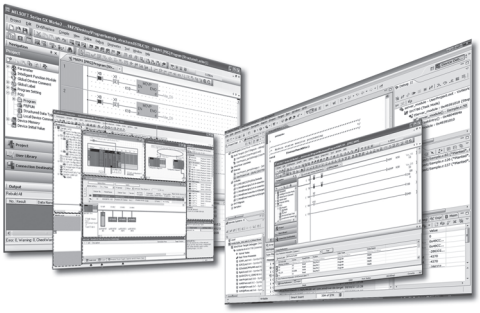
MITSUBISHI ELECTRIC

MELSOFT

Engineering Software

MX Component Version 4
Operating Manual

-SW4DNC-ACT-E



●SAFETY PRECAUTIONS●

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.
The precautions given in this manual are concerned with this product. For the safety precautions of the programmable controller system, refer to the User's Manual for the CPU module.

In this manual, the safety precautions are classified into two levels: "⚠ WARNING" and "⚠ CAUTION".

⚠WARNING	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 minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.
Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Design Instructions]

⚠WARNING

- When data change, program change, or status control is performed from a personal computer to a running programmable controller, create an interlock circuit outside the programmable controller to ensure that the whole system always operates safely.
  Furthermore, for the online operations performed from a personal computer to a programmable controller CPU, the corrective actions against a communication error due to such as a cable connection fault should be predetermined as a system.

⚠CAUTION

- The online operations performed from a personal computer to a running programmable controller CPU (forced output and operating status changes) must be executed after the manual has been carefully read and the safety has been ensured.
  The operation failure may cause the injury or machine damage.

●CONDITIONS OF USE FOR THE PRODUCT●

(1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
("Prohibited Application")
Prohibited Applications include, but not limited to, the use of the PRODUCT in;
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

OPERATING CONSIDERATIONS

This section explains the considerations in the following order.

1) Consideration of operating system and personal computer to be used
2) Consideration of installation and uninstallation
3) Programmable controller CPU-related considerations
4) Considerations for using of other MELSOFT products
5) Considerations for using of Ethernet modules
6) Considerations for using of CC-Link modules
7) Considerations for using of serial communication modules
8) Consideration of modem communication
9) Consideration of programming
10) Considerations for using of Microsoft® Excel®
11) Considerations for using of Microsoft® Access®
12) Considerations for using of VBScript
13) Considerations for using of Robot controller

Considerations of operating system and personal computer to be used

(1) Restrictions applied when a user without Administrator's authority operates MX Component

Note that the following restrictions are applied when a user without Administrator's authority operates MX Component.

(a) Communication Setup Utility

- The logical station number cannot be created, changed, or deleted.
- Communication settings cannot be imported.
- This utility cannot be started up if the communication settings are set using MX Component earlier than version 3.00A.*1

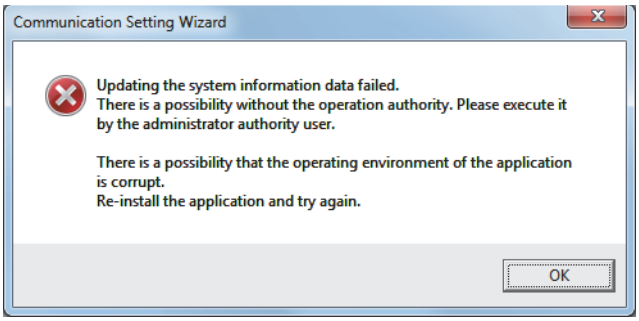
(b) PLC Monitor Utility

- This utility cannot be started up if the communication settings are set using MX Component earlier than version 3.00A.*1
- Device registration cannot be performed on the <<Entry Device>> tab.

(c) Communication board

- Various settings cannot be set on the CC-Link IE Controller Network, CC-Link IE Field Network, MELSECNET/H, and CC-Link board utilities.

*1 : If the following error message is displayed, start up and close the utility as a user with Administrator's authority. This operation enables a user without Administrator's authority to start up the utility.



(2) Resume and other functions of personal computer

A communications error may occur when communicating with the programmable controller CPU after setting the resume function, suspend setting, power-saving function, and/or standby mode of the personal computer. Therefore, do not set the above functions when communicating with the programmable controller CPU.

Considerations of installation and uninstallation

(1) Installation

When performing overwrite installation, install the software in the same folder where it is installed previously.

(2) Start menu

When MX Component is uninstalled, the item may remain in the start menu.
In this case, restart the personal computer.

(3) When downloading the installer

When downloading the installer, save the installer to a directory which does not include any space and execute it.

Programmable controller CPU-related considerations

(1) Considerations for performing USB communication

ON/OFF of a programmable controller CPU during communications with the programmable controller CPU may cause a communication error which cannot be recovered.
If it is not recovered, completely disconnect the USB cable and then reconnect it after 5 or more seconds.
(If this error occurs at the initial communication after the above operation, the function will be performed properly in and after the second communications.)

(2) Clock data of programmable controller CPU

(a) For QCPU (Q mode), LCPU, and FXCPU, the clock data setting can be set if the programmable controller CPU is in the RUN status.

(b) For QCPU (Q mode) and LCPU, the setting can be set regardless of the ON/OFF status of the time setting device "SM1028".

(c) The clock data can be set on FXCPUs with the built-in clock or FX_U/FX_{2C}/FX_{2NC} with the RTC cassette.

(d) Note that an error for transfer time occurs in the time setting.

(3) Restrictions on using FXCPU

(a) When FXCPU is used, the TN devices (timer present values) or CN devices (counter present values) cannot be accessed if the device numbers specified are split across 199 or earlier and 200 or later.

(b) Since FXCPU does not feature the PAUSE switch as the programmable controller CPU, an error is returned if remote pause is specified in SetCpuStatus.

(c) Note that specifying the first I/O number of a non-existing module and executing the WriteBuffer( ) method will not return an error.

(d) For the index registers (Z, V) of FXCPU, data cannot be written to 2 or more consecutive points using WriteDeviceBlock(). (Data may be written to only one point.)

(4) Serial communication function of Q00UJ/Q00/Q00U/Q01/Q01U/Q02UCPU*1

*1 : In this section, "serial communication function compatible CPU" indicates Q00UJ/Q00/Q00U/Q01/Q01U/Q02UCPU.

When the following conditions are all satisfied, communication between the personal computer and the serial communication function compatible CPU is set at 9600bps speed.

- The serial communication function of the connected CPU is valid.
- The transmission speed settings differ between the personal computer and the serial communication function compatible CPU side.

To increase the communication speed, match the transmission speed of personal computer with that of serial communication function compatible CPU.

(5) Considerations for using built-in Ethernet CPU

When resetting the programmable controller CPU during TCP/IP connection establishment (during opening) using MX Component, a communication error or receive error occurs at subsequent communication.
In this case, perform the close processing in the application that uses MX Component, and perform the open processing again.

(6) Considerations for using QSCPU

In order to protect the safety programmable controller system, functions to write data to buffer memory, to write/set devices, and to write clock data cannot be executed.

Considerations for using other MELSOFT products

(1) Considerations for performing GX Simulator communication

When resetting the programmable controller CPU during TCP/IP connection establishment (during opening) using MX Component, a communication error or receive error occurs at subsequent communication.
In this case, perform the close processing in the application that uses MX Component, and perform the open processing again.

(2) Considerations for performing MT Simulator2 communication

- After installing MT Component, install MT Developer2.
- The maximum number of connections*1 to MT Simulator2 is 4.

*1 : Including in MT Developer2.
Example) When two MT Developer2s and one MT Simulator2 are activated:
three connections can be established from MT Component.

Considerations for using Ethernet modules

(1) Resetting the programmable controller CPU during TCP/IP connection establishment

When resetting programmable controller CPU during TCP/IP connection establishment (during opening) using MX Component, a communication error or receive error occurs at subsequent communication.
In this case, perform close the processing in the application that uses MX Component, and perform the open processing again.

(2) Target existence check starting interval of Ethernet module

If the close processing (Close) is executed from the personal computer, the Ethernet module may not perform the close processing (Close). One of its causes is the cable disconnection.
If the open processing (Open) is executed from the personal computer with the Ethernet module not executing the close processing (Close), the open processing (Open) from the personal computer is not terminated normally until the Ethernet module performs a target existence check and executes the close processing (Close).
When terminating the open processing (Open) early from the personal computer, shorten the target existence check starting interval setting of the Ethernet module.
(The default setting of target existence check starting interval of the Ethernet module is 10 minutes.)

(3) Replacement of Ethernet module

If the Ethernet modules are changed during Ethernet communication due to debugging, failure or the like, the other node (personal computer) must be restarted.
(Because the Ethernet addresses (MAC addresses) differ between devices)

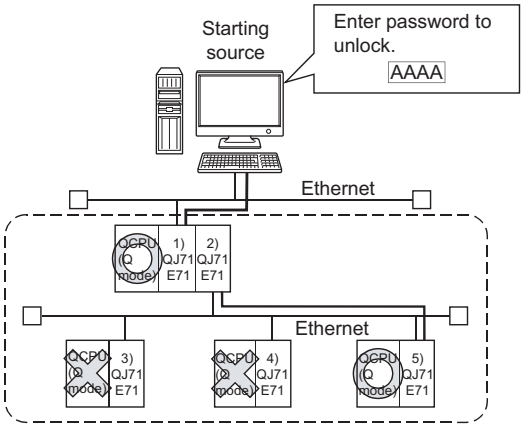
(4) Simultaneous access when using Q series-compatible Ethernet module

The following conditions should be satisfied when communication is performed simultaneously from multiple personal computers to the same module using the TCP/IP protocol.

- Q series-compatible E71 module (except QJ71E71-100) whose first five digits of the serial number is "02122" or higher and whose function version is B or later.
- Using GX Developer Version 6.05F or later, set "MELSOFT connection" in the Ethernet parameter [open system].

(5) Unlocking password when using QJ71E71

The range where the password can be unlocked by remote operation is up to the connection target station. If the password is also set on the lower layer, communication cannot be performed with the programmable controller CPU on the lower layer.



No.	Remote Password
1)	With setting (AAAA)
2)	Without setting
3)	With setting (AAAA)
4)	With setting (BBBB)
5)	Without setting

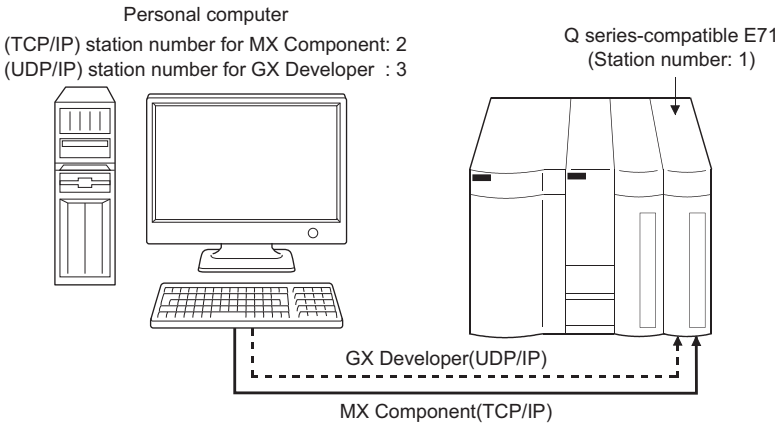
○ : Accessible
× : Inaccessible

1) Unlocking QJ71E71 password enables access to Programmable controller CPUs in this range.

(6) Ethernet communication

(a) The communication line is disconnected if the CPU becomes faulty or the Ethernet module is reset during Ethernet communication (when the protocol is TCP/IP).
In this case, perform the line close processing (Close) and then perform the reopen processing (Open).

(b) When two different communication systems (protocols) are used to access from one personal computer to one Q series-compatible E71, two station numbers TCP/IP and for UDP/IP must be set. However, it is not required to set different station numbers for TCP/IP and for UDP/IP when using MX Component Version 3 or later and Q series-compatible E71 with serial number 05051 or higher.
Example When MX Component uses TCP/IP and GX Developer uses UDP/IP



Set different station numbers as the (TCP/IP) station number for MX Component and (UDP/IP) station number for GX Developer. If they are set to the same station number, an error will occur on the Ethernet module side.

Considerations for using CC-Link modules

(1) Software version of CC-Link master/local module

For CC-Link master/local modules used in CC-Link communication, use modules of software version "N" or later.
Modules of software version "M" or earlier do not operate normally.

Considerations for using serial communication modules

(1) Serial communication

(a) On any serial communication modules, remote "PAUSE" operation will result in an error for all connections.

(b) The FX extended port is required when performing the serial communication using FX_{0N}, FX_{1S}, $FX_{1N(C)}$, $FX_{2N(C)}$, FX_{3S}, $FX_{3G(C)}$, or $FX_{3U(C)}$CPU.

(2) Considerations for connecting personal computer and serial communication module

(a) When using QJ71C24-R2 of function version A
An MX Component application can use only either of CH1 and CH2.
When the MELSOFT product, (GX Developer, GOT, or the like) is using one channel, the application cannot use the other channel.
When QJ71C24-R2 of function version B is used, the application can use both channels.

Considerations of modem communication

(1) Simultaneous modem communications

The simultaneous modem communications using MX Component and other applications (GX Developer or the like) cannot be performed.
Do not perform a modem communication using other applications during a modem communication using MX Component.
If modem communications are simultaneously performed using MX Component and other application, this will result in a communication error, disconnection of telephone line or similar problem.

(2) Considerations for using telephone line

(a) Do not use the call-waiting phone line.
On the call-waiting phone line, data corruption, telephone line disconnection, or similar problem may occur due to interrupt reading sounds.

(b) Do not connect the line to master/slave phones.
If the handset of the slave phone is lifted while the telephone line is connecting to the master/slave phones, the telephone line may be disconnected.

(c) Use an analog 2 wire type telephone line.
When using a digital line, use a terminal adapter.
When the telephone line is 4 wire type, the line may not be connected depending on the wiring type of the modular jack.
For the 4 wire type, conduct connection tests in advance to check for connections.

(3) Considerations for using cellular phone

(a) Modem for radio communication using a cellular phone

Although the modem name is different according to the manufacturer, the modem is generically referred to as the cellular phone communication unit in this manual.
Select the model of the cellular phone communication unit according to the cellular phone used.
For details, contact the company of your cellular phone.

(b) Cellular phone without auto answer function

For the cellular phone without auto answer function, use a cellular phone communication unit that features the ANS/ORG/TEL select switch.
If the cellular phone communication unit does not have the ANS/ORG/TEL select switch, the line cannot be connected.
The line connection procedure is different according to the cellular phone company and cellular phone model.
For details, contact the manufacturer of your cellular phone.

Considerations of programming

(1) Sample programs, test programs, and sample sequence programs

(a) Sample programs and test programs

Sample programs are included for references when creating user programs.
Test programs are included for conducting communication tests.
Use the programs with your responsibility.

(b) Sample sequence programs

Sample sequence programs included in MX Component require modifications according to the system configuration and parameter settings.
Modify the program to suit the system.
Use the programs with your responsibility.

(2) Forced termination of processes during communication

If communication is performed with the same type of control open for multiple processes, forcing one process to be terminated by Task Manager or the like may stop the other processes at the communication function execution area.

(3) Error at communication start

A communication error may occur within the preset time-out period at a communication start, for example, when the communication diagnostic button is pressed, when a monitoring is started, or when any function is executed.
These errors are assumed to be detected before a time-out error.
(Example: When the communication cable is not connected, at when the programmable controller power is off)

(4) CheckDeviceString

Do not use the CheckDeviceString method of ACT control.

(5) ActUMsg control and ActUWzd control

Installing MX Component registers the ActUMsg control and the ActUWzd control, however, do not use them.

(6) Considerations for using Ethernet modules

(a) Provide an interval longer than the sequence scan time of the Ethernet module mounted station for a period from when the Open method is executed until the Close method is executed.

(b) Provide an interval of at least 500ms for a period from when the Close method is executed until the Open method is executed again.

(7) Considerations for execution of Disconnect

If a telephone line cannot be disconnect by executing the Disconnect function for some reason, power OFF the modem being used to forcibly disconnect the telephone line.

Considerations for using Microsoft® Excel®

(1) Considerations for using Excel VBA

If the page feed preview function is set in the application that uses Excel VBA, a memory leak or operating system basic operation (file operation, printing, or the like) failure may occur.

(2) Considerations for using Microsoft® Excel®

(a) Occasionally, controls may not be pasted to Excel.
This symptom occurs if the cache file (temporary file) of Excel remains.
In such a case, perform the operation in the following procedure.

Operating procedure

1. **Close Excel.**
2. **Delete "*.exd" in the Excel 8.0 folder of the temp folders.** *1, *2
3. **Restart Excel.**

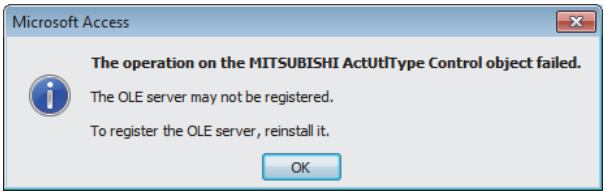
*1 : The location of temp folder differs according to the operating system.
*2 : When the corresponding folder and file are not displayed, set the settings in the folder option setting to display all files and folders.

(b) Resizing of ACT control in Excel does not affect the operation of MX Component.
To restore the size, set the Height and Width properties of ACT control to "24".

Considerations for using Microsoft® Access®

(1) Considerations for using Microsoft® Access®

(a) When the ACT control is pasted to an Access form and the ACT control is double-clicked or the custom control in the property is selected, the following error message is displayed. However, this does not affect the operation of ACT control.
(An error message other than the following message may be displayed.)



(b) When the ACT control is pasted and the property is displayed, the displayed property name may be collapsed. This symptom only occurs on the display of the property, and this does not affect the functions of the property.

(c) Resizing of ACT control in Access does not affect the operation of MX Component.
To restore the size, set the Height and Width properties of ACT control to "24".

Considerations for using VBScript

(1) Security of the Internet/intranet when using VBScript

MX Component does not feature the Internet/intranet security function.
When the security function is required, set the setting on the user side.

Considerations for using Robot controller

(1) When connecting robot controller with USB

For the considerations when connecting a robot controller with USB, refer to the following manual.
📖CR750/700/500 series RT ToolBox2 / RT ToolBox2 mini User's Manual
When connecting a robot controller with USB, an error does not occur for Open method of the control even when the robot controller cannot be used.
If an error code 106 (connection is disconnected) occurred in the method after executing Open, execute Open again after executing Close.

(2) Multiplex communication

Do not perform multiplex communication for one robot controller.

INTRODUCTION

Thank you for your patronage. We appreciate your purchase of the Mitsubishi integrated FA software, MELSOFT series.
This manual is designed for users to understand operations of MX Component.
Before using the product, thoroughly read this manual and related manuals to develop full familiarity with the functions and performance of MX Component and supported modules to ensure correct use.

RELATED MANUALS

The manuals related to this product are shown below.

Refer to the following tables when ordering required manuals.

Manual name < Manual number, model code >	Description
MX Component Version 4 Programming Manual <SH-081085ENG, 13JW12>	Explains the programming procedures, detailed explanations and error codes of the ACT controls.
Type Q80BD-J61BT11N/Q81BD-J61BT11 CC-Link System Master/ Local Interface Board User's Manual (For SW1DNC-CCBD2-B) <SH-080527ENG, 13JR77>	Explains the system configuration, specifications, functions, handling, wiring, and troubleshooting of the type Q80BD-J61BT11N/ Q81BD-J61BT11 CC-Link system master/local interface board.
MELSECNET/H Interface Board User's Manual (For SW0DNC-MNETH-B) <SH-080128, 13JR24>	Explains the system configuration, specifications, functions, handling, wiring, and troubleshooting of the MELSEC/H board.
CC-Link IE Controller Network Interface Board User's Manual (For SW1DNC-MNETG-B) <SH-080691ENG, 13JZ02>	Explains the system configuration, specifications, functions, handling, wiring, and troubleshooting of the CC-Link IE Controller Network board.
MELSEC-Q CC-Link IE Field Network Interface Board User's Manual (For SW1DNC-CCIEF-B) <SH-080980ENG, 13JZ58>	Explains the system configuration, specifications, functions, handling, wiring, and troubleshooting of the CC-Link IE Field Network board.
C Controller Module User's Manual (Hardware Design, Function Explanation) <SH-080766ENG, 13JZ17>	Explains the system configuration, specifications, functions, handling, wiring, and troubleshooting of Q12DCCPU-V (Basic mode) and Q06CCPU-V.
MELSEC-Q C Controller Module User's Manual <SH-081130ENG, 13JZ75>	Explains the system configuration, specifications, functions, handling, wiring, troubleshooting, and programming and function of Q24DHCCPU-V, Q24DHCCPU-LS, and Q12DCCPU-V (Extended mode).
GX Simulator Version 7 Operating Manual <SH-080468ENG, 13JU51>	Explains the setting and operating method for monitoring the device memory and simulating the machine side operations using GX Simulator.
GX Works2 Version 1 Operating Manual (Common) <SH-080779ENG, 13JU63>	Explains the system configuration of GX Works2 and the functions common to a Simple project and Structured project such as parameter setting, operation method for the online function.

Remark

MX Component Version 4 Programming Manual is included on the CD-ROM of the software package in a PDF file format. Manuals in printed form are sold separately for single purchase. Order a manual by quoting the manual number (model code) listed in the table above.

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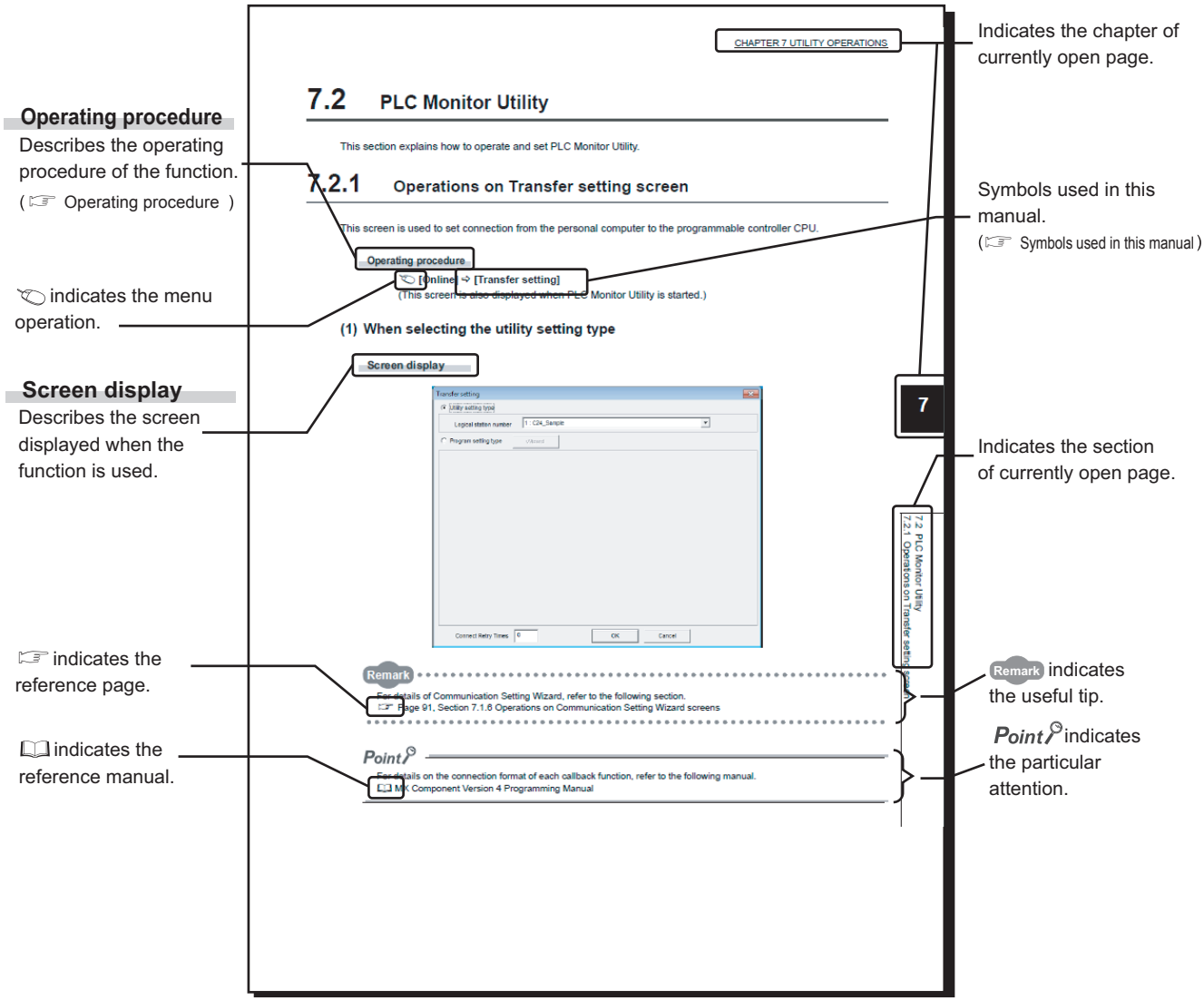
HOW TO READ THIS MANUAL

The following explains the page composition and symbols in this manual.
The content of the example page used here are different from the actual content for the intention of explaining how to use this manual.



- Operating procedure

  The following three types of procedure are found under **Operating procedure** .

  1) When the operation is performed with a single step

  [Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component]

  2) When the operation is performed with multiple steps

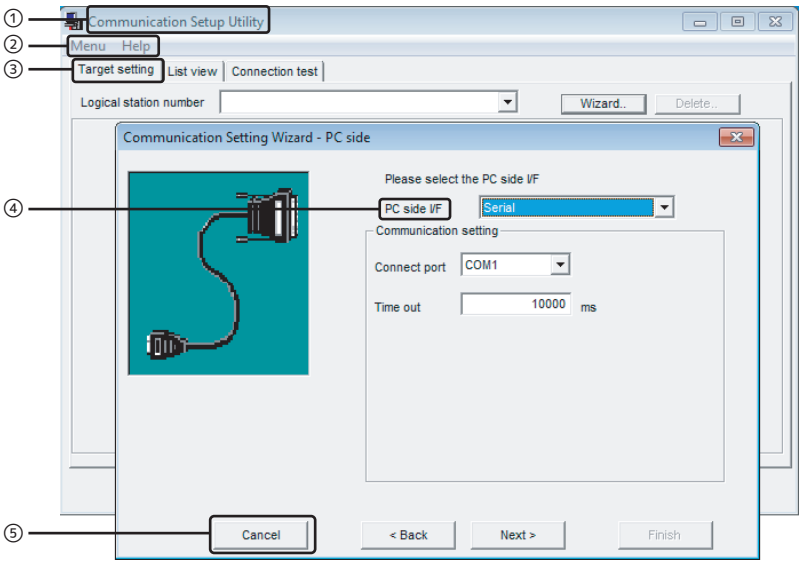
  1. **Turn OFF the personal computer.**
  2. **Turn OFF the conversion cable/converter. Ground the FG terminal if provided.**

  3) When the operation can be performed by more than one method

  - **[Menu] ⇨ [Exit Communication Setup Utility]**
  - **Click the Exit button at bottom right of the screen.**

• Symbols used in this manual

The following shows the symbols used in this manual with descriptions and examples.



No.	Notation	Description	Example
①	(Underline)	Screen name	Communication Setup Utility screen
②	[ ]	Menu name on menu bar	[Menu] ⇨ [Target setting]
③	<< >>	Tab name on screen	<<Target setting>> tab
④	" "	Item name on screen	"PC side I/F"
⑤		Button on screen	OK button
-		Keyboard key	Enter key

TERMS

This manual uses the terms listed in the following table unless otherwise noted.

Term	Description
MX Component	Generic product name for SWnDNC-ACT-E and SWnDNC-ACT-EA (n: version) -EA indicates a volume-license product.
Personal computer	Generic term for personal computers on which Windows® operates
PC CPU module	Abbreviation for MELSEC Q-series compatible PC CPU module (CONTEC CO., LTD. product)
GX Developer	Generic product name for SWnD5C-GPPW-E, SWnD5C-GPPW-EA, SWnD5C-GPPW-EV, and SWnD5C-GPPW-EVA (n: version) -EA indicates a volume-license product, and -EV an updated product.
GX Works2	Generic product name for SWnDNC-GXW2 (n: version)
MT Developer2	Generic product name for SWnDNC-MTW2 (n: version)
MELSOFT Navigator	Product name for the integrated development environment included in SWnDNC-IQWK (MELSOFT iQ Works) (n: version)
GX Simulator	Generic product name for SWnD5C-LLT-E, SWnD5C-LLT-EA, SWnD5C-LLT-EV, and SWnD5C-LLT-EVA (n: version) -EA means a volume-license product, and -EV an updated product.
MELSECNET/H board	Generic term for Q80BD-J71LP21-25, Q80BD-J71LP21S-25, Q81BD-J71LP21-25, Q80BD-J71LP21G, and Q80BD-J71BR11 Abbreviation for MELSECNET/H interface board
CC-Link IE Controller Network board	Generic term for Q80BD-J71GP21-SX and Q80BD-J71GP21S-SX Abbreviation for CC-Link IE Controller Network interface board
CC-Link IE Field Network board	Abbreviation for Q81BD-J71GF11-T2 CC-Link IE Field Network interface board
CC-Link board	Generic term for Q80BD-J61BT11N and Q81BD-J61BT11 Abbreviation for CC-Link system master/local interface board
RCPU	Generic term for R04, R08, R16, R32, and R120
QCPU (Q mode)	Generic term for Q00J, Q00UJ, Q00, Q00U, Q01, Q01U, Q02, Q02H, Q02PH, Q02U, Q03UD, Q03UDE, Q03UDV, Q04UDH, Q04UDEH, Q04UDV, Q06H, Q06PH, Q06UDH, Q06UDEH, Q06UDV, Q10UDH, Q10UDEH, Q12H, Q12PH, Q12PRH, Q13UDH, Q13UDEH, Q13UDV, Q20UDH, Q20UDEH, Q25H, Q25PH, Q25PRH, Q26UDH, Q26UDEH, Q26UDV, Q50UDEH, and Q100UDEH
Built-in Ethernet port QCPU	Generic term for Q03UDE, Q03UDV, Q04UDEH, Q04UDV, Q06UDEH, Q06UDV, Q10UDEH, Q13UDEH, Q13UDV, Q20UDEH, Q26UDEH, Q26UDV, Q50UDEH, and Q100UDEH
LCPU	Generic term for L02S, L02, L06, L26, and L26-BT
FX5CPU	Generic term for FX_{5U} and FX_{5UC}
FXCPU	Generic term for FX_0, FX_{0S}, FX_{0N}, FX_1, FX_{1N}, FX_{1NC}, FX_{1S}, FX_U, FX_{2C}, FX_{2N}, FX_{2NC}, FX_{3S}, FX_{3G}, FX_{3GC}, FX_{3U}, and FX_{3UC}
Built-in Ethernet CPU	Generic term for RCPU, built-in Ethernet port QCPU, LCPU and FX5CPU
R motion CPU	Generic term for R16MT and R32MT
Q motion CPU	Generic term for Q172, Q173, Q172H, Q173H, Q172D, Q173D, Q172DS, and Q173DS
QSCPU	Abbreviation for a safety CPU module (QS001CPU)
C Controller module	Generic term for Q12DCCPU-V (Basic mode), Q12DCCPU-V (Extended mode), Q24DHCCPU-V, and Q24DHCCPU-LS
Q12DCCPU-V (Basic mode)	Status that Q12DCCPU-V is initialized with the basic mode For Q12DCCPU-V (Basic mode), refer to the following manual. 📖 C Controller Module User's Manual (Hardware Design, Function Explanation)
Q12DCCPU-V (Extended mode)	Status that Q12DCCPU-V is initialized with the extended mode For Q12DCCPU-V (Extended mode), refer to the following manual. 📖 MELSEC-Q C Controller Module User's Manual

Term	Description
Programmable controller CPU	Generic term for RCPU, QCPU (Q mode), LCPU, FX5CPU, FXCPU, R motion CPU, Q motion CPU, QSCPU, and C Controller module
R series-compatible C24	Generic term for RJ71C24, RJ71C24-R2, and RJ71C24-R4
Q series-compatible C24	Generic term for QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, and QJ71C24N-R4
L series-compatible C24	Generic term for LJ71C24 and LJ71C24-R2
FX extended port	Generic term for FX_{0N}-485ADP, FX_{2NC}-485ADP, FX_{1N}-485-BD, FX_{2N}-485-BD, FX_{3G}-485-BD, FX_{3U}-485-BD, and FX_{3U}-485ADP
Serial communication module	Generic term for R series-compatible C24, Q series-compatible C24, L series-compatible C24, and FX extended port
R series-compatible E71	Generic term for RJ71EN71
Q series-compatible E71	Generic term for QJ71E71, QJ71E71-B2, QJ71E71-B5, and QJ71E71-100
Ethernet adapter module	Abbreviation for NZ2GF-ETB CC-Link IE Field Network Ethernet adapter module
Ethernet adapter/module	Generic term for FX_{3U}-ENET-ADP and FX_{3U}-ENET(-L)
Ethernet module	Generic term for R series-compatible E71, and Q series-compatible E71
CC-Link G4 module	Abbreviation for AJ65BT-G4-S3 GPP function peripheral connection module
GOT	Abbreviation for Graphic Operation Terminal
GOT2000	Abbreviation for Graphic Operation Terminal GOT2000 series
GOT1000	Abbreviation for Graphic Operation Terminal GOT1000 series
Inverter	Abbreviation for FREQROL-A800 series
Robot controller	Abbreviation for CR750-D/CRnD-700 series
Serial communication	Abbreviation for communication with programmable controller CPU using the serial communication module
Ethernet communication	Abbreviation for communication by connecting the personal computer to Ethernet module or the built-in Ethernet CPU
CPU COM communication	Abbreviation of communication performed by connecting the personal computer to the RS-232 or RS-422 connector of programmable controller CPU
CPU USB communication	Abbreviation for communication by connecting personal computer to the USB connector of Programmable controller CPU
MELSECNET/H communication	Abbreviation for communication with programmable controller CPU using MELSECNET/H board
CC-Link IE Controller Network communication	Abbreviation for communication with programmable controller CPU using CC-Link IE Controller Network board
CC-Link IE Field Network communication	Abbreviation for communication with programmable controller CPU using CC-Link IE Field Network board
CC-Link communication	Abbreviation for communication with programmable controller CPU using CC-Link board
CC-Link G4 communication	Abbreviation for communication with programmable controller CPU using CC-Link G4 module
Q series bus communication	Abbreviation for communication with programmable controller CPU on the same base using PC CPU module
GX Simulator communication	Abbreviation for communication with GX Simulator
GX Simulator2 communication	Abbreviation for communication using the simulation functions of GX Works2
MT Simulator2 communication	Abbreviation for communication using the simulation functions of MT Developer2
Modem communication	Abbreviation for communication with programmable controller CPU via modems using Q series-compatible C24, L series-compatible C24 or FXCPU
Gateway function communication	Abbreviation for communication with programmable controller CPU and third-party programmable controllers using the gateway functions of GOT
GOT transparent communication	Abbreviation for communication with programmable controller CPU using the GOT transparent functions of GOT
Inverter COM communication	Abbreviation for communication by connecting the inverter to the COM port of personal computer
Inverter USB communication	Abbreviation for communication by connecting the inverter to the USB port of personal computer

Term	Description
Robot controller COM communication	Abbreviation for communication by connecting the robot controller to the COM port of personal computer
Robot controller USB communication	Abbreviation for communication by connecting the robot controller to the USB port of personal computer
Robot controller Ethernet communication	Abbreviation for communication by connecting the robot controller and personal computer to Ethernet
Utility setting type	A development type for creating user programs using Communication Setup Utility
Program setting type	A development type for creating user programs without using Communication Setup Utility
ACT control	Generic term for ActiveX control provided by MX Component
.NET control	Generic term for .NET control provided by MX Component
Redundant CPU	Generic term for Q12PRHCPU and Q25PRHCPU
Redundant type extension base unit	Abbreviation for Q65WRB extension base unit for redundant system
Windows® 8.1	Generic term for Microsoft® Windows® 8.1 Operating System, Microsoft® Windows® 8.1 Pro Operating System, Microsoft® Windows® 8.1 Enterprise Operating System "32-bit Windows® 8.1" is used for indicating 32-bit version only, and "64-bit Windows® 8.1" is used for indicating 64-bit version only.
Windows® 8	Generic term for Microsoft® Windows® 8 Operating System, Microsoft® Windows® 8 Pro Operating System, Microsoft® Windows® 8 Enterprise Operating System "32-bit Windows® 8" is used for indicating 32-bit version only, and "64-bit Windows® 8" is used for indicating 64-bit version only.
Windows® 7	Generic term for Microsoft® Windows® 7 Starter Operating System, Microsoft® Windows® 7 Home Premium Operating System, Microsoft® Windows® 7 Professional Operating System, Microsoft® Windows® 7 Ultimate Operating System, and Microsoft® Windows® 7 Enterprise Operating System "32-bit Windows® 7" is used for indicating 32-bit version only, and "64-bit Windows® 7" is used for indicating 64-bit version only.
Windows Vista®	Generic term for Microsoft® Windows Vista® Home Basic Operating System, Microsoft® Windows Vista® Home Premium Operating System, Microsoft® Windows Vista® Business Operating System, Microsoft® Windows Vista® Ultimate Operating System, and Microsoft® Window Vista® Enterprise Operating System
Windows XP®	Generic term for Microsoft® Windows XP® Professional Operating System and Microsoft® Windows XP® Home Edition Operating System
Windows® 7 or later	Generic term for Windows® 7, Windows® 8, and windows® 8.1
Windows Vista® or later	Generic term for Windows Vista®, Windows® 7, Windows® 8, and windows® 8.1
Excel	Generic term for Microsoft® Excel® 2003, Microsoft® Excel® 2007, Microsoft® Excel® 2010 (32-bit version), and Microsoft® Excel® 2013 (32-bit version).
Access	Generic term for Microsoft® Access® 2003, Microsoft® Access® 2007, Microsoft® Access® 2010 (32-bit version), and Microsoft® Access® 2013 (32-bit version).
Visual Basic® .NET	Generic term for Visual Basic version Visual Studio® 2005, Visual Studio® 2008, Visual Studio® 2010, Visual Studio® 2012, and Visual Studio® 2013.
Visual C++® .NET	Abbreviation for creation of an application using .NET Framework

Term	Description
Visual C#® .NET	Generic term for Visual C# version Visual Studio® 2005, Visual Studio® 2008, Visual Studio® 2010, Visual Studio® 2012, and Visual Studio® 2013.
Label	Generic term for label names assigned to each device It can be used instead of devices in programs.
System label	A label that can be used commonly among iQ Works-supported products It is managed by MELSOFT Navigator. There are two kinds of system labels; system label Ver.1 and system label Ver.2. The system label Ver.2 is supported by MX Component Version 4.07H or later.

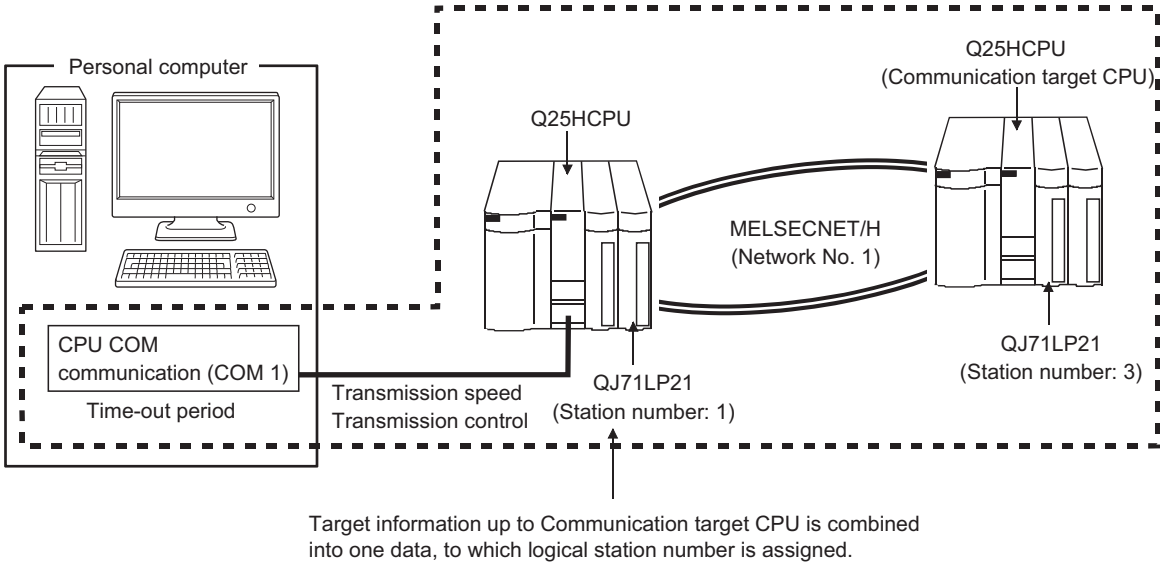
DEFINITIONS OF TERMS

The following are the definitions of terms used in this manual.

(1) Logical station number

The connection target information required to open the communication line is combined into one data using Communication Setup Utility, and that data is provided with a logical number.
This number can be used with the utility setting type only.

Example For CPU COM communication



(2) Utility setting type

Communication Setup Utility (logical station number) is used to create a user program.
In the user program, the communication line can be connected easily by simply specifying the logical station number set on Communication Setting Wizard.

(3) Program setting type

A user program is created without using Communication Setup Utility.
Set the ACT control settings for the corresponding communication in the user program or on the property page or the like of Visual Basic® or Visual C++®.
The required settings for the properties depend on the ACT control.

CHAPTER 1 OVERVIEW

1.1 Overview of MX Component

MX Component is a tool designed to implement communication from an personal computer to the programmable controller without any knowledge of communication protocols and modules.
Program development with serial communication and Ethernet communication used be complicated, however, it is simplified by using the common functions.
When applying any of the following program examples to the actual system, examine the applicability and confirm that no problem will occur in the system control.

1.2 Features

(1) Support of a wide range of communication paths for programmable controller

A wide range of communication paths to the programmable controller are supported to enable the user to configure up a system as desired.

(2) Substantial improvement in user's development efficiency

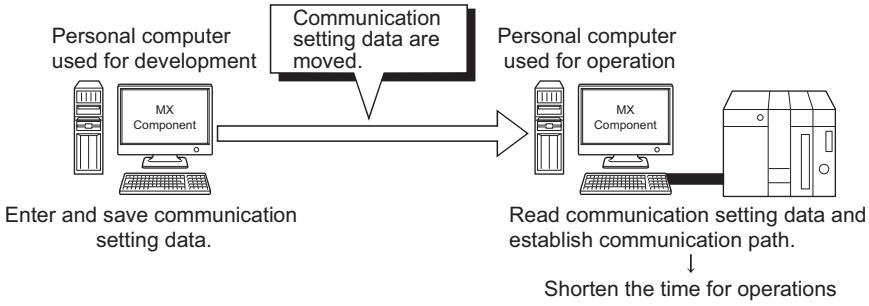
MX Component comes with the wizard type Communication Setup Utility.
By simply setting dialog-based communication settings on the screen, the user can achieve communication settings to access the programmable controller CPU to communicate with.
Once the communication settings are set, stations can be accessed by merely specifying the logical station number of the programmable controller CPU stored on Communication Setup Utility.

(3) Save and read of communication settings

MX Component features the functions to save and read the communication settings set on Communication Setup Utility.

The set data can easily be moved from the personal computer used for development to that used for operation.*1

*1 : MX Component must be installed in both the personal computer used for development and the actually used personal computer.



(4) Label function

This function allows users to create a program with labels.
Programs can be created without considering device numbers, and devices can be read or written using labels names.

```
'Execute the processing of function "ReadDeviceRandom2".
iReturnCode=
DotUtlType.ReadDeviceRandom2(
 "Amount of production",
 3,
 objData)
```

Structured data type label	
D0	Word
CN200	Word
D1	Word

Specify the label name.

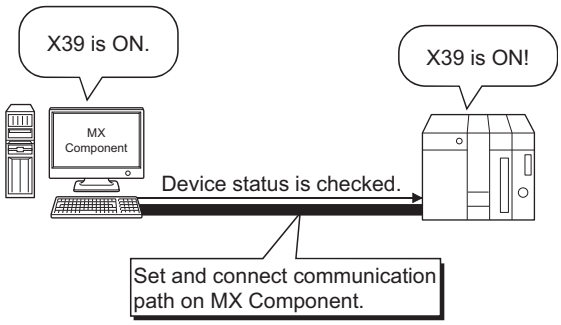
```
'Execute the processing of function "ReadDeviceRandom2".
iReturnCode=
DotUtlType.ReadDeviceRandom2(
 "AlarmArray",
 3,
 objectValue)
```

Array type label	
[0] : D0	Word
[1] : D1	Word
[2] : D2	Word

Free from complex use of data-type-dedicated methods.

(5) Device monitor function

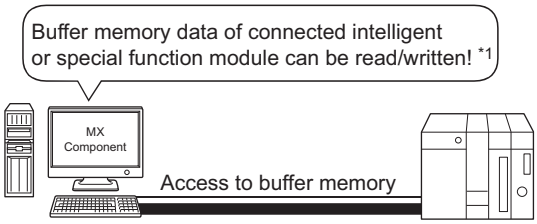
Utilizing PLC Monitor Utility enables users to monitor the status of the specified device and change its data. *1



*1 : Device data of QSCPU cannot be changed.

(6) Access to buffer memory of special function module

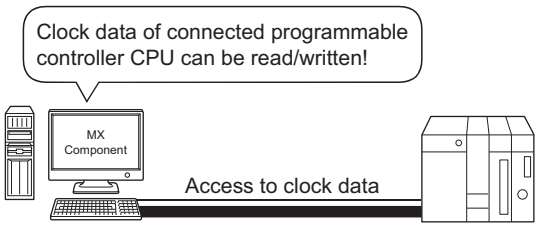
Not only the devices of the programmable controller CPU but also the buffer memory of an intelligent function or special function module can be accessed.



*1 : Buffer memory data of QSCPU cannot be written.

(7) Read/write of programmable controller CPU clock data

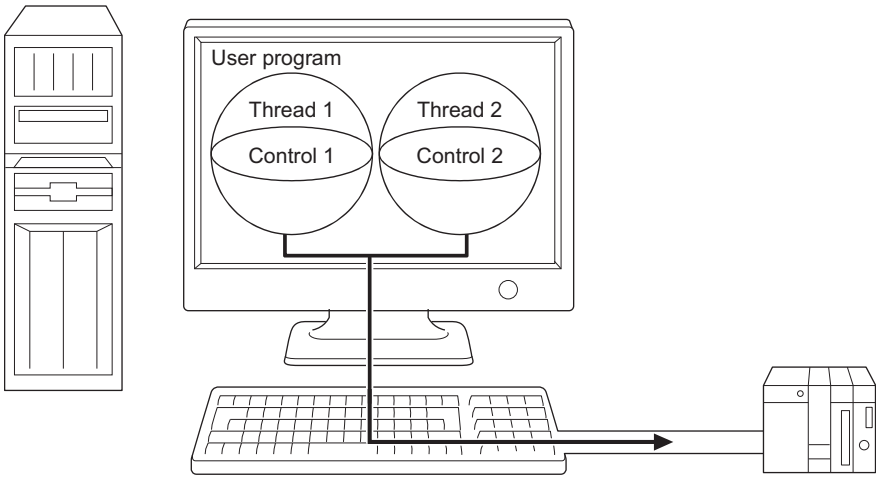
The clock data of the programmable controller CPU connected to the personal computer can be read/written. *1



*1 : Clock data of QSCPU cannot be written.

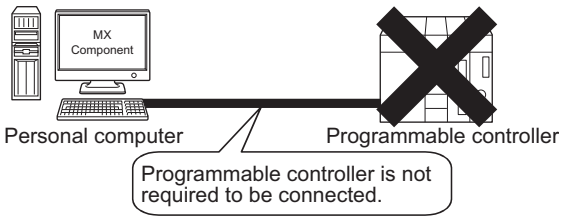
(8) Multi-thread communication

The same communication path can be accessed from multiple threads at the same time.



(9) The simulator function for offline debugging

By using the simulation function, debugging can be performed on a single personal computer without connecting the programmable controller.



(a) When using GX Developer and GX Simulator or the simulation function (GX Simulator2) of GX Works2*1

- GX Developer and GX Simulator are separately required to use GX Simulator.
- GX Works2 is required to use GX Simulator2.
- The maximum of 4 projects can be simulated simultaneously.

*1 : This function is not supported by QSCPU.

(b) When using the simulation function (MT Simulator2) of MT Developer2*2

- MT Developer2 is required to use MT Simulator2.
- The maximum of 3 projects can be simulated simultaneously.

*2 : This function is supported by Q motion CPU only.

(10)A wide variety of programming languages supported

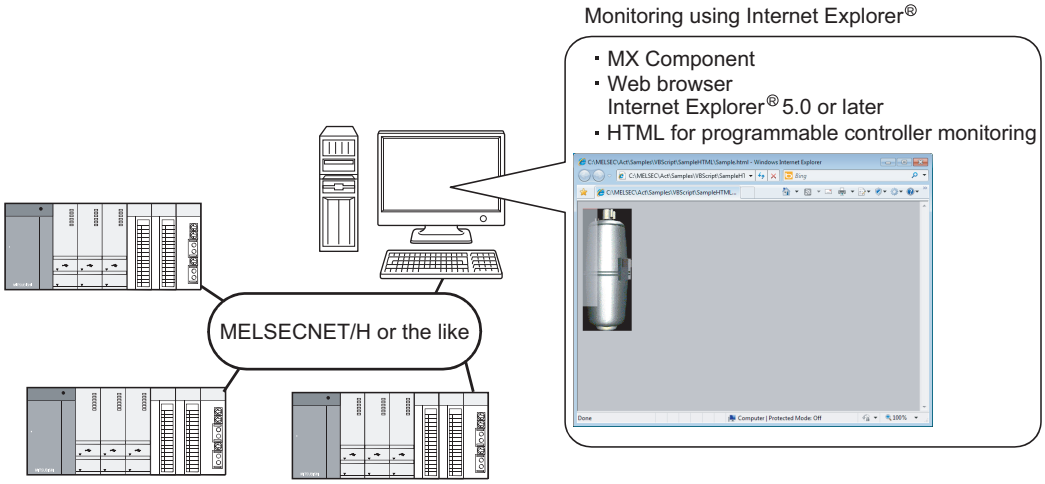
MX Component supports VBScript and VBA as well as Visual Basic®, Visual C++®, and Visual C#®.

