	FX CPU	MELSEC-FX	G1CMFX.OUT	
	MELSEC-WS	MELSEC-WS	G1CMMWS.OUT	
Computer link connection	L/QCPU	A/QnA/L/Q CPU, LJ71C24, QJ71C24	G1CMAQDR.OUT	
	QnACPU	AJ71QC24, MELDAS C6*	G1CMQC24.OUT	
	QCPU (A mode), ACPU	AJ71C24/UC24	G1CMC24.OUT	
MELSECNET/H connection (PC-to-PC net)		MELSECNET/H	G1CMNETH.OUT	
MELSECNET/10 connection (PC-to-PC net)		MELSECNET/10	G1CMNET1.OUT	
CC-Link IE Controller Network connection		CC-Link IE Controller Network	G1CMNETG.OUT	
CC-Link(ID) connection (Intelligent device station)	CC-Link Ver.2(ID)		G1CMCCV2.OUT	
	CC-Link(ID)		G1CMCCID.OUT	
CC-Link(G4) connection (Via G4)		CC-Link(G4)	G1CMCCG4.OUT	
Ethernet connection	QCPU	Ethernet(MELSEC), Q17nNC, CRnD-700	G1CME71.OUT	
	FX CPU	Ethernet(FX)	G1CMFXET.OUT	
MODBUS/TCP connection		MODBUS/TCP	G1CMMBTP.OUT	
MODBUS/RTU connection		MODBUS/RTU	G1CMMRTU.OUT	
IAI robot controller connection		IAI X-SEL	G1CMIAIS.OUT	
OMRON PLC connection	Serial connection	OMRON SYSMAC	G1CMSMC.OUT	
	Ethernet connection	Ethernet(OMRON)	G1CMOMET.OUT	
KEYENCE PLC connection		KEYENCE KV-700/1000	G1CMKEY.OUT	
KOYO PLC connection		KOYO KOSTAC/DL	G1CMKSTC.OUT	
SHARP PLC connection		SHARP JW	G1CMJW.OUT	
JTEKT PLC connection		JTEKT TOYOPUC-PC	G1CMTOYO.OUT	
TOSHIBA PLC connection		TOSHIBA PROSEC T/V	G1CMP SCT.OUT	
TOSHIBA MACHINE PLC connection		TOSHIBA MACHINE TCmini	G1CMT CMI.OUT	
YASKAWA Electric PLC connection	Serial connection	YASKAWA GL/CP9200(SH/H)/CP9300MS	G1CMYGL.OUT	
	Ethernet connection	Ethernet (YASKAWA)	G1CMYKET.OUT	

(Continued to next page)

Connection method used		Communication driver name	File name	Storage destination ^{*1}
HITACHI IES PLC connection		HITACHI HIDIC H	G1CMHDCH.OUT	C:\G1SYS\
		HITACHI HIDIC H (Protocol2)	G1CMHDC2.OUT	
HITACHI PLC connection		HITACHI S10mini/S10V	G1CMHS10.OUT	
FUJI FA PLC connection		FUJI MICREX-F	G1CMFMRX.OUT	
PANASONIC servo amplifier connection		Panasonic MINAS	G1CMPMNS.OUT	
PANASONIC EW PLC connection		Panasonic MEWNET-FP	G1CMMWNT.OUT	
YOKOGAWA Electric PLC connection	Serial connection	YOKOGAWA FA500/FA-M3/STARDOM	G1CMYGFA.OUT	
	Ethernet connection	Ethernet (YOKOGAWA)	G1CMYGET.OUT	
Allen-Bradley PLC connection	Serial connection	AB SLC500, AB1: N	G1CMRWSL.OUT	
		AB Micro Logix	G1CMRWML.OUT	
		AB Control/Compact Logix	G1CMRWCL.OUT	
	Ethernet connection	Ethernet/IP	G1CMETIP.OUT	
GE FUNAC AUTOMATION PLC connection		GE FUNAC AUTOMATION (SNP-X)	G1CMGESX.OUT	
LS INDUSTRIAL PLC connection		LSIS Master-K	G1CMLSMK.OUT	
SICK safety controller connection		SICK Flexi Soft	G1CMSICK.OUT	
SIEMENS PLC connection		SIEMENS S7-200	G1CMSS72.OUT	
		SIEMENS S7-300/400	G1CMSS7.OUT	
Microcomputer connection	Serial connection	Computer	G1CMMICR.OUT	
	Ethernet connection	Ethernet(MICROCOMPUTER)	G1CMMCET.OUT	
OMRON temperature controller connection		OMRON THERMAC/INPANEL NEO	G1CMNEO.OUT	
SHINKO indication controller connection		SHINKO TECHNOS CONTROLLER	G1CMSKTS.OUT	
FUJI SYS temperature controller connection		FUJI PXR/PXG/PXH	G1CMFC.OUT	
YAMATAKE temperature controller connection		YAMATAKE SDC/DMC	G1CMYTK.OUT	
YOKOGAWA temperature controller connection		YOKOGAWA GREEN/UT100/UT2000	G1CMYGUT.OUT	
RKC temperature controller connection		RKC SR Mini HG (MODBUS)	G1CMRKC.OUT	
CHINO controller connection		CHINO Controllers (MODBUS)	G1CMCNDB.OUT	
Inverter connection		FREQROL 500/700	G1CMFQRL.OUT	
Servo amp connection		MELSERVO-J3, J2S/M	G1CMMSV2.OUT	
GOT Multi-Drop Connection		Multidrop (Slave)	G1CMM LDS.OUT	

^{*1} The storage destination folder in the GOT is created when the communication driver is installed.

(2) File names that are used by GT10 and storage destination folder in GOT

Connection method used		Communication driver name	File name	Storage destination
CPU direct connection	QnA/L/QCPU	QnA/L/Q CPU	-	C:
	A CPU	MELSEC-A		
	FX CPU	MELSEC-FX		
	MELSEC-WS	MELSEC-WS		
Computer link connection	QnA/L/QCPU	QnA/L/Q CPU		
	QCPU (A mode), ACPU	AJ71C24/UC24		
CC-Link (G4) connection (Via G4)		CC-Link (G4)		
MODBUS/RTU connection		MODBUS/RTU		
IAI robot controller connection		IAI X-SEL		
OMRON PLC connection		OMRON SYSMAC		
KEYENCE PLC connection		KEYENCE KV-700/1000		
TOSHIBA MACHINE PLC connection		TOSHIBA MACHINE TCmini		
PANASONIC EW PLC connection		Panasonic MEWNET-FP		
YASKAWA Electric PLC connection		YASKAWA MP		
Allen-Bradley PLC connection	AB SLC500			
	AB Micrologix			
LS INDUSTRIAL PLC connection		LSIS Master-K		
SICK safety controller connection		SICK Flexi Soft		
SIEMENS PLC connection		SIEMENS S7-200 SIEMENS S7-300/400		
Microcomputer connection		Computer		
Inverter connection		FREQROL 500/700		
Servo amp connection		MELSERVO-J3, J2S/M		
GOT Multi-Drop Connection		Multidrop (Slave)		

(3) Installation method


The communication driver has not been installed on the GT16, GT15, and GT11 at factory shipment. Therefore, make sure to install it before writing the project data.

Install the communication driver in either of the following methods.

- (a) Installing the driver on the GOT using the USB or RS-232 cable

 7.1.4 ■ Writing project data and installing OS (Personal computer to GOT)

- (b) Installing the driver on the GOT via the CF card or USB memory

 7.2.1 Transferring project data, OS, and special data to memory card

Extended function

The extended function become available after the extended function OS is installed.

The available number of items in the extended function depends on the version of Boot OS.

(1) Extended function and necessary OS

Extended function		Extended function OS
System monitor		System monitor
Barcode		Barcode
RFID		RFID
Remote personal computer operation (Serial)*1		PC Remote Operation(Serial)
Remote personal computer operation (Ethernet)*1		PC Remote Operation(Ethernet)
USB mouse/keyboard		USB Mouse/Keyboard
Report		Report
Printer	Printer (PictBridge)	Printer(PictBridge)
	Printer (Serial)	Printer(Serial)
Video/RGB*2		Video/RGB
Multimedia		Multimedia
Device name converter*3		Device name converter
Stroke Standard Font	Stroke Font Support Data	Stroke Font Support Data
	Stroke Standard Font (JPN)	Stroke Standard Font(JPN)
	Stroke Standard Font (JPN) (supporting Hangul)	Stroke Standard Font(JPN)(supporting Hangul)
	Stroke Standard Font (China GB)	Stroke Standard Font(China GB)
	Stroke Standard Font (China GB) (supporting Hangul)	Stroke Standard Font(China GB)(supporting Hangul)
Sound Output		Sound Output
External I/O/Operation panel		External I/O / Operation Panel
Operator authentication	Password authentication	Operator Authentication
	External authentication	Operator Authentication, RFID
	Fingerprint authentication	Operator Authentication, Fingerprint Authentication
Backup/Restore		Backup/Restore
CNC Data I/O		CNC Data I/O, GOT Platform Library
Device Data Transfer		Device Data Transfer
MELSEC-L Troubleshooting Function		MELSEC-L Troubleshooting Function
SoftGOT-GOT Link Function		SoftGOT-GOT Link Function
Log Viewer		Log Viewer

*1 The driver is required to be installed on the personal computer.
For details, refer to the following.



(Functions) 31. REMOTE PERSONAL COMPUTER OPERATION FUNCTION

*2 Only the GT16, GT1585V-S, and GT1575V-S can use this function.

*3 When the log files collected by the operation log function are converted to the Unicode text files or CSV text files on the GOT, or the device name is output by the operation log information control function, the device name converter is needed.

POINT

Stroke font

- (1) To use the stroke font on the GOT, write the stroke font support data in the extended function and the stroke standard font that corresponds to the language to be displayed. (Example: Select "Stroke Standard Font (JPN)" to display Japanese.)
- (2) To display various Chinese characters that are used in multiple areas, install the stroke standard font and the stroke font in option function that corresponds to the language to be displayed.
- (3) To display Korean (Hangul), select the stroke standard font (supporting Hangul) in the extended function.
- (4) The total amount of OS may differ depending on the combination of Stroke Standard Font in extended function and Stroke Font in option function even when displayable stroke font on the GOT is the same.

(2) File name and data storage location

Data type		File name	Storage location
System monitor		G1OSSYSM.OUT	C:\G1SYS\
Barcode		G1OSBCD.OUT	
RFID		G1OSRFID.OUT	
PC Remote Operation(Serial)		G1OSRMUS.OUT	
PC Remote Operation(Ethernet)		G1OSPCRA.OUT	
USB Mouse/Keyboard		G1OSUSMK.OUT	
Report		G1OSRPT.OUT	
Printer	Printer (PictBridge)	G1OSPRPB.OUT	
	Printer (Serial)	G1OSSPRT.OUT	
Video/RGB		G1OSVRIN.OUT	
Multimedia		G1OSMMR.OUT	
Device name converter		G1OSDEV.OUT	
Stroke Standard Font	Stroke Font Support Data	G1OSSTRK.OUT	
	Stroke Standard Font (JPN)	G1SFRSLG.FON	
	Stroke Standard Font (JPN) (supporting Hangul)	G1SFRSKG.FON	
	Stroke Standard Font (China GB)	G1SFRSBG.FON	
	Stroke Standard Font (China GB) (supporting Hangul)	G1SFRGKG.FON	
Sound Output		G1OSSND.OUT	
External I/O / Operation Panel		G1OSDIO.OUT	
Operator authentication		G1OSAU.OUT	
Fingerprint authentication		G1OSFPA.OUT	
Backup/Restore		G1OSBKUP.OUT	
CNC Data I/O		G1OSNCIO.OUT	
GOT Platform library		G1OSPTFM.OUT	
Device Data Transfer		G1OSDVMV.OUT	
MELSEC-L Troubleshooting Function		G1OSLCTS.OUT	
SoftGOT-GOT Link Function		G1OSSGLK.OUT	
Log Viewer		G1OSLGVW.OUT	

■ Option function

The option function indicates the functions and fonts that are available by installing the option OS or mounting the option function board (including the one with add-on memory) or option function board dedicated to each function. The available number of items in the option function depends on the version of Boot OS.

(1) Option function, required option function board, and required OS

Option function	Option function board	OS
Multi-Channel function	GT16 • Not required GT15 • Expansion memory-attached option function board* ¹	The Option OS is not required.
Recipe function	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board* ² GT11 • Option function board GT10 • Not required	Option OS • Recipe (Not required for the GT10)
Advanced Recipe function	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board* ²	Option OS • Advanced Recipe
Logging function		Option OS • Logging
Object Script function		Option OS • Object Script
Operation Log function* ³	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board* ²	Option OS • Operation Log
Document Display function* ³	GT16 • Not required GT15 • Expansion memory-attached option function board* ¹	Option OS • Document Display
MES Interface function	MES Interface function attached option function board* ⁴	Option OS • MES Interface
Ladder monitor function for MELSEC-A	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board* ²	Option OS • Ladder monitor for MELSEC-A
Ladder monitor function for MELSEC-Q/L/QnA	GT16 • Not required GT15 • Expansion memory-attached option function board* ¹	Option OS • Ladder monitor for MELSEC-Q/L/QnA
Ladder monitor function for MELSEC-FX	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board* ²	Option OS • Ladder monitor for MELSEC-FX

(Continued to next page)

Option function	Option function board	OS
Ladder editor function	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board*2	Option OS • Ladder editor • GOT Function Expansion Library Extended function OS • GOT Platform Library
Network monitor function		Option OS • Network monitor
SFC monitor function		Option OS • SFC Monitor • GOT Function Expansion Library Extended function OS • GOT Platform Library
Motion SFC monitor function		Option OS • Motion SFC Monitor Extended function OS • GOT Platform Library
Intelligent module monitor function		Option OS • Intelligent module monitor
Q motion monitor function		Option OS • Q motion monitor
Servo amplifier monitor function		Option OS • Servo amplifier monitor
CNC monitor function		Option OS • CNC Monitor
List editor for MELSEC-FX ^{*5}	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board*2 GT11 • Option function board GT10 • Not required	Option OS • List editor for MELSEC-FX (Not required for the GT105□ and GT104□)
List editor function for MELSEC-A	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board*2 GT11 • Option function board	Option OS • List editor for MELSEC-A
Gateway (Server, Client) function	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board*2	Option OS • Gateway(Server, Client)
Gateway (Mail) function		Option OS • Gateway(Mail)
Gateway (FTP) function		Option OS • Gateway(FTP)
Standard Font (China: Simplified) (Simplified Chinese [GB] Mincho)		Option OS • Standard Font(China GB)
Standard Font (China: Big5) (Traditional Chinese) (Big5) (Gothic))		Option OS • Standard Font(China Big5)
Standard Font (Japanese)		Option OS • Standard Font(Japanese)

(Continued to next page)

Option function		Option function board	OS
Stroke Font	Stroke Font (JPN)	GT16 • Not required GT15 • Option function board or expansion memory-attached option function board*2	Option OS • Stroke Font(JPN) Extended function OS • Stroke Font Support Data
	Stroke Font (China GB)		Option OS • Stroke Font(China GB) Extended function OS • Stroke Font Support Data
	Stroke Font (China Big5)		Option OS • Stroke Font(China Big5) Extended function OS • Stroke Font Support Data
Kana-Kanji conversion function	Kana-Kanji conversion		This function is dedicated to Japanese version.
	Kana-kanji conversion (Enhanced Version)		This function is dedicated to Japanese version.
Maintenance report function*6				The Option OS is not required.

- *1 The multi-channel function and ladder monitor function for MELSEC-Q/QnA cannot be used on the GT15-FNB.
- *2 If the total amount of data stored in the GOT exceeds the capacity of standard memory, use the option function board with add-on memory.
- *3 In addition to the option function board, the CF card is required.
- *4 In the GT15, installing the option OS for MES Interface function requires 8218 KB on the option function board as work memory for MES Interface function in addition to the space required for MES Interface function data (3216KB). Other option functions can be used by inserting the option function board with MES Interface function. For the GT16, use the GT16-MESB.
- *5 In the GT10, only the GT105□ and GT104□ can use this function.
- *6 In addition to the option function board, the battery is required.

POINT

Option function board

When using the option function, the option function board is required.
 For the precautions of using the option function board, refer to the following.

 Appendix8 Precautions for Option Function Board



Displaying Simplified Chinese or Traditional Chinese

Perform the following three steps to display Simplified Chinese characters or Traditional Chinese characters on the GT16 or GT15.

- (1) Install the following fonts (Option OS) while installing the OS.

Standard font [China GB] 12-dot characters	The Simplified Chinese (GB) font is a GB2312-encoded font mainly used on mainland China.
Standard font [China GB] 16-dot characters	
Standard font [China Big5] 12-dot characters	The Traditional Chinese (Big5) font is a Big5-encoded font mainly used in Taiwan.
Standard font [China Big5] 16-dot characters	

- (2) Set each shape and object's [KANJI Region] to [China(GB)-Mincho] or [China(Big5)-Gothic].
Insert the option function board into the GOT. (GT15)
- (3) If the option function board is not inserted (GT15), or if the font (option OS) is not installed, Japanese characters will be displayed.

(2) File names and data storage destinations

Data type		File name	Storage destination ^{*1}
Advanced Recipe function		G1OSARCP.OUT	C:\G1SYS\
Logging function		G1OSLOG.OUT	
Object Script function		G1OSSCR.OUT	
Operation Log function		G1OSOPLG.OUT	
Kana-kanji conversion function		G1OSFEP.OUT	
Kana-kanji conversion function (Enhanced Version)		G1OSFEP2.OUT	
Document Display function		G1OSDOCV.OUT	
MES Interface function		G1OSMES.OUT	
Ladder monitor function for MELSEC-A		G1OSACIR.OUT	
Ladder monitor function for MELSEC-Q/L/QnA		G1OSQCIR.OUT	
Ladder monitor function for MELSEC-FX		G1OSFCIR.OUT	
Network monitor function		G1OSNETM.OUT	
Intelligent unit monitor function		G1OSSPM.OUT	
Q motion monitor function		G1OSMTM.OUT	
Servo amplifier monitor function		G1OSSVM.OUT	
CNC monitor function		G1OSCNM.OUT	
List editor for MELSEC-FX		G1OSFLST.OUT	
List editor for MELSEC-A		G1OSALST.OUT	
Gateway (Server, Client) function		G1OSGWYE.OUT	
Gateway (Mail) function		G1OSGWYM.OUT	
Gateway (FTP) function		G1OSGWYF.OUT	
Recipe function		G1OSRECP.OUT	
Standard Font (China GB)	12-dot characters	G1F12GBM.FON	
	16-dot characters	G1F16GBM.FON	
Standard Font (China Big5)	12-dot characters	G1F12BGG.FON	
	16-dot characters	G1F16BGG.FON	
Standard Font (Japanese)	12-dot characters	G1F12JSG.FON	
	16-dot characters	G1F16JSG.FON	
Stroke Font	Stroke Font (JPN)	G1SFRJSG.FON	
	Stroke Font (China GB)	G1SFRGBG.FON	
	Stroke Font (China Big5)	G1SFRBGG.FON	
Maintenance report function		G1OSMONT.OUT	

*1 The storage destination folder in the GOT is created when the option OS is installed.

(3) How to install

The option OS such as the recipe function, standard font (China: GB), and standard font (China: Big5) have not been installed on the GOT at factory shipment. Therefore, install them before writing the project data if necessary.

Install the option OS in either of the following methods.

- (a) Installing the option OS on the GOT using the USB or RS-232 cable

✎ 7.1.4 ■ Writing project data and installing OS (Personal computer to GOT)

- (b) Installing the option OS on the GOT via the CF card or USB memory

✎ 7.2.1 Transferring project data, OS, and special data to memory card

■ Project data

Data for monitor screens created by the user

(1) File names and data storage destinations

Data type		File name	Storage destination ^{*1}		
			GT16, GT15	GT11	GT10
Project data	User screen data (base screen, window screen and advanced recipe ^{*4})	G1PRJCT.G1	A:\Project1 ^{*2} \ or B:\Project1 ^{*2} \ or C:\Project1 ^{*2} \	C:\Project1 ^{*2} \	C:\Project1 ^{*2} \
	Parts				
	Comment				
	Common Settings				
	HQ Font ^{*3}				
	System label				

^{*1} The storage destination folder in the GOT is created when the project data is written.

^{*2} Specify the project folder name in [Project Folder] of the [GOT Type Setting] dialog box. (The default setting is Project 1.)

 4.1 GOT Type Setting

^{*3} Check HQ Font when the high-quality font has been set for texts or objects (except Numerical Display and Numerical Input). (The font cannot be selected separately.)

^{*4} If the file is written after the recipe setting is changed, update the recipe file, too.
Otherwise the device values will not be read or written according to the settings changed with GT Designer3.
For details, refer to the following.

 (Functions) 24. RECIPE


(2) How to write

The project data can be written in either of the following methods.

(a) Writing the data to the GOT using the USB or RS-232 cable or the Ethernet communication unit or cable

 7.1.4 ■ Writing project data and installing OS (Personal computer to GOT)

(b) Writing the data to the GOT via the CF card or USB memory

 7.2.1 Transferring project data, OS, and special data to memory card

■ Resource data

The Resource data indicates various data generated in the GOT.

For details of each data, refer to the following.

GT Designer3 Version1 Screen Design Manual (Functions)

Data type	File name	File format	Storage destination *1					Remarks
			GT16	GT15	GT11	GT10		
						GT105□ GT104□ GT1030	GT1020	
Advanced Alarm log file	AAM#####.CSV*2*3	CSV	A:\,B:\,C:\(any path specified in the corresponding object settings)\	A:\,B:\(any path specified in the corresponding object settings)\	-	-	-	File output by the Advanced Alarm function
	AAM#####.TXT*2*3	TXT						
	AAM#####.G1A*2*4	Binary file						
Alarm log file	ALARMHST.CSV	CSV			A:\,D:\	D:*6	C:*6	File output by the Alarm History function
	ALARMHST.G1H*4	Binary file						
Advanced Recipe file	ARP#####.CSV*3*5	CSV						
	ARP#####.TXT*3*5	TXT						
	ARP#####.G1P*5	Binary file						
Recipe data file	RECIP###.CSV*2	CSV			A:\,D:\	D:*6	C:*6	File output by the recipe function
	RECIP###.TXT*2*3	TXT						
	RECIP###.G1R*4	Binary file						
Data log file	LOG###.CSV*2*3	CSV	A:\,B:\,C:\(any path specified in the corresponding object settings)\	A:\,B:\(any path specified in the corresponding object settings)\	--	-	-	File output by the logging function
	LOG###.TXT*2*4	TXT						
	LOG###.G1L*2	Binary file						
Operation log file	OPELOG_YYYYMMDD_xx.CSV	CSV	A:\,B:\,C:\(project folder name)\	A:\,B:\(project folder name)\	A:\	-	-	File output when the screen switching operation mode is set to the history mode (save)
	OPELOG_YYYYMMDD_xx.TXT	TXT						
	OPELOG_YYYYMMDD_xx.G1O	Binary file						
Screen transition information file	BASEHIST.G1C	Binary file						
Operator management information file	AUTHINF.G1U	Binary file			-			File for setting the operator information and setting used for the operator authentication
Fingerprint information administrator file	FINGAUTH.G1F	Binary file	C:\Directly under	C:\Directly under				File for storing the administrator password used for the fingerprint authentication device

(Continued to next page)

Data type	File name	File format	Storage destination*1					Remarks
			GT16	GT15	GT11	GT10		
						GT105□ GT104□ GT1030	GT1020	
Image file (BMP format)	SNAP####.BMP*2	BMP	A:\,B:\,C:\(any path specified in [Common] → [Hard Copy])	A:\,B:\(any path specified in [Common] → [Hard Copy])	-	-	-	File output by the hard copy function
Image file (JPEG format)	SNAP####.JPG*2	JPEG				-	-	

*1 The storage destination folder in the GOT is created when the project data is written.

*2 ### indicates a serial No. of each data type.

The file name can also be specified by the user in the common settings or object settings.

*3 Must be converted from the BIN file by the utility function.

*4 On GT Designer3, the user cannot use these binary files even if they are read. Therefore, read them to GT Designer3 after converting them into text format files or CSV files on the GOT.

On the GT11, however, the binary files cannot be converted into any other format files.

*5 The binary file is necessary, too, if a CSV file or TXT file is to be converted into a binary file with GT Designer3. In this case, read the binary file, too

*6 In the case that resource data is uploaded with GT Designer3.

7.5.2 Drive capacity required for data transfer

The GOT operates by expanding the OS or Project data stored in the built-in flash memory (ROM) to the user memory (RAM).

For the GT16, since a part of the data is compressed to be stored in the built-in flash memory (ROM), the data size becomes larger when it is expanded to the user memory (RAM).

Boot OS, Standard monitor OS, Communication driver, Extended function OS, Option OS, Special data, Project data and other data are stored in the system area and user area of the drive specified by the GOT.

Regarding Boot OS, Standard monitor OS and first communication driver on the GT15 that are stored in the system area of the C drive, it is not necessary to check the data capacity before installation.

However, when the GT16 or GT15 is used, for extended function OS, option function, communication driver (the second or later communication driver for the GT15) and project data that are stored in the user area, data will not be transferred if there is insufficient space on the target drive.

When performing data transfer (OS installation, project data download), confirm the amount of space available on the specified drive's user area and the amount of data to be transferred.

User area capacity

Transfer destination		User area capacity		Remarks
GT16	Drive C (C: Built-in Flash memory)	GT1695M-X, GT1685M-S, GT1675M-S, GT1675M-V, GT1665M-S, GT1665M-V	15MB	The total memory size of Extended function OS, Option OS, Special data, and Communication driver must be smaller than the user area capacity. Download (store) the Project data to Drive A (A: Standard CF Card) or Drive B (B: Extended Memory Card) if user area does not have enough space for Project data, Extended function OS, Option OS, Special data, Communication driver, and buffering.
		GT1675-VN, GT1672-VN, GT1662-VN	11MB	
	Drive A (A: Standard CF Card)	Check the CF Card capacity.		
	Drive B (B: Extended Memory Card)	Check the CF Card capacity.		
	Drive E (E: USB memory)	Check the CF Card capacity.		
GT15	Drive C (C: Built-in Flash memory)	GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, GT1575-V, GT1565-V, GT1555-V, GT1555-Q, GT1550-Q	9MB	The total memory size of Extended function OS, Option OS, Special data, and the second or later Communication driver must be smaller than the user area capacity. An option function board with add-on memory is necessary if user area does not have enough space for Project data, Extended function OS, Option OS, Special data, Communication driver, and buffering.
		GT1575-VN, GT1572-VN, GT1562-VN	5MB	
	Drive A (A: Standard CF Card)	Check the CF Card capacity.		
	Drive B (B: Extended Memory Card)	Check the CF Card capacity.		
GT11	Drive C (C: Built-in Flash memory)	3MB		The project data size is a maximum of 3MB.
GT10	Drive C (C: Built-in Flash memory)	GT105□	3MB	The project data size is a maximum of 3MB.
	Drive C (C: Built-in Flash memory)	GT104□	3MB	The project data size is a maximum of 3MB.
	Drive C (C: Built-in Flash memory)	GT1030	1.5MB	The project data size is a maximum of 1.5MB.
	Drive C (C: Built-in Flash memory)	GT1020	512KB	The project data size is a maximum of 512KB.

Each type of data is grouped and shown as **a**, **b**, **A** to **F**.

Apply the corresponding size when calculating the data size with the following expressions or flow charts.

Data type (GT16)	Data type (GT15)
a Extended function OS stored in the ROM	A Extended function OS
b Option OS stored in the ROM	B Option OS
A Extended function OS expanded to the RAM	C Second or later communication driver
B Option OS expanded to the RAM	D Special data
C Communication driver	E Project
D Special data	F Buffering area
E Project	
F Buffering area	

Data size of extended functions

GT16

Extended function		User area capacity	
		a Built-in flash memory (ROM)	A User memory (RAM)
System monitor		450 KB	692 KB
Barcode		50 KB	84 KB
RFID		50 KB	166 KB
Report		150 KB	235 KB
Printer	Printer (PictBridge)	552 KB	1104 KB
	Printer (Serial)	80KB	200KB
Video/Multimedia	Video/RGB	298 KB	480 KB
	Multimedia	292 KB	1074 KB
Remote personal computer operation (Serial)		50 KB	84 KB
Remote personal computer operation (Ethernet)		860KB	5130KB
USB mouse/keyboard		80KB	200KB
Device name converter		400 KB	800 KB
Stroke Standard Font	Stroke Font Support Data	300 KB	400 KB
	Stroke Standard Font (JPN)	2160 KB	2160 KB
	Stroke Standard Font (JPN) (supporting Hangul)	3175 KB	3175 KB
	Stroke Standard Font (China GB)	1474 KB	1474 KB
	Stroke Standard Font (China GB) (supporting Hangul)	2016 KB	2016 KB
Sound Output		100 KB	200 KB
External I/O/Operation Panel		70 KB	100 KB
Operator authentication		460 KB	730 KB
Fingerprint authentication		270 KB	616 KB
Backup/Restore		420 KB	766 KB
CNC Data I/O		210 KB	383 KB
GOT Platform library		77 KB	200 KB
Device Data Transfer		50 KB	100 KB
MELSEC-L Troubleshooting Function		340 KB	770 KB
SoftGOT-GOT Link Function		100 KB	200 KB
Log Viewer		1434KB	3882KB

GT15

Extended function		A User area capacity
System monitor		746 KB
Barcode		84 KB
RFID		166 KB
PC Remote Operation		84 KB
Report		235 KB
Printer	Printer (PictBridge)	1104 KB
	Printer (Serial)	200KB
Video/RGB		512 KB
Device name converter		800 KB
Stroke Standard Font	Stroke Font Support Data	400 KB
	Stroke Standard Font (JPN)	2160 KB
	Stroke Standard Font (JPN) (supporting Hangul)	3175 KB
	Stroke Standard Font (China GB)	1474 KB
	Stroke Standard Font (China GB) (supporting Hangul)	2016 KB
Sound Output		200 KB
External I/O/Operation Panel		100 KB
Operator authentication		784 KB
Fingerprint authentication		616 KB
Backup/Restore		820 KB
CNC Data I/O		437 KB
GOT Platform library		100 KB
Device Data Transfer		100 KB
SoftGOT-GOT Link Function		200 KB

GT11

Extended function	User area capacity
System monitor	0 KB
Barcode	0 KB
RFID	0 KB

Data size of optional functions

GT16

Option function		User area capacity	
		b Built-in flash memory (ROM)	B User memory (RAM)
Standard Font (China GB)	12-dot characters	1280 KB	1280 KB
	16-dot characters		
Standard Font (China Big5)	12-dot characters	1920 KB	1920 KB
	16-dot characters		
Standard Font (Japanese)	12-dot characters	1280 KB	1280 KB
	16-dot characters		
Stroke Font	Stroke Font (JPN)	1037 KB	1037 KB
	Stroke Font (China GB)	1248 KB	1248 KB
	Stroke Font (China Big5)	1680 KB	1680 KB
Recipe		70 KB	100 KB
Advanced Recipe		310 KB	1187 KB
Logging		380 KB	710 KB
KANA KANJI (JPN) (Enhanced Version)		1242 KB	2774KB
Object Script		180 KB	360 KB
Operation Log		384 KB	1221 KB
Document Display		150 KB	3072 KB
MES Interface function		1598 KB	13461 KB
Ladder monitor	MELSEC-A ladder monitor	342 KB	674 KB
	MELSEC-Q/L/QnA ladder monitor	590 KB	4170 KB
	MELSEC-FX ladder monitor	342 KB	674 KB
Ladder editor		2567 KB	8192 KB
Network monitor		210 KB	370 KB
Intelligent module monitor		390 KB	770 KB
Q motion monitor		390 KB	770 KB
Servo amplifier monitor		390 KB	770 KB
CNC monitor		390 KB	770 KB
SFC monitor		442 KB	2108 KB
Motion SFC monitor		1240KB	12522KB
GOT Function Expansion Library		4729 KB	19381 KB
MELSEC-A list editor		542 KB	1024 KB
MELSEC-FX list editor		542 KB	1024 KB
Gateway (Server, Client)		50 KB	100 KB
Gateway (Mail)		50 KB	100 KB
Gateway (FTP)		50 KB	84 KB

GT15

Option function		B User area capacity
Multi-color display		0 KB
Multi-channel function		0 KB
Maintenance report function		0 KB
Historical trend graph		0 KB
Standard Font (China GB)	12-dot characters	1280 KB
	16-dot characters	
Standard Font (China Big5)	12-dot characters	1920 KB
	16-dot characters	
Standard Font (Japanese)	12-dot characters	1280 KB
	16-dot characters	
Stroke Font	Stroke Font (JPN)	1037 KB
	Stroke Font (China GB)	1248 KB
	Stroke Font (China Big5)	1680 KB
Recipe		100 KB
Advanced Recipe		1241 KB
Logging		740 KB
KANA KANJI (JPN)		1223 KB
KANA KANJI (JPN)(Enhanced Version)		2774 KB
Object Script		360 KB
Operation Log		1218 KB
Document Display		2048 KB
MES Interface function		3196 KB
Ladder monitor	MELSEC-A ladder monitor	523 KB
	MELSEC-Q/L/QnA ladder monitor	1082 KB
	MELSEC-FX ladder monitor	592 KB
Ladder editor		5121 KB
Network monitor		324 KB
Intelligent module monitor		384 KB
Q motion monitor		607 KB
Servo amplifier monitor		524 KB
CNC monitor		588 KB
SFC monitor		1373 KB
Motion SFC monitor		2477KB
GOT Function Expansion Library		4729 KB
MELSEC-A list editor		1058 KB
MELSEC-FX list editor		1058 KB
Gateway (Server, Client)		100 KB
Gateway (Mail)		100 KB
Gateway (FTP)		64 KB

GT11

Option function	User area capacity
Recipe	0 KB
MELSEC-A list editor	0 KB
MELSEC-FX list editor	0 KB

C Communication driver data size

GT16

Communication driver	User area capacity
Bus (Q)	180 KB
A/QnA/L/Q CPU, LJ71C24,QJ71C24	180 KB
MELSEC-FX	180 KB
MELSECNET/H	200 KB
CC-Link IE Controller	200 KB
JTECT TOYOPUC-PC	160 KB
Ethernet (YASKAWA)	160 KB
Computer	230 KB
Ethernet (MICROCOMPUTER)	230 KB
Communication driver other than the above	150 KB

GT15

Communication drivers use 150 KB each.

F Buffering area size (data size)


Refer to the following manual for the data size of the buffering area size.

 GT Designer3 Version1 Screen Design Manual (Functions)

■ Newly transferring data to the GOT

Check whether the following expression is satisfied or not.

Refer to the following section for the project data size.

 ■Checking project data size to be written

● GT16

The GT16 can store the project data into Drive C or Drive A (A: Standard CF Card).

$$\begin{array}{l} \text{User area space (ROM Size)} > \text{Project } \textcircled{E} + \text{Extended function OS data size } \textcircled{a}^{*1} + \text{Option OS data size } \textcircled{b}^{*1*2} \\ + \text{Communication driver data size } \textcircled{C} + \text{Special Data } \textcircled{D} \end{array}$$

*1 Calculate the sizes of Extended function OS and Option OS with the values \textcircled{a} and \textcircled{b} which are the sizes when they are stored in the built-in flash memory (ROM).

● GT15

The GT15 can store the project data into Drive C or Drive A (A: Standard CF Card).

$$\begin{array}{l} \text{User area space} > \text{Project } \textcircled{E} + \text{Extended function OS data size } \textcircled{A} + \text{Option OS data size } \textcircled{B}^{*2} \\ + \text{Second or later Communication driver data size } \textcircled{C} + \text{Special Data } \textcircled{D} \end{array}$$

● GT11 and GT10

The GT11 and GT10 can store the project data into Drive C.

$$\text{User area space } \textcircled{A} > \text{Project}$$

*1 Calculate the sizes of Extended function OS and Option OS with the values \textcircled{a} and \textcircled{b} which are the sizes when they are stored in the built-in flash memory (ROM).

*2 When the GOT project data created on PX Developer (Ver.1.15 or later) is used, logging function and object script function are required.

Refer to the PX Developer User's Manual for details.

POINT

When free space of transfer destination drive is sufficient but the insufficient space message appears

Select [Write after deleting all contents in the project folder] to write all project data.

When it is necessary to back up the project data, read it to a personal computer, CF card, or memory card before writing the project data.

Memory for storage (ROM) and memory for operation (RAM)

(1) GT16

(a) Specifications

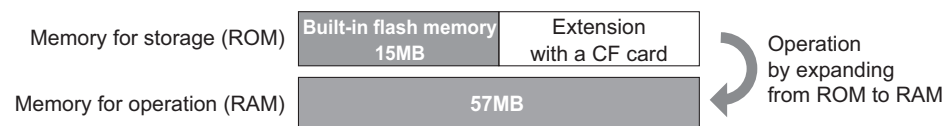
The GT16 operates by expanding the OS or project data stored in the memory for storage (ROM) to the memory for operation (RAM).

The capacity of the memory for storage (ROM) and the memory for operation (RAM) differs according to the GOT.

GOT	Memory	Capacity
GT1695M-X, GT1685M-S, GT1675M-S, GT1675M-V, GT1665M-S, GT1665M-V,	Memory for storage (ROM) (Built-in flash memory, included as standard)	15MB
	Memory for operation (RAM) (User memory, included as standard)	57MB
GT1675-VN, GT1672-VN, GT1662-VN	Memory for storage (ROM) (Built-in flash memory, included as standard)	11MB
	Memory for operation (RAM) (User memory, included as standard)	53MB

If the OS or project data exceeds the capacity of the memory for storage (ROM), the capacity of the ROM can be extended by using a CF card.

Example) GT1675M-V



The built-in flash memory corresponds to drive C, and the CF card corresponds to drive A (standard) or drive B (extended).

The memory for operation (RAM) cannot be extended.

If the amount of data expanded to the memory for operation (RAM) exceeds the above capacity, data must be resized by reducing the project data or deleting the unnecessary OS.

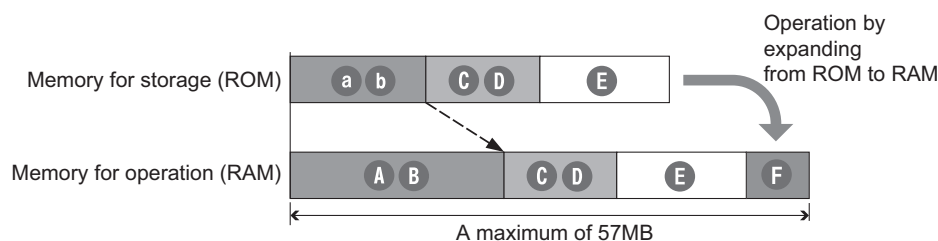
For the extended function OS and option OS, the compressed data **a** and **b** are stored in the memory for storage (ROM) and the data size becomes larger as shown by **A** and **B** when they are expanded to the memory for operation (RAM).

The buffering area **F** is an area for storing the resource data such as logging or advanced alarm and uses the memory for operation (RAM). The data size varies depending on the setting.

The stored resource data is stored to the specified storage destination (Drive A or Drive B) when saving to a file is specified by GT Designer3. (The memory for storage (ROM) is not used.)

If the amount of data expanded to the memory for operation (RAM) exceeds the above capacity, data must be resized by reducing the project data or deleting the unnecessary OS.

Example) GT1675M-V

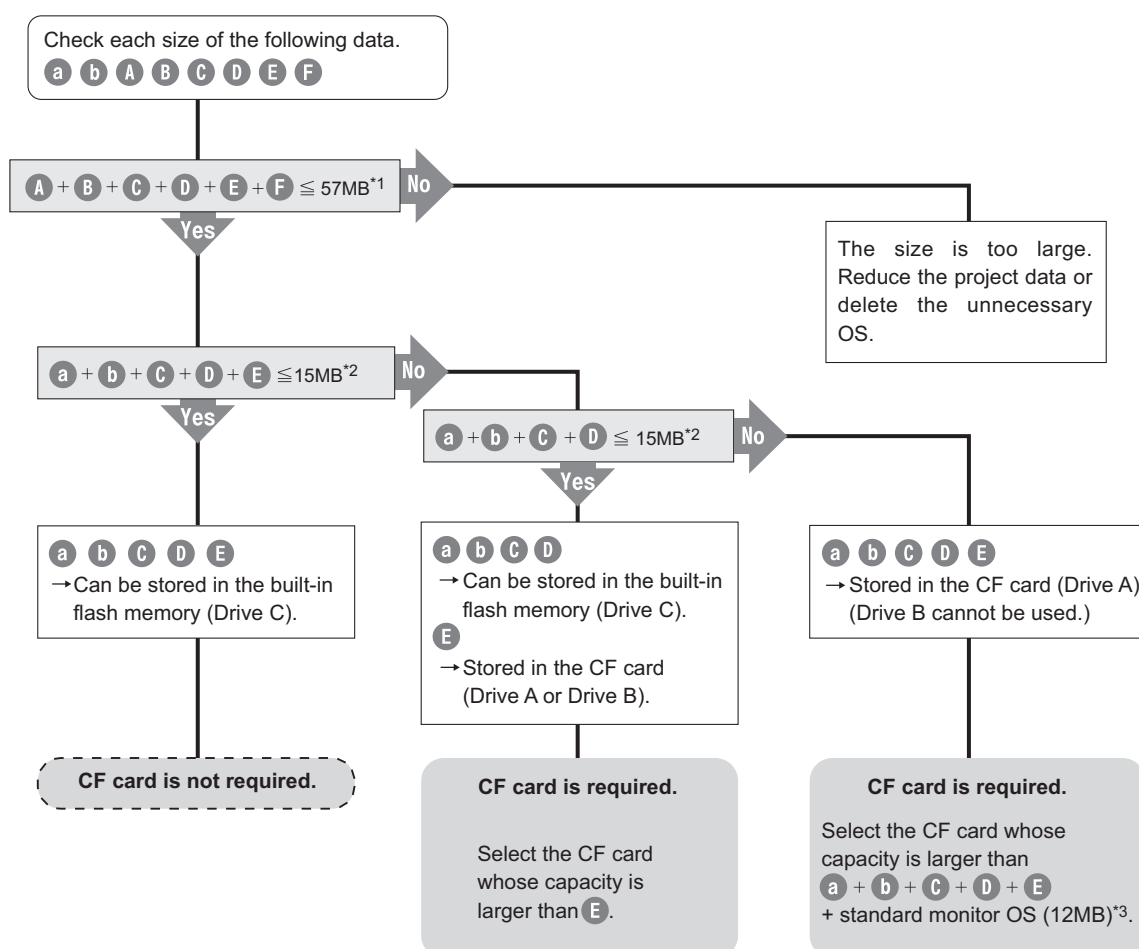


Data type	
a	Extended function OS stored in the ROM
b	Option OS stored in the ROM
A	Extended function OS expanded to the RAM
B	Option OS expanded to the RAM
C	Communication driver
D	Special data
E	Project
F	Buffering area

(b) CF card requirement and capacity

Whether the CF card is required or not and the required capacity of CF card vary depending on the data size.

Select whether to use the CF card and its capacity using the following flow chart.



*1 GT1675-VN, GT1672-VN, GT1662-VN: 53MB

*2 GT1675-VN, GT1672-VN, GT1662-VN: 11MB

*3 When the extended function OS and option OS are stored in the CF card (Drive A), the standard monitor OS (standard monitor OS, basic font, etc.) must be stored also in the CF card (Drive A).

(2) GT15

(a) Specifications

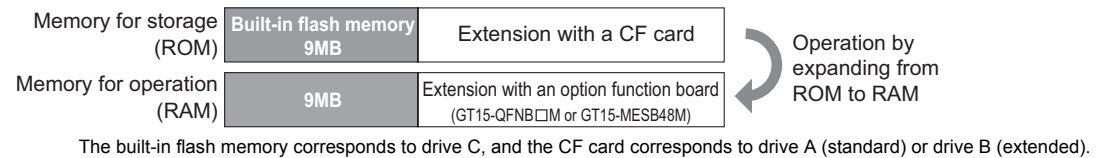
The GT15 operates by expanding the OS or project data stored in the memory for storage (ROM) to the memory for operation (RAM).

The capacity of the memory for storage (ROM) and the memory for operation (RAM) differ according to the GOT.

GOT	Memory	Capacity	Maximum capacity (Option function board with add-on memory mounted)
GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, GT1575-V, GT1565-V, GT1555-V, GT1555-Q, GT1550-Q	Memory for storage (ROM) (Built-in flash memory, included as standard)	9MB	-
	Memory for operation (RAM) (Included as standard)	9MB	57MB (When using the GT15-MESB48M)
GT1575-VN, GT1572-VN, GT1562-VN	Memory for storage (ROM) (Built-in flash memory, included as standard)	5MB	-
	Memory for operation (RAM) (Included as standard)	5MB	53MB (When using the GT15-MESB48M)

If the OS or project data exceeds the maximum capacity of the memory for storage (ROM), the capacity of the ROM can be extended by using a CF card and an option function board with add-on memory (GT15-QFNB□M or GT15-MESB48M).

Example) GT1575-V

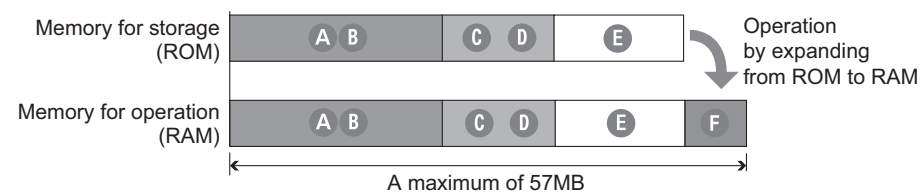


The memory for operation (RAM) can be extended up to the above capacity by mounting the option function board.

If the amount of data expanded to the memory for operation (RAM) exceeds the above maximum capacity, data must be resized by reducing the project data or deleting the unnecessary OS

The buffering area **F** is an area for storing the resource data such as logging or advanced alarm and uses the memory for operation (RAM). The stored resource data is stored to the specified storage destination (Drive A or Drive B) when saving to a file is specified by GT Designer3. (The memory for storage (ROM) is not used.)

Example) GT1575-V

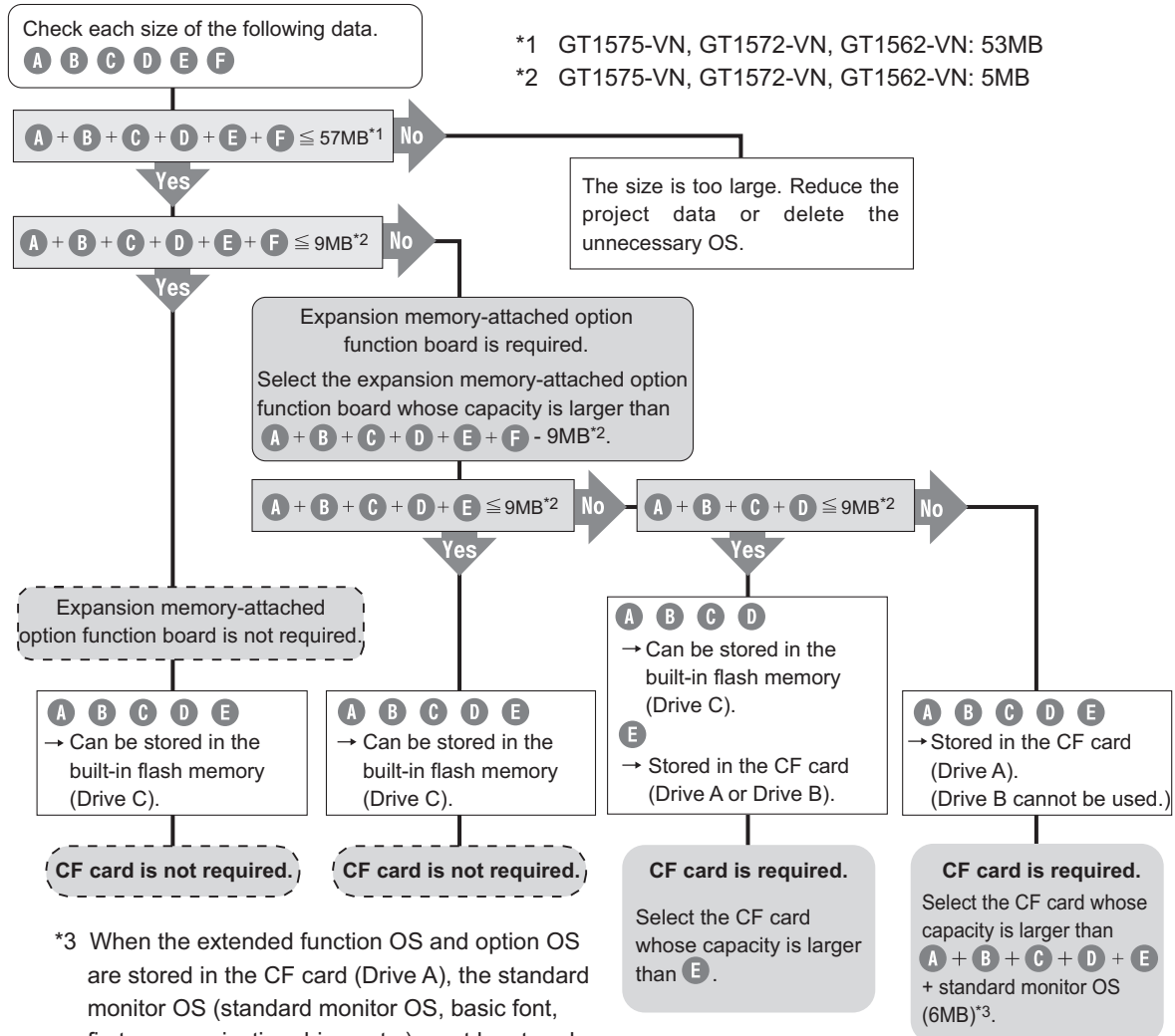


Data type	
A	Extended function OS
B	Option OS
C	Second or later communication driver
D	Special data
E	Project
F	Buffering area

(b) CF card requirement and capacity

Whether the expansion memory-attached option function board or CF card is required or not and the required capacity of expansion memory-attached option function board or CF card vary depending on the data size.

Select whether to use the expansion memory-attached option function board or CF card and their capacity using the following flow chart.



*3 When the extended function OS and option OS are stored in the CF card (Drive A), the standard monitor OS (standard monitor OS, basic font, first communication driver, etc.) must be stored also in the CF card (Drive A).

POINT

Limit to write OS

(1) When the drive of the standard OS in the boot drive is C drive

Even when the option function board with add-on memory is mounted to the GOT, the total volume of the Communication driver (the second or later one for the GT15), Extended function OS, and Option OS cannot exceed the user area capacity in the C drive.

(2) When the drive of the standard OS in the boot drive is A drive

GT16

- Since the memory for operation (RAM) is included as standard, the total volume of the Communication driver, Extended function OS, Option OS, project data, special data, and etc. can be up to the max. total capacity.

Max. RAM capacity

Target models	Max. capacity
GT1695M-X, GT1685M-S, GT1675M-S, GT1675M-V, GT1665M-S, GT1665M-V	57MB
GT1675-VN, GT1672-VN, GT1662-VN	53MB

For details about the capacities of the memory for operation (RAM), refer to the following.

 GT16 User's Manual (Hardware)

GT15

- When the option function board with add-on memory is mounted to the GOT, the total volume of the second or later Communication driver, Extended function OS, Option OS, project data, special data, and etc. can be up to the max. total capacity when the option function board with add-on memory is used.

Max. total capacity when option function board with add-on memory is used.

Target models	Max. total capacity
GT1595-X, GT1585V-S, GT1585-S, GT1575V-S, GT1575-V, GT1565-V, GT1555-V, GT1555-Q, GT1550-Q	57MB
GT1575-VN, GT1572-VN, GT1562-VN	53MB

For details about the types and capacities of the option function boards with add-on memory, refer to the following.

 GT15 User's Manual

■ When adding a new screen or setting data to the project data in the GOT

Compare the size of the new screen or setting data to be added with the free space of the transfer destination drive.

When transferring the modified existing screen, check them referring to the following.

☞ ■Newly transferring data to the GOT

Refer to the following section for the size of the new screen or setting data to be added.

☞ ■Checking project data size to be written (2) Checking the project data size at the time of transfer

Refer to the following section for the free space of the transfer destination drive.

☞ ■Checking the free space in the user area of the transfer destination

- (3) When the size of the new screen or setting data to be added is less than the free space of the transfer destination drive, the project data can be transferred.
- (4) When the size of the new screen or setting data to be added is greater than the free space of the transfer destination drive, all project data cannot be transferred.
Reexamine the project data contents and reduce the data size.
When the project data has been written to Drive C on the GT16 or GT15, write it to Drive A (A: Standard CF Card).

POINT

When free space of the transfer destination drive is sufficient but the insufficient space message appears.
Select [Write after deleting all contents in the project folder] to write all project data.

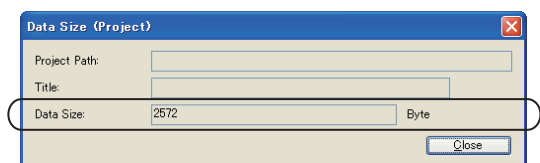
When it is necessary to back up the project data, read it to a personal computer, CF card, or memory card before writing the project data.

■ Checking project data size to be written

The project data size can be checked in either of the following methods.

(1) Check the project data size in advance.

Select [Tools] → [Data Size] → [Project] from the menu to display the [Data Size (Project)] dialog box. Then, check the size.



Item	Description
Project Path	Displays the storage destination and file name of the project data in the PC. The path is not displayed when the data has never been saved.
Title	Displays the Project Title. The title is not displayed when no Project Title is specified.
Data Size	Displays the data size of the project.

(2) Checking the project data size at the time of transfer

Capacity of each data can be checked in the [GOT Write] tab of the [Communicate with GOT] dialog box or the [Memory Card Write] tab of the [Communicate with Memory Card] dialog box.

For details of each dialog box, refer to the following.

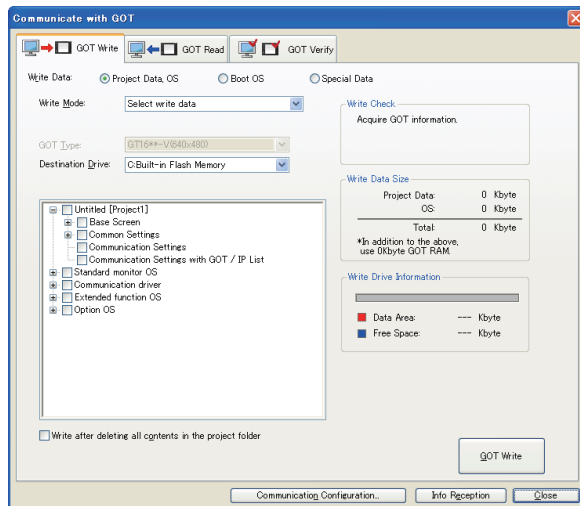
- [Communicate with GOT] dialog box

➡ 7.1.4 Writing and installing on GOT

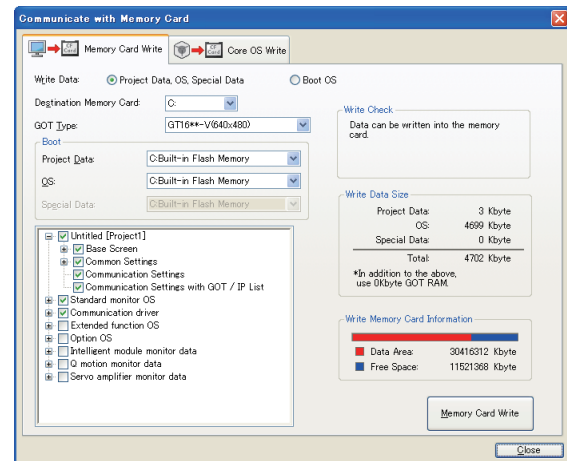
- [Communicate with Memory Card] dialog box

➡ 7.2.1 Transferring project data, OS, and special data to memory card

Select [Project Data] of [Write Data] on the [GOT Write] tab of the [Communicate with GOT] dialog box



Select [Project Data, OS, Special Data] of [Write Data] on the [Memory Card Write] tab of the [Communicate with Memory Card] dialog box.



■ Checking the free space in the user area of the transfer destination

The free space in the user area of the transfer destination can be checked in the [GOT Read] tab of the [Communicate with GOT] dialog box.

To check it, connect the GOT and the personal computer with the USB cable, RS-232 cable, or Ethernet communication unit or cable.

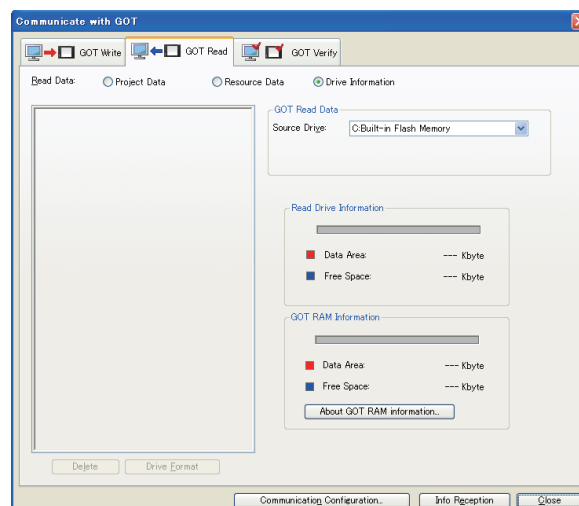
For details, refer to the following.

➡ 7.1.5 ■ Reading drive information (GOT to personal computer)

7.1.1 Connecting personal computer and GOT with cable

User's Manual for the GOT used

Select [Drive Information] of [Read Data] on the [GOT Read] tab of the [Communicate with GOT] dialog box



7.6 Error Messages Displayed at Data Transfer

■ Communication settings

Error No.	Error message	Error definition and cause	Corrective action
-	Invalid communication port is using.	The communication port has not been set.	In [Port No.] of [Communication Configuration], set the port to which the communication cable for the GOT is connected.

■ Drive information

Error No.	Error message	Error definition and cause	Corrective action
-	The deleting items is not selected.	The deleting items is not selected.	Select the item to be deleted and reexecute the deletion.

■ Boot OS installation → GOT

Error No.	Error message	Error definition and cause	Corrective action
00000132	OS version that is older than the one written in GOT cannot be written. The Boot OS version of GOT: AA The Boot OS version to be written: BB	Boot OS older than the one in the GOT cannot be installed.	Upgrade GT Designer3.
00000133	GOT Type error occurred.	The set [GOT Type] is different from the actual GOT.	Execute the installation again, after selecting the [GOT Type] that is the same as the actual GOT.

■ OS installation → GOT

Error No.	Error message	Error definition and cause	Corrective action
00000133	GOT Type error occurred.	The set [GOT Type] is different from the actual GOT.	Execute the installation again, after selecting the [GOT Type] that is the same as the actual GOT.
801f4102	The Standard monitor OS cannot be written in this GOT H/W version. Use the appropriate version of GT Designer3.	The Standard monitor OS of the currently used software cannot be installed, as it is too old and incompatible with the GOT H/W version.	Upgrade GT Designer3.
801f4107	GOT Memory dose not have enough space	The OS cannot be installed as the installation destination drive does not have enough free space.	Select [Drive Information] of [Read Data] in the [GOT Read] tab, and then click the [Info Reception] button to check the GOT information written to the GOT. Delete the functions and data written to the GOT, and install the OS again.
-	The writing items is not selected.	Item to be installed is not selected.	Selecting the target item and execute the installation again.

■ Project write → GOT

Error No.	Error message	Error definition and cause	Corrective action
00000133	GOT type error occurred.	The set [GOT Type] is different from the actual GOT.	Execute the write again, after selecting the [GOT Type] that is the same as the GOT.
00000136	The OS version of the current software and the one of the GOT are different. The OS version of GOT: xx The OS version of the software: xx The project data/special data cannot be written if OS versions are different. *OS write cannot be performed via Modem. Perform OS write via Standard CF Card or USB/RS232/Ethernet.	The OS version of the GT Designer3 where the project data was created and the OS version written in the GOT differ.	<ul style="list-style-type: none"> When the project data is written via modem, install the OS of the latest version on the GOT, and then write the project data. Write the project data via USB, RS232, or Ethernet. <p>When the project data is written via modem, the OS is not installed simultaneously.</p>
801f4107	GOT Memory dose not have enough space.	The project cannot be written as the write destination drive does not have enough free space.	Select [Drive Information] of [Read Data] in the [GOT Read] tab, and then click the [Info Reception] button to check the GOT information written to the GOT. Delete the functions and data written to the GOT, and write the project again. When [C:Built-in Flash Memory] is specified as the write destination on the GT16 or GT15 and the CF card is mounted to the GOT, the project data write destination can be changed to [A:Standard CF Card].
-	GOT does not operate properly due to the capacity shortage of GOT RAM. Take one of the following measures. <ul style="list-style-type: none"> Increase expansion memory Reduce the project data size Delete unnecessary special data Adjust the buffering area size Delete unnecessary OS data <p>Would you like to proceed with the writing of the project, special data, and OS?</p>	Though the write destination drive has enough space, the built-in memory and add-on memory of the GOT do not have enough space. Therefore, the written project may not operate correctly.	Adjust the project data size or buffering size (Advanced Alarm). Alternatively, change the add-on memory board for the one with larger capacity.

■ Project read → GOT

Error No.	Error message	Error definition and cause	Corrective action
801f4101	GOT information cannot be acquired due to an incorrect password entry. Enter the password again.	The entered password is not correct.	Execute the read after entering a correct password.
-	The destination to read is invalid. Set the destination again.	The specified drive, folder or file name is incorrect.	<p>Check if the specified drive, folder name or file name is applicable to the following.</p> <ul style="list-style-type: none"> Check if the specified drive exists. Check if reserved words are used for the folder or file name. Check if incorrect characters are used in the folder or file name.

■ Verify

Error No.	Error message	Error definition and cause	Corrective action
00000133	GOT Type occurred	The GOT type of the target project data is inconsistent with the type of the GOT.	Check the GOT type of the project data to be verified.
00000137	The OS written in GOT does not support the verification feature.	The OS installed on the GOT does not support the verification function.	Save the project data in the GOT and reinstall the Standard Monitor OS from GT Designer3.
-	The destination to read is invalid. Set the destination again.	The specified drive, folder name or file name is incorrect.	Check if the specified drive, folder name or file name is applicable to the following. <ul style="list-style-type: none"> • Check if the specified drive exists. • Check if reserved words are used for the folder or file name. • Check if incorrect characters are used in the folder or file name.
801f4101	GOT information cannot be acquired due to an incorrect password entry. Enter the password again.	The entered password is not correct.	Execute the verification again after entering a correct password.

■ Communication

For the precautions of using USB cables and the personal computer settings, refer to the following.

7.1.1 Connecting personal computer and GOT with cable

Error No.	Error message	Error definition and cause	Corrective action
00000134	Standard monitor OS is not written. Write Standard monitor OS.	As only the Boot OS is installed on the GOT, communication cannot be made for the purpose other than the OS installation	Install the Standard monitor OS by performing OS installation.
00000135	Communication error occurred. The possible causes are shown below. (1) The GOT is in processing. Wait for 60 seconds and retry. (2) GOT Type does not match Check if connected GOT Type matches. (3) Connection setting does not match. Check if the communication setting of each controller matches.	Communication fails due to one of the following causes. (1) Communication fails because GOT is busy. (2) There is inconsistency in the GOT type. (3) The modem setting is incorrect.	(1) It takes 60 seconds until the GOT completes the process. Wait for 60 seconds before starting communication again. If communication with the GOT fails even after 60 seconds, check the state of the GOT. (2) Check if the type of the connected GOT is correct. (3) Check if the modem setting is set correctly.
80110003	Please check Port NO.	The communication port settings are incorrect.	In [Port No.] of [Communication Configuration], set the port to which the communication cable for the GOT is connected.
80110004	Time out error	The cable is disconnected or broken.	<ul style="list-style-type: none"> • Check if the cable is connected correctly.
		The GOT does not respond.	<ul style="list-style-type: none"> • Check if the GOT is powered on. • Using the GOT utility perform the I/O check. • When the USB cable is used, disconnect it from the GOT for more than 5 seconds. • When the USB cable is used, power the GOT off and then on again.
		A communication error has occurred as the communication with the GOT is instable.	For RS-232 communication, change [Baud Rate] of [Communication Configuration] to a value lower than the currently set one.
80110006	The GOT is being accessed by another application.	Communication is disabled as the GOT is communicating with another application.	Check whether the GOT is communicating with another application. When GX Developer is used, check whether the GX Developer monitor screen is open. If open, close the monitor screen or stop monitoring.

Error No.	Error message	Error definition and cause	Corrective action
80110007	Quality of communication signal error. Please check communication settings.	A communication error has occurred as the communication with the GOT is instable.	For RS-232 communication, change [Baud Rate] of [Communication Configuration] to a value lower than the currently set one.
80110008	Please check Baud rate.	The baudrate settings are incorrect.	Set [Baud Rate] of [Communication Configuration] again.
80110009	Send error.	Data cannot be sent to the GOT.	<ul style="list-style-type: none"> When the USB cable is used, disconnect it from the GOT for more than 5 seconds. Cycle the GOT power.
8011000a 80112202 80112005 80112208	Communication error Consider the following cause. <ul style="list-style-type: none"> The communication port settings are incorrect. The cable is disconnected or broken. The GOT is Powered OFF. The communication setting of each controller is incorrect. Dialog Window is displayed in GOT. 	Communication is disabled as the GOT is processing.	Refer to The communication error that may occur when the PLC is not connected to the GOT*1.
		The cable is disconnected or broken.	<ul style="list-style-type: none"> Check the communication port. Check if the cable is connected correctly.
		The GOT does not respond.	<ul style="list-style-type: none"> Check if the GOT is powered on. Using the GOT utility perform the I/O check.
		When the GOT is connected via a modem, GOT Modem Connection Tool is not active.	Start GOT Modem Connection Tool, and then establish the communication between the personal computer and the modem.
		Communication fails because the dialog window is displayed on the GOT.	Close the dialog window on the GOT.
		The USB cable is disconnected or broken while communicating.	Check if the USB cable is connected correctly.
		The GOT does not respond.	Check if the GOT is powered on.
-	The following Drive is not inserted. X:XXXXXX Please check the installation of Drive.	The specified drive is inaccessible.	Check whether the specified drive has been set.
80112401	Unable to communicate with GOT via Ethernet. The possible causes are shown below. (1) Standard monitor OS is not written in the GOT (2) The Standard monitor OS does not support Ethernet Download function (3) The GOT is not turned on (4) Communication Settings are not properly set (5) GOT IP address is not properly set (6) Incorrect wiring *OS write cannot be performed via Ethernet/Modem. Perform OS write via Standard CF Card or USB/RS232/Ethernet.	Communication between the GOT and Ethernet fails due to one of the following causes. (1) The Standard Monitor OS is not installed on the GOT. (2) The Standard Monitor OS of the GOT does not support the Ethernet download function. (3) The GOT is not turned on. (4) Communication Settings include a fault. (5) The IP address of the GOT is incorrect. (6) Wiring is incorrect.	Check the following. (1) Check if the Standard Monitor OS is installed on the GOT. (2) Check if the Standard Monitor OS of the GOT supports the Ethernet download function. (3) Check if the GOT is turned on. (4) Check if the Communication Settings are correct. (5) Check if the IP address of the GOT is correct. (6) Check if wiring is correct.
80112402	Unable to communicate with GOT via Ethernet. The possible causes are shown below. (1) The GOT is communicating with another computer (2) GOT IP address is not properly set (3) GOT Port No. is not properly set	Communication fails because the GOT is communicating with another PC or the specified IP address of the GOT indicates a network device other than the GOT. Communication fails because the GOT port number is incorrect.	Check if the GOT communicates with another PC or if the specified IP address of the GOT indicates a network device other than the GOT. Enter the correct downloading port number where the GOT is connected.
80112405	Please check if both GOT and PC are properly connected together via Ethernet.	Communication fails because the GOT is not connected to the network correctly.	Check if the GOT is connected with the network correctly.
80112406	Unable to communicate with GOT via Ethernet. The possible causes are shown below. (1) The GOT is communicating via USB/RS232/Modem (2) The GOT is not turned on	Communication fails because the GOT is communicating via USB, RS232, or modem, or because the GOT is turned off.	Establish communication via Ethernet, or turn on the GOT.

Error No.	Error message	Error definition and cause	Corrective action
801f42c4	GOT restricts the communication with Ethernet. Unable to communicate with GOT via Ethernet.	Communication via Ethernet fails because the GOT restricts the communication via Ethernet.	Establish communication by either of the following methods. <ul style="list-style-type: none"> • Enable communication of the GOT with Ethernet.(GS454) ➡ Appendix.2.1 GOT internal devices • Establish communication by other method than Ethernet.

- If these corrective actions can not cancel the errors, please consult the nearest sales office or FA Center, and then explain a detailed description of the problem.

*1 The communication error that may occur when the PLC is not connected to the GOT

If the GOT and PLC are not yet connected while the settings of the connection with the PLC have been made on the GOT, the GOT performs retry communication processing as it cannot communicate with the PLC. If any of the following operations is performed from GT Designer3 in this status, a communication error may occur (error No.: 8011000a). In this case, take any of the following corrective actions.

(1) The operations that may cause a communication error

- OS installation
- Project data write
- OS, project data or resource data deletion
- Drive formatting

(2) Corrective action for communication error

Refer to the following manual for the utility operation.

➡ User's Manual for the GOT used

Refer to the following section for installation by pressing two points on the GOT.

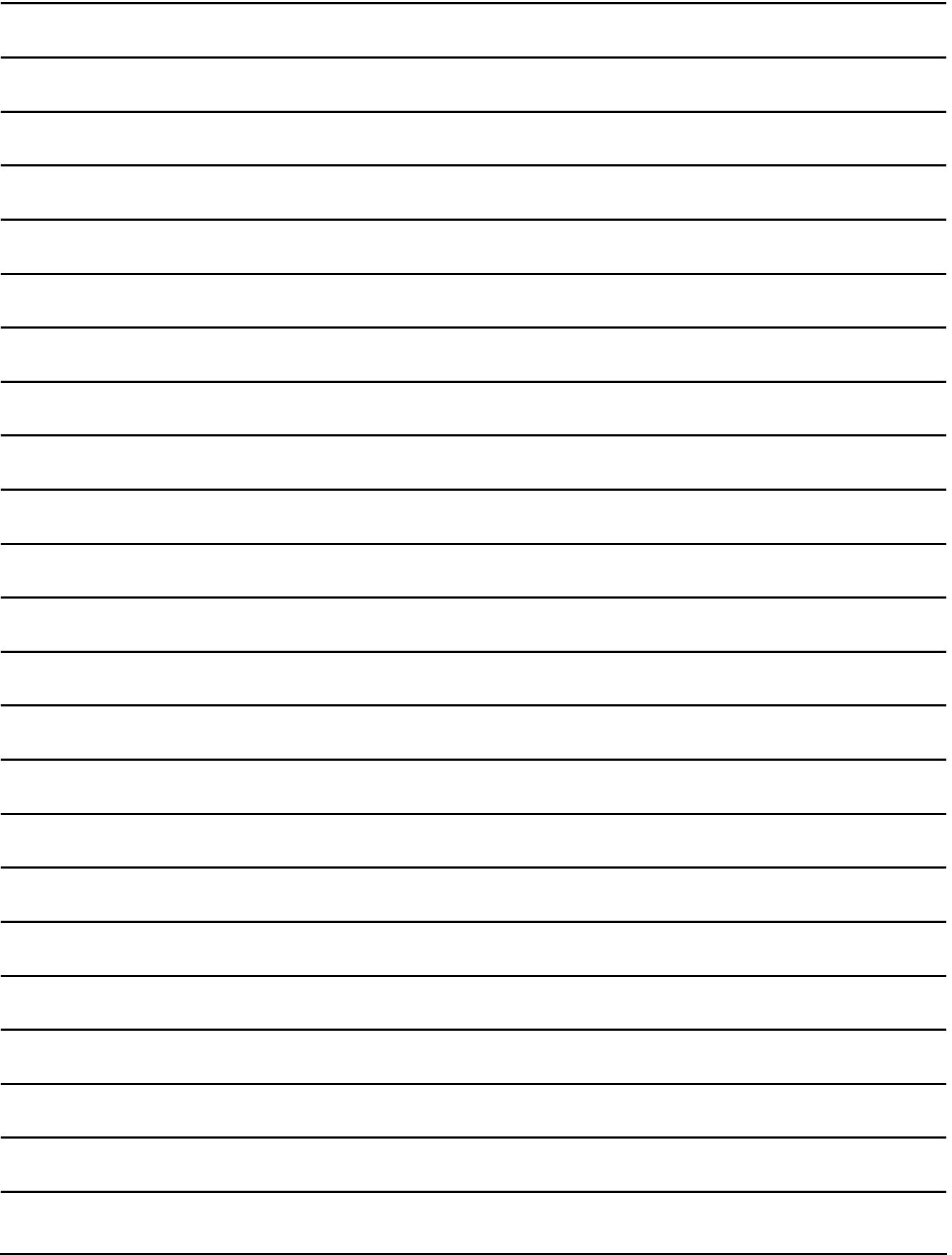
➡ 7.2.1 Transferring project data, OS, and special data to memory card

- Using the utility, set the interface to be connected with the PLC as described below, and perform the operation again from GT Designer3. When making a communication between the GOT and PLC after connecting with the PLC, return the changed Communication Settings to "1".
 - When connecting the GOT and PLC via the RS-232 interface
Change the CH No. of the standard interface RS-232 in [Communication setting] of the utility from "1" to "0" or from "1" to "9".
 - When connecting the GOT and PLC via bus type connection (GT16, GT15, and GT11 Bus)
Change the CH No. of the extension interface in [Communication setting] of the utility from "1" to "0".
 - When connecting the GOT and PLC via the RS-422 interface (GT16, GT11)
Change the CH No. of the standard interface RS-422 in [Communication setting] of the utility from "1" to "0".
- Perform the installation by pressing two points on the GOT or using the utility function.
OS deletion cannot be made by the utility function.
 - OS installation or project data write
Install the OS or write the project data by pressing two points on the GOT, or from [Data control] of the utility.
 - Project data/resource data deletion, drive formatting
Delete project data/resource data or format a drive from [Data control] of the utility.

■ Transfer to memory card (Memory card write)

Error No.	Error message	Error definition and cause	Corrective action
000000c9	Create Folder Error.	The drive in which the memory card is set has not been specified.	Select the drive in which the memory card is set.
		The memory card is write-protected.	Enable the memory card to be written.
-	OS is not selected for Installing.	OS is not selected for Installing.	Select the OS to be installed.

USEFUL FUNCTIONS



8. USEFUL FUNCTIONS FOR DRAWING

This chapter explains the useful editing functions of GT Designer3.

8.1 Utilizing Other Project Data

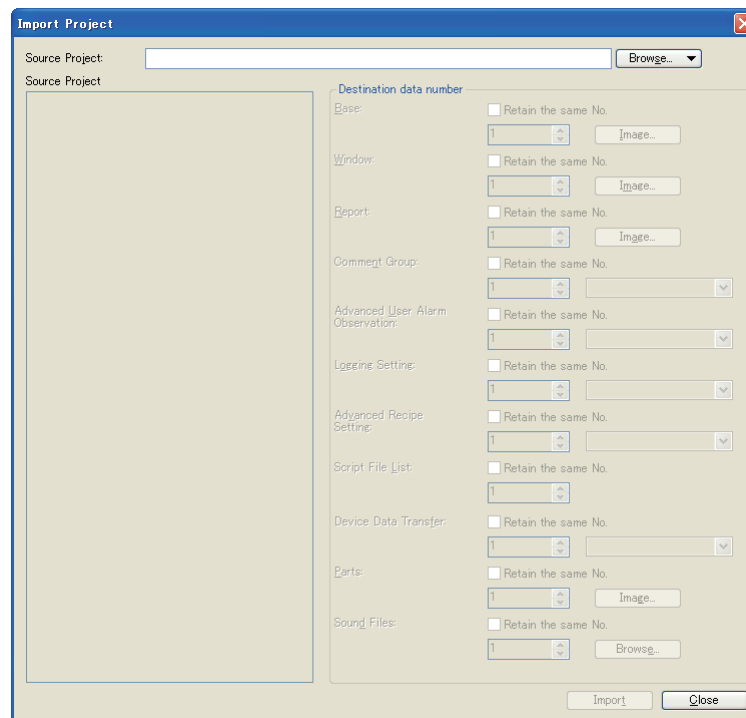


It is possible to utilize other project data, i.e., import other project data (Source project) into the currently edited project (Destination data).

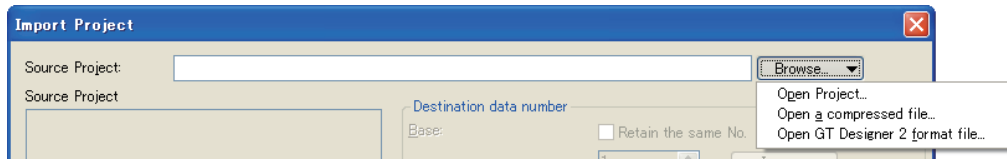
This function is effective when utilizing multiple project data.
Project data from GOT-900 series cannot be utilized.

■ Importing data

1. Select [Project] → [Import Project] from the menu.
2. The [Import Project] dialog box appears.

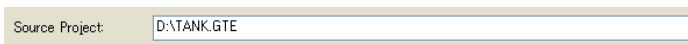


3. Click the [Browse] button and select the type of the project to be imported.
 Select [Open Project] to import a GT Designer3 project.
 Select [Open a compressed file] to import a GT Designer3 project compressed file (*.GTW).
 Select [Open GT Designer2 format file] to import a GT Designer2 format file (*.GTE).



(1) Project specification by direct input

When importing compressed files (*.GTW) or GT Designer2 format files (*.GTE), the project can be specified by inputting the path directly in the [Source Project:] field.



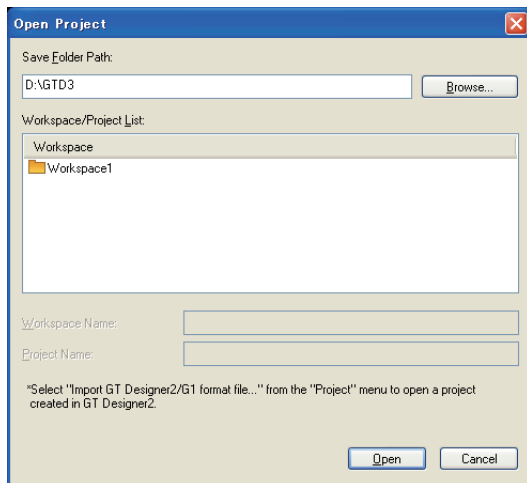
(2) Dialog boxes to be closed before opening other project

Close the [GOT Environmental Setting] dialog box and the [Controller Setting] dialog box before opening other projects.

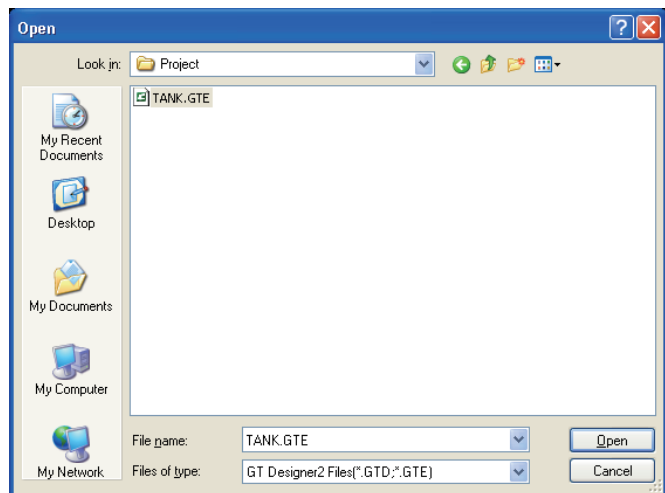
If the dialog boxes above are opened, the [GOT Environmental Setting] and [Controller Setting] cannot be imported.

(They are not displayed on the [Source Project] tree.)

4. When the items are selected, the [Select Project] dialog box or the [Open] dialog box appears.
 Select the project to be imported.



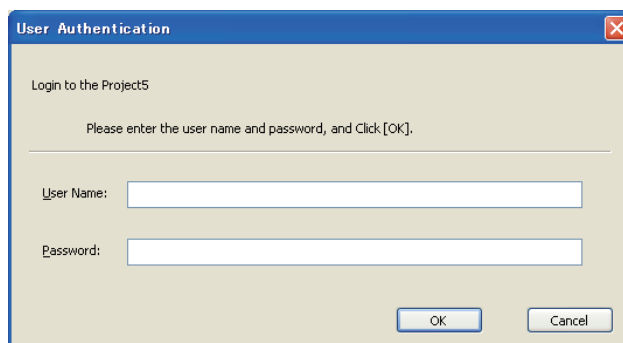
For GT Designer3 project



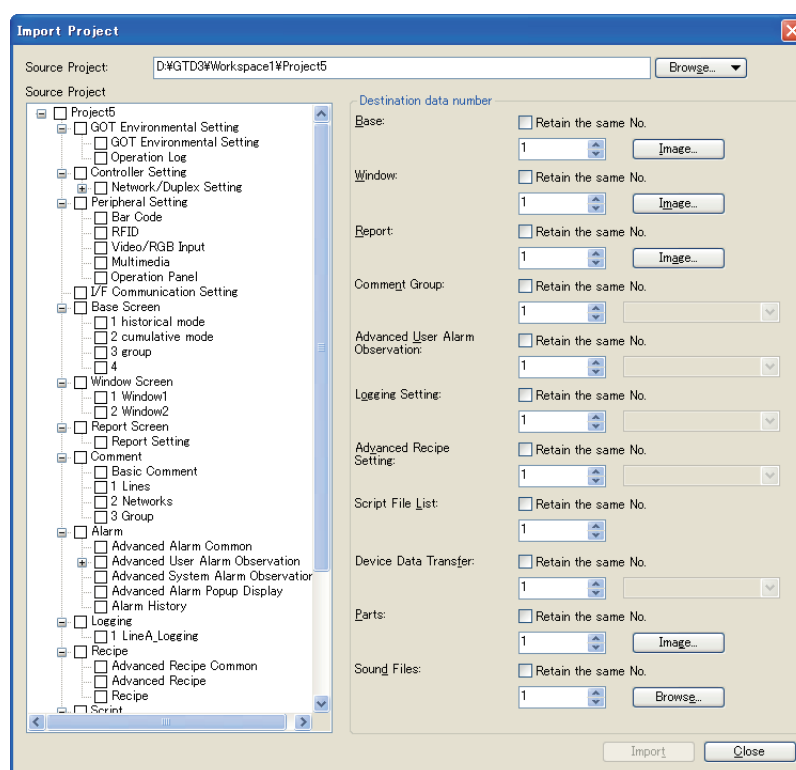
For GT Designer3 project compressed file/
GT Designer2 format file

5. When security is set for the project to be imported, the following dialog box appears. Input the user name and password for the authentication.

