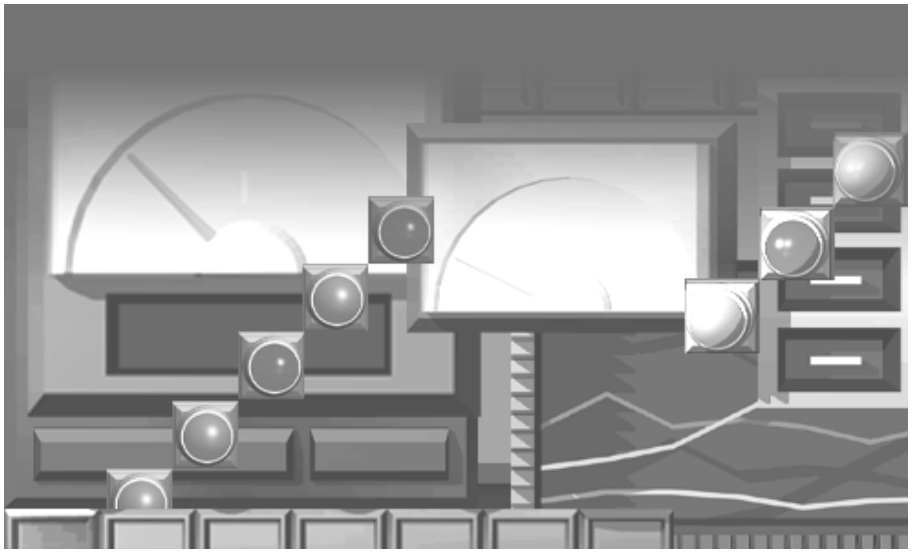
MITSUBISHI

GT SoftGOT2 Version1

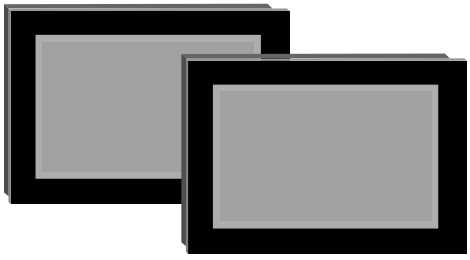
Operating Manual

MELSOFT



Graphic Operation Terminal

900 series



MELSOFT
Integrated FA Software

SW1D5C-GTWK2-E
SW1D5C-GTD2-E

MITSUBISHI Graphic Operation Terminal

• SAFETY PRECAUTIONS •

(Always read these instructions 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 instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.
In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".

⚠ DANGER	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠ CAUTION	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 consequence 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 Instructions]

⚠ 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.

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Precautions for using this software (important)

1. Memory of the personal computer used
   Processing may be terminated by Windows® on some personal computer models having main memory of not more than 64M bytes. Therefore, use them after increasing the main memory to 64M bytes or more.

2. Free space on the hard disk
   While this software is running, free space of at least 100M byte is required on the hard disk.
   Since free space of 100M byte is required by Windows® as the swap area, Windows® may forcibly terminate the program if that free space is used up while the this software is running. Produce a sufficient amount of free space on the hard disk before using the this software.

3. Instructions for displaying any line other than a continuous line (such as a dotted line) in boldface type
   When any line other than a continuous line is drawn in boldface type, the personal computer screen may not display the line type properly. However, it is displayed properly on the GOT and there are no problems in data.

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REVISIONS

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

Print Date	* Manual Number	Revision
Apr., 2003	SH (NA)-080400E-A	First edition
Aug., 2003	SH (NA)-080400E-B	Partial additions Section 2.2, Section 2.3.2, Section 2.4.1, Section 3.3.1 Partial corrections Section 2.3.1, Section 3.2, Section 3.3.2, Section 5.3.1, Section 5.3.2, Section 5.3.3, Section 5.3.4, Section 5.5, Section 5.5.1
Jan., 2004	SH (NA)-080400E-C	Partial additions Section 2.3.3, Section 2.4.1, Section 3.2, Section 3.3.1, Section 5.4.4 Partial corrections Section 2.1.2, Section 5.4.3, Appendix 2 Additions Appendix 1
Jul., 2004	SH (NA)-080400E-D	Partial corrections Section 2.3.1, Section 2.4.1, Section 3.3.1, Section 5.5.1, Section 6.8.1 Additions Section 2.6 MODEL CODE change Changed 1D0J02 to 1DM210
Oct., 2004	SH (NA)-080400E-E	Partial additions Section 2.4.1, Section 5.5.1 Partial corrections Section 5.5, Section 5.8, Section 5.8.1, Appendix 2 Additions Section 7.4
Mar., 2005	SH (NA)-080400E-F	Partial corrections About Manuals, Abbreviations and generic terms in this manual, Chapter 1, Section 2.1.1, Section 2.2, Section 2.3.1, Section 2.5.1, Section 2.6, Section 3.2, Section 3.3.1, Section 4.1, Section 5.1, Section 5.2, Section 5.7, Section 5.11, Section 6.4.2, Section 6.4.3, Section 6.4.4, Section 6.5.3, Section 6.6.3, Section 6.7.1, Section 6.12.2, Appendix 2
Oct., 2005	SH (NA)-080400E-G	Partial corrections Chapter 1, Section 2.3.1, Section 4.1, Section 4.2, Section 5.5, Section 5.7, Section 5.8, Section 5.10, Section 5.11, Section 5.12, Section 6.1.1, Section 6.2.1, Section 6.6.1, Section 6.6.2, Appendix 2 Additions Section 2.6.1, Section 2.6.2

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

Print Date	* Manual Number	Revision
Jan., 2006	SH (NA)-080400E-H	Partial corrections About Manuals, Section 3.2

Japanese Manual Version SH-080354-J

INTRODUCTION

Thank you for choosing the Mitsubishi Graphic Operation Terminal.
Before using the equipment, please read this manual carefully.

CONTENTS

About Manuals

The following manuals related to this product are available. Obtain the manuals as required the according to this table.

- Related manual

Manual name	Manual number (Model code)
GT Works2 Version2/GT Designer2 Version2 Operating Manual (Startup・Introductory Manual) Describes methods of installing GT Designer2 and introductory drawing methods (Sold separately)	SH-080520ENG (1DM215)
GT Designer2 Version2 Operating Manual Describes methods of operating GT Designer2 and transmitting data to GOT (Sold separately)	SH-080521ENG (1DM216)
GT Designer2 Version2 Reference Manual Describes the specifications and settings of each object function used in GT Designer2 (Sold separately)	SH-080522ENG (1DM217)
GOT-A900 Series Operating Manual (GT Works2 Version2/GT Designer2 Version2 compatible Extended・Option Functions Manual) Describes the following extended functions and optional functions applicable to GOT Utility / Ladder monitor System monitor / Special module monitor Network monitor / List editing Module monitor / Servo amplifier monitor CNC monitor / Font change System dialog language switching (Sold separately)	SH-080523ENG (1DM218)

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Abbreviations and generic terms in this manual

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

Abbreviations, generic terms and special terms		Description
Software	GT Works Version2	Abbreviation of SW2D5C-GTWK2-E software package
	GT Designer2 Version2	Generic term of SW2D5C-GTD2-E software package
	GT Designer2	Abbreviation of image creation software GT Designer2 for GOT900
	GT Simulator2	Abbreviation of GT Simulator2 screen simulator GOT900
	GT Converter	Abbreviation of data conversion software GT Converter for GOT900
	GT SoftGOT2	Abbreviation of monitoring software GT SoftGOT2
	GX Developer	Generic term of SW □ D5C-GPPW-E/SW □ D5F-GPPW-E software packages
	Acrobat Reader	Abbreviation of Adobe Acrobat Reader
CPU	QCPU (Q Mode)	Generic term of Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q12PHCPU, Q25PHCPU, Q12PRHCPU and Q25PRHCPU CPU units
	QCPU (A Mode)	Generic term of Q02CPU-A, Q02HCPU-A and Q06HCPU-A CPU units
	QCPU	Generic term of QCPU (Q Mode) and QCPU (A Mode)
	QnACPU Type	Generic term of Q2ACPU, Q2ACPU-S1, Q3ACPU, Q4ACPU and Q4ARCPU CPU units
	QnASCPU Type	Generic term of Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU and Q2ASHCPU-S1 CPU units
	QnACPU	Generic term of QnACPU Type and QnASCPU Type
	AnUCPU	Generic term of A2UCPU, A2UCPU-S1, A3UCPU and A4UCPU CPU units
	AnACPU	Generic term of A2ACPU, A2ACPU-S1 and A3ACPU CPU units
	AnNCPU	Generic term of A1NCPU, A2NCPU, A2NCPU-S1 and A3NCPU CPU units
	AnCPU Type	Generic term of AnUCPU, AnACPU and AnNCPU CPU units
	A2US(H)CPU	Generic term of A2USCPU, A2USCPU-S1 and A2USHCPU-S1 CPU units
	AnS(H)CPU	Generic term of A1SCPU, A1SCPU-S1, A1SHCPU, A1SCPUC24-R2, A2SCPU and A2SHCPU CPU units
	A1SJ(H)CPU	Generic term of A1SJCPU, A1SJCPU-S3 and A1SJHCPU CPU units
	AnSCPU Type	Generic term of A2US(H)CPU, AnS(H)CPU and A1SJ(H)CPU CPU units
	ACPU	Generic term of AnCPU Type, AnSCPU Type and A1FXCPU CPU units
	FXCPU	Generic term of FX_0 series, FX_{0N} series, FX_{0S} series, FX_1 series, FX_{1N} series, FX_{1NC} series, FX_{1S} series, FX_2 series, FX_{2C} series, FX_{2N} series, FX_{2NC} series and FX_{3UC} series CPU unit
	Motion controller CPU	Generic term of A273UHCPU, A171SHCPU, A172SHCPU, A173UHCPU, A173UHCPU-S1 CPU unit
	FA controller	Generic term of LM610, LM7600, LM8000
	MELDAS C6/C64	Generic term of FCA C6 and FCA C64
Ethernet unit	E71	Generic term of AJ71E71-S3, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, AJ71E71N-B2, AJ71E71N-B5T, A1SJ71E71-B2, A1SJ71E71N-B5Tand A1SJ71E71N3-T
	QE71	Generic term of AJ71QE71, A1SJ71QE71-B2, AJ71QE71-B5, A1SJ71QE71-B5, AJ71QE71N-B2, AJ71QE71N-B5T, A1SJ71QE71-B2, A1SJ71QE71N-B5T and A1SJ71QE71N3-T
	Q series-compatible E71	Generic term of QJ71E71, QJ71E71-B2 and QJ71E71-100

Abbreviations, generic terms and special terms		Description
Other PLC	Omron PLC	Generic term of C200HS, C200H, C200Hα Series (C200HX, C200HG, C200HE), CQM1, C1000H, C2000H, CV500, CV1000, CV2000, CVM1-CPU11, CVM1-CPU21, CS1, CS1D, CJ1H, CJ1G, CJ1M, CPM1, CPM1A, CPM2A, CPM2C CPU unit
	Yasukawa PLC	Generic term of GL60S, GL60H, GL70H, GL120, GL130, CP-9200SH, CP-9300MS, MP-920, MP-930, MP-940, CP-9200(H) and PROGIC-8 CPU unit
	SLC500 Series	Generic term of SLC500-20, SLC500-30, SLC500-40, SLC5/01 SLC5/02, SLC5/03, SLC5/04 SLC5/05
	MicroLogix1000 Series	Generic term of 1761-L10BWA, 1761-L10BWB, 1761-L16AWA, 1761-L16BWA, 1761-L16BWB, 1761-L16BBB, 1761-L32AWA, 1761-L32BWA, 1761-L32BWB, 1761-L32BBB, 1761-L32AAA, 1761-L20AWA-5A, 1761-L20BWA-5A, 1761-L20BWB-5A
	MicroLogix1500 Series	Abbreviation of 1764-LSP
	Allen-Bradley PLC	Generic term of SLC 500 Series, MicroLogix1000 Series, MicroLogix1500 Series
	Sharp PLC	Generic term of JW-21CU, JW-22CU, JW-31CUH, JW-32CUH, JW-33CUH, JW-50CUH, JW-70CUH, JW-100CU, JW-100CUH, Z-512J CPU unit
	PROSEC T Series	Generic term of T2(PU224type), T2E, T2N, T3, T3H CPU unit
	PROSEC V Series	Generic term of S2T and Model 3000 (S3) CPU unit
	Toshiba PLC	Generic term of PROSEC T Series and PROSEC V Series
	SIEMENS PLC	Generic term of SIMATIC S7-300 Series and SIMATIC S7-400 Series CPU unit
	Large type H series	Generic term of H-302(CPU2-03H), H-702(CPU2-07H), H-1002(CPU2-10H), H-2002(CPU2-20H), H-4010(CPU3-40H),.J-300(CPU-03Ha), H-700(CPU-07Ha), H-2000(CPU-20Ha)
	H200 to 252 Series	Generic term of H-200(CPU-02H, CPE-02H), H-250(CPU21-02H), H-252(CPU22-02H), H-252B(CPU22-02HB), H-252C(CPU22-02HC, CPE22-02HC)
	H Series board type	Generic term of H-20DR, H-28DR, H-40DR, H-64DR, H-20DT, H-28DT, H-40DT, H-64DT, HL-40DR, HL-64DR
	EH-150 Series	Generic term of EH-CPU104, EH-CPU208, EH-CPU308, EH-CPU316
	HITACHI PLC (HIDIC H Series)	Generic term of large type H series,H-200 to 252 Series H Series board type, EH-150 Series
	Matsushita PLC	Abbreviation of FP Series
	Matsushita Electric Works PLC	Generic term of FP0-C16CT, FP0-C32CT, FP1-C24C, FP1-C40C, FP2, FP2SH, FP3, FP5, FP10(S), FP10SH, FP-M(C20TC) and FP-M(C32TC)
Others	Memory	abbreviation of memory (flash memory) in the GOT
	OS	Abbreviation of GOT system software
	Object	Setting data for dynamic image
	License key	Abbreviation of A9GTSOFT-LKEY-P license key (for DOS/V personal computer)
	License key FD	Abbreviation of SW5D5F-SGLKEY-E (license registration package for PC CPU module)
	DOS/V personal computer	IBM PC/AT® or its compatible DOS/V personal computer
	PC CPU module	Abbreviation for MELSEC-Q series compatible PC CPU module (CONTEC CO., LTD. make)
	Personal Computer	Generic term of IBM PC/AT® and compatible DOS/V personal computer

∗ In this manual, the following products are called by new names.

Old Name	New Name	Remarks
GPPW	GX Developer	Generic term of SW□D5C-GPPW-E/SW□D5F-GPPW-E software packages

MEMO

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Chapter 1 OVERVIEW

1

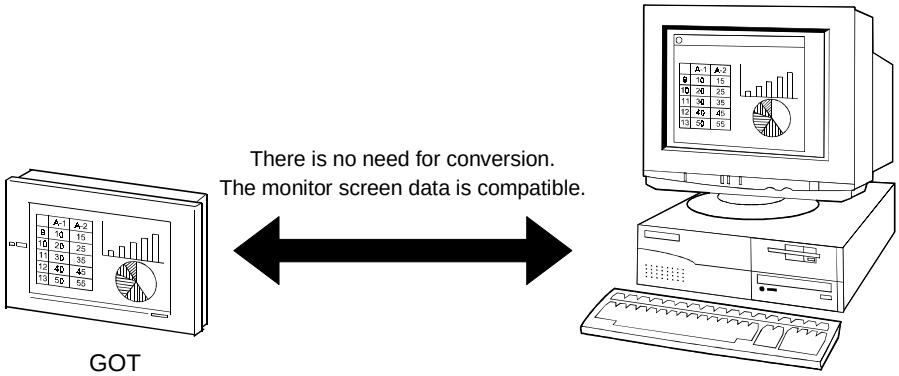
This manual explains the system configuration, specifications, screen structure, and operating method of monitoring software GT SoftGOT2 (hereinafter abbreviated as GT SoftGOT2).
GT SoftGOT2 is the software that has the same functions as the GOT-A900 series and is used to display lamps, data, and messages 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
Refer to the GT Works2 Version□/GT Designer2 Version□ Operating Manual (Start up • Introductory Manual) for how to install and start up GT SoftGOT2.

1.1 Features

(1) The monitor screen data used in the GOT-A900 Series can be used without changes.

Since GT SoftGOT2 uses the monitor screen data created with GT Designer2 without any modifications, it is possible to use the monitor screen data used in the GOT-A900 Series without any modifications.
GT SoftGOT2 uses the same screens and operations as GOT. Therefore, there will be no discomfort or confusion for the operators and maintenance personnel.



(2) Support for various screen sizes

GT SoftGOT2 supports XGA (1024 x 768 dots, equivalent to type 15) and SXGA (1280 x 1024 dots, equivalent to type 18); it is thus possible to design screens in greater detail than with conventional software. In addition, it is possible to use the same screen sizes as A97*GOT (640 x 480 dots, equivalent to type 10) and A985GOT (800 x 600 dots, equivalent to type 12); the screen size can be selected according to the application.

REMARK

GT SoftGOT2 can use the monitor data of both GT Designer2 and GT Designer2.

MEMO

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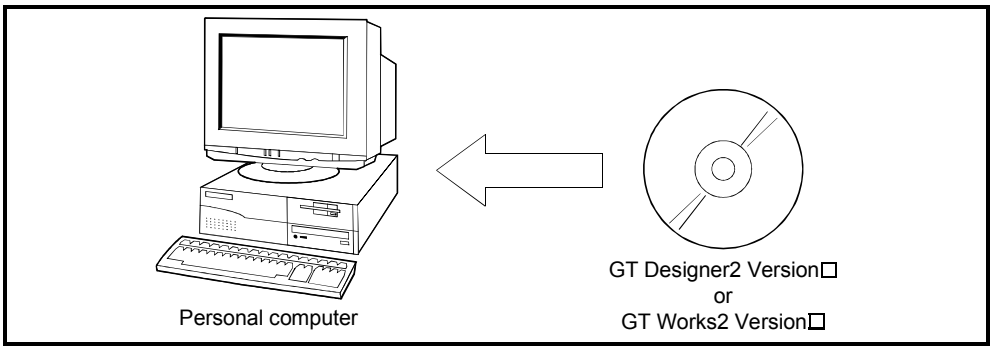
Chapter 2 SYSTEM CONFIGURATION

2.1 System Configuration at Installation of GT SoftGOT2

2.1.1 System configuration



2.1.2 Operation environment

The following table shows the GT SoftGOT2 operating environment.

Item		Description	
		DOS/V personal computer	PC CPU module
Computer main unit		Personal computer that are compaible with windows operating system	Contec's MELSEC-Q series-compatible PC CPU module
Operating system		Microsoft® Windows® 98 operating system, Microsoft® Windows® Millennium Edition operating system, Microsoft® WindowsNT® Workstation 4.0 operating system＊1＊2, Microsoft® Windows® 2000 Professional operating system＊2, Microsoft® Windows® XP Professional operating system＊2 ＊3, Microsoft® Windows® XP Home Edition operating system＊2 ＊3,	WindowsNT® Workstation 4.0 ＊1, Windows® 2000
Computer main unit		Refer to "Used Operating System and performance required for personal computer main unit" on the next page.	
	CPU		
	Required memory		
Hard disk space	For installation	At the time of installation : 200M bytes or more	
	For operation	At the time of operation : 100M bytes or more ＊4	
Disk drive		CD-ROM drive is mandatory.	3.5 inch (1.44MB) floppy disk drive
Monitor		Resolution of 800×600 dots or more	
Necessary software		GT Designer Version5 Version D or later or GT Designer2.	
Necessary License key /License key FD		A9GTSOFT-LKEY-P ＊5	SW5D5F-SGLKEY-E
Valid OS		Japanese, English ＊6	

＊1 When using GT SoftGOT2, use a computer where WindowsNT® Workstation 4.0 of Service Pack 3 or later is installed.
＊2 The authority of the administrator is required when installing GT SoftGOT2 into WindowsNT® Workstation4.0, Windows® 2000 Professional, Windows® XP Professional or Windows® XP Home Edition; when using GT SoftGOT2 on Windows® XP Professional or Windows® XP Home Edition.
＊3 "Compatibility mode", "user's easy switching" and "desktop theme (font) change" are not supported.
＊4 When multiple GT SoftGOT2's have been started, "started GT SoftGOT2's × 100" MB is required.
When the monitor screen data size (capacity) is large, 200MB or more may be required.
＊5 When using A9GTSOFT-LKEY-P, a parallel port (Centronix/printer connector) is required in an IBM-PC/AT compatible personal computer.
＊6 Characters in the dialog box may not be properly displayed when OS other than the above is used.

POINT

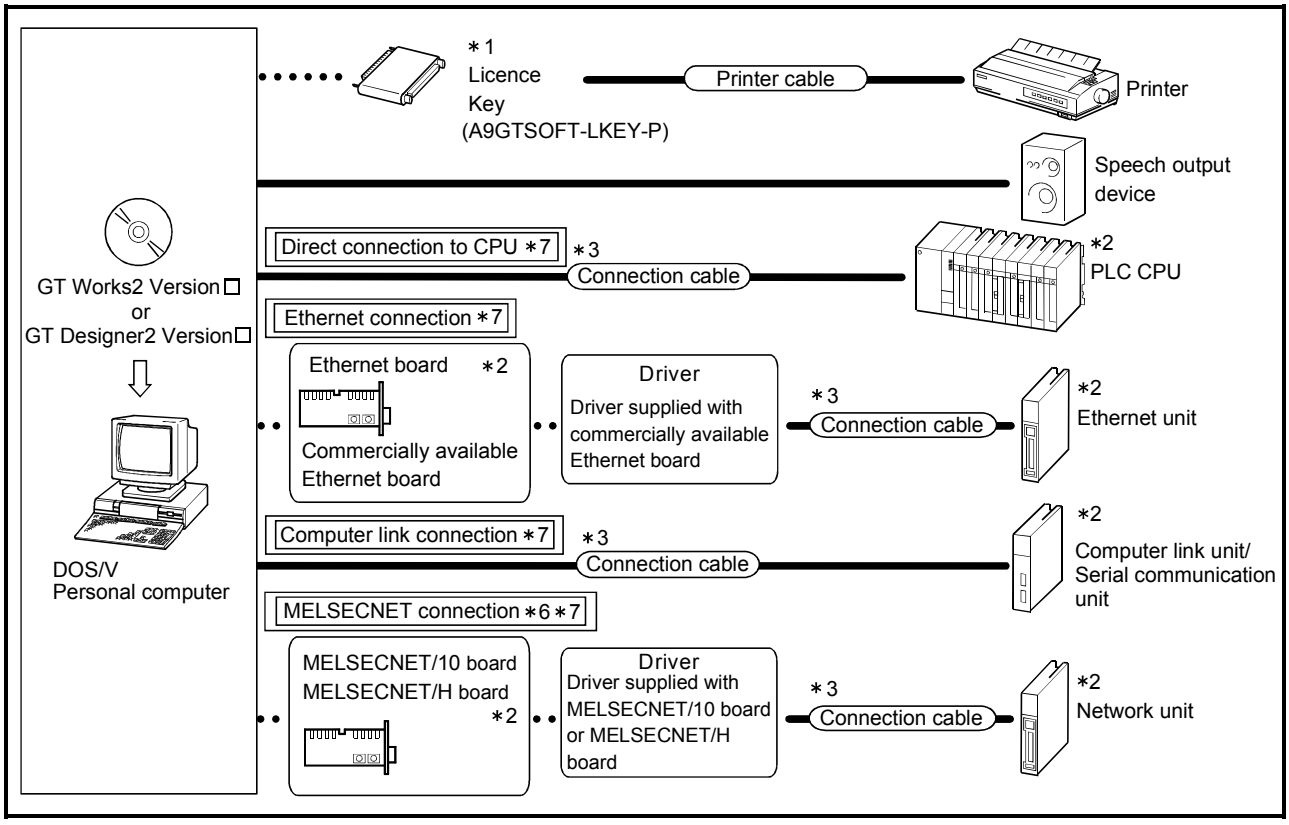
Depending on the language of your Operating System, this software may not start. In such a case, start this software after setting the Regional Settings within Control Panel of Windows® to "English".

Used Operating System and performance required for personal computer main unit

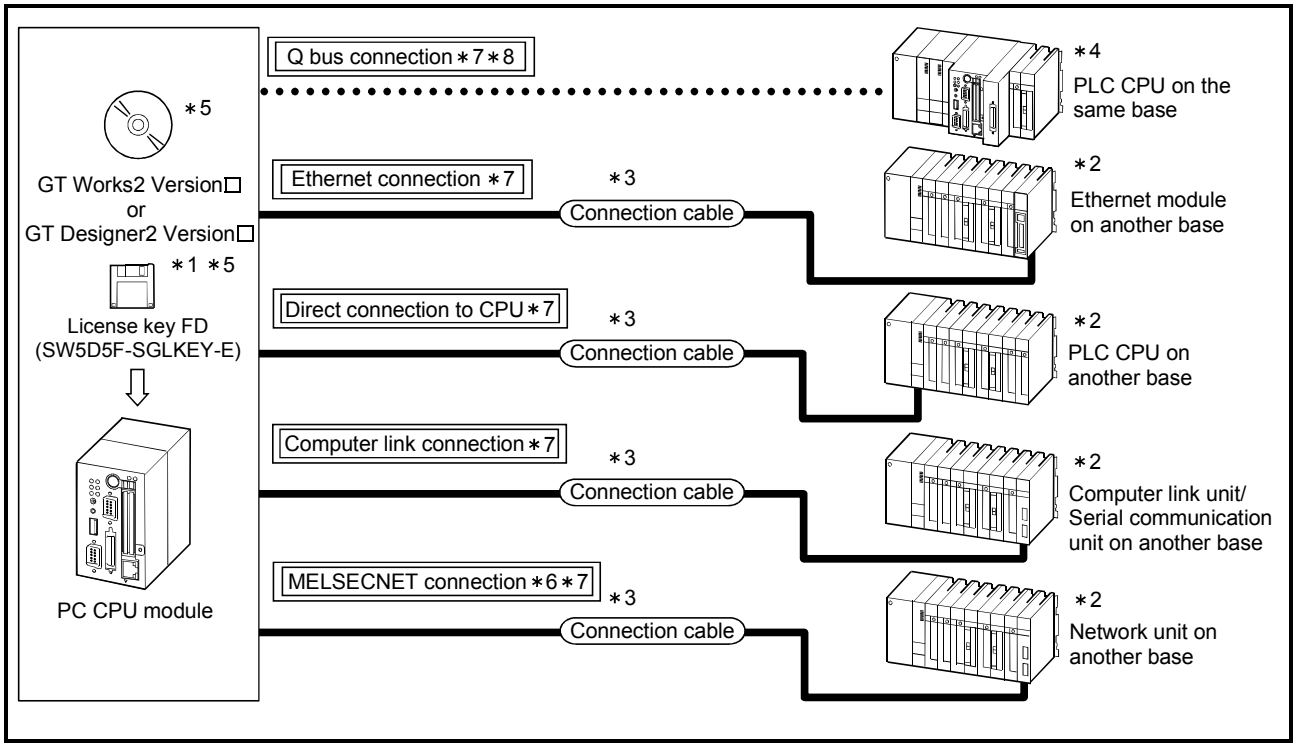
Operating System	Performance required for personal computer main unit		
	CPU	Required memory	
		GT SoftGOT2 only	When GX Developer is used with GT SoftGOT2 or when multiple GT SoftGOT2's are started
Microsoft® Windows® 98 operating system	Pentium® 200MHz or more (Pentium II® 300MHz or more recommended)	64MB or more (96MB or more recommended)	96MB or more (128MB or more recommended)
Microsoft® Windows® Me operating system	Pentium® 200MHz or more (Pentium II® 300MHz or more recommended)	64MB or more (96MB or more recommended)	96MB or more (128MB or more recommended)
Microsoft® WindowsNT® Workstation 4.0 operating system	Pentium® 200MHz or more (Pentium II® 300MHz or more recommended)	64MB or more (96MB or more recommended)	96MB or more (128MB or more recommended)
Microsoft® Windows® 2000 Professional operating system	Pentium® 200MHz or more (Pentium II® 300MHz or more recommended)	64MB or more (96MB or more recommended)	96MB or more (128MB or more recommended)
Microsoft® Windows® XP Professional operating system Microsoft® Windows® XP Home Edition operating system	Pentium II® 300MHz or more (Pentium II® 450MHz or more recommended)	128MB or more (192MB or more recommended)	128MB or more (192MB or more recommended)

2.2 System Configuration for GT SoftGOT2 Execution

(1) When GT SoftGOT2 is used on DOS/V personal computer



(2) When GT SoftGOT2 is used on PC CPU module



∗1 If the license key / license key FD is required, contact your nearest Mitsubishi branch office or dealer.
∗2 Refer to Section 2.3 for usable unit.
∗3 Refer to Section 2.4 for cables for connection of the unit.
∗4 When making Q bus connection, use Version 1.02 or later of the "PC module setting utility" of the PC CPU module. (The version of the PC module setting utility is displayed in "Version".)
∗5 When installing GT SoftGOT2 or a license key FD in a PC CPU module, a CD-ROM drive and a floppy disk drive dedicated for the PC CPU module are required. To purchase a PC CPU module and its related products, contact Contec Co., Ltd.
∗6 MELSECNET(II)/B connection cannot be made.
∗7 Refer to Section 2.3.1 (2) for the connection form applicable for the corresponding CPU.
∗8 For Q bus connection, access can be made from the PC CPU module to the other CPU in a multiple CPU system configuration.