(a) Creation of monitoring page using VBScript

1) Monitoring page can be created in HTML format

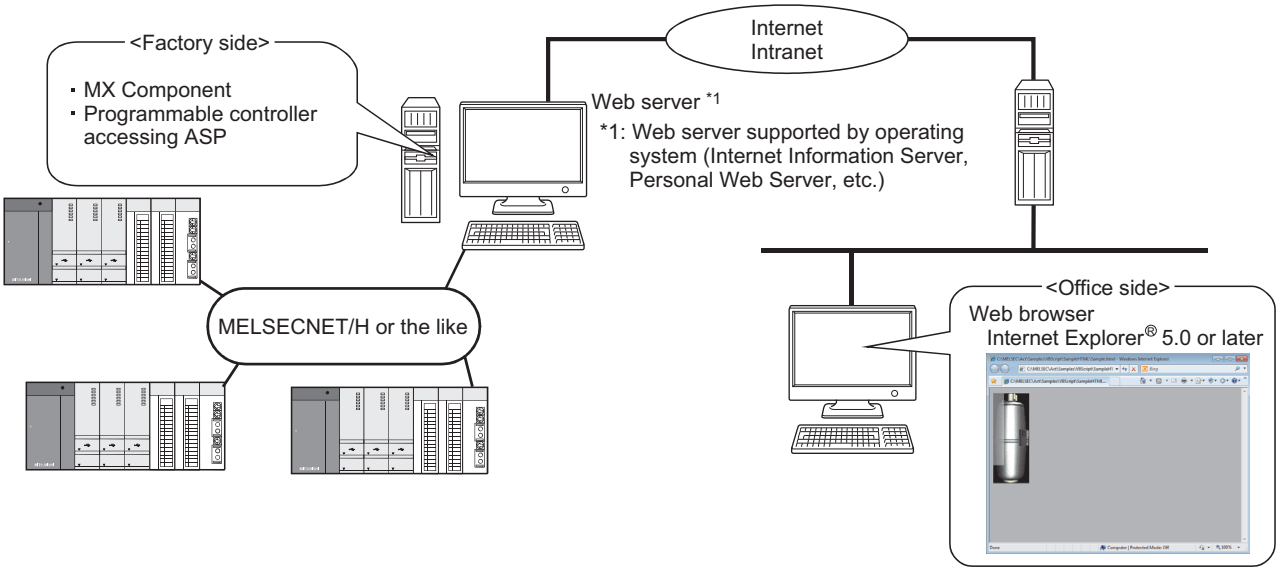
A graphical monitoring home page (HTML format) can be created by using the text editor.

Visual Basic®, Visual C++®, Visual C#® or the like is not required to be purchased.



2) Using ASP function for monitoring via Internet/intranet

Using the ASP function of VBScript and releasing the Web pages on the factory side (side which monitors data using MX Component) enables the programmable controller device status or remote operation for an error to be performed from a remote location or during business trip via the Internet/intranet by merely specifying the factory side URL on Internet Explorer®.

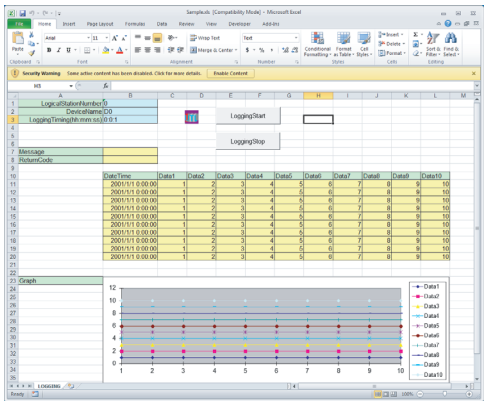


(b) VBA-driven data collection and monitoring function

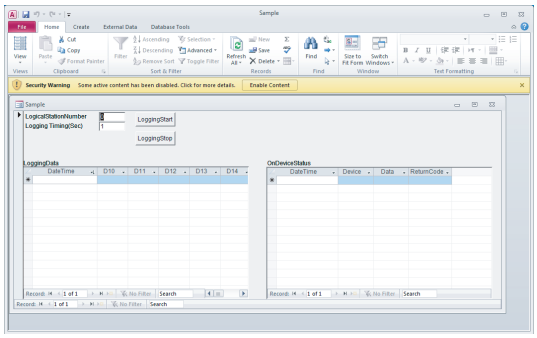
Programming using VBA allows Excel or Access functions to be utilized to create an application for providing a real-time graph display.

Device data of the programmable controller can be logged and device data can be sampled/saved in real time.

<Excel>



<Access>

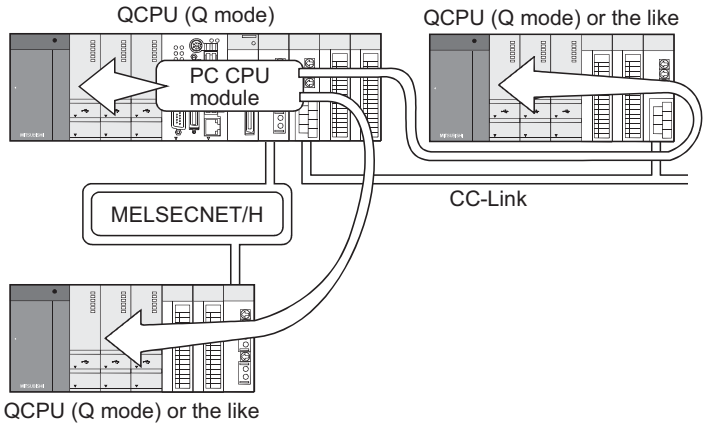


(11)Compatibility with multi-CPU system of QCPU (Q mode)

Setting Communication Setup Utility or control properties enables access to the multi-CPU system.

(12)Operability on PC CPU module

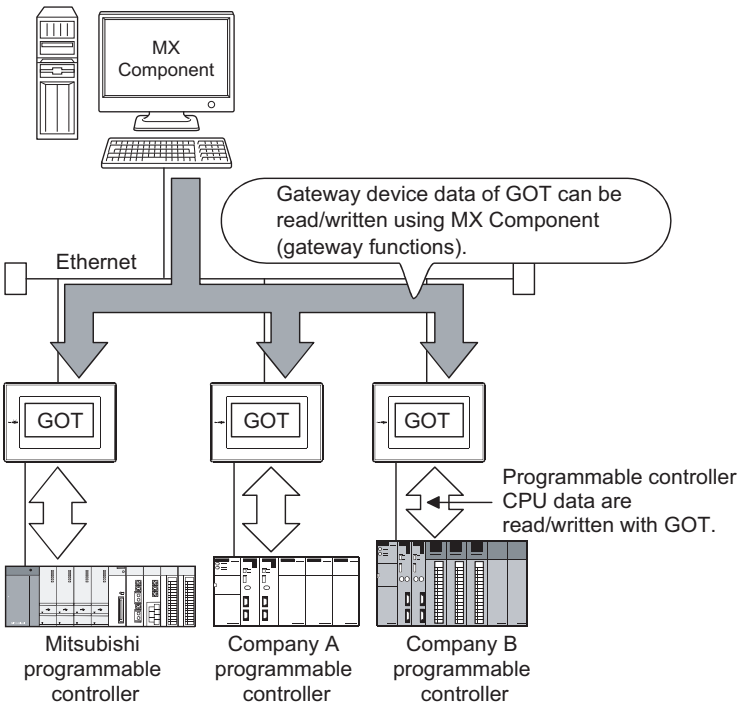
Q series bus communication from the PC CPU module enables access to the QCPU (Q mode) on the same base. Using the MELSECNET/H communication control and CC-Link communication control enables access to other stations via the MELSECNET/H module and CC-Link module controlled by the PC CPU module.



(13)Accessibility to gateway devices of GOT

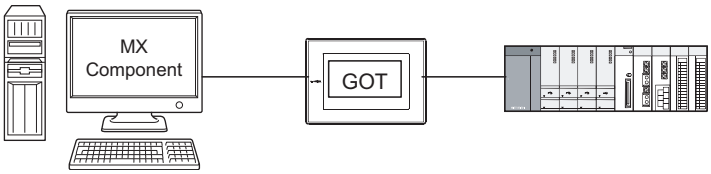
The gateway device data of GOT can be read/written by using the gateway function communication of MX Component.

The device data of the programmable controller CPU that is being monitored by GOT can be read/written by reading from/writing to the gateway device data of GOT.



(14)Compatibility with GOT transparent function

Using the GOT transparent function, the programmable controller CPU can be accessed via GOT.



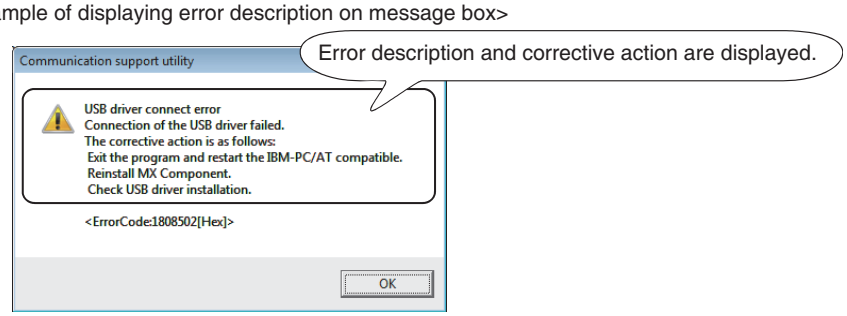
(15)Reduction of error description search time

The ActSupport control for troubleshooting function is supported.

The error description and corrective action are displayed within the user application by only specifying the error code.

Therefore, checking error description or corrective action on the programming manual is not required when an error occurs in a control.

<Example of displaying error description on message box>



CHAPTER 2 SYSTEM CONFIGURATIONS

This chapter explains the system configurations, operating environment and usable CPUs of MX Component.

2.1 System Configuration List

This section lists the systems that can be configured for each operating system.

2.1.1 When using Windows XP® Professional Operating System

The following table lists the systems that can be configured for the use of Windows XP® Professional.

Item		Description
Serial communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		○
MELSECNET/H communication		○*1
CC-Link IE Controller Network communication		○
	Applicable board	CC-Link IE Controller Network board
	Applicable driver	SW1DNC-MNETG-B or later
CC-Link IE Field Network communication		○
	Applicable board	CC-Link IE Field Network board
	Applicable driver	SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later
CC-Link communication		○*2
CC-Link G4 communication		○
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		○
MT Simulator2 communication		○
Modem communication		○
Gateway function communication		○
GOT transparent communication		○
Inverter COM communication		○
Inverter USB communication		○
Robot controller COM communication		○
Robot controller USB communication		○
Robot controller Ethernet communication		○

○: Configurable, ×: Not configurable

*1 : Supported by SW0DNC-MNETH-B version 70H or later
*2 : Supported by SW4DNF-CCLINK-B version 40E or later

2.1.2 When using Windows XP® Home Edition Operating System

The following table lists the systems that can be configured for the use of Windows XP® Home Edition.

Item		Description
Serial communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		○
MELSECNET/H communication		×
CC-Link IE Controller Network communication		○
	Applicable board	CC-Link IE Controller Network board
	Applicable driver	SW1DNC-MNETG-B or later
CC-Link IE Field Network communication		○
	Applicable board	CC-Link IE Field Network board
	Applicable driver	SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later
CC-Link communication		×
CC-Link G4 communication		○
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		○
MT Simulator2 communication		○
Modem communication		○
Gateway function communication		○
GOT transparent communication		○
Inverter COM communication		○
Inverter USB communication		○
Robot controller COM communication		○
Robot controller USB communication		○
Robot controller Ethernet communication		○

○: Configurable, ×: Not configurable

Point

The ASP function of VBScript cannot be used.

2.1.3 When using Windows Vista® Operating System

The following table lists the systems that can be configured for the use of Windows Vista®.

Item	Description
Serial communication	○
Ethernet communication	○
CPU COM communication	○
CPU USB communication	○
MELSECNET/H communication	○
CC-Link IE Controller Network communication	○
CC-Link IE Field Network communication	○
CC-Link communication	○
CC-Link G4 communication	○
Q series bus communication (only when PC CPU module is used)	×
GX Simulator communication	○
GX Simulator2 communication	○
MT Simulator2 communication	○
Modem communication	○
Gateway function communication	○
GOT transparent communication	○
Inverter COM communication	○
Inverter USB communication	○
Robot controller COM communication	○
Robot controller USB communication	○
Robot controller Ethernet communication	○

○: Configurable, ×: Not configurable

2.1.4 When using Windows® 7 Operating System

The following table lists the systems that can be configured for the use of Windows® 7.

Item	Description	
	32-bit edition	64-bit edition
Serial communication	○	○
Ethernet communication	○	○
CPU COM communication	○	○
CPU USB communication	○	○
MELSECNET/H communication	○	○
CC-Link IE Controller Network communication	○	○
CC-Link IE Field Network communication	○	○
CC-Link communication	○	○
CC-Link G4 communication	○	○
Q series bus communication (only when PC CPU module is used)	×	×
GX Simulator communication	○	○
GX Simulator2 communication	○	○
MT Simulator2 communication	○	○
Modem communication	○	○
Gateway function communication	○	○
GOT transparent communication	○	○
Inverter COM communication	○	○
Inverter USB communication	○	○
Robot controller COM communication	○	○
Robot controller USB communication	○	○
Robot controller Ethernet communication	○	○

○: Configurable, ×: Not configurable

2.1.5 When using Windows® 8 Operating System and Windows® 8.1 Operating System

The following table lists the systems that can be configured for the use of Windows® 8 and Windows® 8.1.

Item	Description	
	32-bit edition	64-bit edition
Serial communication	○	○
Ethernet communication	○	○
CPU COM communication	○	○
CPU USB communication	○	○
MELSECNET/H communication	○*1	○*1
CC-Link IE Controller Network communication	○*1	○*1
CC-Link IE Field Network communication	○*1	○*1
CC-Link communication	○*1	○*1
CC-Link G4 communication	○	○
Q series bus communication (only when PC CPU module is used)	×	×
GX Simulator communication	×	×
GX Simulator2 communication	○	○
MT Simulator2 communication	○	○
Modem communication	○	○
Gateway function communication	○	○
GOT transparent communication	○	○
Inverter COM communication	○	○
Inverter USB communication	○	○
Robot controller COM communication	○	○
Robot controller USB communication	○	○
Robot controller Ethernet communication	○	○

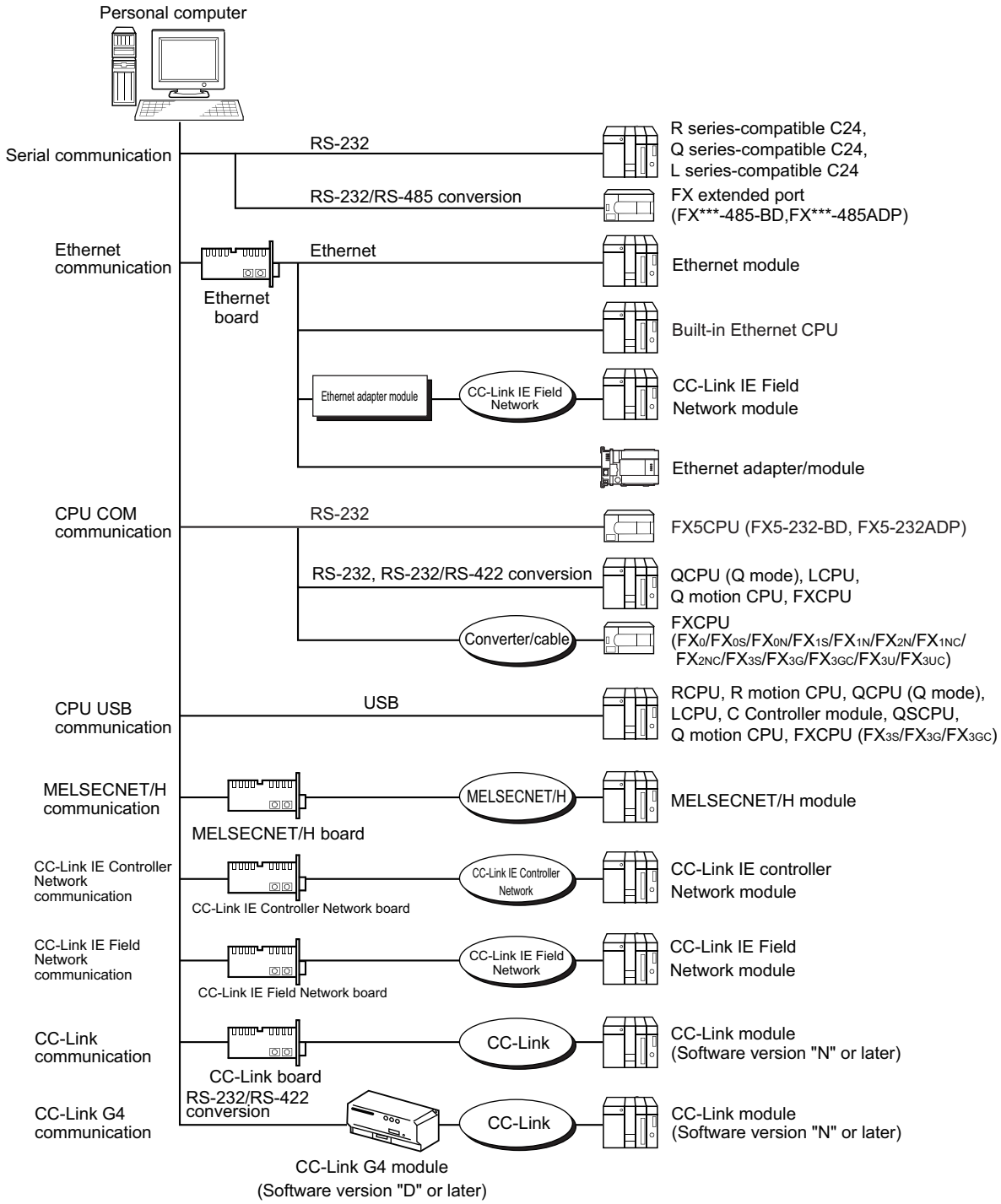
○: Configurable, ×: Not configurable

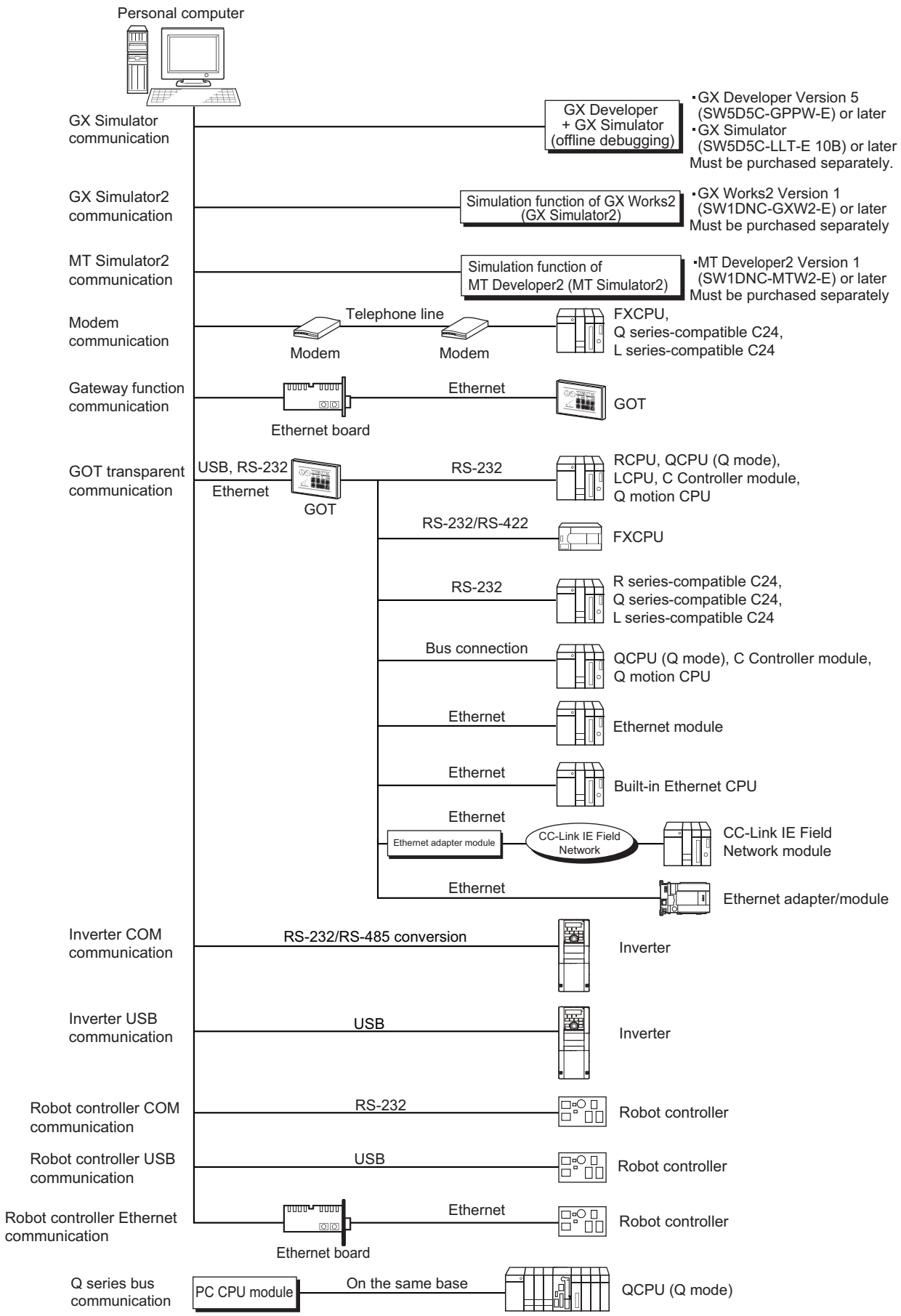
*1 : Not supported when using Windows® 8.1

2.2 System Configuration for Use of Each Connection Form

This section provides the system configurations for the use of MX Component on a communication form basis.
For details and considerations on each communication form, refer to the following section.
☞ Page 37, Section 2.2.2 Details of communication forms

2.2.1 System configurations




Personal computer
GX Simulator communication
GX Developer + GX Simulator (offline debugging)
・GX Developer Version 5 (SW5D5C-GPPW-E) or later
・GX Simulator (SW5D5C-LLT-E 10B) or later
Must be purchased separately.
GX Simulator2 communication
Simulation function of GX Works2 (GX Simulator2)
・GX Works2 Version 1 (SW1DNC-GXW2-E) or later
Must be purchased separately
MT Simulator2 communication
Simulation function of MT Developer2 (MT Simulator2)
・MT Developer2 Version 1 (SW1DNC-MTW2-E) or later
Must be purchased separately
Modem communication
Telephone line
Modem
Modem
FXCPU, Q series-compatible C24, L series-compatible C24
Gateway function communication
Ethernet
Ethernet board
GOT
GOT transparent communication
USB, RS-232
Ethernet
GOT
RS-232
RCPU, QCPU (Q mode), LCPU, C Controller module, Q motion CPU
RS-232/RS-422
FXCPU
RS-232
R series-compatible C24, Q series-compatible C24, L series-compatible C24
Bus connection
QCPU (Q mode), C Controller module, Q motion CPU
Ethernet
Ethernet module
Ethernet
Built-in Ethernet CPU
Ethernet
Ethernet adapter module
CC-Link IE Field Network
CC-Link IE Field Network module
Ethernet
Ethernet adapter/module
Inverter COM communication
RS-232/RS-485 conversion
Inverter
Inverter USB communication
USB
Inverter
Robot controller COM communication
RS-232
Robot controller
Robot controller USB communication
USB
Robot controller
Robot controller Ethernet communication
Ethernet
Ethernet board
Robot controller
Q series bus communication
PC CPU module
On the same base
QCPU (Q mode)

2.2.2 Details of communication forms

(1) Serial communication

For connecting the serial communication module, refer to the manual of serial communication module.

● Applicable modules

1) The following table indicates the applicable modules for accessing programmable controller CPU with serial communication module.

	Module model
R series-compatible C24	RJ71C24, RJ71C24-R2, RJ71C24-R4
Q series-compatible C24	QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71C24N-R4
L series-compatible C24	LJ71C24, LJ71C24-R2
FX extended port	FX_{0N}-485ADP, FX_{2NC}-485ADP, FX_{3U}-485ADP, FX_{1N}-485-BD, FX_{2N}-485-BD, FX_{3G}-485-BD, FX_{3U}-485-BD

2) About connection of applicable modules

When accessing the programmable controller CPU from a personal computer via serial communication modules, note that modules that can be connected to the personal computer are limited.

Even if a module cannot be directly connected to the personal computer, it may be applicable as the nth module in multi-dropped connection.

Model	Interface	1:1 system configuration	Multi-dropped connection	
			1st module	nth module
RJ71C24	RS-232 (CH1)	○	○	×
	RS-422/485 (CH2)	×	×	○
RJ71C24-R2	RS-232 (CH1)	○	×	×
	RS-232 (CH2)	○	×	×
RJ71C24-R4	RS-422/485 (CH1)	×	×	○
	RS-422/485 (CH2)	×	×	○
QJ71C24N QJ71C24	RS-232 (CH1)	○	○	×
	RS-422/485 (CH2)	×	×	○
QJ71C24-R2 QJ71C24N-R2	RS-232 (CH1)	○	×	×
	RS-232 (CH2)	○ (Function version B or later)	×	×
QJ71C24N-R4	RS-422/485 (CH1)	×	×	○
	RS-422/485 (CH2)	×	×	○
LJ71C24	RS-232 (CH1)	○	○	×
	RS-422/485 (CH2)	×	×	○
LJ71C24-R2	RS-232 (CH1)	○	×	×
	RS-232 (CH2)	○	×	×
FX_{0N}-485ADP FX_{2NC}-485ADP FX_{3U}-485ADP FX_{1N}-485-BD FX_{2N}-485-BD FX_{3G}-485-BD FX_{3U}-485-BD	RS-422/485	○	○	○

○: Applicable, ×: Not applicable

● Switch settings of the serial communication module

For the switch settings for the use of MX Component, refer to the following section.

☞ Page 135, Section 8.1.1 Settings of serial communication modules

● Cable for connection

For the connection cable, refer to the manual of serial communication module.

For cable pin assignment, refer to the following appendix.

☞ Page 378, Appendix 3 RS-232 Cable Wiring Examples for Serial Communication

Point

Only the RS-232 connector applicable for connection of the personal computer and serial communication module.
The RS-422 connector or RS-422/485 terminal block cannot be used.

(2) Ethernet communication

(a) when Ethernet module is used

For connecting the Ethernet module, refer to the manual of Ethernet module.

● Applicable modules

The following table indicates the applicable modules for accessing the programmable controller CPU via Ethernet modules.

For the FX series Ethernet module, refer to the user's manuals for the FX series.

	Module model
R series-compatible E71	RJ71EN71
Q series-compatible E71	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100

(b) When built-in Ethernet CPU is used

For connecting built-in Ethernet CPU, refer to the manual of built-in Ethernet CPU.

(c) When Ethernet adapter module is used

For connecting the Ethernet adapter module, refer to the manual of Ethernet adapter module.

(d) When Ethernet adapter is used

For connecting the Ethernet adapter, refer to the manual of Ethernet adapter.

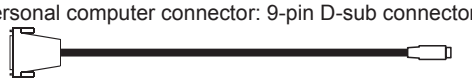
(3) CPU COM communication

● Cables for connection

1) Cable for connection of QCPU (Q mode) and LCPU

The following cable is required for communications between the personal computer and of QCPU (Q mode).

RS-232 adaptor (L6ADP-R2) is required for the connection of LCPU.

Model name	Manufacturer
QC30R2 (Personal computer connector: 9-pin D-sub connector) 	Mitsubishi Electric Corporation RS-232 cable

Point

● High-speed communication
For high-speed communication (transmission speed: 115.2/57.6kbps), use a personal computer compatible with high-speed communication.
When a communication error occurs, retry the communication after reducing the transmission speed setting.

2) Cable for connection of FX5CPU

The following cable is required for communications between the personal computer and of FX5CPU.

Function expansion board and special adapter	RS-232 cable
FX5-232ADP	FX-232CAB-1
FX5-232-BD	

For details of cables, refer to the following manuals.

MELSEC iQ-F FX5U User's Manual (Hardware)

3) Cables for connection of FXCPU

The following cable is required for communications between the personal computer and of FXCPU.

<When using Mitsubishi Electric Corporation product>

Personal computer side (RS-232 cable)	RS-232/RS-422 converter	Programmable controller CPU side (RS-422 cable)
F2-232CAB (25-pin D-sub↔25-pin D-sub)	FX-232AW	For FX_1/FX_U/FX_{2C} FX-422CAB (0.3m) FX-422CAB-150 (1.5m)
F2-232CAB-1 (9-pin D-sub↔25-pin D-sub)		
F2-232CAB-2 (Half pitch↔25-pin D-sub)	FX-232AWC	For FX_0/FX_{0S}/FX_{0N}/FX_{1S}/FX_{1N}/FX_{1NC}/FX_{2N}/FX_{2NC}/ FX_{3S}/FX_{3G}/FX_{3GC}/FX_{3U}/FX_{3UC} FX-422CAB0 (1.5m)
AC30N2A(25-pin↔25-pin)	FX-232AWC-H	

Point

- Transmission speed
  When connecting to FX_{3S}/FX_{3G}/FX_{3GC}/FX_{3U}/FX_{3UC} using FX-232AWC-H, select any of 9.6kbps, 19.2kbps, 38.4kbps, 57.6kbps, or 115.2kbps for the transmission speed.
  When connecting using FX-232AWC or FX-232AW, select either 9.6kbps or 19.2kbps for the transmission speed.
- Connecting to FXCPU
  Be sure to use equipment shown in the table when connecting to FXCPU.

Considerations on using RS-422 interface cables/converters

For the specifications of an RS-422 interface conversion cable/converter and the considerations on using them, read the following instructions as well as the manuals of each product for correct handling.

- Connecting/disconnecting the conversion cable/converter
  When connecting/disconnecting a peripheral device, conversion cable or converter to/from the RS-422 interface, be sure to touch a grounding strap or grounded metal to discharge static electricity stored in the cable or in your body before the operation, regardless of whether electricity is being supplied or not. After doing this, follow the procedure below.
  Turn the programmable controller CPU OFF before connecting/disconnecting a conversion cable/ converter that receives 5VDC power supply from the RS-422 interface.

Operating procedure

1. **Turn OFF the personal computer.**
2. **Turn OFF the conversion cable/converter. Ground the FG terminal if provided.**
3. **Connect/disconnect the conversion cable/converter to/from the personal computer and the programmable controller CPU.**
4. **Turn ON the conversion cable/converter.**
5. **Turn ON the personal computer.**
6. **Start up the software package.**

4) Cables for connection of Q motion CPU

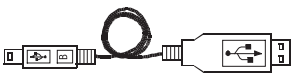
For communications between the personal computer and Q motion CPU, use the cables as indicated in 1).

5) Converter/Cable (FX CPU compatible) for connecting to the USB on personal computer

- Applicable devices

FX-USB-AW

USB cable (included)



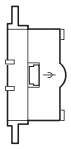
Point

- Using a USB cable for the first time
  Install the driver from the CD-ROM included with FX-USB-AW and FX3U-USB-BD.
- Considerations and restrictions
  For the considerations and restrictions relating to FX-USB-AW, refer to the user's manual included.

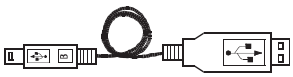
6) USB cables and function expansion boards (compatible with FX3U, FX3UC)

- Applicable devices

FX3U-USB-BD



USB cable (included)



Point

- Using a USB cable for the first time
  Install the driver from the CD-ROM included with FX-USB-AW and FX3U-USB-BD.
- Considerations and restrictions
  For the considerations and restrictions relating to FX3U-USB-BD, refer to the user's manual included.
- PLC parameter
  When "Operate Communication Setting" is selected on the <<PLC System (2)>> tab of PLC parameter in GX Works2, the corresponding port cannot communicate with the programmable controller CPU. Write the setting in which "Operate Communication Setting" is cleared from the built-in programming port of the programmable controller CPU.
  For the method of PLC parameter settings, refer to the following manual.
  📖GX Works2 Version 1 Operating Manual (Common)

7) USB cables (compatible with FX3S, FX3G, and FX3GC)

For details of cables, refer to the following manuals.

📖FX3S Series User's Manual- Hardware Edition
📖FX3G Series User's Manual- Hardware Edition
📖FX3GC Series User's Manual- Hardware Edition

Point

- Using a USB cable for the first time
  Install the USB driver. (☞ Page 407, Appendix 12)

8) RS-422 function expansion board for FXCPU

Series	Function expansion board
FX_{3U}, FX_{3UC} (FX_{3UC}-32MT-LT and FX_{3UC}-32MT-LT-2 only)	FX_{3U}-422-BD
FX_{3S}, FX_{3G}	FX_{3G}-422-BD
FX_{2N}	FX_{2N}-422-BD
FX_{1S}, FX_{1N}	FX_{1N}-422-BD

Point

- PLC parameter
  When "Operate Communication Setting" is selected on the <<PLC System (2)>> tab of PLC parameter in GX Works2, the corresponding port cannot communicate with the programmable controller CPU. Write the setting in which "Operate Communication Setting" is cleared from the built-in programming port of the programmable controller CPU.
  For the method of PLC parameter settings, refer to the following manual.
  GX Works2 Version 1 Operating Manual (Common)

9) RS-232 cable and function expansion board (special adaptor) for FXCPU

Serial port shape of personal computer	Series	Function expansion board and special adapter	RS-232 cable
9-pin D-sub	FX_{3U}, FX_{3UC}	FX_{3U}-232-BD*1	FX-232CAB-1
		Function expansion board (FX_{3U}-***-BD)*2 + FX_{3U}-232ADP	
	FX_{3G}, FX_{3GC}	FX_{3G}-232-BD*3	FX-232CAB-1
		FX_{3G}-CNV-ADP*4 + FX_{3U}-232ADP	
	FX_{3S}	FX_{3G}-232-BD	FX-232CAB-1
		FX_{3S}-CNV-ADP + FX_{3U}-232ADP	
	FX_{2N}	FX_{0N}-232ADP + FX_{2N}-CNV-BD	F2-232CAB-1
		FX_{2N}-232-BD	FX-232CAB-1
		FX_{2NC}-232ADP + FX_{2N}-CNV-BD	
	FX_{1NC}, FX_{2NC}	FX_{0N}-232ADP	F2-232CAB-1
		FX_{2NC}-232ADP	FX-232CAB-1
	FX_{1S}, FX_{1N}	FX_{0N}-232ADP + FX_{1N}-CNV-BD	F2-232CAB-1
		FX_{1N}-232-BD	FX-232CAB-1
		FX_{2NC}-232ADP + FX_{1N}-CNV-BD	
Half pitch 14-pin	FX_{3U}, FX_{3UC}	FX_{3U}-232-BD	FX-232CAB-2
		Function expansion board (FX_{3U}-***-BD)*2 + FX_{3U}-232ADP	
	FX_{3G}, FX_{3GC}	FX_{3G}-232-BD*3	FX-232CAB-2
		FX_{3G}-CNV-ADP*4 + FX_{3U}-232ADP	
	FX_{3S}	FX_{3G}-232-BD	FX-232CAB-2
		FX_{3S}-CNV-ADP + FX_{3U}-232ADP	
	FX_{2N}	FX_{0N}-232ADP + FX_{2N}-CNV-BD	F2-232CAB-2
		FX_{2N}-232-BD	FX-232CAB-2
		FX_{2NC}-232ADP + FX_{2N}-CNV-BD	
	FX_{1NC}, FX_{2NC}	FX_{0N}-232ADP	F2-232CAB-2
		FX_{2NC}-232ADP	FX-232CAB-2
	FX_{1S}, FX_{1N}	FX_{0N}-232ADP + FX_{1N}-CNV-BD	F2-232CAB-2
		FX_{1N}-232-BD	FX-232CAB-2
		FX_{2NC}-232ADP + FX_{1N}-CNV-BD	
25-pin D-sub	FX_{3U}, FX_{3UC}	FX_{3U}-232-BD	F2-232CAB-1
		Function expansion board (FX_{3U}-***-BD)*2 + FX_{3U}-232ADP	
	FX_{3G}, FX_{3GC}	FX_{3G}-232-BD*3	F2-232CAB-1
		FX_{3G}-CNV-ADP*4 + FX_{3U}-232ADP	
	FX_{3S}	FX_{3G}-232-BD	F2-232CAB-1
		FX_{3S}-CNV-ADP + FX_{3U}-232ADP	
	FX_{2N}	FX_{0N}-232ADP + FX_{2N}-CNV-BD	F2-232CAB
		FX_{2N}-232-BD	F2-232CAB-1
		FX_{2NC}-232ADP+ FX_{2N}-CNV-BD	
	FX_{1NC}, FX_{2NC}	FX_{0N}-232ADP	F2-232CAB
		FX_{2NC}-232ADP	F2-232CAB-1
	FX_{1S}, FX_{1N}	FX_{0N}-232ADP + FX_{1N}-CNV-BD	F2-232CAB
		FX_{1N}-232-BD	F2-232CAB-1
		FX_{2NC}-232ADP + FX_{1N}-CNV-BD	

*1 : For FX3UC series, only FX3UC-32MT-LT and FX3UC-32MT-LT-2 are connectable.

*2 : *** of the function expansion board (FX3U-***-BD) indicates 232, 485, 422, USB, CNV, or 8AV.
Function expansion board (FX3U-***-BD) is not required for FX3UC (D, DS, DSS) series.
The serial communication is also available for FX3U-485-BD. For setting for the serial communication, refer to the following section. ☞ Page 138, Section 8.1.1 (3) FX extended port

*3 : FX3GC series are not connectable.

*4 : ADP (FX3G-CNV-ADP) for FX3U adapter connection is not required for FX3GC series.

Point

- PLC parameter
  When "Operate Communication Setting" is selected on the <<PLC System (2)>> tab of PLC parameter in GX Works2, the corresponding port cannot communicate with the programmable controller CPU. Write the setting in which "Operate Communication Setting" is cleared from the built-in programming port of the programmable controller CPU.
  For the method of PLC parameter settings, refer to the following manual.
  📖GX Works2 Version 1 Operating Manual (Common)

(4) CPU USB communication

● About the USB cable

The following table shows the USB cables whose operations have been confirmed by Mitsubishi Electric.

Product name	Model name	Manufacturer
USB cable (USB A type - USB B type)	AU230	BUFFALO KOKUYO SUPPLY INC.
USB cable (USB A type - USB miniB type)	KU-AMB530	SANWA SUPPLY INC.
	U2C-M30BK	ELECOM Co., Ltd.
	MR-J3USBCBL3M	Mitsubishi Electric Corporation
	GT09-C30USB-5P	Mitsubishi Electric System & Service Co., Ltd.

● Applicable modules

Refer to "Access Target" of the accessible device table in the following section.

☞ Page 286, Section 10.5.1 Accessible devices

Point

● Using a USB cable for the first time
Install the USB driver. For the installation of the USB driver, refer to the following appendix.
☞ Page 398, Appendix 11 USB Driver Installation

● Considerations and restrictions
For the considerations and restrictions when accessing a programmable controller CPU, refer to the following section.
☞ Page 3, OPERATING CONSIDERATIONS

(5) MELSECNET/H communication

● Considerations

1) Use the communication driver SW0DNC-MNETH-B or later.
The other communication drivers cannot be used.
2) For details of the supported operating system of the network board to be used for communication, refer to the manual of each network board.

(6) CC-Link IE Controller Network communication

● Considerations

1) Use the communication driver SW1DNC-MNETG-B or later.
The other communication drivers cannot be used.
2) For details of the supported operating system of the network board to be used for communication, refer to the manual of each network board.

(7) CC-Link IE Field Network communication

● Considerations

1) Use the communication driver SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later.
The other communication drivers cannot be used.
2) For details of the supported operating system of the network board to be used for communication, refer to the manual of each network board.

(8) CC-Link communication

- Considerations
  1) Use the communication driver SW1DNC-CCBD2-B or later.
     The other communication drivers cannot be used.
  2) For details of the supported operating system of the network board to be used for communication, refer to the manual of each network board.
  3) The CC-Link master station module used should be of software version "N" or later.
- Applicable CPU modules
  QCPU (Q mode), LCPU

(9) CC-Link G4 communication

- Considerations
  1) The CC-Link G4 module used should be of software version "D" or later.
  2) The CC-Link master station module used should be of software version "N" or later.
- Switch settings of the CC-Link G4 module
  For the switch settings for the use of MX Component, refer to the following section.
  ☞ Page 179, Section 8.9.1 Switch settings of CC-Link G4 module
- Cables
  Communications between the personal computer and CC-Link G4 module require the RS-232/RS-422 conversion cables as used in CPU COM communication.
  For details, refer to the following section.
  ☞ Page 40, (3) in this section 3) Cables for connection of FXCPU

(10)Q series bus communication (only when PC CPU module is used)

- Considerations
  Use the MELSECNET/H communication and CC-Link communication controls to access other stations via the MELSECNET/H module and CC-Link module controlled by the PC CPU module.

(11)GX Simulator communication

- Considerations
  When performing GX Simulator communication, use GX Developer Version 8 (SW8D5C-GPPW) and GX Simulator Version 7 (SW7D5C-LLT) or later.

Point

GX Developer and GX Simulator must be purchased separately.

(12)GX Simulator2 communication

- Considerations
  When performing GX Simulator2 communication, use GX Works2 Version 1 (SW1DNC-GXW2) or later.

Point

GX Works2 must be purchased separately.

(13)MT Simulator2 communication

● Considerations

When performing MT Simulator2 communication, use MT Developer2 Version 1 (SW1DNC-MTW2) or later.

Point

MT Developer2 must be purchased separately.

(14)Modem communication

● Considerations

1) When performing modem communication, set the setting in the parameters and sequence program for the connected module.
   Use any of the following software to set the corresponding module.

Module	Software	
	GX Developer*1	GX Works2*2
FXCPU	Version 3 (SW3D5C-GPPW-E/SW3D5F-GPPW-E) or later	Version 1.08J (SW1DNC-GXW2-E)*3
Q series-compatible C24	Version 4 (SW4D5C-GPPW-E) or later	Version 1.05F (SW1DNC-GXW2-E)
L series-compatible C24	Version 8.89T (SW8D5C-GPPW-E) or later	Version 1.24A (SW1DNC-GXW2-E)

*1 : For details of supported GX Developer versions for each module, refer to the manual of GX Developer.
*2 : For details of supported GX Works2 versions for each module, refer to the manual of GX Works2.
*3 : FX_{3GC} is supported by version 1.77F or later and FX_{3S} is supported by version 1.492N or later.

2) For modem communication using FXCPU, FX_{1S}, FX_{1N}, FX_{1NC}, FX_{2N}, FX_{2NC}, FX_{3S}, FX_{3G}, FX_{3GC}, FX_{3U}, and FX_{3UC} are applicable.
3) Use the RS-232 cable supplied with the modem for connection between the personal computer and modem.

● Modem specifications

When performing modem communication, select the modem that satisfies the following specifications.

- AT commands are supported. (Initialization command)
- DR terminal can be turned ON (High) independently.
  (Example A modem, whose CD terminal turns ON as the DR terminal turns ON, cannot be used.)
- Communication standard: ITU-T V.90/V.34/V.32bis/V.32/V.22bis/V.22/V.21/V.FC
  Bell 212A/103

Point

● MX Component is not compatible with manual line connection (connection via an operator).
Use a subscriber telephone line or private telephone line to perform modem communication

● It is required to set the COM port when performing modem communication by using modem built in the personal computer or the PC card (PCMCIA).
For the COM port of the modem built in the personal computer or the PC card (PCMCIA), refer to the manual of the corresponding product.

● For modem communication, the standard AT command cannot be used for some modems.
If the line cannot be connected by selecting "Modem standard" for "AT command" within Communication Setup Utility, specify the AT command on the user side.
For the setting of "AT command" within Communication Setup Utility, refer to the following section.
☞ Page 102, Section 7.1.7 (1) Connect Line screen

● For details on the callback function, refer to the manual of the module used.

(15)Gateway function communication

- Gateway function compatible GOT
  For the gateway function compatible GOT, refer to the manual of gateway function for GOT series used.
- GOT setting and setting between GOT and programmable controller
  For the settings of GOT and settings between GOT and programmable controller, refer to the manual of gateway function for GOT series used.

(16)GOT transparent communication

- Considerations
  For GOT setting and the setting between GOT and programmable controller, refer to the following manual.
  📖 C onnection manuals for GOT2000 series
  (Mitsubishi Products), (Non-Mitsubishi Products 1), (Non-Mitsubishi Products 2),
  (Microcomputer, MODBUS Products,Peripherals)
  📖Connection manuals for GOT1000 series
  (Mitsubishi Products), (Non-Mitsubishi Products 1), (Non-Mitsubishi Products 2),
  (Microcomputer, MODBUS Products,Peripherals)

(17)Inverter (COM/USB) communication

- Cables
  For the connection cables, refer to the manual of inverter used.

(18)Robot controller(COM/USB/Ethernet) communication

- Cables
  For the connection cables, refer to the following manual.
  📖CR750/700/500 series RT ToolBox2 / RT ToolBox2 mini User's Manual

2.3 Operating Environment

The following table summarizes the operating environment for MX Component.

Item		Description
Personal computer		Windows® supported personal computer
	CPU	Intel® Core™2 Duo 2GHz or higher is recommended.
	Required memory	1GB or more*1
PC CPU module		MELSEC Q-series compatible PC CPU module (CONTEC CO., LTD. product)
Available hard disk capacity		At installation: 300MB or more*2 At operation: Virtual memory available capacity is 512MB or more.
Display		Resolution 1024 × 768 dots or more
Operating system *3, *4		• Microsoft® Windows XP® Professional Operating System (English version) SP3 or later • Microsoft® Windows XP® Home Edition Operating System (English version) SP3 or later • Microsoft® Windows Vista® Home Basic Operating System (English version) SP2 or later • Microsoft® Windows Vista® Home Premium Operating System (English version) SP2 or later • Microsoft® Windows Vista® Business Operating System (English version) SP2 or later • Microsoft® Windows Vista® Ultimate Operating System (English version) SP2 or later • Microsoft® Windows Vista® Enterprise Operating System (English version) SP2 or later • Microsoft® Windows® 7 Starter Operating System (English version) *5 • Microsoft® Windows® 7 Home Premium Operating System (English version) *5 • Microsoft® Windows® 7 Professional Operating System (English version) *5 • Microsoft® Windows® 7 Ultimate Operating System (English version) *5 • Microsoft® Windows® 7 Enterprise Operating System (English version) *5 • Microsoft® Windows® 8 Operating System (English version) *6 • Microsoft® Windows® 8 Pro Operating System (English version) *6 • Microsoft® Windows® 8 Enterprise Operating System (English version) *6 • Microsoft® Windows® 8.1 Operating System (English version) *6 • Microsoft® Windows® 8.1 Pro Operating System (English version) *6 • Microsoft® Windows® 8.1 Enterprise Operating System (English version) *6

*1 : For Windows® 7 (64-bit version), Windows® 8 (64-bit version), and Windows® 8.1 (64-bit version), 2GB or more is required.

*2 : At installation of .NET Framework, 1GB or more free capacity is required.

*3 : "64-bit Windows XP® Professional" and "64-bit Windows Vista®" cannot be used.

*4 : The following functions cannot be used. If used, this product may not operate normally.
- Activating the application with Windows® compatible mode
- Simplified user switch-over
- Remote desktop
- Large font size (Advanced setting of Display Properties)
- DPI setting other than 100 % (set the size of text and illustration other than [smaller-100%])
- Windows® Hibernate and Standby

*5 : The following functions cannot be used.
- Windows XP Mode
- Windows Touch

*6 : The following functions cannot be used.
- Modern UI
- Client Hyper-V
- Touch

Item		Description
Programming language*7		–
	Visual Basic®	Microsoft® Visual Studio® 2005 Visual Basic® (English version)*8 Microsoft® Visual Studio® 2008 Visual Basic® (English version)*9 Microsoft® Visual Studio® 2010 Visual Basic® (English version) Microsoft® Visual Studio® 2012 Visual Basic® (English version) Microsoft® Visual Studio® 2013 Visual Basic® (English version)*10
	Visual C++®	Microsoft® Visual Studio® 2005 Visual C++® (English version)*8 Microsoft® Visual Studio® 2008 Visual C++® (English version)*9 Microsoft® Visual Studio® 2010 Visual C++® (English version) Microsoft® Visual Studio® 2012 Visual C++® (English version) Microsoft® Visual Studio® 2013 Visual C++® (English version)*10
	Visual C#®	Microsoft® Visual Studio® 2005 Visual C#® (English version)*8 Microsoft® Visual Studio® 2008 Visual C#® (English version)*9 Microsoft® Visual Studio® 2010 Visual C#® (English version) Microsoft® Visual Studio® 2012 Visual C#® (English version) Microsoft® Visual Studio® 2013 Visual C#® (English version)*10
	VBScript *11, *12	Text editor and commercially available HTML tool
	VBA	Microsoft® Excel® 2003 (English version)*13 Microsoft® Excel® 2007 (English version) 32-bit Microsoft® Excel® 2010 (English version)*14 32-bit Microsoft® Excel® 2013 (English version)*15 Microsoft® Access® 2003 (English version)*13 Microsoft® Access® 2007 (English version) 32-bit Microsoft® Access® 2010 (English version)*14 32-bit Microsoft® Access® 2013 (English version)*15

*7 : User programs created in the English environment are applicable to the English environment only, cannot be used in the other environment.

*8 : When using Visual Studio® 2005 on Windows Vista®, Visual Studio® 2005 Service Pack 1 or Visual Studio® 2005 Service Pack 1 Update for Windows Vista® is required.

*9 : When using Visual Studio® 2008 on Windows® 7, Visual Studio® 2008 Service Pack 1 is required.

*10 : Supported by Windows®7 or later.

*11 : To operate VBScript, use Internet Explorer® with the following version.
Version 5.00.2919.6307 or later (Version 11 or later cannot be used)

*12 : When Windows XP® Home Edition is used, the ASP function cannot be used.

*13 : When using Microsoft® Excel® 2003 or Microsoft® Access® 2003 on Windows® 7, Microsoft® Office® 2003 Service Pack 3 or later is required.

*14 : 64-bit Microsoft® Excel® 2010 and 64-bit Microsoft® Access® 2010 are not supported.

*15 : 64-bit Microsoft® Excel® 2013 and 64-bit Microsoft® Access® 2013 are not supported.

Point

- When creating a user program, select "x86" (32-bit) as a target CPU.
- Create a user program using either of the following applications.
  - Windows Forms application
  - Console application

  MX Component cannot be accessed from Windows Service applications.

2.4 Applicable Programmable Controller CPUs

The following are the applicable programmable controller CPUs.