3.14 Securing Project



6. Refer to the following to set the [Source Project] and [Destination data number].

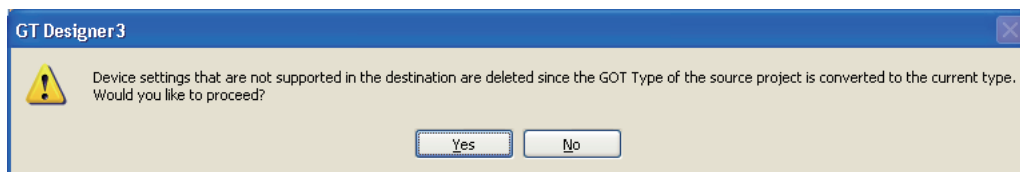


Item	Description		Model
Source Project	Displays the items to be imported from other projects in a tree. Select the checkbox of the item to be imported.		<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
Destination data number	Set the number to assign to the screens and settings imported from other projects. When assigning numbers to multiple screens/settings, the set number becomes the initial number, and the following numbers are set in the selected interval. (■Precautions)		<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
	Base	Set a new screen number for the imported screen.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>
	Window	For using the same screen number used in the previous project, select the [Retain the same No.] item. Click the [Image] button to display a list of the existing screens.	
	Report	When overwriting existing screens, select the screen to be overwritten. When not overwriting screens, click the [Cancel] button and specify a new screen number.	<div>GT16 GT15</div> <div>GT11 GT10</div> <div>SoftGOT 1000</div>

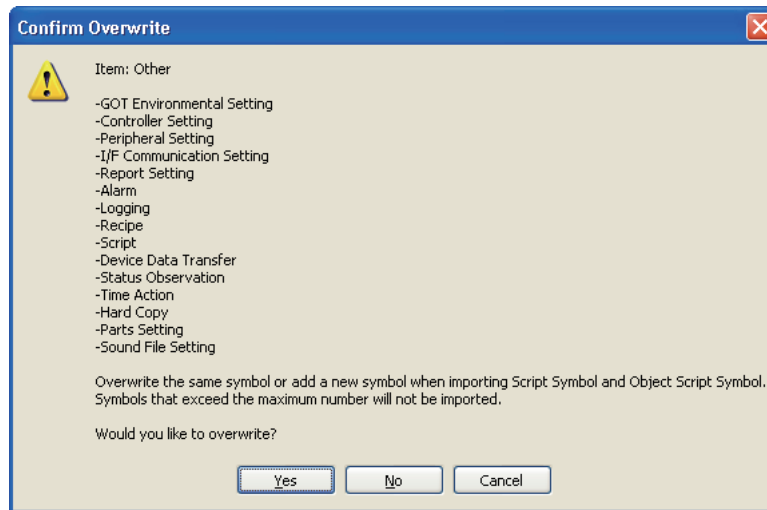
(Continued to next page)

Item	Description		Model
Destination data number	Commnet Group		GT16 GT15 GT11 GT10 SoriGOT 1000
	Advanced User Alarm Observation	Set a new number to the imported setting item. For using the same setting number used in the previous project, select the [Retain the same No.] item.	
	Logging Setting	When the set number is already used, the setting name is displayed. When a setting with the same number already exists in the destination project and overwrite is not intended, set another number.	GT16 GT15 GT11 GT10 SoriGOT 1000
	Advanced Recipe Setting	<ul style="list-style-type: none"> • Commnet Group: Commnoent Group No. (1 to 255) • Advanced User Alarm Observation: Alarm ID (1 to 32767) • Logging Setting: Logging ID (1 to 32767) • Advanced Recipe Setting: Recipe No. (1 to 32767) • Script File List: Script number (1 to 32767) 	
	Script File List	• Device Data Transfer: Device Data Transfer ID(1 to 255)	GT16 GT15 GT11 GT10 SoriGOT 1000
	Device Data Transfer		GT16 GT15 GT11 GT10 SoriGOT 1000
	Parts	Set a new number to the imported part. For using the same number used in the previous project, select the [Retain the same No.] item. Click the [Image] button to display the existing part with the specified number. When a part with the same number already exists in the destination project and overwrite is not intended, specify another number. (1 to 32767)	GT16 GT15 GT11 GT10 SoriGOT 1000
	Sound Files	Set a new file No. to the imported sound file. For using the same file No. used in the previous project, select the [Retain the same No.] item. Click the [Browse] button to display the existing [Sound Files]. When a sound file with the same file No. already exists in the destination project and overwrite is not intended, specify another file No.	GT16 GT15 GT11 GT10 SoriGOT 1000

7. Click the [Import] button to start importing the data.
When the GOT types of the source project and destination project are different, the following dialog box appears. (☞ ■Precautions)
Click the [Yes] button to continue, or the [No] button to cancel the process.



8. When continuing the process, a confirmation dialog box for overwrite appears for each item imported. Confirm the contents of the dialog box, and select whether to overwrite or not.



Example: When settings such as [GOT Environmental Setting] are imported.

9. Return to the [Import Project] dialog box. Click the [Close] button, and complete the importing. After the importing is completed, confirm the imported data and the relevant settings.

■ Precautions

- (1) **If the GOT type or Controller type set for the source project differs from that for the destination project.**
 - (a) If the GOT type set for the source project differs from that for the destination project, the GOT type of the imported data is changed to the one set for the destination project. With this import, some functions may be deleted due to the GOT type incompatibility.
 - (b) If the controller type set for the source project differs from that for the destination project, the controller type of the imported data is changed to the one set for the destination project. GT Designer3 may delete some devices, as incompatible device types or devices out of the setting range. Make the device settings as necessary.



How to avoid the device deletion

The devices to be deleted after the data import, described in (b) above, can be held by executing the following operations.

1. Change the controller type set for the source project to the one for the destination project.
2. The incompatible devices are converted to ??.
Check the objects converted to ?? in the device list, and set the devices again.
3. Save the modified source project. Then, open the destination project and execute [Import Project].

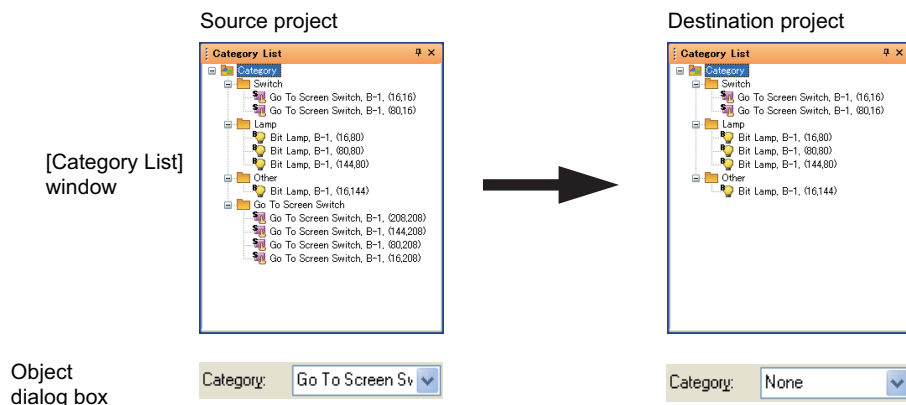
(2) Importing screens with script set

- (a) When importing screens, the set script is imported simultaneously.
The imported script is added following to the last data of the script list in the destination data.
According to this, the settings of scripts set to the imported screens are changed in conjunction.
- (b) When importing screens, all script symbols are imported.
If script symbols with the same name already exists, they are overwritten. If no script symbol with the same name exists, the imported ones are added.
- (c) When [Script] is selected in the source data tree, all scripts are imported.
The imported scripts are added, with priority to the script No. specified in the [Destination data number] setting.
(No data is added after the last data.)

(3) Importing categories

When the object data is imported to the project in which the corresponding category is not set, the object is registered within the [None] category, even if the category is set in the source project.
To set the category, create the same category within the destination project in advance, or set the category after the data import.

Example: When the data in the "Global Lamp" category is imported.

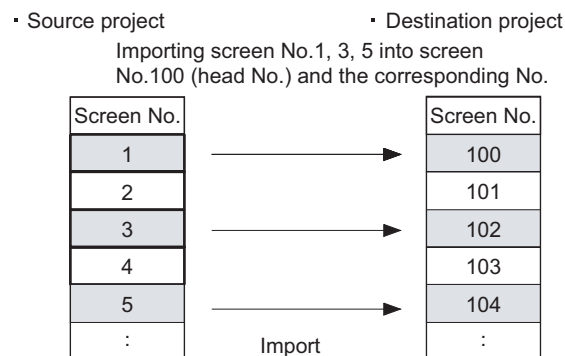


(4) Importing status observation set to the screen

Status observation set to screens cannot be imported from [Status Observation] of the source project tree.
When importing the status observation set to a screen, import also the screen to which the status observation is set.
The status observation is imported simultaneously to the screen.

(5) Data importing interval

When selecting multiple screen No., they will be imported into the screen No. at the same intervals as before the import.

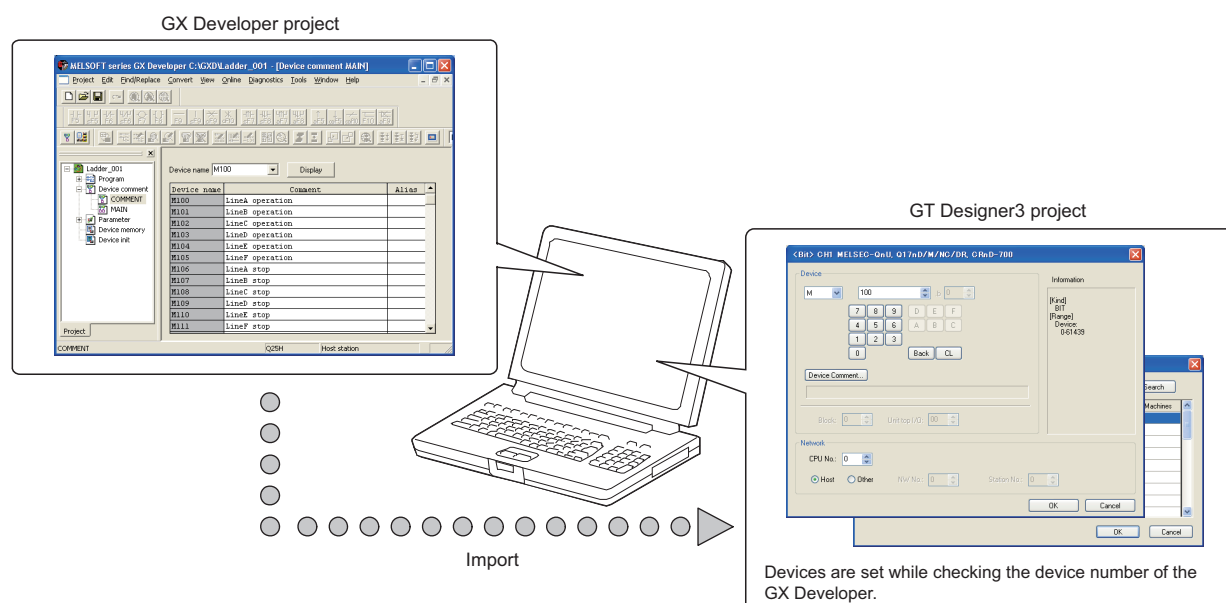


8.2 Referring to Device Comment (Importing GX Developer Device Comment)



The device comment and the device name created on GX Developer can be checked when setting devices on GT Designer3.

Since devices can be set on GT Designer3 while checking the devices used for the PLC program, errors in the device number setting can be prevented.



POINT

(1) PLC types available for the device comment check

The device comments of GX Developer can be checked only when any of the MITSUBISHI PLCs is selected for [Controller Type] in the controller setting.

(2) Referring to device comments with iQ Works

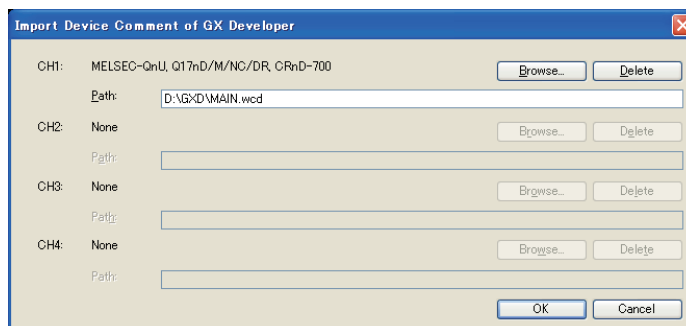
When starting GT Designer3 from MELSOFT Navigator, this function is not available.

To refer to device comments, start GT Designer3 (not from MELSOFT Navigator).

■ Importing the device comments

To look through devices on GT Designer3, import the device comments of GX Developer to GT Designer3.

1. Select [Project] → [Import Device Comment of GX Developer] from the menu.
2. The [Import Device Comment of GX Developer] dialog box appears. Specify the device comment file in the project of GX Developer.
Click the [Delete] button on the [Import Device Comment of GX Developer] dialog box to delete the path of the currently specified device comment data.

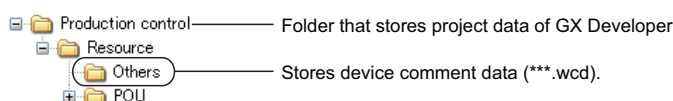


3. Click the [OK] button to complete the import of device comments.

POINT

(1) Device comment data storage destination

The device comment data (*.wcd) of GX Developer are created in the project data of GX Developer.



(2) GX Developer data used for this function

Only the device comment data (*.wcd) of the GX Developer is required for this function.
Other project data of the GX Developer is not required.

(3) Modification of device comment on the GX Developer

If the device comment data (*.wcd) once specified is edited on the GX Developer, it is not updated on GT Designer3.

To update the edition, specify the device comment data (*.wcd) again.

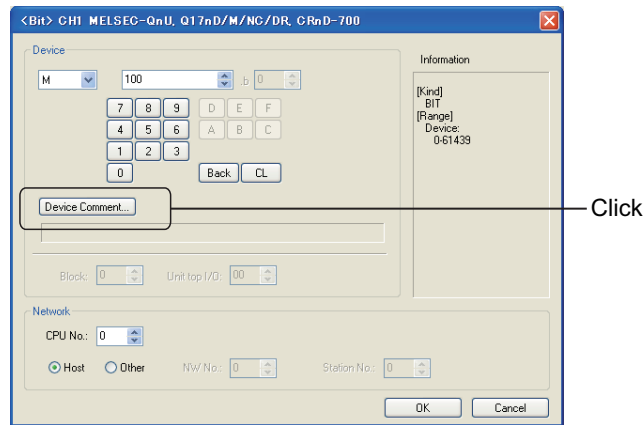
(4) Specified path

The path is stored after the GT Designer3 is completed.

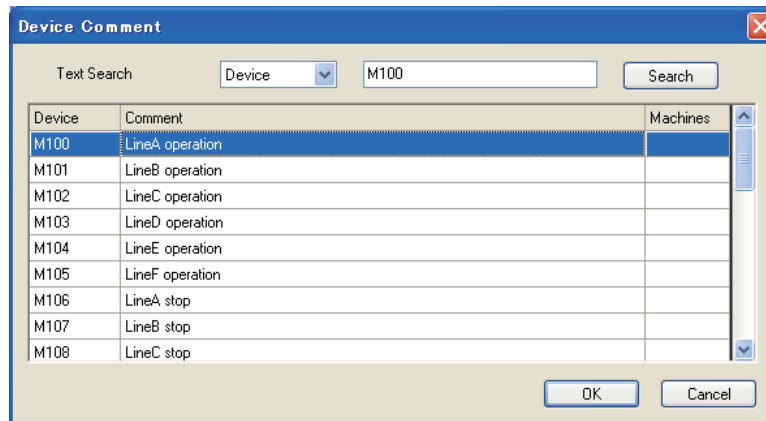
■ Check method of device comment

The following shows the checking method of device comments.

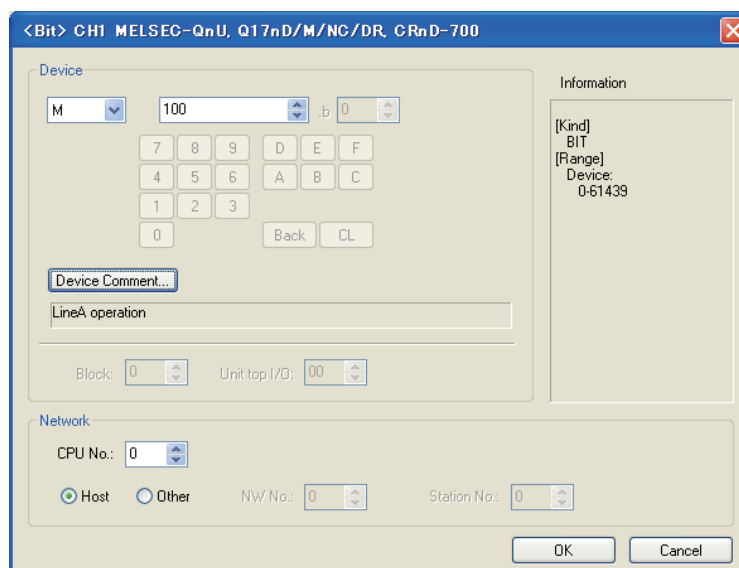
1. Click the [Device Comment] button in the device settings dialog box of each project.



2. The Device Comment dialog box appears. A device can be set while checking the Device comment.



3. After setting, click the [OK] button.
The Device Comment dialog box closes, and the selected device is set to the Device setting dialog box.





Search for device

In the Device comment dialog box, search can be performed by device, comment or machines.

(1) Search by device No.

After entering the device No. to be searched for, click the [Show] button. This displays the entered device No. at the top of the list.

The 'Device Comment' dialog box has a 'Text Search' section with a dropdown menu set to 'Device' and a text input field containing 'M100'. A 'Search' button is to the right. Below is a table with three columns: 'Device', 'Comment', and 'Machines'. The table lists devices M103 through M111 with their respective comments. M100 is not in the list.

Device	Comment	Machines
M103	LineD operation	
M104	LineE operation	
M105	LineF operation	
M106	LineA stop	
M107	LineB stop	
M108	LineC stop	
M109	LineD stop	
M110	LineE stop	
M111	LineF stop	



The 'Device Comment' dialog box shows the same search criteria. The table now lists M100 at the top, with its comment 'LineA operation'. The other devices (M101-M108) are listed below.

Device	Comment	Machines
M100	LineA operation	
M101	LineB operation	
M102	LineC operation	
M103	LineD operation	
M104	LineE operation	
M105	LineF operation	
M106	LineA stop	
M107	LineB stop	
M108	LineC stop	

(2) Search by Comment/Machines name

After entering the keyword to be searched for, click the [Show] button. This displays comments/machine names including the entered keyword in the list.

The 'Device Comment' dialog box has a 'Text Search' section with a dropdown menu set to 'Comment' and a text input field containing 'LineA'. A 'Search' button is to the right. The table below lists devices M100 through M108 with their comments. M100 and M106 have comments containing 'LineA'.

Device	Comment	Machines
M100	LineA operation	
M101	LineB operation	
M102	LineC operation	
M103	LineD operation	
M104	LineE operation	
M105	LineF operation	
M106	LineA stop	
M107	LineB stop	
M108	LineC stop	



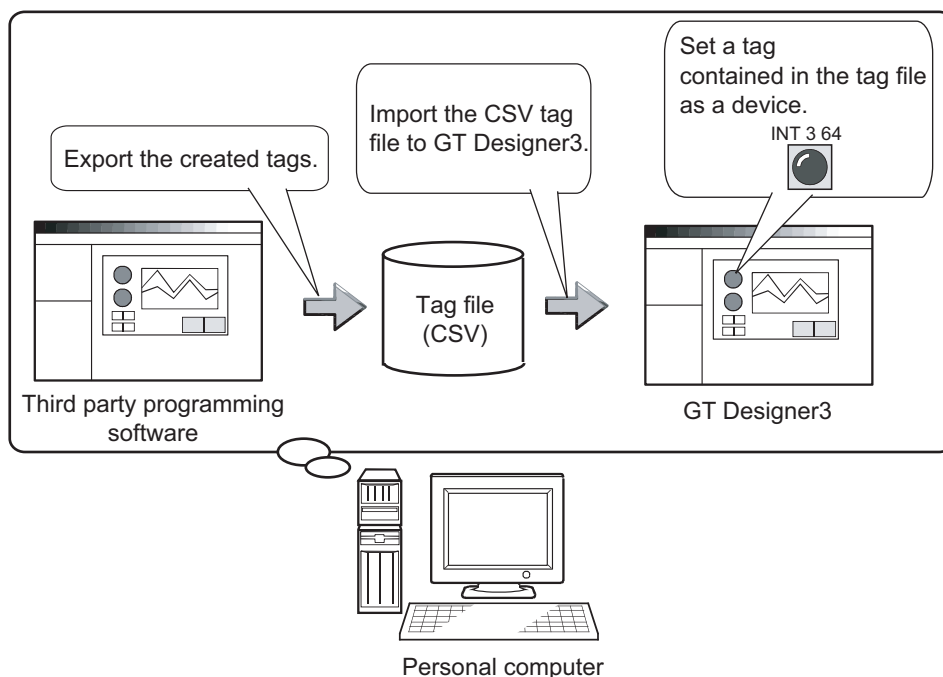
The 'Device Comment' dialog box shows the same search criteria. The table now lists only the devices whose comments contain 'LineA': M100 and M106.

Device	Comment	Machines
M100	LineA operation	
M106	LineA stop	

8.3 Importing Tags Created by Third Party Programming Software



This function enables GT Designer3 to import tag files created by a third party programming software. Tags imported to GT Designer3 can be set as devices.



■ Specifications

(1) Applicable PLCs

GT Designer3 can import tag files that are created for the following PLCs.

Type		Model				
ALLENBRADLEY PLC	ControlLogix series	1756-L, 1756-L62, 1756-L55M16,	1756-L1M1, 1756-L63, 1756-L55M22,	1756-L1M2, 1756-L55M12, 1756-L55M23,	1756-L1M3, 1756-L55M13, 1756-L55M24	1756-L61, 1756-L55M14,
	CompactLogix series	1769-L31,	1769-L32E,	1769-L32C,	1769-L35E,	1769-L35CR

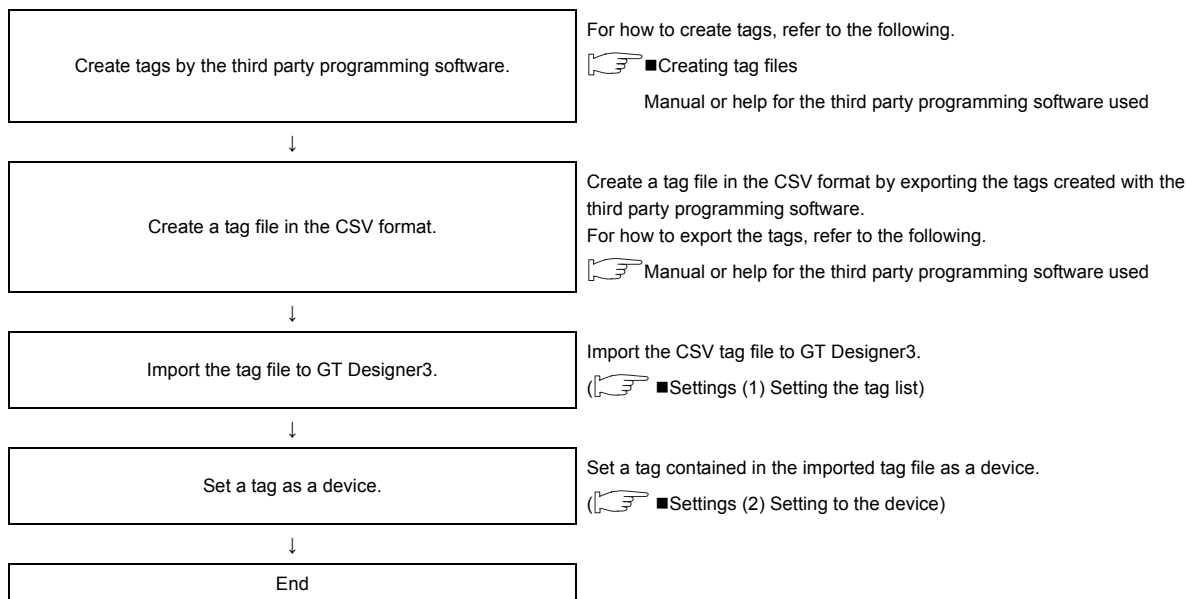
(2) Applicable software

GT Designer3 can import tag files that are created by the following third party programming software.

Manufacturer	Software
Rockwell Automation, Inc. (ALLEN-BRADLEY)	RSLogix5000

■ Operating procedures

The following shows the operating procedures to set a tag as a device.



■ Creating tag files

Create tag files to be imported to GT Designer3 by the third party programming software.

For how to create tags and tag files by the third party programming software, refer to the following.

Manual or help for the third party programming software used

The following shows requirements to create tag files according to programming software.

(1) RSLogix5000

- (a) Tag mapping
 - Map the created tags.
 - The tags without mapping cannot be set as devices with GT Designer3.
- (b) Tag file format
 - Create tag files in the CSV format.
 - GT Designer3 cannot import tag files in formats other than the CSV format.

(c) Tag file setting

To import a tag file to GT Designer3, the following settings are required for the tag file.
Set the following fields with RSLogix5000.

Field	Description	Input example
TYPE	Set the type of the target record. Only tag files with the type TAG can be imported by GT Designer3. Setting range: TAG	TAG
SCOPE	Leave blank.	-
NAME	Set the tag name. Setting range: 0 to 40 characters	tagBOOL
DESCRIPTION	Set the comment of the tag in ASCII characters. Setting range: 0 to 120 characters	\$0050\$004C\$0043
DATATYPE	Set the data type and the element number*1 Setting range: INT[0 to 1000]/DINT[0 to 1000]/ REAL[0 to 1000]/BOOL[0 to 32000]	BOOL[10]
SPECIFIER	Leave blank.	-
ATTRIBUTES	Set the tag attribute. Setting range: RADIX PLCMappingFile*2 PLC2Mapping	(PLCMappingFile : = 100)

***1 Setting range of element number**

Set the element number within the following range.

Element numbers outside the following range cannot be set for the device with GT Designer3.

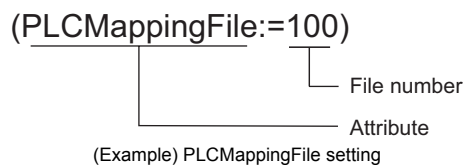
Data type	Element number range
INT,DINT,REAL	0 to 1000
BOOL	0 to 32000

***2 File number of PLCMappingFile**

When the tag attribute is set to PLCMappingFile, set the file number.

The file number must be set within the range from 0 to 999.

File numbers outside the range cannot be set with GT Designer3.

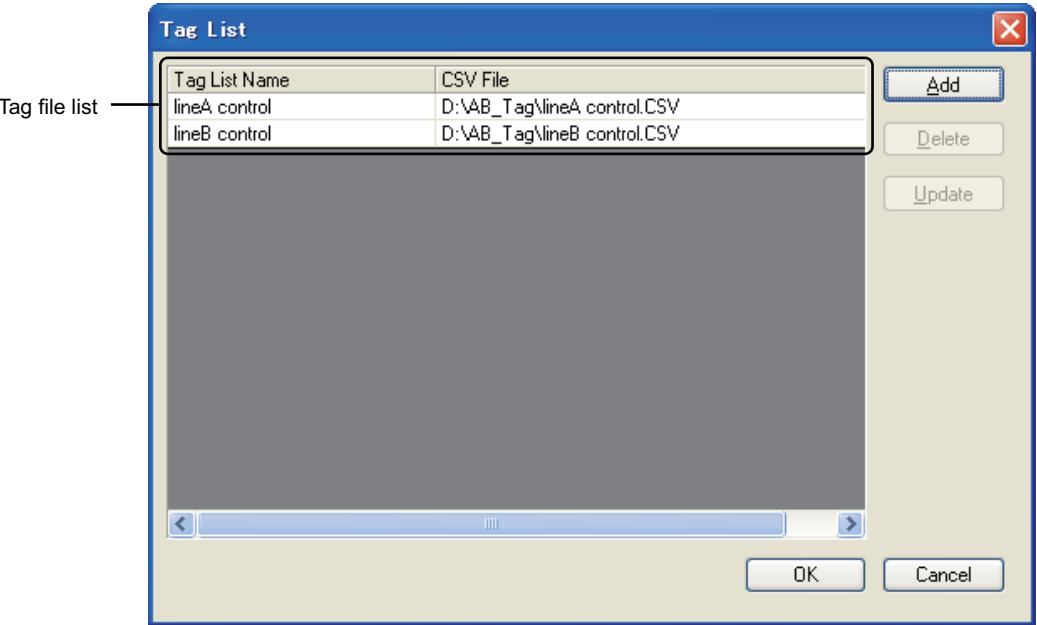




■ Settings

(1) Setting the tag list

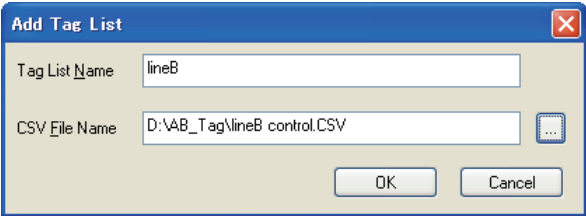
Import the tag list to GT Designer3.

1. Select [Project] → [Import Tag of RS Logix5000] from the menu.
2. The following dialog box appears. Add, delete, or update tag files, and then click the [OK] button.



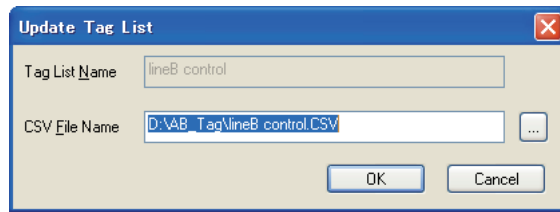
Item	Description		Model
Tag file list	Displays a list of tag files imported to GT Designer3.		<div><div>gr16</div><div>gr15</div><div>gr11</div><div>gr10</div></div> <div>SerGOT 1000</div>
	Tag List Name	Displays the tag file names.	
	CSV File	Displays the paths of the tag files.	
<div>Add</div>	Click this button to import a tag file to GT Designer3. Clicking this button displays the [Add Tag List] dialog box. Input the information of the tag file to be added.  (a) Add Tag List dialog box		
<div>Delete</div>	Click this button to delete the selected tag file.		
<div>Update</div>	Click this button to update the selected tag file. After selecting a tag file, click this button to display the [Update Tag List] dialog box. Input the latest path of the tag file.  (b) Update Tag List dialog box		

(a) Add Tag List dialog box



Item	Description
Tag List Name	Input the name of the tag file to be added to the tag file list.
CSV File Name	Input the path of the tag file to be added. Click the [...] button to select the path in the Open dialog box.

(b) Update Tag List dialog box

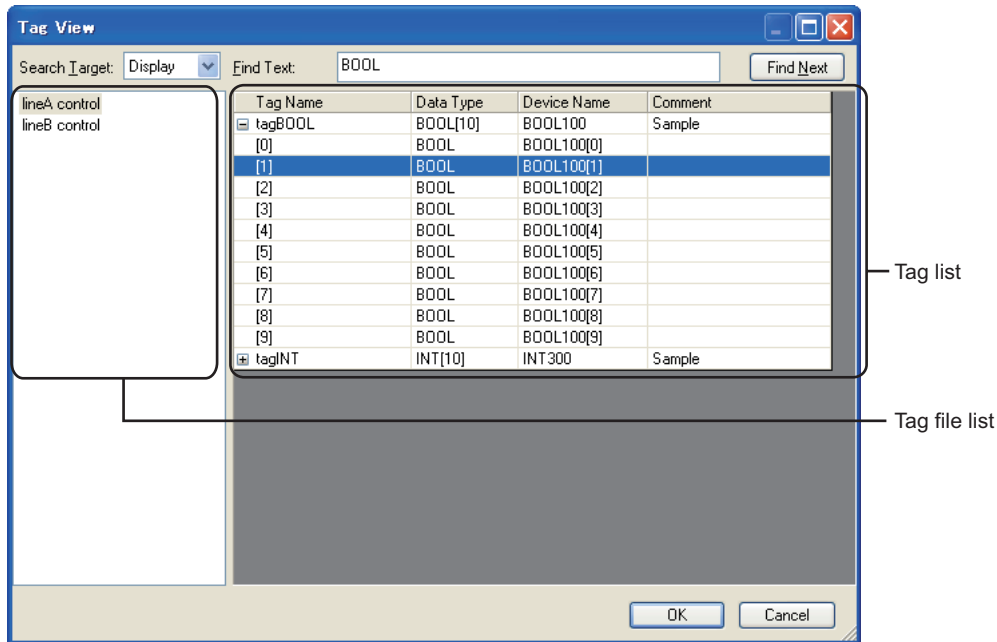


Item	Description
CSV File Name	Input the path of the tag file to be updated. Click the [...] button to select the path in the Open dialog box.

(2) Setting to the device

Set the imported tag to the device.

1. Click the [Tag View] button on the Device dialog box.
Appendix.2.3 Setting device of each controller
2. The Tag View dialog box appears.
Make the settings referring to the following.



Item	Description	Model
Search Target	Set the items for the tag information to be searched.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div> </div>
Find Text	Set the character string to be searched. Upper and lower cases are not distinguished.	
Find Next	Click this button to search by the contents set in the search target or find text.	
Tag file list	Tag files imported to GT Designer3 are displayed in a list. Click the tag file name to display the tag file contents on the right.	
Tag View	Displays the tags in the selected tag file in a list. Select a tag and click the [OK] button to set the tag to the device.	
Tag View	Tag Name	Displays the tag name. Click the [+] button to display the element number of the tag.
	Data Type	The file type of the tag is displayed.
	Device Name	The device name in GT Designer3 is displayed.
	Comment	The comment set to the tag is displayed.

■ Precautions

(3) Tag file format

To export tags by the third party programming software, the tags must be exported in CSV files.
GT Designer3 cannot import tag files exported in formats other than CSV files.

(4) Storage location of tag file

When the storage location of a tag file is changed after importing the file, set the path of the new storage location in the Update Tag List dialog box.

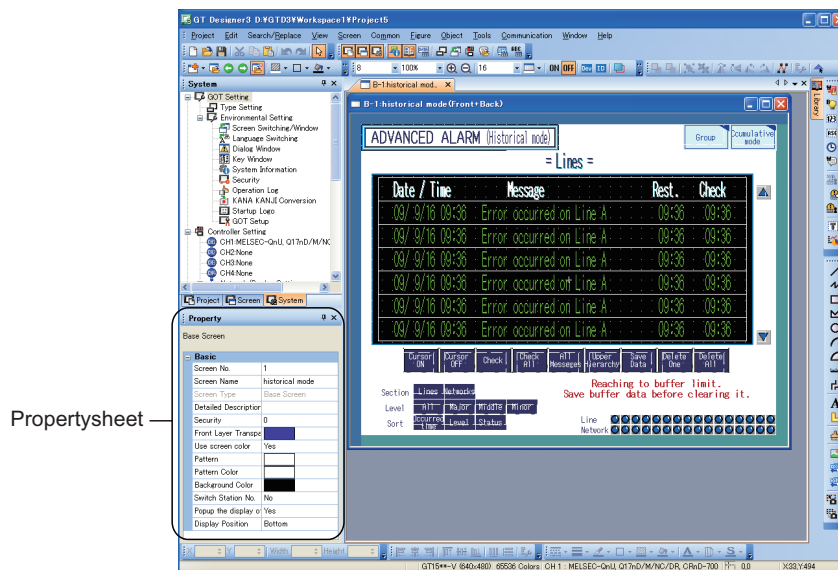
Failure to do so does not display the tag file in the tag file list at the device setting.

8.4 Displaying in List and Editing Screen/Figure/Object Settings (Propertysheet)



The propertysheet is a window that displays all setting items and details of screens/figures/objects currently selected in a list.

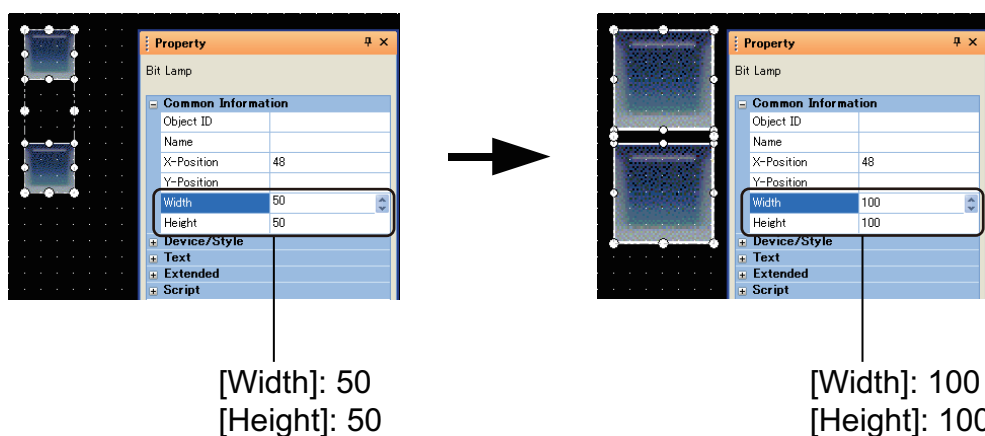
Using the propertysheet, the setting details can be checked and changed without opening the dialog box.



By using the propertysheet, the settings of multiple figures/objects arranged on the same screen can be changed at a time.

(Example) Changing the size of 2 lamps at a time

Change the [Width] and [Height] to change the size of all selected lamps



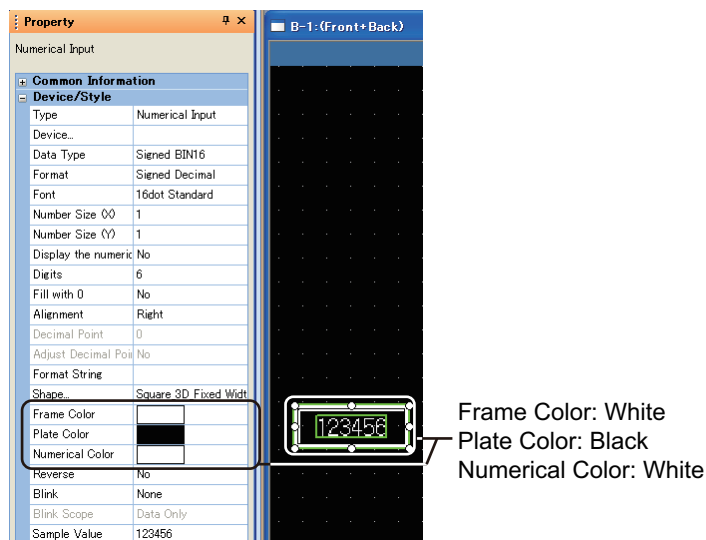
■ Propertysheet operations

(1) Displaying propertysheet

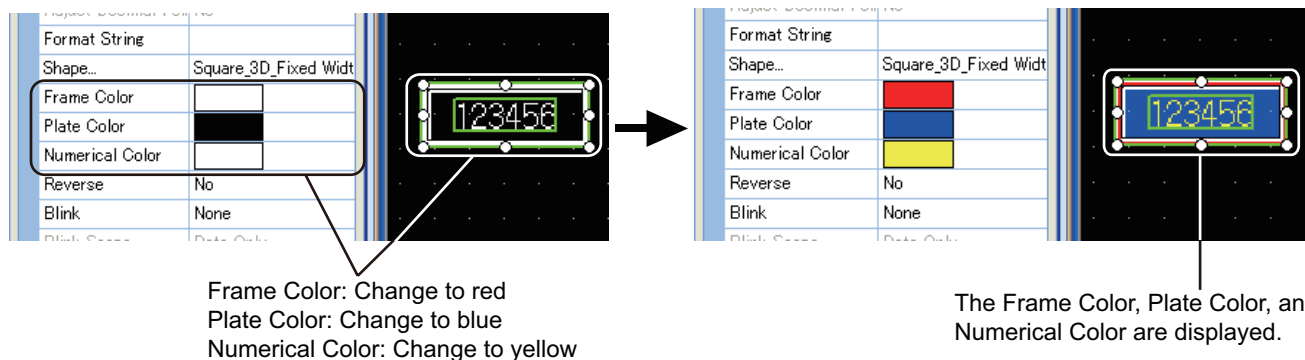
Select [View] → [View Window] → [Propertysheet] from the menu to switch the display/hide status of the propertysheet.

(2) How to change attributes

1. Select the screen/figure/object to change the settings.
Multiple figures/objects can be selected.



2. The attributes are displayed on the Propertysheet. Change the desired attributes.
Example) Changing the Frame Color, Plate Color, and Numerical Color.



POINT

Attribute change

Attributes displayed in the Propertysheet correspond to the setting items of the Object or Figure setting dialog box. The attributes (setting items) can be set in the same way as the dialog box is set. For the figure setting items, refer to the following.

☞ GT Designer3 Version1 Screen Design Manual (Functions)

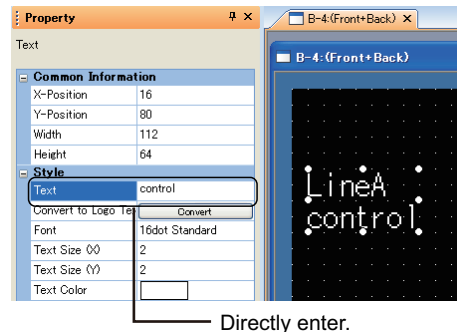
(3) How to input setting items

The input method varies depending on the setting item.

(a) Direct input

Set the text/numerical values by direct input.

For the text, multiple lines can be entered/edited by inserting line feeds.



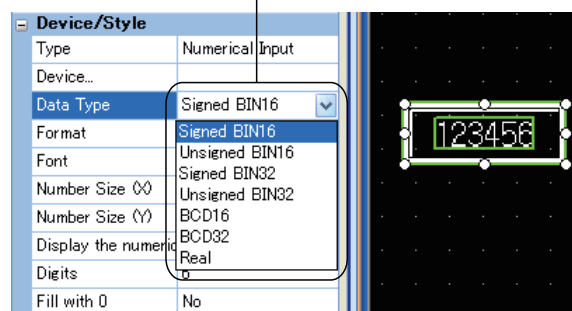
Directly enter.

(b) Selection from the list

Select and set the item from the displayed list.

Numerical values and text cannot be directly input.

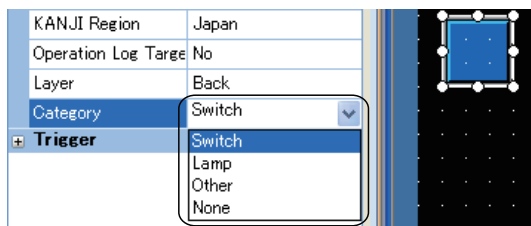
Select from list box.



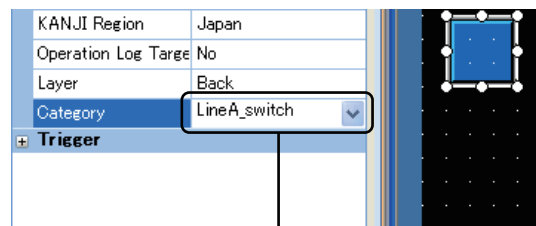
(c) Selection from the list/Direct input

Select and set the item from the displayed list.

Values can also be directly input.





Select the item from the list box.





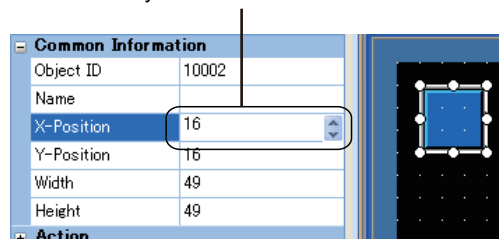
Directly enter the item.

(d) Numerical input

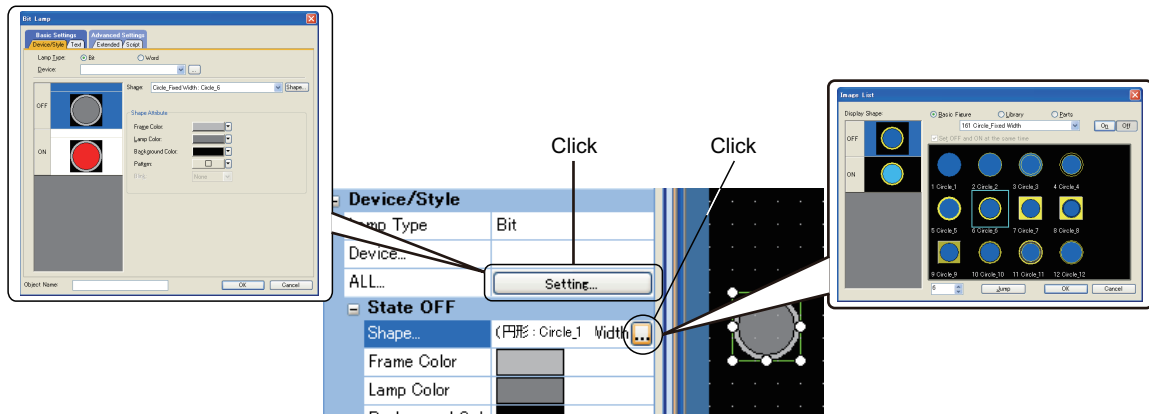
Set the values by clicking  / .

Values can also be directly input.

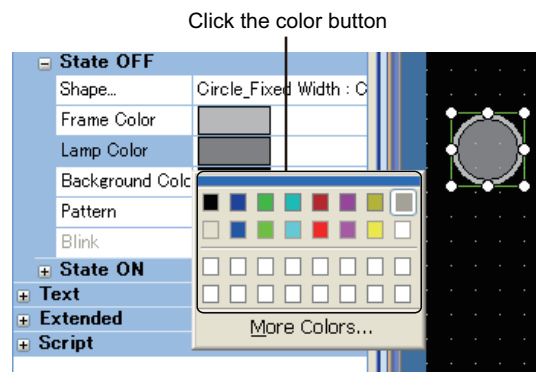
Directly enter a value or click  / .



- (e) Input from dialog box
Click the button, and set the item from the displayed dialog box.

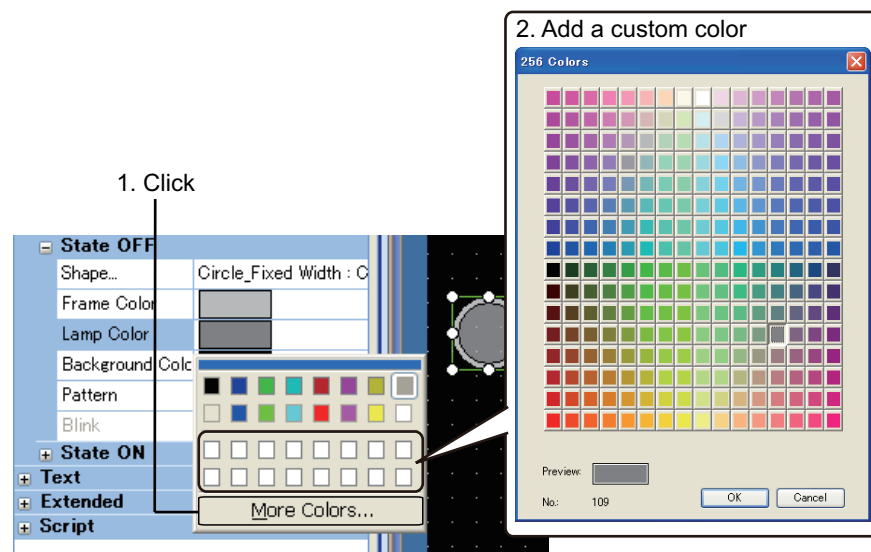


- (f) Color input
Set the color by clicking the color button in the color palette.



Setting custom color

When using other than the basic 16 colors, click the [More Colors] button to add custom colors to the color palette.



■ Precautions

(1) Combinations that cannot be set

Different types of figures/objects cannot be checked/set at a time.

Also, if different types of figures/objects are grouped, they cannot be checked/set at a time.

Example:

- Touch switch and lamp
- Bit lamp and word lamp
- Circle and rectangle

(2) Checking or setting figures/objects on multiple screens

In the property sheet, only figures/objects on the same screen can be checked or set.

Figures/objects on multiple screens cannot be checked nor edited.

(3) Precautions when changing multiple objects

- (a) When multiple figures/objects are selected, the field of items which setting values are different becomes empty.
- (b) When changing from the property sheet, the setting is reflected to all selected figures/objects.
Be careful with unintended changes when changing settings from the property sheet.

(4) Shapes to be set for objects

Setting without [Shape] for objects is not available in the property sheet.

For not setting [Shape] for objects, set from the dialog box of each object.

(5) Setting range of size

Specify the width in the range of 1 to 2000, and specify the height in the range of 1 to 1600.

If the value out of the range is specified, an error occurs.

8.5 Displaying in List and Batch Editing Settings

8.5.1 Batch setting and managing figures/objects for each purpose (Category list)



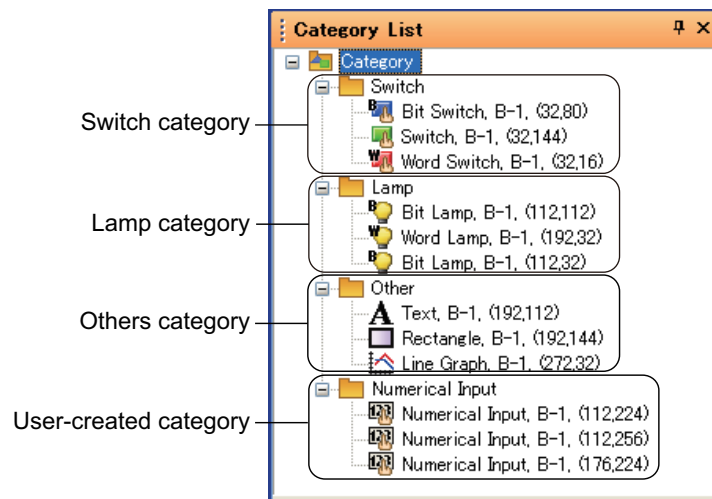
The set figures/objects can be sorted to any of the following categories.

- Switch category
- Lamp category
- Others category
- User-created category

The sorted figures/objects are registered to each category in the category list.

Sorting figures and objects in each category allows management of figures and objects for each purpose.

(1) Category types

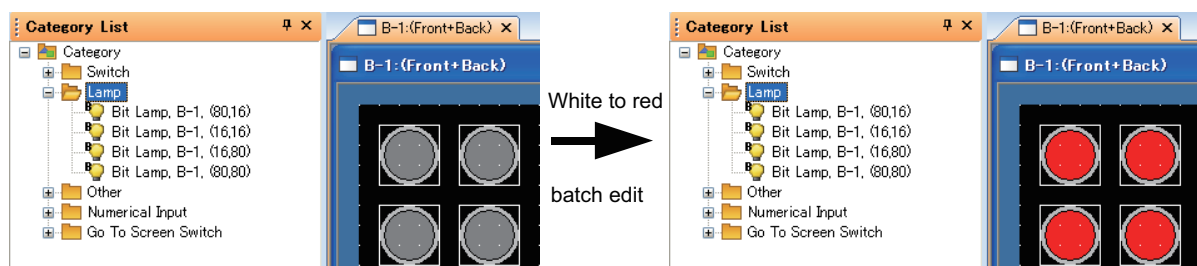


Item	Description
Switch category	Category in which figures/objects set as [Switch] are registered. By default, all touch switches are included.
Lamp category	Category in which figures/objects set as [Lamp] are registered. By default, all lamps are included.
Others category	Category in which figures/objects set as [Others] are registered. By default, figures and objects other than touch switches and lamps are included.
User-created category	User-set category. Figures/objects can be registered for each purpose.

(2) Batch changing attributes

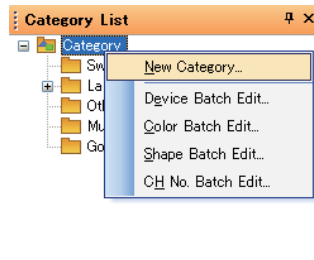
Device, color, shape, and channel No. of figures/objects set to objects in the same category can be batch changed.

(Example) Batch changing display colors of the bit switch.

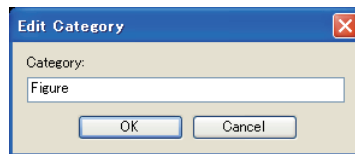


■ How to create user-created category

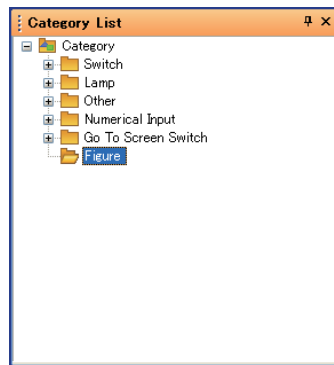
1. Right-click any category in the category list., and select [New Category] from the menu.



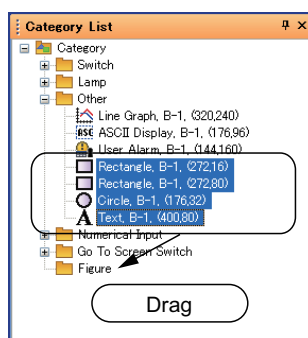
2. The edit category dialog box appears. Enter the category name.
After entering the category name, click the [OK] button to close the dialog box.



3. The user-created category is added.



4. Select the figures/objects to be changed from the existing categories, and drag them to the created category.
The figures/objects are moved to the created category.

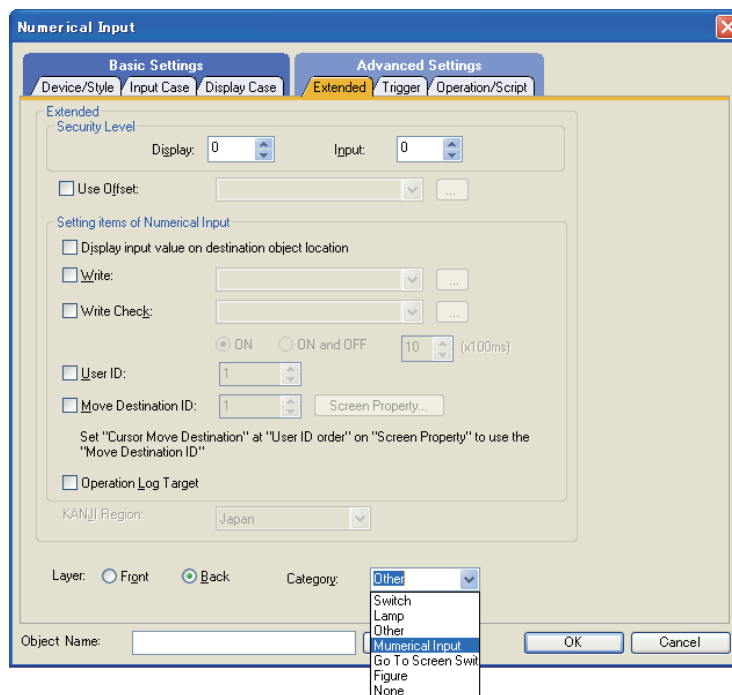


HINT

Category registration of figures and objects

Create a user category first. The created user category can be selected when setting the registration location of figures and objects.

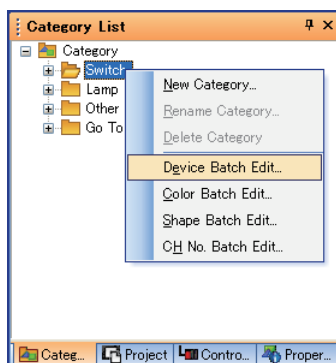
Also, the category name can be edited and new user-created category can be created by directly entering the name in the category list box.



How to configure batch settings for each category

Figures/objects in the same category can be changed in a batch.

- Right-click the category for batch change and select the followings.
 - For changing the device : [Device Batch Edit]
 - For changing the color : [Color Batch Edit]
 - For changing the figure : [Shape Batch Edit]
 - For changing the channel No. : [CH No. Batch Edit]



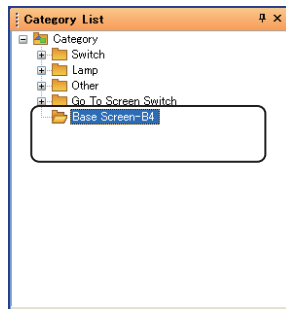
- The batch change dialog box appears. Refer to the following, and configure the batch change settings.

☞ 8.5.2 Batch editing attributes of figures/objects on multiple screens (Batch edit)

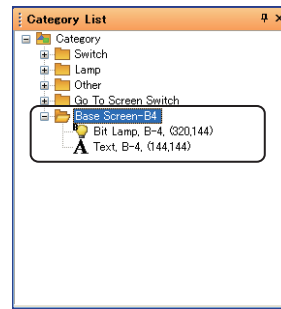
■ Precautions

(1) Figures/objects which are not displayed in the category list.

Figures/objects arranged on closed screens are not displayed in the category list..



When the base screen 4 is closed



When the base screen 4 is opened

(2) Registering to multiple categories

A single figure/object cannot be registered into multiple categories.

(3) Changing multiple attributes

Multiple attributes cannot be batch-changed. (Example: The device and color cannot be batchchanged.)

(4) Other precautions

Before performing batch editing, refer to the precautions for batch editing.

☞ 8.5.2 Batch editing attributes of figures/objects on multiple screens (Batch edit)

8.5.2 Batch editing attributes of figures/objects on multiple screens (Batch edit)



Color or other attributes of figures/objects are changed in a batch.

The following shows the items which can be batch edited.

- Devices or system labels
- Color
- Shapes used for a lamp or touch switch
- Channel No. (Only for GT16, GT15)

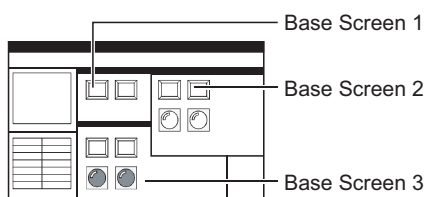
This function is convenient to batch change a device, system label, color, lamp/switch shape, and channel No. of figures or objects arranged on multiple screens.

Also, figures/objects with different types (such as circle and rectangle or touch switch and numerical display) can be batch changed.

The following types of batch edit are available.

Each change method and image after change are shown below.

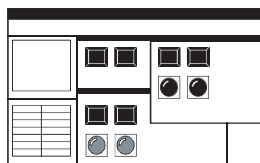
<Image before change>



<Image after change>

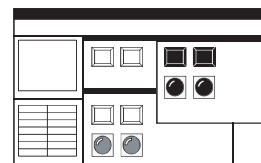
Batch editing all screens
(Change of color: ☐ → ☒)

Color of objects/figures on all screens (Base Screen 1, Base Screen 2, Base Screen 3) is batch edited.



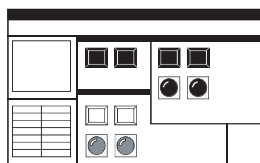
Batch editing screen
(Change of color: ☐ → ☒)

Color of objects/figures on the editing screen (Base Screen 2) is batch edited.



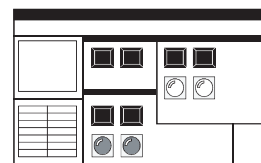
Batch editing specified screens
(Change of color: ☐ → ☒)

Color of objects/figures on screens for the specified numbers (Base Screen 1 to Base Screen 2) is batch edited.



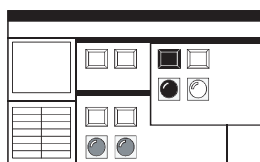
Batch editing each category
(Change of color: ☐ → ☒)

Color of the specified category (Go To Screen Switch) is batch edited.



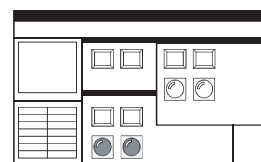
Batch editing selected areas
(Change of color: ☐ → ☒)

Color of objects/figures on the selected area in the editing screen is batch edited.



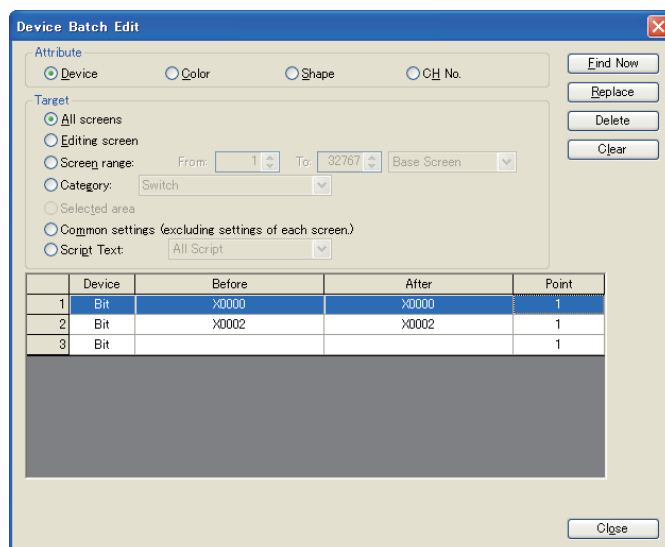
Batch editing common settings
(Change of device)

Devices (Switching screen device, start trigger device of hard copy, etc.) set in the [Common] settings are batch edited.



■ Operation method

1. Select [Search/Replace] → [Batch Edit] → [Device]/[Color]/[Shape]/[CH No.] from the menu.
2. The setting dialog box appears. Refer to the following descriptions for setting.

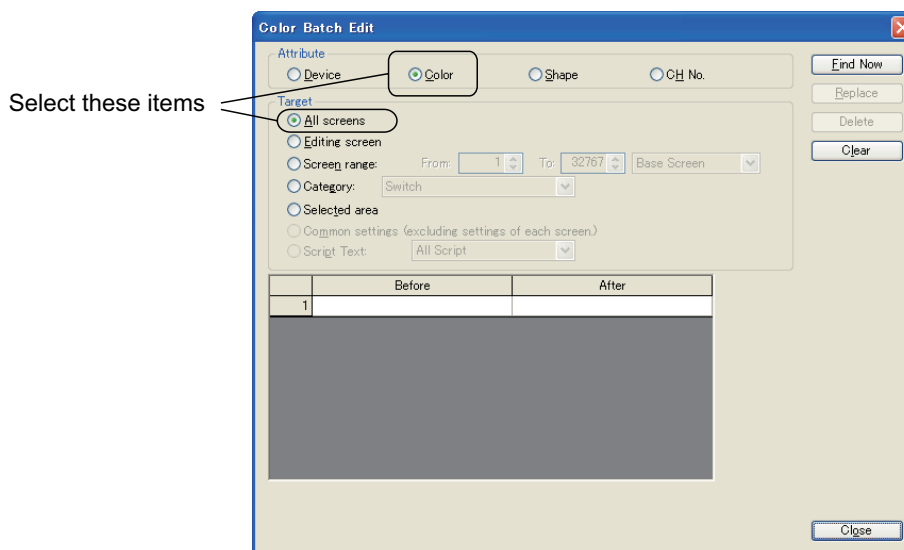


Item	Description	Model
	A device, system label, color, shape, or channel No. (GT16 or GT15) set for a screen and others is searched.	
	Batch edit is performed.	
	Items selected for change are deleted.	
	Items set on the edit list are cleared.	
Attribute	Attribute for batch edit is selected. <ul style="list-style-type: none"> • Device : A device number or system label name is batch edited. • Color : Color is batch edited. • Shape : Figures of touch switch or lamp are edited. • CH No. : CH No. is batch edited. (For GT16 and GT15 only) 	
Target	Unit for batch edit is selected. <ul style="list-style-type: none"> • All screens: All screens are the target for batch edit. • Edited screen: The editing screen is the target for batch edit. • Screen range: The specified screen is the target for batch edit. After selection, the range and the type on the screen are specified. • Category: Category is the target for batch edit. After selection, select the category for batch edit. • Selected area: Figures/objects selected on the editing screen are the target for batch edit. • Common settings (excluding settings of each screen.): [Common] are the target for batch edit. The device assigned to object set on each screen is not the target. • Script Text: The script of the target is selected. 	
Edit list	Attributes to be changed are set. When figures are selected by attributes, switch figures and lamp figures can be classified for setting. Before : Device/Color/Shape/CH No.(GT16 and GT15) before change is selected. After : Device/Color/Shape/CH No.(GT16 and GT15) after change is selected. Device : Device type (bit/word) is selected for batch edit of device. Point : Points are set for consecutive edit of devices. (In Device No of Objects: M0/New Device No.: M10, set 4. M0 to M3 are changed to M10 to M13.)	

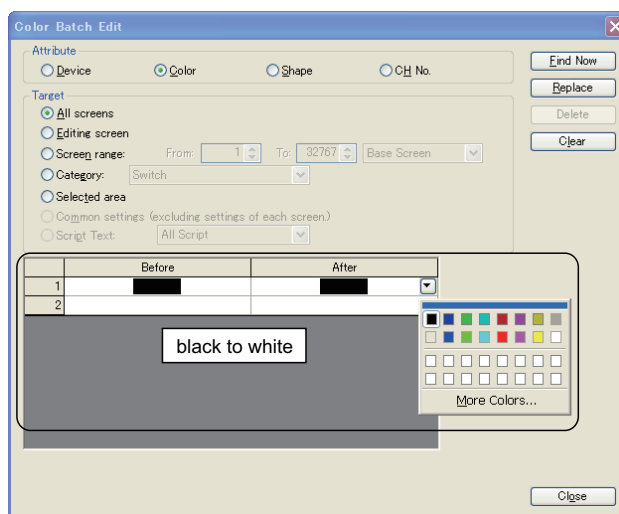
Method of batch edit

An example to change the color of objects or figures set on all screens from black to white is described here.

1. Display the device batch edit dialog box. Select [Color] from [Attribute] and [All screens] from [Target].



2. Select black from [Before] and white from [After].
After selecting, click the [Replace] button to change the contents set with black to white.



HINT

Purpose of the [Find Now] button.

Click the [Find Now] button to display one of the devices/colors/figures/channel numbers that are used in all screens.

This button is convenient to batch edit multiple devices/colors/figures/channel numbers.

■ Precautions

(1) Change of device

- (a) When the device format (bit device, word device, bit specification for word device) is specified, the device cannot be changed to a different device type.
- (b) The object device with the specified offset device cannot be changed to the word specification for bit device.
- (c) When the head device of the device which is automatically and consecutively set is changed, do not make the data length out of the device range.
The following operation occurs depending on the device data length.
 - When the data length is 16 bits and the set device is out of the range, the device is not changed.
- (d) When the data length is 32 bits and the set device is out of the range, the area out of the device range is not set. When searching for devices or others, incorrect labels are displayed in the edit list.
When the following system labels are set to a system label name in [After], devices are not changed.
 - System labels that are not registered in the system label database
 - System labels without devices assigned for the device.

(2) Change of shape

Changes from Basic Figure to Library and from Library to Basic Figure are not allowed.

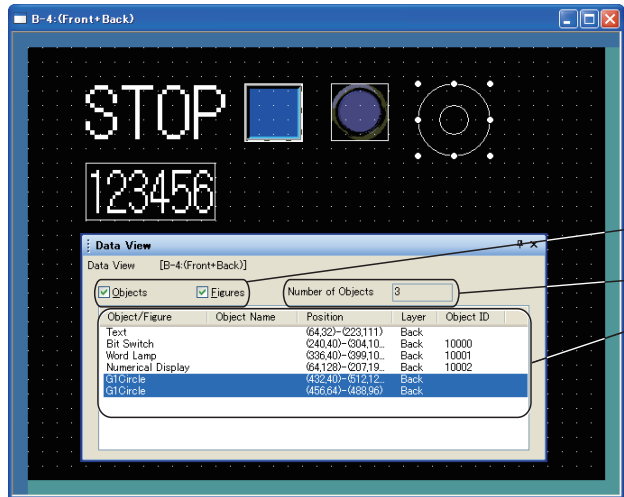
(3) Change of CH No.

- (a) Batch change of CH No. of devices on the script cannot be performed.
- (b) If a non-existent device is used for the device specified in [After], the device must be assigned again.
If a non-existent device is used for the selected device after CH No. is changed, the device must be assigned again.
If a non-existent device is used for the selected device after CH No. is changed, ?? is displayed on the setting dialog for each setting or each object string.

8.5.3 Selecting overlapped figure (Data view)

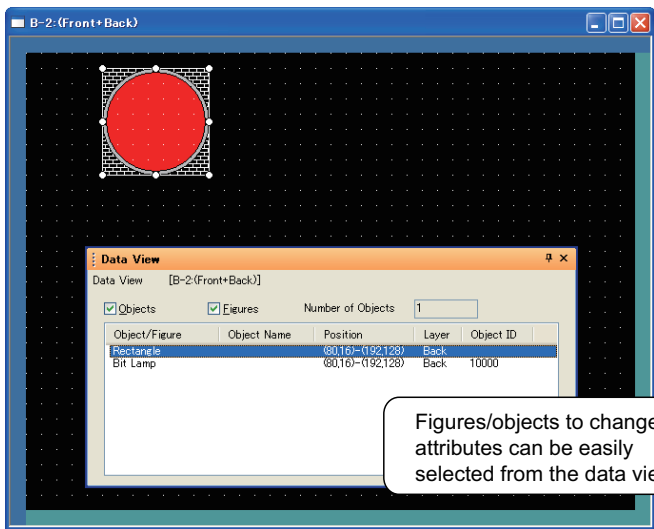


The Data View displays all figures and objects arranged on the screen in a list.
The listed figures/objects can be double clicked and edited directly.



Check an item for display.
The number of objects is displayed.
Object/Figure names, coordinates, layers and object IDs (objects only) are displayed.
When the figure is a grouped one, its name is preceded by G.

If multiple figures or objects are overlapped, the intended figures or objects can be easily selected and edited.



■ Operation method

1. Select [View] → [View Window] → [Data View] from the menu to display the data view.
2. In the data view, double-click the figure/object to be edited.
The setting dialog box appears.



Individual settings for grouped objects

Using the data view, grouped objects can have individual settings without ungrouping.

8.5.4 Checking devices in use (Device list)



The device list displays the devices and system labels used for the editing screen or the entire project. Also, refining, jump, and preset file output are available. This function is convenient for checking or searching devices and system labels in the project/screen being created.

- Bit device tab

Enter the device to be searched, and click the [Search] button to start the searching.

Click the tab and select the type of the device to be searched.

CH	Device	Points	Screen	Object	Object Name	Position	Object ID
0-FF	GB100		B 1	Switch		(352, 91)	1000
0-FF	GB110		B 1	Switch		(269, 94)	1000
1 0-FF	X0500		B 1	Bit Lamp		(443, 235)	1000
1 0-FF	Y0500		B 1	Bit Lamp		(360, 230)	1000

- Word device tab

Select the data length according to the device to be searched.

CH	Device	Points	Screen	Object	Object Name	Position	Obj
0-FF	GD500		B 1	Word Lamp		(441, 168)	
1 0-FF	D250		B 1	Numerical Display		(348, 313)	
1 0-FF	D600		B 1	ASCII Display		(428, 362)	

- Label tab

Enter a system label to be searched, and click the [Search] button to start the search.

System Label Name	CH	Device	Points	Screen	Object	Object Name	Position	Ob
A0_STOP_Flag	1 0-FF/1	X0002		B 1	Bit Switch		(161, 141)	
Start_Lamp	1 0-FF/1	Y0000		B 1	Bit Lamp		(270, 210)	

■ Operation method

1. Select [Search/Replace] → [Device List] → [Screen]/[Project]/[Script Text] from the menu.
 - When the [Screen] is selected, the collection target is [Base Screen].
 - When the [Project] is selected, the collection target is [Project (excl. Script Text)].
 - When the [Script Text] is selected, the collection target is the whole script text.
2. The [Device List] dialog box appears. Check the used devices and system labels.

*mark is displayed when there is data which is not updated.

Item	Description
Collection Target	Select the target to be displayed on the device list. <ul style="list-style-type: none"> • [Project (incl. Script Text)] • [Base Screen],[Windows Screen] • [All Script Text] • [Project/Screen Script Text] • [Project (excl. Script Text)] • [Report Screen] • [Script List] • [Object Script Text] When the [Project (incl. Script Text)] or [Project (excl. Script Text)] is selected, the screen number and [All screens] check box are disabled.
Target Screen No.	Specify the screen number to be searched. (1 to 32767; for report screen only, from 1 to 8)
All screens	Select this item to target all screens of the screen type selected in the collection target.
Update	The list information is updated.
Jump	The specified setting screen is opened, and the object is pointed with a cursor. Jump button is enabled when a line is selected in the list.
Export	The Device List currently displayed is output to the CSV or Unicode Text file.
Search	Set a device or system label, and then press the return key or the [Search] button to search the device or system label.

POINT

When using the Device List

After the objects on the screen are erased, or the order of the objects are changed, if the Jump is performed without updating the device list, an error that the cursor jumps to the different object may occur.

HINT

Cross reference function for MELSOFT Navigator (iQ Works only)

To search a system label used for another project in a workspace, use the cross reference function for MELSOFT Navigator.

Help for MELSOFT Navigator

8.5.5 Checking text in use (Text list)



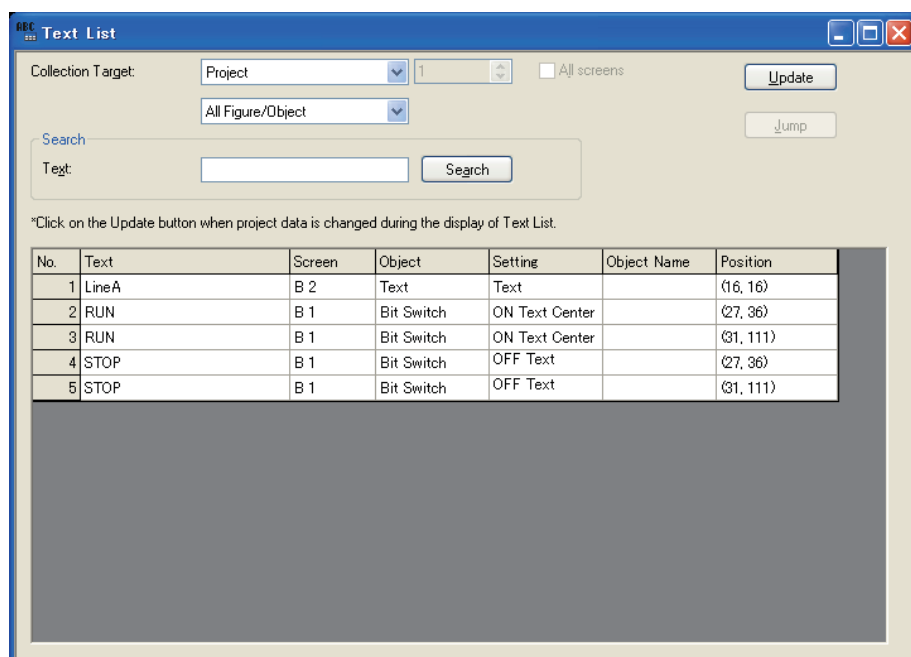
The text list displays the directly set text in a list, by the refining setting.

The specific figure or object can be selected by the jump function.

This function is convenient for checking or searching figures/objects in the creating screen/project.

■ Operation method

1. Select [Search/Replace] → [Text List] from the menu.
2. The text list window is displayed.



Item	Description
Collection Target	Select the ranges and targets to be displayed in the text list. Range: [Project]/[Base Screen]/[Window Screen]/[Report Screen]/[Parts]/[My Library] Target: [All Figure/Object]/[Text Figure]/[Logo Text Figure]/[Switch]/[Lamp]/[Bit Comment]/[Panelmeter]
Target Screen No.	Specify the screen number to be searched. For [Base Screen], [Window Screen], and [Parts]: Specify the screen number to be searched from 1 to 32767. For [Report Screen]: Specify the screen number from 1 to 8. For [My Library]: Specify the screen number to be searched from 1 to 250.
All screens ^{*1}	All screens of the Screen Type that are selected in the collection target are the objects.
	The list information is updated.
	The specified setting screen is opened, and the object is pointed with a cursor. Jump button is enabled when a line is selected in the list.
Collection Target 2	The target to be displayed in the list is refined.
	When the device is set, and when the return key or the Find button is pressed, the search is performed.

^{*1} When the [My Library] is selected, the name becomes [All My Library (0 : including My Favorites)].

8.5.6 Searching and editing figures/objects in project data (Data browser)



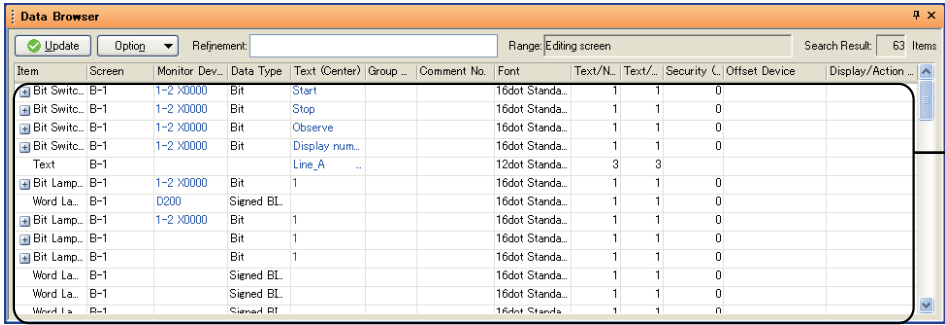
Figures and objects used for a project can be displayed as a list using the data browser. The scope of figures and objects displayed in the figures/objects list can be narrowed using keywords or display conditions. Also, the displayed figures and objects can be edited in the figures/objects list, the [Text Replacement] dialog box or others. The data browser allows the user to search for the figures and objects that match the specified conditions, or to collectively change only the figures and objects that match the specified conditions in a project.




POINT

- (1) When changing values using the batch edit of text or device**
The changes with the batch edit of text or device cannot be cancelled by selecting [Edit] → [Undo] from the menu.
For the batch edit of text or device, check the values to be changed before execution.
- (2) When changing figures and objects on unopened screens**
When values of figures and objects on unopened screens are changed in the data browser, the changes cannot be cancelled by selecting [Edit] → [Undo] from the menu.






■ Operation method

1. Select [View] → [View Window] → [Data Browser] from the menu.
2. The data browser appears.
Search or edit figures and objects by referring to the following.



Item	Description
	Click this button to search with conditions specified in the [Range/Target Setting] dialog box, and show results in the figures/objects list. The status of the button shows whether the figures/objects list is updated or not as follows. <ul style="list-style-type: none">•  : The figures/objects list is updated.•  : The figures/objects list is not updated.

(Continued to next page)

Item	Description
	<p>Set a search condition and display condition for the figures/objects list.</p> <ul style="list-style-type: none"> • Range/Target Setting: Set a range and target for a search when the [Update] button is clicked.  (1) Range/Target Setting dialog box • Display Item Setting: Set the items to be displayed in the figures/objects list.  (2) Display Item List dialog box • Device Batch Edit: Collectively change the devices of figures and objects selected in the figures/objects list.  8.5.2 Batch editing attributes of figures/objects on multiple screens (Batch edit) • Text Batch Edit: Collectively change the text strings of figures and objects selected in the figures/objects list.  (3) Text Replacement dialog box • Export: Export a search result to a CSV/Unicode text file.
Refinement	Enter a keyword to narrow the scope of search for all items displayed in the figures/objects list. To search with multiple keywords, separate the keywords with spaces.
Range	Displays the range of search set in the [Range/Target Setting] dialog box. (All screens/Editing screen/Screen range)
Search Result	Displays the number of figures and objects displayed in the figures/objects list.
Figures/objects list	Search results are displayed as a list. The displayed items can be edited in the list.



Operation by keyboard

The data browser can be operated by a keyboard.

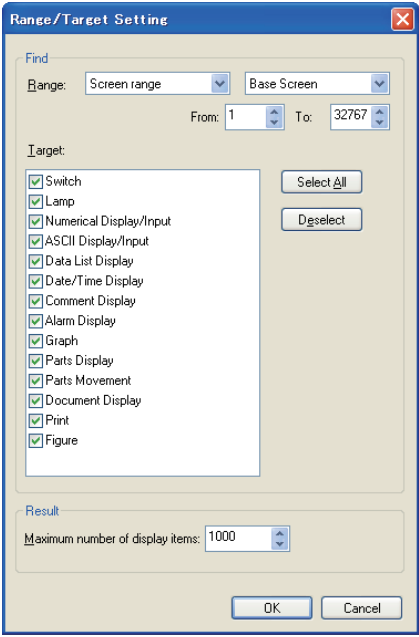
(1) Operation of the figures/objects list

Key	Description	Key	Description
Cursor (up arrow, down arrow)	Moves the selected position to the upper row or lower row.	Shift+End	Selects all the rows downward from the selected row.
Cursor (left arrow, right arrow)	Moves the selected position to the left cell or right cell.	PageUp	Moves up the selected position as number of rows as displayed in the figures/objects list.
+	Displays the tree structure display of the selected row.	PageDown	Moves down the selected position as number of rows as displayed in the figures/objects list.
-	Hides the tree structure display of the selected row.	Enter	Moves the selected position to one row down.
Shift+Plus sign(+)	Displays the tree structure displays of all the rows.	F2	Enables the selected cell to be edited.
Shift+Minus sign(-)	Hides the tree structure displays of all the rows.	Ctrl+Space	Selects or deselects the selected row.
Home	Moves the selected position to the first row.	Tab	Selects the next cell.
End	Moves the selected position to the last row.	Shift+Tab	Selects the preceding cell.
Shift+Home	Selects all the rows upward from the selected row.	Character	Enters characters when the selected cell is in the ready state for edit.

(2) Edit of the figures/objects list

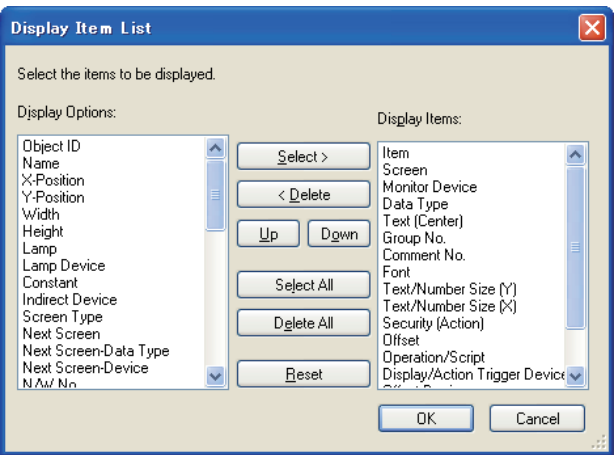
Key	Description	Key	Description
Enter	Determines and ends the edits.	Tab	Determines the edits, and selects the next cell.
Esc	Cancels and ends the edits.	-	-

(1) Range/Target Setting dialog box



Item		Description
Find	Range	Set the search range of figures and objects. <ul style="list-style-type: none">• All screens: Select this item to search all the screens of a project.• Editing screen: Select this item to search only the screens currently being edited.• Screen range: Select this item to search only the specified screens. After selecting this item, select the screen type (Base Screen/Window Screen/Report Screen). Then, set the range of the screen numbers to be searched.
	Target	Select figures and objects to be searched when the [Update] button is clicked.
	Select All	Click this button to select all the items in [Target].
	Deselect	Click this button to clear all the items in [Target].
Result	Maximum number of display items	Set the maximum number of items to be displayed in the figures/objects list.

(2) Display Item List dialog box

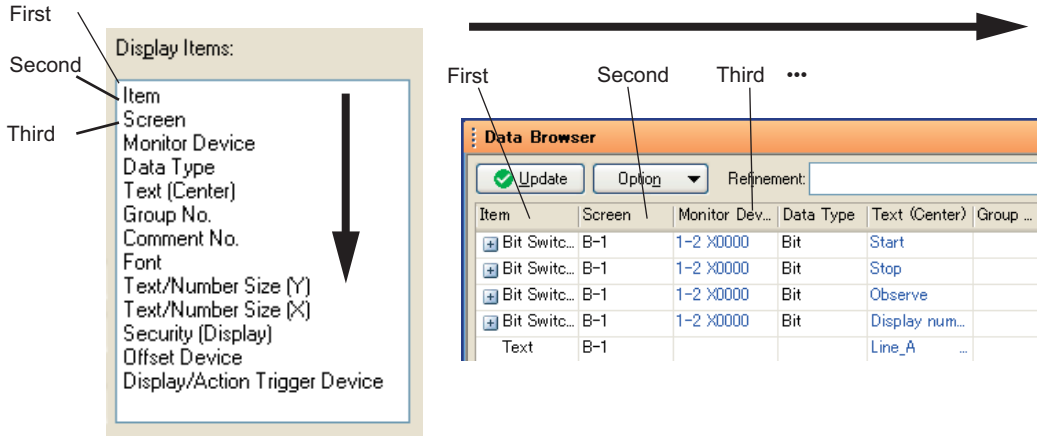


Item	Description
Display Options	Displays the options of items to be displayed in the figures/objects list. These items are not displayed in the figures/objects list. Select an item and click the [Select] button. Then, the selected item is moved to [Display Items]. (The moved items are displayed in the figures/objects list.)
Display Items	Displays the items to be displayed in the figures/objects list. Select an item and click the [Delete] button. Then, the selected item is moved to [Display Options]. (The moved items are not displayed in the figures/objects list.) To change the display order of the selected item, click the [Up] or [Down] button.
	Click this button to move the item selected in [Display Options] to [Display Items].
	Click this button to move the item selected in [Display Items] to [Display Options].
	Click this button to move up or down the selected item in [Display Items].
	Click this button to move all the items in [Display Options] to [Display Items].
	Click this button to move all the items except [Item] in [Display Items] to [Display Options].
	Click this button to reset [Display Items] to its default.



Display order of items to be displayed

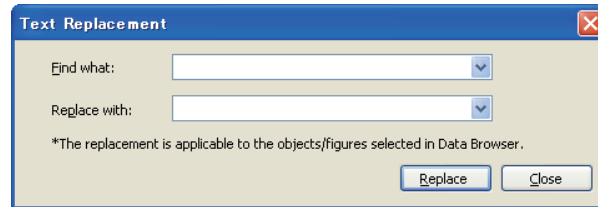
The displayed items in the figures/objects list are displayed in order of appearance set in [Display Items].



(3) Text Replacement dialog box

Text strings of figures and objects selected in the figures/objects list can be collectively changed.

1. Enter the text string to be changed in [Find what], and then enter the new text string in [Replace with].
2. Click the [Replace] button to collectively change the text strings set for the selected figures and objects.



HINT

Settings that can be collectively changed

Only the texts set in [Text] for the figures and objects can be collectively changed.