2.3 Equipment that can Be Used Together with GT SoftGOT2

2.3.1 PLC CPUs that can be connected

(1) Applicable CPU list

The following table indicates the PLC CPUs that may be connected to GT SoftGOT2 (personal computer).

Variety		Type
QCPU	QCPU (Q Mode)	Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q12PHCPU, Q25PHCPU, Q12PRHCPU, Q25PRHCPU
	QCPU (A Mode)	Q02CPU-A, Q02HCPU-A, Q06HCPU-A
QnACPU	QnACPU type	Q2ACPU (S1), Q3ACPU, Q4ACPU, Q4ARCPU
	QnASCPU type	Q2ASCPU (S1), Q2ASHCPU (S1)
ACPU	ACPU (Large type)	A2UCPU (S1), A3UCPU, A4UCPU, A2ACPU (S1), A3ACPU, A1NCPU, A2NCPU (S1), A3NCPU (Version L or later for the one with link, version H or later for the one without link of AnN (S1))
	ACPU (Small type)	A2USCPU (S1), A2USHCPU-S1, A1SCPU (S1), A1SHCPU, A1SCPUC24-R2, A2SCPU (Version C or later), A2SHCPU, A1SJCPU (S3), A1SJHCPU, A0J2HCPU (Version E or later) A2CCPU (Version H or later), A2CCPUC24, A2CJCPU
		A1FXCPU
Motion controller CPU (A series) ＊5		A171SHCPU＊1, A172SHCPU＊2, A173UHCPU (S1)＊3, A273UHCPU (S3)＊3
FXCPU		FX_0,FX_{0N}, FX_{0S}, FX_1, FX_{1N}, FX_{1NC}, FX_{1S}, FX_2, FX_{2C}, FX_{2N}, FX_{2NC}, FX_{3UC}＊4
MELDAS C6/C64		FCA C6, FCA C64

＊1 Monitoring is allowed in the A1SHCPU range only.

＊2 Monitoring is allowed in the A2SHCPU range only.

＊3 Monitoring is allowed in the A3UCPU range only.

＊4 Monitoring is allowed in the FX_{2N} device range only.

＊5 When connecting Motion controller CPU with GT SoftGOT2, GT SoftGOT2 can not be used with the other MELSOFT application (except GT series).
When using Motion controller CPU in the above condition, it may not be communicated with GT SoftGOT2 normally.

(2) PLC CPU that can be monitored and the applicable connection form

PLC CPU can be monitored by GT SoftGOT2 only when they are connected in the applicable system (connection form) for the PLC CPU type.
The following table shows the PLC CPU that can be monitored by GT SoftGOT2 for each connection form.

○: Applicable, ×: N/A, △: Some restrictions

Monitored PLC CPU		Q Bus Connection	CPU direct connection	Computer Link Connection	Ethernet Connection	MELSECNET Connection			CC-Link Connection		
						Network system		Data link system	Intelligent device station	Remote device station	Via G4
						MELSECNET /H	MELSECNET /10	MELSECNET /B, (II)			
QCPU (Q mode)	Other than redundant system	△ ＊1 ＊2	○	○	○	○	○	×	×	×	×
	Redundant system	×	○ ＊6	×	×	○ ＊3	○ ＊3	×	×	×	×
	MELSECNET/H network system remote I/O station (network system)	×	×	×	×	×	×	×	×	×	×
QCPU (A mode)		×	○	○	○	○	○	×	×	×	×
QnACPU		×	○	○	○	○	○	×	×	×	×
ACPU		×	○	△ ＊4	△ ＊5	△ ＊5	△ ＊5	×	×	×	×
FXCPU		×	○	×	×	×	×	×	×	×	×
MELDAS C6/C64		×	○	×	○	×	×	×	×	×	×
Motion controller CPU (Q series)		×	×	×	×	×	×	×	×	×	×
Motion controller CPU (A series)		×	○	○	○	○	○	×	×	×	×
Third party PLC		×	×	×	×	×	×	×	×	×	×
Microcomputer		×	×	×	×	×	×	×	×	×	×

＊1 For bus connection, the Q00CPU, Q00JCPU and Q01CPU are supported by GT SoftGOT2 of which function version B or later.
＊2 For bus connection, only the QCPU compatible with multiple CPU system can be monitored.
＊3 Use the MELSECNET/H board. (For MELSECNET/H mode and MELSECNET/10 mode.)
The MELSECNET/10 board cannot be used.
＊4 Computer link connection is not allowed for the A0J2-C214-S3, A2CCPU, A2CJCPU and A1FXCPU.
＊5 Ethernet connection, MELSECNET/H connection and MELSECNET/10 connection are not allowed for the A2CCPUC24, A2CJCPU and A1FXCPU.
＊6 When a GOT is connected directly to the CPU module of the redundancy system, the GOT cannot change the monitoring target automatically in response to the station switching.
Use two GOTs and connect them to each CPU module of the controls system and standby system.
(When using one GOT, you have to re-connect the GOT to the CPU module of the new control system.)

2.3.2 Ethernet units and Ethernet boards/cards that can be used

(1) Ethernet Units

The table below lists the Ethernet units that can be used together with GT SoftGOT2.

Item	Type	Connection CPU
Q series compatible E71	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100	QCPU (Q mode)
QE71	AJ71QE71, AJ71QE71-B5, AJ71QE71N-T, AJ71QE71N-B2, AJ71QE71N-B5, AJ71QE71N-B5T, A1SJ71QE71-B2, A1SJ71QE71-B5, A1SJ71QE71N-T, A1SJ71QE71N-B2, A1SJ71QE71N-B5, A1SJ71QE71N-B5T	QnACPU
E71 ＊1,＊2	AJ71E71-S3, AJ71E71N-T, AJ71E71N-B2, AJ71E71N-B5, AJ71E71N-B5T, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, A1SJ71E71N-T, A1SJ71E71N-B2, A1SJ71E71N-B5, A1SJ71E71N-B5T	QCPU (A mode), ACPU
FCU6-EX875	FCU6-EX875	MELDAS C6/C64

＊1 Monitoring is allowed in the AnACPU range only.

＊2 GT SoftGOT2 does not allow connection of the AJ71E71, A1SJ71E71-B2 or A1SJ71E71-B5.

(2) Ethernet board/card

The following Ethernet boards/cards have been confirmed by Mitsubishi Electric to operate properly.

Maker Name	Type	Remarks
3COM make	EthernetLink III Lan PC Card	Ethernet board/card
Allied Telesis make	CenterCOM LA-PCM Ethernet PC Card LAN Adapter	
	RE2000 (ISA)	Ethernet board

POINT

When GT SoftGOT2 is used on the PC CPU module, access is made from the Ethernet module communication port provided as standard for the personal computer CPU module.

2.3.3 Computer link units and serial communication units that can be used

The following table indicates the Computer link units and the serial communication units that may be connected to GT SoftGOT2
Connection via RS-422 communication cannot be used.

Item	RS-232C Communication	
MELSEC-Q Series (Q mode)	QJ71C24(-R2), QJ71CMO	QJ71C24N(-R2),
MELSEC-Q Series (A mode)	A1SJ71C24-R2,	A1SJ71UC24-R2
MELSEC-QnA Series	AJ71QC24(-R2), A1SJ71QC24(-R2),	AJ71QC24N(-R2), A1SJ71QC24N(-R2)
MELSEC-A Series	AJ71C24-S8, A1SJ71C24-R2, A1SJ71UC24-R2, A1SCPUC24-R2, A2CCPUC24-PRF	AJ71UC24, A1SJ71C24-PRF, A1SJ71UC24-PRF, A2CCPUC24,

2.3.4 Network units and network boards that can be connected

(1) Network units

The following table indicates the network units that can be connected with GT SoftGOT2.

Network	Type	Driver	Compatible OS
MELSECNET/H	QJ71LP21,QJ71LP21G, QJ71LP21-25, QJ71LP21S-25, QJ71BR11	PPC-DRV-01	WindowsNT® Workstation 4.0, Windows® 2000 Professional

(2) Network boards

The following table indicates the network boards that can be connected with GT SoftGOT2.

Network	Type	Bus Format	Driver	Compatible OS
MELSECNET/10	A70BD-J71QLP23, A70BD-J71QLP23G, A70BD-J71QLR23G, A70BD-J71QBR13	ISA	SW3DNF-MNET10	Windows® 98, WindowsNT® Workstation 4.0
MELSECNET/H	Q80BD-J71BR11, Q80BD-J71LP21-25, Q80BD-J71LP21G	PCI	SW0DNC-MNETH10	Windows® 98, WindowsNT® Workstation 4.0, Windows® 2000 Professional WindowsNT® XP Professional

2.4 About the cable

2.4.1 Cables used for connecting directly to CPUs

The following cables/converter have been confirmed by us that proper operation can be performed.

(1) QCPU

(a) Using the cable of Mitsubishi Electric make

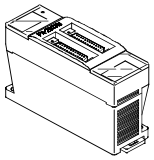
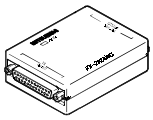
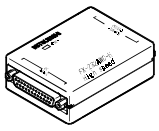
RS-232 cable

QC30R2 (when peripheral device connector is D-sub, 9-pin)

- The USB communication is not allowed between GT SoftGOT2 and QCPU. (If the USB communication is attempted, a confirmation message, "Check communication.", is displayed.)

(2) QnACPU, ACPU, Motion controller CPU, FXCPU

(a) Using the product of Mitsubishi Electric make

Peripheral Device Side (RS-232C cable)	RS-232C/RS-422 Converter	PLC CPU Side (RS-422 cable)
 F2-232CAB-1 (when peripheral device connector is D-sub, 9-pin)	 FX-232AW  FX-232AWC  FX-232AWC-H (FX series only)	For ACPU, Motion controller CPU, QnACPU, $FX_1/FX_2/FX_{2C}$CPU  FX-422CAB (0.3m) FX-422CAB-150 (1.5m) For $FX_0/FX_{0S}/FX_{0N}/FX_{1S}/FX_{1N}/FX_{2N}/FX_{2NC}/FX_{3UC}$CPU  FX-422CABO (1.5m)

- When the FX-232AWC-H is used for connection with the FX_{3UC}, the transmission speed 9.6kbps, 19.2kbps, 38.4kbps, 57.6kbps or 115.2kbps is available. When the FX232AWC or FX-232AW is used for connection, select either the transmission speed 9.6kbps or 19.2kbps.
- When using the F2-232CAB or F2-232CAB-1 cable, use a compatible product. You cannot use an incompatible product. Check the type label indication on the cable to see if it is compatible or not.

Incompatible 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*****

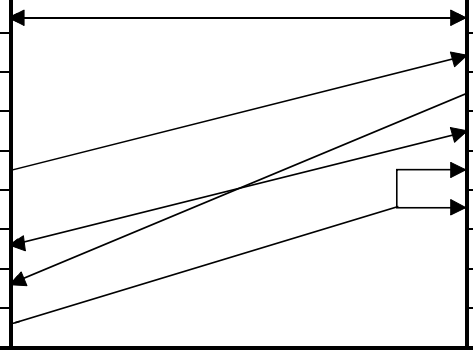
(3) For MELDAS C6/C64

When connecting GT SoftGOT2 and the MELDAS C6/C64, use a conversion cable with the communication terminal connector (TERMINAL) of the MELDAS C6/C64.

Produce the conversion cable by reference to the following connection diagram. For details, refer to the relevant MELDAS C6/C64 manual.

(a) Conversion cable connection diagram

MELDAS C6/C64 (TERMINAL) Side (20-pin half-pitch)		Cable Connection and Signal Direction	Personal Computer (GT SoftGOT2) Side (9pin D-SUB)
Signal name	Pin number		Signal name
GND	1		GND
	2		RD
	3		SD
	5		GND
SD	6		DR (DSR)
	8		CS (CTS)
GND	11		
RD	16		
ER (DTR)	18		



(b) Applicable connector and connector cover

1) MELDAS C6/C64 side

Connector	10120-3000VE(Sumitomo 3M Ltd.)
Connector cover	10320-52F0-008(Sumitomo 3M Ltd.)

2) Personal computer side

Use connectors compatible with the personal computer.

(c) Precautions when producing the conversion cable

The length of the conversion cable must be 15m or shorter.

REMARK

- The cables/converter used with GT SoftGOT2 are the same as the cables/converter used with GX Developer.
- When GT SoftGOT2 is used on the PC CPU module, the converter/cables used with the DOS/V personal computer are usable.

2.4.2 Cables used for connecting via Ethernet

Make sure to use cables compatible with the Ethernet unit and Ethernet board/card to be used if the connection is made via Ethernet.

2.4.3 Cable used for connecting Computer link connection

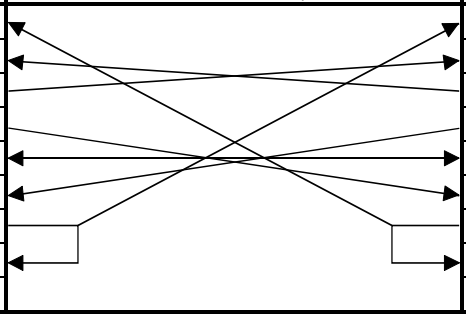
The user needs to fabricate the RS-232C cable which is used to connect the GT SoftGOT2 and Computer link unit/serial Communication unit.
The cables connection diagram indicated below.

(1) For Q Series

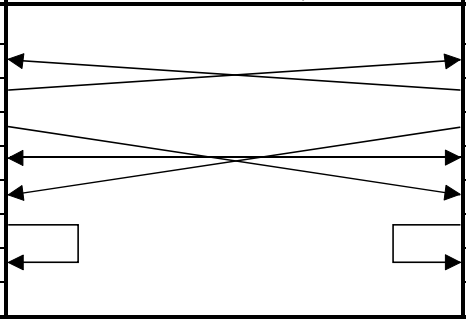
The connector specifications are indicated below.

Pin No.	Signal code	Signal name	Signal direction Q compatible C24 ↔ GT SoftGOT2
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	←

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

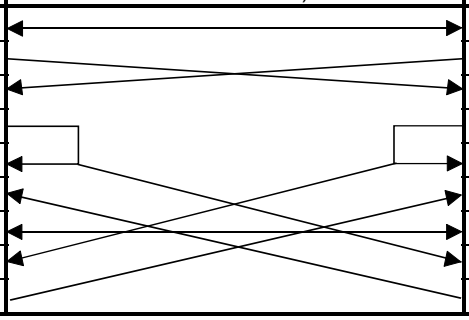
Serial communication unit side		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	GT SoftGOT2 (Personal computer) side
Signal code	Pin No.		Signal code
CD	1		CD
RD(RXD)	2		RD(RXD)
SD(TXD)	3		SD(TXD)
DTR(ER)	4		DTR(ER)
SG	5		SG
DSR(DR)	6		DSR(DR)
RS(RTS)	7		RS(RTS)
CS(CTS)	8		CS(CTS)
RI(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 unit side		Cable Connection and Signal Direction (Connection example for full duplex communication)	GT SoftGOT2 (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)
RI(CI)	9		

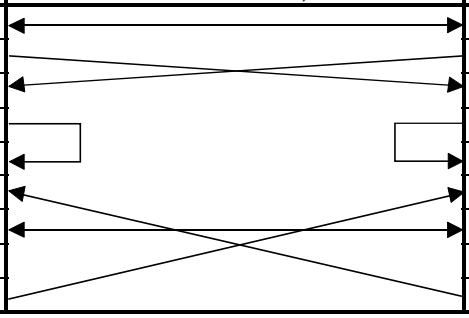
(2) For QnA Series (large-scale QC24(N))

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

Serial communication unit side		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	GT SoftGOT2 (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.

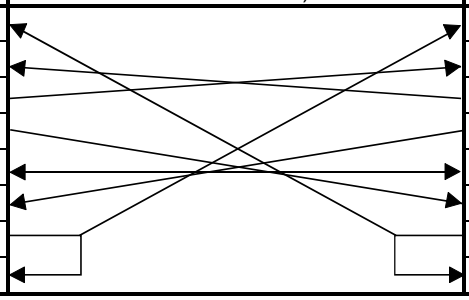
2) Example of connection to an external device that does not allow the CD signal (No. 8 pin) to be turned ON/OFF

Serial communication unit side		Cable Connection and Signal Direction (Connection example for full duplex communication)	GT SoftGOT2 (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.

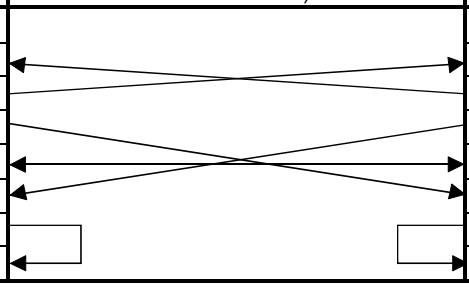
(3) For QnA Series (compact-scale QC24(N))

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

Serial communication unit side		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	GT SoftGOT2 (Personal computer) sode
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.

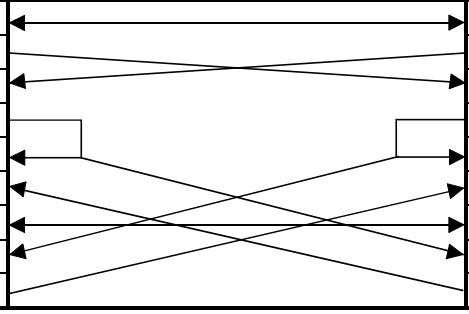
2) Example of connection to an external device that does not allow the CD signal (No. 1 pin) to be turned ON/OFF

Serial communication unit side		Cable Connection and Signal Direction (Connection example for full duplex communication)	GT SoftGOT2 (Personal computer) sode
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.

(4) For A Series

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

Computer link unit side		Cable Connection and Signal Direction	GT SoftGOT2 (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 - 12

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

Computer link unit side		Cable Connection and Signal Direction	GT SoftGOT2 (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)

* If the connection between the computer link module and the GPPW is made in the manner shown above, designate "without CD terminal check".

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

Computer link unit side		Cable Connection and Signal Direction	GT SoftGOT2 (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 unit) has a 9-pin connector

Computer link unit side		Cable Connection and Signal Direction	GT SoftGOT2 (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 If the connection between the computer link module and the GPPW is made in the manner shown above, designate "without CD terminal check".

2.4.4 Cables used for MELSECNET connection

The cables used for MELSECNET connection are the same as the fiber-optic cables and coaxial cables used in the MELSECNET/10 or MELSECNET/H system.
For cable details, refer to the MELSECNET/10 Network System Reference Manual or MELSECNET/H Network System Reference Manual.

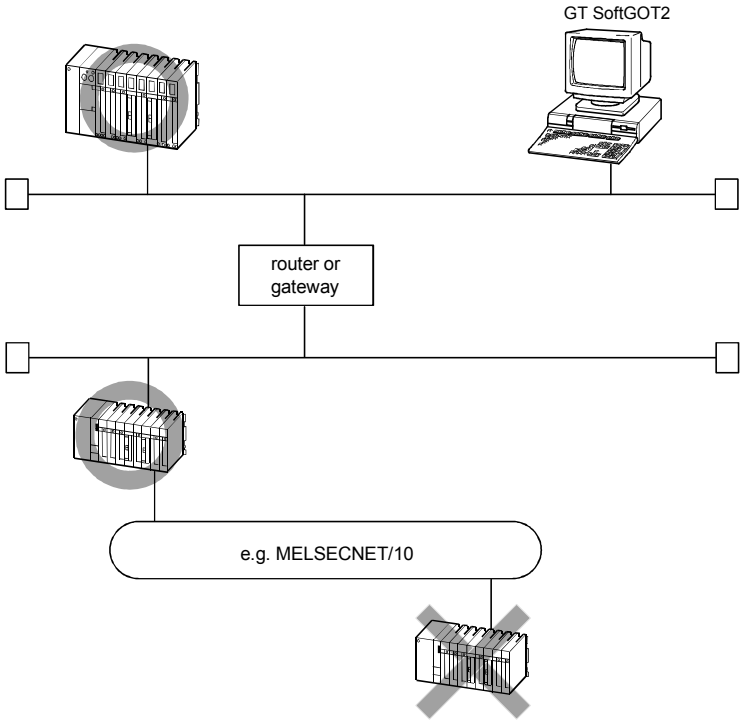
2.5 Access range for monitoring

2.5.1 Access range that can be monitored when CPU direct connection/computer link connection

When GT SoftGOT2 is connected to a QnACPU, other stations besides the QnACPU cannot be monitored. In all other cases the access range that can be monitored is the same as for the GOT-A900 Series. Refer to the GOT-A900 Series User's Manual (Connection System Manual) for the access range of CPUs that can be monitored.

2.5.2 Access range that can be monitored when connecting via Ethernet

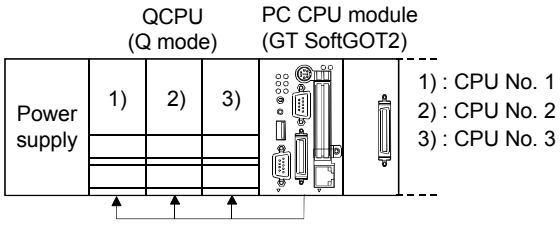
By using the GT Designer2's Ethernet setting, the designated Ethernet module can be monitored.
Communications cannot be made via the MELSECNET/B, MELSECNET(II), MELSECNET/10
Communication via a router or a gateway can be performed only with the QCPU (Q mode).



POINT
Refer to Section 5.3 for how to establish an Ethernet connection.

2.5.3 Access range that can be monitored for Q bus connection (only when PC CPU module is used)

In a multiple PLC system configuration, access can be made from the personal computer CPU module to the other CPU via the Q bus.
Access to the other station cannot be made from the PC CPU module via CC-Link.



2.5.4 Access ranges that can be monitored for MELSECNET connection

(1) Host access range

When access is made to the host, all devices of the MELSECNET/10 or MELSECNET/H board can be monitored.

Device	MELSECNET/H Board (in MELSECNERT/H Mode)	MELSECNET/H Board (in MELSECNERT/10 Mode) MELSECNET/10 Board
X (LX)	X0 to X1FFF (8192 points)	
Y (LY)	X0 to X1FFF (8192 points)	
B (LB)	B0 to B3FFF (16384 points)	B0 to B1FFF (8192 points)
W (LW)	W0 to W3FFF (16384 points)	W0 to W1FFF (8192 points)
SB	SB0 to SB1FF (512 points)	
SW	SW0 to SW1FF (512 points)	

(2) Other station access range

When access is made to the other station, all devices of the accessed CPU can be monitored.

(3) Access to other network

When access is made to the other network via the CPU, the CPU on the MELSECNET/10, MELSECNET/H or Ethernet network can be accessed.
(The CPUs that can be accessed on the Ethernet network are the QCPU (Q mode) and QnACPU only.)

POINT

To monitor the other network, the routing parameters of the MELSECNET/10 board or MELSECNET/H board utility must be set.
For the setting of the routing parameters, refer to the MELSECNET/10 Interface Board User's Manual or MELSECNET/H Interface Board User's Manual.

REMARK

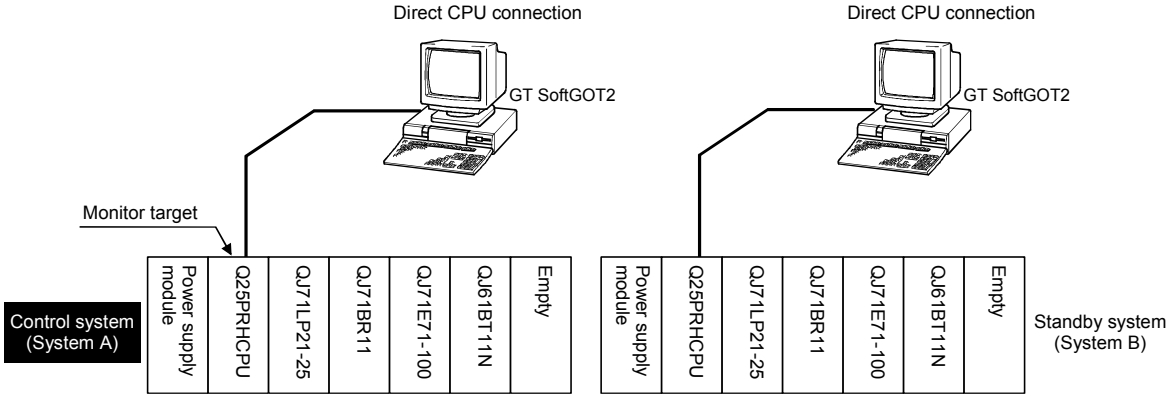
- The access ranges of GT SoftGOT2 are the same as those of GX Developer.
- GT SoftGOT2 differs from GOT in some specifications.
  The following table indicates the differences between GT SoftGOT2 and GOT.

Item	GT SoftGOT2	GOT
QCPU (Q mode), QnACPU monitor range	All devices	Within AnACPU range
Multi PLC monitor	Possible	Impossible
Other network monitor	Possible	Impossible

2.6 How to Monitor QCPU Redundant System

2.6.1 In the case of a direct CPU connection

Two GT SoftGOTs are required for connecting to the control system side and standby system side.
Create each GT SoftGOT screen for the control system and standby system.



POINT

For the precautions and details, refer to Section 2.4 How to Monitor QCPU Redundant System of the GOT-A900 Series User's Manual (Connection System Manual).

2.6.2 In the case of MELSECNET/H connection

In the case of MELSECNET/H connection (network system), create a script to automatically change the monitoring target (Station No.) when system switching occurs.
The script executes the station number changing function or screen changing function.
The following describes the advantages and disadvantages of the station number changing function and screen changing function.

Function	Advantage	Disadvantage
Station No. changing function	The monitor screens for Station No. 1 (control system) and Station No. 2 (standby system) can be created on one screen.	Some objects do not allow the Station No. to be changed.
Screen changing function	All objects can be used to create a monitor screen for each Station No.	Monitor screens must be created separately for Station No. 1 (control system) and Station No. 2 (standby system).

The following explains how to use each function.

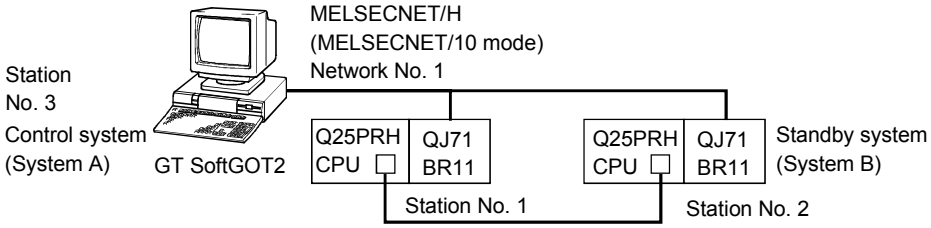
(1) Method using the station number changing function

(a) This function features that a monitor screen for Station No. 1 (control system) and Station No. 2 (standby system) can be created on one screen.
When system switching occurs, the GT SoftGOT2 can change the monitoring target to the control system PLC CPU on the same monitor screen.

(b) To achieve this, the script of the GT SoftGOT2 watches the special relay SM1515 (operating status) of the PLC CPU and stores the Station No. of the latest control system into the Station No. changing device.

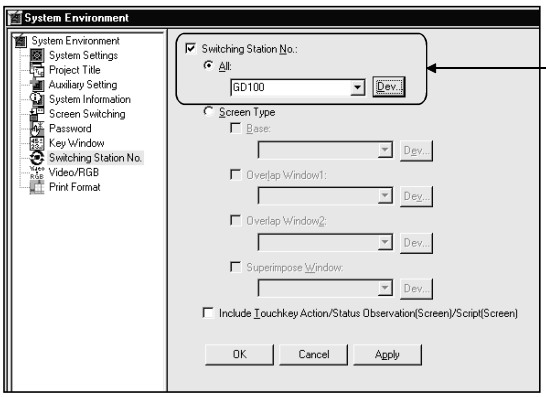
(c) Restrictions
Some objects do not allow the Station No. to be changed.
Refer to Section 3.3 "Switching Station No. Device Setting" in the GT Designer2 Version2 Reference Manual.

(d) The setting method will be explained based on examples.
<System configuration example>



Connected module	Network No.	Station No.
MELSECNET/H network module of control system	1	1
MELSECNET/H network module of standby system		2
GT SoftGOT2 connected to the MELSECNET/H network		3

1) Set the station number changing device.
Choose [Common] - [System Environment] - [Switching Station No.] - "All", and set the internal device GD100 as the station number changing device.