Programmable controller series	Module model
RCPU	R04CPU, R08CPU, R16CPU, R32CPU, R120CPU
R motion CPU	R16MTCPU, R32MTCPU
FX5CPU	FX_{5U}CPU, FX_{5UC}CPU
QCPU (Q mode)	Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU, Q01UCPU, Q02CPU, Q02HCPU, Q02PHCPU, Q02UCPU, Q03UDCPU, Q03UDECPU, Q03UDVCPU, Q04UDHCPU, Q04UDEHCPU, Q04UDVCPU, Q06HCPU, Q06PHCPU, Q06UDHCPU, Q06UDEHCPU, Q06UDVCPU, Q10UDHCPU, Q10UDEHCPU, Q12HCPU, Q12PHCPU, Q12PRHCPU, Q13UDHCPU, Q13UDEHCPU, Q13UDVCPU, Q20UDHCPU, Q20UDEHCPU, Q25HCPU, Q25PHCPU, Q25PRHCPU, Q26UDHCPU, Q26UDEHCPU, Q26UDVCPU, Q50UDEHCPU, Q100UDEHCPU
LCPU	L02SCPU, L02CPU, L06CPU, L26CPU, L26CPU-BT
C Controller module	Q12DCCPU-V (Basic mode)*1, Q12DCCPU-V (Extended mode), Q24DHCCPU-V, Q24DHCCPU-LS
QSCPU	QS001CPU
Q motion CPU	Q172CPU, Q173CPU, Q172HCPU, Q173HCPU, Q172DCPU, Q173DCPU, Q172DSCPU, Q173DSCPU
FXCPU	FX_{0}CPU, FX_{0S}CPU, FX_{0N}CPU, FX_{1}CPU, FX_{1N}CPU, FX_{1NC}CPU, FX_{1S}CPU, FX_{U}CPU, FX_{2C}CPU, FX_{2N}CPU, FX_{2NC}CPU, FX_{3S}CPU, FX_{3G}CPU, FX_{3GC}CPU, FX_{3U}CPU, FX_{3UC}CPU

*1 : The first five digits of the serial number is 12042 or higher are supported.

CHAPTER 3 INSTALLATION AND UNINSTALLATION

This chapter explains the installation and uninstallation procedure of MX Component.

3.1 Installation

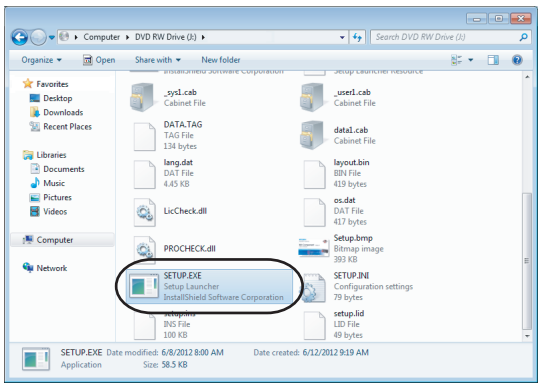
The following explains the installation procedure. Screens from Windows® 7 are used except for different operations required in other operating systems.

Point

- Before installing MX Component, close the other applications running on Windows®.
- The installer may not work normally because of the operating system's or other companies' update programs (Windows® Update the Java update program, or the like) start automatically. Install MX Component after configuring those update programs not to start automatically.
- When installing MX Component, log on as a user with the administrator authority.
- For the required personal computer operating environment to install MX Component, refer to the following section.
  ☞ Page 49, Section 2.3 Operating Environment
- For Windows® 8 and Windows® 8.1, ".NET Framework 3.5 (includes .NET 2.0 and 3.0)" needs to be enabled in "Turn Windows features on or off" on Control Panel.
- When updating MX Component from a removable media, uninstall MelfaRXM English before the installation.
- If do not use labels, refer to the following section.
  ☞ Page 395, Appendix 9(1) Installation of ACT version

(1) Installing the product

Operating procedure

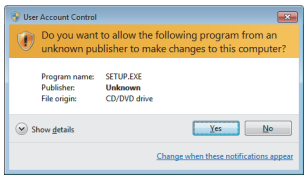


1. Right-click [Start] and select [Explorer]. Click the drive in which the disk is inserted, and double-click "SETUP.EXE".

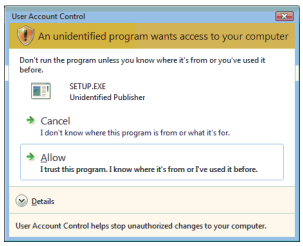
When user account control is enabled, the following screen is displayed.

Click the [Yes] button or "Allow" .

<Windows® 7 or later>



<Windows Vista®>



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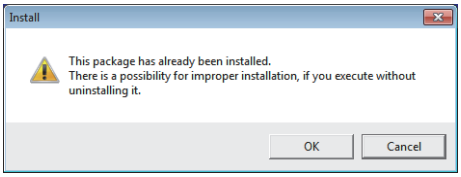
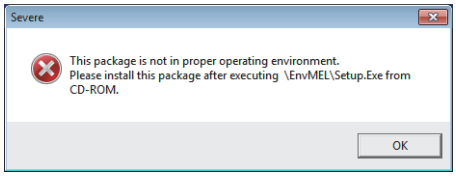
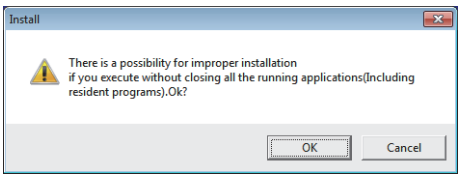


2. **If the message on the left is displayed, click the [Cancel] button to uninstall MX Component, and then reinstall it.**

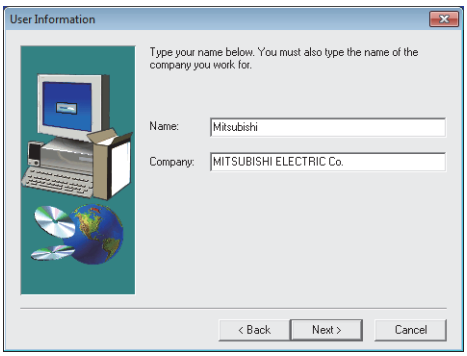


3. **If the message on the left is displayed, install EnvMEL (☞ Page 58, (2)(b) in this section). After the operation is complete, restart installation operation.**



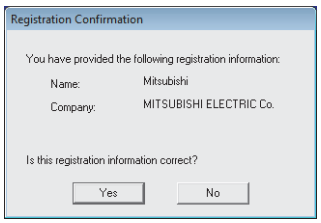
4. **Check that all applications is closed and click the [OK] button.**

If the applications are running, close all running applications.



5. **Starting setup.**

Enter the name and company name and click the [Next >] button.



6. **Check the registered name and company name.**

Check if the registered content is correct, and click the [Yes] button.

In order to change the information, click the [No] button to return to the previous screen

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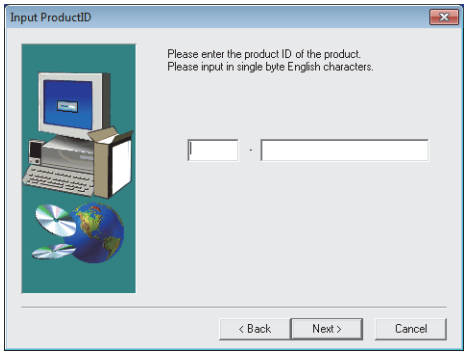
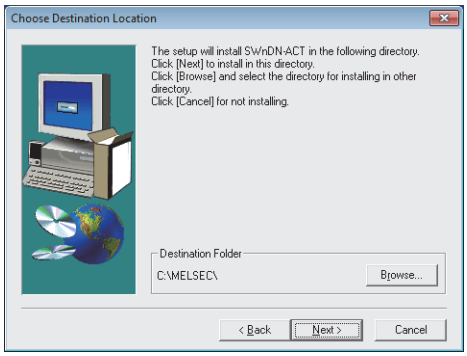
Continued from previous page



7. Register the product ID.

Enter the product ID and click the Next > button.
The product ID is printed on the license certificate included with the product.



8. Specify the installation destination folder.

If do not change the destination folder, click the Next > button.
In order to change the destination folder, click the Browse... button and specify a new drive and folder.

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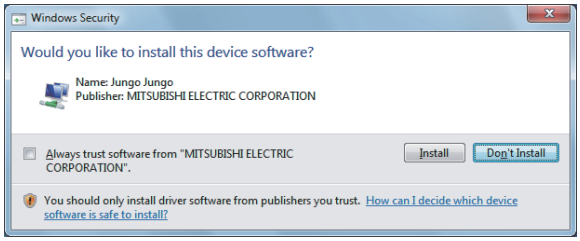
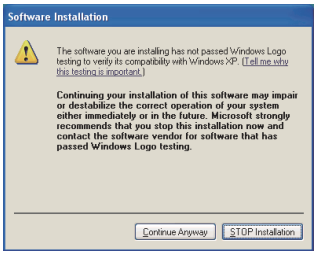
<Windows Vista® or later>

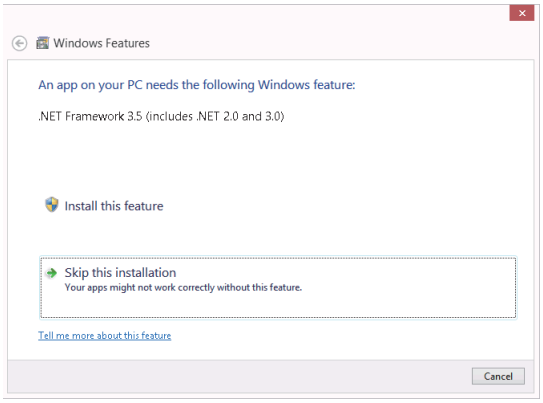


<Windows XP®>



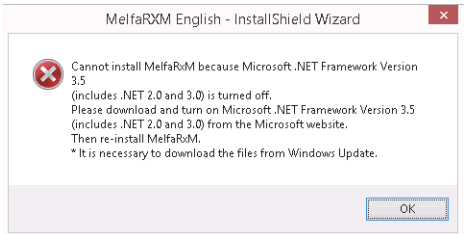
9. **When installing a MELSOFT product, the message on the left may be displayed.**
Click the [Install] button to continue the installation.
When using Windows XP®, click the [Continue Anyway] button

(The screen display may be different partially depending on the used operating system. This does not affect the operation.)
(We have checked the operation and confirmed that no error occurs after the installation.)



If an ACT version (☞ Page 395, (1) Installation of ACT version) has been installed, the message shown on the left may be displayed.

Select "Skip this installation" to proceed the installation.



If an ACT version (☞ Page 395, (1) Installation of ACT version) has been installed, the message shown on the left may be displayed.

Click the [OK] button to proceed the installation.

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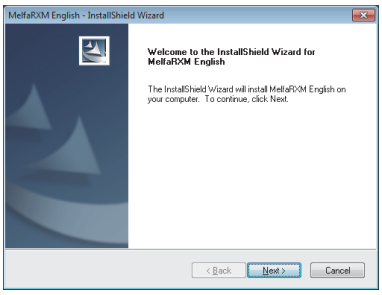
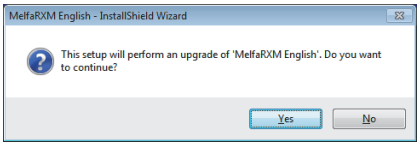
<When installing MelfaRXM English>



10. Install MelfaRXM English.

When the message shown on the left is displayed, click the [Next >] button.

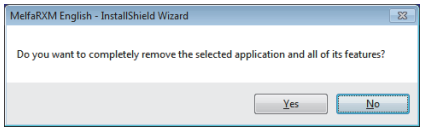
<When updating MelfaRXM English>



When the message shown on the left is displayed, click the [Yes] button.

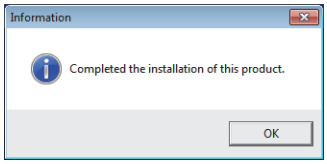
If a warning message is displayed, terminate the installation. After uninstalling MelfaRXM English, reinstall MX Component.

(☞ Page 58, (2)(c) in this section)



When the message shown on the left is displayed, click the [No] button.

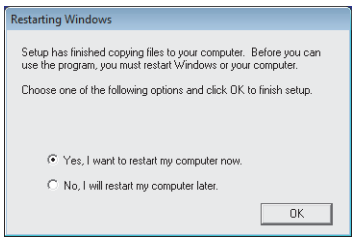
When a screen that indicates the completion of installation or update of MelfaRXM English is displayed, click the [Finish] button.



When the message on the left is displayed, installation is complete.

11. Click the [OK] button to close the screen.

When the following screen is displayed, select "Yes, I want to restart my computer now.".



Installation complete

(2) When message is displayed at start of installation

The following explains the countermeasures when the message is displayed at start of installation.

(a) When starting the installation of this product, the "This package is not in proper operating environment" message is displayed, disabling normal completion of installation.
In such a case, close all applications and perform the following operation.

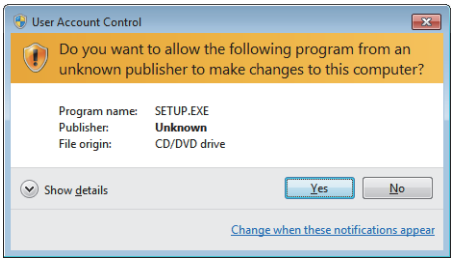
Operating procedure

1. Execute SETUP.EXE in the "EnvMEL" folder within the product CD-ROM.

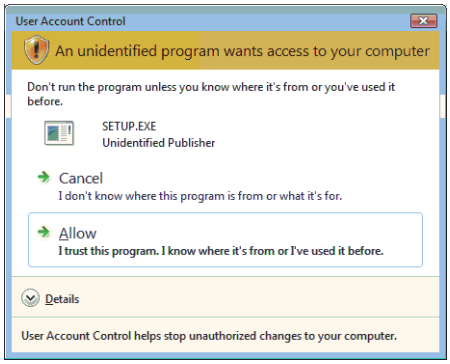
When user account control is enabled, the following screen is displayed.

Click the Yes button or "Allow".

<Windows® 7 or later>



<Windows Vista®>



Point

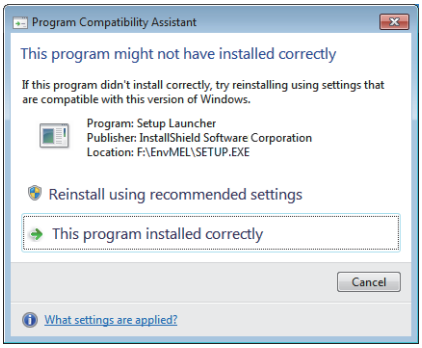
When using Windows® 8 and Windows® 8.1, refer to the following document.

- TECHNICAL BULLETIN No.FA-A-0153

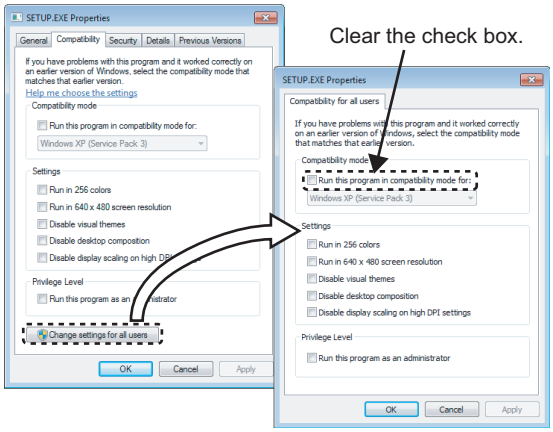
2. Reinstall the product.

If this product is not installed properly at this time, restart the personal computer.

(b) The Program Compatibility Assistant screen may be displayed after installation. Select "This program installed correctly" and restart the personal computer.



If "Reinstall using recommended settings" is selected, the "Windows XP SP2 compatibility mode" is automatically set. Disable the "Windows XP SP2 compatibility mode" by the following procedure, and install the product again.



1. **Right-click on the setup.exe icon of the installation target in the Windows explorer, and open the SETUP.EXE Properties screen.**
2. **Select the <<Compatibility>> tab and click the [Change settings for all users] button.**
3. **Clear the "Run this program in compatibility mode for:" check box of compatibility mode in the <<Compatibility for all users>> tab, and click the [OK] button.**
4. **Click the [OK] button on the SETUP.EXE Properties screen.**
5. **Install the product again.**
   (☞ Page 52, (1) in this section)

(c) The warning message of MelfaRXM English may be displayed during the installation from a removable media. In this case, perform the following operations.

1. **Click the [Cancel] button.**
2. **Terminate the installation.**
3. **Uninstall MelfaRXM English.**
4. **Install MX Component again.**
   (☞ Page 52, (1) in this section)

3.2 Registered Icons

Installation of MX Component registers the following icons to [Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component].

Icon	Name	Description
	Label Utility	Starts Label Utility.
	PLC Monitor Utility	Starts PLC Monitor Utility.
	Communication Setup Utility	Starts Communication Setup Utility.

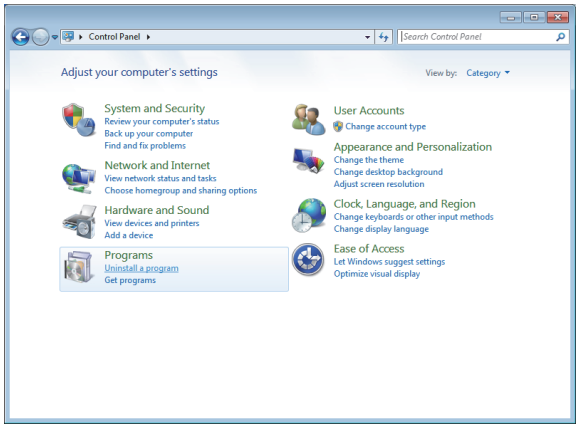
3.3 Uninstallation

The following explains the uninstallation procedure. Screens from Windows® 7 are used except for different operations required in other operating systems.

Point

Uninstalling deletes all the settings within "Communication Setup Utility".
To avoid this, export the file storing the settings.

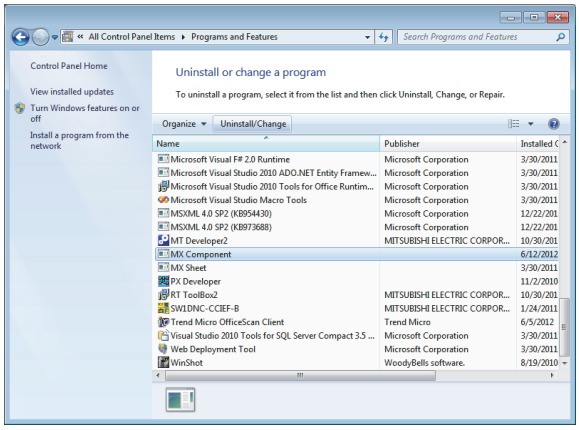
Operating procedure



1. **[Start] ⇨ [Control Panel] ⇨ "Uninstall a program"**

<Windows XP®>

[Start] ⇨ [Control Panel] ⇨ "Add/Remove Programs"



2. **Select "MX Component" from the list of programs and select "Change/Remove".**

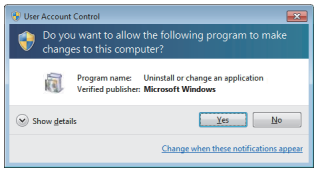
<Windows XP®>

Select "MX Component" from the list of programs and click the [Remove] button.

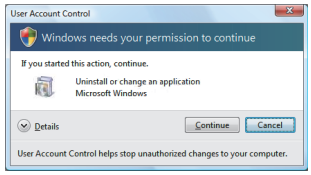
When user account control is enabled, the following screen is displayed.

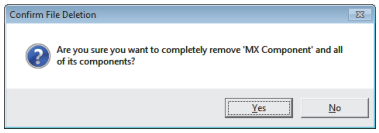
Click the [Yes] button or the [Continue] button.

<Windows® 7 or later>



<Windows Vista®>





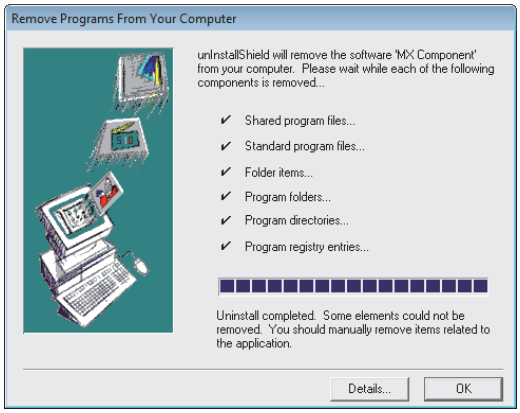
3. **Click the [Yes] button.**

When not uninstalling MX Component, click the [No] button to return to the preceding screen.

Components indicate the icons and files installed.

Continued on next page

Continued from previous page



Uninstallation complete

When the screen on the left is displayed, uninstall is complete.

4. Click the [OK] button to close the screen.

5. Restart the personal computer.

Point

The MelfaRXM English used for communication with a robot controller is not uninstalled even if MX Component is uninstalled.
MelfaRXM English can be uninstalled by any of the following methods.

- Uninstall MelfaRXM English from the control panel with the same procedure as MX Component.
  Select MelfaRXM English from the list of programs.
- Execute SetupRXM.exe in the "EZSocketRc" folder within the product CD-ROM.
  The software package with the version which has been installed must be used.

CHAPTER 4 OPERATION PROCEDURES

This chapter explains the selection of the MX Component utilities, development type, and the procedures for creating user applications.

4.1 Utilities

The following are the utilities used in MX Component.

Item	Description	Reference
Communication Setup Utility	Set the parameter for communication with the wizard.	Page 91, Section 7.1
PLC Monitor Utility	Set the transfer settings using the logical station number set with Communication Setup Utility, and monitor the programmable controller.	Page 109, Section 7.2
Label Utility	Register/utilize the system labels.	Page 121, Section 7.3

4.2 Selecting Development Type

When using MX Component to create user applications, select the utility setting type or program setting type before creating a user application.
The following explains utility setting type and program setting type.

(1) Utility setting type

Set the communication settings using Communication Setting Wizard.
With Communication Setup Utility, a user program can be created without being aware of the complicated parameters of any communication.
In the user program, the communication line can be connected by simply setting the logical station number set on Communication Setting Wizard for the ACT control or the .NET control property or into a user program.

(2) Program setting type

A user program is created without using Communication Setup Utility.
Set the ACT control settings for the corresponding communication on the property window directly or within the user program.
The required settings for the properties differ depending on the ACT control.

(3) Comparison

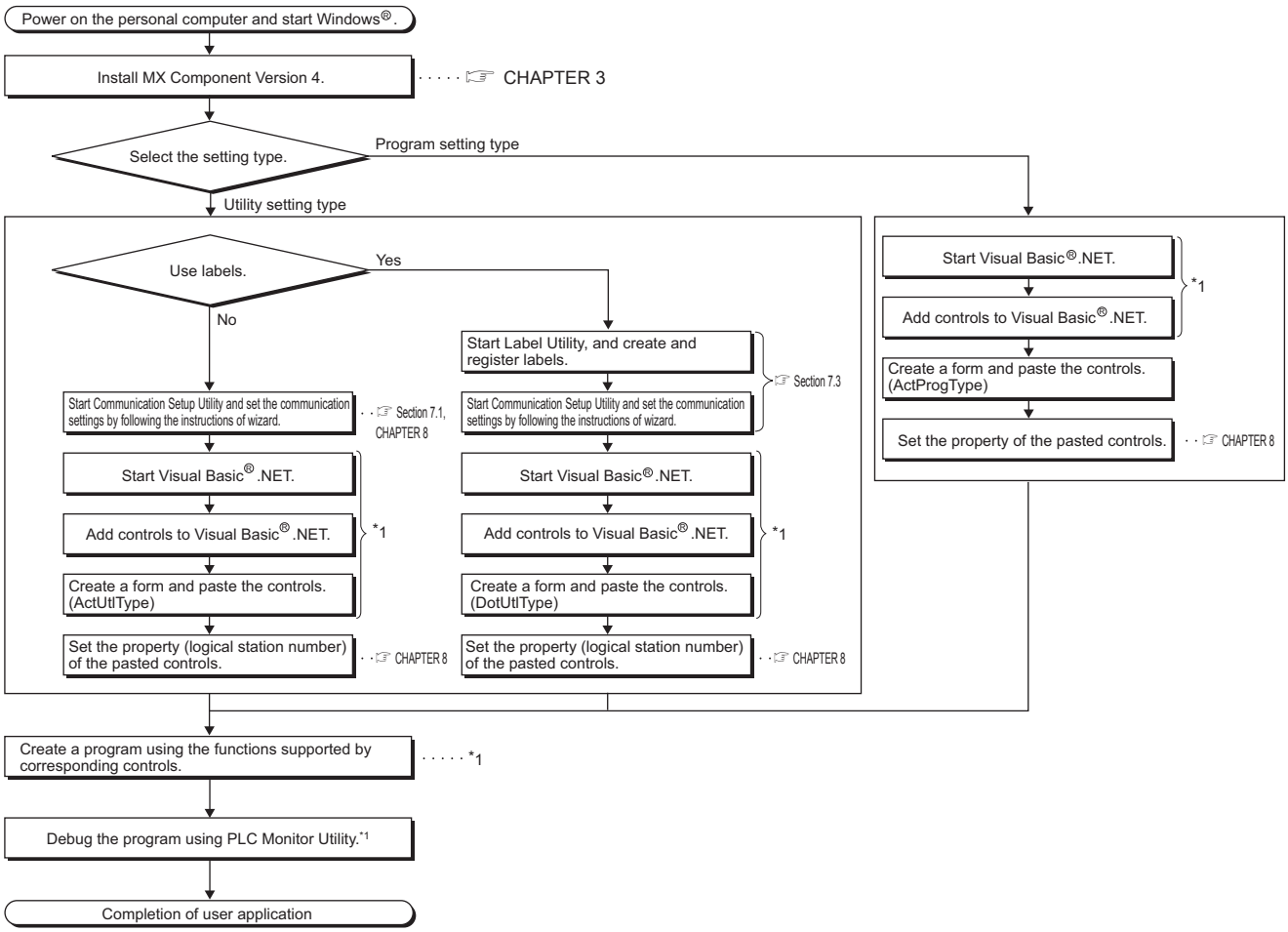
The following table compares the utility setting type and program setting type.

Item	Utility setting type	Program setting type
Feature	Communication settings can be set easily using Communication Setting Wizard. In program creation, communication can be performed by merely setting the parameter (logical station number) on Communication Setting Wizard. (The number of development processes can be reduced.)	All communication settings can be set in the user program. Communication settings can be changed flexibly in the user program.
Used ACT control	ActUtlType, ActMLUtlType	ActProgType, ActMLProgType
Used .NET control	DotUtlType (when labels are used)	-
Communication Setup Utility	Used	Not used
How to connect PLC Monitor Utility	Select the logical station number.	Change the settings every connection. (Use the wizard)

4.3 User Application Creating Procedures

4.3.1 When using Visual Basic® .NET

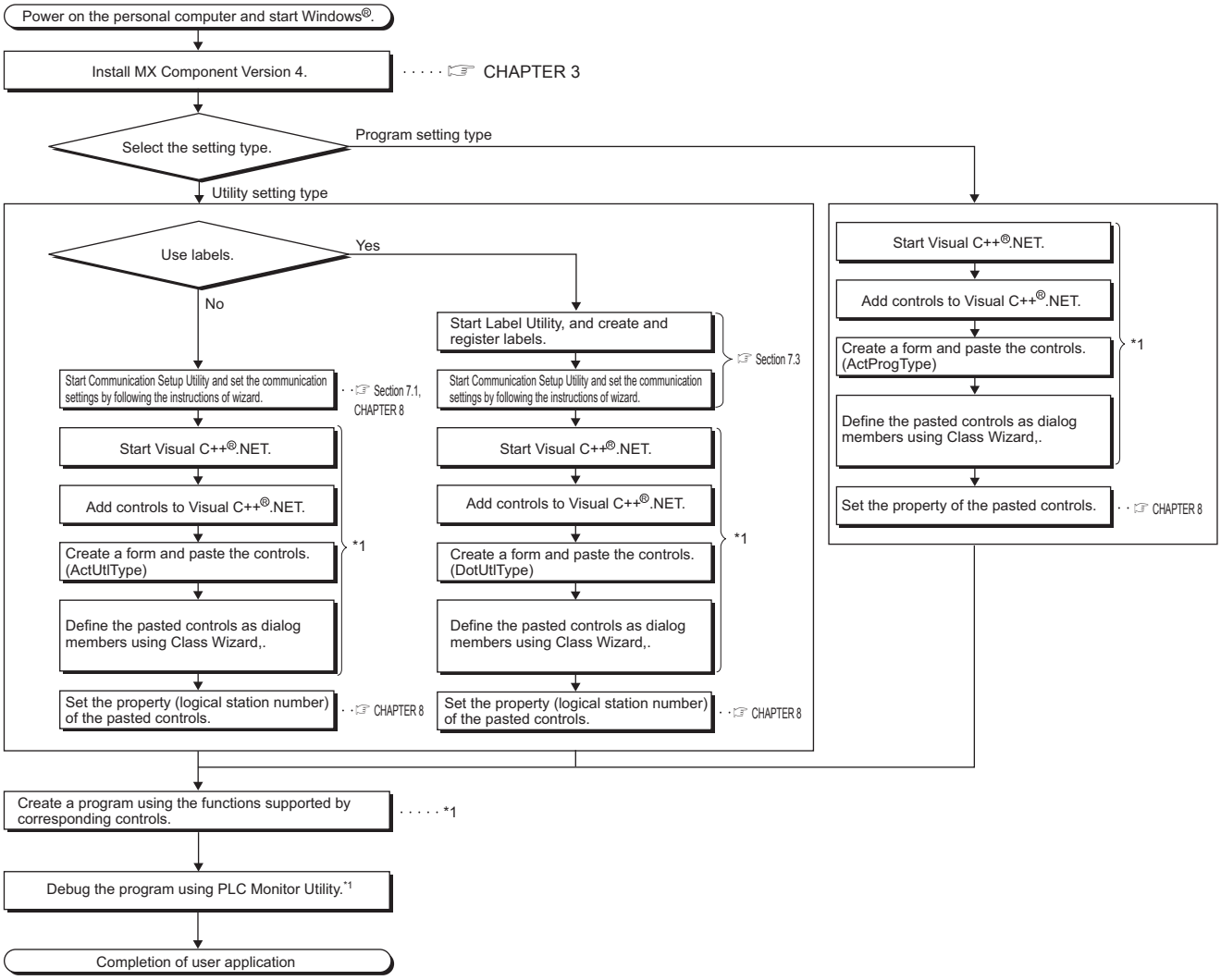
The following describes the creation procedures when using Visual Basic® .NET.



*1 : MX Component Version 4 Programming Manual

4.3.2 When using Visual C++® .NET

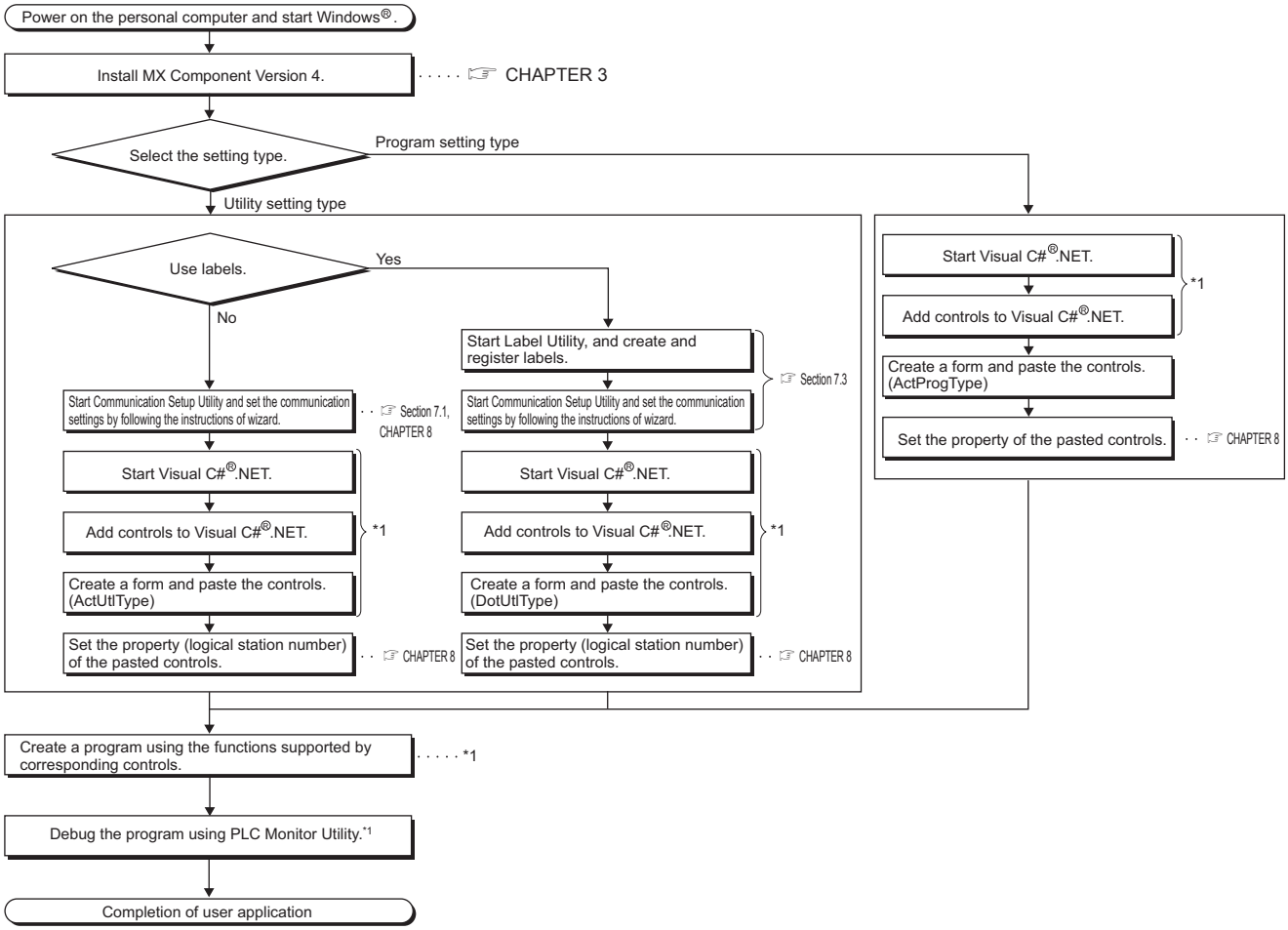
The following describes the creation procedures when using Visual C++® .NET.



*1 : MX Component Version 4 Programming Manual

4.3.3 When using Visual C#® .NET

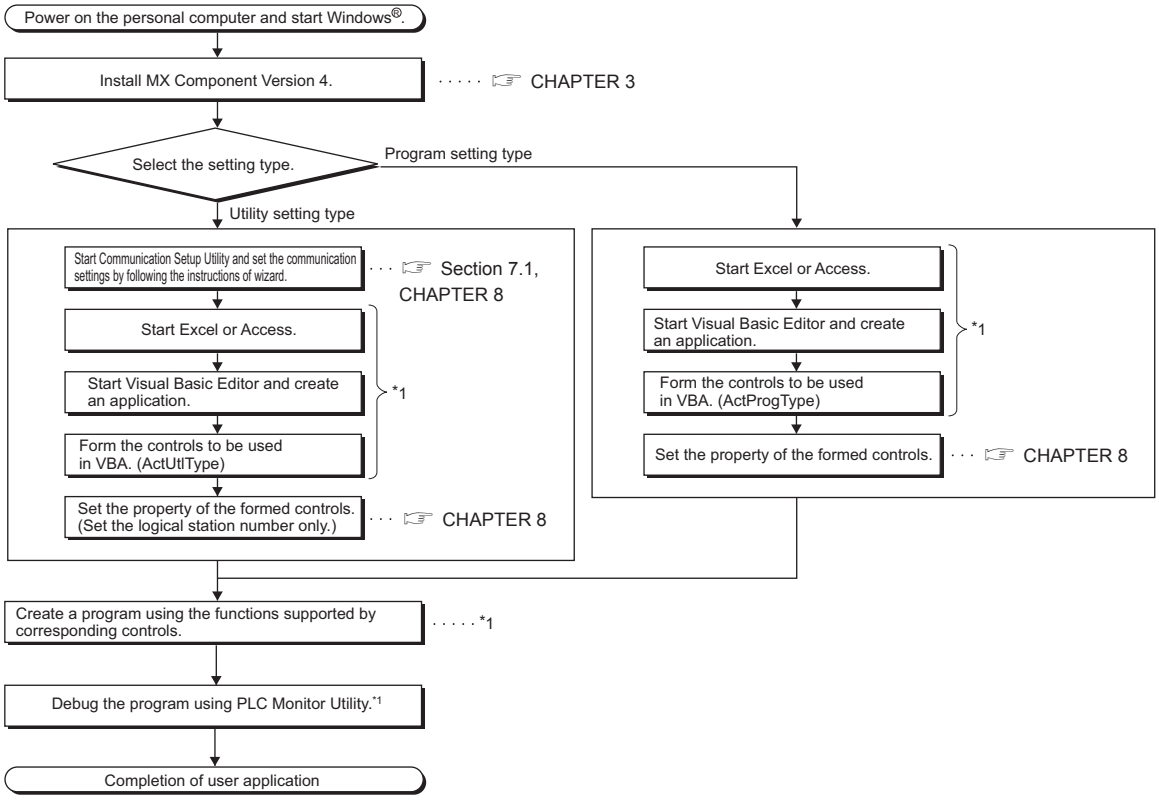
The following describes the creation procedures when using Visual C#® .NET.



*1 : MX Component Version 4 Programming Manual

4.3.4 When using VBA

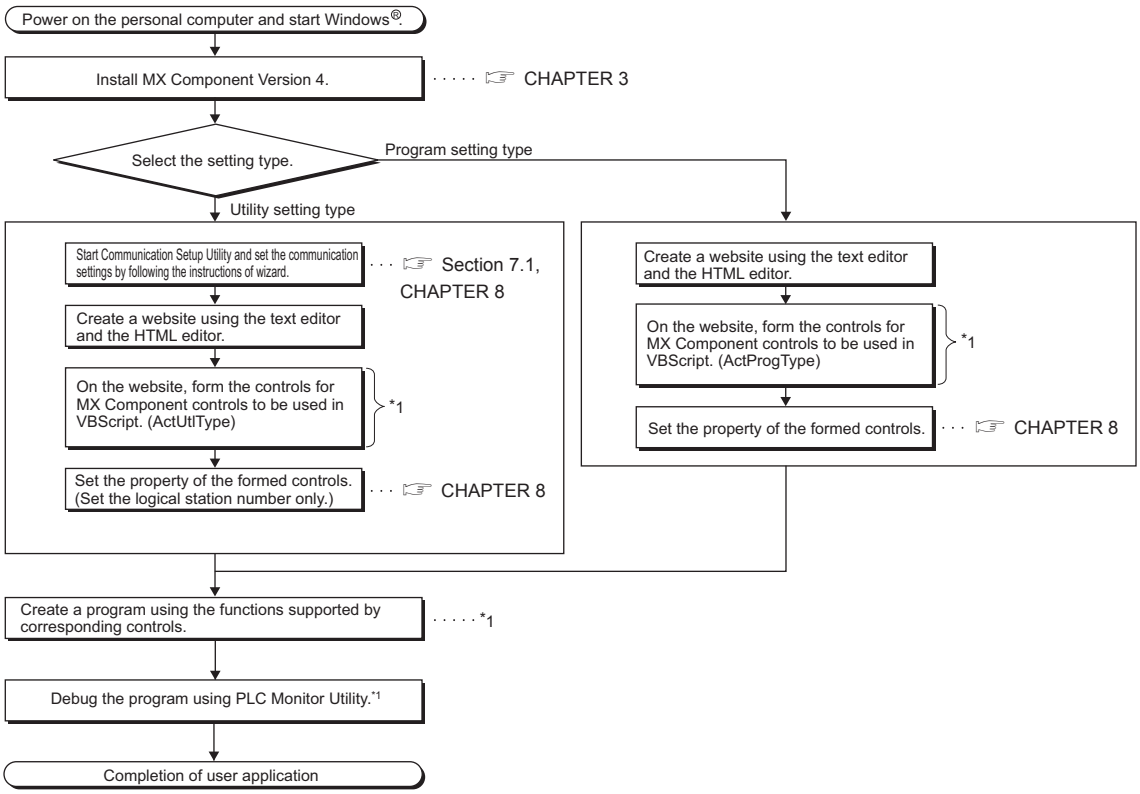
The following describes the creation procedures when using VBA.



*1 : MX Component Version 4 Programming Manual

4.3.5 When using VBScript

The following describes the creation procedures when using VBScript.



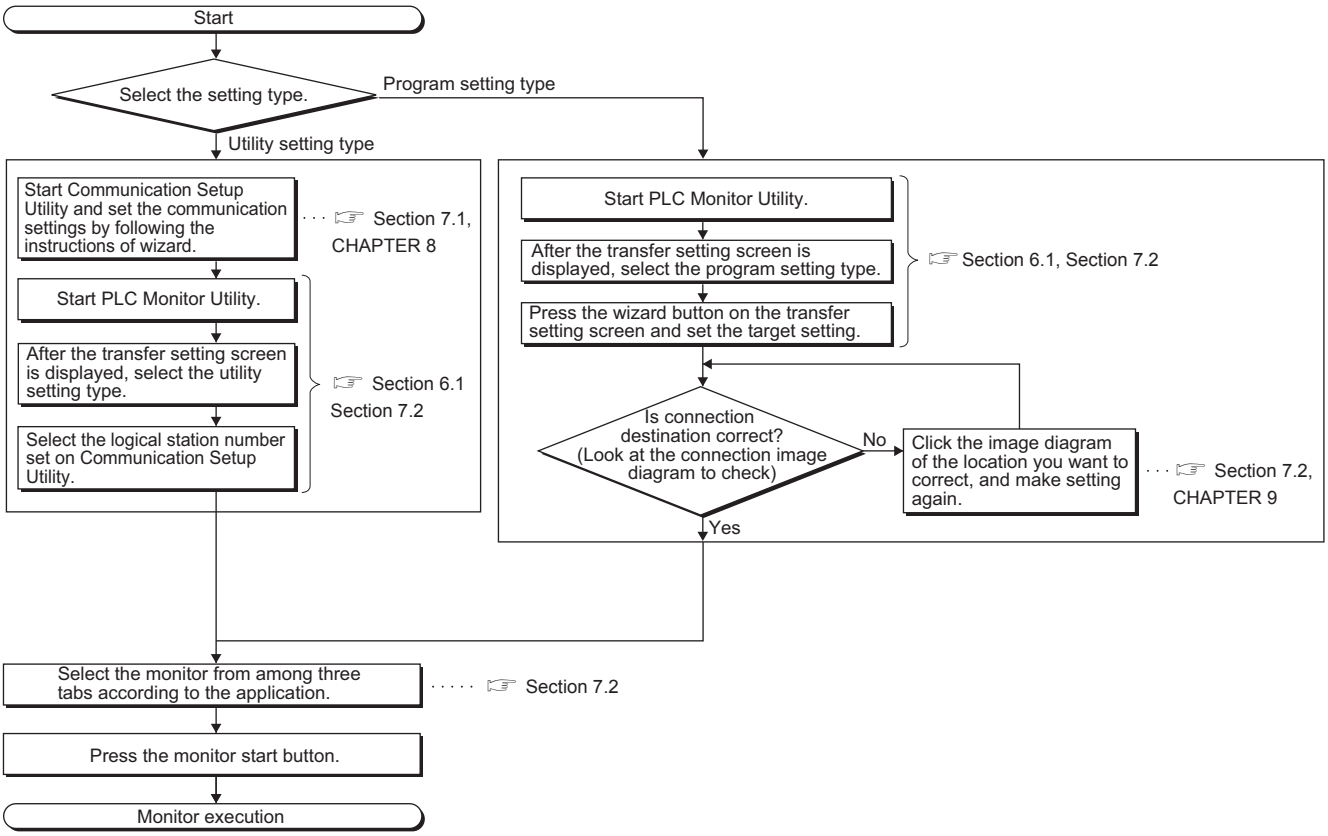
*1 : MX Component Version 4 Programming Manual

Point

For starting the Internet/intranet environment, refer to the following appendix.
Page 366, Appendix 2 How to Configure Internet/Intranet Environment

4.4 PLC Monitor Utility Operating Procedure

The following is the PLC Monitor Utility operating procedure.

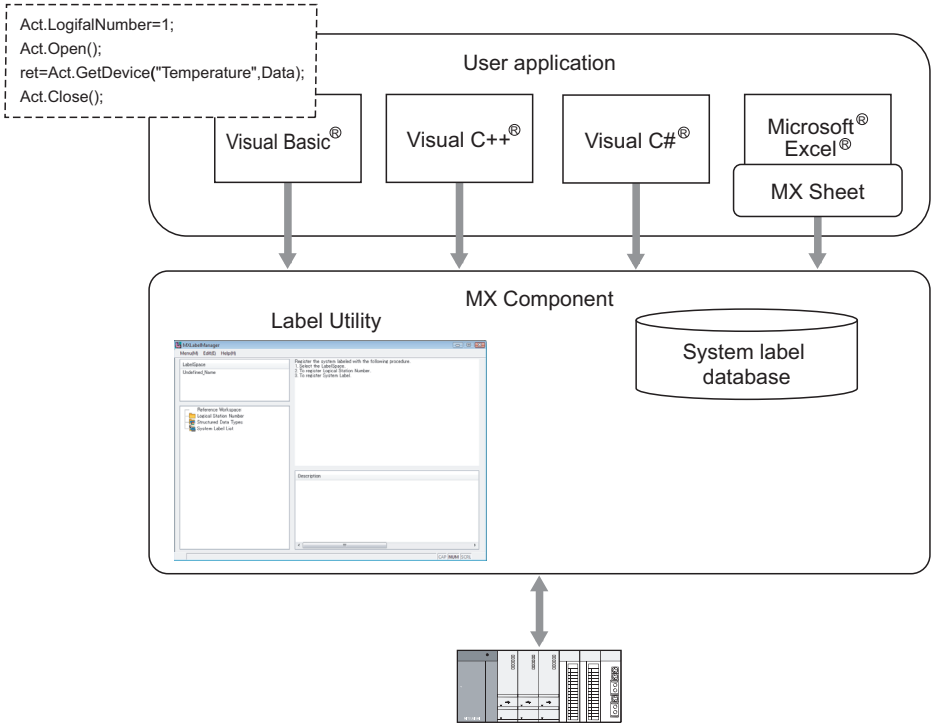


CHAPTER 5 SYSTEM LABELS

System labels are labels that can be used with sharing them with multiple projects by opening devices of programmable controller projects and motion controller projects as system labels. Therefore, programming efficiency is improved.
As the device assignment settings are changed in bulk, device assignment changes on applications are not required.

5.1 Using System Labels

Register a label using Label Utility of MX Component, and use it from controls.



Point

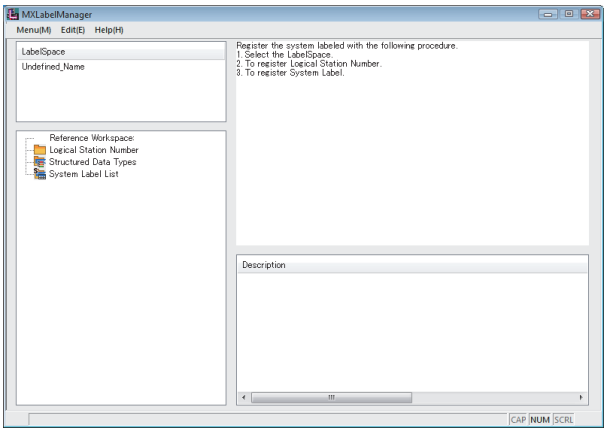
- System labels
  - Define labels one-to-one with devices, and register the labels.
  - Structure can be used. Structure consists of aggregate of various devices.
  - Set data types. Any data types can be set as array.
  - System labels used in MELSOFT Navigator can be utilized in MX Component.
- System label data base
  A system label data base is a data base to manage system labels.
- System label ver.2
  - The labels can be registered to system label Ver.2 using MX Component Version 4.07H or later.
    Structure labels and array labels can also be registered.

5.1.1 Register system labels in MX Component

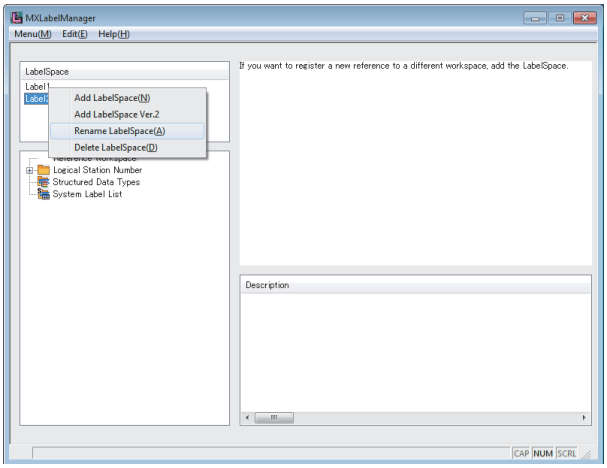
Register a system label with Label Utility.

(1) Register system labels

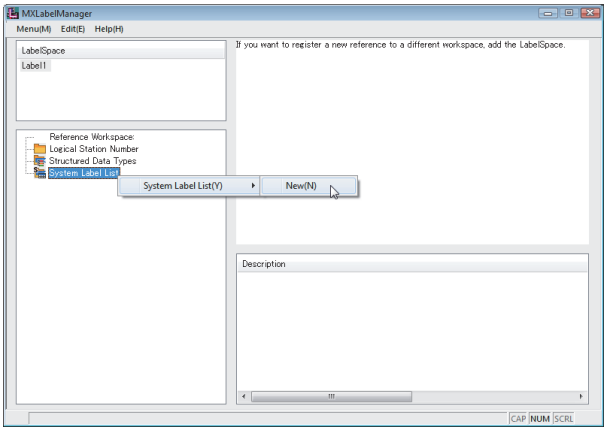
Operating procedure



1. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Label Utility]**
→ Label Utility starts.



2. **Right-click "Undefined_name" on the LabelSpace window, and select [Rename LabelSpace].**
(☞ Page 121, Section 7.3.1)
Change the LabelSpace name.



3. **Right-click "System Label List" on the Navigation window, and select [System Label List] ⇨ [New].**
(☞ Page 124, Section 7.3.3)
Set the system label list name.

Continued on next page

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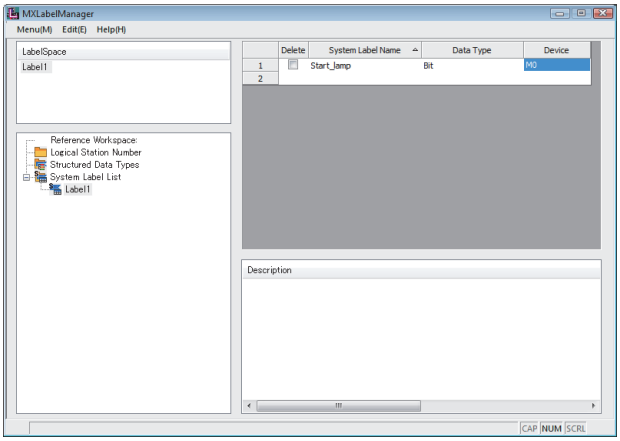
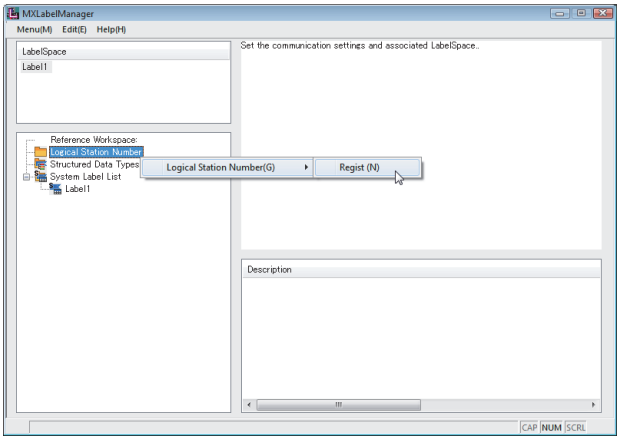
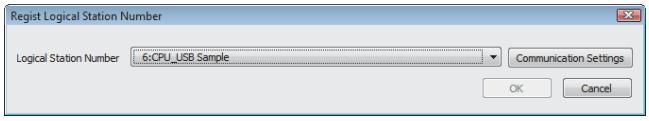


Select the set system label list name to display the system label list.