■ Precautions

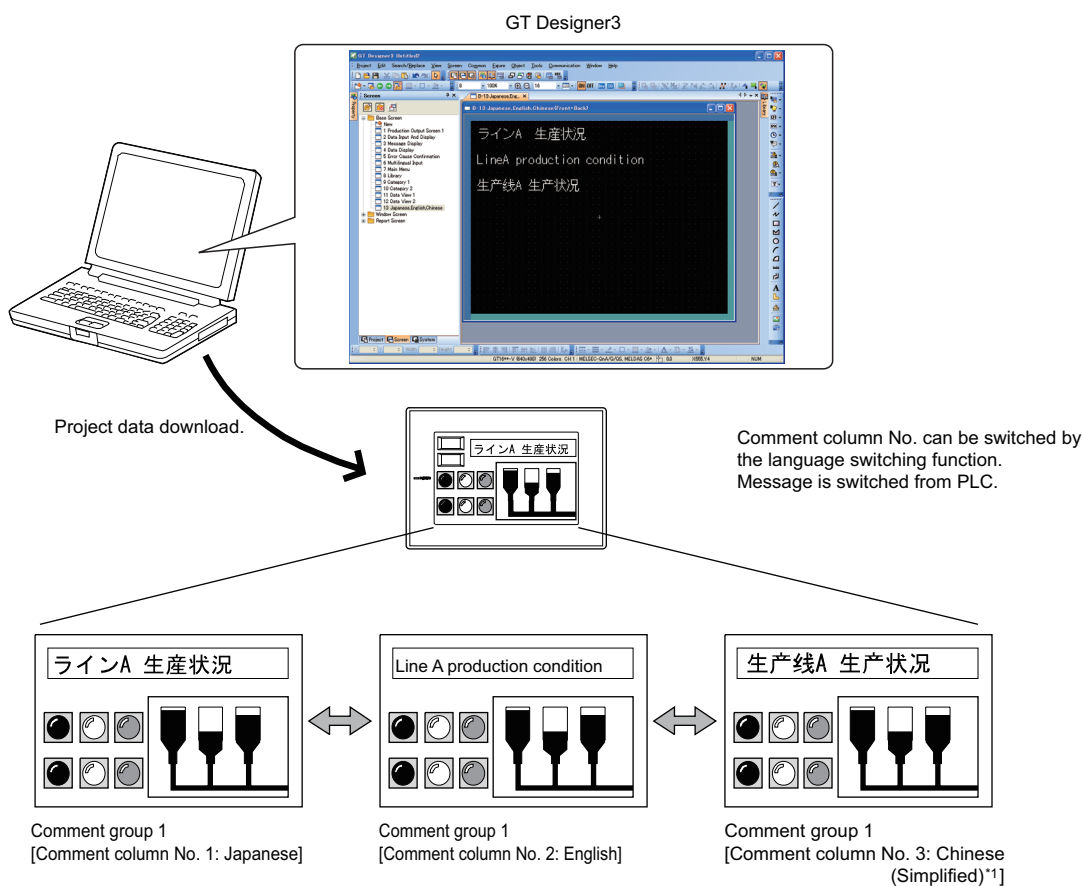
(1) Editing logo texts

To edit a logo text in the data browser, open the screen on which the logo text to be edited is set before editing. Otherwise, the logo text cannot be edited in the data browser.

8.6 Entering Multiple Languages (Multi-Language Input Function)



The GOT 1000 series can display Unicode 2.1 characters. The Windows® multi-language function enables to enter various languages on GT Designer3, and their characters can be displayed as they are on the GOT. Characters or comments can also be entered in the various languages and the corresponding screens can be displayed on a single GOT



*1 When displaying Simplified Chinese on the GT16 or GT15, set the kanji region to Simplified Chinese, and install Simplified Chinese using the option function of OS installation.

POINT

Entering multiple languages

Multiple languages can be entered by the following method

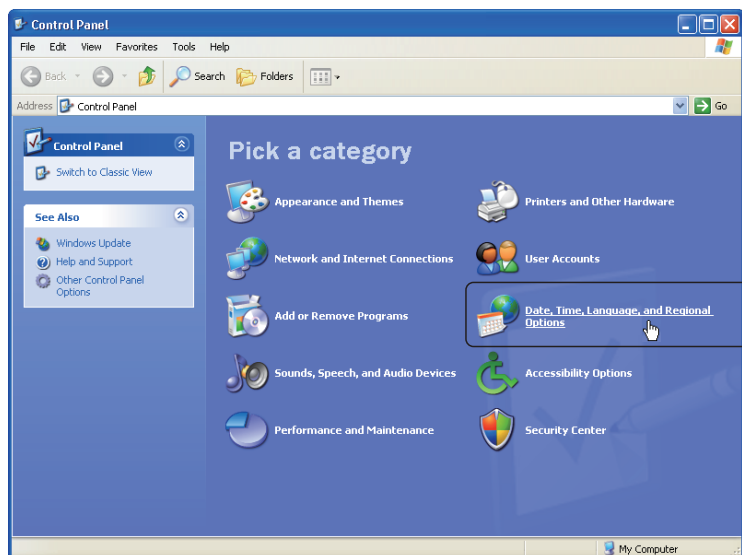
- Use the multi-language function of Windows® to enter.
Multiple languages can be entered on GT Designer3 by using the Windows® multi-language function.
(Windows®-incompatible languages cannot be entered.)
- Using the Windows(R) multi-language function

■ Using the Windows(R) multi-language function

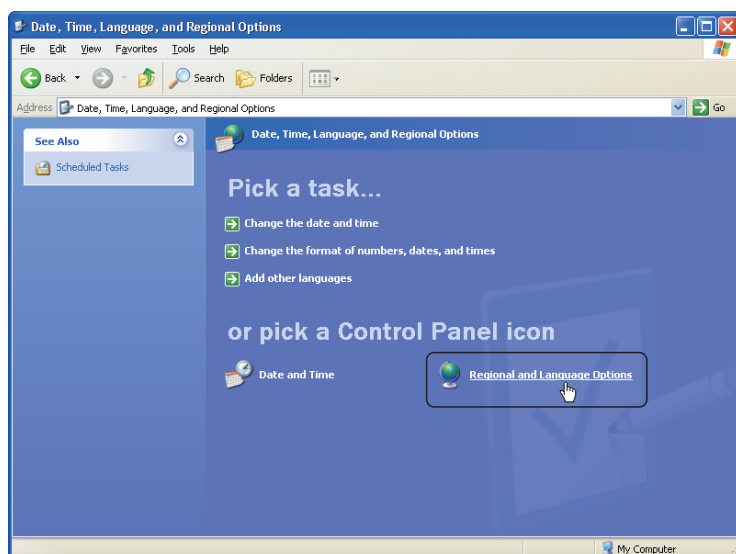
Before entering various languages, the function must be activated in Windows®.
For details of the Windows® operation method, refer to Windows® Manual/Help.

(1) Setting example of entering various languages in Windows® XP.

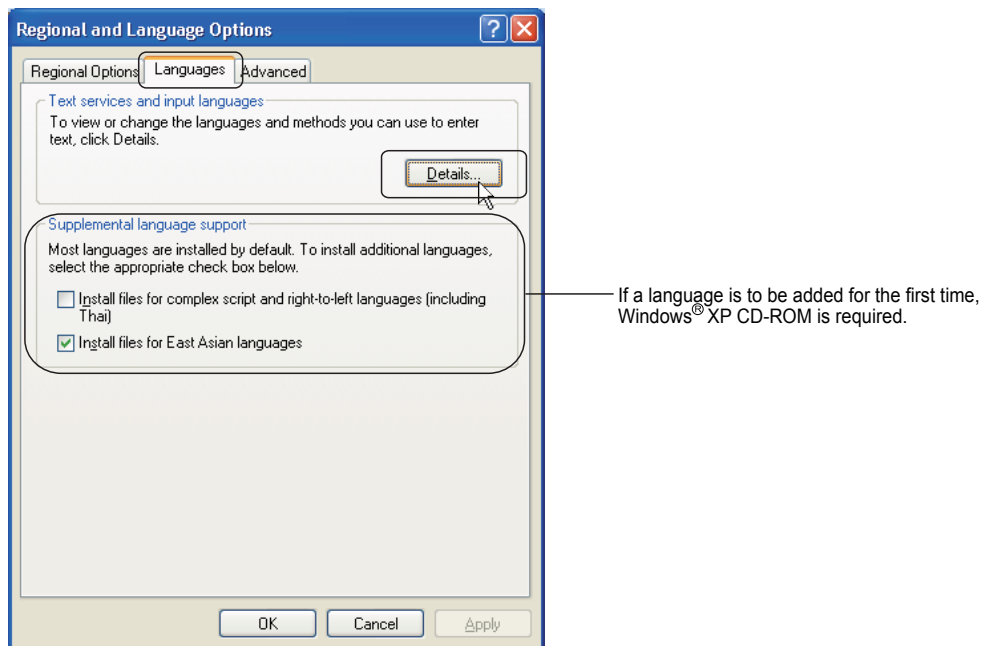
1. Select [Start] → [Control Panel] from the menu and click [Date, Time, Language, and Regional Options].



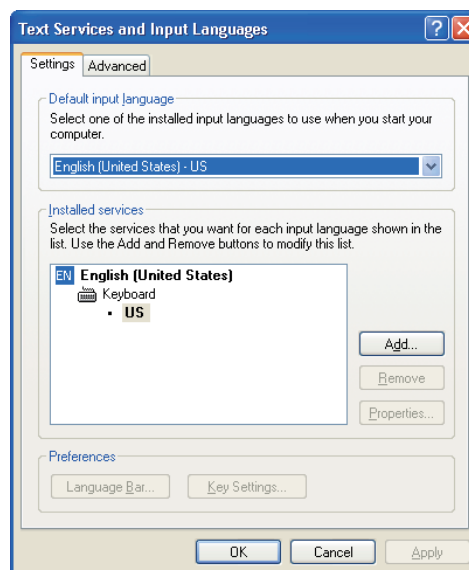
2. Click [Regional and Language Options].



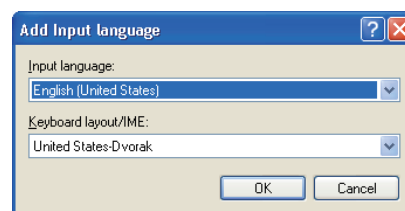
3. The [Regional and Language Options] dialog box appears. Select the Languages tab and click the [Details] button in [Text services and input languages]. Multi-language support requires the setting of additional input languages. Please set additional languages.



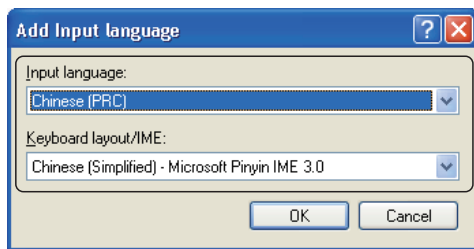
4. The [Text services and input languages] dialog box appears. Click the [Add] button in [Installed services].



5. The [Add input language] dialog box appears.

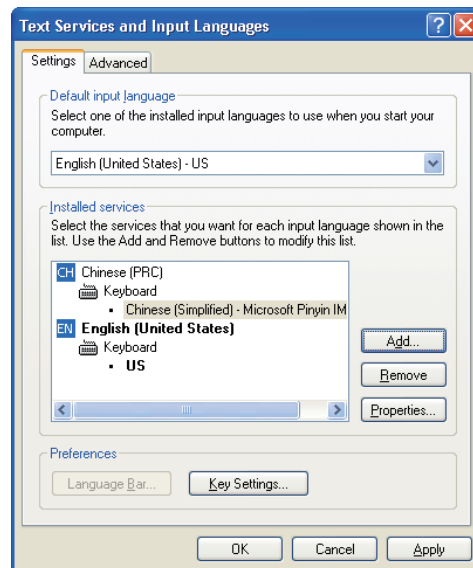


6. Set the necessary language and click the [OK] button.



Setting example:
Input language: Chinese [PRC]
Keyboard layout/IME: Chinese (Simplified) - Microsoft® Pinyin IME 3.0

7. Clicking the [OK] button results in the following settings.



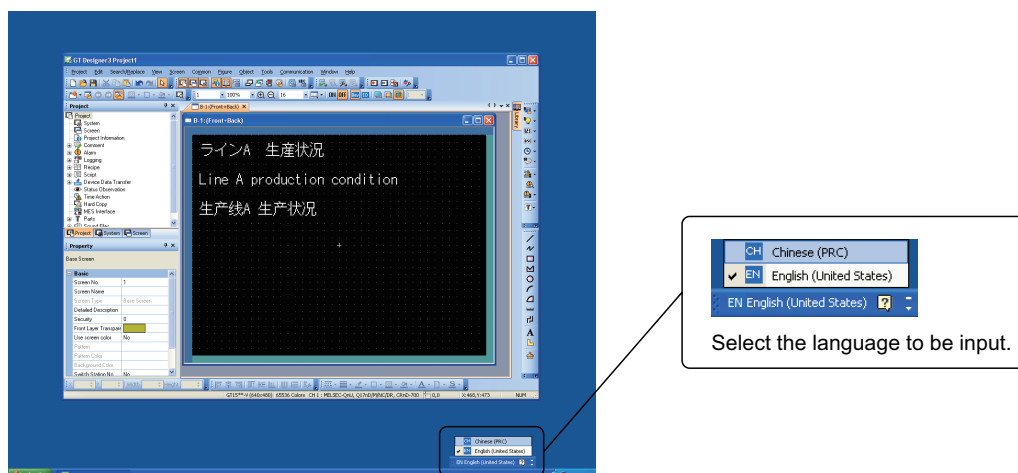
8. Click the [OK] button to apply the settings and close the dialog box.

(2) Input method

Click the language selection icon on the task bar at the bottom right of the screen to select the language to be input.

After the selection, multiple languages can be input on GT Designer3.

Example) Windows® XP Professional



■ Precautions

(1) Characters which are displayed

GT Designer3 and GOT use Unicode 2.1 fonts to display texts. Therefore, when displaying Simplified Chinese, Traditional Chinese and Korean characters, similar ones may appear instead of the intended ones.



Displaying Simplified or Traditional Chinese Characters (GT16 and GT15)

To display Simplified Chinese and Traditional Chinese characters on the GT16 and GT15, perform the following two actions.

(a) Installing fonts

Install the following fonts (Option OS) while installing the OS.

Font	Description
Standard font [China GB] 12-dot characters	The Simplified Chinese (GB) font is a GB2312-encoded font mainly used on mainland China.
Standard font [China GB] 16-dot characters	
Standard font [China Big5] 12-dot characters	The Traditional Chinese (Big5) font is a Big 5-encoded font mainly used in Taiwan.
Standard font [China Big5] 16-dot characters	

(b) Set Kanji region

Set each shape and object KANJI region to China (GB)-Mincho or China (Big5)-Gothic.

(2) Precautions for printing

When [Output to file] is executed for printing, only languages supported by the OS (Windows®) as standard can be output.

(3) Import/export of comments entered in multiple languages

Use Unicode text files to import/export comments entered in multiple languages.

Characters may be garbled if a normal text file or CSV file is used.

8.7 Checking Project Data for Errors

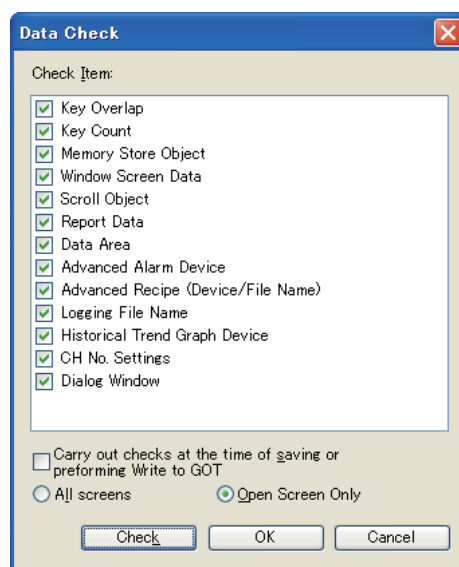


Project data created on GT Designer3 can be checked for errors.
For details of the data check method, refer to the following.

 3.13 Data Check

■ Data Check Procedure

1. Select [Tools] → [Data Check] from the menu.
2. The Data Check dialog box appears.
Set the data check items and the target screens.
After selecting, click the [Check] button to execute the data check.



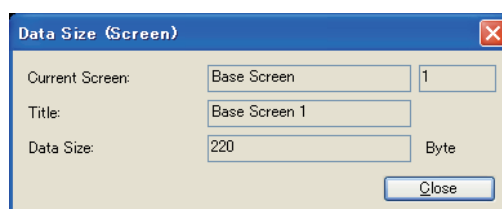
8.8 Confirming Created Data Size



Before transferring the monitor data created using GT Designer3 to the GOT, the data size can be confirmed for each screen or the whole project.

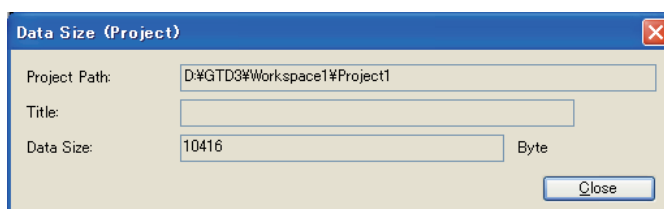
■ Confirmation method

1. Select [Tools] → [Data Size] → [Screen]/[Project] from the menu.
2. The Data Size (Screen)/Data Size (Project) dialog box appears.
Refer to the following to confirm the data size.
 - Screen



Item	Description
Current Screen	The editing screen type and screen No. are displayed
Title	The screen title is displayed.
Data Size	The screen data size is displayed.

- Project



Item	Description
Project Path	The path for the editing project is displayed.
Title	The project title is displayed.
Data Size	The project data size is displayed.

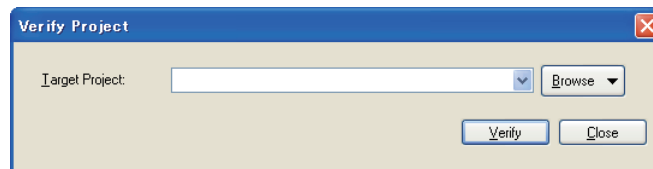
8.9 Verifying Project Data Opened by GT Designer3 with Saved Project Data



Project data opened by GT Designer3 can be verified with project data saved on the personal computer.

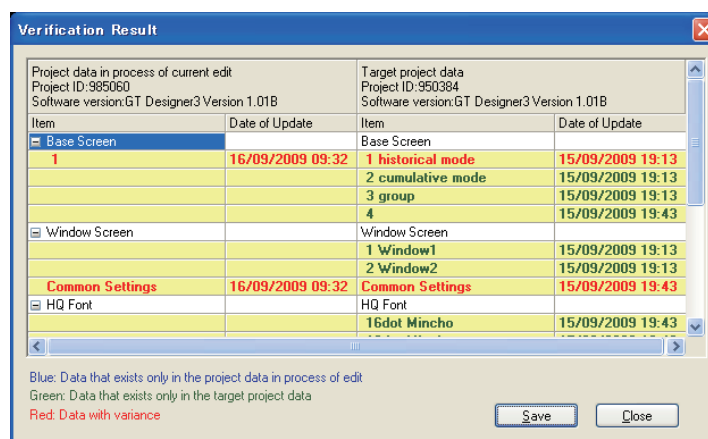
8.9.1 Verifying project

1. Click [Project] → [Verify Data] from the menu to display the [Verify Project] dialog box.
2. Set [Target Project] and click the [Browse] button to start the verification.






Item	Description	Model
Target Project	Set the file to be verified with the [Browse] button or by direct input. Projects in the following formats can be set as the verification target. <ul style="list-style-type: none"> • GT Designer3 projects • G1 format (G1 format data created with GT Designer3) 	
	Select the verification target projects. Click this button, and then the pull-down menu appears. Select the project format.	
	The verification is started.	
	Closes the [Verify Project] dialog box.	

3. The [Verification Result] dialog box is displayed.
Click the [Save] button to save the verification result.



Item	Description	Model
Verification Result	The results of verification are displayed. Items differing between both project data, or existing in only one side, are displayed in light yellow background lines.	

(Continued to next page)

Item	Description	Model
	The results of verification are saved in the text format under the specified file name at the specified location. L: Items existing only in the currently editing project data D: Items existing only in the verification target project data R: Items with differences	
	Closes the [Verification Result] dialog box.	

POINT

File verification

- (1) Verification between project data with different GOT types is not available.
Set the same GOT type for project data to be verified.
For the GOT type settings, refer to the following.

4.1 GOT Type Setting

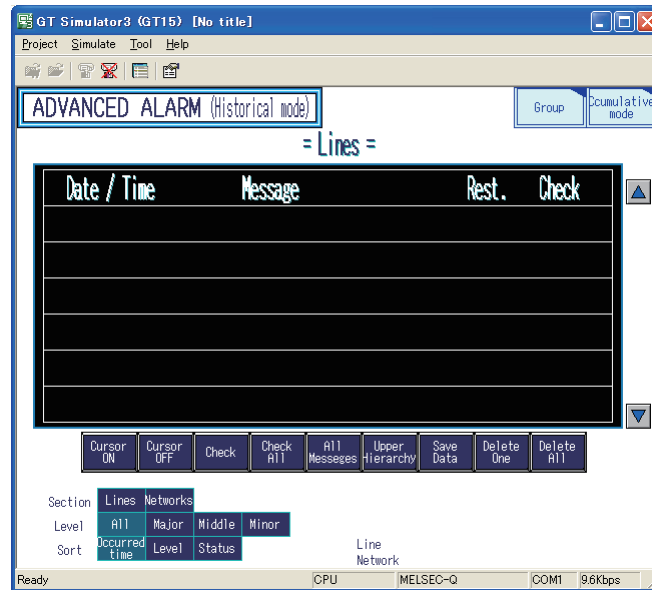
- (2) Unlike the verification function in the [Communicate with GOT] dialog box, the file verification is available even when the OS major version is different.
- (3) When the currently used GT Designer3 version differs from the version of GT Designer3 that edited the project data to be verified, a difference may appear in the verification result.
- (4) When HQ font is set, a font not set by the user is displayed.
Also, when the HQ font to be used is changed, a difference appears in all HQ fonts.
- (5) When a project data to which [Detailed Description] is set on the [Screen Property] dialog box of base/window/report screens is compared with a project data saved by writing from the memory card, or with a project data saved after uploading from GOT using a data transfer tool, a difference may be displayed.
- (6) When the buffering area size is changed, a difference is displayed in the common settings.
Example)
 - When changing settings in [File Conversion External Control] on the [Advanced Recipe Common Setting] dialog box.
 - When changing settings in [Record Number] on the [Advanced Recipe] dialog box.
- (7) When [I/F], [Driver], or [Detail Setting] on the [Controller Setting] dialog box is changed, a difference is displayed in [Communication Setting].
When [Controller Type] on the [Controller Setting] dialog box is changed, [Common] becomes mismatched.

8.10 Starting Up Simulator (GT Simulator3)



GT Simulator3 can be started up from GT Designer3 directly.
For the usage of GT Simulator3, refer to the following.

 GT Simulator3 Version1 Operating Manual for GT Works3



■ Operating procedure


Operate GT Simulator3 by selecting the followings from the [Tools] → [Simulator] menu.

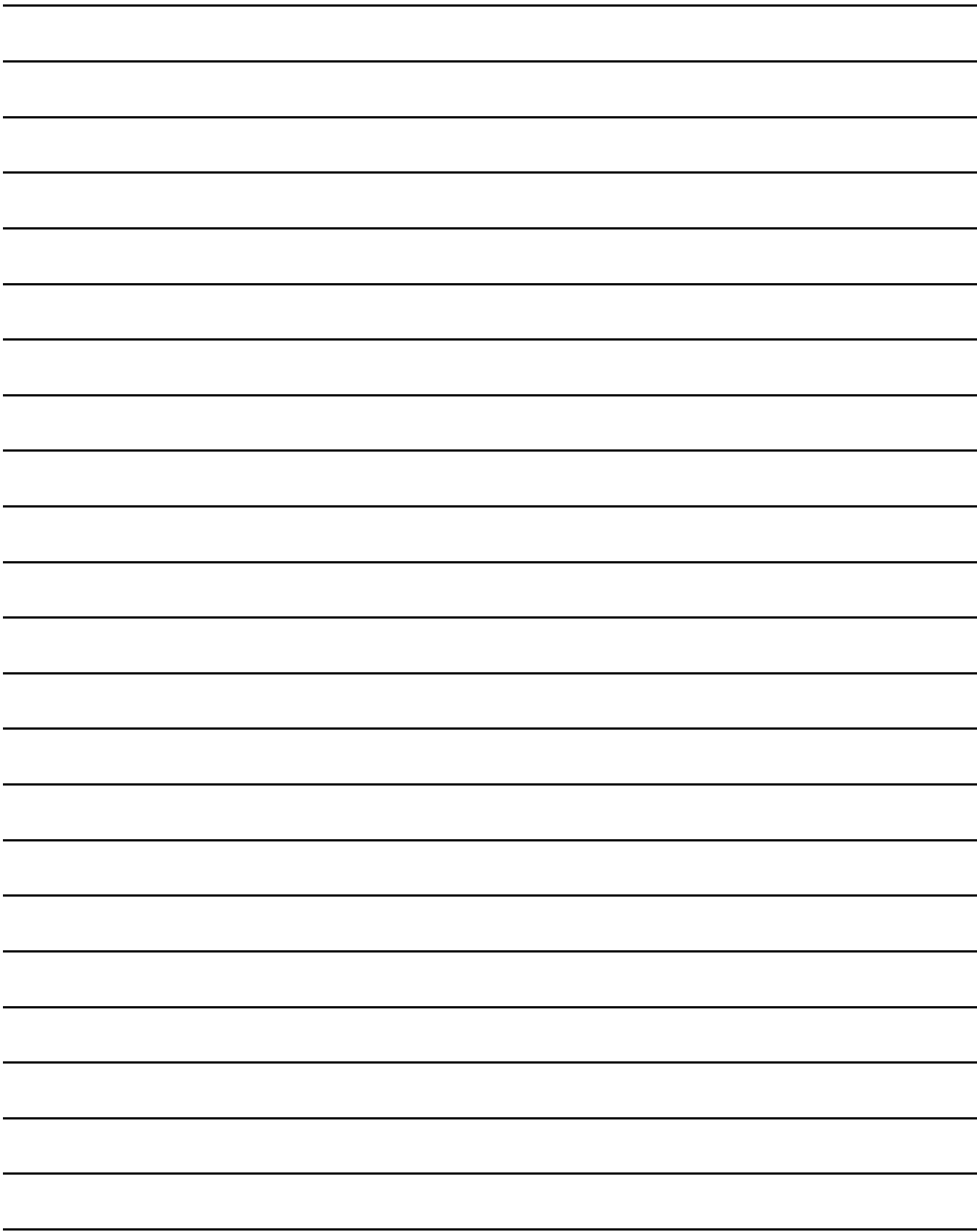
- Select [Activate] from the menu to start GT Simulator3.
- Select [Set] from the menu to display the GT Simulator3 setting dialog box.
- Select [Update] from the menu to reflect the editing project to GT Simulator3.
- Select [Exit] from the menu to exit the operating GT Simulator3.



Executing the system label update/check (iQ Works only)

When starting GT Simulator3 while system labels are used, the system label update/check is executed.

 5.3.2 Label setting



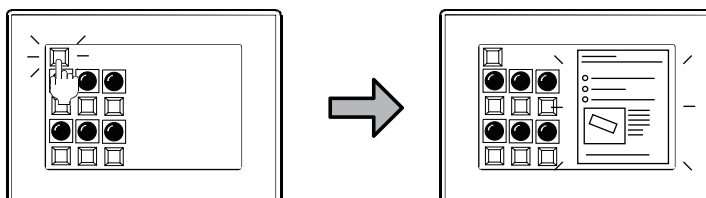
9. USEFUL FUNCTIONS FOR USING GOT

9.1 Displaying Documents such as Word and Excel (Document Display)



The document display function displays a document created on a personal computer (such as Microsoft® Word, Microsoft® Excel, etc.).

Since a document such as the specifications and manuals can be displayed on the GOT, it is possible to use a document on the troubleshooting screen or display an operation document during monitoring.



Displays a document that explains such as touch switch operation on the GOT.

9.1.1 Before using the document display function

■ Documents that can be displayed

The document display function can display a document created using the following data.

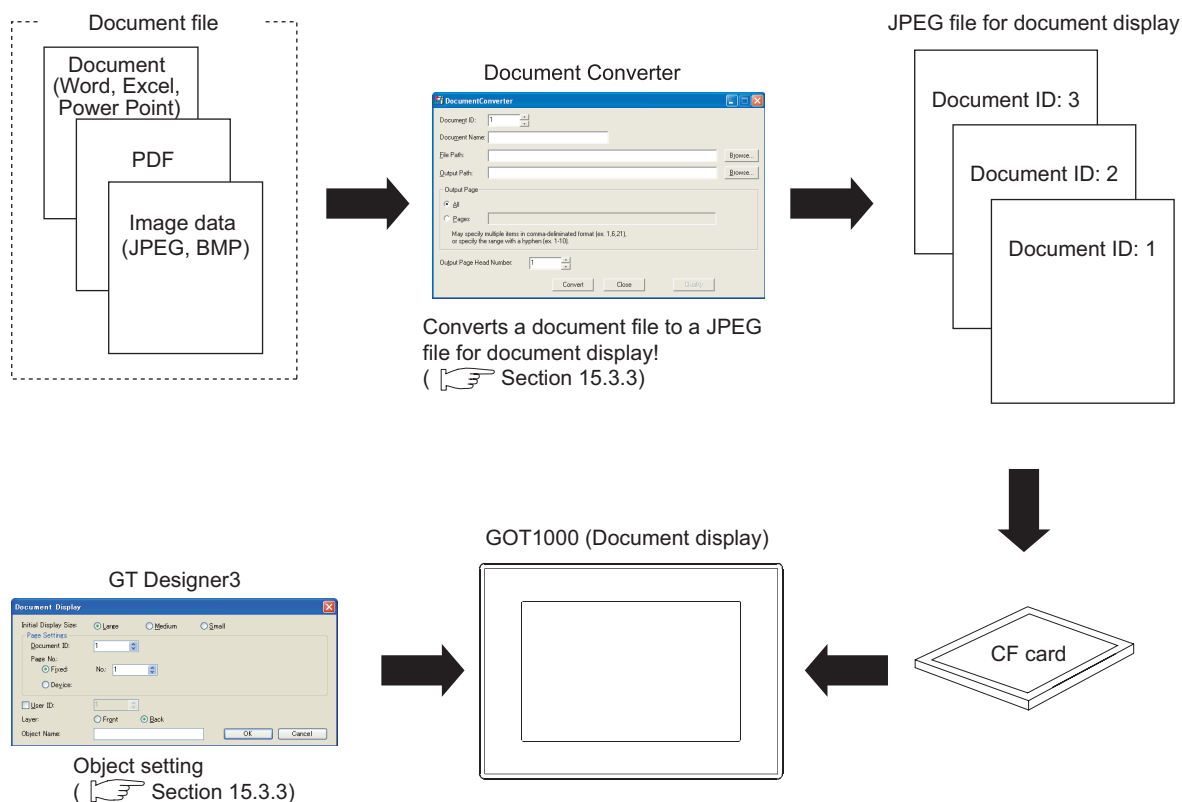
- Microsoft® Word
- Microsoft® Excel
- Microsoft® PowerPoint
- PDF data
- Image file (JPEG, BMP)

■ Operation flow to display a document

The following shows the series of operations from document file conversion to storing the converted document file into a CF card.

Document Converter is necessary to convert a document file.

☞ 9.1.3 Document conversion using Document Converter



About sample image used for document display

When GT Designer3 is installed, document display sample image files (following files) are also installed in the folder in which GTD3.exe is stored.

- IMG00000L.JPG (Large size 816×1168)
- IMG00000M.JPG (Medium size 656×928)
- IMG00000S.JPG (Small size 400×584)

For the sample images, preview that shows how they are displayed when the object is arranged is given. (In the preview, the size conforms to the setting for initial display size.)


It is possible to display other image data in preview by replacing the sample images with the desired images. For this purpose, assign the file name of the present sample image to the desired image.

9.1.2 Relevant settings

The document display function is available for the relevant settings other than the specific settings. The following shows the functions that are available by the relevant settings.

■ GOT internal devices

Appendix.2.1 GOT internal devices

Function	Setting item	Model
Checking if a document is displayed. (Write device)	GS276.b0	

9.1.3 Document conversion using Document Converter

The following explains the procedure used for converting the document to be displayed on the GOT by Document Converter and storing the converted document to a CF card.

■ Operating environment required for using Document Converter

Item	Description	
Personal computer	PC/AT compatible personal computer that the following OSs run on.	
Operating system	<ul style="list-style-type: none"> Microsoft® Windows® 2000 Professional Service Pack4 or later (English versions) Microsoft® Windows® XP Professional Service Pack2 or later (English versions)*1*4*5 Microsoft® Windows® XP Home Edition Service Pack2 or later (English versions)*1*4*5 	<ul style="list-style-type: none"> Microsoft® Windows Vista® Ultimate (English versions)*2*4*5 Microsoft® Windows Vista® Enterprise (English versions)*2*4*5 Microsoft® Windows Vista® Business (English versions)*2*4*5 Microsoft® Windows Vista® Home Premium (English versions)*2*4*5 Microsoft® Windows Vista® Home Basic (English versions)*2*4*5 Microsoft® Windows® 7 Ultimate (English versions)*3*4*5*6 Microsoft® Windows® 7 Enterprise (English versions)*3*4*5*6 Microsoft® Windows® 7 Professional (English versions)*3*4*5*6 Microsoft® Windows® 7 Home Premium (English versions)*3*4*5 Microsoft® Windows® 7 Starter (English versions)*3*4*5
CPU	Windows® 2000: 200MHz or more Windows® XP: 300MHz or more	Windows Vista®: 800MHz or more (1GHz or more recommended) Windows® 7: 1GHz or more
Memory	Windows® 2000: 64MB or more Windows® XP: 128MB or more	Windows Vista®: 512MB or more (1GB or more recommended) Windows® 7: 1GB or more
Display	Resolution SVGA (800×600 dots) or more	
Hard disk space	For installation: 10MB or more For execution: 100MB or more recommended*7	
Display color	High Color(16 bits) or more	
Software	The following software must be installed. <ul style="list-style-type: none"> Ghostscript GPL8.50*8 or more (Free software) PostScript printer driver supplied with Windows®*9 Microsoft® Office® 2000, Microsoft® Office® XP, Microsoft® Office® 2003*9 	
Others	The mouse, key board, printer, CD-ROM drive, sound function (sound card)*5, or speaker*5	

*1 The administrator authority is required for installing Document Converter.

- *2 The administrator authority is required for installing and using Document Converter.
- *3 The administrator authority is required for installing Document Converter.
A standard user or the administrator account is required for using Document Converter.
- *4 The following functions are not supported.
 - Compatibility mode
 - Fast user switching
 - Change your desktop themes (fonts)
 - Remote desktop
- *5 Only the 32-bit OS is available.
- *6 Windows XP Mode is not supported.
- *7 For execution, free hard disk space is required for storing temporary data during conversion.
Required free hard disk space differs according to the size of the document to be converted.
If conversion is not possible, increase the available area and then convert the document again.
- *8 Ghostscript GPL8.50 has been concluded by Mitsubishi to be applicable.
- *9 Only when a file created using the Microsoft® Word, Microsoft® Excel, or Microsoft® PowerPoint is used.

■ Before using Document Converter

Install the software indicated below before using Document Converter.

- Document Converter (Install using the CD-ROM of GT Works3)
- Ghost script GPL8.50^{*2} or more (Free software)
- PostScript printer driver supplied with Windows[®]*1
- Microsoft® Office® 2000, Microsoft® Office® XP, Microsoft® Office® 2003^{*1}

*1 Only when a file created using the Microsoft® Word, Microsoft® Excel, or Microsoft® PowerPoint is used.

*2 Ghost script GPL8.50 has been concluded by Mitsubishi to be applicable.

(1) Installing Document Converter

For the Document Converter installation procedure, refer to the following manual.

 GT Works3 Version1 Installation Procedure Manual

(2) Installing Ghost script (free software)

Download Ghost script from the home page indicated below.

<http://www.ghostscript.com/>

(Please note that the web site above is subject to change without notice.)

(a) Downloading procedure

1. Select [sourceforge.net] from [Ghostscript can be downloaded from cs.wisc.edu and sourceforge.net] on the website above.
2. In [Latest] of [GPL Ghostscript], select the one whose type is [.exe (32-bit Windows)] and download it.

(b) Installation

1. Double click the downloaded file (.exe) and select [Setup].
2. Select the [Use WindowsTrueType fonts for Chinese, Japanese and korean] item.
3. Select [Install] to execute the installation.

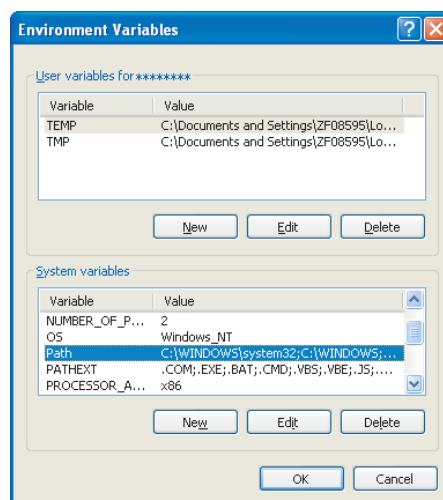
(c) Adding environment variables

When [C:\gs] is set for the installation location, add [C:\gs*****\bin] and [C:\gs*****\lib] to the path of the environmental variables.

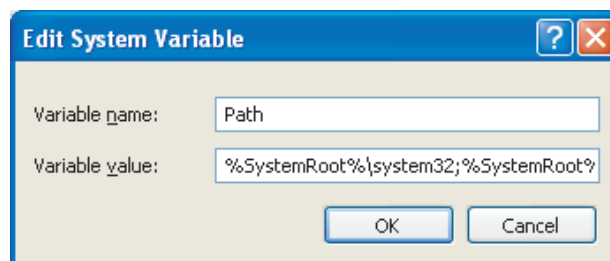
*****: Enter the upper 5 digits of install execution file name (ex.: "gs8.50" if the execution file name is "gs850w32-gpl.exe".)

Follow the procedure below for setting the environment variables.

1. Select [Start] → [Control Panel] → [System] from the menu.
2. Display the Advanced tab and select [Environmental Variables].
3. Select [Path] in [System variables], and execute [Edit].



4. Add a variable value.



5. When the environment variables are changed, restart the personal computer.
The changed environment variables are not enabled without restarting the personal computer.

POINT

Adding path to system variables

For adding a path to the system variables, separate paths with a semicolon ";".

(3) PostScript printer driver

The following explains the procedure for installing the PostScript printer driver.

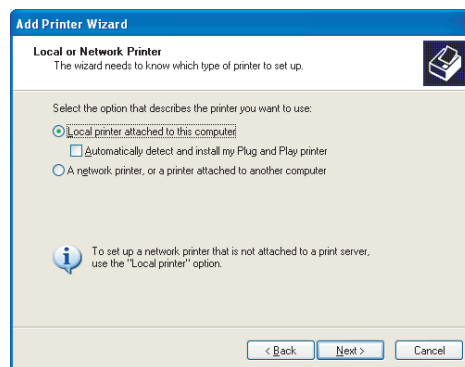
(For Windows® XP Professional or Windows® XP Home Edition)

For details of the operation of Windows®, refer to the manual and help information of Windows®.

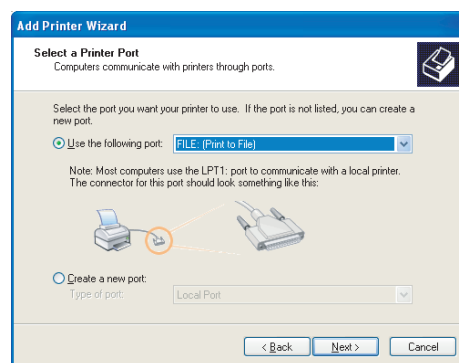
1. Select [Start] → [Control Panel] and in the [Control Panel] menu, select [Printers and Other Hardware] → [Printer and Faxes], and then select [Add a printer].



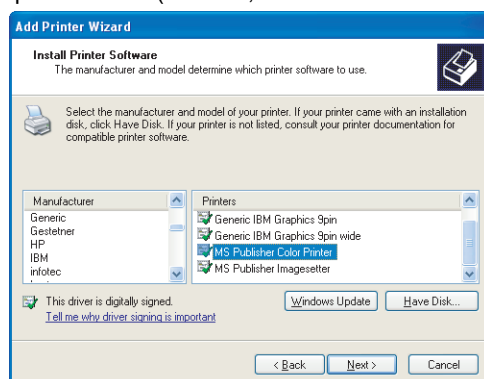
2. Select [Local printer attached to this computer].



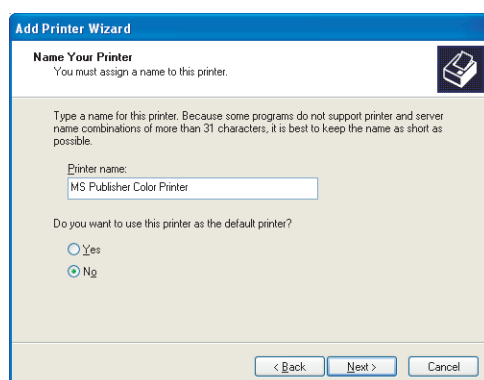
3. Select [FILE: (Print to File)] in [Use the following port].



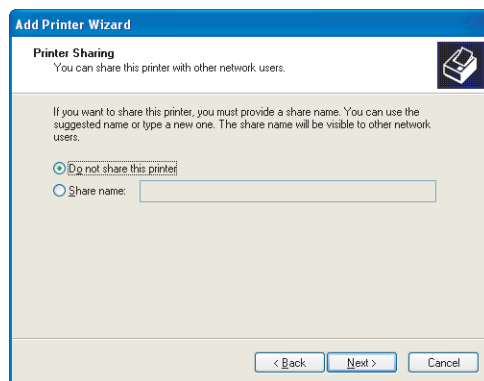
4. Select the PostScript printer driver (Generic, MS Publisher Color Printer) supplied with Windows®.



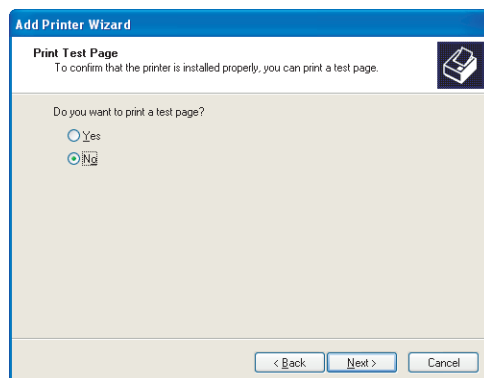
5. Select [No] for [Do you want to use this printer as the default printer?].



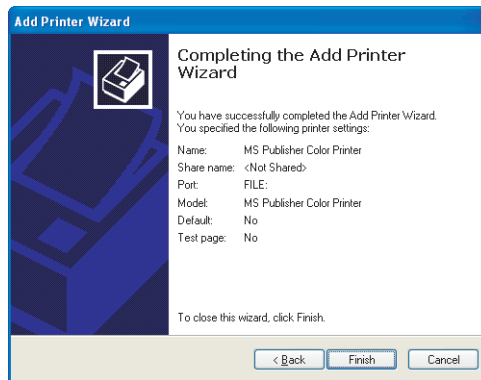
6. Select [Do not share this printer].



7. Select [No] for [Do you want to print a test page?].

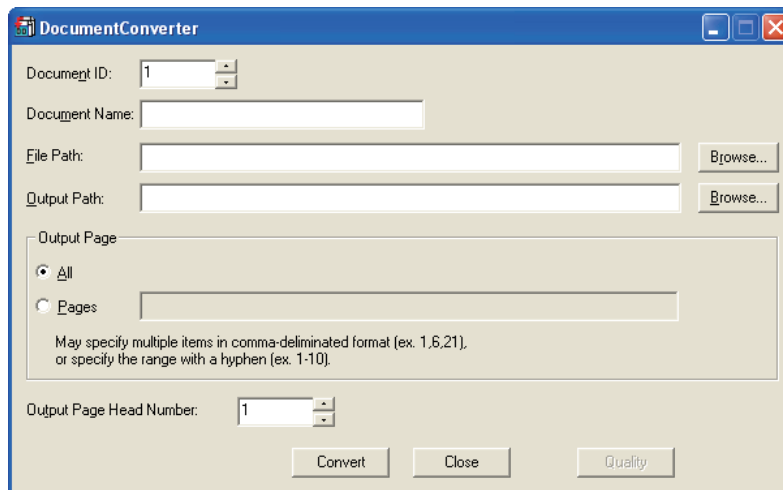



8. After confirming the set contents, exit the Add Printer Wizard.







■ Converting a document file

1. Start Document Converter.
2. Set the following items and click the [Convert] button. The document conversion starts.
After the conversion, three JPEG files (large, middle and small) are created for one page of document.



Item	Description	Model
Document ID	Set the document ID (1 to 255) to be assigned to the document after conversion.	
Document Name	The document name can be changed meeting the purpose. Up to 32 characters can be input.	
File Path	Specify the path name of the file to be converted by clicking the [Browse] button.	
Output Path	Specify the path in the personal computer for outputting the converted file by clicking the [Browse] button. The converted file is output in the following folder structure. \\DOCIMG\\(Document ID)\\(Output size: L/M/S)\\IMG*****.JPG For the output size, L, M, and S stand for large, middle, and small, respectively. *****: Page number (serial number) Example) Document ID: 1, output size: L (large) Output path\\DOCIMG\\001L\\IMG00001.JPG	
Output Page	Specify the pages to be converted. (This is required only for the Word, Excel, PowerPoint and PDF files.)	
Output Page Head Number	Specify the page number to be assigned to the first page of the converted file. (Specify "20" for example to assign Page 20 to the first page.)	
Convert	Starts converting of the document.	

(Continued to next page)

Item	Description	Model
	Exits Document Converter.	
	Adjusts the image quality of the converted document.  (1) Quality dialog box (Executable after document conversion)	

POINT

(1) User Account Control for Windows® 7 and Windows Vista®

When Ghostscript is executed by administrative privileges, execute Document Converter with administrative privileges.

Otherwise, the document cannot be converted properly.

To execute the software with administrative privileges, refer to the following.

 User's manual for Windows® 7 and Windows Vista®

(2) JPEG file after conversion

(a) JPEG file size

When a document of A4 size is converted, the size of JPEG files (large, middle and small) obtained is as follows.

Large: 816×1168 Middle: 656×928 Small: 400×584

(b) Folder structure of JPEG file storage location (DOCIMG) after conversion

Do not change the folder structure of DOCIMG.

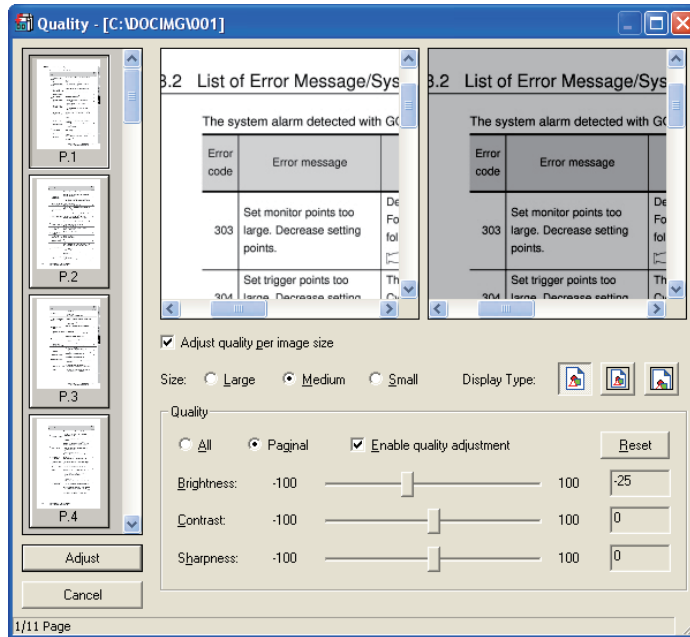
Doing so causes the GOT not to recognize the file.

(c) Storing files in CF card

For storing converted files in a CF card, store the DOCIMG folder containing the files in the root directory. When the DOCIMG folder is stored in a folder other than the root directory, the GOT does not recognize the files.

(1) Quality dialog box

The image quality of the converted document can be adjusted.



Item	Description	Model
Preview screen	Displays the screen images before and after adjustment. (Left: Before adjustment, Right: After adjustment) Select a page for adjusting image quality on the thumbnail located in the left side of the dialog box.	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">G16</div> <div style="border: 1px solid black; padding: 2px;">G15</div> </div> <div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">G11</div> <div style="border: 1px solid black; padding: 2px;">G10</div> </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">SoftGOT 1000</div> </div>
Adjust quality per image size	Check this item when adjusting image quality for each image size. (When this item is not selected, the image quality is adjusted for all [Large], [Medium], and [Small] of [Size].) After selecting, select the image size of the image quality adjusting target in [Size].	
Display Type	Select how to display the image in the preview screen.	
Quality	Performs image quality adjustment. It is selectable whether image adjustment is performed for all pages or each page. Clicking the Reset button restores the settings to default values. <ul style="list-style-type: none"> • All Select this item when applying the same image quality adjustment for all pages. • Paginal Select this item when applying image quality adjustment for each page. After selecting, select the [Enable quality adjustment] item for the image quality adjusting target page and execute image quality adjustment. 	
Adjust	Executes the image quality adjustment set. Note that the image quality cannot be restored after execution of image quality adjustment.	
Cancel	Cancels the set image quality adjustment and closes the screen.	

9.1.4 Placement and settings

1. Select [Object] → [Document Display] from the menu.
2. Click at the position where the document should be displayed. This completes the arrangement for the document display object.
3. Double click the arranged document display object and the setting dialog box is displayed. make the necessary settings referring to the following.



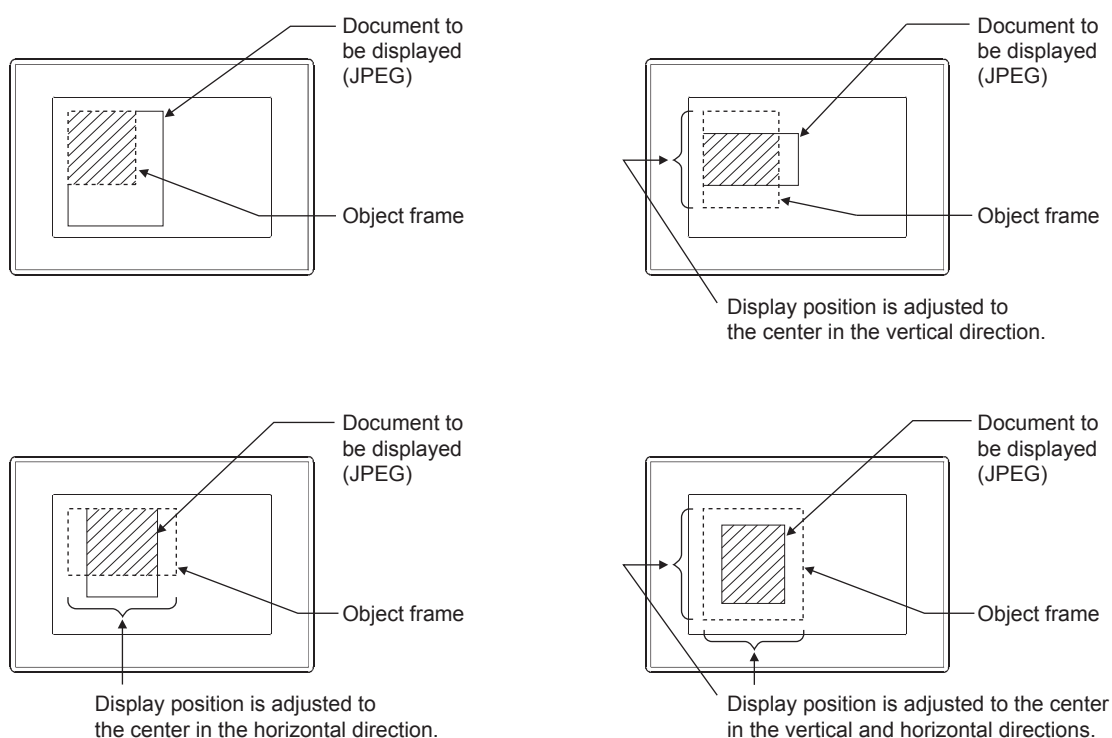
Convenient setting

With the property sheet, direct setting of object is allowed on the sheet.

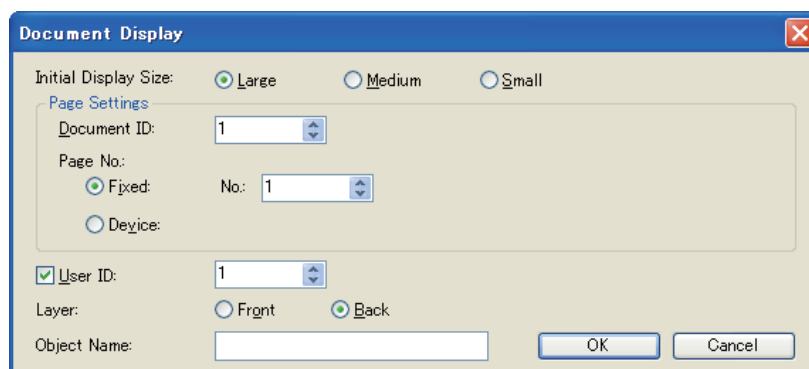
☞ 8.4 Displaying in List and Editing Screen/Figure/Object Settings (Propertysheet)



A document is displayed as follows, depending on the relationship between the size of the object (Object frame) arranged in procedures 1 to 3 and the size of the document to be displayed (Size of the JPEG file converted by Document Converter).

(The shaded area shows the actual area where the document is displayed.)



9.1.5 Setting items



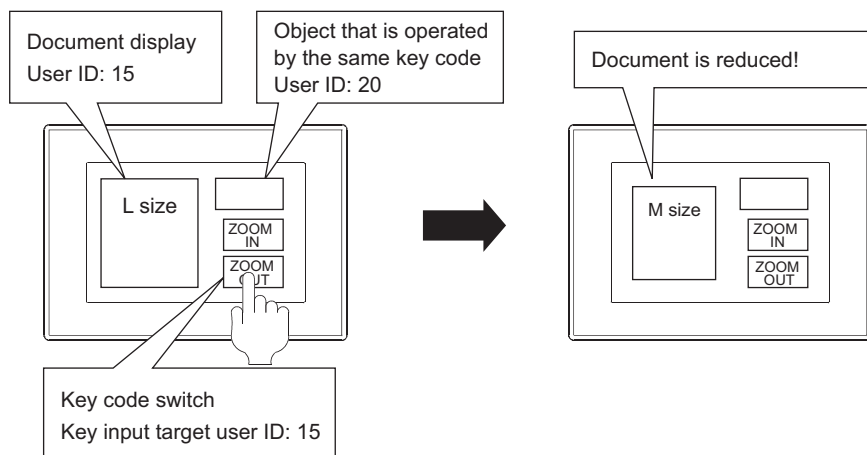
Item	Description		Model
Initial Display Size	Select the size (L / M / S) of the document displayed for the first time when the screen is switched. Large : 816 × 1168 Medium: 656 × 928 Small : 400 × 584		
Page Settings	Document ID*1	Set the document ID of the document to be displayed when the screen is switched in a fixed value (1 to 255). If a document ID that does not exist in the CF card is set, the document is not displayed.	
	Page No.	Select the method (Fixed/Device) to set the page number of the document to be displayed when the screen is switched. If a page number that does not exist or "0" is set, document is not displayed. <ul style="list-style-type: none">• Fixed: Select this item when setting a page number in a fixed number (0 to 65535).• Device: Select this item to set a page number by specifying a device. After selecting this item, select the data format and set the number device. Select [Unsigned BIN16] or [BCD16] for the data format.	
User ID	Set the user ID (1 to 65535) of document display.*2		
Layer	When setting an object without superimposing it, set the object by default (Back). When setting an object with superimposing it, the object has to be set to Front or Back place.  5.3.7 Superimposition setting		
Object Name	The object name being set can be renamed to meet the purpose of use. The changed object name is displayed in the GT Designer3 (in such as Data view and Property sheet). This Object Name item is displayed in other than the Basic tab. Up to 30 characters can be input.		

For details of *1 and *2, refer to the following.

1 User ID*(1) Cases that require setting of user ID**

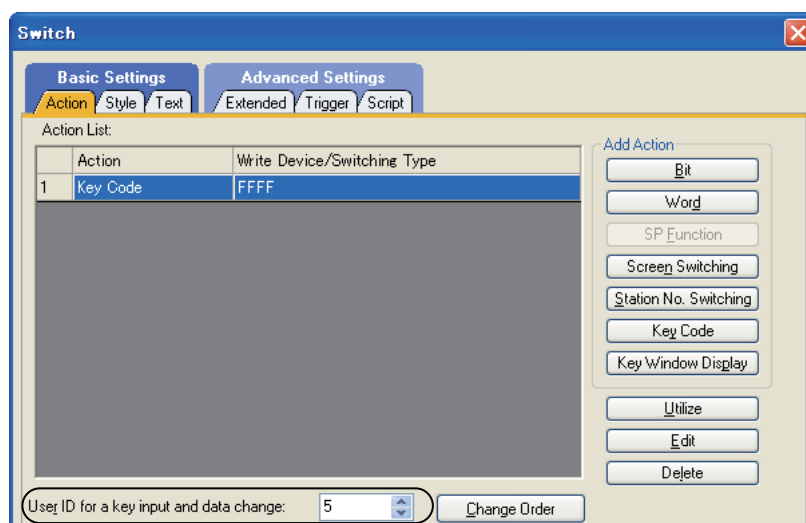
When there are several objects that are operated by the touch switches of the same key code on the screen, expected action may not be achieved even if a touch switch is touched.

By setting a user ID so that each object has unique ID (user ID), it is made possible to specify the ID (object) to be operated by a touch switch. This enables switch operation as expected.

**(2) Setting for a touch switch**

Input the user ID set in this user ID setting to [User ID for a key input and data change].
For details of the switch, refer to the following.

☞ (Functions) 2.1 Setting Switch

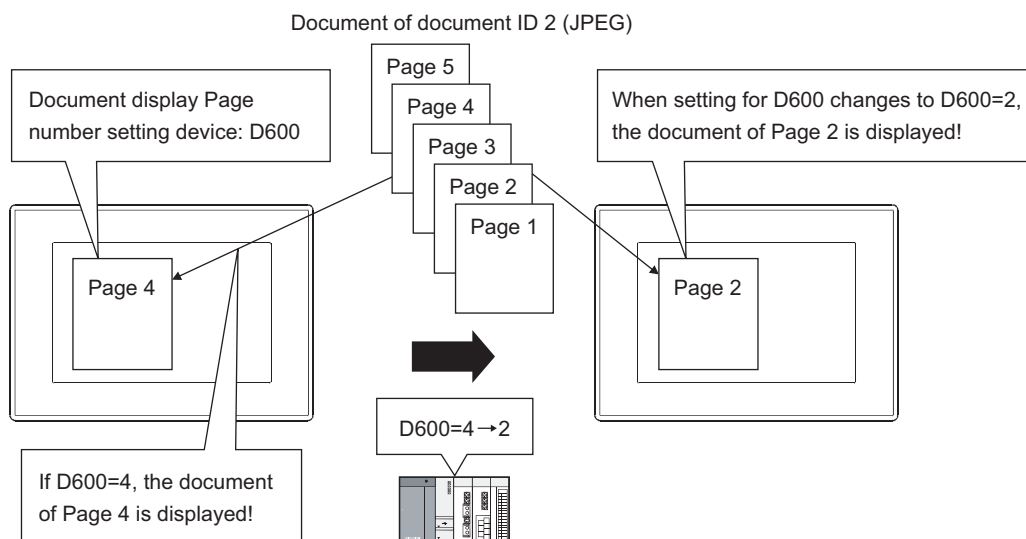
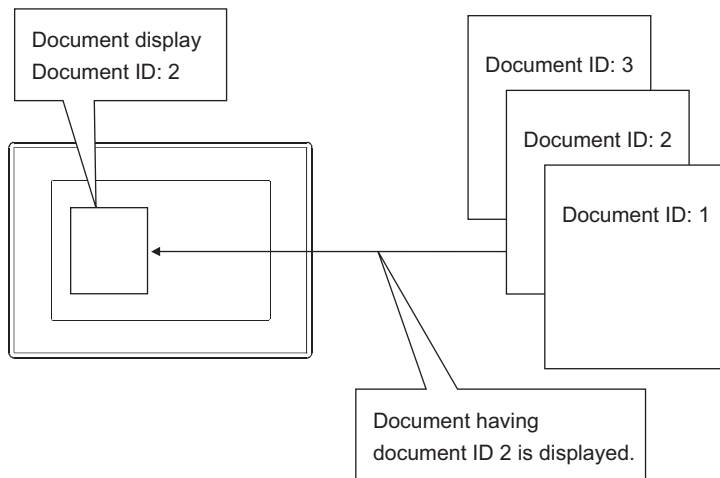


Set the user ID that has been set at the object side.

***2 Changing the page by setting a page number**

To change the display page of the document, set a page number at the device.

Example) Document ID: 2, Page number setting device: D600



POINT

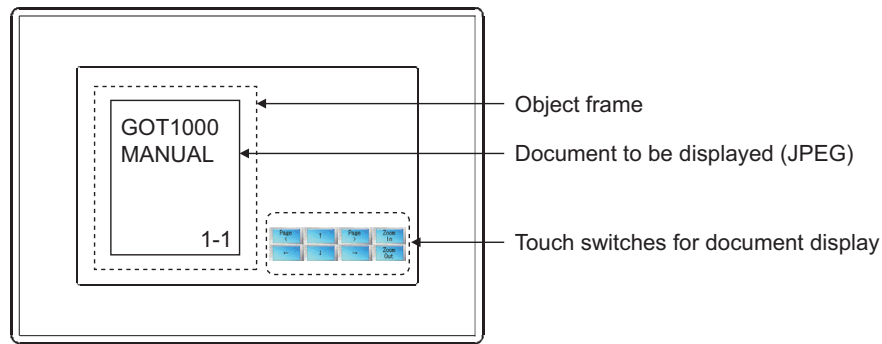
If a page that does not exist is specified



If a page that does not exist is specified when changing the page of the displayed document, document is not displayed.

In this case, the document display status notification signal (GS276.b0) turns ON.

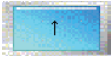
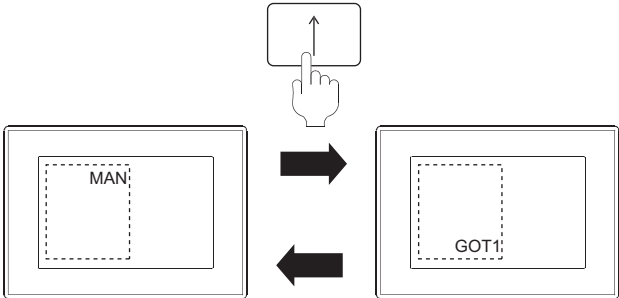





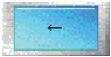
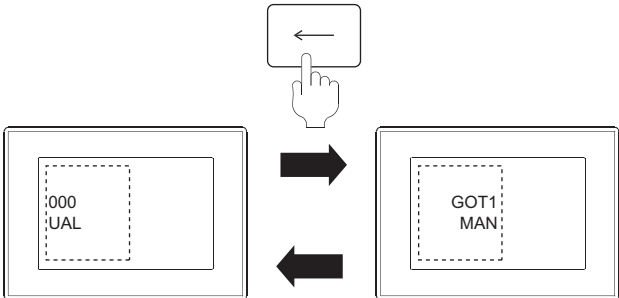
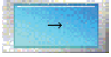




9.1.6 Description on touch switches for document display

Touch switches for document display can be read from the library of GT Designer3. Also, text on a touch switch and touch switch shape can be changed by the user as desired. A document display touch switch can be created by setting a key code to a touch switch.



Touch switch	Key code	Description
Next Page 	FFE0 _H	<p>Advances / returns the document to the next / previous page.</p> <div></div>
Previous Page 	FFE1 _H	<div></div> <p>When the page number of the document to be displayed is specified using a device, the specified device value is updated in synchronization with the operation of the keys  / .</p>
Expansion 	FFE2 _H	<p>Enlarges or contracts the displayed document (in three steps of L / M / S).</p> <div></div>
Reduction 	FFE3 _H	<div></div>

(Continued to next page)

Touch switch	Key code	Description
Up Scroll 	FFE4 _H	Scrolls up / down the displayed document. 
Down Scroll 	FFE5 _H	
		<p>The  /  key is inoperative when the displayed document is at the upper / lower end, respectively.</p> <p>When the vertical size of the document to be displayed is smaller than the object frame (position is adjusted (centering) in the vertical direction),  and  keys are inoperative.</p>
Left Scroll 	FFE6 _H	Scrolls left / right the displayed document. 
Right Scroll 	FFE7 _H	
		<p>The  /  key is inoperative when the displayed document is at the left / right end, respectively.</p> <p>When the horizontal size of the document to be displayed is smaller than the object frame (position is adjusted (centering) in the horizontal direction),  and  keys are inoperative.</p>

9.1.7 Precautions

Precautions to be attended to when using the document display function are indicated below.

■ Precautions for drawing

- (1) **Number of objects that can be arranged on one screen**
Only one document display can be arranged on one screen.
- (2) **Number of objects that can be displayed**
Multiple document displays cannot operate simultaneously.
Displaying of another document on an overlap window or a superimpose window or with the set overlay screen function is invalid.

■ Precautions for OS

Install the option OS (Document display) to the GOT to use the document display function.

■ Precautions for hardware

- (1) **Option function board**
To use the document display function, the option function board is required according to the GOT.
The following shows option function boards required for each GOT

GOT	Option function board
GT16	Not required
GT15	GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M

For GOTs with built-in option function boards, refer to the following.

 Appendix8 Precautions for Option Function Board

- (2) **CF card**
Insert a CF card in the drive specified for [Default Drive Name] in the [GOT Type Setting] dialog box.

 4.1 GOT Type Setting

■ Precautions for use

- (1) **If document is not displayed**
Document display is disabled in the following cases.
 - A CF card is not installed.
 - The CF card access switch is OFF.
 - The document to be displayed does not exist (A document ID or a page number that does not exist has been set)
 - The specified file is not an image file or it is damaged.

In such cases, system alarm occurs and an error message is displayed.

For details of system alarm, refer to the following manual.

 User's Manual for the GOT used

At the same time, the document display status notification signal (GS276.b0) is turned ON.

 Appendix.2.1 GOT internal devices

(2) About Word, Excel and PowerPoint files

Files that can be opened and printed on the personal computer in which Microsoft® Office® 2000, Microsoft® Office® XP or Microsoft® Office® 2003 is installed, can be displayed.

(3) About PDF files

If the font used in the PDF file is in the following state, display of such PDF file is not possible.

- Font does not exist in the execution environment (on Windows®).
- Font data is not embedded to the PDF file.

In such cases, an error occurs when a file is converted by Document Converter.

For the pages that cannot be converted by Document Converter, use the procedure indicated below to convert them.

1. Convert the document page by selecting [Page] in [Output Page].
2. Check the pages that cannot be converted from the display of an error message.
3. Capture the image of the page that was not converted and save it as an image file (JPEG, BMP).
4. Convert the saved image file (JPEG, BMP) by Document Converter.

9.2 Changing Screen According to Situation (Set Overlay Screen)



Other base screens or window screens can be called to be placed on a basic screen and displayed in a single screen by using this function.
Memory capacity when setting the same object onto multiple screens can be saved.

- When not using the set overlay screen function

Set four touch switches. (2 on production status screen1 and 2 on production status screen2)

Production status screen1

RUN

ST.

Base screen1

Production status screen2

RUN

ST.

Base screen2

- When using set overlay screen function

Set two touch switches. (2 on the set overlay screen)

Touch switch setting is not required for production status screen1 and 2 because these touch switches have already been registered on the called screen.

Production status screen1

RUN

ST.

Base screen1
(Base screen1)

Production status screen2

RUN

ST.

Base screen2
(Base screen2)

RUN

ST.

Called screen
(B-10: Base screen10)

Create touch switch dedicated screen called from each screen

(1) **Multiple called screens can be displayed**
Multiple called screens can be displayed on one basic screen.

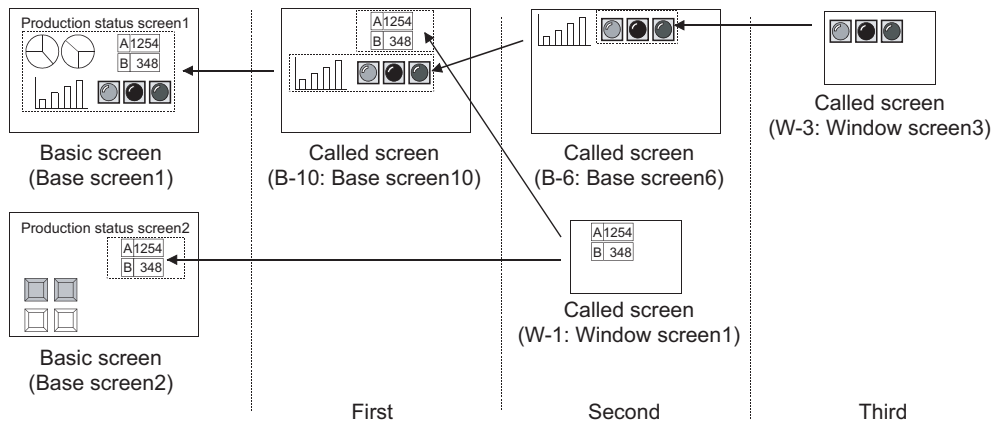
The diagram illustrates a 'Basic screen (Base screen1)' which contains a grid of icons labeled A, B, C, D, E, F. Two arrows point from this basic screen to two separate 'Called screen' boxes. The first 'Called screen (B2: Base screen2)' shows two circular icons. The second 'Called screen (B3: Base screen)' shows a bar chart icon.

9.2 Changing Screen According to Situation (Set Overlay Screen)

9 - 19

(2) Up to the 16th nesting can be called

As up to the 16th nesting can be set, screen setting with high flexibility can be realized.



■ Relevant settings

The set overlay screen function is available for the relevant settings other than the specific settings.
The following shows the functions that are available by the relevant settings.

(1) GOT type setting

☞ 4.1 GOT Type Setting

Function	Setting item	Model
Checking if objects are not overlapping.	[Check for overlapping objects within GOT]	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Adjusting the order of displaying objects on the GOT to that of the overlapped objects on GT Designer3.	[Adjust object display order in GOT to the one in GT Designer3]	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

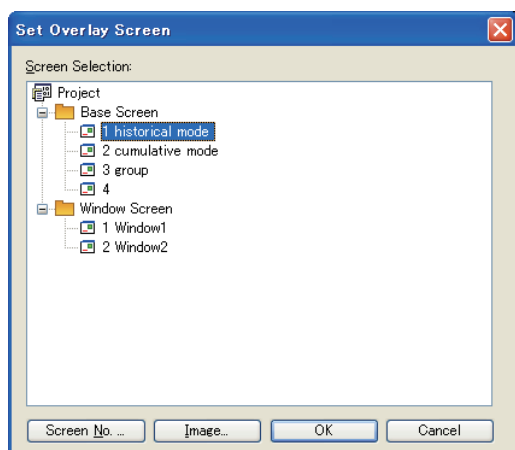
(2) GOT Environmental Setting

☞ 4.2 Screen Switching Device Setting

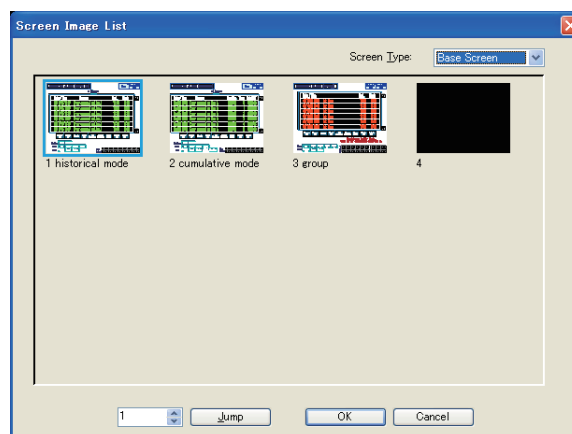
Function	Setting item	Model
Setting the placement position (Front/Back) of the called screen to the basic screen when calling a screen.	[Place the overlay screen under the basic screen]	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
Setting the background color of a called screen to enabled or disabled on the basic screen when calling a screen.	[Disable background colors of overlay screen when setting an overlay screen]	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

■ Arrangement and settings

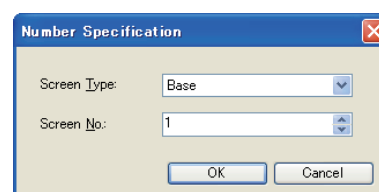
1. Select [Object] → [Set Overlay Screen] from the menu.
2. The [Set Overlay Screen] dialog box appears.
Select the screens to call up by any of the following methods, and click the [OK] button.
 - Select the screen to call up directly from the screen selection tree
 - Click the [Screen No.] button to display the [Number Specification] dialog box, and set the screen to call up by the screen number.
 - Click the [Image] button to display the [Screen Image List] dialog box, and select the screen to call up from the screen images.



[Set Overlay Screen] dialog box

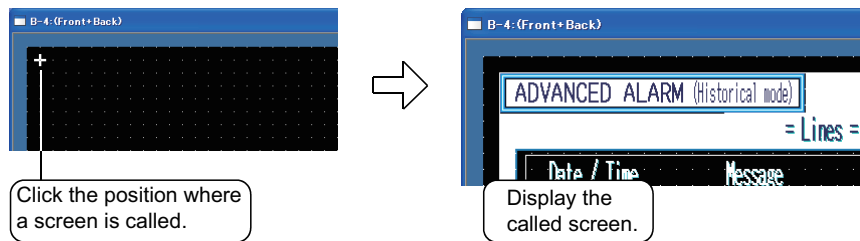


[Screen Image List] dialog box



[Number Specification] dialog box

3. Arrange the Set overlay screen on the screen editor.



HINT

(1) Editing of called screens

By double-clicking a Set overlay screen arranged on the screen editor, the called screen can be opened to be edited.

(2) Easy setting method

The Set overlay screen can also be set by dragging it from the screen view tree.

Check of the settings

The setting contents of Set overlay screen can be checked in the screen view tree.
For details of the screen view tree, refer to the following.

➡ 3.2.2 Operating work tree

Precautions

This section provides the precautions for using the set overlay screen function.

(1) Screen that can be called

Base screen, window screen (For GT10, only the base screen can be called.)

(2) Maximum number of called screens (The number of screens that can be called and displayed on the basic screen)

Up to 2047 called screens can be placed (set). (Up to 5 screens for GT10)

(3) Maximum nesting number (nesting of further call to the called screen)

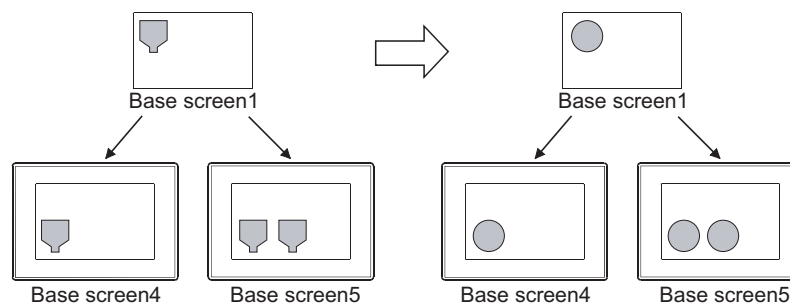
16 (Excluding the basic screen, up to 1 level for GT10)

(4) Edit of called screen

(a) The called screen cannot be edited on the basic screen.

Edit must be done on the called screen.

(b) Once the called screen is edited, it will be reflected to all of the basic screens where the edited screen is called.



(5) Displaying figures and objects placed in temporary area

When figures and objects are placed in the temporary area of the called screen, the GOT does not display the objects.

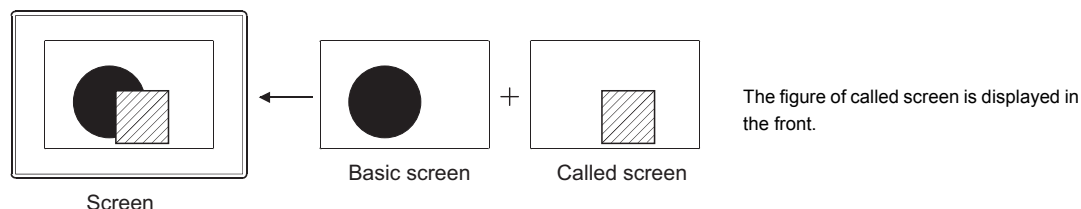
The GOT displays the figures only.

(6) When cascading shapes/objects

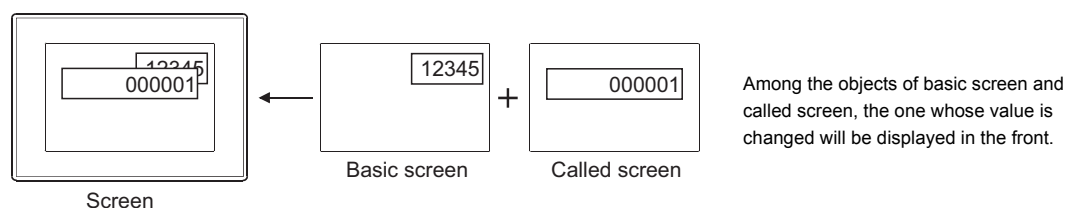
The following are examples of cascading on the same layer.
For the cascading of shapes/objects, refer to the following.

5.3.7 Superimposition setting

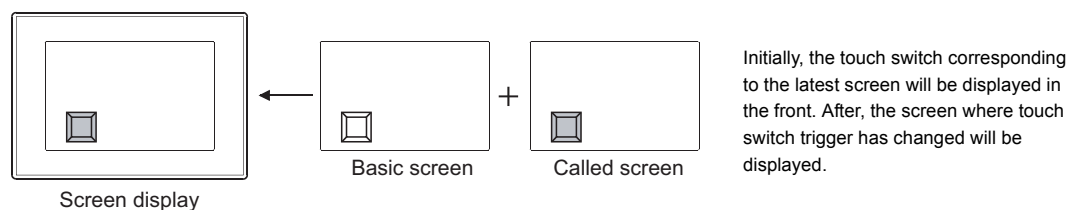
(a) Figure data



(b) Object data



(c) Touch switch



HINT

(1) Overlapping touch switches

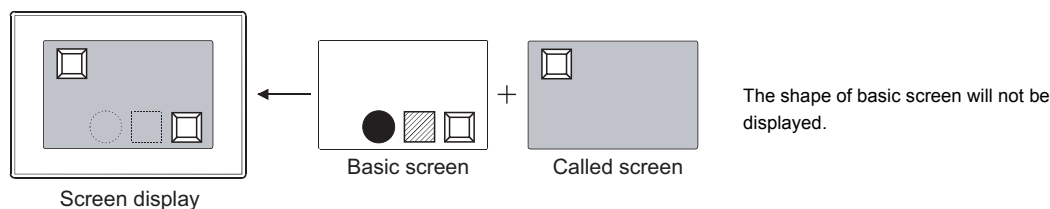
Without using the screen calling, multiple operations can be set to one touch switch.

☞ (Functions) 2.1 Setting Switch

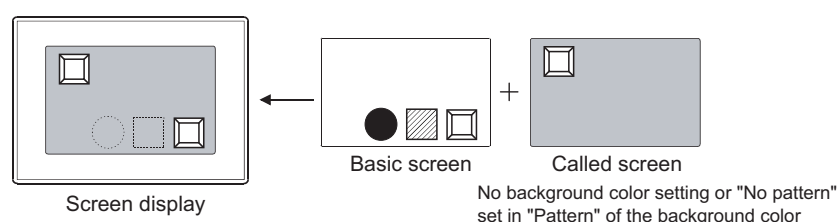
(2) Screen background

The background color of the called screen will be displayed in the front.

When the background color and the basic screen shape color are overlapped, the shape will not be displayed.



If no background color is set for the called screen or if "No pattern" is set in "Pattern" of the background color, that of the basic screen is displayed.

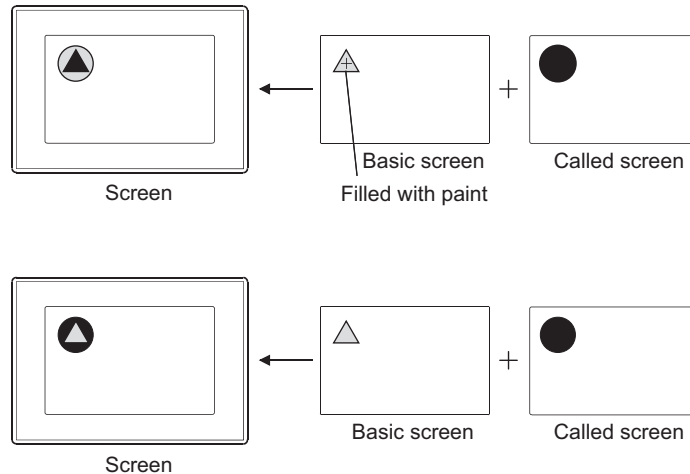


POINT

When the figure is filled with paint

If the paint has been set to the figure on the basic screen and when the figure is overlapped with another on the called screen, the colors may not be displayed correctly.

If this occurs, fill in the figure on the basic screen.



(7) When exclusive objects (which only one setting is allowed per each screen) are overlapped

Do not cascade such objects created by the data list function and the alarm history function.

Otherwise, the set numbers of objects are displayed, however, they cannot be displayed correctly because of the function restrictions.

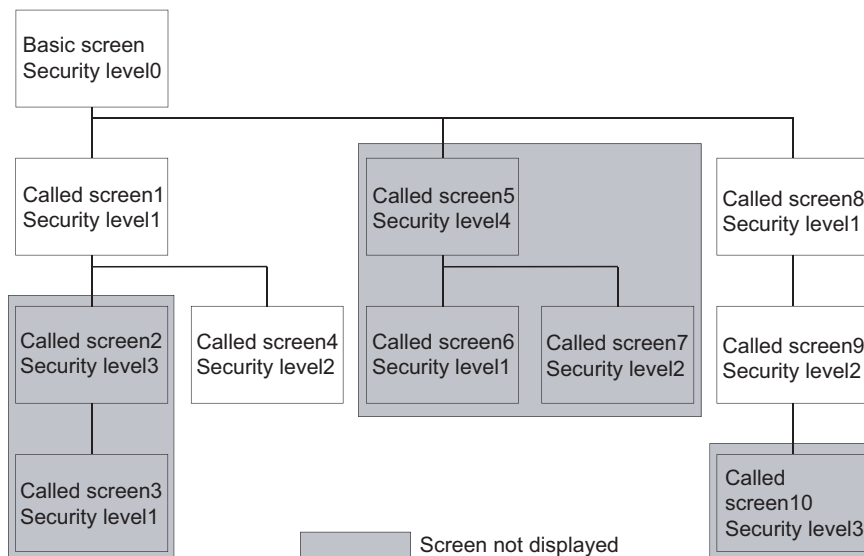
(8) Display/hide called screen according to the security level and nesting of called screen

The security level set in each called screen is valid.

The cautions for security setting in each called screen are as follows.

- The called screen will not be displayed when the security level of the called screen is higher than that of the password input on the basic screen.
- The screen display using the nesting structure cannot be called from the screen with security settings enabled.
- The status observation function and the script function set to the called screen that is not displayed cannot be executed.