2) Set the status observation.
Make setting so that the station number will be changed when the abnormal station information (SW70) of MELSECNET/H turns ON in the project specified by choosing [Common] - [Status Observation].

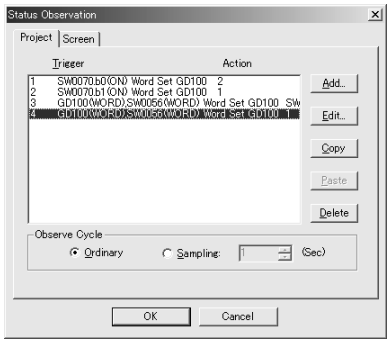
Condition 1: SW70.b0 (while ON) ← When b0 is ON, Station No. 1 is abnormal. Operation: GD100=2 ← Station No. is changed to 2.

Condition 1: SW70.b1 (while ON) ← When b1 is ON, Station No. 2 is abnormal. Operation: GD100=1 ← Station No. is changed to 1.

Condition 1: GD100==0 ← The value of the Station No. changing device is 0. Condition 2: SW56<=2 ← The current control station is a redundant CPU. Operation: GD100=SW56 ← Station No. is changed to a current control station.

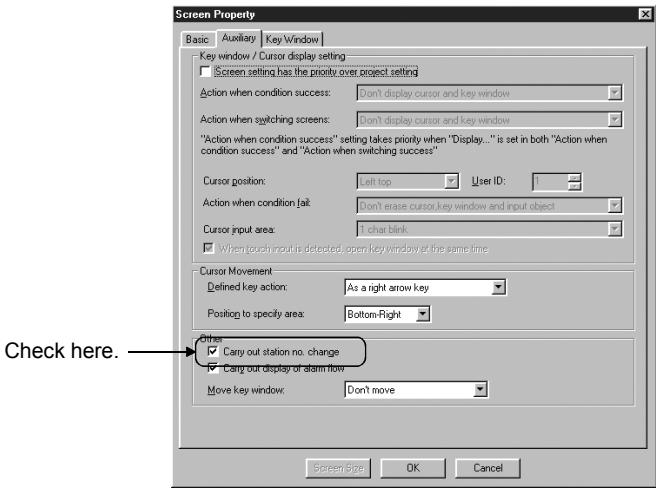
Condition 1: GD100==0 ← The value of the Station No.changing device is 0. Condition 2: SW56>2 ← The current control station is not a redundant CPU. Operation: GD100=1 ← Station No. is changed to a current control station in normal condition.

Create the status observation in the project on the Project tab.



3) Create a monitor screen.
In the device setting (network setting) of each object, set Network No. 1 and Station No. 1 of the control system.

4) Validate the station number changing function.
On the sub setting screen specified by choosing [Screen] - [Properties], check "Carry out station no. change" to validate the station number changing function.
Make this setting for each monitor screen.



5) Change the station number changing device value in the script.
By choosing [Common] - [Script], create a script for each monitor screen that will check the SM1515 status of the current monitor station, and if it is OFF (standby system), change the station number changing device value.
Set the trigger type of the script as "Ordinary" or "Sampling (about 3s)".

▪ Screen script:

```
// If the monitoring target is a standby station, the Station No. is
   changed.
if([b:SM1515]==OFF){              //Is the monitoring target standby?
          if([w:GD100]==1){       //The Station No. is 1 to 2.
                    [w:GD100]=2;
          }else{                  //The Station No. is 2 to 1.
                    [w:GD100]=1;
          }
}
```


2 - 21

REMARK

When the GT SoftGOT2 in MELSECNET/H connection executes monitor with only the redundant system connected to the MELSECNET/H network, SW56 (current control station) can be set as the Station No. changing device.
In this case, even if system switching occurs, the GT SoftGOT2 always monitors the Station No. that is currently the control station.

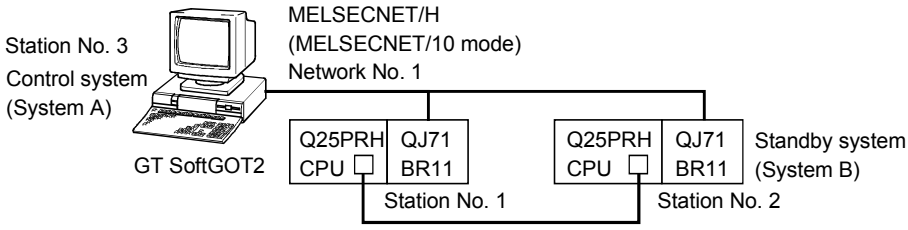
(2) Method using the screen changing function

(a) This function features that a monitor screen is created for each station number.
When system switching occurs, the GT SoftGOT2 can change the monitoring target to the control system PLC CPU on the other monitor screen.

(b) To achieve this, the script of the GT SoftGOT2 watches the special relay SM1515 (operating status) of the PLC CPU and stores the Screen No. corresponding to the Station No. of the latest control system into the screen changing devices.

(c) Precautions
There are the following four different screen changing devices.
Set the screen changing devices for all screens used.
- Base screen changing device
- Overlap window 1 changing device
- Overlap window 2 changing device
- Superimpose window changing device

(d) The setting method will be explained based on examples.
<System configuration example>



Connected module	Network No.	Station No.
MELSECNET/H network module of control system	1	1
MELSECNET/H network module of standby system		2
GT SoftGOT2 connected to the MELSECNET/H network		3

1) Set the screen changing device of the base screen.
Choose [Common] - [System Environment] - [Screen Switching], and set the internal device GD100 as the base screen changing device.

2) Set the status observation.
Set the status observation so that the station number will be changed when the abnormal station information (SW70) of MELSECNET/H turns ON in the project specified by choosing [Common] - [Status Observation].

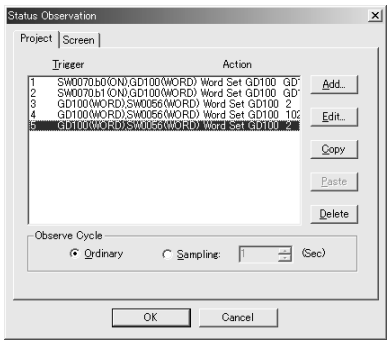
Condition 1: SW70.b0 (while ON) ← Station No. 1 is abnormal. Condition 2: GD100<100 Operation: GD100= GD100+100 ← Station No. is changed to 2.

Condition 1: SW70.b1 (while ON) ← Station No. 2 is abnormal. Condition 2: GD100>100 Operation: GD100= GD100-100 ← Station No. is changed to 1.

Condition 1: GD100==0 ← The value of the screen changing device is 0. Condition 2: SW56==1 ← The current control station is Station No. 1. Operation: GD100=2 ← Screen No. is changed to 2 (for Station No. 1).

Condition 1: GD100==0 ← The value of the screen changing device is 0. Condition 2: SW56==2 ← The current control station is Station No. 2. Operation: GD100=102 ← Screen No. is changed to 102 (for Station No. 2).

Condition 1: GD100==0 ← The value of the screen changing device is 0. Condition 2: SW56>2 ← The current control station is not a redundant CPU. Operation: GD100=2 ← Screen No. is changed to 2 (for Station No. 1).



3) Create monitor screens.
   - Create a monitor screen with each object whose network setting is Station No. 1 on Screen No. 2 (1-1).
   - Create a monitor screen with each object whose network setting is Station No. 2 on Screen No. 102 (1-2).

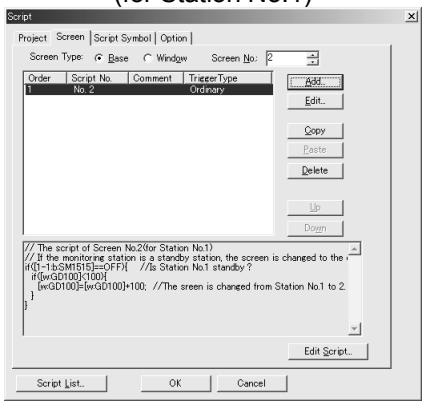
4) Change the screen changing device value in the script.
   By choosing [Common] - [Script], create a script for each monitor screen that will check the SM1515 status of the current monitor station, and if it is OFF (standby system), change the screen changing device value.
   Set the trigger type of the script as "Ordinary" or "Sampling (about 3s)".

   Screen scripts:

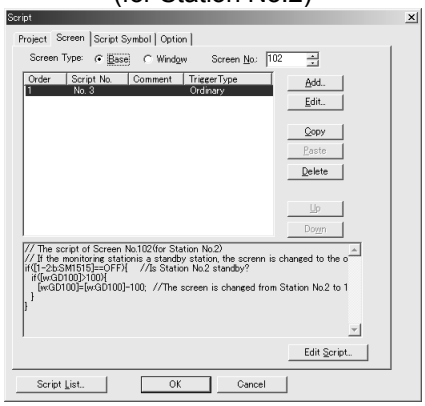
```
// The script of Screen No. 2 (for Station No.1)
// If the mounting target is a standby station, the screen is changed
   to the other one.
If ([1-1: b: SM1515]==OFF){
//Is Station No.1 standby?
  if([w: GD100]<100){
     [w: GD100]= [w: GD100]+100;
//The screen is changed from Station No.1 to 2.
}
    }
```

```
// The script of Screen No. 102 (for Station No.2)
// If the mounting target is a standby station, the screen is changed
   to the other one.
  If ([1-2: b: SM1515]==OFF){
//Is Station No.2 standby?
  if([w: GD100]>100){
     [w: GD100]= [w: GD100]-100;
//The screen is changed from Station No.2 to 1.
}
    }
```

Script setting screen of Screen No. 2 (for Station No.1)



Script setting screen of Screen No. 102 (for Station No.2)



Chapter 3 SPECIFICATIONS

3.1 Specifications of the GT SoftGOT2

The following specifications of the GT SoftGOT2.

Item	Specifications
Resolution (dots)	640×480, 800×600, 1024×768, 1280×1024
Display color (color)	256
Memory capacity (byte)	33M
Connection form	Direct connection to CPU, Ethernet connection, Q bus connection∗2, Computer link connection, MELSECNET connection

∗1 Usable only when GT SoftGOT2 is used on the PC CPU module.

POINT

- If the resolution of the personal computer used is the same as that of GT SoftGOT2, it is recommended to hide the frame and menu part using the full screen mode function (refer to Section 6.7).
  If the full screen mode function is not used, the top/bottom and left/right parts of the display will be off screen slightly depending on the frame and menu part.
- The resolution of the monitor data created in GT Designer2 and the resolution of GT SoftGOT2 must be the same.
  If they are different, the screen will be displayed in the following manner:
  1) If the resolution of the monitor data is higher than the resolution of GT SoftGOT2
     Graphics that are off-screen will not be displayed.
  2) If the resolution of the monitor data is lower than the resolution of GT SoftGOT2
     The resolution of GT SoftGOT2 has the priority in the moving range of window screens, position of messages displayed in the alarm flow function, and display of the superimposed window.
     Graphics not defined within the resolution set in the monitor data are not refreshed. (Out-of-date graphics may remain in the parts outside the area defined within the resolution.) This can be prevented in the following way:
     (a) When using monitor data created with resolutions of 640 x 400 dots or 320 x 240 dots in GT SoftGOT2, change the GOT type (resolution) of the monitor data created in GT Designer2 to the resolution used in GT SoftGOT2.
     (b) Use the mouse to change the screen size of GT SoftGOT2 to the size of the monitor data created in GT Designer2.

3.2 Functions that cannot be Used

Note that the following functions cannot be used on GT SoftGOT2.

Function category	Function name		
Object functions＊1	Test function, Touch key function (part of extension) ＊6	Barcode function,	Operation Panel function＊5
Extension function＊2	System monitor function＊3		
Option functions＊2	Ladder monitor function＊3, Network monitor function＊3, CNC monitor function	Special unit monitor function, Motion monitor function,	List editor function＊3, Servo amplifier monitor function,
Other functions	Transparent function, Sound function＊4, System dialog language switching function	Human sensor function, Gateway function,	Brightness adjustment function, Font change function,

＊1 For function details, refer to the GT Designer2 Version□ Reference Manual.

＊2 For function details, refer to the GOT-A900 Series Operating Manual (Extended •Option Functions Manual).

＊3 The equivalent functions can be obtained by using GT SoftGOT2 and GX Developer on the same personal computer.

＊4 Unusable when GT SoftGOT2 is used on the PC CPU module.

＊5 By using the keyboard function, an equivalent function can be used.

＊6 The following touch keys (extension) are unusable.

- Ladder monitor
- System monitor
- Special module monitor
- Clock setting
- Screen clean-up
- Network monitor
- Brightness adjustment
- List editing
- Motion/CNC monitor
- Servo amplifier monitor

POINT

- About the clock display function

  While GOT reads and displays the clock data of the PLC CPU, GT SoftGOT2 displays the clock data of the personal computer, not the clock data of the PLC CPU.

  When performing clock data-based control, etc., match the clock data of the PLC CPU and personal computer.

(1) About utility functions

(a) About display of utility screen

GT SoftGOT2 does allow two points on the display section to be touched together.

To display the utility screen, therefore, you need to preset the touch key (Special Function Switch) for displaying the utility screen at the time of screen creation.

For the touch key setting method, refer to the GT Designer2 Version□ Reference Manual.

(b) Usability of utility functions

When using the utility functions on GT SoftGOT2, not that some functions are unusable.

The following table indicates whether the utility functions are usable or not on GT SoftGOT2.

○: Usable ×: Unusable

Item	Usability
System monitor	×
Network monitor	×
List editor	×
Ladder monitor	×
Motion/CNC monitor	×
Special unit monitor	×
Servo amplifier monitor	×
Memory information	×
Screen & OS copy	×
Set up	○
Clock	×
Screen clean up	×
Password	○
Self-test	×

POINT

• In the setup of the utility functions, some functions are inoperative if set.
The following table indicates whether they are operative or not on GT SoftGOT2.

○: Operative △: Partly restricted ×: Inoperative

Item	Operability	Description
Buzzer volume	△	When Microsoft® Windows® 98 operating system / Microsoft® Windows® Millennium Edition operating system is used, "LONG" and "SHORT" of the buzzer volume are not reflected.
Outside speaker	○*1	Operates.
Screen save time	×	May be set but does not function.
Screen save light	×	May be set but does not function.
Language	○	Operates.

*1 Unusable when GT SoftGOT2 is used on the PC CPU module.

3.3 Restrictions on and Instructions for use of GT SoftGOT2

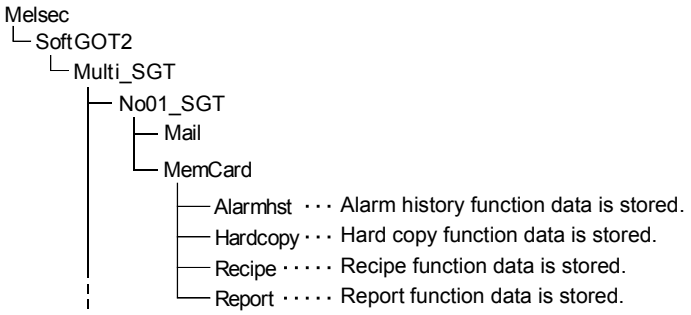
3.3.1 Restrictions on and instructions for GT SoftGOT2

(1) Monitor data that may be monitored

- It is recommended to use the monitor data converted using GT Converter after saving it in a file of GT Designer2 format.
- Make sure to use the same or newer version of GT SoftGOT2 than that of GT Designer2 used to create the monitor data.
  When the older version is used, some problems may occur such as file is not able to be opened and/or some functions/settings are invalid.
  For monitor data compatibility, refer to Appendix 1.

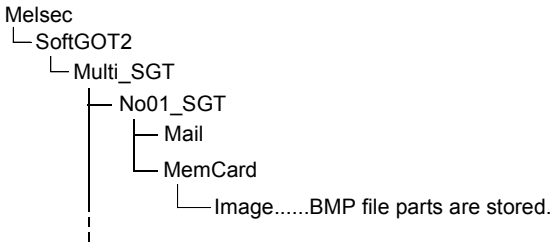
(2) About object functions

- GT SoftGOT2 displays the clock data of the personal computer, not the clock data of the PLC CPU, while GOT reads and displays the clock data of the PLC CPU.
  The clock data of the PLC CPU and the personal computer must be set equal when performing control using the clock data.
- If you perform a memory card save with the alarm history function or the recipe function, data is saved on the hard disk.
  Also, data can not be output directly to the printer using the report function, hard copy function, etc.
  A print image (TXT/CSV/BMP format file) is saved to the personal computer's hard disk, so output each file to the printer separately.
  The saving folder will vary according to the GOT type setting in the option settings, so take care.
  Each bit of data is stored in the folder listed below on the personal computer's hard disk.



- If the setting has been made for other than 256 colors (e.g. monochrome) in the hardcopy function print mode, a 256-color file is saved in the above folder.
  When it is desired to reduce colors, use the software, etc. available on the market.

- With the recipe function, if there is a recipe file present in the PC card, a new recipe file will not be created as with the actual GOT.
  Because of that, if there is a recipe file in the MemCard or Recipe folder that differs from the read monitor data's recipe function settings, reading data from or writing data to the recipe file may not operate normally.
  In these cases, delete the recipe files in the MemCard or Recipe folder before reading the monitor data.
- A file saved as a printing image will not be deleted even if GT SoftGOT2 is exited. Because of that, files saved as printing images will accumulate on the personal computer's hard disk, and the GT SoftGOT2 may not operate due to a lack of available open space on the hard disk.
  If the printing trigger is frequently set to ON and monitor data is used, check that there is enough available open space on the personal computer's hard disk, and delete printing files if necessary.
- If Wordpad or Memopad were used to open saved printing image files (TXT files), the display of the character spacing may be slightly out of line. If the character spacing is out of line, adjust the character font or font size.
- When using BMP image parts for the parts display function or parts movement function, use the BMP files saved in the hard disk of the personal computer. After the Soft GOT2 is restarted, the BMP files are stored in the Image folder that was generated automatically in the MemCard folder.



  For details of the BMP image parts, refer to the GT Designer2 Version□ Reference Manual.
- When setting the odd point of 16-bit data as the first device with the recipe function at the time of FXCPU connection, use the device of CN199 or earlier.

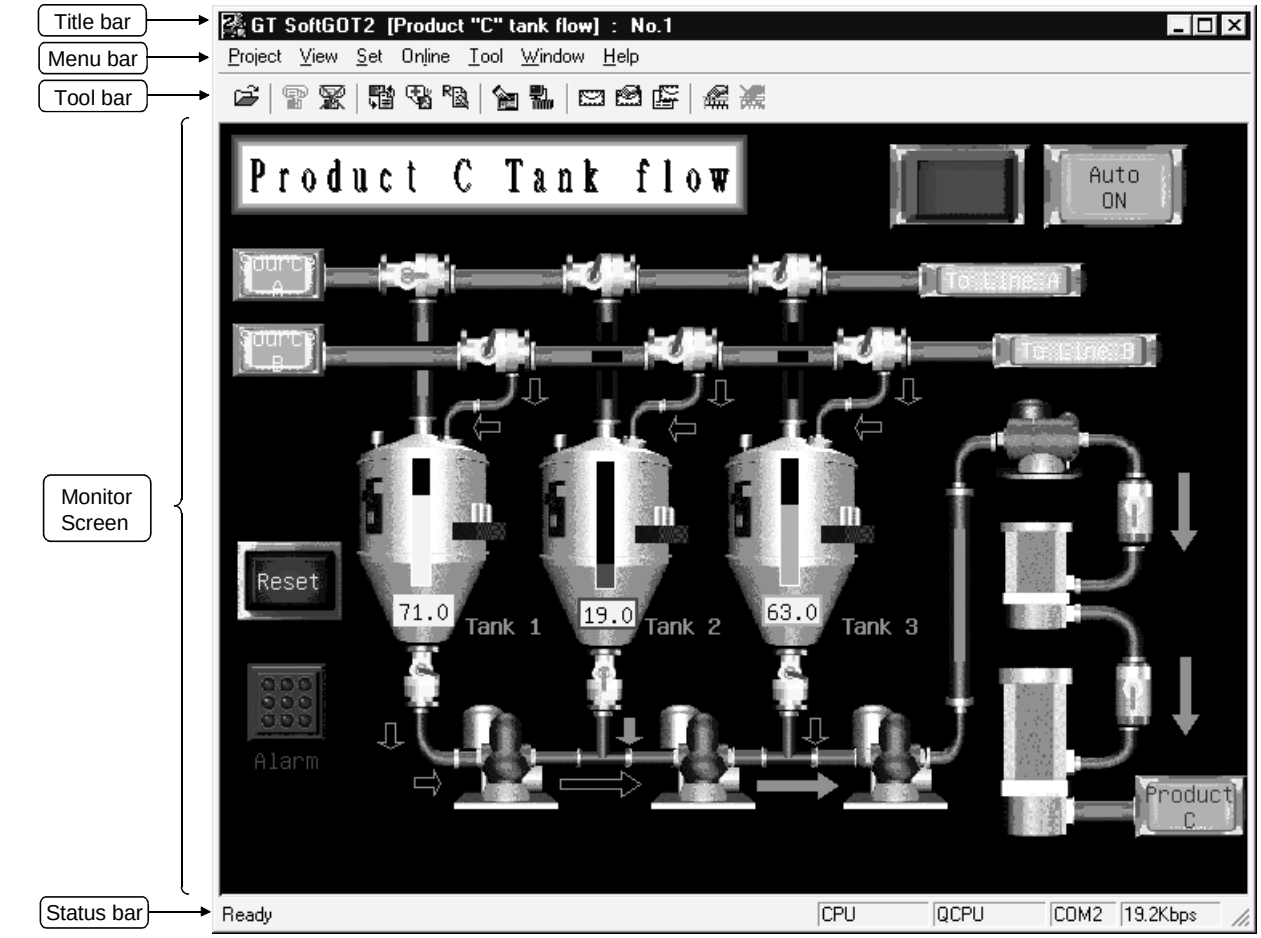
3.3.2 Restrictions on and instructions for PLC CPU connection

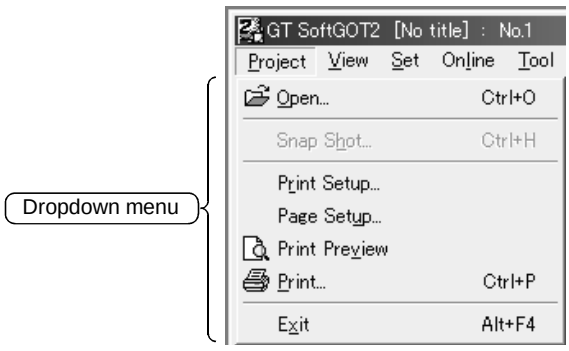
- When connecting GT SoftGOT2 to FX_0, FX_{0S}, FX_1, FX_{1S}, FX_2 or FX_{2C} via 2PIF, use 2PIF of Ver 3.01A or later.
- When connecting GT SoftGOT2 to the function extension board of the FXCPU, you must make the following settings on the FXCPU side.
  1) On GX Developer, choose "PLC parameter"-"PLC System setting (2)" and click the checked "Communication setting" check box.
  2) Set "0" in device "D8120".
- When GT SoftGOT2 is connected to the QnACPU, note that any other station than the QnACPU cannot be monitored.
  The access ranges of the other network systems that can be monitored are the same as those of the GOT.

Chapter 4 SCREEN CONFIGURATION OF GT SOFTGOT2

4.1 Screen Configuration and Various Tools of GT SoftGOT2

This section describes configuration and various tools of GT SoftGOT2.

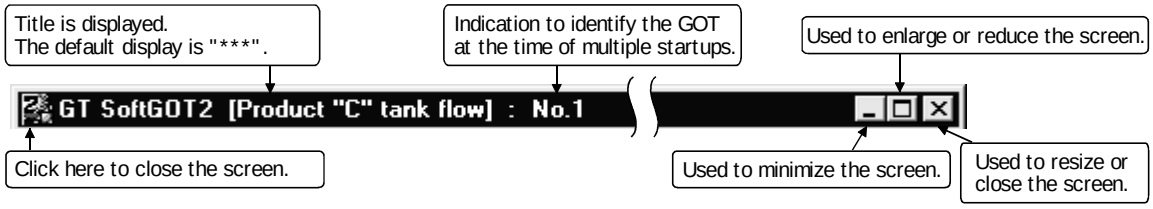




∗1 For the explanations of the title bar, menu bar and drop-down menu, refer to the GT Designer2 Version□ Operating Manual.

(1) Title bar

The screen title, etc. are displayed.

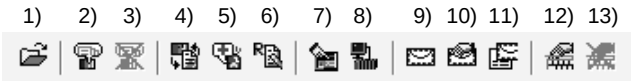


POINT

- The title and module No. being displayed can be hidden by changing the setting in "Environment Setup". (Refer to Section 5.6.)
- Refer to Section 6.9 for details of multiple startups.

(2) Tool bar

Items allocated on the menu bar are displayed in buttons.
Move the cursor to the tool button and click it. The function starts.



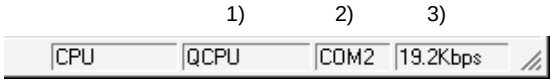
Tool button names

Number	Name	Description
1)	Open project	Opens the project data created on GT Designer2.
2)	Start of monitoring	Starts monitoring.
3)	End of monitoring	Ends monitoring.
4)	Refer to Recipe data	References recipe data/print file.
5)	Refer to Alarm History data	References alarm history data/print file.
6)	Refer to Report data	References report logging data/print file.
7)	Environment Setup	Sets the screen size (resolution), etc.
8)	Online setup	Sets the type of CPU to be connected to etc.
9)	Mail Setup	Sets the mail transmission destination.
10)	Mail Condition	Enables/disables the mail transmission setting defined with GT Designer2.
11)	Mail History	References the mail transmission history.
12)	KeyBoard Enable	Enables input using the keyboard function when selected.
13)	KeyBoard Disable	Disables input using the keyboard function when selected.

4 - 2

(3) Status bar

This is where the settings made in Online setup are displayed.



Description of each status bar

Number	Description
1)	Type of CPU defined in the Online setup
2)	Communication port on the personal computer side defined in the Online setup
3)	Transmission speed of GT SoftGOT2 and the CPU defined in the Online setup

POINT

You can make selection to display or hide the toolbar and status bar.
Choosing "View" - "Toolbar" or "Status bar" on the menu bar displays or hides the toolbar or status bar.

Checked : The toolbar/status bar is displayed.
Unchecked : The toolbar/status bar is hidden.

4.2 Menu Configuration

(1) Menu bar

This section lists and describes the commands assigned to the menu bar.

- **Project**
  - Open ····· Chooses the project data created on GT Designer2 and reads the monitor data.
  - Snap Shot ····· Saves the monitor data being simulated into any file in BMP format.
  - Print Setup ····· Sets the printer.
  - Page Setup ····· Sets the page.
  - Print Preview ····· Shows the printing image.
  - Print ····· Prints the monitor data being simulated.
  - Exit ····· Exits from GT SoftGOT2.
- **View**
  - Tool bar ····· Display/hides the tool bar
  - Status bar ····· Display/hides the status bar
  - Full screen mode ····· Displays GT SoftGOT2 on a full screen.
  - Full screen mode Cancel ··· Cancels the full screen mode.
- **Set**
  - Environment Setup ····· Sets the screen size (resolution), etc.
  - Mail setup
    - Mail setup ····· Sets the mail transmission destination.
    - Mail Condition ····· Enables/disables (send/not to send) the mail transmission setting defined with GT Designer2.
    - Mail History ····· References the mail transmission history.
  - Key Board Disable ····· Disables input using the keyboard function when selected.
  - Key Board Enable ····· Enables input using the keyboard function when selected.
  - Popupmenu ineffective ···· Choosing this function invalidates the operation performed using the right-click menu.
  - Popupmenu effectiove ···· Choosing this function validates the operation performed using the right-click menu.
- **Online**
  - Monitor Start ····· Starts monitoring.
  - Monior Stop ····· Stops monitoring.
  - Online after starting ····· If this item is checked, starts up GT SoftGOT2 in online mode from the next time.
  - Comm. Error dialogue ···· Selects whether to display or hide the error dialogue box when a communication error occurred.
  - Online setup ····· Sets the type of CPU to be connected to etc.
- **Tool**
  - Recipe ····· References recipe data/print file.
  - Alarm History ····· References alarm history data/print file.
  - Report ····· References report logging data/print file.
  - Hard copy ····· References hardcopy data/print file.
  - System Alarm ····· Displays the currently occurring system alarm.
  - Sprict Error ····· Displays the currently occurring script error.
- **Window**
  - Cascade ····· Displays one module over another on a 10-screen (10-module) basis, starting at the top left of the screen.
  - Minimize All Windows ···· Minimizes all started GT SoftGOT2's.
  - Move Window ····· Used to move a window at the time of a full screen display.
- **Help**
  - Index ····· Displays the online manual.
  - About GT SoftGOT2 ····· Shows the software version of GT SoftGOT2 installed.
  - Connect to MELFANSweb ··· Connects to MELFANSweb.