4. Set system label names, data types, and devices. (☞ Page 124, Section 7.3.3)



5. Right-click "Logical Station Number" on the Navigation window, and select [Logical Station Number] ⇨ [Regist]. (☞ Page 123, Section 7.3.2)



6. Select a logical station number, and click the OK button. (☞ Page 123, Section 7.3.2)

For setting the communication settings, click the Communication Settings button, and set the settings with Communication Setting Wizard.
(☞ Page 97, Section 7.1.6)

Continued on next page

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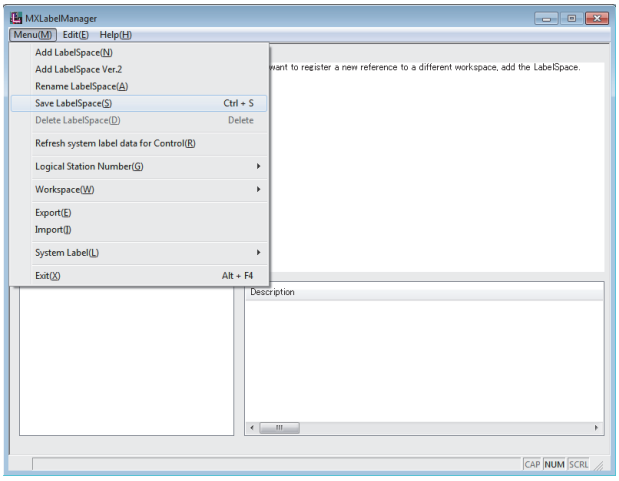
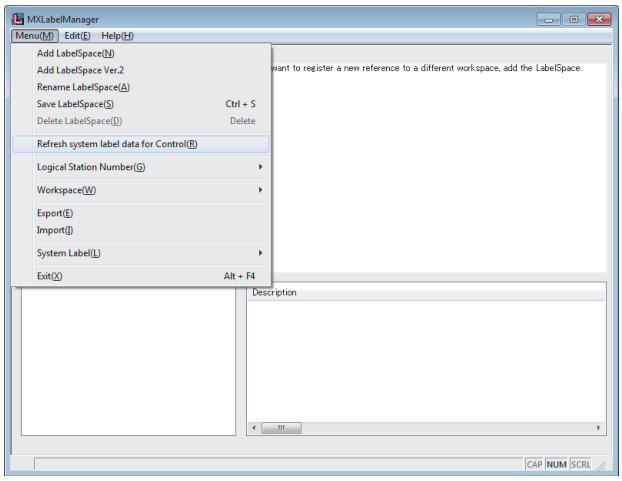


The logical station number is displayed on the Navigation window.

7. **[Menu] ⇨ [Save LabelSpace]**

(☞ Page 121, Section 7.3.1)

→ The system label is registered.



8. **[Menu] ⇨ [Refresh system label data for Control]**

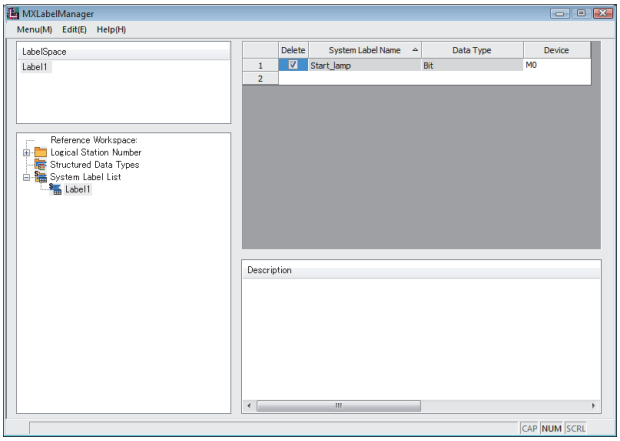
(☞ Page 133, Section 7.3.7)

→ The labels referred from controls are updated.

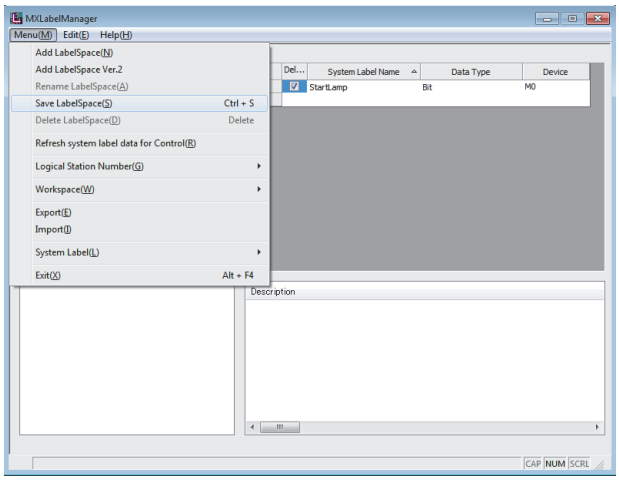
Registration complete

(2) Deleting system labels

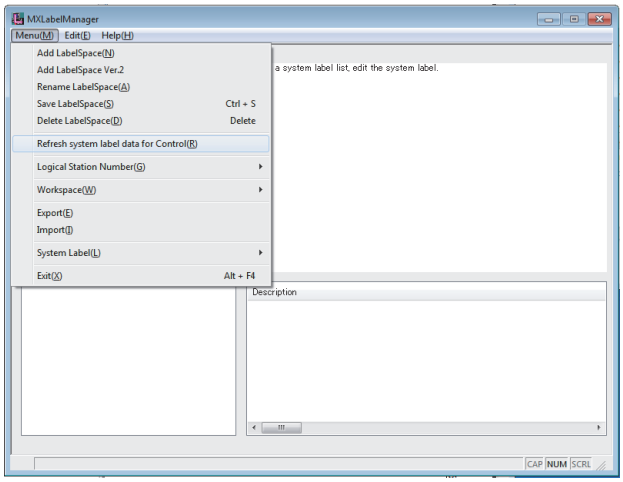
Operating procedure



1. **Select "Delete" for a system label to be deleted.**



2. **[Menu] ⇨ [Save LabelSpace]**
(☞ Page 121, Section 7.3.1)
→ The system label is deleted.

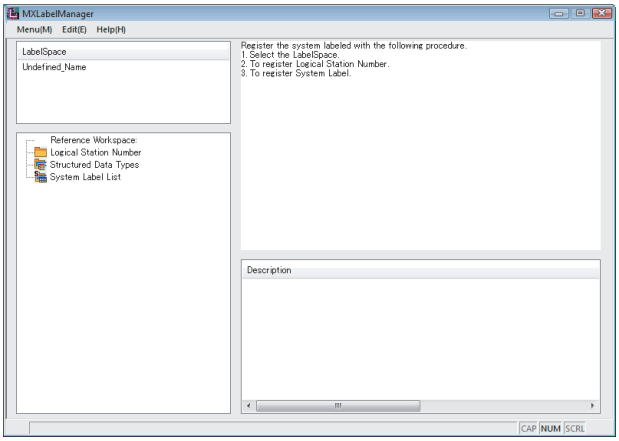


3. **[Menu] ⇨ [Refresh system label data for Control]**
(☞ Page 133, Section 7.3.7)
→ The labels referred from controls are updated.

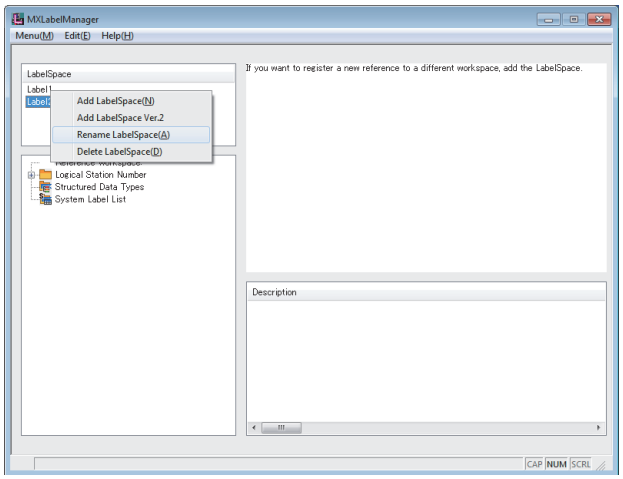
Deletion complete

(3) Registering system labels (structured data type)

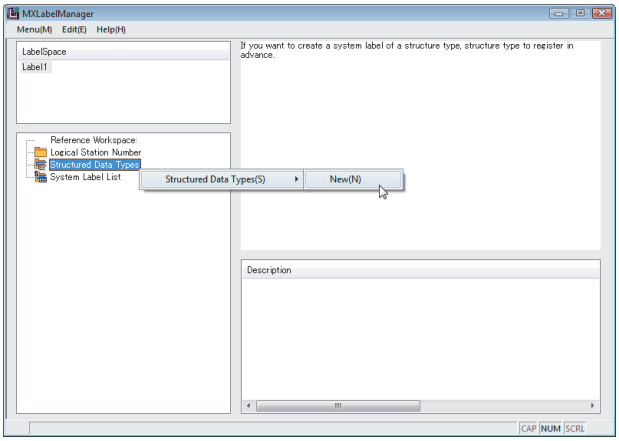
Operating procedure



1. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Label Utility]**
→ Label Utility starts.



2. **Right-click "Undefined_name" on the LabelSpace window, and select [Rename LabelSpace].**
(☞ Page 121, Section 7.3.1)
Change the LabelSpace name.



3. **Right-click "Structured Data Types" on the Navigation window, and select [Structured Data Types] ⇨ [New].**
(☞ Page 129, Section 7.3.4)
Set the structure name.

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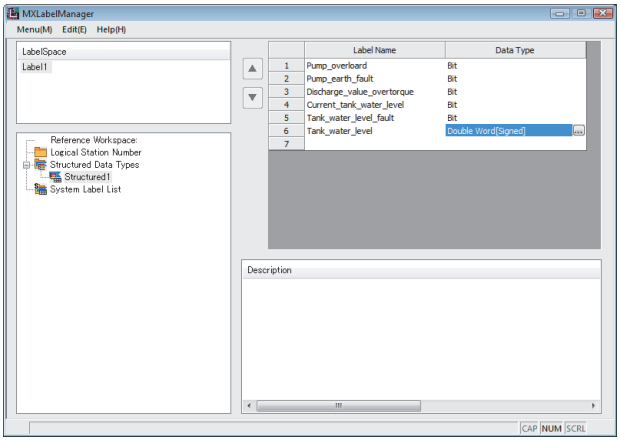
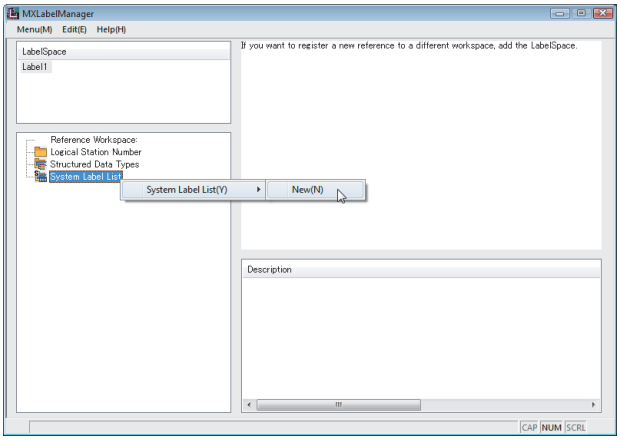
Continued from previous page

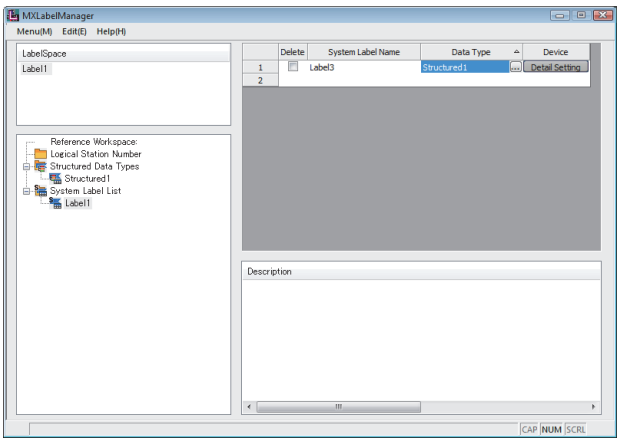


Select the set structure name to display the structure setting list.

4. **Set label names and data types for structure member. (☞ Page 129, Section 7.3.4)**



5. **Right-click "System Label List" on the Navigation window, and select [System Label List] ⇨ [New]. (☞ Page 124, Section 7.3.3)**
Set the system label list name.



Select the set system label list name to display the system label list.

6. **Set system label names and data types. (☞ Page 124, Section 7.3.3)**
Click "Detail Setting" on the "Device" column of the system label list.

Continued on next page

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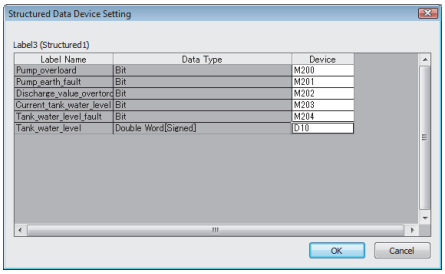
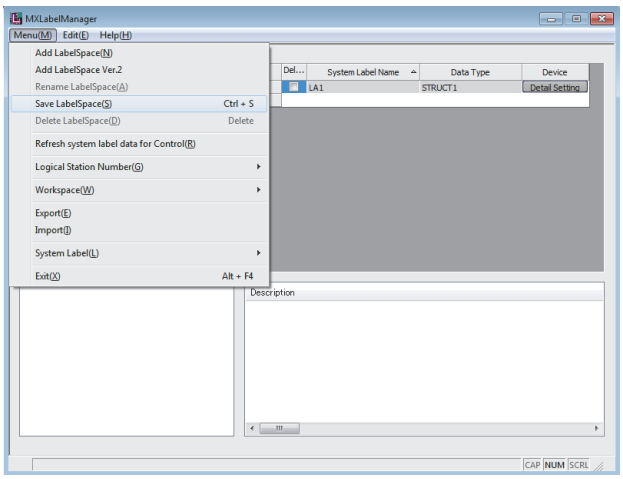


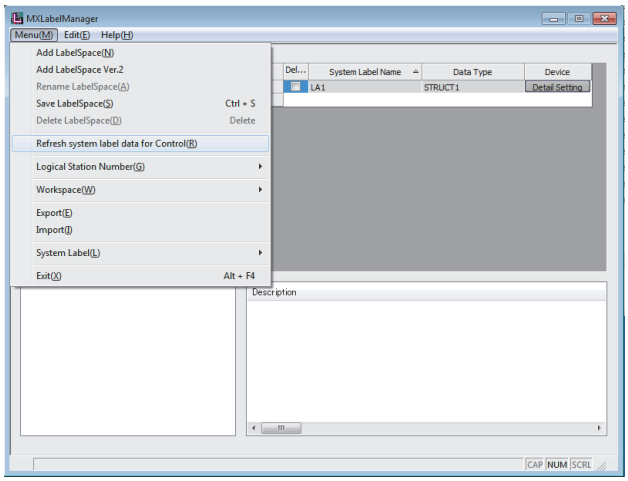
7. **Specify a device.**



8. **[Menu] ⇨ [Save LabelSpace]**

(☞ Page 121, Section 7.3.1)

→ The system label is registered.



9. **[Menu] ⇨ [Refresh system label data for Control]**

(☞ Page 133, Section 7.3.7)

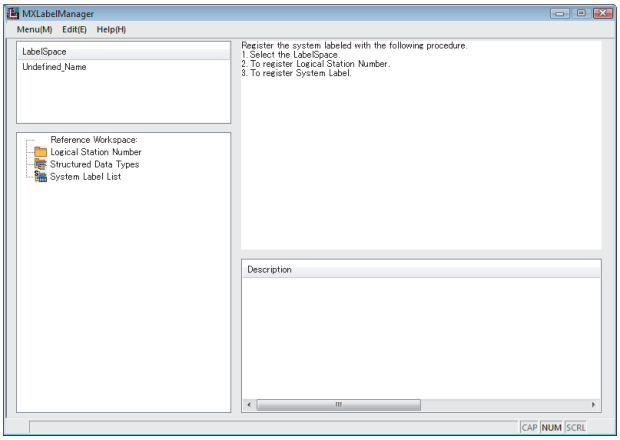
→ The labels referred from controls are updated.

Registration complete

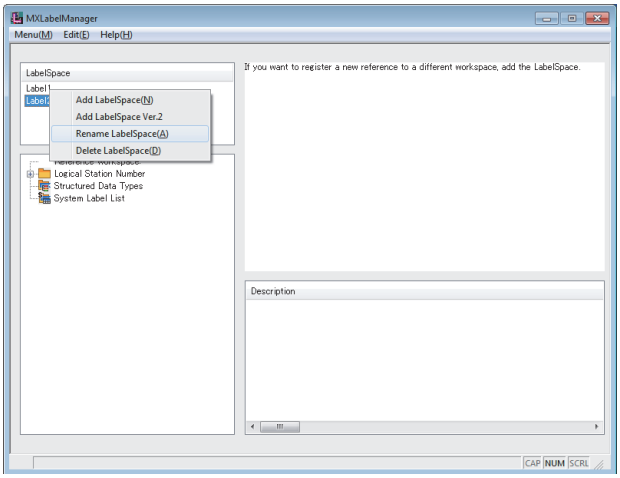
5.1.2 Utilizing labels used in MELSOFT Navigator

Refer a system label from existing Workspace, and register it with Label Utility.

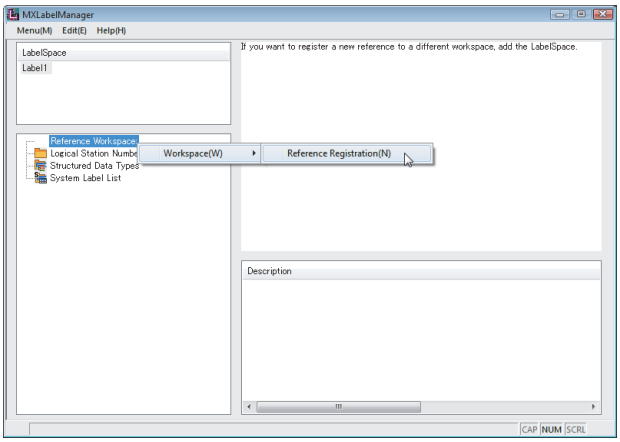
Operating procedure



1. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Label Utility]**
→ Label Utility starts.



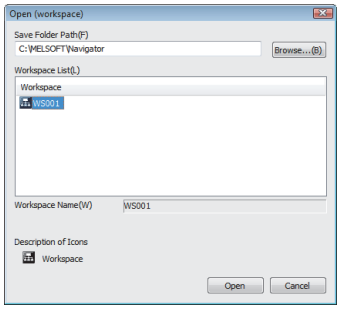
2. **Right-click "Undefined_name" on the LabelSpace window, and select [Rename LabelSpace].**
(☞ Page 121, Section 7.3.1)
Change the LabelSpace name.



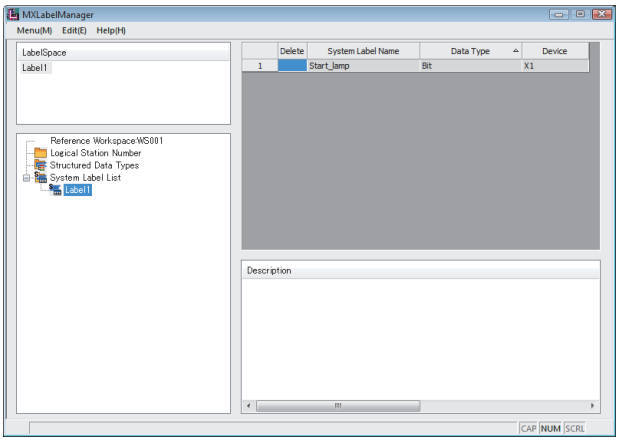
3. **Right-click "Reference Workspace" on the Navigation window, and select [Workspace] ⇨ [Reference Registration].**
(☞ Page 130, Section 7.3.5)

Continued on next page

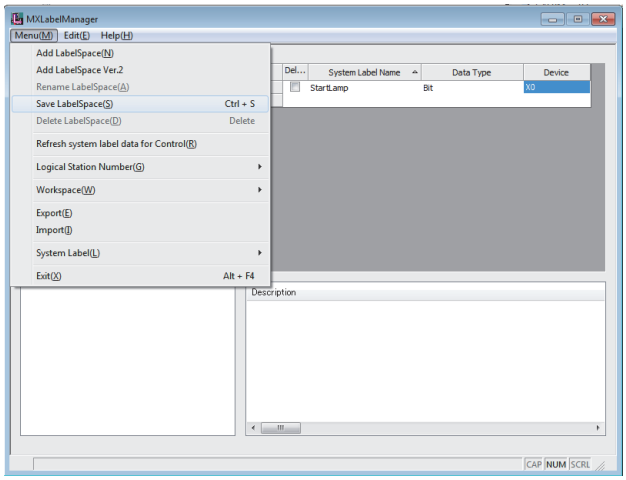
Continued from previous page



4. **Select a Workspace that is to be referred and registered. (☞ Page 130, Section 7.3.5)**



The referred and registered Workspace name is displayed on the Navigation window.
Select the system label name to display the referred system label list.

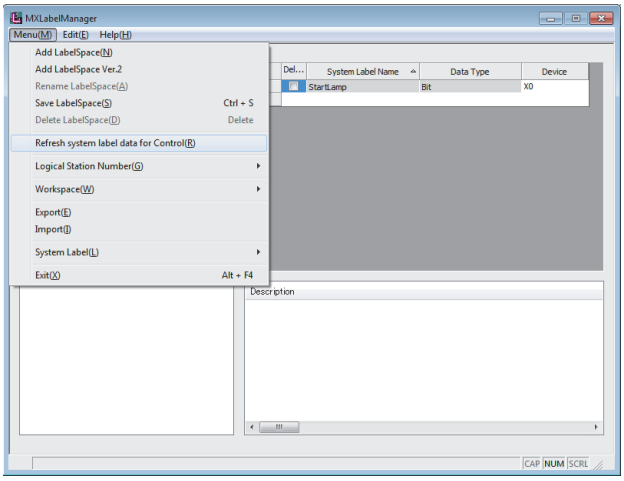


5. **[Menu] ⇨ [Save LabelSpace] (☞ Page 121, Section 7.3.1)**
→ The system label is registered.

For referring more than one Workspace, add LabelSpace first, and operate the procedure 2 to 4.

Continued on next page

Continued from previous page



Registration complete

6. **[Menu] ⇨ [Refresh system label data for Control]**

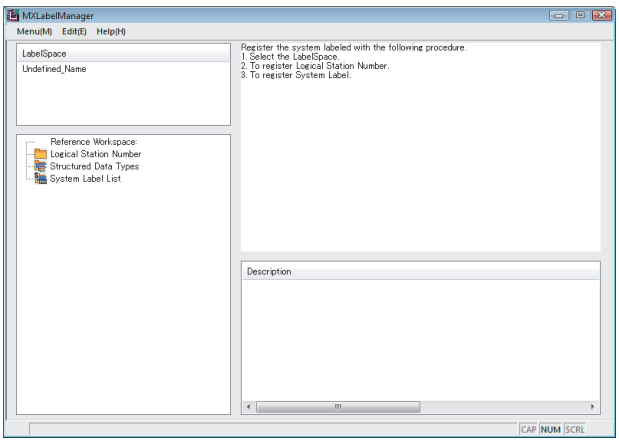
(☞ Page 133, Section 7.3.7)

→ The labels referred from controls are updated.

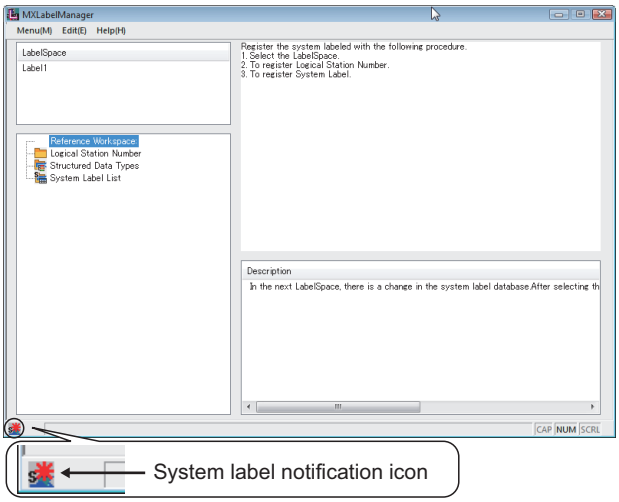
5.1.3 Applying device settings changed in GX Works2 to MX Component

Update the settings with Label Utility after changing the device assignment settings of referred and registered system labels with GX Works2.

Operating procedure

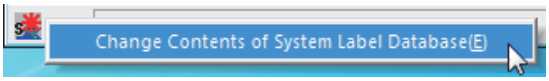


1. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Label Utility]**
→ Label Utility starts.

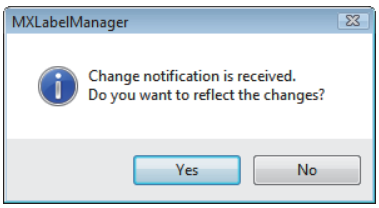


The system label notification icon is displayed on the status bar of Label Utility.

2. **Select the LabelSpace name.**



3. **Right-click the system label notification icon, and select [Change Contents of System Label Database].** **(☞ Page 132, Section 7.3.6)**



4. **Click the Yes button.**

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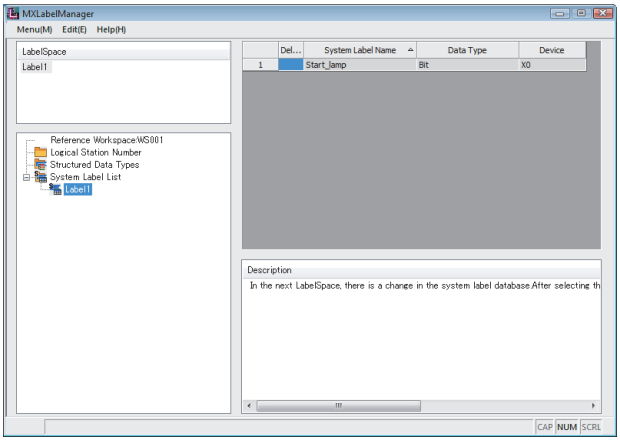
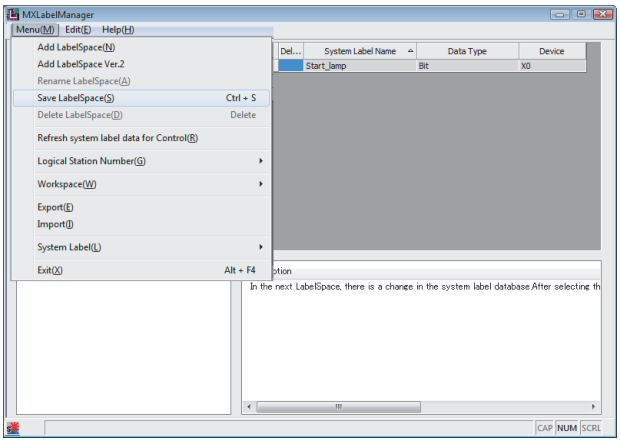
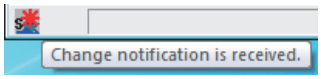


Select the system label list name to display the system label list.

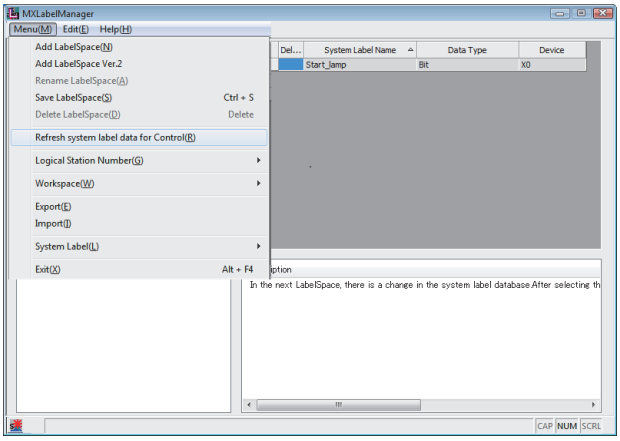


5. **[Menu] ⇨ [Save LabelSpace]**
(☞ Page 121, Section 7.3.1)
→ The system label is registered.

For referring more than one Workspace, select LabelSpace from the LabelSpace window first, and operate the procedure 2 to 4.



The system label notification icon is displayed while referring more than one Workspace.



6. **[Menu] ⇨ [Refresh system label data for Control]**
(☞ Page 133, Section 7.3.7)
→ The labels referred from controls are updated.

Registration complete

Point

The system label notification icon is not displayed when the system labels are used without referring and registering the Workspace.

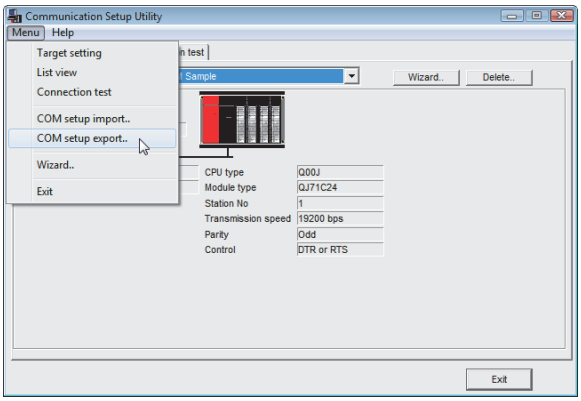
5.1.4 Using System Labels on another personal computer

Export a LabelSpace, and import it to another personal computer to use a system label.

(1) Exporting LabelSpaces

Export a LabelSpace, and create a file.

Operating procedure

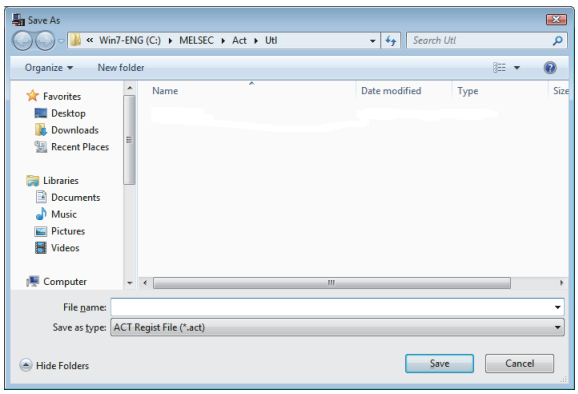


1. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Communication Setup Utility]**

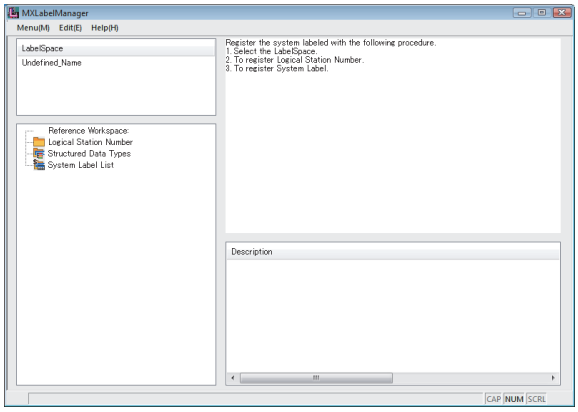
→ Communication Setup Utility starts.

2. **[Menu] ⇨ [COM setup export]**

(☞ Page 96, Section 7.1.5)



3. **Enter the file name to be saved.**



4. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Label Utility]**

→ Label Utility starts.

Continued on next page

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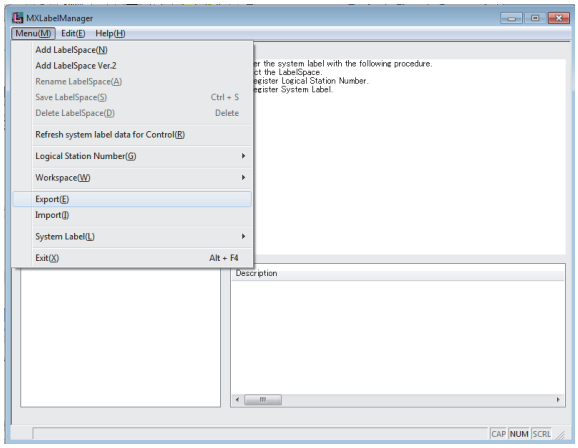
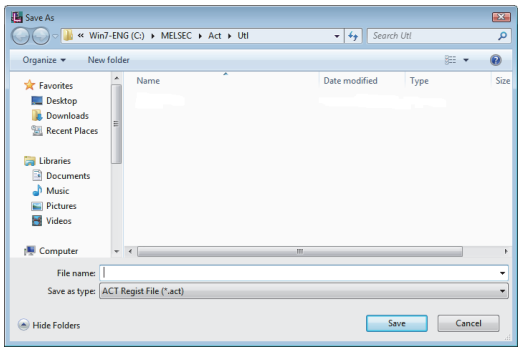


5. [Menu] ⇨ [Export] (☞ Page 133, Section 7.3.8)



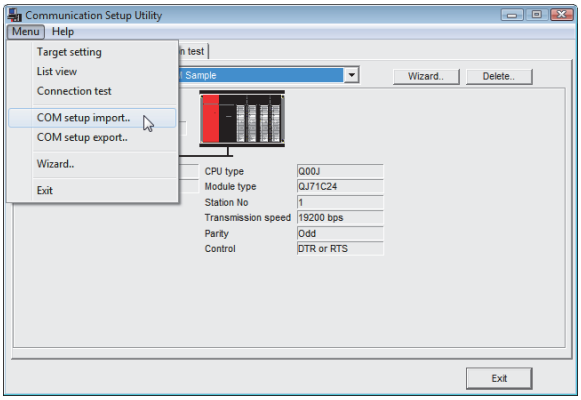
6. **Enter the file name to be saved.**

Registration complete

(2) Importing LabelSpaces

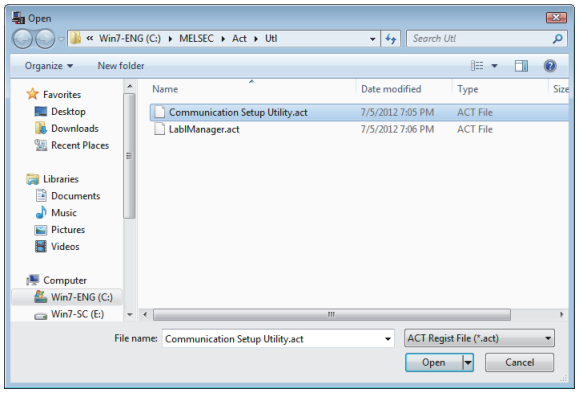
Import an exported file to LabelSpace of another personal computer.
Copy the exported files of the communication setting and the LabelSpace to the personal computer to be imported beforehand.

Operating procedure

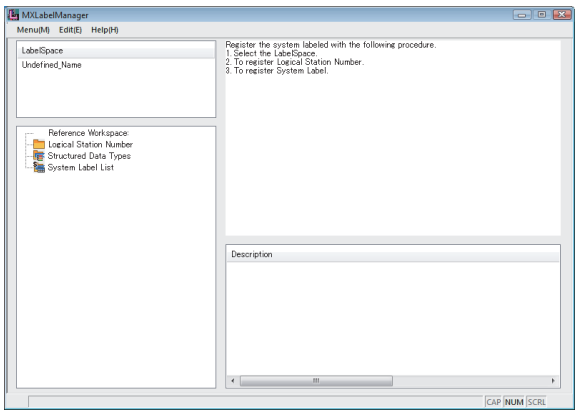


1. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Communication Setup Utility]**
→ Communication Setup Utility starts.

2. **[Menu] ⇨ [COM setup import]**
(☞ Page 95, Section 7.1.4)



3. **Specify the file name of communication setting to be imported.**



4. **[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component] ⇨ [Label Utility]**
→ Label Utility starts.

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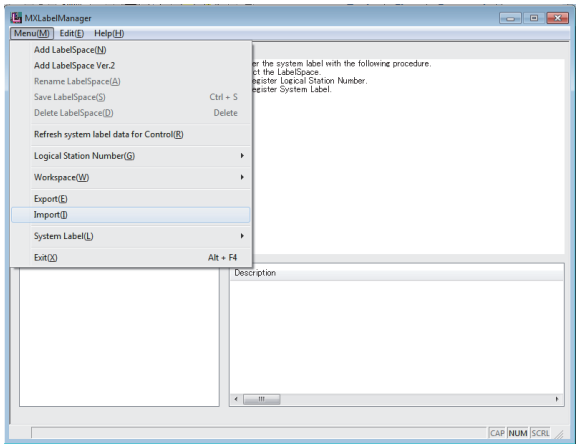
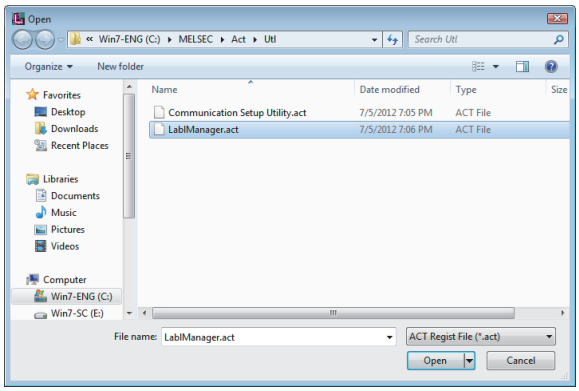
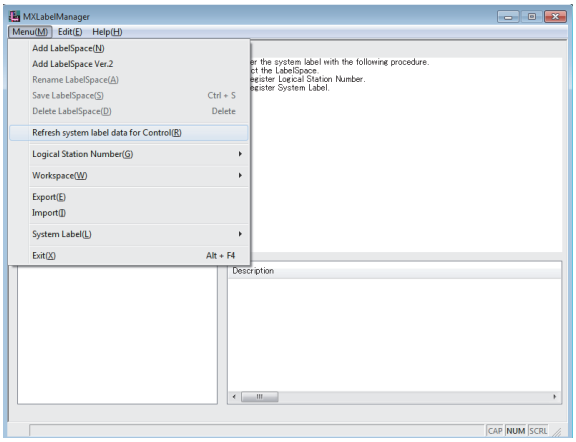


5. **[Menu] ⇨ [Import] (☞ Page 134, Section 7.3.9)**



6. **Specify the file name of LabelSpace to be imported.**



7. **[Menu]⇨[Refresh system label data for Control] (☞ Page 133, Section 7.3.7)**

→ The labels referred from controls are updated.

Registration complete

CHAPTER 6 STARTING AND EXITING UTILITIES

This chapter explains how to start and exit the utilities.

6.1 Starting Utilities

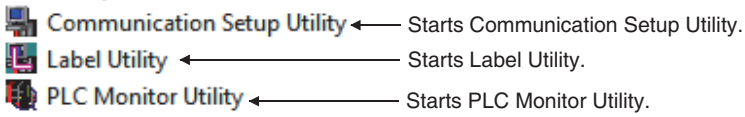
Operating procedure

[Start] ⇨ [All Programs] ⇨ [MELSOFT Application] ⇨ [MX Component]

For the registered icons, refer to the following section.

☞ Page 59, Section 3.2 Registered Icons

Screen display



<Administrator authority when executing each utility>

(1) Administrator authority

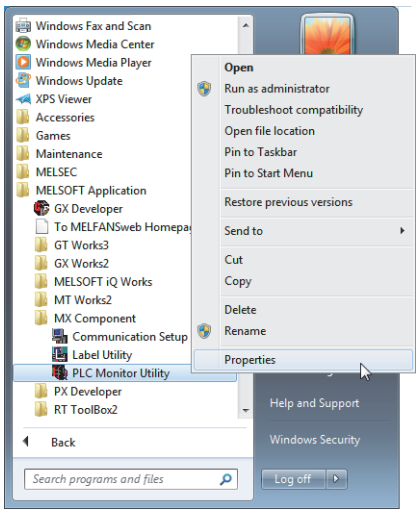
However, when Label Utility is executed, the status is switched to the administrator authority automatically.
When executing Communication Setup Utility and PLC Monitor Utility, the performance differs according to the user account control (UAC) settings.

1) When user account control (UAC) is enabled
   All users including administrator are fixed at and operate as "standard user".
   To execute programs with administrator authority, specify "Run as administrator".
2) When user account control (UAC) is disabled
   Programs can be executed by login user.

(2) Operating procedure for administrator authority

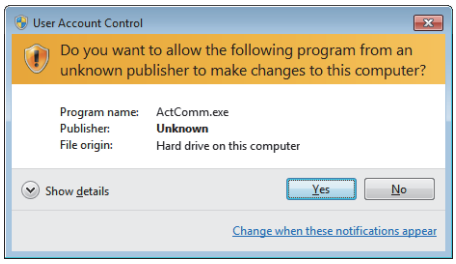
The following shows a procedure to execute Communication Setup Utility with the administrator authority when UAC is enabled. (The procedure is also applied to PLC Monitor Utility.)

Operating procedure



1. **Select [Communication Setup Utility], right-click, and select [Run as administrator] for execution.**

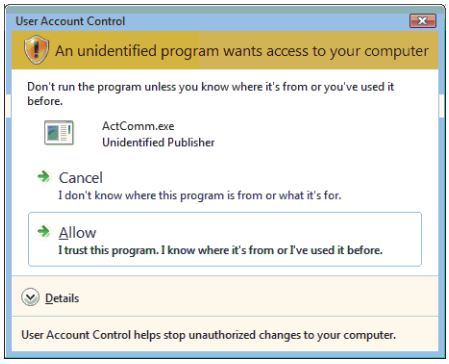
<Windows® 7 or later>



For administrator users, the message shown on the left is displayed.

2. **Select Yes button or "Allow" to execute a program with the administrator authority. Select No button or "Cancel" to cancel the execution.**

<Windows Vista®>

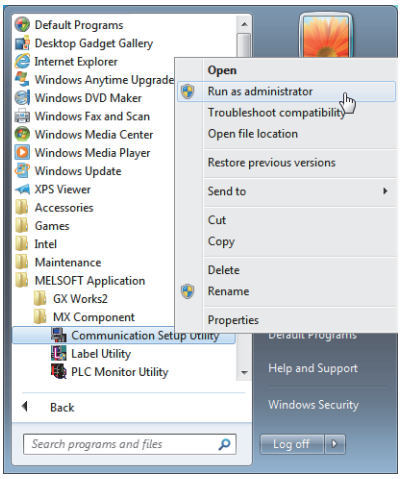


Setting complete

(3) Setting to always execute programs as an administrator

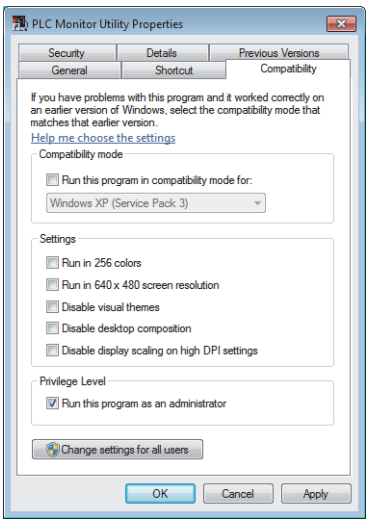
Set the following setting to "Run as administrator" at all times.
(The procedure is also applied to PLC Monitor Utility.)

Operating procedure



1. **Select [Communication Setup Utility], right-click, and select [Properties].**

<Windows® 7 or later>



2. **Select the <<Compatibility>> tab, and select "Run this program as an administrator" of "Privilege Level".**

Setting complete

6.2 Exiting Utilities

(1) Communication Setup Utility

Operating procedure

- **[Menu] ⇨ [Exit Communication Setup Utility]**
- **Click the [Exit] button at bottom right of the screen.**

(2) PLC Monitor Utility

Operating procedure

- **[Menu] ⇨ [Exit PLC Monitor Utility]**
- **Click the [Exit] button at bottom right of the screen.**

(3) Label Utility

Operating procedure

[Menu] ⇨ [Exit]

6.3 Confirming Version

Operating procedure

[Help] ⇨ [About...]

CHAPTER 7 UTILITY OPERATIONS

This chapter explains how to operate each utility.

Point

For communication setting examples using Communication Setup Utility, refer to the following chapter.
☞ Page 135, CHAPTER 8 COMMUNICATION SETTING EXAMPLES OF UTILITY SETTING TYPE

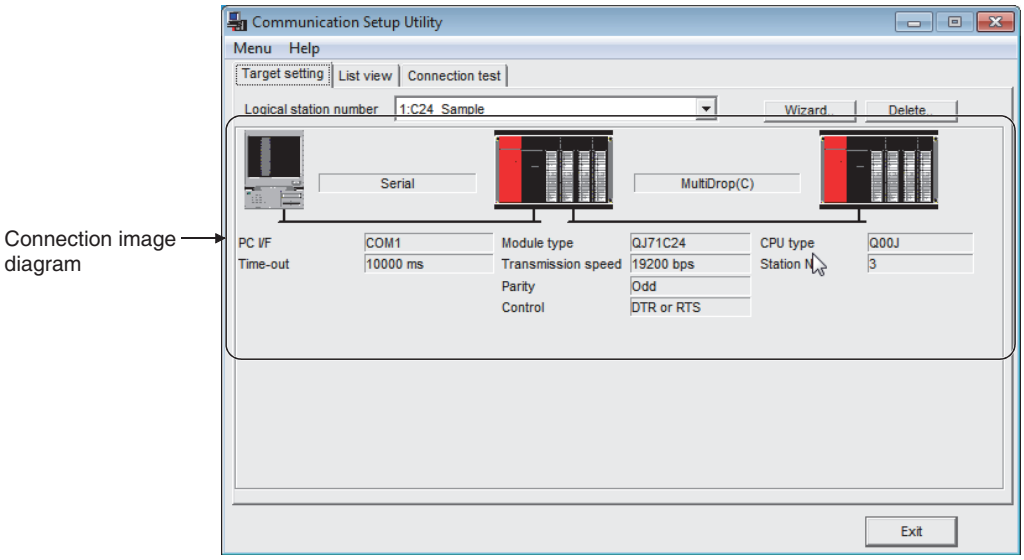
7.1 Communication Setup Utility

This section explains how to operate and set Communication Setup Utility used to perform communication with the utility setting type.

7.1.1 Operations on Target setting tab

This tab is used to display the setting details of the logical station number set on Communication Setting Wizard and to edit.

Screen display



Item	Description
Logical station number	Select the logical station number to display and edit the setting details set on Communication Setting Wizard.
Wizard.. button	Start Communication Setting Wizard and set the logical station number.
Delete.. button	Delete the preset logical station number.
Connection image diagram	Display the connection image diagram of the selected logical station number. Click any sketch (personal computer, programmable controller CPU) in the connection image diagram to start the Communication Setting Wizard, and the settings can be changed.

Remark

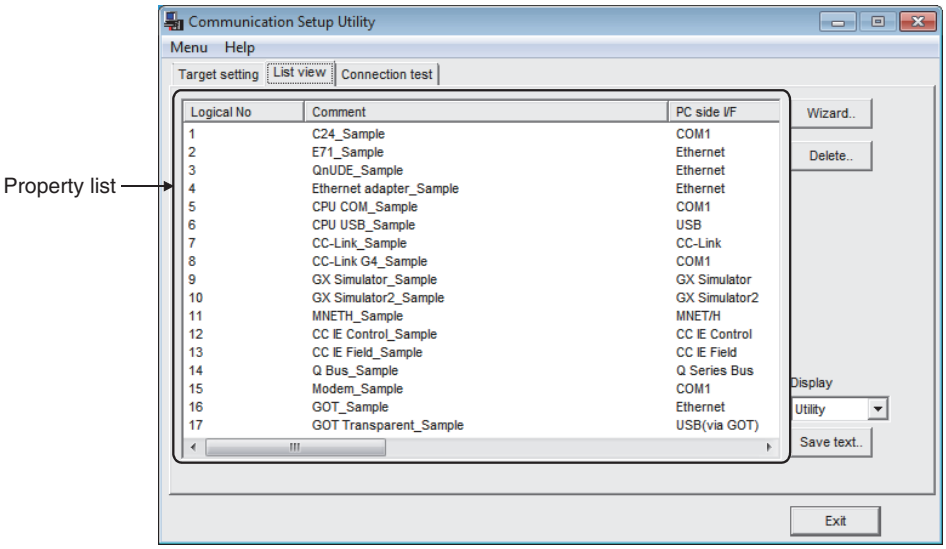
For details of Communication Setting Wizard, refer to the following section.

☞ Page 97, Section 7.1.6 Operations on Communication Setting Wizard screens

7.1.2 Operations on List view tab

This tab is used to list and edit the registered logical station number, and list the properties required for the program setting type.

Screen display



Item	Description
Property list	Display the settings of the registered logical station numbers. Double-clicking the logical station number starts Communication Setting Wizard.
Wizard.. button	Start Communication Setting Wizard and set the logical station number.
Delete.. button	Delete the preset logical station number.
Display	Utility : Display the settings set for the logical station numbers in the property list. Program: Display the property list required for setting with the program setting type.
Save text.. button	Save the settings of property list into a file in the .txt format.

Remark

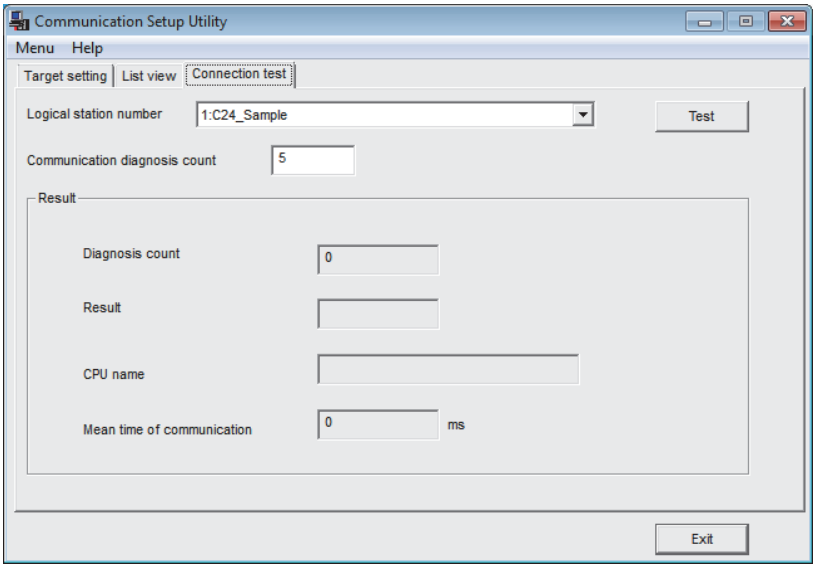
For details of Communication Setting Wizard, refer to the following section.