Example) Called screens that can be displayed by password of security level2



(9) Displaying order for calling multiple screens

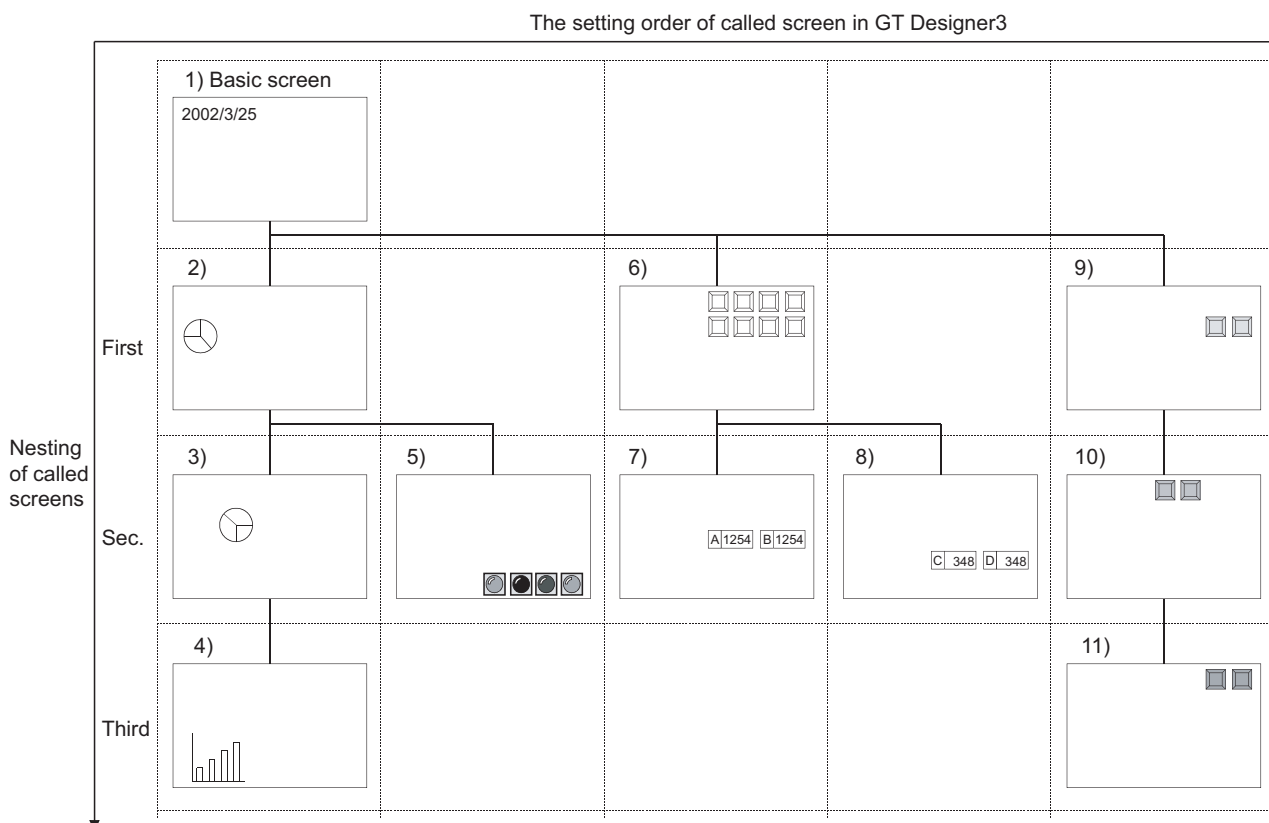
When multiple called screens are set on one screen, they are displayed on the order of setting in GT Designer3 or called screen nesting.

Since the current screen is displayed on the previous screen, the screen with the lowest order will be displayed in the front most.

The following shows the order of precedence for display.

- When multiple called screens are set, they are displayed in the order set in GT Designer3.
- For called screens that have been nested, the screen with deeper nesting is displayed in the front most.
- If the above conditions (a) and (b) are both applied, priority is given to the nested called screen.

Example) When setting multiple called screens including nested called screens (1) to 11): Display order)



POINT

(1) Security function, status observation function and script function of called screen

The security function, status observation function and script function set for each called screen are processed in the same order as the called screen display.

(2) Check methods of nesting and setting order

The nesting can be checked in the screen view tree.

☞ 3.2.2 Operating work tree

The set order can be checked in the data view. (Data are displayed in the order of setting in the data view.) Refer to the following manual for the data view.

☞ 8.5.3 Selecting overlapped figure (Data view)

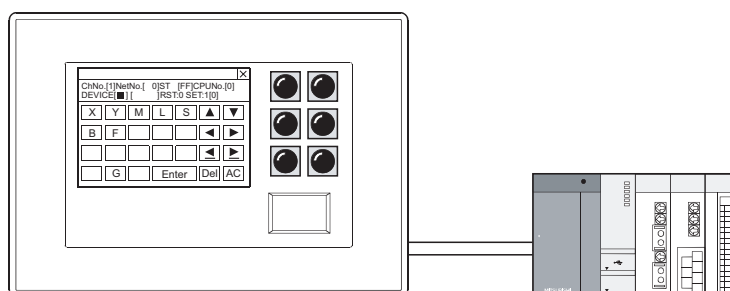
9.3 Switching ON/OFF Device (Test Function)



This section explains the test function that displays test window on monitor screen and changes device value. This function is applicable for maintenance and inspection using monitor screen, providing the following functions. Test function provides following operations.

- Bit device ON/OFF
- Change the word device
- Change the set value of timer/counter
- Change the buffer memory

Arrange touch switch (special function switch) to set the test function.



Test except when the monitor screen is displayed

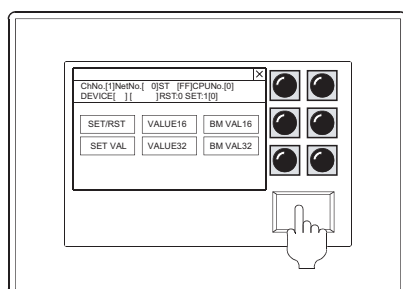
The test window can be displayed to change the device value, as well when the ladder monitor function or system monitor function is used.

Refer to the following manuals for the test methods of various functions.

GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3

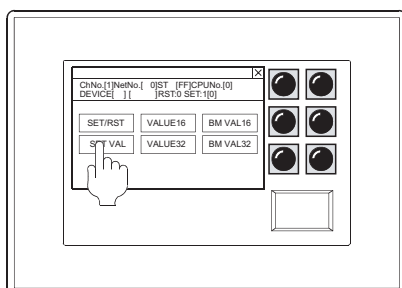
Method of operating test window

This section explains how to operate the test window.

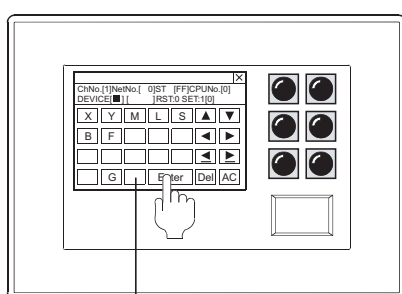


1. Touch the Special Function switch to display the test window.

(Continued to the next page)



2. Select the device type to be changed
 - SET/RST: Set/reset the bit device.
 - Current value 16/Current value 32: Change the current value of word device.
 - Set value: Change the set value of T.C.
 - BIN Value 16/BIN Value 32: Change the current value of buffer memory.



Change keys according to input area.

3. Specify the network No., device and value of the device of which value is to be changed.
Change the input area by ◀, ▶ keys.
 - In the case of data link system
ChNo.: Set the channel No. of the GOT interface.
NetNo.: 0
ST: FF (host), 0 (master station), 1 to 64 (local station)
 - In the case of network system
ChNo.: Set the channel No. of the GOT interface.
NetNo.: 0 (self loop), 1 to 255 (specified loop)
ST: FF (host), 0 (control station), 1 to 64 (normal station)
 - Define the value change by the definition key

■ Arrangement and settings

Refer to the following section for arrangement and settings of the touch switch.

☞ (Functions) 2. TOUCH SWITCH

■ Setting items

Refer to the following section for setting items of the touch switch.

☞ (Functions) 2.6 Setting Special Function Switch

■ Precautions

(1) Precautions for drawing

- (a) Line graph with locus display setting
For GT15, GT SoftGOT1000, GT11, and GT10, the test window cannot be displayed on the base screen that has a line graph with the locus display setting.
- (b) Windows that cannot be displayed on the same screen
The test window and overlap window 2 cannot be displayed on the same screen.

(2) Precautions for use

- (a) Control of the controller control
Executing test function may affect the control of the controller.
Make sure to fully confirm the security before executing the test function.

9.4 Starting GOT with CF card



GOT can start with the easy operation of inserting the CF card into it.

OS that exceeds the limit of the user area capacity (C drive) can be used with the use of the option function board with add-on memory.

Refer to the following section for details of user area capacity.

7.5.2 Drive capacity required for data transfer

■ To start up

1. Select [Communication] → [Transfer to Memory Card] from the menu.
After selecting, the [Communicate with Memory Card] dialog box appears.
2. Set [A:Standard CF Card] for the boot of OS in the [Communicate with Memory Card] dialog box, and transfer the data to the CF card.
For details of the setting method, refer to the following.

7.2 Transferring Data to Memory Card

3. Start the GOT with the CF card into the main unit.
Refer to the following manual for details of the starting operation.

User's Manual for the GOT used

POINT

When GOT is started with the CF card

(1) Inapplicable operations at start-up with the CF card

When GOT is started with the CF card, the following operations cannot be performed.

- Installation of Boot OS^{*3}
- Installation of OS^{*1*3}
- Download of special data^{*1*3}
- Download of the special data to a drive other than A drive^{*3}
- Deleting in the drive information^{*2*3}
- Format in the drive information^{*2*3}

^{*1} Write to the CF card again with GT Designer3.

^{*2} Mount the CF card to the PC, use PC to perform the operation.

^{*3} Stop starting the GOT with the CF card, and perform the operation with GT Designer3.

(2) Files that must not be deleted

When the GOT is started with the CF card, "GOT1000-STATUS.txt" and "GOT1000-TIME.txt" are created in the card.

Do not delete these files because they are required for the system.

9.5 Operating GOT with USB Mouse/Keyboard (USB Mouse/Keyboard Function)




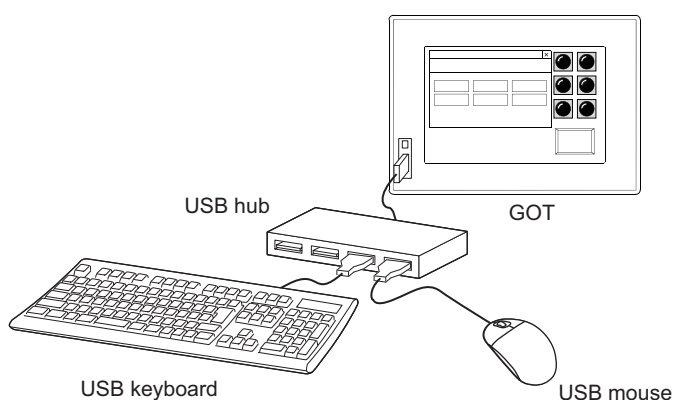
GOT operation by connecting a USB mouse or USB keyboard to the GOT is available.

This function is useful when operating small touch switches or entering a large amount of characters.

With the remote personal computer operation (Ethernet), a personal computer on the network can be operated from the GOT by using a mouse or keyboard.

For using and setting the remote personal computer operation, refer to the following.

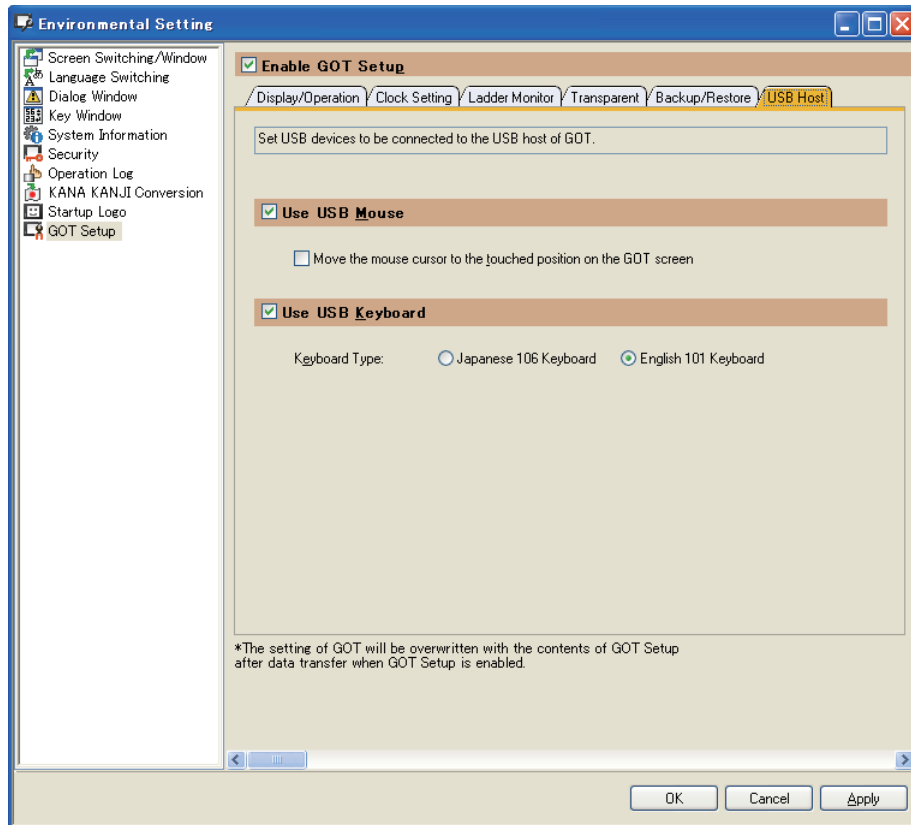
 (Functions) 31.2 Remote Personal Computer Operation (Ethernet)




9.5.1 Settings

Select [Common] → [GOT Environmental Setting] → [GOT Setup] from the menu to display the [Environmental Setting] dialog box.

Click the [USB Host] tab, and then configure the setting.



Item	Description		Model
Use USB Mouse	Select this item to enable the USB mouse connected to the USB interface (host) of the GOT.		
	Move the mouse cursor to the touched position on the GOT screen	Select this item to move the cursor to the position where the user touched on the GOT screen.	
Use USB Keyboard	Select this item to enable the USB keyboard connected to the USB interface (host) of the GOT.		
	Keyboard Type	Select the keyboard type to be connected to the USB interface (host) of the GOT. (Japanese 106 Keyboard/English 101 Keyboard)	

9.5.2 Relevant settings

The USB mouse/keyboard function is available for the relevant settings other than the specific settings. The following shows the functions that are available by the relevant settings.

■ GOT internal devices

Appendix2 Supported Devices

Function	Setting item	Model
Controlling whether to send or not the touch status to the personal computer. (Write device)	GS511.b0	
Notifying the position touched by the user (X-coordinate and Y-coordinate). (Write device)	GS654, GS655	
Notifying whether the screen is touched or not. (Write device)	GS656	

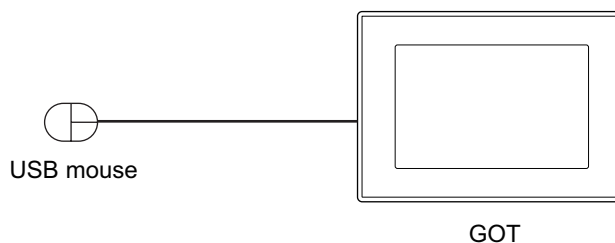
9.5.3 Actions

■ Specifications

(1) System configuration

(a) Using only USB mouse

Connect a USB mouse directly to the USB interface (host) of the GOT.



(b) Using only USB keyboard

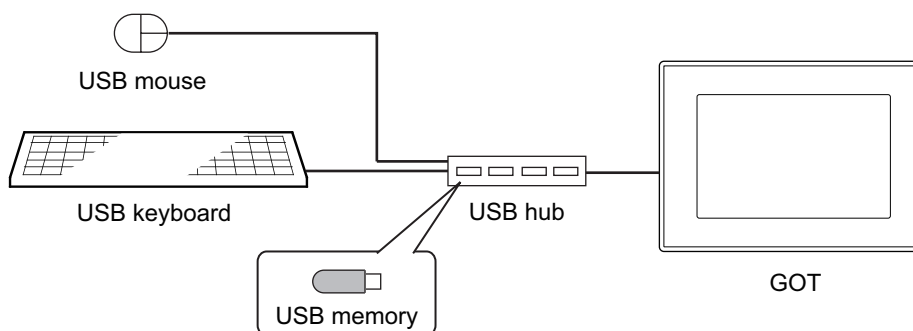
Connect a USB keyboard directly to the USB interface (host) of the GOT.



(c) Using USB mouse and USB keyboard together

A USB mouse and USB keyboard can be used together by connecting a USB hub to the USB interface (host) of the GOT.

Also, a USB memory can be used together.



(2) Connectable USB mouse, USB keyboard, and USB hub

(a) USB mouse

A two-button mouse is available.

A wheeled mouse and a mouse with more than two buttons can be used as a two-button mouse.

The mouse wheel and an extra button are not available.

A mouse with a particular function may not be available depending on the mouse type.

(b) USB keyboard

The following keyboards can be used.

- Japanese 106 keyboard
- English 101 keyboard

Forward-compatible keyboards, including Japanese 109 keyboard or English 104 keyboard, are also available.

However, the keys which do not exist on Japanese 106 keyboard and English 101 keyboard are not available.

Particular keyboards, including a keyboard with hub function, may not be available depending on the keyboard type.

(c) USB hub

A USB version 1.1 compatible USB hub is available.

For available USB hubs, refer to “List of Valid Devices Applicable for GOT 1000 Series” (GOT-A-0010) separately available.

The Technical News above is available as a reference at the MITSUBISHI ELECTRIC FA NETWORK SERVICE (MELFANSweb) website.

MELFANSweb website: <http://wwwf2.mitsubishielectric.co.jp/english/index.html>

■ Available screens, functions, and objects

(1) Screens for which a USB mouse and USB keyboard can be used

A USB mouse and keyboard are available for the following screens.

Screen	Executable operation
Base screen	Operating objects
Overlap window	Operating objects, moving windows, closing windows, and operating a personal computer screen on the GOT displayed by the remote personal computer operation function (Ethernet)
Superimpose window	Operating objects, and operating a personal computer screen on the GOT displayed by the remote personal computer operation function (Ethernet)
Key window	Key input with the keyboard, clicking the buttons, moving windows, and closing windows
Login screen and password authentication screen	Key input with the keyboard
Dialog window	Clicking buttons

(2) Functions for which a USB mouse and USB keyboard can be used

A USB mouse and keyboard are available for the following functions.

- The operator authentication
- The remote personal computer operation function (Serial) (USB mouse only)
- The remote personal computer operation function (Ethernet)

(3) Objects operable with a USB mouse and USB keyboard

The following objects can be operated with a USB mouse and USB keyboard.

○: Applicable ✕: Inapplicable

Object	Operation	
	Click	Keyboard input
Touch switch	○	✕
Numerical input, ASCII input	○	○
Advanced alarm display, advanced alarm popup display	○	○
Alarm display, alarm history display	○	○

■ USB mouse actions

(1) Display of mouse cursor

To display the mouse cursor on the screen, enable the USB mouse operation in the [Environmental Setting] dialog box (GOT Setup) and connect the USB mouse to the USB interface (host) of the GOT.

(2) Action of mouse cursor

The actions of mouse cursor differ on a monitor screen and a personal computer screen on the GOT. For details of the personal computer screen on the GOT, refer to the following.

 (Functions) 31.2 Remote Personal Computer Operation (Ethernet)

Screen	Mouse operation		
	Left-click	Right-click	Drag
Monitor screen	Behaves in the same way as touching a monitor screen.	Inapplicable	Inapplicable
Personal computer screen on the GOT	Behaves in the same way as clicking on a personal computer screen.		Applicable ^{*1}

^{*1} A dragging is not available on the GOTs of the following versions when setting [Avoid input error] for [Touch detection mode] in [GOT setup] for the utility.

- Hardware versions
 - GT1695M-XTBA: F or earlier
 - GT1695M-XTBD: D or earlier
 - GT1685M-STBA: C or earlier
 - GT1685M-STBD: B or earlier

For confirming hardware versions, refer to the following.

 User's Manual for the GOT used

■ USB keyboard actions

On a monitor screen, an input operation to an object with a keyboard is available.

On a personal computer screen on the GOT, an input operation to the personal computer connected to the GOT with a keyboard is available.

POINT

Entering Japanese with USB keyboard

Japanese language cannot be entered with a USB keyboard.

The kana-kanji input by kana-kanji conversion function is available with a touch operation.

HINT

(1) Operation of dialog boxes with a keyboard

Dialog boxes can be also operated with the Esc key or Enter key.

(2) Key repeat

For the remote personal computer operation (Ethernet), while holding down a keyboard key, a character on the keyboard key is repeated.

The Ctrl key, Alt key, Shift key, Caps key, and Windows key are excluded.

(3) Simultaneous press of the Ctrl key, Alt key, or Windows key with other keys

Pressing the Ctrl key, Alt key, or Windows key simultaneously with other keys is invalid.


9.5.4 Precautions

■ Precautions for drawing

(1) USB keyboard setting

Match the setting of [Keyboard Type] in the [Environmental Setting] dialog box (GOT Setup) with the USB keyboard type actually used.

If the setting of the USB keyboard type is different, some characters are incorrectly entered.


 9.5.1 Settings

■ Precautions for OS

(1) CoreOS

To use the USB mouse/keyboard function, install the Core OS (05.03.00.AC or later) on the GOT.

For confirming the Core OS versions and installing the Core OS, refer to the following.

 User's Manual for the GOT used

(2) Extended function OS

To use the USB mouse/keyboard function, install the extended function OS (USB Mouse/Keyboard) on the GOT.

■ Precautions for hardware

(1) Wheeled mouse and particular mouse

A wheeled mouse and a mouse with more than two buttons can be used as a two-button mouse.

The mouse wheel and an extra button are not available.

A mouse with a particular function may not be available depending on the mouse type.

(2) Forward-compatible keyboards with Japanese 106 keyboard/English 101 keyboard, particular keyboards

For forward-compatible keyboards with Japanese 106 keyboard or English 101 keyboard (including Japanese 109 keyboard or English 104 keyboard), the keys which do not exist on Japanese 106 keyboard and English 101 keyboard are not available.

Particular keyboards, including a keyboard with hub function, may not be available depending on the keyboard type.

■ Precautions for use

(1) Touch operation while clicking

Do not touch a GOT screen while clicking the mouse.

The GOT recognizes two points (the clicked position and touched position) are pressed.

(2) Actions of USB keyboard while displaying a personal computer screen on the GOT

While displaying a personal computer screen on the GOT by the remote personal computer operation function (Ethernet), a USB keyboard is available only on the personal computer screen on the GOT.

To use a USB keyboard for an object input and others, close the personal computer screen on the GOT.

9.6 Synchronizing GT SoftGOT1000 data with GOT data (SoftGOT-GOT Link Function)



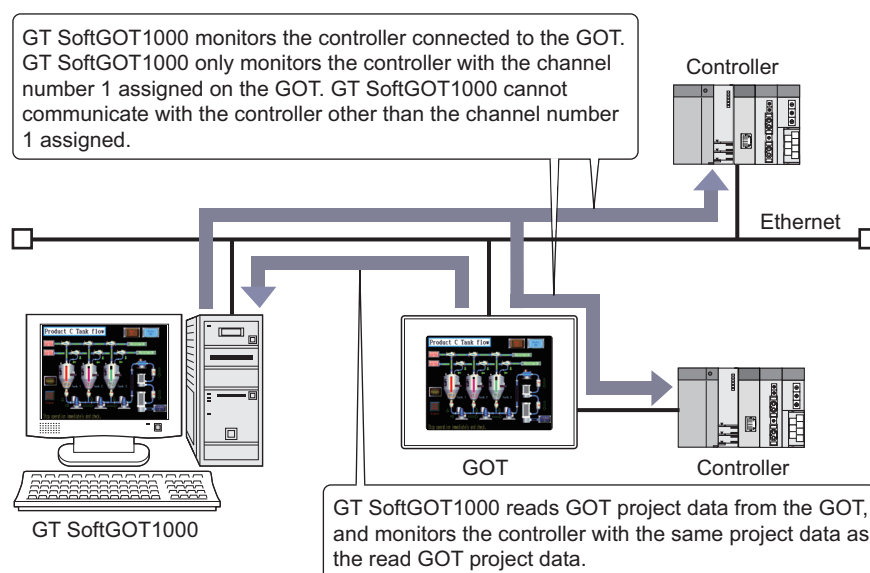
The SoftGOT-GOT link function enables GT SoftGOT1000 to connect the GOT via Ethernet. And then, the function synchronizes GT SoftGOT1000 data with GOT project data and resource data.

When input objects (touch switch, numerical input, and ASCII input) are input or other operation is performed, the simultaneous operation between GT SoftGOT1000 and the GOT must be prevented. The operation must be allowed by either GT SoftGOT1000 or the GOT.

GT SoftGOT1000 can monitor a controller connected to the GOT.

For details of the function including the usage method, refer to the following.

➞ GT SoftGOT1000 Version3 Operating Manual for GT Works3



POINT

(1) Extended function OS

To use the SoftGOT-GOT link function, install the extended function OS (SoftGOT-GOT Link Function) on the GOT.

(2) Settings

For the SoftGOT-GOT link function settings, refer to the following.

➞ GT SoftGOT1000 Version3 Operating Manual for GT Works3

(3) System configuration

For the system configurations for using the SoftGOT-GOT link function, refer to the following.




➞ GT SoftGOT1000 Version3 Operating Manual for GT Works3

■ Relevant settings

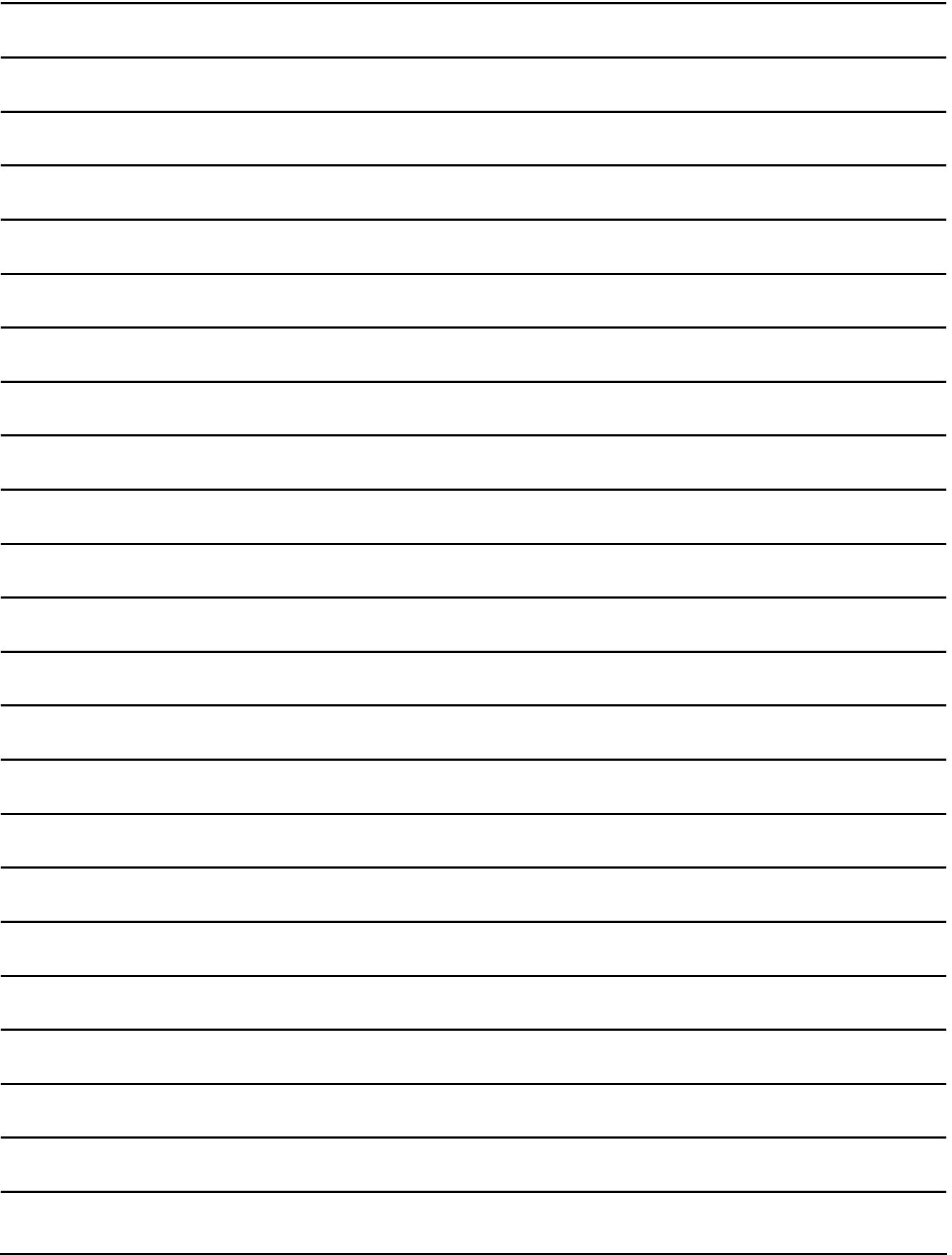
The SoftGOT-GOT link function is available for the relevant settings other than the specific settings. The following shows the functions that are available by relevant settings.

(1) GOT internal devices

☞ Appendix.2.1 GOT internal devices

Function	Setting item	Model
Enabling only the GOT to obtain the exclusive authorization (Not available for GT SoftGOT1000)	GS447.b0	
Notifying the communication status between GT SoftGOT1000 and the GOT	GS244.b0	
Notifying the obtaining status of the authorization	GS244.b1	
Notifying that SoftGOT1000 or the GOT is in use	GS244.b2	
Notifying the obtaining status of the exclusive authorization	GS244.b3	
Notifying the display status of the dedicated screen for the utility, the extended function, or the option function	GS244.b4	

APPENDICES




Appendix1 DATA CAPACITY LIST

Appendix.1.1 Data Capacity List

The maximum number of settings and the data capacity in the following table are for the case that all items are set as default.

If the data size is increased due to settings of data operation, display method, or others, the available number of settings may decrease. Tou

■ Touch switch

 (Functions) 2. TOUCH SWITCH

Function	Data capacity for one function (Bytes)	Models
Switch	120 bytes	GT16 GT15 GT11 GT10 SoRGOT 1000
Bit switch	132 bytes	
Word switch	124 bytes	
Go to screen switch	124 bytes	
Change station number switch	124 bytes	GT16 GT15 GT11 GT10 SoRGOT 1000
Special function switch	80 bytes	GT16 GT15 GT11 GT10 SoRGOT 1000
Key window display switch	124 bytes	
Key code switch	124 bytes	

■ Lamp

 (Functions) 3. LAMP

Function	Data capacity for one function (Bytes)	Model
Lamp (Bit lamp)	68 bytes	GT16 GT15 GT11 GT10 SoRGOT 1000
Lamp (Word lamp)	56 bytes	
Lamp (Lamp area)	44 bytes	

■ Numeric value, text

 (Functions) 5. to 9.

Function	Data capacity for one function (Bytes)	Model
Numerical display	48 bytes	GT16 GT15 GT11 GT10 SoRGOT 1000
Numerical input	52 bytes	
ASCII display	44 bytes	
ASCII input	48 bytes	
Data list display	Refer to the following (1)	GT16 GT15 GT11 GT10 SoRGOT 1000
Date display	44 bytes	GT16 GT15 GT11 GT10 SoRGOT 1000
Time display	44 bytes	
Comment display (Bit comment)	64 bytes	
Comment display (Word comment)	56 bytes	
Comment display (Simple comment)	64 bytes	
Basic comment	Refer to the following (2)	
Comment group	Refer to the following (3)	

(1) Data capacity for data list display (Bytes)

$$60 + (NR + 1) \times 8 + ANC \times 6 + RTN \times 2$$

NR: Number of columns

ANC: Number of all lines

RTN: Number of title characters per line

(2) Data capacity for basic comment (Bytes)

$$24 + (14 \times RC) + (2 \times AT)$$

(The value within () will be converted into multiple of 4)

RC: Number of registered comments

AT: Number of whole characters

(3) Data capacity for comment group (Bytes)


$$46 + (2 \times NT) + (4 \times NC) + (8 \times NR) + (NC \times NR \times (6 + 2 \times NS))$$





NT: Number of characters

NC: Number of lines

NR: Number of columns

NS: Number of average characters of a comment

Alarm (Functions) 10. ALARM

Function	Data capacity for one function (Bytes)	Model
Advanced user alarm display	Refer to the following (1)	
Advanced system alarm display		
Alarm history display	Refer to the following (2)	
User alarm list display	44 bytes	
System alarm list display	40 bytes	
Advanced alarm popup display	Refer to the following (3)	
Scrolling alarm display	Refer to the following (4)	

(1) Data capacity for advanced user alarm display and advanced system alarm display (Bytes)

$$96 + (DAN \times 8) + (TN \times 2) + (DN \times 8)$$

DAN: Number of display attributes

TN: Number of title characters

DN: Date / Specified number of times

(2) Data capacity for alarm history (Bytes)

$$62 + N1 + N2 + N3 + N4$$

N1: (Number of the following title characters) × 2

• Occurred • Message • Restored • Checks • Cum. Time • Occur Freq

N2: (Number of the following characters) × 2

• Occurrence date/time • Restoration date/time • Check date/time

N3: "4" should be added for each of the following setting items

• Text Sprite • Draw Ruled Line • Restored Time • Confirm Time • One Touch

N4: "16" should be added for each of the following setting items

• Figure frame

POINT

Precautions for calculation of N1 and N2

(1) Handling of calculated value

Round the calculated value to a multiple of "4."

Example) If the calculated value is "10"

Use "10" → "12" for calculation.

(2) Calculation procedure

Calculate each item.

Example) Occurrence time field: four characters Message field: five characters

Occurrence time field: $4 \times 2 = 8$

Message field: $5 \times 2 = 10 \rightarrow 12$ (Round to a multiple of "4.")

Therefore $N1 = 8 + 12 = 20$

(3) Data capacity for advanced alarm popup display (Bytes)

$$56 + (CPN \times 8) + (DN \times 8)$$

CPN: Specified number of comments

DN: Date / Specified number of times

(4) Data capacity for scrolling alarm display (Bytes)

$$148 + 28 \times AN + DON + O$$

AN: Alarm points

DON: Setting of the device that stores the number of alarm occurrences (Set: 8, Not set: 0)

O: Setting of the alarm occurrence time (display attributes) (Set: 12, Not set: 0)

Graph, meter

 (Functions) 11. to 19.

Function	Data capacity for one function (Bytes)	Model
Level	52 bytes	GT16 GT15 GT11 GT10 SoftGOT 1000
Panel meter	96 bytes	GT16 GT15 GT11 GT10 SoftGOT 1000
Line graph	Refer to the following (1)	
Trend graph	Refer to the following (2)	
Bar graph	Refer to the following (3)	
Statistics bar graph	Refer to the following (4)	
Statistics pie graph		
Scatter graph	Refer to the following (5)	GT16 GT15 GT11 GT10 SoftGOT 1000
Historical trend graph	Refer to the following (6)	GT16 GT15 GT11 GT10 SoftGOT 1000

(1) Data capacity for line graph (Bytes)

$$48 + (4 \times N1) + (12 \times N2) + (8 \times MN) + (32 \times SVN)$$

N1: Number of lines+Number of offset device points+Number of data operation setting items

N2: Number of graph frame settings+Number of clear trigger device points set in the locus+Number of trigger device points set in the trigger

LN: Number of lines

MN: Number of monitored points

SVN: Number of scales

(2) Data capacity for trend graph (Bytes)

$$48+(4 \times N1)+(12 \times N2)+(32 \times SVN)$$

N1: Number of lines+Number of monitored points+Number of offset device points+Number of data operation setting items

N2: Number of graph frame settings+Number of clear trigger device points set in the locus+Number of trigger device points set in the trigger

SVN: Number of scales

(3) Data capacity for bar graph (Bytes)

$$56+(4 \times N1)+(12 \times N2)+(20 \times SVN)$$

N1: Number of bars+Number of offset device points+Number of data operation setting items

N2: Number of graph frame settings+Number of clear trigger device points set in the locus+Number of trigger device points set in the trigger

SVN: Number of scales

(4) Data capacity for statistics bar graph/statistics pie graph (Bytes)

$$36+(4 \times N1)+(12 \times N2)+(20 \times SVN)$$

N1: Number of pieces+Number of offset device points+Number of data operation setting items

N2: Number of graph frame settings+Number of clear trigger device points set in the locus+Number of trigger device points set in the trigger

SVN: Number of scales

(5) Data capacity for scatter graph (Bytes)

$$108+4 \times PN \times 2$$

PN: Number of points

(6) Data capacity for historical trend graph (Bytes)

$$308+(8 \times N1)+(4 \times N2)+(12 \times SHN)+(20 \times SVN)+(8 \times (EXGN \times LN))+((12+(8 \times LN1)) \times PN)$$

N1: Number of auxiliary lines+Number of extended function settings

N2: Number of horizontal and vertical grid line settings+Number of point attribute settings+Number of line attribute settings+Number of data operation setting items+Number of logging device settings

SHN: Number of graph frame settings

SVN: Number of scales



EXGN: External output setting for each graph

LN: Number of lines

PN: Number of points


Parts

 (Functions) 20. to 21.

Function	Data capacity for one function (Bytes)	Model
Parts display (Bit parts)	48 bytes	
Parts display (Word parts)	44 bytes	
Parts display (Fixed parts)	52 bytes	
Parts movement (Bit parts)	60 bytes	
Parts movement (Word parts)	56 bytes	
Parts movement (Fixed parts)	56 bytes	

Data collection

 (Functions) 22. to 23.

Function	Data capacity for one function (Bytes)	Model
Operation log	Refer to the following (1)	
Logging function	Refer to the following (2)	

(1) Data capacity for operation log (Bytes)


$36+2 \times \text{OPlgfn}$

OPlgfn: Number of characters for an operation log file name (full path)

(2) Data capacity for logging (Bytes)

- Data capacity for logging to be stored in the user area (C drive+expansion memory):

The capacity can be confirmed in [Buffering] of the Logging dialog box.

 (Functions) 23. LOGGING FUNCTION

- When stored on a CF card:

 Appendix.1.2 Data Capacity Available for Storage on CF Card

Recipe

 (Functions) 24. RECIPE

Function	Data capacity for one function (Bytes)	Model
Recipe	Refer to the following (1)	GT16 GT15 GT11 GT10 SoRGOT 1000
Advanced recipe	Refer to the following (2)	GT16 GT15 GT11 GT10 SoRGOT 1000

(1) Data capacity for recipe (Bytes)

- Stored in built-in memory

$48+\text{Nrnm} \times 2 + (\text{Nfom} \times \text{Nfam}) \times 2 + 8$ bytes, shared by recipe)

Nrnm: Number of characters of [Recipe Name]

Nfom: Number of characters of folder name

Nfam: Number of characters of file name

- When stored on a CF card:

 Appendix.1.2 Data Capacity Available for Storage on CF Card

(2) Data capacity for advanced recipe (Bytes)

- Advanced recipe setting capacity to be stored in the built-in flash memory:

$96+\text{N1}+\text{N2}+\text{N3}+\text{N4}+\text{N5}$

N1: $2 \times (\text{Nrnm} + \text{Nfnm})$

N2: $12 \times (\text{Nir} + \text{Niw})$

N3: $(8+2 \times \text{Ndcmt}) \times \text{Ndev}$ (When setting device comment.)

: $4 \times \text{Ndev}$ (When not setting device comment.)

N4: $28 \times \text{Nblk} + 76 \times \text{Nrec}$

N5: $(2 \times (\text{Nbdev} + \text{Nwdev}) + 4 \times \text{Ndwdev}) \times \text{Nrecv}$

Nrnm: Number of characters of [Recipe Name]

Nfnm: Number of characters of [File Name]

Nir: Points of [Read Trigger]

Niw: Points of [Write Trigger]

Ndcmt: Number of characters of [Device Comment] (The average number of characters of device comments set in each device)

Nrecv: Number of record (only for the record whose attribute has recipe device value)

Ndev: Points of device ($\text{Nbdev} + \text{Nwdev} + \text{Ndwdev}$)

Nbdev: Points of bit device

Nwdev: Points of word device (16-bit)

Ndwdev: Points of word device (32-bit)

Nblk: Number of block

Nrec: Number of record

- When stored on a CF card:

 Appendix.1.2 Data Capacity Available for Storage on CF Card

Trigger action

 (Functions) 25. to 27.

Function	Data capacity for one function (Bytes)	Model
Device data transfer	Refer to the following (1)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Status observation	Refer to the following (2)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Time action	Refer to the following (3)	

(1) Data capacity for the device data (Bytes)

Total data capacity of all the device data transfer settings:

$$32+N1+N2(1)+N2(2)+\dots+N2(Ndt)$$

N1: $Wt+Ws+Wm$

N2: $36+(2+2\times Ndtm)+(6+2\times Ncmt)\times Np+52\times Nblk$

Wt: $68+52\times(Ndt+2)$

Ws: $76\times Nend$

Wm: $68+16\times Nrd$ (When the device point is set to 1)

: $80+INT((Ds\times P+3)/4)\times 4$ (When the device point is set to 2 or more)

Ndt: Total number of device data transfer settings

Nend: Total number of device data transfer settings with the external notification device set

Nrd: Total number of blocks with the device point set to 1

INT(): Rounding down numbers of decimal places

Ds: Data type for the selected device type (16-bit device: 2, 32-bit device: 4)

P: Total number of device points

Ndtm: Number of the characters for the device data transfer name set in one device data transfer setting

Ncmt: Total number of the characters for comments set in one device data transfer setting

Np: Total number of device points set in one device data transfer setting

Nblk: Total number of blocks set in one device data transfer setting

(2) Data capacity for status observation (Bytes)

$$28+WN\times 8+IN\times 8+FN\times 4$$

WN: Number of write points

IN: Number of function points

FN: Fixed


(3) Data capacity for time action (Bytes)

$$26+BA\times 8+WA\times 16(+8\text{ bytes, shared by time action})$$

BA: Bit action

WA: Word action

Script

 (Functions) 28. SCRIPT FUNCTION

Function	Data capacity for one function (Bytes)	Model
Project script	Refer to the following (1)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000
Screen script		
Object script	Refer to the following (2)	Gr16 Gr15 Gr11 Gr10 SerGOT 1000

(1) Data capacity for project script/screen script (Bytes)

(The memory capacity for script function set in each window will be 0 if the window screen is not displayed.)

$$48 + (\text{Number of expressions in RPN} \times 8) + (\text{WDN} \times 8) + 28 + \text{FPN} + \text{SCN} + \text{FDS}$$

WDN: Number of write devices

FPN: Number of file path characters

SCN: Number of script comment characters

FDS: File data size

(2) Memory capacity for object script function (Bytes)

$$488 \times (\text{Number of expressions in RPN} \times 8) + (\text{WDN} \times 8) + \text{STS}$$

WDN: Number of write devices

STS: Script text size



Reversed polish notation

The reversed polish notation (RPN) is a method to express an operator (+, -, *, /, and others) after an operand (Numeric value or variable).

Example: In usual expression: 1 + 2, in RPN expression: 1 2 +

Peripheral connection

(Functions) 29. to 38.

Function	Data capacity for one function (Bytes)	Model
Barcode	-	GT16 GT15 GT11 GT10 SOLICOT 1000
RFID	-	GT16 GT15 GT11 GT10 SOLICOT 1000
Remote personal computer operation (Ethernet)	-	GT16 GT15 GT11 GT10 SOLICOT 1000
Video display	12 bytes	GT16 GT15 GT11 GT10 SOLICOT 1000
Multimedia	Refer to the following (1)	GT16 GT15 GT11 GT10 SOLICOT 1000
Operation panel/External I/O	Refer to the following (2)	GT16 GT15 GT11 GT10 SOLICOT 1000
RGB display	12 bytes	GT16 GT15 GT11 GT10 SOLICOT 1000
Report	Refer to the following (3)	GT16 GT15 GT11 GT10 SOLICOT 1000
Hard copy	Refer to the following (4)	GT16 GT15 GT11 GT10 SOLICOT 1000

(1) Data capacity for multimedia function (Bytes)

$$36 + 2 \times \text{FN}$$

FN: Number of characters of file name in the recording setting

(2) Data capacity for operation panel function (Bytes)

$$12 + (\text{NPK} \times 12) + \text{NA} \times (4 + \text{DCS})$$

NPK: Number of keys set for the operation panel

NA: Number of operation settings set for keys

DCS: Data capacity of the touch switch set for the operation panel

■ Touch switch

(3) Data capacity for report function (Bytes)

$136+4 \times \text{Nlin} + (2 \times \text{Nfnv}) + 20 \times \text{Nobv} + (4 + \text{Nchv} \times 2) \times \text{Nclv} + (36 + 8 \times \text{Nrv}) \times \text{Nprv} + (44 + 8 \times \text{Nrv}) \times \text{Npcv}$

For the calculation above, convert the values below to a multiple of 4.

(Example: If the value is "10", assume "12" to calculate.)

Nlin: Number of lines set in the print format of the report setting

Nfnv: Number of characters of file name

Nobv: Total number of objects arranged on the report screen

Nchv: Number of characters

Nclv: Number of lines and characters set

Nrv: Number of data items in the expression

Nprv: Number of numerical prints set

Npcv: Number of comment prints set

(4) Data capacity for hard copy function (Bytes)

$26 + (\text{Nfom} + \text{Nfam}) \times 2$

Nfom: Number of characters of folder name

Nfam: Number of characters of file name

Useful functions

9. USEFUL FUNCTIONS FOR USING GOT

Function	Data capacity for one function (Bytes)	Model
Document display	72 bytes	GT16 GT15 GT11 GT10 SoftGOT 1000
Set overlay screen	8 (+8 bytes common to Set overlay screen)	GT16 GT15 GT11 GT10 SoftGOT 1000

Other functions

GOT1000 Series Gateway Functions Manual for GT Works3

GOT1000 Series MES Interface Function Manual for GT Works3

Function	Data capacity for one function (Bytes)	Model
Gateway	-	GT16 GT15 GT11 GT10 SoftGOT 1000
MES interface	Refer to the following (1)	

(1) Memory capacity for MES interface function (Bytes)

$2500 + 43000 \times \text{COMACT} + 8000 \times \text{CALACT} + 2000 \times \text{JOBN} + 1000 \times \text{HDSKN} + 150 \times \text{TAGN} + 150 \times \text{TAGEN} + 350 \times \text{DTBOJN}$

COMACT: Number of communication a

CALACT: Number of operation actions

JOBN: Number of jobs

HDSKN: Number of handshakes

TAGN: Number of tags

TAGEN: Number of tag components

DTBOJN: Number of database objects

Appendix.1.2 Data Capacity Available for Storage on CF Card

Depending on the used function, the data can be stored on the CF card.
The following shows the data capacity available in the CF card for each function.

Function	Data capacity
Advanced user alarm display (byte)	<ul style="list-style-type: none"> Data capacity for G1A files Historical: $64+2 \times Nm+2 \times Ng+20 \times Nh$ Cumulative: $64+2 \times Nm+34 \times Ng$ No alarm collection: $64+2 \times Nm+18 \times Ng$ Data capacity for CSV files (In the calculation of the number of characters, count a 1-byte character as 0.5 characters and a 2-byte character as 1 character.) Historical: $228+(Nat \times 2)+(91+(Ncv \times 2)) \times Nac$ Cumulative: $258+(Nat \times 2)+(121+(Ncv \times 2)) \times Nac$ Data capacity for Unicode text files Historical: $456+(Nat \times 2)+(182+(Ncv \times 2)) \times Nac$ Cumulative: $516+(Nat \times 2)+(242+(Ncv \times 2)) \times Nac$ <p>Ng: Number of general alarms set Nm: Number of middle alarms set Nh: Max. number of histories (The value set for [Stored Number] of advanced user alarm observation/advanced system alarm observation) Ncv: Average number of comment characters Nac: Number of alarms Nat: Number of alarm name characters (The number of characters set for [Alarm Name] of advanced user alarm observation)</p>
Advanced system alarm display (byte)	<ul style="list-style-type: none"> Data capacity for G1A files Historical: $64+2 \times Nm+2 \times Ng+24 \times Nh$ No alarm collection: $64+2 \times Nm+2 \times Ng+20 \times Nh$ Data capacity for CSV files (In the calculation of the number of characters, count a 1-byte character as 0.5 characters and a 2-byte character as 1 character.) Historical: $197+(71+(Ncv \times 2)) \times Nac$ Data capacity for Unicode text files Historical: $394+(142+(Ncv \times 2)) \times Nac$ <p>Ng: Number of general alarms set Nm: Number of middle alarms set Nh: Max. number of histories (The value set for [Stored Number] of advanced user alarm observation/advanced system alarm observation) Ncv: Average number of comment characters Nac: Number of alarms</p>
Alarm history display (K bytes)	<p>When saving 3072 alarm historical data</p> <p>Cumulative mode (When saved in CSV file): Approx. 97 (Approx. 400) History mode (When saved in CSV file): Approx. 72 (Approx. 360)</p>

(Continued to next page)

Function	Data capacity
Operation log (byte)	<ul style="list-style-type: none"> G10 file size: $40+(N1+N2+\dots+Nm)$ N1 to Nm: Size of each log (see below) <ul style="list-style-type: none"> GOT start-up (12) · Application switching (16) · Time change (16) · System language switching (Max. 28) Security setting (Max.28) · Screen switching (Max.88) · Station No. switching (16) · Language switching (16), Bit switch (Max.120) · Word switch (Max.120) · Special Function Switch (Max.108), Go to screen switch (Max.112) · Change station No. switch (Max.112) Numerical input (Max.124) · Numerical input (When writing to write device / write check device) (Max.120), ASCII input (Max.320) · Alarm history (Display, delete, delete all) (Max.108) · Reset (Max.120), Advanced user alarm display (Display, delete, delete all (Max.108), Reset (Max.120)), Advanced system alarm display (Max.108) · Object script (Max.120) CSV file size: $162+(N1+N2+\dots+Nm)$ N1 to Nm: Size of each log (see below) <ul style="list-style-type: none"> GOT start-up (Max.63) · Application switching (Max.98) · Time change (Max.113) System language switching (Max.86) · Security setting (Max.94) · Screen switching (Max.212) Station No. switching (Max.87) · Language switching (Max.67) · Bit switch (Max.285) Word switch (Max.285) · Special Function Switch (Max.226) · Go to screen switch (Max.235) Change station No. switch (Max.233) · Numerical input (Max.272) Numerical input (When writing to write device / write check device) (Max.282) · ASCII input (Max.449) Alarm history (Delete, delete all) (Max.210) · Reset (Max.274) Advanced user alarm display (Display, delete, delete all (Max.226), Reset (Max.280)), Advanced system alarm display (Max.230) · Object script (Max.262) Unicode text file size: $324+(N1+N2+\dots+Nm)$ N1 to Nm: Size of each log (see below) <ul style="list-style-type: none"> GOT start-up (Max.116) · Application switching (Max.152) · Time change (Max.218), System language switching (Max.156) · Security setting (Max.164) · Screen switching (Max.332) Station No. switching (Max.142) · Language switching (Max.124) · Bit switch (Max.476) Word switch (Max.476) · Special Function Switch (Max.366) · Go to screen switch (Max.384), Change station No. switch (Max.380) · Numerical input (Max.476) Numerical input (When writing to write device / write check device) (Max.474) ASCII input (Max.824) · Alarm history (Delete, delete all (Max.350), Reset (Max.466)) Advanced user alarm display (Display, delete, delete all (Max.366), Reset (Max.472)), Advanced system alarm display (Max.368) · Object script (Max.442)
Logging function (byte)	<ul style="list-style-type: none"> Data capacity for G1L files: $100+N1+N2+N3$ N1: $Nd \times (8+Navedc \times 2)$ N2: $Nb \times 16$ N3: $(6+Ndb \times 2+Ndw \times 2+Ndd \times 4) \times (17/16) \times Nalgf$ Data capacity for CSV files: $99 + N1 + N2 \times N3$ N1: $(Navedc+11) \times Nd$ N2: $(20+(Ndspl+1) \times Nd)$ N3: $Nalgf$ Data capacity for Unicode text files: $198 + N1 + N2 \times N3$ N1: $(Navedc+11) \times Nd \times 2^1$ N2: $(20+(Ndspl+1) \times Nd)$ N3: $Nalgf \times 2$ <p> Navedc: Average number of device comment characters Ndb: Number of bit devices Ndw: Number of 16-bit (word) devices Ndd: Number of 32-bit (double-word) devices Nb: Number of device blocks Ndspl: Number of display digits (When setting the real for the display type: Number of display digits + 5) Nalgf: Number of stored events in a log file Nd: Number of logging devices (Total number of devices set to a device block) </p>
Recipe (byte)	$(149 \times RF) + (9 \times R16) + (14 \times R32)$ RF: Number of recipe files R16: Total number of 16-bit devices in each recipe file R32: Total number of 32-bit devices in each recipe file

(Continued to next page)

Function	Data capacity
Advanced recipe (byte)	<ul style="list-style-type: none"> Data capacity for G1P files: $128 + N1 + N2 + N3$ $N1: (8 + 2 \times \text{Ndcmt}) \times \text{Ndev}$ $: 4 \times \text{Ndev}$ (When not setting device comment.) $N2: \text{Nblk} \times 12$ $N3: (80 + \text{Ndwsz} \times 2) \times \text{Nrec}$ Ndcmt: Number of characters of [Device Comment] Ndev: Points of device ($\text{Nbdev} + \text{Nwdev} + \text{Ndwdv}$) Nbdev: Points of bit device Nwdev: Points of word device (16-bit) Ndwdv: Points of word device (32-bit) Nblk: Number of block Nrec: Number of record Ndwsz: Number of word device points ($\text{Nbdev} + \text{Nwdev} + \text{Ndwdv} \times 2$) Data capacity for CSV data files: $164 + N1 + N2 + N3$ $N1: \text{Nrm}$ $N2: (\text{Nbit} + \text{Nwrd} + \text{Ndwrdr}) \times (18 + \text{Ndcmt})$ $N3: \text{Nrec} \times (25 + \text{Nbit} \times 2 + \text{Nwrd} \times 7 + \text{Ndwrdr} \times 12)$ Unicode text file size: above CSV file size $\times 2$ <p> Nrm: Number of characters^{*1} of [Recipe Name] Ndcmt: Number of characters^{*1} of [Device Comment] Ndev: Device Points Nblk: Block Number Nrec: Record Number Nbit: Number of bit device points Nwrd: Number of 16-bit device points Ndwrdr: Number of 32-bit device points </p>
Multimedia function ^{*2}	<ul style="list-style-type: none"> Data capacity of video when recording on the video image screen (K bytes) Recording size: $[640 \times 480]$, frame rate: [15FPS] or [12.5FPS]: $2.56 + (152 \times \text{RT})$ Recording size: $[320 \times 240]$, frame rate: [15FPS] or [12.5FPS]: $2.56 + (50 \times \text{RT})$ Recording size: $[320 \times 240]$, frame rate: [30FPS] or [25FPS]: $2.56 + (99 \times \text{RT})$ RT: Recording time (Second) Data capacity of video when recording before and after the event (K bytes) Recording size: $[640 \times 480]$, frame rate: [15FPS] or [12.5FPS]: $2.56 + (152 \times \text{RT})$ Recording size: $[320 \times 240]$, frame rate: [15FPS] or [12.5FPS]: $2.56 + (50 \times \text{RT})$ Recording size: $[320 \times 240]$, frame rate: [30FPS] or [25FPS]: $2.56 + (99 \times \text{RT})$ RT: Recording time (before event) + Recording time (after event) (Second) Video file size for long time recording (M bytes): Number of video files $\times 20$
Report function (byte)	$(8 \times \text{RN}) + 48 + (8 \times \text{RN} + 8) \times \text{CN}$ RN : Number of numerical print and comment print objects set on the report screen CN : Number of data collection times
Hard copy function (K bytes)	<p>Data capacity per screen (The following are reference values.) \times Number of screens to be stored</p> <p>Data capacity per screen for BMP format</p> <ul style="list-style-type: none"> GT1695M-X, GT1595-X: 65536 colors (2359), 256 colors (787) GT1685M-S, GT1675M-S, GT1665M-S, GT1585V-S, GT1585-S, GT1575V-S, GT1575-S: 65536 colors (1440), 256 colors (481) GT1675M-V, GT1675-VN, GT1665M-V, GT1575-V, GT1565-V: 65536 colors (921), 256 colors (308) GT1575-VN: 256 colors (308) GT1672-VN, GT1662-VN, GT1572-VN, GT1562-VN: 16 colors (308) GT1555-Q: 65536 colors (230), 256 colors (77) GT1550-Q: Monochrome (77) <p>Data capacity per screen for JPEG format: Depends on the screen contents.</p>
Document display function	Differs depending on the screen contents.
MES interface function (byte)	<p>MES interface execute log file: Up to 524288 (512KB) per file</p> <p>Job execute log file: Up to 1048576 (1MB) per file</p>

*1 Single/double byte characters are not distinguished.

*2 Recorded video files are stored in the CF card installed in the multimedia unit.

Appendix.1.3 Capacity of data to be saved in the SRAM user area

According to functions to be used, data are saved in the SRAM user area.
The following shows the capacity of data to be saved in the SRAM user area in each function.

Function	Data capacity
Advanced user alarm display	<p>(Round up $(200+(2 \times Nm)+\text{alarm data size})$ to multiples of 64.) $\times 2$</p> <p>Alarm data size: Cumulative mode: $(2 \times Ng)+(32 \times Ng)$ Historical mode: $(2 \times Ng)+(20 \times Nh)$ Collecting no alarms: $(2 \times Ng)+(16 \times Ng)$</p> <p>Nm: Number of middle comment settings Ng: Number of alarm points Nh: Number of saved data</p> <p>Round up the calculated value within the parenthesis () to multiples of 4. Example) Alarm data size when the number of alarm points is 3 for the cumulative mode. $(2 \times Ng)+(32 \times Ng) = 2 \times 3+32 \times 3$ $= 6 + 186$ $\rightarrow 8 + 188$</p>
Advanced system alarm display	<p>(Round up $(204+\text{Alarm data size})$ to multiples of 64.) $\times 2$</p> <p>Alarm data size: History mode: $(24 \times Nh)$ Collecting no alarms: $(20 \times Nh)$</p> <p>Nh: Number of saved data for the historical mode Number of maximum alarm points collected at one time when collecting no alarms</p>
Logging function	<p>Round up $(192+12 \times \text{Number of device blocks}+1 \text{ logging data size} \times \text{Number of stored logs})$ to multiples of 64.</p> <p>Logging data size: Round up $(4+\text{data size}+(\text{Data size}+16))$ to multiples of 4.</p> <p>Data size: Round up $(\text{Number of bit devices} \times 2)+(\text{Number of word devices} \times 2)+\text{Number of double word devices} \times 4$ to multiples of 4.</p>

POINT

(1) Advanced alarm data

If power failure occurs while advanced alarm data are written to the SRAM user area, data in the SRAM user area become invalid. Therefore, the data in the SRAM user area may not be read.

To take measures, advanced alarm data are duplicated and saved in the SRAM user area.

Therefore, the size of data in the SRAM user area is approximately twice the size of data in the buffering area.

(2) Data of the logging function

If power failure occurs while logging data are written to the SRAM user area, the data to be written at the power failure are deleted.

To reduce data size, the data are not duplicated.

Appendix2 Supported Devices

Appendix.2.1 GOT internal devices

■ GOT bit register (GB)

Device	Function	Model
GB0 to GB9	Use prohibited	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB10 to GB25	Y0 to YF turn on when the GB devices turn on.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB26 to GB29	Use prohibited	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB30 to GB37	ON when X0 to X7 turn on	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB38	ON without the power supply	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB39	The clock data is stored during GB39 turns on.	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB40	Always ON	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB41	Always OFF	
GB42	ON when screen switching occurs	
GB43 to GB49	Use prohibited	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GB50 to GB57	ON when X8 to XF turn on	
GB58 to GB63	Use prohibited	
GB64 to GB6535 (GB64 to GB255 for GT10)	User area	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

(1) External output for Y0 to YF (GB10 to GB25)

With the external I/O function, signals are output to an external I/O device when the GB devices turn on. The following shows signal names for each GB device.

GB device	Signal name	GB device	Signal name	GB device	Signal name	GB device	Signal name
GB10	Y0 output	GB14	Y4 output	GB18	Y8 output	GB22	YC output
GB11	Y1 output	GB15	Y5 output	GB19	Y9 output	GB23	YD output
GB12	Y2 output	GB16	Y6 output	GB20	YA output	GB24	YE output
GB13	Y3 output	GB17	Y7 output	GB21	YB output	GB25	YF output

(2) External input for X0 to X7 and X8 to XF (GB30 to GB37, GB50 to GB57)

With the external I/O function, the GB devices turn on when signals are input with an external I/O device. The following shows signal names for each GB device.

GB device	Signal name	GB device	Signal name	GB device	Signal name	GB device	Signal name
GB30	X0 input	GB34	X4 input	GB50	X8 input	GB54	XC input
GB31	X1 input	GB35	X5 input	GB51	X9 input	GB55	XD input
GB32	X2 input	GB36	X6 input	GB52	XA input	GB56	XE input
GB33	X3 input	GB37	X7 input	GB53	XB input	GB57	XF input

(3) Without power supply (GB38)

With the external I/O function, the GB device turns on without the power supply of an external I/O device.

(4) Clock data storage during ON (GB39)

With GT10, GD0 to GD6 store the clock data when the GB device turns on.

The device does not store the clock data when the GB device turns off.

(5) Always ON (GB40)

Always ON.

(6) Always OFF (GB41)

Always OFF.

(7) On when screen switching occurs (GB42)

Turns on when switching of the following screens occurs.

- Base screen
- Overlap window 1, 2, 3, 4, 5
- Superimpose window 1, 2
- When an overlap window is closed by opening a test window, etc. during the overlap window is displayed.

Turn off this signal at user side.



Actions of always ON (GB40) and always OFF (GB41)

Always ON (GB40) and always OFF (GB41) in common information 1 (GS0) are always ON (GB40) and always OFF (GB41), respectively.

■ **GOT data register (GD)**


GD devices are listed as follows.

Device	Function
GD0 to GD65535 (GD0 to GD127 for GT10)	User area

(1) Store the clock data in GD device (Only with GT10)

With GT10, GD0 to GD6 store the clock data when GB39 turns on.

For the clock function, refer to the following.

 4.9 GOT Display and Operation Setting

For details of the each GD device, refer to followings.

GD device	Description
GD0	second (0 to 59)
GD1	minute (0 to 59)
GD2	hour (0 to 23)
GD3	day (1 to 31)
GD4	month (1 to 12)
GD5	year (1980 to 2079)
GD6	day of a week (0 to 6)

GD0 to GD6 cannot be used as an user area during GB39 turns on.

Set GB39 to off when using GD0 to GD6 as the user area.

(2) Designation of station No. using GD (only in the case of temperature controller connection, inverter connection and servo amplifier connection)

If 100 to 115 is set for station No. in the setting of device, a station No. can be designated by the value of GD10 to GD25.

The monitor target station No. can be changed by simply changing a device value.

For the device setting, refer to the following.

5.3.1 Device setting

- (a) When GD is used together with a switching station No. device (GT16, GT15 only)

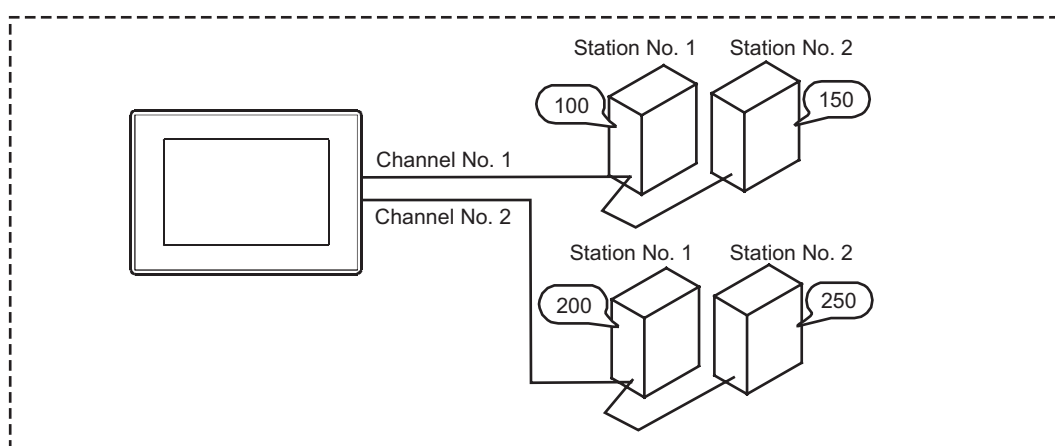
The switching station No. device has priority.

- (b) When objects that monitor different channel Nos. are arranged on the same screen

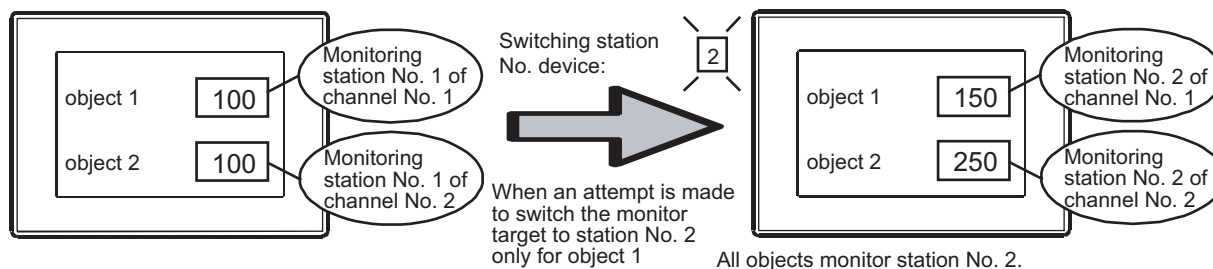
To monitor different station Nos. by individual objects, use GD10 to GD25.

If switching station No. devices are used, the monitor target station No. can change for an unintended object. (Especially when multiple switching target channel Nos. are set.)

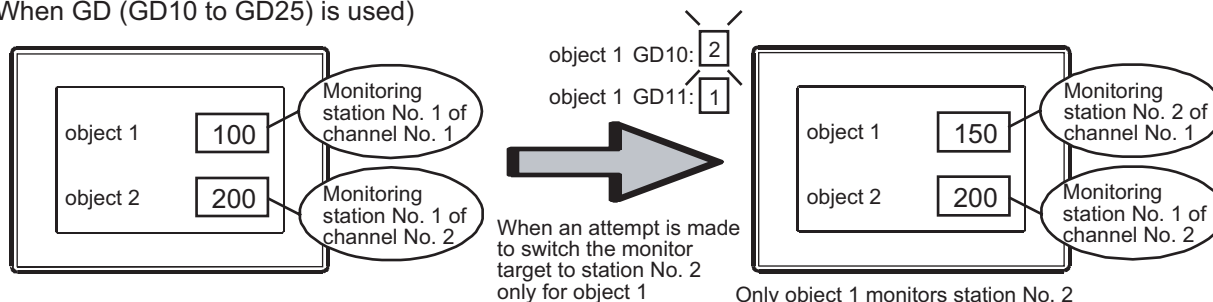
Example: When monitor target channel Nos. of switching station No. device are 1 and 2.



(When switching station No. device is used)



(When GD (GD10 to GD25) is used)





POINT

The timing at which station No. changes

The station No. of monitor target changes when a value of GD10 to GD25 is changed.

■ GOT special register (GS)

The GOT special register includes the following two types.


Device	Range	Description
Read device	GS384 to GS639, GS1792 to GS2047	The user can control the GOT behavior by writing values.  (1) Read device
Write device	GS0 to GS383, GS640 to GS1791	The user can control the GOT behavior by writing values.  (2) Write device

HINT

Functions affected by GOT special register

Some GOT special registers affect multiple functions on the GOT.






















































































For the relation between each GOT special register and GOT functions, refer to the following.

 Appendix6 Relevant Settings














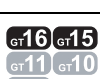

(1) Read device

Device	Function	Reference	Model
GS0 to 383	Write device	(2) Write device	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS384	Script common control	(Functions) 28. SCRIPT FUNCTION	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS385	Script monitoring time		
GS386	Screen script initial operation		
GS387	Object script common control	(Functions) 28. SCRIPT FUNCTION	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS388	Object script monitoring time		
GS389	Object script initial operation		
GS390	File operation function data storage order	(Functions) 28. SCRIPT FUNCTION	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS391 to 399	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS400	Gateway common control	GOT1000 Series Gateway Functions Manual for GT Works3	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS401 to 446	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS447	Exclusive authorization control	GT SoftGOT1000 Version3 Operating Manual for GT Works3	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000


(Continued to next page)

Device	Function	Reference	Model
GS448	Modem connection control	See (a) below	    
GS449	Use prohibited	-	    
GS450	Monitor common control	See (b) below	    
GS451	Auto screen save time	See (c) below	    
GS452	Error detection common control	See (d) below	    
GS453	Use prohibited	-	    
GS454	Ethernet access control	See (e) below	    
GS455	Intensity control	See (f) below	    
GS456	Use prohibited	-	    
GS457	Pass-through transparent stop control	See (g) below	    
GS458 to 459	Use prohibited	-	     (Functions) 28. SCRIPT FUNCTION
GS460	Conversion start indication		
GS461	Conversion devices		
GS462	Conversion source head device No.		
GS463	Conversion destination head device No.		
GS464	Store error value		
GS465 to 499	Use prohibited	-	
GS500	GT SoftGOT1000 common control	See (h) below	    
GS501 to 502	Application start signal	See (i) below	
GS503	GT SoftGOT1000 full screen size (Width)	See (j) below	
GS504	GT SoftGOT1000 full screen size (Height)	See (k) below	
GS505 to 509	Use prohibited	-	    
GS510	Device data transfer information	See (l) below	    
GS511	Touch status communication control	See (m) below	    
GS512	Time change information	4.9	
GS513 to 516	Changed time		
GS517	External I/O function notification/control function	See (n) below	    
GS518	Sound output cancel control	See (o) below	    

(Continued to next page)

Device	Function	Reference	Model
GS519	Use prohibited	-	
GS520	Buffering and file access control	See (p) below	
GS521	Trigger backup data send delay	See (q) below	
GS522 to 530	Use prohibited	-	
GS531 to 538	Temperature controller/servo amplifier monitor station disconnection (CH1)	See (r) below	
GS539	Channel shutdown control (CH1)	See (s) below	
GS540	Use prohibited	-	
GS541 to 548	Temperature controller/servo amplifier monitor station disconnection (CH2)	See (r) below	
GS549	Channel shutdown control (CH2)	See (s) below	
GS550	Use prohibited	-	
GS551 to 558	Temperature controller/servo amplifier monitor station disconnection (CH3)	See (r) below	
GS559	Channel shutdown control (CH3)	See (s) below	
GS560	Use prohibited	-	
GS561 to 568	Temperature controller/servo amplifier monitor station disconnection (CH4)	See (r) below	
GS569	Channel shutdown control (CH4)	See (s) below	
GS570 to 576	MODBUS communication control function	See (t) below	
GS577 to 579	Use prohibited	-	
GS580 to 583	Microcomputer connection (serial) extended setting (CH1 to CH4)	See (u) below	
GS584 to 637	Use prohibited	-	
GS638	Maintenance time notification control	See (v) below	
GS639	GOT reset control	See (w) below	
GS640 to 1023	Write device	(2) Write device	

(Continued to next page)

Device	Function	Reference	Model
GS1024 to 1791	Write device	(2) Write device	
GS1792 to 1823	Use prohibited	-	
GS1824	USB drive common information	See (x) below	
GS1825 to 2047	Use prohibited	-	

(a) Modem connection control (GS448 (16 bits))

b15	b14	b13	b12	b11 to b2							b1	b0
-----	-----	-----	-----	-----------	--	--	--	--	--	--	----	----

GS448 controls communication between the GOT and a modem.

- b0: Turns on to send the initialization command to the modem.
- b1: Turns on to send the circuit disconnect command to the modem.
- b2 to b11: Must not be used
- b12: While this bit is on, reading project data and resource data from the GOT via modems is prohibited.
- b13: While this bit is on, writing project data and resource data to the GOT via modems is prohibited.
- b14: Must not be used
- b15: While this bit is on, communication between a personal computer and the GOT via modems is prohibited.

POINT

(1) **Turning on GS448.b0 during connecting to the circuit**

The device disconnects the circuit, and then sends the initialization command.

The device initializes the modem connection status notification (GS248.b14) and the modem circuit connection baud rate (GS249) at the same time.

(2) **Modem initialization signal and Modem circuit disconnect signal**

Do not turn on the Modem initialization signal (GS448.b0) and the Modem circuit disconnect signal (GS448.b1) in the following cases.


Even if GS448.b0 and GS448.b1 turn on, the connection between modems cannot be disconnected.

- While the GOT communicates with GX Works2 or GX Developer by using the FA transparent function
- While the GOT communicates with GT Designer3


(b) Monitor common control (GS450 (16 bit))

b15	b14	b13	b12	b11 to b9			b8	b7 to b5			b4	b3	b2	b1	b0
-----	-----	-----	-----	-----------	--	--	----	----------	--	--	----	----	----	----	----

- b0: When it is on, displays a confirm message after numerical/ASCII data are input.
- b1: Controls the displaying methods of the message displayed when an numerical value exceeding the valid range is input.
Turning on displays a message during input of the numerical value.
Turning off displays a message after the numerical value is entered.
- b2: Turns on to activate the system signal 1-1.b4 (Numeric value input read complete signal), system signal 2-1.b4 (Numeric value input signal), [Numeric Value Input Number], [Current Cursor Display User ID], and [Previous Cursor Display User ID] on the [Environmental Setting] dialog box (System information) during ASCII input as well.
- b3: Turns on to store "0" in [Current Cursor Display Object ID], [Previous Cursor Display Object ID], [Current Cursor Display User ID], and [Previous Cursor Display User ID] on the [Environmental Setting] dialog box (System information) when a cursor is erased.
- b4: Activates the Kana-kanji conversion function for ASCII input when turned on.
- b5 to b7: Use prohibited
- b8: When it is on, the BMP/JPEG file in the CF card can be used as parts by Parts Display/Parts Movement.
Turning off displays parts registered by GTDesigner3.
When [Show image files in the memory card at the time of specifying Parts No. 9001-9999] on the [Parts Setting] dialog box is selected, a BMP/JPEG file in the CF card is used as a part regardless of the on/off of this signal.

 (Functions) 20. PARTS DISPLAY

- b9 to b11: Use prohibited
- b12: Controls the timing when the screen/station No. changes by touch switch operation.
This applies when multiple actions including either of the bit alternate/bit set/bit reset and either of screen switching/station No. switching are set for a touch switch.

 (Functions) 2. TOUCH SWITCH

- b13: Storing historical information of the previous touch switch to a CF card is enabled when it is turned on.
 - b14: Set the action of the previous touch switch as history mode when it is turned on.
 - b15: Use prohibited
- (c) Auto screen save time (GS451 (16 bit))
Store the time before close (OFF) the monitor screen in screen save function.
Store the value by 1 to 60 (Min).
(To store value higher than 60, store it as 60)
The changed value is validated after canceling screen save when changing value in screen save.

POINT

(1) Relationship between GS451 and GOT utility (screen save time)

If value other than 0 is stored in GS451, the screen save time set in GOT utility will be invalidated.
To validate the screen save time of utility, store 0 in GS451.

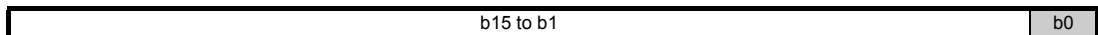
(2) The Modem initialization signal and the Modem circuit disconnect signal

Do not turn on the Modem initialization signal (GS448.b0) and the Modem circuit disconnect signal (GS448.b1) in the following cases.

Even if GS448.b0 and GS448.b1 turn on, the connection between modems cannot be disconnected.

- While the GOT communicates with GX Works2 or GT Designer3 by using the FA transparent function
- While the GOT communicates with GT Designer3

- (d) Error detection common control (GS452 (16 bit))



- b0: Turns ON to turn the error detection common information (GS252.b0) OFF.
- b1 to b15: Use prohibited

- (e) Ethernet access control (GS454 (16 bits))



GS454 controls the OS installation/uninstallation on/from the GOT via Ethernet, or controls the project data write/read to/from the GOT via Ethernet.

- b0: When the bit turns on, OSes cannot be installed on the GOT via Ethernet.
- b1: When the bit turns on, project data cannot be written to the GOT via Ethernet.
- b2 to 7: Use prohibited
- b8: When the bit turns on, project data cannot be read from the GOT via Ethernet.
- b9 to 15: Use prohibited

(f) Intensity control (GS455 (16 bits))

If a value is stored, the intensity of the GOT display section can be adjusted.

This device is valid for the GOT that can adjust the intensity.


The intensity is changed according to the following stored values.

Stored value of GS455	Intensity		Stored value of GS455	Intensity	
	GOT with 8-level intensity adjustment	GOT with 4-level intensity adjustment		GOT with 8-level intensity adjustment	GOT with 4-level intensity adjustment
0	Intensity set in the utility		5	5	3
1	1	1	6	6	
2	2		2	7	7	4
3	3	8		8	
4	4	9 or more		Intensity set in the utility	

The intensity of the GOT can be confirmed by the intensity notification (GS255).

 (q) Intensity notification (GS255 (16 bits))

For the specifications of the GOT display section, refer to the following.

 User's Manual for the GOT used

POINT

Setting value changed by the intensity control (GS455)

The intensity control (GS455) changes the setting value of the intensity temporarily.

If the GOT is turned off after the setting value of the intensity is changed, the value is returned to the value set in the utility.

(g) Pass-through transparent stop control (GS457 (16 bits))

When "1" is set at this area, pass-through transparent stop request is performed.

By using this area, the user can expedite recovery from the pass-through transparent recovery waiting status.

This area is effective only when "2" (pass-through mode in operation) is set for FA transparent status (GS256).

0: No stop request

1: Stop request

(h) GT SoftGOT1000 common control (GS500 (16 bits))

b15 to b2	b1	b0
-----------	----	----

- b0: The dialog box for exiting the GT SoftGOT1000 is displayed when the bit turns ON.
The signal turns OFF if exiting is canceled in the displayed dialog box.
- b1: When the bit turns on, GT SoftGOT1000 is displayed in the full screen mode.
When the bit turns off, the full screen mode of GT SoftGOT1000 is canceled.
- b2 to b15: Use prohibited

(i) Application start signal (GS501 to GS502 (16 bits))

b15 to b0

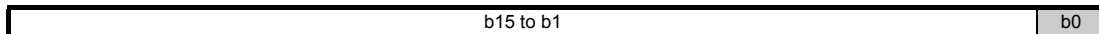
b0 to b15: When a bit turns ON, the application assigned to each bit by the GT SoftGOT1000 runs.

- (j) GT SoftGOT1000 full screen size (Width) (GS503 (16 bits))
 With the full screen mode function of GT SoftGOT1000, set the width of GT SoftGOT1000 monitor screen (320 to 1920 dots).
 When the set value is 320 or less, the value is processed as 320. When the set value is 1920 or more, the value is processed as 1920.
- (k) GT SoftGOT1000 full screen size (Height) (GS504 (16 bits))
 With the full screen mode function of GT SoftGOT1000, set the height of GT SoftGOT1000 monitor screen (240 to 1200 dots).
 When the set value is 240 or less, the value is processed as 240. When the set value is 1200 or more, the value is processed as 1200.
- (l) Device data transfer information (GS510 (16 bits))



- When the bit turns on, the device stores 0 in the error device data transfer ID (GS642) and the device data transfer error count (GS643).
- When the bit turns on, the device stores 0 in the device data transfer processing time (GS644), the device data transfer min. processing time (GS646), and the device data transfer max. processing time (GS648).
- b2 to b15: Use prohibited

- (m) Touch status communication control (GS511 (16 bits))



- b0: When the bit turns on, the touch status is output to the personal computer.
 When the bit turns off, the touch status is not output to the personal computer.
- b1 to b15: Use prohibited

POINT

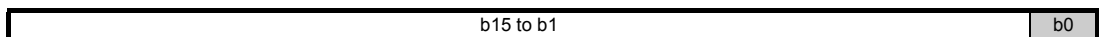
For using touch status communication control

For using the touch status communication control, the extended function OS for the remote personal computer operation function is required.

For details of the remote personal computer operation function, refer to the following.

 (Functions) 31. REMOTE PERSONAL COMPUTER OPERATION FUNCTION

- (n) External I/O function notification/control function (GS517 (16 bits))



- b0: When b0 turns on, the 128-point input can be executed with the external I/O function.
 When b0 turns off, the 16-point input can be executed.
- b1 to b15: Use prohibited


HINT

128-point input

Without the 128-point input (when the above device turns off), a GOT internal device turns on when the 16-point input is executed with an input terminal.

With the 128-point input (when the above device turns on), a 16-point input with an input terminal is used with a 8-point scan signal.

For connection diagrams of each signal with the external I/O function, refer to the following manual.

 GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3

(o) Sound output cancel control (GS518 (16 bits))

b15 to b2	b1	b0
-----------	----	----

- b0: When the bit turns on, a sound output during play is cancelled.
- b1: When the bit turns on, a sound output during play is cancelled and all sound output requests are cancelled.
- b2 to b15: Use prohibited

(p) Buffering and file access control (GS520 (16 bits))

b15 to b1	b0
-----------	----

- b0: Turns on to store the whole data in the buffering area in the destination drive at the timing of the rising edge.
- b1 to b15: Use prohibited

(q) Trigger backup data send delay (GS521 (16 bits))

The backup/restore function can set the delay time for backup communication intervals. Setting of the delay time can reduce the load of other processes (such as monitoring objects) with the backup process.

The actually time set by the set value is listed as follows.

Set value	Delay time
0	None
1 to 100	Set value × 5(ms)
101 or more	500(ms)

POINT

Setting of trigger backup data send delay

Backup communication times are longer than a default when the trigger backup data send delay is set.

Set the suitable delay time to match the processing condition of backup function and others (such as monitoring objects).

(r) Temperature controller/servo amplifier monitor station disconnection (CH1 to CH4) (GS531 to 538, GS541 to 548, GS551 to 558, GS561 to 568 (16 bits))

When the bit corresponding to the station No. of the temperature controller or servo amplifier turns on, the specified station is disconnected from the GOT.

(For the multi-channel connection, the bit of the device corresponding to each channel No. (CH1 to CH4) turns on.)

1: Disconnected

0: Connected


The following shows the station numbers for each device.

Device				Station No.															
CH1	CH2	CH3	CH4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS531	GS541	GS551	GS561	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
GS532	GS542	GS552	GS562	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS533	GS543	GS553	GS563	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS534	GS544	GS554	GS564	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS535	GS545	GS555	GS565	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS536	GS546	GS556	GS566	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS537	GS547	GS557	GS567	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS538	GS548	GS558	GS568	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112

POINT

(1) Error station


When an error station is disconnected from the GOT, the temperature controller/servo amplifier faulty station information corresponding to the disconnected station turns off.

 (2) (x) Temperature controller/servo amplifier faulty station information (CH1 to CH4) (GS281 to 288, GS301 to 308, GS321 to 328, GS341 to 348(16 bits))

(2) Restrictions

- The stations with the station numbers of 128 or later cannot be disconnected from the GOT.
- The stations with the station numbers specified on GT Designer3 cannot be disconnected using the device of the temperature controller/servo amplifier monitor station disconnection.

For specifying station numbers, refer to the following.


 GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3

(s) Channel shutdown control(CH1 to CH4)(GS539, GS549, GS559, GS569)

b15 to b1	b0
-----------	----

Communication of each channel is prohibited.

When this signal turns on, the channel observation notification information (GS299, GS319, GS339, GS359) for the channel whose communication is prohibited turns off.

 (2) (y) Channel observation notification information (GS299, GS319, GS339, GS359 (16 bits))

- b0: While the bit is on, communication of each channel is prohibited.
- b1 to b15: Use prohibited

(t) MODBUS communication control function (GS570 to GS576 (16 bits))

When some controllers do not comply with the specifications, this function enables the GOT to reduce the communication delay in the MODBUS® network.

Even if the GOT communicates with the controllers, settings can be changed.


When the multi-channel function uses the MODBUS®/RTU connection with multiple channels, the channels share settings.

Device	Function
GS570	b0 When the bit turns on, the function code 0FH (Write multiple coils) is not available.
	b1 When the bit turns on, the function code 10H (Write multiple registers) is not available.
	b2 to b15 Use prohibited
GS571	Set the maximum number of device points (1 to 2000) for a message with the function code 01H (Read coils). When the maximum number of device points is set to other than 1 to 2000, the number is set to 2000.
GS572	Set the maximum number of device points (1 to 2000) for a message with the function code 02H (Read discrete inputs). When the maximum number of device points is set to other than 1 to 2000, the number is set to 2000.
GS573	Set the maximum number of device points (1 to 125) for a message with the function code 03H (Read holding registers). When the maximum number of device points is set to other than 1 to 125, the maximum number is set to 125.
GS574	Set the maximum number of device points (1 to 125) for a message with the function code 04H (Read input registers). When the maximum number of device points is set to other than 1 to 125, the maximum number is set to 125.
GS575	Set the maximum number of device points (1 to 1968) for a message with the function code 0FH (Write multiple coils). When the maximum number of device points is set to 0, the maximum number is set to 800. When the maximum number of device points is set to other than 1 to 1968, the maximum number is set to 1968.
GS576	Set the maximum number of device points (0 to 123) for a message with the function code 10H (Write multiple registers). When the maximum number of device points is set to 0, the maximum number is set to 100. When the maximum number of device points is set to other than 0 to 123, the maximum number is set to 123.