(2) Right-clicking the mouse

The list of the commands assigned to the mouse right-click menu will be explained.

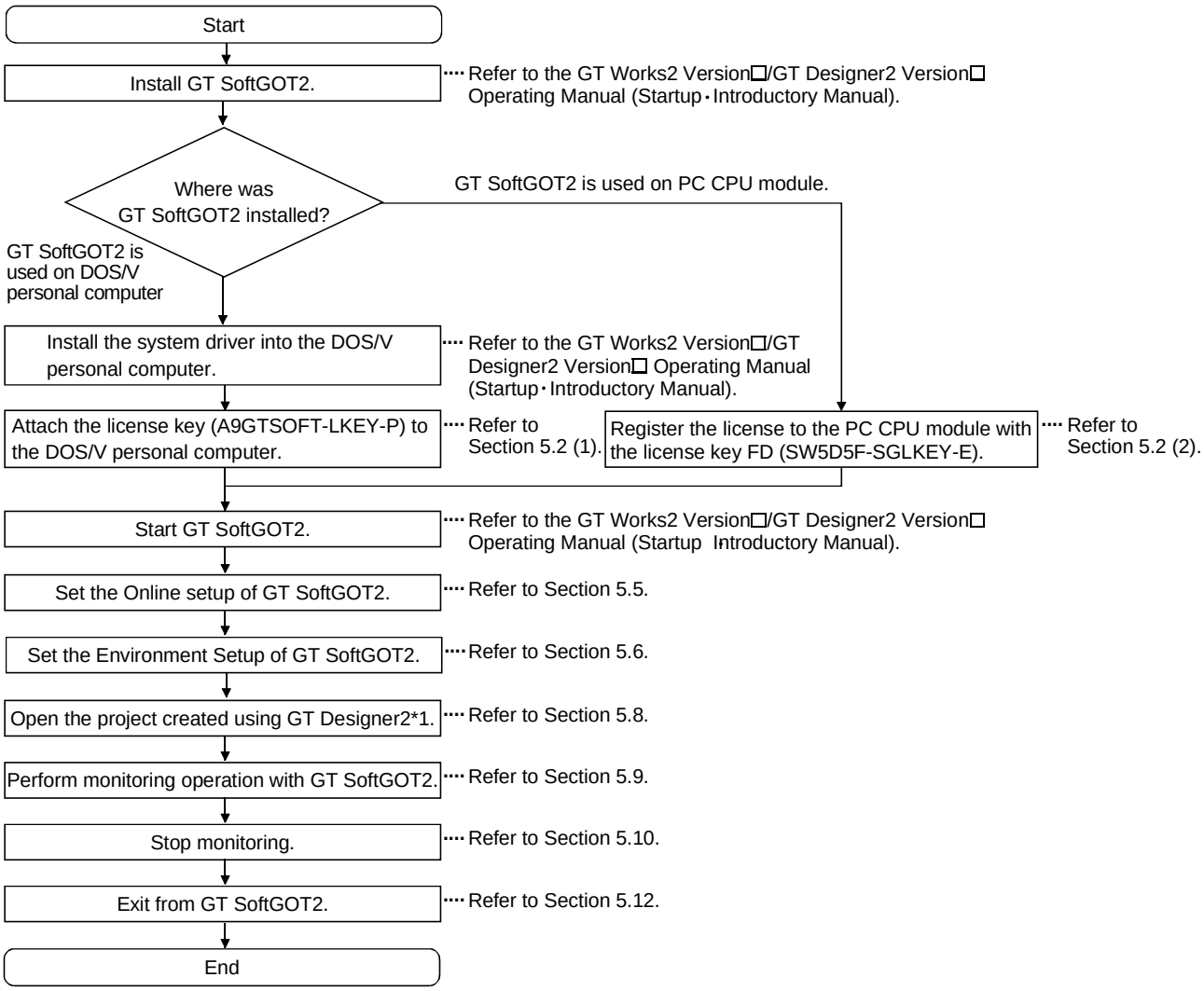
The functions of the commands are the same as those of the commands in (1) Menu bar.

- Open
- Monitor Start/Stop
- Online after starting
- Comm. Error dialogue
- Online setup
- Environment Setup
- View
  - Tool bar
  - Status bar
  - Full Screen mode
  - Full Screen mode Cancel
- Set
  - Mail setup
  - Mail Condition
  - Mail History
  - Key Board Disable
  - Key Board Enable
  - Popupmenu ineffective
  - Popupmenu effective
- Tool
  - Recipe
  - Alarm History
  - Report
  - Hard copy
  - System Alarm
  - Script Error
- Window
  - Cascade
  - Minimize All Windows
  - Move Window
- Help
  - Index
  - About GT SoftGOT2
  - Connect to MELFANSweb
- Exit

Chapter 5 GT SOFTGOT2 OPERATING METHOD

5.1 General Procedure for Monitoring with GT SoftGOT2

The following shows a general procedure for monitoring with GT SoftGOT2 after installation of GT SoftGOT2.



*1 In and after the second monitoring, the project need not be opened
Choosing "Online" - "Monitor Start" automatically opens the previously monitored project and starts monitoring. (Refer to Section 5.8.)

POINT

It is also possible to start up GT SoftGOT2 automatically when Windows® is started up.
Refer to Section 5.13 for how to start up GT SoftGOT2 automatically.

5 - 1

5.2 How to Use the License Key/License Key FD

When using GT SoftGOT2, you must always use the following license key/license key FD to make the license right of GT SoftGOT2 recognized.

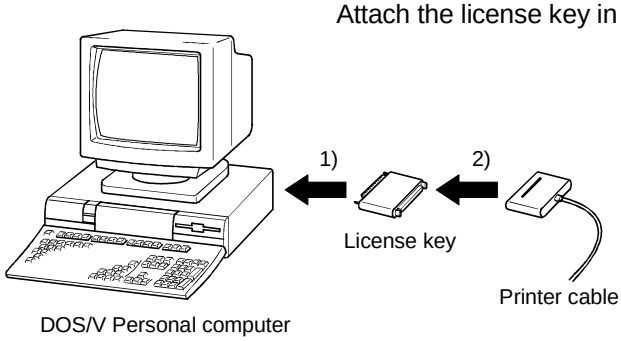
- DOS/V personal computer : License key (A9GTSOFT-LKEY-P)
- PC CPU module : License key FD (SW5D5F-SGLKEY-E)

How to use the license key/license key FD will be described.

(1) When using GT SoftGOT2 on DOS/V personal computer

When using GT SoftGOT2 on the DOS/V personal computer, always attach the license key (A9GTSOFT-LKEY-P) to the DOS/V personal computer.
If monitoring with GT SoftGOT2 is performed without attaching the license key to the personal computer, GT SoftGOT2 will automatically be terminated after approximately 10 minutes.
Moreover, if the system driver has not been installed on the DOS/V personal computer, GT SoftGOT2 does not recognize that the license key is attached. Therefore, make sure to install the system driver as well.
Refer to the GT Works2 Version□/GT Designer2 Version□ Operating Manual (Start up • Introdunctory Manual) for how to install the system driver.

Attach the license key in the following manner:



1) Attach the license key to the parallel port (Centro/printer connector) of the DOS/V personal computer.

2) Connect the printer cable to the license key when a printer is used.

POINT

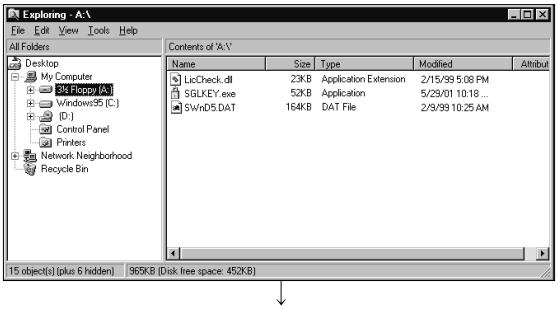
- Fasten the license key securely to ensure that it will not come off.
  If the license key comes off while monitoring is performed with GT SoftGOT2, GT SoftGOT2 will automatically be terminated in about 10 minutes as in the case where monitoring is executed without the license key being attached.
- If a printer switch is used, connect the license key before the printer switch (on the DOS/V personal computer side).
- If a parallel port is not provided as standard equipment, as in the case of notebook personal computers, an external option compatible with the notebook personal computer used is required.
- The following devices cannot be used at the same port as the license key:
  1) SCSI interface for printer port
  2) FDD/HDD/CD-ROM/ZIP drive connected to printer port
  3) Devices that use a data transmission method other than the standard network specification, including printer port communication type Interlink and Centro printer interface
- If the DOS/V personal computer used is a Fujitsu-made FM/V Series computer, make sure to shut off the power supply to the DOS/V personal computer after installing the system driver, and then restart the DOS/V personal computer to use GT SoftGOT2.

(2) When using GT SoftGOT2 on PC CPU module

When using GT SoftGOT2 on the PC CPU module, always register the license with the license key FD (SW5D5F-SGLKEY-E/license registration package for PC CPU module).

If you execute monitoring using GT SoftGOT2 without attaching the license key FD to the personal computer, GT SoftGOT2 will automatically be terminated in about 10 minutes.

(a) Registering the license



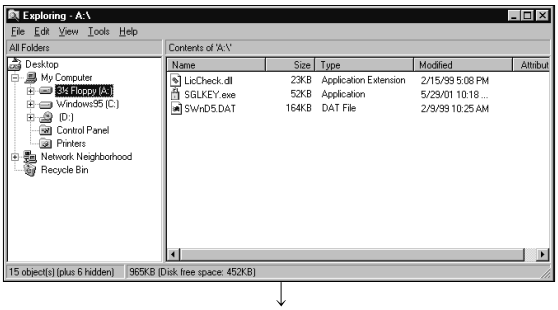
1) Start Explorer and click the drive where the license key FD is inserted.
Double-click "SGLKEY.exe".
To display Explorer, choose [Start]-[Programs]-[Explorer].

2) Click the picture of the key.
As the license registration confirmation dialog box appears, click the [Yes] button.

3) Click the [Close] button.

(b) Canceling the license

When uninstalling GT SoftGOT2, cancel the license with the license key FD.



1) Start Explorer and click the drive where the license key FD is inserted.
Double-click "SGLKEY.exe".
To display Explorer, choose [Start]-[Programs]-[Explorer].

2) Click the picture of the key.
As the license cancellation confirmation dialog box appears, click the [Yes] button.

3) Click the [Close] button.
In this status, the license of the product is canceled and the license right is held by the license key FD.

POINT

(1) The license is not made valid if you attach the license key designed for DOS/V personal computer (A9GTSOFT-LKEY-P) to the PC CPU module.

(2) About the license key FD (SW5D5F-SGLKEY-E)

(a) Use the license key FD as purchased.
(You cannot use the license key FD that was created by copying.)

(b) Save the license key FD carefully.

(c) Never perform any of the following operations for the license key FD.
Performing any of such operations will damage the license key FD.
1) FD formatting
2) Write of file to FD
3) Copying of file from/to FD (to/from other drive)
4) Deletion of file on FD, changing of file name, changing of file attributes
5) Running of analyzing tool (e.g. SCANDISK) for FD

(d) When canceling the license with the license key FD, use the license key FD that was used to register the license.

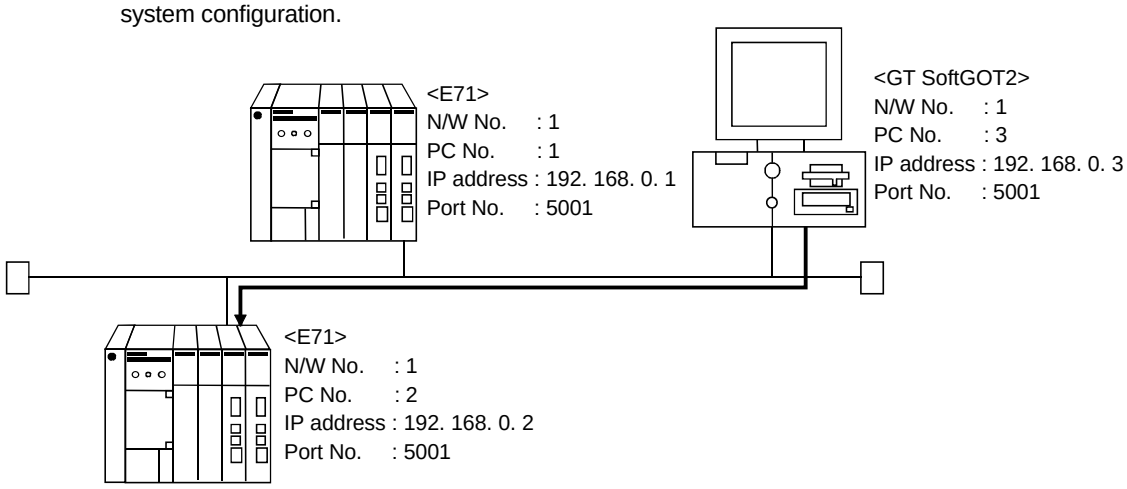
5.3 How to set up the Ethernet connection

POINT

- Read the manual for the Ethernet unit to be used thoroughly and understand it fully before proceeding with setting up the Ethernet connection.
- If many devices (including GT SoftGOT2) 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 Online setup of GT SoftGOT2.

5.3.1 When using E71

For communication from GT SoftGOT2 via the E71, there are the following setting items and precautions. The explanations in this section will be made for the following system configuration.



POINT

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 item (6) in this section for how to set up the Ethernet unit, network number of GT SoftGOT2, personal computer number, IP address, and port number.

Procedure for communications via E71

Restrictions

(a) Communications cannot be made via the MELSECNET/B, MELSECNET(II), MELSECNET/10, MELSECNET/H
(b) Communications can be made only within the same segment. Communication cannot be made via the router or gateway.

(1) Compatible models

AJ71E71-S3, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, AJ71E71N-B2, AJ71E71N-B5T, A1SJ71E71-B2, A1SJ71E71N-B5T

(2) E71 switch settings

	AJ71E71-S3, AJ71E71N-B2, AJ71E71N-B5T, A1SJ71E71N-B2, A1SJ71E71N-B5T	A1SJ71E71-B2-S3, A1SJ71E71-B5-S3
Operation mode setting switch	0 (online mode)	0 (online mode)
Communications condition setting switch	SW2 OFF (BIN code)	SW2 OFF (BIN code)
CPU communications timing setting switch	SW7 ON (online program correction enabled)	SW3 ON (online program correction enabled)

(3) Sequence programs

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

(a) Communication parameters

The following are the communication parameter setting examples.

Setting item	Set value
Application setting*1	100H
IP address of E71	192.168.0.2
E71 port number	5001
IP address of other node	FFFFFFFF
Other node port number	FFFF*2

*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

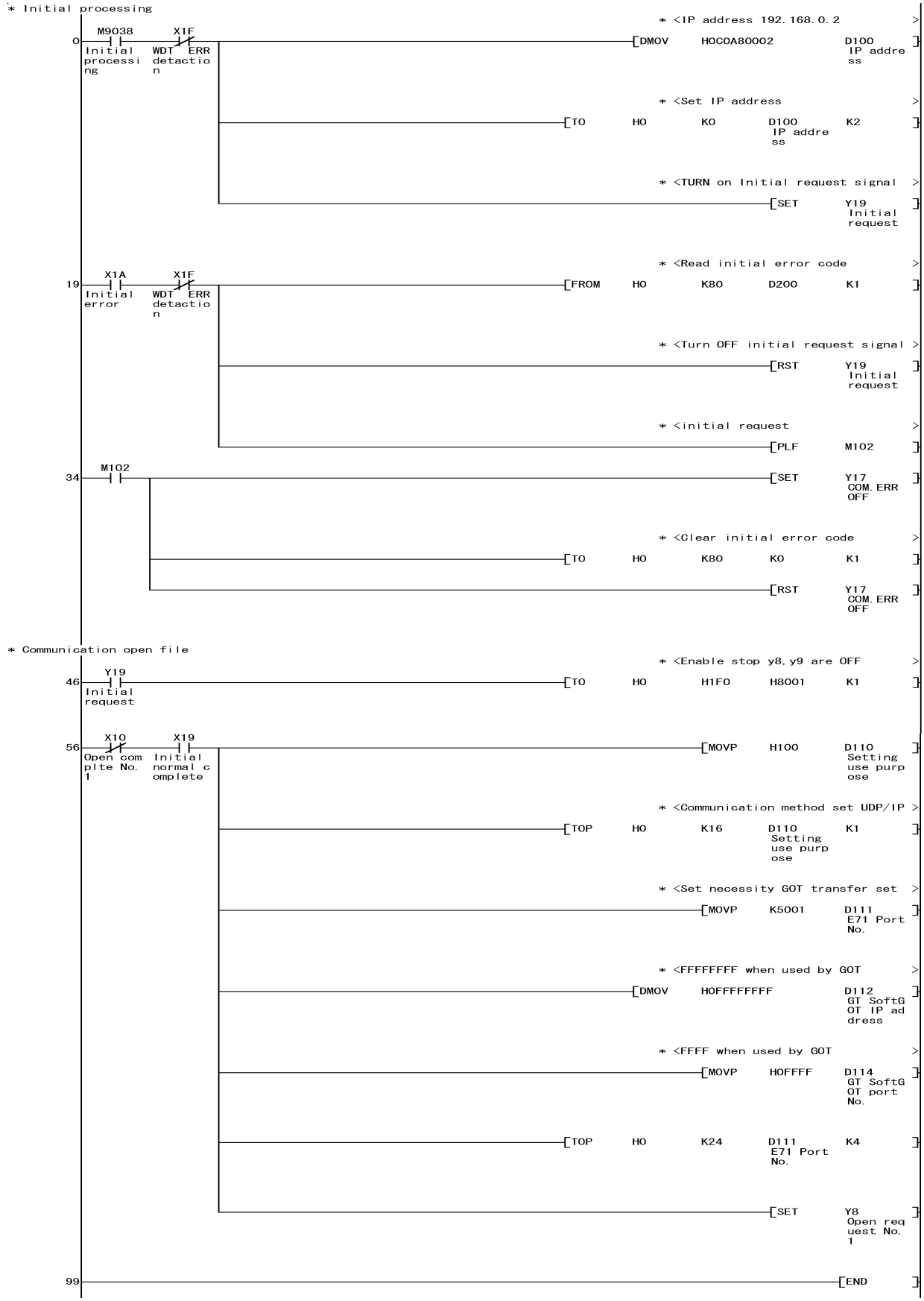
4): Communication system (Set to 1: UDP/IP)

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.

(4) Setting on the personal computer

Set the IP address.

(5) Communications check

When the preparations for communications via the E71 are complete, execute the Ping command in the MS prompt of 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.

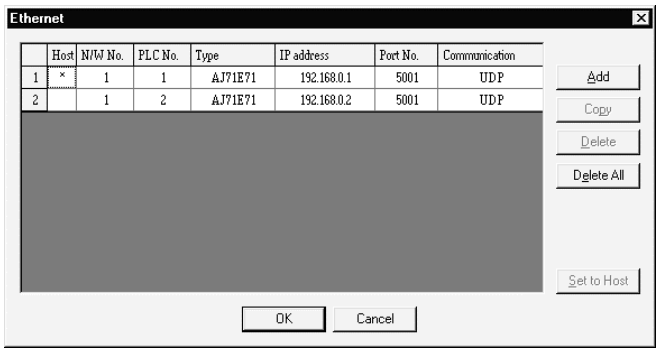
If ping does not pass through, check the cable and unit connections and Windows® side IP address and other settings.

POINT
It is also possible to perform the Ping test using GX Developer (SW6D5C-GPPW 6.01B or later). Refer to the Operating Manual of GX Developer for more details on the Ping test.

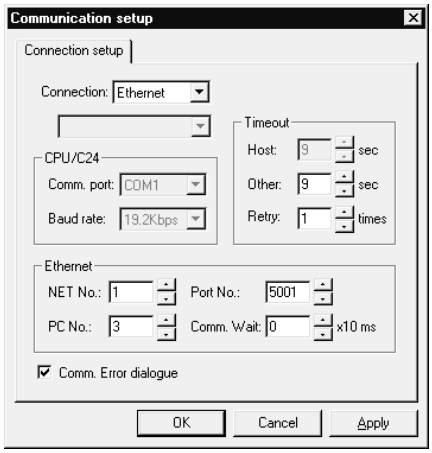
(6) Settings with GT Designer2 and GT SoftGOT2

(a) Make the following settings for the E71 to be monitored in "Ethernet Setting" of GT Designer2.
Refer to Section 5.3.4 for details of Ethernet setting.

Setting Item	Description
N/W No.	Set any number.
PLC No.	Set any number.
IP address	Set the IP address assigned to the connected E71.
Port No.	Set the port No. of the connection target E71 set in the sequence program.

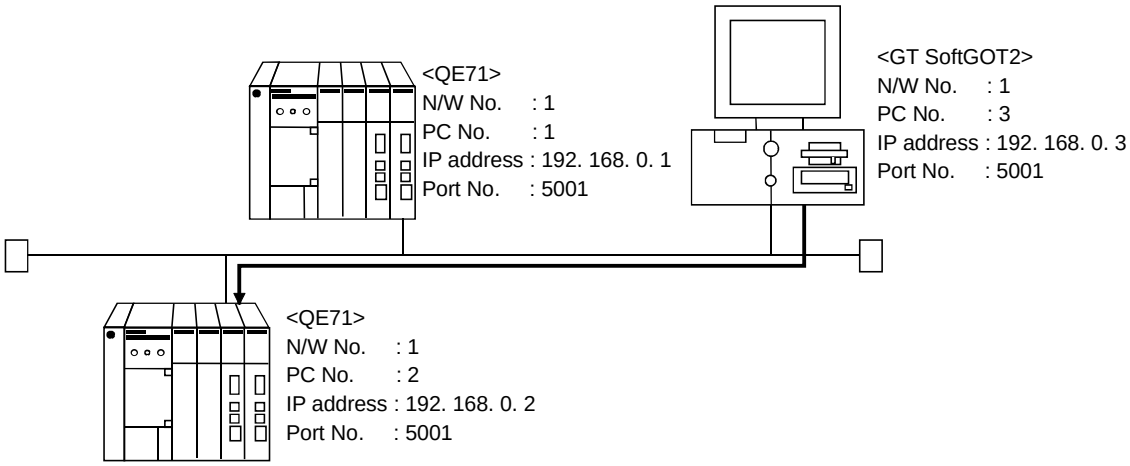


(b) Define the settings of GT SoftGOT2 in "Online setup" of GT SoftGOT2.
Refer to Section 5.4 for Online setup.



5.3.2 When using QE71

For communication from GX Developer via the QE71, there are the following setting items and precautions. The explanations in this section will be made for the following system configuration.



POINT

The "port No." specified for Ethernet connection to the QE71 is fixed at "5001". Refer to item (5) in this section for how to set up the Ethernet unit, network number of GT SoftGOT2, personal computer number, IP address, and port number.

Procedure for communications via QE71

Restrictions

(a) Communications cannot be made via the MELSECNET/B, MELSECNET(II), MELSECNET/10, MELSECNET/H.

(b) Communication cannot be made via the router or gateway.

(1) Compatible models

Use the QE71 and PLC whose function version is B or later.

(2) QE71 switch settings

Operation mode setting switch ..... 0 (online)

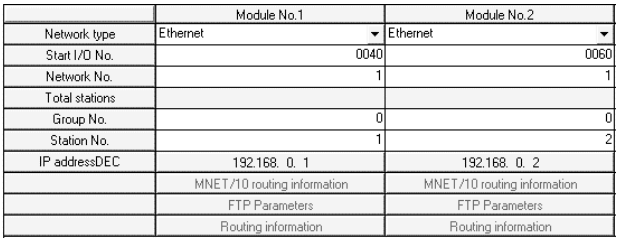
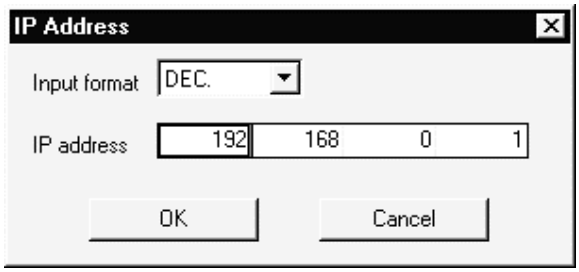
Automatic start mode ..... SW3 ON

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 way to perform initial processing using Y19 (initial processing request), refer to the AJ71QE71 User's Manual and create an initial processing program.

(3) Parameter setting (Setting with GX Developer)

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

Item	Setting Screen Examples
Ethernet Parameters	
IP Address Setting	

(4) Setting on the personal computer

Set the IP address.

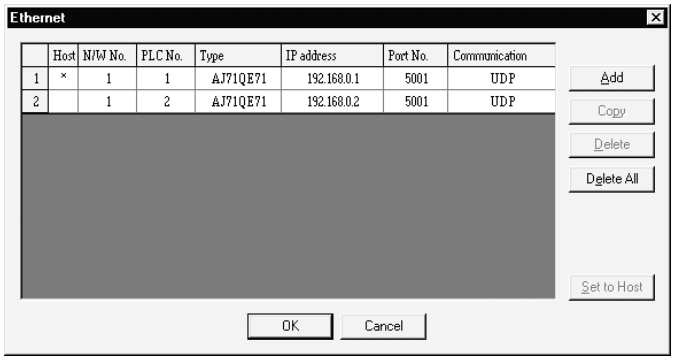
(5) Communications check

Refer to Section 5.3.1 (5) for communications check.

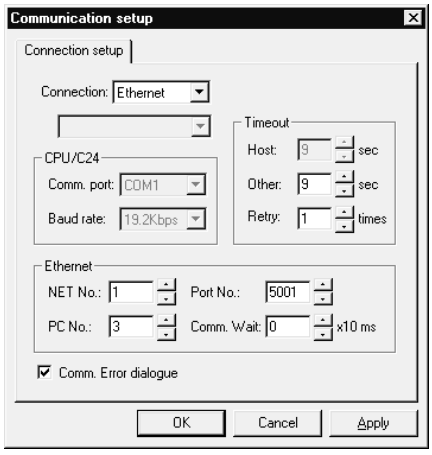
(6) Settings with GT Designer2 and GT SoftGOT2

(a) Make the following settings for the QE71 to be monitored in "Ethernet Setting" of GT Designer2.
Refer to Section 5.3.4 for details of Ethernet setting.

Setting Item	Description
N/W No.	Set the Network No. assigned to the connected QE71.
PLC No.	Set the Station No. assigned to the connected QE71.
IP address	Set the IP address assigned to the connected QE71.
Port No.	Fixed at "5001".

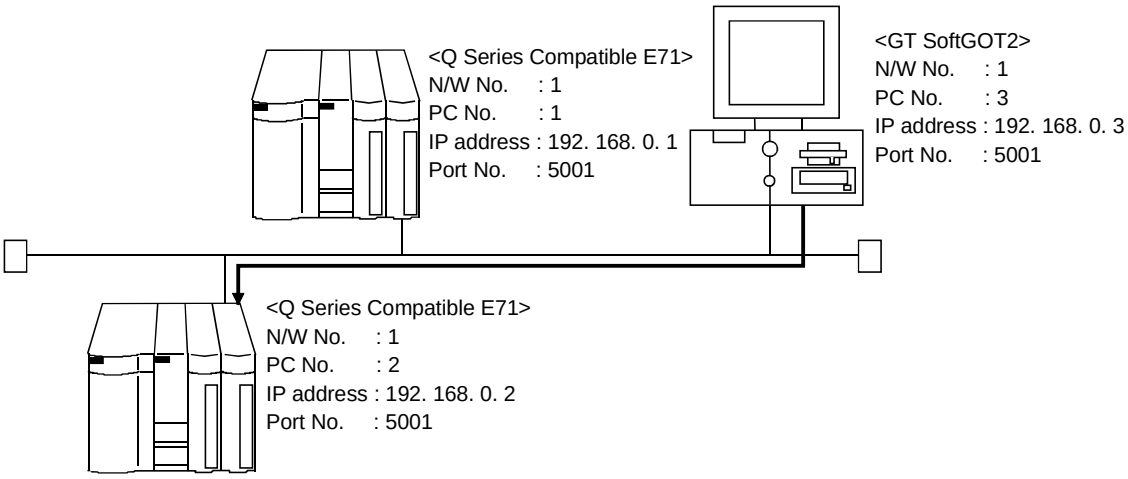


(b) Define the settings of GT SoftGOT2 in "Online setup" of GT SoftGOT2.
Refer to Section 5.4 for Online setup.



5.3.3 When using Q Series Compatible E71

For communication from GX Developer via the Q-compatible E71, there are the following setting items and precautions. The explanations in this section will be made for the following system configuration.



POINT
The "port No." specified for Ethernet connection to the Q series-compatible E71 is fixed at "5001". Refer to item (4) in this section for how to set up the Ethernet unit, network number of GT SoftGOT2, personal computer number, IP address, and port number.

Procedure for and restrictions on communications via Q-compatible E71

Restrictions

(a) Communications cannot be made via the MELSECNET/B, MELSECNET(II), MELSECNET/10, MELSECNET/H.

