MITSUBISHI

MELSOFT

Integrated FA Software

GT SoftGOT1000

Version 2

Operating Manual

SW2D5C-GTWK2-E
SW2D5C-GTD2-E

● SAFETY PRECAUTIONS ●

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.
The precautions given in this manual are concerned with this product.
In this manual, the safety precautions are ranked as "DANGER" and "CAUTION".

DANGER	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the ⚠ caution level may lead to a serious accident according to the circumstances.
Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[Test Operation Precautions]

DANGER

- Before performing test operation (bit device on/off, word device's present value changing, timer/counter's set value and present value changing, buffer memory's present value changing) for a user-created monitor screen, system monitoring, special module monitoring or ladder monitoring, read the manual carefully to fully understand how to operate the equipment.
  During test operation, never change the data of the devices which are used to perform significant operation for the system.
  False output or malfunction can cause an accident.

CAUTIONS FOR USING THIS SOFTWARE

1. Required PC memory

   The processing may be terminated by Microsoft® Windows® on a personal computer of which main memory capacity is less than 128M bytes. Make sure to secure the capacity of 128M bytes or more.

2. Free capacity of hard disk

   At least 100M bytes of free capacity of virtual memory should be secured within hard disk to run this software.

   The processing may be terminated by Windows® , if free space of 100M bytes or more cannot be secured within hard disk while running GTSoftGOT1000.

   Secure enough free capacity of virtual memory within hard disk space in order to run the software.

3. Display of GT SoftGOT1000 and GOT

   Display of GT SoftGOT1000 may be different from display of GOT.

   Confirm for actual display of GOT on the GOT.

REVISIONS

* The manual number is given on the bottom left of the back cover

Print Date	* Manual Number	Revision
Jan., 2006	SH(NA)-080602 ENG-A	First edition
Jun., 2006	SH(NA)-080602 ENG-B	Compatible with the GT Designer2 Version2.32J. Compatible with the GT SoftGOT1000 Version2.32J. Partial corrections ABOUT MANUALS, ABBREVIATIONS AND GENERIC TERMS IN THIS MANUAL, HOW TO READ THIS MANUAL, Section 1.1, 2.2, 2.3.1, 2.4.5, 3.2, 3.3.1, 4.1, 4.2, 4.3, 5.1, 5.7, 5.8, 5.9, 6.2.3, 6.4, 6.5.5, 6.7, 7.1, 7.2, 7.5, INDEX Additions Section 6.13, 6.14, 7.4, Appendix 3
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Print Date	* Manual Number	Revision
May, 2007	SH(NA)-080602ENG-E	Compatible with the GT Designer2 Version2.58L. Compatible with the GT SoftGOT1000 Version2.58L. Partial corrections Section 2.1, 2.2, 2.4, 3.1, 3.2, 5.5.2, 5.7.1, 5.8.1, 6.6, Appendix 3 Additions Section 6.6.3 Section 6.6.3 → Section 6.6.4
Aug., 2007	SH(NA)-080602ENG-F	Compatible with the GT Designer2 Version2.63R. Compatible with the GT SoftGOT1000 Version2.63R. Partial corrections Section 2.5.1, 4.2, 5.8.1, Appendix 3 Partial additions Section 2.5.2, 3.2 Additions Section 5.2.4, 6.18, 6.19 Section 5.2.4 → Section 5.2.5
Dec., 2007	SH(NA)-080602ENG-G	Compatible with the GT Designer2 Version2.73B. Compatible with the GT SoftGOT1000 Version2.73B. Partial corrections Section 1.1, 2.2, 2.4, 3.1.1, 3.2, 5.8.1, 6.9.1, 6.18 Partial additions Section 2.2, 2.5.1, 2.5.2, 5.8.1, 6.7.2, Appendix 3 Additions Section 5.2.5 Section 5.2.5 → Section 5.2.6
Feb., 2008	SH(NA)-080602ENG-H	Compatible with the GT Designer2 Version2.77F. Compatible with the GT SoftGOT1000 Version2.77F. Partial corrections Section 1.1, 2.3.3, 2.4, 2.5.6, 3.1.1, 3.2, 5.7.1, 5.8.1, 6.2.3 Partial additions Section 2.1, Appendix 3

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Jun., 2008	SH(NA)-080602ENG-I	Compatible with the GT Designer2 Version2.82L. Compatible with the GT SoftGOT1000 Version2.82L. Partial corrections Section 2.3, 2.5, 8.1 Additions Section 2.4.1 to 2.4.9 Section 2.3 → Section 2.4 Section 2.4 → Section 2.3 Section 5.2.6 → Section 5.2.4 Section 5.4 to 5.6 → Section 5.2.5 to 5.2.7 Section 5.7 to 5.14 → Section 5.2 to 5.9
Oct., 2008	SH(NA)-080602ENG-J	Compatible with the GT Designer2 Version2.90U. Compatible with the GT SoftGOT1000 Version2.90U. Partial corrections Section 2.1, 2.2, 2.5.1, 2.5.7, 3.3.1, 4.1.2, 5.2.3, 5.3.1, 6.7.1, 6.7.2, 6.9.1, Appendix 3

Japanese Manual Version SH-080598-L

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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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ABOUT MANUALS

The following manuals are also related to this product.
In necessary, order them by quoting the details in the tables below.

Related Manuals

Manual Name	Manual Number (Model Code)
GT15 User's Manual - Describes the GT15 hardware-relevant contents, including the specifications, part names, mounting, power supply wiring, external dimensions, and option devices. - Describes the GT15 functions, including the utility. (Sold separately)	SH-080528ENG (1D7M23)
GT Designer2 Version2 Basic Operation/Data Transfer Manual (For GOT1000 Series) Describes methods of the GT Designer2 installation operation, basic operation for drawing and transmitting data to GOT1000 series. (Sold separately)*1	SH-080529ENG (1D7M24)
GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) 1/3 GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) 2/3 GT Designer2 Version2 Screen Design Manual (For GOT1000 Series) 3/3 Describes specifications and settings of each object function applicable to GOT1000 series. (Sold separately)*1	SH-080530ENG (1D7M25)
GOT1000 Series Connection Manual 1/3 GOT1000 Series Connection Manual 2/3 GOT1000 Series Connection Manual 3/3 Describes system configurations of the connection method applicable to GOT1000 series and cable creation method. (Sold separately)*1	SH-080532ENG (1D7M26)
GOT1000 Series Extended/Option Functions Manual Describes extended functions and option functions applicable to GOT series. (Sold separately)*1	SH-080544ENG (1D7M32)

*1 The manual in PDF-format is included in the GT Works2 and GT Designer2 products.

ABBREVIATIONS AND GENERIC TERMS

Abbreviations and generic terms used in this manual are as follows:

■ GOT

Abbreviations and generic terms			Description
GOT1000 Series	GT SoftGOT1000		Abbreviation of GT SoftGOT1000
	GT1695	GT1695M-X	Abbreviation of GT1695M-XTBA, GT1695M-XTBD
	GT1685	GT1685M-S	Abbreviation of GT1685M-STBA, GT1685M-STBD
	GT16□□, GT16		Abbreviation of GT1695, GT1685
	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□□, 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□□, GT11		Abbreviation of GT115□, GT11 Handy GOT
	GT105□	GT1055-Q	Abbreviation of GT1055-QSBD
		GT1050-Q	Abbreviation of GT1050-QBBD
	GT1030		Abbreviation of GT1030-LBD, GT1030-LBD2, GT1030-LBDW, GT1030-LBDW2
	GT1020		Abbreviation of GT1020-LBD, GT1020-LBD2, GT1020-LBL, GT1020-LBDW, GT1020-LBDW2, GT1020-LBLW
	GT10□□, GT10		Abbreviation of GT105□, GT1030, GT1020
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

*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

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

■ Option

Abbreviations and generic terms		Description			
Memory card	CF card	GT05-MEM-16MC, GT05-MEM-256MC	GT05-MEM-32MC,	GT05-MEM-64MC,	GT05-MEM-128MC,
Memory card adaptor		GT05-MEM-ADPC			
Option function board		GT16-MESB, GT15-QFNB32M,	GT15-FNB, GT15-QFNB48M,	GT15-QFNB, GT15-MESB48M,	GT15-QFNB16M, GT11-50FNB
Battery		GT15-BAT,	GT11-50BAT		
Protective Sheet		GT16-90PSCB, GT16-80PSCB, GT15-90PSCB, GT15-80PSCB, GT15-70PSCB, GT15-60PSCB, GT15-50PSCB, GT11-50PSCB, GT11H-50PSC, GT10-50PSCB, GT10-30PSCB, GT10-20PSCB,	GT16-90PSGB, GT16-80PSGB, GT15-90PSGB, GT15-80PSGB, GT15-70PSGB, GT15-60PSGB, GT15-50PSGB, GT11-50PSGB, GT10-50PSGB, GT10-30PSGB, GT10-20PSGB,	GT16-90PSCW, GT16-80PSCW, GT15-90PSCW, GT15-80PSCW, GT15-70PSCW, GT15-60PSCW, GT15-50PSCW, GT11-50PSCW, GT10-50PSCW, GT10-30PSCW, GT10-20PSCW,	GT16-90PSGW, GT16-80PSGW, GT15-90PSGW, GT15-80PSGW, GT15-70PSGW, GT15-60PSGW, GT15-50PSGW, GT11-50PSGW, GT10-50PSGW, GT10-30PSGW, GT10-20PSGW
Protective cover for oil		GT05-90PCO, GT05-50PCO	GT05-80PCO,	GT05-70PCO,	GT05-60PCO,
USB environmental protection cover		GT16-UCOV,	GT15-UCOV,	GT11-50UCOV	
Stand		GT15-90STAND, GT05-50STAND	GT15-80STAND,	GT15-70STAND,	A9GT-50STAND,
Attachment		GT15-70ATT-98, GT15-60ATT-87,	GT15-70ATT-87, GT15-60ATT-77,	GT15-60ATT-97, GT15-50ATT-95W,	GT15-60ATT-96, GT15-50ATT-85
Backlight		GT16-90XLTT, GT15-70SLTT, GT15-60VLTN	GT16-80SLTT, GT15-70VLTT,	GT15-90XLTT, GT15-70VLTN,	GT15-80SLTT, GT15-60VLTT,
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 Works2 Version□	SW□D5C-GTWK2-E, SW□D5C-GTWK2-EV
GT Designer2 Version□	SW□D5C-GTD2-E, SW□D5C-GTD2-EV
GT Designer2	Abbreviation of screen drawing software GT Designer2 for GOT1000/GOT900 series
GT Converter2	Abbreviation of data conversion software GT Converter2 for GOT1000/GOT900 series
GT Simulator2	Abbreviation of screen simulator GT Simulator 2 for GOT1000 / GOT900 series
GT SoftGOT1000	Abbreviation of monitoring software GT SoftGOT1000
GT SoftGOT2	Abbreviation of monitoring software GT SoftGOT2
GX Developer	Abbreviation of SW□D5C-GPPW-E(-EV)/SW□D5F-GPPW-E type software package
GX Simulator	Abbreviation of SW□D5C-LLT-E(-EV) type ladder logic test tool function software packages (SW5D5C-LLT (-EV) or later versions)
Document Converter	Abbreviation of document data conversion software Document Converter for GOT1000 series
PX Developer	Abbreviation of SW□D5C-FBDQ-E type FBD software package for process control

■ License key (for GT SoftGOT1000)

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

■ License key (for GT SoftGOT2)

Abbreviations and generic terms	Description
License key	A9GTSOFT-LKEY-P (For DOS/V PC)
License key FD	SW5D5F-SGLKEY-J (For PC CPU module)

■ Others

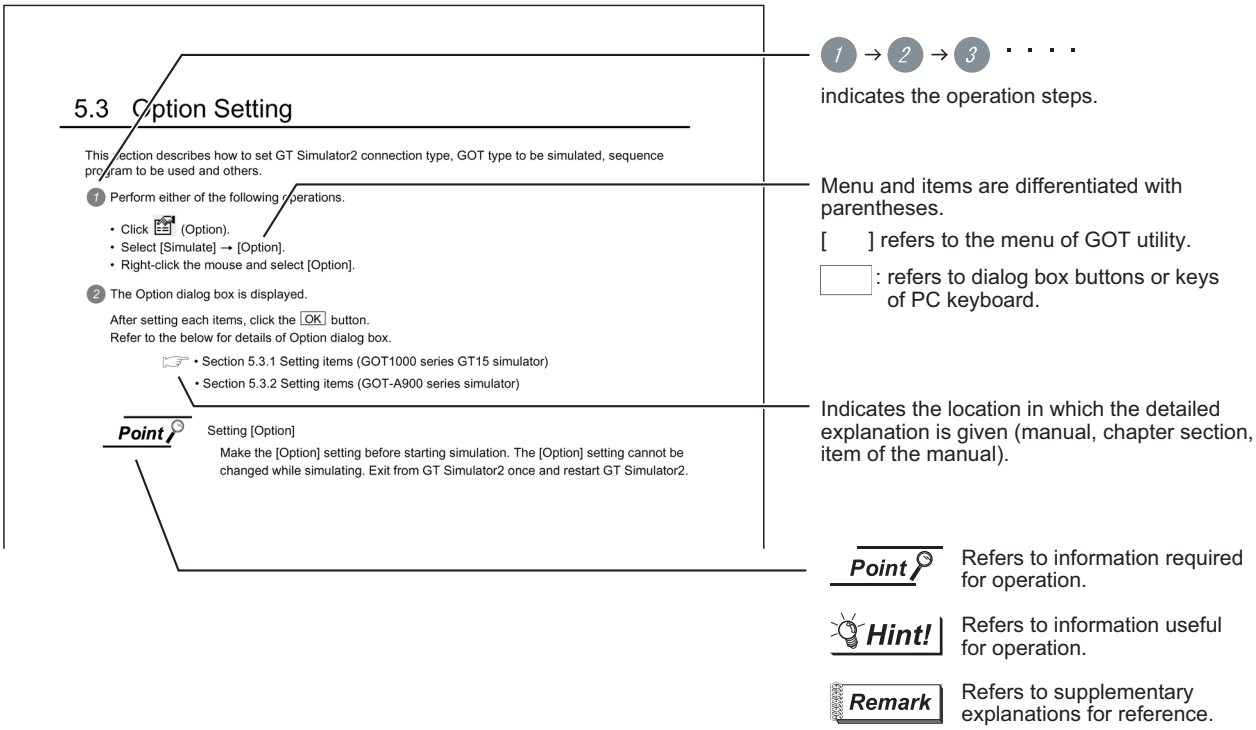
Abbreviations and generic terms		Description
OMRON PLC		Abbreviation of PLC manufactured by OMRON Corporation
KEYENCE PLC		Abbreviation of PLC manufactured by KEYENCE CORPORATION
KOYO EI PLC		Abbreviation of PLC manufactured by KOYO ELECTRONICS INDUSTRIES CO., LTD.
SHARP PLC		Abbreviation of PLC manufactured by Sharp Corporation
JTEKT PLC		Abbreviation of PLC manufactured by JTEKT Corporation
TOSHIBA PLC		Abbreviation of PLC manufactured by TOSHIBA CORPORATION
TOSHIBA MACHINE PLC		Abbreviation of PLC manufactured by TOSHIBA MACHINE CO., LTD.
HITACHI IES PLC		Abbreviation of PLC manufactured by Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI PLC		Abbreviation of PLC manufactured by Hitachi, Ltd.
FUJI FA PLC		Abbreviation of PLC manufactured by Fuji Electric FA Components & Systems Co., Ltd.
MATSUSHITA PLC		Abbreviation of PLC manufactured by Matsushita Electric Works, Ltd.
YASKAWA PLC		Abbreviation of PLC manufactured by YASKAWA Electric Corporation
YOKOGAWA PLC		Abbreviation of PLC manufactured by Yokogawa Electric Corporation
ALLEN-BRADLEY PLC		Abbreviation of Allen-Bradley PLC manufactured by Rockwell Automation, Inc.
GE FANUC PLC		Abbreviation of PLC manufactured by GE Fanuc Automation Corporation
LS IS PLC		Abbreviation of PLC manufactured by LS Industrial Systems Co., Ltd.
SCHNEIDER PLC		Abbreviation of PLC manufactured by Schneider Electric SA
SIEMENS PLC		Abbreviation of PLC manufactured by Siemens AG
Temperature controller	OMRON temperature controller	Abbreviation of temperature controller manufactured by OMRON Corporation
	SHINKO indicating controller	Abbreviation of temperature controller manufactured by Shinko Technos Co., Ltd.
	CHINO controller	Abbreviation of temperature controller manufactured by CHINO CORPORATION
	FUJI SYS temperature controller	Abbreviation of temperature controller manufactured by Fuji Electric Systems Co., Ltd.
	YAMATAKE temperature controller	Abbreviation of temperature controller manufactured by Yamatake Corporation
	YOKOGAWA temperature controller	Abbreviation of temperature controller manufactured by Yokogawa Electric Corporation
	RKC temperature controller	Abbreviation of temperature controller manufactured by RKC INSTRUMENT INC.
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 settable with GT Designer2)
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® /TCP		Generic term for the protocol designed to use MODBUS® protocol messages on a TCP/IP network.

1 Functions

This manual describes functions available for the GT SoftGOT1000 Version2.90U.
For the added functions by the product version upgrade, refer to the list of functions added by GT SoftGOT1000 version upgrade in Appendices.

2 Symbols

Following symbols are used in this manual.



*Since the above page was created for explanation purpose, it differs from the actual page.L

1. OVERVIEW

This manual explains the system configuration, specifications, screen structure, and operating method of monitoring software GT SoftGOT1000 (hereinafter abbreviated as GT SoftGOT1000).
GT SoftGOT1000 is the software that has the same functions as the GOT1000 series and is used to display lamps, data, and messages on personal computers and panel controllers.
When applying the following program examples to the actual system, make sure to examine the applicability and confirm that it will not cause system control problems.

Point

Described contents in this manual

This manual describes the operation method for GT SoftGOT1000.
For other than operation method, refer to the following manuals.

(1) Installation method of GT SoftGOT1000
For the installation method of GT SoftGOT1000, refer to the following manuals.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(2.2 Installing the Software Programs)

(2) Project data creating method of GT Designer2
For the project data creating method of GT Designer2, refer to the following manuals.

☞ Designer2 Version□ Screen Design Manual

(3) Starting method of GT SoftGOT1000
For the starting method of GT SoftGOT1000, refer to the following manual.

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
(2.4 Starting the Software)

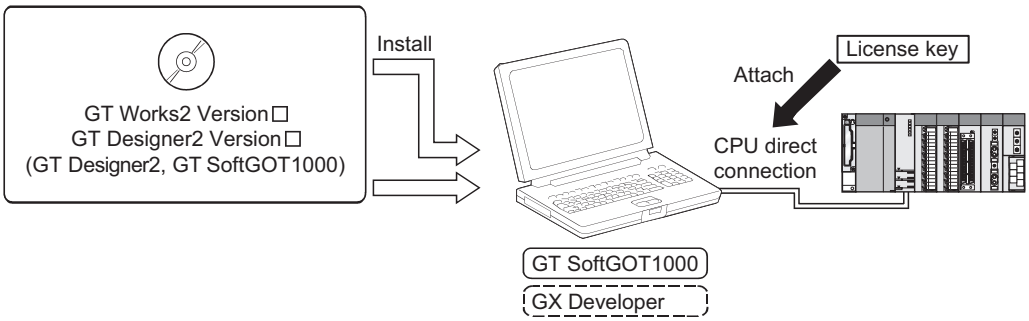
1.1 Features

1 The features of the GOT series and advantages of personal computer and panel computer are available

(1) Interactive use with applications (including MELSOFT)

(a) Interactive use with GT Designer2.

Installation of GT SoftGOT1000 and GT Designer2 on the same personal computer allows operations from screen creation to monitoring to be supported by a single personal computer. Immediately after creating or modifying a screen on GT Designer2, the screen can be monitored on GT SoftGOT1000. Therefore, design efficiency is improved greatly.



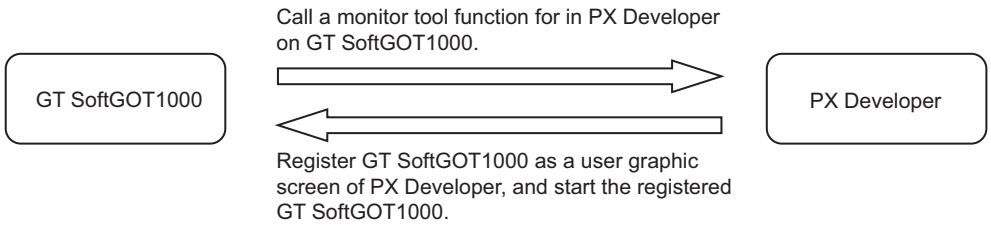
(b) Interaction with PX Developer

With interaction between GT SoftGOT1000 and PX Developer, monitor tool functions for PX Developer can be called on GT SoftGOT1000.

GT SoftGOT1000 can also be started on PX Developer, and the functions can be shared.

For in PX Developer, refer to the following manual.

☞ PX Developer Version ☐ Operating Manual (Monitor Tool)

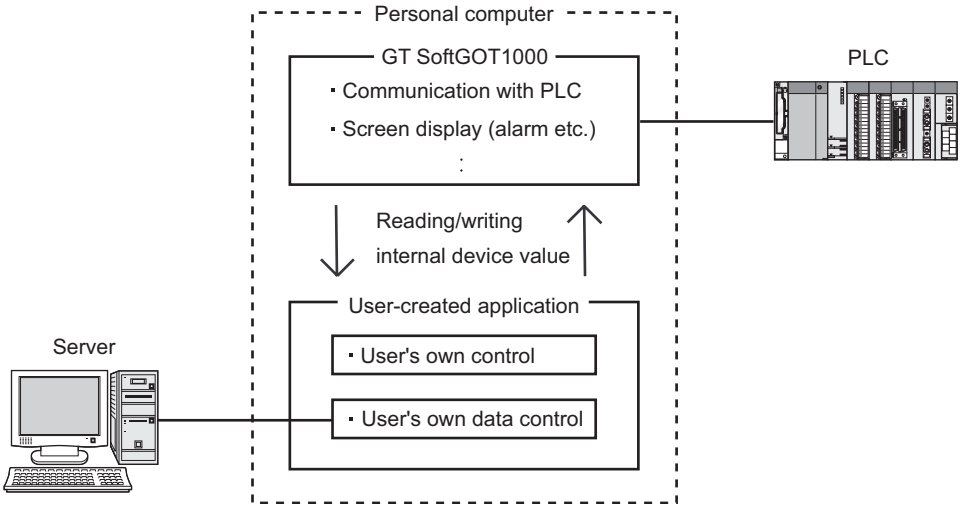


(c) Interactive use with Windows applications

A Windows application can be started up from GT SoftGOT1000.

Also, the data of GT SoftGOT1000 internal devices can be read/written from a user-created application.

With interaction between GT SoftGOT1000 and a user-created application, the user can control or manage data by own method.



(2) Flexible response to high-resolution

The user can select resolutions from UXGA to VGA and can set a resolution specification, which sets a resolution dot by dot depending on applications.

GT SoftGOT1000 supports the following resolutions.

(a) Selectable resolutions

- UXGA (1600 × 1200 dots)
- XGA (1024 × 768 dots)
- VGA (640 × 480 dots)
- SXGA (1280 × 1024 dots)
- SVGA (800 × 600 dots)

(b) User setting

- X × Y (Resolution specification) (1600 to 640 × 1200 to 480 dots)

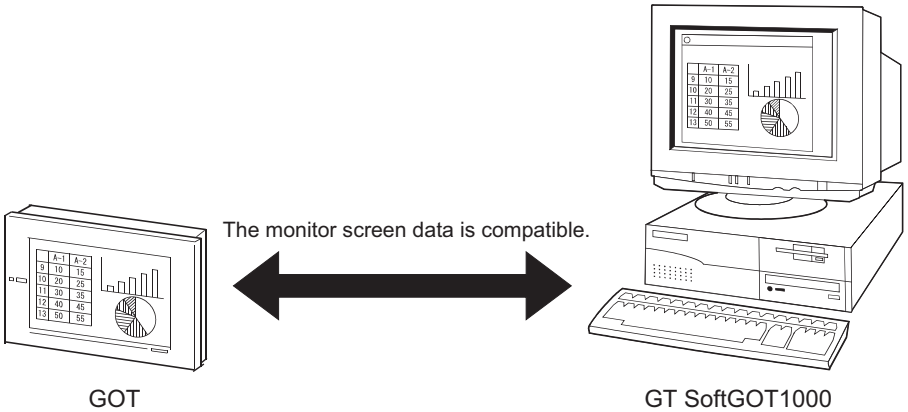
2 The monitor screen data created for the GOT1000 series is applicable to GT SoftGOT1000.

The GT SoftGOT1000 uses monitor screen data created with GT Designer2.

By converting the GOT type for GT SoftGOT1000, the monitor screen data used for the GOT1000 series can be used without modification.

GT SoftGOT1000 uses the same screens and operations as GOT.

Therefore, there will be no discomfort or confusion for the operators and maintenance personnel.

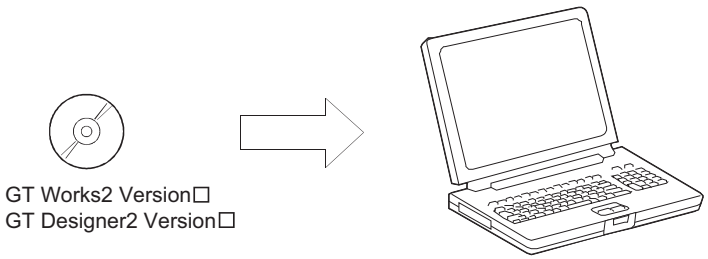


2. SYSTEM CONFIGURATION

2.1 System Configuration

1 When installing GT SoftGOT1000

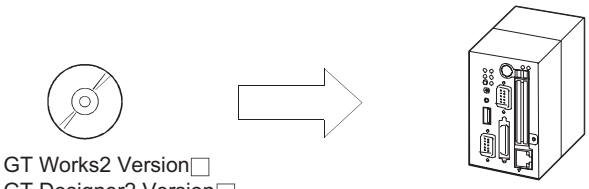
(1) When installing GT SoftGOT1000 on DOS/V personal computer



GT Works2 Version☐
GT Designer2 Version☐

DOS/V personal computer

(2) When installing GT SoftGOT1000 on PC CPU module

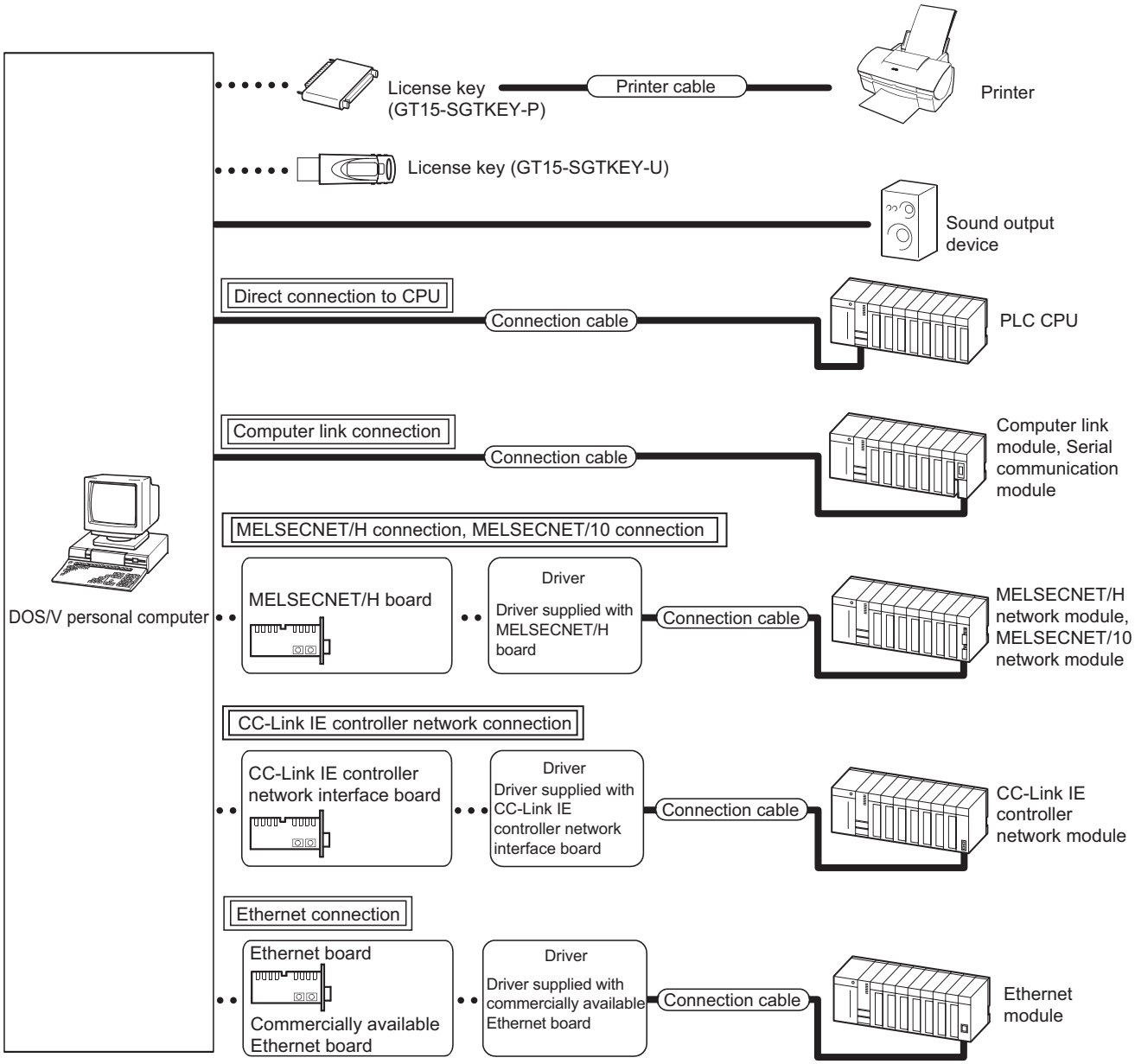


GT Works2 Version□
GT Designer2 Version□

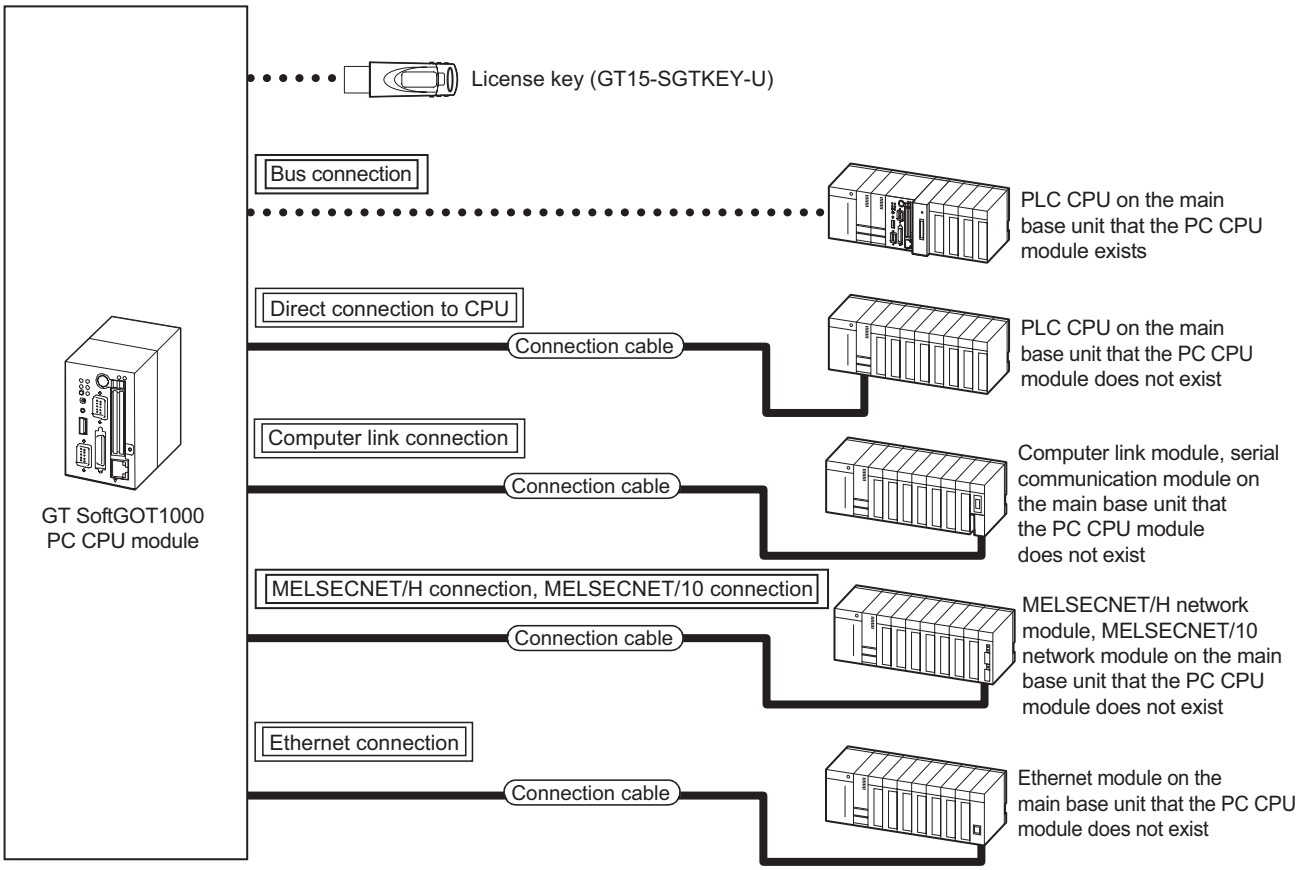
PC CPU module

2 When executing GT SoftGOT1000

(1) When using GT SoftGOT1000 on DOS/V personal computer



(2) When using GT SoftGOT1000 with PC CPU module



2.2 Operating Environment

The following shows the GT SoftGOT1000 operating environment.

Item		Description	
		With DOS/V personal computer	With PC CPU module
Personal computer		PC/AT compatible PC on which Windows 2000®, Windows XP® or Windows Vista® operates.	PPC-852-21B, PPC-852-21G, and PPC-852-22F manufactured by CONTEC CO., LTD*7
Operating system		Microsoft® Windows® 2000 Professional Operating System Service Pack 4 or later [English version]*2 Microsoft® Windows® XP Professional Operating System Service Pack 2 or later [English version]*3*4*9 Microsoft® Windows® XP Home Edition Operating System Service Pack 2 or later [English version]*3*4*9 Microsoft® Windows® XP Embedded [English version]*3*4*8 Microsoft® Windows Vista® Ultimate Operating System [English version]*3*4*9 Microsoft® Windows Vista® Enterprise Operating System [English version]*3*4*9 Microsoft® Windows Vista® Business Operating System [English version]*3*4*9 Microsoft® Windows Vista® Home Premium Operating System [English version]*3*4*9 Microsoft® Windows Vista® Home Basic Operating System [English version]*3*4*9	
Computer		Refer to "Applicable operating system and performance required for personal computer" on the next page.	
	CPU		
	Memory		
Hard disk space*1		For installation (This product only) :600MB or more For installation (This product and manuals) :850MB or more For execution :100MB or more	
Disk drive		CD-ROM drive	
Display color		65536 colors or more	
Display		Resolution of 640 × 480 dots or more	
Software		When creating or editing project data: GT Designer2*5 When using with PX Developer : PX Developer Version 1.14Q or later GT Designer2 Version 2.47Z or later	
Hardware*6		GT15-SGTKEY-U (License key (for USB port)) GT15-SGTKEY-P (License key (for parallel port))	GT15-SGTKEY-U (License key (for USB port))
Others		Installation of Internet Explorer 5.0 or later	
		The mouse, keyboard, printer, CD-ROM drive, sound card, and speakers must be compatible with the above OS.	

*1 When using GT Designer2 or PX Developer, free space is required separately.
For the free space required when using GT Designer2, refer to the following manual.
☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual
For the available space required when using monitor tool functions of PX Developer, refer to the following manual.
☞ PX Developer Version□ Operating Manual (Monitor Tool)
When using a user-created application, free space is required separately.

*2 Administrator authority is required for installing GT SoftGOT1000.

*3 Administrator authority is required for installing and using GT SoftGOT1000.

*4 The following functions are not supported.
- "Compatibility mode"
- "Fast user switching"
- "Change your desktop themes (fonts)"
- "Remote desktop"

*5 Use GT Designer2 included in GT Works2/GT Designer2 that contains GT SoftGOT1000.

*6 When using GT15-SGTKEY-U, a USB port is required in the personal computer.
When using GT15-SGTKEY-P, a parallel port (Centronics/printer connecter) is required in the personal computer.

*7 Refer to the manual of the PC CPU module.

*8 For using the PPC-852-22F, GT SoftGOT1000 can be used on the PPC-852-22F with the OS preinstalled only.

*9 Only the 32-bit OS is available.

Applicable operating system and performance required for personal computer

Operating system	Performance required for personal computer	
	CPU	Memory
Microsoft® Windows® 2000 Professional Operating System [English version]	Pentium II® 300MHz or more	128MB or more
Microsoft® Windows® XP Professional Operating System [English version] Microsoft® Windows® XP Home Edition Operating System [English version]	Pentium II® 300MHz or more	128MB or more
Microsoft® Windows Vista® Ultimate Operating System [English version] Microsoft® Windows Vista® Enterprise Operating System [English version] Microsoft® Windows Vista® Business Operating System [English version] Microsoft® Windows Vista® Home Premium Operating System [English version] Microsoft® Windows Vista® Home Basic Operating System [English version]	800MHz or more (Recommended: 1GHz or more)	512MB or more (Recommended: 1GB or more)

Point

Operating environment when using a user-created application

A user-created application is used with GT SoftGOT1000.
When using a user-created application, therefore, prepare an operating environment where both the user-created application and GT SoftGOT1000 can operate.

2.3 Connection conditions

The following table shows the connection distance between a controller and a personal computer and the number of connectable personal computers when connecting GT SoftGOT1000 and a controller.

Connection type				Connection conditions	
				Distance between controller and PC	Number of connectable PCs
MITSUBISHI PLC		Bus connection[*8]	QCPU (Q mode)	Connecting to the PLC CPU on the main base unit that the PC CPU module exists	1[*1]
		Direct CPU connection	QCPU (Q mode)	RS-232 connection: 3m USB connection: 3m	1 (2 units are connectable when using both RS-232 and USB connections.)[*1]
			QCPU (A mode)	15m	1[*1]
			QSCPU	3m	1[*1]
			QnACPU	15m	1[*1]
			ACPU	15m	1[*1]
			FXCPU	4.5m	1[*1]
			Motion controller CPU (A series)	15m	1[*1]
			MELSECNET/H remote I/O station	3m	1[*1]
		Computer link connection	QCPU (Q mode)	15m	1[*1]
			QCPU (A mode)		
			QnACPU		
			ACPU		
			Motion controller CPU (A series)		
		MELSECNET/H connection, MELSECNET/10 connection	QCPU	Optical fiber cable: 1km[*5] Coaxial cable: 500m[*5]	Optical fiber cable: 64[*1*6] Coaxial cable: 32[*1*6]
			QSCPU		
			QnACPU		
			ACPU		
			Motion controller CPU (A series)		
		CC-Link IE controller network connection	QCPU (Q mode)	550m[*7]	120[*1]
			QSCPU		
		Ethernet connection	QCPU (Q mode)	100m (max. segment length)	128 (recommended to 16 units or less)[*1]
			QCPU (A mode)		
			QSCPU		
			QnACPU		
			ACPU		
			Motion controller CPU (A series)		
CNC	CNC C70	Direct CPU connection[*2], Computer link connection[*2], MELSECNET/H connection[*2], MELSECNET/10 connection[*2], CC-Link IE controller network connection[*2]		Same as QCPU(Q mode)	
		Display I/F connection		100m (max. segment length)	128 (recommended to 16 units or less)[*1]
	MELDAS C6/C64	Direct CPU connection		15m	1[*1]
		Ethernet connection		100m (max. segment length)	128[*1]

(Continued to next page)

Connection type			Connection conditions	
			Distance between controller and PC	Number of connectable PCs
Robot controller	CRnQ-700	Direct CPU connection*2, Computer link connection*2, MELSECNET/H connection*2, MELSECNET/10 connection*2, CC-Link IE controller network connection*2, Ethernet connection*2	Same as QCPU(Q mode)	
	CRnD-700	Ethernet connection	100m (max. segment length)	1
OMRON PLC		Direct CPU connection	15m	1*1
YASKAWA PLC		Direct CPU connection	15m	1*1
		Computer link connection	15m	1*1
		Ethernet connection	100m (max. segment length)	10*3*4
YOKOGAWA PLC		Ethernet connection	100m (max. segment length)	UDP: 128*3 TCP: 8*3*4

*1 When starting up multiple GT SoftGOT1000 modules, monitoring is enabled on the multiple screens.

*2 The multiple CPU system with the QCPU (Q mode) is mounted on.

*3 To use GT SoftGOT1000 module together with another GT SoftGOT1000 module or a different application, set the different number for each port No.
If the port No. is the same, monitoring may not be available due to a communication timeout, or other causes.

*4 The number of connectable personal computers includes the number of total GT SoftGOT 1000 modules started in a personal computer.

*5 Distance between stations for using QSI optical cable and 5C-2V coaxial cable.
The overall distance and distance between stations differs according to the type and the number of total stations for the cable to be used.
For details on the cable, refer to the following manual.
☞ Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

*6 Applicable when using one MELSECNET/H board per personal computer.
Up to four MELSECNET/H boards can be mounted per personal computer.

*7 Distance between stations for using the fiber-optic cable (core/cladding = 50/125(μm)
The overall distance and distance between stations differs according to the type and the number of total stations for the cable to be used.
For details on the cable, refer to the following manual.
☞ CC-Link IE Controller Network Reference Manual

*8 The connection type can be used only with the PC CPU module.

2.4 Connectable Modules

2.4.1 MITSUBISHI PLC

1 Applicable CPU

Refer to the following manual for PLC CPUs that can be monitored from GT SoftGOT1000.

☞ GT Designer2 Version□ Screen Design Manual

2 Controllers that can be monitored in each connection type

Refer to the following manual for GT SoftGOT1000 connection types and PLC CPUs that can be monitored in each connection type.

☞ GT Designer2 Version□ Screen Design Manual

2.4.2 Serial communication module, computer link module

The following table shows connectable serial communication modules and computer link modules.
Connection via RS-422 communication cannot be used.

Item	Model name		
For QCPU (Q mode)	QJ71C24(-R2), QJ71CMON	QJ71C24N(-R2),	QJ71CMO,
For QCPU (A mode)	A1SJ71UC24-R2, A1SJ71C24-PRF	A1SJ71UC24-PRF,	A1SJ71C24-R2,
For QnACPU	AJ71QC24(-R2), A1SJ71QC24N(-R2)	AJ71QC24N(-R2),	A1SJ71QC24(-R2),
For ACPU or motion controller CPU (A series)	AJ71C24-S8, A1SJ71C24-PRF,	AJ71UC24, A1SJ71UC24-R2,	A1SJ71C24-R2, A1SJ71UC24-PRF

2.4.3 Interface board, network module

Point

When using PC CPU module

A interface board is not required.
For the system configuration of the PC CPU module, refer to the manual of the PC CPU module .

1 MELSECNET/H interface board/network module, MELSECNET/10 interface board/ network module

The following shows the required interface boards for GT SoftGOT1000 to configure a MELSECNET/H network system and MELSECNET/10 network system.

Type	Model name	Bus format	Driver
MELSECNET/H	Q80BD-J71BR11 (Coaxial loop) Q80BD-J71LP21-25 (Optical loop) Q80BD-J71LP21G (Optical loop)	PCI	SWODNC-MNETH-B

Refer to the following manual for the settings of the interface board.

☞ MELSECNET/H Interface Board User's Manual (For SW0DNC-MNETH-B)

Refer to the following manual for the available network modules for each destination.

☞ Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

2 CC-Link IE controller network interface board/network module

The following shows the required interface boards for GT SoftGOT1000 to configure a CC-Link IE controller network.

Type	Model name	Bus format	Driver
CC-Link IE	Q80BD-J71GP21-SX, Q80BD-J71GP21S-SX	PCI	SW1DNC-MNETG-B

Refer to the following manual for the settings of the interface board.

☞ CC-Link IE Controller Network Interface Board User's Manual (For SW1DNC-MNETG-B)

Refer to the following manual for the available network modules for each destination.

☞ CC-Link IE Controller Network Reference Manual

2.4.4 Ethernet module, Ethernet board/card

1 Ethernet module

Connectable Ethernet modules are shown in the following.

Item	Model name		
For QCPU	QJ71E71, QJ71E71-100	QJ71E71-B2,	QJ71E71-B5,
For QnACPU	AJ71QE71, AJ71QE71N-B2, AJ71QE71N3-T, A1SJ71QE71N-T, A1SJ71QE71N-B5T	AJ71QE71-B5, AJ71QE71N-B5, A1SJ71QE71-B2, A1SJ71QE71N-B2, A1SJ71QE71N3-T	AJ71QE71N-T, AJ71QE71N-B5T, A1SJ71QE71-B5, A1SJ71QE71N-B5,
For ACPU or motion controller CPU (A mode)	AJ71E71-S3, AJ71E71N-T, AJ71E71N3-T, A1SJ71E71N-B2, A1SJ71E71N3-T	A1SJ71E71-B2-S3, AJ71E71N-B2, AJ71E71N-B5T, A1SJ71E71N-B5,	A1SJ71E71-B5-S3, AJ71E71N-B5, A1SJ71E71N-T, A1SJ71E71N-B5T,
For MELDAS C6/C64	FCU6-EX875		

2 Ethernet board/card

Applicable Ethernet bords/cards are shown in the following.

Manufacturer	Model name	Remarks
3COM	EthernetLink III LAN PC Card	Ethernet board/card
-	Ethernet board built in the personal computer as standard	Ethernet board

2.4.5 CNC

For CNCs that GT SoftGOT1000 can monitor and the applicable connection types, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

2.4.6 Robot controller

For robot controllers that GT SoftGOT1000 can monitor and the applicable connection types, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

2.4.7 OMRON PLC

For OMRON PLCs that GT SoftGOT1000 can monitor and the applicable connection types, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

2.4.8 YASKAWA PLC

For YASKAWA PLCs that GT SoftGOT1000 can monitor and the applicable connection types, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

1 Serial connection

The following table shows connectable MEMOBUS Modules and Communications Modules.
Connection via RS-422 communication cannot be used.

Item		Model name
GL-60S, GL-60H, GL-70H		JAMSC-IF60 JAMSC-IF61
MP920/NSC40		217IF
CP-9200SH		CP-2171E
MP2200	JEPMC-MP2300	217IF-01
	JEPMC-MP2200	218IF-01

2 Ethernet connection

(1) Communications Module

Item	Model name
MP920	218IF
MP2200, MP2300	218IF-01

(2) Ethernet board/card

Use the same Ethernet board and card as those for connecting to MITSUBISHI PLC.

2.4.9 YOKOGAWA PLC

For YOKOFGAWA PLCs that GT SoftGOT1000 can monitor and the applicable connection types, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

1 Ethernet connection

(1) Ethernet Interface Module

Item	Model name
FA-M3	F3LE01-5T, F3LE11-0T, F3LE12-0T

(2) Ethernet board/card

Use the same Ethernet board and card as those for connecting to MITSUBISHI PLC.

2.5 Connection Cable

This section provides the converter/cable whose operations has been checked by our company.

Remark Converter/Cable used in GT SoftGOT1000

The converter/cable used for the GX Developer can be applied to the GT SoftGOT1000.

2.5.1 Connecting to MITSUBISHI PLC

1 Connecting to QCPU

(1) Connection via RS-232 cable

(a) When using MITSUBISHI SYSTEM & SERVICE product

RS-232 cable		
Personal computer: D-sub 9-pin		Controller: MINI-DIN 6-pin
	GT01-C30R2-6P (3m)	

(2) Connection via USB cable

(a) With Universal model QCPU

• When using MITSUBISHI product

USB cable		
Personal computer: USB A type		Controller: USB miniB type
	MR-J3USBCBL3M (3m)	

• When using product manufactured by Mitsubishi Electric System & Service Co., Ltd.

USB cable		
Personal computer: USB A type		Controller: USB miniB type
	GT09-C30USB-5P (3m)	

• When using product manufactured by ELECOM CO.,LTD. (Recommended Product)

USB cable/USB conversion adapter		
Personal computer: USB A type		Controller: USB miniB type
	USB-M53 (3m)	
Personal computer: USB A type	+	Controller: USB miniB type
	USB2-30 (3m)	AD-USBBFTM5M

• When using product manufactured by ARVEL CORP (Recommended Product)

USB cable/USB conversion adapter		
Personal computer: USB A type		Controller: USB miniB type
	+	
AU2-30 (3m)		AUXUBM5

• When using product manufactured by LOAS CO., LTD. (Recommended Product)

USB cable	
Personal computer: USB A type	Controller: USB miniB type
ZUM-430 (3m)	

(b) With Basic model QCPU, High Performance model QCPU, Process CPU, Redundant CPU

• When using product manufactured by ELECOM CO.,LTD. (Recommended Product)

USB cable	
Personal computer: USB A type	Controller: USB miniB type
USB2-30 (3m)	

• When using product manufactured by ARVEL CORP (Recommended Product)

USB cable	
Personal computer: USB A type	Controller: USB miniB type
AU2-30 (3m)	

2 Connecting to QSCPU

(1) Connection with USB cable

(a) When using product manufactured by ELECOM CO.,LTD. (Recommended Product)

USB cable	
Personal computer: USB A type	Controller: USB miniB type
USB2-30 (3m)	

(b) When using product manufactured by ARVEL CORP (Recommended Product)

USB cable	
Personal computer: USB A type	Controller: USB miniB type
AU2-30 (3m)	

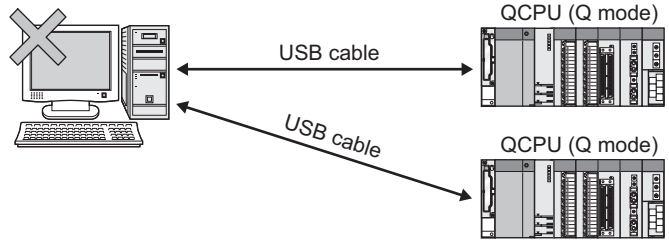
Point

Precautions for using USB cable

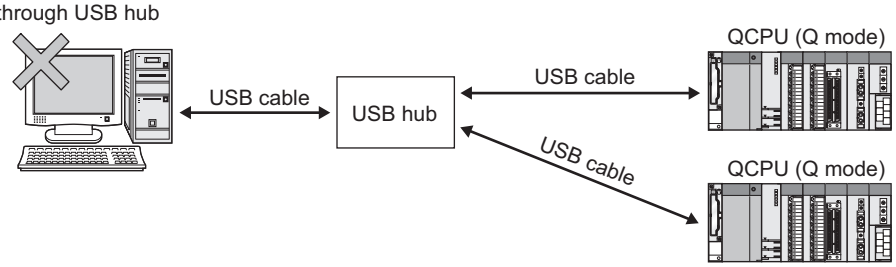
(1) Before using USB cable
The USB cable can be used with the USB driver already installed.