POINT

Function codes supported by the GOT

For function codes supported by the GOT, refer to the following.

 GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3


- (u) Microcomputer connection (serial) extended setting (CH1 to CH4) (GS580 to GS583 (16 bits))

b15 to b1	b0
-----------	----

- b0: For the microcomputer connection (serial), when the bit is on and the data format of the message format is the format 12 or 13, communication packets are fully compatible with the Digital Electronics Corporation's memory link method in the communication.

(ON: Fully compatible, OFF: Partly compatible)

For details of the message format of the microcomputer connection (serial), refer to the following.

 GOT1000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3

- b1 to b15: Use prohibited

- (v) Maintenance time notification cancel control (GS638 (16 bits))

b15 to b8	b7	b6	b5	b4	b3	b2	b1	b0
-----------	----	----	----	----	----	----	----	----

- b0: Turns on to turn off the first-stage backlight maintenance time notification signal (GS680.b0). While this bit is on, the first-stage backlight maintenance time notification signal (GS680.b0) remains off even if the backlight power on addition time (GS681 (32 bits)) exceeds the backlight maintenance notification time setting specified with a utility.
- b1: Turns on to turn off the first-stage display section maintenance time notification signal (GS680.b1). While this bit is on, the first-stage display section maintenance time notification signal (GS680.b1) remains off even if the display section power ON addition time (GS683 (32 bits)) exceeds the display section maintenance notification time setting specified with a utility.
- b2: Turns on to turn off the first-stage touch key maintenance time notification signal (GS680.b2). While this bit is on, the first-stage touch key maintenance time notification signal (GS680.b2) remains off even if any of the touch key pushing addition times (GS700 to 979) exceeds the touch key maintenance notification count setting specified with a utility.
- b3: Turns on to turn off the first-stage built-in flash memory maintenance time notification signal (GS680.b3). While this bit is on, the first-stage built-in flash memory maintenance timing notification signal (GS680.b3) remains off even if the built-in flash memory writing times (GS685 (32 bits)) exceeds the built-in flash memory maintenance notification count setting specified with a utility.
- b4: Turns on to turn off the second-stage backlight maintenance time notification signal (GS680.b4). While this bit is on, the second-stage backlight maintenance time notification signal (GS680.b4) remains off even if backlight power ON addition time (GS681 (32 bits)) exceeds the backlight maintenance notification time setting specified with a utility.
- b5: Turns on to turn off the second-stage display section maintenance time notification signal (GS680.b5). While this bit is on, the second-stage display section maintenance time notification signal (GS680.b5) remains off even if the backlight power ON addition time (GS683 (32 bits)) exceeds the display section maintenance notification time setting specified with a utility.
- b6: Turns on to turn off the second-stage touch key maintenance time notification signal (GS680.b6). While this bit is on, the second-stage touch key maintenance time notification signal (GS680.b6) remains off even if any of the touch key pushing addition times (GS700 to 979) exceeds the touch key maintenance notification count setting specified with a utility.
- b7: Turns on to turn off the second-stage built-in flash memory maintenance time notification signal (GS680.b7). While this bit is on, the second-stage built-in flash memory maintenance time notification signal (GS680.b7) remains off even if the built-in flash memory writing times (GS685 (32 bits)) exceeds the built-in flash memory maintenance time notification count setting specified with a utility.

- b8 to b15: Use prohibited

POINT

Action of maintenance time notification cancel signal upon power-off of GOT

The maintenance time notification cancel signal is reset when the GOT is powered off.

Therefore the maintenance time notification signal deactivated during operation of the maintenance timing notification cancel signal is turned on again when the GOT is powered on.

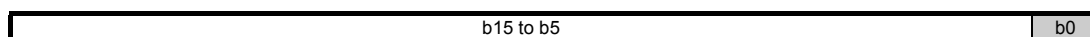
To keep the maintenance time notification signal off even when the GOT is powered off and then on again, use the state monitoring function or the like to turn on the maintenance time notification cancel signal again.

(w) GOT reset control (GS639 (16 bits))



- b0 to b13: Use prohibited
- b14: Turns on to exit all the GOT functions. (The GOT power can be turned off safely.)
Not supported by GT11.
- b15: Turn on to software-reset the GOT at the rising edge timing.

(x) USB drive common control (GS1824 (16 bits))



- b0: When the bit turns on, the USB memory connected to the USB interface on the GOT can be removed.
- b5 to b15: Use prohibited

(2) Write device

Device	Function	Reference	Model
GS0	Common information 1	See (a) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS1	Base screen information	See (b) below	
GS2 to 5	Use prohibited	-	
GS6	CC-Link G4 station No.(CH1)	See (c) below	GT16 GT15 GT11 GT10 SoRGOT 1000
	GOT multidrop slave station No. (CH1)	See (d) below	
GS7	1 second binary counter	See (e) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS8	Scan time of monitor	See (f) below	
GS9	Use prohibited	-	
GS10	Scan counter of monitor	See (g) below	
GS11 to 13	Use prohibited	-	
GS14	Script common information	(Functions) 28. SCRIPT FUNCTION	GT16 GT15 GT11 GT10 SoRGOT 1000
GS15	Script error pointer		
GS16	Script No.		
GS17	Error code		
:	:		
GS46	Script No.		
GS47	Error code		
GS48	Script execute pointer		
GS49 to 79	Script execute No.		
GS80	Object script common information	(Functions) 28. SCRIPT FUNCTION	GT16 GT15 GT11 GT10 SoRGOT 1000
GS81	Object script error point		
GS82	Object script user ID		
GS83	Error code		
:	:		
GS112	Object script user ID		
GS113	Error code		
GS114	Object script error execute pointer		
GS115 to 145	Object script error execute ID		
GS146 to 153	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS154	File operation function information	(Functions) 28. SCRIPT FUNCTION	
GS155 to 199	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS200 to 229	Gateway common information	GOT1000 Series Gateway Functions Manual for GT Works3	GT16 GT15 GT11 GT10 SoRGOT 1000
GS230	No. of faulty stations	See (h) below	
GS231 to 238	Ethernet faulty station information	See (i) below	
GS239	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS240	External authentication status notification	See (j) below	GT16 GT15 GT11 GT10 SoRGOT 1000

(Continued to next page)

Device	Function	Reference	Model
GS241	Insufficient security level	See (k) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS242	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS243	Object direct input reception notification	See (l) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS244	SoftGOT-GOT link status control/notification	GT SoftGOT1000 Version3 Operating Manual for GT Works3	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS245 to 247	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS248	Modem connection status notification	See (m)below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS249	Modem circuit connection baud rate	See (n) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS250 to 251	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS252	Error detection common information	See (o) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS253	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS254	Ethernet incorrect access notification	See (p) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS255	Intensity notification	See (q) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS256	FA transparent status	See (r) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS257	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS258	Printer status information	See (s) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS259	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS260	Integer ↔ Real number conversion status	(Functions) 28. SCRIPT FUNCTION	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS261	Integer ↔ Real number conversion error code		
GS262	System alarm GOT error channel No.	See (t) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS263	System alarm CPU error channel No.	See (u) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS264	System alarm network error channel No.	See (v) below	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS265	SNTP time synchronization setting status	GOT1000 Series MES Interface Function Manual for GT Works3	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS266 to 272	SNTP time query result		
GS273 to 274	Use prohibited	-	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000
GS275	Monitoring interval timeout count	GOT1000 Series MES Interface Function Manual for GT Works3	Gr16 Gr15 Gr11 Gr10 SoftGOT 1000

(Continued to next page)

Device	Function	Reference	Model
GS276	Document display status notification	See (w) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS277 to 280	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS281 to 288	Temperature controller/servo amplifier faulty station information (CH1)	See (x) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS289 to 298	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS299	Channel observation notification information (CH1)	See (y) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS300	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS301 to 308	Temperature controller/servo amplifier faulty station information (CH2)	See (x) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS309 to 318	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS319	Channel observation notification information (CH2)	See (y) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS320	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS321 to 328	Temperature controller/servo amplifier faulty station information (CH3)	See (x) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS329 to 338	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS339	Channel observation notification information (CH3)	See (y) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS340	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS341 to 348	Temperature controller/servo amplifier faulty station information (CH4)	See (x) below	GT16 GT15 GT11 GT10 SoRGOT 1000
GS349 to 358	Use prohibited	-	GT16 GT15 GT11 GT10 SoRGOT 1000
GS359	Channel observation notification information (CH4)	See (y) below	GT16 GT15 GT11 GT10 SoRGOT 1000

(Continued to next page)

Device	Function	Reference	Model
GS360	CC-Link G4 station No.(CH1)	See (c) below	    
	GOT multidrop slave station No. (CH1)	See (d) below	
GS361	CC-Link G4 station No.(CH2)	See (c) below	    
	GOT multidrop slave station No. (CH2)	See (d) below	
GS362	CC-Link G4 station No.(CH3)	See (c) below	    
	GOT multidrop slave station No. (CH3)	See (d) below	
GS363	CC-Link G4 station No.(CH4)	See (c) below	    
	GOT multidrop slave station No. (CH4)	See (d) below	
GS364 to 383	Use prohibited	-	    
GS384 to 639	Read device	(1) Read device	
GS640 to 641	Use prohibited	-	
GS642	Error device data transfer ID	See (z) below	    
GS643	Device data transfer error count	See (aa) below	
GS644	Device data transfer processing time	See (ab) below	
GS645	Device data transfer ID	See (ac) below	
GS646	Device data transfer min. processing time	See (ad) below	
GS647	Device data transfer ID (min. processing time)	See (ae) below	
GS648	Device data transfer max. processing time	See (af) below	
GS649	Device data transfer ID (max. processing time)	See (ag) below	
GS650 to 653	Present time	4.9	    
GS654	Touch status external notification (X-coordinate)	See (ah) below	
GS655	Touch status external notification (Y-coordinate)	See (ai) below	
GS656	Touch status external notification (touch status)	See (aj) below	
GS657	Trigger backup processing setting No. notification	See (ak) below	    
GS658 to 665	Extended external input status notification signal	See (al) below	
GS666 to 667	Use prohibited	-	    
GS668	Sound status information	See (am) below	    
GS669	Sound file number during play	See (an) below	    
GS670	No. of trigger buffer data (GS670)	GOT1000 Series MES Interface Function Manual for GT Works3	    
GS671	Trigger buffer overflow count (GS671)		
GS672 to GS675	Trigger buffer overflow flag per job (GS672 to GS675)		
GS676 to GS679	Use prohibited	-	    

(Continued to next page)

Device	Function	Reference	Model
GS680 *1	Maintenance time notification information	See (ao) below	GT16 GT15 GT11 GT10 SoftGOT 1000
GS681 to 682 *1	Backlight power ON addition time	See (ap) below	
GS683 to 684 *1	Display section power ON addition time	See (aq) below	
GS685 to 686 *1	Built-in flash memory writing times	See (ar) below	
GS687 to 699	Must not be used	-	GT16 GT15 GT11 GT10 SoftGOT 1000
GS700 to 701 *1	Touch key pushing addition times No. 0	See (as) below	GT16 GT15 GT11 GT10 SoftGOT 1000
:	:		
GS978 to 979 *1	Touch key pushing addition times No. 139		
GS980 to 1023	Use prohibited	-	GT16 GT15 GT11 GT10 SoftGOT 1000
GS1024	USB drive common information	See (at) below	GT16 GT15 GT11 GT10 SoftGOT 1000
GS1025	RGB signal input status notification	See (au) below	GT16 GT15 GT11 GT10 SoftGOT 1000
GS1026	RGB signal resolution (horizontal)	See (av) below	
GS1027	RGB signal resolution (vertical)	See (aw) below	
GS1028	RGB signal refresh rate	See (ax) below	
GS1029 to 1240	Use prohibited	-	GT16 GT15 GT11 GT10 SoftGOT 1000
GS1241	Insufficient security level notification	See (ay) below	
GS1242 to 1791	Use prohibited	-	
GS1792 to 2047	Read device	(1) Read device	

*1 For using the function, the GOT requires a battery.

(a) Common information1 (GS0 (16 bit))

b15 to b11	b10	b9	b8	b7 to b6	b5	b4	b3	b2	b1	b0
------------	-----	----	----	----------	----	----	----	----	----	----

- b0: Repeats turning ON and OFF for every communication cycle*1. (For channel No. 1)
- b1: Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen setting processing is complete. (This applies to station No. switching, security level change or language switching.)
It is used to check (debug) the screen switch settings.
- b2: Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen object processing of the status observation is complete. (This applies to station No. switching, security level change or language switching.)
It is used to activate the status observation for once when switching the screen.
- b3: Turns ON while the initial screen is displayed at power-on.
It turns off when the base screen is switched over.
- b4: Always ON.
- b5: Always OFF.
- b6 to b7: Use prohibited
- b8: Repeats turning ON and OFF for every communication cycle*1. (For channel No. 2)
- b9: Repeats turning ON and OFF for every communication cycle*1. (For channel No. 3)
- b10: Repeats turning ON and OFF for every communication cycle*1. (For channel No. 4)
- b11 to b15: Use prohibited

*1 A cycle is the elapsed time for GOT to read the objects on the current screen display and the data set in the common settings.



Actions of b4 and b5 in common information 1 (GS0)

b4 and b5 in common information 1 (GS0) are always ON (GB40) and always OFF (GB41), respectively.

(b) Base screen information (GS1 (16 bit))

b15 to b11	b10	b9	b8	b7 to b3	b2	b1	b0
------------	-----	----	----	----------	----	----	----

- b0: Repeats turning ON and OFF for every communication cycle while the base screen is displayed. (For channel No. 1)
- b1: Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen setting processing is complete. (This applies to station No. switching, security level change or language switching.)
It is used to check (debug) the screen switch settings
- b2: Turns ON when the base/window screen is switched and remains ON until a cycle of the on-screen object processing of the status observation is complete. (It functions in the same way for the station No. switching and security level switching.)
It is used to activate the status observation for once when the screen is switched over.
- b3 to b7: Use prohibited
- b8: Repeats turning ON and OFF for every communication cycle while the base screen is displayed. (For channel No. 2)
- b9: Repeats turning ON and OFF for every communication cycle while the base screen is displayed. (For channel No. 3)
- b10: Repeats turning ON and OFF for every communication cycle while the base screen is displayed. (For channel No. 4)
- b11 to b15: Use prohibited

(c) CC-Link G4 station No.(CH1) (GS6 (16 bits))

For the CC-Link connection (via G4), the station No. of the connected AJ65BT-G4-S3 or AJ65BT-R2N is stored when the GOT is powered ON.

When the multi-channel function is used, the station No. of channel No. 1 is stored. Station Nos. of channel Nos. 2 to 4 are stored to GS361 to GS363.

(d) GOT multidrop slave station No. (CH1) (GS6 (16 bits))

For the multidrop connection, the station No. of the connected GOT is stored when the GOT is powered ON.

When the multi-channel function is used, the station No. of channel No. 1 is stored. Station Nos. of channel Nos. 2 to 4 are stored to GS361 to GS363.

(e) 1 second binary counter (GS7 (16bit))

Starts counting every second immediately after the power is switched on.

Any given value can be written to this counter to start the count from the written value.

The obtained data are stored as binary data.

This is used to check how long the time has elapsed from specific timing (operation, etc.).

(f) Scan time of monitor (GS8 (16bit))

Stores the time (ms) of a complete processing cycle set on the display screen as binary data.

Data will be updated when all of the processing set on the display screen is complete.

An error of 10 ms may be produced depending on the processing settings.

Also, this does not apply to the objects that have not been processed by the security function.

It is useful for load checking (debugging) of the monitor processing.

(g) Scan time counter of monitor (GS10 (16bit))

Counts up the number of cycles every time the processing cycle set on the display screen is complete.

Used to check (debug) the number of scan of monitor.

- (h) No. of faulty stations detection (GS230 (16 bit))
 The number of stations where CPU error was detected is stored.
 The station where error occurs can be checked with GS231 to GS238.
- ☞ (i) Ethernet faulty station information (GS231 to GS238 (16 bits))



b0 to b7: Stores the number of faulty stations.
 b8 to b15: Use prohibited

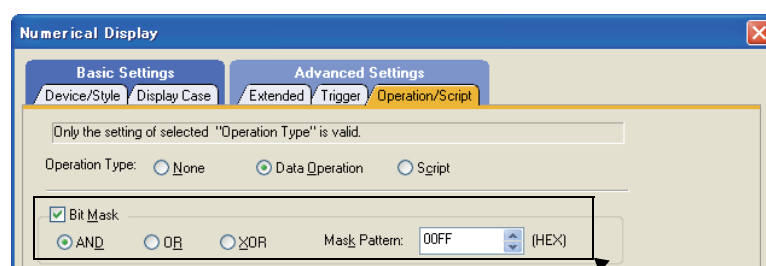
POINT

Monitoring GS230 by numerical display

When monitoring GS230 by numerical display, etc., perform mask processing using data operation function as below.

☞ 5.3.9 Data operation setting

Example: Setting of numerical display ([Operation/Script] tab)



Make setting for mask processing of the upper 8 bits (b15 to b8) of GS230 in Numerical Display.

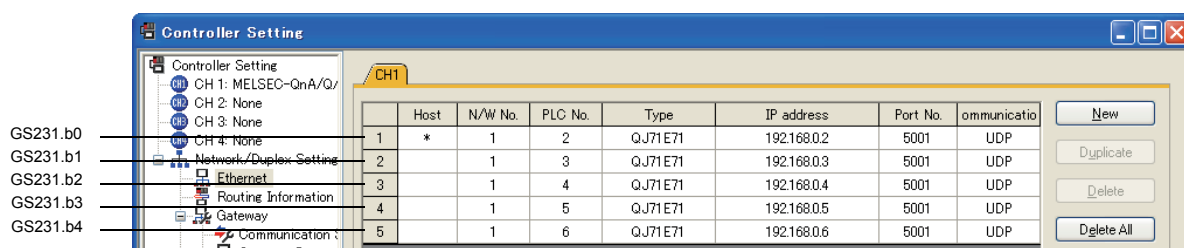
- (i) Ethernet faulty station information (GS231 to GS238 (16 bits))

The bit for the Ethernet module with an error turns on.

0: No error

1: Error

When an alarm occurred has restored, the bit turns off.



Device	Ethernet Setting No															
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS231	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS232	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS233	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS234	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS235	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS236	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS237	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS238	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

(j) External authentication status notification (GS240 (16 bits))

b15	b14	b13	b13 to b2	b1	b0
-----	-----	-----	-----------	----	----

- b0: Turns on when the authentication by an external authentication device or fingerprint unit succeeds.
Turns off when the login screen or operator re-authentication screen is displayed regardless of authentic method.
- b1: Turns on when the authentication by an external authentication device or fingerprint unit fails.
Turns off when the login screen or operator re-authentication screen is displayed regardless of authentic method.
- b2 to b12: Use prohibited
- b13: Turns on while the login screen or operator re-authentication screen is displayed.
- b14: Turns on when the login screen for the authentication by an external authentication device or fingerprint unit is displayed.
- b15: Turns on when the external authentication ID input key window is displayed.

POINT

Notifying the authentication mode by b13 and b14

The status of the Operator authentication reception signal and External authentication reception signal notifies the user of the authentication mode currently being accepted.

Operator authentication reception signal (GS240.b13)	External authentication reception signal (GS240.b14)	Authentication mode
OFF	OFF	The operator authentication not accepted
ON	OFF	The password authentication accepted (operator name + password)
ON	ON	The external authentication accepted (external authentication or fingerprint authentication)

This notifies the user of switching to the auxiliary authentication.

(k) Insufficient security level notification (GS241 (16 bits))

The bit turns on when the screen cannot be displayed because of the insufficient security level.

b15 to b13	b12	b11	b10	b9	b8	b7 to b5	b4	b3	b2	b1	b0
------------	-----	-----	-----	----	----	----------	----	----	----	----	----

- b0: Use prohibited
- b1: Turns on when the overlap window 1 cannot be displayed.
- b2: Turns on when the overlap window 2 cannot be displayed.
- b3: Turns on when the superimpose window 1 cannot be displayed.
- b4: Turns on when the superimpose window 2 cannot be displayed.
- b5 to b7: Use prohibited
- b8: Turns on when a called screen on the base screen cannot be displayed.
- b9: Turns on when a called screen on the overlap window 1 cannot be displayed.
- b10: Turns on when a called screen on the overlap window 2 cannot be displayed.
- b11: Turns on when a called screen on the superimpose window 1 cannot be displayed.
- b12: Turns on when a called screen on the superimpose window 2 cannot be displayed.
- b13 to b15: Use prohibited

b1 to b4 turn off when a screen is displayed.

b1 to b4 turn off when "0" is stored in a screen switching device.

b8 to b12 turn off when a called screen is displayed.

(l) Object direct input reception notification (GS243 (16 bits))

b15	b14 to b0
-----	-----------

- b0 to b14: Use prohibited
- b15: Turns on while an object is in the ready state for the data read by the barcode reader or RFID to be directly input.

(m) Modem connection status notification (GS248 (16 bits))

b15	b14	b13 to b2	b1	b0
-----	-----	-----------	----	----

GS248 notifies the connection status between the GOT and a modem.

- b0: Turns on during sending the initialization command of the modem.
Turns off when the modem initialization is completed, and GS448.b0 turns off.

 (1) (a) Modem connection control (GS448 (16 bits))

- b1: Turns on when the modem initialization is completed.
- b2 to 13: Use prohibited
- b14: Turns on during connecting to the circuit.
Turns off when disconnecting the circuit.
- b15: Turns on when the modem initialization is failed.

(n) Modem circuit connection baud rate (GS249 (16 bits))

This device stores the transmission speed during connecting to the circuit via modems.

When the GOT starts up, resets, initializes modems, and disconnects the circuit, this device stores 0.

(o) Error detection common information (GS252 (16bit))

b15	b14 to b1	b0
-----	-----------	----

- b0: Turns ON if an error is detected in the alarm information file to be stored when executing memory card storage function by alarm history display.
The alarm information file is not stored into a memory card while this bit is ON.
Turns OFF when the error detection common control (GS452.b0) is turned ON.
Useful for error detection during file storage.
- b1 to b13: Use prohibited
- b14: Turns on when the RGB signal for CH2 is not input.
The bit automatically turns OFF when the RGB signal for CH2 is input.
The bit turns OFF when b14 of the device specified for [Video/RGB Input Common] is turned OFF (to hide the RGB screen for CH2).
For details, refer to the following.

 (Functions) 35. RGB DISPLAY FUNCTION

- b15: Turns on when the RGB signal for CH1 is not input.
The bit automatically turns OFF when the RGB signal for CH1 is input.
The bit turns OFF when b15 of the device specified for [Video/RGB Input Common] is turned OFF (to hide the RGB screen for CH1).
For details, refer to the following.

 (Functions) 35. RGB DISPLAY FUNCTION

(p) Ethernet incorrect access notification (GS254 (16 bits))

b15 to b9	b8	b7 to b2	b1	b0
-----------	----	----------	----	----

While OSes and project data cannot be written to or read from the GOT by the Ethernet access control (GS454), GS254 notifies the incorrect write or read request send from GT Designer3.

- b0: Turns on when the OS installation prohibition signal (GS454.b0) is on, and when the GOT receives the OS installation request from GT Designer3 via Ethernet.
When the OS installation prohibition signal (GS454.b0) turns off, the bit turns off.
- b1: Turns on when the Project data write prohibition signal (GS454.b1) is on, and when the GOT receives the project data write request from GT Designer3 via Ethernet.
When the Project data write prohibition signal (GS454.b1) turns off, the bit turns off.
- b2 to b7: Use prohibited
- b8: Turns on when the Project data read prohibition signal (GS454.b8) is on, and when the GOT receives the project data read request from GT Designer3 via Ethernet.
When the Project data read prohibition signal (GS454.b8) turns off, the bit turns off.
- b9 to b15: Use prohibited

(q) Intensity notification (GS255 (16 bits))


The current intensity of the GOT display section is stored.

This device is valid for the GOT that can adjust the intensity.

The following shows the intensity according to the stored value.

Stored value of GS255	Current intensity		Stored value of GS455	Current intensity	
	GOT with 8-level intensity adjustment	GOT with 4-level intensity adjustment		GOT with 8-level intensity adjustment	GOT with 4-level intensity adjustment
1	1	1	5	5	3
2	2	-	6	6	-
3	3	2	7	7	4
4	4	-	8	8	-

For the specifications of the GOT display section, refer to the following.

 User's Manual for the GOT used

(r) FA transparent status (GS256 (16 bits))

Notifies the status of the FA transparent function.

The relationship between the stored value and the FA transparent status is as indicated below.

0: Ordinary monitoring

1: In the transparent mode

2: In the pass-through mode

(s) Printer status information (GS258 (16 bits))

b15 to b4	b3	b2	b1	b0
-----------	----	----	----	----

- b0: Turns ON when the connection between the printer unit of GOT and the printer is established.
Turns OFF when the connection with the printer is shut off.
- b1: Turns ON when a warning level alarm occurs while a printer is connected.
Turns OFF after the restoration from the alarm.
- b2: Turns ON when a fatal level alarm occurs while a printer is connected.
Turns OFF after the restoration from the alarm.
- b3: Turns ON when the printer gets ready for printing.
Stays OFF when the printer is in the preparation status (during warm up, etc.) or during printing.
If printing is not possible although this bit is ON, check whether the printing function (hard copy function, etc.) processing has been completed.
Whether or not the processing has been completed can be confirmed by checking the hard copy output signal (System Signal 2-1.b7), etc.
- b4 to b15: Use prohibited



(1) If printing is not possible

Whether the cause is cable connection error or a problem at the printer can be found by checking this signal (GS258).

Signal status	Cause of Error
GS258.b0: OFF, GS258.b3: OFF	Cable connection error
GS258.b0: ON, GS258.b3: OFF	Although cable is connected correctly, the printer has a problem. (Printer in preparation stage (warming up), during printing, printer error)

(2) Corrective action at the occurrence of an error

Refer to the following manuals for the corrective action to be taken after the occurrence of an error.

 User's Manual for the GOT used

- (t) System alarm GOT error channel No. (GS262 (16 bits))
If a system alarm (GOT error) occurs, the corresponding channel No. is stored.
"0" is stored when the system alarm is cleared.
With some system alarms, channel numbers are not stored.
Refer to the following manual for details.

 User's Manual for the GOT used

- (u) System alarm CPU error channel No. (GS263 (16 bits))
If a system alarm (CPU error) occurs, the corresponding channel No. is stored.
"0" is stored when the system alarm is cleared.
- (v) System alarm network error channel No. (GS264 (16 bits))
If a system alarm (network error) occurs, the corresponding channel No. is stored.
"0" is stored when the system alarm is cleared.
- (w) Document display status notification (GS276 (16 bits))

b15 to b1	b0
-----------	----

- b0: Turns on in the following cases.
 - There is no display target file.
 - Memory card is not installed.
 - The CF card access switch on the GOT is off.
 - The specified file is not an image file or it is damaged.
 - The bit automatically turns off when the problem above is cleared.
 - b1 to b15: Use prohibited
- (x) Temperature controller/servo amplifier faulty station information (CH1 to CH4) (GS281 to 288, GS301 to 308, GS321 to 328, GS341 to 348(16 bits))
With the temperature controller or servo amplifier connection, the bit corresponding to the station with a communication error turns on.
(For the multi-channel connection, the bit of the device corresponding to each channel No. (CH1 to CH4) turns on.)
0: No error
1: Error
When the error is recovered, the bit turns off.
The following shows station numbers for each device.

Device				Station No.															
CH1	CH2	CH3	CH4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS281	GS301	GS321	GS341	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
GS282	GS302	GS322	GS342	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS283	GS303	GS323	GS343	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS284	GS304	GS324	GS344	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS285	GS305	GS325	GS345	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS286	GS306	GS326	GS346	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS287	GS307	GS327	GS347	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS288	GS308	GS328	GS348	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112

POINT

Restrictions

- (1) Errors cannot be detected with the station numbers of 128 or later.
- (2) When an error occurs with the station No. specified on GT Designer2, the own station No. of the error temperature controller or servo amplifier is detected.
(For example, when the station No. specified on GT Designer3 is "110" and the own station No. of the temperature controller or servo amplifier is "10", the bit for the station No.10 turns on.)
For specifying station numbers, refer to the following.

☞ GOT1000 Series Connection Manual for GT Works3 and a controller used

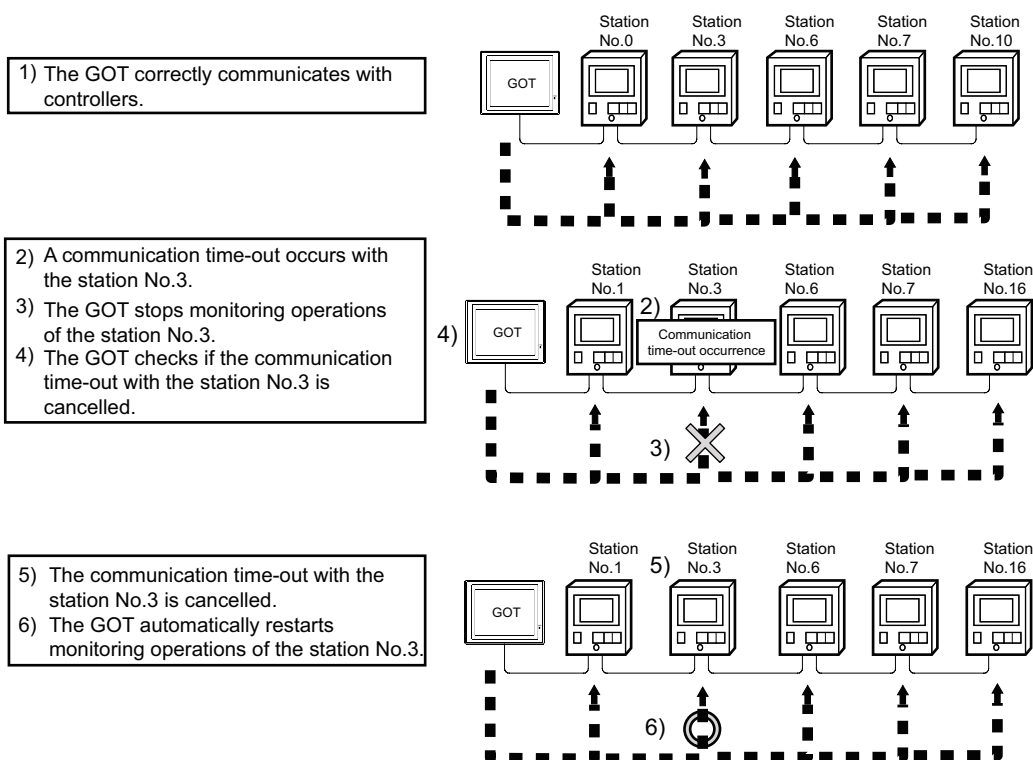
HINT

Dealing with faulty stations

- (1) **The GOT automatically stops monitoring operations of controllers with errors.**

The GOT automatically stops monitoring operations of the faulty station with a communication time-out among controllers so as not to slow monitoring the other stations. (No settings are required.)

The following explains GOT's operations when a communication error occurs with the station No.3.



- (2) **Disconnecting the temperature controller or servo amplifier from the system**

With the temperature controller/servo amplifier monitor station disconnection (GS531 to GS568), the specified temperature controller or servo amplifier can be disconnected from the GOT.

Therefore, no communication time-out occurs even if the temperature controller or servo amplifier is removed for changing units. (No system alarm is displayed on the GOT.)

Depending on the connection type used, the GOT may not monitor temperature controllers or servo amplifiers that follow the disconnected temperature controller or servo amplifier.

- (y) Channel observation notification information (GS299, GS319, GS339, GS359 (16 bits))

b15 to b1	b0
-----------	----

Notifies the communication status of each channel.

- b0: Turns on if a connection error occurs.
- b1 to b15: Use prohibited

- (z) Error device data transfer ID (GS642 (16 bits))

The device stores the device data transfer ID with the executed device data if an error occurs during device data transfer.

- (aa) Device data transfer error count (GS643 (16 bits))

The device stores the number of error times with the executed device data during the device data transfer. (Maximum 65535 times)

When errors occur 65535 times or more, the value remains 65535.

The device data transfer ID with the executed device data is stored in the error device data transfer ID.

- (ab) Device data transfer processing time (GS644 (16 bits))

The device stores the device data transfer processing time for one time. (0 to 60000 (×10ms))

The device stores 60000 (×10ms) when the device data transfer processing time is 600 seconds or more.

- (ac) Device data transfer ID (GS645 (16 bits))

The device stores the device data transfer ID with the executed device data transfer.

- (ad) Device data transfer min. processing time (GS646 (16 bits))

The device stores minimum processing time among all of stored device data transfer processing times (GS644). (0 to 60000 (×10ms))

- (ae) Device data transfer ID (min. processing time) (GS647 (16 bits))

The device stores the device data transfer ID with the executed device data transfer when GS646 stores a minimum processing time.

- (af) Device data transfer max. processing time (GS648 (16 bits))

The device stores a maximum processing time among all of stored device data transfer processing times (GS644). (0 to 60000 (×10ms))

- (ag) Device data transfer ID (max. processing time) (GS649 (16 bits))

The device stores the device data transfer ID with the executed device data when GS648 stores a maximum processing time.

- (ah) Touch status external notification (X-coordinate) (GS654 (16 bits))

The device stores the x-coordinate of touched position when the GOT screen is touched on.

- (ai) Touch status external notification (Y-coordinate) (GS655 (16 bits))

The device stores the y-coordinate of touched position when the GOT screen is touched on.

- (aj) Touch status external notification (touch status) (GS656 (16 bits))

The following values are stored in the device depending on the touched screen types when the GOT screen is touched on.

0: Without touching

1: Touching on the base screen

2: Touching touchable objects on the base screen

11: Touching on the overlap window 1

12: Touching touchable objects on the overlap window 1

21: Touching on the overlap window 2

22: Touching on touchable objects on the overlap window 2

61: Touching on the video window

71: Touching on the key window

81: Touching on the comment window

91: Touching on the popup display

- (ak) Trigger backup processing setting No. notification (GS657 (16 bits))

The GOT notifies users the trigger backup processing status.

The device stores the trigger ID with the executing backup trigger setting during the trigger backup processing.

The device stores 0 when the trigger backup processing is not executed.

(al) Extended external input status notification signal (GS658 to GS665 (16 bits))

When the 128-point input can be executed with the external I/O function, the bit for an input scan signal turns on.

When the 128-point input cannot be executed, the GB devices are always off.

To enable the 128-point input, turns on GS517.b0 (external I/O function notification, external I/O control function).

0: Signal OFF

1: Signal ON

The following shows the devices for each bit.

Scan signal	Extended external input status notification signal	External input signal															
		X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	XA	XB	XC	XD	XE	XF
XSCN0	GS658	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN1	GS659	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN2	GS660	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN3	GS661	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN4	GS662	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN5	GS663	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN6	GS664	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN7	GS665	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15



Controlling signal with controllers

The above signal can be controlled with controllers when the status observation function and the script function are used.

(am) Sound status information (GS668 (16 bits))

b15	b14 to b0
-----	-----------

- b0 to b14: Use prohibited
- b15: Turns on with a jack disconnection when the sound output function is used.
Turns off without a jack disconnection.

(an) Sound file number during play (GS669 (16 bits))

A sound file number during play is stored in the device.

When no sound file exists during play, 0 is stored in the device.

(ao) Maintenance time notification information (GS680 (16 bits))

b15 to b8	b7	b6	b5	b4	b3	b2	b1	b0
-----------	----	----	----	----	----	----	----	----

- b0: Turns on as a first-stage notification if the backlight power on addition time (GS681 (32 bits)) reaches 80% or above of the maintenance notification time setting specified with a utility function.
- b1: Turns on as a first-stage notification if display power on addition time (GS683 (32 bits)) reaches 80% or above of the display section maintenance notification time setting specified with a utility.
- b2: Turns on as a first-stage notification if any of the touch key pushing addition times (GS700 to 979) reaches 80% or above of the touch key maintenance notification count setting specified with a utility.
- b3: Turns on as a first stage notification if the build in flash memory writing times (GS685 (32b bits)) reaches 80% or above of the built-in flash memory maintenance notification count setting specified with a utility.
- b4: Turns on as a second-stage notification if the backlight power on addition time (GS681 (32 bits)) reaches 100% or above of the backlight maintenance notification time setting specified with a utility function.
- b5: Turns on as a second-stage notification if display power on addition time (GS683 (32 bits)) reaches 100% or above of the display section maintenance notification time setting specified with a utility.
- b6: Turns on as a second-stage notification if any of the touch key pushing addition times (GS700 to 979) reaches 100% or above of the touch key maintenance notification count setting specified with a utility.
- b7: Turns on as a second-stage notification if the built-in flash memory writing times (GS685 (32 bits)) reaches the built-in flash memory maintenance notification count setting specified with a utility.
- b8 to b15: Use prohibited

(ap) Backlight power on addition time (GS681 (32 bits))

The cumulative power-on time of the backlight is stored in binary data.

Unit: hours

(aq) Display power on addition time (GS683 (32 bits))

The cumulative power-on time of the display section is stored in binary data.

Unit: hours

(ar) Build in flash memory writing times (GS685 (32 bits))

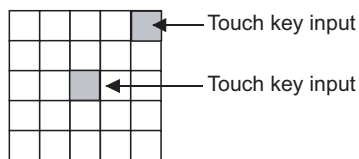
The cumulative writing times of the built-in flash memory is stored in binary data.

- (as) Touch key pushing addition times No. 0 (GS700 (32 bits)).
 Touch key pushing addition times No. 1 (GS702 (32 bits)) to No. 139 (GS978 (32 bits))
 The cumulative pushing times of the touch key is stored in binary data.
 The count is taken in each of areas, divided into the size shown below.

Model name	Area (dots)	The number of touch keys included in an area
GT1695M-X, GT1595-X	96 × 96	36 pieces
GT1685M-S, GT1675M-S, GT1675M-V, GT1675-VN, GT1672-VN, GT1665M-S, GT1665M-V, GT1662-VN, GT1585V-S, GT1585-S, GT1575V-S, GT1575-S, GT1575-V, GT1575-VN, GT1572-VN, GT1565-V, GT1562-VN, GT1555-V, GT1555-Q, GT1550-Q	80 × 80	25 pieces

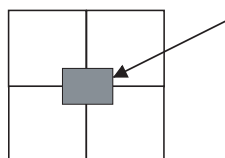
The number of times a touch key is pushed is counted in the manner explained below.

- Touching in an area

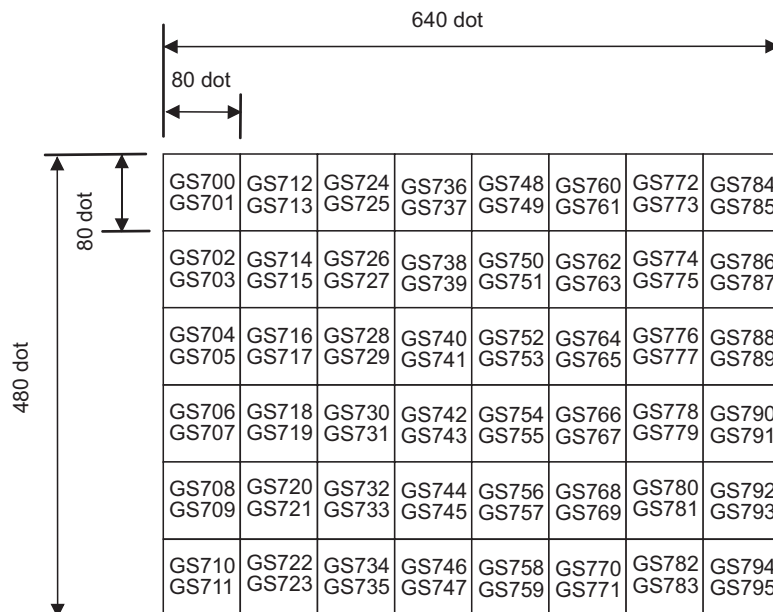


If multiple touch keys are pushed simultaneously in an area, only one count is added.

- Touching four areas



Example: Arrangement of the special registers of GOT of the 640×480 dot screen size

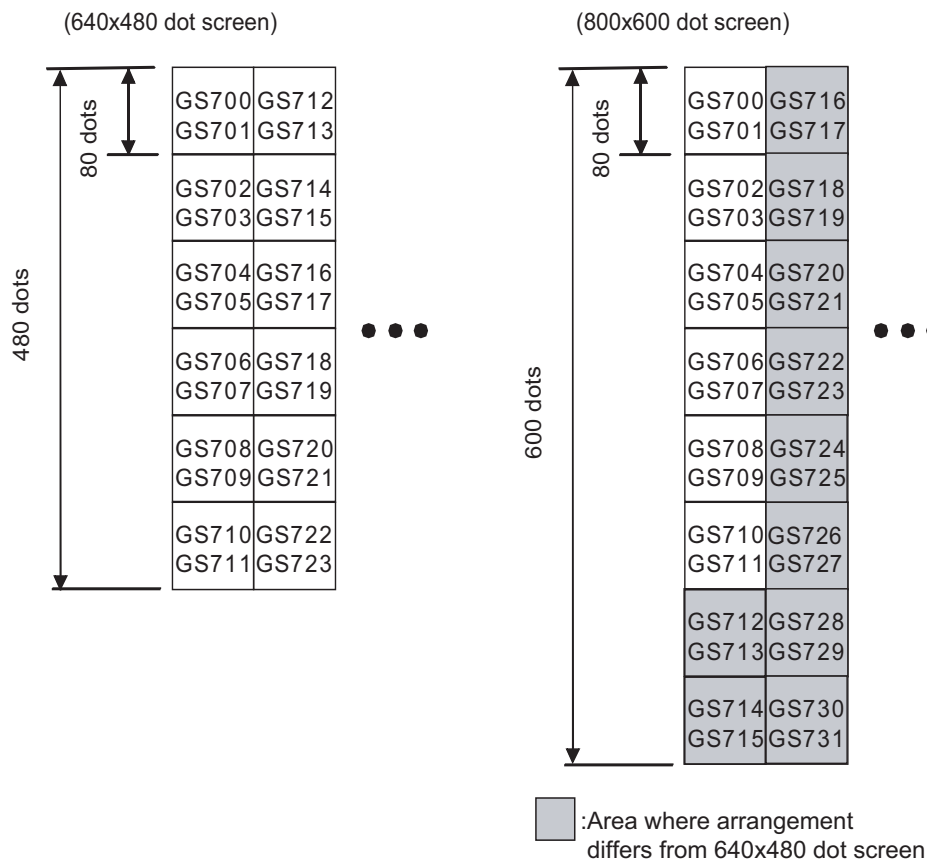


POINT

When the GOT type is changed by the GT Designer3

When the GOT type is changed to the one having different resolution, the arrangement of special registers of GOT changes. After changing the GOT type, check the GOT special registers.

Example: Differences in GOT special register arrangement between 640×480 dot screen and 800×600 dot screen



(at) USB drive common information (GS1024 (16 bits))

b15 to b9	b8	b7 to b1	b0
-----------	----	----------	----

- b0: Turns on when the USB memory connected to the USB interface on the GOT is ready for removal after the USB drive common information (GS1824.b0) turns on.
- b1 to b7: Use prohibited
- b8: Turns on when the USB memory connected to the USB interface on the GOT is ready for use.
- b9 to b15: Use prohibited

(au) RGB signal input status notification (GS1025 (16 bits))

The device notifies the following:

the RGB signal input, supporting the resolution and the refresh rate of the RGB signal or not, and the RGB input unit status.

When the GT16M-R2 is used, the device notifies the input status of the channel set for the input source of the RGB screen.

b15 to b3	b2	b1	b0
-----------	----	----	----

- b0: Turns on when the RGB signal is input.
- b1: Turns on when the GOT supports the input resolution and refresh rate.
- b2: Turn on when the RGB unit operates normally.
- b3 to b15: Use prohibited

- (av) RGB signal resolution (horizontal) (GS1026 (16 bits))
 When GS1025.b0 turns on, the device stores the horizontal resolution (dots) of the RGB signal.
 When the RGB signal does not exist or the resolution of the signal is unclear, the device stores 0.
- (aw) RGB signal resolution (vertical) (GS1027 (16 bits))
 When GS1025.b0 turns on, the device stores the vertical resolution (dots) of the RGB signal.
 When the RGB signal does not exist or the resolution of the signal is unclear, the device stores 0.
- (ax) RGB signal refresh rate (GS1028 (16 bits))
 When GS1025.b0 turns on, the device stores the refresh rate (Hz) of the RGB signal.
 When the RGB signal does not exist or the refresh rate of the signal is unclear, the device stores 0.
- (ay) Insufficient security level notification (GS1241 (16 bits))
 The bit turns on when the screen cannot be displayed because of the insufficient security level.

b15 to b11	b10	b9	b8	b7 to b3	b2	b1	b0
------------	-----	----	----	----------	----	----	----

- b0: Turns on when the overlap window 3 cannot be displayed.
- b1: Turns on when the overlap window 4 cannot be displayed.
- b2: Turns on when the overlap window 5 cannot be displayed.
- b3 to b7: Use prohibited
- b8: Turns on when a called screen on the overlap window 3 cannot be displayed.
- b9: Turns on when a called screen on the overlap window 4 cannot be displayed.
- b10: Turns on when a called screen on the overlap window 5 cannot be displayed.
- b11 to b15: Use prohibited

Appendix.2.2 Device of Controllers

The device ranges of controller that can be used for GOT are as follows.

Note that the device ranges in the following tables are the maximum values that can be set in GT Designer3.

Since the device specifications may be different depending on the models even though they belongs to the same series of the controller.

Please make setting according to the specifications of the controller actually used.

When a non-existent device or device No. outside the range is specified, other objects may not be monitored.



■Mitsubishi Electric PLC, CNC, C Controller module, and motion controllers

■OMRON PLC

■KEYENCE PLC (KEYENCE KV-700/1000/3000/5000)

■KOYO EI PLC (KOYO KOSTAC/DL)

■SHARP PLC (SHARP JW)

■JTEKT PLC (JTEKT TOYOPUC-PLC)

■TOSHIBA PLC (TOSHIBA PROSEC T/V)

■TOSHIBA MACHINE PLC (TOSHIBA MACHINE TCmini)

■HITACHI IES PLC (HITACHI HIDIC H series)

■HITACHI PLC (HITACHI S10mini/S10V)

■FUJI FA PLC (FUJI MICREX-F)

■PANASONIC EW PLC (Panasonic MEWNET-FP)*1

■YASKAWA PLC

■YOKOGAWA PLC

■ALLEN-BRADLEY PLC

■GE FANUC PLC (GE Fanuc Automation Series 90)

■LS IS PLC (LS Industrial Systems MASTER-K)

■SICK safety controller (SICK Flexi Soft)

■SIEMENS PLC

■IAI robot controller (IAI X-SELController)

■Microcomputer connection

■MODBUS(R)

■OMRON temperature controller (OMRON THERMAC/INPANEL NEO)

■SHINKO indicating controller (Shinko Technos Controller)

■CHINO controller (CHINO Controllers)

■FUJI SYS temperature controllers (FUJI PXR/PXG/PXH)

■YAMATAKE temperature controller (YAMATAKE SDC/DMC series)

■YOKOGAWA temperature controller (YOKOGAWA GREEN/UT100/UT2000)

■RKC temperature controller (RKC SR Mini HG)

■Inverter (FREQROL 500/700 series)


■Servo amplifier

■PANASONIC servo amplifier (PANASONIC MINAS-A4 Series)



Device setting

For the device setting methods, see the following section.

 [Appendix.2.3 Setting device of each controller](#)

■ Mitsubishi Electric PLC, CNC, C Controller module, and motion controllers

(1) MELSEC-QnU/DC, Q17nD/M/NC/DR, CRnD-700*11

Device name*8			Setting range	Device No. representation
Bit device	Input (X)		X0 to X1FFF	Hexadecimal
	Output (Y)		Y0 to Y1FFF	
	Internal relay (M)*4*6		M0 to M61439	Decimal
	Latch relay (L)		Y0 to Y1FFF	
	Annunciator (F)		F0 to F32767	
	Link relay (B)*4		B0 to BEFFF	Hexadecimal
	Timer*6	Contact (TT)	TT0 to TT32767	Decimal
		Coil (TC)	TC0 to TC32767	
	Counter*6	Contact (CT)	CT0 to CT32767	
		Coil (CC)	CC0 to CC32767	
	Special relay (SM)		SM0 to SM2255	
	Retentive timer*6	Contact (SS)	SS0 to SS32767	
		Coil (SC)	SC0 to SC32767	
	Step relay (S)		S0 to S32767	
	Link special relay (SB)		SB0 to SB7FFF	Hexadecimal
	Word device bit		Specified bit of the following word devices (Except timer, counter, retentive timer, index register, and buffer memory)	-
Word device	Data register (D)*4*6		D0 to D4212223	Decimal
	Special data register (SD)		SD0 to SD2255	
	Link register (W)*4		W0 to W4045FF	Hexadecimal
	Timer (current value) (TN)*6		TN0 to TN32767	Decimal
	Counter (current value) (CN)*6		CN0 to CN32767	
	Retentive timer (current value) (SN)*6		SN0 to SN32767	
	Link special register (SW)		SW0 to SW7FFF	Hexadecimal
	File register (R)*1*2		R0 to R32767	Decimal
	Extension file register (ER)*1	Block	0 to 255	
		Device	ER0 to ER32767	
	Extension file register (ZR)*1*3*4*9		ZR0 to ZR4184063	
	Index register (Z)		Z0 to Z19	
	Buffer memory (Intelligent function module) (BM)*5		BM0 to BM32767	
	Ww*10		Ww0 to Ww7FF	Hexadecimal
	Wr*10		Wr0 to Wr7FF	
	Multiple CPU high speed transmission memory (U3E0)		U3E010000 to U3E024335	
	Multiple CPU high speed transmission memory (U3E1)		U3E110000 to U3E124335	
	Multiple CPU high speed transmission memory (U3E2)		U3E210000 to U3E224335	
	Multiple CPU high speed transmission memory (U3E3)		U3E310000 to U3E324335	
	Motion device (#)*7*10		#0 to #12287		Decimal
	Bit device word*10		Converting the above bit devices into words (Except timer, counter, and retentive timer.)	-

- *1 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program.] by the PLC parameter of GX Developer.
Otherwise, read/write at GOT will be erroneous.
- *2 Available for file register of block No. switched with the RSET instruction.
- *3 Available for file register of block No. of file name switched with the QDRSET instruction.
- *4 GOT treats them in units of 32k (32767 points).
- *5 Only the intelligent function module on the station connected to GOT can be specified.
Set within the address range of the buffer memory existing in the intelligent function module.
- *6 Do not use the local device set in a MELSEC-Q system.
Otherwise normal monitoring is not performed.
- *7 GT SoftGOT1000 cannot monitor the device.
- *8 Even though Universal model QCPU processes 64-bit data, the GOT cannot monitor the 64-bit data.
- *9 ZR1042432 to ZR4184063 cannot be used for GT SoftGOT1000.
- *10 This is not supported by GT10.
- *11 For GT11 and GT10, the controller type is as shown below.
 - GT11: MELSEC-QnU/DC,Q17nD/M/NC/DR
 - GT10: MELSEC-QnU/DC

(2) MELSEC-L

Device name			Setting range	Device No. Representation
Bit device	Input (X)		X0 to X1FFF	Hexadecimal
	Output (Y)		Y0 to Y1FFF	
	Internal relay (M) ^{*4 *6}		M0 to M61439	Decimal
	Latch relay (L)		L0 to L32767	
	Annunciator (F)		F0 to F32767	
	Link relay (B)		B0 to BEFFF	Hexadecimal
	Timer ^{*6}	Contact (TT)	TT0 to TT32767	Decimal
		Coil (TC)	TC0 to TC32767	
	Counter ^{*6}	Contact (CT)	CT0 to CT32767	
		Coil (CC)	CC0 to CC32767	
	Special relay (SM)		SM0 to SM2047	
	Retentive timer ^{*6}	Contact (SS)	SS0 to SS32767	
		Coil (SC)	SC0 to SC32767	
	Step relay (S)		S0 to S8191	
	Link special relay (SB)		SB0 to SB7FF	Hexadecimal
	Word device bit		Specified bit of the following word devices (Except timer, counter, retentive timer, index register, and buffer memory)	-
Word device	Data register (D) ^{*4 *6}		D0 to D421887	Decimal
	Special data register (SD)		SD0 to SD2047	
	Link register (W) ^{*4}		W0 to W66FFF	Hexadecimal
	Timer (current value) (TN) ^{*6}		TN0 to TN32767	Decimal
	Counter (current value) (CN) ^{*6}		CN0 to CN32767	
	Retentive timer (current value) (SN) ^{*6}		SN0 to SN32767	
	Link special register (SW)		SW0 to SW7FFF	Hexadecimal
	File register (R) ^{*1*2}		R0 to R32767	Decimal
	Extension file register (ZR) ^{*1*3*4*10}		ZR0 to ZR393215	
	Index register (Z)		Z0 to Z19	
	Buffer memory (Intelligent function module) (BM) ^{*5}		BM0 to BM32767	
	Ww ^{*7*8}		Ww0 to Ww7FF	Hexadecimal
	Wr ^{*7*8}		Wr0 to Wr7FF	
	Bit device word ^{*7}		Converting the above bit devices into words (Except timer, counter, and retentive timer.)	-

*1 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program.] by the PLC parameter of GX Developer.
Otherwise, read/write at GOT will be erroneous.

*2 Available for file register of block No. switched with the RSET instruction.

*3 Available for file register of block No. of file name switched with the QDRSET instruction.

*4 GOT treats them in units of 32k (32767 points).

*5 Only the intelligent function module on the station connected to GOT can be specified.

Set within the address range of the buffer memory existing in the intelligent function module.

*6 Do not use the local device set in a MELSEC-Q system.

Otherwise normal monitoring is not performed. (D32768 or later can be used for data register (D)).

*7 This is not supported by GT10.

*8 This cannot be monitored when in GOT multi-drop connection.

(3) MELSEC-QnA/Q/QS, MELDAS C6**13

Device name *7 *8 *12			Setting range	Device No. Representation
Bit device	Input (X)		X0 to X1FFF	Hexadecimal
	Output (Y)		Y0 to Y1FFF	
	Internal relay (M)* ⁹		M0 to M32767	Decimal
	Latch relay (L)		L0 to L32767	
	Annunciator (F)		F0 to F32767	
	Link relay (B)		B0 to B7FFF	Hexadecimal
	Timer* ⁹	Contact (TT)	TT0 to TT32767	Decimal
		Coil (TC)	TC0 to TC32767	
	Counter* ⁹	Contact (CT)	CT0 to CT32767	
		Coil (CC)	CC0 to CC32767	
	Special relay (SM)		SM0 to SM2047	
	Retentive timer* ⁹	Contact (SS)	SS0 to SS32767	
		Coil (SC)	SC0 to SC32767	
	Step relay (S)		S0 to S32767	
	Link special relay (SB)		SB0 to SB7FF	Hexadecimal
Word device bit		Specified bit of the following word devices (Except timer, counter, retentive timer, index register, and buffer memory)	-	
Word device	Data register (D)* ⁹		D0 to D32767	Decimal
	Special data register (SD)		SD0 to SD2047	
	Link register (W)		W0 to W7FFF	Hexadecimal
	Timer (current value) (TN)* ⁹		TN0 to TN32767	Decimal
	Counter (current value) (CN)* ⁹		CN0 to CN32767	
	Retentive timer (current value) (SN)* ⁹		SN0 to SN32767	
	Link special register (SW)		SW0 to SW7FF	Hexadecimal
	File register (R)* ¹ * ²		R0 to R32767	Decimal
	Extension fill register (ER)* ¹ * ¹⁰	Block	0 to 255	
		Device	R0 to R32767	
	Extension file register (ZR)* ¹ * ³ * ⁴ * ¹⁰		ZR0 to ZR1042431	
	Index register (Z)		Z0 to Z15	
	Buffer memory (Intelligent function module) (BM)* ⁵ * ¹⁰ * ¹¹		BM0 to BM32767	
	Ww* ¹⁰ * ¹¹		Ww0 to Ww7FF	Hexadecimal
	Wr* ¹⁰ * ¹¹		Wr0 to Wr7FF	
Bit device word* ⁶ * ¹⁰		Converting the above bit devices to words (Except timer, counter, and retentive timer.)	-	

*1 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program.] by the PLC parameter of GX Developer. (With exceptions of MELSECQnA)
Otherwise, read/write at GOT will be erroneous.

*2 Available for file register of block No. switched with the RSET instruction.

*3 Available for file register of block No. of file name switched with the QDRSET instruction.

*4 GOT treats them in units of 32k (32767 points).

*5 Only the intelligent function module on the station connected to GOT can be specified.

Set within the address range of the buffer memory existing in the intelligent function module.

*6 The device No. must be set in multiples of 16.

*7 When monitoring MELDAS C6/64, if a word device outside the range is set, the value will be indefinite.

If a bit device outside the range is set, the object may not be displayed or the set function may fail to operate.
Check the set device using the device list of GT Designer3.

*8 Devices used by the MELDAS C6/64 system cannot be used.

*9 Do not use the local device set in a MELSEC-Q system.

Otherwise normal monitoring is not performed.

- *10 This is not supported by GT10.
- *11 This cannot be monitored when in GOT multi-drop connection.
- *12 The GOT can only read data from the device for the QS001CPU.
- *13 For GT11 and GT10, the controller type is as shown below.
 - GT11: MELSEC-QnA/Q, MELDAS C6*
 - GT10: MELSEC-QnA/Q

(4) MELSEC-Q (Multi)/Q Motion^{*13}

Device name			Setting range	Device No. representation
Bit device	Input (X)		X0 to X1FFF	Hexadecimal
	Output (Y)		Y0 to Y1FFF	
	Internal relay (M) ^{*12}		M0 to M32767	Decimal
	Latch relay (L)		L0 to L32767	
	Annunciator (F)		F0 to F32767	
	Link relay (B)		B0 to B7FFF	Hexadecimal
	Timer ^{*12}	Contact (TT)	TT0 to TT32767	Decimal
		Coil (TC)	TC0 to TC32767	
	Counter ^{*12}	Contact (CT)	CT0 to CT32767	
		Coil (CC)	CC0 to CC32767	
	Special relay (SM) ^{*8}		SM0 to M2047	
	Retentive timer ^{*12}	Contact (SS)	SS0 to SS32767	
		Coil (SC)	SC0 to SC32767	
	Step relay (S)		S0 to S32767	
	Link special relay (SB)		SB0 to SB7FF	Hexadecimal
	Word device bit		Specified bit of the following word devices (Except timer, counter, retentive timer, index register, and buffer memory)	-
Word device	Data register (D) ^{*9*10*12}		D0 to D32767	Decimal
	Special data register (SD)		SD0 to SD2047	Hexadecimal
	Link register (W)		W0 to W7FFF	
	Timer (current value) (TN) ^{*12}		TN0 to TN32767		Decimal
	Counter (current value) (CN) ^{*12}		CN0 to CN32767	
	Retentive timer (current value) (SN) ^{*12}		SN0 to SN32767	
	Link special register (SW)		SW0 to SW7FF	Hexadecimal
	File register (R) ^{*1*2}		R0 to R32767	Decimal
	Extension file register (ER) ^{*1*7}	Block	0 to 255	
		Device	R0 to R32767	
	Extension file register (ZR) ^{*1*3*4*7}		ZR0 to ZR1042431	
	Index register (Z)		Z0 to Z15	
	Buffer memory (Intelligent function module) (BM) ^{*5*7}		BM0 to BM32767	
	Ww ^{*7}		Ww0 to Ww7FF	Hexadecimal
	Wr ^{*7}		Wr0 to Wr7FF	
	Motion device (#) ^{*11}		#0 to #8191	Decimal
	Bit device word ^{*6*7}		Converting the above bit devices into words (Except timer, counter, and retentive timer.)	-

(When the QCPU is used)

*1 to *6 (2) MELSEC-QnA/Q/QS, MELDAS C6*

*7 This is not supported by GT10.

(When the Q Motion is used)

*8 When setting special internal relay M9000 to M9255, use SM for the device name and set the value subtracted 9000 for the device number (0 to 255).

*9 The setting range is D9000 to D9255 when setting the special data register.

*10 D8192 to D8999 and D9256 to D9999 are out of the valid setting range.

*11 Monitoring is not available with GT SoftGOT1000.

(When the QCPU / Q Motion is used)

- *12 Do not use the local device set in a MELSEC-Q (Multi)/Q Motion system.
Otherwise normal monitoring is not performed.
- *13 For GT10, the controller type is [MELSEC-Q(Multi)].

(5) MELSEC-A

(a) GT16, GT15, GT11, GT SoftGOT1000

Device name		Setting range	Device No. representation
Bit device	Input (X)	X0 to X1FFF	Hexadecimal
	Output (Y)	Y0 to Y1FFF	
	Internal relay/Special internal relay (M)	M0 to M32767	Decimal
	Latch relay (L)	L0 to L32767	
	Annunciator (F)	F0 to F32767	
	Link relay (B)	B0 to B7FFF	Hexadecimal
	Timer	Contact (TT)	Decimal
		Coil (TC)	
	Counter	Contact (CT)	
		Coil (CC)	
	Link special relay (SB)	SB0 to SB7FF	Hexadecimal
	Word device bit	Specified bit of the following word devices (Except Index register and Buffer memory)	-
Word device	Data register/Special data register (D)	D0 to D32767	Decimal
	Link register (W)	W0 to W7FFF	Hexadecimal
	Timer (current value) (TN)	TN0 to TN32767	Decimal
	Counter (current value) (CN)	CN0 to CN32767	
	Link special register (SW)	SW0 to SW7FF	Hexadecimal
	File register (R)	R0 to R32767	Decimal
	Extension file register (ER)*1	Block	
		Device	
	Index register*2	(Z)	
		(V)	
	Annunciator (A)	A0 to A1	Decimal
	Buffer memory (Intelligent function module) (BM)*3	BM0 to BM32767	
	Ww	Ww0 to Ww7FF	Hexadecimal
	Wr	Wr0 to Wr7FF	
	Bit device word*4*5	Converting the above bit devices to words (Except Timer and Counter)	-

- *1 In the computer link connection, the bit specification writing of the word device to the ER29-0 (block 29 of the extension file register) or later of A3ACPU, A3UCPU, A4UCPU is not available.
When the bit specification writing of the word device is required, use the range of block No. 0 to 28.
- *2 In the computer link connection, writing to the index register (e.g., the touch switch function, numerical input function) is not available.
- *3 Only the intelligent function module on the station connected to GOT can be specified.
Set within the address range of the buffer memory existing in the intelligent function module.
- *4 The device No. must be set in multiples of 16.
- *5 If the special internal relay (M) is converted to the word device, treat 9000 of the device No. as 0 and set in multiples of 16.
Example: M9000, M9016, M9240

(b) GT10

Device name			Setting range	Device No. representation
Bit device	Input (X)		X0 to X1FFF	Decimal
	Output (Y)		Y0 to Y1FFF	
	Internal relay/Special internal relay (M)		M0 to M9255	
	Latch relay (L)		L0 to L8191	
	Annunciator (F)		F0 to F2047	
	Link relay (B)		B0 to B1FFF	Hexadecimal
	Timer	Contact (TT)	TT0 to TT2047	Decimal
		Coil (TC)	TC0 to TC2047	
	Counter	Contact (CT)	CT0 to CT1023	
		Coil (CC)	CC0 to CC1023	
Word device bit		Specified bit of the following word devices (Except index register)	-	
Word device	Data register/Special data register (D)		D0 to D9255	Decimal
	Link register (W)		W0 to W1FFF	Hexadecimal
	Timer (current value) (TN)		TN0 to TN2047	Decimal
	Counter (current value) (CN)		CN0 to CN1023	
	File register (R)		R0 to R8191	
	Index register*1	(Z)	Z0 to Z6	
		(V)	V0 to V6	
	Accumulator (A)*2		A0 to A1	

*1 When the computer link connection is used, writing to index registers (such as touch switch function, numerical input function) is disabled.

*2 With the computer link connection, the GOT cannot read/write data from/to the accumulator.

(6) MELSEC-FX

Device name		Setting range	Device No. representation
Bit device	Input (X)	X0 to X377	Octal
	Output (Y)	Y0 to Y377	
	Auxiliary relay (M)	M0 to M7679	Decimal
	Special auxiliary relay (M)	M8000 to M8511	
	State (S)	S0 to S4095	
	Timer contact (T)	T0 to T511	
	Counter contact (C)	C0 to C255	
	Word device bit ^{*1}	Specified bit of the following word devices (Except Timer (set value) and Counter (set value))	-
Word device	Data register (D)	D0 to D0999	Decimal
	RAM file register (D)	D1000 to D7999	
	Special data register (D)	D8000 to D8511	
	Timer (set value) (T)	T0 to T511	
	Counter (set value) (C)	C0 to C255	
	Timer (set value) (TS) ^{*3*5}	TS0 to TS511	
	Counter (set value) (CS) ^{*4*5}	CS0 to CS255	
	Extension register (R)	R0 to R32767	
	Index register (V)	V0 to V7	
	Index register (Z)	Z0 to Z7	
	Buffer memory (Special function units/blocks)(BM) ^{*7}	BM0 to BM32767	
	Bit device word ^{*2*6}	Converting the above bit devices to words (Except Timer contact and Counter contact)	

*1 When executing the touch switch function that has been set during the bit specification of the word device, do not write any data to the word device through the sequence program.

*2 The device No. must be set in multiples of 16.

*3 Only 16-bit (1-word) designation is allowed.

*4 For CS0 to CS199, only 16-bit (1-word) designation is allowed.

For CS200 to CS255, only 32-bit (2-word) designation is allowed.

*5 Monitoring or writing is not possible in the continuous device designation mode.

*6 This is not supported by GT10.

*7 For the Ethernet connection, only the bit specification of the word device can be monitored.

POINT

(1) How to select a keyword protection level

For equipment that is allowed to operate the FX PLC on line, 3 levels of protection level can be set. When performing monitoring or changing settings with any on-line equipment is required, set password with referring to the following.

(a) When setting keyword only

Select a protection level by the initial letter of keyword.

All operation protect: Set a keyword with initial letter of "A", "D" to "F", or "0" to "9".

Read/Incorrect write protection: Set a keyword with initial letter of "B".

Incorrect write protect: Set a keyword with initial letter of "C".

(b) Set a keyword with initial letter of "C".

Select a protection level by [Registration condition].

(2) Monitoring availability at each keyword protection level

Device monitoring availability at each keyword protection level is shown in the following.

Item		When registering keyword only			When registering keyword and 2nd keyword			Keyword not registered or protection cancelled
		All operation protect	Read/Incorrect write protection	Incorrect write protect	All on-line operation protect	Read/write protect	Write protect	
Monitoring devices		○	○	○	×	○	○	○
Changing devices	T, C set value and file register (D1000 and the following)	×	×	×	×	○	○	○
	Other than the above	○	○	○	×	○	○	○

(3) Difference between all online operations prohibition and all operations prohibition

When specifying all online operations prohibited, displaying devices and inputting data with a programming tool or GOT are all prohibited.

When all operations are prohibited, displaying devices and inputting data with the GOT are enabled while all operations using a programming tool are prohibited.

(7) MELSEC-WS

Device name*1		Setting range	Device No. representation
Bit device	Input (I)	I1.1 to I12.8	Decimal+Decimal
	Output (Q)	Q1.1 to Q12.8	
	Logic result (LQ)	LQ0.0 to LQ3.7	
	Logic input (LI)	LI0.0 to LI3.7	
	Word device bit	Specified bit of the following word devices	-
Word device	Data (byte) (D)	D0 to D99	Decimal
	Data (word) (W)	W0 to W49	
	EFI input(byte) (EI)	EI110 to EI233	Decimal +Decimal +Decimal
	EFI output(byte) (EQ)	EQ10 to EQ22	Decimal+Decimal
	Logic input (byte) (LD)	LD0 to LD3	Decimal
	Logic input (word) (LW)	LW0 to LW1	

*1 The GOT can only read data from all the devices.

■ OMRON PLC

(1) SYSMAC

Device name		Setting range	Device No. representation
Bit device	I/O relay/internal auxiliary relay	..000000 to ..614315	Decimal + Hexadecimal
	Data link relay (LR)	LR00000 to LR19915	
	Auxiliary memory relay (AR)	AR00000 to AR95915	
	Holding relay (HR)	HR00000 to HR51115	
	Internal auxiliary relay/Work relay (WR)	WR00000 to WR51115	
	Timer contact (TIM)	TIM0000 to TIM4095	Decimal
	Counter contact (CNT)	CNT0000 to CNT4095	
	Word device bit ^{*1*4}	Specified bit of the following word devices (except data link relay, auxiliary memory relay, holding relay and internal auxiliary relay.)	-
Word device	I/O relay / internal auxiliary relay	..0000 to ..6143	Decimal
	Data link relay (LR)	LR000 to LR199	
	Auxiliary memory relay (AR)	AR000 to AR959	
	Holding relay (HR)	HR000 to HR511	
	Internal auxiliary relay/Work relay (WR)	WR000 to WR511	
	Data memory (DM)	DM00000 to DM32767	
	Timer (current value) (TIM) ^{*3}	TIM0000 to TIM4095	
	Counter (current value) (CNT) ^{*3}	CNT0000 to CNT4095	
	Extension data memory (EM current bank) ^{*2}	EM00000 to EM32767	
	Extension data memory (E0 to EC: 13 banks) ^{*2}	E000000 to E032767 : EC00000 to EC32767	

*1 When executing the touch switch function that has been set during the bit specification of the word device, do not write to word device through the sequence program.

*2 Writing or reading the extension data memory using multiple banks is not allowed.

*3 Timer (current value) and counter (current value) are valid within the range of 0 to 9999.
(This applies to the 16 bit/32 bit device data.)

*4 This is not supported by GT10.

(2) SYSMAC CS/CJ

Device name		Setting range	Device No. representation
Bit device	I/O relay/internal auxiliary relay	..000000 to ..614315	Decimal + Hexadecimal
	Data link relay (LR)	LR00000 to LR19915	
	Auxiliary memory relay (AR)	AR00000 to AR147115 AR1000000 to AR1153515	
	Holding relay (HR)	HR00000 to HR51115	
	Internal auxiliary relay/Work relay (WR)	WR00000 to WR51115	
	Timer contact (TIM)	TIM0000 to TIM4095	Decimal
	Counter contact (CNT)	CNT0000 to CNT4095	
Word device bit ^{*1*4}		Specified bit of the following word devices (except data link relay, auxiliary memory relay, holding relay and internal auxiliary relay.)	-
Word device	I/O relay / internal auxiliary relay	..0000 to ..6143	Decimal
	Data link relay (LR)	LR000 to LR199	
	Auxiliary memory relay (AR)	AR000 to AR11535	
	Holding relay (HR)	HR000 to HR511	
	Internal auxiliary relay/Work relay (WR)	WR000 to WR511	
	Data memory (DM)	DM00000 to DM32767	
	Timer (current value) (TIM) ^{*3}	TIM0000 to TIM4095	
	Counter (current value) (CNT) ^{*3}	CNT0000 to CNT4095	
	Extension data memory (EM current bank) ^{*2}	EM00000 to EM32767	
	Extension data memory (E0 to E18: 25 banks) ^{*2}	E000000 to E032767 : E1800000 to EC1832767	

*1 When executing the touch switch function that has been set during the bit specification of the word device, do not write to word device through the sequence program.

*2 Writing or reading the extension data memory using multiple banks is not allowed.

*3 Timer (current value) and counter (current value) are valid within the range of 0 to 9999.
(This applies to the 16 bit/32 bit device data.)

*4 This is not supported by GT10.

■ KEYENCE PLC (KEYENCE KV-700/1000/3000/5000)

	Device name	Setting range	Device No. representation
Bit device	Relay (...)	..00000 to ..99915	Decimal
	Internal auxiliary relay (MR)	MR00000 to MR99915	
	Latch relay (LR)	LR00000 to LR99915	
	Control relay (CR)	CR00000 to CR3915	
	Link relay (B) ^{*2}	B0000 to B3FFF	Hexadecimal
	Work relay (VB) ^{*2}	VB0000 to VB3FFF	
	Timer (contact) (T) ^{*1*2}	T0000 to T3999	Decimal
	Counter (contact) (C) ^{*1*2}	C0000 to C3999	
	High-speed counter comparator (contact) (CTC) ^{*2*3*6}	CTC0 to CTC3	
	Word device bit ^{*7}	Specified bit of the following word devices (except timer (current value), timer (set value), counter (current value), counter (set value), high-speed counter (current value), high-speed counter comparator (set value), control memory, temporary data memory, index register and digital trimmer)	-
Word device	Timer (current value) (TC) ^{*2*4}	TC0000 to TC3999	Decimal
	Timer (set value) (TS) ^{*2*4}	TS0000 to TS3999	
	Counter (current value) (CC) ^{*2*4}	CC0000 to CC3999	
	Counter (set value) (CS) ^{*2*4}	CS0000 to CS3999	
	High-speed counter (current value) (CTH) ^{*2*4}	CTH0 to CTH1	
	High-speed counter comparator (set value) (CTC) ^{*2*4}	CTC0 to CTC3	
	Data memory (DM)	DM00000 to DM65534	
	Extension data memory (EM)	EM00000 to EM65534	
	Extension data memory 2 (FM)	FM00000 to FM32767	
	File register (ZF)	ZF000000 to ZF032767 ZF032768 to ZF065535 ZF065536 to ZF098303 ZF098304 to ZF131071	
	Link register (W)	W0000 to W3FFF	Hexadecimal
	Control memory (CM)	CM00000 to CM11998	Decimal
	Temporary data memory (TM)	TM000 to TM511	
	Work memory (VM)	VM00000 to VM59999	
	Index register (Z) ^{*8}	Z1 to Z12	
	Index register (DZ)	DZ01 to DZ12	
	Digital trimmer (TRM) ^{*4*5}	TRM0 to TRM7	
	Bit device word ^{*7}	Converting the above bit devices to words (except timer (contact), counter (contact) and high-speed counter comparator (contact))	-

*1 Monitoring or writing is not possible in the continuous device designation mode.

*2 Monitoring by GOT is possible only when a device is used in the sequence program.

*3 In writing, only resetting of a contact is possible.

*4 Only 32-bit (2-word) designation is possible.

*5 Only reading is possible.

*6 Reading/writing from/to continuous devices is not possible.

*7 This is not supported by GT10.

*8 With KV-3000 and KV-5000, Z devices cannot be specified as 32-bit (2 words) data. Use DZ devices.

KOYO EI PLC (KOYO KOSTAC/DL)

Device name		Setting range	Device No. representation
Bit device	Input (I) ^{*5}	I0 to I1777	Octal
	Output (Q) ^{*5}	Q0 to Q1777	
	Link relay (GI)	GI0 to GI3777	
	Link output (GQ)	GQ0 to GQ3777	
	Internal relay (M)	M0 to M3777	
	Stage (S)	S0 to S1777	
	Timer (T)	T0 to T377	
	Counter (C)	C0 to C377	
	Special relay (SP) ^{*1}	SP0 to SP777	
Word device	Timer (current value) (R)	R0 to R377	Octal
	Preparatory register (R) ^{*5}	R400 to R677	
	Special register 1 (R) ^{*1*5}	R700 to R777	
	Counter (current value) (R) ^{*3}	R1000 to R1377	
	Data register 1 (R) ^{*2*5}	R1400 to R7377	
	Special register 2 (R) ^{*1*4*5}	R7400 to R7777	
	Data register 2 (R) ^{*5}	R10000 to R36777	
	Special register 3 (R) ^{*1*5}	R37000 to R37777	
	Link relay (R)	R40000 to R40177	
	Link output (R)	R40200 to R40377	
	Input (R)	R40400 to R40477	
	Output (R)	R40500 to R40577	
	Internal relay (R)	R40600 to R40777	
	Stage (R)	R41000 to R41077	
	Timer (R)	R41100 to R41117	
	Counter (R)	R41140 to R41157	
	Special relay (R)	R41200 to R41237	

*1 Read-only device for KOSTAC SU series

*2 The GOT cannot write data to R7377 for the SU-5M and SU-6M.

*3 For Direct Logic 05 series and Direct Logic 06 series, devices from R1200 to R1377 are used as V-memory 2.

*4 The GOT cannot write data to devices from R7766 to R7774 (calendar area).

*5 The device names differ according to the series.

The following shows the device names for each series.

KOSTAC SU series, PZ series	Direct Logic 05 series, Direct Logic 06 series	Direct Logic 205 series
Input	Input relay	Input
Output	Output relay	Output
Preparatory register	V-memory 1	Data register 1
Special register 1	System parameter 1	System parameter 1
Data register 1	V-memory 2	Data register 2
Special register 2	System parameter 2	System parameter 2
Data register 2	V-memory 3	Data register 3
Special register 3	System parameter 4	System parameter 4

■ SHARP PLC (SHARP JW)

Device name		Setting range	Device No. representation
Bit device	I/O relay	..00000 to ..15777 ..20000 to ..75777	Octal
	Timer (Contact) (T)	T0000 to T1777	
	Counter (Contact) (C)	C0000 to C1777	
	Word device bit	Specified bit of the following word devices.	-
Word device	Timer (Current value) (T)	T0000 to T1777	Octal
	Counter (Current value) (C)	C0000 to C1777	
	Register (09 to E7)	09000 to 09776	
		19000 to 19776	
		29000 to 29776	
		39000 to 39776	
		49000 to 49776	
		59000 to 59776	
		69000 to 69776	
		79000 to 79776	
		89000 to 89776	
		99000 to 99776	
		E0000 to E0776	
		E1000 to E1776	
		E2000 to E2776	
		E3000 to E3776	
		E4000 to E4776	
		E5000 to E5776	
		E6000 to E6776	
		E7000 to E7776	
	File register (1 to 7)	1000000 to 1177776 2000000 to 2177776 3000000 to 3177776 4000000 to 4177776 5000000 to 5177776 6000000 to 6177776 7000000 to 7177776	

JTEKT PLC (JTEKT TOYOPUC-PLC)

Device name		Setting range	Device No. representation
Bit device	Input (X) ^{*1}	X000 to X7FF	Hexadecimal
	Output (Y) ^{*1}	Y000 to Y7FF	
	Link relay (L)	L000 to L7FF	
	Internal relay (M)	M000 to M7FF	
	Keep relay (K)	K000 to K2FF	
	Edge detection (P)	P000 to P1FF	
	Timer (T) ^{*1}	T000 to T1FF	
	Counter (C) ^{*1}	C000 to C1FF	
	Special relay (V)	V000 to V0FF	
	Extended input (EX) ^{*1}	EX000 to EX7FF	
	Extended output (EY) ^{*1}	EY000 to EY7FF	
	Extended internal relay (EM)	EM0000 to EM1FFF	
	Extended keep-relay (EK)	EK000 to EKFFF	
	Extended special relay (EV)	EV000 to EVFFF	
	Extended timer (ET) ^{*1}	ET000 to ET7FF	
	Extended counter (EC) ^{*1}	EC000 to EC7FF	
	Extended link relay (EL)	EL0000 to EL1FFF	
	Extended edge detection (EP)	EP000 to EPFFF	
	Extended input 2 (GX) ^{*1*3}	GX0000 to GXFFFF	
	Extended output 2 (GY) ^{*1*3}	GY0000 to GYFFFF	
	Extended internal relay (GM) ^{*3}	GM0000 to GMFFFF	
Word device bit		Specified bits of the following word devices (Excluding EB and TCS)	Hexadecimal
Word device	Data register (D)	D0000 to D2FFF	
	Link register (R)	R0000 to R07FF	
	Current value register (N)	N0000 to N01FF	
	Special register (S)	S0000 to S03FF	
	File register (B)	B0000 to B1FFF	
	Extended present value register (EN)	EN0000 to EN07FF	
	Extended setup value register (H)	H0000 to H07FF	
	Extended special register (ES)	ES0000 to ES07FF	
	Extended data register (U)	U0000 to U7FFF	
	Extended buffer register (EB) ^{*3}	EB00000 to EB07FFF EB08000 to EB0FFFF EB10000 to EB17FFF EB18000 to EB1FFFF	
	Setup value register (TCS) ^{*2}	TCS0000 to TCS01FF	
	Word of bit devices above	Converting bit devices into word	

*1 Overlapped device designation of an input (X, EX, GX) and an output (Y, EY, GY), or a timer (T, ET) and a counter (C, EC) is not allowed. (Example: X0000 and Y0000, EX0000 and EY0000)

*2 To store a setting value of T (timer) or C (counter), use TCS.
Setting value of a timer and a counter is stored in TCS. (TCS cannot be used if a timer or a counter is not in a program.)

*3 GX, GY, GM and EB can be used only in the PC3JG separate mode.
Access to GX, GY, GM and EB through a link module is not possible.

■ TOSHIBA PLC (TOSHIBA PROSEC T/V)

Device name		Setting range	Device No. representation
Bit device	External input (X)	X0000 to X511F	Hexadecimal
	External output (Y)	Y0000 to Y511F	
	Internal relay (R) ^{*7}	R0000 to R4095F	
	Special relay (S) ^{*7}	S0000 to S511F	
	Link register relay (Z)	Z0000 to Z999F	
	Link relay (L)	L0000 to L255F	
	Timer (Contact) (T) ^{*1}	T0 to T999	Decimal
	Counter (Contact) (C) ^{*1}	C0 to C511	
	Word device bit ^{*2,7}	Specified bit of the following word devices (except external input, external output, internal relay, special relay, link relay, timer and counter)	-
Word device	External input (XW)	XW0 to XW511	Decimal
	External output (YW)	YW0 to YW511	
	Internal relay (RW) ^{*6,8}	RW0 to RW4095	
	Special relay (SW) ^{*8}	SW0 to SW511	
	Link relay (LW)	LW0 to LW255	
	Timer (Current value) (T) ^{*1}	T0 to T999	
	Counter (Current value) (C) ^{*1}	C0 to C511	
	Data register (D) ^{*4,6,8}	D0 to D8191	
	Link register (W) [*]	W0 to W2047	
	File register (F) ^{*5}	F0 to F32767	

(PROSEC T series)

- *1 Write of the timer (contact)/(current value), counter (contact)/(current value) is executed after having been read by GOT. Therefore, do not edit it in the sequence program during this period.
- *2 As bit specification of a word device is performed after the GOT reads the value, do not change the value in the sequence program during this period.
- *4 When the mode switch on the CPU module has been set to "P-RUN", writing to D0000 through D4095 is disabled.
- *5 Extension file register is not supported.

(PROSEC V series)

- *2 As bit specification of a word device is performed after the GOT reads the value, do not change the value in the sequence program during this period.
- *6 RW0000 and D0000 indicate the same data register in the same region although they are shown in different notations.
- *7 For bit data, the conversion from the address notation for the TOSHIBA PLC to that for the GOT is shown as follows.
Address notation for TOSHIBA PLC ÷ 16 = Word address (Quotient)...Bit address (Remainder)

Address notation for TOSHIBA PLC	Address notation for GOT	Conversion
S8191	<u>S511</u> E (Decimal) (Hexadecimal)	8191 ÷ 16 = 511...15
R65535	<u>R4095</u> E (Decimal) (Hexadecimal)	65535 ÷ 16 = 4095...15

- *8 For word data, the conversion from the address notation for the TOSHIBA PLC to that for the GOT is shown as follows.