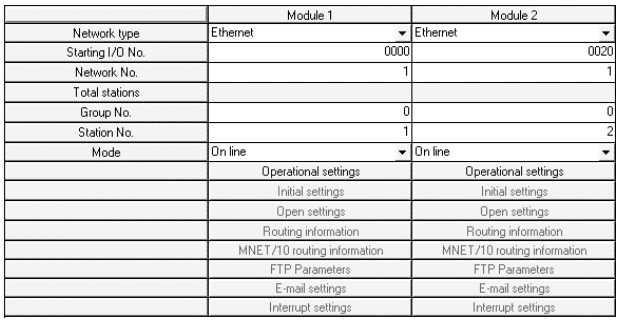
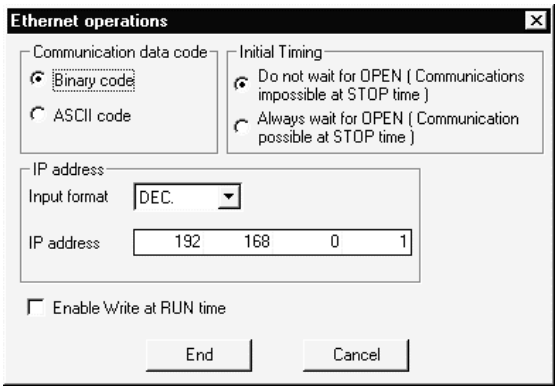
(1) Compatible models

QJ71E71, QJ71E71-B2, QJ71E71-100

(2) Network parameter setting (Setting with 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 Q series-compatible E71.

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

(1) Communication data code

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

(2) Initial Timing

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

(3) Enable Write at RUN time

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

(4) Setting on the personal computer

Set the IP address.

(5) Communications check

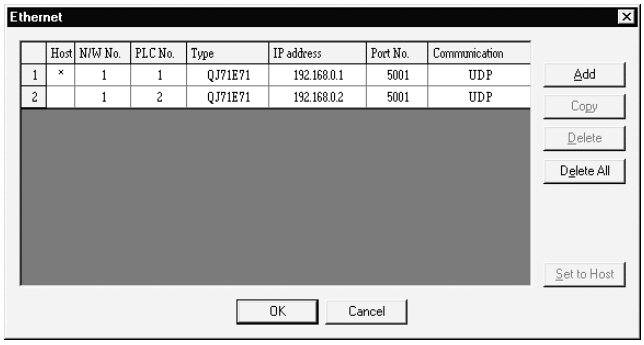
Refer to Section 5.3.1 (5) for communications check.

(6) Settings with GT Designer2 and GT SoftGOT2

(a) Make the following settings for the Q series-compatible E71 to be monitored in "Ethernet Setting" of GT Designer2.

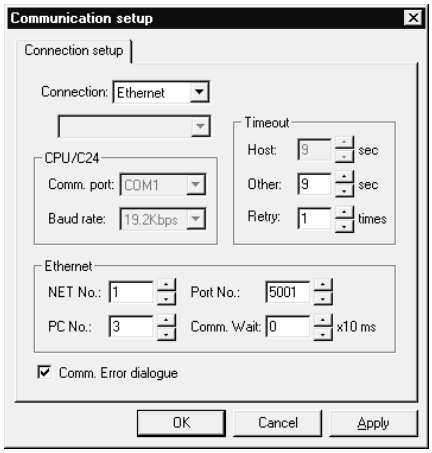
Refer to Section 5.3.4 for details of Ethernet setting.

Setting Item	Description
N/W No.	Set the Network No. assigned to the connected Q series-compatible E71.
PLC No.	Set the Station No. assigned to the connected Q series-compatible E71.
IP address	Set the IP address assigned to the connected Q series-compatible E71.
Port No.	Fixed at "5001".



(b) Define the settings of GT SoftGOT2 in "Online setup" of GT SoftGOT2.

Refer to Section 5.4 for Online setup.



5.3.4 Setting on GT Designer2

Make Ethernet setting on GT Designer2 as described below.

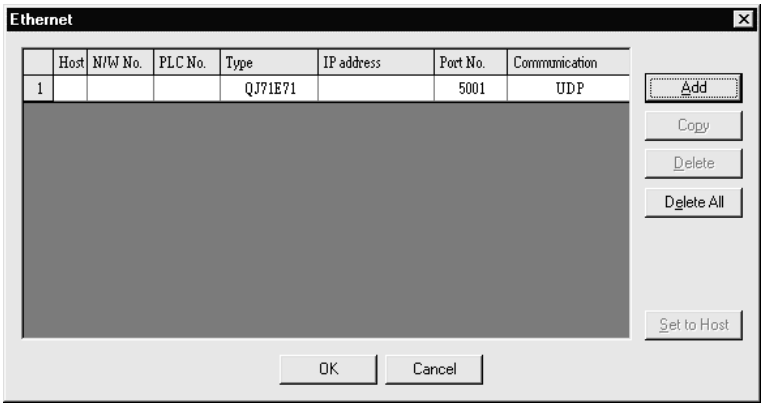
(1) Ethernet setting method

(a) Operation procedure

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

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

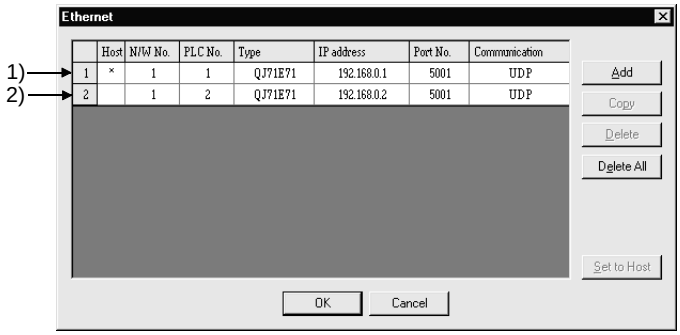
(b) Ethernet dialog box



Item		Description
Ethernet setting list		Set the N/W numbers, PLC numbers, etc. of the Ethernet modules to be monitored by the GT SoftGOT2. Up to 128 settings can be made.
	N/W No.	Set the network number of the Ethernet module.
	PLC No.	Set the PLC number (station number) of the Ethernet module.
	Type	Select the type (QJ71E71, AJ71QE71, AJ71E71) of the Ethernet module. For the MELDAS C6/C64, set the type of the Ethernet module to "AJ71QE71".
	IP address	Input the IP address of the Ethernet module. Set the IP address assigned to the connected Ethernet module.
	Port No.	Set the port number of the Ethernet module. For the E71, set the port number of the connection target E71 set in the sequence program. Fixed to "5001" when the "Type" is the "QJ71E71" or "AJ71QE71".
	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.
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.)

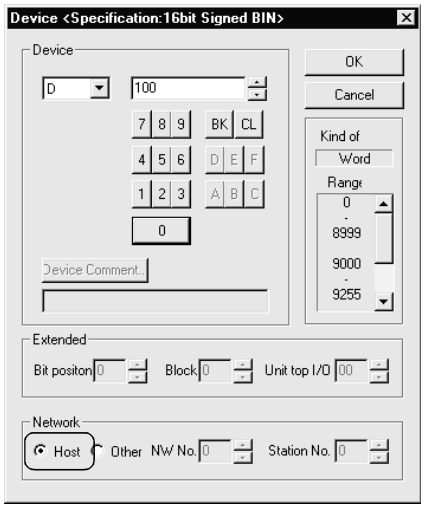
(2) How to Set Devices

The following explains how to set devices defined with GT Designer2 when connected via Ethernet.



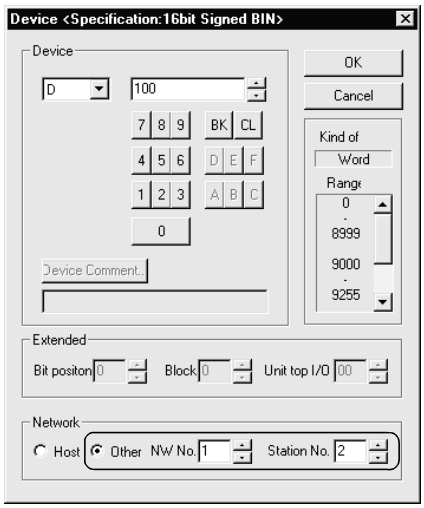
(a) If Ethernet unit 1) (an Ethernet unit set as local station) is monitored by GT SoftGOT2, set the network setting to the local station when the device is set with GT Designer2.

<Setting example with GT Designer2>



(b) If Ethernet unit 2) (an Ethernet unit that is not set as local station) is monitored by GT SoftGOT2, set the network setting to other station (network No. "1", personal computer station No. "2") when the device is set with GT Designer2.

<Setting example with GT Designer2>



5.4 How to set up the Computer link connection

When connecting the GOT and the computer link unit and serial communication unit and modem interface unit for monitoring, set the switches of the computer link unit and serial communication unit as follows.

5.4.1 When using A Series

(1) When connecting with an AJ71C24-S8

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

Switch	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 with an AJ71UC24

The following shows the settings when connecting with an AJ71UC24.

Switch	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 with an A1SJ71UC24-R2 and A1SJ71C24-R2.

The following shows the settings when connecting with an A1SJ71UC24-R2 and A1SJ71C24-R2.

Switch	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	OFF	ON
SW08	ON	
SW09	ON	
SW10	OFF	
SW11	OFF	
SW12	ON	

5.4.2 When using QnA Series

The following shows the settings when connecting with a QnA series (AJ71QC24(-R2), AJ71QC24N(-R2), A1SJ71QC24(-R2) and A1SJ71QC24N(-R2)).

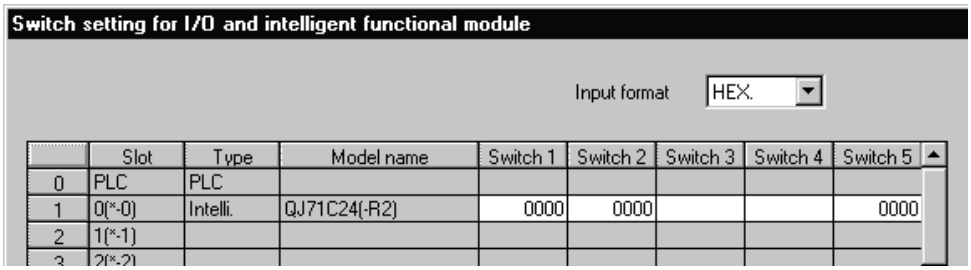
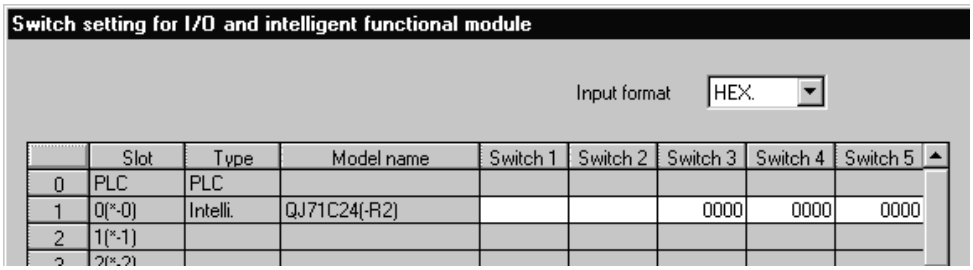
Switch	Baud rate (Transmission speed)				
	9600bps	19200bps	38400bps	57600bps	115200bps
Station number switch	0				
Mode switch	5				
SW01	OFF				
SW02	ON				
SW03	ON				
SW04	OFF				
SW05	OFF				
SW06	ON				
SW07	ON				
SW08	OFF				
SW09	ON	OFF	ON	OFF	ON
SW10	OFF	ON	ON	ON	ON
SW11	ON	ON	ON	OFF	OFF
SW12	OFF	OFF	OFF	ON	ON

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

5 - 20

5.4.3 When using Q Series

When connecting to Q series (QJ71C24(-R2), QJ71C24N(-R2) or QJ71CMO), switch setting is not required. (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 GOT.
However, when the GT SoftGOT2 is connected with the QJ71CMO, only CH2 is usable.
For the GX Developer operating method, refer to the GX Developer Operating Manual.

Channel Where GT SoftGOT2 Is Connected	Settings
CH1	
CH2	

POINT

When using the GT SoftGOT2 connected to the serial communication unit of function version B, you can use CH1 and CH2 of the serial communication unit together. Hence, you can use the GT SoftGOT2 and GX Developer or similar peripheral device or two GT SoftGOT2s connected to one serial communication unit.
Note that only one GOT unit can be connected to the serial communication unit of function version A.

5.4.4 Transmission specifications

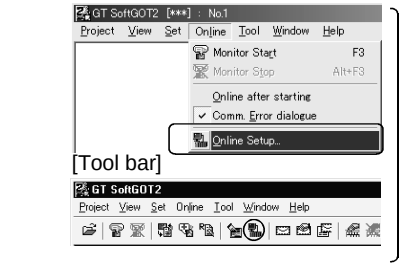
The following transmission specifications apply to the case where communication is made between the GT SoftGOT2 and computer link or serial communication module.

Item	Settings			
	Q Series	QnA Series		A Series
	QJ71C24(-R2), QJ71C24N(-R2), QJ71CMO	AJ71QC24N(-R2), A1SJ71QC24N(-R2)	AJ71QC24(-R2), A1SJ71QC24(-R2)	AJ71C24-S8, AJ71UC24, A1SJ71UC24-R2, A1SJ71C24-R2
Transmission speed	9600bps/19200bps/38400bps/57600bps/115200bps		9600bps/19200bps	
Data length	8 bits			
Stop bit	1 bits			
Parity bit	Yes (odd)			
Sum check	Yes			

5.5 Online Setup

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

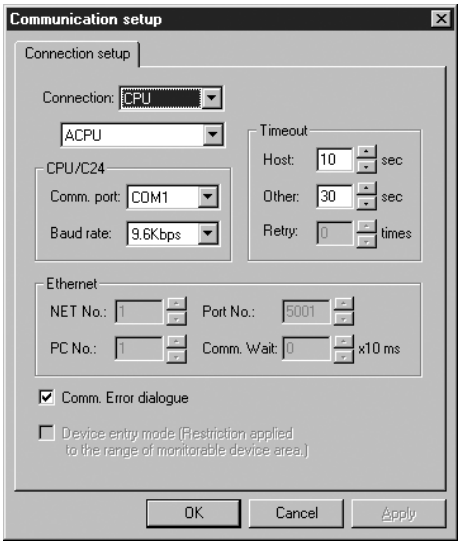
POINT
Make Online setup before starting monitor. After start of monitor on GT SoftGOT2, option setting cannot be made. (The "Comm. Error dialogue" setting can be changed during monitoring.)



Choose any

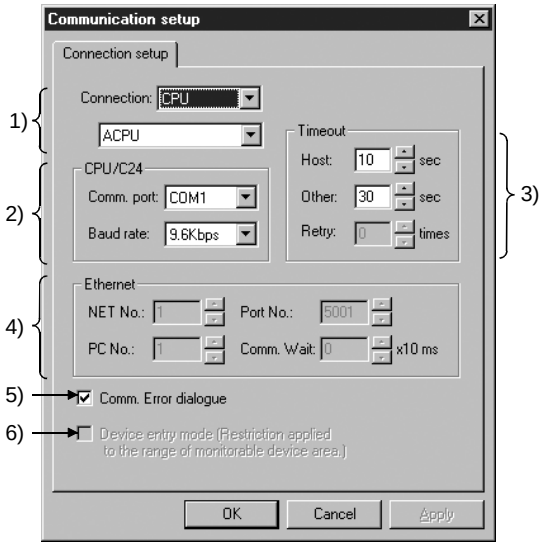
1) When making option setting, choose any of the following.
   - "Online" - "Online setup"
   - "Online setup " on toolbar
   - "Online setup " by right-clicking the mouse

   (Refer to Section 4.2 for right-clicking the mouse)



2) As the Communication setup dialog box appears, make settings. (Refer to Section 5.5.1.)
   After setting, press [Apply] to update the information.
   Clicking the [OK] button, and closes the dialog box.

5.5.1 Communication setup Dialog Box



Number	Item		Description
1)	Connection		Select the connection method of GT SoftGOT2. "CPU" : Select this option when direct connection to CPU is used. "C24" : Select this option when computer link connection is used. "NET/H" : Select this when using the MELSECNET/H board. (Also select "NET/H" when using the MELSECNET/H board in the MELSECNET/10 mode.) "NET/10" : Select this when using the MELSECNET/10 board. "Ethernet" : Select this option when Ethernet connection is used. "Q-BUS" : Select this option when Q bus connection is used. (May be set only when the PC CPU module is used.) (The default is "CPU".)
		——	If "CPU"/"C24"/"NET/H"/"NET/10" is selected as the connection method, designate the connection destination. When "CPU" is selected: Selects the type of CPU to be connected. When "C24" is selected: Selects the type of computer link unit or serial communication unit to be connected. When "NET/H" or "NET/10" is selected: select the board to be used (board mounted to the personal computer).
2)	CPU/C24		When you selected "CPU"/"C24" in the connection method, the following items are set.
		Comm. port	Choose the communication port on the personal computer side. "COM1" to "COM6" (The default is "COM1".)
		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 unit 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. For connection with the MELDAS C6/C64, set the baud rate to "19.2Kbps".
3)	Timeout		Set the timeout period and retry count.
		Host ＊1	Set the timeout period for host monitor. "3" to "90" (seconds)
		Other station ＊1	Set the timeout period for other station monitor. "3" to "90" (seconds)
		Retry ＊1	Set the number of retries. "0" to "10" (times)

Number	Item		Description
4)	Ethernet		When you selected "Ethernet" in the connection method, the following items are set.
		NET No. ＊1	Set the network number of GT SoftGOT2. "1" to "239" (The default is "1.")
		PC No.	Set the station number of GT SoftGOT2. The station number must be different from the personal computers personal computer number of the Ethernet unit to be monitored. "1" to "64" (The default is "1.")
		Port No. ＊1	Set the port number of GT SoftGOT2. "1024" to "65535" (The default is "5001.")
		Comm. Wait ＊1	Set the transmission wait time in order to reduce the load on the network and target PLC. "0" to "10000" (x 10 ms) (The default is "0.")
5)	Comm. Error dialogue		Enable this check box to display the error dialogue box in GT SoftGOT2 when a communication error occurred. (The check box is enabled by default.)
6)	Device entry mode		Check this item to perform the monitoring at high-speed when connecting with the FXCPU. When applied, the device range monitored will be restricted and may not be monitored normally. This setting is effective only when select “FX” for Connection. (Unchecked at default)

＊1 GT SoftGOT2 operates even with the default settings.

POINT

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

(1) 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 C239
		C240 to C255
FX_{1S} series	Counter contact (C)	C224 to C239
FX_{1N} series	Counter contact (C)	C192 to C207
$FX_{2(C)}$ series		C192 to C207
$FX_{2N(C)}$ series		C192 to C207

(2) 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 monitor data so as any offset will not operate for the devices above.

(3) 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 monitor data.

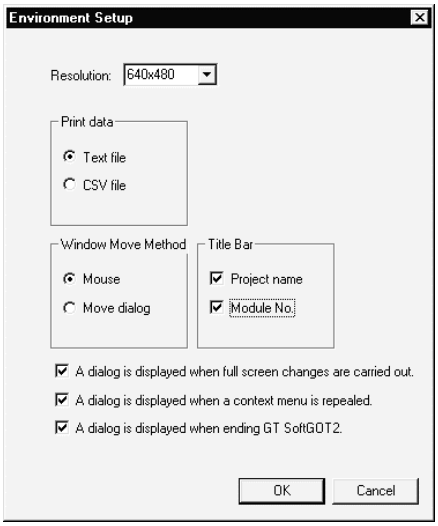
5.6 Environment Setup

In Environment Setup, set the resolution, etc. of GT SoftGOT2.

Choose any

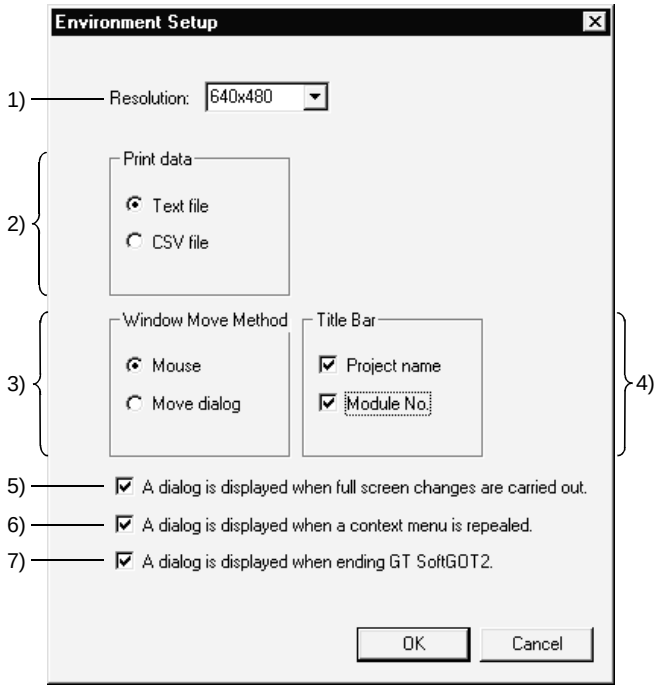
1) When making option setting, choose any of the following.
   - "Set" - " Environment setup"
   - " Environment setup " on toolbar
   - " Environment setup " by right-clicking the mouse

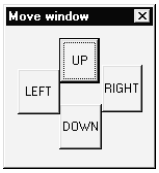
   (Refer to Section 4.2 for right-clicking the mouse)



2) As the Environment setup dialog box appears, make settings. (Refer to Section 5.5.1.)
   Clicking the OK button closes the dialog box.

5.6.1 Environment setup dialog box



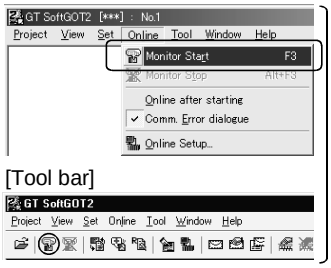
Number	Item	Description
1)	Resolution ＊1	Select the screen size (resolution: dots) to be monitored. "640 × 480", "800 × 600", "1024 × 768", "1280 × 1024" (The default is "640 × 480".)
2)	Print data	Select the format of the data to be saved in the "Memcard" folder when the alarm history display/report/recipe function, etc. are printed or saved. "Text file": Data are saved in the Text file format. "CSV file": Data are saved in the CSV file format. (The default is "Text file".)
3)	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 SoftGOT2 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 SoftGOT2 on a 5-dot basis. A window can also be moved on a panel computer that cannot use a mouse.  Move window dialog box (The default is "Mouse".)
4)	Title Bar	Select the data to be displayed on the title bar. (By default, both the project name and module No. checkboxes are on.)
	Project name	Turn on this checkbox to display the project name on the title bar.
	Modeule No.	Turn on this checkbox to display the module No. on the title bar.

＊1 To change the setting after execution of monitoring, GT SoftGOT2 must be ended once. (The setting can be referred to.)

Number	Item	Description
5)	A dialog is displayed when full screen changes are carried out.	Turn on this checkbox to display the confirmation dialog box when full screen changes are carried out. (By default, this checkbox is on.)
6)	A dialog is displayed when a context menu is repealed.	Turn on this checkbox to display the confirmation dialog box when a context menu is repealed. (By default, this checkbox is on.)
7)	A dialog is displayed when ending GT SoftGOT2. ＊2	Turn on this checkbox to display the confirmation dialog box when ending GT SoftGOT2. (By default, this checkbox is on.)

＊2 When the internal device (GS500.b0 is turned ON) of the GOT or shortcut key ("F12" key on the keyboard of the personal computer) is used to exit from GT SoftGOT2, the confirmation dialog box for exit from GT SoftGOT2 is displayed independently of this setting.

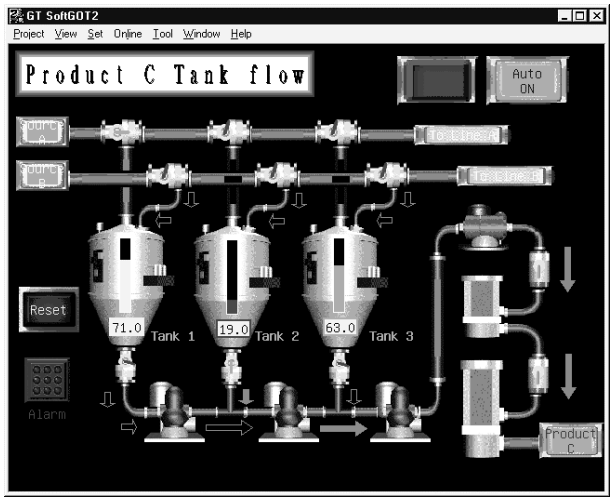
5.7 Execution of monitor



Choose any

1) To start monitor, choose any of the following.
   - "Online" - "Monitor start"
   - "Start of Monitoring" on toolbar
   - "Monitor start" by right-clicking the mouse

   (Refer to Section 4.2 for right-clicking the mouse)

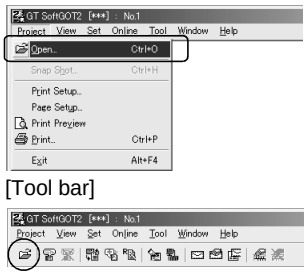


2) Monitor of the project monitored previously starts.

POINT

- When monitor is performed for the first time on GT SoftGOT2, choosing "Start" causes GT SoftGOT2 to show the utility screen.
  In this case, choose "Open" (refer to Section 5.8) and read out the monitor data to start monitor.
  For details of the utility function, refer to the GOT-A900 Series Operating Manual (Extended • Option Functions Manual)

5.8 Opening the Project

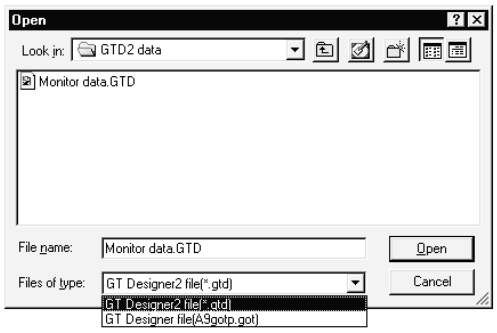


[Tool bar]

Choose any

1) To open a project, choose any of the following.
   - "Project" - "Open"
   - "Open project" on toolbar
   - "Open" by right-clicking the mouse

   (Refer to Section 4.2 for right-clicking the mouse)



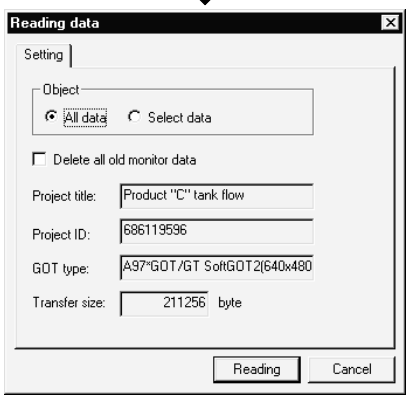
2) Choose the project where the monitor data created on GT Designer2 or GT Designer is stored.
   The type of the file to be opened can be selected in "Files of type".
   - GT Designer2 file (*.gtd)
   - GT Designer file (A9gotp.got)

3) The left dialog box appears.
   (The dialogue box is not displayed if GT SoftGOT2 is already in online mode.)
   Select [Yes] to start monitoring the project monitored previously.
   (Display the Utility screen in order to open a project for the first time.)

   Turn the power supply to the PLC off 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 monitor data or if it is desired to open a project in off-line mode.

(To the following page)

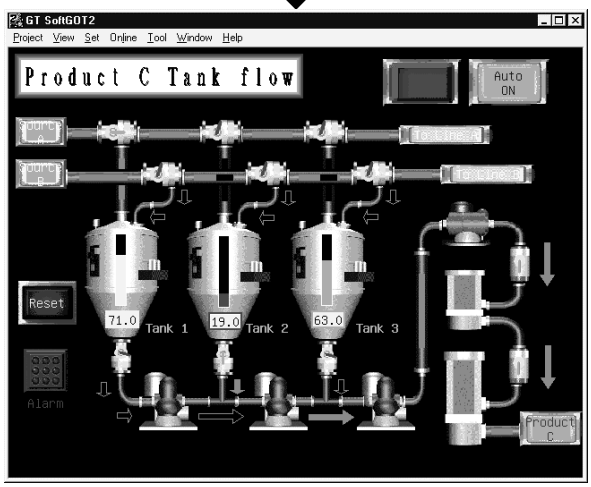
(From the previous page)



4) As the "Reading data" dialog box appears, make settings. (Refer to Section 5.8.1)
Choosing [Reading] reads the monitor data of the selected project.

Go to step 5) if the power supply to the PLC is turned off or the communication cable is disconnected in step 3).
Otherwise, go to step 6).