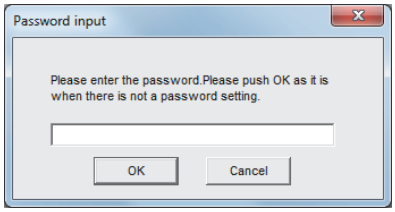
☞ Page 97, Section 7.1.6 Operations on Communication Setting Wizard screens

7.1.3 Operations on Connection test tab

This tab is used to conduct a communication test on the registered logical station number.

Screen display



Item	Description
Logical station number	Select the logical station number on which a communication test will be performed.
Communication diagnosis count	Set how many times (1 to 32767) the communication test will be repeated for the specified logical station number.
Test button (Cancel button)	Start (stop) the communication test. When the logical station number where the modem communication data are set is selected, the following screen is displayed after Test button is clicked. When the password is set, enter the password and click the OK button. 
Result	Display the result of the communication test. **Item** / **Description** Diagnosis count: Display the number of connections during the communication test. Result: Display the test result. An error code is displayed at error occurrence. 0 is displayed at normal termination, or any value other than 0 is displayed at abnormal termination. CPU name: Display the connected CPU type. Mean time of communication: Display the average time taken until one communication test is established. (Unit: ms)

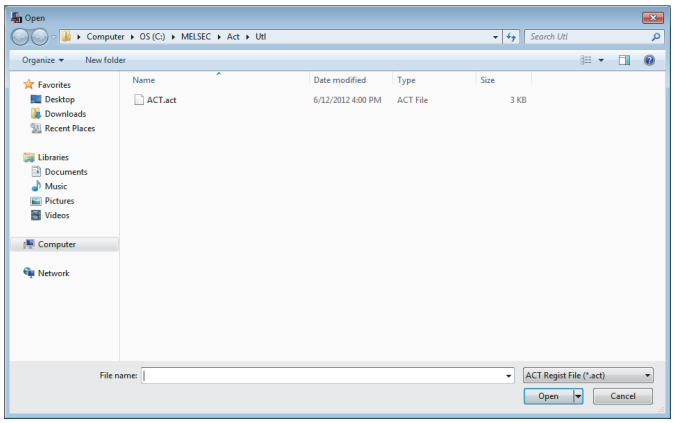
7.1.4 Importing communication settings

Apply the exported communication settings saved to the file (☞ Page 96, Section 7.1.5) to the utility.
This screen is used when the communication settings set on another personal computer are to be applied to the personal computer being used.

Operating procedure

[Menu] ⇨ [COM setup import...]

Screen display



Point

To import the communication settings, use MX Component of a version of the one used for export, or later.
Using a MX Component version earlier than that may cause incorrect import.

7.1.5 Exporting communication settings

Save the communication settings set on the personal computer in a file. (The file where data are saved is called the ACT registered file.)
This screen is used to apply the communication settings on another personal computer.

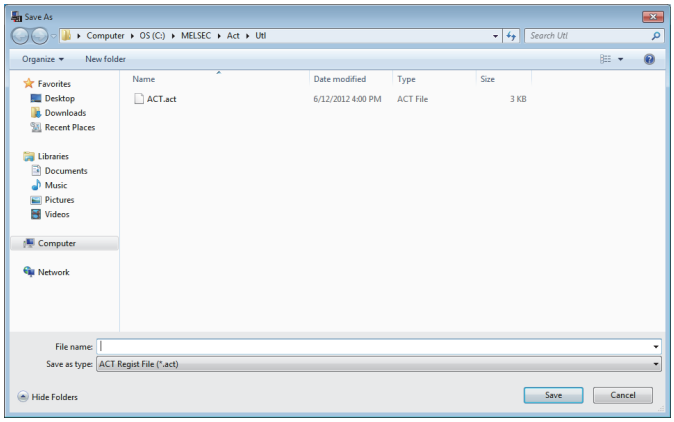
Point

Uninstalling deletes all the settings within "Communication Setup Utility".
To avoid this, export the file storing the settings.

Operating procedure

[Menu] ⇨ [COM setup export...]

Screen display



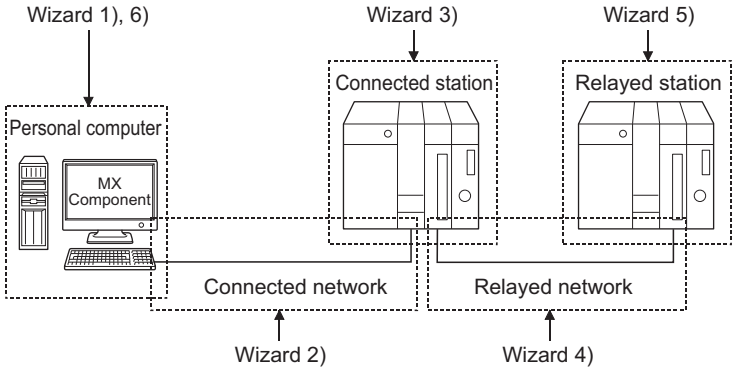
7.1.6 Operations on Communication Setting Wizard screens

These screens are used to set the logical station number required to perform communication with the utility setting type.

(1) Outline of Communication Setting Wizard

The logical station number required to perform communication with the utility setting type is set with the wizard. The following are the places and descriptions of the settings set on the Communication Setting Wizard screens. For the wizard screen settings, refer to the following section.

☞ Page 98, (3) in this section Explanation of Communication Setting Wizard screens



Screen Name	Description
Wizard 1)	Set the logical station number.
Wizard 2)	Set the connected network between the personal computer and connected station (programmable controller CPU and module).
Wizard 3)	Set the connected station (programmable controller CPU and module).
Wizard 4)	Set the relayed network between the connected station (programmable controller CPU and module) and relayed station (programmable controller CPU and module).
Wizard 5)	Set the relayed station programmable controller CPU.
Wizard 6)	Comment the logical station number.

(2) Starting procedure

Operating procedure

- **[Menu] ⇨ [Wizard]**
- **Click the Wizard.. button on the utility screen.**

(3) Explanation of Communication Setting Wizard screens

Communication Setting Wizard screens are shown from wizard 1) to wizard 6) in order.
The following explains Communication Setting Wizard screens in displayed order.

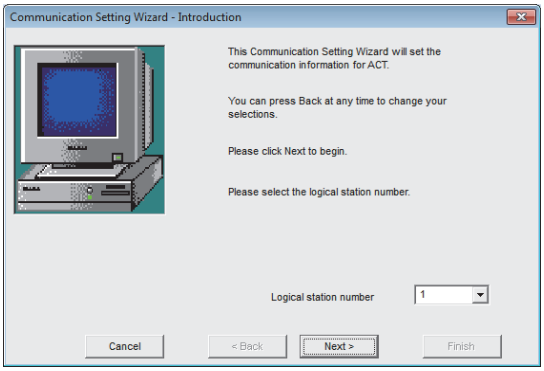
Point

- The displays or available setting items of Communication Setting Wizard screens differ depending on the communication settings. Set all available setting items being displayed.
- Some of Communication Setting Wizard screens may not be displayed depending on the settings.

Operating procedure

Start Communication Setting Wizard.

Wizard 1)



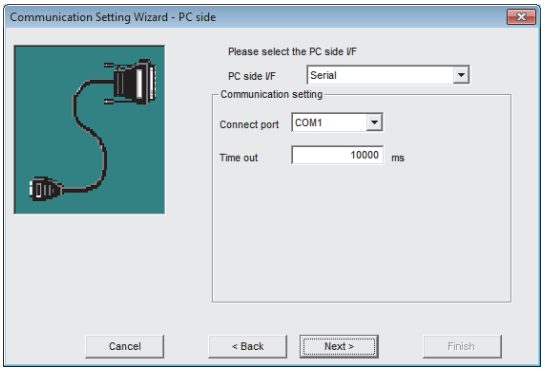
Continued on next page

1. Enter or select the logical station number and click the [Next >] button.

The logical station number can be registered from 0 to 1023.

Continued from previous page

Wizard 2)

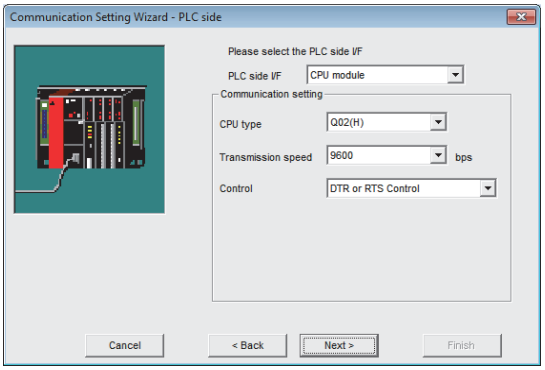


2. Select "PC side I/F" to communicate with.
The items shown in "Communication setting" differ depending on the setting set in "PC side I/F".
Set all available setting items and click the Next > button.

The following table indicates the items corresponding to the communications in "PC side I/F".

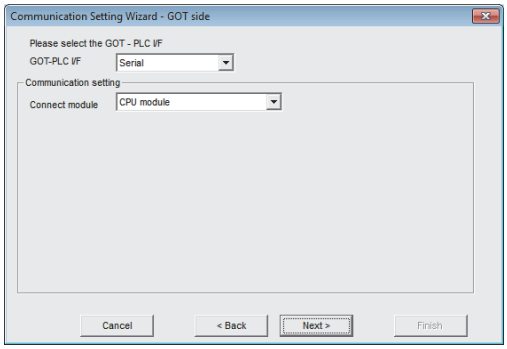
Setting Item	Communication Name
USB	USB communication
USB (via GOT)	GOT transparent communication
Serial	Serial communication, CPU COM communication, CC-Link G4 communication
Serial (via GOT)	GOT transparent communication
Ethernet board	Ethernet communication, Gateway function communication
Ethernet (via GOT)	GOT transparent communication
Modem	Modem communication
CC IE Control board	CC-Link IE Controller Network communication
MELSECNET/H board	MELSECNET/H communication
CC IE Field board	CC-Link IE Field Network communication
CC-Link board	CC-Link communication
Q Series Bus	Q Series bus communication
GX Simulator2	GX Simulator2 communication
GX Simulator	GX Simulator communication
MT Simulator2	MT Simulator2 communication

Wizard 3)



3. Wizard 3) differs in available setting items depending on the settings on Wizard 2).
Set all available setting items and click the Next > button.

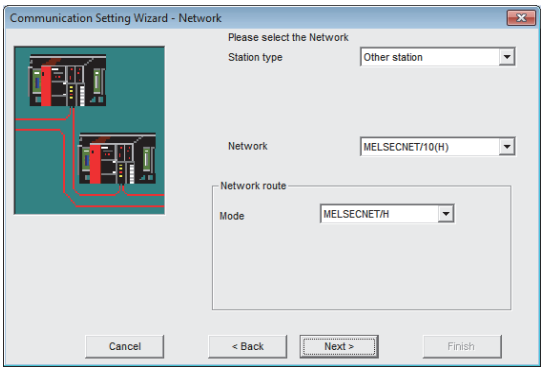
When via GOT is selected on Wizard 2), the following screen is displayed. (Wizard 3) differs in available setting items depending on the settings on Wizard 2))
Set all available setting items and click the Next > button.



Continued on next page

Continued from previous page

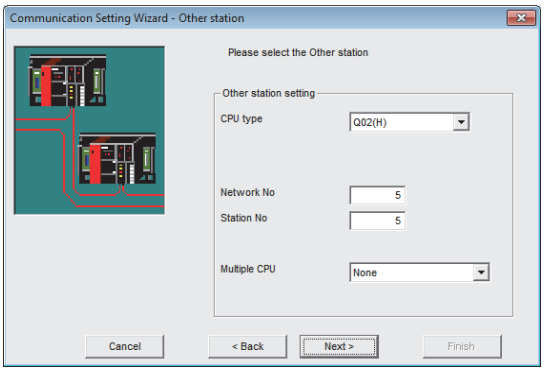
Wizard 4)



4. **Wizard 4) differs in available setting items depending on the settings on Wizard 2) and Wizard 3).**
Set all available setting items and click the Next > button.

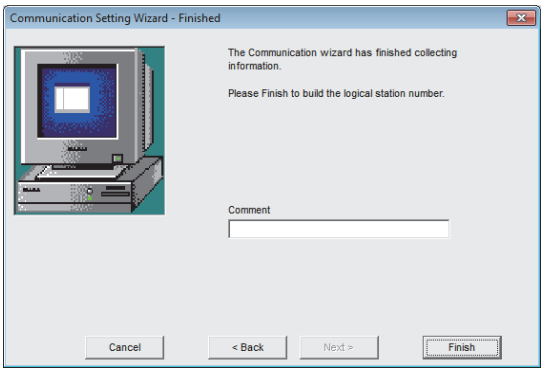
When the modem is selected on Wizard 2), the Connect Line screen is displayed before Wizard 4).
For details of the Connect Line screen, refer to the following section.
☞ Page 102, Section 7.1.7 Operations on Connect Line screen

Wizard 5)



5. **Wizard 5) differs in available setting items depending on the settings on Wizard 2), Wizard 3) and Wizard 4).**
Set all available setting items and click the Next > button.

Wizard 6)

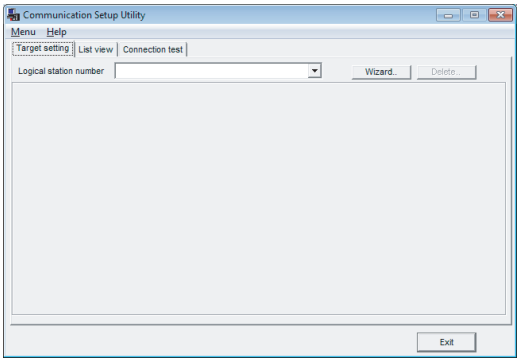


6. **Comment the logical station number being set.**
The maximum number of characters for comment is 32.
Enter a comment and click Finish button.
If a comment is not required, click the Finish button without entering it.

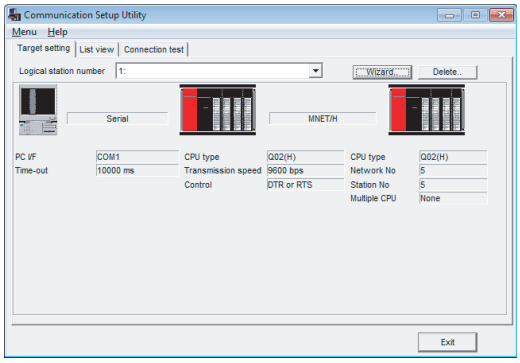
Setting completion

When the registration of the logical station number is completed on Communication Setting Wizard, the settings are displayed on the <<Target setting>> tab.

<Before registration>



<After registration>



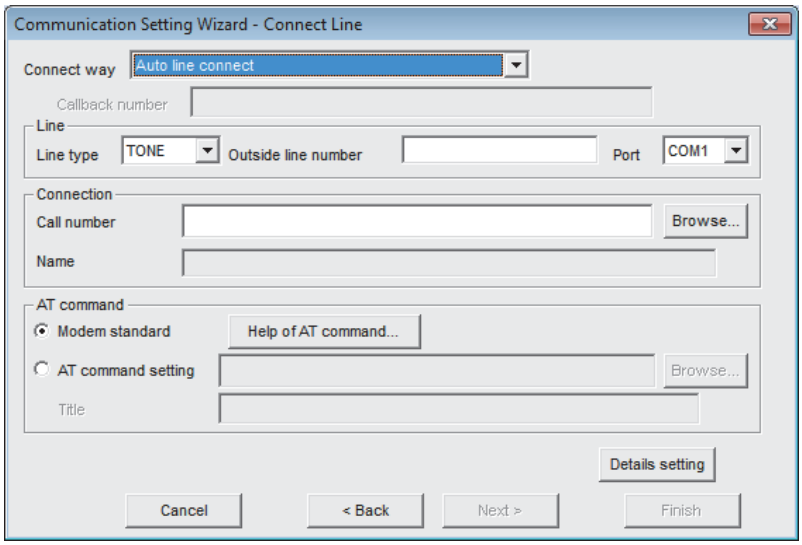
7.1.7 Operations on Connect Line screen

This screen is used to set the telephone line settings required to set modem communication in Communication Setup Utility.

(1) Connect Line screen

Set the line connection system, telephone line, AT command, and the like.

Screen display



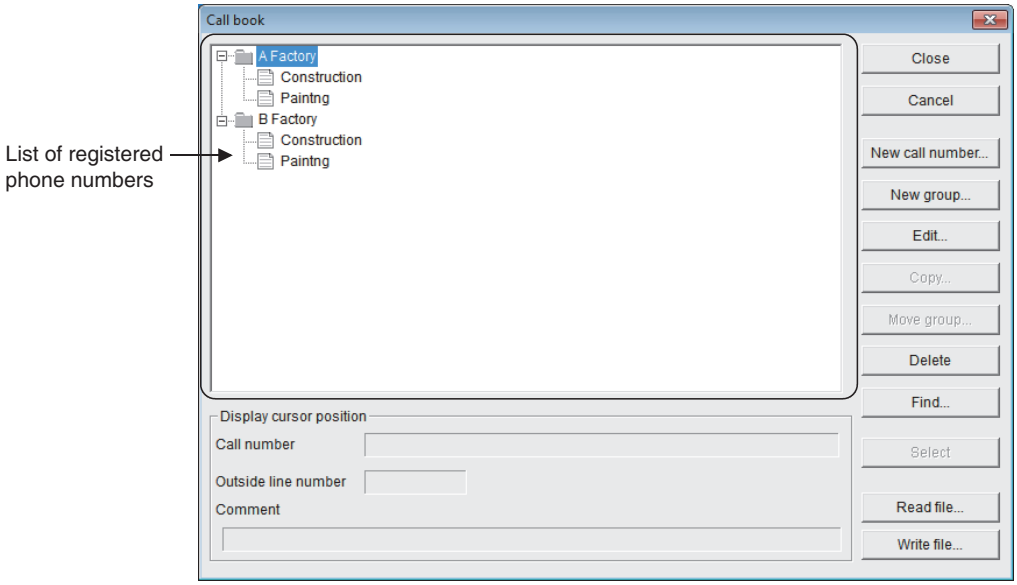
Item	Description	Reference
Connect way	Set the line connection system. When Q series-compatible C24 or L series-compatible C24 is used any of the following items can be selected. (Fixed to "Auto line connect" when FXCPU is used.) **Item** / **Description** Auto line connect: Select this when the callback function is not set. Auto line connect (Callback fixation) Auto line connect (Callback number specification) Callback connect (Fixation) Callback connect (Number specification) Callback request (Fixation) Callback request (Number specification) Callback reception waiting : For details on the connection format of each callback function, refer to the following manual. MX Component Version 4 Programming Manual	-
Callback number	Set the telephone number used with the callback function of Q series-compatible C24 and L series-compatible C24. This item can be set only when "Auto line connect (Callback number specification)", "Callback connect (Number specification)" or "Callback connect (Number specification)" is selected in the line connection system.	-

(Continued on next page)

Item		Description	Reference
Line		-	-
	Line type	Select a line type: Tone, Pulse, or ISDN.	-
	Outside line number	Set the number as required when calling through the outside line.	-
	Port	Select the COM port number which is connected to the modem.	-
Connection target		Set the phone number of the target. The previously-registered phone numbers in the telephone directory can be specified by clicking the Browse... button.	Page 104, (2) in this section
AT command		-	-
	Modem standard	Use the AT command set on the modem.	-
	AT command setting	When a difficulty of line connection occurs using the standard AT command, create an AT command with referring to the manual of the modem and the content displayed by clicking the Help of AT command... button.	Page 106, (3) in this section
Details setting button		Display the Detail setting screen.	Page 108, (4) in this section

(2) Setting TEL data

Set the telephone numbers used on the Connect Line screen.



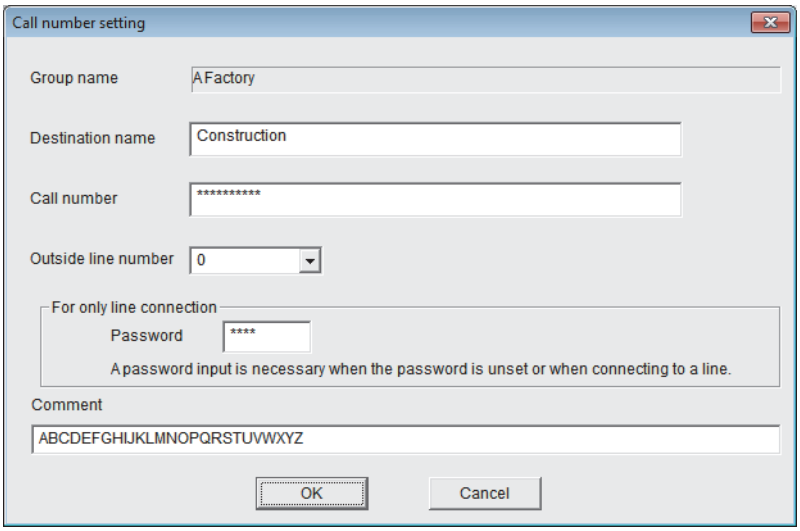
Display contents

Item	Description
List of registered phone numbers	Display group names and user names of phone numbers.
Display cursor position	Display the registered information of the data selected on the list of registered phone numbers.

Operating procedure

1. **Select a group for which the phone number to be registered on the list of registered phone numbers.**
2. **Click the** New call number... **button.**

   → The Call number setting screen is displayed.



3. Set the items on the screen.

Item	Description
Group name	Display the group name to which the information is registered.
Destination name	Enter the name of the phone number to be set. The maximum number of characters that can be set is 50.
Call number	Enter the phone number. The maximum number of characters that can be set is 50.
Outside line number	Set the outside line number. The maximum number of characters that can be set is 10.
For only line connection	When a password is set for Q series-compatible C24 or L series-compatible C24, this setting enables to process the password authorization automatically to connect the line.
Comment	Enter notes on the registered information. The maximum number of characters that can be set is 60.

4. Click the [OK] button.

→ The phone number is registered.

Screen button

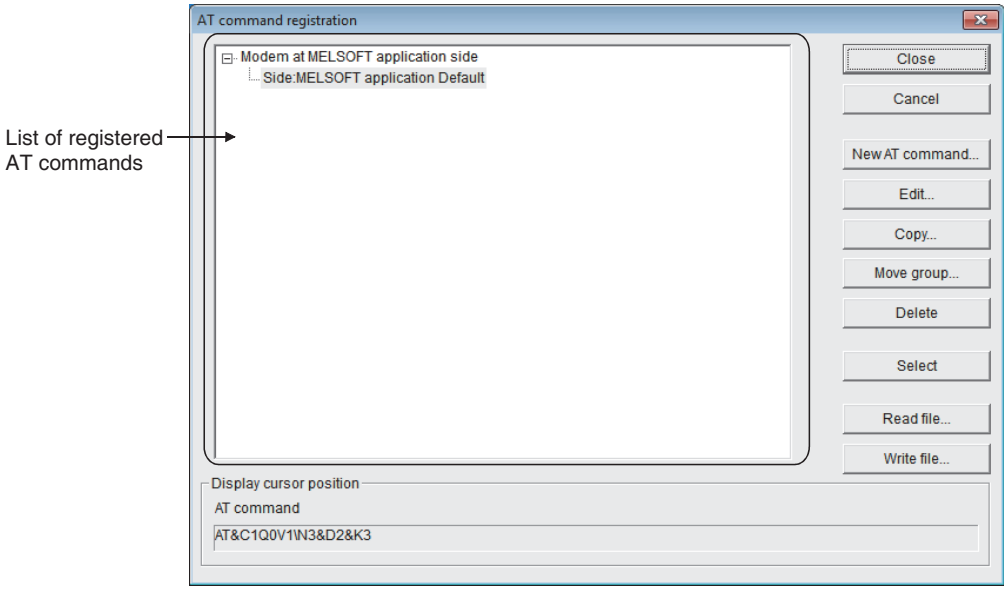
Item	Description
[New group...] button	Create a new group. The Group setting screen is displayed by clicking the [New group...] button. Enter a group name. The maximum number of characters that can be set is 50.
[Edit...] button	Edit the registered data. Select a registered data to be edited on the list of registered phone numbers. The Call number setting screen is displayed by clicking the [Edit...] button. Edit the data.
[Copy...] button	Copy a registered phone number to another group. Select the registered data to be copied on the list of registered phone numbers. The Group screen is displayed by clicking the [Copy...] button. Select the group to which data is pasted, and click the [OK] button.
[Move group...] button	Move a registered phone number to another group. Select the registered data to be moved on the list of registered phone numbers. The Group screen is displayed by clicking the [Move group...] button. Select the group to which data is moved, and click the [OK] button.
[Delete] button	Delete a registered group and phone number. Data cannot be deleted in bulk in group unit.
[Find...] button	Search for a registered phone number. The search condition is a partial match. Target data is searched from all registered data. When entering search conditions to both "Destination Name" and "Phone Number", the data which satisfies the both search conditions is searched.
[Select] button	Perform a selection processing of phone number setting when referring from the Connect Line screen.
[Read file...] button	Read phone number data from the specified file and add it to the directory. To replace the data with the read phone number data, execute the read file function after deleting all groups and phone numbers.
[Write file...] button	Write the data set on the AT command registration screen to the specified file.

Point

The phone book created using GX Developer can be read in MX Component.
The phone book of GX Developer is stored in the following folders.
[User-specified folder] - [Gppw]

(3) Registering AT commands

Set the AT commands used on the Connect Line screen.



Display contents

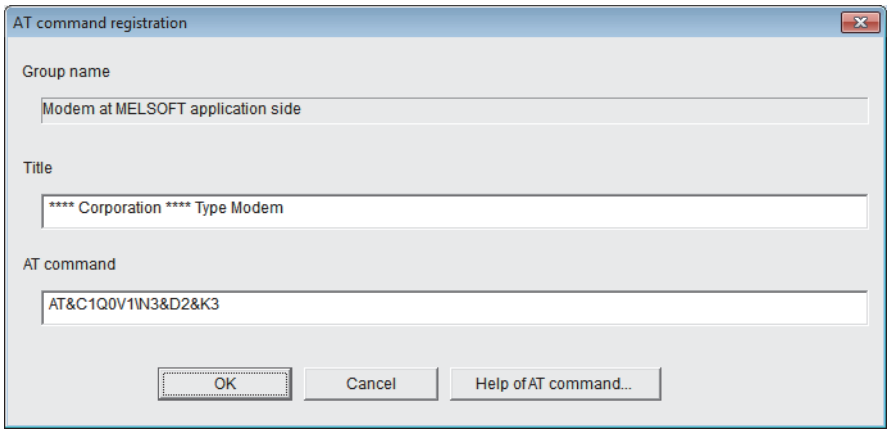
Item	Description
List of registered AT commands	Display titles of AT commands.
Display cursor position	Display the registered information of the data selected on the list of registered AT commands.

Operating procedure

1. Select "Modem at MELSOFT application side" on the list of registered AT commands.

2. Click the New AT command... **button.**

→ The AT command registration screen is displayed.



3. Set the items on the screen.

Item	Description
Group name	Display the group name of data to which AT command is registered.
Title	Enter a title for the AT command to be registered.
AT command	Set the command for modem initialization. The maximum number of characters that can be entered is 70 in ASCII code.

4. Click the [OK] button.

→ The AT command is registered.

Screen button

Item	Description
[Edit...] button	Edit the registered data. Select the registered data to be edited on the list of registered AT commands. The AT command registration screen is displayed by clicking the [Edit...] button. Edit the data.
[Copy...] button	Copy a registered AT command to another group. Select the registered data to be copied on the list of registered AT commands. The Group screen is displayed by clicking the [Copy...] button. Select the group (to which data is pasted), and click the [OK] button.
[Move group...] button	Move a registered AT command to another group. Select the registered data to be moved on the list of registered AT commands. The Group screen is displayed by clicking the [Move group...] button. Select the group (to which data is moved), and click the [OK] button.
[Delete] button	Delete a registered AT command.
[Select] button	Perform a selection processing of AT command when referring from the Connect Line screen.
[Read file...] button	Read AT command from the specified file and add it to the directory. To replace the commands with the read AT commands, execute the read file function after deleting all AT commands.
[Write file...] button	Write data set on the AT command registration screen to the specified file.

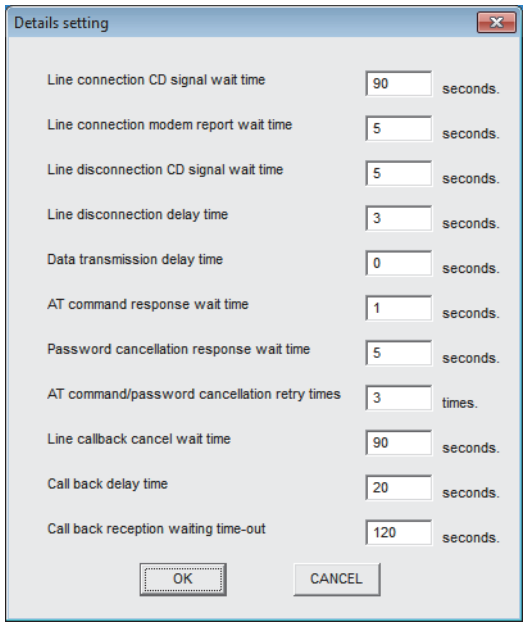
Point

The AT commands created using GX Developer can be read in MX Component.
The AT commands of GX Developer are stored in the following folders.
[User-specified folder] - [Gppw]

(4) Details setting screen

Set details for telephone line connection.
Set the settings according to the modem used.

Screen display



Item	Description
Line connection CD signal wait time	Set the line connection CD signal confirmation time. (1 to 999 seconds) Increase the set time if the CD signal does not turn ON within the set time depending on the line-connected region (example: overseas).
Line connection modem report wait time	Set the line connection modem report wait time. (1 to 999 seconds) Increase the set time if the response speed of the modem is low.
Line disconnection CD signal wait time	Set the line disconnection CD signal confirmation time. (1 to 999 seconds) Increase the set time if the CD signal does not turn OFF within the preset time depending on the line-connected region (example: overseas).
Line disconnection delay time	Set the line disconnection delay time. (1 to 999 seconds) Increase the set time if the response speed of the modem is low.
Data transmission delay time	Set the data transmission delay time. (1 to 999 seconds) Increase the set time if the response speed of the modem is low.
AT command response wait time	Set the AT command response wait time. (1 to 999 seconds) Increase the set time if the response speed of the modem is low.
Password cancellation response wait time	Set the password cancellation response wait time. (1 to 999 seconds) Increase the set time if the quality of the line with the other end is low.
AT command/password cancellation retry times	Set the AT command/password cancellation retry count. (1 to 999 times) Increase the set count if the AT command cannot be sent or the password cannot be canceled.
Line callback cancel wait time	Set the Line callback cancel wait time. (1 to 180 seconds) Increase the set time if the line at the other end (Q series-compatible C24 side) is not disconnected within the set time depending on the line-connected region (example: overseas).
Call back delay time	Set the callback delay time. (1 to 999 seconds) Increase the set time if the device for relaying connection to the line (example: modem, etc.) requires the set time for reconnection after line disconnection.
Call back reception waiting time-out	Set the callback reception waiting time-out. (1 to 3600 seconds) Increase the set time if a time-out occurs in a callback receive waiting status.

7.2 PLC Monitor Utility

This section explains how to operate and set PLC Monitor Utility.

7.2.1 Operations on Transfer setting screen

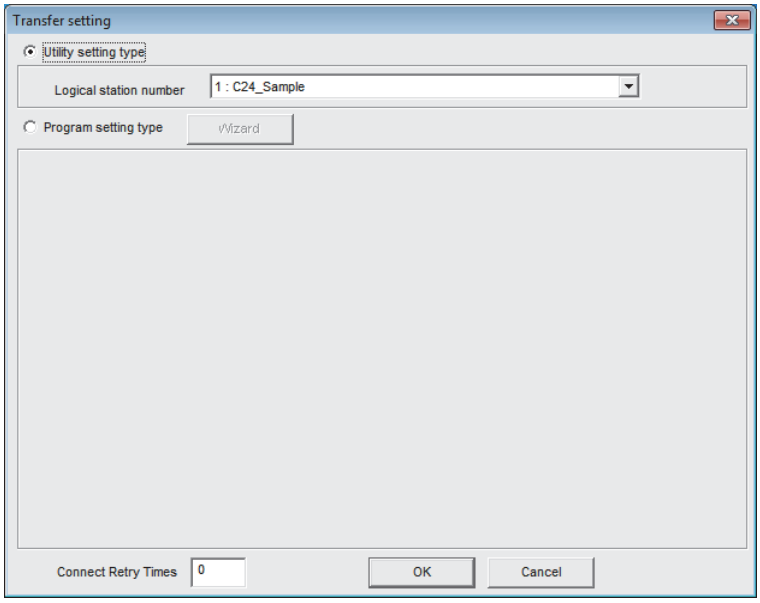
This screen is used to set connection from the personal computer to the programmable controller CPU.

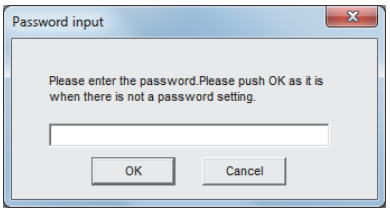
Operating procedure

[Online] ⇨ [Transfer setting]
(This screen is also displayed when PLC Monitor Utility is started.)

(1) When selecting the utility setting type

Screen display



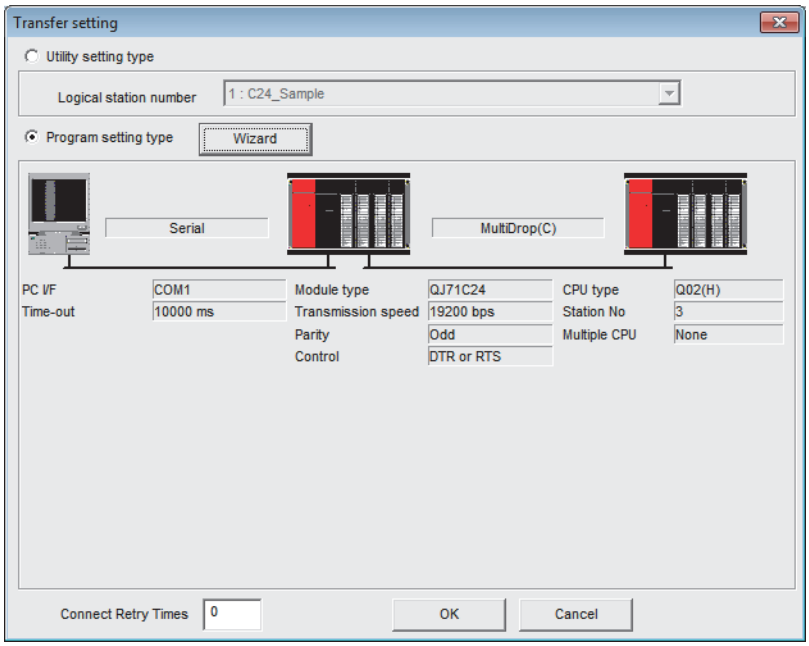
Item	Description
Utility setting type	Select this to set the transfer setting using the logical station number set on Communication Setup Utility.
Logical station number	Select the logical station number set on Communication Setup Utility. When the logical station number where the modem communication data are set is selected, the following screen is displayed after the OK button is clicked. When the password is set, enter the password and click the OK button. 
Connect Retry Times	Set the number of retries (0 to 9) to be performed when an error occurs during monitoring with PLC Monitor Utility.

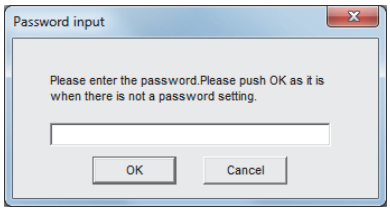
Point

Before specifying the logical station number, confirm that the settings of the logical station number, (the CPU type, station number, or the like) are correct on Communication Setup Utility.

(2) When selecting the program setting type

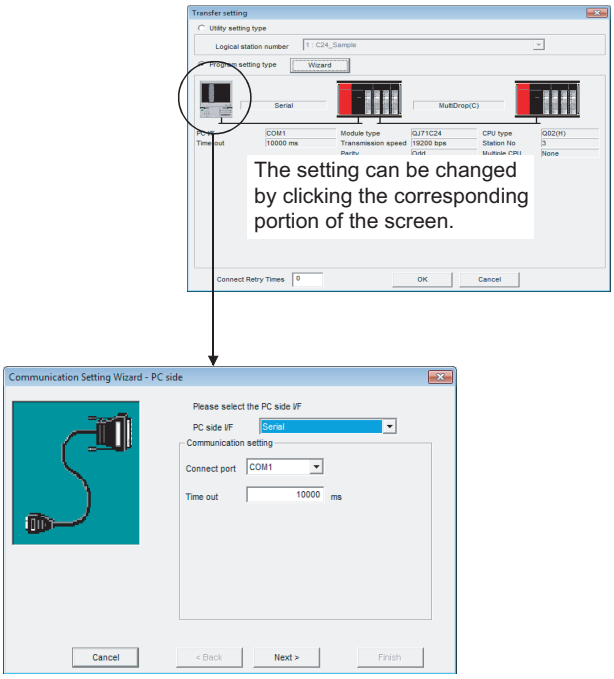
Screen display



Item	Description
Program setting type	Select when the program setting type is used to create programs.
Wizard.. button	Start Communication Setting Wizard and set the transfer setting. When the modem communication data is set on Communication Setting Wizard, the following screen is displayed after the OK button is clicked. When the password is set, enter the password and click the OK button. 
Connect Retry Times	Set the number of retries (0 to 9) to be performed when an error occurs during monitoring with PLC Monitor Utility.

Point

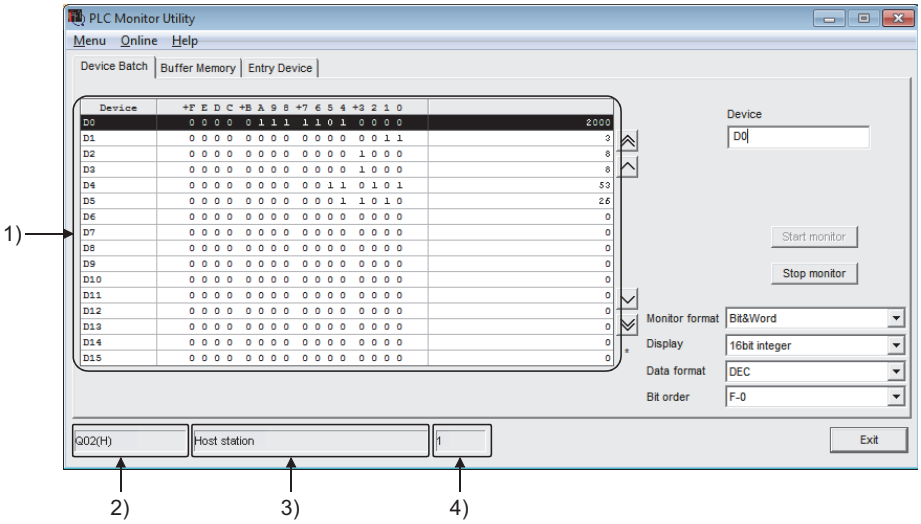
When the program setting type is selected, the details of the transfer setting can be changed by clicking the programmable controller or personal computer sketch.



7.2.2 Operations on Device Batch tab

This tab is used to monitor the specified device.

Screen display



Item	Description
Device	Enter the device name to be monitored in batch. For the X and Y devices of FXCPU and FX5CPU, enter the device number in octal.
Start monitor button (Stop monitor button)	Start (stop) monitor.
Monitor format	Set the monitor format. **Item / Description** Bit&Word: Set the monitor screen to the bit and word display. Bit: Set the monitor screen to the bit display only. Word: Set the monitor screen to the word display only.
Display	Set the display format of the device values to be displayed when the monitor format is "Bit & Word" or "Word". **Item / Description** 16bit integer: Set to the 16-bit integer display. 32bit integer: Set to the 32-bit integer display. Real number (single precision): Set to the real number (single precision) display. Real number (double precision): Set to the real number (double precision) display. ASCII character: Set to the ASCII character string display.
Data format	Set the radix when the display is "16 bit integer" or "32 bit integer". **Item / Description** DEC: Set to the decimal display. HEX: Set to the hexadecimal display.

(Continued on next page)

Item	Description
Bit order	Set the order of the bit devices being monitored. Item / Description F-0 / Display in order of F, E, ... 1, 0 from left to right. 0-F / Display in order of 0, 1, ... E, F from left to right.
1) Monitor screen	Display the device status. • For the bit device status, 1 indicates an ON status and 0 an OFF status. • Bit devices are monitored in units of 16 points. If any device outside the range supported by the programmable controller CPU is included in the 16 points, its value is displayed "0". • For the C devices of FXCPU, C0 to C199 (16 bit) and C200 and later (32 bit) are displayed separately. The Write to Device screen is displayed by clicking the device name. (☞ Page 118, Section 7.2.5) "*" flickers under the scroll button during monitoring.
2) Target CPU name	Display the communication target CPU name specified on Communication Setting Wizard.
3) Communication path information	Display such information as the network type, network number, start I/O address and station number.
4) Logical station number	Display the logical station number set for the utility setting type. This number is not displayed when the program setting type is used.

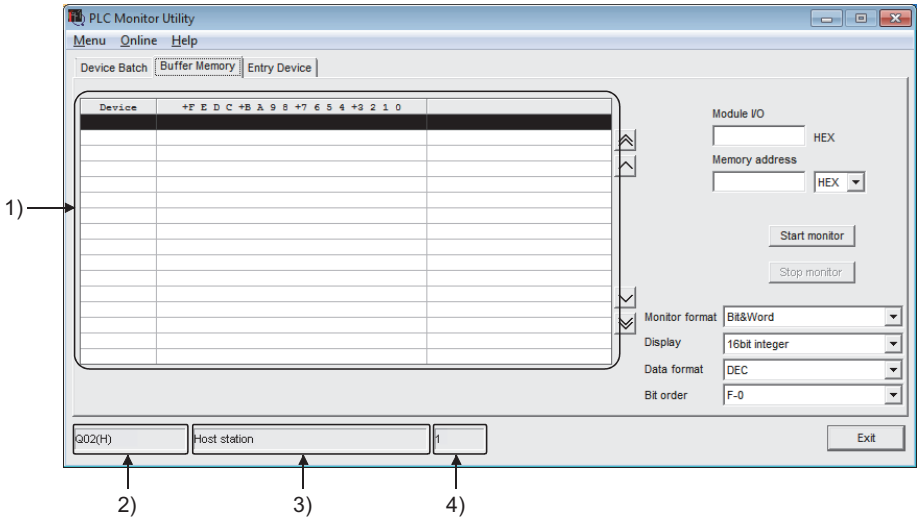
Point

- Specifying the device memory in the U*\G format enables the buffer memory to be monitored.
- When monitoring the setting values of the timers and counters, indirectly specify the data registers.
- Devices cannot be monitored if the connection destination is not established.
- The transfer settings cannot be set during monitoring.

7.2.3 Operations on Buffer Memory tab

This tab is used to monitor the specified buffer memory.

Screen display



Item	Description
Module I/O	Enter the start address of the module to be monitored. For access to FXCPU, enter the block number of the special expansion device into Module I/O.
Memory address	Enter the address of the buffer memory to be monitored in hexadecimal or decimal.
Start monitor button (Stop monitor button)	Start (stop) monitor.
Monitor format	Set the monitor format. **Item / Description** Bit&Word: Set the monitor screen to the bit and word display. Bit: Set the monitor screen to the bit display only. Word: Set the monitor screen to the word display only.
Display	Set the display format of the device values to be displayed when the monitor format is "Bit & Word" or "Word". **Item / Description** 16bit integer: Set to the 16-bit integer display. 32bit integer: Set to the 32-bit integer display. Real number (single precision): Set to the real number (single precision) display. Real number (double precision): Set to the real number (double precision) display. ASCII character: Set to the ASCII character string display.
Data format	Set the radix when the display is "16 bit integer" or "32 bit integer". **Item / Description** DEC: Set to the decimal display. HEX: Set to the hexadecimal display.

(Continued on next page)

Item	Description
Bit order	Set the order of the bit devices being monitored. Item / Description F-0 / Display in order of F, E, ... 1, 0 from left to right. 0-F / Display in order of 0, 1, ... E, F from left to right.
1) Monitor screen	Display the buffer memory status. • For the bit device status, 1 indicates an ON status and 0 an OFF status. "*" flickers under the scroll button during monitoring.
2) Target CPU name	Display the communication target CPU name specified on Communication Setting Wizard.
3) Communication path information	Display such information as the network type, network number, start I/O address and station number.
4) Logical station number	Display the logical station number set for the utility setting type. This number is not displayed when the program setting type is used.

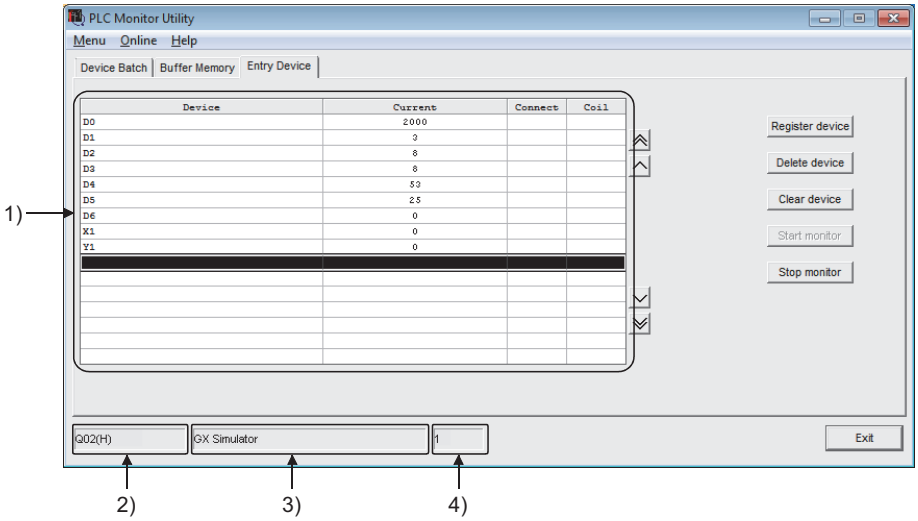
Point

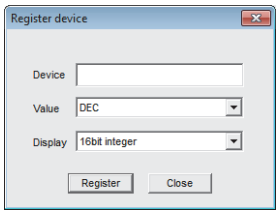
- Devices cannot be monitored if the connection destination is not established.
- The transfer settings cannot be set during monitoring.
- Monitoring for RCPU and FX5CPU are not supported.
- The devices cannot be monitored during gateway function communication.

7.2.4 Operation on Entry Device tab

This tab is used to monitor the specified devices on a single screen at the same time.

Screen display



Item	Description
Register device button	Register the device to be monitored. The following screen is displayed by clicking the Register device button.  **Item / Description** Device: Enter the device to be registered. Value: Set the value to be entered when a word device is specified. **Item / Description** DEC: Set to decimal. HEX: Set to hexadecimal. Display: Set the display format when a word device is specified. **Item / Description** 16bit integer: Set to the 16-bit integer display. 32bit integer: Set to the 32-bit integer display. Real number (single precision): Set to the real number (single precision) display. Real number (double precision): Set to the real number (double precision) display. ASCII character: Set to the ASCII character string display. Register button: Register the device. Close button: Close the dialog box.
Delete device button	Delete the device to be monitored.
Clear device button	Delete all devices registered in device entry monitor from the monitor screen.
Start monitor button (Stop monitor button)	Start (stop) monitor.

(Continued on next page)

Item	Description
1) Monitor screen	Display the device status. The Write to Device screen is displayed by clicking the device name. (☞ Page 118, Section 7.2.5) "*" flickers under the scroll button during monitoring.
2) Target CPU name	Display the communication target CPU name specified on Communication Setting Wizard.
3) Communication path information	Display such information as the network type, network number, start I/O address and station number.
4) Logical station number	Display the logical station number set for the utility setting type. This number is not displayed when the program setting type is used.

Point

- When monitoring the setting values of the timers and counters, indirectly specify the data registers.
- Devices cannot be monitored if the connection destination is not established.
- The transfer settings cannot be set during monitoring.

7.2.5 Operations on Write to Device screen

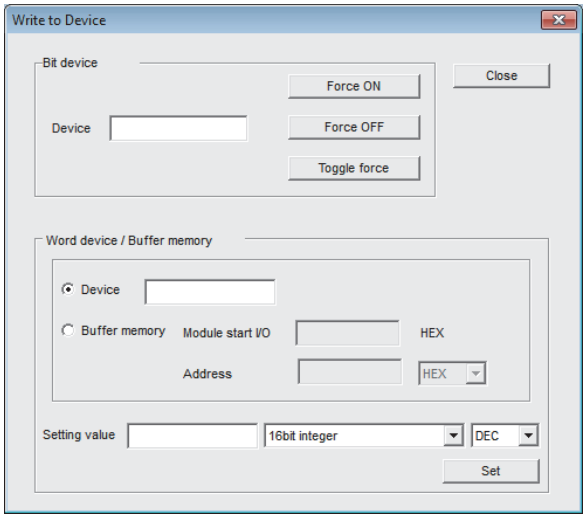
This screen is used to change the ON/OFF of a bit device or the present value of a word device or buffer memory.

Operating procedure

- **[Online] ⇨ [Device write]**
- **Double-click the monitor screen of the corresponding tab.**

* [Device write] cannot be selected when QSCPU is connected.

Screen display



Item		Description
Bit device	Device	Enter the device name.
	Force ON button	Forcibly change the specified device to the ON status.
	Force OFF button	Forcibly change the specified device to the OFF status.
	Toggle force button	Forcibly change the specified device from the ON to OFF status or from the OFF to ON status.
Word device/ Buffer memory	Device	Select this to enter the word device to be written.
	Buffer memory	Select this to enter a module start I/O address and a buffer memory address.
	Setting value	Enter the value to be written. The following table indicates the input range. **Item** / **Description** 16bit integer: -32768 to 32767 32bit integer: -2147483648 to 2147483647 Real number (single precision): -999999999999999 to 9999999999999999 Real number (double precision): Number of significant figures: 13 digits
	Set button	Write the set data.

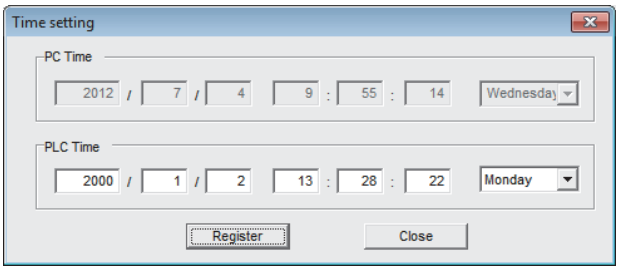
7.2.6 Operations on Time setting screen

This screen is used to read or change the clock data of the programmable controller.

Operating procedure

[Online] ⇨ [Set time]

Screen display



* For QSCPU, the clock data cannot be changed.

Item	Description
PC Time	Display the time of the personal computer. (Write disabled)
PLC Time	Display the time of the programmable controller CPU.
Register button	Write the "PLC Time" information to the programmable controller CPU.
Close button	Close the Time setting screen.