(2) Number of connectable programmable controllers when using USB cable
A single programmable controller can be connected when using the USB cable.
The following shows the system configurations, which do not meet the above conditions.

· Connecting from a personal computer with multiple USB ports to multiple QCPUs (Qmode)



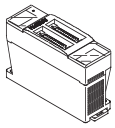
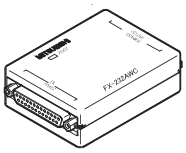
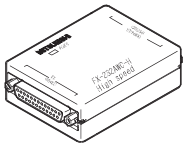
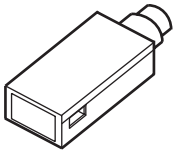
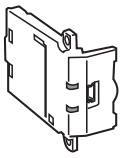
· Connecting from a personal computer to multiple QCPUs (Q mode) through USB hub



(3) Precautions for connecting programmable controller
Connect or remove the USB cable, reset a programmable controller or turn the power on/off after stop the monitor.
(☞ 5.7 Monitor Stop)
If operated without stop, a communication timeout occurs, which cannot be fixed. If not fixed, remove the USB cable completely. After 5 seconds or more, reconnect the cable. (The error may occur at first communication after the above operation. From the next time, the programmable controller functions normally.)

3 Connecting to QnACPU, ACPU, motion controller CPU, or FXCPU

(1) Using the product of Mitsubishi Electric make

PC side (RS-232 cable)	RS-232/RS-422 Converter*3	PLC CPU Side(RS-422 cable)
 F2-232CAB(3m)*1*2 (For the 25-pin D-sub connector of the PC side)	 FX-232AW	 FX-422CAB (0.3m), FX-422CAB-150 (1.5m) (For connecting to QnACPU, ACPU, motion controller CPU, FXCPU)
 F2-232CAB-1(3m)*2 (For the 9-pin D-sub connector of the PC side)	 FX-232AWC	
 AC30N2A(3m)*1 (For the 25-pin D-sub connector of the PC side)	 FX-232AWC-H (FX series only)	 FX-422CAB0 (1.5m) (For connecting to FX0/FX0S/FX0N/FX1S/FX1N/FX2N/FX1NC/FX2NC/FX3UC/FX3U/FX3GCPU)
(Use the cable included in the FX-USB-AW.)	 FX-USB-AW*4 (FX series only)	
(Use the cable included in the FX3U-USB-BD.)	 FX3U-USB-BD*4 (FX3UC only)	

*1 A straight cable for conversion between 9-pin D-sub and 25-pin D-sub is required separately.

*2 How to distinguish products compatible with QnACPU, ACPU.

Check the model name label of the cable.

Icompatible products	Compatible products (with indication of F/FX/A)
F2-232CAB Y990C*****	F2-232CAB(F/FX/A) Y990C*****
F2-232CAB-1 Y990C*****	F2-232CAB-1(F/FX/A) Y990C*****

*3 When connecting the FX-232AWC-H to the FX3UCCPU, transmission speed of 9600/19200/38400/57600/115200 bps is available.

When connecting the FX-232AWC or FX-232AW, either of transmission speed of 9600/19200bps is available.

*4 Drivers respectively stored in the CD-ROMs included in the FX-USB-AW and FX3U-USB-BD must be installed on the personal computer for using the converters. (The converters can be used by assigning the USB-serial conversion driver to the COM number.)

When connection to the function expansion board or function adaptor of FX1S/FX1N/FX2N/FX1NC/FX2NC/FX3UC/FX3UCPU, the following cables are available.

RS-232 cable[*1*2]
 GT01-C30R2-9S(3m)side)
 GT01-C30R2-25P(3m)

*1 The following system configurations are available in the GT01-C30R2-9S.

Model name	Function expansion board	Function adapter	PC side connector
FX3U series, FX3UC series (FX3UC-□□-LT)	FX3U-232-BD	-	9-pin D-sub
	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-CNV-BD	FX3U-232ADP	
FX3UC series (FX3UC-□□/D, FX3UC-□□/DSS)	-		
FX3G series	FX3G-232BD	-	9-pin D-sub
	-	FX3G-CNV-ADP+FX3U-232ADP	
FX2N series	FX2N-232-BD	-	9-pin D-sub
	FX2N-CNV-BD	FX2NC-232ADP	
FX1NC, FX2NC series	-	FX2NC-232ADP	9-pin D-sub
FX1S, FX1N series	FX1N-232-BD	-	9-pin D-sub
	FX1N-CNV-BD	FX2NC-232ADP	

*2 The following system configurations are available in the GT01-C30R2-25P.

Model name	Function expansion board	Function adapter	PC side connector
FX3U series, FX3UC series (FX3UC-□□-LT)	FX3U-232-BD	-	25-pin D-sub
	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-CNV-BD	FX3U-232ADP	
FX3UC series (FX3UC-□□/D, FX3UC-□□/DSS)	-		
FX3G series	FX3G-232BD	-	25-pin D-sub
	-	FX3G-CNV-ADP+FX3U-232ADP	
FX2N series	FX2N-CNV-BD	FX0N-232ADP	9-pin D-sub
	FX2N-232-BD	-	25-pin D-sub
	FX2N-CNV-BD	FX2NC-232ADP	
FX1NC, FX2NC series	-	FX0N-232ADP	9-pin D-sub
	-	FX2NC-232ADP	25-pin D-sub
FX1S, FX1N series	FX1N-CNV-BD	FX0N-232ADP	9-pin D-sub
	FX1N-232-BD	-	25-pin D-sub
	FX1N-CNV-BD	FX2NC-232ADP	

Point

(1) Specifications and precautions for converters/cables
Refer to the following manual for the specifications and precautions for converters/cables.
☞ The manual for each product

(2) Inserting and removing a converter/cable that receives electricity from the 5VDC power
Turn the PLC CPU side power OFF before inserting and removing the converter/cable that receives electricity from the PLC CPU side 5VDC power.

(3) Inserting and removing a converter/cable that does not receive electricity from the 5VDC power
Refer to the following procedures when inserting and removing the peripheral device or cable that does not receive electricity from the PLC CPU side 5VDC power (receives from an external power supply).

1. Make sure to touch the static discharge wrist strap or grounded metal before operation and discharge electrostatic from cables, human body or others.
2. Turn off the PC.
3. Turn off the converter.
   Ground the FG terminal if provided.
4. Insert and remove the converter/cable connected to the PC and PLC.
5. Turn on the converter.
6. Turn on the PC.
7. Start the software package.

2.5.2 Connecting to serial communication module or computer link module

1 Connecting to serial communication module communicating with QCPU

(1) When using an RS-232 cable

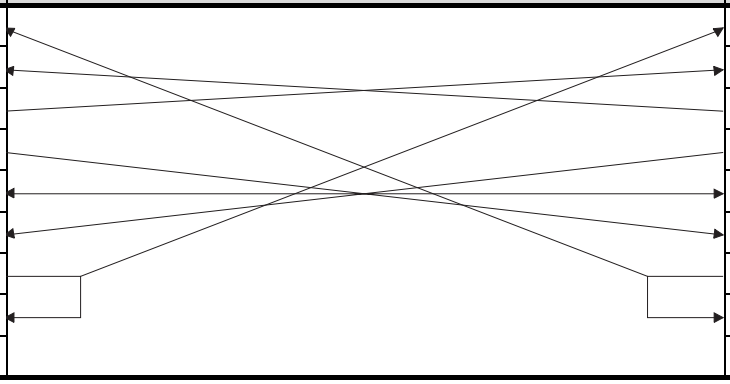
The user is required to make a RS-232 cable for connecting GT SoftGOT1000 to a module.
The cables connection diagram indicated below.

(a) Connector specifications

Pin No.	Signal code	Signal name	Signal direction Q compatible C24 ↔ GT SoftGOT1000
1	CD	Receive carrier detection	←
2	RD(RXD)	Receive data	←
3	SD(TXD)	Send data	→
4	DTR(ER)	Data terminal ready	→
5	SG	Send ground	↔
6	DSR(DR)	Data set ready	←
7	RS(RTS)	Request to send	→
8	CS(CTS)	Clear to send	←
9	RI(CI)	Call indication	←

(b) Connection diagram

1) Connection example which can turn ON/OFF CD signal (No. 1 pin)

Serial communication module side		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD(RXD)	2		RD(RXD)
SD(TXD)	3		SD(TXD)
DTR(ER)	4		DTR(ER)
SG	5		SG
DSR(DR)	6		DSR(DR)
RS(RTS)	7		RS(RTS)
CS(CTS)	8		CS(CTS)
R1(CI)	9		

2) Connection example which cannot turn ON/OFF CD signal (No. 1 pin)
Connection example for exercising DC code control or DTR/DSR control

Serial communication module side		Cable Connection and Signal Direction (Connection example for full duplex communication)	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD(RXD)	2		RD(RXD)
SD(TXD)	3		SD(TXD)
DTR(ER)	4		DTR(ER)
SG	5		SG
DSR(DR)	6		DSR(DR)
RS(RTS)	7		RS(RTS)
CS(CTS)	8		CS(CTS)
R1(CI)	9		

2 Connecting to serial communication module or computer link module communicating with QnACPU, ACPU, or motion controller CPU (A series)

(1) When using an RS-232 cable

(a) Using the product of Mitsubishi Erectric make.

RS-232 cable
AC30N2A
(For personal computer side 25 pin D-sub connector

(b) When using an RS-232 cable prerared by user
The cable connection diagrams are indicated below.

For QnA Series (large-scale QC24(N))

1) Example of connection to an external device that allows the CD signal (No.8 pin) to be turned ON/OFF

Serial communication module side		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
FG	1		FG
SD (TXD)	2		SD (TXD)
RD (RXD)	3		RD (RXD)
RS	4		RS
CS (CTS)	5		CS (CTS)
DSR (DR)	6		DSR (DR)
SG	7		SG
CD	8		CD
DTR (ER)	20		DTR (ER)

* DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

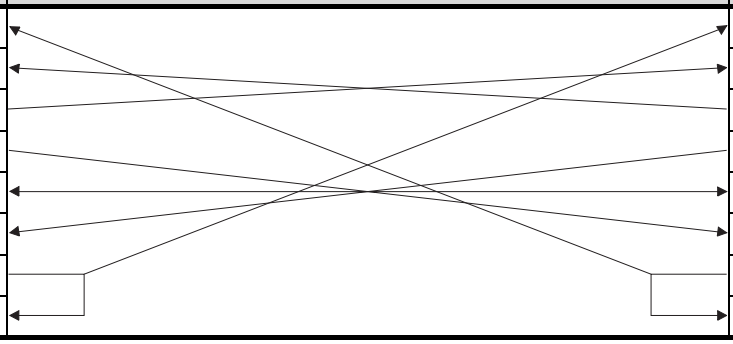
2) Example of connection to an external device that does not allow the CD signal (No. 8 pin) to be turned ON/OFF

Serial communication module side		Cable Connection and Signal Direction (Connection example for full duplex communication)	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
FG	1		FG
SD (TXD)	2		SD (TXD)
RD (RXD)	3		RD (RXD)
RS	4		RS
CS (CTS)	5		CS (CTS)
DSR (DR)	6		DSR (DR)
SG	7		SG
CD	8		CD
DTR (ER)	20		DTR (ER)

* DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

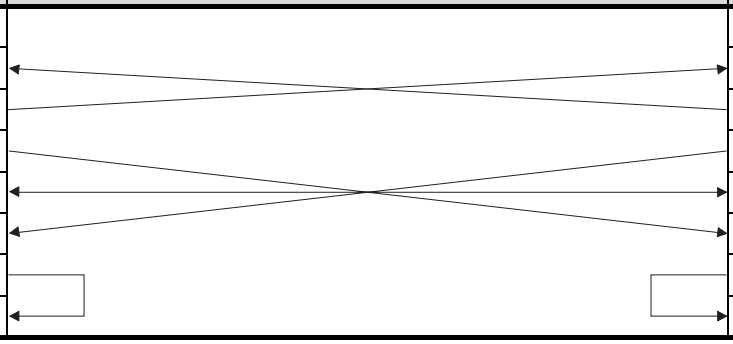
For QnA Series (compact-scale QC24(N))1)

1) Example of connection to an external device that allows the CD signal (No.1 pin) to be turned ON/OFF

Serial communication module side		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD (RXD)	2		RD (RXD)
SD (TXD)	3		SD (TXD)
DTR (ER)	4		DTR (ER)
SG	5		SG
DSR (DR)	6		DSR (DR)
RS (RTS)	7		RS (RTS)
CS (CTS)	8		CS (CTS)

* DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

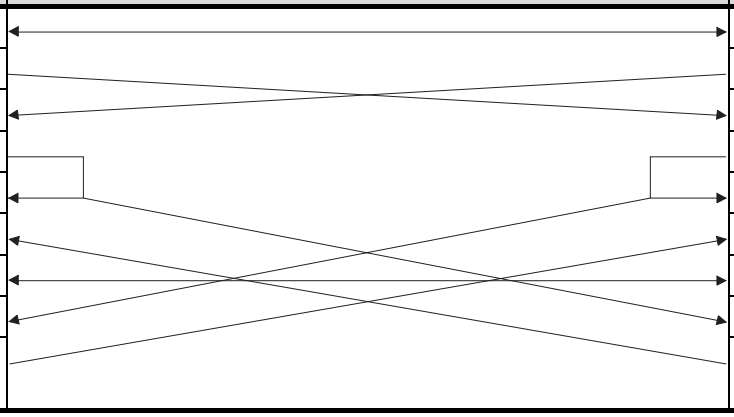
2) Example of connection to an external device that does not allow the CD signal (No. 1 pin) to be turned ON/OFF

Serial communication module side		Cable Connection and Signal Direction (Connection example for full duplex communication)	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD (RXD)	2		RD (RXD)
SD (TXD)	3		SD (TXD)
DTR (ER)	4		DTR (ER)
SG	5		SG
DSR (DR)	6		DSR (DR)
RS (RTS)	7		RS (RTS)
CS (CTS)	8		CS (CTS)

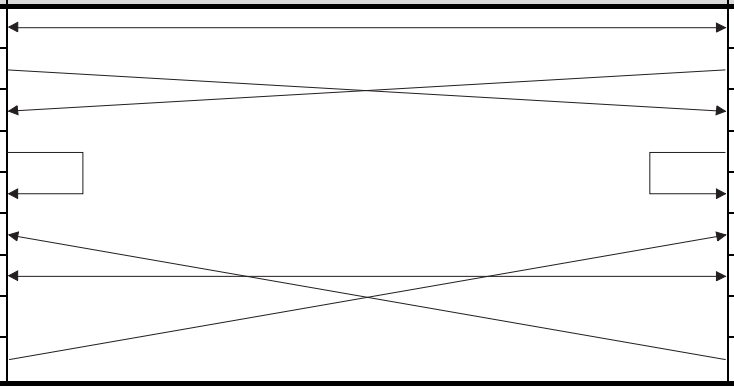
* DC code control or DTR/DSR control is enabled by connecting the QC24 (N) to an external device as shown above.

For A Series

1) Connection example 1 when the C24 (computer link module) has a 25-pin connector

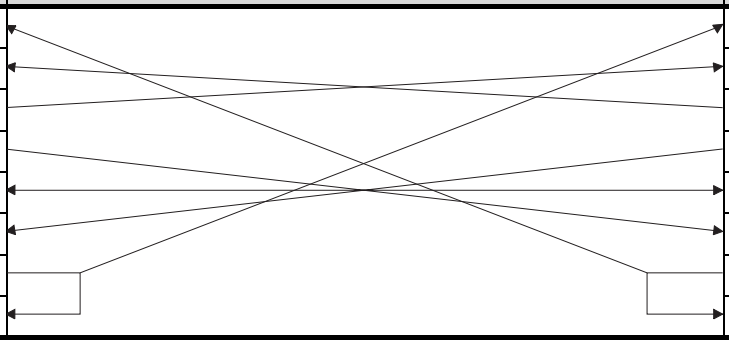
Computer link module side		Cable Connection and Signal Direction	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
FG	1		FG
SD (TXD)	2		SD (TXD)
RD (RXD)	3		RD (RXD)
RS	4		RS
CS (CTS)	5		CS (CTS)
DSR (DR)	6		DSR (DR)
SG	7		SG
CD	8		CD
DTR (ER)	20		DTR (ER)

2) Connection example 2 when the C24 (computer link module) has a 25-pin connector

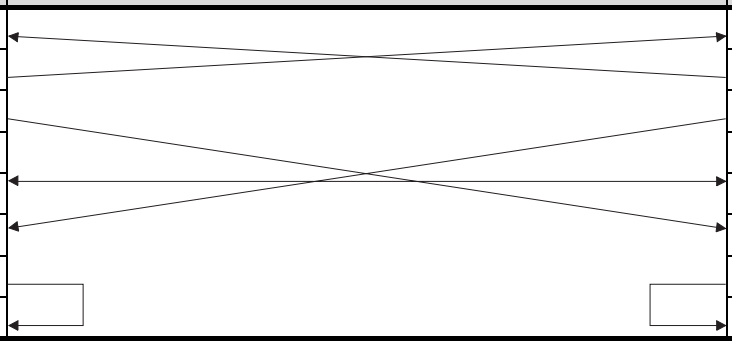
Computer link module side		Cable Connection and Signal Direction	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
FG	1		FG
SD (TXD)	2		SD (TXD)
RD (RXD)	3		RD (RXD)
RS	4		RS
CS (CTS)	5		CS (CTS)
DSR (DR)	6		DSR (DR)
SG	7		SG
CD	8		CD
DTR (ER)	20		DTR (ER)

* When performing a communication in the connection shown above, the CD signal is not required to be connected.
For the RS-232C CD terminal check setting (set by the buffer memory address "10BH"), specify "without CD terminal check (writing "1")".

3) Connection example 1 when the C24 (computer link module) has a 9-pin connector

Computer link module side		Cable Connection and Signal Direction	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD (RXD)	2		RD (RXD)
SD (TXD)	3		SD (TXD)
DTR (ER)	4		DTR (ER)
SG	5		SG
DSR (DR)	6		DSR (DR)
RS (RTS)	7		RS (RTS)
CS (CTS)	8		CS (CTS)

4) Connection example 2 when the C24 (computer link module) has a 9-pin connector

Computer link module side		Cable Connection and Signal Direction	GT SoftGOT1000 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD (RXD)	2		RD (RXD)
SD (TXD)	3		SD (TXD)
DTR (ER)	4		DTR (ER)
SG	5		SG
DSR (DR)	6		DSR (DR)
RS (RTS)	7		RS (RTS)
CS (CTS)	8		CS (CTS)

*1 DC code control or DTR/DSR control is enabled by connecting the DTR and DSR signals of the computer link module to an external device as shown above.

*2 When performing a communication in the connection shown above, the CD signal is not required to be connected.
For the RS-232C CD terminal check setting (set by the buffer memory address "10BH"), specify "without CD terminal check (writing "1")".

2.5.3 Connecting to interface board or network module

1 MELSECNET/H connection, MELSECNET/10 connection

The cables are the same as the fiber-optic cables and coaxial cables used in the MELSECNET/H or MELSECNET/10 network system.
Refer to the following for details of cables.

☞Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

2 CC-Link IE controller network connection

The cables are the same as the fiber-optic cables used in the CC-Link IE controller network.
Refer to the following for details of cables.

☞CC-Link IE Controller Network Reference Manual

2.5.4 Connecting to Ethernet module or Ethernet board/card

Use a cable applicable to the Ethernet module or the Ethernet board/card to be used.

2.5.5 Connecting to CNC

1 Connecting to CNC C70

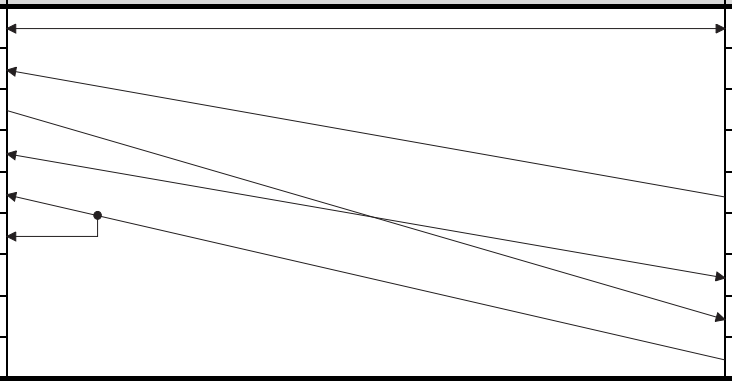
(1) Direct CPU connection, computer link connection, MELSECNET/H connection, MELSECNET/10 connection
Connect GT SoftGOT1000 to the QCPU (Q mode) in the multiple CPU system.
The cable for connecting to the CNC C70 is the same as that for connecting to the QCPU.

(2) Display I/F connection
The cable for connecting to the CNC C70 is the same as that for connecting to the QCPU via the Ethernet connection.
Use a cable applicable to the CNC C70 to be used.

2 Connecting to MELDAS C6/C64

(1) Direct CPU connection
The user is required to make a conversion cable for connecting to the MELDAS C6/C64.
The following describes the connection diagram, connector and others for each cable.

(a) Connection diagram

PC (GT SoftGOT1000) side		Cable connection and signal direction	MELDAS C6/C64 (TERMINAL) siide	
Signal name	Pin No.		Pin No.	Signal name
GND	1		1	GND
RD(RXD)	2		-	
SD(TXD)	3		-	
GND	5		-	
DR(DSR)	6		6	SD(TXD)
CS(CTS)	8		-	
			11	GND
			16	RD(RXD)
			18	ER(DTR)

(b) Connector specifications
- PC side connector
  Use the connector compatible with the PC side.
- MELDAS C6/C64 side connector
  Use the connector compatible with MELDAS C6/C64 side.
  For details, refer to the following manual.
  ☞ User's Manual for the MELDAS C6/C64

(c) Precautions for creating cables
The length of the conversion cable must be 15m or shorter.

(2) Ethernet connection
Use a cable applicable to the Ethernet module to be used.

2.5.6 Connecting to robot controller

1 Connecting to CRnQ-700

Connect GT SoftGOT1000 to the QCPU (Q mode) in the multiple CPU system.
The cable for connecting to the CRnQ-700 is the same as that for connecting to the QCPU.

2 Connecting to CRnD-700

The cable for connecting to the CRnD-700 is the same as that for connecting to the QCPU via the Ethernet connection.
Use a cable applicable to the CRnD-700 to be used.

2.5.7 Connecting to Omron PLC CPU

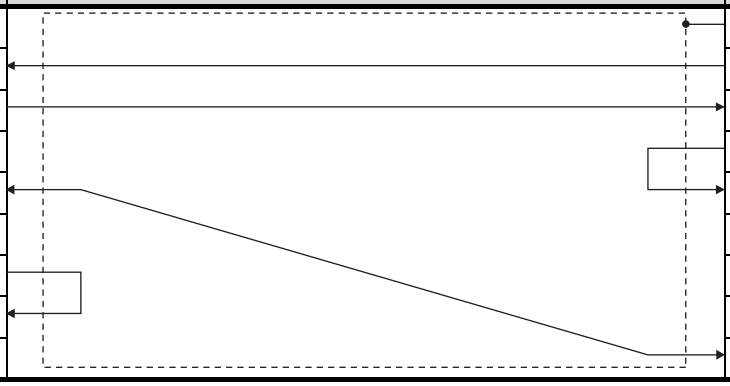
1 When using a product made in Mitsubishi Electric System Service Co., Ltd.

RS-232 cable
GT09-C30R20101-9P(3m) (For the 9-pin D-sub connector of the PC

2 When using an RS-232 cable prepared by user

The following describes the connection diagram, connector and others for each cable.

(1) Connection diagram

PC (GT SoftGOT1000) side		Cable connection and signal direction	Omron products side	
Signal name	Pin No.		Pin No.	Signal name
CD	1		1	FG
RD (RXD)	2		2	SD
SD (TXD)	3		3	RD
ER (DTR)	4		4	RS
SG	5		5	CS
DR (DSR)	6		6	-
RS (RTS)	7		7	FR
CS (CTS)	8		8	ER
-	9		9	SG

(2) Connector specifications

(a) PC side connector

Use the connector compatible with the PC side.

(b) Omron PLC CPU side connector

Use the connector compatible with Omron PLC CPU side.

For details, refer to the following manual.

☞ User's Manual for Omron PLC CPU

(3) Precautions for creating cables

The length of the cable must be 15m or less.

2.5.8 Connecting to YASKAWA PLC CPU

1 Serial connection

For serial connection, the used cable differs according to the connection destination.
The following lists the available cables for each destination.

Model name			Connection cable
PLC CPU	GL120		• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
	GL130		
	CP-9300MS (CP-9300MC compatible/no compatible)		• GT09-C30R20203-9P • User-created cable (RS-232 cable 3))
	CP-9200(H)		• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
	PROGIC-8	For connecting to port 1	• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
		For connecting to port 2	• User-created cable (RS-232 cable 2))
	MP-920		• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
	MP-930		
	MP-940		• User-created cable (RS-232 cable 4))
MEMOBUS module	JAMSC-IF60		• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
	JAMSC-IF61		
Communication module	217IF		• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
	CP-217IF	For connecting to CN1	
		For connecting to CN2	• User-created cable (RS-232 cable 5))
	217IF-01		• GT09-C30R20201-9P • User-created cable (RS-232 cable 1))
	218IF-01		

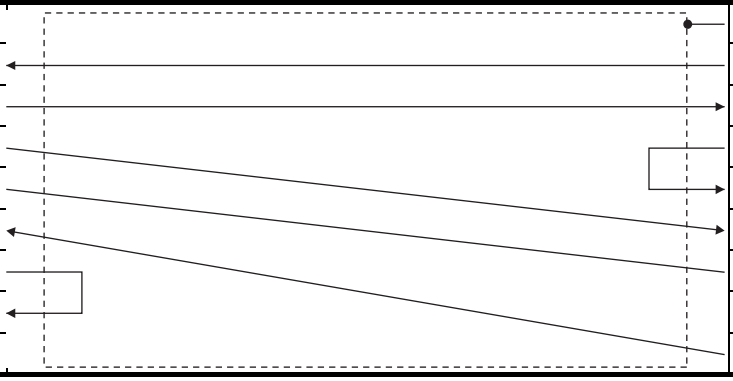
(1) When using MITSUBISHI SYSTEM & SERVICE product

RS-232 cable
GT09-C30R20201-9P (3m) (For the 9-pin D-sub connector of the personal computer side)
GT09-C30R20203-9P (3m) (For the 9-pin D-sub connector of the personal computer side)

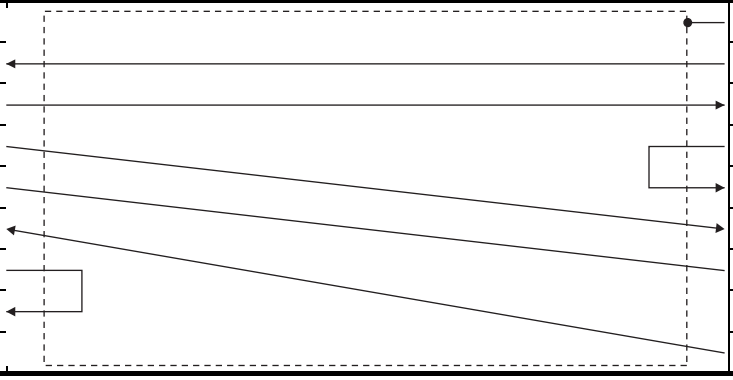
(2) When using an RS-232 cable prepared by user
The following describes the connection diagram, connector and others for each cable.

(a) Connection diagram

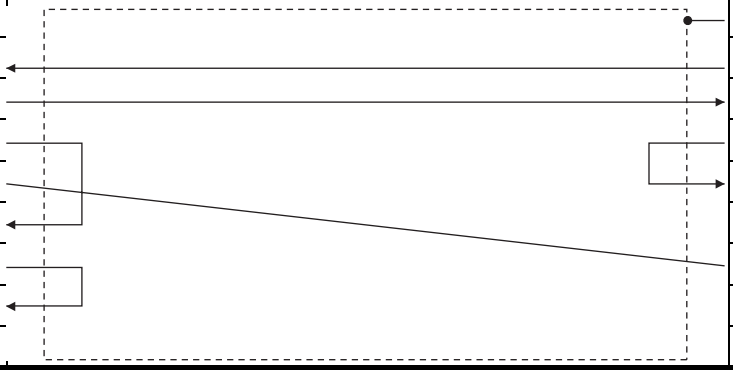
• RS-232 cable 1)

Personal computer (GT SoftGOT1000) side		Cable connection and signal direction	YASKAWA products side	
Signal name	Pin No.		Pin No.	Signal name
CD	1		1	FG
RD(RXD)	2		2	TXD
SD(TXD)	3		3	RXD
ER(DTR)	4		4	RTS
SG	5		5	CTS
DR(DSR)	6		6	DSR
RS(RTS)	7		7	GND
CS(CTS)	8		8	EST
-	9		9	DTR

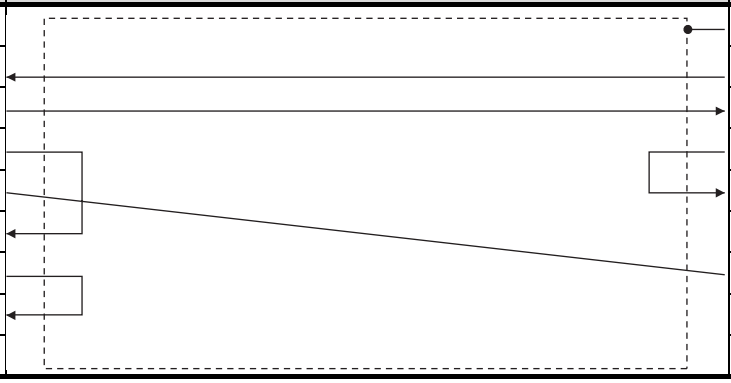
• RS-232 cable 2)

Personal computer (GT SoftGOT1000) side		Cable connection and signal direction	YASKAWA products side	
Signal name	Pin No.		Pin No.	Signal name
CD	1		1	FG
RD(RXD)	2		2	TXD
SD(TXD)	3		3	RXD
ER(DTR)	4		4	RTS
SG	5		5	CTS
DR(DSR)	6		6	DSR
RS(RTS)	7		7	GND
CS(CTS)	8		8	NC
-	9		9	DTR

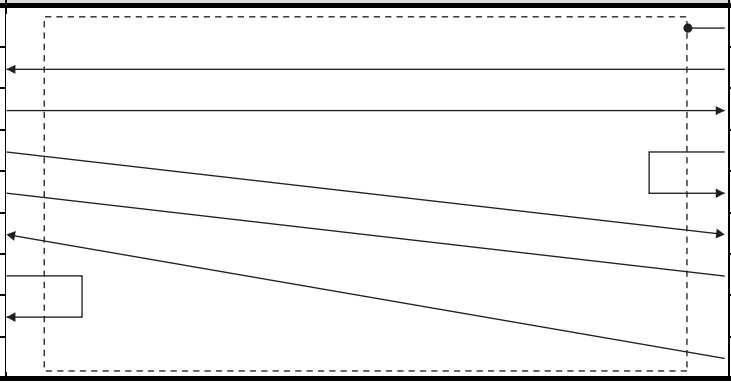
• RS-232 cable 3)

Personal computer (GT SoftGOT1000) side		Cable connection and signal direction	YASKAWA products side	
Signal name	Pin No.		Pin No.	Signal name
CD	1		1	FG
RD(RXD)	2		2	TXD
SD(TXD)	3		3	RXD
ER(DTR)	4		4	RTS
SG	5		5	OP/CTS
DR(DSR)	6		6	DSR
RS(RTS)	7		7	GND
CS(CTS)	8		8	PWR
-	9		9	DTR

• RS-232 cable 4)

Personal computer (GT SoftGOT1000) side		Cable connection and signal direction	YASKAWA products side	
Signal name	Pin No.		Pin No.	Signal name
CD	1		Clamped on hood	
RD(RXD)	2		1	TXD
SD(TXD)	3		3	RXD
ER(DTR)	4		12	RTS
SG	5		6	CTS
DR(DSR)	6		2	-
RS(RTS)	7		14	GND
CS(CTS)	8			
-	9			

• RS-232 cable 5)

Personal computer (GT SoftGOT1000) side		Cable connection and signal direction	YASKAWA products side	
Signal name	Pin No.		Pin No.	Signal name
CD	1		1	FG
RD(RXD)	2		2	TXD
SD(TXD)	3		3	RXD
ER(DTR)	4		4	RS
SG	5		5	CS
DR(DSR)	6		6	DSR
RS(RTS)	7		7	SG
CS(CTS)	8		8	CD
-	9		20	DTR

(b) Connector specification

• Personal computer side connecter
Use the connector compatible with the personal computer side.

• YASKAWA PLC CPU side connector
Use the connector compatible with YASKAWA PLC CPU side.
For details, refer to the following manual.
☞User's manual for YASKAWA PLC CPU

(c) Precautions for creating cables
The length of the cable must be 15m or less.

2 Ethernet connection

Be sure to use cables compatible with the communication module to be used if the connection is made via Ethernet.

2.5.9 Connecting to YOKOGAWA PLC

1 Ethernet connection

Be sure to use cables compatible with the Ethernet interface module to be used if the connection is made via Ethernet.

2.6 Access Range for Monitoring

For the access range for monitoring of GT SoftGOT1000, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

3. SPECIFICATIONS

3.1 Specifications

3.1.1 Specifications of the GT SoftGOT1000

The specifications of the GT SoftGOT1000 is shown below.

Item	Specifications	
Resolution (dots)	640 × 480, 800 × 600, 1024 × 768, 1280 × 1024, 1600 × 1200, X × Y (Resolution specification)*1	
Display color (color)	65536	
Memory capacity	57MB	
Connection type	For using MITSUBISHI PLC:	Bus connection, Direct connection to CPU, Computer link connection, MELSECNET/H connection, MELSECNET/10 connection, CC-Link IE controller network connection, Ethernet connection
	For using CNC:	
	・CNC C70	Direct connection to CPU, Computer link connection, MELSECNET/H connection, MELSECNET/10 connection, CC-Link IE controller network connection, Display I/F connection
	・MELDAS C6/C64	Direct connection to CPU, Ethernet connection
	For using a robot controller:	
	・CRnQ-700	Direct connection to CPU, Computer link connection, MELSECNET/H connection, MELSECNET/10 connection, CC-Link IE controller network connection, Ethernet connection
	・CRnD-700	Ethernet connection
	For using OMRON PLC:	Direct connection to CPU
	For using YASKAWA PLC:	Direct connection to CPU, Computer link connection, Ethernet connection
	For using YOKOGAWA PLC:	Ethernet connection

*1 X and Y are resolution values set by the user.

5.3.1 Environment setup dialog box

Point

Project data display

(1) Full screen mode

If the resolution of the personal computer used is the same as that of GT SoftGOT1000, it is recommended to hide the frame and menu part using the full screen mode function.

When not using the full screen mode function, the top/bottom and left/right parts of the display are hidden by the frame and menu part.

(2) GOT type and resolution

For the GT SoftGOT1000, set the same resolution as the GOT type of the project data created with GT Designer2.

If the resolution settings are different, the project data cannot be read into the GOT.

3.1.2 License key specifications

To use GT SoftGOT1000, license key is required.
License key has the following two types.

Model name	Attachment type
GT15-SGTKEY-U	Attached to USB port
GT15-SGTKEY-P	Attached to parallel port

Be sure to attach the license key before starting monitoring on GT SoftGOT1000.
When starting monitoring without a license key, GT SoftGOT1000 automatically ends in about two hours.
Also, from starting monitoring to exiting it, use GT SoftGOT1000 with the license key attached.
If the license key is disconnected during monitoring, the GT SoftGOT1000 will exit automatically.

Point

License key

(1) Before using license key
The license key is authentificated by OS as a connected device.
Thus, the System Driver (device driver) needs to be installed as other connected devices.
As the license key can be accessed via the System Driver, the access to the license key is not allowed when the System Driver is not installed.

(2) License key use target
The GT15-SGTKEY-U and GT15-SGTKEY-P are dedicated for GT SoftGOT1000.
They cannot be used for GT SoftGOT2.

3.2 Functions that Cannot Be Used

In GT SoftGOT1000, some functions available in GT15 cannot be used.
The following table shows unusable functions.

Function category	Function name	
Utility functions[*1]	Communication Settings, Debug & self check[*3], Program/data control[*3],	Time setting & display, Maintenance timming setting, Addtion times reset
Extension function[*2]	System monitor function, Video display, External I/O function, Backup/restore function, RFID function	Barcode function, RGB display, Operation Panel function[*4], CNC data I/O function,
Option functions[*2]	Ladder monitor function, List editor for MELSEC-FX, Network monitor function, Servo amplifier monitor function, Gateway function, Multi-channel function, SFC monitor function	List editor for MELSEC-A, Intelligent module monitor function, Q motion monitor function, CNC monitor function, Maintenance timming setting, MES interface function,
Others	FA transparent functions, RGB output	Human sensor function,

*1 Refer to the following manual for details of Utility function.

☞ GT15 User's Manual

*2 Refer to the following manual for details of Extension and Option functions.

☞ GOT1000 Series Extended/Option Functions Manual

*3 By using the special function switch, the logging information, advanced recipe information, operation log information operator information management can be used.
For details of the special function switch, refer to the following manual.

☞ GT Designer2 Version□ Screen Design Manual

*4 With the keyboard input function, operations equivalent to the operation panel function can be available.

Point

Utility operability

In GT SoftGOT1000, some functions do not operate even though they can be set. The operability on GT SoftGOT1000 is shown below.

Item			Operability on GT SoftGOT1000
Communication setting			×
Time setting & display			-
Debug & self check			×
Maintenance timming setting			-
GOT setup	Display	Opening screen time	○
		Screen save time	×
		Screen save backlight	-
		Language	○
		Battery alarm display	-
		Brightness, contrast	×
	Q/QnA ladder monitor		-
	Operation	Buzzer volume	○
		Window move buzzer	○
		Security setting screen switching	○
		Menu call key	○
		Key sensitivity	-
		Key reaction speed	-
		Touch panel calibration	-
		Touch detection mode	-
	Transparent mode settings		-
	Backup/restoration setting		-
Program/data control			×
Clean			×
Addition times reset			-

○ : Operable

× : Inoperable

- : Setting is not required on GT SoftGOT1000 (Some items can be set but do not operate.)

3.3 Precautions

3.3.1 Precautions for using the GT Soft GOT1000

1 Numerical Display

When the [View Format] of [Numerical Display] is set to [Real] and if illegal value is stored, illegal value will be displayed on GT Soft GOT1000. (GOT displays [non].)

2 Time display

The clock data of the personal computer is used for clock display when monitoring GT SoftGOT1000. (GOT reads and shows the clock data of the PLC CPU.)
When controling a system using clock data, set the same clock data for the PLC CPU and personal computer.
GT SoftGOT1000 does not support [Automatically adjust clock for daylight saving changes] on the personal computer.

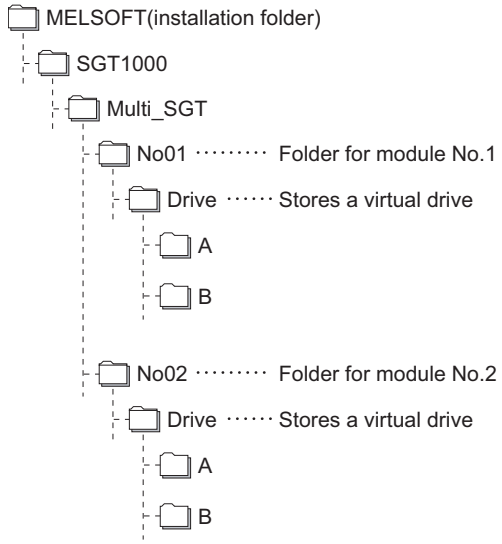
3 GT Soft GOT1000 Versions

Be sure to use the GT Soft GOT1000 of the same version as the GT Designer2 that the project data is created.
When using different versions of GT SoftGOT1000 and GT Designer2, the file may not be opened, functions/settings may be invalid, or the GT Soft GOT1000 may not work correctly.
Refer to the following for the project data compatibility.

☞ Appendix 1 Applicable Project Data

4 Virtual drive

The GT SoftGOT1000 uses the following folder located on the hard disk of a personal computer as a virtual drive.
A virtual drive is created for each module.



Any other folder can also be set as a virtual A/B drive.
Refer to the following section for changing the folder for a virtual A/B drive.

☞ 5.3 Environment Setup

5 Logging, advanced recipe, operation log, operator authentication

The logging information, advanced recipe information, operation log information, and operator info. management cannot be displayed with the utility.
For using the logging information, advanced recipe information, operation log information, and operator info. management, set special function switches.
For special function switches, refer to the following manual.

☞ GT Designer2 Version2 Screen Design Manual

6 Printer to output function

(1) Hard copy output destination
Hard copy output destination can be specified on GT Designer2 or GT SoftGOT1000.
Settings that are required for each hard copy output destination are shown below.

(a) In the case [Printer] is selected as the output destination on the Hard copy setting screen of GT Designer2.

Hard copy output		Setting at GT SoftGOT1000	
File save destination (Hard copy (File Save))	Printing	[Print to printer (Hard Copy Function)] on the Page Setup screen	[File Output (Hard Copy Function)] on the Environment Setup screen
Virtual A Drive (GT1sgHardcopy)	Yes	Check	-
Virtual A Drive (GT1sgHardcopy)	No	Uncheck	-

-: Setting ineffective

(b) In the case [File] is selected as the output destination on the Hard copy setting screen of GT Designer2

.

Hard copy output		Setting at GT SoftGOT1000	
File save destination (Hard copy (File Save))	Printing	[Print to printer (Hard Copy Function)] on the Page Setup screen	[File Output (Hard Copy Function)] on the Environment Setup screen
Virtual A Drive (GT1sgHardcopy)	No	-	Select [Default].
The save file destination that was specified on the Hard copy setting screen of GT Designer2	No	-	Select [Project Data Setting].

-: Setting ineffective

Refer to the following for hard copy functions.

☞ GT Designer2 Version Screen Design Manual

Refer to the following for Page Setup.

☞ 6.2.3 Performing page setup

Refer to the following for Environment Setup.

☞ 5.3 Environment Setup

(2) System alarm during hard copying
The system alarm will not be displayed during hard copying.
Refer to the following for troubleshooting for the hard copy function.

☞ 8.4 Troubleshooting for Print

☞ 8.5 Troubleshooting for File Save Problems

(3) Report function
Data cannot be output to a printer directly.
Print images (in CSV format) are stored to the virtual A drive of a personal computer once. Output these images in each file to a printer.

7 Resource data storage destination

Resource data is stored to the virtual A drive or a user-specified folder with the configuration shown below.

Storage destination		Function		
Virtual A drive or user-specified folder	Folder name specified in project data	Advanced alarm, Recipe, Hard copy (File save)*1,	Alarm history, Advanced recipe, Hard copy (Print),	Logging, Report (Print), Operation log
	G1SgtReport	Report (Print)		
	G1SgtHardcopy	Hard copy (File save)*1		
		Hard copy (Print)		

*1 File save destination for each file can be specified in the [File Output (Hard Copy Function)] menu in the Environment Setup dialog box.
Refer to the following for Environment Setup dialog box.

☞ 5.3.1 Environment setup dialog box

The file formats of resource data are described below.

Function	Folder name	File format and file name
Advanced alarm	Folder name set in project data	File name set in project data *****.G1A
		File name set in project data *****.CSV
		File name set in project data *****.TXT
Alarm function	Folder name set in project data	File name set in project data *****.G1H
		File name set in project dataa *****.CSV
Logging	Folder name set in project data	File name set in project data *****.G1L
		File name set in project data *****.CSV
		File name set in project data *****.TXT
Recipe	Folder name set in project data	File name set in project data *****.CSV
Advanced recipe	Folder name set in project data	File name set in project data *****.G1P
		File name set in project data *****.CSV
		File name set in project data *****.TXT
Report (Print)*1	G1SgtReport (Fixed)	REP00001.CSV - REP00008.CSV
Hard copy (File save)*2	G1SgtHardcopy (Fixed)	SNAP0001.BMP - SNAP9999.BMP
		SNAP0001.JPG - SNAP9999.JPG
	File name set in project data	File name set in project data *****.BMP
		File name set in project data *****.JPG
Hard copy (Print)	G1SgtHardcopy (Fixed)	HARDCOPY.BMP (Fixed)
Operation log function	Folder name set in project data	File name set in project data *****.G1O
		File name set in project data *****.CSV
		File name set in project data *****.TXT

*1 When using any language other than Japanese and English for the report screen and outputting the data in CSV file, characters may not be displayed correctly.
Do not use any language other than Japanese and English.

*2 File save destination for each file can be specified in the [File Output (Hard Copy Function)] menu in the Environment Setup dialog box.
Refer to the following for Environment Setup.

☞ 5.3.1 Environment setup dialog box

Point

Precautions on file names for the virtual drive

As a folder name for the virtual drive, only ASCII characters (excluding “|”, “,” and “;”) can be used with up to 78 characters.
Set the file name with up to 256 characters including the path name for file storage destination and file name to be stored (including extension).
Two-byte and one-byte Japanese kana are considered as 2 characters.

8 Functions in which data are stored in the memory card in advance by the user

Store parts of BPM/JPEG files and document display data to the virtual drive A or the virtual drive B when registering the files and data.
(The drive to be used depends on the specifications and setting of the object.)
For details of each function, refer to the following manual.

☞ GT Designer2 Version ☐ Screen Design Manual

Except for the virtual drive, GT SoftGOT1000 does not recognize BPM/JPEG files and other files.

Example) Storage destination for document display data

\MELSOFT\SGT1000\Multi_SGT\No01\Drive\A\DOCIMG

3.3.2 Precautions on license key

1 When attaching GT15-SGTKEY-U

(1) Installation/uninstallation of the System Driver
Before installing or uninstalling the System Driver, disconnect the GT15-SGTKEY-U.
When installing the System Driver with the GT15-SGTKEY-U attached, the installation of USB may be failed.
When the installation is failed, uninstall the System Driver after disconnecting the GT15-SGTKEY-U, and install it again.

2 When attaching GT15-SGTKEY-P

(1) Using GT15-SGTKEY-P
The GT15-SGTKEY-P can be used only with the parallel port built in a personal computer as standard.
It cannot be used with the parallel port added by extension or a converter.

(2) Using GT15-SGTKEY-P with other devices simultaneously
The following devices cannot be used at the same port as the GT15-SGTKEY-P.
- SCSI interface for parallel port
- Floppy disc drive, hard disc drive, CD-ROM or ZIP drive connected to parallel port
- Devices that use a data communication method other than the standard network specification, including parallel port communication type Interlink and Centronics printer interface

(3) Attaching GT15-SGTKEY-P
Connect the GT15-SGTKEY-P between the printer switching device and personal computer.

3 When using the System Driver

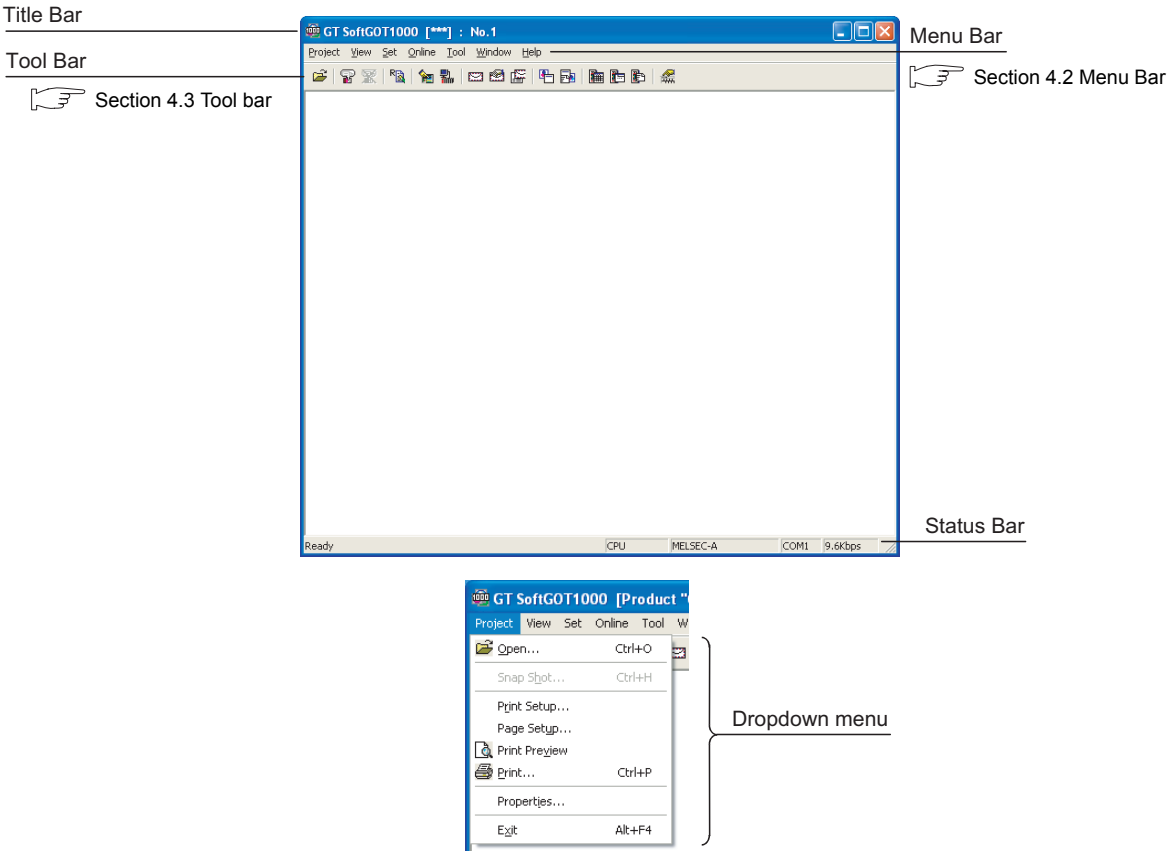
(1) Installing the System Driver
Use the System Driver included in the GT Works2 Version2/GT Designer2 Version2 of Ver. 2.25B.
When using a System Driver earlier than Ver. 2.25B or later, GT15-SGTKEY-U cannot be used.
(GT15-SGTKEY-P can be used.)