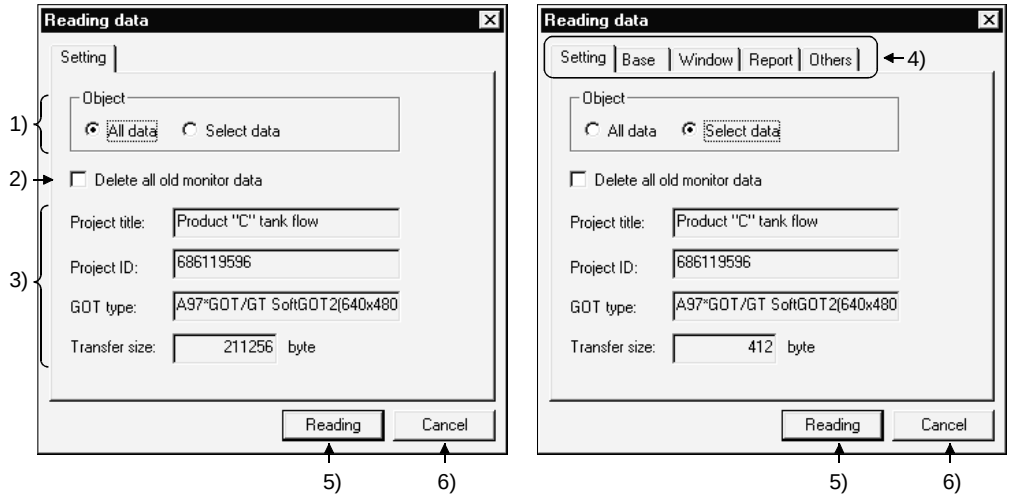
5) The message shown to the left is displayed. Turn the power supply to the PLC on or connect the communication cable, and then select [OK].



6) The monitoring of the selected project starts.

5 - 30

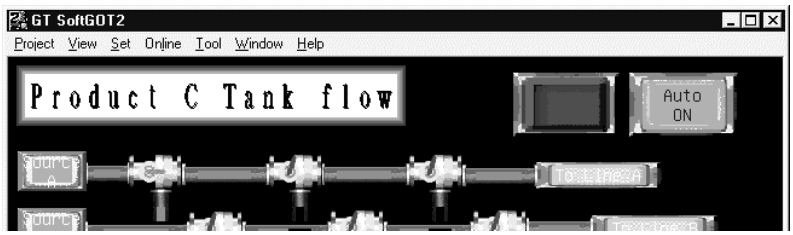
5.8.1 Description of the monitor data reading dialog box



Number	Item	Description
1)	Object	"All data" Check when reading all monitor data of the selected project. "Select data" Check when reading some monitor data of the selected project.
2)	Delete all old monitor data	Turn on the check box when reading the monitor data of the selected project after deletion of the already read monitor data.
3)	Project title Project ID GOT type Trans size	The settings and data size of the monitor data to be read appear.
4)	"Base" "Window" "Others" Tab	Turn on the read data check boxes when you chose "Select data" in Object. "Base"/"Window" tab Turn on the screen number and screen title check boxes of the screen to be read. "Others" tab Turn on the read data (part data, comment, common settings, high-quality font, sound WAVE) check boxes. Common settings are always read.
5)	Reading	Used to read the monitor data of the selected project.
6)	Cancel	Used to cancel reading the monitor data of the selected project.

5.9 Operation at Monitoring

On GT SoftGOT2, touching the touch keys is performed by pressing the mouse button. Touching is indicated by "beep".



POINT
When the sound card is fitted, the sound set in "Default sound" after choosing "Control Panel"-"Sounds" beeps on Windows® 98, Windows® Me.

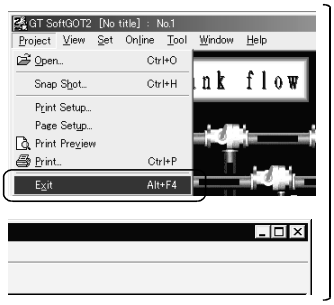
5.10 Stopping Monitoring

Choose any

4) To stop monitoring, choose any of the following:
   - "Online" - "Monitor stop"
   - "End of monitoring" on toolbar
   - "Monitor Stop" by right-clicking the mouse

   (Refer to Section 4.2 for right-clicking the mouse)

5.11 Exiting from GT SoftGOT2



Choose any

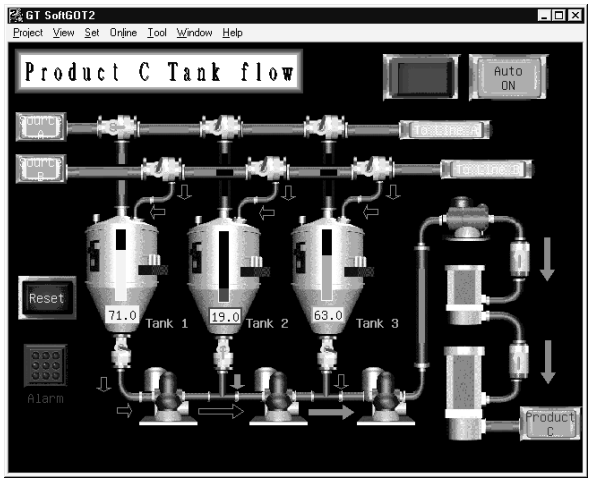
1) To exit from GT SoftGOT2, choose any of the following.
   - "Project" - "Exit"
   - "Close" in system menu
   - "Exit" by right-clicking the mouse

   (Refer to Section 4.2 for right-clicking the mouse)

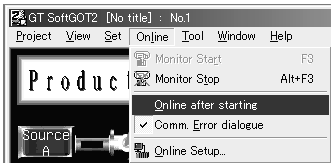
POINT
Turn ON the GOT internal device (system data area of GT SoftGOT2: GS500.b0) to exit from GT SoftGOT2. Presetting the above device as a touch key enables exit from GT SoftGOT2 without selecting the menu. For details of the GOT internal device, refer to the GT Designer2 Version□ Reference Manual.

5.12 Automatic Startup

The following explains how to start up GT SoftGOT2 automatically when Windows® is started up by using "Online after starting."



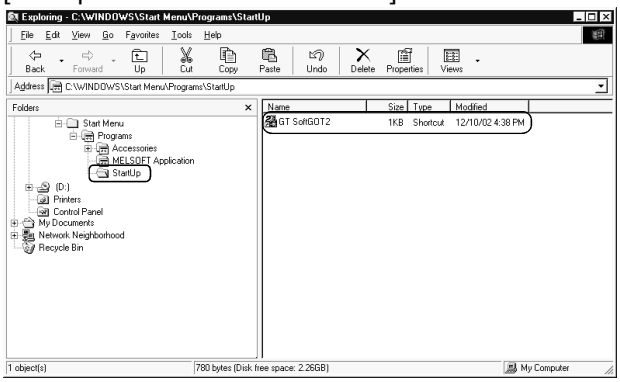
1) After starting up GT SoftGOT2, the monitor data for which the monitoring should be automatically started up is read out and monitored by GT SoftGOT2.



2) Choose any of the following.
   - "Online" - "Online after Starting."
   - Online after starting by right-clicking the mouse.
     (Refer to Section 4.2 for right-clicking the mouse)

3) Close GT SoftGOT2.

[Example of Windows® 98 screen]



4) Start up Windows Explorer and copy the GT SoftGOT2 icon in "MELSOFT application" to "Startup" in Windows.

5) GT SoftGOT2 automatically starts up when Windows® is started up from the next time, and automatically begins monitoring.

POINT

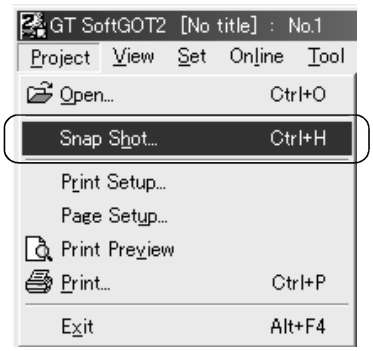
Make sure that the power supply to the connected PLC CPU is turned on before starting up Windows® when performing automatic startup.

Chapter 6 FUNCTIONS OF GT SOFTGOT2

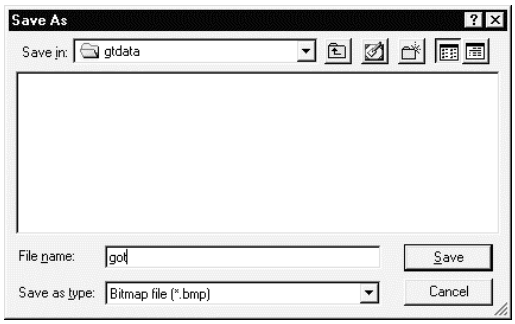
6.1 Snap Shot Function

The snap shot function allows a screen image being monitored on GT SoftGOT2 to be saved into any folder as a BMP format file.

6.1.1 Operating procedure



1) Select "Project" - "Snap Shot" during GT SoftGOT2 monitoring.



2) Choose the folder which will save the data. After setting the file name, press [Save] to save the screen image of GT Simulator in BMP format.

6.2 Print Function

The print function allows a screen image being monitored on GT SoftGOT2 to be output to a printer.

6.2.1 Operating procedure

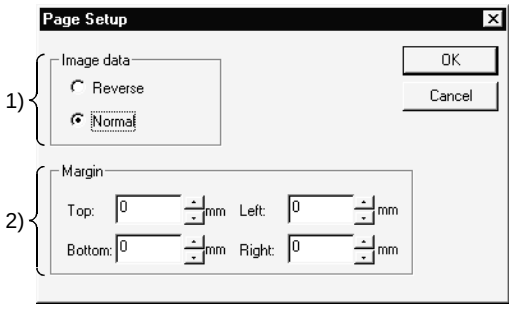
1) Select "Project" - "Print" during GT SoftGOT2 monitoring to start printing.
Note that printing cannot be done if the printer is not specified.

6.2.2 Print preview

Selecting Print preview shows a printing image.

6.2.3 Page setup

Selecting Page setup shows the following dialog box.

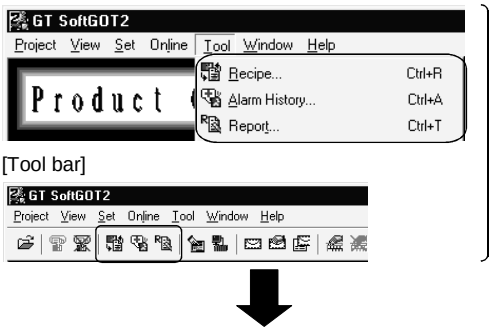


Number	Item	Description
1)	Image data	Choose "Reverse" to print the screen in reverse video. (Defaults is "Normal".)
2)	Margin	Set the margins on a page to be printed. When margins have been set, the screen to be printed is reduced according to the specified values. The reduction image of the screen can also be checked in print preview.

6.3 Data Reference Function

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

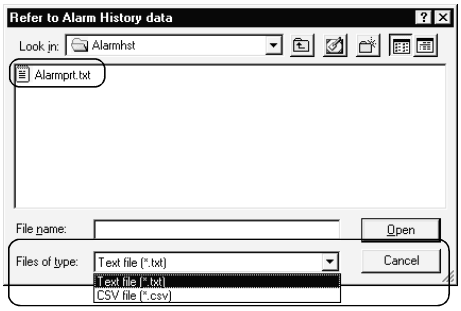
Item	Description
Recipe function	References recipe data stored as CSV format files.
Alarm history display function	References print image data of alarm history stored as text format files or as CSV format files.
Report function	References print image data of reports stored as text format files or as CSV format files.
Hardcopy function	References screen image data stored as BMP format files.



Choose any

1) Choose any of the following.
   - "Tool" - "Recipe/Alarm History/Report/Hard Copy"
   - Click the corresponding button on the tool bar. (Only for Recipe, Alarm History, and Report)
   - "Tool" - "Recipe/Alarm History/Report/Hard Copy" by right-clicking the mouse.

   (Refer to Section 4.2 for right-clicking the mouse)



2) Select a file to be referenced.
   Select the type of file to be referenced for reference alarm history data or report data.

POINT

- Data cannot be updated while being referenced. (The data is held during this time.)
  (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 alarm history display function or 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.

6.4 Mail Function

POINT
• If the mail function is used, e-mail is sent from GT SoftGOT2, so mail software is not required on the sending side. • In order to use the mail function, it is necessary to make a contract with a service provider and set up the environment so that e-mail can be sent.

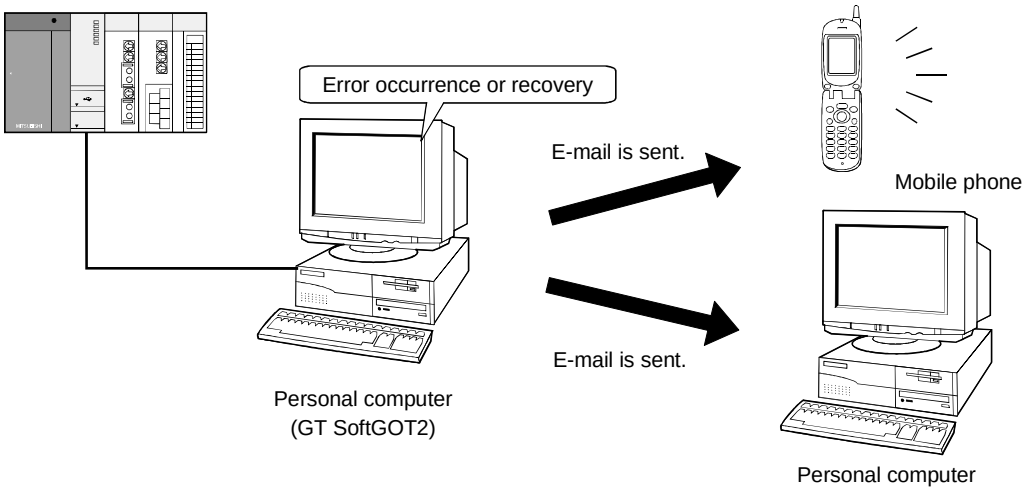
6.4.1 Mail function overview

It is possible to send messages from GT SoftGOT2 to personal computers and mobile phones.
The mail function can only be used in the following object functions:

- Alarm history display function
- Time action function
- System Alarm

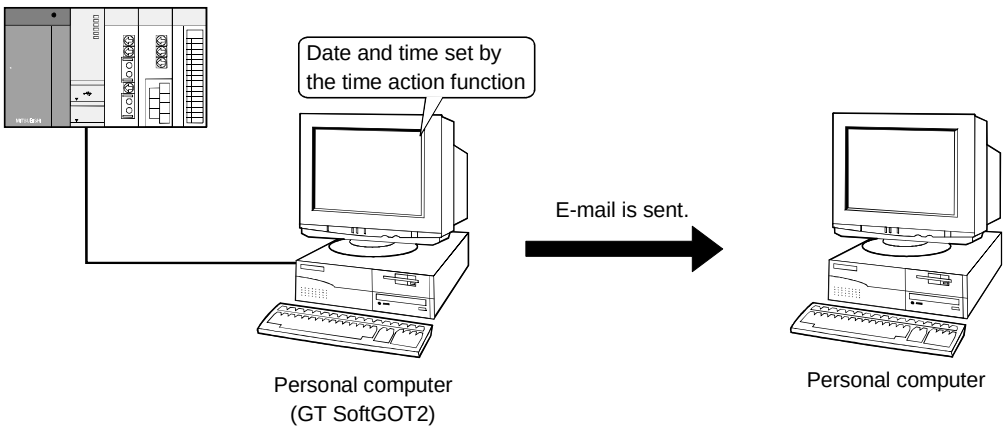
(1) Using the alarm history display function

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



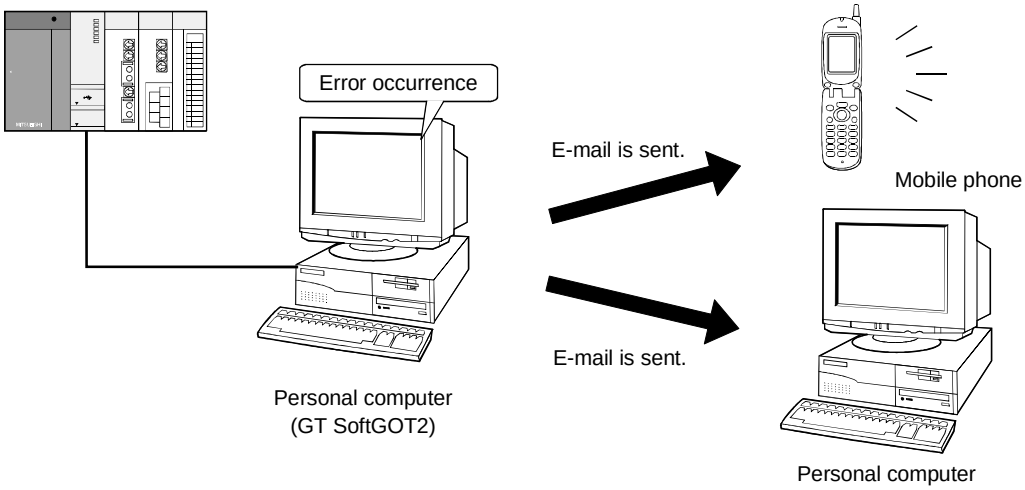
(2) Using the time action function

It is possible to send alarm history data, recipe data, and screen images stored in "Memcard" at the specified date and time using the time action function.



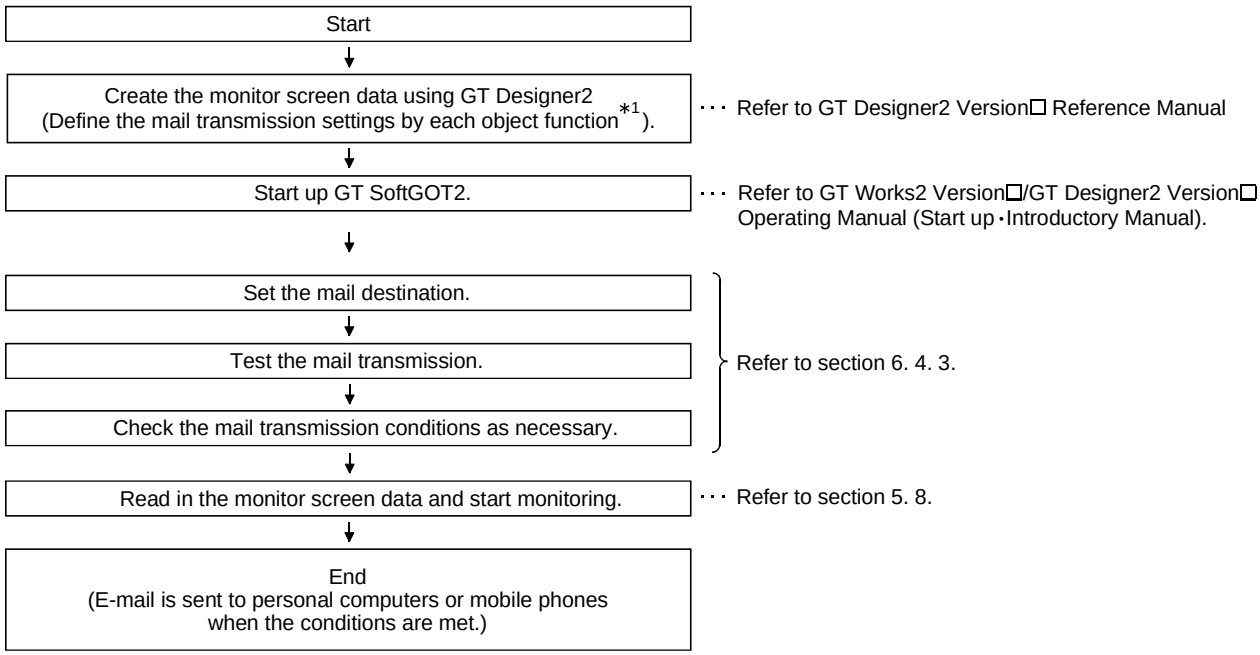
(3) When System Alarm is used

An error definition is sent at system alarm occurrence.
The system alarm transmission of GT SoftGOT2 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.



6.4.2 Operation flow when using the mail function

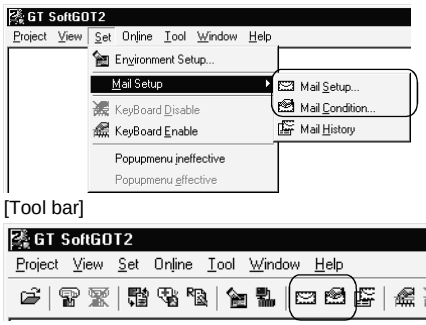
The following flowchart shows operations involved in using the mail function of GT SoftGOT2.



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

6.4.3 How to set up the mail function

The following explains how to set up the mail function to send e-mail using GT SoftGOT2.
Mail Setup..... Used to set the mail destination and perform a mail transmission test.
Mail Condition ... Used to set the mail transmission conditions.



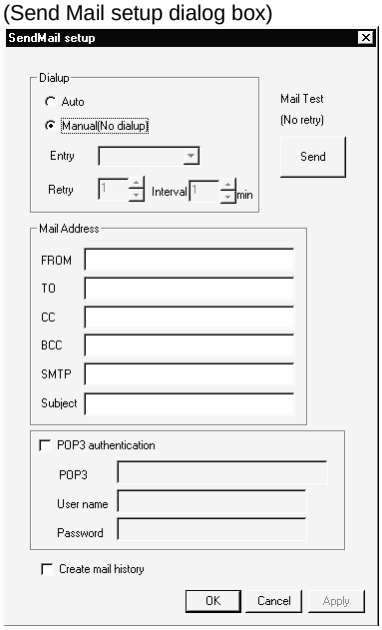
[Tool bar]

Choose any

1) Choose any of the following to set up the mail function:
   - "Set" - "Mail Setup" - "Mail Setup/Mail Condition"
   - "Mail Setup/Mail Condition" in the tool bar
   - "Set" - "Mail Setup/Mail Condition" by right-clicking the mouse.

   (Refer to Section 4.2 for right-clicking the mouse)

(Send Mail setup dialog box)

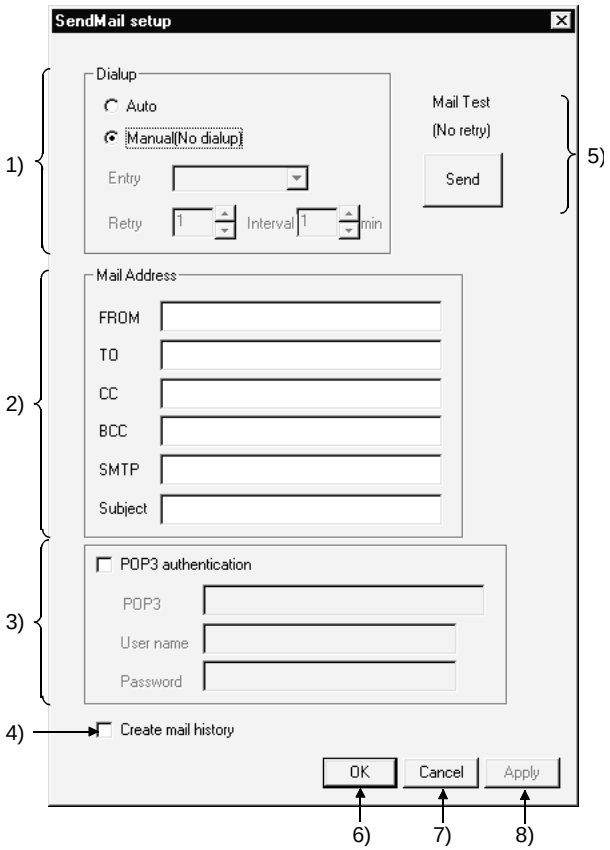


2) As the Send Mail setup dialog box or Mail Condition dialog box appears.make settings. (Refer to Section 6.4.3 (1), (2))
   Clicking the OK button closes the dialog box.

(1) Contents of the mail setup dialogue box

The settings necessary to send e-mail from GT SoftGOT2 to the target device are defined below.

In addition, it is possible to perform mail transmission tests from this dialogue box.



Number	Item		Description
1)	Dialup		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 dialup)	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.
		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.")
2)	Mail Address		Enter the origin, destination, server name, and title of mail.
		FROM	Enter the address of the mail origin.
		TO *	Enter the address of the mail destination.
		CC *	Enter the address of the mail destination (copy). (E-mail can be sent even this field is blank.)
		BCC *	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.

Number	Item		Description
3)	POP3 authentication		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.
4)	Create mail history		Enable this check box to create a mail transmission history. (The check box is disabled by default.)
5)	Mail Test		Test e-mail is sent to the destination by clicking the "Send" button.
6)	OK		Used to update the settings and close the dialog box.
7)	Cancel		Used to cancel the settings and close the dialog box.
8)	Apply		Used to update the settings.

* If more than one address is entered, they should be separated with a space or a comma.
It is possible to enter up to 32 addresses per setting.
Up to 64 characters can be used for one address.

(a) Performing dialup (automatic)
The following explains an outline of how to make the necessary settings in order to perform dialup (automatically) by GT SoftGOT2.

POINT
Refer to the manual of the service provider and the Help function in Windows® for how to set the dialup network connection.

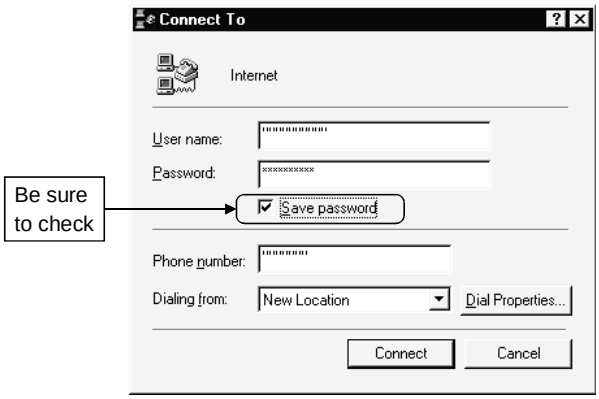
1) Set up the modem to be used.

2) Double-click "My Computer" - "Dial-up Networking" in Windows®.
A wizard for creating dialup network connection is displayed. Follow the instructions on the screen to make the settings.

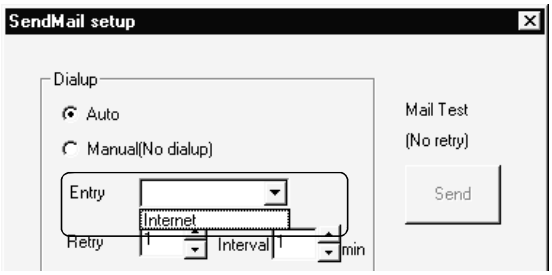
3) After creating the dialup network connection, double-click the icon created.

4) In the screen shown below, enter the user name and password specified by the service provider and enable the "Save password" check box.
When the setting is complete, click "Connect" and connect to the service provider.
If the connection is established successfully, cancel the connection and close the dialogue box.

<Example of Windows® 98 screen>



5) After making the settings mentioned above, it becomes possible to select the entry set in "Entry" of the mail setting by GT SoftGOT2.



REMARK

If you run "Dialup (Auto)," be sure to log on when you start Windows®.
If you do not log on, you can not check "Save password" in step 4) above.

(b) Mail test

It is possible to check whether e-mail can be sent properly before starting monitoring by GT SoftGOT2.

In the mail test, the following sample massage of GT SoftGOT2 is sent to the destination based on the definition set in the Mail Setup dialogue box.

1) GT SoftGOT2 sample message displayed at the destination.

```
SoftGOT2 TEST MAIL
This is testmail.
```

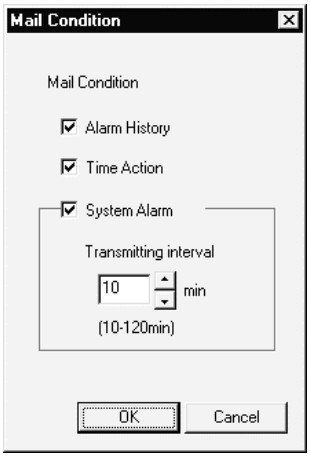
POINT

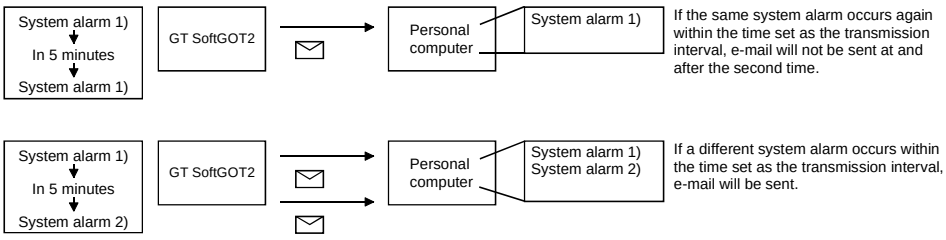
If "Create mail history" is checked in the Mail Setup dialogue box, the status of the mail test is saved as one of the history data items.

Refer to Section 6.4.5 for a description of the mail history.