Data format		Address notation for TOSHIBA PLC	Address notation for GOT
16 bit data		DW10	D10
32 bit data	(Integer)	DD10 (Calculate the device No. in 32-bit unit)	D20
	(Real number)	DF10 (Calculate the device No. in 32-bit unit)	D20

■ TOSHIBA MACHINE PLC (TOSHIBA MACHINE TCmini)

Device name		Setting range	Device No. representation
Bit device	Input relay 1 (X)	X000 to XF7F	Hexadecimal + Octal + Hexadecimal
	Input relay 2 (I)	I000 to IF7F	
	Output relay 1 (Y)	Y000 to YF7F	
	Output relay 2 (O)	O000 to OF7F	
	Internal relay (R)	R000 to R77F	
	Extended internal relay 1 (GR)	GR000 to GRF7F	
	Extended internal relay 2 (H)	H000 to HF7F	
	Extended internal relay 3 (J)	J000 to JF7F	
	Extended internal relay 4 (K)	K000 to KF7F	
	Timer contact (T)	T000 to T77F	
	Counter contact (C)	C000 to C77F	
	Shift relay (S)	S000 to S07F	
	Latch relay (L)	L000 to L07F	
	Edge relay (E)	E000 to E77F	
	Special aux relay (A)	A000 to A16F	
Word device	Input register 1 (XW)	XW00 to XWF7	Hexadecimal + Octal
	Input register 2 (IW)	IW00 to IWF7	
	Output register 1 (YW)	YW00 to YWF7	
	Output register 2 (OW)	OW00 to OWF7	
	Internal register (RW)	RW00 to RW77	
	Extended internal register 1 (GW)	GW00 to GWF7	
	Extended internal register 2 (HW)	HW00 to HWF7	
	Extended internal register 3 (JW)	JW00 to JWF7	
	Extended internal register 4 (KW)	KW00 to KWF7	
	Timer contact register (TW)	TW00 to TW77	
	Counter contact register (CW)	CW00 to CW77	
	Shift register (SW)	SW00 to SW07	
	Latch register (LW)	LW00 to LW07	
	Edge register (EW)	EW00 to EW77	
	Special aux register (AW)	AW00 to AW16	
	Generic register 1 (D)	D000 to DF7F	Hexadecimal + Octal + Hexadecimal
	Generic register 2 (B)	B000 to BF7F	
	Generic register 3 (U)	U000 to UF7F	
	Generic register 4 (M)	M000 to MF7F	
	Generic register 5 (Q)	Q000 to QF7F	
	Timer/Counter current value (P)	P000 to P77F	
	Timer/Counter set value (V)	V000 to V77F	

■ HITACHI IES PLC (HITACHI HIDIC H series)

	Device name	Setting range	Device No. representation
Bit device	External input (X)	X00000 to X05A95	Hexadecimal + Decimal
	External output (Y)	Y00000 to Y05A95	
	Remote external input (X)	X10000 to X49995	Decimal
	Remote external output (Y)	Y10000 to Y49995	
	1st CPU link (L)	L0000 to L3FFF	Hexadecimal
	2nd CPU link (L1)	L10000 to L13FFF	
	Data area (M)	M0000 to M3FFF	
	On-delay timer (TD) ^{*1}	TD0 to TD255	Decimal
	Single-shot timer (SS) ^{*1}	SS0 to SS255	
	Watchdog timer (WDT) ^{*1}	WDT0 to WDT255	
	Monostable timer (MS) ^{*1}	MS0 to MS255	
	Retentive timer (TMR) ^{*1}	TMR0 to TMR255	
	Up counter (CU) ^{*1}	CU0 to CU511	
	Ring counter (RCU) ^{*1}	RCU0 to RCU511	
	Up/Down counter (CT) ^{*1}	CT0 to CT511	
	Bit internal output (R)	R0 to R7BF	Hexadecimal
	Rising edge detection (DIF) ^{*1}	DIF0 to DIF511	Decimal
	Falling edge detection (DFN) ^{*1}	DFN0 to DFN511	
	Word device bit	Specified bit of the following word devices (except external input, external output, remote external input, remote external output, first CPU link, second CPU link and data area)	-
Word device	External input (WX)	WX0000 to WX05A7	Hexadecimal + Decimal
	External output (WY)	WY0000 to WY05A7	
	Remote external input (WX)	WX1000 to WX4997	Decimal
	Remote external output (WY)	WY1000 to WY4997	
	First CPU link (WL)	WL000 to WL3FF	Hexadecimal
	Second CPU link (WL1)	WL1000 to WL13FF	
	Data area (WM)	WM000 to WM3FF	
	Timer/Counter (Elapsed value) (TC) ^{*1}	TC0 to TC511	Decimal
	Word internal output (WR)	WR000 to WR3FF	Hexadecimal

*1 The same number cannot be used repeatedly.

*2 Do not set device outside the range.

If the set device is outside the range, the object set by the device within the range cannot be displayed.

■ HITACHI PLC (HITACHI S10mini/S10V)

Device name		Setting range	Device No. representation
Bit device	External input (X)	X000 to XFFF	Hexadecimal
	External output (Y)	Y000 to YFFF	
	Internal register (R)	R000 to RFFF	
	Keep relay (K)	K000 to KFFF	
	Extended internal register (M)	M000 to MFFF	
	Extended internal register (A)	A000 to AFFF	
	On-delay timer (T)	T000 to T1FF	
	On-shot timer (U)	U000 to U0FF	
	Up-down counter (C)	C00 to CFF	
	Global link register (GL)* ⁶	GL000 to GLFFF	
	Event register (E)	E000 to EFFF	
	System register (S)* ¹	S000 to SBFF	
	Transfer register (J)	J000 to JFFF	
	Receive register (Q)	Q000 to QFFF	
	Word device bit	Specified bit of the following word devices (Except for external input, external output, internal register, extended internal register, keep relay, on-delay timer, oneshot timer, up-down counter, global link register, event register, system register, transfer register, receive register, long-word work register, floating-point work register, and backup single-precision floating-point work register)	-

(Continued to next page)

Device name		Setting range	Device No. representation
Word device	External input (XW)	XW000 to XWFF0	Hexadecimal
	External output (YW)	YW000 to YWFF0	
	Internal register (RW)	RW000 to RWFF0	
	Extended internal register (MW)	MW000 to MWFF0	
	Extended internal register (AW)	AW000 to AWFF0	
	Keep relay (KW)	KW000 to KWFF0	
	On-delay timer (TW)	TW000 to TW1F0	
	On-shot timer (UW)	UW000 to UW0F0	
	Up-down counter (CW)	CW00 to CWF0	
	Global link register (GW)	GW000 to GWFF0	
	Event register (EW)	EW000 to EWFF0	
	System register (SW) ^{*1}	SW000 to SWBF0	
	Transfer register (JW)	JW000 to JWFF0	
	Receive register (QW)	QW000 to QWFF0	
	On-delay timer (current value) (TC) ^{*2}	TC000 to TC1FF	
	On-delay timer (set value) (TS) ^{*2}	TS000 to TS1FF	
	One-shot timer (current value) (UC) ^{*2}	UC000 to UC0FF	
	One-shot timer (set value) (US) ^{*2}	US000 to US0FF	
	Up-down counter (current value) (CC) ^{*2}	CC00 to CCFF	
	Up-down counter (set value) (CS) ^{*2}	CS00 to CSFF	
	Function data register (DW) ^{*4*5}	DW000 to DWFFF	
	Function work register (FW) ^{*4*5}	FW000 to FWBFF	
	Extended function work register (LWW) ^{*4*5}	LWW0000 to LWWFFFF	
	Backup work register (LXW) ^{*5}	LXW0000 to LXW3FFF	
	Long-word work register (LLL) ^{*3}	LLL0000 to LLL1FFF	
	Backup Long-word work register (LML) ^{*3*4}	LML0000 to LML1FFF	
	Floating-point work register (LF) ^{*3}	LF0000 to LF1FFF	
	Backup single-precision floating-point work register (LG) ^{*3}	LG0000 to LG1FFF	

*1 Only reading is possible.

*2 Only 16-bit (1-word) specification is possible.

*3 Only 32-bit (2-word) specification is possible.

*4 When it is used with bit specification (bit specification of word device), the offset function cannot be used.

*5 When bit specification (bit specification of word device) is performed, the uppermost bit is b0 and the lowermost bit is b15.

Higher		Lower		
b0	b1	.....	b14	b15

*6 Device "GL" corresponds to device "G" of the PLU CPU.

■ FUJI FA PLC (FUJI MICREX-F)

Device name		Setting range	Device No. representation
Bit device	I/O relay (B)	B0000 to B511F	Decimal + Hexadecimal
	Auxiliary relay (M)	M0000 to M511F	
	Keep relay (K)	K0000 to K063F	
	Special relay (F) ^{*1}	F0000 to F125F	
	Annunciator relay (A)	A0000 to A045F	
	Differential relay (D)	D0000 to D063F	
	Link memory (L)	L0000 to L511F	
	Timer output (0.01s) (T)	T000 to T511	Decimal
	Timer output (0.1s) (T)	T512 to T999	
	Counter output (C)	C000 to C511	
	Word device bit ^{*5}	Specified bit of the following word devices (Except for I/O relay, auxiliary relay, keep relay, special relay, annunciator relay, differential relay, link memory, data memory, timer, and counter)	-
Word device	I/O relay (WB)	WB000 to WB511	Decimal
	Auxiliary relay (WM)	WM000 to WM511	
	Keep relay (WK)	WK000 to WK063	
	Special relay (WF) ^{*1}	WF000 to WF125	
	Annunciator relay (WA)	WA000 to WA045	
	Differential relay (WD)	WD000 to WD063	
	Link memory (WL)	WL000 to WL511	
	Direct access (W24) ^{*6*7}	W24 :0000 to W24 :0255	
	User file (W30) ^{*4*6*7}	W30 :0000 to W30 :4095	
	User file (W31) ^{*4*6*7}	W31 :0000 to W31 :4095	
	:	:	
	User file (W108) ^{*4*6*7}	W108 :0000 to W108 :4095	
	User file (W109) ^{*4*6*7}	W109 :0000 to W109 :4095	
	Data memory (BD) ^{*2}	BD0 to BD4095	
	Timer set value (0.01s) (TS) ^{*2*3}	TS0 to TS511	
	Timer current value (0.01s) (TR) ^{*2*3}	TR0 to TR511	
	Timer current value (0.1s) (W9) ^{*2*3}	W9 :0000 to W9 :0487	
	Counter set value (CS) ^{*2*3}	CS0 to CS511	
	Counter current value (CR) ^{*2*3}	CR0 to CR511	

- *1 Only reading is possible.
- *2 Only 32-bit (2-word) specification is possible.
- *3 Decimal points are not displayed.
- *4 When reading/writing data from/to a user file, set SI data for the data format of the PLC CPU, and 16 bits for the data length on GT Designer3.

With any setting other than the above, the PLC does not operate normally

Data format of the PLC CPU	Setting on GT Designer2
SI (Binary 16-bit length)	Data length of devices: 16 bits
DI (Binary 32-bit length)	None
BD (8-digit BCD)	None

- *5 As bit specification of a word device is performed after the GOT reads the value, do not change the value in the sequence program during this period.
- *6 When it is used with bit specification (bit specification of word device), the offset function cannot be used.
- *7 When bit specification (bit specification of word device) is performed, the uppermost bit is b0 and the lowermost bit is b15.

Upper			Lower	
b0	b1	.....	b14	b15

■ PANASONIC EW PLC (Panasonic MEWNET-FP)*¹

Device name		Setting range	Device No. representation
Bit device	Input relay (X) ^{*2,3}	X0000 to X511F	Hexadecimal + Decimal
	Output relay (Y) ^{*3}	Y0000 to Y511F	
	Internal relay (R)	R0000 to R886F	
	Special relay (R) ^{*2}	R9000 to R911F	
	Link relay (L) ^{*5}	L0000 to L639F	
	Timer contact (T) ^{*2,4}	T0 to T3071	Decimal
	Counter contact (C) ^{*2,4}	C0 to C3071	
	Word device bit ^{*7}	Specified bit of the following word devices (except input relay, output relay, internal relay, special relay and link relay)	-
Word device	Input relay (WX) ^{*2}	WX000 to WX511	Decimal
	Output relay (WY)	WY000 to WY511	
	Internal replay (WR)	WR000 to WR886	
	Special relay (WR) ^{*2}	WR900 to WR911	
	Link relay (WL)	WL000 to WL639	
	Timer/Counter (Elapsed value) (EV)) ^{*4}	EV0 to EV3071	
	Timer/Counter (Set value) (SV)) ^{*4}	SV0 to SV3071	
	Data register (DT)	DT0 to DT10239	
	Special data register (DT)	DT0 to DT32764 DT90000 to DT90511	
	Link register (LD) ^{*5}	LD0 to LD8447	
	File register (FL) ^{*5,6}	FL0 to FL32764	
	Bit device word ^{*7}	Converting the above bit devices to words (Except Timer contact and Counter contact)	-

*1 The above device range is for the case where FP10SH is used.

For Fp0, FP1, FP2, FP3, FP5, FP-10(S), or FP-M, device ranges are different in individual CPUs.

*2 Writing to device is not allowed.

*3 Only those devices that have been assigned to I/O contacts by peripheral software can be used.

*4 The device points of the timer and counter differs depending on the head numbers of the counter set by the value of the system register (No. 5).

*5 This device does not exist in FP0, FP1, and FP-M.

*6 When FP2SH is used, only one bank of 32765 × 3 banks can be monitored.

*7 This is not supported by GT10.

YASKAWA PLC

(1) YASKAWA GL/PROG1C8

Device name		Setting range	Device No. representation
Bit device	Coil (O) ^{*5}	O1 to O63424	Decimal
	Input relay (I) ^{*6,7}	I1 to I63424	
	Link coil (D)	D1 to D2048	
		D10001 to D12048 D20001 to D22048	
	Word device bit	Specified bit of the following word devices	-
Word device	Input register (Z) ^{*1,7}	Z1 to Z31840	Decimal
	Holding register (W) ^{*2,4}	W1 to W28291	
		SW1 to SW28291	
	Link register (R, SR) ^{*4}	R1 to R2048	
		R10001 to R12048 R20001 to R22048	
		SR1 to SR2048	
		SR10001 to SR12048 SR20001 to SR22048	
	Constant register (K) ^{*3}	K1 to K4096	-
	Bit device word	Converting the above bit devices to word devices (Except Coil and Input relay)	

*1 Change the input register "30001 to 30512" to "Z1 to Z512" for setting. (When set in default)

*2 Change the holding register "40001 to 49999" to "W1 to W9999" for setting. (When set in default)

*3 Change the constant register "31001 to 35096" to "K1 to K4096" for setting. (When set in default)

*4 SR and SW indicate registers (virtual register) compatible to the data format where internal data of PLC is displayed using R or W. The following shows the difference between the display values of SR, SW and those of R, W corresponding to the values of PLC internal data.

PLC internal data (16 bit)	SR, SW	R, W
9999	9999	9999
1001	1001	1001
1000	1000	1000
999	999	999
0	0	0
-1	-1	32769
-999	-999	33767
-1000	-1000	33768
-1001	-1001	33769
-9999	-9999	42767

*5 The internal coil N1 to N1536 can be set as O513 to O2048.

However, setting must not exceed O1 to O512 and O513 to O2048.

*6 Change the input relay "10001 to 14096" to "I1 to I4096" for setting. (When set in default)

*7 Only reading is possible.

(2) YASKAWA CP-9200SH/MP-900

Device name		Setting range	Device No. representation
Bit device	Coil (MB)* ¹	MB000000 to MB32767F	Decimal + hexadecimal
	Input relay (IB)	IB0000 to IBFFFF	Hexadecimal
	Bit of word device* ²	Specified bit of the following bit device (except coil and input relay)	-
Word device	Input register (IW)	IW0000 to IW7FFF	Hexadecimal
	Holding register (MW)	MW0 to MW32767	Decima
	Coid (MB)* ²	MB0 to MB32767	Decima
	Input relay (IB)* ²	IB000 to IBFFF	Hexadecimal

*1 MB40960 to MB32767F is available for MP-940 only.

*2 This is not supported by GT10.

(3) YASKAWA CP-9200 (H)

Device name		Setting range	Device No. representation
Bit device	Coil (OB)* ³	OB000 to OB7FF	Hexadecimal
	Input relay (IB)* ³	IB000 to IB7FF	
	Word device bit	Specified bit of the following word devices	-
Word device	Input register (IW)	IW00 to IW7F	Hexadecimal
	Output register (OW)	OW00 to OW7F	
	Data register (DW, ZD)* ¹	DW0 to DW2047	Decimal
		ZD0 to ZD2047	
	Common register (MW)* ²	MW0 to MW7694	
	Bit device word	Converting the above bit devices to word devices	-

*1 Setting is available only when CP-9200 is used.

*2 To use data registers of CPU #1 during operation of CP-9200, copy them to MW0 to 7694.

*3 During operation of CP-9200H, specify the reference No. and quantities so that they do not cover both OB*** and IB***.

(4) YASKAWA CP-9300MS (MC compatible)

Device name		Setting range	Device No. representation
Bit device	Coil (OB)	OB0 to OB1023	Decimal
	Input relay (IB)	IB0 to IB1023	
	Word device bit	Specified bit of the following word devices	-
Word device	Input register (I)	I0 to I63	Decimal
	Data register (OM)	M0 to M2047	
	Output register (o)	o0 to o63	
	Bit device word	Converting the above bit devices to word devices	-

(5) YASKAWA MP2000/MP900

Device name		Setting range	Device No. representation
Bit device	Coil(MB)	MB000000 to MB65534F	Decimal + Hexadecimal
	Input relay(IB) ^{*1}	IB00000 to IB7FFFF	Hexadecimal
	Word device bit ^{*2}	Specified bit of the following word devices	-
Word device	Input register(IW) ^{*1}	IW0000 to IW7FFF	Hexadecimal
	Holding register(MW)	MW0 to MW65534	Decimal
	Bit device word ^{*2}	Converting the above bit devices to words devices	-

*1 Only reading is possible.

*2 This is not supported by GT10.

YOKOGAWA PLC

POINT

(1) When using YOKOGAWA PLC FA-M3

When YOKOGAWA PLC FA-M3 is used, the usable device range differs depending on the PLC model selected by the GT Designer3.

Since [YOKOGAWA STARDOM/FA-M3] has a larger number of devices that can be set than [YOKOGAWA FA500/FA-M3], select [YOKOGAWA STARDOM/FA-M3] for setting a large number of devices.

(2) Devices to be set for an object

If a device outside the setting range is set for an object, the value display at the object is indefinite (no error is displayed for system alarm).

A device to be set for an object must be in the device range of YOKOGAWA PLC.

For the device range of YOKOGAWA PLC, refer to the manual below.

 Manual of YOKOGAWA PLC

(1) YOKOGAWA FA500/FA-M3

Device name		Setting range	Device No. representation
Bit device	Input relay (X) ^{*1}	X00201 to X71664	Decimal
	Output relay (Y)	Y00201 to Y71664	
	Internal relay (I)	I1 to I65536	
	Link relay (L)	L1 to L71024	
	Common relay (E)	E1 to E4096	
	Special relay (M) ^{*3}	M1 to M9984	
	Timer (TU) ^{*2}	TU1 to TU3072	
	Counter (CU) ^{*2}	CU1 to CU3072	
	Word device bit	Specified bit of the following word device (Except Timers (TP, TS), Counter (CP, CS))	
Word device	Timer (TP)	TP1 to TP3072	Decimal
	Timer (TS) ^{*1}	TS1 to TS3072	
	Counter (CP)	CP1 to CP3072	
	Counter (CS) ^{*1}	CS1 to CS3072	
	File register (B)	B1 to B262144	
	Data register (D)	D1 to D8192	
	Common register (R)	R1 to R4096	
	Index register (V)	V1 to V256	
	Link register (W)	W1 to W71024	
	Special register (Z) ^{*3}	Z1 to Z512	
	Bit device word	Converting the above bit devices to words (Except Timers (TU), Counter (CU))	

*1 Writing is not possible.

*2 Writing to continuous devices is not possible.

*3 Reading/writing from/to continuous devices is not possible.

(2) YOKOGAWA STARDOM/FA-M3

Device name		Setting range	Device No. representation
Bit device	Input relay (X)* ¹	X00201 to X71664	Decimal
	Output relay (Y)	Y00201 to Y71664	
	Internal relay (I)* ⁴	I1 to I65535	
	Link relay (L)	L00001 to L08192 L10001 to L18192 L20001 to L28192 L30001 to L38192 L40001 to L48192 L50001 to L58192 L60001 to L68192 L70001 to L78192	
	Shared relay (E)	E1 to E4096	
	Special relay (M)* ³	M1 to M9984	
	Timer (TU)* ²	TU1 to TU3072	
	Counter (CU)* ²	CU1 to CU3072	
	Word device bit	Specified bits of the following word devices (Excluding TP, TS, CP and CS)	
Word device	Timer (TP)	TP1 to TP3072	Decimal
	Timer (TS)* ¹	TS1 to TS3072	
	Counter (CP)	CP1 to CP3072	
	Counter (CS)* ¹	CS1 to CS3072	
	Filer register (B)* ⁵	B1 to B262144	
	Data register (D)	D1 to D65535	
	Shared register (R)	R1 to R4096	
	Index register (V)	V1 to V256	
	Link register (W)	W00001 to W08192 W10001 to W18192 W20001 to W28192 W30001 to W38192 W40001 to W48192 W50001 to W58192 W60001 to W68192 W70001 to W78192	
	Special register (Z)* ³	Z1 to Z1024	
	Word of bit devices above	Converting bit devices into word (Excluding TU and CU)	

*1 Writing is not possible.

*2 Writing to continuous devices is not possible.

*3 Reading/writing from/to continuous devices is not possible.

*4 With STARDOM, FA-M3 (F3SP59 only), if communications that include the maximum device number (32767 or 65535) occurs, system alarm "322 Dedicated device is out of range. Confirm device range." may be detected.
If such system alarm is detected, do not use the last 15 bits.

*5 With STARDOM, do not use B32768 or later. If used, correct monitoring is disabled.

■ ALLEN-BRADLEY PLC

(1) AB SLC500

Device name		Setting range	Device No. representation
Bit device	Bit (B)	B3:0/0 to B3:255/15 B10:0/0 to B255:255/15	Decimal
	Timer (Timing bit) (T) ^{*2}	T4:0/14(TT) to T4:255/14(TT) T10:0/14(TT) to T255:255/14(TT)	
	Timer (Completion bit) (T) ^{*2}	T4:0/13(DN) to T4:255/13(DN) T10:0/13(DN) to T255:255/13(DN)	
	Counter (Up counter) (C) ^{*2}	C5:0/15(CU) to C5:255/15(CU) C10:0/15(CU) to C255:255/15(CU)	
	Counter (Down counter) (C) ^{*2}	C5:0/14(CD) to C5:255/14(CD) C10:0/14(CD) to C255:255/14(CD)	
	Counter (Completion bit) (C)	C5:0/13(DN) to C5:255/13(DN) C10:0/13(DN) to C255:255/13(DN)	
	Integer (N) ^{*3}	N7:0 to N7:255 N10:0 to N255:255	
Word device	Bit (B) ^{*3}	B3:0 to B3:255 B10:0 to B255:255	Decimal
	Timer (Set value) (T) ^{*1*2}	T4:0.1(PRE) to T4:255.1(PRE) T10:0.1(PRE) to T255:255.1(PRE)	
	Timer (Current value) (T) ^{*1*2}	T4:0.2(ACC) to T4:255.2(ACC) T10:0.2(ACC) to T255:255.2(ACC)	
	Counter (Set value) (C) ^{*1*2}	C5:0.1(PRE) to C5:255.1(PRE) C10:0.1(PRE) to C255:255.1(PRE)	
	Counter (Current value) (C) ^{*1*2}	C5:0.2(ACC) to C5:255.2(ACC) C10:0.2(ACC) to C255:255.2(ACC)	
	Integer (N) ^{*1}	N7:0 to N7:255 N10:0 to N255:255	

*1 Writing on the device is not allowed for 32-bit data.

*2 Monitoring or writing cannot be done in the continuous device designation mode.

*3 This is not supported by GT10.

(2) AB Micrologix1000/1200/1500 series

Device name		Setting range	Device No. representation
Bit device	Bit (B)	B3:0/0 to B255:255/15	Decimal
	Timer (Timing bit) (T) ^{*3}	T3:0/14(TT) to T255:255/14(TT)	
	Timer (Completion bit) (T) ^{*3}	T3:0/13(DN) to T255:255/13(DN)	
	Counter (Up counter) (C) ^{*3}	C3:0/15(CU) to C255:255/15(CU)	
	Counter (Down counter) (C) ^{*3}	C3:0/14(CD) to C255:255/14(CD)	
	Counter (Completion bit) (C) ^{*3}	C3:0/13(DN) to C255:255/13(DN)	
	Integer (N) ^{*4}	N3:0/0 to N255:255/15	
Word device	Bit (B) ^{*4}	B3:0 to B255:255	Decimal
	Timer (Set value) (T) ^{*1*3}	T3:0.1(PRE) to T255:255.1(PRE)	
	Timer (Current value) (T) ^{*1*3}	T3:0.2(ACC) to T255:255.2(ACC)	
	Counter (Set value) (C) ^{*1*3}	C3:0.1(PRE) to C255:255.1(PRE)	
	Counter (Current value) (C) ^{*1*3}	C3:0.2(ACC) to C255:255.2(ACC)	
	Integer (N) ^{*1}	N3:0 to N255:255	
	32bit integer(L) ^{*2}	L3:0 to L3:255 L255:0 to L255:255	

*1 Writing on the device is not allowed for 32 bit data.

*2 Writing on the device is not allowed for 16 bit data.

*3 Monitoring or writing cannot be done in the continuous device designation mode.

*4 This is not supported by GT10.

(3) AB Control/CompactLogix

Device name		Setting range	Device No. representation
Bit device	BOOL	BOOL0[0] to BOOL999[31999]	Decimal
Word device	INT	INT0[0] to INT999[999]	Decimal
	DINT ^{*1}	DINT0[0] to DINT999[999]	
	REAL ^{*1}	REAL0[0] to REAL999[999]	

*1 Only 32-bit (2-word) specification is possible.

■ GE FANUC PLC (GE Fanuc Automation Series 90)

Device name		Setting range	Device No. representation
Bit device	input (I)	I00001 to I12288	Decimal
	output (Q)	Q00001 to Q12288	
	internal (M)	M00001 to M12288	
	temporary (T)	T001 to T256	
	system status (S)	S001 to S128	
	system status (SA)	SA001 to SA128	
	system status (SB)	SB001 to SB128	
	system status (SC)	SC001 to SC128	
	global data (G)	G0001 to G7680	
Word device	system register (R)	R00001 to R32640	Decimal
	analog input register (AI)	AI0001 to AI32640	
	analog output register (AQ)	AQ0001 to AQ32640	

■ LS IS PLC (LS Industrial Systems MASTER-K)

Device name		Setting range	Device No. representation
Bit device	I/O relay (P)	P0000 to P063F	Decimal + Hexadecimal
	Auxiliary relay (M)	M0000 to M191F	
	Keep relay (K)	K0000 to K031F	
	Link relay (L)	L0000 to L063F	
	Special relay (F) ^{*1}	F0000 to F063F	
	Timer contact (T)	T0 to T255	Decimal
	Counter contact (C)	C0 to C255	
Word device	I/O relay (P)	P000 to P063	Decimal
	Auxiliary relay (M)	M000 to M191	
	Keep relay (K)	K000 to K031	
	Link relay (L)	L000 to L063	
	Special relay (F) ^{*1}	F000 to F063	
	Timer current value (T)	T0 to T255	
	Counter current value (C)	C0 to C255	
	Step controller (S)	S0 to S99	
	Data register (D)	D0 to D9999	

*1 Only reading is possible.

■ SICK safety controller (SICK Flexi Soft)

Device name ^{*1}		Setting range	Device No. representation
Bit device	Input (I)	I1.1 to I12.8	Decimal+Decimal
	Output (Q)	Q1.1 to Q12.8	
	Logic result (LQ)	LQ0.0 to LQ3.7	
	Logic input (LI)	LI0.0 to LI3.7	
	Word device bit	Specified bit of the following word devices	-
Word device	Data (byte) (D)	D0 to D99	Decimal
	Data (word) (W)	W0 to W49	
	EFI input (byte) (EI)	EI110 to EI233	Decimal +Decimal +Decimal
	EFI output (byte) (EQ)	EQ10 to EQ22	Decimal+Decimal
	Logic input (byte) (LD)	LD0 to LD3	Decimal
	Logic input (word) (LW)	LW0 to LW1	

^{*1} The GOT can only read data from all the devices.

■ SIEMENS PLC

(1) SIEMENS S7-300/400 series

Device name		Setting range	Device No. representation
Bit device	Input relay (I)	I0000 to I5117	Decimal
	Output relay (Q)	Q0000 to Q5117	
	Bit memory (M)	M00000 to M20477	
	Word device bit	Specified bit of the following word devices (except input relay, output relay, bit memory, timer and counter)	-
Word device	Input relay (IW)	IW000 to IW510	Decimal
	Output relay (QW)	QW000 to QW510	
	Bit memory (MW)	MW000 to MW2046	
	Timer (Current value) (T) ^{*1}	T0 to T511	
	Counter (Current value) (C)	C0 to C511	
	Data register (DB)	DB000100000 to DB000165534	
		DB000200000 to DB000265534	
		DB000300000 to DB000365534	
		.	
		.	
		.	
		DB409400000 to DB409465534	
		DB409500000 to DB409565534	

^{*1} Monitoring or writing cannot be done in the continuous device designation mode.

(2) SIEMENS S7-200 series

Device name		Setting range	Device No. representation
Bit device	variable memory (V)	V0 to V51197	Decimal
	Input relay (I)	I0 to I77	
	Output relay (Q) ^{*3}	Q0 to Q77	
	Bit Memory (M)	M0 to M317	
	special memory (SM)	SM0 to SM1947	
	Timer (T) ^{*1}	T0 to T255	
	Counter (C) ^{*1}	C0 to C255	
	sequence control relay (S)	S0 to S317	
Word device	variable memory (VW)	VW0 to VW5118	Decimal
	Input relay (IW)	IW0 to IW6	
	Output relay (QW) ^{*3}	QW0 to QW6	
	analog input (AIW) ^{*1}	AIW0 to AIW30	
	analog output (AQW) ^{*3}	AQW0 to AQW30	
	Bit memory (MW)	MW0 to MW30	
	special memory (SMW)	SMW0 to SMW192	
	Timer (T) ^{*4}	T0 to T255	
	Counter (CW) ^{*4}	C0 to C255	
	High-speed counter (HC) ^{*2}	HC0 to HC2	
	sequence control relay (SW)	SW0 to SW30	

*1 Only reading is possible.

*2 Only reading 32-bit data (two-word data) is possible.

*3 Only writing while the programmable controller runs is possible.

*4 Reading and writing only 16-bit data (one-word data) are possible.

■ IAI robot controller (IAI X-SELController)

Device name		Setting range	Device No. representation
Bit device	Input Port (IP) ^{*1}	IP000 to IP299	Decimal
	Output Port (OP)	OP300 to OP599	
	Flag (FG)	FG000:600 to FG000:899 FG001:900 to FG001:999 : FG128:900 to FG128:999	
	Point Data Clear (PCLR) ^{*2*6}	PCLR0001 to PCLR4E20	Hexadecimal
Word device	Point Data Total Count (PDT) ^{*1}	PDT0	Decimal
	String (STR) ^{*3}	STR000:300 to STR000:998 STR001:001 to STR001:299 : STR128:001 to STR128:299	
	Axis Status (AXST) ^{*1}	AXST00 to AXST2F	
	Scara Axis Status 0 (Base coordinate system) (SAXS0) ^{*1}	SAXS000 to SAXS0FF	Hexadecimal
	Scara Axis Status 1 (Selected work coordinate system) (SAXS1) ^{*1}	SAXS100 to SAXS1FF	

(Continued to next page)

Device name		Setting range	Device No. representation
Word device	Scara Axis Status 2 (Reserved for system use) (SAXS2)* ¹	SAXS200 to SAXS2FF	Hexadecimal
	Scara Axis Status 3 (Each axis system) (SAXS3)* ¹	SAXS300 to SAXS3FF	
	Version 0 (Main CPU application/) (VR0)* ¹	VR00:0 to VR00:F : VR0F:0 to VR0F:F	
	Version 1 (Main CPU core) (VR1)* ¹	VR10:0 to VR10:F : VR1F:0 to VR1F:F	
	Version 2 (Driver CPU) (VR2)* ¹	VR20:0 to VR20:F : VR2F:0 to VR2F:F	
	Version 3 (Mount SIO) (VR3)* ¹	VR30:0 to VR30:F : VR3F:0 to VR3F:F	
	Program Status (PGST)* ^{1,4}	PGST000 to PGST511	Decimal
	System Status (SYST)* ¹	SYST0 to SYST6	
	Program Control (PRG)* ²	PRG000 to PRG128	
	Alarm Reset (AR)* ²	AR0	
	Software Reset (SR)* ^{2,5}	SR0	
	Drive-Source Recovery (DSR)* ²	DSR0	
	Operation-Pause Reset (OPR)* ²	OPR0	
	Servo (SV)* ⁷	SV0 to SV2	
	Write to Flash ROM (FRW)* ⁷	FRW0 to FRW1	
	Coordinate Affiliate Data 0 (Work coordinate system definition data) (CD0)* ¹	CD000:0 to CD000:F : CD0FF:0 to CD0FF:F	Hexadecimal
	Coordinate Affiliate Data 1 (Tool coordinate system definition data) (CD1)* ¹	CD100:0 to CD100:F : CD1FF:0 to CD1FF:F	
	Integer (INT)	INT000:0200 to INT000:1299 INT001:0001 to INT001:1099 : INT128:0001 to INT128:1099	Decimal
	Real (RL)	RL000:0300 to INT000:1399 RL001:0100 to INT001:1199 : INT128:0100 to INT128:1199	
	Error Detail 0 (System error) (ER0)* ¹	ER000:000:00 to ER0FF:000:FF : ER000:FFF:00 to ER0FF:FFF:FF	Hexadecimal
	Error Detail 1 (Axis-specific error) (ER1)* ¹	ER100:000:00 to ER1FF:000:FF : ER100:FFF:00 to ER1FF:FFF:FF	
	Error Detail 2 (Program-specific error) (ER2)* ¹	ER200:000:00 to ER2FF:000:FF : ER200:FFF:00 to ER2FF:FFF:FF	
	Error Detail 3 (Error in error list record) (ER3)* ¹	ER300:000:00 to ER3FF:000:FF : ER300:FFF:00 to ER3FF:FFF:FF	

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Device name		Setting range	Device No. representation
Word device	Error Detail 4 (Rederved for system use) (ER4)* ¹	ER400:000:00 to ER4FF:000:FF : ER400:FFF:00 to ER4FF:FFF:FF	Hexadecimal
	Error Detail 5 (Rederved for system use) (ER5)* ¹	ER500:000:00 to ER5FF:000:FF : ER500:FFF:00 to ER5FF:FFF:FF	
	Error Detail 6 (Rederved for system use) (ER6)* ¹	ER600:000:00 to ER6FF:000:FF : ER600:FFF:00 to ER6FF:FFF:FF	
	Error Detail 7 (Rederved for system use) (ER7)* ¹	ER700:000:00 to ER7FF:000:FF : ER800:FFF:00 to ER8FF:FFF:FF	
	Point Data Total Count (PD)* ⁷	PD00 to PD9E	
	Simple Interference Check Zone Data (SD)* ¹	SD01:0 to SD01:F : SDFF:0 to SDFF:F	

*1 The GOT can only read data from the device.

*2 The GOT can only write data to the device.

*3 The following restrictions are applied depending on the program number.

- When the program number is 000, the variable number can be only even numbers.
- When the program number is 001 to 128, the variable number can be only odd numbers.

*4 For the program control device, the command to be sent differs depending on the write data.

Write data other than the followings are processed as an internal error of GOT.

- Write data 0: Program Exit Command (0 × 254)
- Write data 1: Program Execution Command (0 × 253)
- Write data 2: Program Pause Command (0 × 255)
- Write data 3: Program 1 Step Execution Command (0 × 256)
- Write data 4: Program Restart Command (0 × 257)

*5 When performing software reset, a no response error is displayed after a non-communicating period of ten and several seconds, and then the communication is resumed.

*6 For the word address, the value is specified only when the last digit is 1.

*7 For the device whose obtained data No.0 is a command trigger, a request is sent to the controller when the Write or Read is input to the command trigger.

It is not sent when the Clear is input.

■ Microcomputer connection

(1) GT16, GT15, GT11, GT SoftGOT1000

Device name		Setting range	Device No. representation
Bit device	Internal relay (M)	M0 to M2047	Decimal
	Special relay (SM)	SM0 to SM63	
	Latch relay (L)	L0 to L2047	
	Word device bit	Specified bit of the following word device	
Word device	Data register (D)	D0 to D4095	Decimal
	Link special register (SD)	SD0 to SD15	
	File register (R)	R0 to R4095	
	Bit device word	Converting the above bit devices to words	

*1 The host is not allowed to write to/read from GB and GD devices.

(2) GT10

Device name		Setting range	Device No. representation
Bit device	Internal relay (M)	M0 to M2047	Decimal
	Special relay (SM)	SM0 to SM63	
	Latch relay (L)	L0 to L2047	
Word device	Data register (D)	D0 to D511	Decimal
	Link special register (SD)	SD0 to SD15	
	File register (R)	R0 to R4095	

*1 The host is not allowed to write to/read from GB and GD devices.

MODBUS(R)

Device name		Setting range	Device No. representation
Bit device	Coils (0)	000001 to 065536	Decimal
	Discretes input (1)*1	100001 to 165536	
Word device	Input registers (3)*1	300001 to 365536	Decimal
	Holding registers (4)	400001 to 465536	
	Extension file register (6)	File No.: 0 to 104 600000 to 609999	

*1 Only reading is possible.

OMRON temperature controller (OMRON THERMAC/INPANEL NEO)

Device name		Setting range	Device No. representation
Bit device	Status (S)*1	S0000 to S0031 S0100 to S0131	Decimal
Word device	Operation command (A)*2	A0000 to A000C	Hexadecimal
	Variable area 0 (C0)*1*3	C00000 to C00006 C00100 to C00106	Decimal + Hexadecimal
	Variable area 1 (C1)*3	C10000 to C1001C C10100 to C1011C	
	Variable area 3 (C3)*3	C30000 to C3003E C30100 to C3013E	

*1 Only reading is possible.

*2 Only writing is possible.
Numerical input cannot be used.
Use a word switch for writing.

*3 Only 32-bit (2-word) designation is possible.

■ SHINKO indicating controller (Shinko Technos Controller)

Device name		Setting range	Device No. representation
Bit device	Word device bit*1	Specified bit of the following word devices	-
Word device	Data item (..)	..0001 to ..7901	Hexadecimal

*1 As bit specification of a word device is performed after the GOT reads the value, do not change the value with the indicating controller during this period.

■ CHINO controller (CHINO Controllers)

Device name		Setting range	Device No. representation
Bit device	Digital parameter (0)	00001 to 09999	Decimal
	Digital input data (1)*1	10001 to 19999	
Word device	Analog input data (3)*1	30001 to 39999	Decimal
	Analog parameter (4)	40001 to 49999	

*1 Only reading is possible.

■ FUJI SYS temperature controllers (FUJI PXR/PXG/PXH)

Device name		Setting range	Device No. representation
Bit device	Bit data (0)	00001 to 00001	Decimal
	Bit data (1)*1	10001 to 10016	
	Word device bit	Specified bits of the following word devices	-
Word device	Word data (3)*1	30001 to 31398	Decimal
	Word data (4)	40001 to 43776	

*1 Only reading is possible.

■ YAMATAKE temperature controller (YAMATAKE SDC/DMC series)

Device name		Setting range	Device No. representation
Bit device	Word device bit	Specified bit of the following word devices	-
	Data (..)* ¹	..273 to ..31243	Decimal

*¹ Only 16-bit (1-word) designation is possible.

■ YOKOGAWA temperature controller (YOKOGAWA GREEN/UT100/UT2000)

Device name		Setting range	Device No. representation
Bit device	Internal relay	I0001 to I1024	Decimal
	Word device bit* ¹	Specified bits of the following word devices	-
Word device	Data register (D)* ¹	D0001 to D1700	Decimal
	File register (B)* ¹	B0001 to B1600	
	Bit device word	Converting the above bit devices to word devices	-

*¹ Only 16-bit (1-word) specification is possible.

■ RKC temperature controller (RKC SR Mini HG)

Device name		Setting range	Device No. representation
Bit device	Word device bit	Specified bit of the following word devices	-
	Data (..)	..0000 to ..FFFF	Hexadecimal

■ Inverter (FREQROL 500/700 series)



Inverter data

For details of parameters, etc., refer to the following manual.

Manual of the inverter being used

Device name*4		Setting range	Device No. representation
Bit device	Inverter status monitor (RS)*3	RS0:0 to RS7:31 RS0:100 to RS7:115	Decimal
	Run command (WS)*5*6	WS0:0 to WS7:31 WS0:0 to WS7:115	
Word device	Alarm definition (A)*2*3	A0:0 to A7:31 A0:100 to A7:115	Decimal
	Parameter (Pr)*1*2	Pr0:0 to Pr993:31 Pr0:100 to Pr993:115	
	Programmed operation (PG)*1*2	PG0:0 to PG89:31 PG0:100 to PG89:115	
	Special parameter (SP)*2*5	SP108:0 to SP127:31 SP108:100 to SP127:115	

*1 When creating the screen, designate only either of programmed operation (PG) device or parameter (Pr) device.

Do no designate both PG (PG0 to PG89) and Pr (Pr900 to Pr905) devices.

*2 Only 16-bit (1-word) designation is possible.

*3 Only reading is possible.

*4 The GOT cannot read or write data from/to consecutive devices.

For details of *5, *6, refer to the following.

*5 Precautions for PU operation mode

When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the multi-speed operation (W3 to W7, SP121, SP122) cannot be used.

For using the multi-speed operation, follow either of the operations as below.

- Connect the GOT to the RS-485 terminal and set the operation mode to the NET operation mode (Computer link operation mode), and then operate the inverter.
- Change the motor speed with the set frequency (SP109, SP110), and then operate the inverter with the forward or reverse rotation (WS1, WS2, SP121, SP122).

*6 Precautions for WS devices

- Only writing is possible for WS devices.

More than one WS cannot turn on at once. (Except the turned on WS device, the other WS devices turn off.)

Bits of SP122 (word device) are assigned to WS0 to WS7.

When more than one WS turns on at once, convert the values for the bit devices that are assigned to the word device into values for the word device. Write the converted values into SP122.

Example: Forward rotation (WS1) and low speed operation (WS3)

Write "10" in decimal (the value that turns on WS1 and WS3) into SP122.

- When using a WS device, [Alternate] of a bit switch cannot be used.

Use [Momentary], [Set], and [Reset] for bit switch actions.

The following shows correspondences between virtual inverter devices used in the GOT and data of the inverter.

(1) Inverter status monitor

Device name	Description
RS0	Inverter running (RUN)
RS1	Forward rotation (STF)
RS2	Reverse rotation (STR)
RS3	Up to frequency (SU)
RS4	Overload (OL)
RS5	Instantaneous power failure (IPF) ^{*1}
RS6	Frequency detection (FU)
RS7	Alarm occurrence

^{*1} Can be used only for FREQROL-A500/A700/F700 series.

(2) Run command

Device name	Description
WS0	Current input selection (AU) ^{*2}
WS1	Forward rotation (STF)
WS2	Reverse rotation (STR)
WS3	Low speed operation (RL) ^{*1} (Current input selection (AU) for FREQROL-F500 series)
WS4	Middle speed operation (RM) ^{*1}
WS5	High speed operation (RH) ^{*1}
WS6	Second function selection (RT) ^{*2}
WS7	Output stop (MRS) ^{*2}

^{*1} Cannot be used for FREQROL-A500/E500 series.

^{*2} Can be used only for FREQROL-A700/F700 series.

(3) Alarm definition


Device name ^{*1}	Description
A0	Second alarm in past
A1	Latest alarm
A2	Fourth alarm in past
A3	Third alarm in past
A4	Sixth alarm in past
A5	Fifth alarm in past
A6	Eighth alarm in past
A7	Seventh alarm in past

^{*1} Only reading is possible for A0 to A7.
These devices cannot be used for a write object (numerical input etc.).

(4) Parameters

The numbers of virtual devices for inverter (parameter (Pr)), used by GOT, correspond to the inverter parameter numbers.

For the inverter parameters, refer to the following.

 Manual of the inverter being used

POINT

(1) Monitoring Pr.37

GOT cannot monitor the parameter (Pr.37) of FREQROL-E500/S500(E)/F500J.

(2) When setting [8888] or [9999] to inverter parameter (Pr)

[8888] and [9999] designate special function.

To set these numbers from GOT, designate a number as shown below.

Setting at inverter	Value to be set at GOT
8888	65520
9999	65535

(3) Precautions for setting calibration parameter (Pr900 to Pr905)

When setting a calibration parameter (Pr900 to Pr905), it is necessary to set the value below for extension second parameter (SP108), depending on the device number to be used and the inverter model.

Value to be set to extension second parameter (SP108)	Description
H00	Offset / gain
H01	Analog
H02	Analog value at terminal

(5) Program operation

The devices below correspond to the parameters (Pr.201 to Pr.230) of FREQROL-A500 series.

Device name	Description
PG0 to PG9	Program set 1 (running frequency)
PG10 to PG19 ^{*1}	Program set 1 (time)
PG20 to PG29	Program set 1 (rotation direction)
PG30 to PG39	Program set 2 (running frequency)
PG40 to PG49 ^{*1}	Program set 2 (time)
PG50 to PG59	Program set 2 (rotation direction)
PG60 to PG69	Program set 3 (running frequency)
PG70 to PG79 ^{*1}	Program set 3 (time)
PG80 to PG89	Program set 3 (rotation direction)

^{*1} To set the start time (PG10 to PG19, PG40 to PG49, PG70 to PG79), set hour or minute in the upper 8 bits, and minute or second in the lower 8 bits.


Example) To set 13 hour 35 minute

Time to be set	13 H	35 M	Remark
Convert "hour" and "minute" into hexadecimal.	H0D	H23	HEX
Combine upper and lower 8-bit values.	Input H0D23 or 3363.		-

(6) Special parameters

The numbers of inverter virtual devices (SP) used for the GOT correspond to instruction code of the inverter communication function.

For instruction details, and values to be read and written, refer to the following,

 Manual of the inverter used

Device name	Description	Instruction code	
		Read	Write
SP108	Second parameter changing	6CH	ECH
SP109 ^{*1}	Set frequency (RAM)	6DH	EDH
SP110 ^{*1}	Set frequency (RAM, E ² PROM)	6EH	EEH
SP111 ^{*1}	Output frequency	6FH	-
SP112	Output current	70H	-
SP113	Output voltage	71H	-
SP114	Special monitor	72H	-
SP115	Special monitor selection No.	73H	F3H
SP116	Alarm definition all clear	-	F4H
	Latest alarm, second alarm in past	74H	-
SP117	Third alarm in past, fourth alarm in past	75H	-
SP118	Fifth alarm in past, sixth alarm in past	76H	-
SP119	Seventh alarm in past, eighth alarm in past	77H	-
SP121	Inverter status monitor (extended)	79H	F9H
	Run command (extend)		
SP122	Inverter status monitor	7AH	-
	Run command	-	FAH
SP123	Communication mode	7BH	FBH
SP124	All parameter clear	-	FCH
SP125	Inverter reset	-	FDH
SP127	Link parameter extended setting	7FH	FFH

*1 GOT cannot monitor SP109 to SP111 if the conditions below are satisfied at the same time.
(Only FREQROL-E500/F500J/S500(E)/E700 series)

- Pr37 ≠ 0
- SP127 = 1

*2 Only reading is possible for SP111 to SP114.

These devices cannot be used for write objects (such as numerical input).

*3 Only writing is possible for SP124 and SP125.

These devices cannot be used for read object.

*4 If the GOT is connected to the PU port of the FREQROL-A500/E500/F500 (excluding the PREQROL-F500J), the mode of the inverter is [External operation mode.] when the power is turned on.

When changing parameters from the GOT, change the value of SP123 to "2" (PU operation mode) in advance.

■ Servo amplifier

POINT

(1) Monitoring servo amplifier

Carefully read the manual of servo amplifier to be connected and fully understand the operating procedures before monitoring.

Before operation, check the parameter settings. Improper settings may cause some machines to perform unexpected operation.

The parameter settings must not be changed excessively. Operation will be insatiable.

(2) Parameters with * in front of it's abbreviated name

For the parameter with * in front of it's abbreviated name, powering off the servo amplifier after setting then on makes the parameter valid.

(3) Data length for setting virtual devices for servo amplifier

Set the following data length for setting devices.

- PRM, ST, AL, PA, PB, PC, PD, POS, SPD, ACT, DCT, DWL, AUX: 16 bits or 32 bits (depends on the data of servo amplifier)
- DI, DO, TMI, TMO, TMD: 32 bits

If the above data length was not set, data would not be set to the servo amplifier correctly or the GOT can not monitor normally.

(a) Monitoring

- When the 16-bit data is handled as 32-bit data, the upper 16 bits are displayed as 0.
- When the 32-bit data is handled as 16-bit data, the lower 16 bits only are displayed as 0.

(b) Writing

The GOT writes within the range of data length set. Note that the servo amplifier responds correctly while the written data is invalid in the servo amplifier side when the written data is outside the range of values which can be set by the servo amplifier.

(4) Memory area for writing parameters

Parameters are written to RAM or E²PROM of servo amplifier.

(a) When written to RAM

Remember that written parameters are cleared when power supply to the servo amplifier is turned off.

(b) When written to E²PROM

Written parameters are not cleared even when power supply to the servo amplifier is turned off. However, there are limits in the number of writing to E²PROM.

If the data is frequently updated (more than once in an hour), write the parameters to the RAM.

For details, refer to the manual of the servo amplifier used.



Data of servo amplifier

Refer to the following manual for parameters.



Manual of the servo amplifier used

(1) MELSERVO-J2M-P8A

Device name ^{*2}		Setting range available	Device No. representation
Bit device	Servo amplifier request (SP) ^{*3}	SP1 to SP2	Decimal
	Operation mode selection (OM) ^{*3}	OM0 to OM4	
Word device	Basic parameter/expansion parameter (PRM) ^{*1}	PRM0 to PRM29 PRM1000 to PRM1029	
	Status display (ST)	ST0 to ST2	
	Alarm (AL)	AL0 AL11 to AL13 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	External input (DI)	DI0 to DI2	
	External output (DO)	DO0 to DO1	
	Forced output of signal pin (for test operation) (TMO) ^{*3}	TMO0	

^{*1} Use PRM0 to PRM29 when writing parameters to the servo amplifier RAM.

PRM1000 to PRM1029 are used when writing parameters to E²PROM of the servo amplifier.

^{*2} The GOT cannot read or write data from/to consecutive devices.

For details of ^{*3}, refer to the following.

^{*3} Precautions for SP, OM, and TMO devices

- (a) For bit devices
 - Only writing is possible.
 - [Alternate] of a bit switch cannot be used.
 - Use [Momentary], [Set], and [Reset] for bit switch actions.
- (b) For word devices
 - Only writing is possible.
 - Numerical input cannot be used.
 - Use a word switch for writing.
 - Servo amplifier request

Device name	Item	Symbol
SP1	Current alarm clear	-
SP2	Alarm history clear	-

• Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM4	Output signal (DO) forced output	-

• Basic parameter/expansion parameter

Device name	Item	Symbol ^{*2}
PRM0, PRM1000	Serial communication function selection, alarm history clear	*BPS
PRM1, PRM1001	Regenerative brake option selection	*REG
PRM2, PRM1002	Function selection 1	*OP1

(Continued to next page)

Device name	Item	Symbol* ²
PRM3, PRM1003	Analog monitor 1 output	MD1
PRM4, PRM1004	Analog monitor 2 output	MD2
PRM5, PRM1005	Analog monitor 3 output	MD3
PRM6, PRM1006	Analog monitor 1 offset	MO1
PRM7, PRM1007	Analog monitor 2 offset	MO2
PRM8, PRM1008	Analog monitor 3 offset	MO3
PRM9, PRM1009	Function selection 2	*OP2
PRM10, PRM1010	Interface unit serial communication number selection	*ISN
PRM11, PRM1011	1slot serial communication station number selection	*DSN1
PRM12, PRM1012	2slot serial communication station number selection	*DSM2
PRM13, PRM1013	3slot serial communication station number selection	*DSM3
PRM14, PRM1014	4slot serial communication station number selection	*DSN4
PRM15, PRM1015	5slot serial communication station number selection	*DSN5
PRM16, PRM1016	6slot serial communication station number selection	*DSN6
PRM17, PRM1017	7slot serial communication station number selection	*DSN7
PRM18, PRM1018	8slot serial communication station number selection	*DSN8
PRM19, PRM1019	Parameter write inhibit	*BLK
PRM20, PRM1020	Serial communication time-out selection	SIC
PRM21 to PRM29, PRM1021 to PRM1029	For manufacturer setting	-

² For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Status display

Device name	Item	Symbol
ST0	Regenerative load ratio	-
ST1	Bus voltage	-
ST2	Peak bus voltage	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL11	Servo status when alarm occurs regenerative load factor	-
AL12	Servo status when alarm occurs bus voltage	-
AL13	Servo status when alarm occurs peak bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-

(Continued to next page)

Device name	Item	Symbol
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

• External I/O signal

Device name	Item	Symbol
DI0	External input pin statuses CN1A/CN1B	-
DI1	External input pin statuses CN5	-
DI2	External input pin statuses CN4A/CN4B	-
DO0	External output pin statuses CN1A/CN1B	-
DO1	External output pin statuses CN4A/CN4B	-

• Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	-

(2) MELSERVO-J2M-*DU

Device name*2		Setting range	Device No. representation
Bit device	Servo amplifier request (SP)*3	SP0 to SP6	Decimal
	Servo amplifier request (SP)*3	OM0 to OM4	
	Instruction demand (for test operation) (TMB)*3	TMB0 to TMB1	
Word device	Basic parameter/expansion parameter (PRM)*1	PRM0 to PRM84 PRM1000 to PRM1084	
	Status display (ST)	ST0 to ST10	
	Alarm (AL)	AL0 AL11 to AL21 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	Input signal for test operation (for test operation) (TMI)*3	TMI0	
	Forced output of signal pin (for test operation) (TMO)*3	TMO0	
	Set data (for test operation) (TMD)*3	TMD0 to TMD2	

- *1 Use PRM0 to PRM84 when writing parameters to the servo amplifier RAM.
PRM1000 to PRM1084 are used when writing parameters to E²PROM of the servo amplifier.
- *2 The GOT cannot read or write data from/to consecutive devices.
For details of *3, refer to the following.

*3 Precautions for SP, OM, TMB, TMI, TMO, and TMD devices

- (a) For bit devices
Only writing is possible.
[Alternate] of a bit switch cannot be used.
Use [Momentary], [Set], and [Reset] for bit switch actions.
- (b) For word devices
Only writing is possible.
Numerical input cannot be used.
Use a word switch for writing.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

- Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

- Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

- Instruction demand (for test operation)

Device name	Item	Symbol
TMB0	Clears acceleration/deceleration time constant (test mode)	-
TMB1	Temporary stop command (test mode)	-

- Basic parameter/expansion parameter

Device name	Item	Symbol *1
PRM0, PRM1000	For manufacturer setting	-
PRM1, PRM1001	Function selection 1	*OP1
PRM2, PRM1002	Auto tuning	ATU
PRM3, PRM1003	CMX Electronic gear numerator (Command pulse multiplying factor numerator)	CMX
PRM4, PRM1004	Electronic gear denominator (Command pulse multiplying factor denominator)	CDV
PRM5, PRM1005	In-position range	INP
PRM6, PRM1006	Position loop gain 1	PG1
PRM7, PRM1007	Position command acceleration/deceleration time constant (position smoothing)	PST
PRM8 to PRM15, PRM1008 to PRM1015	For manufacturer setting	-
PRM16, PRM1016	Alarm history clear	*BPS

(Continued to next page)

Device name	Item	Symbol*1
PRM17 to PRM18, PRM1017 to PRM1018	For manufacturer setting	-
PRM19, PRM1019	DRU parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	Function selection 3 (Command pulse selection)	*OP3
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Feed forward gain	FFC
PRM24, PRM1024	Zero speed	ZSP
PRM25 to PRM26, PRM1025 to PRM1026	For manufacturer setting	-
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29 to PRM32, PRM1029 to PRM1032	For manufacturer setting	-
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ratio of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position loop gain 2	PG2
PRM36, PRM1036	Speed loop gain 1	VG1
PRM37, PRM1037	Speed loop gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40 to PRM41, PRM1040 to PRM1041	For manufacturer setting	-
PRM42, PRM1042	Input signal selection 1	*DI1
PRM43 to PRM50, PRM1043 to PRM1050	For manufacturer setting	-
PRM51, PRM1051	Function selection 6	*OP6
PRM52 to PRM53, PRM1052 to PRM1053	For manufacturer setting	-
PRM54, PRM1054	Function selection 9	*OP9
PRM55, PRM1055	Function selection A	*OPA
PRM56 to PRM57, PRM1056 to PRM1057	For manufacturer setting	-
PRM58, PRM1058	Machine resonance suppression filter 1	NH1
PRM59, PRM1059	Machine resonance suppression filter 2	NH2
PRM60, PRM1060	Low-pass filter, adaptive vibration suppression control	LPF
PRM61, PRM1061	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM62, PRM1062	Position control gain 2 changing ratio	PG2B
PRM63, PRM1063	Speed control gain 2 changing ratio	VG2B
PRM64, PRM1064	Speed integral compensation changing ratio	VICB
PRM65, PRM1065	Gain changing selection	*CDP
PRM66, PRM1066	Gain changing condition	CDS
PRM67, PRM1067	Gain changing time constant	CDT
PRM68, PRM1068	For manufacturer setting	-
PRM69, PRM1069	Command pulse multiplying factor numerator 2	CMX2
PRM70, PRM1070	Command pulse multiplying factor numerator 3	CMX3
PRM71, PRM1071	Command pulse multiplying factor numerator 4	CMX4
PRM72 to PRM75, PRM1072 to PRM1075	For manufacturer setting	-
PRM76, PRM1076	Internal torque limit 2	TL2
PRM77 to PRM84, PRM1077 to PRM1084	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Status display

Device name	Item	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Effective load ratio	-
ST6	Peak load ratio	-
ST7	Instantaneous torque	-
ST8	Within one-revolution position	-
ST9	ABS counter	-
ST10	Load inertia moment ratio	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL11	Servo status when alarm occurs cumulative feedback pulses	-
AL12	Servo status when alarm occurs servo motor speed	-
AL13	Servo status when alarm occurs droop pulses	-
AL14	Servo status when alarm occurs cumulative command pulses	-
AL15	Servo status when alarm occurs command pulse frequency	-
AL16	Servo status when alarm occurs effective load ratio	-
AL17	Servo status when alarm occurs peak load ratio	-
AL18	Servo status when alarm occurs instantaneous torque	-
AL19	Servo status when alarm occurs within one-revolution position	-
AL20	Servo status when alarm occurs ABS counter	-
AL21	Servo status when alarm occurs load inertia moment ratio	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

- Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	-

- Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	-

- Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

(3) MELSERVO-J2S-*A

Device name*2		Setting range	Device No. representation
Bit device	Servo amplifier request (SP)*3	SP0 to SP6	Decimal
	Operation mode selection (OM)*3	OM0 to OM4	
	Instruction demand (for test operation) (TMB)*3	TMB0 to TMB1	
Word device	Basic parameter/expansion parameter (PRM)*1	PRM0 to PRM84 PRM1000 to PRM1084	
	Status display (ST)	ST0 to ST14	
	Alarm (AL)	AL0 to AL1 AL11 to AL25 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	External input (DI)	DI0	
	External output (DO)	DO0	
	Input signal for test operation (for test operation) (TMI)*3	TMI0	
	Forced output of signal pin (for test operation) (TMO)*3	TMO0	
	Set data (for test operation) (TMD)*3	TMD0 to TMD2	

*1 Use PRM0 to PRM84 when writing parameters to the servo amplifier RAM.

PRM1000 to PRM1084 are used when writing parameters to E²PROM of the servo amplifier.

*2 The GOT cannot read or write data from/to consecutive devices.

For details of *3, refer to the following.

*3 Precautions for SP, OM, TMB, TMI, TMO, and TMD devices

- (a) For bit devices
 - Only writing is possible.
 - [Altimate] of a bit switch cannot be used.
 - Use [Momentary], [Set], and [Reset] for bit switch actions.
- (b) For word devices
 - Only writing is possible.
 - Numerical input cannot be used.
 - Use a word switch for writing.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

- Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

- Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

- Instruction demand (for test operation)

Device name	Item	Symbol
TMB0	Clears the acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

- Basic parameter/expansion parameter

Device name	Item	Symbol *1
PRM0, PRM1000	Control mode, regenerative brake option selection	*STY
PRM1, PRM1001	Function selection 1	*OP1
PRM2, PRM1002	Auto tuning	ATU
PRM3, PRM1003	Electronic gear numerator	CMX
PRM4, PRM1004	Electronic gear denominator	CDV
PRM5, PRM1005	In-position range	INP
PRM6, PRM1006	Position loop gain 1	PG1
PRM7, PRM1007	Position command acceleration/deceleration time constant	PST
PRM8, PRM1008	Internal speed command1/limit1	SC1
PRM9, PRM1009	Internal speed command2/limit2	SC2
PRM10, PRM1010	Internal speed command3/limit3	SC3
PRM11, PRM1011	Acceleration time constant	STA
PRM12, PRM1012	Deceleration time constant	STB
PRM13, PRM1013	S-pattern acceleration/deceleration time constant	STC
PRM14, PRM1014	Torque command time constant	TQC
PRM15, PRM1015	Station number setting	*SNO
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	Function selection 3 (Command pulse selection)	*OP3
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Feed forward gain	FFC
PRM24, PRM1024	Zero speed	ZSP
PRM25, PRM1025	Analog speed command maximum speed/limit maximum speed	VCM
PRM26, PRM1026	Analog torque command maximum output	TLC
PRM27, PRM1027	Encoder output pulses	*ENR

(Continued to next page)

Device name	Item	Symbol *1
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29, PRM1029	Analog speed command offset/limit offset	VCO
PRM30, PRM1030	Analog torque command offset/limit offset	TLO
PRM31, PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ratio of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position loop gain 2	PG2
PRM36, PRM1036	Speed loop gain 1	VG1
PRM37, PRM1037	Speed loop gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40, PRM1040	For manufacturer setting	-
PRM41, PRM1041	Input signal automatic ON selection	*DIA
PRM42, PRM1042	Input signal selection 1	*DI1
PRM43, PRM1043	Input signal selection 2 (CN1B-5)	*DI2
PRM44, PRM1044	Input signal selection 3 (CN1B-14)	*DI3
PRM45, PRM1045	Input signal selection 4 (CN1A-8)	*DI4
PRM46, PRM1046	Input signal selection 5 (CN1B-7)	*DI5
PRM47, PRM1047	Input signal selection 6 (CN1B-8)	*DI6
PRM48, PRM1048	Input signal selection 7 (CN1B-9)	*DI7
PRM49, PRM1049	Output signal selection 1	*DO1
PRM50, PRM1050	For manufacturer setting	-
PRM51, PRM1051	Function selection 6	*OP6
PRM52, PRM1052	For manufacturer setting	-
PRM53, PRM1053	Function selection 8	*OP8
PRM54, PRM1054	Function selection 9	*OP9
PRM55, PRM1055	Function selection A	*OPA
PRM56, PRM1056	Serial communication time-out selection	SIC
PRM57, PRM1057	For manufacturer setting	-
PRM58, PRM1058	Machine resonance suppression filter 1	NH1
PRM59, PRM1059	Machine resonance suppression filter 2	NH2
PRM60, PRM1060	Low-pass filter, adaptive vibration suppression control	LPF
PRM61, PRM1061	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM62, PRM1062	Position control gain 2 changing ratio	PG2B
PRM63, PRM1063	Speed control gain 2 changing ratio	VG2B
PRM64, PRM1064	Speed integral compensation changing ratio	VICB
PRM65, PRM1065	Gain changing selection	*CDP
PRM66, PRM1066	Gain changing condition	CDS
PRM67, PRM1067	Gain changing time constant	CDT
PRM68, PRM1068	For manufacturer setting	-
PRM69, PRM1069	Command pulse multiplying factor numerator 2	CMX2
PRM70, PRM1070	Command pulse multiplying factor numerator 3	CMX3

(Continued to next page)

Device name	Item	Symbol *1
PRM71, PRM1071	Command pulse multiplying factor numerator 4	CMX4
PRM72, PRM1072	Internal speed command4/limit4	SC4
PRM73, PRM1073	Internal speed command5/limit5	SC5
PRM74, PRM1074	Internal speed command6/limit6	SC6
PRM75, PRM1075	Internal speed command7/limit7	SC7
PRM76, PRM1076	Internal torque limit 2	TL2
PRM77 to PRM84, PRM1077 to PRM1084	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Status display

Device name	Item	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Analog speed command voltage/limit voltage	-
ST6	Analog torque command voltage/limit voltage	-
ST7	Regenerative load ratio	-
ST8	Effective load ratio	-
ST9	Peak load ratio	-
ST10	Instantaneous torque	-
ST11	Within one-revolution position	-
ST12	ABS counter	-
ST13	Load inertia moment ratio	-
ST14	Bus voltage	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs cumulative feedback pulses	-
AL12	Servo status when alarm occurs servo monitor speed	-
AL13	Servo status when alarm occurs droop pulses	-
AL14	Servo status when alarm occurs cumulative command pulses	-
AL15	Servo status when alarm occurs command pulse frequency	-
AL16	Servo status when alarm occurs analog speed command voltage/limit voltage	-
AL17	Servo status when alarm occurs analog torque command voltage/limit voltage	-
AL18	Servo status when alarm occurs regenerative load ratio	-
AL19	Servo status when alarm occurs effective load ratio	-
AL20	Servo status when alarm occurs peak load ratio	-
AL21	Servo status when alarm occurs instantaneous torque	-
AL22	Servo status when alarm occurs within one-revolution position	-

(Continued to next page)

Device name	Item	Symbol
AL23	Load inertia moment ratio ABS counter	-
AL24	Servo status when alarm occurs load inertia moment ratio	-
AL25	Servo status when alarm occurs bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

- External I/O signal

Device name	Item	Symbol
DI0	External input pin statuses	-
DO0	External output pin statuses	-

- Input signal for test operation (for test operation)

Device name	Item	Symbol
TMIO	Input signal status for test operation	-

- Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output status of signal pin	-

- Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

(4) MELSERVO-J2S-*CP

Device name ^{*3}		Setting range	Device No. representation
Bit device	Servo amplifier request (SP) ^{*5}	SP0 to SP6	Decimal
	Operation mode selection (OM) ^{*5}	OM0 to OM4	
	Instruction demand (for test operation) (TMB) ^{*5}	TMB0 to TMB1	
Word device	Basic parameter/expansion parameter (PRM) ^{*1}	PRM0 to PRM90 PRM1000 to PRM1090	
	Status display (ST)	ST0 to ST16	
	Alarm (AL)	AL0 to AL1 AL11 to AL27 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	External input (DI) ^{*4}	DI0 to DI2	
	External output (DO)	DO0 to DO1	
	Point table (position) (POS) ^{*2}	POS1 to POS31 POS1001 to POS1031	
	Point table (speed) (SPD) ^{*2}	SPD1 to SPD31 SPD1001 to SPD1031	
	Point table (acceleration time constant) (ACT) ^{*2}	ACT1 to ACT31 ACT1001 to ACT1031	
	Point table (deceleration time constant) (DCT) ^{*2}	DCT1 to DCT31 DCT1001 to DCT1031	
	Point table (dwell) (DWL) ^{*2}	DWL1 to DWL31 DWL1001 to DWL1031	
	Point table (auxiliary function) (AUX) ^{*2}	AUX1 to AUX31 AUX1001 to AUX1031	
	Input signal for test operation (for test operation) (TMI) ^{*5}	TMI0	
	Forced output of signal pin (for test operation) (TMO) ^{*5}	TMO0	
	Set data (for test operation) (TMD) ^{*5}	TMD0 to TMD2	

*1 Use PRM0 to PRM90 when writing parameters to the servo amplifier RAM.

PRM1000 to PRM1090 are used when writing parameters to E²PROM of the servo amplifier.

*2 When writing to a point table, use the area of 1001 to 1031 (E²PROM area) of POS, SPD, ACT, DCT, DWL, or AUX.

If writing to the area of 1 to 31 (RAM area) of POS, SPD, ACT, DCT, DWL, or AUX, the value is not reflected.

*3 The GOT cannot read or write data from/to consecutive devices.

*4 Only reading is available for DI0 to DI1.

For details of *5, refer to the following.

***5 Precautions for SP, OM, TMB, TMI, TMO, and TMD devices**

- (a) For bit devices
 - Only writing is possible.
 - [Altimate] of a bit switch cannot be used.
 - Use [Momentary], [Set], and [Reset] for bit switch actions.
- (b) For word devices
 - Only writing is possible.
 - Numerical input cannot be used.
 - Use a word switch for writing.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

- Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

- Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

- Instruction demand (for test operation)

Device name	Item	Symbol
TMB0	Clears the acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

- Basic parameter/expansion parameter

Device name	Item	Symbol*1
PRM0, PRM1000	Command system/regenerative brake option selection	*STY
PRM1, PRM1001	Feeding function selection	*FTY
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Auto tuning	ATU
PRM4, PRM1004	Electronic gear numerator	*CMX
PRM5, PRM1005	Electronic gear denominator	*CDV
PRM6, PRM1006	In-position range	INP
PRM7, PRM1007	Position loop gain 1	PG1
PRM8, PRM1008	Home position return type	*ZTY
PRM9, PRM1009	Home position return speed	ZRF
PRM10, PRM1010	Creep speed	CRF
PRM11, PRM1011	Home position shift distance	ZST
PRM12, PRM1012	Rough match output range	CRP
PRM13, PRM1013	Jog speed	JOG
PRM14, PRM1014	S-pattern acceleration/deceleration time constant	*STC
PRM15, PRM1015	Station number setting	*SNO

(Continued to next page)

Device name	Item	Symbol*1
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	For manufacturer setting	-
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Serial communication time-out selection	SIC
PRM24, PRM1024	Feed forward gain	FFC
PRM25, PRM1025	Override offset	VCO
PRM26, PRM1026	Torque limit offset	TLO
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29, PRM1029	Internal torque limit 2	TL2
PRM30, PRM1030	Backlash compensation	*BKC
PRM31, PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ration of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40 to PRM41, PRM1040 to PRM1041	For manufacturer setting	-
PRM42, PRM1042	Home position return position data	*ZPS
PRM43, PRM1043	Moving distance after proximity dog	DCT
PRM44, PRM1044	Stopper type home position return stopper time	ZTM
PRM45, PRM1045	Stopper type home position return torque limit value	ZTT
PRM46, PRM1046	Software limit +	*LMP
PRM47, PRM1047		
PRM48, PRM1048		
PRM49, PRM1049	Software limit -	*LMN
PRM50, PRM1050		
PRM51, PRM1051		
PRM52, PRM1052	Position range output address +	*LPP
PRM53, PRM1053		
PRM54, PRM1054		
PRM55, PRM1055	For manufacturer setting	-
PRM56, PRM1056	Function selection 6	*OP6
PRM57, PRM1057	For manufacturer setting	-
PRM58, PRM1058	Function selection 8	*OP8
PRM59, PRM1059	Function selection 9	*OP9
PRM60, PRM1060	Function selection A	*OPA
PRM60, PRM1060	For manufacturer setting	-

(Continued to next page)

Device name	Item	Symbol* ¹
PRM61, PRM1061	Machine resonance suppression filter 1	NH1
PRM62, PRM1062	Machine resonance suppression filter 2	NH2
PRM63, PRM1063	Low-pass filter/adaptive vibration suppression control	LPF
PRM64, PRM1064	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM65, PRM1065	Position control gain 2 changing ratio	PG2B
PRM66, PRM1066	Speed control gain 2 changing ratio	VG2B
PRM67, PRM1067	Speed integral compensation changing ratio	VICB
PRM68, PRM1068	Gain changing selection	*CDP
PRM69, PRM1069	Gain changing condition	CDS
PRM70, PRM1070	Gain changing time constant	CDT
PRM71 to PRM90, PRM1071 to PRM1090	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Status display

Device name	Item	Symbol
ST0	Current position	-
ST1	Command position	-
ST2	Command remaining distance	-
ST3	Point table No.	-
ST4	Cumulative feedback pulses	-
ST5	Servo motor speed	-
ST6	Droop pulses	-
ST7	Override	-
ST8	Torque limit voltage	-
ST9	Regenerative load ratio	-
ST10	Effective load ratio	-
ST11	Peak load ratio	-
ST12	Instantaneous torque	-
ST13	Within one-revolution position	-
ST14	ABS counter	-
ST15	Load inertia moment ratio	-
ST16	Bus voltage	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs current position	-
AL12	Servo status when alarm occurs command position	-
AL13	Servo status when alarm occurs command remaining distance	-
AL14	Servo status when alarm occurs point table No.	-
AL15	Servo status when alarm occurs cumulative feedback pulses	-
AL16	Servo status when alarm occurs servo motor speed	-
AL17	Servo status when alarm occurs droop pulses	-

(Continued to next page)

Device name	Item	Symbol
AL18	Current alarm number	-
AL19	Detailed data of current alarms	-
AL20	Servo status when alarm occurs current position	-
AL21	Servo status when alarm occurs command position	-
AL22	Servo status when alarm occurs command remaining distance	-
AL23	Servo status when alarm occurs point table No.	-
AL24	Servo status when alarm occurs cumulative feedback pulses	-
AL25	Servo status when alarm occurs servo motor speed	-
AL26	Servo status when alarm occurs droop pulses	-
AL27	Current alarm number	-
AL200	Detailed data of current alarms	-
AL201	Servo status when alarm occurs current position	-
AL202	Servo status when alarm occurs command position	-
AL203	Servo status when alarm occurs command remaining distance	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

• External I/O signal

Device name	Item	Symbol
DI0	Input device statuses	-
DI1	External input pin statuses	-
DI2	Statuses of input devices switched on through communication	-
DO0	Output device statuses	-
DO1	External output pin statuses	-

• Point table (position)

Device name	Item	Symbol
POS1 to POS31, POS1001 to POS1031	Point table (position) No. 1 to No. 31	-
SPD1 to SPD31, SPD1001 to SPD1031	Point table (speed) No. 1 to No. 31	-
ACT1 to ACT31, ACT1001 to ACT1031	Point table (acceleration time constant) No. 1 to No. 31	-
DCT1 to DCT31, DCT1001 to DCT1031	Point table (deceleration time constant) No. 1 to No. 31	-
DWL1 to DWL31, DWL1001 to DWL1031	Point table (dwell) No. 1 to No. 31	-
AUX1 to AUX31, AUX1001 to AUX1031	Point table (auxiliary function) No. 1 to No. 31	-

- Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	-

- Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	-

- Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

(5) MELSERVO-J2S-*CL

Device name* ²		Setting range	Device No. representation
Bit device	Servo amplifier request (SP)* ⁵	SP0 to SP6	Decimal
	Operation mode selection (OM)* ⁵	OM0 to OM4	
	Instruction demand (for test operation) (TMB)* ⁵	TMB0 to TMB1	
Word device	Basic parameter/expansion parameter (PRM)* ¹	PRM0 to PRM90 PRM1000 to PRM1090	
	Status display (ST)	ST0 to ST17	
	Alarm (AL)	AL0 to AL1 AL11 to AL28 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	External input (DI)* ⁴	DI0 to DI2	
	External output (DO)	DO0 to DO1	
	Current position latch data (LD)	LD1	
	The value of the general-purpose register (Rx) (RR)* ³	RR1 to RR4 RR1001 to RR1004	
	The value of the general-purpose register (Dx) (RD)	RD1 to RD4	
	Input signal for test operation (for test operation) (TMI)* ⁵	TMI0	
	Forced output of signal pin (for test operation) (TMO)* ⁵	TMO0	
	Set data (for test operation) (TMD)* ⁵	TMD0 to TMD2	

- *1 PRM0 to PRM90 are used when writing parameters to the servo amplifier RAM.
PRM1000 to PRM1090 are used when writing parameters to E2PROM with the servo amplifier.
- *2 The GOT cannot read or write data from/to consecutive devices.
- *3 Use the integer number when writing parameters to Rx.
- *4 Only reading is available for DI0 to DI1.
For details of *5, refer to the following.

***5 Precautions for SP, OM, TMB, TMI, TMO, and TMD devices**

- (a) For bit devices
Only writing is possible.
[Alternate] of a bit switch cannot be used.
Use [Bit], [Set], and [Reset] for bit switch actions.
- (b) For word devices
Only writing is possible.
Numerical input cannot be used.
Use a word switch for writing.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

- Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

- Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

- Instruction demand (for test operation)

Device name	Item	Symbol
TMB0	Clears the acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

- Basic parameter/expansion parameter

Device name	Item	Symbol*1
PRM0, PRM1000	Command system/regenerative brake option selection	*STY
PRM1, PRM1001	Feeding function selection	*FTY
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Auto tuning	ATU
PRM4, PRM1004	Electronic gear numerator	*CMX
PRM5, PRM1005	Electronic gear denominator	*CDV
PRM6, PRM1006	In-position range	INP
PRM7, PRM1007	Position loop gain 1	PG1
PRM8, PRM1008	Home position return type	*ZTY
PRM9, PRM1009	Home position return speed	ZRF
PRM10, PRM1010	Creep speed	CRF
PRM11, PRM1011	Home position shift distance	ZST
PRM12, PRM1012	For manufacturer setting	-
PRM13, PRM1013	Jog speed	JOG
PRM14, PRM1014	S-pattern acceleration/deceleration time constant	*STC
PRM15, PRM1015	Station number setting	*SNO

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Device name	Item	Symbol*1
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	For manufacturer setting	-
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Serial communication time-out selection	SIC
PRM24, PRM1024	Feed forward gain	FFC
PRM25, PRM1025	Override offset	VCO
PRM26, PRM1026	Torque limit offset	TLO
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29, PRM1029	Internal torque limit 2	TL2
PRM30, PRM1030	Backlash compensation	*BKC
PRM31, PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ration of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40, PRM1040	JOG operation acceleration/deceleration time constant	JTC
PRM41, PRM1041	Home position return operation acceleration/deceleration time constant	ZTS
PRM42, PRM1042	Home position return position data	*ZPS
PRM43, PRM1043	Moving distance after proximity dog	DCT
PRM44, PRM1044	Stopper type home position return stopper time	ZTM
PRM45, PRM1045	Stopper type home position return torque limit value	ZTT
PRM46, PRM1046	Software limit +	*LMP
PRM47, PRM1047		
PRM48, PRM1048		
PRM49, PRM1049	Software limit -	*LMN
PRM50, PRM1050		
PRM51, PRM1051	Position range output address +	*LPP
PRM52, PRM1052	Position range output address -	*LNP
PRM53, PRM1053		
PRM54, PRM1054	For manufacturer setting	-
PRM55, PRM1055	Function selection 6	*OP6
PRM56, PRM1056	For manufacturer setting	-
PRM57, PRM1057	Function selection 8	*OP8
PRM58, PRM1058	Function selection 9	*OP9
PRM59, PRM1059	Function selection A	*OPA
PRM60, PRM1060	For manufacturer setting	-

(Continued to next page)

Device name	Item	Symbol* ¹
PRM61, PRM1061	Machine resonance suppression filter 1	NH1
PRM62, PRM1062	Machine resonance suppression filter 2	NH2
PRM63, PRM1063	Low-pass filter, adaptive vibration suppression control	LPF
PRM64, PRM1064	Ratio of load inertia moment to Servo motor inertia moment 2	GD2B
PRM65, PRM1065	Position control gain 2 changing ratio	PG2B
PRM66, PRM1066	Speed control gain 2 changing ratio	VG2B
PRM67, PRM1067	Speed integral compensation changing ratio	VICB
PRM68, PRM1068	Gain changing selection	*CDP
PRM69, PRM1069	Gain changing condition	CDS
PRM70, PRM1070	Gain changing time constant	CDT
PRM71 to PRM73, PRM1071 to PRM1073	For manufacturer setting	-
PRM74, PRM1074	OUT1 output time selection	OUT1
PRM75, PRM1075	OUT2 output time selection	OUT2
PRM76, PRM1076	OUT3 output time selection	OUT3
PRM77, PRM1077	Selected to program input polarity selection 1	SYC1
PRM78?PRM90, PRM1078?PRM1090	For manufacturer setting	-

*1 For the parameter with * in front of it's abbreviated name, powering off the servo amplifier after setting then on makes the parameter valid.

- Status display

Device name	Item	Symbol
ST0	Current position	-
ST1	Command position	-
ST2	Command remaining distance	-
ST3	Program Number	-
ST4	Step Number	-
ST5	Cumulative feedback pulses	-
ST6	Servo motor speed	-
ST7	Droop pulses	-
ST8	Override	-
ST9	Torque limit voltage	-
ST10	Regenerative load ratio	-
ST11	Effective load ratio	-
ST12	Peak load ratio	-
ST13	Instantaneous torque	-
ST14	Within one-revolution position	-
ST15	ABS counter	-
ST16	Load inertia moment ratio	-
ST17	Bus voltage	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs Current position	-

(Continued to next page)

Device name	Item	Symbol
AL12	Servo status when alarm occurs Command position	-
AL13	Servo status when alarm occurs Command remaining distance	-
AL14	Servo status when alarm occurs Program Number	-
AL15	Servo status when alarm occurs Step Number	-
AL16	Servo status when alarm occurs Cumulative feedback pulses	-
AL17	Servo status when alarm occurs Servo motor speed	-
AL18	Servo status when alarm occurs Droop pulses	-
AL19	Servo status when alarm occurs Override	-
AL20	Servo status when alarm occurs Torque limit voltage	-
AL21	Servo status when alarm occurs Regenerative load ratio	-
AL22	Servo status when alarm occurs Effective load ratio	-
AL23	Servo status when alarm occurs Peak load ratio	-
AL24	Servo status when alarm occurs Instantaneous torque	-
AL25	Servo status when alarm occurs Within one-revolution position	-
AL26	Servo status when alarm occurs ABS counter	-
AL27	Servo status when alarm occurs Load inertia moment ratio	-
AL28	Servo status when alarm occurs Bus voltage	-
AL200	Alarm number from Alarm History most recent alarm	-
AL201	Alarm number from Alarm History first alarm in past	-
AL202	Alarm number from Alarm History second alarm in past	-
AL203	Alarm number from Alarm History third alarm in past	-
AL204	Alarm number from Alarm History fourth alarm in past	-
AL205	Alarm number from Alarm History fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from Alarm History most recent alarm	-
AL231	Detailed alarm from Alarm History first alarm in past	-
AL232	Detailed alarm from Alarm History second alarm in past	-
AL233	Detailed alarm from Alarm History third alarm in past	-
AL234	Detailed alarm from Alarm History fourth alarm in past	-
AL235	Detailed alarm from Alarm History fifth alarm in past	-

• External I/O signal

Device name	Item	Symbol
DI0	Input device statuses	-
DI1	External input pin statuses	-
DI2	Statuses of input devices switched on through communication	-
DO0	Output device statuses	-
DO1	External output pin statuses	-

- Current position latch data

Device name	Item	Symbol
LD1	Current position latch data	-

- The value of the general-purpose register (Rx)

Device name	Item	Symbol
RR1, RR1001	The value of the general-purpose register (R1)	-
RR2, RR1002	The value of the general-purpose register (R2)	-
RR3, RR1003	The value of the general-purpose register (R3)	-
RR4, RR1004	The value of the general-purpose register (R4)	-

- The value of the general-purpose register (Dx)

Device name	Item	Symbol
RD1	The value of the general-purpose register (D1)	-
RD2	The value of the general-purpose register (D2)	-
RD3	The value of the general-purpose register (D3)	-
RD4	The value of the general-purpose register (D4)	-

- Input signal for test operation (for test operation)

Device name	Item	Symbol
TMIO	Input signal for test operation	-

- Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	-

- Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

(6) MELSERVO-J3-*A

Device name* ²		Setting range	Device No. representation
Bit device	Servo amplifier request (SP)* ⁴	SP0 to SP6	Decimal
	Operation mode selection (OM)* ⁴	OM0 to OM4	
	Instructin demand (for test operation) (TMB)* ⁴	TMB1 to TMB6	
Word device	Basic setting parameter (PA)* ¹	PA1 to PA19 PA1001 to PA1019	
	Gain filter parameter (PB)* ¹	PB1 to PB45 PB1001 to PB1045	
	Extension setting parameter (PC)* ¹	PC1 to PC50 PC1001 to PC1050	
	I/O setting parameter (PD)* ¹	PD1 to PD30 PD1001 to PD1030	
	Status display (ST)	ST0 to ST14	
	Alarm (AL)	AL0 to AL1 AL11 to AL25 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	External input (DI)* ³	DI0 to DI12	
	External output (DO)	DO0 to DO1	
	Input signal for test operation (for test operation) (TMI)* ³	TMI0	
	Forced output of signal pin (for test operation) (TMO)* ⁴	TMO0	
	Set data (for test operation) (TMD)* ⁴	TMD0 to TMD1 TMD3	

- *1 1 to 50 of PA, PB, PC, and PD are used when writing data to the servo amplifier RAM.
1001 to 1050 of PA, PB, PC, and PD are used when writing data to E²PROM of the servo amplifier.
- *2 The GOT cannot read or write data from/to consecutive devices.
- *3 Only reading is available for DI0 to DI1.
- For details of *4, refer to the following.