4. SCREEN CONFIGURATION

4.1 Screen Configuration and Basic Operation

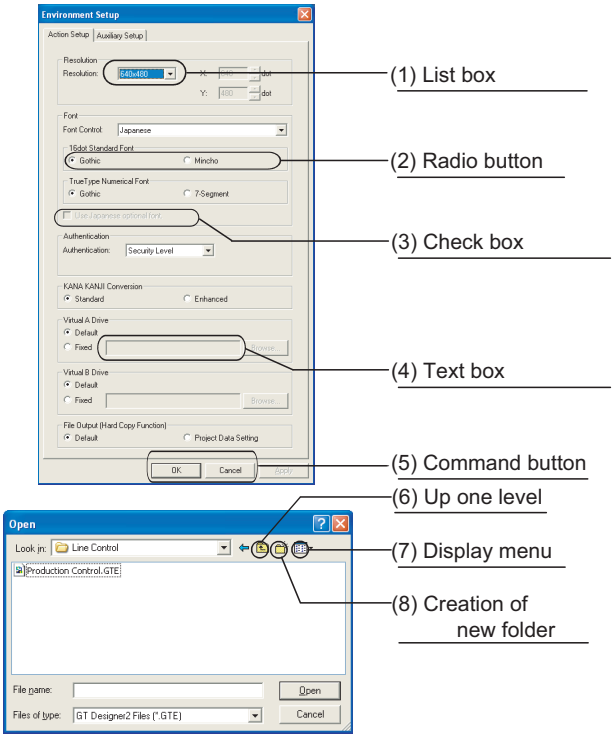
4.1.1 Screen configuration

This section describes screen configuration.



4.1.2 Basic operation

This section describes basic operation.



(1) List box
Click ▼ to display the selection list, then click and select an item.

(2) Radio button
Select an item by clicking the corresponding ○.

(3) Check box
When executing the item, click ☐ to put a check mark ✔.

(4) Text box
Enter a text from the keyboard.

(5) Command button
The command buttons such as OK and Cancel are provided. Click the command button indicating desired operation.

(6) Up one level
Displays the level one up from the current folder.

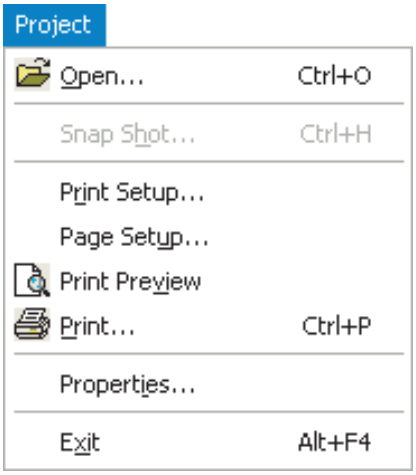
(7) Display menu
Provides the viewing mode of the folders and files in the current folder; select from detailed display, list display and another modes.

(8) Creation of new folder
Creates a new folder.

4.2 Menu Bar

This section describes commands assigned to the menu bar.

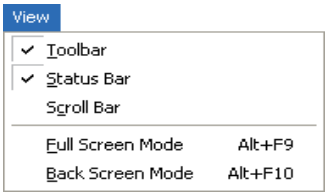
Project



The Project menu includes options for project data reading, Snap Shot and printing.

☞ 5. OPERATING METHOD 6. FUNCTIONS

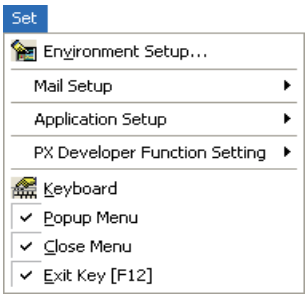
View



The View menu includes the functions for switching the toolbar, menu bar, and scroll bar between display and nondisplay states. The menu includes the functions for switching the full screen mode and back screen mode between enabled and disabled states.

☞ 5. OPERATING METHOD

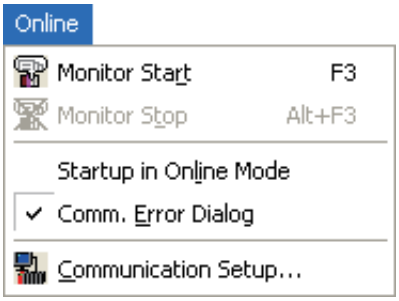
Set



The Set menu includes the functions for setting the environment, mail, application start-up, and PX Developer. The menu includes the functions for switching the keyboard input, popup menu, close menu, and exit key between enabled and disabled states.

☞ 6. FUNCTIONS

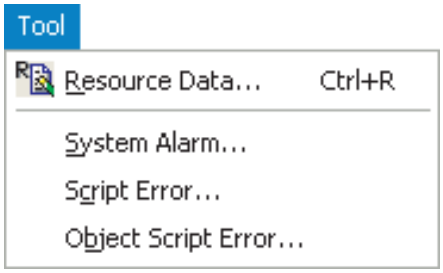
Online



The Online menu includes functions for setting monitor start/stop, starting in online mode enable/disable switching, communication error dialog display/non-display and communications.

☞ 5. OPERATING METHOD

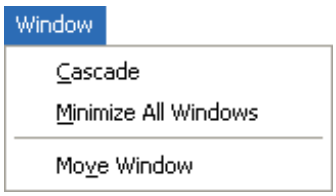
Tool



The Tool menu includes display functions of resource data and error information.

☞ 6. FUNCTIONS

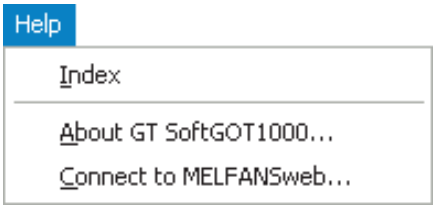
Window



The Window menu includes the function of window move.

☞ 6. FUNCTIONS

Help



The Help menu includes functions of viewing the PDF manual related to the GT SoftGOT1000 and checking the software version.

☞ 4.4 Help

4.3 Tool bar

This section describes the tool bar.

Name	Description
Open a GT Designer2 file.	Opens the project data created with GT Designer2.
Monitor Start	Starts monitoring.
Monitor Stop	Stops monitoring.
Resource Data	Displays resource data.
Environment Setup	Performs environment settings for GT SoftGOT1000.
Communication Setup	Performs communication settings for GT SoftGOT1000.
Mail setup	Performs mail settings such as dial-up, send address.
Mail Condition	Disables the mail send setting of the project data.
Mail History	Displays the operation history of mail sendings.
Application Start-up Setting	Allows settings for starting up applications from GT SoftGOT1000.
Application Start-up History	Shows operation histories of application start-up.
PX Developer Function Call Setting	Performs the PX Developer call settings.
PX Developer Function Call Sub-Setting	Performs the PX Developer call sub-settings.
PX Developer Function Call Sub-Setting	Shows operation histories at calling monitor tool functions for in PX Developer.
Keyboard	Switches keyboard input enable/disable.

4.4 Help

Using Help allows viewing of the GT SoftGOT1000 related PDF manuals and the software version check.

Point Before viewing the PDF manual

To view the PDF manual, GT Manual and Adobe® Reader® must be installed.

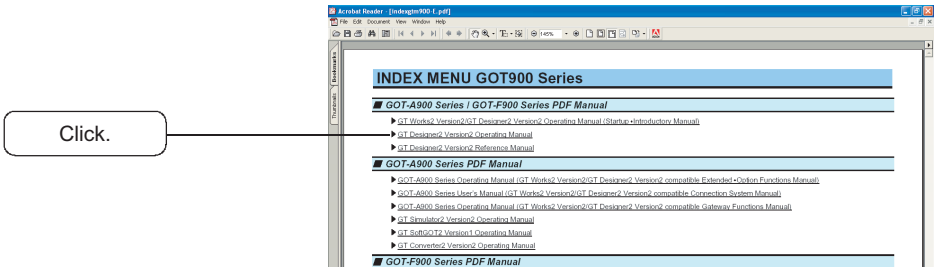
1 Operating method

1 Click an item within [Help].

Item	Description
[Index]	Displays the PDF manual list.
[About GT SoftGOT1000...]	Used to check the GT SoftGOT1000 version.
[Connect to MEL FANweb...]	Connects to the Information site for Mitsubishi Electric Industrial Automation Products, MELFANSweb.

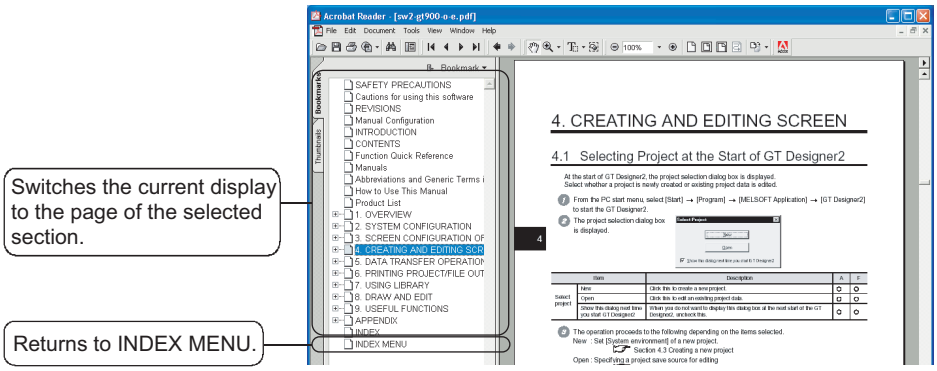
2 Viewing a PDF manual (When [Index] is selected)

1 After operation in 1, the following screen appears. Click the manual to be viewed.



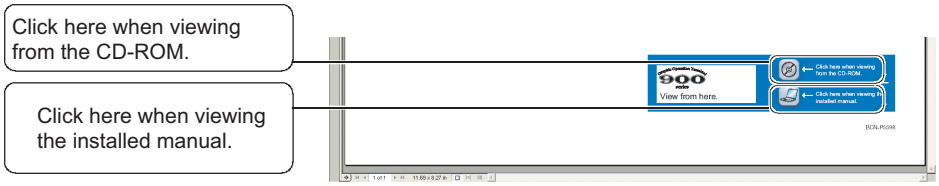
*The illustration above is given as an example and different from the actual page.

2 The selected manual is displayed. (For details of the Adobe® Reader® operating method, refer to Help of Adobe® Reader® .)



*The illustration above is given as an example and different from the actual page.

3 Clicking the icon in the lower right of INDEX MENU switches the screens between GOT1000 and GOT900 series.

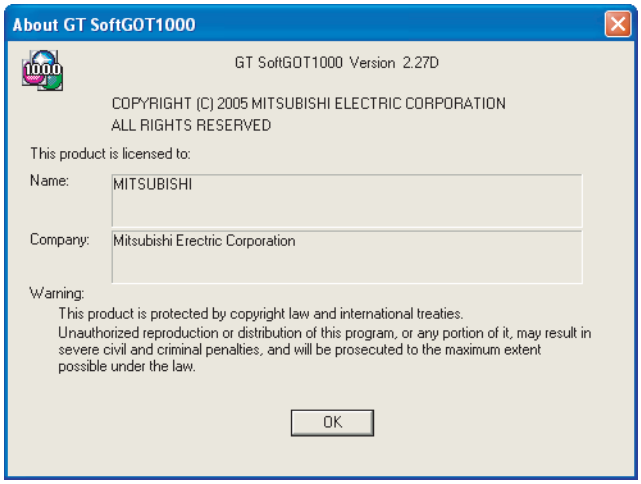


(Example: Screen for changing to GOT900 Series screen)

*The illustration above is given as an example and different from the actual page.

3 Confirming GT SoftGOT1000 version (When [About GT SoftGOT1000...] is selected)

1 After operation in 1, the screen about GT SoftGOT1000 is displayed.



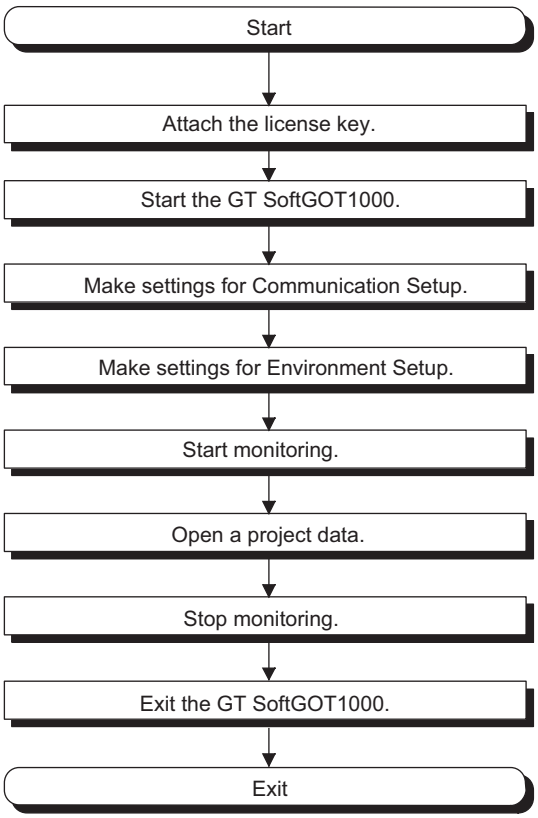
(Example: For Version 2.27D)

Item	Description
GT SoftGOT1000	Displays GT SoftGOT1000 version.
Name	Displays the name entered during GT SoftGOT1000 installation.
Company	Displays the company name entered during GT SoftGOT1000 installation.
OK	Closes the About GT SoftGOT1000 screen.

5. OPERATING METHOD

5.1 Operating Procedure

The following describes the operating procedure of GT SoftGOT1000.



☞ 3.1.2 License key specifications
3.3.2 Precautions on license key

☞ GT Designer2 Version□ Basic Operation/Data Transfer Manual

☞ 5.2 Communication Setup

☞ 5.3 Environment Setup

☞ 5.4 Starting Monitoring

☞ 5.5 Opening the Project

☞ 5.7 Monitor Stop

☞ 5.8 Exiting from GT SoftGOT1000

5.2 Communication Setup

In Communication Setup, set the type of the PLC CPU to be connected, the communication time-out period, etc.

1 Perform either of the following operations.

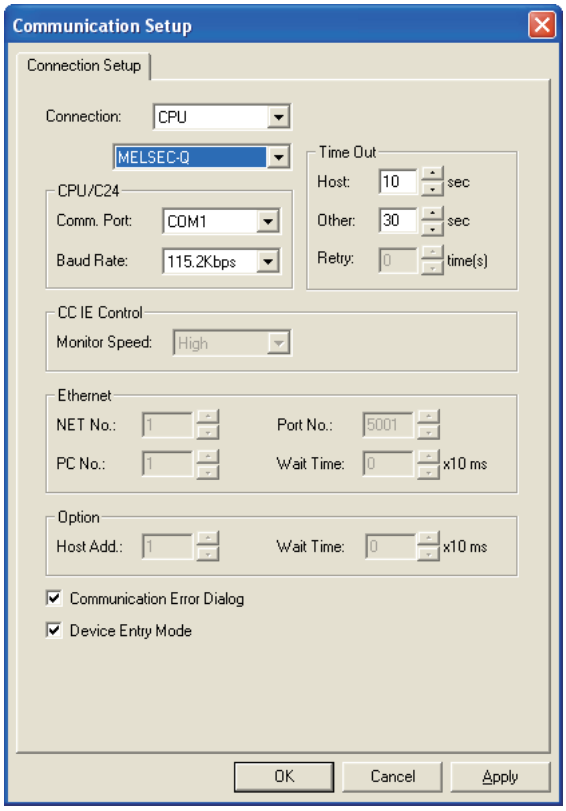
- Clicking (Communication Setup)
- Select [Online] → [Communication Setup] from the menu.
- Right-click the mouse to select [Communication Setup] from the menu.

2 The Communication Setup dialog box is displayed.
Set each item and click the OK button.

Point Communication Setup

Make Communication Setup before starting monitoring.
After start of monitoring on GT SoftGOT1000, Communication Setup cannot be changed.
(The "Communication Error Dialog" setting can be changed during monitoring.)

5.2.1 Communication setup dialog box



Item		Description
Connection		Select the connection method of GT SoftGOT1000. CPU : Select this option for direct connection to CPU via the RS-232 cable. USB : Select this option for direct connection to CPU via the USB cable. C24 : Select this option when computer link connection is used. NET/H : Select this option when using the MELSECNET/H interface board. Select "NET/H" when using the GT SoftGOT1000 in MELSECNET/10 mode. CC IE Control : Select this option when using the CC-Link IE controller network interface board. Ethernet : Select this option when Ethernet connection is used. BUS : Select [BUS] when the bus connection is used.
	-*1	If CPU/USB/C24/NET/H/CC IE Control/Ethernet is selected as the connection method, specify the connection destination. When CPU/USB is selected : Selects the type of CPU to be connected. When C24 is selected : Selects the type of computer link module or serial communication module to be connected. When NET/H/CC IE Control is selected : Select the interface board mounted on the personal computer to be used. When Ethernet is selected : Select the model of a programmable controller to be connected.
CPU/C24		When selecting CPU/C24 in the connection method, set the following items.
	Comm. port	Choose the communication port on the personal computer side. COM1 to COM6
	Baud rate	Set the transmission speed to/from the CPU. Set the baud rate to be used. When connecting a QnA/A series computer link, set the same baud rate as the one set in the computer link/serial communication module to be used. For connection with the FXCPU, select the baud rate supported by the connected FXCPU. When the set baud rate is not supported, communication is made at 9.6kbps. When selecting a transmission speed that is not supported by OMRON SYSMAC, a communication error occurs.
Timeout		Set the timeout period and retry count. Depending on the settings on the [Connection] menu, some items cannot be set.
	Host	Set the timeout period for host monitor. "3" to "90" (seconds)
	Other	Set the timeout period for other station monitor. "3" to "90" (seconds)
	Retry	Set the number of retries. "0" to "10" (times)
CC IE Control		When selecting [CC IE Control] in the connection method, set the following item.
	Monitor Speed	Set the monitor speed for CC-Link IE controller network. [High], [Normal], [Low]
Ethernet		When selecting "Ethernet" in the connection method, set the following items.
	NET No.	Set the network number of GT SoftGOT1000. "1" to "239"
	PC No.	Set the station number of GT SoftGOT1000. The station number must be different from the PLC No. of the Ethernet module to be monitored. "1" to "64"
	Port No.*2	Set the port number of GT SoftGOT1000. "1024" to "65535"
	Wait Time	Set the transmission wait time to reduce the load on the network and target PLC. "0" to "10000" (x 10 ms)
Option		Set the options when selecting [YASKAWA] from [CPU] on the selecting method.
	Host Add.	Specify the host address (the station number of a programmable controller to which connects GT SoftGOT1000) within the connection network. [1] to [31]
	Wait Time	Set the transmission time to reduce the loads of a network and a target programmable controller. [0] to [30] (x 10ms)

(Continued to next page)

Item	Description
Communication Error Dialog	Enable this check box to display the error dialogue box in GT SoftGOT1000 when a communication error occurred.
Device Entry Mode	Check the item to enable high-speed monitoring on GT SoftGOT1000. When using the Device Entry Mode during FXCPU connection, the range of devices to be monitored may be restricted, and monitoring may not be performed properly. This setting is enabled only when selecting [MELSEC-Q] or [MELSEC-FX] from [CPU] or when [MELSEC-Q] from [USB].

*1 For using the CNC C70, select [MELSEC-Q].

*2 For communication via the Ethernet port of the QnUDE(H)CPU, the port No. is automatically specified, regadless of the setting.

Point

Precautions for using device entry mode (When the MELSEC-FX connection)

The precautions for applying the device entry mode are described below.
Apply the device entry mode after the adequate debugging.

(1) Devices that can be set

An error (Communication time out) may occur if the following device (Bit device) is set.

For the device as objects, set other than the devices shown below when applying the device entry mode.

Type of connected CPU	Device name (Bit device)	Device range
$FX_{0(S)}$ series FX_{0N} series	Counter contact (C)	C224 to C239
		C240 to C255
	Special auxiliary relay (M)	M8240 to M8255
FX_1 series	Timer contact (T)	T240 to T255
	Counter contact (C)	C128 to C143
		C224 to 239
		C240 to 255
FX_{1S} series	Counter contact (C)	C224 to 239
FX_{1N} series	Counter contact (C)	C192 to 207
$FX_{2(C)}$ series		C192 to 207
$FX_{2N(C)}$ series		C192 to 207

(2) When using the offset function

When offset function is applied, the device range above may be monitored during an unintended moment and an error (Communication time out) may occur.
Create the project data so that any offset will not operate for the devices above.

(3) Measures for errors

The error mentioned by (1) and (2) is displayed in the system alarm.
When applying the device entry mode, it is recommended to set system alarm to the project data.

5.2.2 How to Set Up the Computer Link Connection

When communicating GT SoftGOT1000 to a serial communication module or a computer link module, set the switches of the module as shown in the next page.
For setting details of serial communication module and computer link module, refer to the manual of the module to be used.

The following table shows the transmission specifications for communicating GT SoftGOT1000 to a serial communication module or a computer link module.
Refer to the following for Communication Setup.

☞ 5.2 Communication Setup

Model name		Settings				
		Transmission speed	Data length	Stop bit	Parity bit	Sum check
Serial communication module (Q series)	QJ71C24(-R2), QJ71C24N(-R2), QJ71CMO, QJ71CMON	9600bps/ 19200bps/ 38400bps/ 57600bps/ 115200bps	8 bitsg	1 bits	Yes (odd)	Yes
Serial communication module (QnA series)	AJ71QC24N(-R2), A1SJ71QC24N(-R2)					
	AJ71QC24(-R2), A1SJ71QC24(-R2)	9600bps/ 19200bps				
Computer link module	AJ71C24-S8, AJ71UC24 A1SJ71C24-R2/-PRF, A1SJ71UC24-R2/-PRF					

1 When connecting to serial communication module (Q series)

No switch setting is required for the serial communication module (Q series). GX Developer(GOT monitors via it without making switch setting in the I/O assignment setting of GX Developer.)
The following settings are also available for monitoring, according to the CH (interface) of the module to be connected with GT SoftGOT1000.
For the GX Developer operating method, refer to the GX Developer Operating Manual.

Channel where GT SoftGOT1000 is connected	Settings				
	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
CH1	0000	0000			0000
CH2			0000	0000	0000

2 When connecting to serial communication module (QnA series)

Switch	Baud rate (Transmission speed)*1				
	9600bps	19200bps	38400bps	57600bps	115200bps
Station number switch	0				
Mode switch	5				
sw01	OFF				
sw02	ON				
sw03	ON				
sw04	OFF				
sw05	OFF				
sw06	ON				
sw07	ON				
sw08	OFF				
sw09	ON	OFF	ON	OFF	ON
sw10	OFF	ON	ON	ON	ON
sw11	ON	ON	ON	OFF	OFF
sw12	OFF	OFF	OFF	ON	ON

*1 38400 bps, 57600 bps and 115200 bps can be set only for the following modules.
• AJ71QC24N(-R2) • A1SJ71QC24N(-R2)

3 When connecting to computer link module

(1) When connecting to an AJ71C24-S8

The following shows the settings when connecting to an AJ71C24-S8.

Switch	RS-232 communication	
	Baud rate (Transmission speed)	
	9600bps	19200bps
Station number switch	0	
Mode switch	1	
sw11	OFF	
sw12	ON	
sw13	ON	OFF
sw14	OFF	ON
sw15	ON	ON
sw16	ON	
sw17	OFF	
sw18	OFF	
sw21	ON	
sw22	ON	
sw23	OFF	
sw24	OFF	

(2) When connecting to an AJ71UC24

The following shows the settings when connecting to an AJ71UC24.

Switch	RS-232 communication	
	Baud rate (Transmission speed)	
	9600bps	19200bps
Station number switch	0	
Mode switch	1	
sw11	OFF	
sw12	ON	
sw13	ON	OFF
sw14	OFF	ON
sw15	ON	ON
sw16	ON	
sw17	OFF	
sw18	OFF	
sw21	ON	
sw22	ON	
sw23	ON	
sw24	OFF	

(3) When connecting to an A1SJ71UC24-R2, A1SJ71C24-R2, A1SJ71UC24-PRF and A1SJ71C24-PRF.

The following shows the settings when connecting to an A1SJ71UC24-R2, A1SJ71C24-R2, A1SJ71UC24-PRF and A1SJ71C24-PRF.

Switch	RS-232 communication	
	Baud rate (Transmission speed)	
	9600bps	19200bps
Station number switch	No applicable switch	
Mode switch	1	
SW01	No applicable switch	
SW02	No applicable switch	
sw03	OFF	
sw04	ON	
sw05	ON	OFF
sw06	OFF	ON
sw07	ON	ON
sw08	ON	
sw09	ON	
sw10	OFF	
sw11	OFF	
sw12	ON	

5.2.3 How to Set Up the Ethernet Connection

Point

Ethernet connection

(1) Before Ethernet connection
Read the manual for the Ethernet module to be used thoroughly and understand it fully before setting up the Ethernet connection.

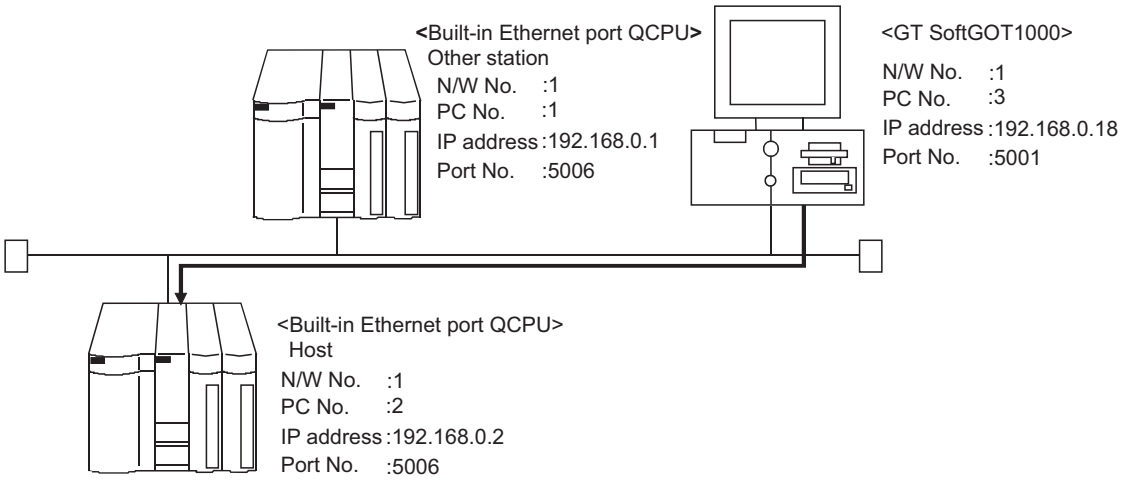
(2) Time-out error
If many devices (including GT SoftGOT1000) are connected, line traffic may become dense, causing a time-out error. If a time-out error occurs, reduce the number of connected devices or increase the time-out value in the Communication Setup of GT SoftGOT1000.

1 When using Built-in Ethernet port QCPU (one-to-one connection, multiple connection)

The setting items and precautions are shown below for communicating GT SoftGOT1000 to Built-in Ethernet port QCPU.

This section describes the system configuration to monitor the host as shown below.

When monitoring other stations, follow the same procedure as the host.



Point

Setting items

The port No. for Built-in Ethernet port QCPU is fixed to "5006".

Refer to the following for how to set the N/W No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT1000.

☞ This section 1 (7)

The following shows the procedure for communicating GT SoftGOT1000 to Built-in Ethernet port QCPU.

(1) Before setting

(a) Monitoring the CPUs on other networks

Monitoring the CPUs on other networks requires the routing parameter to be set.

Refer to the following for how to set the routing parameters.

☞ This section 1 (4) Routing Parameter Setting

This section 1 (7)(b) Routing Parameter Setting

(b) Precautions for communication

When multiple network devices (including GT SoftGOT1000) are connected to the same segment, the network load may increase, and the communication speed may slow down between GT SoftGOT1000 and the PLC.

The following actions may improve the communication performance.

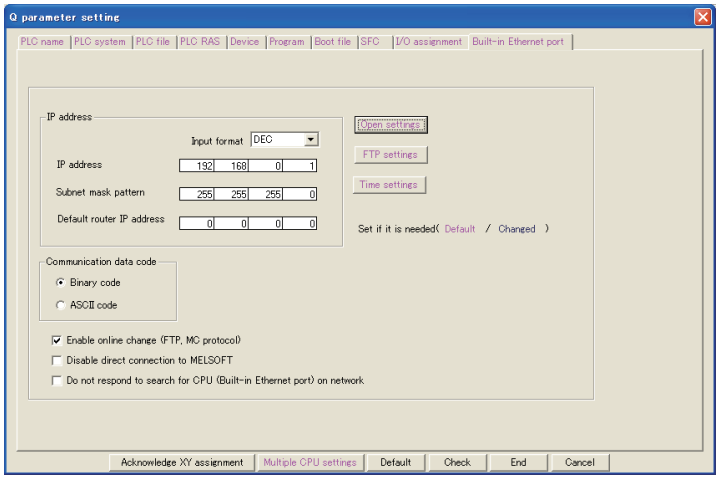
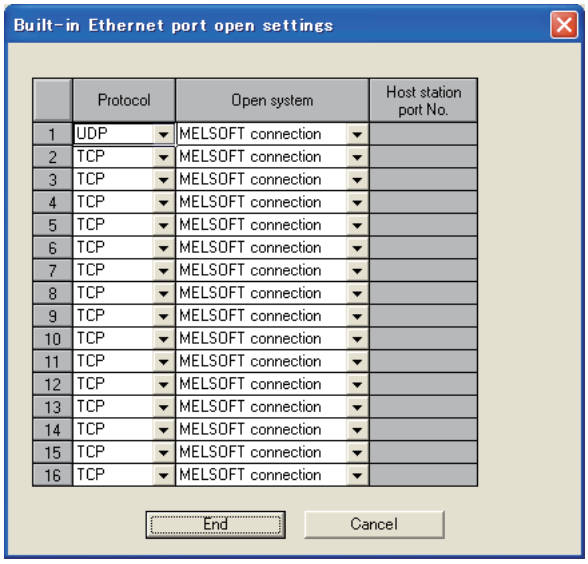
- Use a switching hub.
- Use the high-speed 100BASE-TX (100Mbps).
- Reduce the monitoring points of GT SoftGOT1000.

(2) Compatible models

Compatible models			
Q03UDECPU, Q26UDEHCPU	Q04UDEHCPU,	Q06UDEHCPU,	Q13UDEHCPU,

(3) Q parameter setting (Setting on GX Developer)

Set the Built-in Ethernet port for the Q parameter setting. (multiple connection only)

Item	Setting Screen Examples
Built-in Ethernet port	
Open settings	

Operation settings

To make communications with GX Developer, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

Since "any" values may be set to the other items, set them according to the specifications of the other node and application connected to the Ethernet module.

The following are the operation setting items that may be set to "any" values on GX Developer.

(a) Communication data code

Either "Binary code" or "ASCII code" may be specified.

(b) Initial Timing

Independently of this setting, communications can be made from GX Developer if the PLC CPU is at a STOP.

(c) Enable Write at RUN time

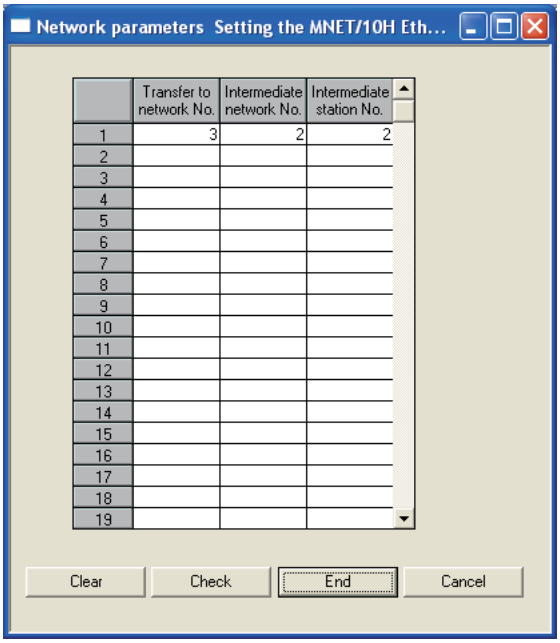
Independently of this setting, online program correction or device test can be performed from GX Developer.

(4) Routing Parameter Setting

Up to 64 [Transfer Network No.]s can be set.

The same [Transfer Network No.] cannot be set twice or more.

The host (GOT) can access up to 64 [Transfer Network No.]s as a request source.



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

Refer to the following for routing parameter setting.

☞ This section 1 (7)(b) Routing Parameter Setting

(5) Setting on the personal computer

Set the IP address.

(6) Communications check

(a) Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows®.

When connections are OK
C:\>ping 192. 168. 0. 2
Reply from 192. 168. 0. 2:bytes=32 time<10ms TTL=32

When connections are not good
C:\>ping 192. 168. 0. 2
Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows®.

Point

Ping test

The Ping test can be performed using GX Developer (SW6D5C-GPPW 6.01B or later).
Refer to the GX Developer Operating Manual for more details on the Ping test.
Refer to the following for details of the Ping test.

☞ GX Developer Version□Operating Manual

(b) Station monitoring function

For details on the station monitoring function, refer to the following manual.

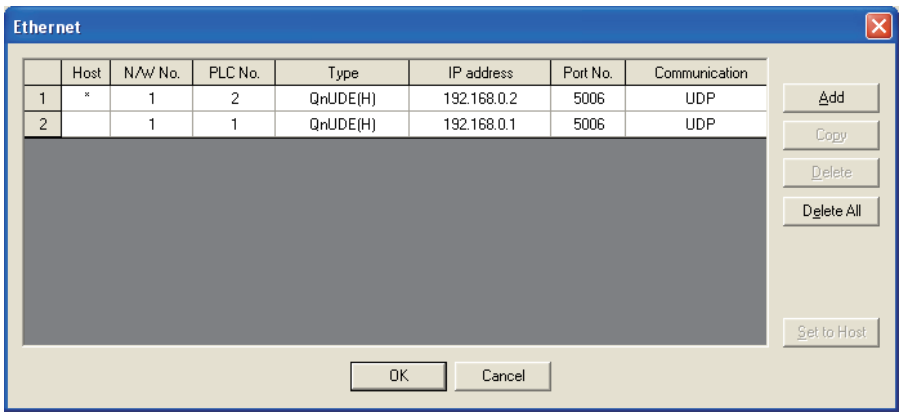
☞ GOT1000 Series Connection Manual

(7) Settings with GT Designer2 and GT SoftGOT1000

(a) Ethernet setting

Make the following settings on the Ethernet setting dialog box of GT Designer2.
Refer to the following for details of the Ethernet settings.

☞ 5.2.4 Setting on GT Designer2



(b) Routing Parameter Setting

Set the routing parameter in the Routing Information Setting dialog box of GT Designer2.
Up to 64 [Transfer Network No.]s can be set.
The same [Transfer Network No.] cannot be set twice or more.
The host (GOT) can access up to 64 [Transfer Network No.]s as a request source.

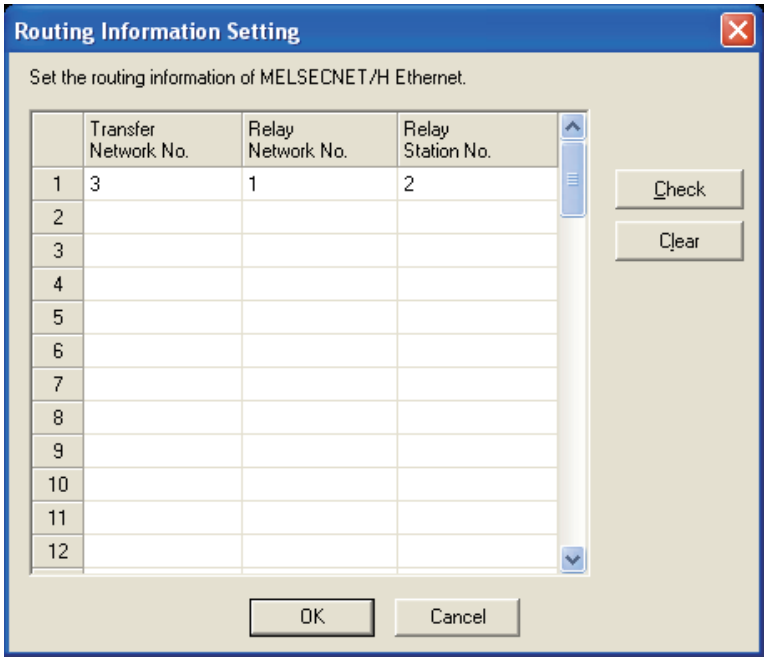
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

Refer to the following for details of routing parameter setting.

☞ Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Point

Routing parameter setting for the relay station

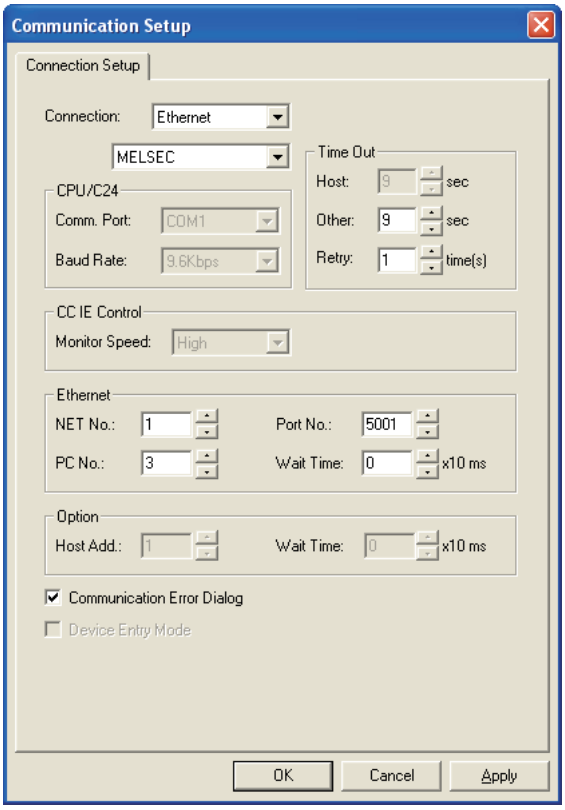
The PLC at the relay station also requires the routing parameter setting.
Refer to the following for routing parameter setting.

☞ This section 1 (4) Routing Parameter Setting

(c) Communication setup

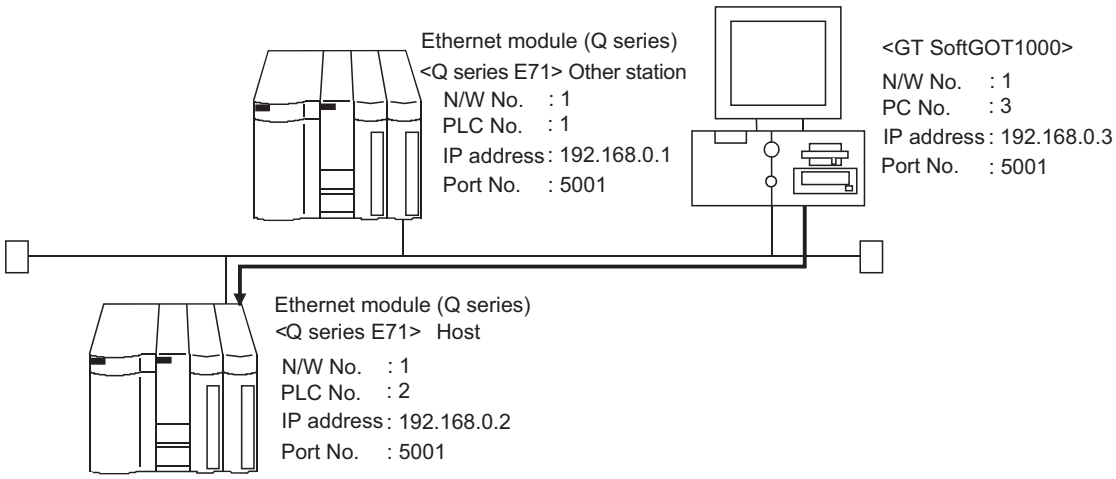
Make the settings in the Communication Setup dialog box of GT SoftGOT1000.
Refer to the following for details of Communication Setup.

☞ 5.2.1 Communication setup dialog box



2 When using Ethernet module (Q series)

The setting items and precautions are shown below for communicating GT SoftGOT1000 to the PLC CPU via the Ethernet module (Q series).
This section describes the system configuration to monitor the host as shown below.
When monitoring other stations, follow the same procedure as the host.



Point

Setting items

The port No. for the Ethernet module (Q series) is fixed to "5001".
Refer to the following for how to set the N/W No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT1000.

☞ This section 2 (7)

The following shows the procedure for communicating GT SoftGOT1000 to the PLC CPU via the Ethernet module (Q series).

(1) Before setting

(a) Monitoring the CPUs on other networks
Monitoring the CPUs on other networks requires the routing parameter to be set.
Refer to the following for how to set the routing parameters.

☞ This section 2 (4) Routing Parameter Setting
This section 2 (7)(b) Routing Parameter Setting

(b) Precautions for communication
When multiple network devices (including GT SoftGOT1000) are connected to the same segment, the network load may increase, and the communication speed may slow down between GT SoftGOT1000 and the PLC.
The following actions may improve the communication performance.

- Use a switching hub.
- Use the high-speed 100BASE-TX (100Mbps).
- Reduce the monitoring points of GT SoftGOT1000.

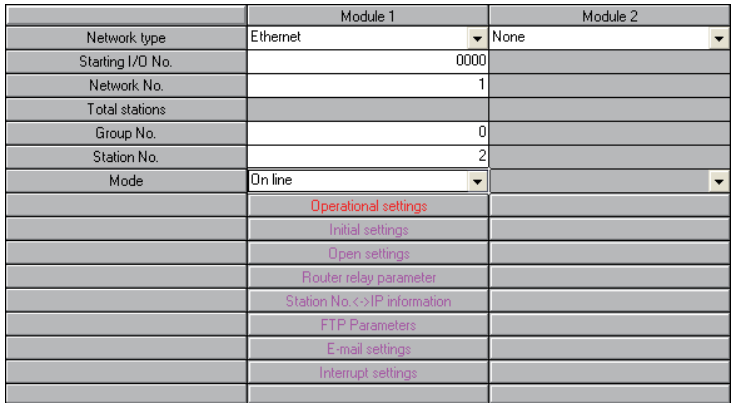
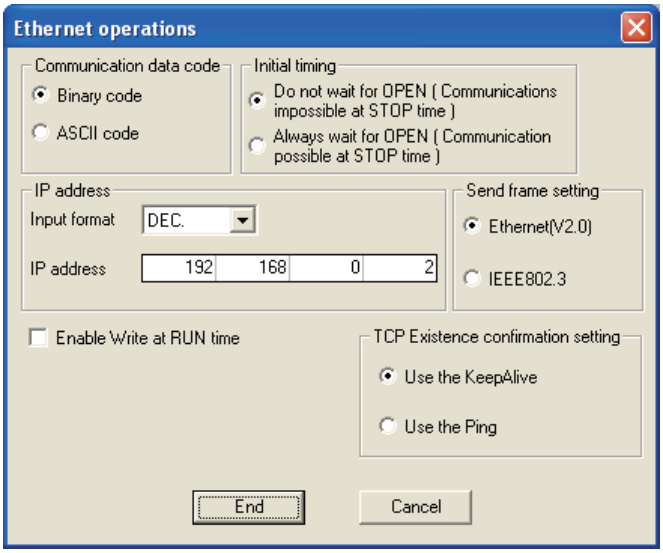
(2) Compatible models

Compatible models			
QJ71E71-100,	QJ71E71-B5,	QJ71E71-B2,	QJ71E71

(3) Network parameter setting (Setting on GX Developer)

Parameter setting can be made from the MELSECNET/ETHERNET network parameter setting screen.

Set the network type, first I/O No., network No., group No., station number, mode and operation setting.

Item	Setting Screen Examples
Ethernet Parameters	
Operation Setting	

Operation settings

To make communications with GX Developer, ask the person in charge of the network about the IP address setting to confirm, and set the IP address.

Since "any" values may be set to the other items, set them according to the specifications of the other node and application connected to the Ethernet module.

The following are the operation setting items that may be set to "any" values on GX Developer.

(a) Communication data code

Either "Binary code" or "ASCII code" may be specified.

(b) Initial Timing

Independently of this setting, communications can be made from GX Developer if the PLC CPU is at a STOP.

(c) Enable Write at RUN time

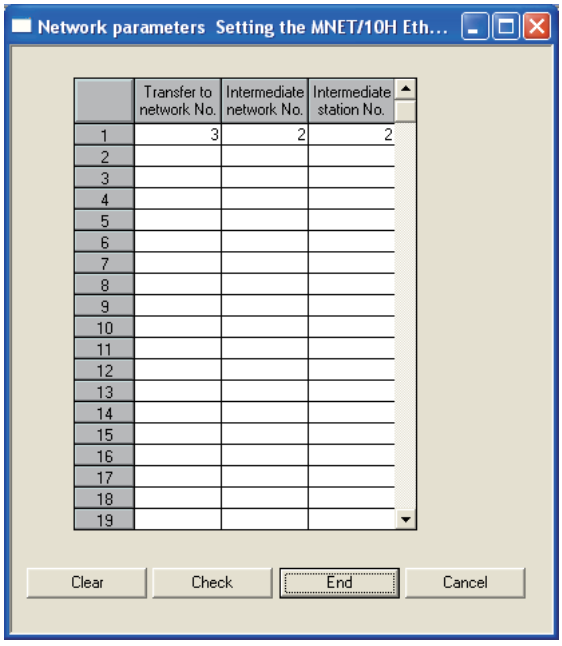
Independently of this setting, online program correction or device test can be performed from GX Developer.

(4) Routing Parameter Setting

Up to 64 [Transfer Network No.]s can be set.

The same [Transfer Network No.] cannot be set twice or more.

The host (GOT) can access up to 64 [Transfer Network No.]s as a request source.



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

Refer to the following for routing parameter setting.

☞ This section 2 (7)(b) Routing Parameter Setting

(5) Setting on the personal computer

Set the IP address.

(6) Communications check

(a) Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows®.

When connections are OK
C:\>ping 192. 168. 0. 2
Reply from 192. 168. 0. 2:bytes=32 time<10ms TTL=32

When connections are not good
C:\>ping 192. 168. 0. 2
Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows®.

Point

Ping test

The Ping test can be performed using GX Developer (SW6D5C-GPPW 6.01B or later).
Refer to the GX Developer Operating Manual for more details on the Ping test.
Refer to the following for details of the Ping test.

☞ GX Developer Version□Operating Manual

(b) Station monitoring function

For details on the station monitoring function, refer to the following manual.

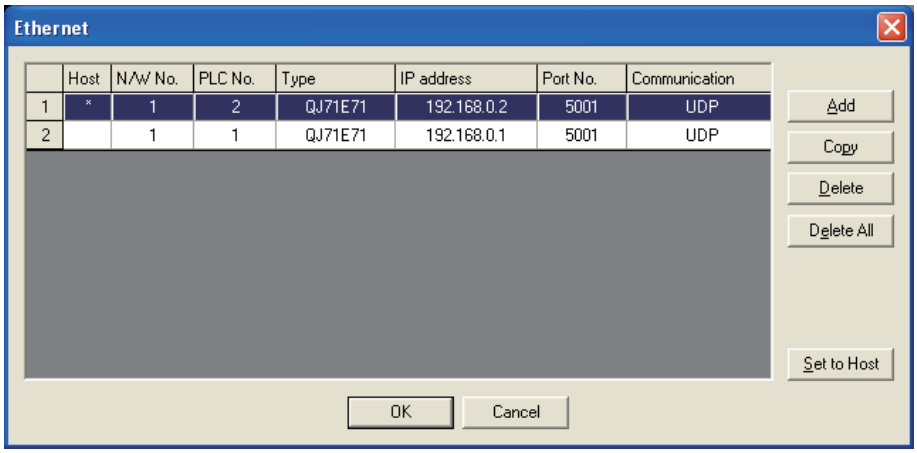
☞ GOT1000 Series Connection Manual

(7) Settings with GT Designer2 and GT SoftGOT1000

(a) Ethernet setting

Make the following settings on the Ethernet setting dialog box of GT Designer2.
Refer to the following for details of the Ethernet settings.

☞ 5.2.4 Setting on GT Designer2



(b) Routing Parameter Setting

Set the routing parameter in the Routing Information Setting dialog box of GT Designer2.
Up to 64 [Transfer Network No.]s can be set.
The same [Transfer Network No.] cannot be set twice or more.
The host (GOT) can access up to 64 [Transfer Network No.]s as a request source.

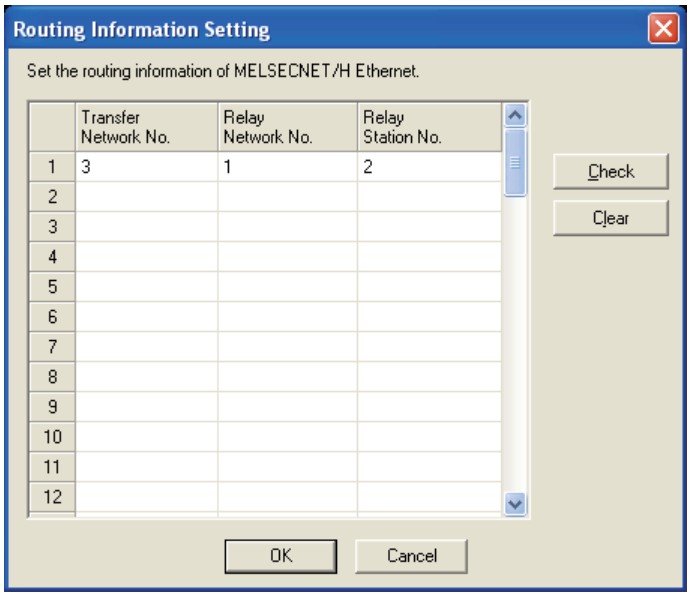
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

Refer to the following for details of routing parameter setting.