(2) Mail Condition dialogue box

If the mail transmission is set with GT Designer2, 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.)



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.
	Time Action	Turn on this checkbox to use the time action 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 

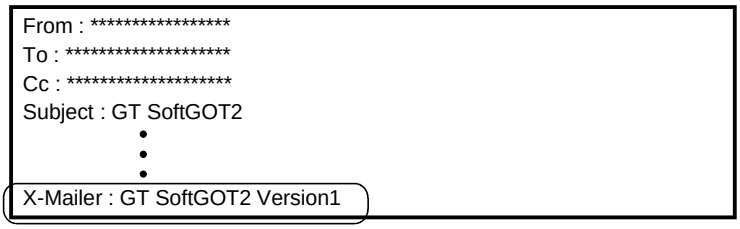
POINT

If the mail function is not set by Alarm history display function, Time Action 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□ Reference Manual for how to set objects.

6.4.4 Sending e-mail

When e-mail is sent from GT SoftGOT2 to the target device, the reception header part shown at the destination displays a message that shows that the e-mail is from GT SoftGOT2.

(a) Example of display in the reception header part at the destination



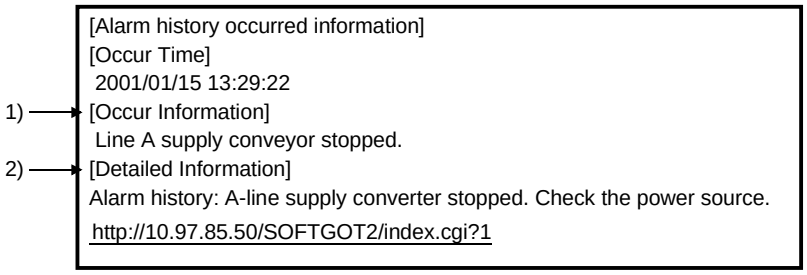
POINT

1. The format and contents of the display of e-mail sent vary depending on the mailer specifications used at the destination.
2. When e-mail is sent to a mobile phone, the display may vary depending on the specifications (screen size) of the mobile phone.
3. GT SoftGOT2 can send up to 64 e-mail at one time. If alarms occur 65 times or more, the 65th e-mail and subsequent are not sent.
4. When multiple GT SoftGOT2's are started, the module No. of GT SoftGOT2 that has sent e-mail can be identified in the following method.
   - Check the URL.
     Look at the URL at the bottom of the e-mail to confirm the module No. of GT SoftGOT2 that has sent the e-mail.
     http://10.97.85.50/SOFTGOT2/index.cgi?1 — Module No. is given at the end of the URL.
     (?1: Module No. 1, ?2: Module No. 2, ?3: Module No. 3 ...)
   - Check the Subject.
     By setting the module No. of GT SoftGOT2 to "Subject" in the mail setting (refer to Section 6.4.3), the module No. can be confirmed in Subject of the receive header section.

(1) When sending e-mail using the alarm history display function

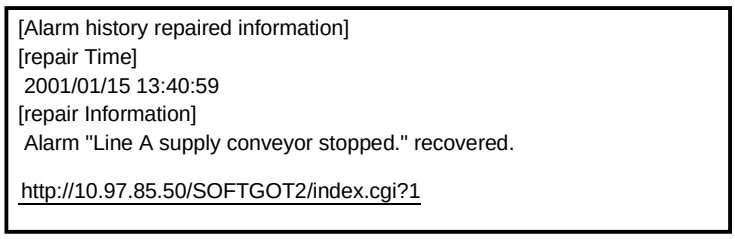
If an alarm occurs in GT SoftGOT2, the time and information of the alarm are sent to the destination by e-mail.
Moreover, if the alarm recovers, the time and information of the alarm recovery are sent to the destination by e-mail.
For the details of the alarm history display functions, refer to the GT Designer2 Version□ Reference Manual.

(a) Example of display at the destination (when an alarm occurred)



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 In formation" is not displayed if the details of the alarm history display function are set to be displayed in the base screen or window screen.
[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 In formation".

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



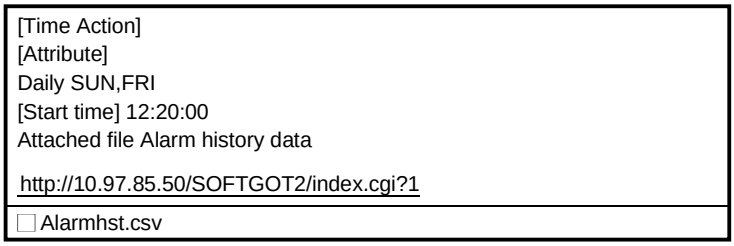
(2) When sending e-mail using the time action function

E-mail with the following data attached is sent to the destination at the day of the week/time set with GT Designer2.

- Alarm history data..... CSV format file
- Recipe data..... CSV format file
- Display image ..... BMP format file

For the details of the time action functions, refer to the GT Designer2 Version□ Reference Manual.

(a) Example of display at destination (when alarm history data is sent)



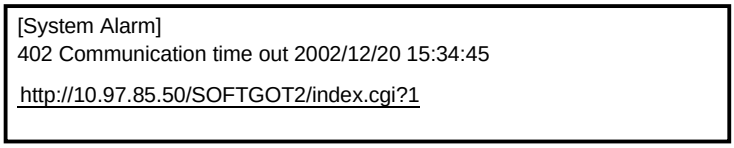
POINT

Owing to the specification of the mobile phone to use, the e-mail with data may not be sent.
For the details, refer to the manual of the mobile phone to use.

(3) 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)

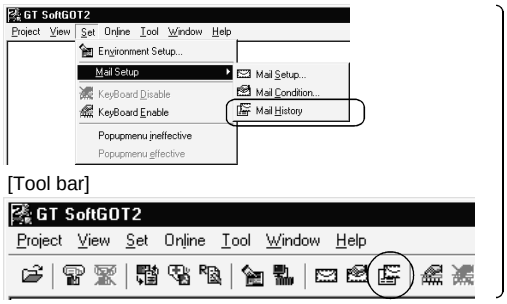


6.4.5 Mail history

It is possible to reference the operation history data of the e-mail sent from GT SoftGOT2.
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.



Choose any

1) Choose any of the following to reference mail history:
   - "Set" - "Mail setup" - "Mail History"
   - "Mail History" in the tool bar
   - "Set" - "Mail History" by right-clicking the mouse.

   (Refer to Section 4.2 for right-clicking the mouse)

(a) Example of mail history data display

```
2000/12/23  13:40:57        SMTP:***** Serch...
2000/12/23  13:40:58        SMTP:***** Connect...
2000/12/23  13:40:58        SMTP:***** Connect Complete.
2000/12/23  13:40:58        Sendmail Complete.
2000/12/23  14:01:23        SMTP:***** Serch...
2000/12/23  14:01:29        SMTP:***** is not found.
2000/12/23  14:01:29        Sendmail can not Complete.
2000/12/23  14:01:29        <ErrCode:***> ******************
```

POINT

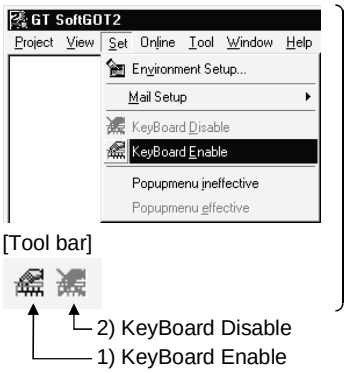
- The mail history cannot be referenced if the data does not exist.
  In order to create a mail history, enable "Create mail history" in the Mail Setup dialogue box.
  Refer to Section 6.4.4 for a description of the Mail Setup dialogue box.
- The mail history data is not deleted even if GT SoftGOT2 is closed.
  The user should delete any history data that is no longer necessary.

6.5 Keyboard input function

The following operations can be performed using the keyboard input function.

- Input operations using the numerical input function and the ASCII input function can be performed from the keyboard.
- The numerical input function, ASCII input function, data list display function, alarm list display function and alarm history display function can be executed from the keyboard by assigning key codes to function keys (F1 to F8, [Shift]+F1 to [Shift]+F8).

6.5.1 Keyboard Input Enabling/Disabling Procedure



1) Input from the keyboard is disabled by default. Therefore, if you want to input from the keyboard, select one of the following.
   - "Set" - "KeyBoard Enable"
   - "KeyBoard Enable" on tool bar
   - "Mail" - "KeyBoard Enable" by right-clicking the mouse.

   (Refer to Section 4.2 for right-clicking the mouse)
2) If you want to disable keyboard input again, select one of the following.
   - "Set" - "KeyBoard Disable"
   - "KeyBoard Disable" on tool bar
   - "Mail" - "KeyBoard Disable" by right-clicking the mouse.

   (Refer to Section 4.2 for right-clicking the mouse)

6.5.2 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.

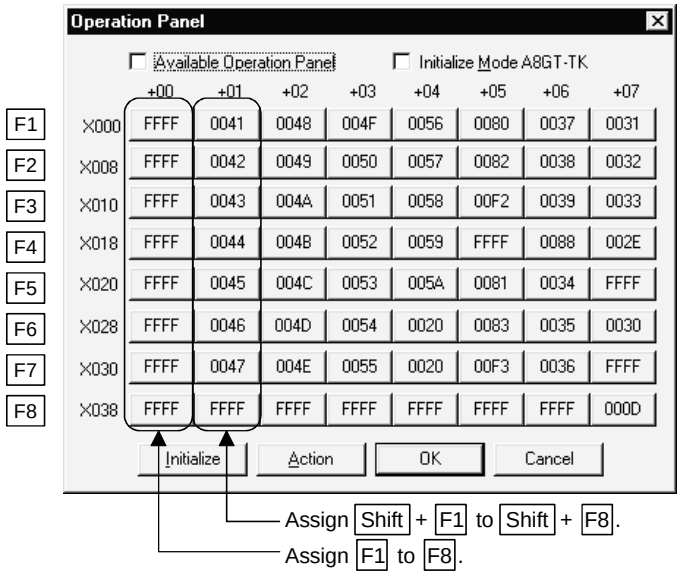
Type of key	Operation when entering a numeric value	Operation when entering ASCII code
[Back Space] key	Erases the least significant digit and shifts the entire content one digit to the right.	
[Enter] key	Confirms the current operation, writes to a device, and closes the current dialog box.	
[Esc] key	Displays/erases the cursor.	
[-] key	Inputs a minus sign.	
[.] key	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.	
[Delete] key	Erases a character being input.	

6.5.3 How to Use the Function Keys

The numerical input function, ASCII input function, data list display function, alarm list display function and alarm history display function can be executed from the keyboard by assigning key codes to function keys (F1 to F8, [Shift]+F1 to [Shift]+F8).
For more information about the key codes of each function, refer to GT Designer2 Version□ Reference Manual.

(1) Assigning the key codes

Assign key codes to the Edit Operation panel dialog box of GT Designer2.



6.5.4 Precautions for Use

(1) When a window screen is displayed over 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) Do not set up multiple alarm list display functions or do not set up both the alarm list display function and the alarm history display function on a single base screen.
If set up, the operations assigned to the function keys may not be performed properly.

(3) No operation is performed even if a key is pressed while the touch switch to prohibit simultaneous key pressing is ON.

(4) If any key input is performed while executing screen save, the screen save is cancelled. (The key entered does not operate as the key input function.)

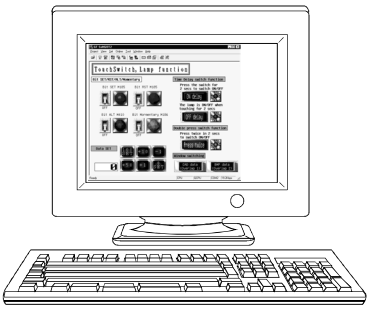
(5) If both key code “000D” (Enter key) and operation setting are specified to a function key using the numerical input function or the ASCII input function, the operation specified by the operation setting will not be performed.

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

6.6 Full Screen Mode Function

The full monitor screen of GT SoftGOT2 can be displayed on the personal computer screen.

When the full screen mode function is not used



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

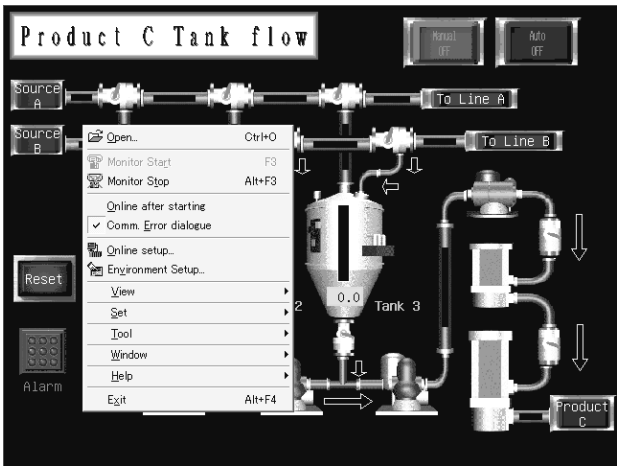
- When using the full screen mode function, such operations as exiting from GT SoftGOT2 cannot be performed, since the menu bar, toolbar and status bar of GT SoftGOT2 are hidden.
  To perform operations of the menu bar and toolbar, use the mouse right-click menu.
- If the full screen mode function is canceled, the toolbar and status bar remain hidden.
  To display them, perform menu operation or right-click a mouse.

6.6.1 Full screen mode function 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.

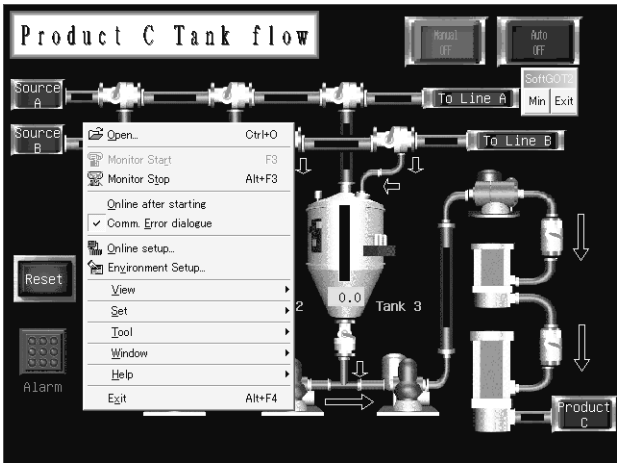


<Operation procedure>

1) The operations performed on the menu bar and toolbar can be performed by right-clicking a mouse.
2) Double-click on the monitor screen with holding down the [Shift] key to minimize the screen.
3) Press the F12 key (function key) to exit from GT SoftGOT2.

(2) Full screen 2

A monitor screen is displayed fully on the screen, and a small dialog is displayed. GT SoftGOT2 can be minimized/exited in the small dialog.
Since GT SoftGOT2 can be exited on the monitor screen, it can be used for the panel computer where a mouse and keyboard are not connected.

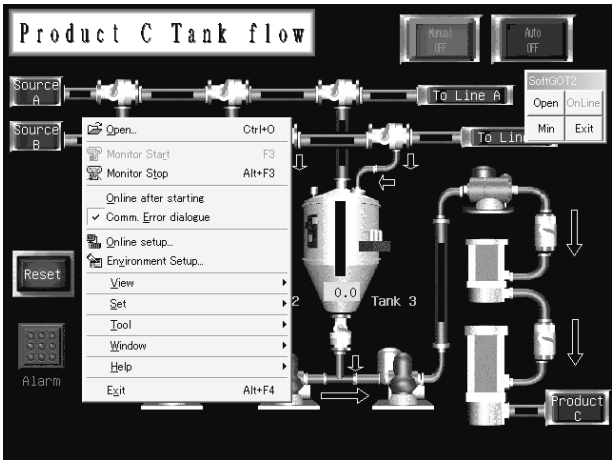


<Procedure for operation>

1) The following operations can be performed in the small dialog.
   • Min: Minimizes GT SoftGOT2.
   • Exit: Exits GT SoftGOT2.
2) The operations performed on the menu bar and toolbar can be performed by right-clicking a mouse.
3) Double-click on the monitor screen holding down the [Shift] key to minimize the screen.
4) Press the F12 key (function key) to exit from GT SoftGOT2.

(3) Full screen 3

A monitor screen is displayed fully on the screen, and a small dialog is also displayed. GT SoftGOT2 can be opened/monitored/minimized/exited in the small dialog.
Since GT SoftGOT2 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>

1) 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 SoftGOT2.
   • Exit: Exits GT SoftGOT2.
2) The operations performed on the menu bar and toolbar can be performed by right-clicking the mouse.
3) Double-click on the monitor screen holding down the [Shift] key to minimize the screen.
4) Press the F12 key (function key) to exit from GT SoftGOT2.

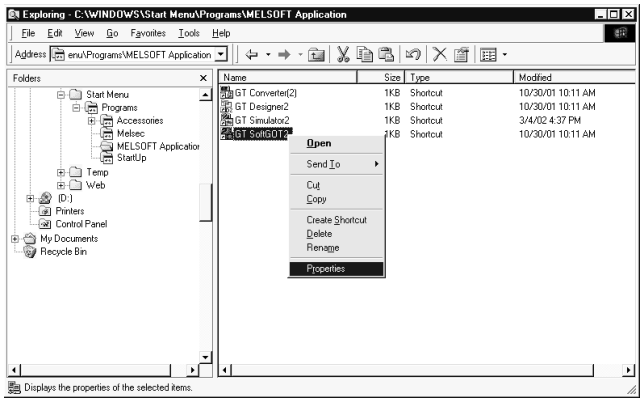
POINT

Turning ON the GOT internal device (system information area of GT SoftGOT2: GS500.b0) exit GT SoftGOT2.
By setting the above device as a touch switch, GT SoftGOT2 can be exited without using a mouse and keyboard.
For details of the GOT internal device, refer to the GT Designer2 Version□ Reference Manual.

6.6.2 Setting method

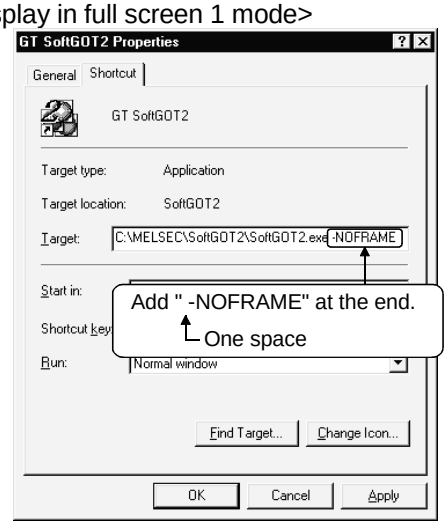
The full screen mode can either be set before or after starting GT SoftGOT2.

(1) Method of setting before starting GT SoftGOT2



1) Choose the GT SoftGOT2 icon in the C:/Windows/startmenu/program/MELSOFT application and right-click the mouse to select the [Properties] menu.
(If the GT SoftGOT2 starting icon was not registered at the time of installation, create the shortcut of the GT SoftGOT2 execution file (.EXE).)

<For display in full screen 1 mode>



2) As the GT SoftGOT2 properties appear, choose the shortcut tab and add the keyword of the mode to be used to "Target".
   • Full screen 1: " -NOFRAME"
   • Full screen 2: " -NOFRAMEDLG"
   • Full screen 3: " -NOFRAMEDLGMENU"

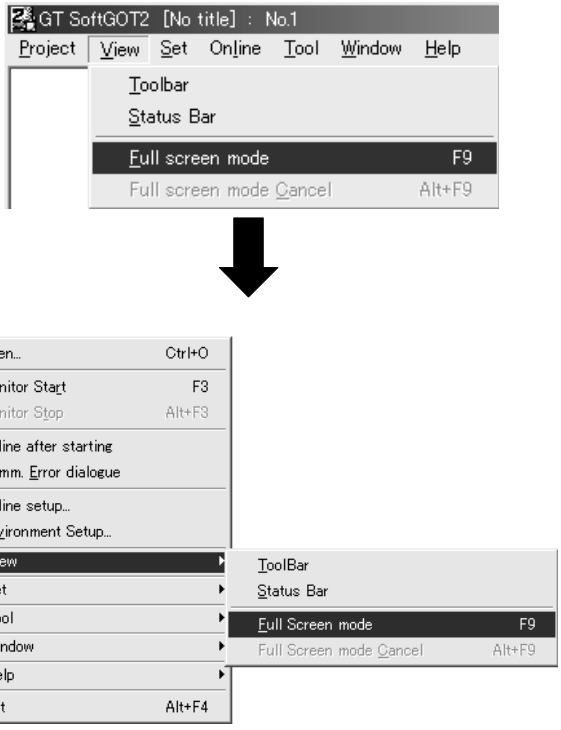
3) After addition, click the [OK] button.

4) When GT SoftGOT2 is started next, GT SoftGOT2 is started in the full screen mode.

5) When you want to cancel the full screen mode, delete the keyword added to "Target".

(2) Method of setting after starting GT SoftGOT2

POINT
• This setting is also made valid when exiting and restarting GT SoftGOT2. • When the full screen mode is set after the start up of GT SoftGOT2, GT SoftGOT2 is displayed on the full screen 1 mode. When display GT SoftGOT2 on the full screen 2 or 3 mode, set the full screen mode by the method (1). • When you have set the full screen mode by the method (1), the full screen mode cannot be cancelled by this method. To cancel the full screen mode, delete the keyword that was added to the link destination in (1).



1) Choose either of the following.
   • "View" - "Full screen mode"
   • "View" - "Full screen mode" by right-clicking a mouse.
   (Refer to Section 4.2 for right-clicking a mouse)

2) GT SoftGOT2 is displayed on the full screen 1 mode.

3) To cancel the full screen mode, right-click a mouse and select "View" - "Full screen mode cancel".

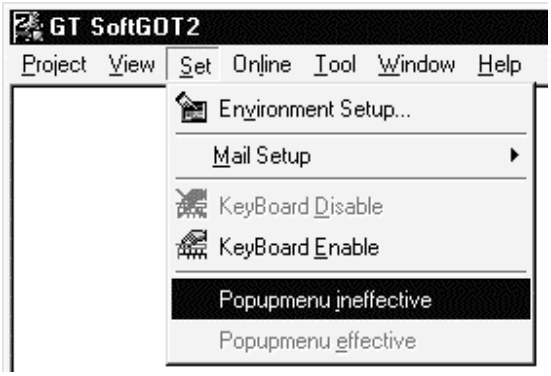
6.6.3 Precautions for use

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

6.7 Disable/Enable of Popupmenu

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 SoftGOT2.

6.7.1 Setting method



1) Choose either of the following.
   • "Set" - "Popupmenu ineffective"
   • "Set" - "Popupmenu ineffective" by right-clicking the mouse.
   (Refer to Section 4.2 for right-clicking the mouse)

2) The right-click of the mouse is disabled.

3) When you want to enable the right-click of the mouse again, choose "Set" - "Popupmenu effective".

6.7.2 Precautions for use

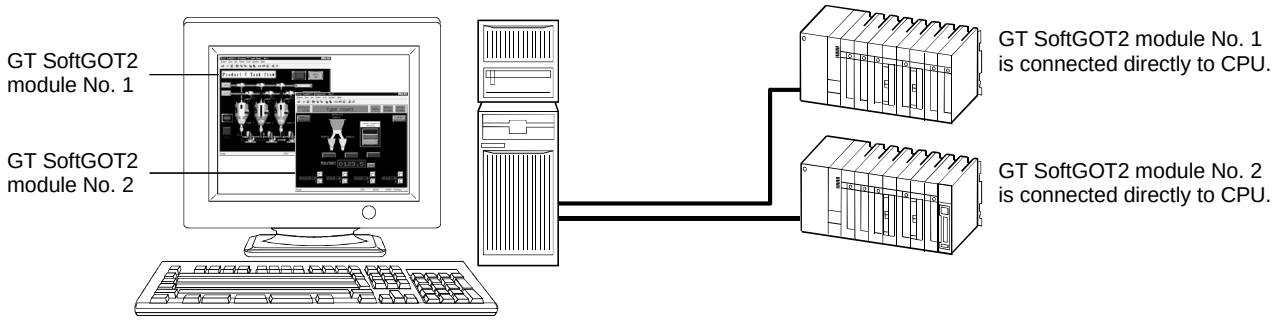
(1) When the full screen mode and Poppuppmenu disable are set, the operations of the menu bar and mouse right-click menu cannot be performed. Therefore, the pop-up menu cannot be enabled until the full screen mode is canceled.
When you want to enable the pop-up menu, cancel the full screen mode in the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

   (a) When the keyword of the full screen mode was added to the property of the GT SoftGOT2 icon.
   After exiting GT SoftGOT2 (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.

6.8 Multiple Startups

Multiple GT SoftGOT2's can be started on a single personal computer.
Each GT SoftGOT2 starts as "module No. n" and can be monitored in a different connection form.
(The module No. is displayed on the title bar. (Whether the module No. is displayed or hidden can be selected in Environment Setup.)

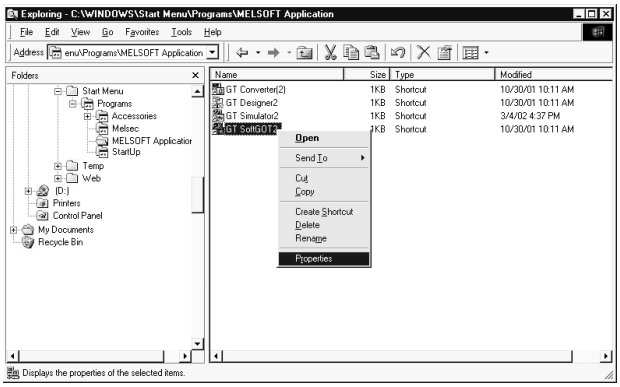


(1) Starting method

Multiple startups can be executed in the following methods.

(a) Startups in order of module numbers
When GT SoftGOT2 is started in the normal starting method, they are started in order of module numbers, No. 1, No. 2, No. 3 ...

(b) Startup of the specified module No.
When the specified module No. (e.g. No. 3 only) is to be started, it can be started in the following procedure.

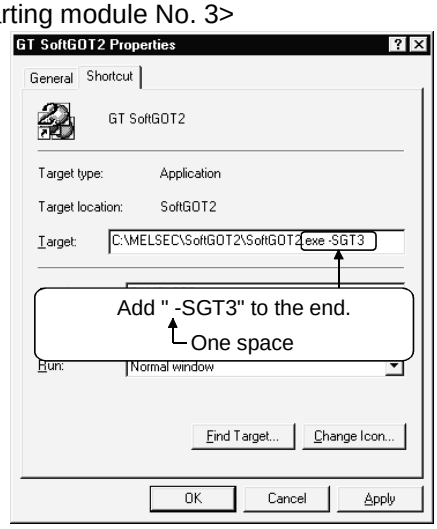


1) Select the GT SoftGOT2 icon in the C:\Windows\Start Menu\Programs\MELSOFT Application, click the right mouse button, and select the [Property] menu.
(When the icon for GT SoftGOT2 startup was not registered to the Start Menu during installation, create the shortcut of the GT SoftGOT2 execution file (.EXE).)

(To next page)

(From previous page)

<When starting module No. 3>



2) As GT SoftGOT2 Property is displayed, select the shortcut tab and add " -SGTn" to "Target".
   * n indicates the specified module No.
   Example: When starting module No. 3: " -SGT3"
3) After making addition, click the OK button.
4) When GT SoftGOT2 is started next time, it is started with the specified module No.
5) When not specifying the module No., delete the keyword added to "Target".

POINT
When it is desired to specify and start multiple GT SoftGOT2's, copy the above icon several times and create a shortcut key for each module No.

6.8.1 Precautions for use

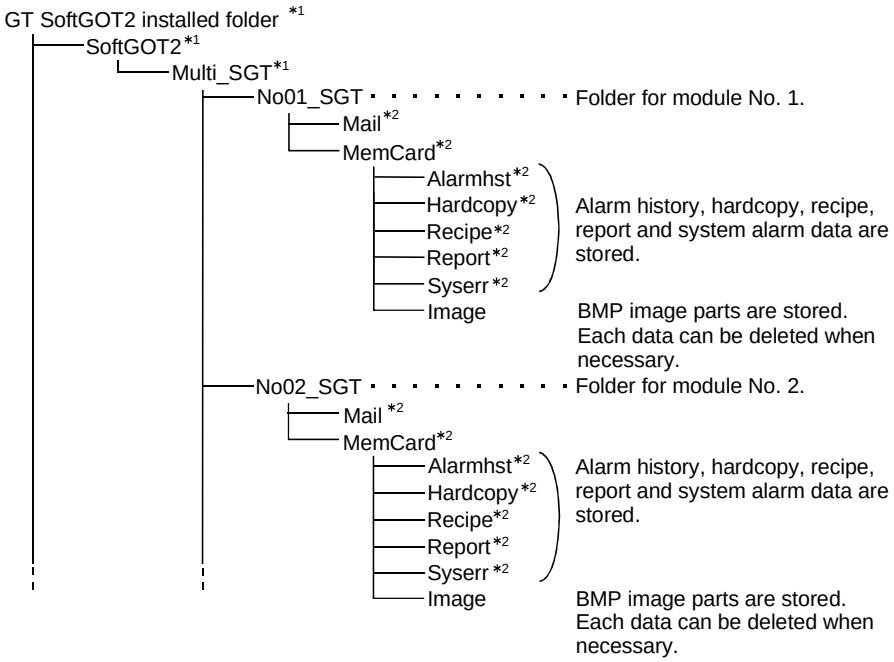
(1) Multiple startups can be made for up to 99 modules.
Note that multiple startups will decrease the monitor speed according to the personal computer performance.
(Around four modules as a guideline)

(2) When multiple GT SoftGOT2's are started up on a full screen display, GT SoftGOT2's other than on the front become inoperative.
To operate GT SoftGOT2's other than on the front, click the right mouse button and choose "Window" - "Cascade/Minimize All Window/Move Window".