Point

Time setting is not available when either of the following communications is selected.

- GX Simulator communication (Only the time of the personal computer is displayed.)
- Gateway function communication (An error occurs.)

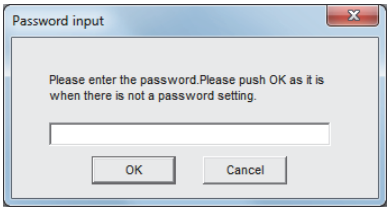
7.2.7 Operations on telephone line connection, disconnection screens

Connect and disconnect the telephone line for modem communication.

(1) Telephone line connection

Operating procedure

1. **[Online] ⇨ [Connect]**
2. **For telephone line connection, the following dialog box is displayed.**
   Enter the password and click the OK button.



* [Connect] cannot be selected when QSCPU is connected.

(2) Telephone line disconnection

[Online] ⇨ [Disconnect]

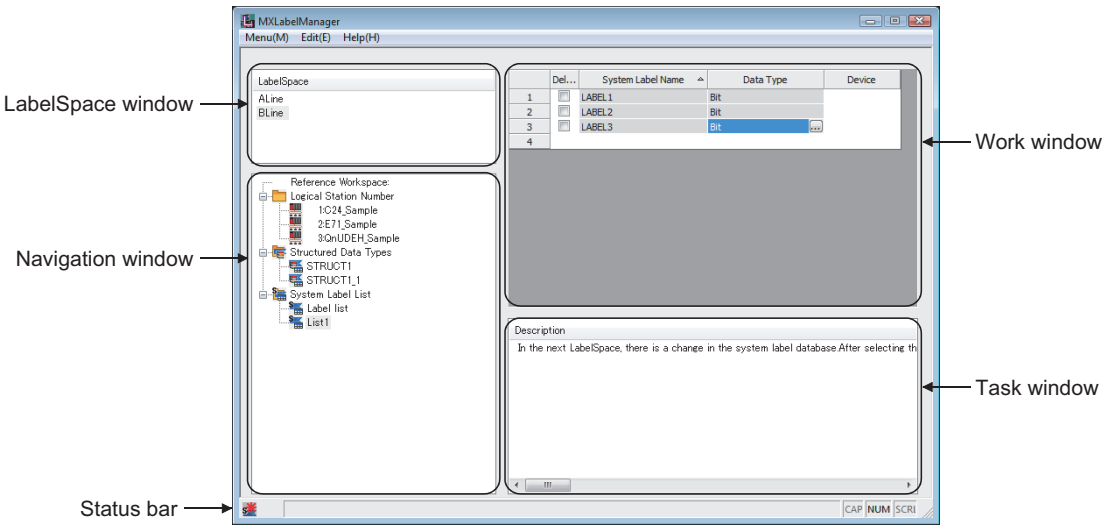
* [Disconnect] cannot be selected when QSCPU is connected.

7.3 Label Utility

This section explains how to operate and set Label Utility.

7.3.1 Operations on Label screen

Screen display



Item	Description	Reference
LabelSpace window	Display the list of LabelSpace. The LabelSpace names are displayed on the list in ascending order based on the date of creation.	-
Navigation window	Display the logical station number, structured data type and system label list of LabelSpace in tree format.	-
Work window	Display the system label list and the Structure Setting screen.	Page 124, Section 7.3.3 Page 129, Section 7.3.4
Task window	Display the processing result in list format.	-
Status bar	Display the current status.	Page 132, Section 7.3.6

(1) Basic operations

Operating procedure

(a) Adding LabelSpace

- **[Menu] ⇨ [Add LabelSpace]*1**
- **Right-click the LabelSpace window, and select [Add LabelSpace].**

*1 : For system label Ver.1, select [Add LabelSpace]. As for system label Ver.2, select [Add LabelSpace Ver.2].

Point

The maximum number of LabelSpaces is 8.
Note that the sum of LabelSpaces and referred Workspaces should be 16 or less.

(b) Changing LabelSpace name

- **Select the LabelSpace name on the LabelSpace window, [Menu] ⇨ [Rename LabelSpace].**
- **Right-click the LabelSpace name on the LabelSpace window, and select [Rename LabelSpace].**

(c) Saving LabelSpace

- **[Menu] ⇨ [Save LabelSpace]**
- **Exit Label Utility.**

(d) Deleting LabelSpace

- **Select the LabelSpace name on the LabelSpace window, [Menu] ⇨ [Delete LabelSpace].**
- **Right-click the LabelSpace name on the LabelSpace window, and select [Delete LabelSpace].**

7.3.2 Registering/deleting logical station numbers

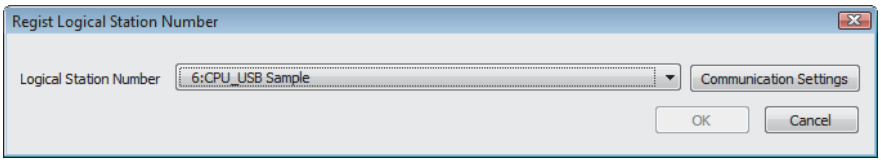
(1) Registration

Register a logical station number to LabelSpace.

Operating procedure

- **Select a LabelSpace name on the LabelSpace window, [Menu] ⇨ [Logical Station Number] ⇨ [Regist].**
- **Select a LabelSpace name on the LabelSpace window, right-click "Logical Station Number" on the Navigation window, and select [Logical Station Number] ⇨ [Regist].**

Screen display



Item	Description
Logical Station Number	Select the logical station number defined on Communication Setup Utility from the list box. The logical station number which has already been registered to other LabelSpace is not displayed.
Communication Settings button	Start Communication Setup Utility.
OK button	Register the logical station number, and close the screen.
Cancel button	Close the screen without registering the logical station number.

(2) Deletion

Delete the logical station number registered to LabelSpace.

Operating procedure

- **Select the station number to be deleted from the Navigation window, [Menu] ⇨ [Logical Station Number] ⇨ [Deregist].**
- **Right-click the station number to be deleted from the Navigation window, and select [Logical Station Number] ⇨ [Deregist].**

Point

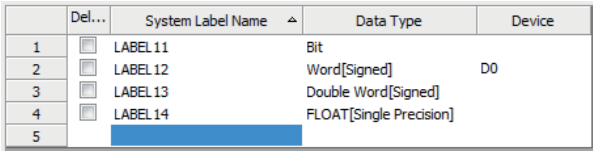
After registering the logical station number, save the LabelSpace.

7.3.3 System label list

Register, edit, and browse a system label.

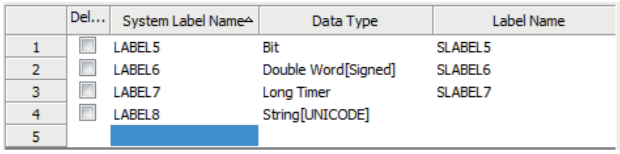
Screen display

<System label Ver.1>



	Del...	System Label Name	Data Type	Device
1		LABEL11	Bit	
2		LABEL12	Word[Signed]	D0
3		LABEL13	Double Word[Signed]	
4		LABEL14	FLOAT[Single Precision]	
5				

<System label Ver.2>



	Del...	System Label Name	Data Type	Label Name
1		LABEL5	Bit	SLABEL5
2		LABEL6	Double Word[Signed]	SLABEL6
3		LABEL7	Long Timer	SLABEL7
4		LABEL8	String[UNICODE]	
5				

Item	Description	Maximum number of characters	
Delete	Select the system label to be deleted.	Ver.1	Ver.2
System Label Name	Enter a desired system label name. For characters that cannot be used for label names, refer to (☞ Page 396, Appendix 10).	32 characters	256 characters
Data Type	Set a data type from the Data Type Selection screen displayed by clicking ... (☞ Page 125, (2) in this section) It can also be entered directly.	128 characters	512 characters
Device	Set the device to be assigned to system label Ver.1. The bit-specified word device (D0.1) can be specified. If the structure is set for data type, "Detail Setting" is displayed. Set the items on the Structured Data Device Setting screen displayed by clicking "Detail Setting". (☞ Page 127, (3) in this section, Page 128, (4) in this section)	50 characters	-
Label Name	Enter the label name to be managed by system label Ver.2.	-	587 characters

(1) Basic operations

Operating procedure

(a) Adding system label list

- **Select a LabelSpace name on the LabelSpace window, [Menu] ⇨ [System Label] ⇨ [System Label List] ⇨ [New].**
- **Select a LabelSpace name on the LabelSpace window, right-click "System Label List" on the Navigation window, and select [New].**

(b) Changing system label list name

- **Select the system label list name on the Navigation window, [Menu] ⇨ [System Label] ⇨ [System Label List] ⇨ [Rename].**
- **Right-click the system label list name on the Navigation window, and select [System Label List] ⇨ [Rename].**

(c) Deleting system label list

- **Select the system label list name to be deleted on the Navigation window, [Menu] ⇨ [System Label] ⇨ [System Label List] ⇨ [Delete].**
- **Right-click the system label list name to be deleted on the Navigation window, and select [System Label List] ⇨ [Delete].**
- **Select the system label list name to be deleted on the Navigation window, and press the Delete key.**

(2) Selecting data types

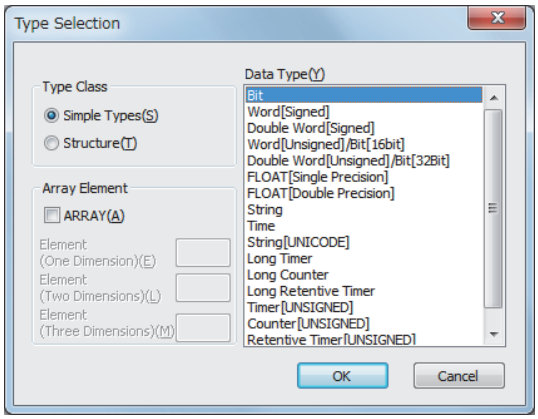
The applicable data types are as follows.

Data type	System Label		MX Component	
	Ver.2	Ver.1	Simple Types	Structure
Bit	○	○	○	○
Word [Signed]	○	○	○	○
Double Word [Signed]	○	○	○	○
Word [Unsigned]/Bit String [16-bit]	○	○	○	○
Double Word [Unsigned]/Bit String [32-bit]	○	○	○	○
FLOAT(Single Precision)	○	○	○	○
FLOAT(Double Precision)	○	○	○	○
String	○	○	○	○
String[Unicode]	○	—	○	○
Time	○	○	○	○
Timer	—	○	○	○
Timer[Unsigned]	○	—	○	○
Long Timer	○	—	○	○
Counter	—	○	○	○
Counter[Unsigned]	○	—	○	○
Long Counter	○	—	○	○
Retentive Timer	—	○	○	○
Retentive Timer[Unsigned]	○	—	○	○
Long Retentive Timer	○	—	○	○
Pointer	○	○	—	—
Structure	○	○	○	—

○:Supported,—: Not supported

Screen display

Click ... on the data type entry field of the system label list or the structure setting.



Operating procedure

1. **Select a type from "Type Class".**

Item	Description
Simple Types	Specify this to select a data type from basic types: bit, word.
Structure	Specify this to select a data type from the defined structures. (Not displayed for the structured data settings)

2. **In the "Data Type" field, select the data type and structure.**
3. **Click the OK button.**

   The settings are displayed in the "Data Type" column.

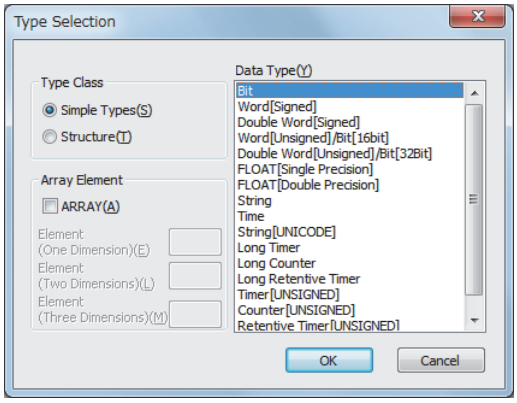
Setting arrays for data type

Define a data type as an array.

To define a data type as an array, set the items of "Array Element" on the Type Selection screen.

Operating procedure

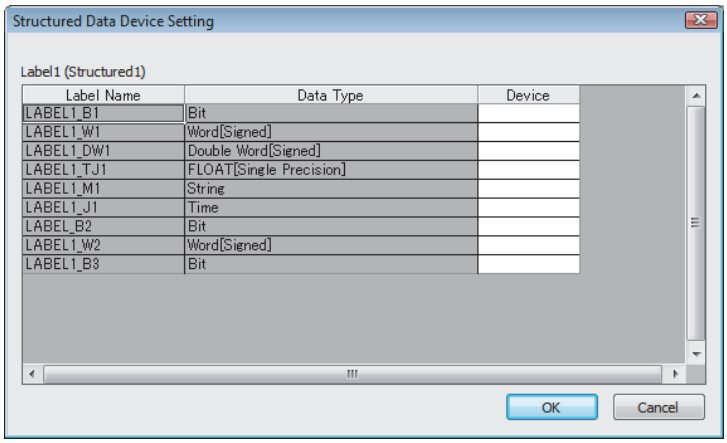
1. **Click ... on the data type entry field of the system label list or the structure setting.**
2. **Select the check box under "Array Element".**
3. **Set "Element (One Dimension)", and if necessary, set "Element (Two Dimension)", "Element (Three Dimension)".**
4. **Set the data type of the array element in the same manner as setting the normal data type.**



(3) Assigning devices to structured data type labels

Screen display

Click "Detail Setting" on the "Device" column of System Label List.



Operating procedure

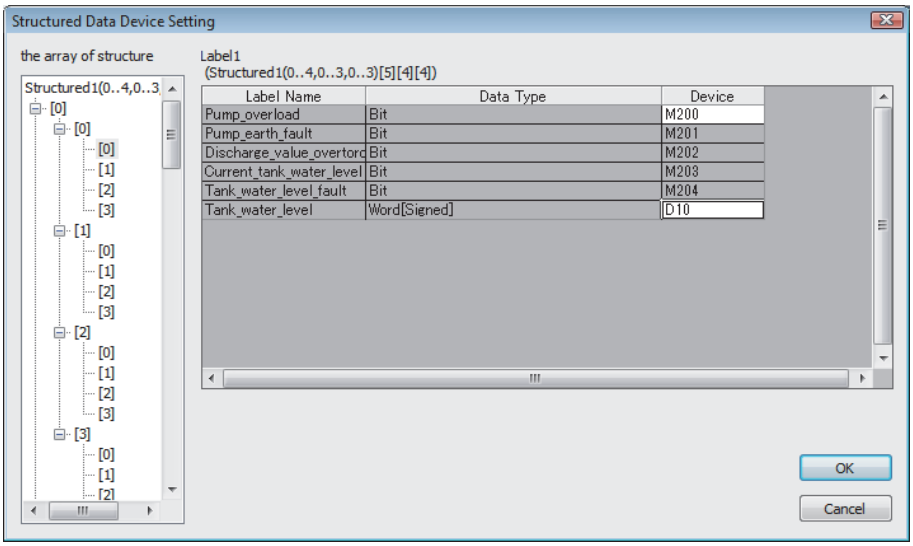
Set the items on the screen.

Item	Description
Label Name	Display label names defined as structure.
Data Type	Display data types set to data names.
Device	Set device names to be assigned.

(4) Assigning devices to structure array type labels

Screen display

Click "Detail Setting" on the "Device" column of System Label List.



Operating procedure

Set the items on the screen.

Item	Description
Structure Array	Display elements of the structure array in tree format. The device setting of the element selected in the tree is displayed in the right area of the screen.
Label Name	Display label names defined as the structure.
Data Type	Display data types set to label names.
Device	Set device names to be assigned. Device names can be entered for the start array element only.

7.3.4 Setting Structure

Register, edit, and browse each data (element) that is configured in the structure managed in the LabelSpace.

Screen display

	Label Name	Data Type
1	ST_data1	Bit
2	ST_data2	Bit
3	ST_data3	Bit
4	ST_data4	Bit
5	ST_data5	Bit
6	ST_data6	Bit
7	ST_data7	Bit
8	ST_data8	Bit
9	ST_data9	Bit
10	ST_data10	Bit
11		

Item	Description	Reference
Label Name	Display a label name.	-
Data Type	Display a data type of the label. Specify a data type from the Type Selection screen displayed by clicking	Page 125, Section 7.3.3 (2)

(1) Basic operations

Operating procedure

(a) Adding structured data type

- **Select a LabelSpace name on the LabelSpace window, [Menu] ⇨ [System Label] ⇨ [Structured Data Types] ⇨ [New].**
- **Select a LabelSpace name on the LabelSpace window, right-click "Structured Data Types" on the Navigation window, and select [Structured Data Types] ⇨ [New].**

(b) Changing structure name

- **Select the structure name on the Navigation window, [Menu] ⇨ [System Label] ⇨ [Structured Data Types] ⇨ [Rename].**
- **Right-click the structure name on the Navigation window, and select [Structured Data Types] ⇨ [Rename].**

(c) Deleting structured data type

- **Select the structure name to be deleted on the Navigation window, [Menu] ⇨ [System Label] ⇨ [Structured Data Types] ⇨ [Delete].**
- **Right-click the structure name to be deleted on the Navigation window, and select [Structured Data Types] ⇨ [Delete].**
- **Select the structure name to be deleted on the Navigation window, and press the Delete key.**

7.3.5 Referring and registering/canceling Workspaces

(1) Referring and registering

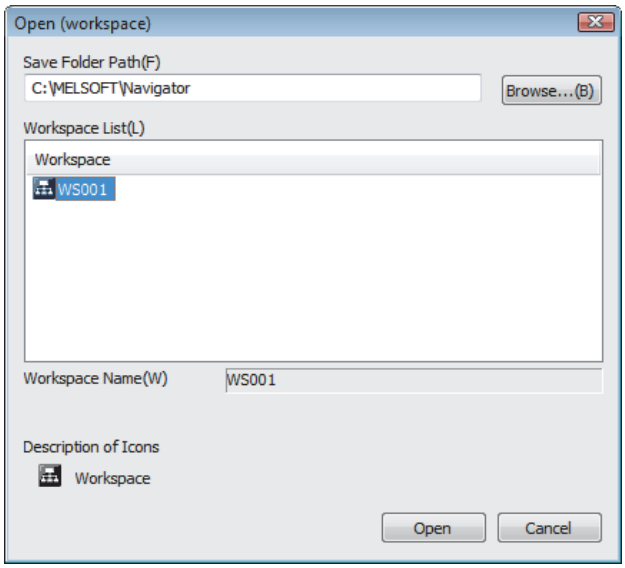
Register a Workspace to be referred when importing a system label.

- A system label can be used in MX Component independently by canceling the reference.
- When registering a canceled reference, the reference is regarded as a new reference.
  (The canceled references are not restored.)
- The label information within the LabelSpace cannot be edited after the reference registration.
  (Note that the logical station numbers can be registered.)

Operating procedure

- **Select the LabelSpace name on the LabelSpace window, and [Menu] ⇨ [Workspace] ⇨ [Reference Registration].**
- **Right-click "Reference Workspace" on the Navigation window, and select [Workspace] ⇨ [Reference Registration].**

Screen display



Item	Description
Save Folder Path	Click the Browse...(B) button, and select a folder in the Browse for Folder screen.
Workspace List	Display the list of Workspaces.

Point

The structure array labels whose devices are automatically assigned or whose devices are bit-specified cannot be referred and registered properly.
Register them with the system label list.

(2) Canceling

Cancel the reference of registered Workspace for importing the system label.

- The label information within the LabelSpace can be edited after canceling the reference registration.

Operating procedure

- **Select the LabelSpace name on the LabelSpace window, [Menu] ⇨ [Workspace] ⇨ [Dereference Registration].**
- **Right-click "Reference Workspace" on the Navigation window, and select [Workspace] ⇨ [Dereference Registration].**

7.3.6 Change notification

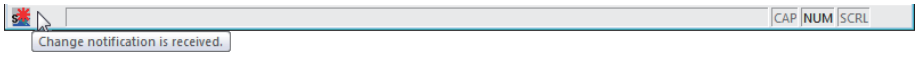
(1) Change notification

When Workspace is referred and registered, the system label notification icon is displayed by executing the change confirmation when the status-changed labels exist.

Operating procedure

[Menu] ⇨ [System Label] ⇨ [Check Changes of System Label Database]
(The change confirmation is also executed when Label Utility starts.)

Screen display



Point

- For using the change notification function, use MELSOFT Navigator version 1.39R or later.
- Receive a change notification when executing any of the following operations on the reference Workspace.
  (The change notification is not sent when creating a new system label.)
  - Change in system labels (including the change of comment and remark)
  - Deletion of system labels

(2) Applying the changed data

Apply the status-changed label information when Workspace is referred and registered. When more than one Workspace is referred, apply them for each LabelSpace.

Operating procedure

- **[Menu] ⇨ [System Label] ⇨ [Change Contents of System Label Database]**
- **Right-click the system label notification icon ( ), and select [Change Contents of System Label Database].**

7.3.7 Updating system label data

Update the system label data.

Operating procedure

[Menu] ⇨ [Refresh system label data for Control]

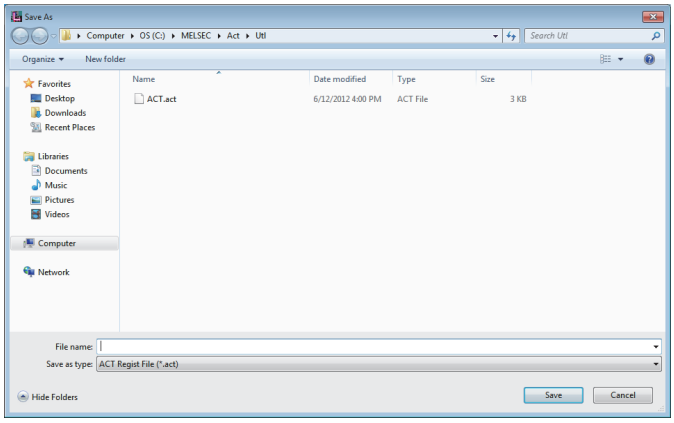
7.3.8 Exporting LabelSpace

Save the information used in Label Utility.

Operating procedure

[Menu] ⇨ [Export]

Screen display



Point

The assignment information of the logical station number is not included in the exported information.
When using the exported information by importing it, the assignment of logical station number is required.

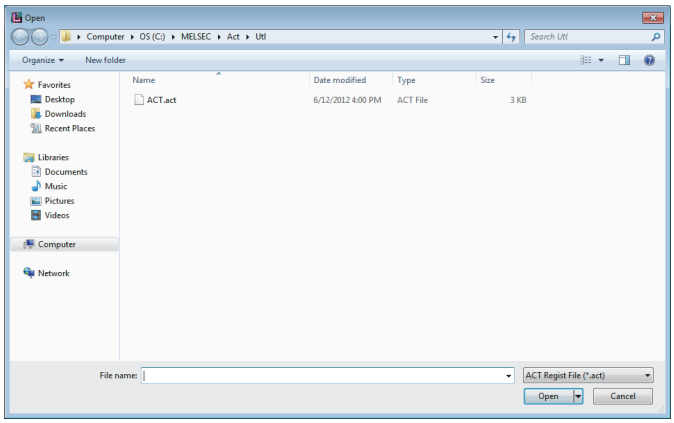
7.3.9 Importing LabelSpace

Import the saved information saved in a file by exporting LabelSpace (☞ Page 133, Section 7.3.8) to Label Utility.

Operating procedure

[Menu] ⇨ [Import]

Screen display



CHAPTER 8 COMMUNICATION SETTING EXAMPLES OF UTILITY SETTING TYPE

This chapter explains the setting procedure and setting example of each communication path when the utility setting type is used for programming.

Point

- The communication settings can be registered or changed in order to run MX Component Version 3 programs in MX Component Version 4.
- For the settings other than "As set by user", set the value shown in the table.
- When performing communication using MX Component for the first time, check if MX Component can communicate with a module properly using GX Developer first so that the cause of the communication failure can be identified easily.
- For details for the settings of modules, refer to the manual of each module.

8.1 Serial Communication

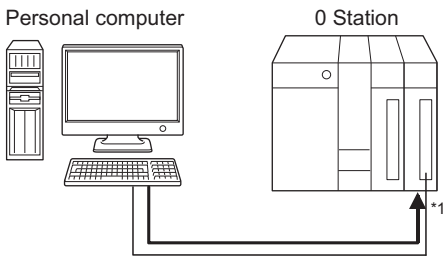
This section provides the serial communication procedure and its setting example using the utility setting type.

8.1.1 Settings of serial communication modules

This section explains the settings of serial communication modules for the use of MX Component.
The settings of MX Component need to be the same as the module.
The following sketches are used to explain each module.

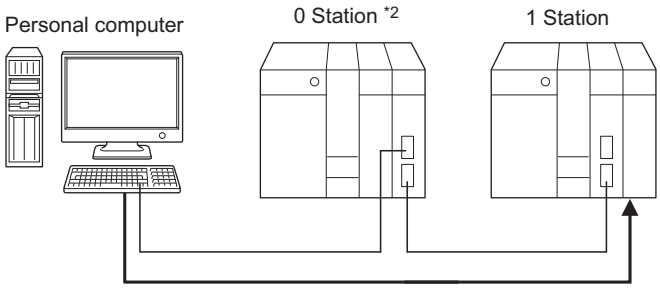
<When using Q series-compatible C24 or L series-compatible C24>

(For 1:1 communication)



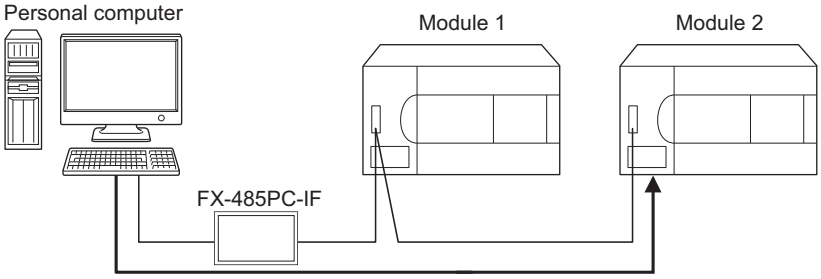
*1: Use of CH1

(For 1:n communication)



*2: Use of both CH1 and CH2

<When using FX extended port>



(1) R series-compatible C24

For details, refer to the following manual.

MELSEC iQ-R Serial Communication Module User's Manual (Application)

(2) Q series-compatible C24, L series-compatible C24

Point

When connecting a personal computer with Q/L series compatible C24 on a 1:1 basis, the communication can be performed without the switch setting of Q/L series compatible C24.
When the switch setting is not set, the module operates as GX Developer/MELSOFT connection as shown below.

(a) For 1:1 communication

Item	Setting		Setting value
	b15 to b8	b7 to b0	
Switch 1	CH1 communication speed	CH1 transmission setting	0000H
Switch 2	-	CH1 communications protocol	0000H
Switch 3	CH2 communication speed	CH2 transmission setting	0000H
Switch 4	-	CH2 communications protocol	0000H
Switch 5	Module station number		0000H

When the communication protocol is set to '00H' (GX Developer/MELSOFT connection), the module operates with the value shown in the following table.

For details, refer to the following manual.

Q Corresponding Serial Communication Module User's Manual (Basic)

MELSEC-L Serial Communication Module User's Manual (Basic)

Transmission setting	Setting
Data bit	8
Parity bit	Yes
Odd/even number parity	Odd number
Stop bit	1
Sum check code	Yes
Online change	Enable

(b) For 1:n communication

①0 Station

Item	Setting		Setting value
	b15 to b8	b7 to b0	Synchronous operation
Switch 1	CH1 communication speed	CH1 transmission setting	07E6H
Switch 2	-	CH1 communications protocol	0008H
Switch 3	CH2 communication speed	CH2 transmission setting	07E7H
Switch 4	-	CH2 communications protocol	0000H
Switch 5	Module station number		0000H(As set by user)

②1 Station

Item	Setting		Setting value
	b15 to b8	b7 to b0	Independent operation
Switch 1	CH1 communication speed	CH1 transmission setting	Set to satisfy the application of CH1.
Switch 2	-	CH1 communications protocol	
Switch 3	CH2 communication speed	CH2 transmission setting	07E6H
Switch 4	-	CH2 communications protocol	0005H
Switch 5	Module station number		0000H(As set by user)

The module operates with the value shown in the following table.

Transmission setting		Setting
Operation setting	0 Station	Synchronous
	1 Station	Independent
Data bit		8
Parity bit		Yes
Odd/even number parity		Odd number
Stop bit		1
Sum check code		Yes
Online change		Enable
Transmission speed setting		19200bps

(3) FX extended port

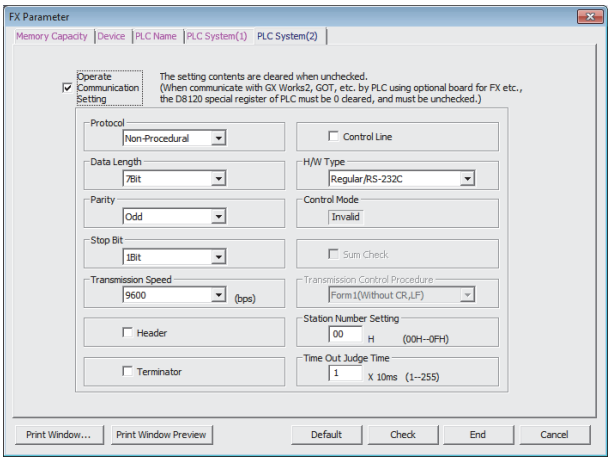
Set the FXCPU parameters with GX Works2 before using FX extended port to perform communication.
Execute either of the following two setting methods by following the instruction described on the reference page.

- To use the PLC parameters (☞ Page 138, (3)(a) in this section)
- To write values to special data registers (D8120, D8121, D8129) in a sequence program. (For FX0NCPU, only this method is applicable.) (☞ Page 139, (3)(b) in this section)

(a) Settings with PLC parameters

Operating procedure

1. **Start GX Works2.**
2. **Select [Parameter] ⇨ [PLC parameter] in the project list.**
3. **Click the <<PLC System(2)>> tab in the FX Parameter screen.**



4. **Set the items on the screen.**

Item	Description
Operate communication setting	Select the checkbox.
Protocol *1	Select the communication protocol.
Data length *1	7bit/8bit
Parity *1	NONE/Odd/Even
Stop bit *1	1bit/2bit
Transmission speed *1	300bps/600bps/1200bps/2400bps/4800bps/9600bps/19200bps
H/W type *1	Select the cable type used in the communication.
Sum check *1	Select/clear
Transmission control procedure *1	Select the transmission control procedure.
Station number setting *1	Set the station number.
Time out judge time *1	Set the time out period.

*1 : Not applicable when "Operate Communication Setting" is OFF.

Point

- When communication setting is set, turn on the FXCPU again after writing to programmable controller.
- When performing multi-drop connection, set the same communication settings for the devices.
  However, check that the station number is not overlapped.

(b) Settings by writing values to the special data registers in a sequence program

1) D8120 (communication format)

	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
D8120																

Bit	Description	Setting detail
b0	Data length	0: 7 bit 1: 8 bit
b1 b2	Parity	

	b2	b1
None	0	0
Odd number	0	1
Even number	1	1

Bit	Description	Setting detail
b3	Stop bit	0: 1 bit 1: 2 bit
b4 b5 b6 b7	Transmission speed	

	b7	b6	b5	b4
300bps	0	0	1	1
600bps	0	1	0	0
1200bps	0	1	0	1
2400bps	0	1	1	0
4800bps	0	1	1	1
9600bps	1	0	0	0
19200bps	1	0	0	1

Bit	Description	Setting detail
b8	-	0
b9		0
b10 b11	H/W type	

	b11	b10
RS-485	0	0

Bit	Description	Setting detail
b12	-	0
b13	Sum check	0: Not available 1: Available
b14	Communication protocol	1: Serial communication
b15	Transmission control procedure	0: Form 1

2) D8121 (station number setting)

Specify the station number.

The station number can be specified in the range of 00_H to $0F_H$.

	b15 to b0
D8121	Station number range: 00_H to $0F_H$

3) D8129 (time out judge time setting)

Specify the FXCPU time out judge time in 10ms units.

The setting range is as follows:

For FX_{0N}, FX_{1S}, FX_{1N}, FX_{1NC}, FX_{3S}, FX_{3G}, FX_{3GC}, FX_{3U}, FX_{3UC}, 1 to 255 (10 to 2550ms).

For FX_{2N}, FX_{2NC}, 1 to 3276 (10 to 32760ms).

If "0" is stored, 100ms is set.

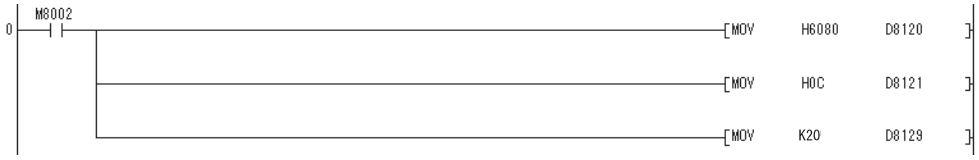
	b15 to b0
D8129	FX_{0N},FX_{1S},$FX_{1N(C)}$,FX_{3S},$FX_{3G(C)}$,$FX_{3U(C)}$: 1 to 255 $FX_{2N(C)}$: 1 to 3276

Point

- When communication setting is performed, turn on FXCPU again after writing to programmable controller.
- When performing multi-drop connection, set the same communication settings for the devices.
  However, check that the station number is not overlapped.

Remark

The following shows an example of setting values to the special data registers.

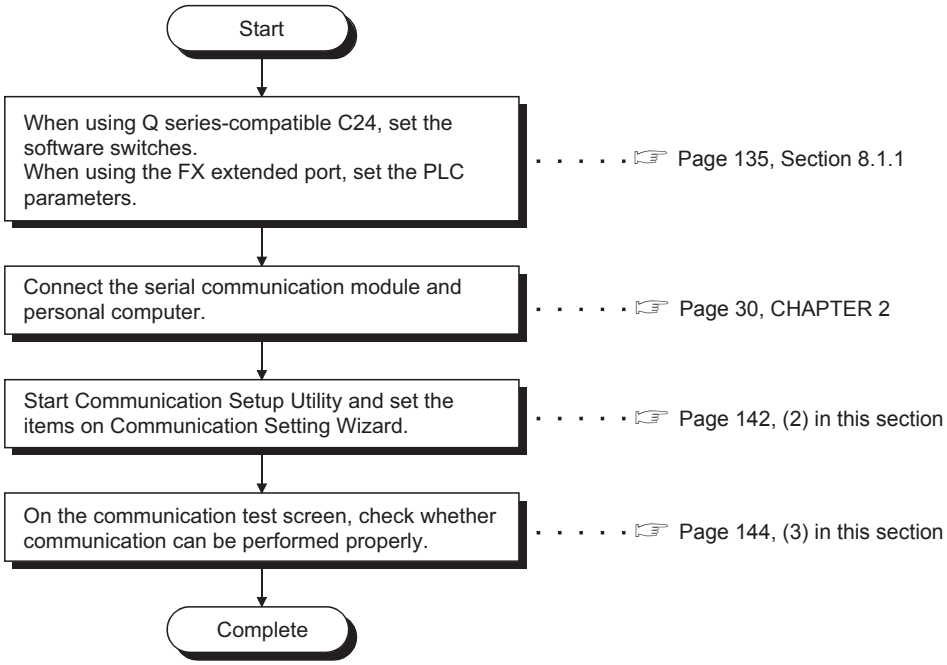


The following shows the setting details of each special data register in the above program.

- D8120
  Transmission control procedure : Form 1
  Communication protocol : Serial communication
  Sum check : Available
  H/W type : RS-485
  Transmission speed : 9600bps
  Stop bit : 1 bit
  Parity : NONE
  Data length : 7 bit
- D8121
  Station number : 12
- D8129
  Time out time : 200ms

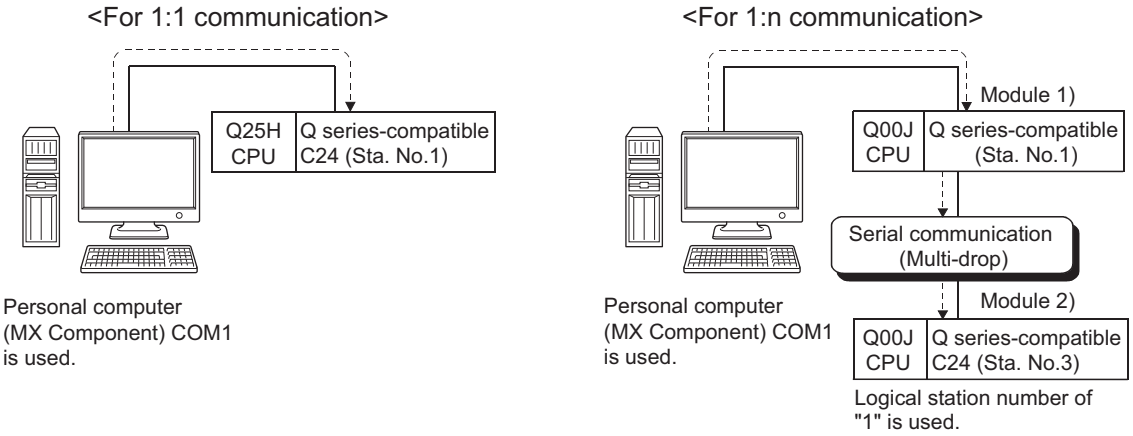
8.1.2 Access procedure

The following is the procedure for accessing the programmable controller CPU using serial communication.



(1) System examples

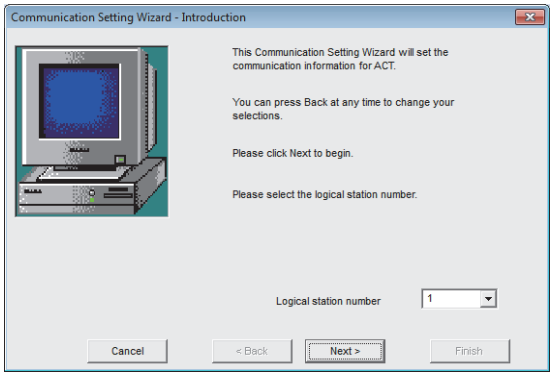
The following system examples are used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

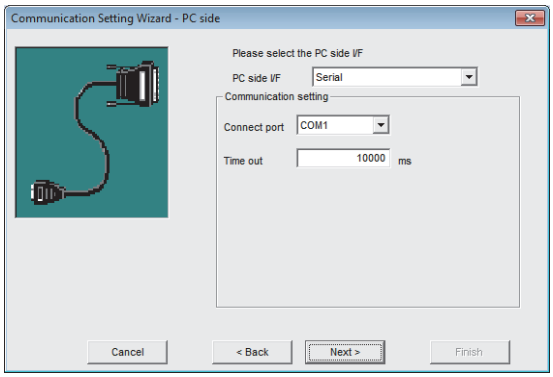
The following explains how to set the logical station number using the system example for 1:n communication.

Operating procedure



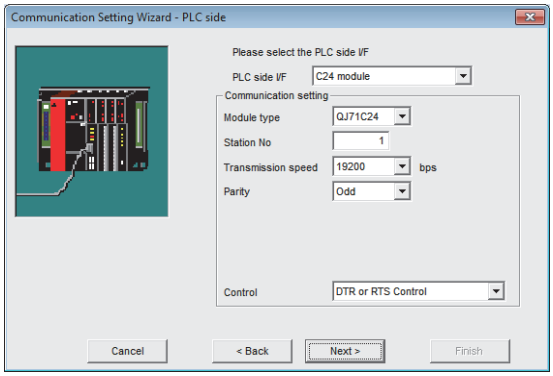
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "1" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Serial**
Connect port	**: COM1**
Time out	**: 10000**

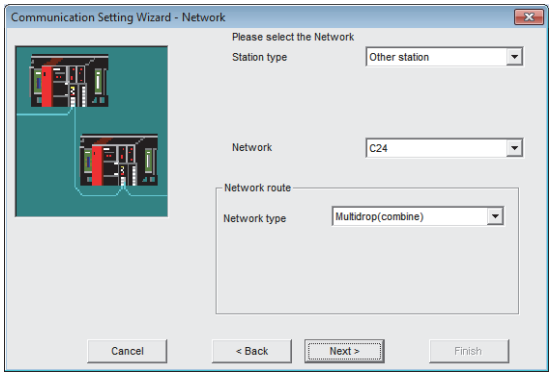


4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: C24 module**
Module type	**: QJ71C24**
Station No.	**: 1**
Transmission speed	**: 19200**
Parity	**: Odd**
Control	**: DTR or RTS Control**

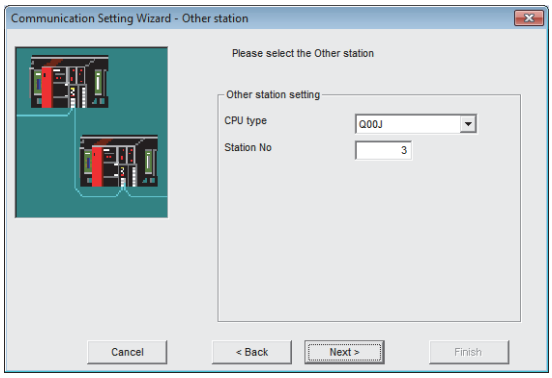
Continued on next page

Continued from previous page



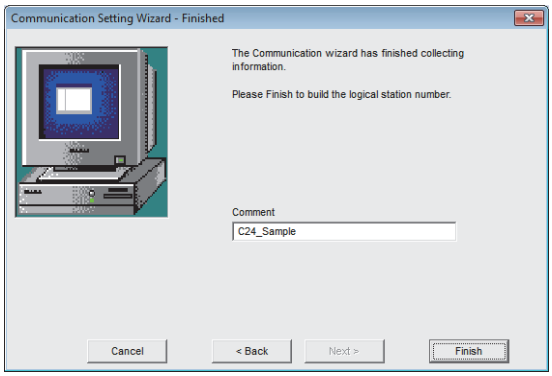
5. **Set the following items and click the Next > button.**

Station type	**: Other station**
Network	**: C24**
Network type	**: Multidrop(combine)**



6. **Set the following items and click the Next > button.**

CPU type	**: Q00J**
Station No.	**: 3**



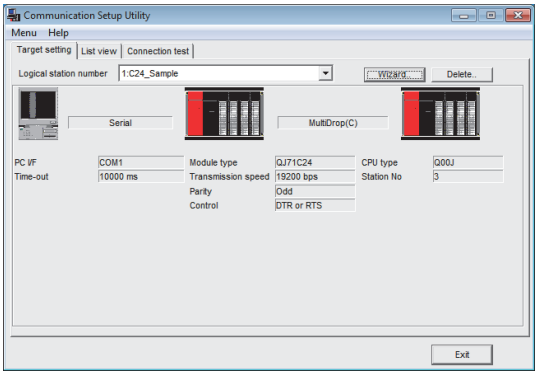
7. **Enter a comment and click the Finish button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

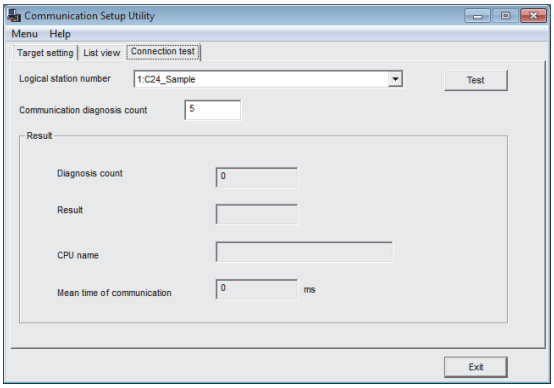
Check the serial communication settings, using the logical station number set in (2) in this section.

Operating procedure

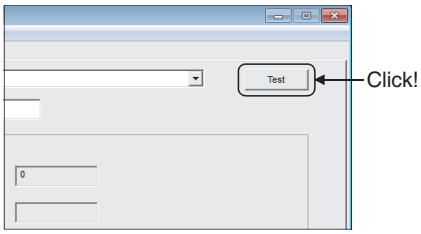


1. Click the <<Target setting>> tab and select the logical station number "1".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "1".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

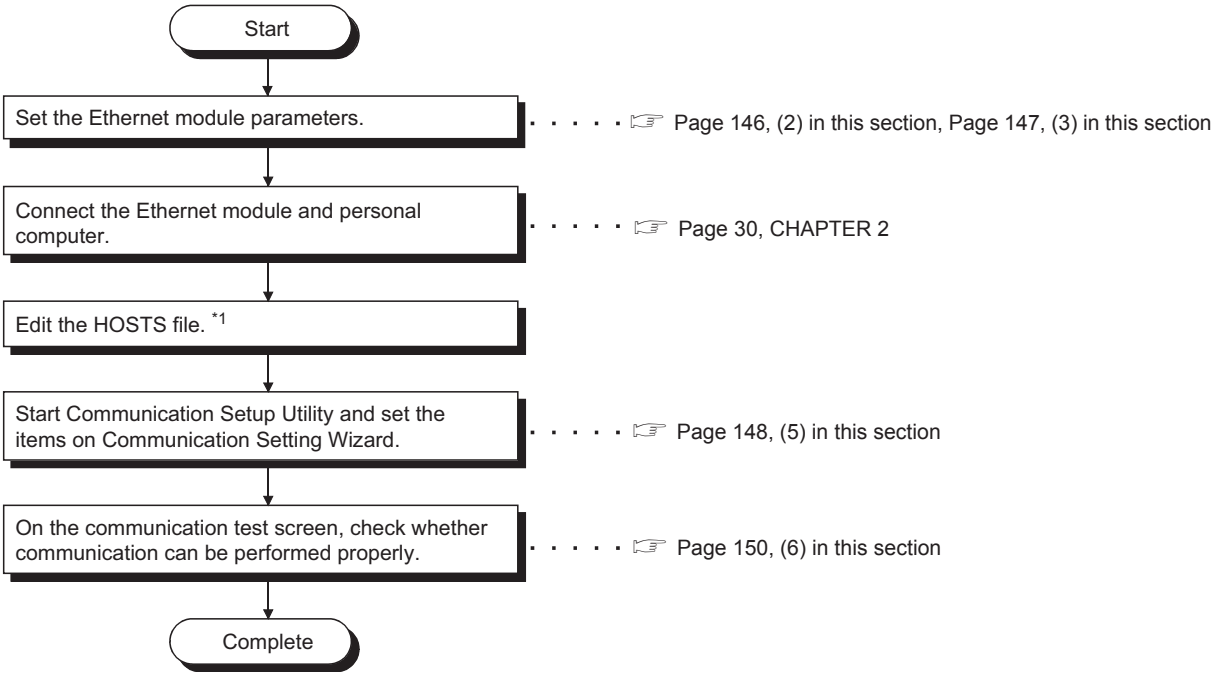
Collect device data, using this logical station number.

8.2 Ethernet Communication (When Using Ethernet Modules)

This section provides the procedure for Ethernet communication with the Ethernet module and its setting example using the utility setting type.

8.2.1 Access procedure

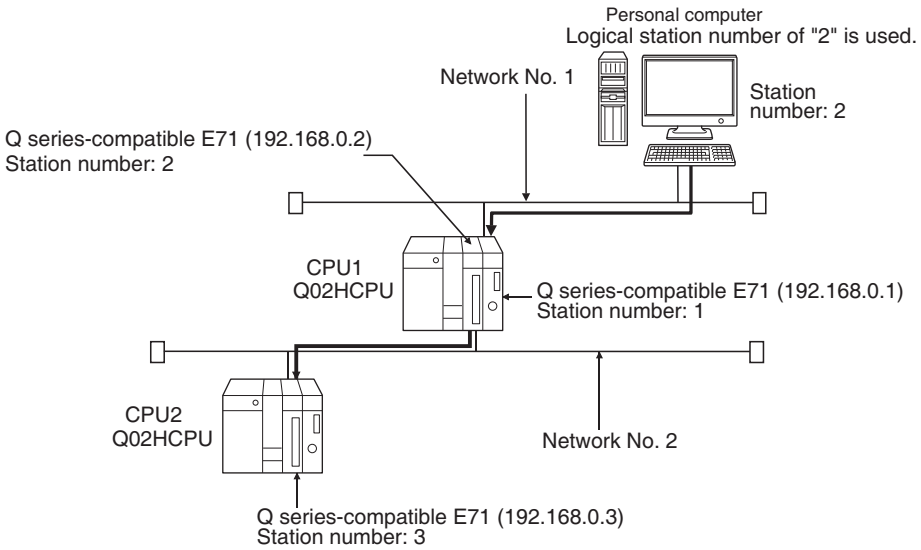
The following is the procedure for accessing the programmable controller CPU using Ethernet communication.



*1 : The HOSTS file is not required to be edited when entering the IP address in the host name (IP Address) of Communication Setup Utility and the ActHostAddress property of the Ethernet communication control.

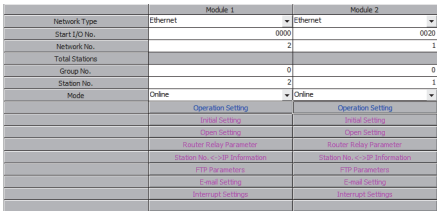
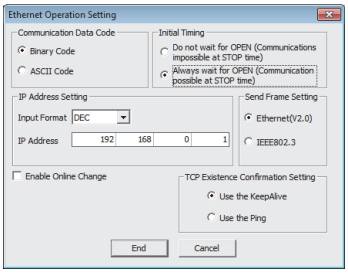
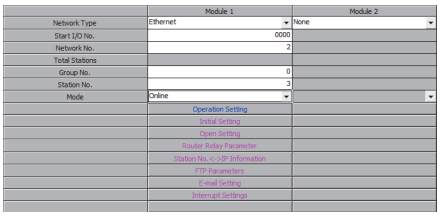
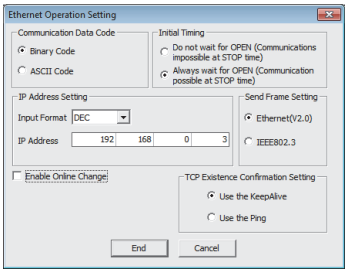
(1) System example

The following system example is used in this section.



(2) Setting parameter setting

Set the network type, start I/O number, network number, station number, mode and operational settings on the Network Parameter - MELSECNET/CC IE/Ethernet Module Configuration screen of GX Works2.

CPU to be set	Setting screen example
CPU 1	Ethernet parameters 
	Operational settings 
CPU 2	Ethernet parameters 
	Operational settings 

(3) Setting routing parameter setting

Set the following items on the Network Parameter - Setting the Ethernet/CC IE/MELSECNET Routing Information screen of GX Works2.

For the routing parameters, refer to the following appendix.

☞ Page 363, Appendix 1 Concept of Routing Parameters

CPU to be set	Setting screen example
CPU 1	
CPU 2	

CPU 1

	Target Network No.	Relay Network No.	Relay Station No.
1	1	2	2
2	2	1	1
3			

CPU 2

	Target Network No.	Relay Network No.	Relay Station No.
1	1	2	2
2			
3			

(4) Performing communications check

After completion of preparations for Ethernet communication, execute ping in the MS-DOS mode to check connection before starting communications on MX Component.