☞ Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.
Refer to the following for routing parameter setting.

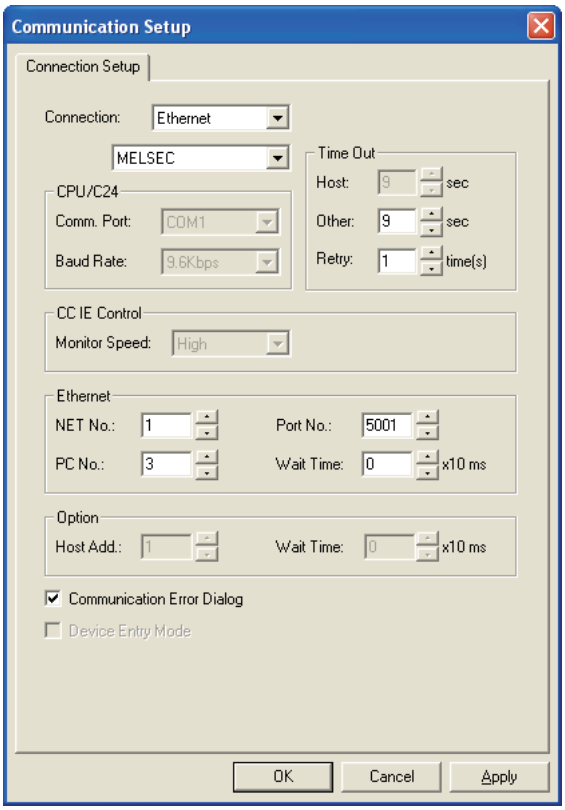
☞ This section 2 (4) Routing Parameter Setting

(c) Communication setup

Make the settings in the Communication Setup dialog box of GT SoftGOT1000.

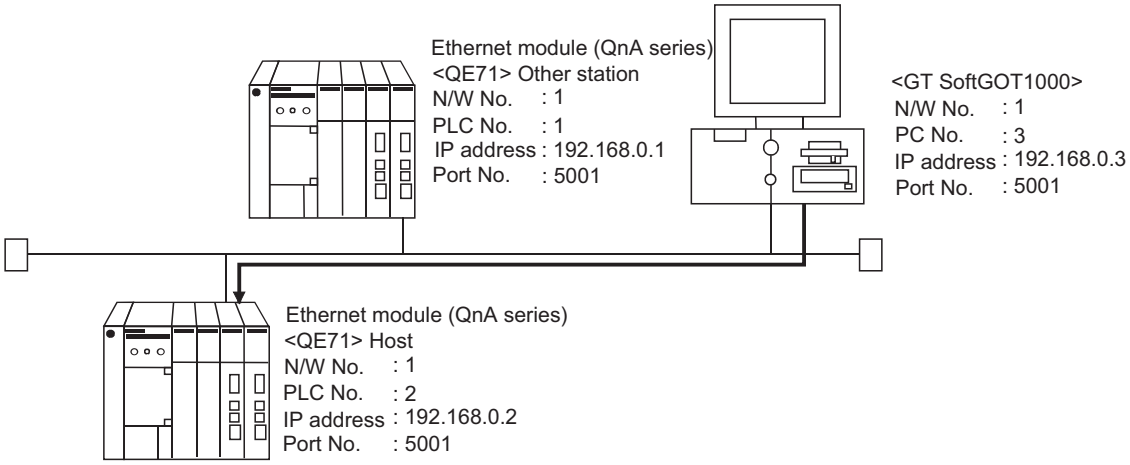
Refer to the following for details of Communication Setup.

☞ 5.2.1 Communication setup dialog box



3 When using Ethernet module (QnA series)

The setting items and precautions are shown below for communicating GT SoftGOT1000 to the PLC CPU via the Ethernet module (QnA series).
This section describes the system configuration to monitor the host as shown below.
When monitoring other stations, follow the same procedure as the host.



Point Setting items

The port No. for the Ethernet module (QnA series) is fixed to "5001".
Refer to the following for how to set the N/W No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT1000.

☞ This section 3 (8)

The following shows the procedure for communicating GT SoftGOT1000 to the PLC CPU via the Ethernet module (QnA series).

(1) Before setting

(a) Monitoring the CPUs on other networks
Monitoring the CPUs on other networks requires the routing parameter to be set.
Refer to the following for how to set the routing parameters.

☞ This section 3 (5) Routing Parameter Setting

☞ This section 3 (8)(b) Routing Parameter Setting

(b) Precautions for communication

- Only communications within the same segment are applicable.
  No communications via a router or gateway can be monitored.
- When multiple network devices (including GT SoftGOT1000) are connected to the same segment, the network load may increase, and the communication speed may slow down between GT SoftGOT1000 and the PLC.
  The following actions may improve the communication performance.
  - Use a switching hub.
  - Use the high-speed 100BASE-TX (100Mbps).
  - Reduce the monitoring points of GT SoftGOT1000.

(2) Compatible models*1

Compatible models				
AJ71QE71N3-T, AJ71QE71, A1SJ71QE71N-T,	AJ71QE71N-B5, AJ71QE71-B5, A1SJ71QE71N-B5T,	AJ71QE71N-B2, A1SJ71QE71N3-T, A1SJ71QE71-B5,	AJ71QE71N-T, A1SJ71QE71N-B5, A1SJ71QE71-B2	AJ71QE71N-B5T, A1SJ71QE71N-B2,

*1 When using AJ71QE71, AJ71QE71-B5, A1SJ71QE71-B2 or A1SJ71QE71-B5, use a module or PLC CPU of function version B or later.

(3) Ethernet module (QnA series) switch settings

Operation mode setting switch : 0 (online)

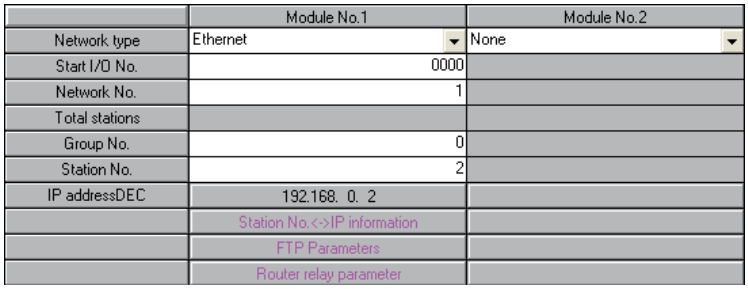
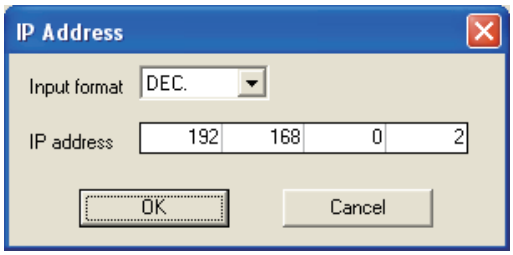
Automatic start mode : SW3 ON

When SW3 is ON, initial processing is performed independently of Y19 (initial processing request). Communications are also enabled if the CPU module is stopped.

For the initial processing using Y19 (initial processing request), create the program for initial processing while referring to the "For QnA Ethernet Interface Module User's Manual".

(4) Network parameter setting (Setting on GX Developer)

On the MELSECNET/Ethernet setting screen of network parameter, set the network type, starting I/O No., network No., group No., station number and IP address.

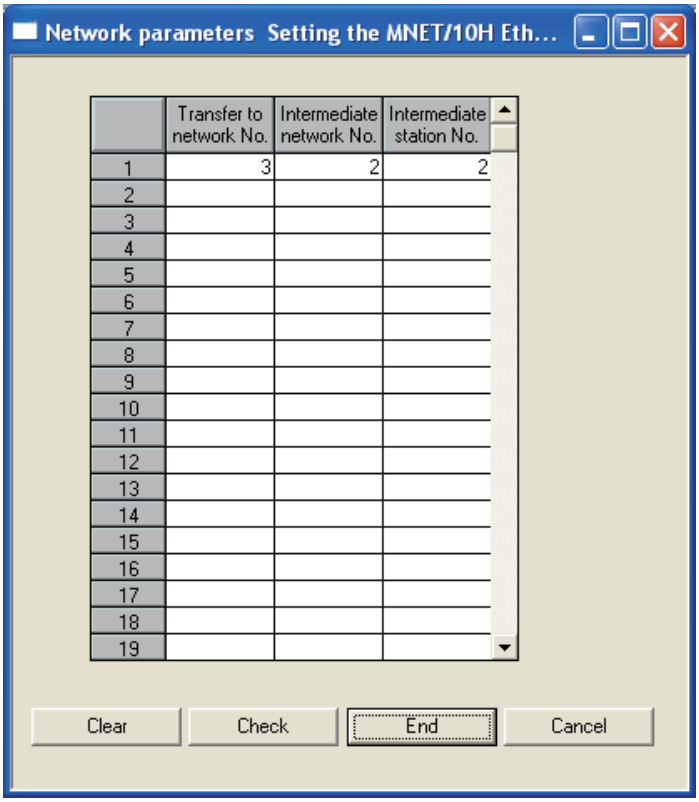
Item	Setting screen example
Ethernet Parameters	
IP Address Setting	

(5) Routing Parameter Setting

Up to 64 [Transfer Network No.]s can be set.

The same [Transfer Network No.] cannot be set twice or more.

The host (GOT) can access up to 64 [Transfer Network No.]s as a request source.



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Point

Routing parameter setting for the request source

The GOT at the request source also requires the routing parameter setting.

Refer to the following for routing parameter setting.

☞ This section 3 (8)(b) Routing Parameter Setting

(6) Setting on the personal computer

Set the IP address.

(7) Communications check

(a) Ping test

When ready to communicate, execute the Ping command at the command prompt on the Windows®.

When connections are OK
C:\>ping 192. 168. 0. 2
Reply from 192. 168. 0. 2:bytes=32 time<10ms TTL=32

When connections are not good
C:\>ping 192. 168. 0. 2
Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows®.

Point

Ping test

The Ping test can be performed using GX Developer (SW6D5C-GPPW 6.01B or later).
Refer to the GX Developer Operating Manual for more details on the Ping test.
Refer to the following for details of the Ping test.

☞ GX Developer Version□Operating Manual

(b) Station monitoring function

For details on the station monitoring function, refer to the following manual.

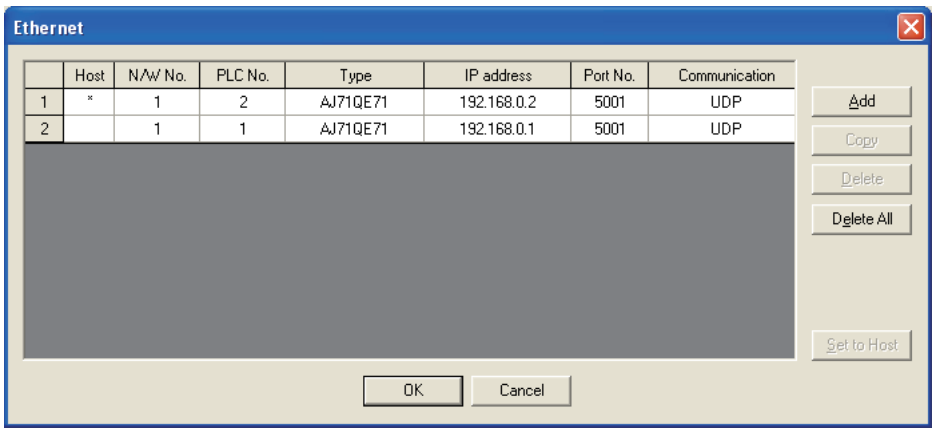
☞ GOT1000 Series Connection Manual

(8) Settings with GT Designer2 and GT SoftGOT1000

(a) Ethernet setting

Make the following settings on the Ethernet setting dialog box of GT Designer2.
Refer to the following for details of the Ethernet settings.

☞ 5.2.4 Setting on GT Designer2



(b) Routing Parameter Setting

Set the routing parameter in the Routing Information Setting dialog box of GT Designer2.
Up to 64 [Transfer Network No.]s can be set.
The same [Transfer Network No.] cannot be set twice or more.
The host (GOT) can access up to 64 [Transfer Network No.]s as a request source.

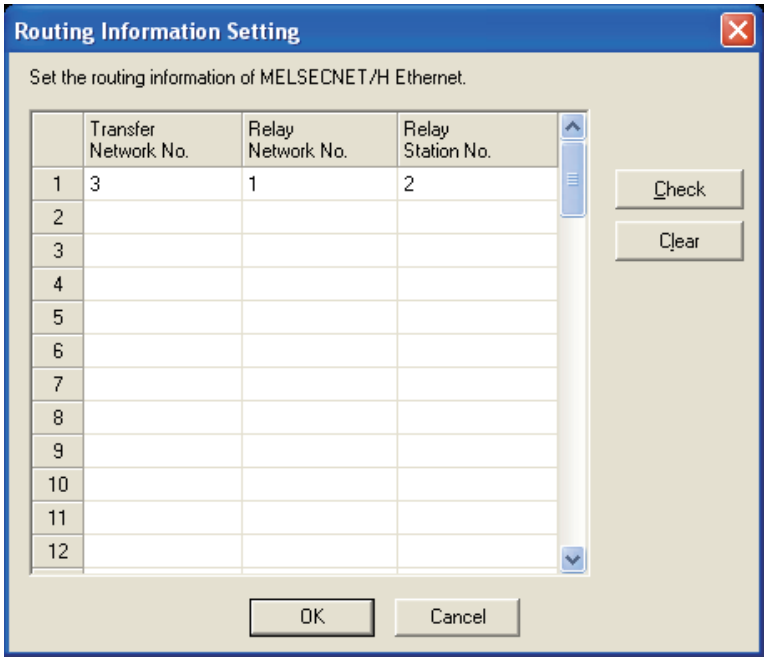
Point

Routing parameter setting

Communication within the host network does not require routing parameter setting.

Refer to the following for details of routing parameter setting.

☞ Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Point

Routing parameter setting for the relay station

The PLC at the relay station also requires the routing parameter setting.
Refer to the following for routing parameter setting.

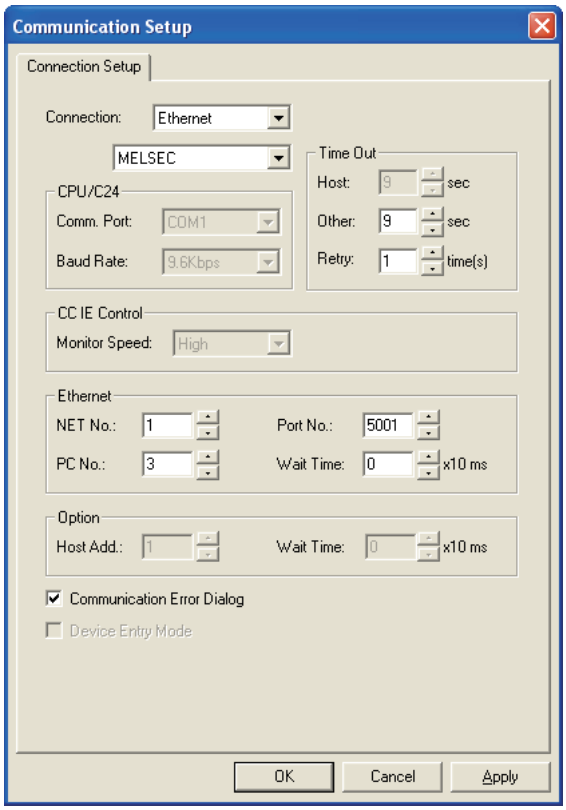
☞ This section 3 (5) Routing Parameter Setting

(c) Communication setup

Make the settings in the Communication Setup dialog box of GT SoftGOT1000.

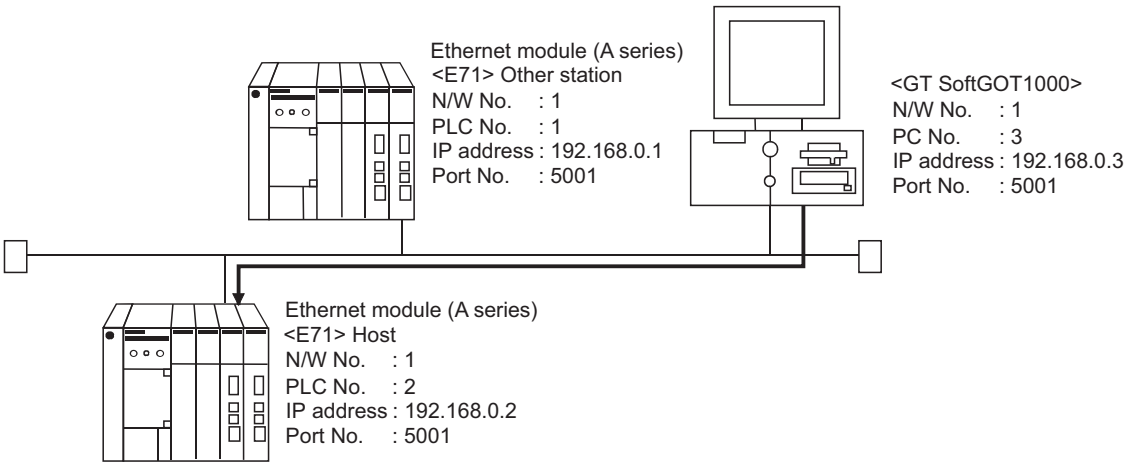
Refer to the following for details of Communication Setup.

☞ 5.2.1 Communication setup dialog box



4 When using Ethernet module (A series)

The setting items and precautions are shown below for communicating GT SoftGOT1000 to the PLC CPU via the Ethernet module (A series).
This section describes the system configuration to monitor the host as shown below.
When monitoring other stations, follow the same procedure as the host.



Point

Precautions for setting items

The N/W No. and PLC No. to be specified for Ethernet connection to the E71 should be those set as desired on GT Designer2.
Refer to the following for how to set the N/W No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT1000.

☞ This section 4 (7)

The following shows the procedure for performing communications via E71.

(1) Before setting

(a) Monitoring precautions
The connection target cannot be monitored via MELSECTNET/10 or MELSECNET/H.

(b) Communication precautions
- Only communications within the same segment can be monitored.
  No communications via a router or gateway can be monitored.
- A connection of multiple pieces of network equipment (including GT SoftGOT1000) to a segment may increase the network load and slow down the communication between the GT SoftGOT1000 and the PLC.
  Communication efficiency may be improved by using one or more of the following methods:
  - Use a switching hub
  - Use a high-speed 100BASE-TX (100Mbps)
  - Reduce the number of monitoring points of the GT SoftGOT1000

(2) Compatible models

Compatible models				
AJ71E71N3-T, AJ71E71-S3, A1SJ71E71N-B5T,	AJ71E71N-B5, A1SJ71E71N3-T, A1SJ71E71-B5-S3,	AJ71E71N-B2, A1SJ71E71N-B5, A1SJ71E71-B2-S,	AJ71E71N-T, A1SJ71E71N-B2,	AJ71E71N-B5T, A1SJ71E71N-T,

(3) E71 switch settings

Switch		AJ71E71N3-T, AJ71E71N-B2, AJ71E71N-B5T, A1SJ71E71N3-T, A1SJ71E71N-B2, A1SJ71E71N-B5T, AJ71E71N-B5, AJ71E71N-T, AJ71E71-S3, A1SJ71E71N-B5, A1SJ71E71N-T,	A1SJ71E71-B2-S3, A1SJ71E71-B5-S3
Operation mode setting switch		O (Online mode)	O (Online mode)
Exchange condition setting switch	Data code setting	SW2 OFF (Binary code)	SW2 OFF (Binary code)
	CPU exchange timing setting	SW7 ON (Online change enabled)	SW3 ON (Online change enabled)

(4) Sequence programs

Initial processing and communication line open processing sequence programs are needed. Necessary communication parameters and sequence program examples are given below.

(a) Communication parameters

The following are the communication parameter setting examples for the host side.

Setting item	Set value
Application setting*1	100_H
IP address of E71	192.168.0.2
E71 port number	5001
IP address of other node	$FFFFFFFF_H$
Other node port number*2	$FFFF_H$

*1 Value specified for application setting

The user can change the settings of 1), 2) and 3).

4), 5) and 6) are fixed settings.

The following shows details of the application setting.

b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6)						5)	4)	3)						2)	1)

1): Fixed buffer application
- 0: For send/no communication
- 1: For receive

2): Existence check
- 0: No
- 1: Yes

3): Paring open
- 0: No
- 1: Yes

4): Communication system (Set to 1: UDP/IP)

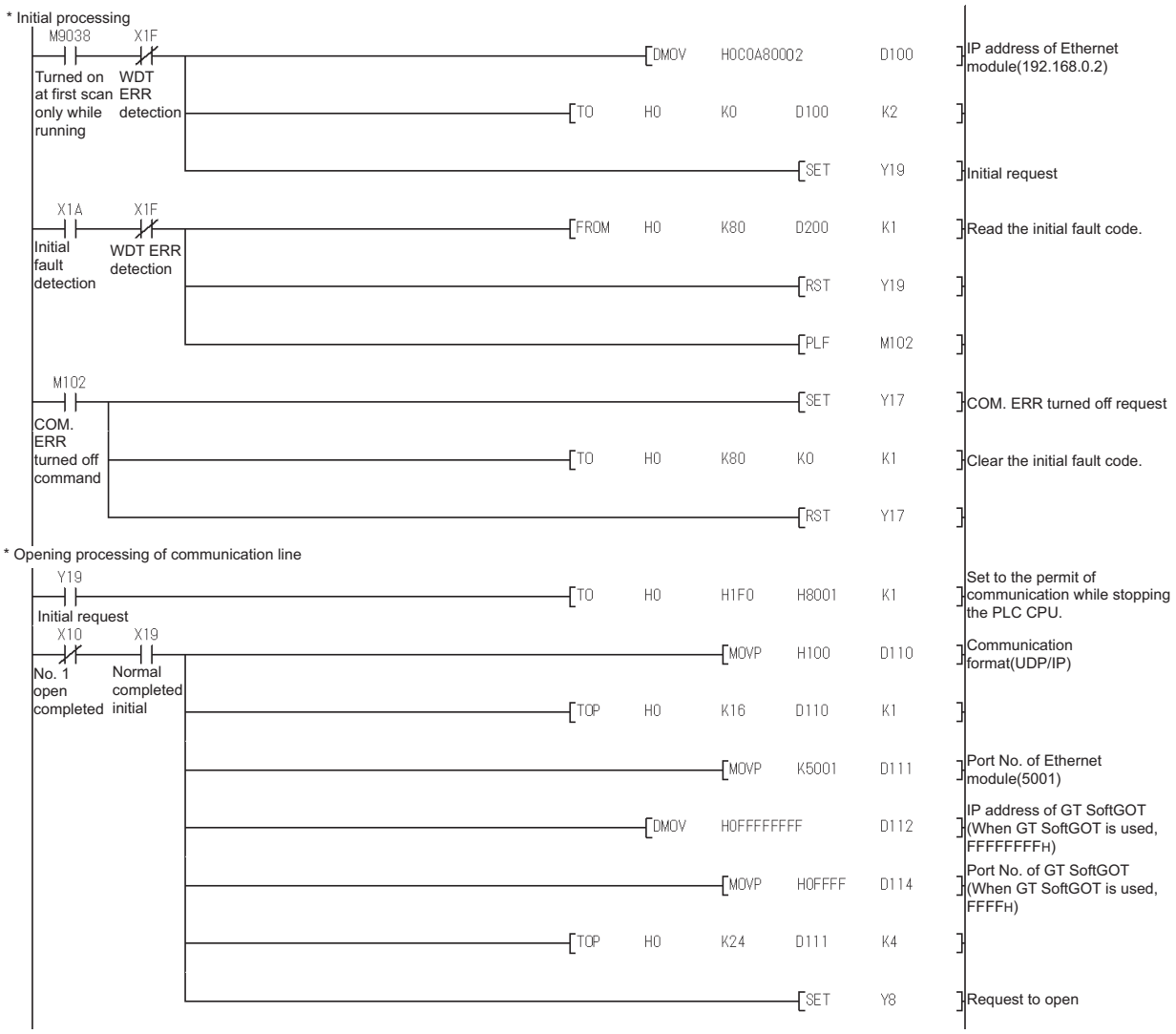
5): Fixed buffer communication (Set to 0: With procedure)
- 0: With procedure
- 1: Without procedure

6): Open system (Set to 00: Active, UDP/IP)

*2: The other node port number is a fixed setting.

The user can change the other settings.

(b) Sequence program



In a communications-ready status, the E71's RUN LED comes on and RDY LED flickers.

(5) Setting on the personal computer
Set the IP address.

(6) Communications check

(a) Ping test
When ready to communicate, execute the Ping command at the command prompt on the Windows®.

When connections are OK
C:\>ping 192. 168. 0. 2
Reply from 192. 168. 0. 2:bytes=32 time<10ms TTL=32

When connections are not good
C:\>ping 192. 168. 0. 2
Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows®.

Point

Ping test

The Ping test can be performed using GX Developer (SW6D5C-GPPW 6.01B or later).
Refer to the GX Developer Operating Manual for more details on the Ping test.
Refer to the following for details of the Ping test.

☞ GX Developer Version □ Operating Manual

(b) Station monitoring function
For details on the station monitoring function, refer to the following manual.

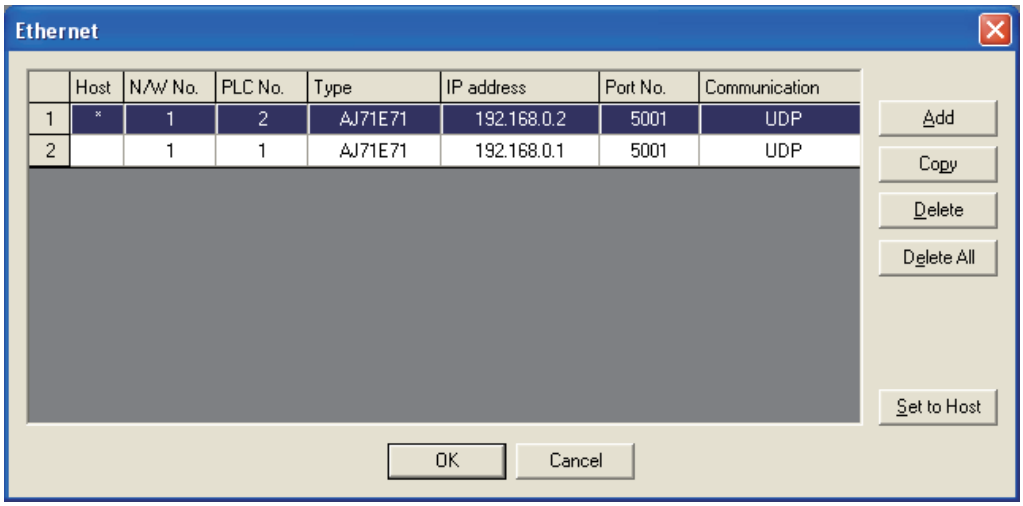
☞ GOT1000 Series Connection Manual

(7) Settings with GT Designer2 and GT SoftGOT1000

(a) Ethernet setting

Make the following settings on the Ethernet setting dialog box of GT Designer2.
Refer to the following for details of the Ethernet settings.

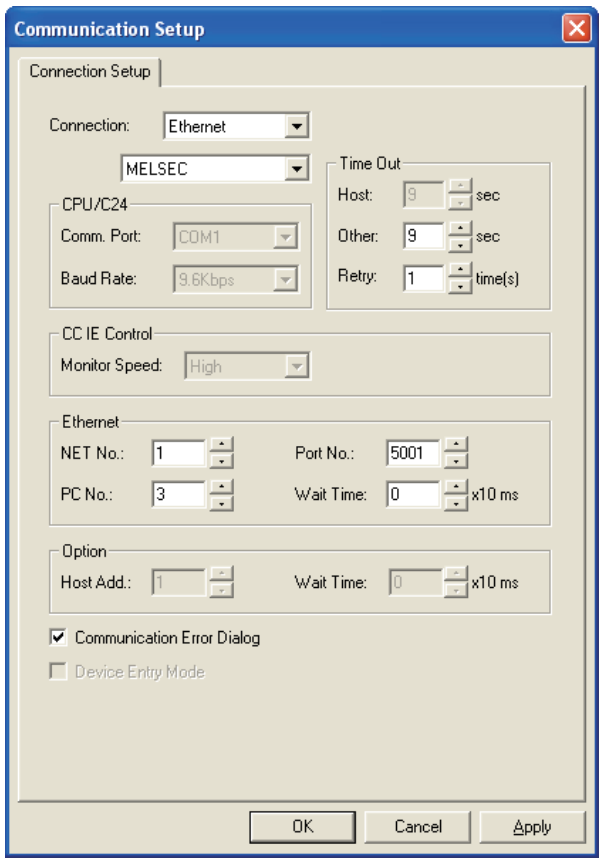
☞ 5.2.4 Setting on GT Designer2



(b) Communication setup

Make the settings in the Communication Setup dialog box of GT SoftGOT1000.
Refer to the following for details of Communication Setup.

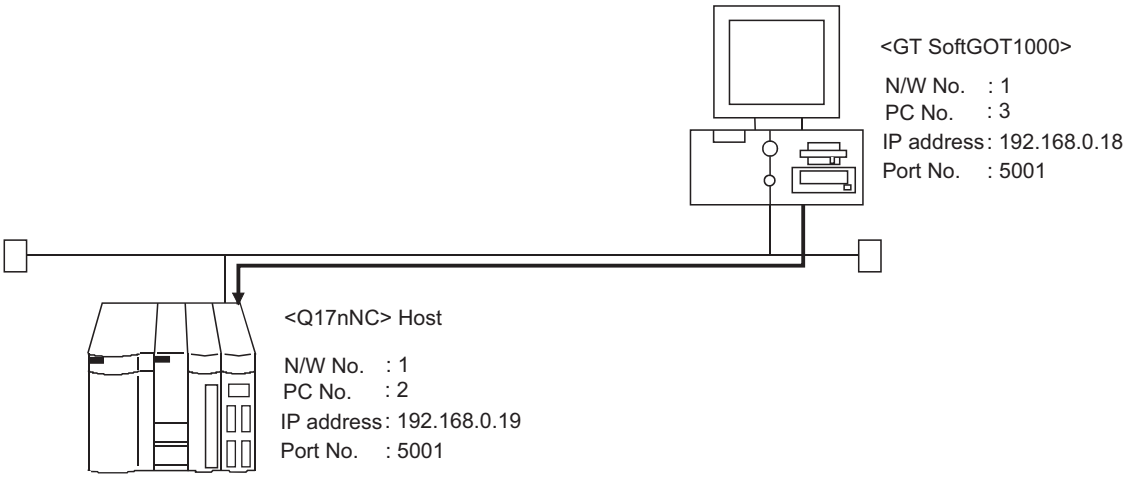
☞ 5.2.1 Communication setup dialog box



5 When using CNC C70 (Q17nNCCPU)

For communications with GT SoftGOT1000 via the Display I/F of the CNC C70, setting items and precautions are described below.

This section describes the system configuration for monitoring the host station as shown below.



Point

Before creating Display I/F connection

(1) Display I/F connection

For the Display I/F connection, read the following manual carefully, and fully understand the details.

☞ C70 Setup Manual

(2) Setting items

The port No. specified for the Ethernet connection to the CNC C70 is fixed at "5001".

Refer to the following for how to set the N/W No., IP address, and port No. of the CNC C70 and GT SoftGOT1000.

☞ This section 5 (6)

The following shows the procedures for communications with the CNC C70.

(1) Before setting

(a) Precautions for monitoring

GT SoftGOT1000 cannot monitor other stations.

GT SoftGOT1000 cannot monitor CPUs on the other networks.

(b) Precautions for communication

When multiple network devices (including GT SoftGOT1000) are connected to the same segment, the network load may increase, and the communication speed may slow down between GT SoftGOT1000 and the PLC.

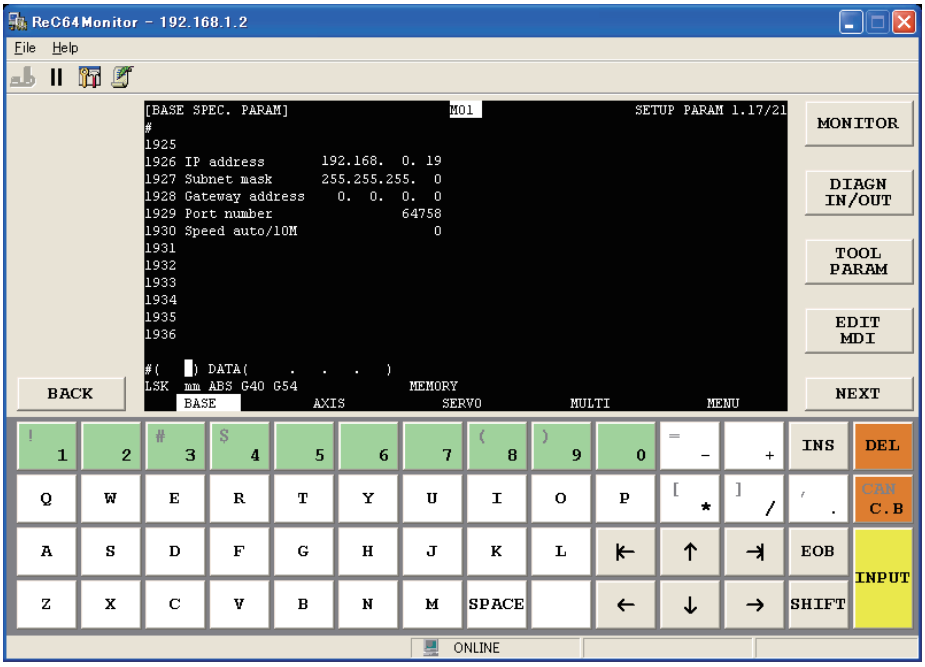
The following actions may improve the communication performance.

- Use a switching hub.
- Use the high-speed 100BASE-TX (100Mbps).
- Reduce the monitoring points of GT SoftGOT1000.

(2) Compatible models

Compatible models
Q173NCCPU

(3) IP address setting (Setting with remote monitor tool)



Item	Setting	Setting (with GOT connected)
IP address	192.168.0.19	○
Subnet mask	255.255.255.0	○
Gateway address	0.0.0.0	○
Port number	64758 (Fixed)	○
Speed auto/10M	0 (Fixed)	○

○: Required △: Set if necessary ×: Not required

(4) Setting on personal computer
Set the IP address.

(5) Communication check

(a) Ping test
The INIT.LED of the CNC C70 turns on when the CNC C70 is ready for communications. When the CNC C70 is ready for communications, execute the Ping command with the command prompt of Windows®.

• When the Ping test is verified

```
C:\>Ping  192. 168. 0. 19

Reply from 192.168.0.19:bytes=32 time<10ms TTL=32
```

• When the Ping test is not verified

```
C:\>Ping  192. 168. 0. 19

Request timed out.
```

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows®.

(b) Station monitoring function
For details on the station monitoring function, refer to the following manual.

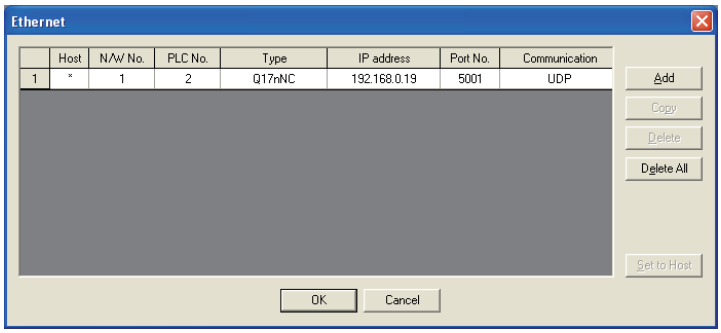
☞ GOT1000 Series Connection Manual

(6) Settings on GT Designer2 and GT SoftGOT1000

(a) Ethernet setting

Set the following in the Ethernet dialog box of GT Designer2.
For details of the Ethernet setting, refer to the following.

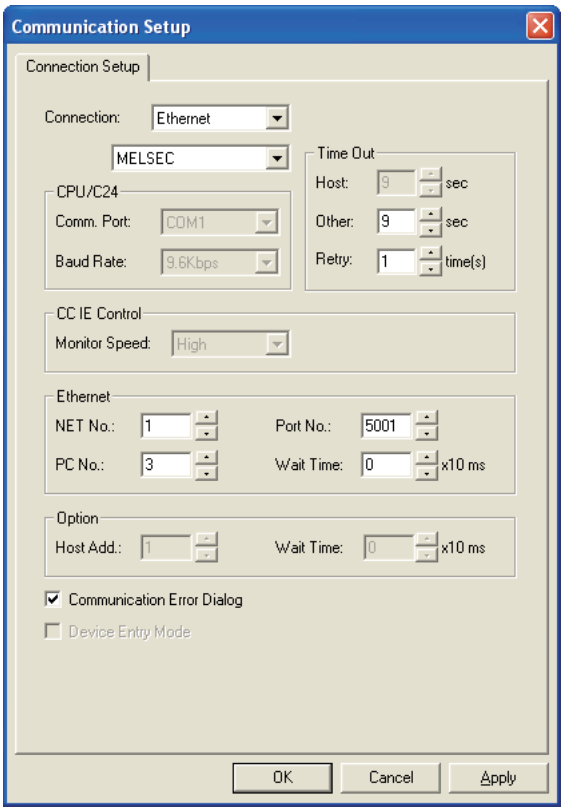
☞ 5.2.4 Setting on GT Designer2



(b) Communication setup

Set the settings in the Communication Setup dialog box of GT SoftGOT1000.
For details of the communication setup, refer to the following.

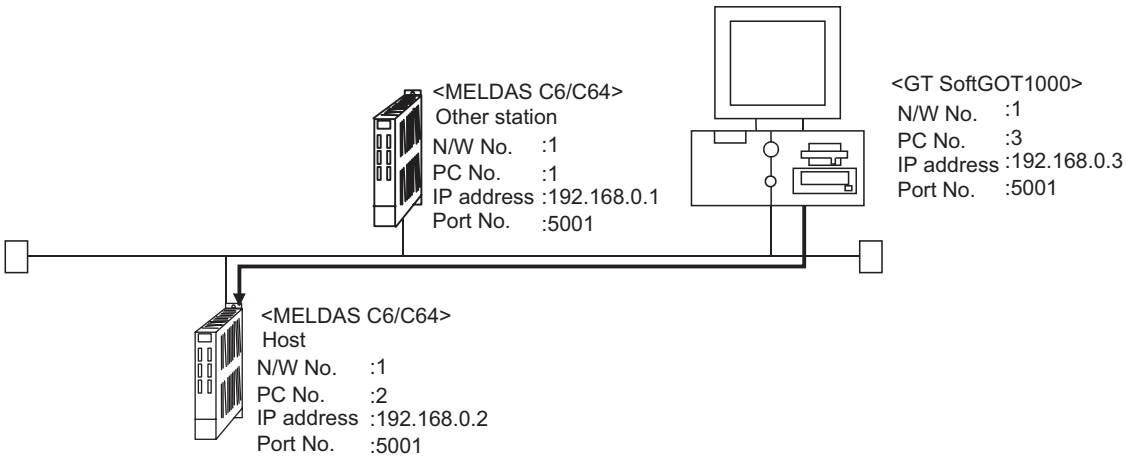
☞ 5.2.1 Communication setup dialog box



6 When using MELDAS C6/C64

The setting items and precautions are shown below for communicating GT SoftGOT1000 to the MELDAS C6/C64.

This section describes the system configuration to monitor the host station as shown below.



Point

Setting items

Refer to the following for how to set the N/W No., PLC No./PC No., IP address and port No. of the MELDAS C6/C64 and GT SoftGOT1000.

☞ This section 6 (7)

The following shows the procedure for communicating GT SoftGOT1000 to the MELDAS C6/C64.

(1) Before setting

(a) Precautions for monitoring

GT SoftGOT1000 cannot monitor other stations.

GT SoftGOT1000 cannot monitor CPUs on the other networks.

(b) Precautions for communication

When multiple network devices (including GT SoftGOT1000) are connected to the same segment, the network load may increase, and the communication speed may slow down between GT SoftGOT1000 and the PLC.

The following actions may improve the communication performance.

- Use a switching hub.
- Use the high-speed 100BASE-TX (100Mbps).
- Reduce the monitoring points of GT SoftGOT1000.

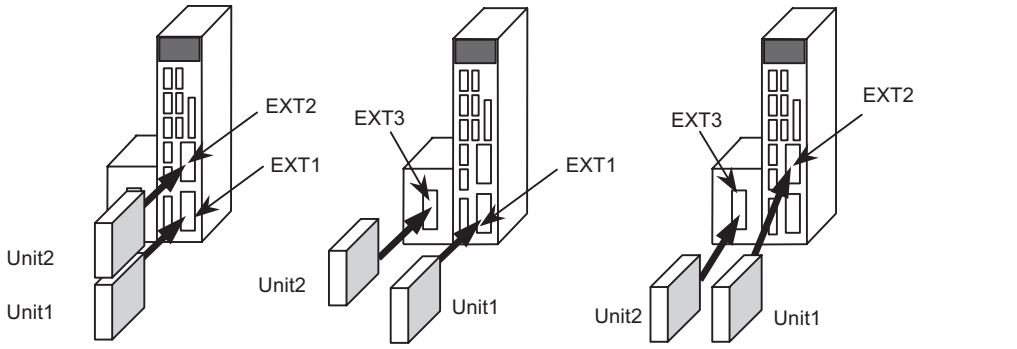
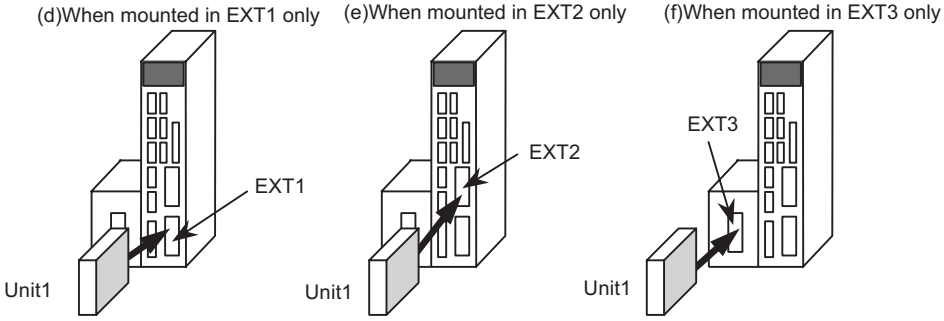
(2) Compatible models

Compatible models	
FCA C6,	FCA C64

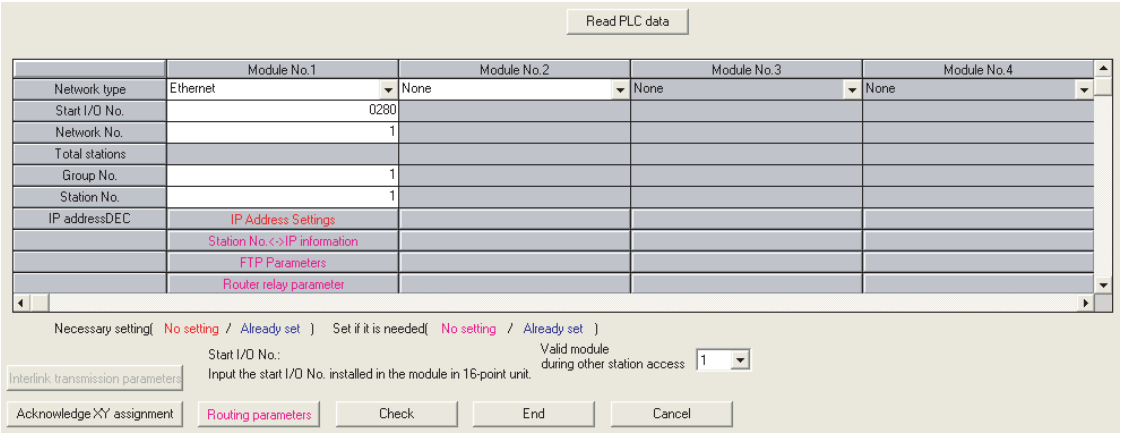
(3) Network parameter setting

Set the network parameters by peripheral devices and write them to the MELDAS C6/C64.
The following shows an example of the parameter setting for GX Developer.
Set the start I/O No. that corresponds to the extension slot to be connected with the Ethernet unit.
When using two extension slots, unit numbers are assigned as shown in the following figures from 1) to 3).

(a) Start I/O No.

Extension slot	Start I/O No.	Mounting position of extension unit
EXT1	0200	(a)When mounted in EXT1 and EXT2 (b)When mounted in EXT1 and EXT3 (c)When mounted in EXT2 and EXT3  (d)When mounted in EXT1 only (e)When mounted in EXT2 only (f)When mounted in EXT3 only 
EXT2	0280	
EXT3	0300	

(b) Example of GX Developer setting



For details of the parameter setting, refer to the following.

☞ MELDAS C6/C64 NETWORK MANUAL BNP-B2373

Point

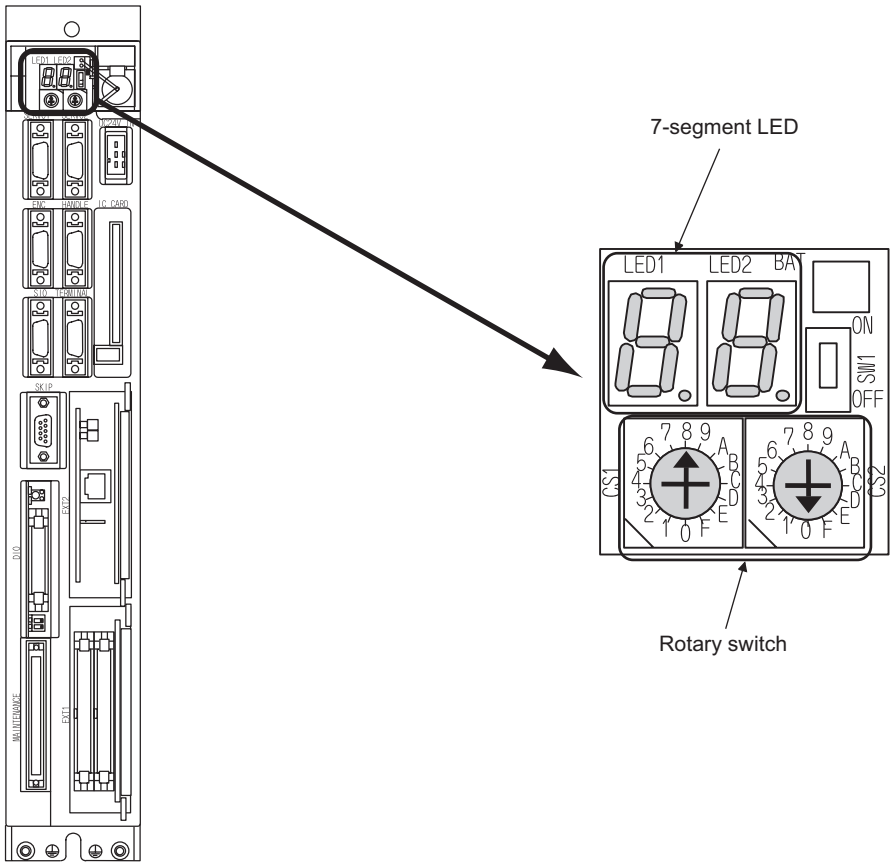
IP address setting

The IP address setting on GX Developer is invalid.
Set the IP address by the 7-segment LED and rotary switch of the MELDAS C6/C64 side, referring to the next page.

(4) MELDAS C6/C64 side parameter setting

Set the IP address, gateway address, subnet mask, and port No. for the 7-segment LED and rotary switch of the MELDAS C6/C64 side, and then check the settings.
For details of the parameter setting, refer to the following.

☞ MELDAS C6/C64 NETWORK MANUAL BNPB2373 IV Setting the Ethernet IP Address



(5) Setting on the personal computer
Set the IP address.

(6) Communications check

(a) Ping test
When ready to communicate, execute the Ping command at the command prompt on the Windows®.

When connections are OK
C:\>ping 192. 168. 0. 2
Reply from 192. 168. 0. 2:bytes=32 time<10ms TTL=32

When connections are not good
C:\>ping 192. 168. 0. 2
Request timed out.

When the Ping test is not verified, check the connections of the cable and module, and settings, including the IP address, for Windows®.

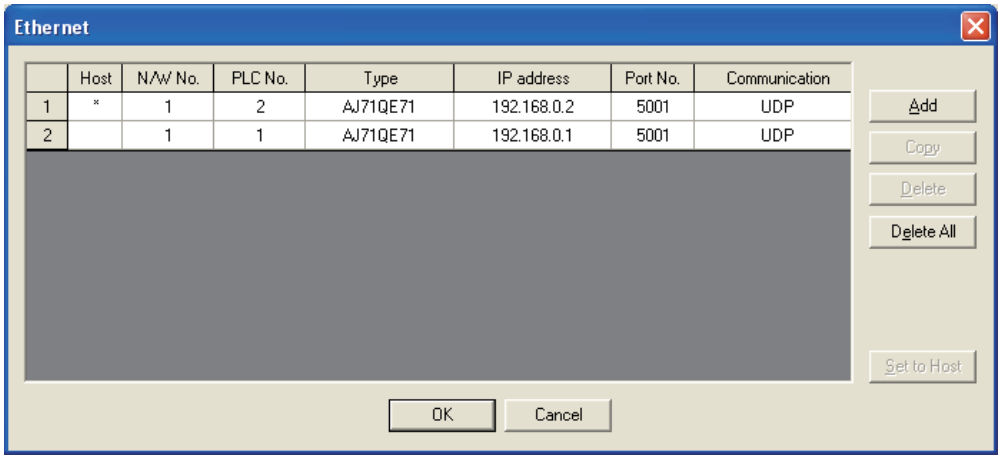
(b) Station monitoring function
For details on the station monitoring function, refer to the following manual.