***4 Precautions for SP, OM, TMB, TMI, TMO, and TMD devices**

- (a) For bit devices
Only writing is possible.
[Alternate] of a bit switch cannot be used.
Use [Momentary], [Set], and [Reset] for bit switch actions.
- (b) For word devices
Only writing is possible.
Numerical input cannot be used.
Use a word switch for writing.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

- Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

- Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

- Instruction demand (for test operation)

Device name	Item	Symbol
TMB1	Temporary stop command	-
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	-
TMB4	Reverse rotation direction	-
TMB5	Restart for remaining distance	-
TMB6	Remaining distance clear	-

- Basic setting paramete

Device name	Item	Symbol*1
PA1, PA1001	Control mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Number of command input pulses per revolution	*FBP
PA6, PA1006	Electronic gear numerator (command pulse multiplying factor numerator)	CMX
PA7, PA1007	Electronic gear denominator (command pulse multiplying factor denominator)	CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward torque limit	TLP
PA12, PA1012	Reverses torque limit	TLN
PA13, PA1013	Command pulse input form	*PLSS
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16 to PA18, PA1016 to PA1018	For manufacturer setting	-
PA19, PA1019	Parameter block	*BLK

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Gain filter parameter

Device name	Item	Symbol ^{*1}
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PA2, PB1002	Vibration suppression control filter tuning mode (Advanced vibration suppression control)	VRFT
PB3, PB1003	Position command acceleration/deceleration time constant (position smoothing)	PST
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	-
PB6, PB1006	Ratio of load inertia moment to servo motor inertia moment	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position loop gain	PG2
PB9, PB1009	Speed loop gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	For manufacturer setting	-
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch form selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch form selection 2	NHQ2
PB17, PB1017	For manufacturer setting	-
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control vibration frequency setting	VRF1
PB20, PB1020	Vibration suppression control resonance frequency setting	VRF2
PB21 to PB22, PB1021 to PB1022	For manufacturer setting	-
PB23, PB1023	Low-pass filter selection	VFBF
PB24, PB1024	Slight vibration suppression control selection	*MVS
PB25, PB1025	Function selection B-1	*BOP1
PB26, PB1026	Gain changing selection	*CDP
PB27, PB1027	Gain changing condition	CDL
PB28, PB1028	Gain changing time constant	CDT
PB29, PB1029	Ratio of load inertia moment to servo motor inertia moment at changing gain	GD2B
PB30, PB1030	Position loop gain at changing gain	PG2B
PB31, PB1031	Speed loop gain at changing gain	VG2B
PB32, PB1032	Speed integral compensation at changing gain	VICB
PB33, PB1033	Vibration suppression control vibration frequency setting for changing gain	VRF1B
PB34, PB1034	Vibration suppression control vibration resonance setting for changing gain	VRF2B
PB35 to PB45, PB1035 to PB1045	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Extension setting parameter

Device name	Item	Symbol*1
PC1, PC1001	Acceleration time constant	STA
PC2, PC1002	Deceleration time constant	STB
PC3, PC1003	S-pattern acceleration/deceleration time constant	STC
PC4, PC1004	Torque command time constant	TQC
PC5, PC1005	Internal speed command 1 / limit 1	SC1
PC6, PC1006	Internal speed command 2 / limit 2	SC2
PC7, PC1007	Internal speed command 3 / limit 3	SC3
PC8, PC1008	Internal speed command 4 / limit 4	SC4
PC9, PC1009	Internal speed command 5 / limit 5	SC5
PC10, PC1010	Internal speed command 6 / limit 6	SC6
PC11, PC1011	Internal speed command 7 / limit 7	SC7
PC12, PC1012	Analog speed command maximum speed / limit maximum speed	VCM
PC13, PC1013	Analog torque command maximum output	TLC
PC14, PC1014	Analog monitor 1 output	MOD1
PC15, PC1015	Analog monitor 2 output	MOD2
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number. setting	*SNO
PC21, PC1021	Communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	Function selection C-2	*COP2
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	-
PC26, PC1026	Function selection C-5	*COP5
PC27 to PC29, PC1027 to PC1029	For manufacturer setting	-
PC30, PC1030	Acceleration time constant 2	STA2
PC31, PC1031	Deceleration time constant 2	STB2
PC32, PC1032	Command pulse multiplying factor numerator 2	CMX2
PC33, PC1033	Command pulse multiplying factor numerator 3	CMX3
PC34, PC1034	Command pulse multiplying factor numerator 4	CMX4
PC35, PC1035	Internal torque limit 2	TL2
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Analog speed command offset / limit offset	VCO
PC38, PC1038	Analog torque command offset / limit offset	TPO
PC39, PC1039	Analog monitor 1 offset	MO1
PC40, PC1040	Analog monitor 2 offset	MO2
PC41 to PC50, PC1041 to PC1050	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- I/O setting parameter

Device name	Item	Symbol*1
PD1, PD1001	Input signal automatic ON selection 1	*DIA1
PD2, PD1002	For manufacturer setting	-
PD3, PD1003	Input signal device selection 1 (CN1-15)	*DI1
PD4, PD1004	Input signal device selection 2 (CN1-16)	*DI2
PD5, PD1005	Input signal device selection 3 (CN1-17)	*DI3
PD6, PD1006	Input signal device selection 4 (CN1-18)	*DI4
PD7, PD1007	Input signal device selection 5 (CN1-19)	*DI5
PD8, PD1008	Input signal device selection 6 (CN1-41)	*DI6
PD9, PD1009	For manufacturer setting	-
PD10, PD1010	Input signal device selection 8 (CN1-43)	*DI8
PD11, PD1011	Input signal device selection 9 (CN1-44)	*DI9
PD12, PD1012	Input signal device selection 10 (CN1-45)	*DI10
PD13, PD1013	Output signal device selection 1 (CN1-22)	*DO1
PD14, PD1014	Output signal device selection 2 (CN1-23)	*DO2
PD15, PD1015	Output signal device selection 3 (CN1-24)	*DO3
PD16, PD1016	Output signal device selection 4 (CN1-25)	*DO4
PD17, PD1017	For manufacturer setting	-
PD18, PD1018	Output signal device selection 6 (CN1-49)	*DO6
PD19, PD1019	Response level setting	*DIF
PD20, PD1020	Function selection D-1	*DOP1
PD21, PD1021	For manufacturer setting	-
PD22, PD1022	Function selection D-3	*DOP3
PD23, PD1023	For manufacturer setting	-
PD24, PD1024	Function selection D-5	*DOP5
PD25 to PD30, PD1025 to PD1030	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Status display

Device name	Item	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Analog speed command voltage/limit voltage	-
ST6	Analog torque command voltage/limit voltage	-
ST7	Regenerative load ratio	-
ST8	Effective load ratio	-
ST9	Peak load ratio	-
ST10	Instantaneous torque	-
ST11	Within one-revolution position	-
ST12	ABS counter	-
ST13	Load inertia moment ratio	-
ST14	Bus voltage	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs cumulative feedback pulses	-
AL12	Servo status when alarm occurs servo monitor speed	-
AL13	Servo status when alarm occurs droop pulses	-
AL14	Servo status when alarm occurs cumulative command pulses	-
AL15	Servo status when alarm occurs command pulse frequency	-
AL16	Servo status when alarm occurs analog speed command voltage/limit voltage	-
AL17	Servo status when alarm occurs analog torque command voltage/limit voltage	-
AL18	Servo status when alarm occurs regenerative load ratio	-
AL19	Servo status when alarm occurs effective load ratio	-
AL20	Servo status when alarm occurs peak load ratio	-
AL21	Servo status when alarm occurs instantaneous torque	-
AL22	Servo status when alarm occurs within one-revolution position	-
AL23	Load inertia moment ratio ABS counter	-
AL24	Servo status when alarm occurs load inertia moment ratio	-
AL25	Servo status when alarm occurs bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

- External input

Device name	Item	Symbol
DI0	Input device statuses	-
DI1	External input pin statuses	-
DI2	Statuses of input devices switched on through communication	-

- External output

Device name	Item	Symbol
DO0	Output device statuses	-
DO1	External output pin statuses	-

- Input signal for test operation (for test operation)

Device name	Item	Symbol
TMIO	Input signal for test operation	-

- Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	-

- Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	For manufacturer setting	-
TMD3	Writes the moving distance (test mode)	-

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Device name ^{*5}		Setting range	Device No. representation
Bit device	Servo amplifier request (SP) ^{*6}	SP0 to SP6	Decimal
	Operation mode selection (OM) ^{*6}	OM0 to OM5	
	Instruction demand (for test operation) (TMB) ^{*6}	TMB1 to TMB6	
Word device	Basic setting parameter (PA) ^{*1}	PA1 to PA19 PA1001 to PA1019	Decimal
	Gain filter parameter (PB) ^{*1}	PB1 to PB45 PB1001 to PB1045	
	Extension setting parameter (PC) ^{*1}	PC1 to PC50 PC1001 to PC1050	
	Extension setting parameter(PD) ^{*1}	PD1 to PD30 PD1001 to PD1030	
	Option unit parameter (PO) ^{*1}	PO1 to PO35 PO1001 to PO1035	
	Status display (ST) ^{*4}	ST0 to ST17	
	Alarm (AL) ^{*4}	AL0 to AL1 AL11 to AL28 AL200 to AL205 AL210 to AL215 AL230 to AL235	
	External input (DI) ^{*7}	DI0 to DI7	
	External output (DO) ^{*4}	DO0 to DO4	
	Point table (position) (POS) ^{*2}	POS1 to POS255 POS1001 to POS1255	
	Point table (speed) (SPD) ^{*2}	SPD1 to SPD255 SPD1001 to SPD1255	
	Point table (acceleration time constant) (ACT) ^{*2}	ACT1 to ACT255 ACT1001 to ACT1255	
	Point table (deceleration time constant) (DCT) ^{*2}	DCT1 to DCT255 DCT1001 to DCT1255	
	Point table (dwell) (DWL) ^{*2}	DWL1 to DWL255 DWL1001 to DWL1255	
	Point table (auxiliary function) (AUX) ^{*2}	AUX1 to AUX255 AUX1001 to AUX1255	
	Point table (M code) (MCD) ^{*2 *3}	MCD1 to MCD255 MCD1001 to MCD1255	
	Input signal for test operation (for test operation) (TMO) ^{*6}	TMI0 to TMI2	
	Forced output of signal pin (for test operation) (TMO) ^{*6}	TMO0 to TMO1	
	Set data (for test operation) (TMD) ^{*6}	TMD0 to TMD1 TMD3	

*1 Use 1 to 50 of PA, PB, PC, PD, and PO when the GOT writes data to RAM of the servo amplifier.

Use 1001 to 1050 of PA, PB, PC, PD, and PO when the GOT write data to E²PROM of the servo amplifier.

*2 When the GOT writes data to point tables, use 1001 to 1255 of POS, SPD, ACT, DCT, DWL, AUX, and MCD (E²PROM area).

*3 MCD cannot be used as a real number.

*4 The GOT can only read data from the device.

*5 The GOT cannot read or write from/to consecutive devices.

For details of *6, refer to the following.

*7 For DI0 to DI4, the GOT can only read data from devices.

***6 Precautions for SP, OM, TMB, TMI, TMO, and TMD devices**

- (a) For bit devices
Only writing is possible.
[Alternate] of a bit switch cannot be used.
Use [Momentary], [Set], and [Reset] for bit switch actions.
- (b) For word devices
Only writing is possible.
Numerical input cannot be used.
Use a word switch for writing.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

- Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

- Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-
OM5	One step sending	-

- Instruction demand (for test operation)

Device name	Item	Symbol
TMB1	Temporary stop command	-
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	-
TMB4	Reverse rotation direction	-
TMB5	Restart for remaining distance	-
TMB6	Remaining distance clear	-

- Basic setting parameter

Device name	Item	Symbol*1
PA1, PA1001	Control mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Feeding function selection	*FTY
PA6, PA1006	Electronic gear numerator	*CMX
PA7, PA1007	Electronic gear denominator	*CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward torque limit	TLP
PA12, PA1012	Reverses torque limit	TLN
PA13, PA1013	For manufacturer setting	-
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16 to PA18, PA1016 to PA1018	For manufacturer setting	-
PA19, PA1019	Parameter block	*BLK

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Gain filter parameter

Device name	Item	Symbol* ¹
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PA2, PB1002	Vibration suppression control filter tuning mode (advanced vibration suppression control)	VRFT
PB3, PB1003	For manufacturer setting	-
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	-
PB6, PB1006	Ratio of load inertia moment to servo motor inertia moment	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position loop gain	PG2
PB9, PB1009	Speed loop gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	For manufacturer setting	-
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch form selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch form selection 2	NHQ2
PB17, PB1017	For manufacturer setting	-
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control vibration frequency setting	VRF1
PB20, PB1020	Vibration suppression control resonance frequency setting	VRF2
PB21 to PB22, PB1021 to PB1022	For manufacturer setting	-
PB23, PB1023	Low-pass filter selection	VFBF
PB24, PB1024	Slight vibration suppression control selection	*MVS
PB25, PB1025	For manufacturer setting	-
PB26, PB1026	Gain changing selection	*CDP
PB27, PB1027	Gain changing condition	CDL
PB28, PB1028	Gain changing time constant	CDT
PB29, PB1029	Gain changing, Ratio of load inertia moment to servo motor inertia moment	GD2B
PB30, PB1030	Gain changing, Position loop gain	PG2B
PB31, PB1031	Gain changing, Speed loop gain	VG2B
PB32, PB1032	Gain changing, Speed integral compensation	VICB
PB33, PB1033	Gain changing, Vibration suppression control vibration frequency setting	VRF1B
PB34, PB1034	Gain changing, Vibration suppression control resonance frequency setting	VRF2B
PB35 to PB45, PB1035 to PB1045	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Extension setting parameter

Device name	Item	Symbol*1
PC1, PC1001	For manufacturer setting	-
PC2, PC1002	Home position return type	*ZTY
PC3, PC1003	Direction of home position return	*ZDIR
PC4, PC1004	Home position return speed	ZRF
PC5, PC1005	Creep speed	CRF
PC6, PC1006	Home position shift distance	ZST
PC7, PC1007	Home position return position data	*ZPS
PC8, PC1008	Moving distance after proximity dog	DCT
PC9, PC1009	Hold time home position return hold time	ZTM
PC10, PC1010	Hold time home position return torque limit value	ZTT
PC11, PC1011	Rough match output range	CRP
PC12, PC1012	Jog speed	JOG
PC13, PC1013	S-pattern acceleration/deceleration time constant	*STC
PC14, PC1014	Backlash compensation	*BKC
PC15, PC1015	For manufacturer setting	-
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number. setting	*SNO
PC21, PC1021	communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	For manufacturer setting	-
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	-
PC26, PC1026	Function selection C-5	*COP5
PC27, PC1027	For manufacturer setting	-
PC28, PC1028	Function selection C-7	*COP7
PC29 to PC30, PC1029 to PC1030	For manufacturer setting	-
PC31, PC1031	Software limit + Low	LMPL
PC32, PC1032	Software limit + High	LMPH
PC33, PC1033	Software limit - Low	LMNL
PC34, PC1034	Software limit - High	LMNH
PC35, PC1035	Internal torque limit2	TL2
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Position range output address + Low	*LPPL
PC38, PC1038	Position range output address + High	*LPPH
PC39, PC1039	Position range output address - Low	*LNPL
PC40, PC1040	Position range output address - High	*LNPH
PC41 to PC50, PC1041 to PC1050	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- I/O setting parameter

Device name	Item	Symbol*1
PD1, PD1001	Input signal automatic ON selection 1	*DIA1
PD2, PD1002	For manufacturer setting	-
PD3, PD1003	Input signal automatic ON selection 3	*DIA3
PD4, PD1004	Input signal automatic ON selection 4	*DIA4
PD5, PD1005	For manufacturer setting	-
PD6, PD1006	Input signal device selection 2 (CN6-2)	*DI2
PD7, PD1007	Input signal device selection 3 (CN6-3)	*DI3
PD8, PD1008	Input signal device selection 4 (CN6-4)	*DI4
PD9, PD1009	Output signal device selection 1 (CN6-14)	*DO1
PD10, PD1010	Output signal device selection 2 (CN6-15)	*DO2
PD11, PD1011	Output signal device selection 3 (CN6-16)	*DD3
PD12 to PD15, PD1012 to PD1015	For manufacturer setting	-
PD16, PD1016	Input polarity selection	*DIAB
PD17 to PD18, PD1017 to PD1018	For manufacturer setting	-
PD19, PD1019	Response level setting	*DIF
PD20, PD1020	Function selection D-1	*DOP1
PD21, PD1021	For manufacturer setting	-
PD22, PD1022	Function selection D-3	*DOP3
PD23, PD1023	For manufacturer setting	-
PD24, PD1024	Function selection D-5	*DOP5
PD25 to PD30, PD1025 to PD1030	For manufacturer setting	-

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

- Option unit parameter

Device name	Item	Symbol
PO1, PO1001	For manufacturer setting	-
PO2, PO1002	MR-J3-D01 Input signal device selection 1 (CN10-21, 26)	*ODI1
PO3, PO1003	MR-J3-D01 Input signal device selection 2 (CN10-27, 28)	*ODI2
PO4, PO1004	MR-J3-D01 Input signal device selection 3 (CN10-29, 30)	*ODI3
PO5, PO1005	MR-J3-D01 Input signal device selection 4 (CN10-31, 32)	*ODI4
PO6, PO1006	MR-J3-D01 Input signal device selection 5 (CN10-33, 34)	*ODI5
PO7, PO1007	MR-J3-D01 Input signal device selection 6 (CN10-35, 36)	*ODI6
PO8, PO1008	MR-J3-D01 Output signal device selection 1 (CN10-46, 47)	*ODO1
PO9, PO1009	MR-J3-D01 Output signal device selection 2 (CN10-48, 49)	*ODO2
PO10, PO1010	Function selection 0-1	*OOP1
PO11, PO1011	For manufacturer setting	-
PO12, PO1012	Function selection 0-3	*OOP3
PO13, PO1013	MR-J3-D01 Analog monitor 1 output	MOD1
PO14, PO1014	MR-J3-D01 Analog monitor 2 output	MOD2
PO15, PO1015	MR-J3-D01 Analog monitor 1 offset	M01
PO16, PO1016	MR-J3-D01 Analog monitor 2 offset	M02
PO17 to 20, PO1017 to PO1020	For manufacturer setting	-

(Continued to next page)

Device name	Item	Symbol
PO21, PO1021	MR-J3-D01 Override offset	VCO
PO22, PO1022	MR-J3-D01 Analog torque limitation offset	TLO
PO23 to 35, PO102 to PO1035	For manufacturer setting	-

• Status display

Device name	Item	Symbol
ST0	Current position	-
ST1	Command position	-
ST2	Command remaining distance	-
ST3	Point table No.	-
ST4	Cumulative feedback pulses	-
ST5	Servo motor speed	-
ST6	Droop pulses	-
ST7	Override voltage	-
ST8	Override	-
ST9	Analog torque command voltage/limit voltage	-
ST10	Regenerative load ratio	-
ST11	Effective load ratio	-
ST12	Peak load ratio	-
ST13	Instantaneous torque	-
ST14	Within one-revolution position	-
ST15	ABS counter	-
ST16	Load inertia moment ratio	-
ST17	Bus voltage	-

- Alarm

Device name	Item	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs, Current position	-
AL12	Servo status when alarm occurs, Command position	-
AL13	Servo status when alarm occurs, Command remaining distance	-
AL14	Servo status when alarm occurs, Point table No.	-
AL15	Servo status when alarm occurs, Cumulative feedback pulses	-
AL16	Servo status when alarm occurs, Servo motor speed	-
AL17	Servo status when alarm occurs, Droop pulses	-
AL18	Servo status when alarm occurs, Override voltage	-
AL19	Servo status when alarm occurs, Override	-
AL20	Servo status when alarm occurs, Analog torque limit voltage	-
AL21	Servo status when alarm occurs, Regenerative load ratio	-
AL22	Servo status when alarm occurs, Effective load ratio	-
AL23	Servo status when alarm occurs, Peak load ratio	-
AL24	Servo status when alarm occurs, Instantaneous torque	-
AL25	Servo status when alarm occurs, Within one-revolution position	-
AL26	Servo status when alarm occurs, ABS counter	-
AL27	Servo status when alarm occurs, Load inertia moment ratio	-
AL28	Servo status when alarm occurs, Bus voltage	-
AL200	Alarm number from alarm history, Most recent alarm	-
AL201	Alarm number from alarm history, First alarm in past	-
AL202	Alarm number from alarm history, Second alarm in past	-
AL203	Alarm number from alarm history, Third alarm in past	-
AL204	Alarm number from alarm history, Fourth alarm in past	-
AL205	Alarm number from alarm history, Fifth alarm in past	-
AL210	Alarm occurrence time in alarm history, Most recent alarm	-
AL211	Alarm occurrence time in alarm history, First alarm in past	-
AL212	Alarm occurrence time in alarm history, Second alarm in past	-
AL213	Alarm occurrence time in alarm history, Third alarm in past	-
AL214	Alarm occurrence time in alarm history, Fourth alarm in past	-
AL215	Alarm occurrence time in alarm history, Fifth alarm in past	-
AL230	Detailed alarm from alarm history, Most recent alarm	-
AL231	Detailed alarm from alarm history, First alarm in past	-
AL232	Detailed alarm from alarm history, Second alarm in past	-
AL233	Detailed alarm from alarm history, Third alarm in past	-
AL234	Detailed alarm from alarm history, Fourth alarm in past	-
AL235	Detailed alarm from alarm history, Fifth alarm in past	-

• External input

Device name	Item	Symbol
DI0	Input device statuses 1	-
DI1	Input device statuses 2	-
DI2	Input device statuses 3	-
DI3	External input pin statuses 1	-
DI4	External input pin statuses 2	-
DI5	Statuses of input devices switched on through communication 1	-
DI6	Statuses of input devices switched on through communication 2	-
DI7	Statuses of input devices switched on through communication 3	-

• External output

Device name	Item	Symbol
DO0	Output device statuses 1	-
DO1	Output device statuses 2	-
DO2	Output device statuses 3	-
DO3	External output pin statuses 1	-
DO4	External output pin statuses 2	-

• Point table (position)

Device name	Item	Symbol
POS1 to POS255, POS1001 to POS1255	Point table (position) No.1 to 255	-
SPD1 to SPD255, SPD1001 to SPD1255	Point table (speed) No.1 to 255	-
ACT1 to ACT255, ACT1001 to ACT1255	Point table (acceleration time constant) No.1 to 255	-
DCT1 to DCT255, DCT1001 to DCT1255	Point table (deceleration time constant) No.1 to 255	-
DWL1 to DWL255, DWL1001 to DWL1255	Point table (dwell) (DWL) No.1 to 255	-
AUX1 to AUX255, AUX1001 to AUX1255	Point table (auxiliary function) No.1 to 255	-
MCD1 to MCD255, MCD1001 to MCD1255	Point table (M code) No.1 to 255	-

• Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation 1	-
TMI1	Input signal for test operation 2	-
TMI2	Input signal for test operation 3	-

• Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output from signal pin (CN6)	-
TMO1	Forced output from signal pin (CN10)	-

• Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD3	Writes the moving distance (test mode)	-

■ **PANASONIC servo amplifier (PANASONIC MINAS-A4 Series)**




Device name*1		Setting range	Device No. representation
Bit device	Status (STS)	STS0 to STS7	Decimal
	Input signal (INP)	INP0 to INP31	
	Output signal (OTP)	OTP0 to OTP47	
	Absolute encoder (Status) (AEST)	AEST0 to AEST15	
	Writing of parameter to EEPROM (EPRW)	EPRW0	
	Clear of user alarm history (in EEPROM as well) (ALHC)	ALHC0	
	Alarm clear (ALMC)	ALMC0	
	Absolute clear (ABSC)	ABSC0	
Word device	Status (Control modes) (STCM)	STCM0	Decimal
	Present speed (SPD)	SPD0	
	Present torque output (TRQ)	TRQ0	
	Absolute encoder (Encoder ID) (AEID)	AEID0	
	Absolute encoder (Multi-turn data) (AEMD)	AEMD0	
	Parameter (PRM)	PRM0000 to PRM007F	Hexadecimal
	Present alarm data (ALM)	ALM0	Decimal
	User alarm history (ALHI)	ALHI1 to ALHI14	
	User parameter (MIN. value) (PRMN)	PRMN0000 to PRMN007F	Hexadecimal
	User parameter (MAX. value) (PRMX)	PRMX0000 to PRMX007F	
	User parameter (Property) (PRPR)	PRPR0000 to PRPR007F	
	Feedback pulse counter (FBPC)	FBPC0	Decimal
	Present deviation counter (DVC)	DVC0	
	Absolute encoder (Single turn data) (AESD)	AESD0	
	External scale deviation and sum of pulses (ESA)	ESA0 to ESA1	

Appendix.2.3 Setting device of each controller

■ Mitsubishi Electric PLC

MELSEC-Q/L/QnA/FX(Ethernet) and CNC

MELSEC-FX

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device. When setting the buffer memory (BM), set the buffer memory address in the space for the device number.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
	<div>Device Comment...</div>	Reading the device comment data created by GX Developer and confirming the device comment/device name is available during device setting. For how to use the device comment reference, refer to the following.  8.2 Referring to Device Comment (Importing GX Developer Device Comment)	
	Block	It can be set when the extended file register (ER) is selected. Set the block number of the extended file register.	
	Unit top I/O	It can be set when the buffer memory (BM) is selected. Set the head I/O number of the buffer memory for the intelligent function module. Set the first 2 digits of the 3-digit head I/O number.	
	Mask	Set this item when using the buffer memory of the FX CPU. Set the mask type when only the specific bit of the buffer memory is monitored or written.  (4) Mask type setting	
	Unit No.	Set this item when using the buffer memory of the FX CPU. Set the unit number of special function units or special function blocks to be monitored or written.  (5) Unit number setting	
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the station number of the controller to be monitored.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
	CPU No.	Set the CPU No. of the controller.	
	Host	Select this when monitoring the host controller.	
	Other	Select this when monitoring other controller. Then, set the station number and network number of the controller to be monitored. NW No. : Set the network No. Station No. : Set the station No.	

(1) Setting CPU No.

- (a) When monitoring single CPU system
Set the CPU No. to "0".
- (b) When monitoring multiple CPU system
Set [CPU No.] between "0" and "4" in the network setting when monitoring a multiple CPU system.
When [CPU No.] is set to "0", the monitoring target differs depending on the connection method.

Connection method	Monitoring target
• Direct CPU connection	Connected PLC CPU
• Bus connection • Computer link connection • MELSECNET connection • Ethernet connection • CC-Link connection	Control CPU

- (c) When bus-connected by GT SoftGOT1000, which is installed on the PC CPU module
Do not set [CPU No.] to "0".
When [CPU No.] is set to "0", GT SoftGOT1000 cannot monitor the PC CPU module although the module is set as a monitoring target.

(2) When monitoring link relay (B) and link register (W) assigned in link parameter and network parameter

Set device link relay (B) and link register (W) running cyclic communication as [Host].

If it is set as [Other] in the network setting, the cyclic transmission will be changed to the transient transmission irrespective of the network type, resulting in delay of the object display.

(3) Setting device by inputting directly from keyboard

When setting it by inputting directly from the keyboard, set the items as follows:

(4) Mask type setting

Set the mask type when only the specific bit of the buffer memory is monitored or written.

(a) Mask type "0"

The buffer memory value is monitored or written.

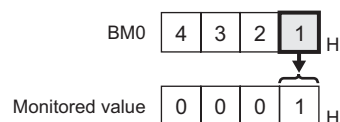
(b) Mask type "1"

- 16 bits

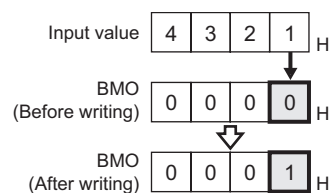
Only b0 to b3 of the buffer memory is monitored or written.

Example:

When monitoring BM0=4321H with the mask type "1", the monitored value=0001H.



When writing the input value (4321H) to BM0=0000H with the mask type "1", BM0=0001H.

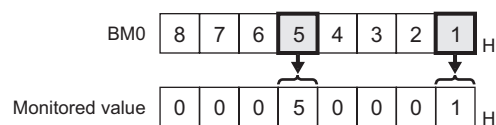


- 32 bits

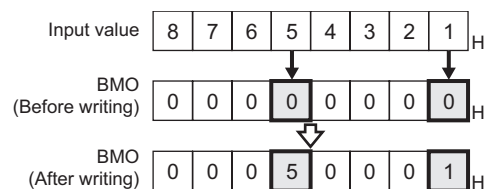
Only b0 to b3 and b16 to b19 of the buffer memory is monitored or written.

Example:

When monitoring BM0=87654321H with the mask type "1", the monitored value=00050001H.



When writing the input value (87654321H) to BM0=00000000H with the mask type "1", BM0=00050001H.



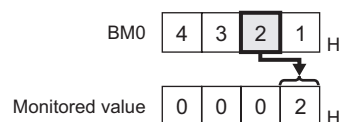
(c) Mask type "2"

- 16 bits

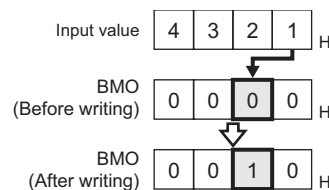
Only b4 to b7 of the buffer memory is monitored or written.

Example:

When monitoring BM0=4321H with the mask type "2", the monitored value=0002H.



When writing the input value (4321H) to BM0=0000H with the mask type "2", BM0=0010H.

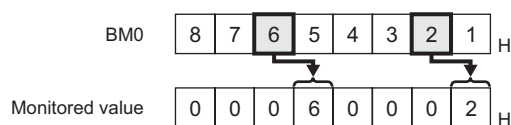


- 32 bits

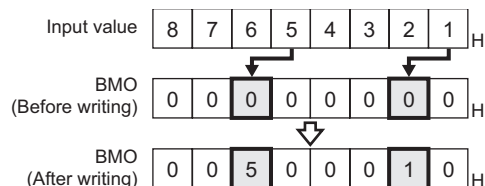
Only b4 to b7 and b20 to b23 of the buffer memory is monitored or written.

Example:

When monitoring BM0=87654321H with the mask type “2”, the monitored value=00060002H.



When writing the input value (87654321H) to BM0=00000000H with the mask type “2”, BM0=00500010H.



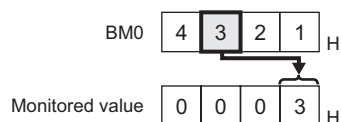
(d) Mask type “3”

- 16 bits

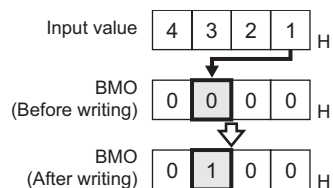
Only b8 to b11 of the buffer memory is monitored or written.

Example:

When monitoring BM0=4321H with the mask type “3”, the monitored value=0003H.



When writing the input value (4321H) to BM0=0000H with the mask type “3”, BM0=0100H.

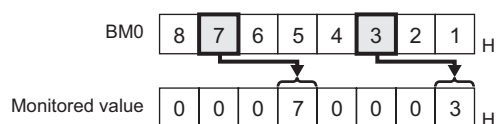


- 32 bits

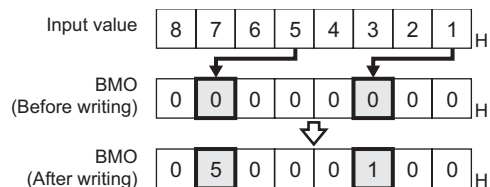
Only b8 to b11 and b28 to b31 of the buffer memory is monitored or written.

Example:

When monitoring BM0=87654321H with the mask type “3”, the monitored value=00070003H.



When writing the input value (87654321H) to BM0=00000000H with the mask type “3”, BM0=00050001H.



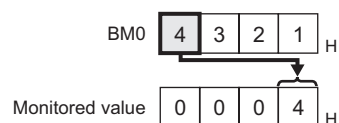
(e) Mask type "4"

- 16 bits

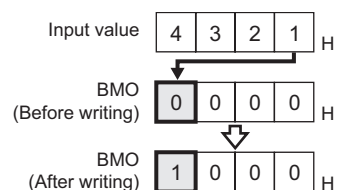
Only b12 to b15 of the buffer memory is monitored or written.

Example:

When monitoring BM0=4321H with the mask type "4", the monitored value=0004H.



When writing the input value (4321H) to BM0=0000H with the mask type "4", BM0=1000H.

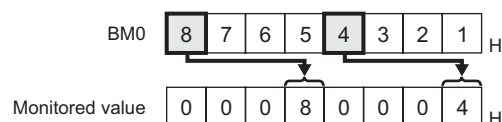


- 32 bits

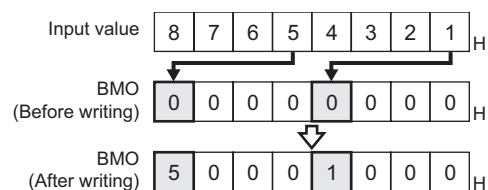
Only b12 to b15 and b28 to 31 of the buffer memory is monitored or written.

Example:

When monitoring BM0=87654321H with the mask type "4", the monitored value=00080004H.



When writing the input value (87654321H) to BM0=00000000H with the mask type "4", BM0=50001000H.



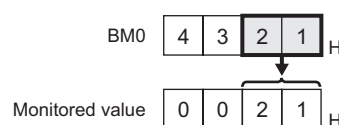
(f) Mask type "5"

- 16 bits

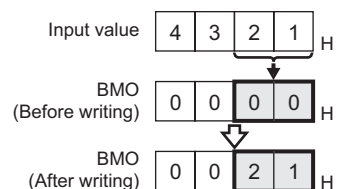
Only b0 to b7 of the buffer memory is monitored or written.

Example:

When monitoring BM0=4321H with the mask type "5", the monitored value=0021H.



When writing the input value (4321H) to BM0=0000H with the mask type "5", BM0=0021H.

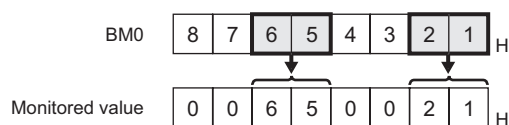


- 32 bits

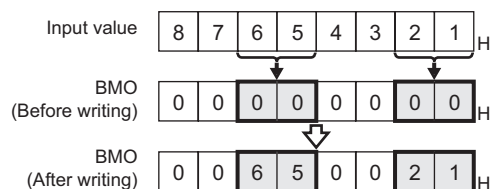
Only b0 to b7 and b13 to b16 of the buffer memory is monitored or written.

Example:

When monitoring BM0=87654321H with the mask type “5”, the monitored value=00650021H.



When writing the input value (87654321H) to BM0=00000000H with the mask type “5”, BM0=00650021H.



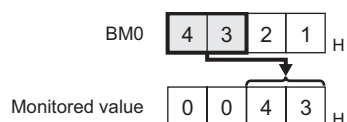
(g) Mask type “6”

- 16 bits

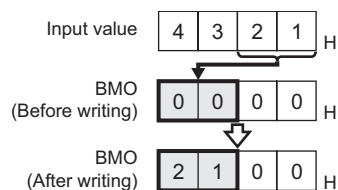
Only b8 to b15 of the buffer memory is monitored or written.

Example:

When monitoring BM0=4321H with the mask type “6”, the monitored value=0043H.



When writing the input value (4321H) to BM0=0000H with the mask type “6”, BM0=2100H.

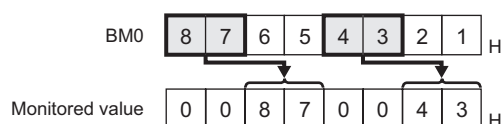


- 32 bits

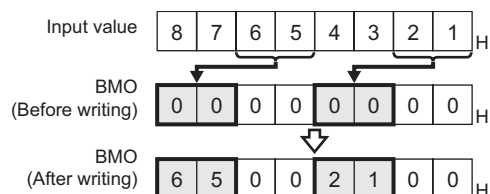
Only b8 to b15 and b24 to 31 of the buffer memory is monitored or written.

Example:

When monitoring BM0=87654321H with the mask type “6”, the monitored value=00870043H.



When writing the input value (87654321H) to BM0=00000000H with the mask type “6”, BM0=65002100H.



(5) Unit number setting

Set the unit number of special function units or special function blocks to be monitored or written.
The unit number (No.0 to No.7) is assigned to the units or blocks in order of distance from the main unit.
For details of the unit number, refer to the following.

 User's Manual (Hardware) of MELSEC-FX

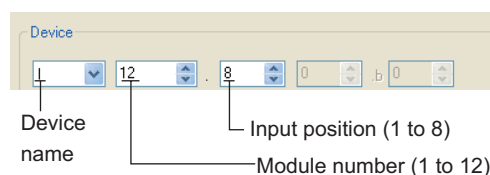
- (a) Direct specification
When setting devices, directly specify the unit number (No.0 to No.7) of special function units or special function blocks to be monitored or written.
- (b) Indirect specification
When setting devices, indirectly specify the unit number of special function units or special function blocks to be monitored or written using the 16-bit GOT internal registers (GD10 to GD25).
When specifying the unit number at 100 to 115 on GT Designer3, the value of device corresponding to the unit number (GD10 to GD25) is the unit number of the special function unit or special function block.

Unit No.	Corresponding device	Setting range
100	GD10	0 to 7 If setting a value outside the range above, a device range error occurs. If setting the unit number which does not exist, a communication timeout error occurs.
101	GD11	
:	:	
114	GD24	
115	GD25	

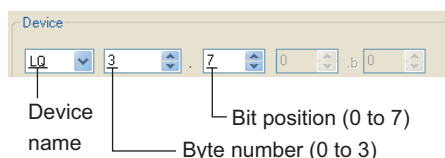
(6) MELSEC-WS

- (a) Device settings of MELSEC-WS

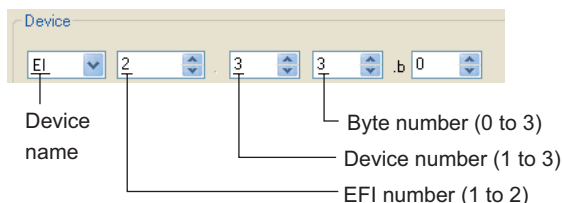
- Input (I), Output(Q)



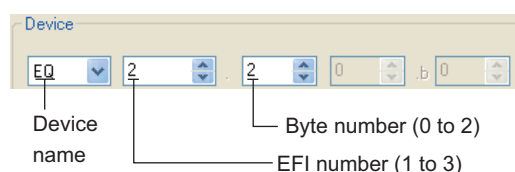
- Logic result (LQ), Logic input (LI)



- EFI input (EI)



- EFI output (EQ)



(b) Engineering software for MELSEC-WS and device representation of GT Designer3

The engineering software for MELSEC-WS and the device representation of GT Designer3 are different.
Set the device by referring to the following table.

Device name	GT Designer3	Engineering software for MELSEC-WS
I	I□□.△ □□(1-12(Dec)): Module number △(1-8): Input position	▲▲▲▲[□□].I△ ▲▲▲▲: I/O model name (such as XTIO) □□ (1-12(Dec)): Module number △ (1-8): Input position
Q	Q□□.△ □□ (1-12(Dec)): Module number △ (1-8): Output position	▲▲▲▲[□□].Q△ ▲▲▲▲: I/O model name (such as XTIO) □□ (1-12(Dec)): Module number △ (1-8): Output position
LQ	LQ□.△ □ (0-3): Byte number △ (0-7): Bit position	▲▲□.△ ▲▲: "Result" □ (0-3): Byte number △ (0-7): Bit position
LI	LI□.△ □ (0-3): Byte number △ (0-7): Bit position	▲▲▲▲[0].□.△ ▲▲▲▲: CPU type (CPU0, CPU1) □ (0-3): Byte number △ (0-7): Bit position
EI	EI□□△ ○ (1-2): EFI number □ (1-3): Device number △ (0-3): Byte number	▲▲▲▲[0].EFI○:□, Byte △ ▲▲▲▲: CPU type (CPU0, CPU1) ○ (1-2): EFI number □ (1-3): Device number △ (0-3): Byte number
EQ	EQ○△ △ (1-2): EFI number ○ (0-2): Byte number	▲▲▲▲[0].EFI○:1, Byte △ ▲▲▲▲: CPU type (CPU0, CPU1) ○ (1-2): EFI number △ (0-2): Byte number
D	D△ △ (0-99(Dec)): Byte number	RS232 data (Safety controller to RS232)
W	W△ △ (0-49(Dec)): Word number Word virtualization of D device W0= (D1(Upper bits), D0(Lower bits))	GOT independent device (Not available)
LD	LD△ △ (0-3): Byte number	RS232 data (Safety controller to RS232)
LW	LW△ △ (0-1): Word number Word virtualization of LD device LW0= (LD1(Upper bits), LD0(Lower bits))	GOT independent device (Not available)

(c) When using offset specification

When setting devices using the offset function, the device values are as follows.

• Input (I)

Offset	+0	+1	+2	+3	+4	+5	+6	+7	+8 to +15
+0	I1.1	I1.2	I1.3	I1.4	I1.5	I1.6	I1.7	I1.8	Fixed to 0 (OFF)
+16	I2.1	I2.2	I2.3	I2.4	I2.5	I2.6	I2.7	I2.8	
+32	I3.1	I3.2	I3.3	I3.4	I3.5	I3.6	I3.7	I3.8	
+48	I4.1	I4.2	I4.3	I4.4	I4.5	I4.6	I4.7	I4.8	
+64	I5.1	I5.2	I5.3	I5.4	I5.5	I5.6	I5.7	I5.8	
+80	I6.1	I6.2	I6.3	I6.4	I6.5	I6.6	I6.7	I6.8	
+90	I7.1	I7.2	I7.3	I7.4	I7.5	I7.6	I7.7	I7.8	
+112	I8.1	I8.2	I8.3	I8.4	I8.5	I8.6	I8.7	I8.8	
+128	I9.1	I9.2	I9.3	I9.4	I9.5	I9.6	I9.7	I9.8	
+144	I10.1	I10.2	I10.3	I10.4	I10.5	I10.6	I10.7	I10.8	
+160	I11.1	I11.2	I11.3	I11.4	I11.5	I11.6	I11.7	I11.8	
+176	I12.1	I12.2	I12.3	I12.4	I12.5	I12.6	I12.7	I12.8	
+192	Device range error								

• Output (Q)

Offset	+0	+1	+2	+3	+4	+5	+6	+7	+8 to +15
+0	Q1.1	Q1.2	Q1.3	Q1.4	Q1.5	Q1.6	Q1.7	Q1.8	Fixed to 0 (OFF)
+16	Q2.1	Q2.2	Q2.3	Q2.4	Q2.5	Q2.6	Q2.7	Q2.8	
+32	Q3.1	Q3.2	Q3.3	Q3.4	Q3.5	Q3.6	Q3.7	Q3.8	
+48	Q4.1	Q4.2	Q4.3	Q4.4	Q4.5	Q4.6	Q4.7	Q4.8	
+64	Q5.1	Q5.2	Q5.3	Q5.4	Q5.5	Q5.6	Q5.7	Q5.8	
+80	Q6.1	Q6.2	Q6.3	Q6.4	Q6.5	Q6.6	Q6.7	Q6.8	
+90	Q7.1	Q7.2	Q7.3	Q7.4	Q7.5	Q7.6	Q7.7	Q7.8	
+112	Q8.1	Q8.2	Q8.3	Q8.4	Q8.5	Q8.6	Q8.7	Q8.8	
+128	Q9.1	Q9.2	Q9.3	Q9.4	Q9.5	Q9.6	Q9.7	Q9.8	
+144	Q10.1	Q10.2	Q10.3	Q10.4	Q10.5	Q10.6	Q10.7	Q10.8	
+160	Q11.1	Q11.2	Q11.3	Q11.4	Q11.5	Q11.6	Q11.7	Q11.8	
+176	Q12.1	Q12.2	Q12.3	Q12.4	Q12.5	Q12.6	Q12.7	Q12.8	
+192	Device range error								

• Logic result (LQ)

Offset	+0	+1	+2	+3	+4	+5	+6	+7
+0	LQ0.0	LQ0.1	LQ0.2	LQ0.3	LQ0.4	LQ0.5	LQ0.6	LQ0.7
+8	LQ1.0	LQ1.1	LQ1.2	LQ1.3	LQ1.4	LQ1.5	LQ1.6	LQ1.7
+16	LQ2.0	LQ2.1	LQ2.2	LQ2.3	LQ2.4	LQ2.5	LQ2.6	LQ2.7
+24	LQ3.0	LQ3.1	LQ3.2	LQ3.3	LQ3.4	LQ3.5	LQ3.6	LQ3.7
+32	Device range error							

- EFI input (EI)

Offset	+0	+1	+2	+3	+8 to +15
+0	EI110	EI111	EI112	EI113	Fixed to 0
+16	EI120	EI121	EI122	EI123	
+32	EI130	EI131	EI132	EI133	
+48 : +240	Fixed to 0				
+256	EI210	EI211	EI212	EI213	
+272	EI220	EI221	EI222	EI223	Device range error
+288	EI230	EI231	EI232	EI233	
+302	Device range error				

- EFI output (EQ)

Offset	+0	+1	+2	+3 to +15
+0	EQ10	EQ11	EQ12	Fixed to 0
+16 : +240	Fixed to 0			
+256	EQ20	EQ21	EQ22	Device range error
+302	Device range error			

■ OMRON PLC

OMRON SYSMAC

OMRON SYSMAC CS/CJ

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		GT16 GT15 GT11 GT10 SoftGOT 1000
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the station number of the controller to be monitored.		GT16 GT15 GT11 GT10 SoftGOT 1000
	Host	Select this when monitoring the host controller.	
	Other	Select this when monitoring other controller. Then, set the station number and network number of the controller to be monitored. NW No. : Set the network No. Station No. : Set the station No.	

KEYENCE PLC

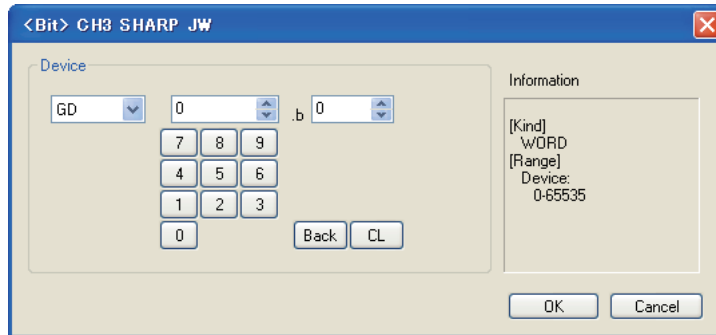
Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	<div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div>
Information	Displays the type and setting range of the device selected in [Device].	

- (1) **How to set relays (..), internal auxiliary relays (MR), latch relays (LR) and control relays (CR)**
 Make settings for these devices by a channel number and a bit position.

KOYO EI PLC

Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	<div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div>
Information	Displays the type and setting range of the device selected in [Device].	
Network	Set the monitor target of the set device.	
	Station No. Set this item when monitoring the PLC of the specified station No.	

■ SHARP PLC

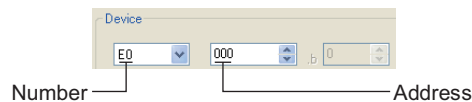


Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	<div> <div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div> </div>
Information	Displays the type and setting range of the device selected in [Device].	

(1) Device setting when setting a register or memory as a word device

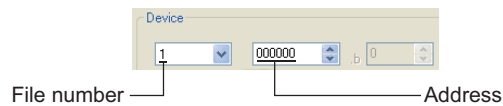
(a) Registers

Set the type (first 2 digits) and the address.



(b) File register

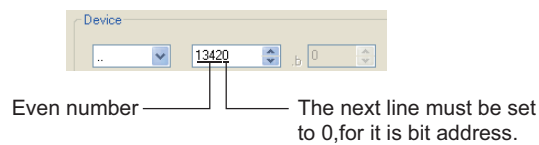
Set the file number and the address.



(2) Device setting when setting a register or memory as a word device

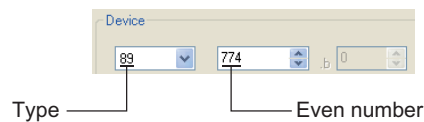
(a) I/O relay

Set a combination of the device address (multiple of 16) + bit address format (fixed to 0).



(b) Registers and file register

Set the device address (multiple of 16).

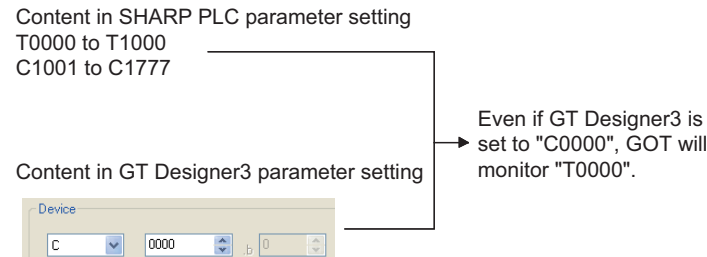


(3) Monitoring the timer (T) and the counter (C)

(a) Address setting

Make sure not to set the same address range for the timer (T) and the counter (C).
 Even if the address ranges are overlapped, GOT will display no error.
 GOT monitors them according to the address instead of the device name.
 Therefore, if the device invalid for the SHARP PLC side parameter is set by GT Designer3, GOT will monitor other device (the device corresponding to the set device address range).

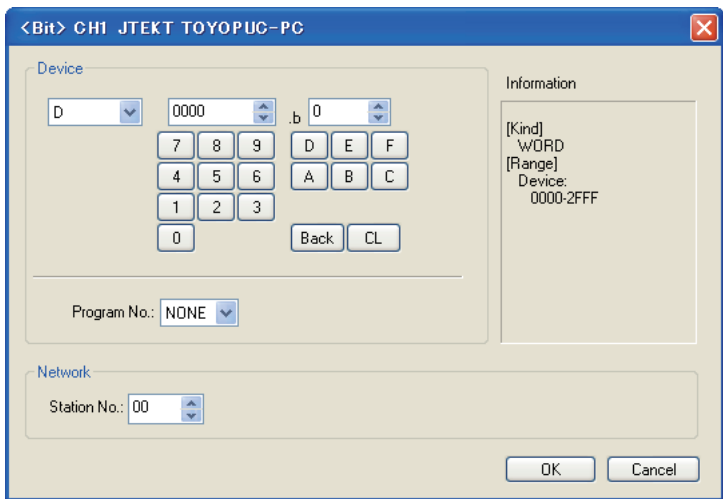
Example)




(b) Contact writing into timer (T) and counter (C)

Writing the contact for the timer (T) and counter (C) can only be done while the CPU is in RUN (while the timer and counter is in operation).

■ JTEKT PLC



Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
	Program No.	Sets the number of the program for which the device is set.	
Information	Displays the type and setting range of the device selected in [Device].		
Network	Sets the monitoring target for the set device.		
	Station No.	Select the station No. when monitoring the PLC of the specified station No. (octal)	

(1) About program number setting (when PC3JG or PC3J is used)

Setting of a program number is allowed for the following devices.
 Internal relay (M), keep relay (K), link relay (L), special relay (V), edge detection (P), timer (T), counter (C), data register (D), link register (R), special register (S), current value register (N)

■ TOSHIBA PLC

Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	
Information	Displays the type and setting range of the device selected in [Device].	

(1) Device setting when setting a relay as a bit device

Set the device using the format of word address (DEC) + bit address (HEX).

(2) Device setting when setting a relay as a word device

Set the device using the format of word address (DEC).

For the device name, set the bit device name with "W".

(3) Notation of device address (when using PROSEC V series)

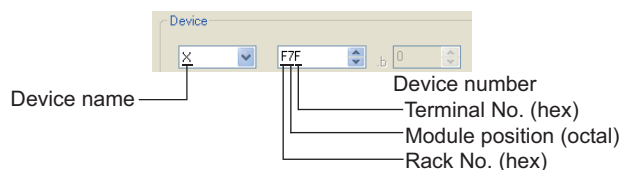
The notation of device address setting is different between the TOSHIBA PLC peripheral software and GOT. Refer to the following for details.

➡ Appendix2 Supported Devices

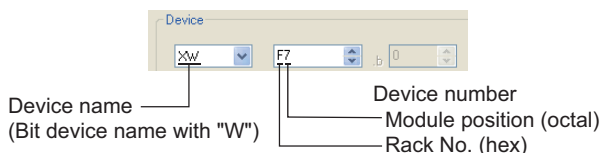
■ TOSHIBA MACHINE PLC

Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	
Information	Displays the type and setting range of the device selected in [Device].	

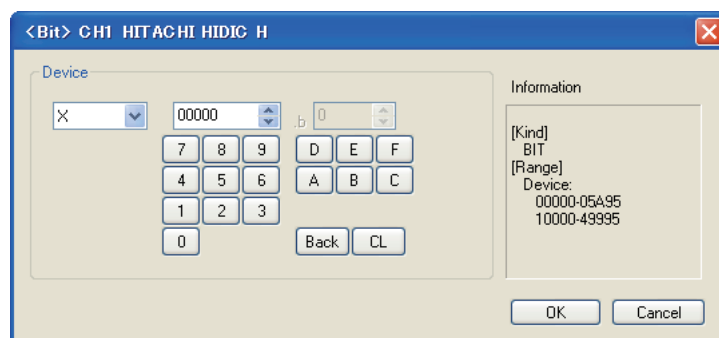
- (1) **Device setting when setting a relay address or word register address as a bit device**
Set the device using the format of rack No. (HEX) + module position (OCT) + terminal No. (HEX).



- (2) **Device setting when setting a relay address as a word device**
Set the device using the format of rack No. (HEX) + module position (OCT).
For the device name, set the bit device name with "W".



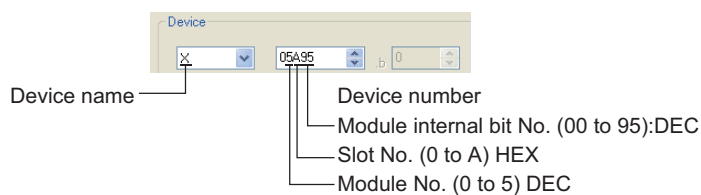
■ HITACHI IES PLC



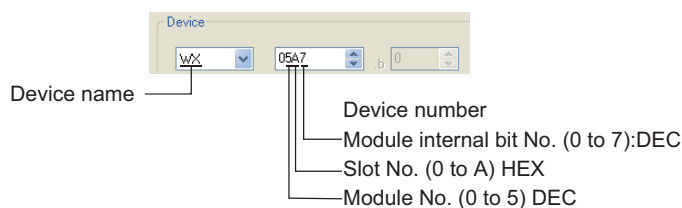
Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	GT16 GT15 GT11 GT10 SoftGOT 1000
Information	Displays the type and setting range of the device selected in [Device].	

- (1) **When specifying an external I/O device**

- (a) When setting a bit device
Set the device using the format of module No. + slot No. + module bit No.

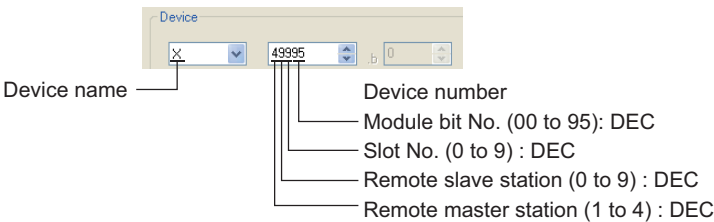


- (b) When setting a word device
Set the device using the format of module No. + slot No. + module bit No.
For the device name, set the bit device name with "W".

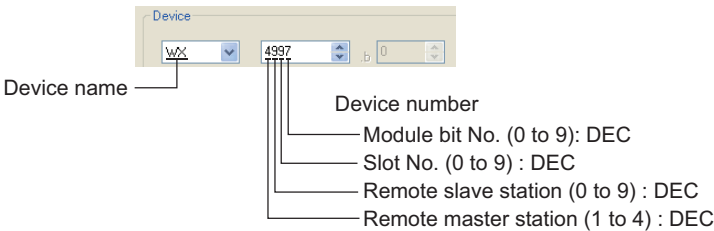


(2) Device setting when specifying an external I/O device

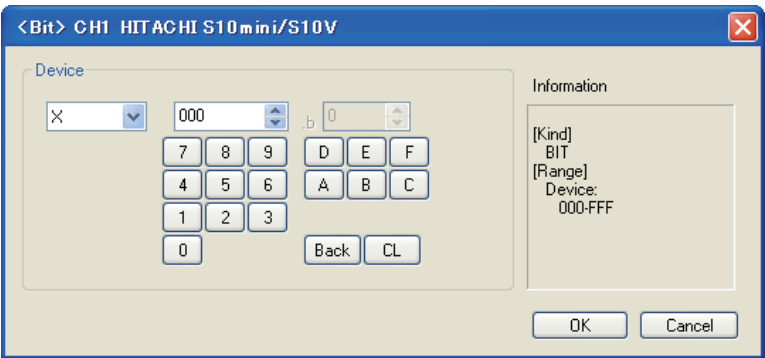
- (a) When setting a bit device
Set the device using the format of remote master station + remote slave station + slot No. + module bit No.



- (b) When setting a word device.
Set the device using the format of remote master station + remote slave station + slot No. + module bit No.
For device name setting, enter "W" before the bit device name.



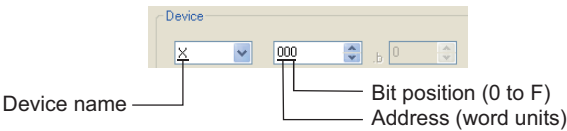
■ HITACHI PLC



Item	Description	Model
Device*1	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	Gr16 Gr15 Gr11 Gr10 S10mini S10V
Information	Displays the type and setting range of the device selected in [Device].	

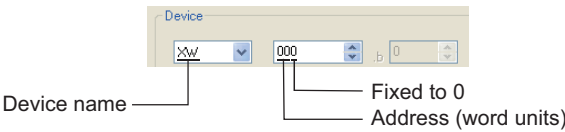
*1 The uppermost bit is b0 and the lowermost bit is b15.

- (1) Device setting when setting a bit device
Set the device using the format of address (word unit) + bit position (0 to F).

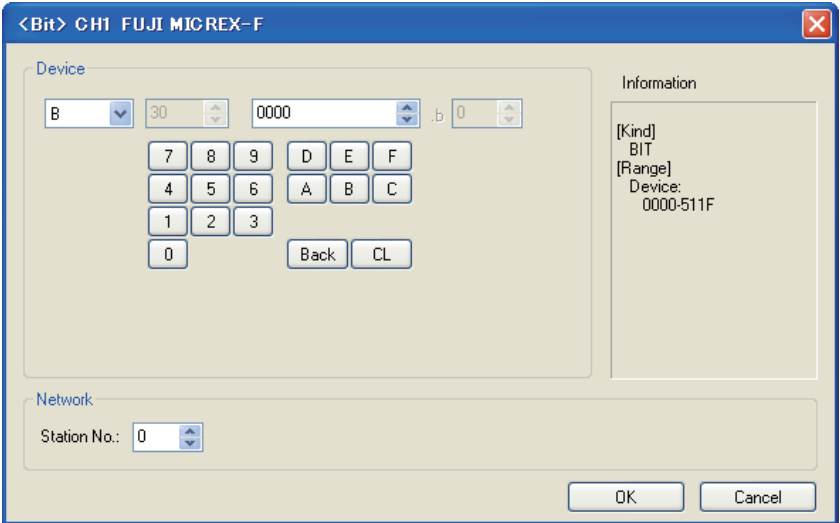


(1) When setting a word device

For external input (XW), external output (YW), internal register (RW), extended internal register (MW, AW), keep relay (KW), on-delay timer (TW), one-shot timer (UW), up-down counter (CW), global link register (GW), event register (EW), system register (SW), transfer register (JW), and receive register (QW), set as follows.



■ FUJI FA PLC



Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device. The uppermost bit is b0 and the lowermost bit is b15.	GT16 GT15 GT11 GT10 SoftGOT 1000
Information	Displays the type and setting range of the device selected in [Device].	
Network	Set the monitor target of the set device.	
	Station No. Set this item when monitoring the PLC of the specified station No.	

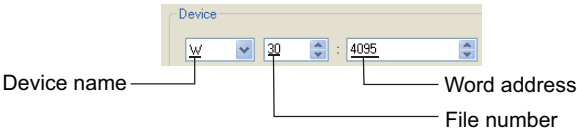
(1) Device setting when setting a bit device

Set the device using the format of word number (DEC) + bit position (0 to F (HEX)).



(2) Device setting when setting a word device

For direct access (W24) and under file (W30 to W109, W9), set as follows.



PANASONIC EW PLC

Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	<div> <div>Gr16</div> <div>Gr15</div> <div>Gr11</div> <div>Gr10</div> <div>SoRGOT 1000</div> </div>
Information	Displays the type and setting range of the device selected in [Device].	

(1) Device setting when setting a contact as a bit device

Set the device using the format of word address (DEC) + bit address (HEX).

(2) Device setting when setting a contact as a word device

Set the device number.

"W" is added to the device name, and the bit address is not included.

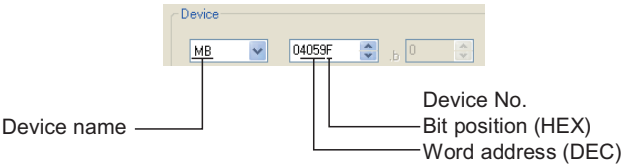
■ YASKAWA PLC

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		GT16 GT15 GT11 GT10 SoftGOT 1000
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the station No. of the controller to be monitored.		GT16 GT15 GT11 GT10 SoftGOT 1000
	Host	Select [Host] for monitoring the controller set as the host station.	
	Other	Select [Other] for monitoring the controller set as the other station. After selecting the item, set the station No. of the controller to be monitored. NW No. : Set the network No. Station No. : Set the station No.	

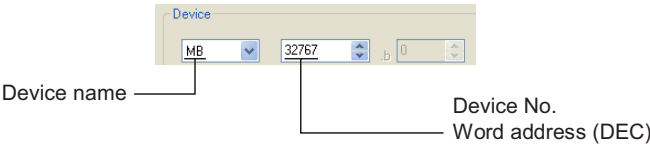
(1) Device setting when using CP-9200SH, CP-9300MS, MP-920, or MP-930

Set the coil device (MB) as follows:

- (a) When setting a link and coil as a bit device
Set the device using the format of word address (DEC) + bit position (HEX).




- (b) When setting a register as a word device
Set the device using the format of word address (DEC).




YOKOGAWA PLC

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div><div>GT16GT15</div><div>GT11GT10</div><div>SoftGOT1000</div></div>
	File number	Set the file number.	
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the station No. of the controller to be monitored.		
	Host	Select [Host] for monitoring the controller set as the host station.	
	Other	Select [Other] for monitoring the controller set as the other station. After selecting the item, set the station No. of the controller to be monitored. NW No. : Set the network No. Station No. : Set the station No.	

ALLEN-BRADLEY PLC

Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	<div><div>GT16GT15</div><div>GT11GT10</div><div>SoftGOT1000</div></div>
Information	Displays the type and setting range of the device selected in [Device].	
<div>Tag...</div>	Click this button to set the device by selecting a tag file read to GT Designer3.  8.3 Importing Tags Created by Third Party Programming Software	<div><div>GT16GT15</div><div>GT11GT10</div><div>SoftGOT1000</div></div>

Item	Description		Model
Network	Set the station number of the PLC connected to the specified device.		
	Host	Select this when monitoring the host PLC.	
	Other	Select this when monitoring the other PLC. Then, set the station number of the PLC to be monitored. NW No. : Set the network No. Station No. : Set the station No.	

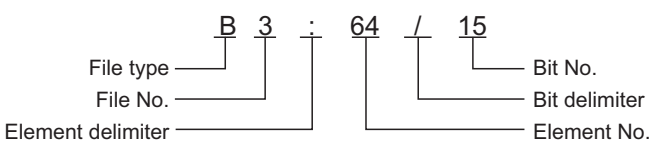


Device settings for ALLEN-BRADLEY PLC

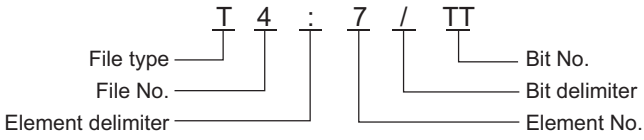
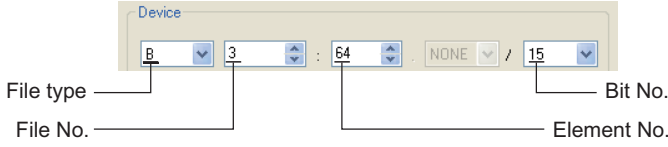
The ALLEN-BRADLEY PLC device addressing consists of a file and element.

(1) Device setting when using AB SLC500 or AB Micro Logix

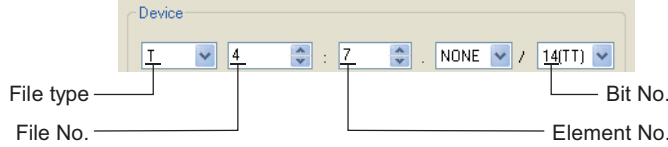
(a) When setting a bit address as a bit device



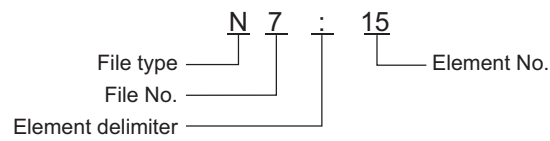
• Setting by GT Designer3



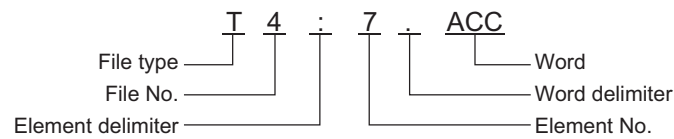
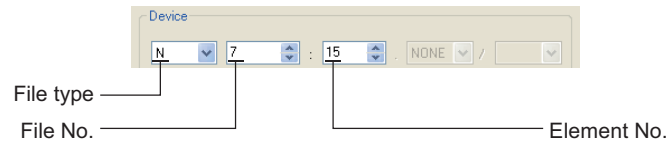
• Setting by GT Designer3



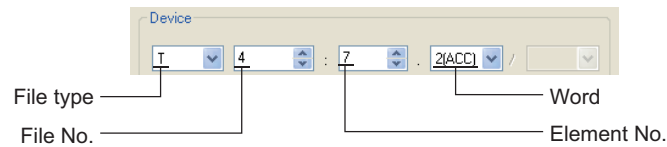
(b) When setting an element address as a word device



• Setting by GT Designer3

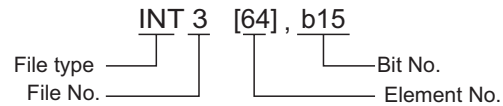


• Setting by GT Designer3

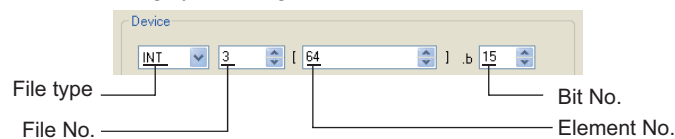


(2) Device setting when using AB Control/CompactLogix

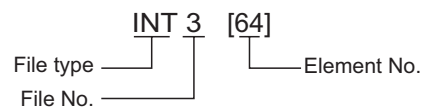
(a) When setting a bit address as a bit device



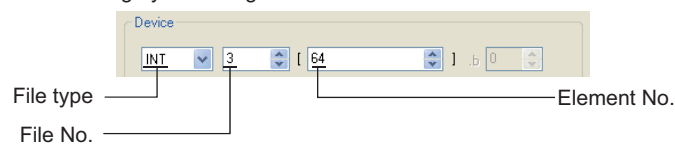
• Setting by GT Designer3



(b) When setting an element address as a word device



• Setting by GT Designer3



■ GE FANUC PLC

<Bit> CH1 GE Fanuc Automation Series 90

Device

GB

64

b 0

7

8

9

4

5

6

1

2

3

0

Back

CL

Information

[Kind]

BIT

[Range]

Device:

0-65535

Network

Station No.: 00

OK

Cancel

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	Station No.	Set this item when monitoring the PLC of the specified station No.	

■ LS IS PLC

<Bit> CH1 LS Industrial Systems MASTER-K

Device

P

0000

b 0

7

8

9

4

5

6

1

2

3

0

D

E

F

A

B

C

Back

CL

Information

[Kind]

BIT

[Range]

Device:

0000-063F

Network

Station No.: 0

OK

Cancel

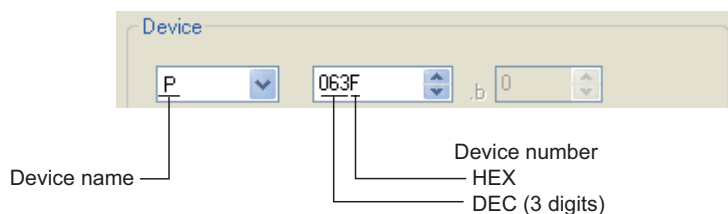
Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	Station No.	Monitors the temperature controller of the specified station No. 0 to 31 : To monitor the PLC of the specified station No. 100 to 115 : To specify the station No. of the PLC to be monitored by the value of GOT data register (GD).*1	

*1 The relation between station No. of PLC and GOT data register is as follows.

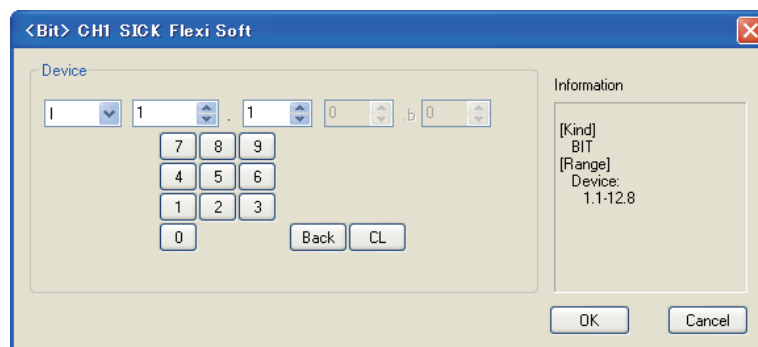
Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 31 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
⋮	⋮	
114	GD24	
115	GD25	

(1) Device setting when setting a bit device

Set the bit device using the decimal number (three digits) and the hexadecimal number.



■ SICK safety controller



Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set only by specifying the bit of word device.	Gr16 Gr15 Gr11 Gr10
Information	Displays the device type and its setting range selected in [Device].	Gr1000

The device setting method is the same as that of MELSEC-WS series.

To set a device, refer to the following.

☞ ■Mitsubishi Electric PLC, CNC, C Controller module, and motion controllers (7) MELSEC-WS

■ SIEMENS PLC (S7-300/400 series)

<Bit> CH1 SIEMENS S7-300/400

Device

I1.DBW0000.b0

789

456

123

0

Back

CL

Information

[Kind]

BIT

[Range]

Device:

0000-5117

Network

Host

Other

Station No.:1

OK

Cancel

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		<div>GT16GT15</div> <div>GT11GT10</div> <div>SoftGOT1000</div>
	Host	Select this to monitor the PLC specified as the host from the GOT utility (setup).	
	Other	Select this when monitoring the PLC other than the one specified as [Host]. Then, set the PLC MPI address.	

- (1) Device setting when setting a bit memory as a bit device
- Set the device using the format of byte address (DEC) + bit address (0 to 7)

Device

I1.DBW1287.b0

Device name

Device number

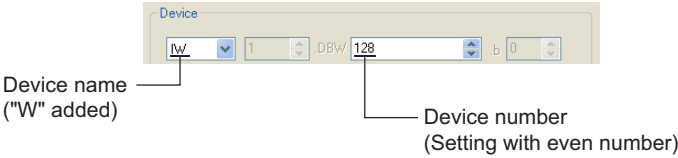
Bit address (0 to 7)

Byte address (DEC)

(2) Device setting when setting a bit memory as a word device

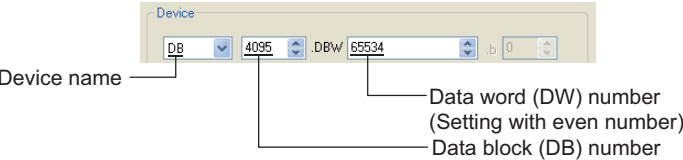
Set it with device number.

For the device name, set the bit memory device name with "W".



(3) Device setting when setting a data register

Set the device using the format of data block (DB) + data word (DW).



(4) Precautions for setting device

(a) Notation system of bit memory

The difference in bit memory notation between GOT and PLC is as follows:

Notation of GOT	Notation of PLC
Q0007	Q0.7

(b) Preparation for setting data register

It is necessary to define the data block using a peripheral software and sequence program, before using a data register.

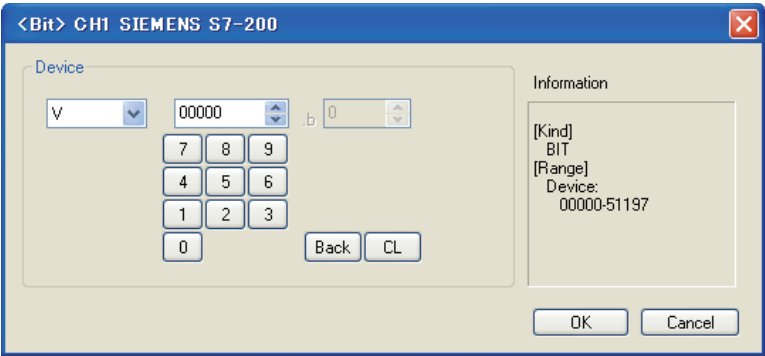
Setting more than one data block cannot be done for the data register.

(c) Object to which timer (current value) (T) cannot be set

For the timer (current value) (T), only one device can be set for the write target.

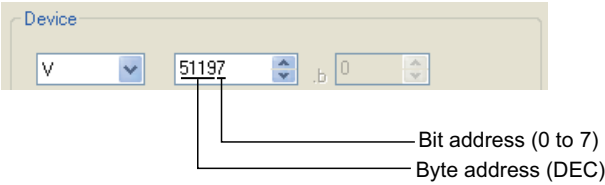
Therefore, multiple devices, such as, using the recipe function, etc., cannot be used.

■ SIEMENS PLC (S7-200 series)

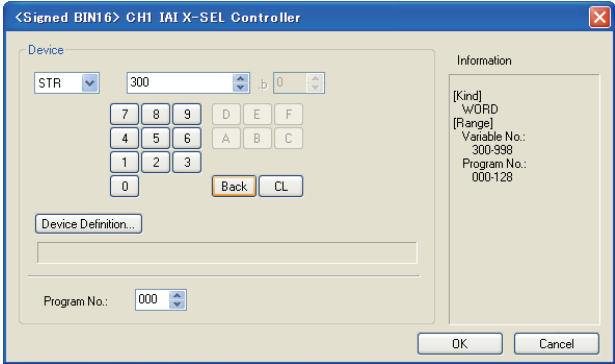


Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	<div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div>
Information	Displays the type and setting range of the device selected in [Device].	

- (1) **When setting bit device (excluding timer and counter)**
 Make settings for bit devices by byte address (decimal) and bit address (0 to 7).



■ IAI robot controller



Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set only when specifying the bit of word device.	<div>GT16</div> <div>GT15</div> <div>GT11</div> <div>GT10</div> <div>SoftGOT 1000</div>
	<div>Device Definition...</div> Device definition can be checked.	
	Program No.	
	Device No.	
Information	Displays the device type and setting range which are selected in [Device].	

(1) Flag device setting

FG000 : 600

300 0

Flag number:
Global area (600 to 899)
Local area (900 to 999)

Program No.: 000

Program number:
Global area (000)
Local area (001 to 128)

(2) String device setting

STR000 : 300

300 0

Variable number:
Global area (300 to 998 (only even))
Local area (001 to 299 (only odd))

Program No.: 000

Program number:
Global area (000)
Local area (001 to 128)

(3) Version device setting

VR 0 0 : 0

0 0

Obtained data:

0: Model code	5: Time (day)
1: Unit code	6: Time (hour)
2: Version number	7: Time (min)
3: Time (year)	8: Time (sec)
4: Time (month)	9 to F: Reserved for system use

Device No.: 0

Device number (0 to F)

VR0

Unit type (0 to 3)
0= Main CPU application / 1 = Main CPU core
/ 2= Driver CPU / 3 = Mount SIO

(4) Axis Status device setting

AXST00

0 0

Obtained data:
AXST00 to AXST05: Single-axis status

00: Axis status

Bit 7 (Reserved for system use)

Bit 6 (Reserved for system use)

Bit 5 (Push error detection): 0 = Not detected / 1 = Detected

Bit 4 (Operation command successful completion):
0 = Not yet complete / 1 = Completed successfully

* Can be used only for completion check after an operation command.

Bit 3 (Servo): 0 = OFF / 1 = ON

Bit 1-2 (Origin return): 0 = Not yet performed
/ 1 = Returning to origin / 2 = Completed

Bit 0 (Servo axis in use): 0 = Not in use
/ 1 = In use (moving, etc.)

* "Servo axis in use" indicates that a given task has the right to use the applicable axis.
Therefore, this bit will turn ON in the following conditions:

- When an operation command involving axis movement is in progress (including when an axis is moving)
- Servo is starting up from an OFF state
- Servo is shutting down from an ON state (excluding emergency stop)
- Operation axis is paused

01: Axis sensor input status

Bit 3 (Reserved for system use)

Bit 2 (Origin sensor): 0 = OFF / 1 = ON

Bit 1 (Overrun sensor): 0 = OFF / 1 = ON

Bit 0 (Creep sensor): 0 = OFF / 1 = ON

02: Axis error code

03: Encoder status

Bit 7 (Battery alarm (BA))

Bit 6 (Battery error (BE))

Bit 5 (Multi-rotation error (ME))

Bit 4 (Reserved for system use)

Bit 3 (Counter overflow (OF))

Bit 2 (Count error (CE))

Bit 1 (Full absolute status (FS))

Bit 0 (Overspeed (OS))

04: Current position (L) unit (0.001mm)
Indicates the lower 16 bits of the current position in

05: Current position (H) unit (0.001mm)
Indicates the upper 16 bits of the current position in

AXST06 to AXST11: Double axes status

AXST42 to AXST47: Eight axes status

(5) Scara Axis Status device setting

SAXS 0 00

Obtained data:

00: Work coordinate system selection number
 01: Tool coordinate system selection number
 02: Common axis status
 Bit 7 (Reserved for system use)
 Bit 6 (Reserved for system use)
 Bit 5 (Reserved for system use)
 Bit 4 (Reserved for system use)
 Bit 2-3 (Scara axis current position coordinate system type):
 0 = Base coordinate system
 / 1 = Selected work coordinate system
 / 2 = Reserved for system use / 3 = Each axis system
 Bit 0-1: (Scara axis current arm system):
 0 = Right arm system / 1 = Left arm system
 / 2 = Indeterminable / 3 = Reserved for system use
 03: Axis pattern

Bit	-	7	6	5	4	3	2	1	0
-----	---	---	---	---	---	---	---	---	---

1st axis
 8th axis
 Reserved for system use

04 to 09: Single-axis status

04: Axis status
 Bit 7 (Reserved for system use)
 Bit 6 (Reserved for system use)
 Bit 5 (Push error detection): 0 = Not detected / 1 = Detected
 Bit 4 (Operation command successful completion):
 0 = Not yet complete / 1 = Completed successfully
 * Can be used only for completion check after an operation command.(For positioning that includes any of the X, Y and R axes, be sure to check completion for all of the X, Y and R axes.)
 Bit 3 (Servo): 0 = OFF / 1 = ON
 Bit 1-2 (Origin return): 0 = Not yet performed
 / 1 = Returning to origin / 2 = Completed
 Bit 0 (Servo axis in use): 0 = Not in use
 / 1 = In use (moving, etc.)
 * "Servo axis in use" indicates that a given task has the right to use the applicable axis. Therefore, this bit will turn ON in the following conditions:
 - When an operation command involving axis movement is in progress (including when an axis is moving)
 - Servo is starting up from an OFF state
 - Servo is shutting down from an ON state (excluding emergency stop)
 - Operation axis is paused

Unit type (0 to F)

Bit 3 (Reserved for system use) Fixed to 0
 Bit 2 (Reserved for system use) Fixed to 0
 Bit 0-1 (Scara axis current position type):
 0 = Base coordinate system
 / 1 = Selected work coordinate system
 / 2 = Reserved for system use / 3 = Each axis system

05: Axis sensor input status
 Bit 3 (Reserved for system use)
 Bit 2 (Origin sensor): 0 = OFF / 1 = ON
 Bit 1 (Overrun sensor): 0 = OFF / 1 = ON
 Bit 0 (Creep sensor): 0 = OFF / 1 = ON
 06: Axis error code
 07: Encoder status
 Bit 7 (Battery alarm (BA))
 Bit 6 (Battery error (BE))
 Bit 5 (Multi-rotation error (ME))
 Bit 4 (Reserved for system use)
 Bit 3 (Counter overflow (OF))
 Bit 2 (Count error (CE))
 Bit 1 (Full absolute status (FS))
 Bit 0 (Overspeed (OS))
 08: Current position (L) unit (0.001mm or 0.001deg)
 Indicates the lower 16 bits of the current position in Hex.
 09: Current position (H) unit (0.001mm or 0.001deg)
 Indicates the upper 16 bits of the current position in Hex.
 0A to 0E: Double axes status

2E to 33: Eight axes status
 34 to FF: Reserved for system use

(6) Program Status device setting

PGST 000

Obtained data:

000 to 003: Program number 1 status
 000: Status
 Bit 3 (Reserved for system use)
 Bit 2 (Reserved for system use)
 Bit 1 (Reserved for system use)
 Bit 0 (Start): 0 = Not started / 1 = Started
 001: Execution program step number
 002: Program-dependent error code
 003: Error occurrence step number

004 to 007: Program number 2 status
 :
 508 to 511: Program number 128 status

(7) System Status device setting

SYST 0

Obtained data:

0: System mode

0 = Indeterminable / 1 = AUTO mode / 2 = MANUAL mode
/ 3 = Slave update mode / 4 = Core update mode

1 Critical level system error number

2: Latest system error number

3: System status byte 1

Bit 7 (Reserved for system use)

Bit 6 (Battery voltage error status): 0 = No error / 1 = Error

Bit 5 (Battery voltage low warning status): 0 = No low / 1 = Low

Bit 4 (Power error status): 0 = Normal / 1 = Error

Bit 3 (Emergency stop switch status):

0 = No emergency stop / 1 = Emergency stop

Bit 2 (Safety gate status): 0 = CLOSE / 1 = OPEN

* X-SEL (P/Q Series) (Multi axes/Scara)/SSEL/ASEL/PSEL: Enable switch
(Deadman switch / Enable switch) status is indicated.

Bit 1 (TP enable switch status): 0 = ON / 1 = OFF

* X-SEL (P/Q Series) (Multi axes/Scara)/SSEL/ASEL/PSEL:
This bit is disabled (fixed to 0).

Bit 0 (Operation mode switch status): 0 = AUTO / 1 = MANUAL

4: System status byte 2

Bit 7 (Reserved for system use)

Bit 6 (Reserved for system use)

Bit 5 (Program run status): 0 = Not run / 1 = Running

Bit 4 (Restart wait status): 0 = Not waiting / 1 = Waiting

Bit 3 (I/O interlock status): 0 = No interlock / 1 = Interlock

Bit 2 (Servo interlock status): 0 = No interlock / 1 = Interlock

Bit 1 (Slave parameter writing status):

0 = Not writing / 1 = Writing

Bit 0 (Application data flash ROM write status):

0 = Not writing/erasing / 1 = Writing/erasing

* When the core program is in operation (Application update mode),
only Bit 0 is enabled. Data for System mode, Critical level
system error number, Latest system error number,
System status byte 1, System status byte 3 and System
status byte 4 is disabled.