When normal

C:\>ping 192.168.0.2

Reply from 192.168.0.2:bytes=32 time<10ms TTL=32

When abnormal

C:\>ping 192.168.0.2

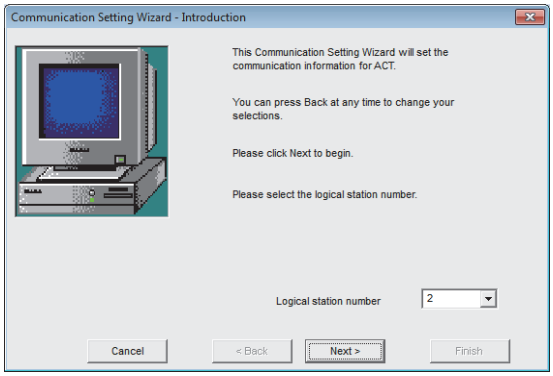
Request timed out.

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

(5) Setting the logical station number (setting on Communication Setting Wizard)

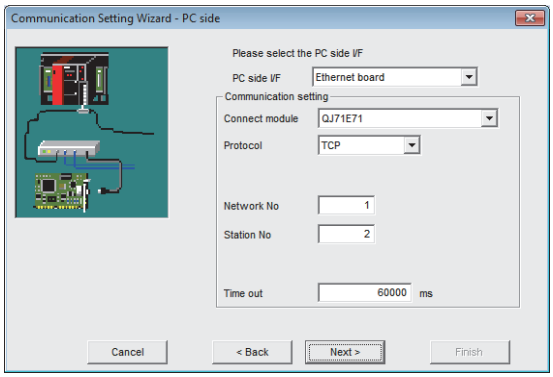
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



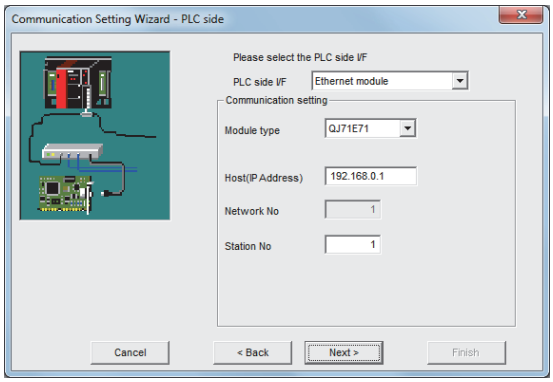
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "2" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Ethernet board**
Connect module	**: QJ71E71**
Protocol	**: TCP**
Network No.	**: 1**
Station No.	**: 2**
Time out	**: 60000**

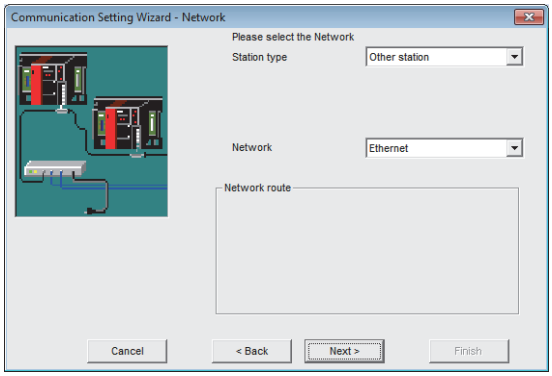


4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Ethernet module**
Module type	**: QJ71E71**
Host (IP Address)	**: 192.168.0.1**
Station No.	**: 1**

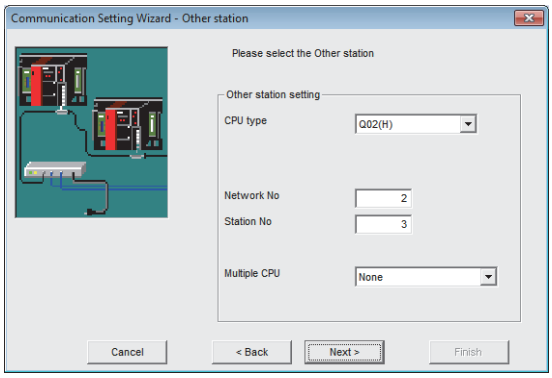
Continued on next page

Continued from previous page



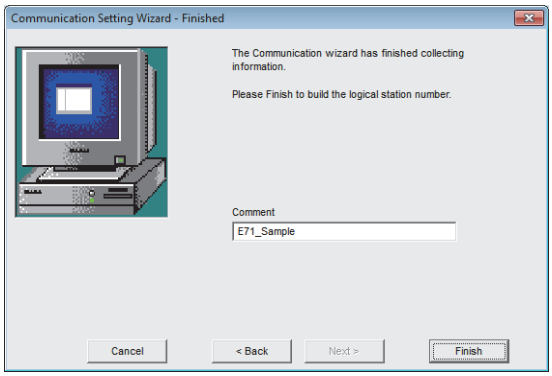
5. **Set the following items and click the Next > button.**

Station type	**: Other station**
Network	**: Ethernet**



6. **Set the following items and click the Next > button.**

CPU type	**: Q02(H)**
Network No.	**: 2**
Station No.	**: 3**
Multiple CPU	**: None**



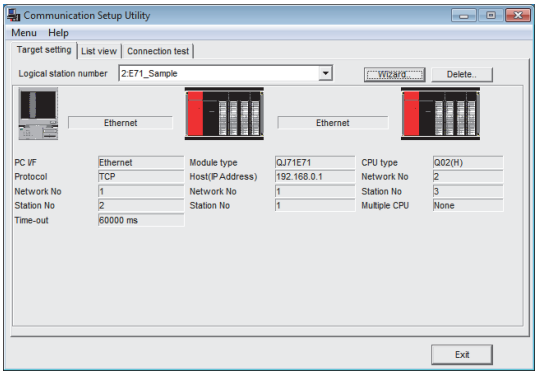
7. **Enter a comment and click the Finish button.**

Registration complete

(6) Checking the logical station number settings (conducting a communication test)

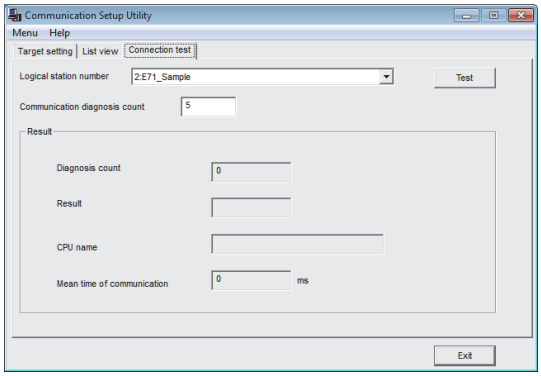
Check the Ethernet communication settings, using the logical station number set in (5) in this section.

Operating procedure

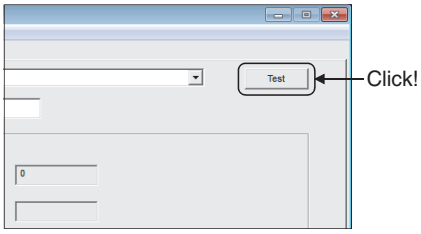


1. Click the <<Target setting>> tab and select the logical station number "2".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "2".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

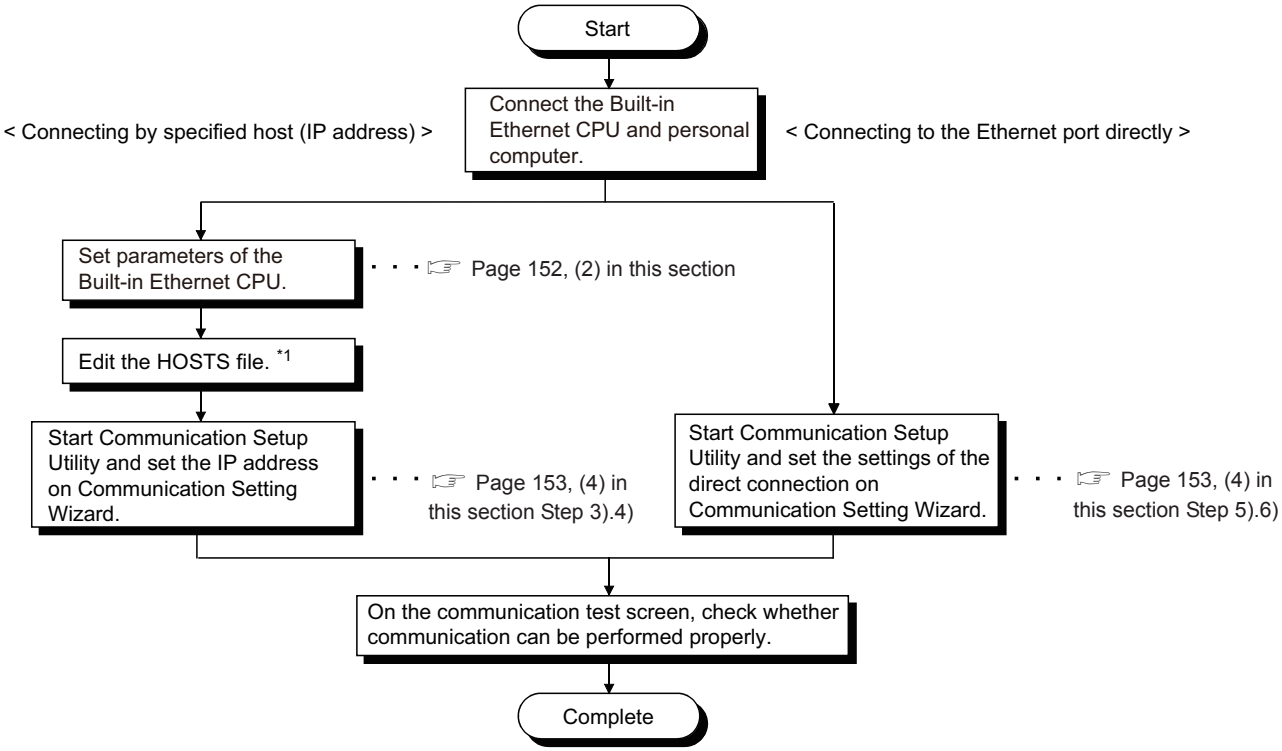
Collect device data, using this logical station number.

8.3 Ethernet Communication (When Using Built-in Ethernet CPUs)

This section provides the procedure for the Ethernet communication with the built-in Ethernet CPU and its setting example using the utility setting type.

8.3.1 Access procedure

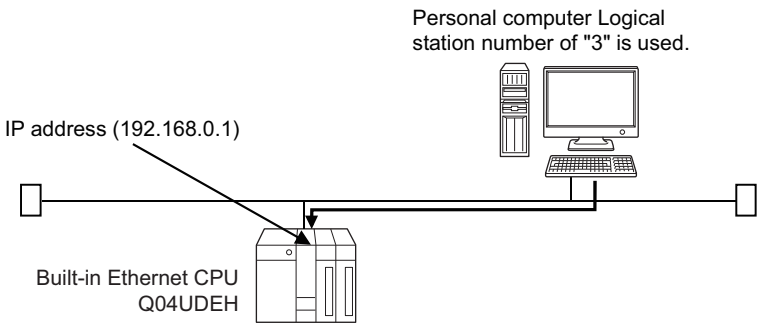
The following is the procedure for accessing the programmable controller CPU using Ethernet communication.



*1 : The HOSTS file is not required to be edited when entering the IP address in the host name (IP address) of Communication Setup Utility and the ActHostAddress property of the Ethernet communication control.

(1) System example

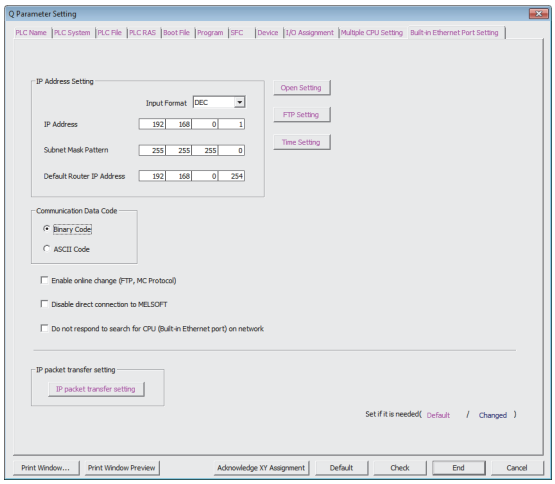
The following system example is used in this section.



(2) Setting parameters (in case of connection by specified Host (IP address only)

Parameter settings are set from the PLC parameter of GX Works2.

Select the <<Built-in Ethernet Port Setting>> tab and set the communication settings : IP address or the like.



(3) Performing communications check

After completion of preparations for Ethernet communication, execute ping in the MS-DOS mode to check connection before starting communications on MX Component.

When normal
C:\>ping 192.168.0.1
Reply from 192.168.0.1:bytes=32 time<10ms TTL=32

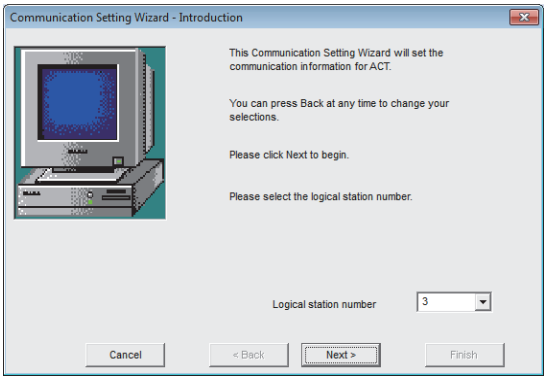
When abnormal
C:\>ping 192.168.0.1
Request timed out.

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

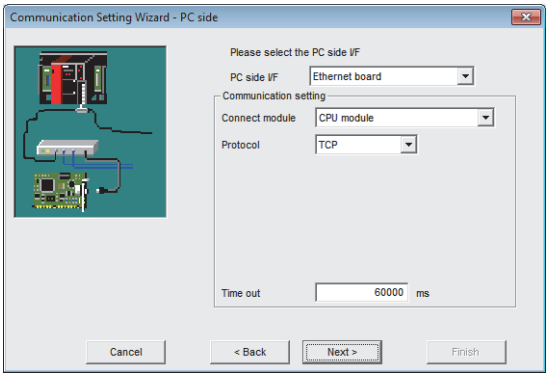
(4) Setting the logical station number (setting on Communication Setting Wizard)

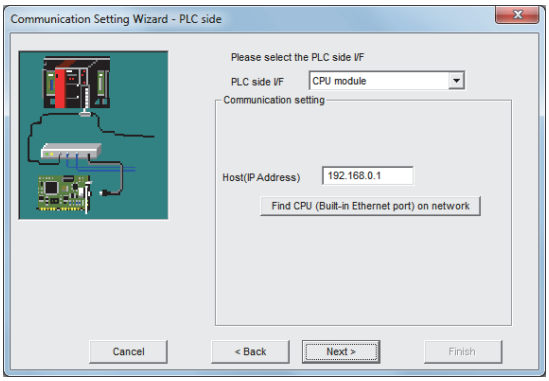
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



Step 3) or jump to step 5)





Step 7)

1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "3" in Logical station number and click the [Next >] button.**

Execute either of the following two ways of steps of the programmable controller side settings.
Follow 3) and 4) of steps in case of connection by specified Host (IP address).
Follow 5) and 6) of steps in case of Ethernet port direct connection.

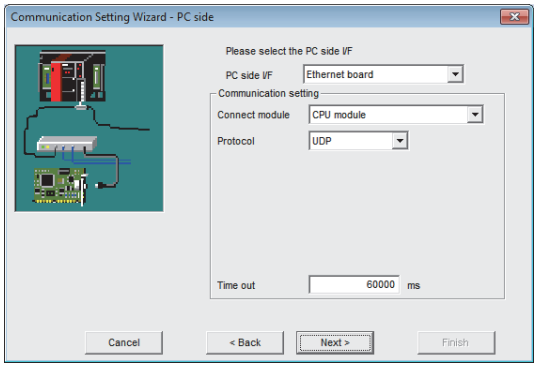
3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Ethernet board**
Connect module	**: CPU module**
Protocol	**: TCP**
Time out	**: 60000**

4. **Set the following items and click the [Next >] button.**

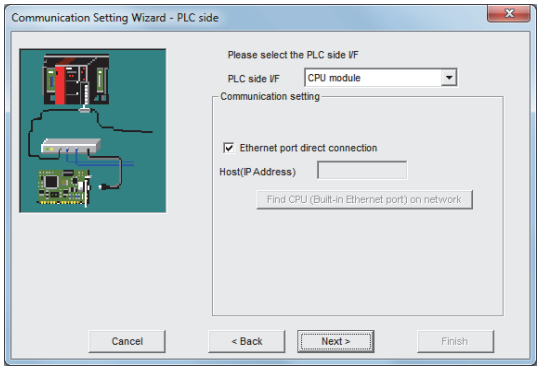
PLC side I/F	**: CPU module**
Host (IP Address)	**: 192.168.0.1**

Continued from previous page

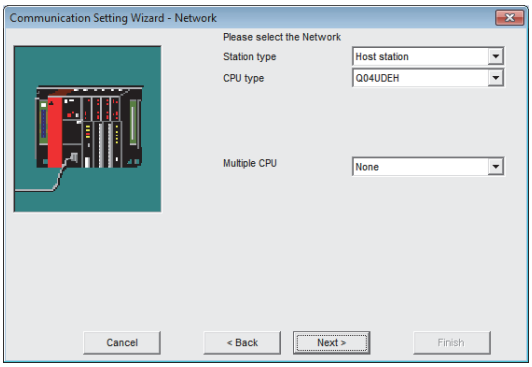


5. **Set the following items and click the Next > button.**

PC side I/F	**: Ethernet board**
Connect module	**: CPU module**
Protocol	**: UDP**
Time out	**: 60000**

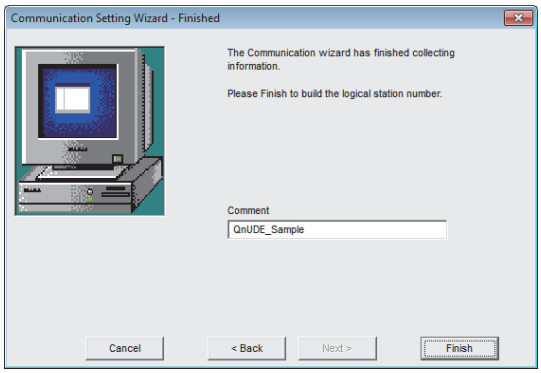


6. **Set the following items and click the Next > button.**
Select the check box "Ethernet port direct connection".



7. **Set the following items and click the Next > button.**

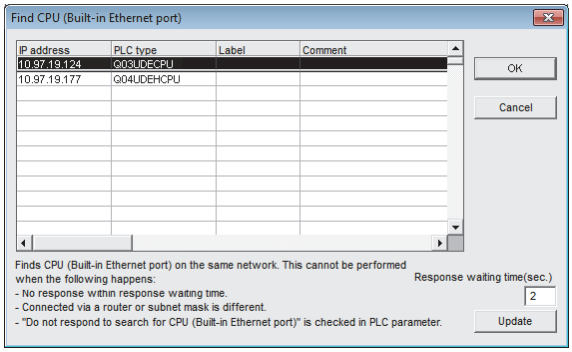
Station type	**: Host station**
CPU type	**: Q04UDEH**
Multiple CPU	**: None**



8. **Enter a comment and click the Finish button.**

Registration complete

Perform the built-in Ethernet CPU search on the following screen displayed by clicking the [Find CPU (Built-in Ethernet port) on network] button when use it.



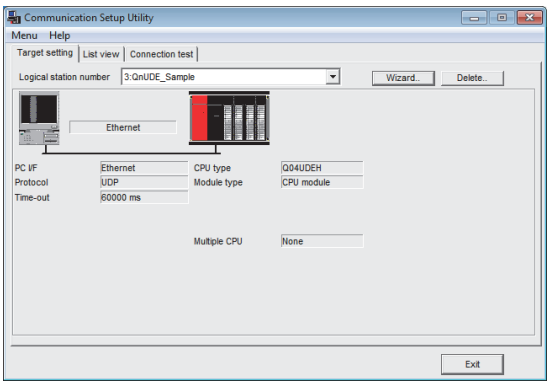
Choosing the target CPU from the list and clicking the [OK] button enables to update the IP address on the "Communication Setting Wizard - PLC side" setting.

* Built-in Ethernet CPUs on the same network is the target of the search.

(5) Checking the logical station number settings (conducting a communication test)

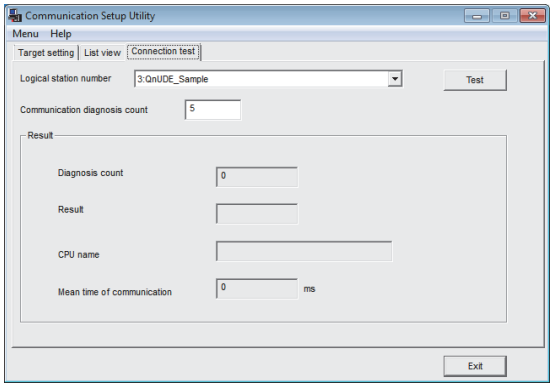
Check the Ethernet communication settings, using the logical station number set in (4) in this section.

Operating procedure

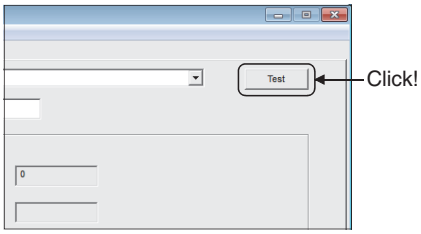


1. Click the <<Target setting>> tab and select the logical station number "3".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "3".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

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Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

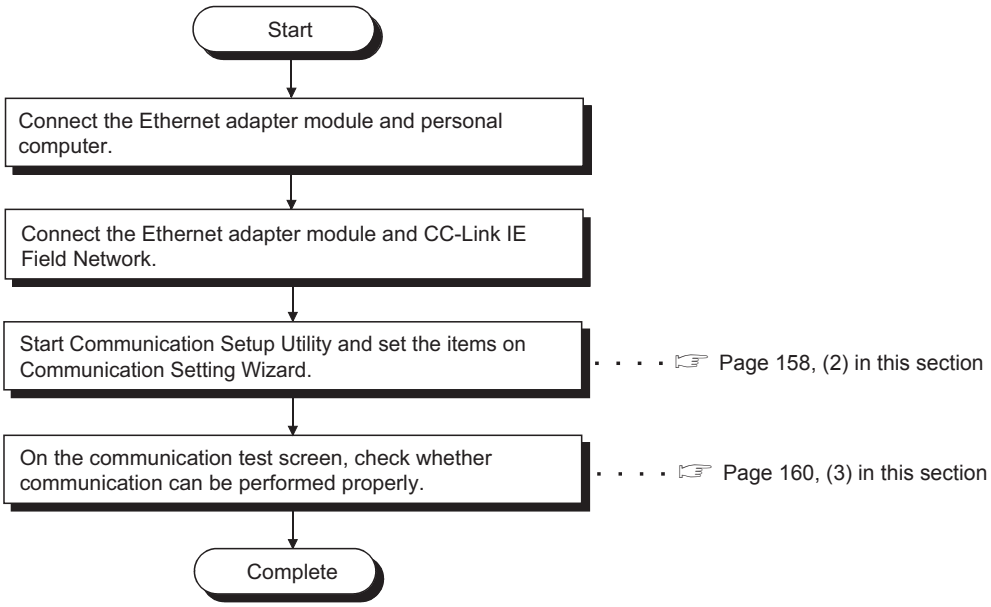
Collect device data, using this logical station number.

8.4 Ethernet Communication (When Using Ethernet Adapter Module)

This section provides the procedure for the Ethernet communication with in case of using Ethernet adapter module and its setting example using the utility setting type.

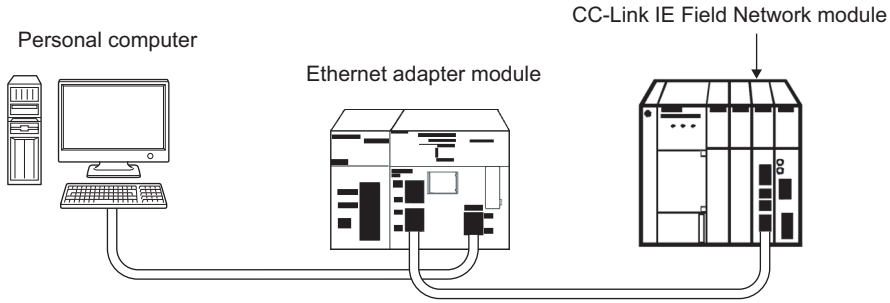
8.4.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using Ethernet communication.



(1) System example

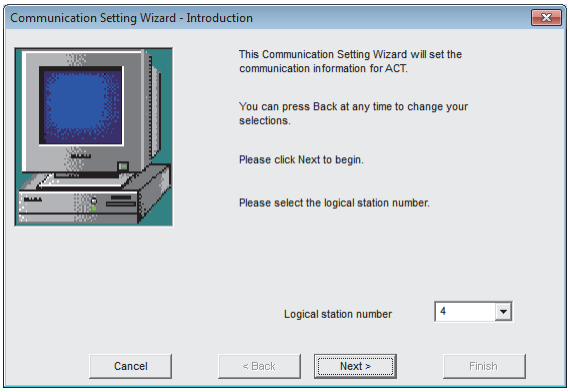
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

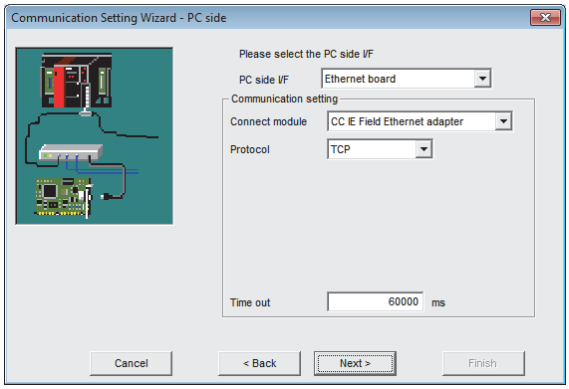
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



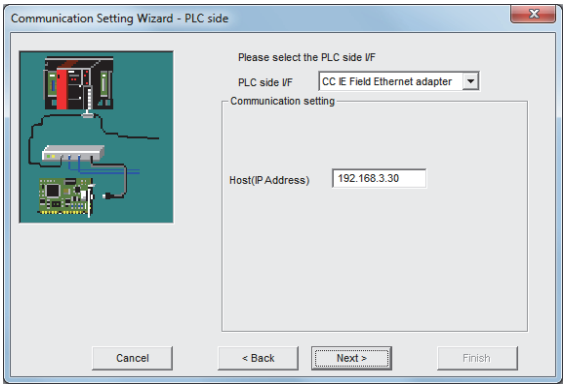
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "4" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Ethernet board**
Connect module	**: CC IE Field Ethernet adapter**
Protocol	**: TCP**
Time out	**: 60000**



4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: CC IE Field Ethernet adapter**
Host (IP Address)	**: 192.168.3.30**

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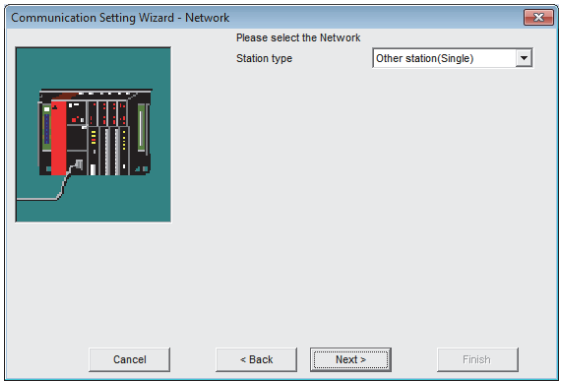
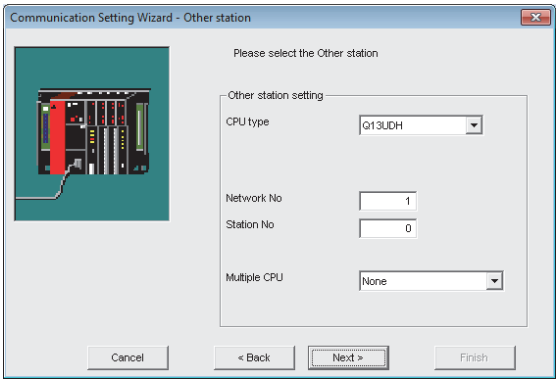


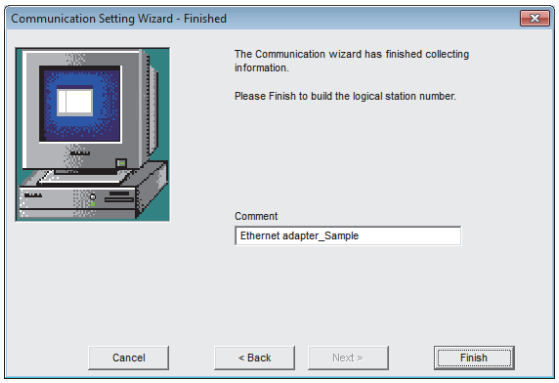
5. **Set the following items and click the Next > button.**

Station type : Other station (Single)



6. **Set the following items and click the Next > button.**

CPU type : Q13UDH
Network No : 1
Station No : 0
Multiple CPU : None



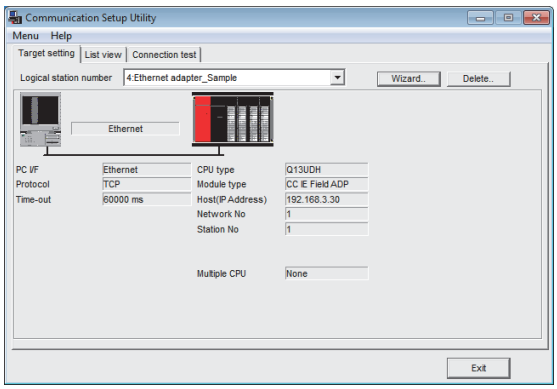
7. **Enter a comment and click the Finish button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

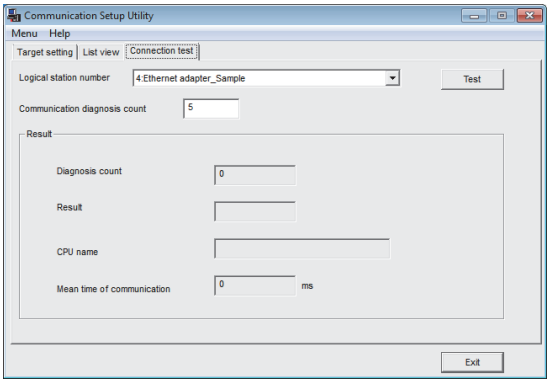
Check the Ethernet communication settings, using the logical station number set in (2) in this section.

Operating procedure

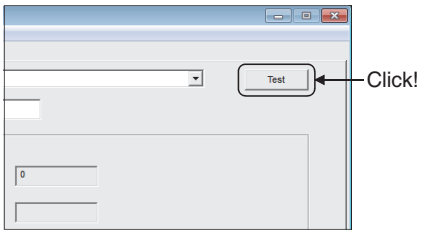


1. Click the <<Target setting>> tab and select the logical station number "4".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "4".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

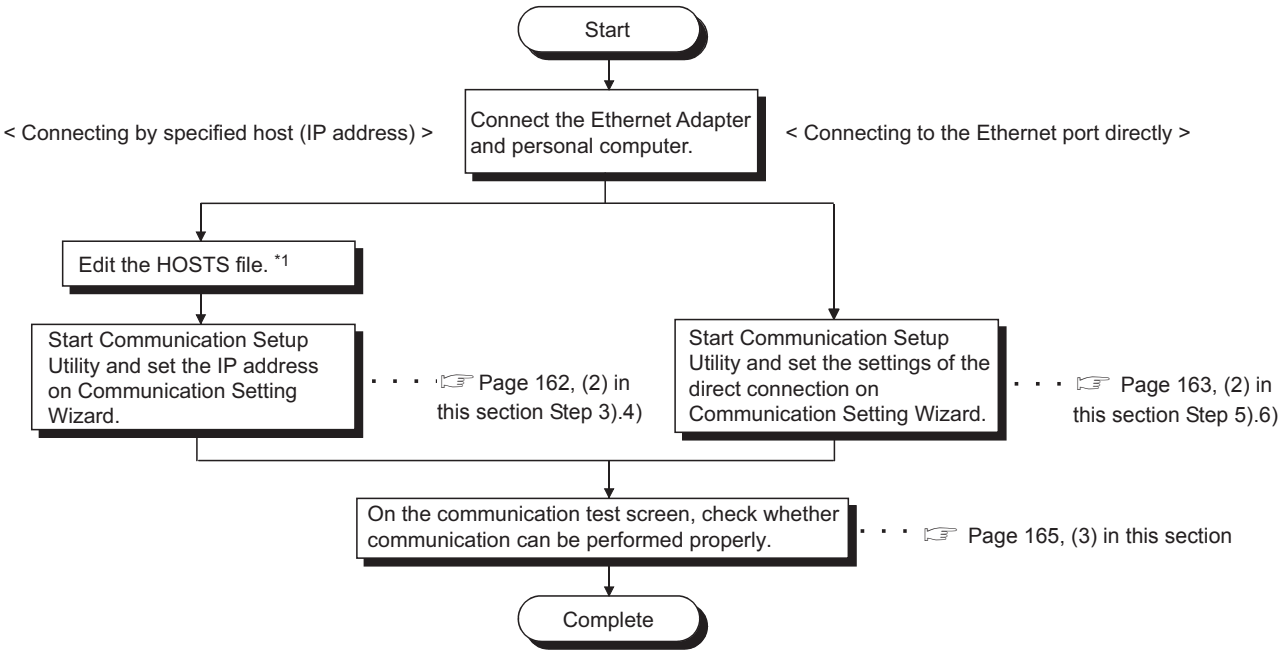
Collect device data, using this logical station number.

8.5 Ethernet Communication (When Using Ethernet Adapter)

This section provides the procedure for the Ethernet communication with in case of using Ethernet adapter and its setting example using the utility setting type.

8.5.1 Access procedure

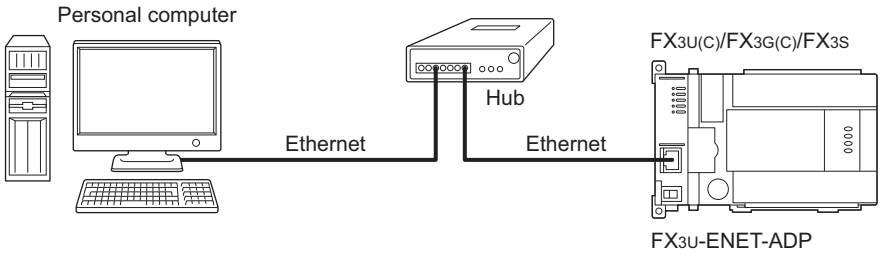
The following is the procedure for accessing the programmable controller CPU using Ethernet communication.



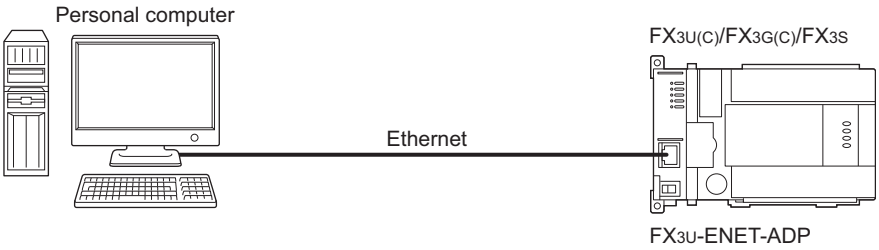
*1 : The HOSTS file is not required to be edited when entering the IP address in the host name (IP address) of Communication Setup Utility and the ActHostAddress property of the Ethernet communication control.

(1) System example

(a) The following shows an example of the system for the IP address specified communication.



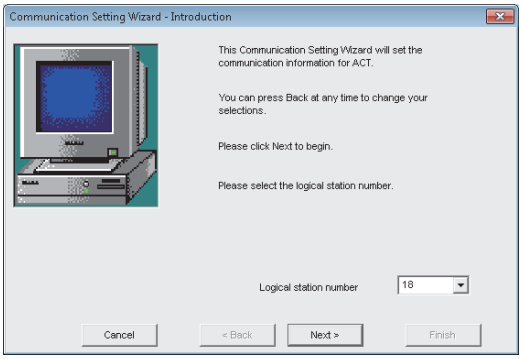
(b) The following shows an example of the system for the direct communication.



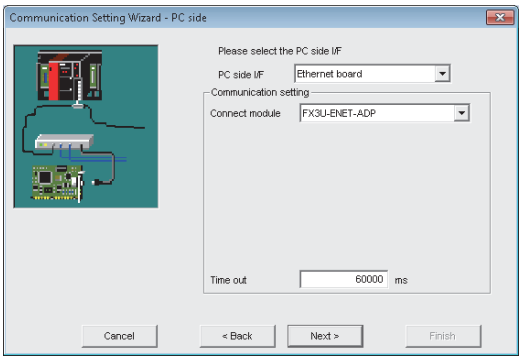
(2) Setting the logical station number (setting on Communication Setting Wizard)

The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



Step 3) or jump to step 5)



Continued on next page

1. **Start Communication Setup Utility and click the [Wizard...] button.**

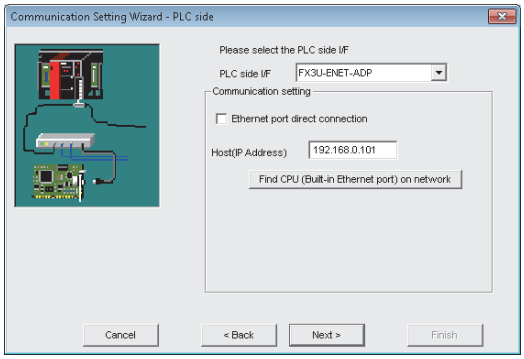
2. **Enter "18" in Logical station number and click the [Next >] button.**

Execute either of the following two ways of steps of the programmable controller side settings.
Follow 3) and 4) of steps in case of connection by specified Host (IP address).
Follow 5) and 6) of steps in case of Ethernet port direct connection.

3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Ethernet board**
Connect module	**: FX3U-ENET-ADP**
Time out	**: 60000**

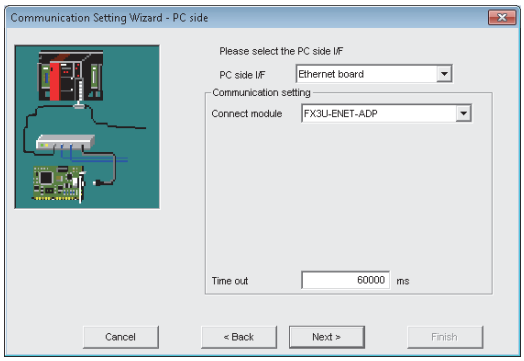
Continued from previous page



4. **Set the following items and click the Next > button.**

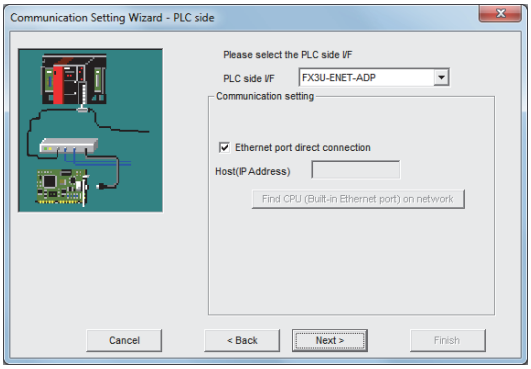
PLC side I/F : FX3U-ENET-ADP
Host (IP Address) : 192.168.0.101

Step 7)

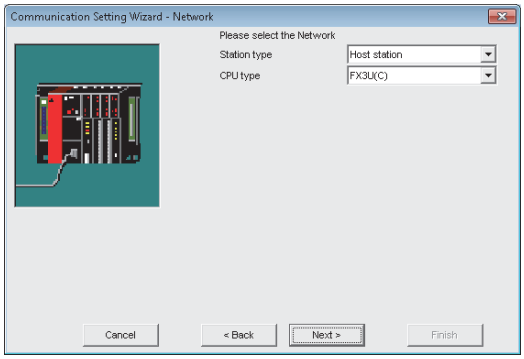


5. **Set the following items and click the Next > button.**

PC side I/F : Ethernet board
Connect module : FX3U-ENET-ADP
Time out : 60000



6. **Set the following items and click the Next > button.**
Select the check box "Ethernet port direct connection".



7. **Set the following items and click the Next > button.**

Station type : Host station
CPU type : FX3U(C)

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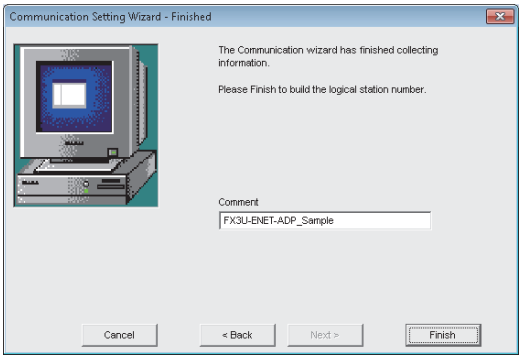
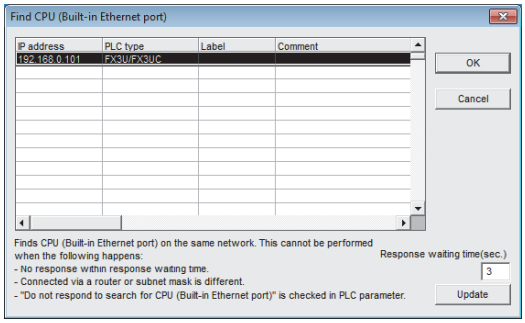


8. Enter a comment and click the Finish button.

Registration complete

Perform the built-in Ethernet CPU search on the following screen displayed by clicking the Find CPU (Built-in Ethernet port) on network button when use it.



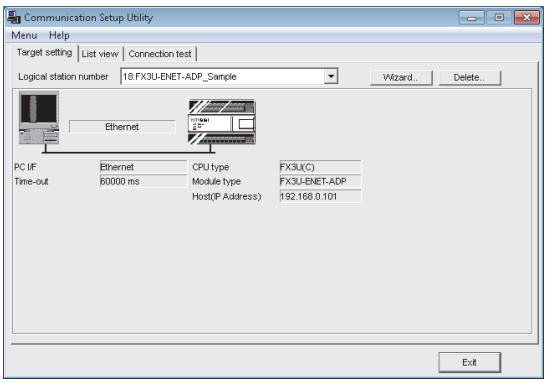
Choosing the target CPU from the list and clicking the OK button enables to update the IP address on the "Communication Setting Wizard - PLC side" setting.

* FX3U(C)/FX3G(C)/FX3SCPU on the same network is the target of the search.

(3) Checking the logical station number settings (conducting a communication test)

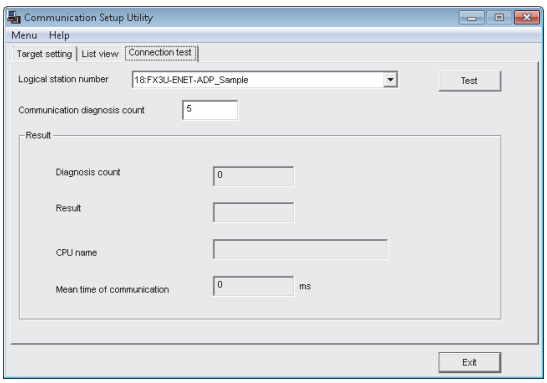
Check the Ethernet communication settings, using the logical station number set in (2) in this section.

Operating procedure

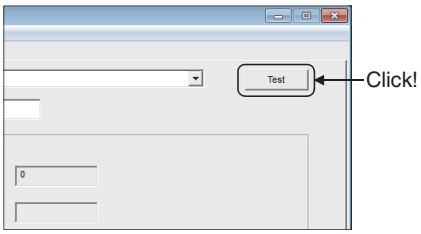


1. Click the <<Target setting>> tab and select the logical station number "18".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "18".



Communication test complete

3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

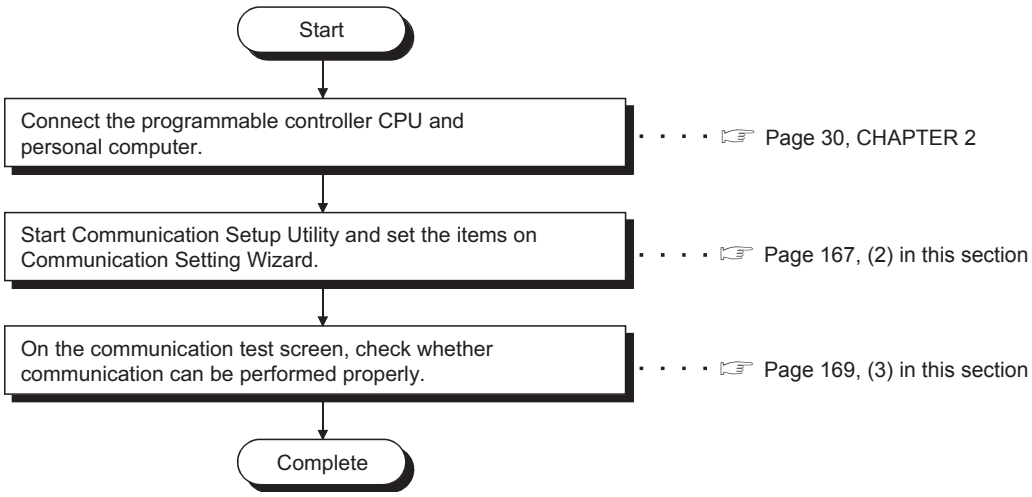
Collect device data, using this logical station number.

8.6 CPU COM Communication

This section provides the CPU COM communication procedure and its setting example using the utility setting type.

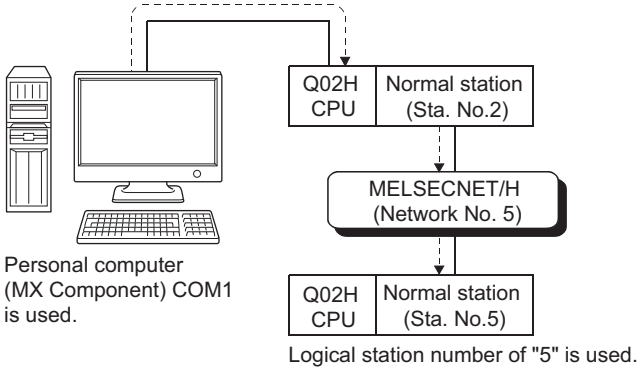
8.6.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using CPU COM communication.



(1) System example

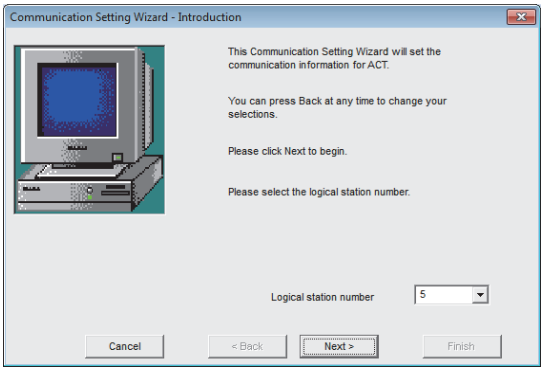
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

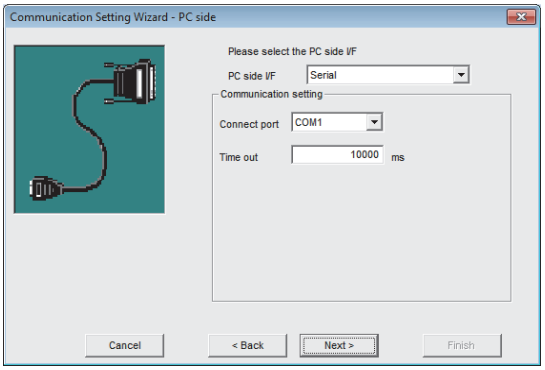
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



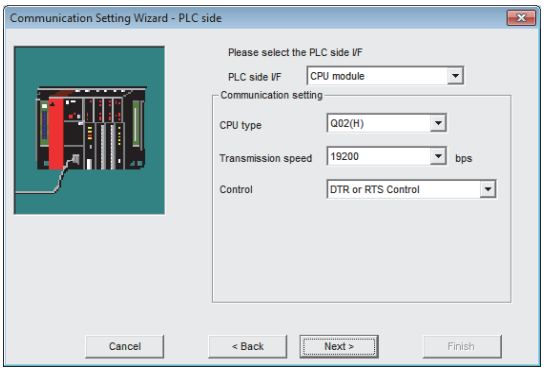
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "5" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Serial**
Connect port	**: COM1**
Time out	**: 10000**



4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: CPU module**
CPU type	**: Q02(H)**
Transmission speed	**: 19200**
Control	**: DTR or RTS Control**

Continued on next page

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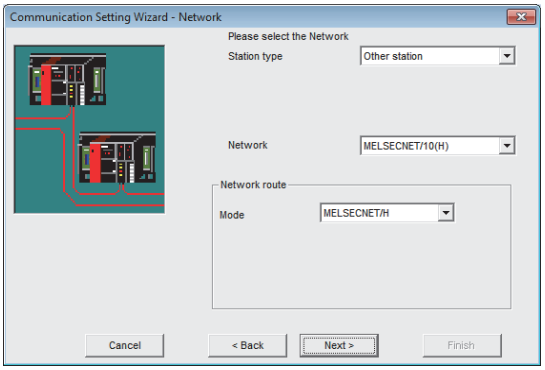
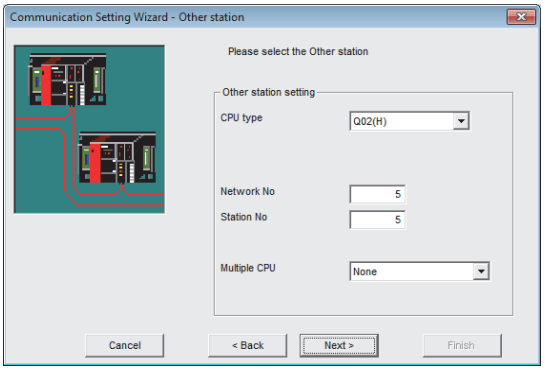


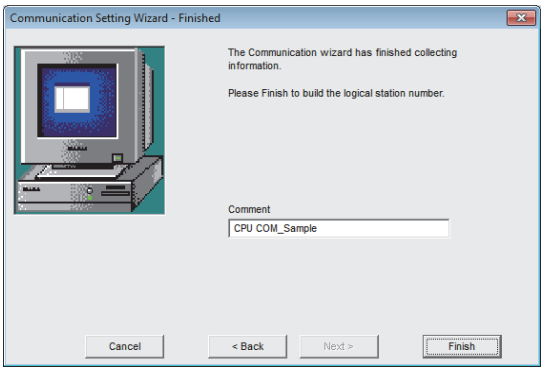
5. **Set the following items and click the Next > button.**

Station type	**: Other station**
Network	**: MELSECNET/10(H)**
Mode	**: MELSECNET/H**



6. **Set the following items and click the Next > button.**

CPU type	**: Q02(H)**
Network No.	**: 5**
Station No.	**: 5**
Multiple CPU	**: None**



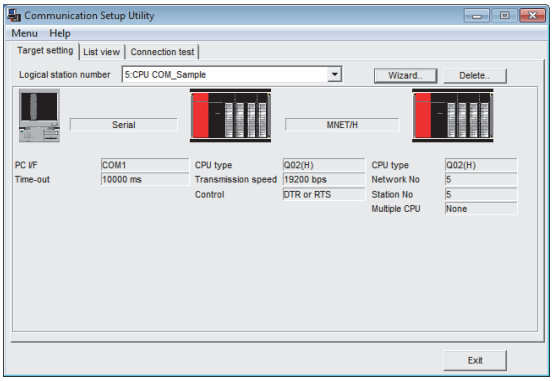
7. **Enter a comment and click the Finish button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

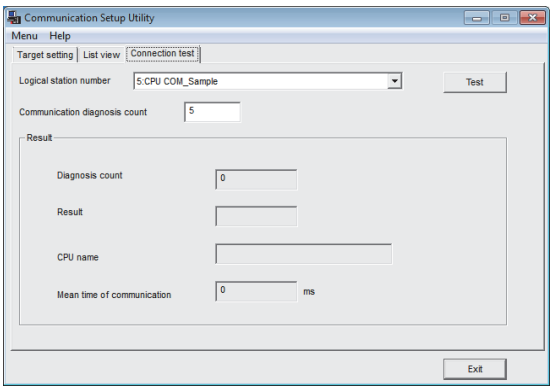
Check the CPU COM communication settings, using the logical station number set in (2) in this section.