☞ GOT1000 Series Connection Manual

(7) Settings with GT Designer2 and GT SoftGOT1000

(a) Ethernet setting
Make the following settings on the Ethernet setting dialog box of GT Designer2.
Refer to the following for details of the Ethernet settings.

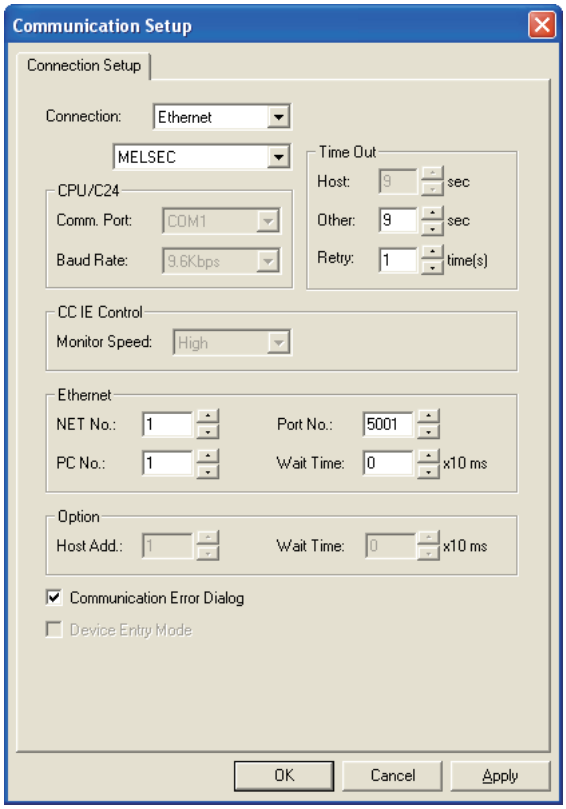
☞ 5.2.4 Setting on GT Designer2



(b) Communication setup

Make the settings in the Communication Setup dialog box of GT SoftGOT1000.
Refer to the following for details of Communication Setup.

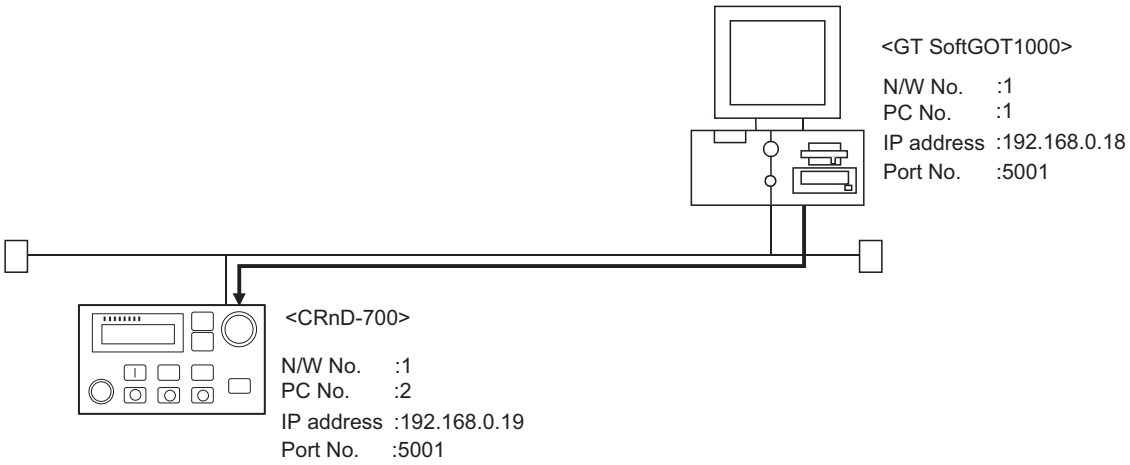
☞ 5.2.1 Communication setup dialog box



7 When using robot controller (CRnD-700)

For communications between GT SoftGOT1000 and the CRnD-700, the following setting items and precautions are described below.

This section describes the system configuration to monitor the host as shown below.



Point Setting items

Refer to the following for how to set the N/W No., PLC No./PC No., IP address, and port No. of the CRnD-700 and GT SoftGOT1000.

☞ This section 7 (6)

The following shows the procedures for communications with the CRnD-700.

(1) Before setting

(a) Precautions for monitoring

GT SoftGOT1000 cannot monitor other stations.

GT SoftGOT1000 cannot monitor CPUs on the other networks.

(b) Precautions for communication

When multiple network devices (including GT SoftGOT1000) are connected to the same segment, the network load may increase, and the communication speed may slow down between GT SoftGOT1000 and the PLC.

The following actions may improve the communication performance.

- Use a switching hub.
- Use the high-speed 100BASE-TX (100Mbps).
- Reduce the monitoring points of GT SoftGOT1000.

(2) Compatible models

Compatible models
CRnD-700

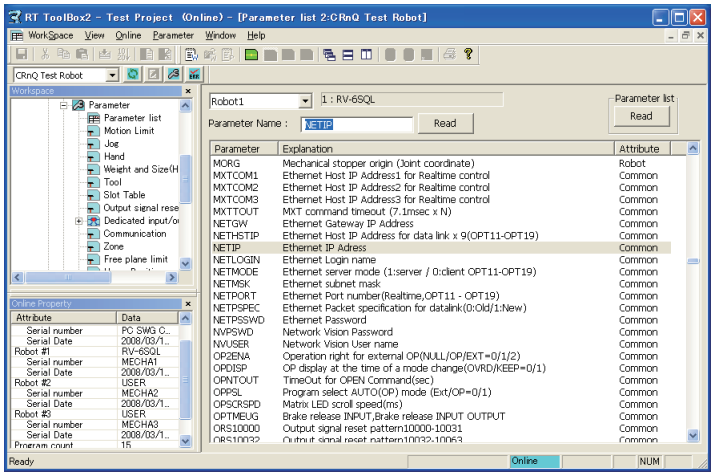
(3) Parameter settings for CRnD-700
Set the CRnD-700 parameter settings with the R32TB, R56TB, or RT ToolBox2.

Point Robot controller (CRnD-700)

For details of the robot controller (CRnD-700), refer to the following manual.

Manual for CRnD-700

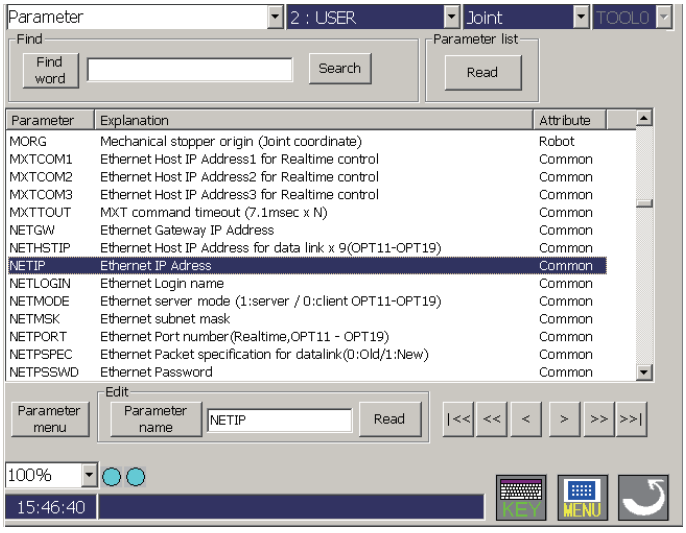
(a) For RT ToolBox2



Item	Setting	Setting (with GOT connected)
NETIP	192.168.0.19	○
GOTPORT	5001	○

○: Required △: Set if necessary ×: Not required

(b) For R32TB or R56TB



(For R56TB)

Item	Setting	Setting (with GOT connected)
NETIP	192.168.0.19	○
GOTPORT	5001	○

○: Required △: Set if necessary ×: Not required

(4) Setting on personal computer
Set the IP address.

(5) Communication check

(a) Ping test
When the CNC C70 is ready for communications, execute the Ping command with the command prompt of Windows®.

• When the Ping test is verified
C: \>Ping 192. 168. 0. 19

Reply from 192.168.0.19:bytes=32 time<10ms TTL=32

• When the Ping test is not verified
C: \>Ping 192. 168. 0. 19

Request timed out.

When the Ping test is not verified, check the connections of the cable and unit, and settings, including the IP address, for Windows®.

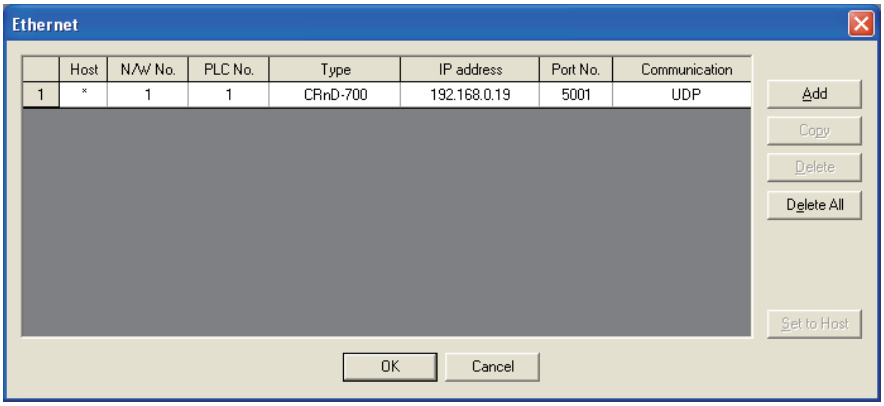
(b) Station monitoring function
For details on the station monitoring function, refer to the following manual.

☞ GOT1000 Series Connection Manual

(6) Settings on GT Designer2 and GT SoftGOT1000

(a) Ethernet setting
Set the following in the Ethernet dialog box of GT Designer2.
For details of the Ethernet setting, refer to the following.

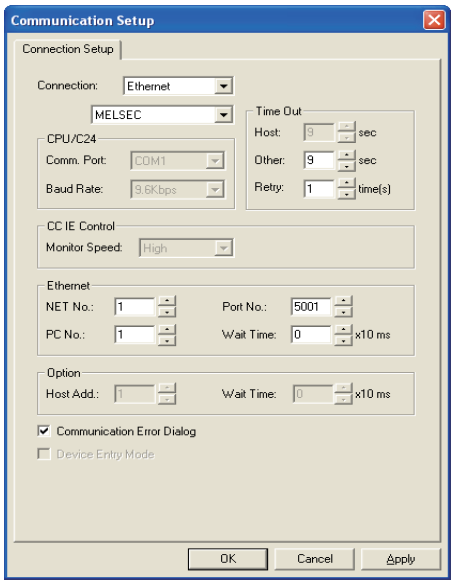
☞ 5.2.4 Setting on GT Designer2



(b) Communication setup

Set the settings in the Communication Setup dialog box of GT SoftGOT1000.
For details of the communication setup, refer to the following.

☞ 5.2.1 Communication setup dialog box



5.2.4 Setting on GT Designer2

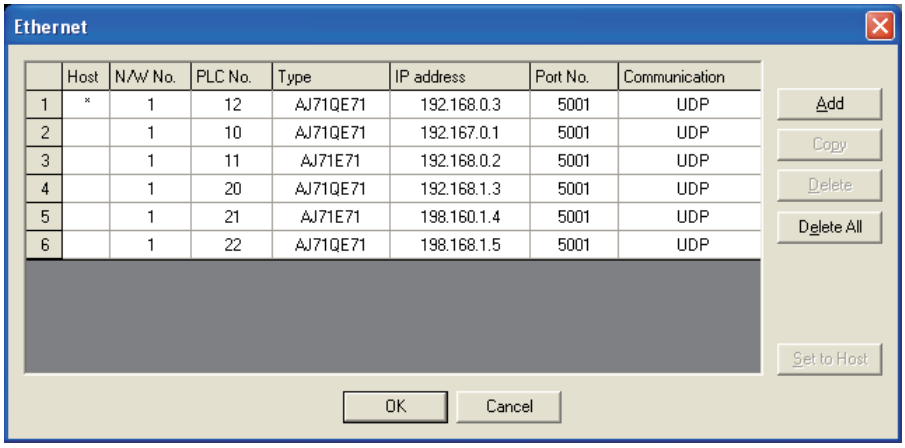
(1) Ethernet setting method

(a) Operation procedure

When either of the following operations is performed, the Ethernet dialog box is displayed.

- Select [Common] → [Ethernet] from the menu.
- Double-click (Ethernet) in the workspace.

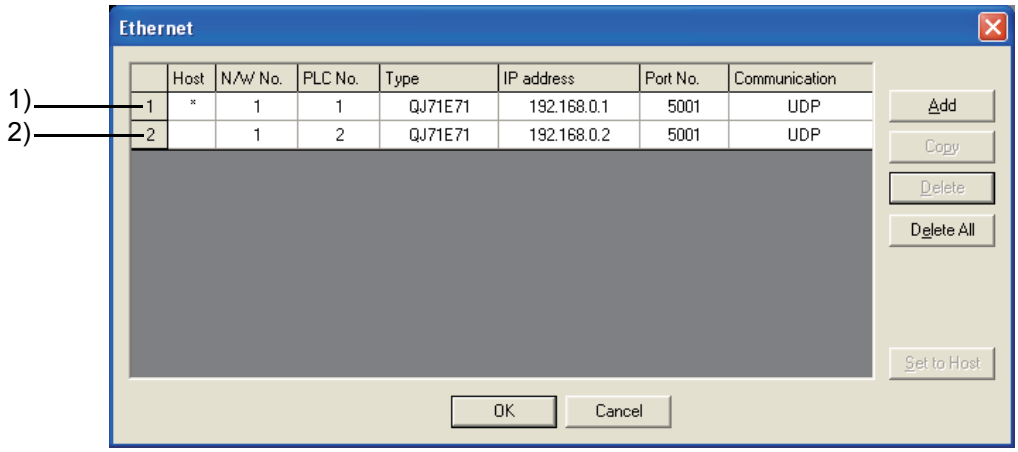
(b) Ethernet dialog box



Item		Description
Ethernet setting list		Set the N/W No., PLC No., and others for controllers to be monitored by GT SoftGOT1000. Up to 128 can be set.
	N/W No.	Set the network No. for the controller.
	PLC No.	Set the PLC No. (station No.) for the controller.
	Type	Select the type of controllers (QnUDE(H), QJ71E71, AJ71QE71, AJ71E71, Q17nNC, CRnD-700). For the MELDAS C6/C64, set the type of the Ethernet module to "AJ71QE71".
	IP address	Set the IP address assigned to the controller.
	Port No.	Set the port No. for the controller. For the E71, set the port number of the connection target E71 set in the sequence program. Fixed to "5006" when [Type] is [QnUDE(H)]. Fixed to "5001" when [Type] is [QJ71E71], [AJ71QE71], or [CRnD-700].
	Communication	Fixed to UDP.
Add		Used to add the Ethernet setting to the list.
Copy		Used to copy the selected Ethernet setting to the end of the list.
Delete		Used to delete the selected Ethernet setting.
Delete All		Used to delete all Ethernet settings.
Set to Host		Used to set the selected Ethernet setting to the host. (When the setting is set to the host, the " * " mark is displayed.)

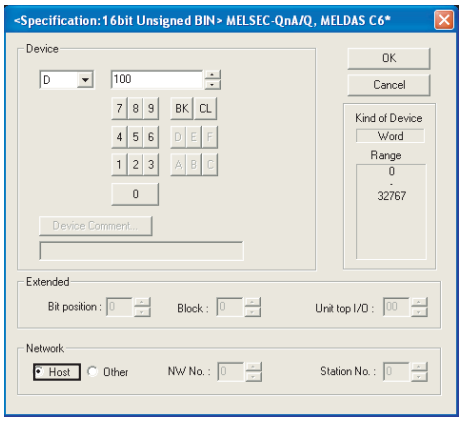
(2) How to set devices

The following explains how to set devices set on GT SoftGOT1000 when using the Ethernet connection.



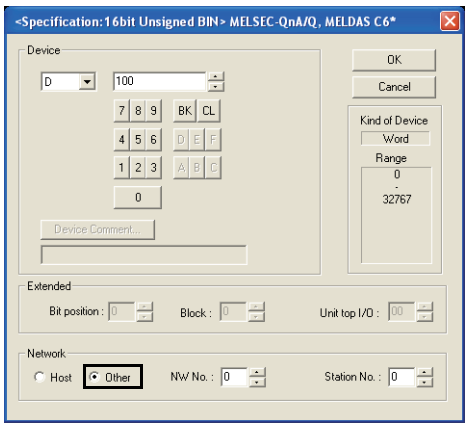
(a) When monitoring the Ethernet module 1) (an Ethernet module set as host) by GT SoftGOT1000, set the network setting to the local station in the device setting of GT Designer2.

<Setting example of GT Designer2>



(b) When monitoring the Ethernet module 2) (an Ethernet module that is not set as host) by GT SoftGOT1000, set the network setting to other station (network No. "1", PLC station No. "2") in the device setting of GT Designer2.

<Setting example of GT Designer2>



5.2.5 How to Set Up the OMRON PLC Connection

The setting method when connecting to an OMRON PLC is shown below.
For the PLC side setting, refer to the following manual.

☞GOT1000 Series Connection Manual

Item*2	Setting
Transmission speed*1	9600/19200/38400/57600/115200bps
Data length	7bits
Stop bit	2bits
Parity	Even
Communication condition format	Individual
Host link station No.	00

*1 Transmission speed supported by the PLC must be set.

*2 The settings on the PLC and GT SoftGOT1000 must be the same.

5.2.6 How to Set Up the YASKAWA PLC Connection

1 Serial connection

For the programmable controller side setting, refer to the following manual.

☞ GOT1000 Series Connection Manual

Item*2	Setting
Comm. port	COM1 to COM6
Baud Rate*1	9600/19200/38400/57600bps
Host Add.	1 to 31
Wait Time	0 to 300ms

*1 The baud rate supported by the programmable controller must be set.

*2 The settings on the programmable controller and GT SoftGOT1000 must be the same.

Point

Send delay time

Set the transmission wait time as shown below when connecting to the programmable controller of CP-9200(H) or CP-9300MS.

Model name		Send delay time
CP-9200(H)		30ms or more
CP-9300MS	For connecting to port 0	10ms or more
	For connecting to port 1	30ms or more

2 Ethernet connection

This section describes the setting items and the precautions when connecting GT SoftGOT1000 to YASKAWA PLC via the Ethernet connection.

Point

Precautions for Ethernet connection

(1) YASKAWA PLC

For details on YASKAWA PLC, refer to the following manual.

☞ User's manual for YASKAWA PLC CPU

(2) Precautions for Ethernet connection

The N/W No. and PLC No. are specified when connecting to the YASKAWA PLC via the Ethernet connection. In such cases, set the N/W No. and PLC No. arbitrarily on GT Designer2.

For how to set the N/W No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT1000, refer to the following.

☞ This section 2 (6)

(1) Before setting

(a) Communication precautions

- Only communications within the same segment are applicable.
  Communications via a router or a gateway are not applicable.
- A connection of multiple pieces of network equipment (including GT SoftGOT1000) to a segment may increase the network load and slow down the communication between the GT SoftGOT1000 and the programmable controller.
  Communication efficiency may be improved by using one or more of the following methods:
  - Use a switching hub
  - Use a high-speed 100BASE-TX (100Mbps)
  - Reduce the number of monitoring points of the GT SoftGOT1000
- To connect multiple GT SoftGOT1000 modules within the Ethernet network, set a different [PLC No.] for each GT SoftGOT1000.
- Do not use "192.168.0.18" for IP address when starting multiple GT SoftGOT modules. Otherwise, a communication error occurs in GOT.

(2) Compatible models

Models	
218IF,	218IF-01

(3) Setting of programmable controller side
For settings for each part of programmable controller, refer to the following manual.
☞ GOT1000 Series Connection Manual

(4) Setting on the personal computer
Set the IP address.

(5) Communications check

(a) Ping test
Execute the Ping command with Command Prompt of Windows® when the preparations for communication are complete.

When the Ping test is verified
C:\>Ping 192. 168. 0. 2
Reply from 192.168.0.2:bytes=32 time<10ms TTL=32

When the Ping test is not verified
C:\>Ping 192. 168. 0. 2
Request timed out.

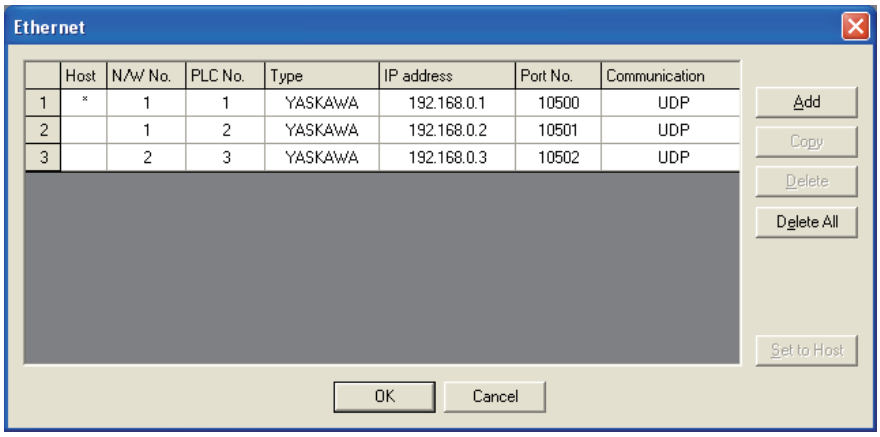
If the Ping test is not verified, check connections of the cable and unit, Windows® side IP address and other settings.

(b) Station monitoring function
For details on the station monitoring function, refer to the following manual.
☞ GOT1000 Series Connection Manual

(6) Settings on GT Designer2 and GT SoftGOT1000.

(a) Setting on GT Designer2

Set the Ethernet setting dialog box on GT Designer as shown below.



Item	Description	Range
Host	Indicate the host station. (The host station is indicated as *.)	-
N/W No.	Set the network number of the target Ethernet module.	1 to 239
PLC No.	Set the station number of the target Ethernet module.	1 to 64
Type	Select [YASKAWA].	YASKAWA
IP address	Set the IP address of the target Ethernet module.	IP address of programmable controller side
Port No.	Set the port number of the target Ethernet module.	256 to 65534
Communication	Select a communication method.	UDP, TCP

(b) Setting on GT SoftGOT1000

Set the communication setup dialog box of GT SoftGOT1000.

For details on the communication setting, refer to the following manual.

☞ 5.2 Communication Setup

5.2.7 How to Set Up the YOKOGAWA PLC Connection

1 Ethernet connection

This section describes the setting items and the precautions when connecting GT SoftGOT1000 to YOKOGAWA PLC via the Ethernet connection.

Point

Precautions for setting items

(1) YOKOGAWA PLC
For details on YOKOGAWA PLC, refer to the following manual.
☞ User's manual for YOKOGAWA PLC CPU

(2) Precautions for Ethernet connection
The N/W No. and PLC No. are specified when connecting to the YOKOGAWA PLC via the Ethernet. In such cases, set the N/W No. and PLC No. arbitrarily on GT Designer2.
Refer to the following for how to set the N/W No., PLC No./PC No., IP address and port No. of the Ethernet module and GT SoftGOT1000
☞ This section 1 (6)

(1) Before setting

(a) Precaution for monitoring
Monitoring via MELSECNET/10 or MELSECNET/H is not available.

(b) Communication precautions

- Only communications within the same segment can be monitored.
- Communications via a router or a gateway cannot be monitored.
- A connection of multiple pieces of network equipment (including GT SoftGOT1000) to a segment may increase the network load and slow down the communication between the GT SoftGOT1000 and the programmable controller.
- Communication efficiency may be improved by using one or more of the following methods:
- Use a switching hub
- Use a high-speed 100BASE-TX (100Mbps)
- Reduce the number of monitoring points of the GT SoftGOT1000
- To connect multiple GT SoftGOT1000 modules within the Ethernet network, set a different [PLC No.] for each GT SoftGOT1000.
- Do not use "192.168.0.18" for IP address when starting multiple GT SoftGOT. Otherwise, a communication error occurs in GOT.

(2) Compatible models

Models		
F3LE01-5T,	F3LE11-0T,	F3LE12-0T

(3) Setting of programmable controller side
For settings for each part of the programmable controller, refer to the following manual.
☞ GOT1000 Series Connection Manual

(4) Setting on the personal computer
Set the IP address.

(5) Communications check

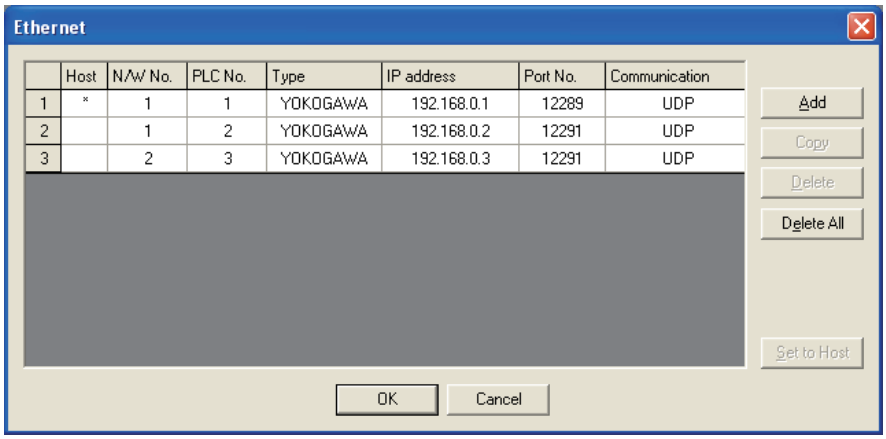
For communications check, refer to the following.

☞ Section 5.2.6 2 (5) Communications check

(6) Settings on GT Designer2 and GT SoftGOT1000.

(a) Setting on GT Designer2

Set the Ethernet setting dialog box on GT Designer as shown below.



Item	Description	Range
Host	Indicate the host station. (The host station is indicated as *.)	-
N/W No.	Set the network number of the target Ethernet module.	1 to 239
PC No.	Set the station number of the target Ethernet module	1 to 64
Type	Select [YOKOGAWA].	YOKOGAWA
IP address	Set the IP address of the target Ethernet module.	IP address of programmable controller side
Port No.	Set the port number of the target Ethernet module.	12289, 12291
Communication	Select a communication method.	UDP, TCP

(b) Setting on GT SoftGOT1000

Set the communication setup dialog box of GT SoftGOT1000.

For details on setting the communication setup dialog box, refer to the following manual.

☞ 5.2 Communication Setup

5.3 Environment Setup

In Environment Setup, set the resolution, etc. of GT SoftGOT1000.

1 Perform either of the following operations.

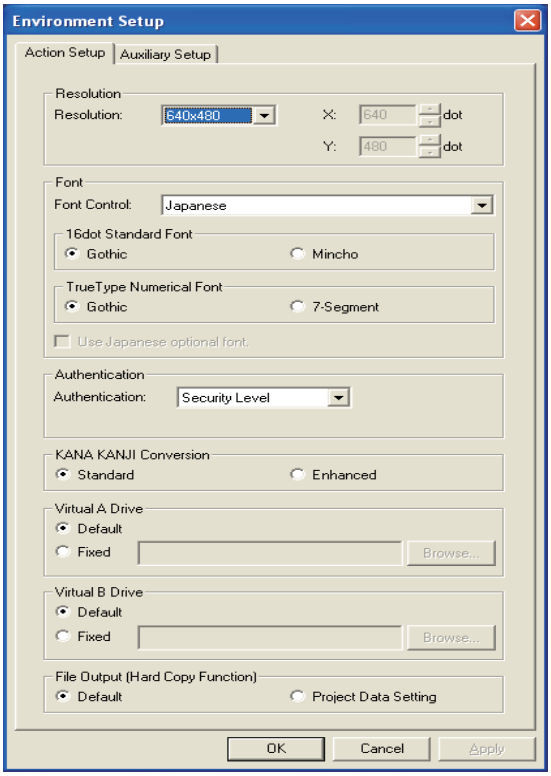
- Clicking (Environment Setup)
- Selecting [Set] → [Environment Setup] from the menu
- Right-clicking the mouse to select [Environment Setup] from the menu

2 The Environment Setup dialog box is displayed.

Set each item and click the OK button.

5.3.1 Environment setup dialog box

1 Action Setup tab



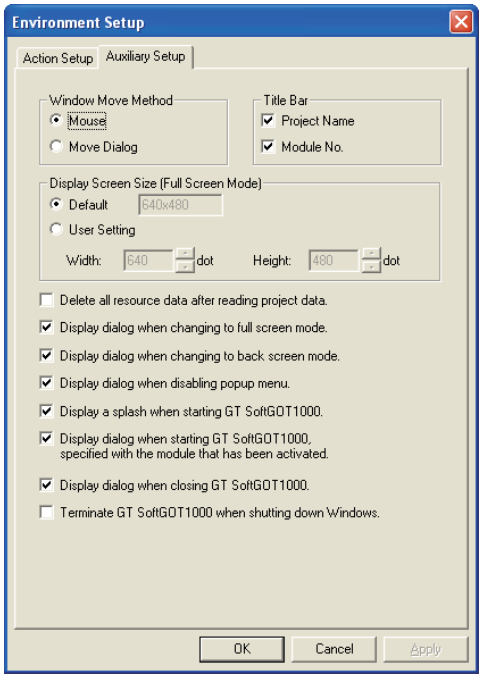
Item	Description
Resolution	Select the screen size (resolution: dots) to be monitored. "640 × 480", "800 × 600", "1024 × 768", "1280 × 1024", "1600 × 1200", "X × Y" Set the resolution dot by dot when selecting [X × Y]. X :Set the horizontal size (X axis). (1600 dots to 640 dots) Y :Set the vertical size (Y axis). (1200 dots to 480 dots)

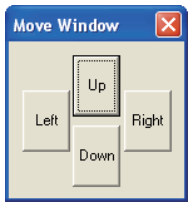
(Continued to next page)

Item		Description
Font	Font Control	Select a font language used for monitoring. When selecting Japanese (Supporting Europe) or Chinese (Simplified) (Supporting Europe), Latin characters are displayed in one-byte characters. Japanese: Japanese characters are displayed. Japanese (Supporting Europe): Japanese characters (supporting Europe) are displayed. Chinese (Simplified): Chinese (Simplified) characters are displayed. Chinese (Simplified) (Supporting Europe): Chinese (Simplified) characters (supporting Europe) are displayed.
	16dot Standard Font	Select the font type of 16dot standard font. [Gothic], [Mincho]
	TrueType Numerical Font	Select a font type of the TrueType numerical font. [Gothic], [7-Segment]
	Use Japanese optional font	This item is available only when selecting Chinese (Simplified) or Chinese (Simplified) (Supporting Europe) for Font Control. Do not check this item normally (when displaying in Chinese (Simplified) characters). When checking this item, objects without Kanji region setting will be displayed in Japanese.
Authentication		Select an authentic method. Select the same authentic method set in [System Environment] of GT Designer2.
KANA KANJI Conversion		Select a version of the Kana-kanji conversion function. [Standard], [Enhanced]
Virtual A Drive*1		Set a folder in the hard disc drive as the virtual A drive, which is used as the A drive environment of the GOT main unit. • Default : Stores resource data in the virtual A drive. Refer to the following for virtual A drive. Section 3.3.1 4 Virtual drive • Fixed: : Stores resource data in the folder specified by the user. Select this item when storing resource data to a desired folder. Clickingn the Brouse button displays the Browse For Folder dialog. Select a folder to which resource data is stored.
Virtual B Drive*1		Set a folder in the hard disc drive as the virtual B drive, which is used as the B drive environment of the GOT main unit. • Default : Stores resource data in the virtual B drive. Refer to the following for virtual B drive. Section 3.3.1 4 Virtual drive • Fixed: : Stores resource data in the folder specified by the user. Select this item when storing resource data to a desired folder. Clickingn the Brouse button displays the Browse For Folder dialog. Select a folder to which resource data is stored.
File Output (Hard Copy Function)		Select the output destination for the hard copy file. • Default : Stores files in the virtual A drive (G1SgtHardcopy). Refer to the following for G1SgtHardcopy. Section 3.3.1 6 Resource data storage destination • [Project Data Setting] : Stores files in the file output destination specified on the [Project Data Setting] screen.

*1 For specifying a virtual drive, do not specify the same folder set as the other virtual drive or virtual drives for other GT SoftGOT1000.
Doing so may cause malfunctions.

2 Auxiliary Setup tab



Item		Description
Window Move Method		Select the window moving method used when the title bar is not displayed, for example, in the full screen display function. Refer to Section 6.9 for details of window movement. [Mouse] :Move the mouse to move GT SoftGOT1000 for window movement. Click the mouse to determine the position. [Move Dialog] :The Move window dialog box is displayed for window movement, and clicking the up, down, left or right button moves GT SoftGOT1000 on a 5-dot basis. A window can also be moved on a panel computer that cannot use a mouse. 
Title Bar		Select the data to be displayed on the title bar.
	Project Name	Turn on this checkbox to display the project name on the title bar.
	Module No.	Check this item to display the module No. on the title bar.
Display Screen Size (Full Screen Mode)*1		Set the screen size of GT SoftGOT1000 with the full screen mode function. • Default :Select [Default] for displaying the full-screen GT SoftGOT1000 in the size set for [Resolution] in the Environment Setup dialog box. • User Setting :Select [User Setting] for displaying the full-screen GT SoftGOT1000 in sizes other than the size set for [Resolution]. After selecting [User Setting], set the screen size. (Width: 320 to 1600 dots, Height: 240 to 1200 dots)
Delete all resource data after reading project data.		Check this item to delete all resource data in the A/B drive when completing project data reading.

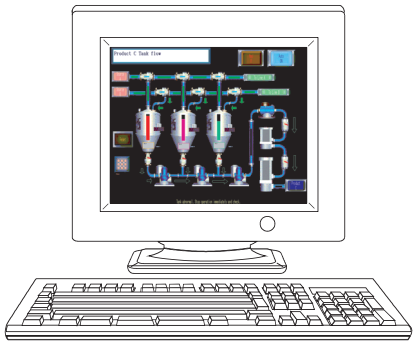
(Continued to next page)

Item	Description
Display dialog when changing to full screen mode.	Check this item to display the confirmation dialog box when full screen changes are carried out.
Display dialog when changing to back screen mode.	Check this item to display the confirmation dialog box when the screen is displayed behind the other screens.
Display dialog when disabling popup menu.	Check this item to display the confirmation dialog box when disabling popup menu.
Display a splash when starting GT SoftGOT1000.	Check the item to display the splash screen when GT SoftGOT1000 starts.
Display dialog when starting GT SoftGOT1000, specified with the module that has been activated.	Check this item to display the attention dialog box when restarting GT SoftGOT1000 module that has been activated.
Display dialog when closing GT SoftGOT1000.	Check this item to display the confirmation dialog box when ending GT SoftGOT1000.
Terminate GT SoftGOT1000 when shutting down Windows.	Check this item to end GT SoftGOT1000 as well as logging off or ending Windows.

For details of *1, refer to the following.

*1 Display Screen Size (Full Screen Mode)

When [Display Screen Size (Full Screen Mode)] is set to a smaller size than the size set for [Resolution] in the Environment Setup dialog box, the user can simultaneously use the full-screen GT SoftGOT1000 and other applications.



When the sizes set for [Resolution] and [Display Screen Size (Full Screen Mode)] are the same
· [Resolution] : 1280 × 1024
· [Display Screen Size (Full Screen Mode)] : 1280 × 1024

When [Display Screen Size (Full Screen Mode)] is set to a smaller size than the size set for [Resolution]
· [Resolution] : 1280 × 1024
· [Display Screen Size (Full Screen Mode)] : 1280 × 512

Displaying the scroll bars enables GT SoftGOT1000 to display the hidden part of the monitor screen. (☞ 6.18 Scroll Function)

Point

Screen size in full screen mode

For selecting [User Setting] for [Display Screen Size (Full Screen Mode), [Width] and [Height] can be set with GOT internal devices (Width: GS503, Height: GS504). Input values into the corresponding GOT internal devices, and the screen size changes.
For GOT internal devices, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual

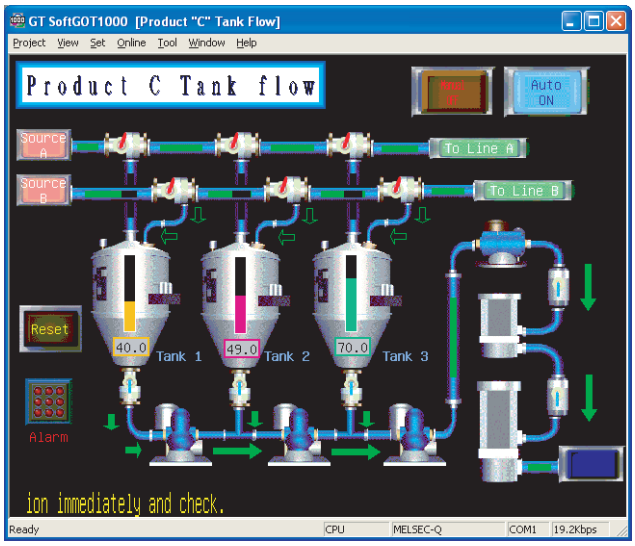
5.4 Starting Monitoring

This section describes how to perform monitoring with the project data monitored previously.

1 Perform either of the following operations.

- Click (Monitor Start)
- Select [Online] → [Monitor Start] from the menu.
- Right-click the mouse and select [Monitor Start] from the menu.

2 Monitoring is started with the project data monitored previously.



Point

Before monitoring

The following shows the procedure used when not starting monitoring with the project data monitored previously.

(1) When performing a monitoring for the first time
Select [Project] → [Open] and set a project data to be monitored.

☞ 5.5 Opening the Project

When performing a monitoring for the first time, performing the operation shown in this section causes GT SoftGOT1000 to display the Utility.

(2) When project data has been changed after previous monitoring
Select [Project] → [Open] and set the project data to be monitored before starting monitoring.

☞ 5.5 Opening the Project

5.5 Opening the Project

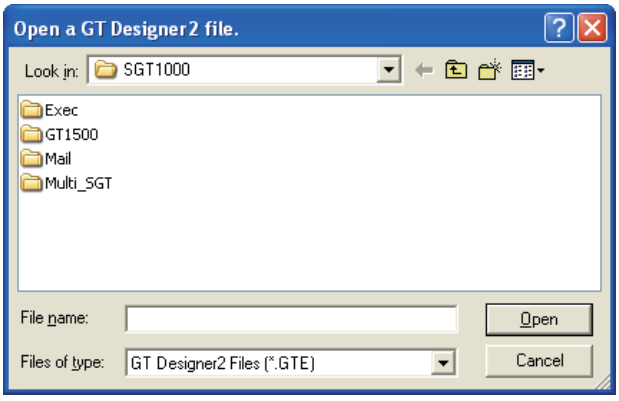
Set a project data for monitoring and start monitoring.

1 Perform either of the following operations.

- Click (Open a GT Designer2 file.).
- Select [Project] → [Open] from the menu.
- Right-click the mouse and select [Open] from the menu.

2 The Open a GT Designer2 file. dialog box is displayed.

Set up the following items and click the Open button.

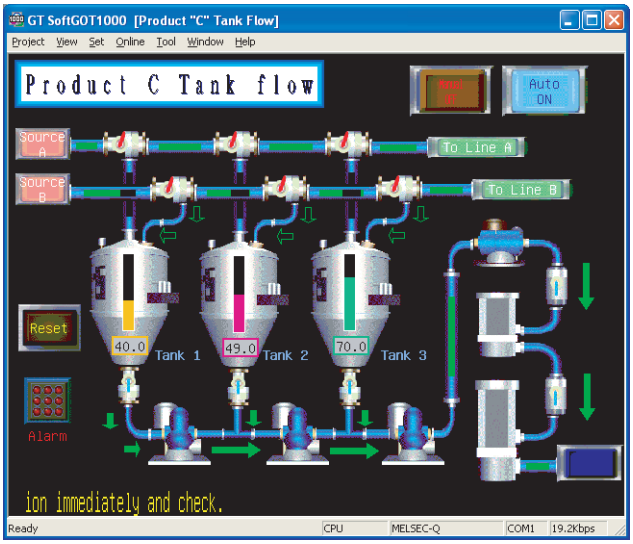


Item	Description
Look in	Selects the area where the project data is saved.
File name	Sets project data name for monitoring.
Files of type	Selects a file format of the project data. GT Designer2 file(*.gte) : GTE format

3 Confirmation dialog box is displayed. (The dialogue box is not displayed if GT SoftGOT1000 is already in online mode.)

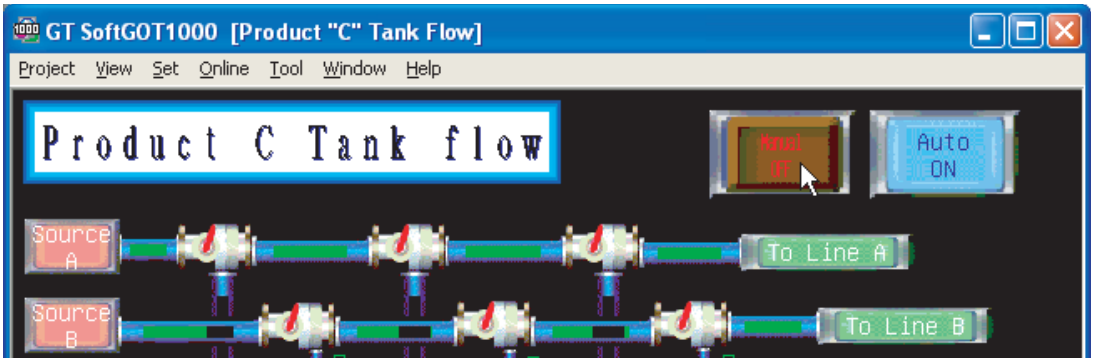
4 Selecting Yes starts monitoring of the project monitored previously.
(Displays the Utility when opening a project for the first time.)

Turn off the power supply to the PLC or disconnect the communication cable that connects the personal computer and PLC in advance if it is not desired to go into online mode with the previous project data or if it is desired to open a project in off-line mode.



5.6 Monitoring Operation

On GT SoftGOT1000, touching the touch keys is performed by pressing the mouse button.
As the input range of the touch key is narrower than that of the GOT, confirm the input with the buzzer sound after inputting.

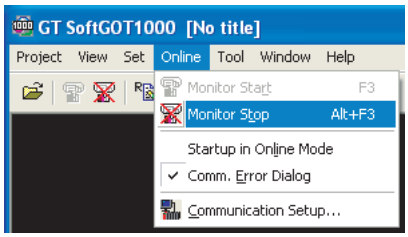


5.7 Monitor Stop

This section describes how to stop a monitoring.

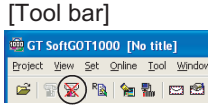
1 Perform either of the following operations.

- Click (Monitor Stop).
- Select [Online] → [Monitor Stop] from the menu.
- Right-click the mouse and select [Monitor Stop] from the menu.



Select either method.

[Tool bar]

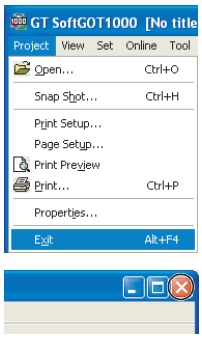


2 The monitoring stops.

5.8 Exiting from GT SoftGOT1000

This section describes how to exit from GT SoftGOT1000.

1. Perform either of the following operations.
   - Select [Project] → [Exit] from the menu.
   - Click the on the tool bar.
   - Right-click the mouse and select [Exit] from the menu.
2. GT SoftGOT1000 is exited.



Select either method.

Point

Exiting with GOT internal device

Turn ON the GOT internal device (system data area of GT SoftGOT1000: GS500.b0) to exit from GT SoftGOT1000.
Presetting the above device as a touch key enables to exit from GT SoftGOT1000 without selecting the menu.
(GT SoftGOT1000 may not be terminated if device ON time is too short. Keep the device ON until GT SoftGOT1000 is terminated.)
For details of the GOT internal device, refer to the following.

☞ GT Designer2 Version□ Screen Design Manual

5.9 Automatic Startup

The following explains how to start up GT SoftGOT1000 automatically when Windows® is started up by using [Online after starting].

1. After starting up GT SoftGOT1000, the project data for which the monitoring should be automatically started up is read out and monitored by GT SoftGOT1000.
2. Choose any of the following.
   - [Online] - [Startup in Online Mode]
   - [Startup in Online Mode] by right-clicking the mouse
3. Close GT SoftGOT1000.
4. Start up Windows Explorer and copy the GT SoftGOT1000 icon in [MELSOFT application] to [Startup] in Windows.
5. GT SoftGOT1000 automatically starts up when Windows® is started up from the next time, and automatically begins monitoring.

Point

Before automatic startup

Make sure that the power supply to the connected PLC CPU is turned on before starting up Windows® when performing automatic startup.

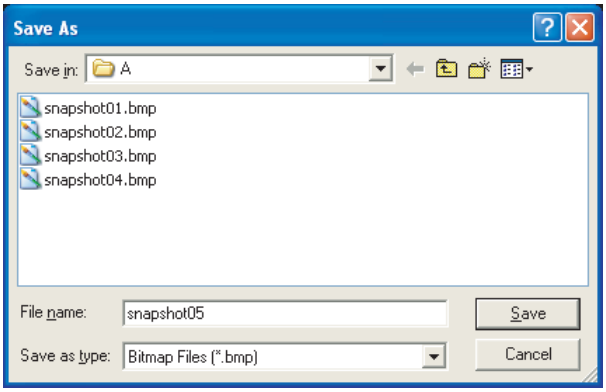
6. FUNCTIONS

6.1 Snap Shot

The screen image being monitored is saved into BMP or JPG format file.

1. Perform the following operation.
   - Select [Project] → [Snap Shot...] from the menu.
2. The save as dialog box is displayed.

   Set the following items and click the Save button.



Item	Description
Save in	Selects the area where the file is saved.
File name	Selects the file name to be saved.
Save as type	Selects a format of the file. • Bitmap Files (*.bmp) : BMP format • JPEG Files (*.jpg) : JPEG format

6.2 Print

The screen image being monitored is output to a printer.

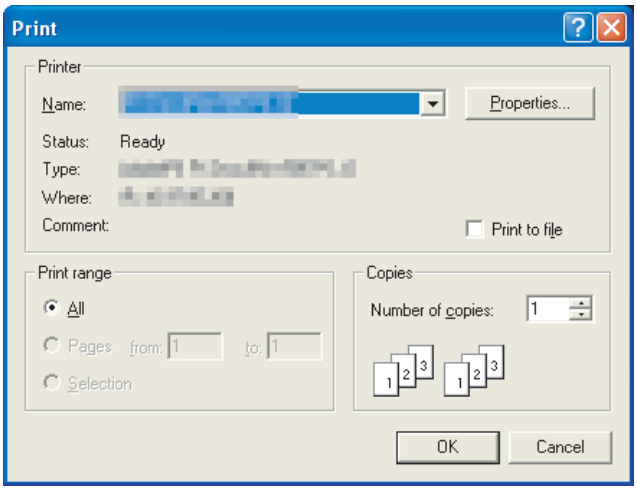
6.2.1 Printing

1 Perform the following operation.

- Select [Project] → [Print...] from the menu.

2 The print dialog box of Windows® is displayed.

Click the OK button to start printing.

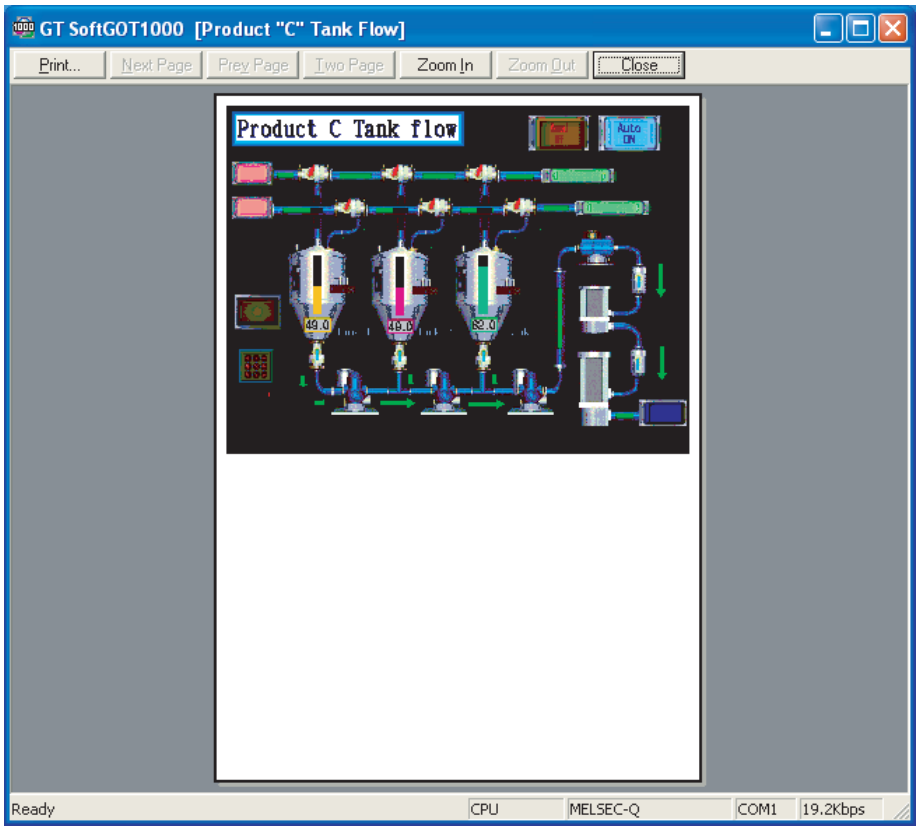


6.2.2 Performing print preview

1 Perform the following operation.

- Select [Project] → [Print Preview] from the menu.

2 Print Preview is displayed.



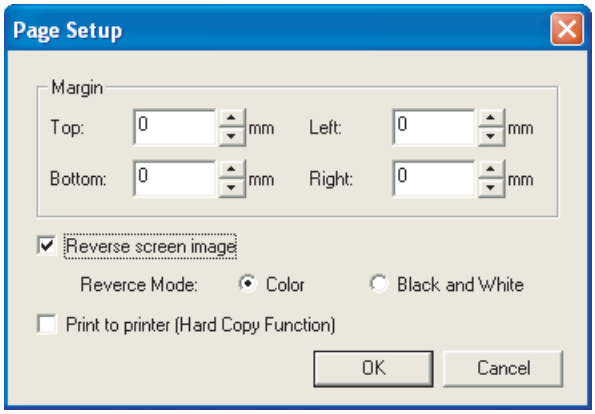
6.2.3 Performing page setup

1 Perform the following operation.

- Select [Project] → [Page Setup] from the menu.