(3) The GOT internal devices are managed on a module basis.
They cannot be shared between the modules.

(4) If multiple GT SoftGOT2's have been started, there is one dialup line for each personal computer.
(When module No. 1 performs dialup, the other modules use the line of module No. 1.)

(5) Memcard folder (alarm history, recipe, report print) is created in the folder of each module.



∗1 If this folder is deleted, GT SoftGOT2 will not start
When it has been deleted, GT SoftGOT2 must be reinstalled.

∗2 If this folder is deleted, GT SoftGOT2 may not operate properly.
When it has been deleted, delete the entire module folder (No**_SGT).
The module folder will be regenerated at the next startup.

∗3 While monitoring is in progress using GT SoftGOT2, do not delete any folders and files that can be deleted.

6.9 Moving the Window

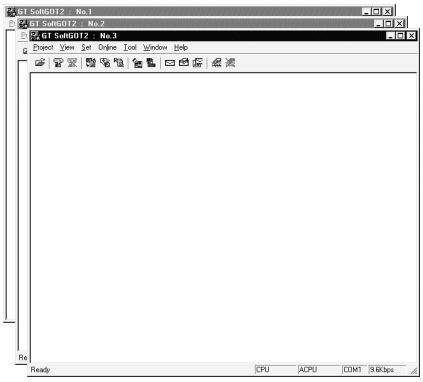
GT SoftGOT2 can be moved by operating the mouse.
GT SoftGOT2 can also be moved when the full screen display function, where the title bar is not displayed, is used.

6.9.1 Window movement types

There are the following window movement types.

(1) Cascade

One started GT SoftGOT2 is displayed over another. (Depending on the Windows® specifications, GT SoftGOT2's may not be displayed in order of module numbers.)



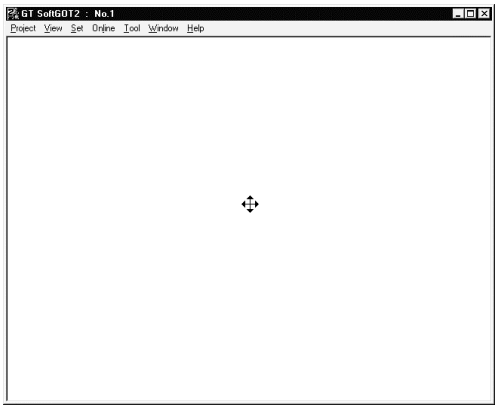
(2) Minimize All Windows

Started GT SoftGOT2's are all minimized.

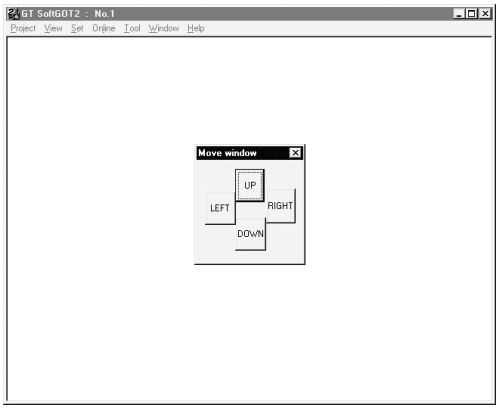
(3) Move Window

A window is moved in either of the following methods.
Set the moving method in Environment setup.
Refer to Section 5.6 for details of Environment setup.

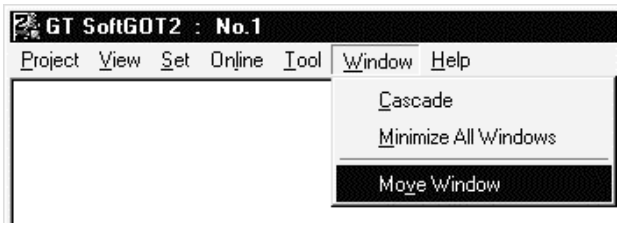
- Movement with mouse
  Setting the cursor of the mouse to the Move mode and moving the mouse also moves GT SoftGOT2 with the motion of the mouse.
  Clicking the mouse cancels the Move mode.



- Movement with Move buttons
  Clicking the UP, DOWN, LEFT or RIGHT button in the "Move window" dialog box moves GT SoftGOT2 2 on a 5-dot basis.
  A window can also be moved on a panel computer that cannot use a mouse.



6.9.2 Setting method

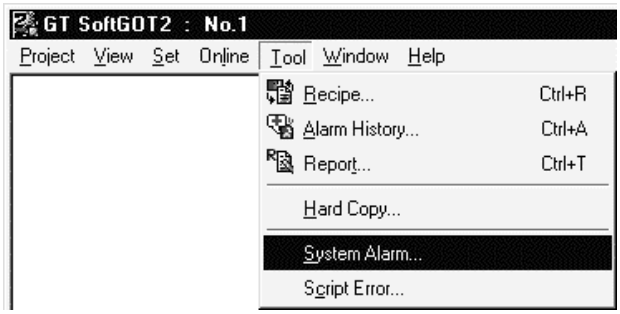


1) When making option setting, choose either of the following.
   - "Window" - "Cascade" / "Minimize All Windows" / "Move Window"
   - "Window" - "Cascade" / "Minimize All Windows" / "Move Window" by right-clicking the mouse. (Refer to Section 4.2 for right-clicking the mouse.)
2) Move GT SoftGOT2 in the selected moving method.

6.10 System Alarm Display

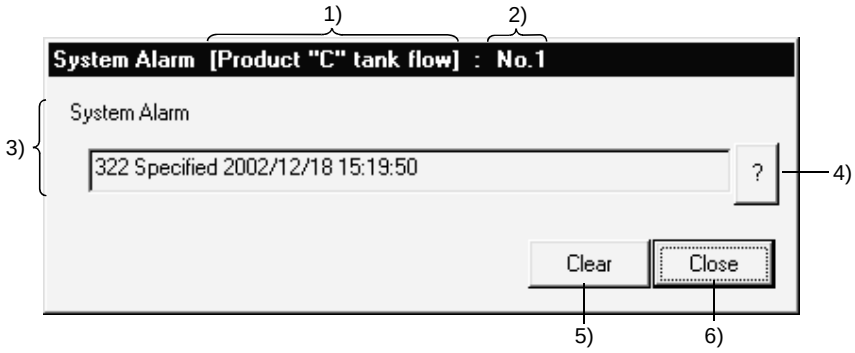
If the alarm list display function (System Alarm) is not set in the monitor data, a system alarm can be confirmed on GT SoftGOT2.

6.10.1 Operating procedure



1) When making option setting, choose either of the following.
   - "Tool" - "System Alarm"
   - "Tool" - "System Alarm" by right-clicking the mouse.
     (Refer to Section 4.2 for right-clicking the mouse.)
2) The System Alarm dialog box is displayed.

6.10.2 Definition of System Alarm dialog box



No.	Name	Description
1)	Project name	The "Project name" and "Module No." are displayed according to the settings of "Title Bar" in Environment setup.
2)	Module No.	
3)	System Alarm	The error definition is displayed.
4)	?	How to remedy the error that has occurred is displayed.
5)	Clear	Used to clear the displayed error message. If errors have occurred consecutively, the message is redisplayed.
6)	Close	Used to close the System Alarm dialog box.

POINT

The system alarm that occurred on GT SoftGOT2 can also be sent by mail.
Refer to Section 6.4 for details of mail transmission.

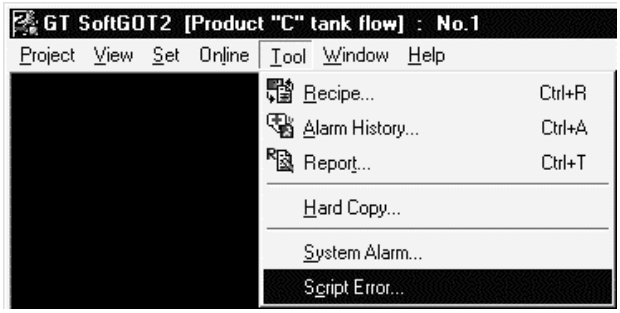
6.10.3 Precautions for use

(1) Only the errors of the GOT can be monitored.
When it is desired to confirm the errors of the CPU and network, set the alarm list display function (System Alarm) in the monitor data.

6.11 Script Error

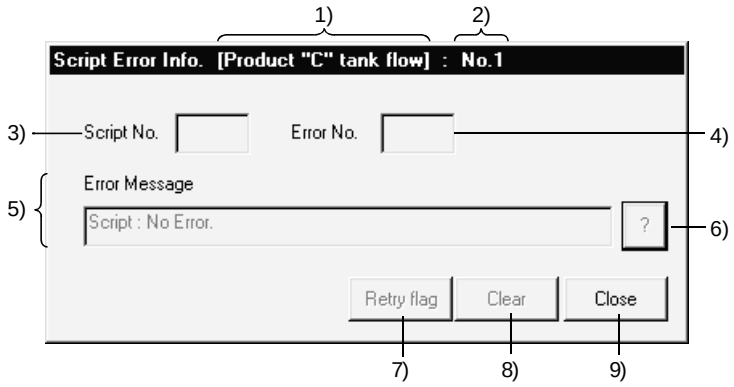
If the GS for script error information has not been set in the monitor data, the error of the script function can be confirmed on GT SoftGOT2.

6.11.1 Operating procedure



1) When making option setting, choose either of the following
   - "Tool" - "Script Error"
   - "Tool" - "Script Error" by right-clicking the mouse.
     (Refer to Section 4.2 for right-clicking the mouse.)
2) The Script Error Info dialog box is displayed.

6.11.2 Definition of Script Error Info dialog box



No.	Name	Description
1)	Project name	The "Project name" and "Module No." are displayed according to the settings of "Title Bar" in Environment setup.
2)	Module No.	
3)	Script No.	The script No. where an error has occurred is displayed.
4)	Error No. *	The error code of the error that has occurred is displayed.
5)	Error Message	The error definition is displayed.
6)	?	How to remedy the error that has occurred is displayed.
7)	Retry flag	Used to execute the script again.
8)	Clear	Used to clear the displayed error message. If errors have occurred consecutively, the message is redisplayed.
9)	Close	Used to close the Script Error Info dialog box.

* Depending on the error that will occur, the script No. may become "0".
  For details of the script function error, refer to the GT Designer2 Version□ Reference Manual.

MEMO

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Chapter 7 TROUBLESHOOTING

7.1 Error messages

The following table indicates the error messages displayed during use of GT SoftGOT2, their definitions and causes, and corrective actions.

Type	Error message	Definition and cause	Corrective action
Download	This operating environment is unapplicable for 'GT SoftGOT2'.	Access could not be made to the file necessary to operate GT SoftGOT2.	• Check whether you logged on to Windows® XP Professional or Windows® XP Home Edition as the user who has the attributes of the administrator (for computer management). • Check whether "user's easy switching function" of Windows® XP Professional or Windows® XP Home Edition is being used or not.
		• Last time, GT SoftGOT2 was exited in an illegal status. • Illegal process is operating.	After restarting the personal computer, restart GT SoftGOT2.
	GOT type of the project is not correct.	• GOT type of the read project is other than the GOT-A900 series (GOT-F900 series). • The project's GOT type has been selected to GOT with resolution of 640 x 480 dots or less.	• Change the GOT type of the project created on GT Designer2 to the GOT-A900 series. •Change the GOT type of projects created with GT Designer2 to GOT with a resolution of 640 x 480 dots or more.
	PLC type of the project is different from setting 'GT SoftGOT2'.	PLC type of the read project is different from the setting on GT SoftGOT2.	Make correction so that the PLC type of the project created on GT Designer2 is the same as the CPU type of GT SoftGOT2.
	Cannot access the project file.	Access to the specified project file could not be made.	Check the access right of the project file (e.g. a9gotp.got).
	Failed in reading. Please retry after checking the following. • Data size and number of the data. • Capacity of free disk. • Please close Dialogue if it is displayed. • Waiting for 'Offline mode'. Please wait at several seconds. • File access privilege of the project file. • Project file is illegal or destroyed.	Screen data size is too large.	Check to see if the screen data size is not more than 33M bytes.
		Hard disk is short of free space.	Increase the free space of hard disk to more than 100M bytes.
		Since the message such as "This function can't be used now." is displayed on the screen, read cannot be performed.	After choosing "OK" in the dialog box to erase the on-screen message, perform read again.
		Waiting for the end processing of the script function. (Waiting for offline mode)	After the message "Off-Line processing execution" appears on the screen, perform read again.
		Access to the project file cannot be made.	Check the access right of the project file (e.g. a9gotp.got).
		Project setting is illegal (no script file, script grammatical error)	• Check whether a script file exists in the script setting. • Check for any grammatical error in the script.
		The project file is not the one for the GOT. The project file is corrupted.	Use a correct project file or normal project file.
	Failed in initialize for reading. Please retry after checking the following. • Capacity of free disk. • File access privilege of the project file. • Project file is illegal or destroyed.	Hard disk is short of free space.	Increase the free space of hard disk to more than 100M bytes.
		Access to the project file cannot be made.	Check the access right of the project file (e.g. a9gotp.got).
		Project setting is illegal (no script file, script grammatical error)	• Check whether a script file exists in the script setting. • Check for any grammatical error in the script.
		The project file is not the one for the GOT. The project file is corrupted.	Use a correct project file or normal project file.

Type	Error message	Definition and cause	Corrective action
Online	The simulation cannot be ended. Please retry after shutting Dialogue on the simulation screen	Since the message such as "This function can't be used now." is displayed on the screen, you cannot exit from GT SoftGOT2 properly.	After choosing "OK" in the dialog box to erase the on-screen message, exit from GT SoftGOT2 again.
		There is the other internal cause than the above that does not allow you to exit from the software.	After choosing "OK" in the dialog box, wait for some time and exit from GT SoftGOT2 again.
	Please do logoff/the termination of Windows after ending 'GT SoftGOT2'.	Logoff/exit processing of Windows was executed before exiting from GT SoftGOT2.	After exiting from GT SoftGOT2, execute logoff/exit processing of Windows.
	This function can't be used now.	You selected the function unusable with GT SoftGOT2.	Press "OK".
Communication	check communication	Cable is disconnected. Cable is open.	Check the cable.
		Transmission speed (baudrate) is incorrect.	Check the transmission speed (baudrate) of the CPU.
		Connection target PLC differs from the PLC type of the project.	Check the connection target PLC.
	Communication error occurred. • Retry : Communication begins again. • Cancel : Communication is interrupted. Please reexecute 'GT SoftGOT2', if communicate agin.	Cable is disconnected. Cable is open.	After checking for the left causes, choose the button in the displayed dialog box. "Retry" Restarts communication. "Cancel" After Cancel is selected, all communications will not be made. When performing monitor, restart GT SoftGOT2.
		Transmission speed (baudrate) is incorrect.	
		Connection target PLC differs from the PLC type of the project.	
License key (for DOS/V personal computer)	The license key is necessary to operate GT SoftGOT2 ends at about 10 minutes when executing without installing the license key.	The license key is not installed.	Check that the license key is installed.
	The license key is not installed. GT SoftGOT2 is ended.		
License key FD (for PC CPU module)	This License key floppy disk is only for PPC-CPU.	The license registration destination is not the PC CPU module.	Register the license to the PC CPU module with the license key FD.
	This is a illegal License key floppy disk. Please insert the master floppy disk.	The floppy disk of the copied license key FD is inserted.	Register the license with the regular license key floppy disk.
	Failed to disable the product. Please use the License key floppy disk which you used to enable the product for disabling too.	An attempt was made to register a new license to the personal computer CPU module where the license has already been registered.	Register a new license after canceling the license with the license key FD that was used to register the license.
	Failed to enable the product, because this License key floppy disk has no license.	An attempt was made to register the license with the license key FD that does not hold the license.	Register the license using the license key FD that holds the license.
	Failed to write on floppy disk. Please remove the write protect of floppy disk.	The license key FD is write-protected.	Write-enable the write-protected license key FD.
Others	Access to license key is denied. The following may be the possible causes. • The system driver has not been installed. • The parallel port is unusable or does not exist.	The system driver has not been installed.	Install the system driver.
		The parallel port is unusable.	Set the personal computer, Windows®, etc. to make the parallel port usable.

POINT

Regarding the communication time-out (system alarm 402) during Ethernet connection.
If a part of communication is in the condition of time-out error, "402 communication time-out" is displayed on the system alarm. (The dialog of communication will not be displayed.)
When the above error occurs, confirm the following.
• N/W No, PC No and IP address are correctly set for Ethernet setting.
• All of the other stations specified for Device setting are available.
• If the heavy load of PLC prevents the communication from completing within the time-out value set in advance, set the value larger.

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7.2 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.
	The parallel port may not be used unless the printer driver is set for each local port when using the Microsoft® Windows NT® Workstation 4.0 operating system.	Install the necessary printer drivers. (Complete the printer settings even if a printer is not used.)
	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.)

7.3 Troubleshooting Related to Mail Transmission

(1) Troubleshooting

No dialogue boxes are displayed by GT SoftGOT2 for errors related to mail transmission and dialup.

Problem	Definition and cause	Corrective action
Mail is not sent.	The mail send setting of GT SoftGOT2 has not been made.	Make the mail send setting of GT SoftGOT2. (Refer to Section 6.4.)
	Mail send setting has been made on GT Designer2.	
	The mail send setting method is wrong.	Reexamine the mail send setting of GT SoftGOT2.

(2) Error code

No dialogue boxes are displayed by GT SoftGOT2 for errors related to mail transmission and dialup.
Refer to the mail history data for error codes and error messages.
Refer to Section 6.4.5 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

"SMTP Error Report : **********" is displayed in the mail history data if an error is reported from the mail server.
Consult the server administrator if this type of error occurs.

7.4 Error Code and Error Message List

The error codes and messages displayed by the system alarm are indicated below.

Error Code	Error Message	Definition	Action
303	Too many monitor points specified	The number of objects set to the screen to be displayed is too many to reserve the work area of the system	Reduce the number of objects
304	Too many trigger points specified		
305	Too many print-out points specified	The number of objects set to the screen for print-out by the hard copy function is too many to reserve the work area of the system	
306	No monitor data	Screen data has not been downloaded to the built-in memory	Download the screen data to the built-in memory
307	No monitor device setting	Object monitoring devices not determined	Determine object monitoring devices
308	Specified comment not found or outside range	The comment number set for comment display does not exist or the comment file does not exist	Create the comment file and download it to the GOT
309	Device read error	Device data read caused an error	Correct device
310	Specified monitor data not found or outside range	(1) The specified base screen/window screen does not exist in the project data. (2) The specified base screen/window screen is outside the permissible range.	(1) Specify the existing base screen/window screen. (2) Specify the existing base screen/window screen.
311	More than 1024 alarms in alarm history	The alarms in the history has exceeded the largest number of points (1024 points) which the alarm history display function can monitor	Reduce the alarms in the alarm history (Remove the history recovered)
312	The collected time has exceeded upper limit	The collected time exceeded the upper limit when the following setting had been made for the scattered chart. "Store memory" "Accumulate/Average"	1. Establish "Clear trigger" set for the scattered chart. 2. Set "Operation at frequency over time" of the scattered chart for "Initialize and continue".
315	Device write error	Data write to device caused an error	Correct device
316	Operation result value cannot be displayed/entered	The data operation result has exceeded the range which can be represented by the device type	Reconsider the data operation formula so that the operation result does exceeded the range which can be represented by the device type
320	Specified part not found or outside range	The part number set for part display does not exist.	Confirm the part number specified for the part display in the screen data
321	Unauthorized station number specified for monitor device	The station number specified as a monitor destination does not exist or is not the station to be monitored	Confirm the monitor destination station number in the screen data
322	Specified device outside range	The device number to be monitored is outside the permissible range of the corresponding PLC CPU	Set the monitored PLC CPU and parameters to set the device in the monitorable range
323	Specified file register outside range		
324	AD51H-dedicated device used without AD51H	The AD51H-dedicated device was monitored in the system which does not use the AD51H	Incorporate the AD51H into the system or stop monitoring of the AD51H-dedicated device
325	Specified special module not loaded	The specified special module is not loaded	Check the loading status of the specified special module
330	PC card capacity short	The PC card does not have enough capacity	Check the capacity
331	PC card not loaded or memory card access switch OFF	The PC card is not loaded or the memory card access switch is OFF	1. Load the PC card 2. Turn ON the access switch
332	Format error	The PC card is not formatted	Format the PC card
333	PC card write-protected to disable write	The PC card is write-protected	Make the PC card write-enabled
334	PC card fault	PC card failure	Change the PC card
335	PC card battery voltage low	The battery voltage of the PC card is low	Change the battery of the PC card
340	Printer in error or power off	The printer is faulty or its power is not on	1. Check the printer 2. The Printer switch it on
341	Printer fault		

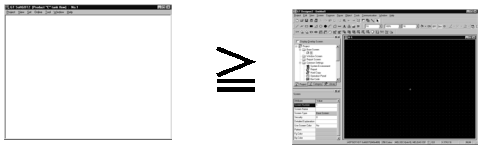
Error Code	Error Message	Definition	Action
342	The fuse of KBF module was blown	A fault occurred in the external I/O interface unit.	1. If external power (24VDC) is not supplied, supply external power. 2. If external power is supplied, change the external I/O interface unit.
343	KBF module status is abnormal	The external I/O interface unit is not mounted properly.	Mount the external I/O interface unit properly.
345	BCD/BIN conversion error	It has been attempted to display/enter a value that cannot be BCD/BIN converted	1. Change the device data to be displayed into a BCD value 2. Enter the value of 4-digit integer
350	RS-232C communication error	The cable used to connect the GOT and personal computer is faulty	1. Check for an unplugged communication cable connector 2. check the cables used
351	Recipe file abnormal	Recipe file data are not normal	1. Check recipe file data in PC card 2. Start GOT after deleting recipe file in PC card
352	Recipe file generation error	Recipe file generation failed	Start GOT after loading PC card
353	Recipe file write disabled	Data write to recipe file failed	1. Check write protect of PC card 2. Check PC card capacity 3. Do not unload PC card during recipe operation
354	Error during recipe file write	Error occurred during recipe file write	Do not unload PC card during recipe operation
355	Error during recipe file read	Error occurred during recipe file read	1. Do not unload PC card during recipe operation 2. Check recipe file data (device values) in PC card
356	File system error occurred in the PLC	When the file register name is designated and then the recipe function is operated, an error occurs in the designated file register.	1. Check the file register name, and then operate the recipe function again. 2. Apply Format PLC memory to the designated PLC drive with the GX Developer, and then operate the recipe function again.
357	The specified drive of PLC is abnormal	When the file register name is designated and then the recipe function is operated, there is a fault in the PLC drive.	1. Check the designated PLC drive, and then operate the recipe function again. 2. Apply Format PLC memory to the designated PLC drive with the GX Developer, and then operate the recipe function again.
358	File of PLC access failure	When the file register name is designated and then the recipe function is operated, the PLC file register could not be accessed.	1. Check the designated PLC drive/ file register name, and then operate the recipe function again (If drive 0 was designated, change to a different drive, and then operate the recipe function again). 2. Check whether the memory card is write-protected, and then operate the recipe function again.
359	Processing is from another peripheral device	When the file register name is designated and then the recipe function is operated, other peripheral devices begin processing for the file register.	Wait until the peripheral devices finish operating, and then operate the recipe function again.
360	Division error due to divisor of 0	Divisor 0 occurred in the data operation formula	Reconsider the data operation formula to avoid the divisor of 0
370	Contradiction in magnitude relationship of upper and lower limit values	Upper and lower limit values have been set as [upper limit ≤ lower limit]	Check the upper and lower limit value setting and correct them to be [upper limit ≥ lower limit]

Error Code	Error Message	Definition	Action
402	Communication time-out	Time-out error occurred during communication	1. Check for any disconnected cable or improperly fitted communication board/communication unit 2. This may occur if the programmable logic controller load is increased while accessing another station. In this case, move the other station's data to the local station's programmable logic controller, and monitor with the local station. 3. If the sequence scan is long, insert a COM command. 4.Confirm whether the [Device entry mode] of the GT SoftGOT2 is checked. If checked, confirm whether the device set by the monitor data is within the range.
403	SIO request status error	At the time of receive during RS-422/RS-232C communication, any of overrun error, parity bit error and framing error occurred.	Check the cable connection status, the communication board/communication unit mounting status, the PLC status, and the communication link transmission speed.
406	Specified station doesn't access for out of range	(1) The station number specified for CC-Link connection (via G4) is other than that of the master/local station. (2) Access was made to the CPU other than the QCPU.	Check the station number of the monitor screen data.
407	Other network accessed by MNET10 module	Access was made to the other network at the time of MELSECNET connection (network system)	Check the network number in the screen data to avoid access to the other network.
421	The specification of E71 cannot be written	The Ethernet module on the PLC side has been set for write disable.	Set the PLC side Ethernet module for write enable.
422	It is not communicate between the CPU and E71	The CPU is faulty or communication cannot be made between the CPU and PLC side Ethernet module.	Check the CPU for any fault using GX Developer or like. (Check the buffer memory.)
423	Information is insufficient in network table	The station number set as the screen data does not exist in the Ethernet setting of GT Designer.	Add the station number set as the screen data to the Ethernet setting of GT Designer. (Use the station number of the PLC side Ethernet module set in the parameter setting of GX Developer.)
424	The same bureau is set by GOT and monitor data.	The station number set on the utility screen of the GOT is the same as the station number set in the Ethernet setting of GT Designer (station number of the PLC side Ethernet module) or the station number set as the screen data.	Check the following data and do not use the same station number. 1. Check the station number of the GOT on the utility screen of the GOT. 2. Check the station number set as the screen data. 3. Check the station number set in the Ethernet setting. (Use the station number of the PLC side Ethernet module set in the parameter setting of GX Developer.)
448	Devices outside file register and other ranges included	Devices specified are outside file register or buffer memory range of QnACPU	Set PLC file registers. Also correct monitor devices
470	Communication destination faulty	During monitoring of the other station via MELSECNET/10, a fault occurred in the corresponding communication station	Check whether the corresponding communication station has been set correctly in the management station (reconsider the parameters, switch setting, etc.)
499	CPU communication error	Other communication error	Check for any disconnected cable or improperly fitted communication unit

APPENDIX

Appendix 1 Applicable monitor data

Make sure to use the same or newer version of GT SoftGOT2 than that of GT Designer2 used to create the monitor data.
When the older version is used, some problems may occur such as file is not able to be opened and/or some functions/settings are invalid.



GT SoftGOT2 version ≧ GT Designer2 version

GT SoftGOT2 can open the monitor data created using GT Designer, irrespective of the software version.

<Monitor data compatibility>

The following table shows the compatibility between software versions.

Software used to open monitor data	Software used to create monitor data	
	GT Designer2	GT Designer
GT SoftGOT2	△	○
GT SoftGOT	×	△

○: Compatible.
△: When opening the monitor data by older software version, some functions/settings are invalid.
×: GT SoftGOT cannot open the GT Designer2 format files.
Use GT SoftGOT2.

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Appendix 2 List of Functions Added to Update GT SoftGOT2

POINT

GT SoftGOT2 is also compatible with the updates of GT Designer2 (common setting/object function, GOT function and other functions).
For the updates of GT Designer2, refer to the GT Designer2 Version□ Reference Manual.

The following table lists the functions added to up to Edition 23Z of GT SoftGOT2 Version 1.
The symbols in the table have the following meanings.
○: Usable
×: Unusable

Item	Description	Version1	
		02C	09K
Mail send	Sends a system alarm by mail.	○	○
Multiple starts	Starts multiple GT SoftGOT2's on a single personal computer.	○	○
Window movement	Moves GT SoftGOT2 with a mouse or in a dedicated window.	○	○
Error display	Displays a system alarm on GT SoftGOT2.	○	○
	Displays a script error on GT SoftGOT2.	○	○
File	Reads a file of GT Designer2 format.	○	○
Operating environment	Compatible with Windows® XP Professional and Windows® XP Home Edition.	○	○
Computer link connection	Supports the connection to QJ71C24N(R-2).	×	○

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GT SoftGOT2 Version1

Operating Manual

MODEL	SW1-SOFTGOT2-O-E
MODEL CODE	1DM210
SH(NA)-080400E-H(0601)MEE	

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