5: System status byte 3

Bit 7 (Reserved for system use)

Bit 6 (Reserved for system use)

Bit 5 (Reserved for system use)

Bit 4 (Operation mode):

0 = Program mode / 1 = Position mode

Bit 3 (Reserved for system use)

Bit 2 (System ready status): 0 = Not ready / 1 = Ready

Bit 1 (System operation status):

0 = Not operating in AUTO mode

/ 1 = Operating in AUTO mode

Bit 0 (Drive-source cutoff status): 0 = Not cut off / 1 = Cut off

6: System status byte 4

Reserved for system use

(8) Coordinate Affiliate Data device setting

CD 0 00 : 0

Obtained data:

0: X axis coordinate offset

1: Y axis coordinate offset

2: Z axis coordinate offset

3: R axis coordinate offset

4 to F: Reserved for system use

Definition Data No.: 00

Coordinate system definition data number (00 to FF)

Work/tool coordinate system definition data number (0 to)

CD0

Type 1 (0 to 1)

0 = Work coordinate system definition data

/ 1 = Tool coordinate system definition data

(9) Servo device setting

SV 0

Obtained data:

0: Command trigger

1 = Write / 4 = Clear

1: Axis pattern

Bit - 7 6 5 4 3 2 1 0

1st axis

8th axis

Reserved for system use

2: Operation type

Bit 3 (Reserved for system use) Fixed to 0

Bit 2 (Reserved for system use) Fixed to 0

Bit 1 (Reserved for system use) Fixed to 0

Bit 0 (Servo ON/OFF): 0 = OFF / 1 = ON

(10) Write to Flash ROM device setting

FRW 0

0

Obtained data
0 : Command trigger
1=Write/
1 : Reserved for system use

(11) Integer device setting

INT000 : 0200

0200

Variable number:
Global area (0200 to 0299,1200 to 1299)
Local area (0001 to 0099,1001 to 1099)

Program No.: 000

Program number:
Global area (000)
Local area (001 to 128)

(12) Real device setting

RL000 : 0300

0300

Variable number:
Global area (0300 to 0399,1300 to 1399)
Local area (0100 to 0199,1100 to 1199)

Program No.: 000

Program number:
Global area (000)
Local area (001 to 128)

(13) Error Detail (0 to 7) device setting

ER0 00 : 000 : 00

00

Obtained data:
00: Error number
01: Detail information 1
Other than system-down level error: Program number
(Error source is indicated if the step number is not 0.)
System-down level error: System down type
02: Detail information 2
Other than system-down level error: Step number
(Error source)
System-down level error: System down error code
03: Detail information 3
Other than system-down level error: Axis number
System-down level error: System down information 1

Reserved: 000

Reserved for system use

Type2: 00

Type 2 (0 to FF)
System error: 0 = Critical level error / 1 = Latest error
Axis-specific error: Axis number
Program-specific error: Program number
Error in error list record: Record number (1 to)

ER0

Type 1
0 = System error / 1 = Axis-specific error
/ 2 = Program-specific error
/ 3 = Error in error list record
/ 4 or later = Reserved for system use

04: Detail information 4
Other than system-down level error: Point number
(Negative value at interpolation point)
System-down level error: System down information 2
05: Detail information 5
06: Detail information 6
07: Detail information 7
08: Detail information 8
09: Message bytes
0A: Message 1 (4 bytes)
10: Message 2 (4 bytes)
:
49: Message 64 (4 bytes)
50 to FF: Reserved for system use

(14) Point Data device setting

PD 00

00

b

0

Obtained data:

00: Command trigger

1 =Write / 2 =Read / 4 =Clear

01: Starting point number

02: Number of point data

03 to 0F: Point data 1

03: Point number

04: Axis pattern

05: Acceleration unit (0.01G)

06: Deceleration unit (0.01G)

07: Speed unit (mm/sec)

08 to 0F: Position data unit (0.001 mm)

08: 1st axis position data

:

0F: 8th axis position data

10 to 1C: Point data 2

:

92 to 9E: Point data 12

(15) Simple Interference Check Zone Data device setting

SD 01 : 0

0

b

0

Obtained data:

0: Effective axis pattern

1 to 4: Simple interference check zone definition coordinate

1 unit (0.001 mm (R axis: 0.001 deg))

1: X-axis definition coordinate

2: Y-axis definition coordinate

3: Z-axis definition coordinate

4: R-axis definition coordinate

5 to 8: Simple interference check zone definition coordinate

2 unit (0.001 mm (R axis: 0.001 deg))

9: Physical output port number or global flag number for output upon entry

A: Entry error type specification

0 = No error handling / 1 = Message-level error

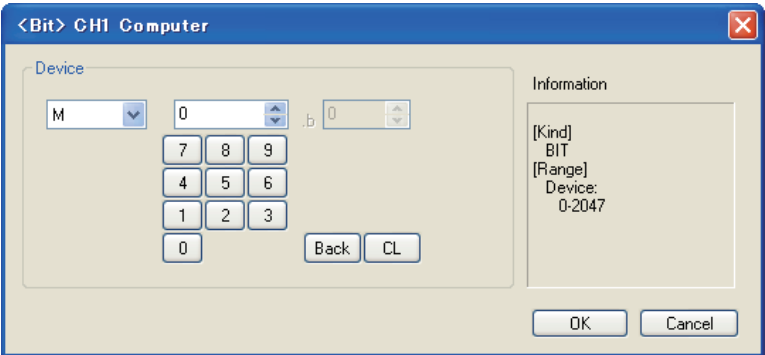
/ 2 = Operation-cancellation level error

B to F: Reserved for system use

Definition Data No.: 01

Definition data number (1 to FF)

■ Microcomputer

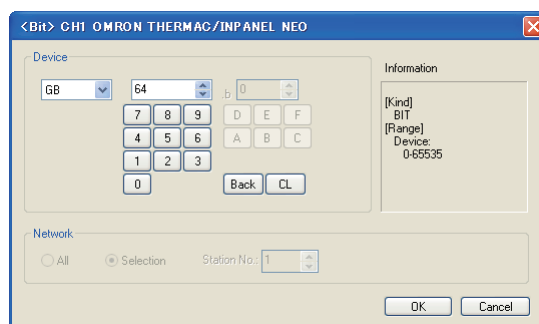



Item	Description	Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.	Gr16Gr15 Gr11Gr10
Information	Displays the type and setting range of the device selected in [Device].	SeiGOT 1000

■ MODBUS® connection

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div><div>GT16</div><div>GT15</div><div>GT11</div><div>GT10</div><div>SoftGOT 1000</div></div>
	File No.	Set the file No. It can be set only when "6" is selected in [Device].	
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the station number of the controller to be monitored.		
	Host	Select this when monitoring the host controller.	
	Other	<ul style="list-style-type: none">• GT16, GT15 Select this when monitoring the other controllers. Then, set the station number and network number of the controller to be monitored. NW No. : For the MODBUS®/RTU connection, set "1". MODBUS®/TCP connection, set the network No. Station No. : Set the station No. <ul style="list-style-type: none">• GT11, GT10 Select this item when monitoring the controller set as the other station. After selecting this item, set the station No. of the controller to be monitored. Station No. : Set the station No.	

■ OMRON temperature controller



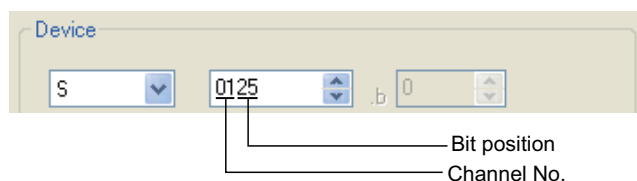
Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	All	Select this when writing data to all temperature controllers. During monitoring, the temperature controller of station No. 0 is monitored. (When writing the data in numerical input, data is written to all connected temperature controllers during input, and the temperature controller of station No. 0 is monitored during other than input (i.e. display).)	
	Selection	Select this when monitoring the temperature controller of the specified station No. After selecting "Selection", set the station No. in the range indicated below. 0 to 99 : To monitor the temperature controller of the specified station No. 100 to 115 : To specify the station No. of the temperature controller to be monitored by the value of GOT data register (GD). ^{*1}	

*1 The relation between station No. of PLC and GOT data register is as follows.

Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 99 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

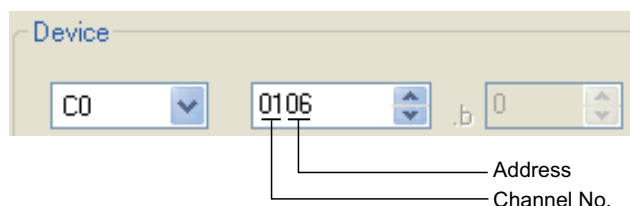
(1) Device setting when setting status (S)

Make settings for status by a channel number and a bit position.




(2) Device setting when setting variable area (0), variable area (1), and variable area (2)

Make setting for variable areas by a channel number and address.



■ SHINKO indicating controller

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
	Memory No.*1	Set the memory number (None, 0 to 7) of the device to be monitored.	
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	All	Select this item when writing data to all the indicating controllers connected. During a monitoring, the indicating controller set for [Host Address] of the communication detail setting is monitored. (When inputting data with the numerical input function, the data is written to all the connected indicating controllers during input; the indicating controller that is set for [Host Address] is monitored during other than input (display).)	
	Selection	Select this item when monitoring the indicating controller of the station No. specified. After selecting, set the station No. of the indicating controller in the following range. 0 to 94 : The indicating controller of the station No. specified is monitored. 95 : Same as the setting of [All]. 100 to 115 : Specify the station No. of the indicating controller to be monitored with the GOT data register (GD).*2	

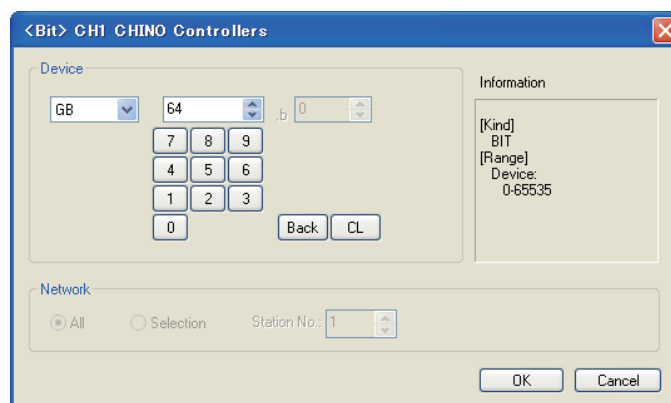
*1 The device name is displayed as follows when the memory number (0 to 7) is set.


Memory No.	Displayed device name
None	Device Number
0	M0/Device Number
1	M1/Device Number
2	M2/Device Number
3	M3/Device Number
4	M4/Device Number
5	M5/Device Number
6	M6/Device Number
7	M7/Device Number

*2 The relation between station No. of indicating controller and GOT data register is as follows.

Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 94 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

■ CHINO controller



Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
Information	Displays the type and setting range of the device selected in [Device].		
Network	Sets the monitoring target for the set device.		
	All	Select the item when data are written in all the connected controllers. The controller set for [Host Address] of the communication detail settings is monitored. (When inputting data with the numerical input function, data is written to all the connected controllers during input. The controller set for [Host Address] is monitored during other than input (display).)	
	Selection	Select the item when the controller with the specified station No. is monitored. Select the item, and then set the station No. for the controller in the following range. 1 to 99 : The controller with the specified station No. is monitored. 100 to 115 : Specify the station No. for the controller to be monitored with a GOT data register (GD). ¹	

*1 The relation between station No. of controller and GOT data register is as follows.


Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 99 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

(1) Device setting

Devices are set with reference numbers.

For parameters corresponding to each reference number, refer to the manual of the controller to be used.

■ FUJI SYS temperature controllers

Item	Description		Model
Device ^{*1}	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
Information	Displays the type and setting range of the device selected in [Device]. (Bit/Word)		
Network	Set the monitor target of the set device.		
	Station No.	Monitors the temperature controller of the specified station number. 1 to 119, 216 to 255 : Monitors the temperature controller of the specified station number. 200 to 215 : The station number of the temperature controller to be monitored is specified by the value of the data register (GD) of the GOT. ^{*1}	

^{*1} The relation between station No. of temperature controller and GOT data register is as follows


Station No.	GOT data register (GD)	Setting range
200	GD10	1 to 255 (If setting a value outside the range above, a device range error occurs.)
201	GD11	
:	:	
214	GD24	
215	GD25	

(1) Device setting

Devices are set with the coil and register numbers of the temperature controller.

For the relation between the numbers and parameters etc. (such as an address map of coil/register number and a parameter), refer to the manual of the temperature controller to be used.

■ YAMATAKE temperature controller

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	Station No.	Monitors the temperature controller of the specified station No. 0 to 127 : To monitor the temperature controller of the specified station No. 200 to 215 : To specify the station No. of the temperature controller to be monitored by the value of GOT data register (GD).*1	

*1 The relation between station No. of temperature controller and GOT data register is as follows.

Station No.	GOT data register (GD)	Setting range
200	GD10	0 to 127 (If setting a value outside the range above, a device range error occurs.)
201	GD11	
:	:	
214	GD24	
215	GD25	


YOKOGAWA temperature controller

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div><div>GT16</div><div>GT15</div><div>GT11</div><div>GT10</div><div>SoftGOT 1000</div></div>
	CPU No.	Set the CPU No. (1, 2) of the device to be monitored. When device B is selected, the CPU No. is fixed to 1.	
Information	Displays the setting range available for the device selected in [Device].		
Network	Set the monitor target of the set device.		
	All	Select this item when writing data to all the temperature controllers connected. When bit specification of word device is preformed, data are written to the indicating controller of the station No. set for [Host Address] of the communication detail settings. Monitoring and writing with bit specification of word device are performed only for the station No. set for [Host Address]. (When inputting data with the numerical input function, the data is written to all the connected temperature controller that is set for [Host Address] is monitored during other than input (display).)	
	Selection	Set is item when monitoring the temperature controller of the specification No. After selecting, set the station No. of the temperature controller in the following range. 0 to 99 : The temperature controller of the station No. specified is monitored. 100 to 115 : Specify the station No. of the temperature controller to be monitored with the GOT data register (GD)*1	

*1 The relation between station No. of temperature controller and GOT data register is as follows.

Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 99 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

■ RKC temperature controller

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	Station No.	Monitors the temperature controller of the specified station No. 0 to 16 : To monitor the temperature controller of the specified station No. 100 to 115 : To specify the station No. of the temperature controller to be monitored by the value of GOT data register (GD). ^{*1}	

^{*1} The relation between station No. of temperature controller and GOT data register is as follows.

Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 16 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

(1) Device setting

Set by a value of "unit address + 1".
 · For unit address 0: Set "1".
 · For unit address F: Set "16".


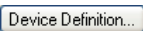

Inverter

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		<div><div>GT16</div><div>GT15</div><div>GT11</div><div>GT10</div><div>SoftGOT 1000</div></div>
	Station No.	Monitors the Inverter of the specified station No. 0 to 31 : To monitor the Inverter of the specified station No. 100 to 115 : To specify the station No. ofs the Inverter to be monitored by the value of GOT data register (GD).*1	
Information	Displays the type and setting range of the device selected in [Device].		

*1 The relation between station No. of inverter and GOT data register is as follows.

Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 31 (If setting a value outside the range above, a device range error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

■ MITSUBISHI servo amplifier

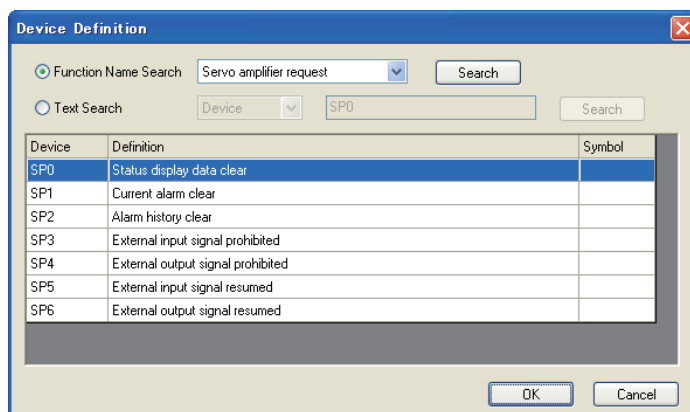
Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set when performing the bit specification of word device.		
		Clicking the button displays the dialog box indicating the correspondence between the GOT virtual device for a servo amplifier and the definition of servo amplifier. If select an item on the displayed dialog box, the definition of the servo amplifier is displayed in the text box below.  (a) Device Definition dialog box	
Information	Displays the type and setting range of the device selected in [Device].		
Network	Set the monitor target of the set device.		
	All	Select this item when writing data to all servo amplifiers connected. During a monitoring, the servo amplifier of Station No. 0 is monitored. When inputting data by Numerical Input, the data is written to all servo amplifiers connected during inputting; the servo amplifier of Station No. 0 is monitored during other than inputting (displaying).	
	Selection Station No.	Select this item when monitoring the servo amplifier of the Station No. specified. After selecting, set station numbers of servo amplifiers in the following range. 0 to 31 : The servo amplifier of the Station No. specified will be monitored. 100 to 115 : Specify the Station No. of the servo amplifier to be monitored with a GOT data register (GD). ^{*1}	

For details of *1, refer to the following.

Station No.	GOT data register (GD)	Setting range
100	GD10	0 to 31 (If setting a value out of the range above, a timeout error occurs.)
101	GD11	
:	:	
114	GD24	
115	GD25	

(a) Device Definition dialog box

When setting a device in the Device dialog box and click the [Device Definition] button, the correspondence between the GOT virtual device for a servo amplifier and the definition of the servo amplifier is displayed.



The device can be searched with the servo definition or other items on this dialog box to set a device.

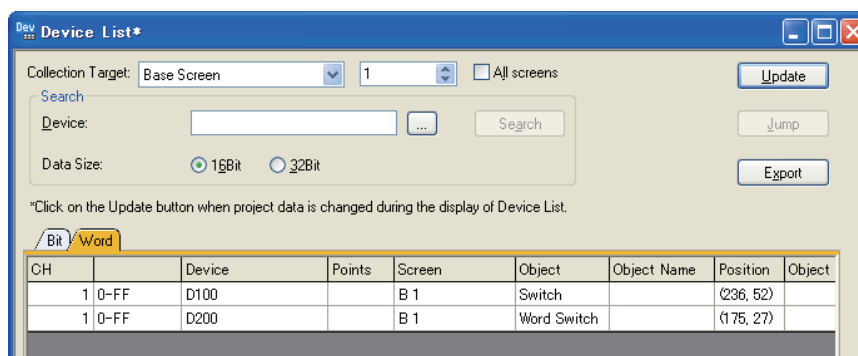
1. Select a key item for searching.
 - Function Name Search: Select this item to search by a function name.
 - Text Search: Select this item to search by a character string. (Device, definition, or symbol)
2. Enter a function name, device, definition, or symbol by which the searching is performed.
3. After entering, click the [Search] button.
As the items that match to the specified condition are displayed, select the device to be set.
4. Click the [OK] button to reflect the device selected in step 4 to the Device dialog box.

POINT

When selecting [All] in the Network setting

The network No. 0 and Station No. FF are displayed on Device List and when printing.

(Device List screen)



PANASONIC servo amplifier

Item	Description		Model
Device	Set the device name, device number, and bit number. The bit number can be set only when specifying the bit of word device.		<div>GT16GT15</div> <div>GT11GT10</div> <div>Servo1000</div>
Information	Displays the device type and setting range which are selected in [Device].		
Network	Set the monitor target of the set device.		
	Station No.	Set this item when monitoring the servo amplifier of the specified station No.	

Appendix3 Key Code List

(1) List of key code for numerical input and ASCII input

Key	Key code(H)	Key	Key code(H)	Key	Key code(H)	Key	Key code(H)
SP	0020H	@	0040H	`	0060H	←	0081H
!	0021H	A	0041H	a	0061H	↑	0082H
”	0022H	B	0042H	b	0062H	↓	0083H
#	0023H	C	0043H	c	0063H	(Clear)	0088H
\$	0024H	D	0044H	d	0064H		
%	0025H	E	0045H	e	0065H		
&	0026H	F	0046H	f	0066H		
,	0027H	G	0047H	g	0067H		
(	0028H	H	0048H	h	0068H		
)	0029H	I	0049H	i	0069H		
*	002AH	J	004AH	j	006AH		
+	002BH	K	004BH	k	006BH		
,	002CH	L	004CH	l	006CH		
-	002DH	M	004DH	m	006DH		
.	002EH	N	004EH	n	006EH		
/	002FH	O	004FH	o	006FH		
0	0030H	P	0050H	p	0070H		
1	0031H	Q	0051H	q	0071H		
2	0032H	R	0052H	r	0072H		
3	0033H	S	0053H	s	0073H		
4	0034H	T	0054H	t	0074H		
5	0035H	U	0055H	u	0075H		
6	0036H	V	0056H	v	0076H		
7	0037H	W	0057H	w	0077H		
8	0038H	X	0058H	x	0078H		
9	0039H	Y	0059H	y	0079H		
:	003AH	Z	005AH	z	007AH		
;	003BH	[	005BH	{	007BH		
<	003CH	\	005CH	|	007CH		
=	003DH	]	005DH	}	007DH		
>	003EH	^	005EH	~	007EH		
?	003FH	_	005FH	→	0080H		

(2) List of key code for objects

(a) Key code for numerical input

Key code ^(H)	Application
0008H	Deletes the least signification digit and shifts the entire digits to the right by one.
000DH	Write to the destination device (Execute)/Move the cursor
001BH	Cancel
002DH	"±" (sign inversion)
002EH	". "
0030H to 0046H	Input value
0090H	Move cursor to right within object
0091H	Move cursor to left within object
0092H	User ID ascending order movement of cursor
0093H	User ID descending order movement of cursor
FFFAH	Increment
FFFBH	Decrement

(b) Key code for ASCII input

Key code ^(H)	Application
0008H	Deletes the first character and shifts the entire characters to the right by one character.
000DH	Write to the destination device (Execute)/Move the cursor
001BH	Cancel
ASCII code	Input characters
0084H	Kanji conversion
0085H	Previous choice
0086H	Next choice/Conversion
0087H	Select/No conversion/Select next word
0089H	Select previous word
0090H	Move cursor to right within object/Lengthen the word length
0091H	Move cursor to left within object/Shorten the word length
0092H	User ID ascending order movement of cursor
0093H	User ID descending order movement of cursor
0094H	Switches key windows. (Next)
0095H	Switches key windows. (Previous)
0096H	Switches key windows. (Screen number specification)

(c) Key code for data list display

Key code ^(H)	Application
00F2H	Scroll up by one line
00F3H	Scroll down by one line

(d) Key code for user alarm display and system alarm display

Key code ^(H)	Application
00F2H	Scroll up by one line
00F3H	Scroll down by one line
FFB0H	Show cursor
FFB1H	Hide cursor
FFB2H	Move cursor upward (Move to previous page when cursor is hidden.)
FFB3H	Move cursor downward (Move to next page when cursor is hidden.)
FFB8H	Display detail information
FFBCH	Display ladder

(e) Key code for alarm history function

Key code ^(H)	Application
FFB0H	Show cursor
FFB1H	Hide cursor
FFB2H	Move cursor upward (Move to previous page when cursor is hidden.)
FFB3H	Move cursor downward (Move to next page when cursor is hidden.)
FFB4H	Display date/time of selected data
FFB5H	Display date/time of all data
FFB6H	Clear the selected alarm data
FFB7H	Clear all alarm data
FFB8H	Display detail /Move to the lower hierarchy
FFB9H	Reset the selected alarm data
FFBBH	Store to Memory Card
FFBCH	Display ladder

(f) Key code for advanced alarm display

Key code ^(H)	Application
FFB0H	Show cursor
FFB1H	Hide cursor
FFB2H	Move cursor up
FFB3H	Move cursor down
FFB4H	Display date/time of selected data
FFB5H	Display date/time of all data
FFB6H	Clear the selected alarm data
FFB7H	Clear all alarm data
FFB8H	Move to the lower hierarchy (Display detail)
FFB9H	Reset the specified device
FFBBH	Store to Memory Card
FFBCH	Display ladder
FFC2H	Move to the upper hierarchy



(g) Key code for historical trend graph

Key code ^(H)	Application
FFD4H	Display position time specification jump
FFEFH	Latest Data
FFF0H	Show cursor
FFF1H	Hide cursor
FFF2H	Cursor next
FFF3H	Cursor previous
FFF4H	Graph next
FFF5H	Graph previous
FFF6H	Graph next page scroll
FFF7H	Graph previous page scroll
FFF8H	Time axis expansion
FFF9H	Time axis reduction

(h) Key code for document display function

Key code ^(H)	Application
FFE0H	Next page
FFE1H	Previous page
FFE2H	Expansion
FFE3H	Reduction
FFE4H	Up scroll
FFE5H	Down scroll
FFE6H	Left scroll
FFE7H	Right scroll

(3) List of key code for USB keyboard (USB mouse/keyboard function)

Key code of the GOT ^(H)	Used key	Character code	Application
0008H	Back Space	0008H	Deletes the least signification digit and shifts the entire digits to the right by one.
000DH	Enter	000DH	Writes to a device, displays the cursor, moves the cursor, and closes dialog boxes.
001BH	Esc	001BH	Cancel
002DH	-	002DH	Sign inversion (\pm)
002EH	.	002EH	Decimal point (.)
0030H to 0039H	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	0030 to 0039H	Numeric value (1 to 9)
0041H to 0046H	A, B, C, D, E, F a, b, c, d, e, f	0041H to 0046H, 0061H to 0066H	Alphabet (A to F)
 Appendix5 ASCII Code List	Character key and symbol key assigned to USB keyboard	 Appendix5 ASCII Code List	Inputs ASCII characters and other characters.
0080H to 0083H	Cursor key ($\rightarrow \leftarrow \uparrow \downarrow$)	0025H to 0028H, 0085H to 0088H (soft keyboard)	Moves the cursor.
0084H	Home	0024 0084 (soft keyboard)	Kanji conversion

(Continued to next page)

Key code of the GOT ^(H)	Used key	Character code	Application
0085H	PageUp	0021 0081 (soft keyboard)	Previous choice
0086H	PageDown	0022H 0082H (soft keyboard)	Next choice
0087H	End	0023H 0083H (soft keyboard)	Selection or no conversion
0088H	Delete	002EH 008EH (soft keyboard)	Clears the texts currently inputting.
0091H to 0092H	Ctrl + ←, Ctrl + →	0025H, 0027H 0095H, 0097H (soft keyboard)	Moves the cursor within objects.
FFFAH	Ctrl + ↑	0026H 0096H (soft keyboard)	Increment
FFFBH	Ctrl + ↓	0028H 0098H (soft keyboard)	Decrement

Appendix4 Synthesized Colors Available for XOR

The following table indicates the colors and corresponding numbers available when using the parts display function XOR drawing mode

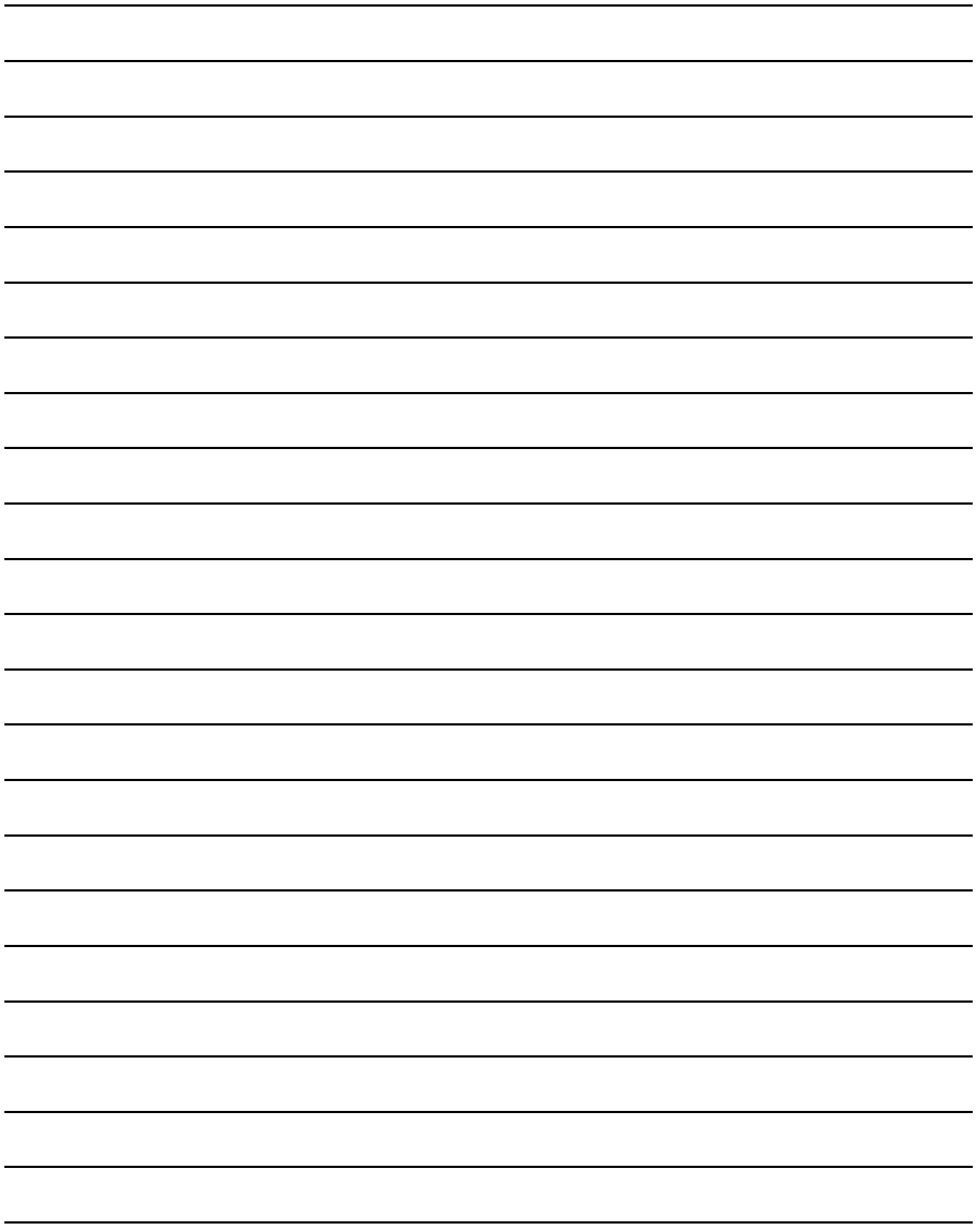
When using the XOR for any colors other than the following, confirm them in the preview of GT Designer3.

	Black 0	Blue 3	Red 224	Purple 227	Green 28	Cyan 31	Yellow 252	White 255	Dark blue 2	Dark red 160	Dark purple 162	Dark green 20	Dark cyan 22	Dark yellow 180	Gray 182	Dark white 109
Black 0	Black 0	Blue 3	Red 224	Purple 227	Green 28	Cyan 31	Yellow 252	White 255	Dark blue 2	Dark red 160	Dark purple 162	Dark green 20	Dark cyan 22	Dark yellow 180	Gray 182	Dark white 109
Blue 3	Blue 3	Black 0	Purple 227	Red 224	Cyan 31	Green 28	White 255	Yellow 252	- 1	- 163	- 161	- 23	- 21	- 183	- 181	- 110
Red 224	Red 224	Purple 227	Black 0	Blue 3	Yellow 252	White 255	Green 28	Cyan 31	- 226	- 64	- 66	- 244	- 246	- 84	- 86	- 141
Purple 227	Purple 227	Red 224	Blue 3	Black 0	White 255	Yellow 252	Cyan 31	Green 28	- 225	- 67	- 65	- 247	- 245	- 87	- 85	- 142
Green 28	Green 28	Cyan 31	Yellow 252	White 255	Black 0	Blue 3	Red 224	Purple 227	- 30	- 188	- 190	- 8	- 10	- 168	- 170	- 113
Cyan 31	Cyan 31	Green 28	White 255	Yellow 252	Blue 3	Black 0	Purple 227	Red 224	- 29	- 191	- 189	- 11	- 7	- 171	- 169	- 114
Yellow 252	Yellow 252	White 255	Green 28	Cyan 31	Red 224	Purple 227	Black 0	Blue 3	- 254	- 92	- 94	- 232	- 234	- 72	- 74	- 145
White 255	White 255	Yellow 252	Cyan 31	Green 28	Purple 227	Red 224	Blue 3	Black 0	- 253	- 95	- 93	- 235	- 233	- 75	- 73	- 146
Dark blue 2	Dark blue 2	- 1	- 226	- 225	- 30	- 29	- 254	- 253	Black 0	Dark purple 162	Dark red 160	Dark cyan 22	Dark green 20	Gary 182	Dark yellow 180	- 111
Dark red 160	Dark red 160	- 163	- 64	- 67	- 188	- 191	- 92	- 95	Dark purple 162	Black 0	Dark blue 2	Dark yellow 180	Gary 182	Dark green 20	Dark cyan 22	- 205
Dark purple 162	Dark purple 162	- 161	- 66	- 65	- 190	- 189	- 94	- 93	Dark red 160	Dark blue 2	Black 0	Gary 182	Dark yellow 180	Dark cyan 22	Dark green 20	- 207
Dark green 20	Dark green 20	- 23	- 244	- 247	- 8	- 11	- 232	- 235	Dark cyan 22	Dark yellow 180	Gary 182	Black 0	Dark blue 2	Dark red 160	Dark purple 162	- 121
Dark cyan 22	Dark cyan 22	- 21	- 246	- 245	- 10	- 7	- 234	- 233	Dark green 20	Gary 182	Dark yellow 180	Dark blue 2	Black 0	Dark purple 162	Dark red 160	- 123
Dark yellow 180	Dark yellow 180	- 183	- 84	- 87	- 168	- 171	- 72	- 75	Gary 182	Dark green 20	Dark cyan 22	Dark red 160	Dark purple 162	Black 0	Dark blue 2	- 217
Gray 182	Gray 182	- 181	- 86	- 85	- 170	- 169	- 74	- 73	Dark yellow 180	Dark cyan 22	Dark green 20	Dark purple 162	Dark red 160	Dark blue 2	Black 0	- 219
Dark white 109	Dark white 109	- 110	- 141	- 142	- 113	- 114	- 145	- 146	- 111	- 205	- 207	- 121	- 123	- 217	- 219	Dark black 0

Appendix5 ASCII Code List

ASCII code list is shown below. (The blanks represent control code.)
 0xA1 to 0xDF can be displayed only when the GOT's system language is Japanese.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			(SP)	0	@	P	`	p				ー	タ	ミ		
1			!	1	A	Q	a	q			。	ア	チ	ム		
2			"	2	B	R	b	r			「	イ	ツ	メ		
3			#	3	C	S	c	s			」	ウ	テ	モ		
4			\$	4	D	T	d	t			、	エ	ト	ヤ		
5			%	5	E	U	e	u			・	オ	ナ	ユ		
6			&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7			'	7	G	W	g	w			ア	キ	ヌ	ラ		
8			(	8	H	X	h	x			イ	ク	ネ	リ		
9			)	9	I	Y	i	y			ウ	ケ	ノ	ル		
A			*	:	J	Z	j	z			エ	コ	ハ	レ		
B			+	:	K	[	k	{			オ	サ	ヒ	ロ		
C			,	<	L	\	l	|			ヤ	シ	フ	ワ		
D			—	=	M	]	m	}			ユ	ス	ヘ	ン		
E			.	>	N	^	n	~			ヨ	セ	ホ	*		
F			/	?	O	_	o				ッ	ソ	マ	°		



Appendix6 Relevant Settings

Some of the contents in the settings common to each project affect multiple functions of GT Designer3. The following shows the relation between each common setting item and functions of GT Designer3.



- GOT type setting
 - GOT environment setting (Screen switching/Windows)
 - GOT environment setting (Key window)
 - Screen property
 - GOT environment setting: System information
- Parts setting
- Sound file setting
- GOT special register (GS)

■ GOT type setting

○ : Relevant - : Irrelevant

Item	Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
Check for overlapping objects within GOT	-	-	○	○	○	○	○	○	-	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○
Adjust object display order in GOT to the one in GT Designer3	-	-	○	○	○	○	○	○	-	○	○	○	-	-	○	○	○	○	○	○	○	○	○	○	○

■ GOT environment setting (Screen switching/Windows)

○ : Relevant - : Irrelevant

Item	Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
Disable background colors of overlay screen when setting an overlay screen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Place the overlay screen under the basic screen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation Timing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○

○ : Relevant - : Irrelevant

Item	Key windows		
	Station No. switching function	-	-
	MES interface function	-	-
	Gateway function	-	-
	Test function	-	-
	Document display function	-	-
	Set overlay screen function	○	○
	Sound output function	-	-
	Hardcopy function	-	-
	Report	-	-
	RGB display function	-	-
	Operation panel/External I/O function	-	-
	Multimedia function	-	-
	Video display function	-	-
	Remote personal computer operation (Ethernet)	-	-
	Remote personal computer operation (Serial)	-	-
	RFID function	-	-
	Barcode function	-	-
	Script function	-	-
	Time action function	-	-
	Status observation function	-	-
	Device data transfer function	-	-
	Advanced recipe function	-	-
	Recipe function	-	-
	Logging function	-	-
Check for overlapping objects within GOT		-	-
Adjust object display order in GOT to the one in GT Designer3		-	-

○ : Relevant - : Irrelevant

Item	Key windows			
	Station No. switching function	-	-	-
	MES interface function	-	-	-
	Gateway function	-	-	-
	Test function	-	-	-
	Document display function	-	-	-
	Set overlay screen function	○	○	-
	Sound output function	-	-	-
	Hardcopy function	-	-	-
	Report	-	-	-
	RGB display function	-	-	-
	Operation panel/External I/O function	-	-	-
	Multimedia function	-	-	-
	Video display function	-	-	-
	Remote personal computer operation (Ethernet)	-	-	-
	Remote personal computer operation (Serial)	-	-	-
	RFID function	-	-	-
	Barcode function	-	-	-
	Script function	-	-	-
	Time action function	-	-	-
	Status observation function	-	-	-
	Device data transfer function	-	-	-
	Advanced recipe function	-	-	-
	Recipe function	-	-	-
	Logging function	-	-	-
Disable background colors of overlay screen when setting an overlay screen		-	-	-
Place the overlay screen under the basic screen		-	-	-
Operation Timing		-	-	-

■ GOT environment setting (Key window)

(1) Advanced Setting tab

○ : Relevant - : Irrelevant

Item	Touch switch	Lamp	Numerical display	Numerical input	ASCII display	ASCII input	Data list	Date display/Time display	Comment display	Advanced user alarm display	Advanced system alarm display	Advanced alarm popup display (User alarm)	Advanced alarm popup display (System alarm)	User alarm display	System alarm display	Alarm history display	Scrolling alarm display	Level	Panel meter	Line/Trend/Bar graph	Statistics bar/Statistics pie/Scatter graph	Historical trend graph	Parts display	Parts movement	Operation log function
Key Window	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cursor	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
When screens are switched	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cursor Position	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clear the key window and the cursor	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clear the input object	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cursor Type	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display the cursor with a touch on the Enter/arrow key when the cursor is hidden	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display the valid input range when an invalid value is input in Numerical Input	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display the input confirmation dialog when setting the function of Numerical/ASCII Input	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Check the input range while entering numerical values	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Defined key action	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Item	Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
Key Window	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Cursor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
When screens are switched	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Cursor Position	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Clear the key window and the cursor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Clear the input object	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Cursor Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display the cursor with a touch on the Enter/arrow key when the cursor is hidden	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Display the valid input range when an invalid value is input in Numerical Input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Display the input confirmation dialog when setting the function of Numerical/ASCII Input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Check the input range while entering numerical values	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
Defined key action	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○

■ Screen property

(1) Basic tab

○ : Relevant - : Irrelevant

Item	Operation log function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Parts movement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Parts display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Historical trend graph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Statistics bar/Statistics pie/Scatter graph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Line/Trend/Bar graph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Panel meter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Level	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Scrolling alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Alarm history display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	System alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	User alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Advanced alarm popup display (System alarm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Advanced alarm popup display (User alarm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Advanced system alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Advanced user alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Comment display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Date display/Time display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Data list	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ASCII input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ASCII display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Numerical input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Numerical display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Lamp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Touch switch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(2) Advanced Setting tab

○ : Relevant - : Irrelevant

Item	Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
Prioritize screen setting over project setting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Key Window	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Cursor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
When screens are switched	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Cursor Position	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Clear the key window and the cursor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Clear the input object	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Cursor Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Display the input confirmation dialog when setting the function of Numerical/ ASCII Input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Check the input range while entering numerical values	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-
Defined key action	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Reference for determining cursor destination	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
Automatically move the key window when it overlaps with an input object	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-

○ : Relevant - : Irrelevant

Item	Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Switch Station No.	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Popup the display of advanced alarm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display alarm flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Backlight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blink Backlight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Item	Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Prioritize screen setting over project setting	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Key Window	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cursor	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
When screens are switched	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cursor Position	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clear the key window and the cursor	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clear the input object	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cursor Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Display the input confirmation dialog when setting the function of Numerical/ ASCII Input	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Check the input range while entering numerical values	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Defined key action	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reference for determining cursor destination	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Automatically move the key window when it overlaps with an input object	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

■ GOT environment setting: System information

○ : Relevant - : Irrelevant

System Signal 1-1 (Read device)		Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
Bit No.	Description	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Automatic Screen Saver Disable Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Forced Screen Saver Enable Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b2	Forced Screen Saver Touch-cancel Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b3	Key Code Read Complete Signal	-	-	-	○	-	○	-	-	-	○	○	○	○	○	○	○	○	-	-	-	-	-	-	-	
b4	Numeric Value Input Read Complete Signal	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b5	Barcode Input Disable Signal (CH8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b6	External device I/O complete signal (CH8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b7	Backlight OFF Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	Buzzer Threeshot Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b9	Key-In Disable Signal	○	-	-	○	-	○	-	-	-	○	○	○	○	○	○	○	○	-	-	-	-	-	-	-	
b10	Hard copy setting validate signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b12	Hard copy white/black reverse signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b13	GOT Error Reset Signal	-	-	-	-	-	-	-	-	-	-	○	○	○	○	○	○	○	-	-	-	-	-	-	-	
b14	Buzzer Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b15	Buzzer Oneshot Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

○ : Relevant - : Irrelevant

System Signal (Read device)		Operation log function																							
Description		Parts movement																							
Bit No.		Parts display																							
		Historical trend graph																							
		Statistics bar/Statistics pie/Scatter graph																							
		Line/Trend/Bar graph																							
		Panel meter																							
		Level																							
		Scrolling alarm display																							
		Alarm history display																							
		System alarm display																							
		User alarm display																							
		Advanced alarm popup display (System alarm)																							
		Advanced alarm popup display (User alarm)																							
		Advanced system alarm display																							
		Advanced user alarm display																							
		Comment display																							
		Date display/Time display																							
		Data list																							
		ASCII input																							
		ASCII display																							
		Numerical input																							
		Numerical display																							
		Lamp																							
		Touch switch																							

○ : Relevant - : Irrelevant

System Signal 1-1 (Read device)		Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Bit No.	Description																									
b0	Automatic Screen Saver Disable Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Forced Screen Saver Enable Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Forced Screen Saver Touch-cancel Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Key Code Read Complete Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Numeric Value Input Read Complete Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b5	Barcode Input Disable Signal (CH8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-
b6	External device I/O complete signal (CH8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-
b7	Backlight OFF Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Buzzer Threeshot Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b9	Key-In Disable Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
b10	Hard copy setting validate signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Hard copy white/black reverse signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	GOT Error Reset Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Buzzer Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Buzzer Oneshot Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal (Read device)		Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Bit No.	Description																									
External input and output function/output information (GT16, GT15)		-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-
External input and output function/output information (GT11, GT10)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0 to b5	Operation switch LED control signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b6	Grip switch LED control signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal 1-2 (Read device)	
Bit No.	Description
b0	File Access Error Reset Signal
b1	RFID request signal (CH8)
b2	Barcode input disable signal (CH5)
b3	External device I/O complete signal (CH5)
b4	RFID request signal (CH5)
b5	Bar code input disable signal (CH6)
b6	External device I/O complete signal (CH6)
b7	RFID request signal (CH6)
b8	Bar code input disable signal (CH7)
b9	External device I/O complete signal (CH7)
b10	RFID request signal (CH7)
b11	Enabling RFID control during external authentication signal
b13	D drive automatic recovery confirmation complete signal
b15	Print abort signal

○ : Relevant - : Irrelevant

[illegible]

○ : Relevant - : Irrelevant

System Signal 1-2 (Read device)		Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Bit No.	Description																									
b0	File Access Error Reset Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	RFID request signal (CH8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-
b2	Barcode input disable signal (CH5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b3	External device I/O complete signal (CH5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-
b4	RFID request signal (CH5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b5	Bar code input disable signal (CH6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b6	External device I/O complete signal (CH6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b7	RFID request signal (CH6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b8	Bar code input disable signal (CH7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b9	External device I/O complete signal (CH7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b10	RFID request signal (CH7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b11	Enabling RFID control during external authentication signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	D drive automatic recovery confirmation complete signal	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Print abort signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal 2-1 (Write device)		Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Bit No.	Description	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Screen saving signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	GOT Ready Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Key Input Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Numeric Value Input Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b5	Human Sensor Detection Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b6	External device I/O signal (CH8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-
b7	Hard copy output signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Report output signal	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b10	Recipe Processing Signal	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b11	Key window Output Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Hardcopy Sub-signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	GOT Error Detection Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Numeric Value Error Detection Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Printer error detection signal	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal (Write device)		Operation log function																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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○ : Relevant - : Irrelevant

System Signal 2-2 (Write device)		Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
		Description	Bit No.																							
b0	Drive A File Accessing Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-
b1	Drive B File Accessing Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-
b2	Drive C File Accessing Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Drive D File Accessing Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Drive A Full Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-
b5	Drive B Full Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-
b6	Drive D Full Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b7	Drive A File Access Error Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-
b8	Drive B File Access Error Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-
b9	Drive D File Access Error Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b11	Cursor Displaying Signal	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-
b12	Built-in Battery Voltage Drop Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	D drive automatic recovery signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Backlight Shutoff Detection Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Printing signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal (Write device)																	
Bit No.	Description	Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)
	GOT Error Code	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	On-screen Base Screen Number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	On-screen Window 1 Screen Number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Numeric Value Input Number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
	Current Cursor Display Object ID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Previous Cursor Display Object ID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Key Code Input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
	Previous Numeric Value Input (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
	Current Numeric Value Input (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
	Printing report number	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
	External I/O function/input information 1	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-
	Current Cursor Display User ID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Previous Cursor Display User ID	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal 2-2 (Write device)																	
Bit No.	Description	Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)
b0	Drive A File Accessing Signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b1	Drive B File Accessing Signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b2	Drive C File Accessing Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Drive D File Accessing Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Drive A Full Signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b5	Drive B Full Signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b6	Drive D Full Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b7	Drive A File Access Error Signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b8	Drive B File Access Error Signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-
b9	Drive D File Access Error Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b11	Cursor Displaying Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Built-in Battery Voltage Drop Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	D drive automatic recovery signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Backlight Shutoff Detection Signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Printing signal	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal (Write device)		Operation log function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Parts movement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Parts display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Historical trend graph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Statistics bar/Statistics pie/Scatter graph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Line/Trend/Bar graph	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Panel meter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Level	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Scrolling alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Alarm history display	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		System alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		User alarm display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Advanced alarm popup display (System alarm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Advanced alarm popup display (User alarm)	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Advanced system alarm display	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Advanced user alarm display	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Comment display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Date display/Time display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Data list	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ASCII input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ASCII display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Numerical input	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Numerical display	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lamp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Touch switch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		On-screen Window 2 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Drive A empty capacity information (32bit)	-	-	-	-	-	-	-	-	○	-	-	-	○	○	-	-	-	-	-	-	-	-	-
		Drive B empty capacity information (32bit)	-	-	-	-	-	-	-	-	○	-	-	○	○	-	-	-	-	-	-	-	-	-	-
		Drive C empty capacity information (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Drive D empty capacity information (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		External I/O function/input information 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		On-screen Window 3 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		On-screen Window 4 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		On-screen Window 5 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Extended Drive Information (E and subsequent drives)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Drive E empty capacity information (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal 2-3 (Write device)		Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
System Signal 2-3 (Write device)	Description	Bit No.	b0	External device I/O signal (CH5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	b1	External device I/O signal (CH6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	b2	External device I/O signal (CH7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Item		Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
Item	An object ID is output to the system information device at ASCII input.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-
	When the cursor is deleted, the cursor information is cleared.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	-	-
	When the screen is switched, On-screen Number (System Information) is maintained. (Zero is not written.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal (Write device)		Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Bit No.	Description																									
	On-screen Window 2 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Drive A empty capacity information (32bit)	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○
	Drive B empty capacity information (32bit)	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○
	Drive C empty capacity information (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Drive D empty capacity information (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-
	External I/O function/input information 2	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-
	On-screen Window 3 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	On-screen Window 4 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	On-screen Window 5 screen number	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Extended Drive Information (E and subsequent drives)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Drive E empty capacity information (32bit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

System Signal 2-3 (Write device)		Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
Bit No.	Description																									
b0	External device I/O signal (CH5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	-	-	-	-	-	-
b1	External device I/O signal (CH6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	-	-	-	-	-	-
b2	External device I/O signal (CH7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Item	Key windows	Station No. switching function	MES interface function	Gateway function	Test function	Document display function	Set overlay screen function	Sound output function	Hardcopy function	Report	RGB display function	Operation panel/External I/O function	Multimedia function	Video display function	Remote personal computer operation (Ethernet)	Remote personal computer operation (Serial)	RFID function	Barcode function	Script function	Time action function	Status observation function	Device data transfer function	Advanced recipe function	Recipe function	Logging function
An object ID is output to the system information device at ASCII input.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
When the cursor is deleted, the cursor information is cleared.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
When the screen is switched, On-screen Number (System Information) is maintained. (Zero is not written.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

■ Parts setting

○ : Relevant - : Irrelevant

Item	Operation log function	-	-
	Parts movement	-	○
	Parts display	○	○
	Historical trend graph	-	-
	Statistics bar/Statistics pie/Scatter graph	-	-
	Line/Trend/Bar graph	-	-
	Panel meter	-	-
	Level	-	-
	Scrolling alarm display	-	-
	Alarm history display	-	-
	System alarm display	-	-
	User alarm display	-	-
	Advanced alarm popup display (System alarm)	-	-
	Advanced alarm popup display (User alarm)	-	-
	Advanced system alarm display	-	-
	Advanced user alarm display	-	-
	Comment display	-	-
	Date display/Time display	-	-
	Data list	-	-
	ASCII input	-	-
	ASCII display	-	-
	Numerical input	-	-
	Numerical display	-	-
	Lamp	-	-
	Touch switch	-	-
	Show overlapping areas of shapes in XOR when Display Mode of Parts Display is XOR.		
	Show image files in the memory card at the time of specifying Parts No. 9001-9999		

■ Sound file setting

○ : Relevant - : Irrelevant

Item	Operation log function	-	-
	Parts movement	-	-
	Parts display	-	-
	Historical trend graph	-	-
	Statistics bar/Statistics pie/Scatter graph	-	-
	Line/Trend/Bar graph	-	-
	Panel meter	-	-
	Level	-	-
	Scrolling alarm display	-	-
	Alarm history display	-	-
	System alarm display	-	-
	User alarm display	-	-
	Advanced alarm popup display (System alarm)	-	-
	Advanced alarm popup display (User alarm)	-	-
	Advanced system alarm display	-	-
	Advanced user alarm display	-	-
	Comment display	-	-
	Date display/Time display	-	-
	Data list	-	-
	ASCII input	-	-
	ASCII display	-	-
	Numerical input	-	-
	Numerical display	-	-
	Lamp	-	-
	Touch switch	○	○
	Use a sound file for touch key tone		
	Give top priority to sound output of a switch		

○ : Relevant - : Irrelevant

Item	Key windows	-	-
	Station No. switching function	-	-
	MES interface function	-	-
	Gateway function	-	-
	Test function	-	-
	Document display function	-	-
	Set overlay screen function	-	-
	Sound output function	-	-
	Hardcopy function	-	-
	Report	-	-
	RGB display function	-	-
	Operation panel/External I/O function	-	-
	Multimedia function	-	-
	Video display function	-	-
	Remote personal computer operation (Ethernet)	-	-
	Remote personal computer operation (Serial)	-	-
	RFID function	-	-
	Barcode function	-	-
	Script function	-	-
	Time action function	-	-
	Status observation function	-	-
	Device data transfer function	-	-
	Advanced recipe function	-	-
	Recipe function	-	-
	Logging function	-	-
	Show overlapping areas of shapes in XOR when Display Mode of Parts Display is XOR.		
	Show image files in the memory card at the time of specifying Parts No. 9001-9999		

○ : Relevant - : Irrelevant

Item	Key windows	-	-
	Station No. switching function	-	-
	MES interface function	-	-
	Gateway function	-	-
	Test function	-	-
	Document display function	-	-
	Set overlay screen function	○	○
	Sound output function	-	-
	Hardcopy function	-	-
	Report	-	-
	RGB display function	-	-
	Operation panel/External I/O function	-	-
	Multimedia function	-	-
	Video display function	-	-
	Remote personal computer operation (Ethernet)	-	-
	Remote personal computer operation (Serial)	-	-
	RFID function	-	-
	Barcode function	-	-
	Script function	-	-
	Time action function	-	-
	Status observation function	-	-
	Device data transfer function	-	-
	Advanced recipe function	-	-
	Recipe function	-	-
	Logging function	-	-
	Use a sound file for touch key tone		
	Give top priority to sound output of a switch		

■ GOT special register (GS)

○ : Relevant - : Irrelevant

		Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
Bit No.	Item																									
Common information1 (GS0)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	CH No. 1 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Screen switching complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b2	Screen initial scan complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b3	Initial screen displaying signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b4	Always ON signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b5	Always OFF signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	CH No. 2 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b9	CH No. 3 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b10	CH No. 4 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Base screen information (GS1)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Base screen CH No. 1 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Base screen switching complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b2	Base screen initial scan complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	Base screen CH No. 2 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b9	Base screen CH No. 3 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b10	Base screen CH No. 4 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CC-Link G4 station No. (CH1)		GS6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GOT multidrop slave station No. (CH1)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 second binary counter (GS7)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Scan time of monitor (GS8)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Scan counter of monitor (GS10)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Script common information (GS14)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Script error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b7	Script BCD error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	Script zero division error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b12	Script communication error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Script error pointer (GS15)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Script error data (GS16 to 47)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Script execute pointer (GS48)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Script execute No. (GS49 to 79)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Object script common information (GS80)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Object script error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b7	Object script BCD error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	Object script zero division error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b12	Object script communication error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Object script error pointer (GS81)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

○ : Relevant - : Irrelevant

Bit No.	Item	Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
Common information1 (GS0)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	CH No. 1 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Screen switching complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Screen initial scan complete signal	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Initial screen displaying signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Always ON signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b5	Always OFF signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	CH No. 2 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b9	CH No. 3 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b10	CH No. 4 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Base screen information (GS1)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Base screen CH No. 1 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Base screen switching complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Base screen initial scan complete signal	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Base screen CH No. 2 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b9	Base screen CH No. 3 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b10	Base screen CH No. 4 communication cycle signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CC-Link G4 station No. (CH1)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOT multidrop slave station No. (CH1)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 second binary counter (GS7)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scan time of monitor (GS8)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scan counter of monitor (GS10)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script common information (GS14)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Script error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b7	Script BCD error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Script zero division error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Script communication error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script error pointer (GS15)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script error data (GS16 to 47)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script execute pointer (GS48)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script execute No. (GS49 to 79)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script common information (GS80)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Object script error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b7	Object script BCD error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Object script zero division error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Object script communication error occurrence signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script error pointer (GS81)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No.	Item	Touch switch	Lamp	Numerical display	Numerical input	ASCII display	ASCII input	Data list	Date display/Time display	Comment display	Advanced user alarm display	Advanced system alarm display	Advanced alarm popup display (User alarm)	Advanced alarm popup display (System alarm)	User alarm display	System alarm display	Alarm history display	Scrolling alarm display	Level	Panel meter	Line/Trend/Bar graph	Statistics bar/Statistics pie/Scatter graph	Historical trend graph	Parts display	Parts movement	Operation log function
	Object script error data (GS82 to GS113)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Object script error execute pointer (GS114)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Object script error execute ID (GS115 to GS145)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	File operation function information (GS154)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	File operation function execution notification	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	File operation function error occurrence	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gateway common information (GS200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Mail send function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	FTP server function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	FTP server function log-in signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Server function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Client function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b11	Mail send function error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Server function error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Client function error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mail send function error counter (GS201)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mail send function error code (GS202)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mail send function error occurrence date and time (GS203 to 205)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mail send function send source (GS206)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Server function error counter (GS210)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Server function error code (GS211)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Server function error occurrence date and time (GS212 to 214)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Server function error client (GS215 to 216)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Server function error counter (GS220)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Client function error code (GS221)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Client function error occurrence date and time (GS222 to 224)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Client function error server (GS225 to 226)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	No. of faulty stations (GS230)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Faulty station information (GS231 to 238)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	External authentication status notification (GS240)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	External authentication success signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	External authentication failure signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	Operator authentication reception signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Item		Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
Bit No.	Object script error data (GS82 to GS113)	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Object script error execute pointer (GS114)	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Object script error execute ID (GS115 to GS145)	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	File operation function information (GS154)	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	File operation function execution notification	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	File operation function error occurrence	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Gateway common information (GS200)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b0	Mail send function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b1	FTP server function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b2	FTP server function log-in signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b3	Server function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b4	Client function ready signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b11	Mail send function error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b14	Server function error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b15	Client function error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Mail send function error counter (GS201)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Mail send function error code (GS202)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Mail send function error occurrence date and time (GS203 to 205)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Mail send function send source (GS206)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Server function error counter (GS210)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Server function error code (GS211)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Server function error occurrence date and time (GS212 to 214)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Server function error client (GS215 to 216)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Server function error counter (GS220)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Client function error code (GS221)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Client function error occurrence date and time (GS222 to 224)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	Client function error server (GS225 to 226)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
	No. of faulty stations (GS230)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Faulty station information (GS231 to 238)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	External authentication status notification (GS240)	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	External authentication success signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	External authentication failure signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	Operator authentication reception signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No.S	Item	Operation log function																							
		Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
b14	External authentication reception signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	External authentication ID input reception signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Insufficient security level notification (GS241)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Insufficient screen security level notification signal (Overlap window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Insufficient screen security level notification signal (Overlap window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Insufficient screen security level notification signal (Superimpose window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Insufficient screen security level notification signal (Superimpose window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Insufficient called screen security level notification signal (Base screen)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b9	Insufficient called screen security level notification signal (Overlap window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b10	Insufficient called screen security level notification signal (Overlap window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b11	Insufficient called screen security level notification signal (Superimpose window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Insufficient called screen security level notificationsignal (Superimpose window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object direct input reception notification (GS243)		-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Object direct input reception notification signal	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SoftGOT-GOT link status control/ notification (GS244)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Communication status notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Obtaining authorization notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	GT SoftGOT1000/GOT identification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Obtaining exclusive authorization notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	System screen displaying notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modem connection status notification (GS248)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Modem initializing notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Modem initialization complete notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Modem circuit connecting notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Modem initialization error notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-
Modem circuit connection baud rate (GS249)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Error detection common information (GS252)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Item		Key windows																									
Station No. switching function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MES interface function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gateway function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Test function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Document display function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Set overlay screen function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sound output function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hardcopy function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Report	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RGB display function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Operation panel/External I/O function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Multimedia function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Video display function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Remode personal computer operation (Ethernet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Remode personal computer operation (Serial)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RFID function	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Barcode function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Script function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Time action function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Status observation function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Device data transfer function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Advanced recipe function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Recipe function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Logging function	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b14	External authentication reception signal	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b15	External authentication ID input reception signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Insufficient security level notification (GS241)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Insufficient screen security level notification signal (Overlap window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b2	Insufficient screen security level notification signal (Overlap window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b3	Insufficient screen security level notification signal (Superimpose window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b4	Insufficient screen security level notification signal (Superimpose window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	Insufficient called screen security level notification signal (Base screen)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b9	Insufficient called screen security level notification signal (Overlap window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b10	Insufficient called screen security level notification signal (Overlap window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b11	Insufficient called screen security level notification signal (Superimpose window 1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b12	Insufficient called screen security level notificationsignal (Superimpose window 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Object direct input reception notification (GS243)		-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b15	Object direct input reception notification signal	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SoftGOT-GOT link status control/ notification (GS244)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Communication status notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Obtaining authorization notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b2	GT SoftGOT1000/GOT identification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b3	Obtaining exclusive authorization notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b4	System screen displaying notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Modem connection status notification (GS248)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Modem initializing notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Modem initialization complete notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b14	Modem circuit connecting notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b15	Modem initialization error notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Modem circuit connection baud rate (GS249)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Error detection common information (GS252)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	

○ : Relevant - : Irrelevant

Bit No.S	Item	Operation log function	Parts movement	Parts display	Historical trend graph	Statistics bar/Statistics pie/Scatter graph	Line/Trend/Bar graph	Panel meter	Level	Scrolling alarm display	Alarm history display	System alarm display	User alarm display	Advanced alarm popup display (System alarm)	Advanced alarm popup display (User alarm)	Advanced system alarm display	Advanced user alarm display	Comment display	Date display/Time display	Data list	ASCII input	ASCII display	Numerical input	Numerical display	Lamp	Touch switch
	Ethernet incorrect access notification (GS254)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	OS incorrect installation notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Project data incorrect write notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Project data incorrect read notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Intensity notification (GS255)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FA transparent status (GS256)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Printer status information (GS258)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Printer connection notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Warning error occurrence notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Fatal error occurrence notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Print enable/disable status notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Integer ↔ Real number conversion status (GS260)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Integer ↔ Real number conversion error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Integer ↔ Real number conversion complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Integer ↔ Real number conversion error code (GS261)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	System alarm GOT error channel No. (GS262)	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	-	-	-	-	-	-	-	-	-
	System alarm CPU error channel No. (GS263)	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	-	-	-	-	-	-	-	-	-
	System alarm network error channel No. (GS264)	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	-	-	-	-	-	-	-	-	-
	SNTP time synchronization setting status (GS265)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNTP time query result (GS266 to 272)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Monitoring interval timeout count (GS275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Document display status notification (GS276)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH1) (GS281 to 288)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH1) (GS299)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH2) (GS301 to 308)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH2) (GS319)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH3) (GS321 to 328)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH3) (GS339)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH4) (GS341 to 348)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH4) (GS359)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No.S	Item	Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
	Ethernet incorrect access notification (GS254)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	OS incorrect installation notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Project data incorrect write notification signal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Project data incorrect read notification signal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Intensity notification (GS255)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FA transparent status (GS256)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Printer status information (GS258)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Printer connection notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-
b1	Warning error occurrence notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-
b2	Fatal error occurrence notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-
b3	Print enable/disable status notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-
	Integer ↔ Real number conversion status (GS260)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Integer ↔ Real number conversion error occurrence signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Integer ↔ Real number conversion complete signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Integer ↔ Real number conversion error code (GS261)	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	System alarm GOT error channel No. (GS262)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	System alarm CPU error channel No. (GS263)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	System alarm network error channel No. (GS264)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNTP time synchronization setting status (GS265)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-
	SNTP time query result (GS266 to 272)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-
	Monitoring interval timeout count (GS275)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-
	Document display status notification (GS276)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH1) (GS281 to 288)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH1) (GS299)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH2) (GS301 to 308)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH2) (GS319)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH3) (GS321 to 328)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH3) (GS339)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier faulty station information (CH4) (GS341 to 348)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel observation notification information (CH4) (GS359)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No.S	Item	Touch switch	Lamp	Numerical display	Numerical input	ASCII display	ASCII input	Data list	Date display/Time display	Comment display	Advanced user alarm display	Advanced system alarm display	Advanced alarm popup display (User alarm)	Advanced alarm popup display (System alarm)	User alarm display	System alarm display	Alarm history display	Scrolling alarm display	Level	Panel meter	Line/Trend/Bar graph	Statistics bar/Statistics pie/Scatter graph	Historical trend graph	Parts display	Parts movement	Operation log function
	CC-Link G4 station No.(CH1)	GS360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GOT multidrop slave station No. (CH1)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CC-Link G4 station No.(CH2)	GS361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GOT multidrop slave station No. (CH2)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CC-Link G4 station No.(CH3)	GS362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GOT multidrop slave station No. (CH3)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CC-Link G4 station No.(CH4)	GS363	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GOT multidrop slave station No. (CH4)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script common control (GS384)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Script error clear signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Script retry signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script monitoring time (GS385)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Screen script initial operation (GS386)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script common control (GS387)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script monitoring time (GS388)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script initial operation (GS389)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
File operation function data storage order (GS390)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gateway common control (GS400)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Forced FTP server function logout signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	FTP server function binary resource file visualize signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b11	Mail send function error clear signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Server function error clear signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Client function error clear signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exclusive authorization control (GS447)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Exclusive authorization control signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modem connection control (GS448)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Modem initialization signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Modem circuit disconnect signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Modem connection read prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	Modem connection write prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Modem connection prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitor common control (Write device) (GS450)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Base screen initial scan complete signal	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Numeric input range check setting signal	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2	Ascii input system information output setting	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Cursor deleted system information clear setting	-	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Kana-kanji conversion authorization certification	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No. S	Item																									
		Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
CC-Link G4 station No.(CH1)		GS360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOT multidrop slave station No. (CH1)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CC-Link G4 station No.(CH2)		GS361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOT multidrop slave station No. (CH2)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CC-Link G4 station No.(CH3)		GS362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOT multidrop slave station No. (CH3)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CC-Link G4 station No.(CH4)		GS363	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GOT multidrop slave station No. (CH4)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script common control (GS384)			-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Script error clear signal			-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Script retry signal			-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Script monitoring time (GS385)					-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Screen script initial operation (GS386)					-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script common control (GS387)					-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script monitoring time (GS388)					-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Object script initial operation (GS389)					-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
File operation function data storage order (GS390)					-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gateway common control (GS400)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b2	Forced FTP server function logout signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b8	FTP server function binary resource file visualize signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b11	Mail send function error clear signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b14	Server function error clear signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
b15	Client function error clear signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-
Exclusive authorization control (GS447)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Exclusive authorization control signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modem connection control (GS448)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Modem initialization signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Modem circuit disconnect signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Modem connection read prohibition signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	Modem connection write prohibition signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Modem connection prohibition signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitor common control (Write device) (GS450)					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Base screen initial scan complete signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
b1	Numeric input range check setting signal			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○
b2	Ascii input system information output setting			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3	Cursor deleted system information clear setting			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b4	Kana-kanji conversion authorization certification			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No.S	Item	Touch switch	Lamp	Numerical display	Numerical input	ASCII display	ASCII input	Data list	Date display/Time display	Comment display	Advanced user alarm display	Advanced system alarm display	Advanced alarm popup display (User alarm)	Advanced alarm popup display (System alarm)	User alarm display	System alarm display	Alarm history display	Scrolling alarm display	Level	Panel meter	Line/Trend/Bar graph	Statistics bar/Statistics pie/Scatter graph	Historical trend graph	Parts display	Parts movement	Operation log function
b8	Memory card image file display setting signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	
b12	Touch switch operation timing (Screen/station no. switch) setting signal	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b13	Screen switch memory card save function setting signal	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b14	Touch switch upper hierarchy operation mode setting signal	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Auto screen save time (GS451)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Error detection common control (GS452)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	
Ethernet access control (GS454)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	OS installation prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Project data write prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b8	Project data read prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Intensity control (GS455)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pass-through transparent stop control (GS457)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Conversion start indication (GS460)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0 to b7	Integer ↔ Real number conversion method	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b15	Integer ↔ Real number conversion start signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Conversion devices (GS461)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Conversion source head device No. (GS462)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Conversion destination head device No. (GS463)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Store error value (GS464)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GT SoftGOT1000 common control (GS500)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	GT SoftGOT1000 exit confirmation signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	GT SoftGOT1000 full screen mode switching signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Application start signal (GS501, GS502)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GT SoftGOT1000 full screen size (Width) (GS503)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
GT SoftGOT1000 full screen size (Height) (GS504)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Device data transfer information (GS510)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Device data transfer error clear signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b1	Device data transfer processing time clear signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Touch status communication control (GS511)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
b0	Touch status communication control signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Time change information (GS512)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
Changed time (GS513 to 516)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	
External I/O function notification/control function (GS517)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

○ : Relevant - : Irrelevant

Bit No S	Item	Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
b8	Memory card image file display setting signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b12	Touch switch operation timing (Screen/station no. switch) setting signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b13	Screen switch memory card save function setting signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b14	Touch switch upper hierarchy operation mode setting signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Auto screen save time (GS451)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Error detection common control (GS452)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethernet access control (GS454)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	OS installation prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Project data write prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b8	Project data read prohibition signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intensity control (GS455)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pass-through transparent stop control (GS457)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conversion start indication (GS460)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0 to b7	Integer ↔ Real number conversion method	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Integer ↔ Real number conversion start signal	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conversion devices (GS461)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conversion source head device No. (GS462)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conversion destination head device No. (GS463)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Store error value (GS464)		-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT SoftGOT1000 common control (GS500)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	GT SoftGOT1000 exit confirmation signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	GT SoftGOT1000 full screen mode switching signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Application start signal (GS501, GS502)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT SoftGOT1000 full screen size (Width) (GS503)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GT SoftGOT1000 full screen size (Height) (GS504)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Device data transfer information (GS510)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Device data transfer error clear signal	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	Device data transfer processing time clear signal	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Touch status communication control (GS511)		-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Touch status communication control signal	-	-	-	-	-	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Time change information (GS512)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Changed time (GS513 to 516)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
External I/O function notification/control function (GS517)		-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No. S	Item	Touch switch	Lamp	Numerical display	Numerical input	ASCII display	ASCII input	Data list	Date display/Time display	Comment display	Advanced user alarm display	Advanced system alarm display	Advanced alarm popup display (User alarm)	Advanced alarm popup display (System alarm)	User alarm display	System alarm display	Alarm history display	Scrolling alarm display	Level	Panel meter	Line/Trend/Bar graph	Statistics bar/Statistics pie/Scatter graph	Historical trend graph	Parts display	Parts movement	Operation log function
	Sound output cancel control (GS518)	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Sound output cancel signal during play	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1	All sound output cancel signal	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Buffering and file access control (GS520)	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trigger backup data send delay (GS521)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH1) (GS530 to 537)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH1) (GS539)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH2) (GS540 to 547)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH2) (GS549)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH3) (GS550 to 557)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH3) (GS559)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH4) (GS560 to 567)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH4) (GS569)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MODBUS communication control function (GS570 to 576)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH1) (GS580)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH2) (GS581)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH3) (GS582)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH4) (GS583)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maintenance time notification cancel control (GS638)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0, b4	Backlight maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1, b5	Display section maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2, b6	Touch key maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3, b7	Build-in flash memory maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GOT reset control (GS639)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Error device data transfer ID (GS642)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer error count (GS643)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer processing time (GS644)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer ID (GS645)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer min. processing time (GS646)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No S	Item	Logging function	Recipe function	Advanced recipe function	Device data transfer function	Status observation function	Time action function	Script function	Barcode function	RFID function	Remote personal computer operation (Serial)	Remote personal computer operation (Ethernet)	Video display function	Multimedia function	Operation panel/External I/O function	RGB display function	Report	Hardcopy function	Sound output function	Set overlay screen function	Document display function	Test function	Gateway function	MES interface function	Station No. switching function	Key windows
	Sound output cancel control (GS518)	-	-	-		○	○	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b0	Sound output cancel signal during play	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
b1	All sound output cancel signal	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	-	-	-
	Buffering and file access control (GS520)	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trigger backup data send delay (GS521)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH1) (GS530 to 537)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH1) (GS539)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH2) (GS540 to 547)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH2) (GS549)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH3) (GS550 to 557)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH3) (GS559)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Temperature controller/servo amplifier monitor station disconnection (CH4) (GS560 to 567)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Channel shutdown control (CH4) (GS569)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MODBUS communication control function (GS570 to 576)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH1) (GS580)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH2) (GS581)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH3) (GS582)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Microcomputer connection (serial) extended setting (CH4) (GS583)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0	Digital compatible signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maintenance time notification cancel control (GS638)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0, b4	Backlight maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1, b5	Display section maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2, b6	Touch key maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3, b7	Build-in flash memory maintenance time notification cancel signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	GOT reset control (GS639)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Error device data transfer ID (GS642)	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer error count (GS643)	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer processing time (GS644)	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer ID (GS645)	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer min. processing time (GS646)	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

○ : Relevant - : Irrelevant

Bit No. S	Item																		Operation log function
		Touch switch	Lamp	Numerical display	Numerical input	ASCII display	ASCII input	Data list	Date display/Time display	Comment display	Advanced user alarm display	Advanced system alarm display	Advanced alarm popup display (User alarm)	Advanced alarm popup display (System alarm)	User alarm display	System alarm display	Alarm history display	Scrolling alarm display	
	Device data transfer ID (min. processing time) (GS647)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer max. processing time (GS648)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Device data transfer ID (max. processing time) (GS649)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Present time (GS650 to 653)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Touch status external notification (X-coordinate) (GS654)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Touch status external notification (Y-coordinate) (GS655)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Touch status external notification (touch status) (GS656)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trigger backup processing setting No. notification (GS657)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Extended external input status notification signal (GS658 to GS665)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sound status information (GS668)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b15	Jack disconnection notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sound file number during play (GS669)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	No. of trigger buffer data (GS670)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trigger buffer overflow count (GS671)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trigger buffer overflow flag per job (GS672 to GS675)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Maintenance time notification information (GS680)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b0, b4	Backlight maintenance time notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b1, b5	Display section maintenance time notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b2, b6	Touch key maintenance time notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b3, b7	Built-in flash memory maintenance time notification signal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Backlight power ON addition time (GS681, 682)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Display section power ON addition time (GS683, 684)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Built-in flash memory writing times (GS685, 686)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Touch key pushing addition times No.0 (GS700, 701) to No.139 (GS978, 979)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	USB drive common information (GS1024)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RGB signal input status notification (GS1025)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RGB signal resolution (horizontal) (GS1026)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RGB signal resolution (vertical) (GS1027)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RGB signal refresh rate (GS1028)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Insufficient security level notification (GS1241)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	USB drive common control (GS1824)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Appendix7 Precautions for Using Unicode Text File

The following describes precautions to be attended to when using the Unicode text file that has been imported/exported by GT Designer3.

■ How to store Unicode text file

To use the exported and edited Unicode text file again, store it in the Unicode text file format (*.txt).
The character code applicable to Unicode text file is Unicode (file format: UTF16 LittleEndian).

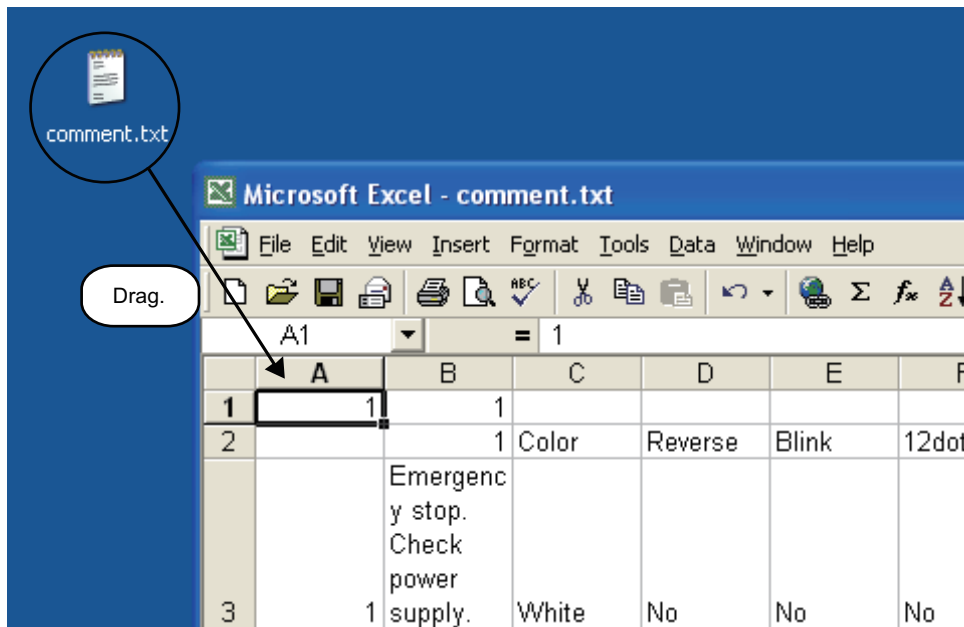
■ Displaying Unicode text file

To display the Unicode text file on a personal computer or others, use a software compatible to the Unicode.
If the software used to display the Unicode text file is not compatible to the Unicode, the file may not be displayed correctly.

■ Displaying Unicode text file with Microsoft® Excel

To open a Unicode text file that contains a comment of multiple lines by the Microsoft® Excel, drag the Unicode text file to the Microsoft® Excel.

If the Unicode text file is opened in other methods, it may not be displayed in the Microsoft® Excel correctly.



Appendix8 Precautions for Option Function Board



The following shows the option function boards used for each GOT.

GOT	Option function board
GT16	GT16-MESB
GT15	GT15-FNB, GT15-QFNB, GT15-QFNB16M, GT15-QFNB32M, GT15-QFNB48M, GT15-MESB48M
GT11	GT11-50FNB
GT10	Not necessary

An option function board (GT15-FNB or GT11-50FNB) is built in the following GOTs.

GOT	Model	Description ^{*1}
GT15	All models	Function version D or later
GT11	GT1155-QTBDQ, GT1155-QTBDA, GT1155-QSBDQ, GT1155-QSBDA, GT1150-QLBDQ, GT1150-QLBDA	
	GT1155-QTBD	
	GT1155HS-QSBD, GT1150HS-QLBD	
	GT1155-QSBD, GT1150-QLBD	Hardware Version C or later

^{*1} For how to check function versions and hardware versions, refer to the following manuals.

User's Manual for the GOT used

When using the above GOTs, the option functions operated with the GT15-FNB or GT11-50FNB can be used without installing any additional option function board.

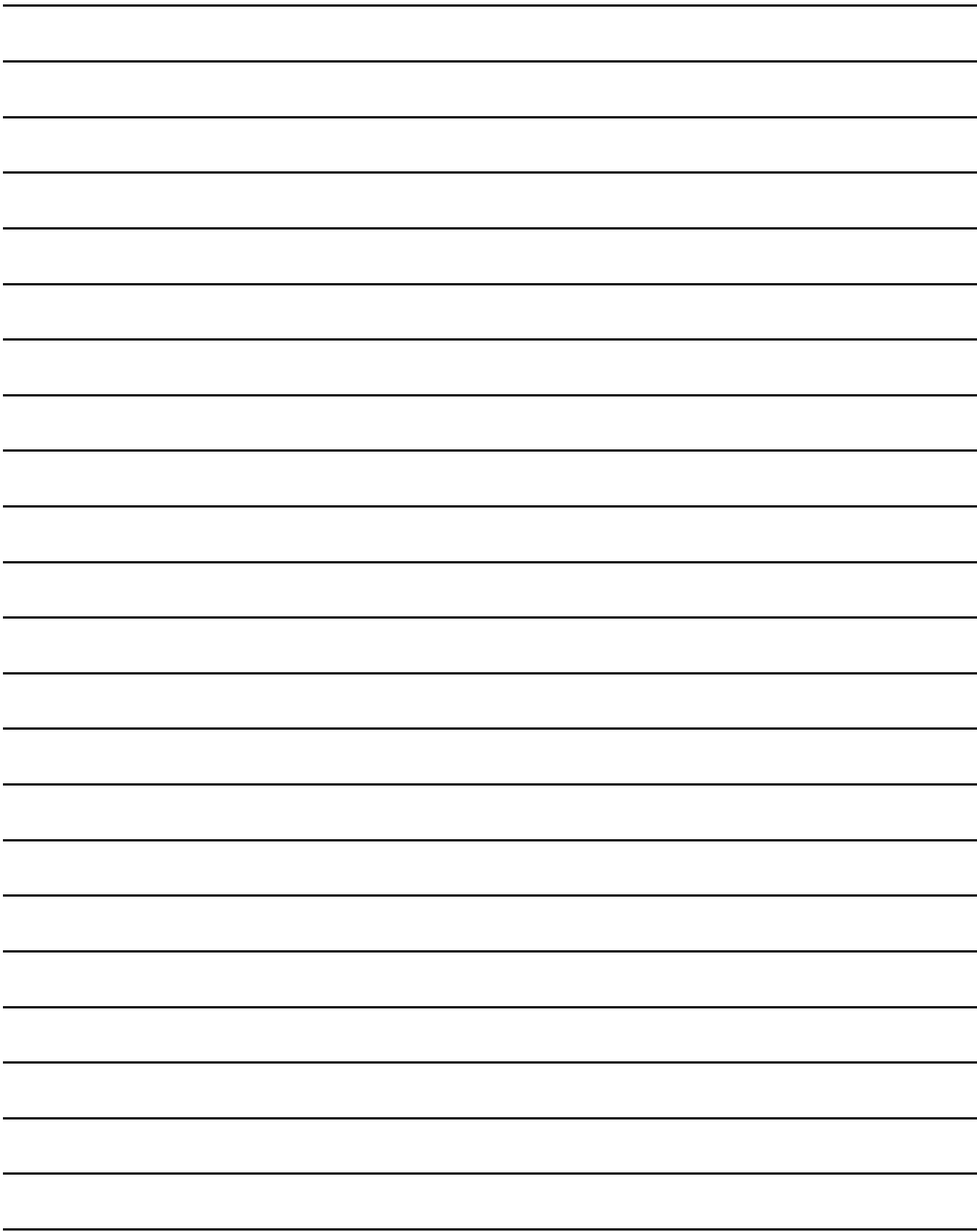
For using functions operated with the GT16-MESB, GT15-QFNB (□M), or GT15-MESB48M, and for adding more memory to the GT15, install an applicable option function board.

For option function boards required for each option function, refer to the following.

GOT1000 Series User's Manual (Extended Functions, Option Functions) for GT Works3

An additional option function board can be installed on the GOT with a built-in option function board.

(However, an option function board inapplicable to the GOT cannot be used. For example, the board for the GT15 cannot be installed on the GT16.)



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REVISIONS

* The manual number is given on the left bottom of the back cover.

Print Date	*Manual Number	Revision
Oct., 2009	SH(NA)-080866ENG-A	First Printing: Compatible with GT Works3 Version1.01B The function of the initial communication time-out for GOT Modem Connection Tool will be supported soon.
Nov., 2009	SH(NA)-080866ENG-B	Compatible with GT Works3 Version1.05F The function of the initial communication time-out for GOT Modem Connection Tool is supported. <ul style="list-style-type: none"> • Interaction with iQ Works supported • System label in the device setting supported • System label update/check supported • System label search in the device list supported • Communication between a personal computer and the GOT via a modem supported
Jan., 2010	SH(NA)-080866ENG-C	Compatible with GT Works3 Version1.10L <ul style="list-style-type: none"> • Remote personal computer operation (Ethernet) supported • Storing the operator information read with RFID to a device at the operator authentication enabled • Auxiliary authentication at the operator authentication with the external authentication device or fingerprint unit supported • Restriction of displaying the ladder editor screen or device test operation screen in the system security setting supported • Forced logout of a login user for the operator authentication supported • USB mouse/keyboard function supported • Ethernet connection with FX CPUs supported • Ethernet connection with OMRON PLCs supported • Ethernet connection with microcomputers supported • Connection with LCPUs supported • MELSEC-L troubleshooting function for the special function switch supported • SoftGOT1000-GOT link function supported
May, 2010	SH(NA)-080866ENG-D	Compatible with GT Works3 Version1.14Q <ul style="list-style-type: none"> • Windows® 7 supported by GT Works3 Version1 • GOT multi-drop connection for the GT16 and GT 15 supported • Character display in smaller size for the user alarm display and alarm history display enabled • OS installation via Ethernet supported • Holding project data and special data during the OS installation supported
Jun, 2010	SH(NA)-080866ENG-E	Compatible with GT Works3 Version1.17T <ul style="list-style-type: none"> • GT1675-VN, GT1672-VN, and GT1662-VN supported • Connection with C Controller modules supported • Connection with MELSEC-WS series supported • Connection with IAI robot controllers supported • Connection with SICK safety controllers supported • Connection with PANASONIC servo amplifiers supported • Connection with a serial printer supported • Switching images of shapes according to the status whether or not a touch switch is touched enabled • Motion SFC monitor and log viewer function for special function switch supported • Lamp area supported • Data input by barcode reader or RFID for numerical input or ASCII input enabled • Retaining data in the SRAM user area under power failure for the advanced user alarm, advanced system alarm, and logging function enabled • Editing a device comment for the advanced recipe function enabled • Data browser supported • Importing and exporting the setting of default values for objects enabled • Default key window for ASCII characters supported • CF card formatting with FAT32 format type enabled • Intensity adjustment of backlight by the GOT special register (GS) enabled

* The manual number is given on the left bottom of the back cover.

Print Date	*Manual Number	Revision

This manual confers no industrial property rights or any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual.

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company. However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.
If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense.
The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.
- (2) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (3) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 2. Failure caused by unapproved modifications, etc., to the product by the user.
 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 4. Failure that could have been avoided if consumable parts designated in the instruction manual had been correctly serviced or replaced.
 5. Replacing consumable parts such as the battery, backlight and fuses.
 6. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 7. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 8. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued.
Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

6. Product application

- (1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.
- (2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the graphic operation terminal applications.
In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation equipment for recreation and amusement, and safety devices, shall also be excluded from the graphic operation terminal range of applications.
However, in certain cases, some applications may be possible, providing the user consults the local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at our discretion.
In some of three cases, however, Mitsubishi Electric Corporation may consider the possibility of an application, provided that the customer notifies Mitsubishi Electric Corporation of the intention, the application is clearly defined and any special quality is not required.

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LEADTOOLS(r) DLL for Win32

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Integrated FA Software

GT Designer3 Version1

Screen Design Manual

Fundamentals

(For GOT1000 Series)

MODEL	SW1-GTD3-R(DRAW1)-E
MODEL CODE	1D7MB9
SH(NA)-080866ENG-E(1006)MEE	



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