2 The page setup dialog box is displayed.

Set the following items and click the OK button.



Item		Description
Margin		Set the margins on a page to be printed.
Reverse screen image		Select this item to reverse the colors of screen image when printing.
	Reverse Mode	Set the reverse mode for screen image. • Color : Reverse all the colors of screen image to be printed. • Black and White : Reverse the black and white colors of screen image to be printed.
Print to printer (Hard Copy Function)		Check this item to output data to a printer using the hard copy function.

6.2.4 Performing print setup

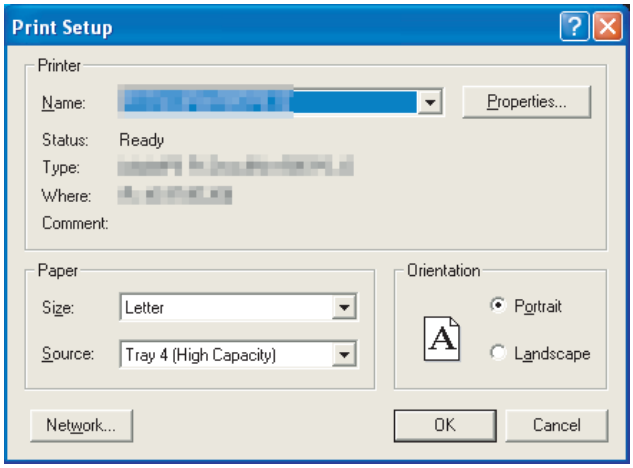
1 Perform the following operation.

- Select [Project] → [Print Setup...] from the menu.

2 The print dialog box of Windows® is displayed.

Make printer settings (selection of printer, paper size and printing direction).

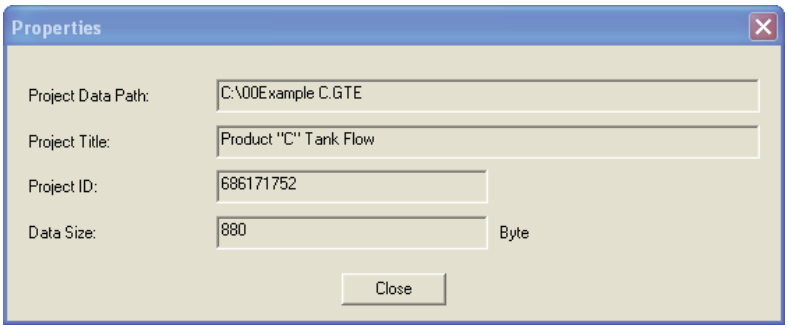
Click the OK button to start printing.



6.3 Property

The project title, project ID and data size of project data being monitored are displayed.

1. Perform the following operation.
   - Select [Project] → [Properties...] from the menu.
2. The Properties dialog box is displayed.



Item	Description
Project Data Path	Displays the path of the read project data.
Project Title	Displays the project title.
Project ID	Displays the project ID.
Data Size	Displays the data size of project data.

Remark

When the properties dialog box is displayed before starting monitoring

When the properties dialog box is displayed before starting monitoring, the project data path, project title, project ID and data size of project data monitored previously are displayed.
(If project data has not been loaded, the project data path, project title, project ID and data size are not displayed.)

6.4 Resource Data

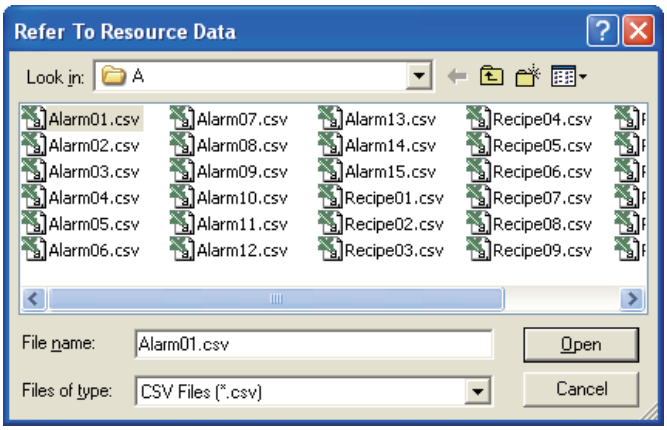
It is possible to reference data of the following object functions stored in the hard disk of the personal computer:

Advanced alarm,	Alarm history,	Logging,	Recipe,
Advanced recipe,	Report (Print),	Hard copy (File save),	Hard copy (Print),
Operation log			

1 Perform the following operation.

- Select [Tool] → [Resouce Data] from the menu.
- Right-click the mouse to select [Tool] → [Resource Data].

2 The Properties dialog box is displayed.



Item	Description
Look in	Selects the location to which the resource data is stored.
File name	Specifies the file to be read.
Files of type	Selects the file format of the resource data. • CSV Files (*.csv) : CSV format • Unicode Text Files (*.txt) : Unicode text file format • Bitmap Files (*.bmp) : BMP format • JPEG Files (*.jpg) : JPEG format

Point

Resource data

Data cannot be updated while being referenced. (The data is held.)
(The held data is reflected when the print data is updated after the data reference is over.)
Use the format shown in Example 1 if tables are created in the report function.
Tables with the format shown in Example 2 cannot be properly displayed in CSV files.

(Example 1) Table created with GT Designer2

	A	B
X	1	2
Y	3	4

CSV file table

	A	B
X	1	2
Y	3	4

(Example 2) Table created with GT Designer2

	A	B
X	1	2
Y	3	4

CSV file table

A	B	
X	1	2
Y	3	4

If the [Fail in the start of application.] message is displayed during data reference, check the application relating setting or hard disk/memory capacity.

6.5 Mail Function

Point

Before using the mail function

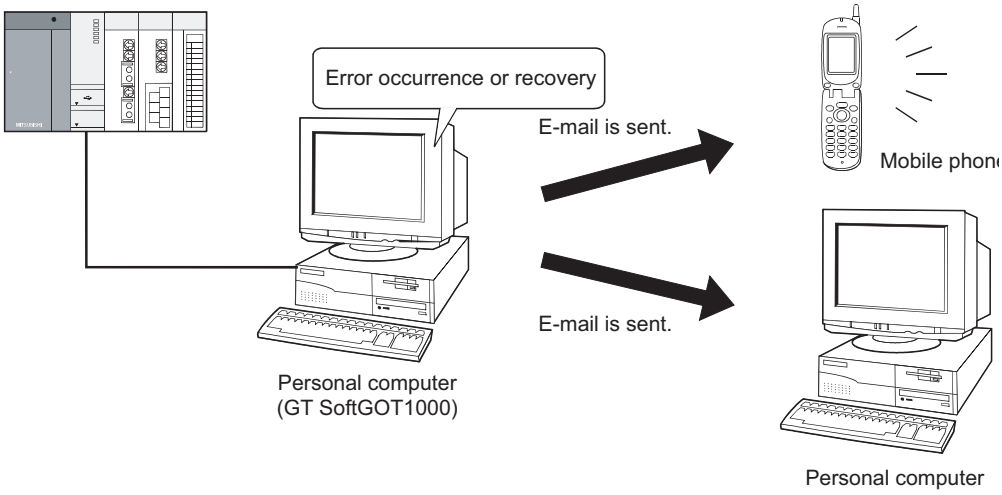
When using the mail function, e-mail is sent from GT SoftGOT1000, so mail software is not required on the sending side.
To use the mail function, a contract with a service provider and set up the environment so that e-mail can be sent is required.

6.5.1 Mail function overview

It is possible to send messages from GT SoftGOT1000 to personal computers and mobile phones.
The mail function can only be used in the following object functions:

- Alarm history display function
- System alarm

(1) Using the alarm history display function
It is possible to send error and recovery information at error/recovery of stations using the alarm history display function.



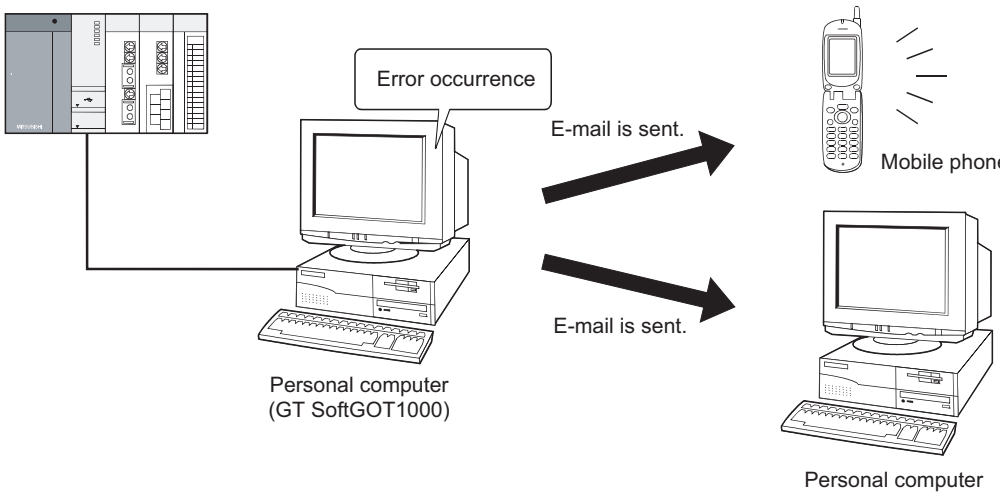
(2) Using system alarms

An error definition is sent at system alarm occurrence.

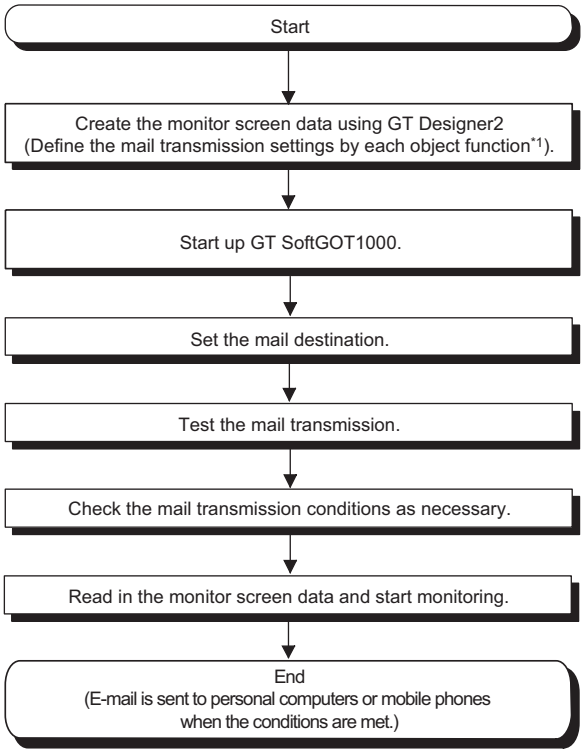
The system alarm transmission of GT SoftGOT1000 differs from the alarm list display function (system alarm) of the GOT.

It does not require the alarm list display function (system alarm) to be set in the monitor screen data.

Turn on/off the checkboxes in the Mail Condition dialog box to select whether this function will be used or not.



6.5.2 Operation flow when using the mail function



GT Designer2 Version□ Screen Design Manual

GT Designer2 Version□ Basic Operation/Data Transfer Manual

6.5.3 How to set up the mail function

6.5.3 How to set up the mail function

6.5.3 How to set up the mail function

5.5 Opening the Project

*1: Setting need not be made when system alarm transmission is used.

6.5.3 How to set up the mail function

The following explains how to set up the mail function to send e-mail using GT SoftGOT1000.

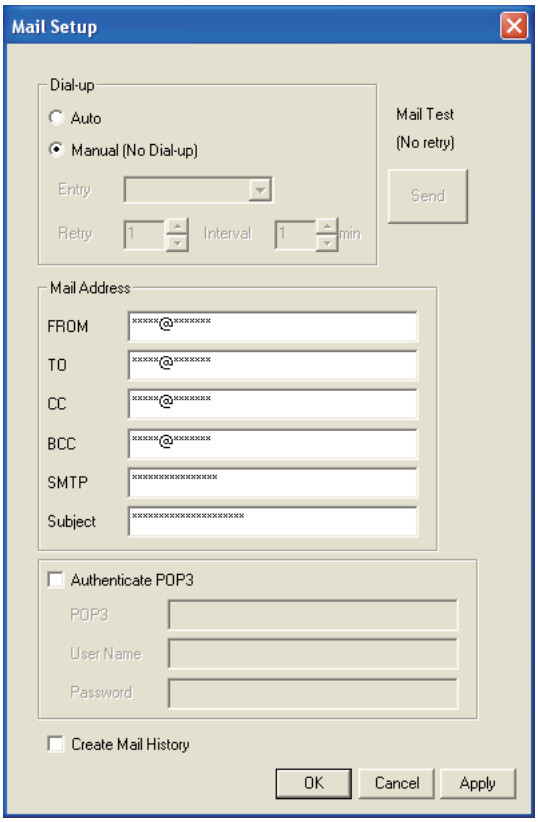
1 Mail setup

Used to set the mail send destination and perform a mail transmission test.

1 Perform the following operation.

- Click (Mail Setup).
- Select [Set] → [Mail Setup] → [Mail Setup] from the menu.
- Right-click the mouse to select [Set] → [Mail Setup] from the menu.

2 The Mail Setup dialog box is displayed.



Item		Description
Dial-up		Set whether or not to send e-mail via dialup. (The default is [Manual].)
	Auto	Check this radio button to send e-mail via dialup. If [Auto] is checked, a connection to the mail server is made and e-mail is sent when the mail conditions are established. The connection to the server is canceled after e-mail is sent. It is necessary to set [Entry,] [Retry,] and [Interval.]
	Manual (No dial-up)	Check this radio button to send e-mail without using dialup. If [Manual] is set, the connection to the mail server is always active when e-mail is sent. The connection to the server is not canceled even after e-mail is sent.

(Continued to next page)

Item		Description
	Entry	Select the dialup connection entry name in Windows® . Refer to the Help function in Windows® for how to create a dial up entry.
	Retry	Set the number of retries made if a dialup fails. "0" to "10" (The default is "1.")
	Interval	Set the interval between retries. "1" to "10" (minutes) (The default is "1.")
Mail Address		Enter the origin, destination, server name, and title of mail.
	FROM	Enter the address of the mail origin.
	TO*1	Enter the address of the mail destination.
	CC*1	Enter the address of the mail destination (copy). (E-mail can be sent even this field is blank.)
	BCC*1	Enter the address of the mail destination (blind copy). (E-mail can be sent even this field is blank.)
	SMTP	Enter the mail server name.
	Subject	Enter the title of the mail.
Authenticate POP3		Enable the check box and enter the necessary information if POP3 authentication is required when sending e-mail. (The check box is disabled by default.)
	POP3	Enter the POP3 server name.
	User Name	Enter the user name.
	Password	Enter the password corresponding to the user name.
Create Mail History		Enable this check box to create a mail transmission history. (The check box is disabled by default.)
Mail Test		Test e-mail is sent to the destination by clicking the [Send] button.
OK		Used to update the settings and close the dialog box.
Cancel		Used to cancel the settings and close the dialog box.
Apply		Used to update the settings.

*1 If more than one address is entered, they should be separated with a space or a comma.
Up to 32 addresses are applicable to each setting.
Up to 64 characters can be used for one address.

Point

Mail settings

(1) Precautions for mail settings
The setting contents made by selecting [Common] → [Gateway] → [Mail...] in GT Designer2 are not reflected on GT SoftGOT1000.

(2) Dialup settings
Refer to the manual of the service provider and the Help function in Windows® for how to set the dialup network connection.

(a) Mail test

It is possible to check whether e-mail can be sent properly before starting monitoring by GT SoftGOT1000.

In the mail test, the following sample massage of GT SoftGOT1000 is sent to the destination based on the definition set in the Mail Setup dialogue box.

• GT SoftGOT1000 sample message displayed at the destination.

```
GT SoftGOT1000 TEST MAIL

This is a test message.
```

Point

Mail history

If [Create mail history] is checked in the Mail Setup dialogue box, the status of the mail test is saved as one of the history data items.

Refer to the following for mail history.

☞ 6.5.5 Mail history

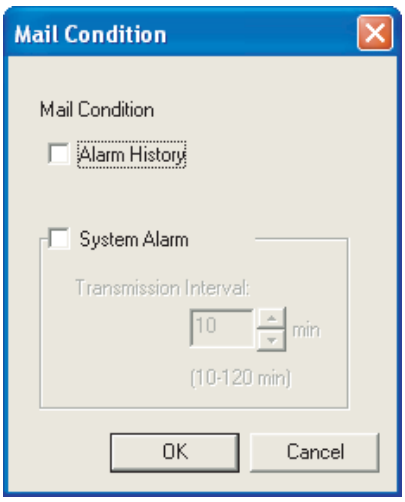
2 Mail Condition

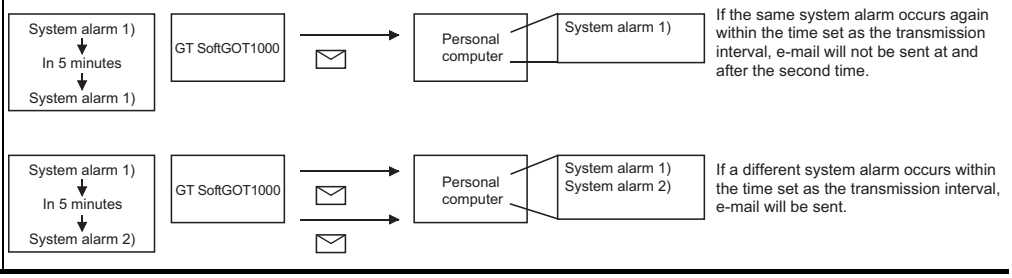
Set the mail send conditions.
If the mail transmission is set with GT SoftGOT1000, it is possible to set not to send e-mail for certain functions without modifying the monitor screen data.
Disable the functions for which e-mail is not to be sent.
(Check boxes are enabled by default.)

1 Perform the following operation.

- Click (Mail Condition).
- Select [Set] → [Mail Setup] → [Mail Condition] from the menu.
- Right-click the mouse to select [Set] → [Mail Condition].

2 The Mail Condition dialog box is displayed.



Item		Description
Mail Condition		Set whether the mail function will be used or not with each function.
	Alarm History	Turn on this checkbox to use the alarm history display function with the mail function.
	System Alarm	Turn on this checkbox to use the system alarm with the mail function. After turning it on, set the transmission interval (10 to 120 minutes) for the case where the same error occurs two or more times in a row. Example: When the error transmission interval is set to 15 minutes 

Point

Precautions for setting mail conditions

If the mail function is not set by Alarm history display function, this setting is ignored for that function (e-mail is not sent even if the check boxes are checked).
Refer to the GT Designer2 Version□ Screen Design Manual for how to set objects.

6.5.4 Sending e-mail

When e-mail is sent from GT SoftGOT1000 to the target device, the reception header part shown at the destination displays a message that shows that the e-mail is from GT SoftGOT1000.
Example of display in the reception header part at the destination

```
From:****************

To:******************

Cc:******************

Subject:GT SoftGOT1000 Mail.

        :

X-Mailer:GT SoftGOT1000(Version 2)
```

Point Precautions for mail sending

The format and contents of the display of e-mail sent vary depending on the mailer specifications used at the destination.
When e-mail is sent to a mobile phone, the display may vary depending on the specifications (screen size) of the mobile phone.
GT SoftGOT1000 can send up to 64 e-mails at once.

(1) When sending e-mail using the alarm history display function
If an alarm occurs in GT SoftGOT1000, the time and information of the alarm are sent to the destination by e-mail.
Moreover, if the alarm recovers, the time and information of the alarm recovery are sent to the destination by e-mail.
For the details of the alarm history display functions, refer to the GT Designer2 Version□ Screen Design Manual.

(a) Example of the header part display in the mail send destination when an alarm occurred

```
  [Alarm history: Occurrence Notification]
  [Occurrence Data and Time]
 2005/10/12 14:23:13
1)[Alarm Information]
An error occurred in the tank.
2)[Detailed Information]
The hydraulic pressure of tank is low.
```

1)The comment entered in the alarm history display function is displayed.
2)The content of detailed display entered in the alarm history display function is displayed.
[Detailed Information] is not displayed if the detail display setting of the alarm history display function has not been made or if it has been made to the base screen or window screen.
[detail comment nothing] appears under [Detailed Information]
Set the details to be displayed in the comment window in order to display the [Detailed Information].

(b) Example of display at destination (when an alarm recovered)

```
[Alarm History: Restoration Notification]
[Restored Time]
2005/10/12 15:05:47
[Restoration Information]
Alarm of the tank has been restored.
[Detailed Information]
The hydraulic pressure of tank is low.
```

(2) When sending e-mail using System Alarm

At communication error occurrence, the error occurrence time and error information are sent to the destination by mail.

(a) Destination display example (at error occurrence)

```
[System Alarm]
402 Communication timeout. Confirm communication pathway or modules. 2005/11/22 11:24:25
```

6.5.5 Mail history

It is possible to reference the operation history data of the e-mail sent from GT SoftGOT1000.
It is also possible to reference the errors generated at the time e-mail was sent.
The mail history data can be displayed using Notepad or a similar editor in Windows® .

1 How to reference mail history

The following explains how to reference the mail history data.

1 Perform the following operation.

- Click (Mail History).
- Select [Set] → [Mail Setup] → [Mail History] from the menu.
- Right-click the mouse to select [Set] → [Mail History] from the menu.

2 The mail history information is displayed.

(a) Example of mail history data display

```
                                        :
2006/09/25   15:10:52   No.01   POP:##### Searching...
2006/09/25   15:10:52   No.01   POP:##### Connecting...
2006/09/25   15:10:52   No.01   POP:##### Connection is completed.
2006/09/25   15:10:52   No.01   SMTP:##### Searching...
2006/09/25   15:10:52   No.01   SMTP:##### Connecting...
2006/09/25   15:10:52   No.01   SMTP:##### Connection is completed.
2006/09/25   15:10:52   No.01   Mail was sent successfully.
                                        :
```

Point Mail history

The mail history cannot be referenced if the data does not exist.
To create a mail history, enable [Create Mail History] in the Mail Setup dialogue box.
For the Mail Setup dialog box, refer to the following.

☞ 6.5.3 How to set up the mail function

The mail history data is not deleted even if GT SoftGOT1000 is exited.
The unnecessary history data is required to delete by the user.

6.6 Keyboard Input

The following can be operated using the keyboard input function.
- For the numerical input and the ASCII input, characters and values can be input with a keyboard.
- Operations, including displaying a ladder with the alarm history, can be operated with function keys of a keyboard.

6.6.1 Keyboard input enabling/disabling procedure

1 When switching the keyboard input enable/disable, perform the following operation.

- Click (Keyboard).
- Select [Set] → [Keyboard] from the menu.
- Right-click the mouse to select [Set] → [Keyboard] from the menu.

6.6.2 When operating the numerical input function or the ASCII input function from the keyboard of a PC

When using the numerical input function or the ASCII input function, numeric values/ASCII codes can be entered from the keyboard of a PC.
The following lists the operation when each key is pressed.

Type of key	Operation when entering a numeric value	Operation when entering ASCII code
Back Space	Erases the least significant digit and shifts the entire content one digit to the right.	
Enter	Writes to a device, displays the cursor, moves the cursor, and closes the current dialog box.	
Esc	Cancels the operation.	
-	Reverses the sign.	
.	Inputs a decimal point.	
Numeric key	Inputs numeric values (0 to 9).	Inputs ASCII code, shift JIS code, and letters.
Alphabetic key	Input alphabetic letters (A to F).	
Arrow key	Moves the cursor.	
Home	–	Kanji conversion
PageUp	–	Former candidate
PageDown	–	Next candidate
End	–	Select/No conversion
Delete	Erases a character being input.	
Ctrl + ←, Ctrl + →	Moves the cursor in the object.	
Ctrl + ↑	Increment	–
Ctrl + ↓	Decrement	–

6.6.3 How to use function keys

With assigning key codes to the following function keys, objects, including the alarm history, can be operated with a keyboard.

- F1 to F8
- Shift + F1 to F8
- Ctrl + F1 to F8
- Ctrl + Shift + F1 to F8

For applicable key codes for objects, refer to the following manual.

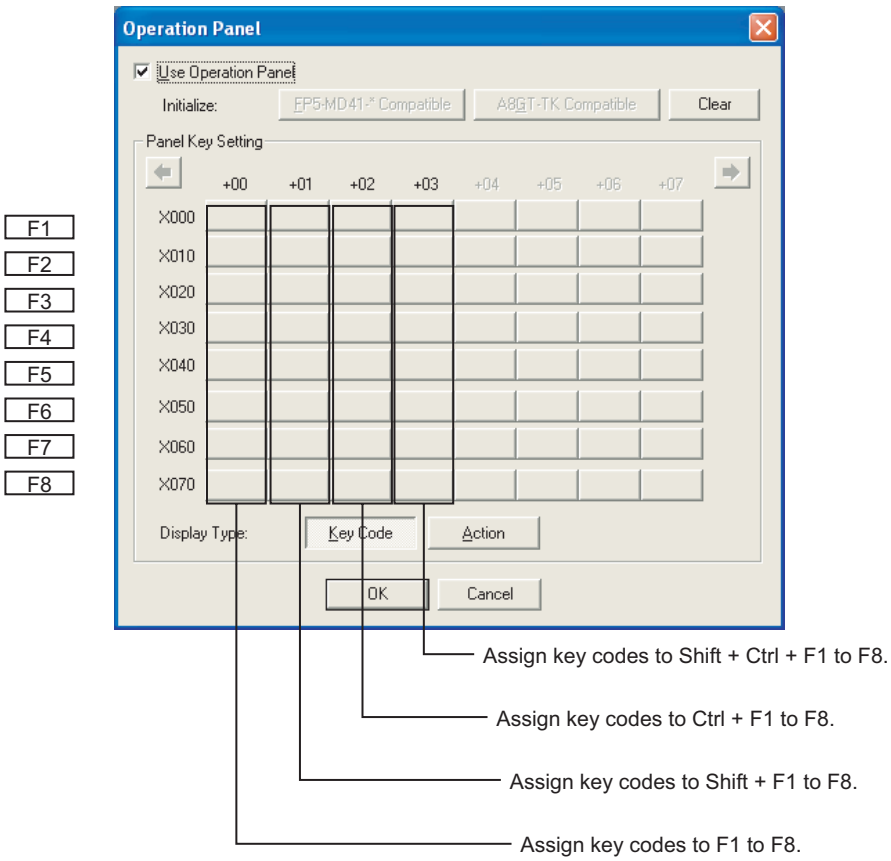
☞ GT Designer2 Version ☐ Screen Design Manual

(1) How to assign key codes

Key codes are assigned in the OperationPanel screen on GT Designer2

For settings in the OperationPanel dialog box, refer to the following manual.

☞ GT Designer2 Version ☐ Screen Design Manual



6.6.4 Precautions

(1) When displaying a window screen on a base screen
When displaying a window screen on a base screen, and the alarm list display function or the alarm history display function has been set up on both the screens, key input is enabled for the alarm list display function or the alarm history display function on the base screen.

(2) When a touch switch to which the simultaneous press disable setting has been made is ON
The touch switch will not operate when pressing a key in the case the simultaneous press disable setting has been made to the touch switch and the touch switch is ON.

(3) Precautions on screen saving

(a) When the screen save is set on GT SoftGOT1000, the monitor screen does not turn black as GOT even though the screen save operates. (The monitor screen keeps the same screen as before setting the screen save.)
When the monitor screen is clicked for canceling the screen save, clicking the screen is not recognized as input operations, including clicking touch switches. Be sure not to make incorrectly inputs.

(b) When the screen saves for GT SoftGOT1000 and Windows operate, canceling the screen saves must be executed respectively.

(4) Keyboard inputs

(a) The keyboard input function is not compatible with the utility screen.
Operate the utility screen with the mouse.

(b) Do not use software keyboards (keyboard applications).

(5) Precautions for function keys

(a) Function keys cannot be used during clicking the mouse.

(b) For an input with a function key, the input is executed when the function key is released.
As a result, operations are not correctly executed even though the following are set on GT Designer2.
- Setting [Screen Switching Switch Synchronous Mode] in [Auxiliary Setting] of [System Environment]
- Setting [Momentary] for the action of the bit in the Action tab of the Edit Action/Key Code screen for the operation panel setting
- Setting [Auto Repeat] in the Trigger tab of the Edit Action/Key Code screen for the operation panel setting

(c) When input methods, including IME of Windows® , are enabled, inputs with function keys cannot be executed.
For inputs with function keys, disable input methods, including IME of Windows® .

6.7 Full Screen Mode

The full monitor screen of GT SoftGOT1000 can be displayed on the personal computer screen.

When the full screen mode function is not use

When the full screen mode function is not used, the part of the frame is displayed.

When the full screen mode function is used

When the full screen mode function is used, the part of the frame is hidden and the full monitor screen can be displayed on the personal computer.

Point Precautions on the full screen mode

When using the full screen mode function, such operations as exiting from GT SoftGOT1000 cannot be performed, since the menu bar, toolbar and status bar of GT SoftGOT1000 are hidden.

To perform operations of the menu bar and toolbar, use the mouse right-click menu.

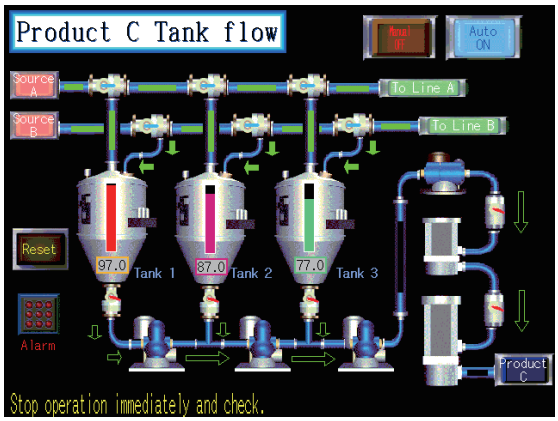
6.7.1 Full screen mode types

There are the following types of full screen mode function.

(1) Full screen 1

Only a monitor screen is displayed fully on the screen.

Use this function with the personal computer or panel computer where a mouse and keyboard are connected.



<Operation procedure>

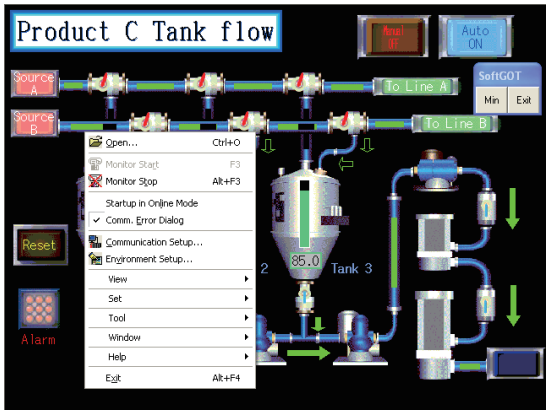
The operations performed on the menu bar and toolbar can be performed by right-clicking a mouse.

Double-click on the monitor screen with holding down the Shift key to minimize the screen.

Press the F12 key (function key) to exit from GT SoftGOT1000.

(2) Full screen 2

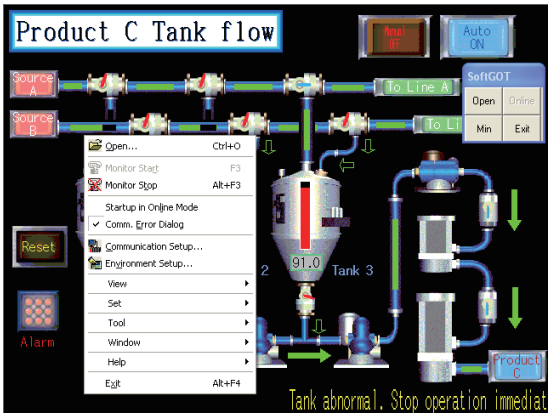
A monitor screen is displayed fully on the screen, and a small dialog is displayed.
GT SoftGOT1000 can be minimized/exited in the small dialog.
Since GT SoftGOT1000 can be exited on the monitor screen, it can be used for the panel computer where a mouse and keyboard are not connected.



<Procedure for operation>
The following operations can be performed in the small dialog.
Min: Minimizes GT SoftGOT1000.
Exit: Exits GT SoftGOT1000.
The operations performed on the menu bar and toolbar can be performed by right-clicking a mouse.
Double-click on the monitor screen holding down the Shift key to minimize the screen.
Press the F12 key (function key) to exit from GT SoftGOT1000.

(3) Full screen 3

A monitor screen is displayed fully on the screen, and a small dialog is also displayed.
GT SoftGOT1000 can be opened/monitored/minimized/exited in the small dialog.
Since GT SoftGOT1000 can be exited on the monitor screen, it can be used for the panel computer where a mouse and keyboard are not connected.



<Procedure for operation>
The following operations can be performed in the small dialog.
Open: Opens a project.
Online: Starts monitoring. (Cannot be selected during monitoring.)
Min: Minimizes GT SoftGOT1000.
Exit: Exits GT SoftGOT1000.
The operations performed on the menu bar and toolbar can be performed by right-clicking the mouse.
Double-click on the monitor screen holding down the Shift key to minimize the screen.
Press the F12 (function key) to exit from GT SoftGOT1000.

Point

Exiting the full screen mode

Turning ON the GOT internal device (system information area of GT SoftGOT1000: GS500.b0) exit GT SoftGOT1000.
By setting the above device as a touch switch, GT SoftGOT1000 can be exited without using a mouse and keyboard.
For details of the GOT internal device, refer to the following manual

☞ GT Designer 2 Version ☐ Screen Design Manual

6.7.2 Setting method

The full screen mode can be set either before or after starting GT SoftGOT1000.

1 Setting before starting GT SoftGOT1000

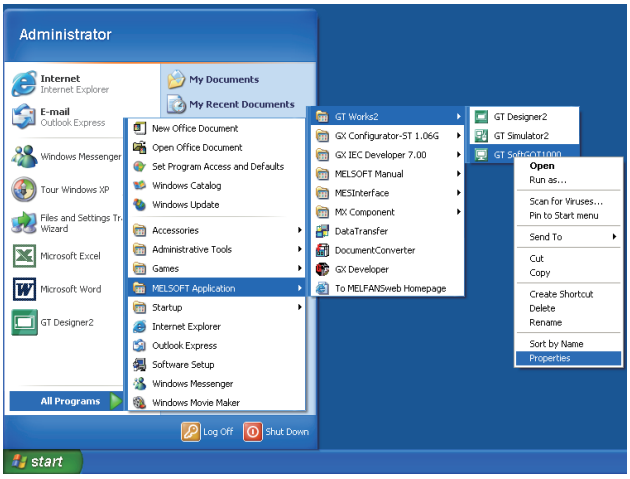
1 Select the operation from the following depending on the OS in use.

- For Windows® 2000

  Select [Start] → [Program] → [MELSOFT Application] → [GT Works2] → [GT SoftGOT1000], where right-click the mouse to select [Properties].

- For Windows® XP, Windows Vista®

  Select [Start] → [All Programs] → [MELSOFT Application] → [GT Works2] → [GT SoftGOT1000], where right-click the mouse to select [Properties].

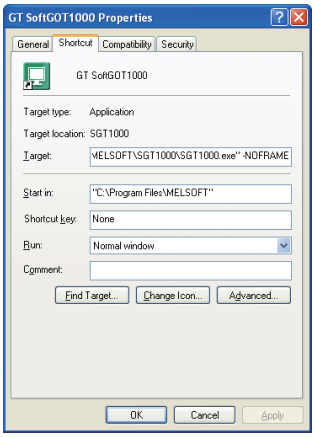


In the case of Windows® XP

2 As the GT SoftGOT1000 properties appear, choose the shortcut tab and add the keyword of the mode to be used to [Target].

Keyword	Description
-NOFRAME*1	Displays the screen in full screen 1.
-NOFRAMEDLG*1	Displays the screen in full screen 2.
-NOFRAMEDLGMENU*1	Displays the screen in full screen 3.

*1 A one-byte blank is required to be prefixed to "-".



When displaying the screen in full screen 1

3 After addition, click the OK button.

4 When GT SoftGOT1000 is started next, GT SoftGOT1000 is started in the full screen mode.

5 When you cancel the full screen mode, delete the keyword added to [Target].

Hint!

When starting the GT SoftGOT1000 with the specified module number in the full-screen mode

The specified module of GT SoftGOT1000 can be started in the full-screen by entering the keyword for both full screen mode and module No. in the [Target] of [GT SoftGOT1000 Properties]. (There are no rules for the order of entering keywords.)
Ex) When starting module No. 3 in the full-screen 1

C:\Program Files\MELSOFT\SGT1000\SGT1000.exe -SGT3 -NOFRAME

A one-byte space is necessary in front of keyword

Refer to the following for module keyword.

☞ 6.9 Starting Up Multiple GT SoftGOT1000 Modules

2 Setting after starting GT SoftGOT1000

1 Select either of the following.
- Select [View] → [Full Screen Mode] from the menu.
- Right-click the mouse to select [View] → [Full Screen Mode] from the menu.

2 The GT SoftGOT1000 is displayed in full screen 1 mode.

3 To cancel the full screen mode, right-click the mouse to select [View] → [Full Screen Mode] from the menu.

Point

Enabling and disabling full screen mode with GOT internal device

The full screen mode of GT SoftGOT1000 can be switched between enabled and disabled states by turning on and off the GOT internal device (GS500.b1).
- ON : GT SoftGOT1000 is displayed in the full screen mode.
- OFF : The full screen mode of GT SoftGOT1000 is canceled.

For GOT internal devices, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual

6.7.3 Precautions

(1) Small dialog
The small dialog is movable but cannot be closed.
It is always displayed on the front position.

(2) Switching to the standard screen display
When the GT SoftGOT1000 was started with a keyword, the screen cannot be switched to the standard screen display.
([Full Screen Mode] in the menu is displayed in gray.)

(3) Full screen mode setting
The full screen mode setting is valid even when exiting the GT SoftGOT1000 and restarting it.

(4) Display position in full screen mode
When switching to full screen mode under the environment where the resolution of the PC display and GT SoftGOT1000 are different, the GT SoftGOT1000 window is displayed so that the upper-left corner of the window is on the upper-left of the PC display.

(5) When displaying the screen in full screen mode after starting the GT SoftGOT1000
When displaying the screen in full screen mode after starting the GT SoftGOT1000, the screen is displayed in full screen 1.
To display the screen in full screen 2 or 3, set the full screen mode with the procedure shown in Section 6.7.2 1 .

6.8 Popup Menu

The right-click of the mouse can be disabled (the menu can be hidden).
When the Popupmenu is set to be disabled, the menu is not displayed if you right-click the mouse.
This setting is also enabled when you exit and then restart GT SoftGOT1000.

6.8.1 Popup menu ineffective/effective

1. Perform the following operation.
   - Select [Set] → [Popup Menu] from the menu.
   - Right-click the mouse to select [Set] → [Popup Menu] from the menu.
2. The right-click of the mouse is disabled.
3. When you want to enable the right-click of the mouse again, choose [Set] - [Popup Menu].

6.8.2 Precautions

When the full screen mode and Popupmenu disable are set, the operations of the menu bar and mouse right-click menu cannot be performed. Therefore, the pop-up menu cannot be enabled until the full screen mode is canceled.
When you want to enable the pop-up menu, cancel the full screen mode in the following method.

(a) When the keyword of the full screen mode was added to the property of the GT SoftGOT1000 icon.

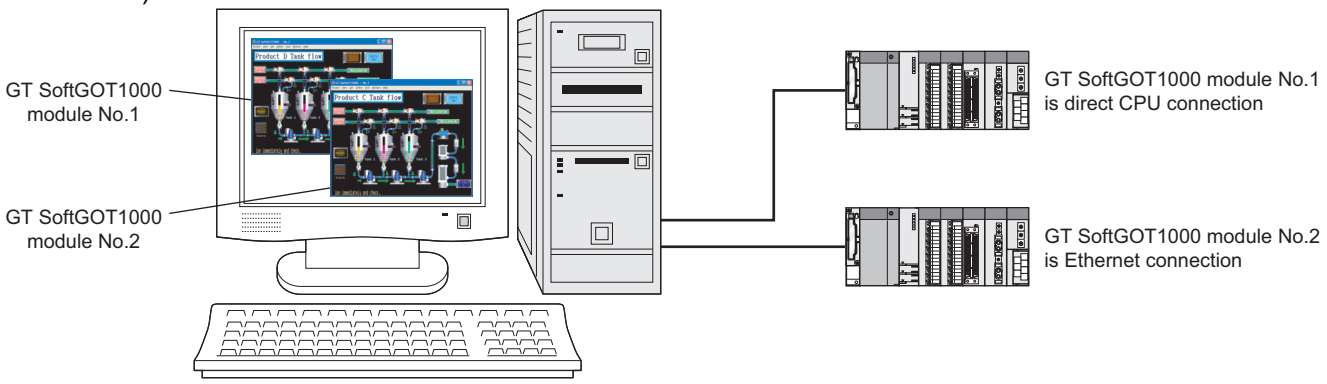
After exiting GT SoftGOT1000 (pressing the F12 key or turning ON the GOT internal device GS500.b0), delete the added keyword.

(b) When the full screen mode was executed from the menu.

As the full screen mode is canceled by pressing the Alt + F9 key, enable the Popupmenu from the menu.

6.9 Starting Up Multiple GT SoftGOT1000 Modules

Multiple modules of GT SoftGOT1000 can be started up simultaneously by a single computer.
Each module of GT SoftGOT1000 is started up as an "n" module, and can be monitored by different connection types.
(Module numbers appear in the title bar. Module numbers can be shown or hidden by the Environment Setup screen.)



6.9.1 Startup procedure

Take one of the following procedures to start up multiple modules of GT SoftGOT1000.

(1) When starting up multiple modules in the order of module numbers
If the GT SoftGOT1000 modules are started up by the normal startup procedures, they will start up in the order of module numbers (Module No. 1, No. 2, No. 3...).

(2) When starting up the specified module
Take the following procedures to start up the specified GT SoftGOT1000 module (e.g., module No. 3 only).

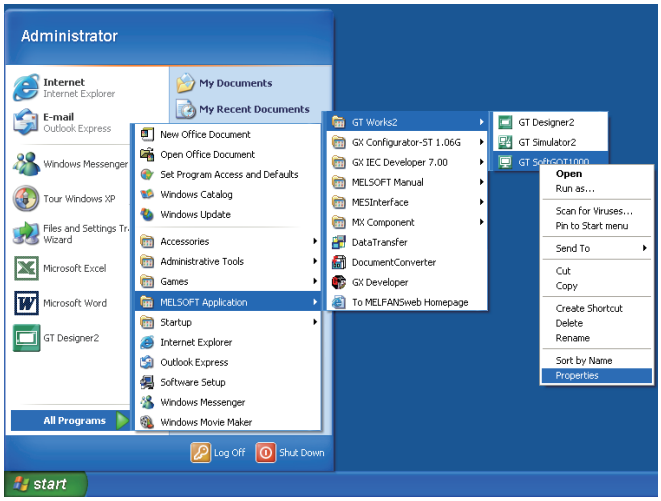
1 Choose one of the following procedures according to the OS in use.

- For Windows® 2000

  Select [Start] → [Program] → [MELSOFT Application] → [GT Works2] → [GT SoftGOT1000], where right-click the mouse to select [Properties].

- For Windows® XP, Windows Vista®

  Select [Start] → [All Programs] → [MELSOFT Application] → [GT Works2] → [GT SoftGOT1000], where right-click the mouse to select [Properties].

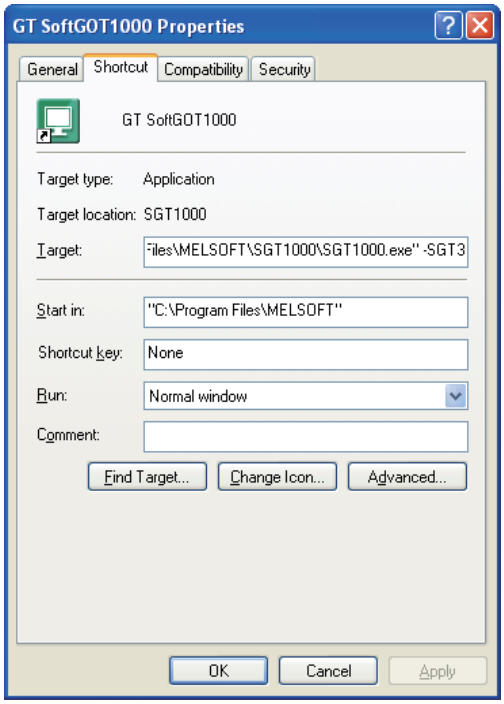


In the case of Windows® XP

2 Enter the keyword for the module to be started up at the end of the character strings in the [Target] field on the Shortcut tab on [GT SoftGOT1000 Properties] that appears.

Keyword	Description
-SGTn*1	Specifies the number of the module to be started up. Set the number of the module to be started up to "n". (1 to 99)

*1 A single-byte space is required before "_".



When starting up module No. 3

3 Press the OK button after entering the module number.

4 The specified module of GT SoftGOT1000 will start up at the next startup.

5 Delete the keyword that was entered in the [Target] field when not specifying the module No.

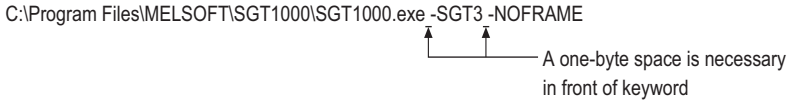
Hint! Starting up multiple GT SoftGOT1000 modules

(1) When starting up multiple GT SoftGOT1000 modules by specifying the module numbers
Create a shortcut for each module to start up multiple GT SoftGOT1000 modules by specifying each module number.

(2) When multiple GT SoftGOT1000 modules are started up in the full screen mode
If multiple modules of GT SoftGOT1000 are started up in the full screen mode, only the very front screen is accessible.
To access other windows, rearrange the windows so that the window of the module to be operated is at the very front.
Refer to the following section for how to move the windows.

☞ 6.10 Moving the Window

(3) When starting the GT SoftGOT1000 with the specified module number in the full-screen mode
The specified module of GT SoftGOT1000 can be started in the full-screen by entering the keyword for both full screen mode and module No. in the [Target] of [GT SoftGOT1000 Properties]. (There are no rules for the order of entering keywords.)
Ex) When starting module No. 3 in the full-screen 1



Refer to the following for the keyword for the full screen mode.

☞ 6.7 Full Screen Mode

6.9.2 Precautions for use

(1) Monitoring speed when starting up multiple GT SoftGOT1000 modules
When starting up multiple GT SoftGOT1000 modules, the monitoring speed may be reduced according to the performance of the personal computer.
It is recommended to not activate five or more modules.
(The number of modules can be specified between 1 and 99.)

(2) GOT internal device when multiple modules are started up
GOT internal device for each module is controlled separately.
GOT internal device cannot be shared by different modules.

(3) Data save location when multiple applications are started up
Data save location for each module is controlled separately.

(4) Monitoring a third party PLC when starting up multiple modules
When connected to the third party PLC and the same COM port is designated as the monitor target for multiple GT SoftGOT1000 modules, only the first GT SoftGOT1000 module that starts monitoring is allowed to communicate.
Communication of the GT SoftGOT 1000 module that begins monitoring later will time out.

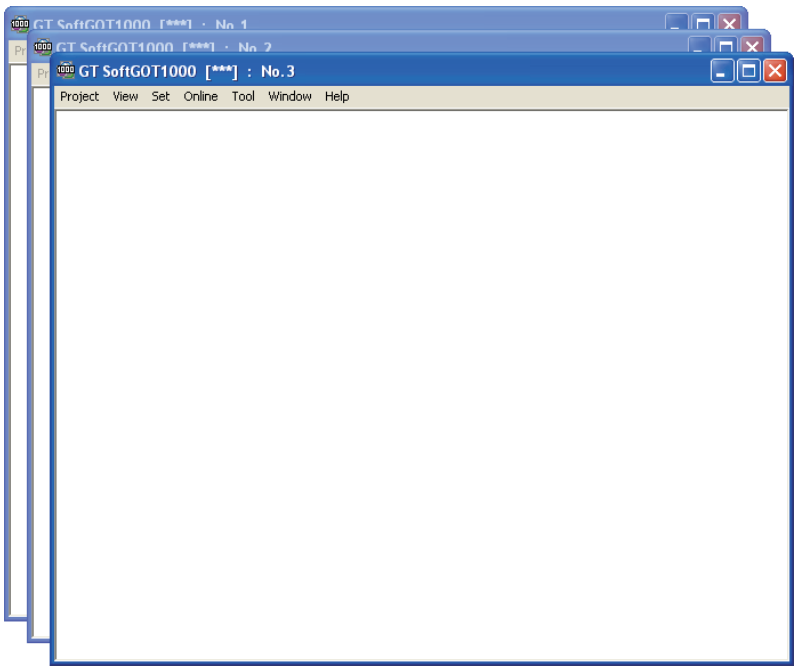
6.10 Moving the Window

GT SoftGOT1000 can be moved by operating the mouse.
GT SoftGOT1000 can also be moved when the full screen display function, where the title bar is not displayed, is used.

6.10.1 Window movement types

There are the following window movement types.

(1) Cascade
Cascades the windows of the active GT SoftGOT1000. (These windows may not necessarily be in the order of module numbers, depending on the Windows® specifications.)



(2) Minimize all windows
Minimizes all the windows of the active GT SoftGOT1000 modules.

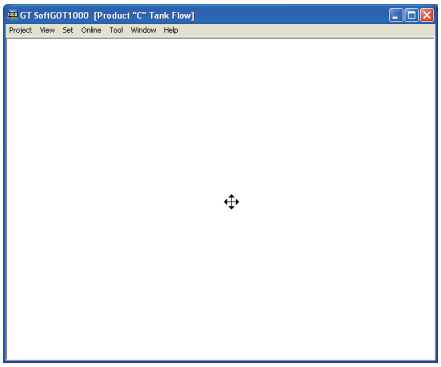
(3) Window movement

A window is moved in either of the following methods.

Set the moving method in Environment setup.

For details of Environment Setup, refer to the following.

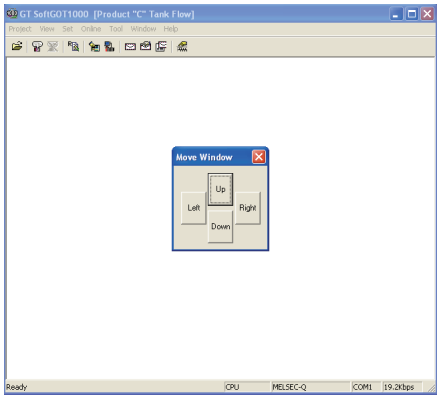
5.3 Environment Setup



Movement with mouse

Setting the cursor of the mouse to the Move mode and moving the mouse also moves GT SoftGOT1000 with the motion of the mouse.

Clicking the mouse cancels the Move mode.



Movement with Move buttons

The UP, DOWN, LEFT or RIGHT button in the [Move window] dialog box moves GT SoftGOT1000 on a 5-dot every clicking.

A window can also be moved on a panel computer that cannot use a mouse.

6.10.2 Setting method

1. Perform the following operation.
   - Select [Window] → [Cascade] / [Mimimize All Windows] / [Move Window] from the menu.
   - Right-click the mouse to select [Window] → [Cascade] / [Mimimize All Windows] / [Move Window] from the menu.
2. Move GT SoftGOT1000 in the selected moving method.

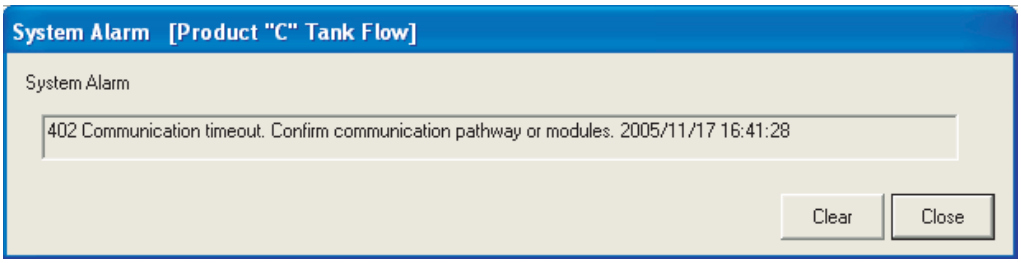
6.11 System Alarm

System alarm is displayed.
If system alarm is not set to project data, it can be confirmed with this dialog box.

1 Perform the following operation.

- Select [Tool] → [System Alarm] from the menu.
- Right-click the mouse to select [Tool]→[System Alarm] from the menu.

2 The System Alarm dialog box is displayed.



Item	Description
System Alarm*1	Error contents are displayed.
Clear	Displayed error message is cleared. However, it is redisplayed when the error keeps occuring.

*1 Refer to the following manual for list of system alarm.

8.6 Error Code and Error Message List

Point

About system alarm to be displayed.

- Only the error detected by GOT is displayed on the system alarm dialog box. Set the system alarm to project data for confirming error of PLC CPU and network.
- Error messages are displayed in English.
  To display them in other languages, set system alarm in the project data.

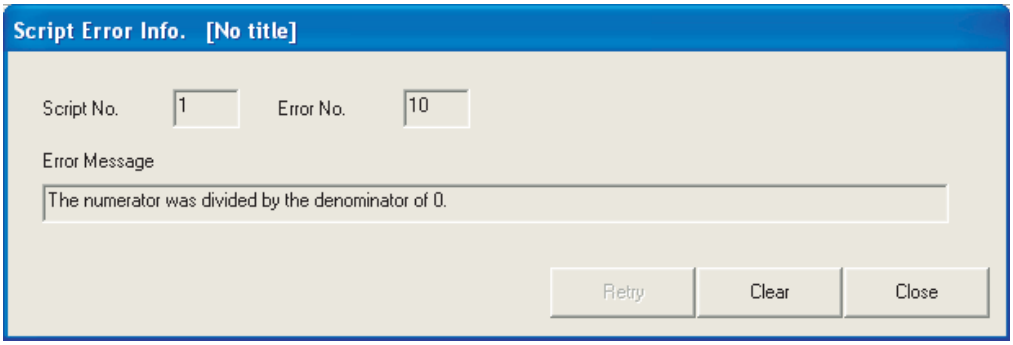
6.12 Script Error

Script error information is displayed.

1 Perform the following operation.

- Select [Tool] → [Script Error] menu.
- Right-click the mouse to select [Tool] → [Script Error] from the menu.

2 The Script Error Info. dialog box is displayed.



Item	Description
Script No. *1	Script No. where error occurs is displayed.
Error No.	Error code of occurring error is displayed.
Error Message	Error contents are displayed.
Retry	Script is executed again.
Clear	Displayed error message is cleared. However, it is redisplayed when the error keeps occuring.

*1 Refer to the following manual for script function.

☞ GT Designer2 Version□ Screen Design Manual

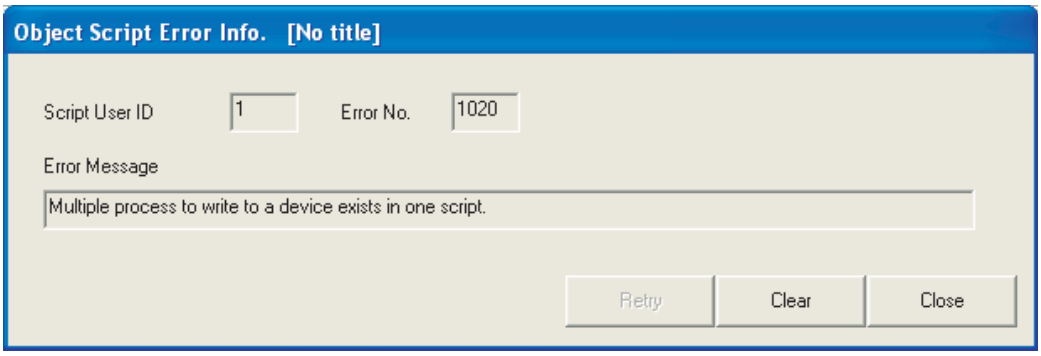
6.13 Object Script Error

Object script error information is displayed.

1 Perform the following operation.

- Select [Tool] → [Object Script Error] from the menu.
- Right-click the mouse to select [Tool] → [Object Script Error] from the menu.

2 The Object Script Error Info. dialog box is displayed.



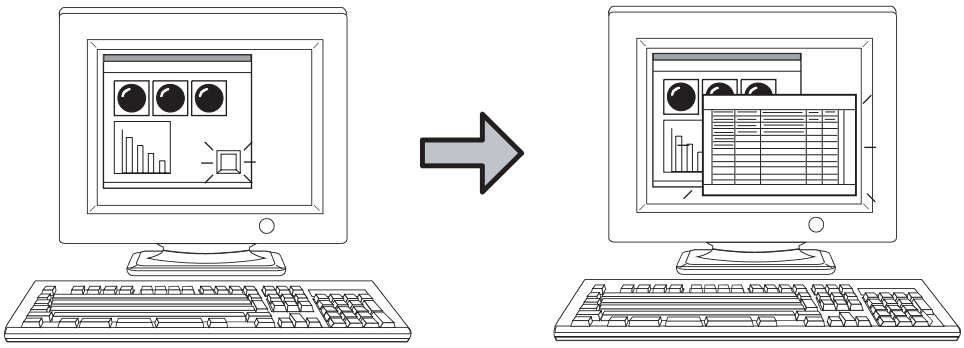
Item	Description
Script User ID *1	User ID of the object script where error occurs is displayed.
Error No.	Error code of occurring error is displayed.
Error Message	Error contents are displayed.
Retry	Object script is executed again.
Clear	Displayed error message is cleared. However, it is redisplayed when the error keeps occuring.

*1 Refer to the following manual for object script function and corrective actions for error messages.

☞ GT Designer2 Version□ Screen Design Manual

6.14 Application Start-up

Various applications (such as Microsoft® Excel) can be started from GT SoftGOT1000 while GT SoftGOT1000 monitor is running.
A file to be started up can be specified. This allows reference to the resource data of each function in CSV or BMP format.



An application can be started up by clicking a touch switch, for example.

Point

Application start-up

With the application start-up, assigning an application to be started up to a GOT internal device beforehand, and then turning the assigned internal device ON start up the application.
(The GOT internal device will automatically turn OFF after the application is started up.)
For details of GOT internal devices, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual

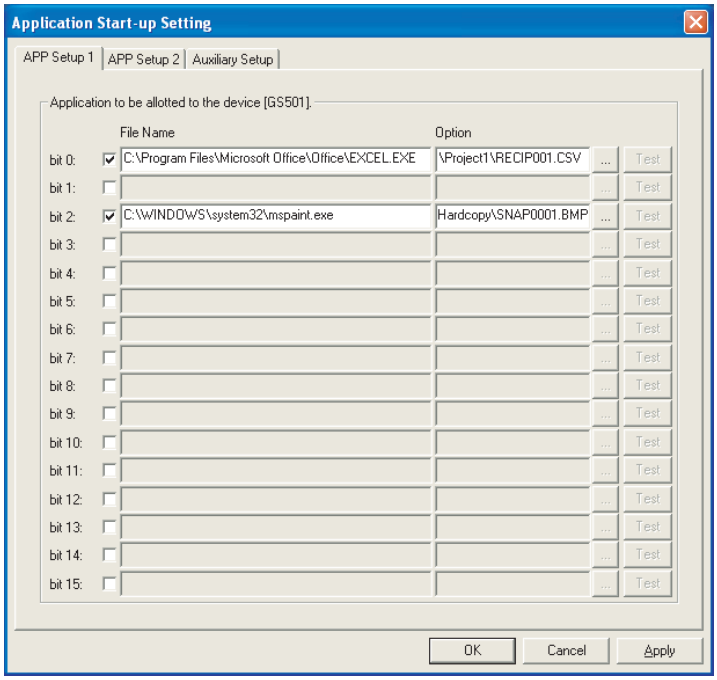
6.14.1 Setting method

1 Follow the procedure below.

- Select [Set] → [Application Start-up Setting] from the menu.
- Right-click the mouse, and select [Set] → [Application Start-up Setting] from the menu.

2 The Application Start-up Setting dialog box is displayed.
Make the settings referring to the explanation below.

(1) APP Setup 1/APP Setup 2 tab



APP Setup 1 | APP Setup 2 | Auxiliary Setup

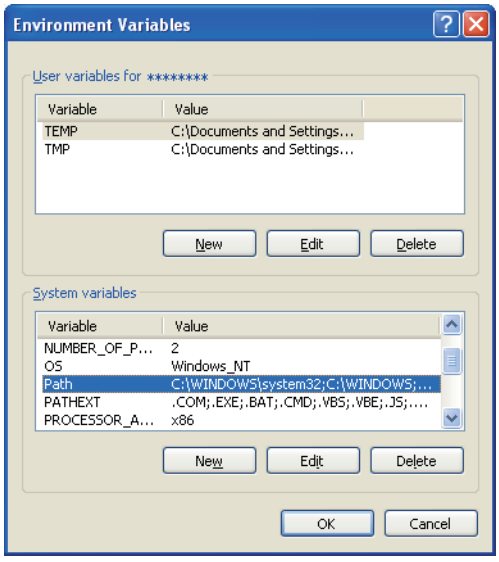
Item		Description
Application to be allotted to the device GS501 Application to be allotted to the device GS502		Specify an application to be allotted to the bit of device GS501 or GS502.Up to 32 applications can be allotted. Applications allotted start up when these bits turn ON.
	File Name	Specify the path to the application to be started up by typing (Up to 1023 characters can be entered.) or clicking [...]. Available file extensions are as follows: * .exe, * .com, * .bat
	Option	By specifying a file name, the specified file is opened simultaneously with start-up of the application. Also, the mode or processing of the application can be specified by specifying options for the application. (Availability of options differs depending on the application.) For options available for each application, refer to the manual or Help of the application to be used. Up to 1023 characters can be entered in [Option].
	Test	Click this button to check if the set application operates normally. Before executing monitoring with the GT SoftGOT1000, click this button to confirm the normal operation of the set application.

Remark Using environment variables

Using the environment variables (Path) provided by Windows®, paths no longer need to be set each time.

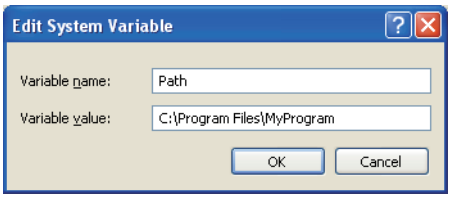
For details of environment variables, refer to the manual or Help of Windows®. The following shows an example setting of environment variables.

1. Select [Start] → [Control Panel] → [Performance and Maintenance] → [System].
2. Display the Advanced tab and then select [Environment Variables].
3. Select [Path] from [System variables] and click [Edit].

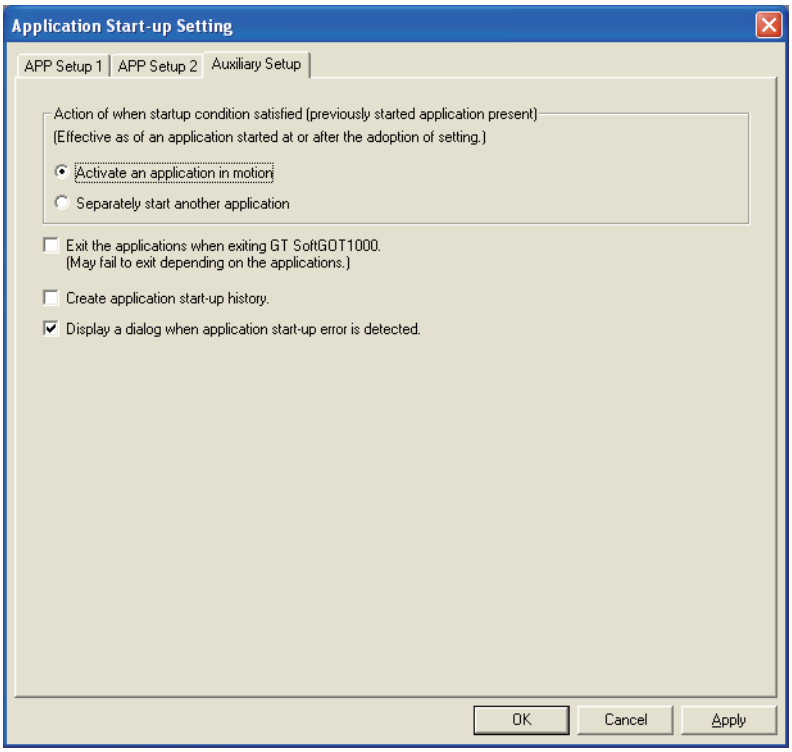


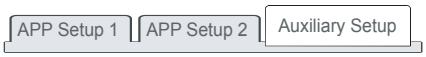
4. Add the path to an executable file to Variable value.
   (To set multiple paths, place ; (semi-colon) between paths.)

   Example) Specifying a file located in C:\Program Files\MyProgram



(2) Auxiliary Setup tab





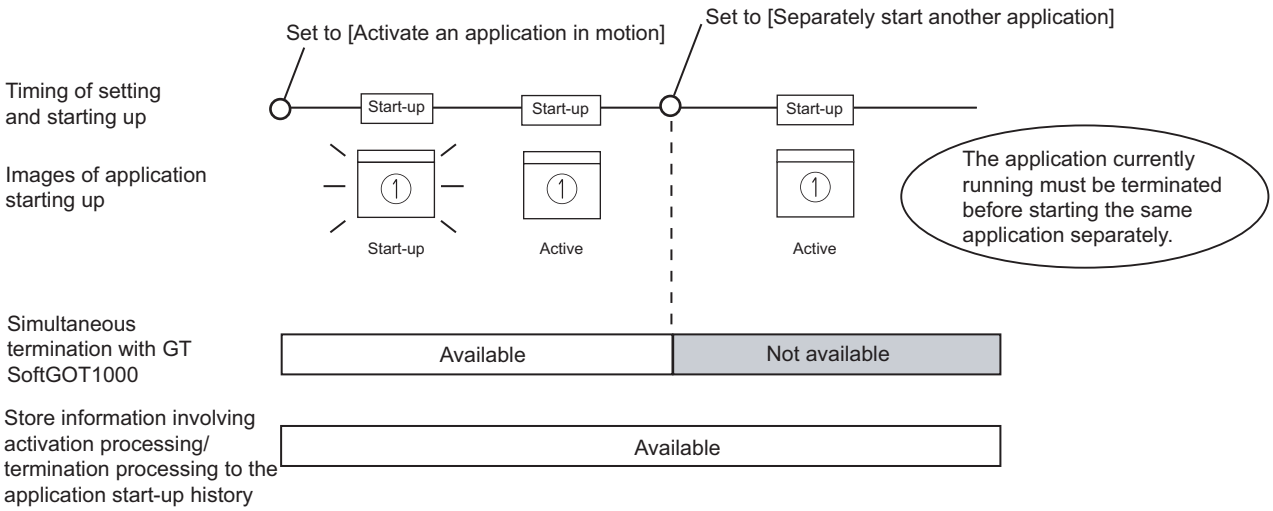
Item	Description
Action of when startup condition satisfied *1	Select how the application that was started up from GT SoftGOT1000 behaves when its start-up condition is satisfied again. Activate an application in motion: Select this item to make an application that is already in motion active. Separately start another application: Select this item to start up the same application in addition to the one currently running.
Exit the applications when exiting GT SoftGOT1000 *1	Check this item to terminate GT SoftGOT1000 together with applications that were started up from GT SoftGOT1000. Note that applications that are started up after checking [Separately start another application] in [Action of when startup condition satisfied] are not terminated.
Create application start-up history *1	Check this item to store a startup status of an application in a history. Data that can be stored in a history differ by the selection made in [Action of when startup condition satisfied]. For details of data storable in a history, refer to the following. ☞ 6.14.2 Application start-up history
Display a dialog when application start-up error is detected.	Check this item to display an error dialog box when an error occurs at application start-up.

For details of * 1, refer to the next page.

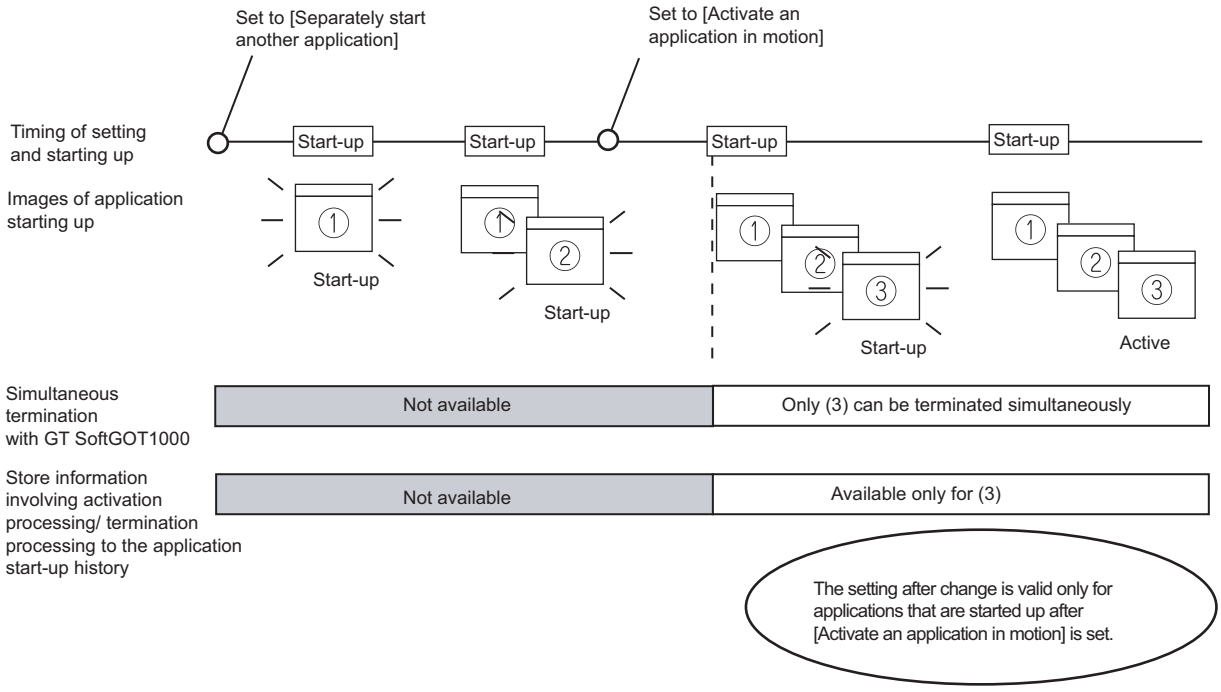
*1 Action of when startup condition satisfied

When a setting is changed while GT SoftGOT1000 is operating, the setting after change is valid only for applications started up after the change.
For this reason, even when [Exit the applications when exiting GT SoftGOT1000.] is enabled, some applications may not be terminated simultaneously with termination of GT SoftGOT1000.

Example) When changed from [Activate an application in motion] to [Separately start another application]



Example) When changed from [Separately start another application] to [Activate an application in motion]



6.14.2 Application start-up history

Information involving application start-ups can be stored in a history.

1 Information storable in a history

The following lists information storable in a history.

- Successful application start-ups
- Erroneous application start-ups
- Activation processing of applications *1
- Termination processing of applications*1

*1 This applies only for applications that are started up after [Activate an application in motion] is selected in [Action of when startup condition satisfied].

2 Referring to history data

The following explains how to refer to history data.

1 Follow the procedure below.

- Select [Set] → [Application Start-up History] from the menu.
- Right-click the mouse, and select [Set] → [Application Start-up History] from the menu.

2 History data are displayed.

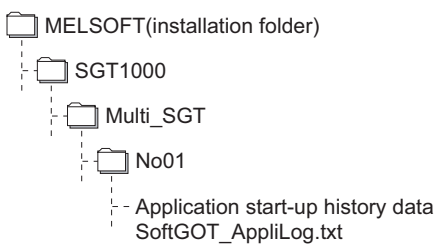
2006/09/25	19:56:26	No.01	GS501.b0 : The application has been started.
2006/09/25	20:10:30	No.01	GS501.b0 : The application has been terminated.
2006/09/25	13:51:28	No.01	GS501.b2 : The application has been started.
2006/09/25	14:00:30	No.01	GS501.b2 : The application has been terminated.
2006/09/25	16:47:02	No.01	GS501.b0 : The application has been started.
2006/09/25	16:57:07	No.01	GS501.b0 : The application has been activated.

Point History data

Any application start-up history cannot be referred to when no history data are stored.
To create history data, check [Create application start-up history] in the application start-up setting.
For details of the application start-up setting, refer to the following section.

6.14.1 Setting method

Historical data are stored for each module as follows. They are not deleted even when GT SoftGOT1000 is closed.
Delete unnecessary history data.



6.14.3 Precautions

(1) Precautions for setting

With personal computers employing VGA (640 × 480) resolution, the Application Start-up Setting dialog box cannot entirely seen on the screen.

Move the dialog box with the mouse to make settings, or employ resolutions of SVGA (800 × 600) or higher to the display.

(2) Precautions for creating application start-up history data
If an application fails to start up, the error dialog box is displayed.
The application cannot be restarted in this state.
Close the error dialog box before starting the application.
Choose not to display the error dialog box in the application start-up setting, if necessary.

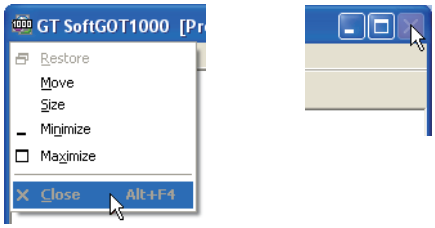
(3) Precautions for exiting applications when exiting GT SoftGOT1000
Applications started from other than GT SoftGOT1000 are not terminated.
Also, some applications may not be terminated with this function.

(4) Precautions for use
Applications may not be started up if device ON time is too short.
Keep the device ON until applications are started up.

6.15 Close Menu

The Close menu at the upper right of the title bar can be disabled (enabled).
The Close menu at the upper right of the title bar is grayed out when it is disabled.
Clicking the Close menu in this status does not terminate GT SoftGOT1000.
The setting selected here remains valid even after GT SoftGOT1000 is terminated and then restarted.

After making this setting, [Exit] provided in the right-click menu and the Project menu is enabled.



Close menu on the title bar

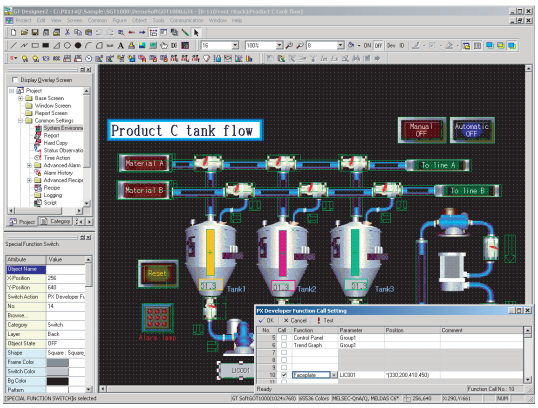
6.15.1 Disabling/enabling the close menu

1. Follow the procedure below.
   Select [Set] → [Close Menu] from the menu.
   Right-click the mouse, and select [Set] → [Close Menu] from the menu.
2. The Close menu at the upper right of the title bar is disabled.
3. To enable back the Close menu at the upper right of the title bar, select [Set] → [Close Menu].

6.16 Interaction with PX Developer

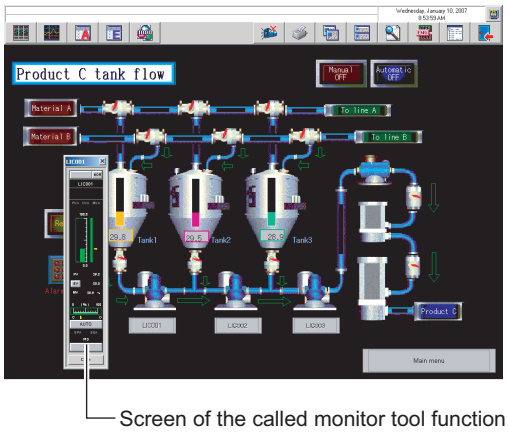
The monitor tool function of PX Developer can be called on GT SoftGOT1000.
In PX Developer, when registering GT SoftGOT1000 as the user graphic screen, the registered GT SoftGOT1000 can be started up.
With interaction between GT SoftGOT1000 and PX Developer, their functions can be shared.
Thus, the interaction improves the operational performance for combining the functions.

<Setting on GT Designer2>



Set the PX Developer function call for a special function switch on GT Designer2.

<Interaction between GT SoftGOT1000 and PX Developer>



Screen of the called monitor tool function

Touch the special function switch, and then the monitor tool function for PX Developer set on GT Designer2 is called.

For methods of interaction between GT SoftGOT1000 and PX Developer, refer to the following manual.

☞ PX Developer Version ☐ Operating Manual (Monitor Tool)

To call monitor tool functions for PX Developer on GT SoftGOT1000, the setting for the special function switch is required.
For details on the setting, refer to the following manual.

☞ GT Designer2 Version ☐ Screen Design Manual (Section 6.2 Touch Switch)

6.16.1 Setting method

1 Before interaction with PX Developer

For interaction with PX Developer, the setting is required respectively for GT SoftGOT1000 and PX Developer.
The following describes the settings required for interaction with PX Developer.

(1) Settings on GT SofGOT1000

- Set to the online mode at start-up.(☞ 5.9 Automatic Startup)
- Check the [Display dialog when starting GT SoftGOT1000, specified with the module that has been activated.] of the auxiliary setup tab on the environment setup dialog box.(☞ 5.3 Environment Setup)
- Do not check [Display dialog when closing GT SoftGOT1000.].(☞ 5.3 Environment Setup)
- Call project data on GT SoftGOT1000. (☞ 5.5 Opening the Project)

Point

Opening project data

Set the PX Developer function call for the current project data opened on the GT SoftGOT1000.
For the following cases, open the project data on GT SoftGOT1000.

- When the project data has never been opened on GT SoftGOT1000
- When the target project data differs from the last monitored project data

When GT SoftGOT1000 is displayed in the full screen mode for the interaction with PX Developer, set the back screen mode for GT SoftGOT1000, and then monitor tool windows are not behind GT SoftGOT1000.
(☞ 6.17 Back screen mode)

(2) Settings on PX Developer
For the settings on PX Developer, refer to the following manual.
☞ PX Developer Version □ Operating Manual (Monitor Tool)

2 PX Developer function call setting

Set to call monitor tool functions on GT SoftGOT1000.
To call monitor tool functions for PX Developer on GT SoftGOT1000, the special function switch to which the [PX Developer function call] is set is required.
Set the special function switch with GT Designer2.
For details on the setting, refer to the following manual.

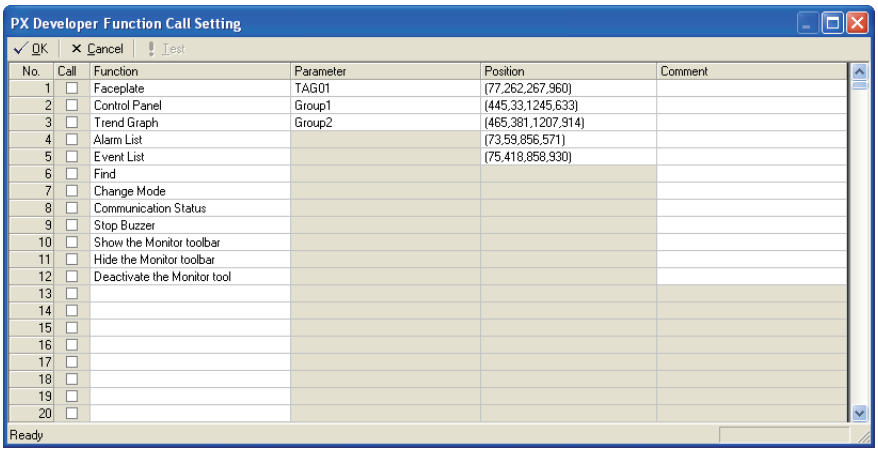
☞ GT Designer2 Version □ Screen Design Manual (Section 6.2 Touch Switch)

After setting the PX Developer function call in the special function switch with GT Designer2, the settings can be changed on GT SoftGOT1000. (To change the settings, starting GT Designer2 is not needed.)
The following describes the method for changing the settings on GT SoftGOT1000.

1 Operate any of the followings.

- Click (PX Developer Function Call Setting).
- Select [Set] → [PX Developer Function Setting] → [PX Developer Function Call Setting] from the menu.
- Right-click the mouse and select [Set] → [PX Developer Function Call Setting] from the menu.

2 The dialog box appears for the PX Developer function call setting. Set the dialog box with reference to the following list.



Item		Description
Toolbar		The functions of the toolbar are shown.
	OK	Press the button to accept the settings and close the dialog box.
	Cancel	Press the button to cancel the setting and close the dialog box.
	Test	Call the monitor tool function that is checked in the [Call] column. The name of the function is shown in the [Function] column. The function is used to check a monitor tool function to be called and the position to be displayed when setting with GT Designer. The display position for the monitor tool is always at the upper left of screen. ([Set to the relative coordinates to GT SoftGOT1000] checked in [Display Position Setting] are disabled.) For restrictions for calling monitor tool functions, refer to the following manual. ☞ PX Developer Version □ Operating Manual (Monitor Tool)
Call		Assign the functions that is checked in the [Call] column to the special function switch. The setting is available only with GT Designer2.
Function		Select monitor tool functions to be called when touching the special function switch. The following indicates the applicable functions. • Faceplate • Control Panel • Trend Graph • Alarm List • Event List • Find • Change Mode • Communication Status • Stop Buzzer • Show the Monitor toolbar • Hide the Monitor toolbar • Deactivate the Monitor tool For details for each function, refer to the following manual. ☞ PX Developer Version □ Operating Manual (Monitor Tool)
Parameter		Input an argument when calling a monitor tool function. The following indicates the applicable functions and their settings. • Faceplate : Tag name • Control Panel : Group name • Trend Graph : Group name
Position		Set the display position of monitor tool windows to be called. Click the [...] button to show the setting dialog box for the display position.
Comment		Comments can be entered arbitrarily. (Up to 512 characters regardless of whether single-byte or double-byte)
Status bar		The function call number, which is checked in the [Call] column, is indicated. Double-click the displayed function call number to show the column checked in [Call]. The setting is available with GT Designer2.

For details on *1, refer to the next page.

Point

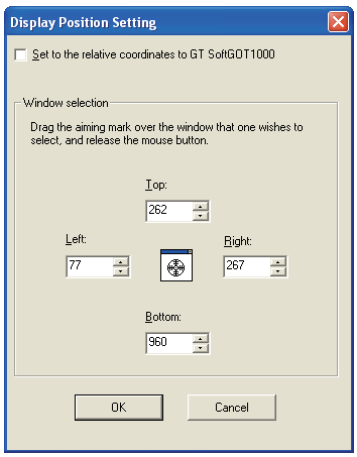
Precautions for changing PX Developer function call setting

During changing the PX Developer function call setting on GT SoftGOT1000, do not change the PX developer function call setting of the same project data on other GT SoftGOT1000 or GT Designer2.

When the PX Developer function call setting of the same project data is changed on multiple software, the setting saved at the last is enabled. The settings saved before the last one are deleted.

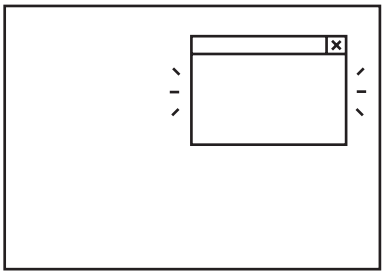
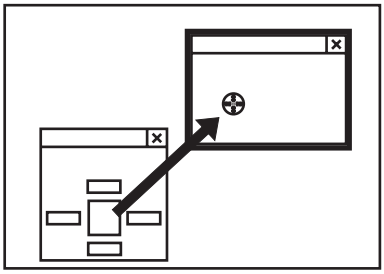
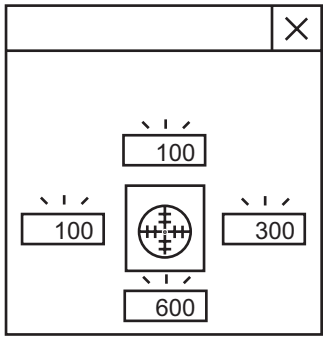
*1 Setting for display position

In the setting dialog box for the display position, the position can be set for displaying monitor tool windows to be called.



Item	Description
Set to the relative coordinates to GT SoftGOT 1000.	To display monitor tool windows in the fixed position on the display regardless of whether display is GT SoftGOT1000, do not check the item. If not checked, the coordinates of the display position can be set with their origin at the upper left on the display of a personal computer. Check the item to always display monitor tool windows in the fixed position on GT SoftGOT1000. If checked, the coordinates of the display position can be set with their origin at the upper left on the display of a personal computer.

(Continued to next page)

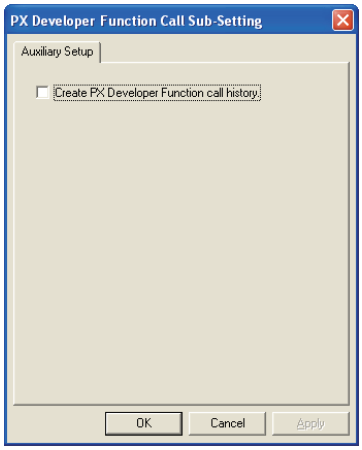
Item		Description
Window selection		Set the display position when calling monitor tool functions. To display monitor tool windows, Set the coordinates in [Top], [Left], [Right] and [Bottom]. The coordinates can be automatically set with the (Aiming mark). The following describes how to use aiming mark. 1) Set a window at the position of a monitor tool window to be displayed. (Any windows, including monitor tool windows, can be positioned.)  2) Drag the aiming mark to the set window. If dragged, the window is surrounded with a black frame. Release the mouse button on the window surrounded with a black flame.  3) The coordinates of the set window are input in the setting dialog box for the display position.  Do not use (Aiming mark) if [Set to the relative coordinates to GT SoftGOT1000.] is checked. Directly input the coordinates. (Applicable range: -32768 to 32767)
	Top	Set X-coordinate on the upper left of the window.
	Left	Set Y-coordinate on the upper left of the window.
	Right	Set X-coordinate on the upper right of the window.
	Bottom	Set Y-coordinate on the upper right of the window.

3 PX Developer function call sub-setting

1 Operate any of the followings.

- Click (PX Developer Function Call Sub-Setting).
- Select [Set] → [PX Developer Function Setting] → [PX Developer Function Call Sub-Setting] from the menu.
- Right-click the mouse and select [Set] → [PX Developer Function Call Sub-Setting] from the menu.

2 The dialog box appears for the PX Developer function call sub-setting. Set the dialog box with reference to the following explanation.



Item	Description
Create PX Developer Function call history.	Check the item to register the calling status of monitor tool functions as a history. For available information as history, refer to the following. 6.16.2 PX Developer function call history

6.16.2 PX Developer function call history

Histories for calling monitor tool functions can be registered.

1 Available information as history

The following information can be registered as a history.

- Success of calling monitor tool functions
- Failure of calling monitor tool functions

2 Referencing history data

The following describes the reference method of the history data.

1 Operate any of the followings.

- Click (PX Developer Function Call History).
- Select [Set] → [PX Developer Function Setting] → [PX Developer Function Call History] from the menu.
- Right-click the mouse and select [Set] → [PX Developer Function Call History] from the menu.

2 The history data appears.

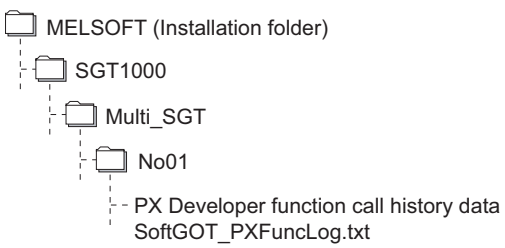
2007/01/10	10:56:47	No.01	Function Call No.1 : Failed to call PX Developer Function.
2007/01/10	10:57:39	No.01	Function Call No.1 : PX Developer Function has been called.
2007/01/10	10:57:53	No.01	Function Call No.2 : Failed to call PX Developer Function.
2007/01/10	11:07:56	No.01	Function Call No.2 : PX Developer Function has been called.
2007/01/11	17:10:35	No.01	Function Call No.3 : PX Developer Function has been called.
2007/01/12	13:25:11	No.01	Function Call No.4 : PX Developer Function has been called.

Point History data

When history data is not registered, the PX Developer function call history cannot be referenced.
To reference the history data, check [Create PX Developer Function call history.] in the PX Developer function call sub-setting.
For the PX Developer function call sub-setting, refer to the following.

☞6.16.1 Setting method

The history data is managed for each module as shown below. The data is not deleted even if GT SoftGOT1000 is exited.
The unnecessary data is required to delete by the user.



6.17 Back screen mode

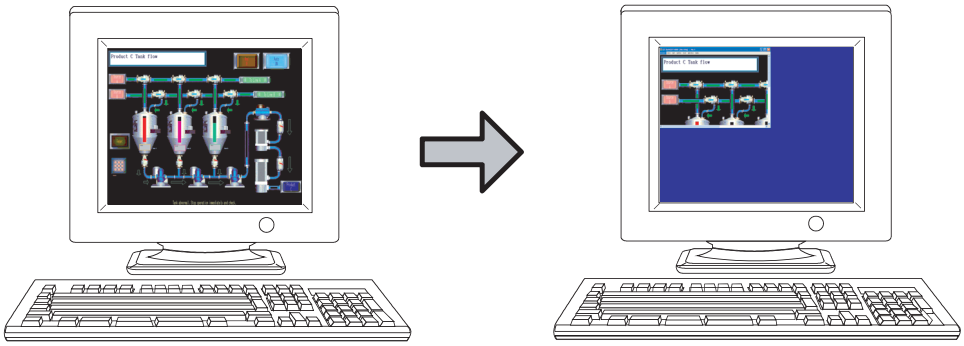
The monitor screen of GT SoftGOT1000 is always displayed behind all the other screens.
In this mode, other applications can be used while GT SoftGOT1000 is displayed in full-screen.

6.17.1 Setting method

1. Operate any of the followings.
   - Select [View] → [Back Screen Mode] from the menu.
   - Right-click the mouse and select [Set] → [Back Screen Mode] from the menu.
2. GT SoftGOT1000 is displayed behind all other screens.
3. To cancel the settings, operate any of the followings.
   - Select [View] → [Back Screen Mode] from the menu.
     (Note that the settings cannot be canceled in the menu bar if displayed in full screen.)
   - Right-click the mouse and select [Set] → [Back Screen Mode] from the menu.

6.18 Scroll Function

The scroll bars are displayed when GT SoftGOT1000 pane is resized to a smaller size.



6.18.1 Setting method

1. Operate the following.
   - Select [View] → [Scroll Bar] from the menu.
2. The scroll bars are displayed when GT SoftGOT1000 pane is resized to a smaller size.
   Scroll the monitor screen with the scroll bars, and then the hidden part of the monitor screen is displayed.
   The scroll bars cannot be operated with keyboards.
   The scroll bars are not displayed with the full screen mode.
3. For hiding the scroll bars, select [View] → [Scroll Bar] from the menu.

6.19 Exit Key

GT SoftGOT1000 can be ended with the F12 key on a keyboard.

6.19.1 Disabling/enabling exit key

1. Operate the following.
   - Select [Set] → [Exit Key [F12]] from the menu.
2. The F12 key on the keyboard cannot end GT SoftGOT1000.
   End GT SoftGOT1000 with the Set menu and others.
3. For ending GT SoftGOT1000 with the F12 key on the keyboard, select [Set] → [Exit Key [F12]] from the menu.

7. INTERNAL DEVICE INTERFACE FUNCTION

The internal device interface function is a function that can be used with Microsoft Visual C++® and Microsoft® Visual Basic® .
By using the internal device interface function, the GOT internal device can be read/written from a user-created application.

7.1 Development Environment

The following shows development environment for an application using the internal device interface function.

Development environment
Microsoft® Visual C++® .NET 2003, Microsoft® Visual C++® 6.0,
Microsoft® Visual Basic® .NET 2003, Microsoft® Visual Basic® 6.0

7.2 Accessible Devices

For the GOT internal devices that can be read/written from a user-created application, refer to the following.

☞ GT Designer2 Version□ Screen Design Manual (Section 2.9.1 GOT internal devices)

Point

Access to internal devices

- Internal devices can be accessed only while GT SoftGOT1000 is running. Internal devices hold their values while GT SoftGOT1000 is running.
- Internal devices can be accessed irrespective of the connection type of GT SoftGOT1000.

7.3 Internal Device Interface Function

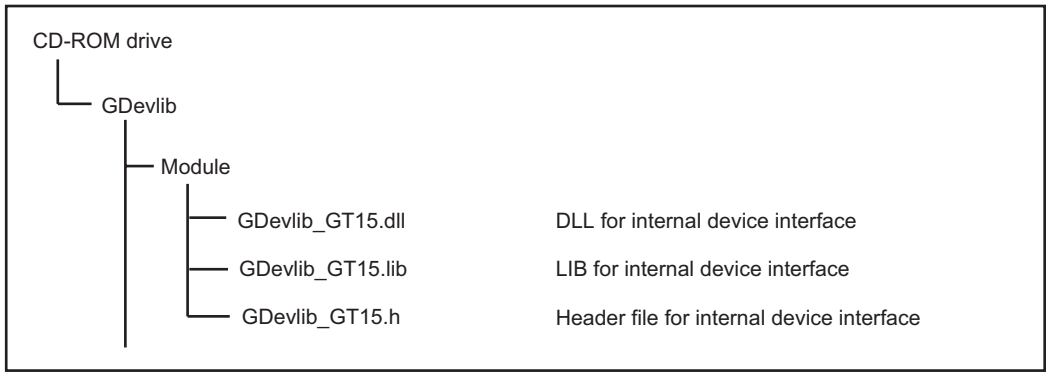
The internal device interface function is used to operate internal devices from a created program.
The following describes the internal device interface function.

Internal device interface function	Description	Reference
unsigned long GDev_OpenMapping()	Opens and maps the shared memory of the GOT internal device.	Section 7.3.1
long GDev_Read()	Reads from the GOT internal device.	Section 7.3.2
long GDev_Write()	Writes to the GOT internal device.	Section 7.3.3
void GDev_CloseUnMapping()	Unmaps and closes the shared memory of the GOT internal device.	Section 7.3.4

The following files are required when using the internal device interface function.

File name	Description
GDevlib_GT15.dll	DLL for the internal device interface
GDevlib_GT15.lib	LIB for the internal device interface
GDevlib_GT15.h	Header file for the internal device interface

The above files are stored in the CD-ROM (DISC1) of GT Works2/GT Designer2.
When using an application that uses the internal device interface function, store GDevlib_GT15.dll in the same folder as the application or in a folder with a path specified.
The folder storing the above files is shown below.



Point

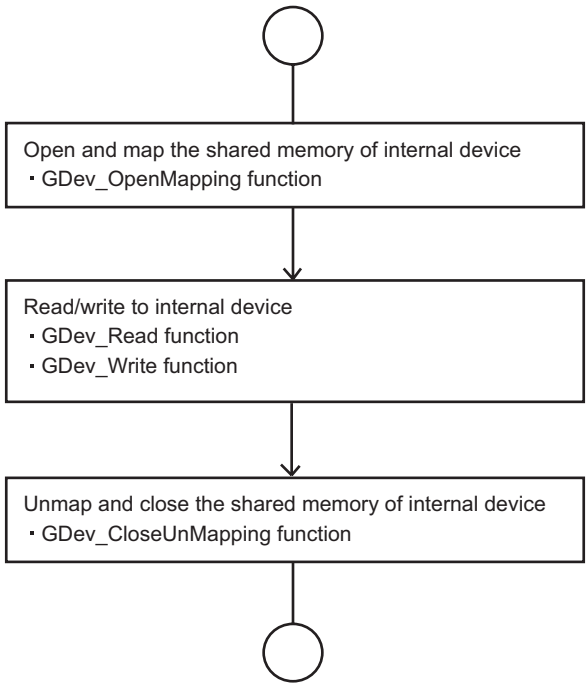
Before using the internal device interface function

Use the GDevlib_GT15.dll, GDevlib_GT15.lib, or GDevlib_GT15.h that is stored in the same CD-ROM as GT SoftGOT1000 to be used.
If using any file that is copied from another CD-ROM, an error such as application error may occur.

Remark

Processing flow when the internal device interface function is used

The following shows the processing flow when the internal device interface function is used in a program.



7.3.1 GDev_OpenMapping (Opening and mapping the internal device shared memory)

The following shows details of the GDev_OpenMapping function.

(1) Function
Opens and maps the shared memory of the GOT internal device.

(2) Format

(a) For Visual C++®

ulMapPointer = GDev_OpenMapping(*lphMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	unsigned long	Return value (shared memory address)	Output
*lphMapFile	HANDLE	Shared memory handle	Output
sGotNo	short	Module No. of GT SoftGOT1000 (Fixed to 1)	Input

(b) For Visual Basic

ulMapPointer = GDev_OpenMapping(hMapFile, sGotNo)

Variable name	Variable type	Description	I/O
ulMapPointer	unsigned long	Return value (shared memory address)	Output
hMapFile	HANDLE	Shared memory handle	Output
sGotNo	short	Module No. of GT SoftGOT1000 (Fixed to 1)	Input

(3) Explanation
The shared memory handle for the internal device of GT SoftGOT1000 that is specified by sGotNo is obtained, and map processing is performed with the handle.
The obtained shared memory handle is stored to lphMapFile or hMapFile, and the obtained shared memory address is stored to ulMapPointer.

(4) Return value
Normal termination: A number other than "0" (shared memory address) is returned.
Abnormal termination: "0" is returned.

(5) Precautions for using the GDev_OpenMapping function
After the GDev_OpenMapping function is called and required processings are performed, the GDev_CloseUnMapping function must always be called.
If it is not called, a memory leak may result and an error such as application error may occur.

7.3.2 GDev_Read (Reading from the internal device)

The following shows details of the GDev_Read function.

(1) Function
Reads from the GOT internal device.

(2) Format

(a) For Visual C++®

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID (GB:0/GD:1/GS:2)	Input
lDevNum	long	Device number	Input
*lpsDataTable	short	Device value read	Output
lDataSize	long	Number of data points to be read	Input

(b) For Visual Basic

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, sDataTable(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID (GB:0/GD:1/GS:2)	Input
lDevNum	long	Device number	Input
sDataTable(n)	short	Device value read	Output
lDataSize	long	Number of data points to be read	Input

(3) Explanation
The device values in the area starting from the device specified by sDevNameID and lDevNum are batch read for the number specified by lDataSize to the shared memory address specified by ulMapPointer.
The read device values are stored to lpsDataTable or sDataTable.
Specify the shared memory address that has been obtained by the GDev_OpenMapping function.

(4) Return value
Normal termination: "0" is returned.
Abnormal termination: A number other than "0" is returned.

(5) Precautions for using the GDev_Read function
The maximum number of data points to be read, that is set for lDataSize, must be specified in the following range.
- For bit device (GB) specification
  Device number + (Number of data points to be read × 16)-1 ≦ Terminal device number
- For word device (GD/GS) specification
  Device number + Number of data points to be read-1 ≦ Terminal device number
  In the case of bit device (GB) specification, specify a multiple of 16 for the device number.
  Secure the area for lpsDataTable with the same size as lDataSize or more.
  If the area is insufficient, an error such as application error may occur.

(6) Device specifying method

• For bit device (GB) specification

Example) Reading 1-point data from GB64 (sDevNameID=0, lDevNum=64, lDataSize=1)

Variable name	Storage device
lpsDataTable[0]	GB64 to GB79

Example) Reading 3-point data from GB80 (sDevNameID=0, lDevNum=80, lDataSize=3)

Variable name	Storage device
lpsDataTable[0]	GB80 to GB95
lpsDataTable[1]	GB96 to GB111
lpsDataTable[2]	GB112 to GB127

• For word device (GD/GS) specification

Example) Reading 3-point data from GD5 (sDevNameID=1, lDevNum=5, lDataSize=3)

Variable name	Storage device
lpsDataTable[0]	GD5
lpsDataTable[1]	GD6
lpsDataTable[2]	GD7

Example) Reading 1-point data from GS500 (sDevNameID=2, lDevNum=500, lDataSize=1)

Variable name	Storage device
lpsDataTable[0]	GS500

7.3.3 GDev_Write (Writing to the internal device)

The following shows details of the GDev_Write function.

(1) Function
Writes to the GOT internal device.

(2) Format

(a) For Visual C++®

lReturn = GDev_Write(ulMapPointer, sDevNameID, lDevNum, *lpsDataTable, lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID (GB:0/GD:1/GS:2)	Input
lDevNum	long	Device number	Input
*lpsDataTable	short	Device value to be written	Input
lDataSize	long	Number of data points to be written	Input

(b) For Visual Basic

lReturn = GDev_Read(ulMapPointer, sDevNameID, lDevNum, sDataTable(0), lDataSize)

Variable name	Variable type	Description	I/O
lReturn	long	Return value	Output
ulMapPointer	unsigned long	Shared memory address	Input
sDevNameID	short	Device name ID (GB:0/GD:1/GS:2)	Input
lDevNum	long	Device number	Input
sDataTable(n)	short	Device value to be written	Input
lDataSize	long	Number of data points to be written	Input

(3) Explanation
The device values are batch written to the devices specified by sDevNameID and lDevNum for the shared memory address specified by ulMapPointer for the number specified by lDataSize.
The device values to be written are stored to lpsDataTable or sDataTable.
Specify the shared memory address that has been obtained by the GDev_OpenMapping function.

(4) Return value
Normal termination: "0" is returned.
Abnormal termination: A number other than "0" is returned.

(5) Precautions for using the GDev_Write function
The maximum number of data points to be written, that is set for lDataSize, must be specified in the following range.

- For bit device (GB) specification
  Device number + (Number of data points to be written × 16)-1 ≦ Terminal device number
- For word device (GD/GS) specification
  Device number + Number of data points to be written-1 ≦ Terminal device number
  In the case of bit device (GB) specification, specify a multiple of 16 for the device number.
  Secure the area for lpsDataTable with the same size as lDataSize or more.
  If the area is insufficient, an error such as application error may occur.

(6) Device specifying method

• For bit device (GB) specification

Example) Writing 1-point data from GB64 (sDevNameID=0, lDevNum=64, lDataSize=1)

Variable name	Storage device
lpsDataTable[0]	GB64 to GB79

Example) Writing 3-point data from GB80 (sDevNameID=0, lDevNum=80, lDataSize=3)

Variable name	Storage device
lpsDataTable[0]	GB80 to GB95
lpsDataTable[1]	GB96 to GB111
lpsDataTable[2]	GB112 to GB127

• For word device (GD/GS) specification

Example) Writing 3-point data from GD5 (sDevNameID=1, lDevNum=5, lDataSize=3)

Variable name	Storage device
lpsDataTable[0]	GD5
lpsDataTable[1]	GD6
lpsDataTable[2]	GD7

Example) Writing 1-point data from GS500 (sDevNameID=2, lDevNum=500, lDataSize=1)

Variable name	Storage device
lpsDataTable[0]	GS500

7.3.4 GDev_CloseUnMapping (Unmapping and closing the internal device shared memory)

The following shows details of the GDev_CloseUnMapping function.

(1) Function
Unmaps and closes the shared memory of the GOT internal device.

(2) Format

(a) For Visual C++®

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
hMapFile	HANDLE	Shared memory handle	Input
ulMapPointer	unsigned long	Shared memory address	Input

(b) For Visual Basic®

GDev_CloseUnMapping(hMapFile, ulMapPointer)

Variable name	Variable type	Description	I/O
hMapFile	HANDLE	Shared memory handle	Input
ulMapPointer	unsigned long	Shared memory address	Input

(3) Explanation
The unmap processing is performed for the shared memory address specified by ulMapPointer and the shared memory handle specified by hMapFile is released.
Specify the shared memory address and shared memory handle that have been obtained by the GDev_OpenMapping function.

(4) Return value
None

(5) Precautions for using the GDev_CloseUnMapping function
After the GDev_OpenMapping function is called and required processings are performed, the GDev_CloseUnMapping function must always be called.
If it is not called, a memory leak may result and an error such as application error may occur.

7.3.5 Precautions for the internal device interface function

The following shows precautions for using an application that uses the internal device interface function.

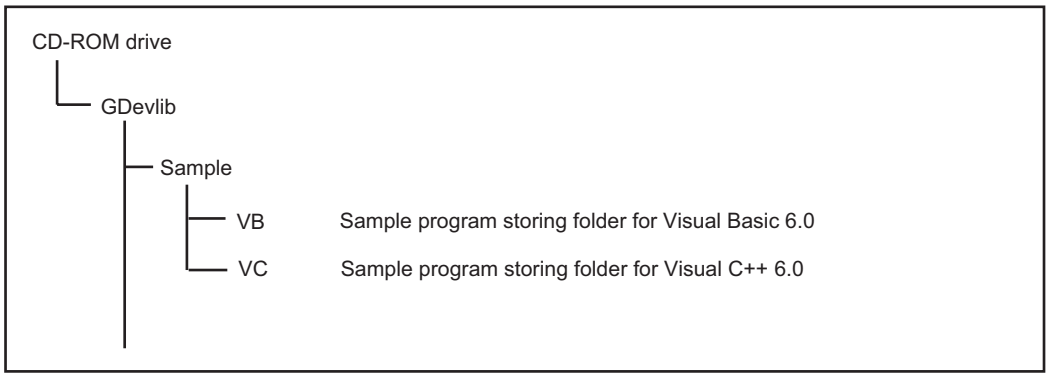
(1) When the GDev_OpenMapping function is called
The GDev_OpenMapping function must be called after GT SoftGOT1000 is started.

(2) When the GDev_Read function or the GDev_Write function is called
The GDev_Read function and the GDev_Write function must be called while GT SoftGOT1000 is running.

(3) When exiting GT SoftGOT1000
If GT SoftGOT1000 has been exited in a status the GDev_OpenMapping function is called, the GDev_CloseUnMapping function must be called immediately.
If GT SoftGOT1000 is started again without the GDev_CloseUnMapping function called, after GT SoftGOT1000 is exited, GT SoftGOT1000 may not operate normally.
If GT SoftGOT1000 does not operate normally, the GDev_CloseUnMapping function should be called before GT SoftGOT1000 is exited.

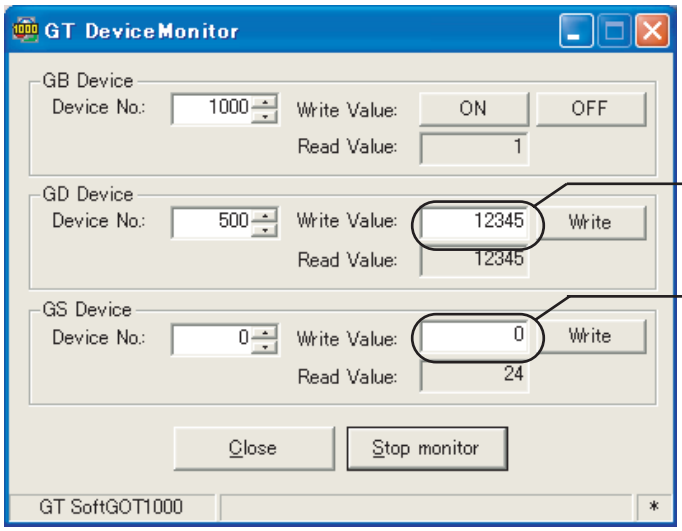
7.4 Sample Program

A sample program using the internal device interface function is stored in the CD-ROM (DISC1) of GT Works2/GT Designer2.
Use the sample program as a reference when creating an application using the internal device interface function.
The following shows folders storing the sample programs.



This sample program is used to read/write data from/to the internal device of GT SoftGOT1000 that is running.

Example) Sample program for Visual C++



Monitor execution status

Setting item			Description
GB Device			GB device monitor area
	Device No.		Input a device range (GB0 to GB65535).
	Write Value	ON	Turns ON the device specified for Device No.
		OFF	Turns OFF the device specified for Device No.
	Read Value		Displays the reading result of the specified device. The value is updated only while monitoring is performed. Bit device status "1" : ON "0" : OFF
GD Device			GD device monitor area
	Device No.		Input a device range (GD0 to GD65535).
	Write Value	Write value input area (GD)	Set a value to be written to the device specified for Device No. Input format: Signed decimal number (-32768 to 32767)
		Write	Writes the value input for the write value input area to the specified device.
	Read Value		Displays the reading result of the specified device. (Updates only while monitoring is performed.) Display format: Signed decimal number (-32768 to 32767) The value of the internal device specified for Device No. is read.
GS Device			GS device monitor area
	Device No.		A device range (GS0 to GS1023) can be input.
	Write Value	Write value input area (GS)	Set a value to be written to the device specified for Device No. Input format: Signed decimal number (-32768 to 32767)
		Write	Writes the value input for the write value input area to the specified device.
	Read Value		Displays the reading result of the specified device. (Updates only while monitoring is performed.) Display format: Signed decimal number (-32768 to 32767) The value of the internal device specified for Device No. is read.

Setting item	Description
Start monitor	Starts monitoring. (Displayed only while monitoring is stopped.)
Stop monitor	Stops monitoring.(Displayed only while monitoring is performed.)

8. TROUBLESHOOTING

8.1 Error Message

The following table indicates the error messages occurred in [GT SoftGOT1000] themselves, the Descriptions and resolutions.

1 Error messages displayed when GT SoftGOT1000 is used.

Error message	Definition and cause	Corrective action
Adobe Reader is not installed properly. Install Adobe Reader included with the product.	• Adobe® Reader® is not installed. • Adobe® Reader® is not installed correctly.	After uninstalling Adobe® Reader® , reinstall it.
Easysocket is not installed.	Perhaps GT SoftGOT1000 is not installed correctly.	After uninstalling GT SoftGOT1000, reinstall it.
GS###.b##: The .exe file is invalid (not .exe or error in .exe image).	• Access to the specified file (application) was not made. • The specified file (application) is corrupted. • The specified file (application) is not an executable file.	• Check the settings of the application start-up setting. • Check the access right of the specified file (application). • Specify an operable file (application). • Specify an executable file (application).
GS###.b##: Failed to start the application. <ErrCode:##>	• The specified file (application) is corrupted. • Relevant applications are not installed properly. • There is not sufficient space left in memory/ hard disk. • GT SoftGOT1000 was terminated illegally last time.	• Check the settings of the application start-up setting. • Specify an operable file (application). • Install relevant applications again. • Terminate unnecessary applications. • Increase free space in the hard disk. • Restart GT SoftGOT1000. • Restart the personal computer.
GS###.b##: The operating system denied access to the specified file.	• Access to the specified file (application) was not made. • The specified file (application) is corrupted. • Relevant applications are not installed properly.	• Check the settings of the application start-up setting. • Check the access right of the specified file (application). • Specify an operable file (application). • Install relevant applications again.
GS###.b##: The specified file was not found.	The specified file (application) does not exist.	• Check the settings of the application start-up setting. • Specify an existing file (application). • Install relevant applications again.
GS###.b##: The specified path was not found.		
GS###.b##: There was not enough memory to complete the operation.	• There is not sufficient space left in memory/ hard disk. • GT SoftGOT1000 was terminated illegally last time.	• Terminate unnecessary applications. • Increase free space in the hard disk. • Restart GT SoftGOT1000. • Restart the personal computer.
The GT SoftGOT1000 is not installed correctly.	Can not find the Windows® sregistry for GT SoftGOT1000.	After uninstalling GT SoftGOT1000, reinstall it.
Please do logoff/the termination of Windows after ending 'GT SoftGOT1000'.	Close 'GT SoftGOT1000' before log out or shut down the Windows® .	Close 'GT SoftGOT1000' before log out or shut down the Windows® .

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Error message	Definition and cause	Corrective action
Failed to start the application.	• Relevant application is not installed correctly. • Not enough free disk space. • GT SoftGOT1000 was exited illegally last time. • Illegal process is running. • The application start-up history file cannot be started up.	• Install the relevant application again. • Exit unnecessary applications. • Increase the free space of hard disk to 250MB or more. • Restart GT SoftGOT1000. • After restarting the personal computer, restart GT SoftGOT1000. • Check the application start-up history file.
Easysocket has an invalid version.	GT SoftGOT1000 may be not installed correctly.	After uninstalling GT SoftGOT1000, reinstall it.
The specified project data was created by using a previous version of the GT Designer2. Some functions may not operate properly. Do you want to proceed?	The version of the GT Designer2 on which the project data is created is later than the GT SoftGOT1000.	Select a button on the displayed dialog box. Yes: Execute reading and perform monitoring with operable functions. No: Install GT SoftGOT1000 of the same version as GT Designer2 and execute reading again.
The major versions of the specified project data and GT SoftGOT1000 Standard monitor OS do not match. Project data : Ver. ##.## GT SoftGOT1000 Standard monitor OS : Ver. ##.## Specify the project data of the same version.	The following OS major versions are not matched. • The major version of OS in GT Designer2 that stores the created project data to be read. • The standard monitor OS in GT SoftGOT1000	• Install GT SoftGOT1000 with the same version as GT Designer2 that stores the created project data, and read the data again. • Create the project data for GT Designer2 that version is same as the version of GT SoftGOT1000, and read the data again.
Failed to take a snap shot.	• GT SoftGOT1000 was closed illegally last time. • Illegal process is running.	• Restart GT SoftGOT1000. • After restarting the personal computer, restart GT SoftGOT1000.
Vertical project data is not supported.	The project data for vertical display type has been read.	Read project data for horizontal display.
A Communication error occurred. Retry : Executes communication again. Cancel : Cancels all communication. To retry communication, restart the GT SoftGOT1000. <ES:0x########>	• Cable was disconnected. • Cable was broken.	After checking for the left causes, select the button in the displayed dialog box. [Retry] Restarts communication. [Cancel] After Cancel is selected, all communications will not be made. When performing monitoring, restart GT SoftGOT1000.
	Transmission speed (Baud rate) is incorrect.	
	The PLC CPU type is different from that of the project setting.	
Cannot set up the operating environment. Insufficient disk space or memory may be the cause.	• Not enough free disk space. • GT SoftGOT1000 was exited illegally last time. • Illegal process is running.	• Exit unnecessary applications. • Increase the free space of hard disk to 250MB or more. • Restart GT SoftGOT1000. • After restarting the personal computer, restart GT SoftGOT1000.
Failed to set up an operating environment. Check the followings and retry the operation. • Free disk space. • Access privileges to the environment file. • Validity of environment files (invalid files or files not found).	Not enough free disk space.	Increase the free space of hard disk to more than 250M bytes.
	Can not access the necessary file for GT SoftGOT1000's operation.	Check whether GT SoftGOT1000 has been operated already.
	GT SoftGOT1000 may be not installed correctly.	After uninstalling GT SoftGOT1000, reinstall it.

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Error message	Definition and cause	Corrective action
Path name is too long.	Save the GT Designer2 under too many directory levels.	In Option setting, set the project of GT Designer2 again.
GOT type of the project is different from the one specified in the GT SoftGOT1000. [Project data setting] GOT type : #####(###x###) PLC type : ##### [GT SoftGOT1000 setting] Resolution : ###x### Connection : #####(#####)	The GOT type set in the project is different from the GOT type specified in GT SoftGOT1000.	Make correction so that the GOT type of the project created on GT Designer2 is the same as the GOT type of GT SoftGOT1000.
GOT type (Resolution) of the project is different from the one specified in the GT SoftGOT1000. [Project data setting] GOT type : #####(###x###) PLC type : ##### [GT SoftGOT1000 setting] Resolution : ###x### Connection : #####(#####)	The GOT type (Resolution) set in the project is different from the GOT type (Resolution) specified in GT SoftGOT1000.	Make correction so that the GOT type (Resolution) of the project created on GT Designer2 is the same as the GOT type (Resolution) of GT SoftGOT1000.
PLC type of the project is different from the one specified in the GT SoftGOT1000. [Project data setting] GOT type : #####(###x###) PLC type : ##### [GT SoftGOT1000 setting] Resolution : ###x### Connection : #####(#####)	The PLC type set in the project is different from that in GT SoftGOT1000.	Make correction so that the PLC type of the project created on GT Designer2 is the same as the CPU type of GT SoftGOT1000.
Manual file cannot be found. Please install manuals.	• GT Manual 1000 is not installed. • GT Manual 1000 is not installed correctly.	After uninstalling GT Manual, reinstall it.
Cannot stop monitoring. Close the dialog on monitor screen and retry.	Since the message such as "This function cannot be used now" was displayed on the screen, GT SoftGOT1000 could not be exit correctly.	After selecting OK in the dialog box to erase the on-screen message, exit from GT SoftGOT1000 again.
	There was the other internal cause than the above that did not allow to exit from the software.	After selecting OK in the dialog box, wait for some time and exit from GT SoftGOT1000 again.
Fail in the delete of resource data. • Please close resource data if it is opened. • Check the file access privilege.	Failed in erasing resource data after loading screen data.	• If there is resource data opened by another software, close that file. • Check the file access privilege.
Initialization for reading failed. Execute one of the following operations. • Close the dialog if it is displayed. • Switching to offline mode may have been failed. Wait for several seconds and retry the operation.	Since the message such as "This function cannot be used now" was displayed on the screen, this funciton can not be loaded.	After selecting OK in the dialog box to erase the on-screen message, re-load the function.
	Waiting for completion of internal process.	re-load the function after a few minutes.

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Error message	Definition and cause	Corrective action
Failed to read a project data. Check the following items and retry the operation. • Data size and number of the data. • Free disk space. • Access privileges to the environment file. • Validity of project data (invalid file or file not found).	Screen data size was too large.	Decrease the screen data size to 57MB or less.
	Not enough free disk space.	Increase the free space of hard disk to more than 250M bytes.
	Can not access the project data.	Check the access privilege of the project data.
	Not compatible with the project setting.	Check whether setting is correct on GT Designer2.
	• This data is not for GT SoftGOT1000 project. • The project data does not exist.	Use a correct project data or normal project data. Check that the project data exists.

8.2 Troubleshooting for License Key

The troubleshooting and error messages related to license key, the error definition and cause, and corrective actions are described below.

1 Troubleshooting for license key

(1) Troubleshooting for USB license key

When attaching a USB license key to the personal computer and it is not recognized, check the following.

Problem	Definition and cause	Corrective action
The dialog for starting a wizard to search an added hardware is displayed.	The license key was attached to the PC before the installation of system driver.	Exit the GT SoftGOT1000 without any installation and then remove the license key. When attaching the GT15-SGTKEY-U after installing the system driver, it is recognized as license key.
The GT15-SGTKEY-U is not recognized as license key by the OS when attached to the PC.	The GT15-SGTKEY-U was attached to the PC before the installation of system driver, and an illegal driver was installed.	Install the system driver after removing the GT15-SGTKEY-U. When attaching the GT15-SGTKEY-U after installation, it is recognized as license key.
The GT SoftGOT1000 displays an error message involving license key despite System Driver is installed/license key is installed/the port is ready for use.	System Driver has an error.	Remove the GT15-SGTKEY-U and uninstall System Driver once (In Windows, select [Add or Remove Programs] and delete [Sentinel Protection Installer #.#.#].) Install System Driver again. Install the GT15-SGTKEY-U after installing System Driver. Then it is recognized as license key.

(2) Troubleshooting Related to the License Key

Check the following items if the license key is not recognized even if it has been installed on the DOS/V personal computer or the printer does not operate properly after being connected on the external side of the license key.

Problem	Definition and cause	Corrective action
The license key cannot be recognized	The license key is connected to the personal computer's serial port.	Connect the license key to the printer port
	The license key is installed on the DOS/V personal computer via the printer switch (the devices are installed in the order from the DOS/V personal computer, then the printer switch, and then the license key).	Install the license key closer to the DOS/V personal computer than the printer switch (i.e., install the devices in the order from the DOS/V personal computer, then the license key, and then the printer switch.)
	It is possible that the power supply to the printer port is shut off via setting of the DOS/V personal computer.	Change the settings so that the printer port can be used.
	The system driver is not installed.	Install the system driver.
	The parallel port is unusable.	Set the personal computer, Windows® , etc. to make the parallel port usable.
	In the case of a Fujitsu-made FM/V Series computer	Install the system driver and restart the DOS/V personal computer.
Cannot print	If a printer cable that is 5 m or longer is used, the printing may be disturbed by noise from the surroundings.	Check the cable length. (Check the overall cable length when a switch is used.)

8.3 Troubleshooting Related to Mail Transmission

(1) Troubleshooting

Problem	Definition and cause	Corrective action
Mail is not sent.	The mail send setting of GT SoftGOT1000 has not been made.	Make the mail send setting of GT SoftGOT1000.
	Mail send setting has been made on GT Designer2.	
	The mail send setting method is wrong.	Reexamine the mail send setting of GT SoftGOT1000.

(2) Error code

No dialogue boxes are displayed by GT SoftGOT1000 for errors related to mail transmission and dialup.

Refer to the mail history data for error codes and error messages.

Refer to Section 6.5.5 for how to reference the mail history data.

The following table lists the error codes related to mail transmission and dialup, their definitions and causes, and the corrective actions to take:

Error code	Definition and cause	Corrective action
600 to 750s	Setting errors of personal computers and peripheral devices (e.g., modem)	Refer to the Help function in Windows® .

Point

Error notifications from the mail server

When an error is notified from the mail server, the error message will be displayed in the mail history data.

The following shows an example.

(Example) Error message displayed when an error is notified from the SMTP server

Error message
SMTP Error Report : #####.

When an error as shown above occurs, consult the server administrator.

8.4 Troubleshooting for Print

Problem	Definition and cause	Corrective action
GT SoftGOT1000 does not output data to a printer even when the hard copy is executed from a monitor screen with [Print to printer (Hard Copy Function)] enabled.	Printing is disabled due to a problem in the printer.	• Select [Project] → [Print Setup] on GT SoftGOT1000 to check the settings of the printer. • Print a test page from Windows to check the settings of the printer. • Check if the printer is powered on and online. • Install the printer driver again.
	The output target in the hard copy setting of the project data is set to [File].	Open the project data with GT Designer2, and select [Printer] for [Target] in the hard copy setting.

8.5 Troubleshooting for File Save Problems

Problem	Definition and Cause	Corrective action
No files are output when the hard copy command is executed from the monitor screen of the GT SoftGOT1000.	The file cannot be saved due to problems with the output destination disk.	• Confirm that the folder that is designated as a virtual drive does exist. • Check the access right for the folder that is designated as a virtual drive. • Confirm that there is enough free space in the folder that is designated as a virtual drive.
	The file cannot be saved, since file number external control device value is set to a value outside of the range 1 to 9999.	• Confirm that the file number external control device value is set to a value in the range 1 to 9999.

8.6 Error Code and Error Message List

8.6.1 GOT error code list

The system alarm detected with GOT is shown below.

Error code	Error message	Action	Channel No. storage
303	Set monitor points too large. Decrease setting points.	Decrease the number of objects from the displayed screen. For the number of maximum objects for 1 screen, refer to the following. ☞ GT Designer2 Version□ Screen Design Manual	×
304	Set trigger points too large. Decrease setting points.	The number of objects using Sampling/Cycle during ON/ Cycle during OFF exceeds 100. Decrease the number of objects.	×
306	No project data. Download screen data.	The project data is not downloaded to the built-in flash memory. Download the project data to the built-in flash memory.	×
307	Monitor device not set	The monitor device of the object is not set. Set the monitor device of the object.	×
308	No comment data. Download comment.	The comment file does not exist. Create the comment file and download to GOT.	×
309	Device reading error. Correct device.	The error occurred when reading a continuous device. Correct the device.	×
310	Project data does not exist or out of range.	1. Specified base screen / window screen does not exist in the project data. 2. Specified base screen / window screen is out of the permissible area. Specify the existing base screen / window screen.	×
311	No. of alarm has exceeded upper limit. Delete restored alarm.	The number of alarm histories that can be observed by the alarm history display function has exceeded the maximum points. Delete the restored history to decrease the number of alarm histories.	×
312	No. of sampling has exceeded upper limit. Delete collected data.	The collection frequency exceeded the upper limit when "Store Memory" and "Accumulate/Average" were set in the scatter graph. 1. Approve "Clear trigger" setup in the scatter graph. 2. Set the "Operation at frequency over time" and "initialize and continue" in scatter graph.	×
315	Device writing error. Correct device.	Error occurred while writing in the device. Correct the device.	×

Error code	Error message	Action	Channel No. storage
316	Cannot display or input operation value. Review expression.	In indirect specification of comment/parts number, the data operation result exceeded the range in which device type can be expressed. Review the data operational expression, in order not exceeding the range in which the device type can be expressed.	×
317	Too high frequency of data collection. Review conditions.	Data of an object, to which [Collect data only when trigger conditions are satisfied] is set, are collected too frequently, or the number of objects has exceeded the number of objects collectable simultaneously. 1. Set a longer cycle for trigger occurrence to each object. 2. Make the settings so that 257 or more display triggers of objects, to which [Collect data only when trigger conditions are satisfied] is set, do not occur simultaneously.	×
320	Specified object does not exist or out of range.	The part file does not exist. Create the part file and download to GOT.	×
322	Dedicated device is out of range. Confirm device range.	The monitored device No. is out of the permissible area of the targeted PLC CPU. Set the device within the range that can be monitored by the monitored PLC CPU and parameter settings.	×
330	Insufficient memory media capacity. Confirm M-card capacity.	Available memory of the memory card is insufficient. Confirm the available memory of the memory card. The available memory can be confirmed by system information screen, which is described in GT Designer2 Version□ Screen Design Manual.	×
331	Memory card not installed or M-CARD switched OFF	The memory card is uninstalled or access switch is OFF in drive. 1. Install the memory card in the specified drive. 2. Turn ON the access switch.	×
332	Memory media is not formatted.	Memory card is not formatted or formatted incorrectly. Format the memory card.	×
333	Unable to overwrite. Memory card is write-protected.	Memory card is write-protected. Cancel the write-protection of memory card.	×
334	Memory media error. Replace memory media.	Memory card is faulty. Replace the memory card.	×
335	Memory card battery voltage low. Replace battery.	The battery voltage of the memory card is low. Replace the battery of the memory card.	×

Error code	Error message	Action	Channel No. storage
337	File output failed. Confirm output file path.	Either of the following folder or file with the name same as the file to be created exists in the storage destination memory card. 1. Folder storing data 2. Write-protect file Delete the above folder or file, or change the name of the file to be created.	×
340	Printer error or power failure	Printer is faulty or the printer power supply has not been turned on. 1. Confirm the printer. 2. Turn on the power supply of the printer.	×
341	Printer error	Printer is faulty or the printer power supply has not been turned on. 1. Confirm the printer. 2. Turn on the power supply of the printer.	×
342	External power is not supplied to external I/O unit	Error occurred at the external I/O interface module. 1. If an external power supply (24VDC) is not supplied, supply the external power supply. 2. If an external power supply is supplied, replace the external I/O interface module.	×
343	External I/O unit installation error. Check if firmly installed.	The external I/O interface module is not installed correctly. Install the external I/O interface module correctly.	×
345	BCD/BIN conversion error Correct data	The BCD/BIN conversion disabled data is being displayed/ input. 1. Change the device data to be displayed to the BCD value. 2. Correct the input value to the 4 digits integer.	○
351	Recipe file error. Confirm content of recipe file.	The contents of the recipe file are not normal. 1. Confirm the contents of the recipe files in the memory card. 2. Reboot the GOT after deleting the recipe file in the memory card (format).	×
352	Recipe file make error. Reboot GOT after inserting memory card.	Failed to generate recipe file. Reboot the GOT after installing the memory card.	×
353	Unable to write Recipe file. Confirm memory card is inserted.	Failed to write in the recipe file. 1. Confirm the write-protection of the memory card. 2. Confirm the contents of the memory card. 3. Do not pull out the memory card while recipe is operating.	×
354	Recipe file write error	Error occurred while writing in the recipe file. Do not unplug the memory card while recipe is operating.	×
355	Recipe file read error	Error occurred while writing in the recipe file. 1. Do not unplug the memory card while recipe is operating. 2. Confirm the contents (device value) of the recipe file in the memory card.	×

Error code	Error message	Action	Channel No. storage
356	File system error occurred in PLC. Confirm file register.	Error occurred in the specified file register when executing the recipe function by specifying the file register name. 1. Execute the recipe function again after confirming the file register name. 2. Execute the recipe function again after formatting the PC memory in the specified PLC CPU drive with GX Developer.	×
357	Error in specified PLC drive Confirm PLC drive	When executing the recipe function specifying the file register name, error occurred in PLC CPU drive. 1. Execute the recipe function again after confirming the specified PLC CPU drive. 2. Execute the recipe function again after formatting the PC memory in the specified PLC CPU drive with GX Developer.	×
358	PLC file access failure. Confirm PLC drive.	When the recipe function is executed specifying the file register name, PLC CPU file register could not be accessed. 1. Execute the recipe function again after confirming the specified PLC CPU drive / file register name. (When you specify drive 0, execute the recipe function again after changing to other drives.) 2. Confirm whether the memory card is write-protected, and execute the recipe function again.	×
359	Processing from another peripheral device. Execute it after.	When the recipe function is executed specifying the file register name, other peripherals carry out the process to the file register. Wait until the processing of other peripherals end, and execute the recipe function again.	×
360	0 divisor division error. Confirm operation expression.	Division 0 was generated by the data operational expression. Review the data operational expression so that the divisor should not become 0.	×
361	Specified device No. is out of range.	The value of the specified device number is out of range. Check the value of the specified device number before inputting the appropriate value (between 1 and 9999).	×
362	Invalid device value in time action setting.	When time action is external-controlled, the specified device number is out of range or the device value for the operation setting is out of range or invalid. Set the valid value.	×
370	Upper and lower limit value error. Confirm value setting.	The setting of lower/upper limit value is [Upper limit < Lower limit]. Correct the setting so as to be "Upper limit × Lower limit".	×

Error code	Error message	Action	Channel No. storage
402	Communication timeout. Confirm communication pathway or modules.	The time-out error occurred during communicating. 1. Confirm the cable omission, the communication module mounting status and status of the PLC. Channel No. is not displayed in error code or error message in the case an error occurs when using the multi-channel function. Refer to the following manual to identify the channel No. in error. ☞ GOT1000 Series Connection Manual (Description of "Checking for normal monitoring" of each connection type) 2. This error may occur when the load of PLC CPU becomes heavier while accessing other stations. In such case, transfer the data of the other station to the host station PLC CPU to be monitored by host. 3. Put COM instruction when the PLC scanning is long.	○
403	SIO status error. Confirm communication pathway or modules.	Either of the overrun error, parity bit error or flaming error was generated when the RS-422 / RS-232 communication was received. Confirm the cable omission, the communication module mounting status, status of the PLC, and the transmission speed of the computer link. Channel No. is not displayed in error code or error message in the case an error occurs when using the multi-channel function. Refer to the following manual to identify the channel No. in error. ☞ GOT1000 Series Connection Manual (Description of "Checking for normal monitoring" of each connection type)	○
406	Specified station access is out of range. Confirm station no.	1. Station numbers other than master/local station are specified at the CC-Link connection (via G4). 2. Accessed PLC CPUs other than QCPU. Confirm the station number of the project data.	○
407	Accessed other network. Change network setting.	1. When monitoring the same network as the GOT Accessed other networks when connecting MELSECNET/H, MELSECNET/10 (PLC to PLC network), and CC-Link IE controller network. Confirm the network number of project data so as not to access to other network. 2. When monitoring other networks Reconfigure the [Routing Information Setting] of GT Designer2 or the [Routing parameters] of GX Developer. 3. When the GT15-75J71LP23-Z/GT15-75J71BR13Z is used These models cannot monitor other networks.	○
410	Cannot perform operation because of PLC run mode. stop the PLC.	The operation, which could not be performed during RUN of PLC CPU, was performed. Stop the PLC CPU.	○

Error code	Error message	Action	Channel No. storage
411	Memory cassette is write-protected. Check the memory cassette.	The memory cassette installed in PLC CPU is in the state protected with EPROM or E^2PROM. Confirm the memory cassette installed in PLC CPU.	○
412	Cannot read/write device protected by keyword. Remove keyword.	The key word is set in PLC CPU. Cancel the key word.	○
420	E71 specification is ASCII.	[ASCII code] is selected in [Ethernet operations] of the PLC side setting. Select [Binary code].	○
421	E71 is set as read-only. Clear setting.	The Ethernet module on the PLC side is set in read-only. Set the Ethernet module on the PLC side to write-enabled.	○
422	Not communicating between CPU and E71. Confirm CPU error.	PLC CPU error. Communication between PLC CPU and the PLC side Ethernet module impossible. Confirm whether there is error in PLC CPU by GX Developer etc. (Confirm buffer memory)	○
423	Insufficient network table information. Add station no.	The station number set in the object, etc. does not exist in the Ethernet setting. 1. Add the station number set in the object, etc. to the Ethernet setting. 2. When station No. switching is used, check the settings of the station No. switching device. If the used station number is not set in the Ethernet setting, add the station number. If the station number does not exist in a system, review the settings of the station No. switching device. (Set the station number so that it becomes the same as the station number of the PLC CPU side Ethernet module set by the parameter of GX developer.)	○
424	Same sta. on GOT & project data. Review communication parameter.	The station number set in the GOT's utility is the same as the station number set by the GT Designer2 Ethernet setting (the station number of the PLC side Ethernet module) or by the project data. Confirms the following contents so that the multiple station numbers should not be the same. 1. Confirm the station number of GOT by the utility of GOT. 2. Confirm the station number set by the project data. 3. Confirm the station number set by the Ethernet setting. (Set the station number so that it becomes the same as the station number of the PLC CPU side Ethernet module set by the parameter of GX developer.) 4. When station No. switching is used, check the settings of the station No. switching device.	○
448	PLC cannot handle as requested. Correct devices.	The file register of QnACPU and the device beyond the outside range of buffer memory was specified. Correct the monitor device by setting file register of PLC CPU.	○

Error code	Error message	Action	Channel No. storage
449	Dedicated device is out of range. Confirm device range.	Set the address for the special function module in the GOT monitor available range.	○
450	Path has changed or timeout occured in redundant system.	The path has been switched or timeout occurred in the redundant system. 1. Check the PLC CPU to know if the path has been switched. 2. Check the cable connection status, the communication unit installation status, and the PLC CPU status. 3. When accessing other stations, this error may occur if the load of the PLC CPU becomes heavier. 4. Perform one of the following operations if the PLC scanning time is long: COM instruction/Extension of End processing/ Setting of the number of processing times for general data/ Data update batch processing.	○
451	Q redundant system settings and current config. do not match.	Change the Q redundant setting in accordance with the actual Q redundant CPU system.	○
460	Communication unit error	1. Reset the power of the GOT. 2. Replace the unit.	○
480	Communication channel not set. Set channel number on Utility.	Channel (CH.No.1 to 4) to communicate with a controller is not set. 1. After setting the Communication Settings on the GT Designer2, download it to the GOT. 2. Change the channel assignment in the Communication Setting on the utility.	○ *1
481	Communication unit not mounted to the slot of active channel.	The interface where the channel (CH No.1 to 4) is set has not a communication unit installed. 1. Install a communication unit to the interface where the channel (CH No.1 to 4) is set. 2. Change assignment of the channel (CH No.1 to 4) in the Communication Setting.	○ *1
482	Too many same units are mounted. Confirm the no of units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○ *1
483	Simultaneous mounting of the units are not allowed.	Two or more units which cannot be mounted on the GOT simultaneously are mounted. Check the mounted units, and remove unnecessary units.	○ *1
484	Unit mounted incorrectly. Move the unit to correct position.	The unit is not mounted on the GOT in the correct position. Confirm the mounting position of the unit.	○ *1
485	Too many units mounted on GOT. Reduce units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○ *1

Error code	Error message	Action	Channel No. storage
486	Communication unit not corresponded to set communication driver.	The communication driver set in the Communication Setting and the communication unit installed on the GOT do not match. 1. Check whether the communication driver set in the Communication Setting is correct. 2. Check whether any incorrect communication unit has been installed on the GOT.	○ *1
487	Please turn on the PLC and the GOT again.	Turn the power of the PLC and GOT on again.	○
488	Too many units mounted on GOT. Reduce units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○ *1
489	Inactive channel has been selected at Communication Settings.	Inactive channel No. has been set in the project data. 1. Check whether any unnecessary channel No. has been set in the project data. 2. Check whether channel Nos. set in the project data are set in the Communication Settings.	○ *1
490	Simultaneous mounting of the units are not allowed.	Two or more units which cannot be mounted on the GOT simultaneously are mounted. Check the mounted units, and remove unnecessary units.	○ *1
491	Too many units mounted on GOT. Reduce units.	Units are mounted on the GOT exceeding the maximum number of mountable units. Check the number of units, and remove unnecessary units.	○ *1
500	Warning! Built-in battery voltage is low.	The voltage of the GOT built-in battery is decreased. Replace the GOT built-in battery.	×
502	Warning! Backlight needs replacement soon.	User notifies the backlight power on addition time that reaches more than 80% of setting time with the dedicated GS. GOT can be restored by executing the addition times reset function after replacing the backlight. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
503	Warning! Display section needs replacement soon.	User notifies the display section power on addition time which reaches to more than 80 % of the setting time with the dedicated GS. GOT can be restored by executing the addition times reset function after replacing the display section. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×

Error code	Error message	Action	Channel No. storage
504	Warning! Touch panel needs replacement soon.	User notifies the touching count of the touch key that reaches to more than 80 % of the setting time with the dedicated GS. GOT can be restored by executing the addition times reset function after replacing the touch key. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
505	Warning! Built-in Flash ROM needs replacement soon.	User notifies the built in flash memory writing times which reaches to more than 80 % of the setting time with the dedicated GS. The GOT must be replaced. In that case, the data backup and the reestablishment of data are needed. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
506	Warning! Backlight needs replacement.	User notifies the backlight power on addition time that reaches more than setting time with the dedicated GS. GOT can be restored by executing the addition times reset function after replacing the backlight. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
507	Warning! Display section needs replacement.	User notifies the display section power on addition time which reaches to more than the setting time with the dedicated GS. GOT can be restored by executing the addition times reset function after replacing the display section. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
508	Warning! Touch panel needs replacement.	User notifies the touching count of the touch key that reaches to more than the setting time with the dedicated GS. GOT can be restored by executing the addition times reset function after replacing the touch key. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
509	Warning! Built-in Flash ROM needs replacement. Change the GOT.	User notifies the built in flash memory writing times which reaches to more than the setting time with the dedicated GS. The GOT must be replaced. In that case, the data backup and the reestablishment of data are needed. Moreover, GOT can also be restored by turning off the notification signal manually. In such case, turn it OFF after changing the setting value to the integrated value or more.	×
510	Clock data input out of range	The value that is input as clock data is out of the input enabled range. In this case, the input value is not accepted. Confirm the input range of the value to be input as clock data, and input the proper value again.	×

Error code	Error message	Action	Channel No. storage
520	Insufficient Flash ROM capacity	The capacity for the buffering area is insufficient in the build in flash memory. 1. Confirm whether there are no mistakes in specified buffering area size. 2. Install the option function board with add-on memory.	×
521	Insufficient user memory (RAM) capacity	The capacity for the buffering area is insufficient in the user memory (RAM). 1. Confirm whether there are no mistakes in specified buffering area size. 2. Install the option function board with add-on memory.	×
522	Unnecessary file deleted to create new file.	Cancelled the file of different contents and created a new file. Note that the old file is cancelled and the new file is created if the file of the same name with different contents exists when creating files.	×
524	Device writing error. Correct device.	When writing in the device, error occurred. Correct the device.	×
525	Unable to read/write alarm log files under different projects.	Unable to read the alarm log file saved by the different project. Confirm where to store the alarm log file and alarm log file.	×
526	File conversion failed.	The file specified in file conversion does not exist. Check the settings for specifying a file to be converted.	×
530	Improper monitor device. Confirm monitor channel.	The channel of the specified monitor target does not exist or the channel is not the monitor target. Confirm the monitor target channel of the screen data.	×
535	Cannot open image file.	Confirm whether any file exists in the memory card.	×
536	Image file error or invalid file format.	1. Confirm whether the image file in the memory card is normal. 2. Confirm whether any image file of invalid format is stored.	×
540	Auto repeat error. Confirm system information.	Error occurred while executing the auto repeat function of the touch switch object. Confirm the followings. 1. Confirm that the other system error has not occurred during auto repeat 2. Confirm that any error information is not stored in the system information/GS during auto repeat.	×
570	Recipe device points too large.	The number of the set points of the recipe device exceeds the specified range. Put the number of the set points of the recipe device within the specified range.	×
571	Capacity shortage of user memory (RAM)	There is no empty area/space in D drive. Format the D drive in the memory to secure free area.	×
581	Abnormal Advanced recipe file	Advanced Recipe cannot be executed for advanced recipe file with incorrect contents. Delete the advanced recipe file from the memory card.	×

Error code	Error message	Action	Channel No. storage
582	Cannot generate Advanced recipe file.	Cannot generate advanced recipe file. Confirm the following and execute recipe processing again. 1. Confirm whether the memory card is installed. 2. Confirm whether the CF card access switch of the GOT is ON. 3. Confirm the available memory of the memory card.	×
583	Unable to save device value to Advanced recipe file.	Unable to save device value to advanced recipe file. 1. Confirm the write-protection of memory card. 2. Confirm whether the attribute of saving file is for reading only.	×
584	Advance recipe file save error	An error has occurred during the advanced recipe file writing. Do not pull the memory card out while the Advanced Recipe is operating.	×
585	Advanced recipe file upload error	An error has occurred during the advanced recipe file reading. Do not pull the memory card out while the Advanced Recipe is operating.	×
586	Specified Advanced recipe number does not exist.	The advanced recipe of non-existing number is about to be executed. Execute advanced recipe of existing number.	×
587	Specified record number does not exist.	The advanced record of non-existing number is about to be executed. Execute record of existing number.	×
588	Cannot save recipe data to read only record.	Saving recipe is about to be executed to the record of which recipe device value cannot be edited. Make the recipe device value of the record editable with Advanced Recipe Setting of GT Designer2 or specify the record of which recipe device value can be edited.	×
589	Recipe device save error. Recipe file does not exist.	Saving recipe is about to be executed to the advanced recipe setting that is set for not using file. Specify the advanced recipe setting that uses file.	×
590	Recipe device upload error. Recipe device value does not exist.	Loading recipe is about be executed to the record of which recipe device value is not set. Specify the record of which recipe device value is set.	×
591	Advanced Recipe error. Check recipe data.	The advanced recipe setting is not correct. Confirm the advanced recipe setting of the project data and download it to the GOT again.	×
595	Logging file error.	Logging file error. When collecting data again, delete logging files and management files.	×
596	Logging setting does not exist or setting value error.	The logging setting specified in the historical trend graph setting does not exist. Review the historical trend graph setting and specify a logging setting that exists.	×
600	Unsupported version of printer unit.	The version of OS installed in the GOT is not compatible with the printer unit. Install the extended function OS (Printer) with the latest GT Designer2.	×

Error code	Error message	Action	Channel No. storage
601	Printer unit error.	The printer unit is installed incorrectly. The built-in flash memory of the printer unit is broken or the guaranteed life has been elapsed. Check that the printer unit is installed correctly. When the printer unit has been installed correctly, the built-in flash memory is broken or the guaranteed life has been elapsed. Replace the printer unit with new one.	×
602	Video/RGB unit not mounted	1. Check if the video/RGB input unit is installed. 2. Check if the GOT used supports video/RGB input.	×
603	External I/O unit error	Check if the external I/O unit is correctly installed.	×
604	Sound output unit error	Check if the sound output unit is correctly installed.	×
610	Insufficient memory capacity.	The memory capacity for the MES interface function is insufficient. Delete unnecessary files, and reserve memory.	×
611	Improper job files. Confirm job setting.	The contents for job files are unmatched with the settings for job files. Check if there are mistakes in the settings on the setting screen.	×
612	Cannot access Logging Files Check the memory card	1. Insert a memory card. 2. Turn on the memory card access switch. 3. If the memory card has unnecessary files, delete the files.	×
613	Error in writing logfile	1. Insert a memory card. 2. Turn on the memory card access switch. 3. Check if the memory card is writable.	×
614	Error in reading logfile	1. Insert a memory card. 2. Turn on the memory card access switch. 3. Check if the memory card is readable.	×
615	Cannot connect to MES Server. Check the Server.	The server does not work normally or the connection path to the server is made up incorrectly. 1. Check the operating conditions of the server. 2. Check the network to the server.	×
616	Cannot connect to SNTP Server. Check the Server.	The settings for the SNTP server are wrong or the network to the SNTP server is made up incorrectly. 1. Check the operating conditions of the STNP server. 2. Check the network to the SNTP server.	×
800	Abnormal module status	Refer to explanations of SB0020 in the applicable network manual.	○
801	Abnormal baton passing status	Refer to explanations of SB0047 in the applicable network manual.	○
802	Abnormal cyclic transmission status	Refer to explanations of SB0049 in the applicable network manual.	○
803	Transient error	Refer to explanations of SB00EE in the applicable network manual.	○

Error code	Error message	Action	Channel No. storage
804	The cable on the IN side is disconnected or is not connected.	Refer to explanations of SB0067 in the applicable network manual.	○
805	The cable on the OUT side is disconnected or is not connected.	Refer to explanations of SB0068 in the applicable network manual.	○
850	CC-Link switch setting error	• Check if the switch settings have no error. • Check error codes stored in SW006A. • Refer to explanations of SB006A in the applicable network manual.	○
851	Abnormal cyclic transmission status	• Check if terminating resistors are connected. • Check error codes for the PLC CPU. • Check the parameter for the PLC CPU on the master station. • Check the error status of the master station. • Refer to explanations of SB006E in the applicable network manual.	○
852	Abnormal host line status	• Check if the cable is unplugged or not. • Refer to explanations of SB0090 in the applicable network manual.	○
853	Transient error	• Check the transient error occurrence status for each station stored in SW0094 to SW0097. • Refer to explanations of SB0049 in the applicable network manual	○

*1 When an error occurs, "FFH" is stored to the channel No.

8.6.2 Error code list when using the internal device interface function

The following shows lists of error codes that occur when the internal device interface function is used.

1 GDev_OpenMapping function

Error code	Definition and cause	Corrective action
0	Opening or mapping of the shared memory was failed. (Access to internal devices disabled)	• Start GT SoftGOT1000. • Specify the module No. (Fixed at 1) of the existing GT SoftGOT1000. • Exit unnecessary applications to secure memory space. • Restart the personal computer.

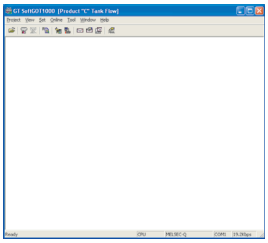
2 GDev_Read function/GDev_Write function

Error code	Definition and cause	Corrective action
-1	The specified device is illegal.	• Specify the ID of an existing device name.
-2	The specified head device is outside the range.	• Specify an existing device number.
-3	The specified terminal device is outside the range.	• Specify device points of the existing device range.
-9	The specified shared address is illegal.	• Specify the shared memory address obtained by the GDev_OpenMapping function.

APPENDICES

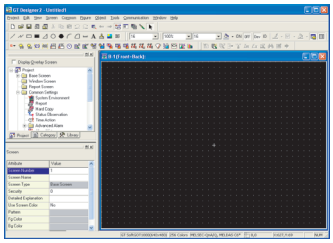
Appendix 1 Applicable Project Data

Use GT SoftGOT1000 of the same version as the GT Designer2.
When the versions of GT SoftGOT1000 and GT Designer2 are different, install the same version of GT SoftGOT1000/GT Designer2.



GT SoftGOT1000 version

=



GT Designer2 version

Hint!

When using the project data created on the GT Designer2 version older than the GT SoftGOT1000 version

Open the project data on the GT Desinger2 of the same version as the GT SoftGOT1000, and save the project data.

Appendix 2 Unsupported Functions (Function Difference When Comparing GT SoftGOT1000 and GT SoftGOT2)

Compared to GT SoftGOT2, the GT SoftGOT1000 does not support the following functions.

Function	Description
Remote device monitoring	Monitoring a device monitored by GT SoftGOT1000 with a PC or mobile phone using the mail function

Appendix 3 List of Functions Added by GT SoftGOT1000 Version Update

Point

For version upgrade of GT SoftGOT1000

The GT SoftGOT1000 complies with the GT Designer2 version upgrade (Common settings/object functions/GOT main unit functions).
For version upgrade of GT Designer2, refer to the following manual.

☞ GT Designer2 Version □ Screen Design Manual

The following functions are added to GT SoftGOT1000 Version2.90U.

Item	Description	Version of GT SoftGOT1000
Print	Function to output data to a printer is added to the hard copy function.	2.32J
Application start-up	Function to start up applications from the GT SoftGOT1000 is added.	2.32J
Close menu	Function to enable/disable the Close menu on the Menu bar is added.	2.32J
Internal device interface function	Function to operate the internal device of GT SoftGOT1000 from a user-created application is added.	2.43V
Starting up multiple GT SoftGOT1000 modules	Function to start up multiple SoftGOT1000 modules on a single computer is added.	2.43V
Cascade	Function to display running GT SoftGOT1000 in cascade.	2.43V
Minimize All Windows	Function to minimize all windows of active GT SoftGOT1000 modules is added.	2.43V
USB connection	Function to enable USB connection when directly connecting to QCPU.	2.47Z
Interaction with PX Developer	Function to enable interaction with PX Developer	2.47Z
Back screen mode	Function to always display SoftGT1000 behind all the other screens.	2.47Z
PC CPU module	GT SoftGOT1000 can be used with the PC CPU module.	2.58L
Keyboard input	Objects, including the alarm history, can be operated with function keys of a keyboard.	
Environment setup	The settings regarding the authentication are added to the action setup.	
	The settings of the screen size in the full screen mode are added to the auxiliary setup.	2.73B
	The settings of the TrueType numerical font and the Kana-kanji conversion are added.	2.90U
Scroll function	Function to display the scroll bars when GT SoftGOT1000 pane is resized to a smaller size is added.	2.63R
Displaying splash screen at GT SoftGOT1000 startup	Choosing to display or hide the splash screen when GT SoftGOT1000 starts is enabled.	
Exit key	The F12 key enables or disables the exit operation of GT SoftGOT1000.	
Resolution	UXGA (1600 × 1200) is selectable.	2.73B
	Resolution specification (X × Y) is selectable.	2.77F

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SH(NA)-080602ENG-J

Integrated FA Software

GT SoftGOT1000

Version 2

Operating Manual

MODEL	SW2-SOFTGOT1000-O-E
MODEL CODE	1D7M48
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