Operating procedure

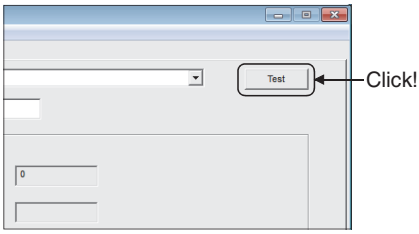


1. Click the <<Target setting>> tab and select the logical station number "5".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "5".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

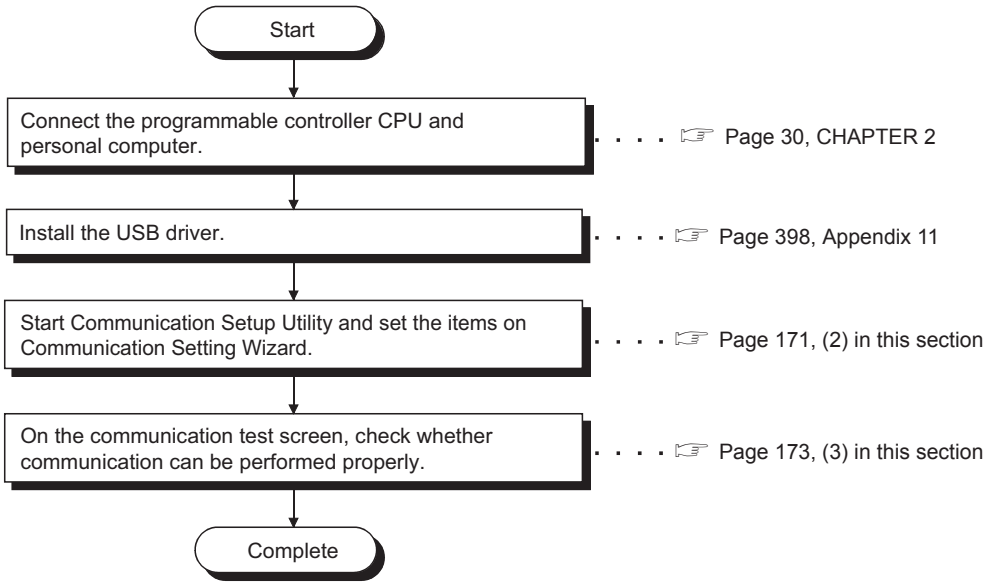
Collect device data, using this logical station number.

8.7 CPU USB Communication

This section provides the CPU USB communication procedure and its setting example using the utility setting type.

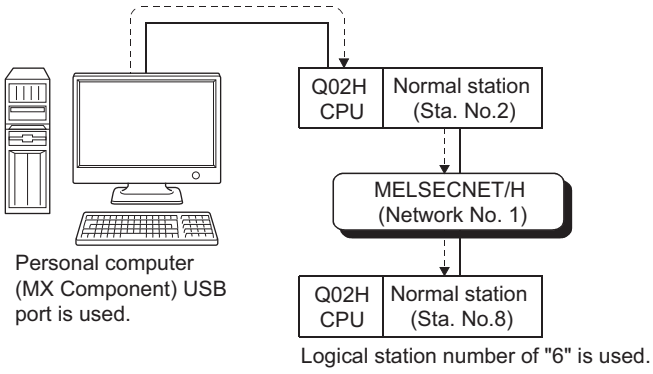
8.7.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using CPU USB communication.



(1) System example

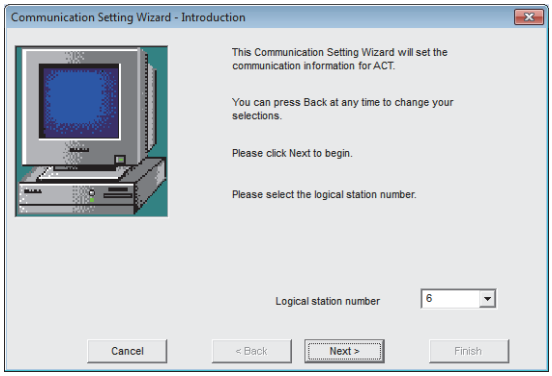
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

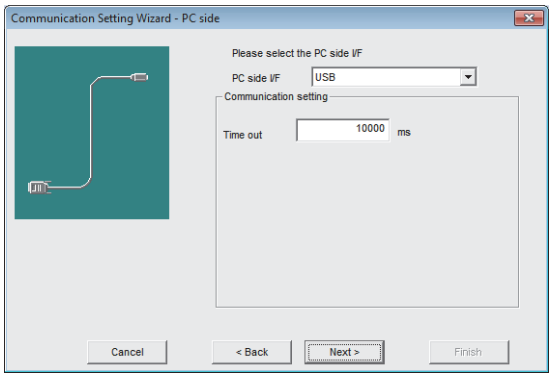
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



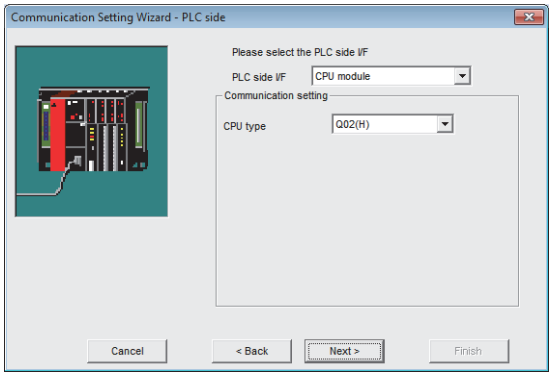
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "6" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F : USB
Time out : 10000



4. **Set the following items and click the [Next >] button.**

PLC side I/F : CPU module
CPU type : Q02(H)

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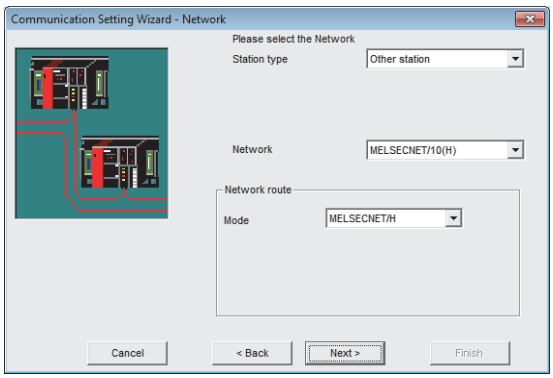
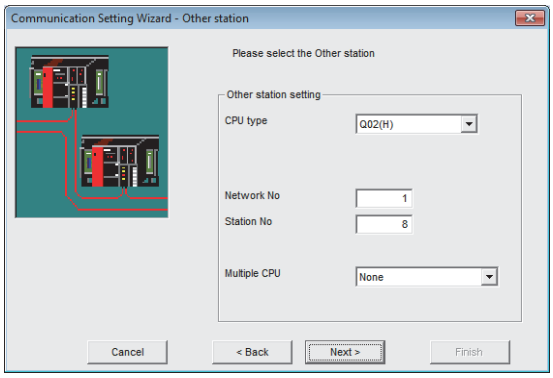
Continued from previous page



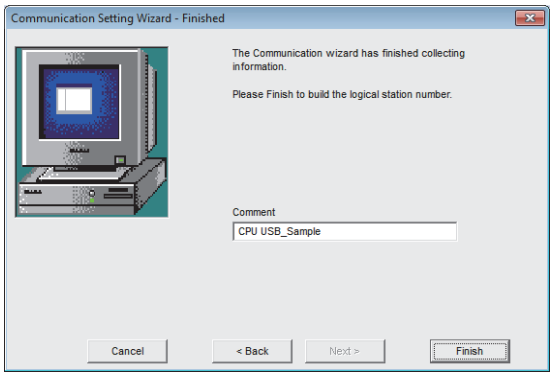
5. **Set the following items and click the Next > button.**

Station type	**: Other station**
Network	**: MELSECNET/10(H)**
Mode	**: MELSECNET/H**



6. **Set the following items and click the Next > button.**

CPU type	**: Q02(H)**
Network No.	**: 1**
Station No.	**: 8**
Multiple CPU	**: None**



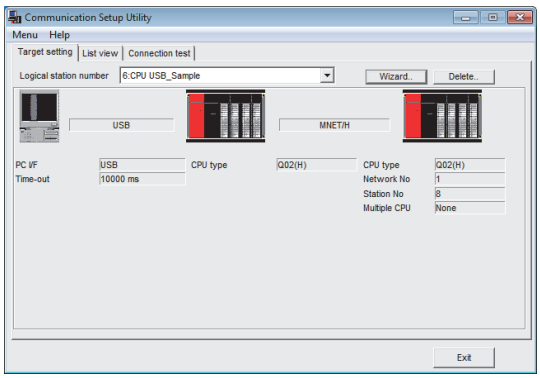
7. **Enter a comment and click the Finish button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

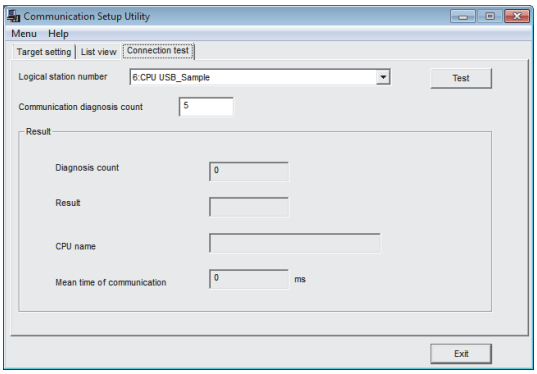
Check the CPU USB communication settings, using the logical station number set in (2) in this section.

Operating procedure

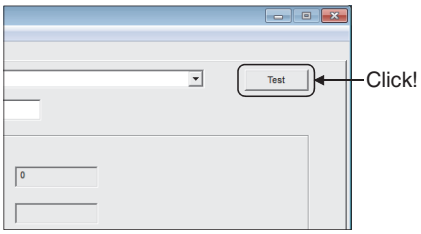


1. Click the <<Target setting>> tab and select the logical station number "6".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "6".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

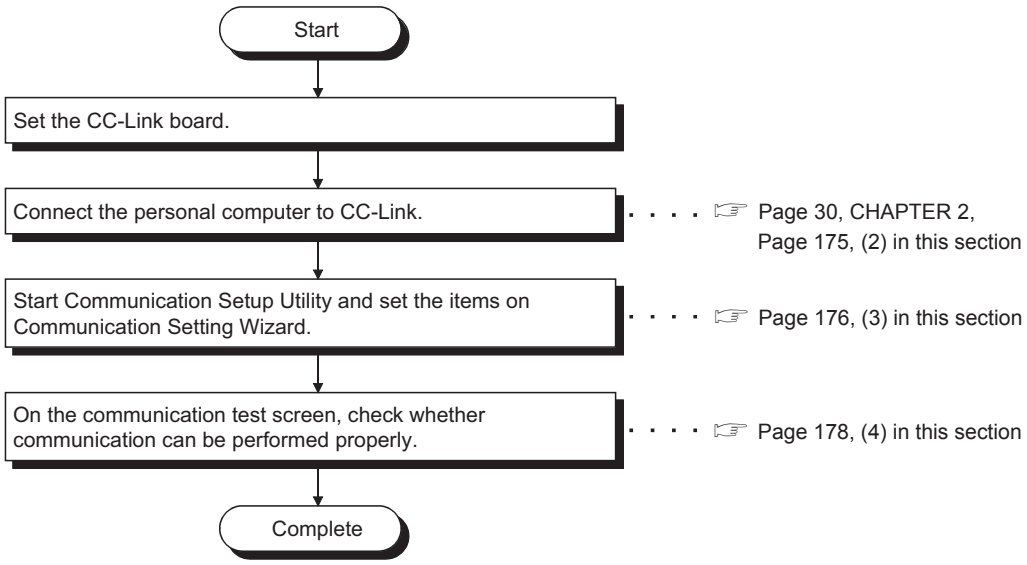
Collect device data, using this logical station number.

8.8 CC-Link Communication

This section provides the CC-Link communication procedure and its setting example using the utility setting type.

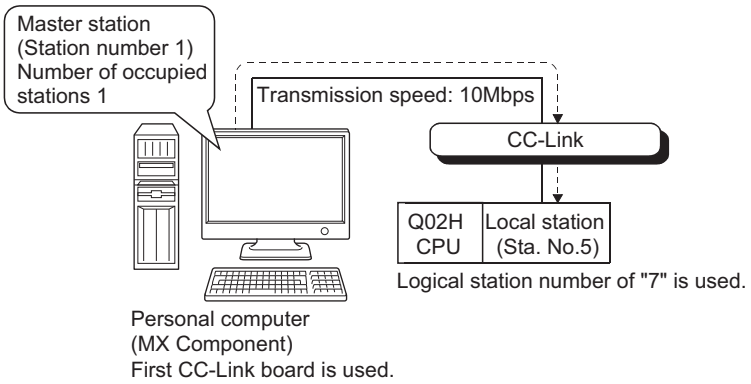
8.8.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using CC-Link communication.



(1) System example

The following system example is used in this section.



* Accessible to FXCPU with CC-Link communication only via the serial/USB connection of QCPU or via Q series-compatible C24.

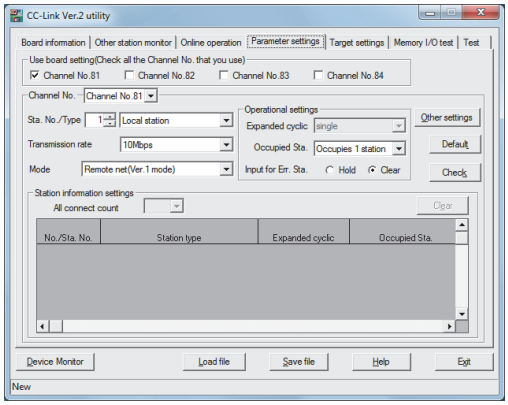
Supported CPUs and module in CC-Link communication to FXCPU are as follows.

CC-Link module	Compatible CPU	Station number
FX3U-64CCL	FX3G, FX3GC, FX3U, FX3UC	1 to 63

(2) Checking the CC-Link board

Check whether the personal computer is connected properly to CC-Link.

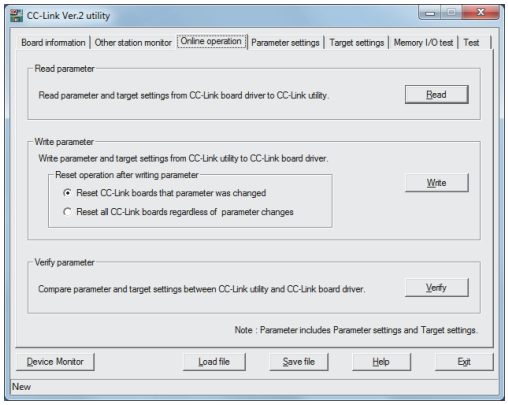
Operating procedure



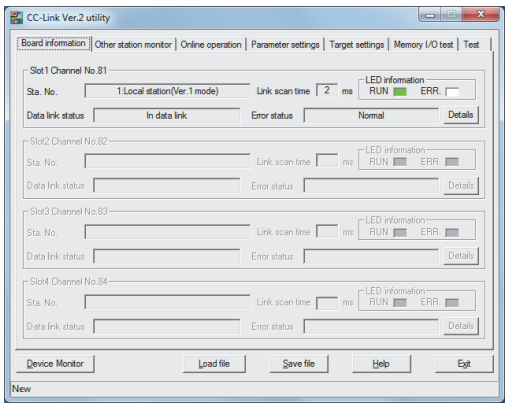
1. [Start] ⇨ [All Programs] ⇨ [MELSEC] ⇨ [MELSEC CC-Link Ver.2 Utility]

2. Click the <<Parameter settings>> tab and set the following items.

Channel No.	: Channel No. 81
Sta. No.	: 1
Type	: Local station
Transmission rate	: 10Mbps
Mode	: Remote net (Ver.1 mode)
Occupied Sta.	: Occupies 1 station
Input for Err Sta.	: Clear



3. Click the <<Online operation>> tab and click the Write button.



4. Click the <<Board information>> tab.

Check that the loop of the own station is normal.

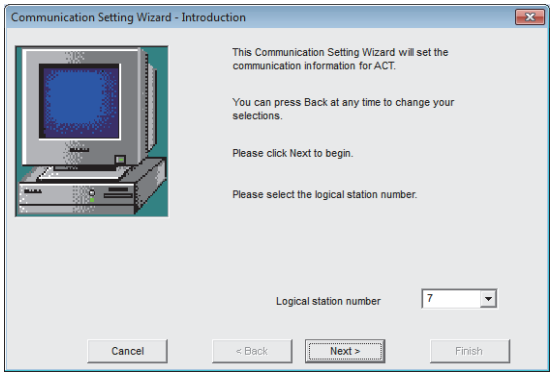
Check complete

5. Click the Exit button to exit from the utility.

(3) Setting the logical station number (setting on Communication Setting Wizard)

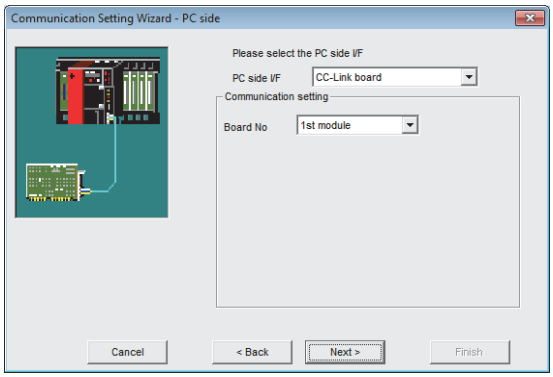
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



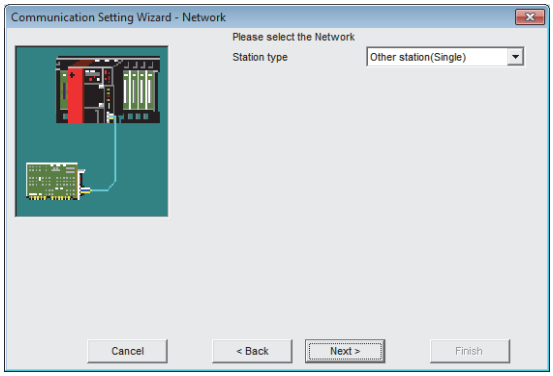
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "7" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: CC-Link board**
Board No	**: 1st module**



4. **Set the following items and click the [Next >] button.**

Station type	**: Other station (Single)**

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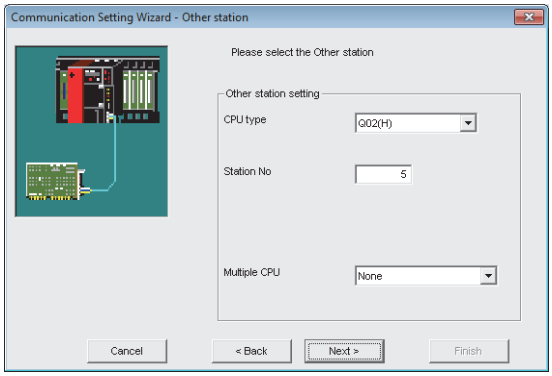
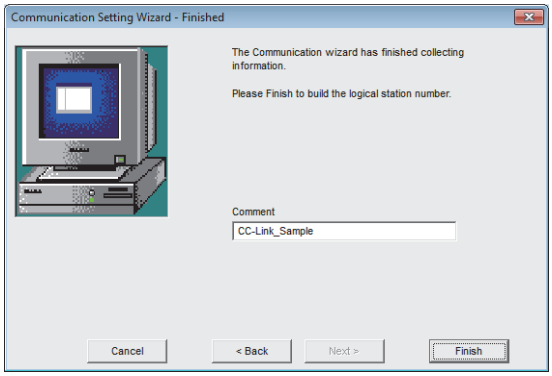


5. **Set the following items and click the Next > button.**

CPU type	**: Q02(H)**
Station No	**: 5**
Multiple CPU	**: None**



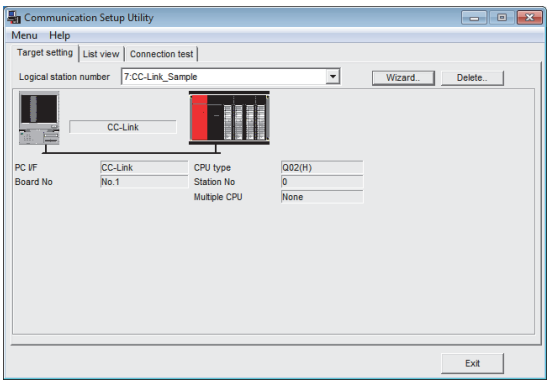
6. **Enter a comment and click the Finish button.**

Registration complete

(4) Checking the logical station number settings (conducting a communication test)

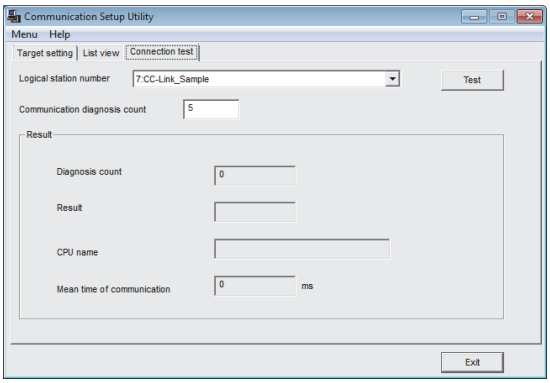
Check the CC-Link communication settings, using the logical station number set in (3) in this section.

Operating procedure

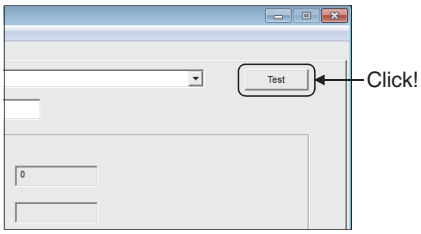


1. Click the <<Target setting>> tab and select the logical station number "7".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "7".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

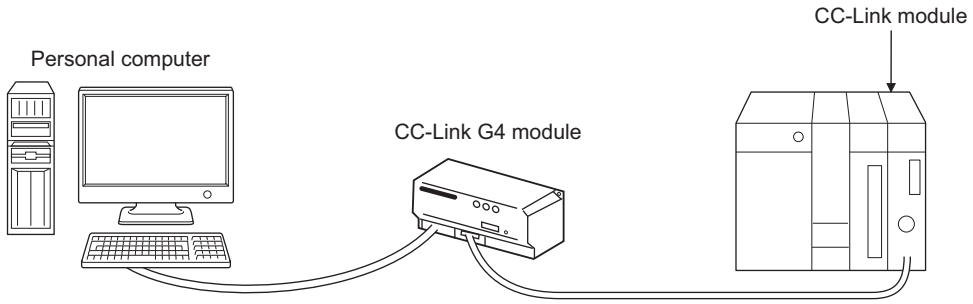
Collect device data, using this logical station number.

8.9 CC-Link G4 Communication

This section provides the CC-Link G4 communication procedure and its setting example using the utility setting type.

8.9.1 Switch settings of CC-Link G4 module

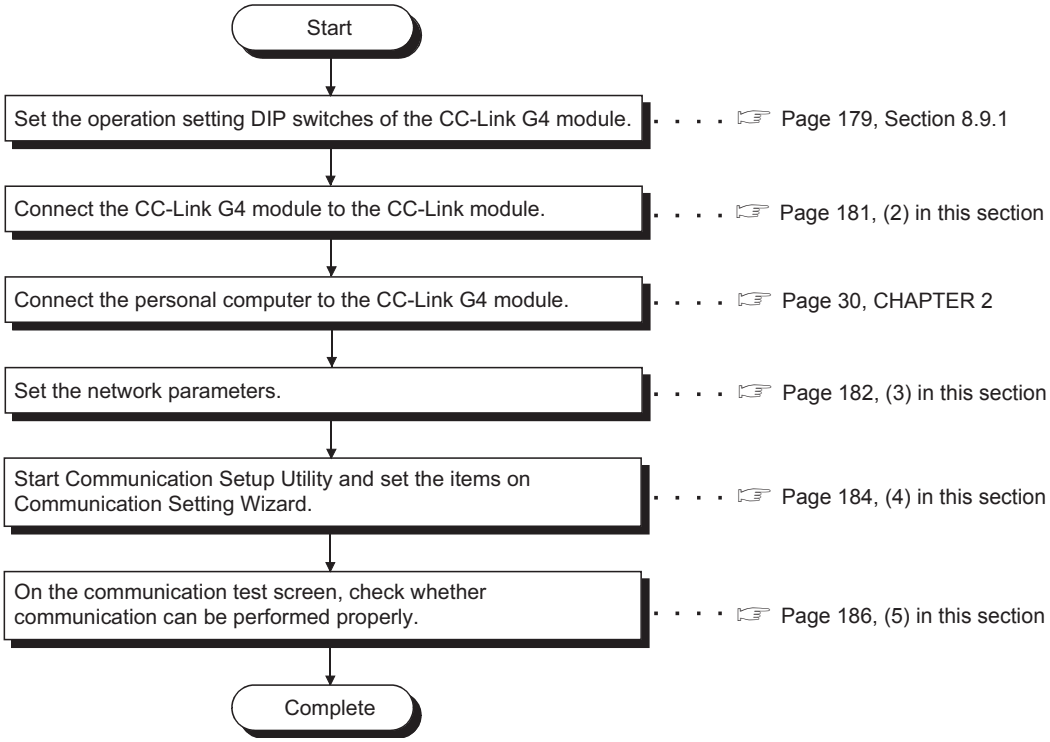
This section explains the switch settings of CC-Link G4 modules for the use of MX Component.
The following sketches are used to explain each module.
The settings of MX Component need to be the same as the module.



<table>
<tr><th colspan="2" rowspan="2">Switch (switch number)</th><th>Setting</th></tr>
<tr><th>Q mode</th></tr>
<tr><td colspan="2">Station number setting switch</td><td>1(local station)</td></tr>
<tr><td colspan="2">Data link transmission speed setting switch</td><td>4(10Mbps)
(match to the transmission speed of the CC-Link module)</td></tr>
<tr><td rowspan="4">Operation setting DIP switch</td><td>Operation mode setting (SW1, SW6)</td><td><table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW1</td><td>OFF</td></tr><tr><td>SW6</td><td>ON</td></tr></table></td></tr>
<tr><td>Inter-peripheral transmission speed setting (SW2, SW3)</td><td>Setting is not required (automatic setting)</td></tr>
<tr><td>Parity bit setting (SW4, SW5)</td><td>Set, Odd number
<table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW4</td><td>OFF</td></tr><tr><td>SW5</td><td>OFF</td></tr></table></td></tr>
<tr><td>- (SW7)</td><td>OFF</td></tr>
<tr><td>Test mode setting (SW8)</td><td>OFF (online mode)</td></tr>
</table>

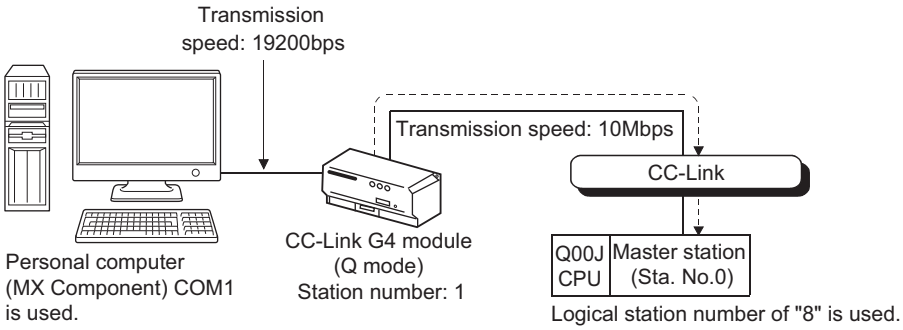
8.9.2 Access procedure

The following is the procedure for accessing the programmable controller CPU using CC-Link G4 communication.



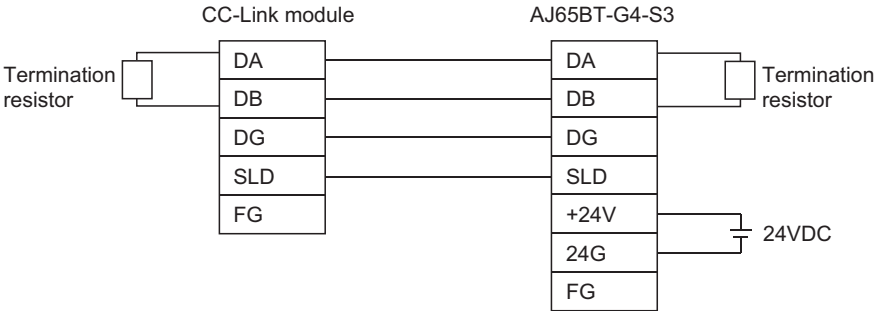
(1) System example

The following system example is used in this section.



(2) Wiring the CC-Link G4 module

The diagram of wiring the CC-Link G4 module to the CC-Link module is shown below.



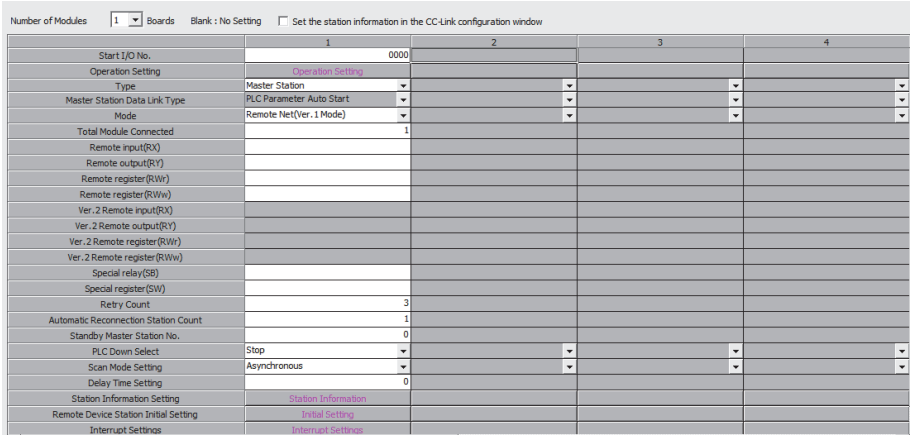
(3) Setting the network parameters

Parameter setting may either be set on the Network Parameter - CC-Link Module Configuration screen of GX Works2 or from a sequence program.

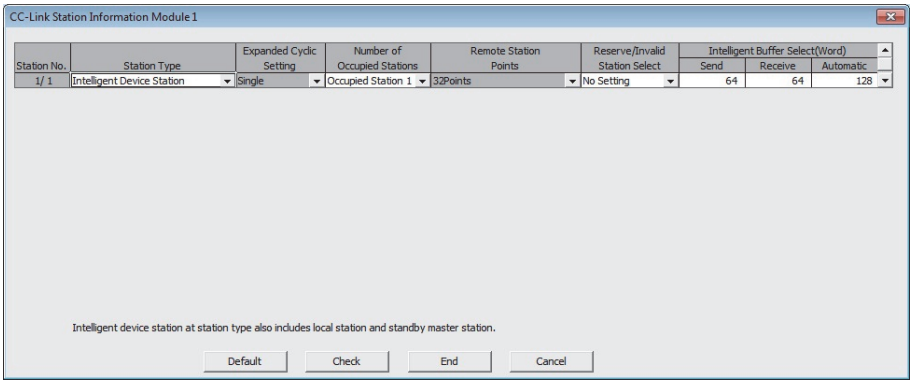
(a) Setting parameter setting on CC-Link setting screen

Set the start I/O number, type, total number of modules connected, and station information.
Set other setting items as required.

<CC-Link parameter setting screen>



<Station information setting screen>



After setting the CC-Link parameters, write them to the programmable controller CPU.

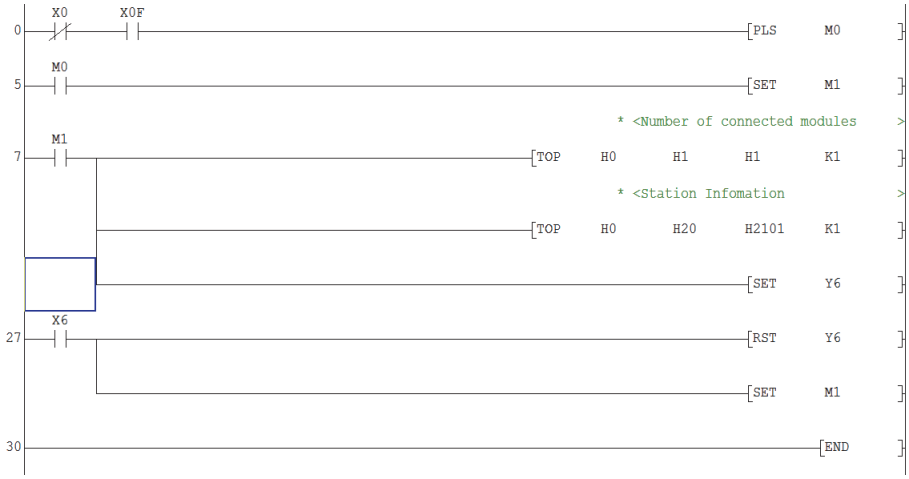
(b) Setting parameter setting in sequence program

The parameter setting items for data link and the sequence program example are described below.

<Parameter setting items>

Address	Item	Description	Setting value
1H	Number of connected modules	Set the number of modules on the remote/local stations connected.	1H
20H	Station information	AJ65BT-G4-S3	2101H

<Sequence program>



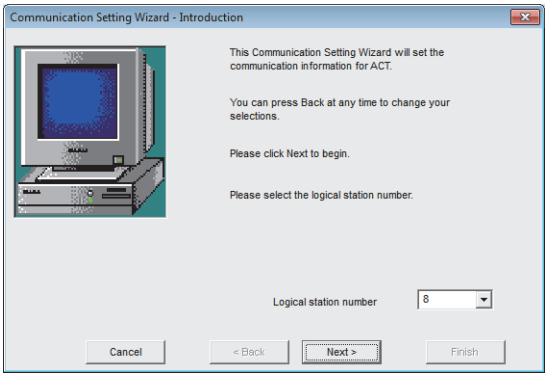
Point

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder] - [Act] - [Samples] - [GppW] - [CCG4A]

(4) Setting the logical station number (setting on Communication Setting Wizard)

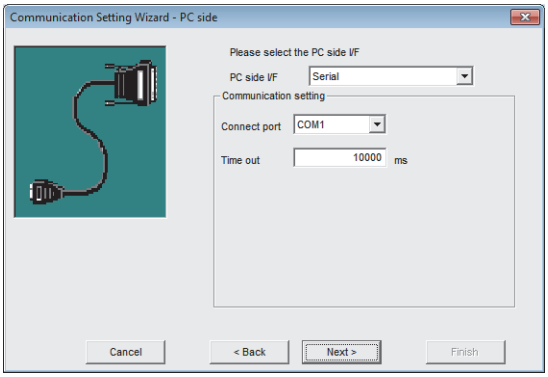
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



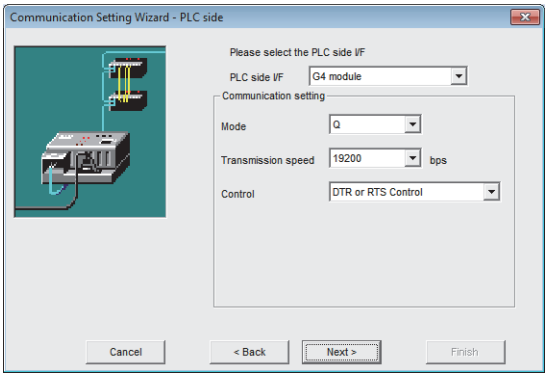
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "8" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Serial**
Connect port	**: COM1**
Time out	**: 10000**

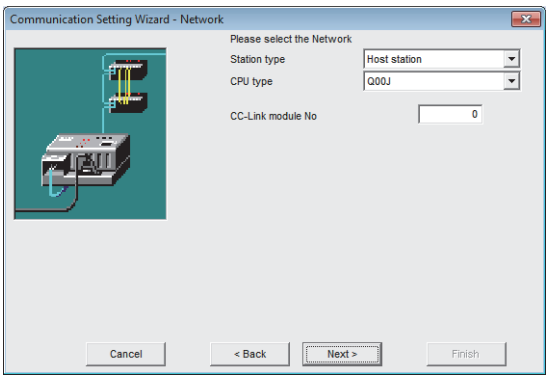


4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: G4 module**
Mode	**: Q**
Transmission speed	**: 19200**
Control	**: DTR or RTS Control**

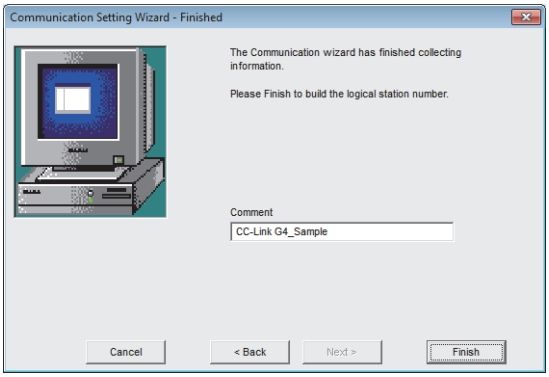
Continued on next page

Continued from previous page



5. **Set the following items and click the [Next >] button.**

Station type : Host station
CPU type : Q00J
CC-Link module No : 0



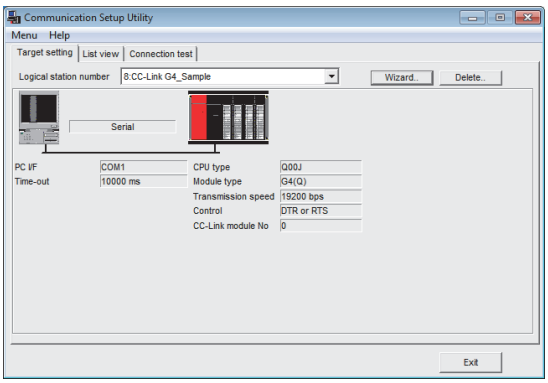
6. **Enter a comment and click the [Finish] button.**

Registration complete

(5) Checking the logical station number settings (conducting a communication test)

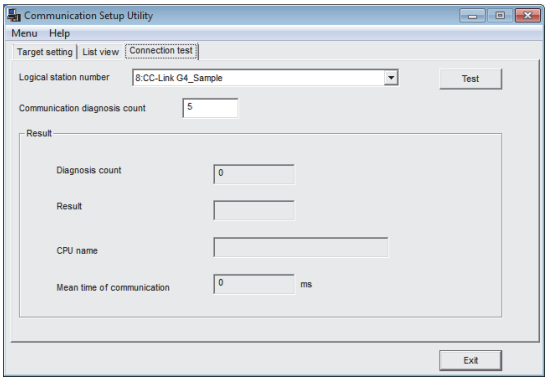
Check the CC-Link G4 communication settings, using the logical station number set in (4) in this section.

Operating procedure

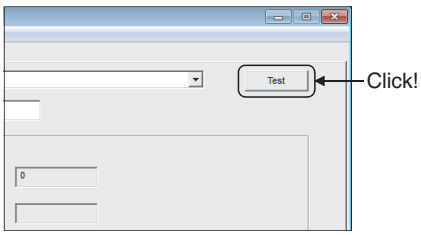


1. **Click the <<Target setting>> tab and select the logical station number "8".**

Check the logical station number settings.



2. **Click the <<Connection test>> tab and select the logical station number "8".**



3. **Click the Test button to check that communication is being performed normally.**

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

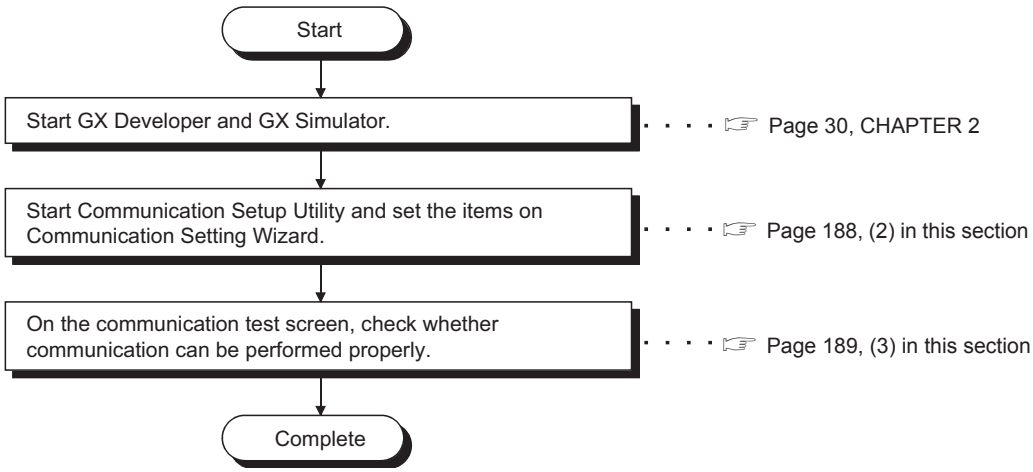
Collect device data, using this logical station number.

8.10 GX Simulator Communication

This section provides the GX Simulator communication procedure and its setting example using the utility setting type.

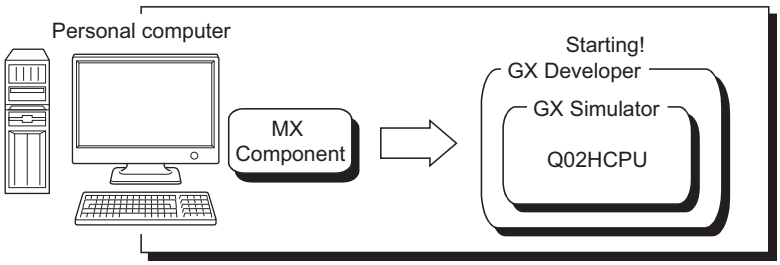
8.10.1 Access procedure

The following is the procedure for accessing GX Simulator using GX Simulator communication.



(1) System example

The following system example is used in this section.

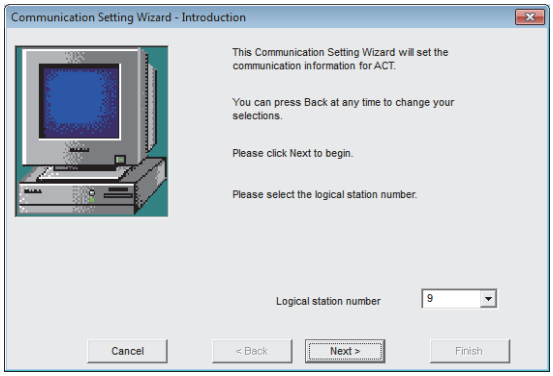


Logical station number of "9" is used.

(2) Setting the logical station number (setting on Communication Setting Wizard)

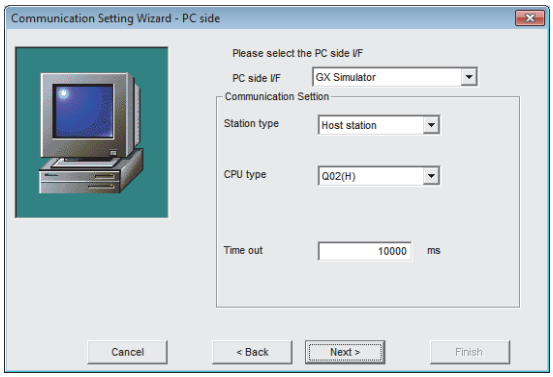
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



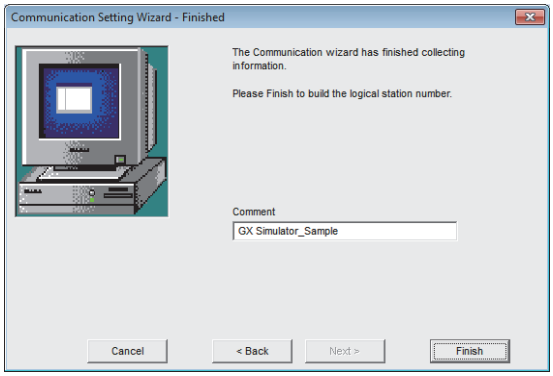
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "9" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: GX Simulator**
Station type	**: Host station**
CPU type	**: Q02(H)**
Time out	**: 10000**



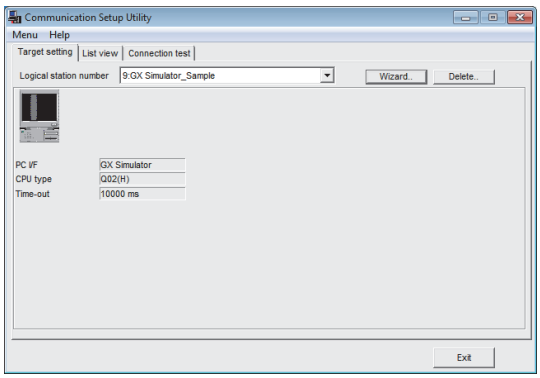
4. **Enter a comment and click the [Finish] button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

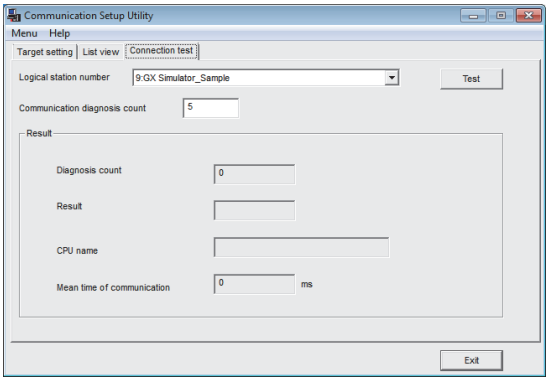
Check the GX Simulator communication settings, using the logical station number set in (2) in this section.

Operating procedure

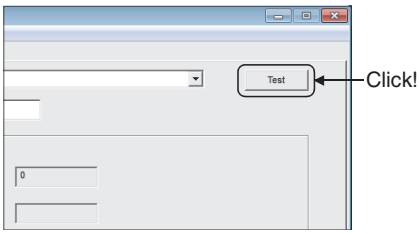


1. Click the <<Target setting>> tab and select the logical station number "9".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "9".



Communication test complete

3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

Collect device data, using this logical station number.

8.11 GX Simulator2 Communication

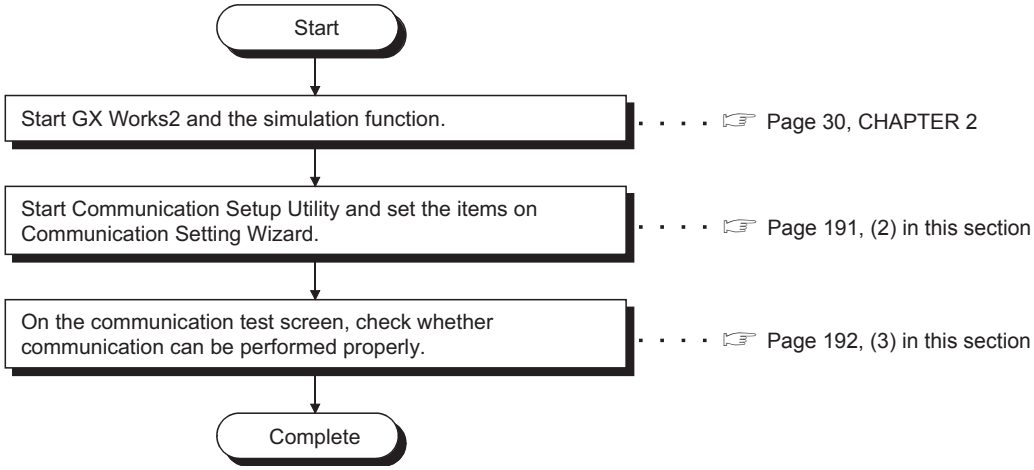
This section provides GX Simulator2 communication procedure and its setting example using the utility setting type.

Point

The simulation function of GX Works2 cannot be terminated even if stopped by GX Works2 while connecting to MX Component. (The simulation function of GX Works2 cannot be terminated even if GX Works2 is terminated.)
The simulation function of GX Works2 can be terminated after disconnected to MX Component.

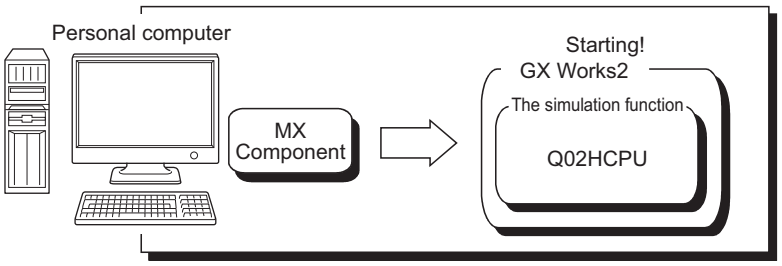
8.11.1 Access procedure

The following is the procedure for accessing the simulation function of GX Works2 using GX Simulator2 communication.



(1) System example

The following system example is used in this section.

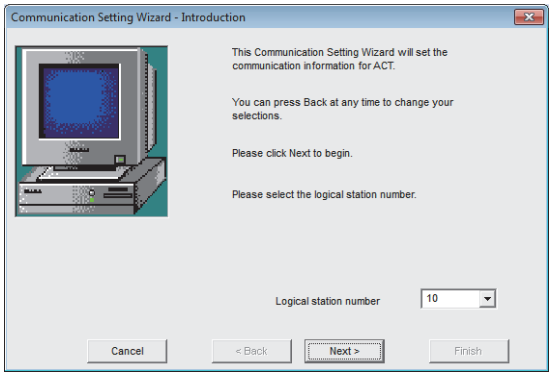


Logical station number of "10" is used.

(2) Setting the logical station number (setting on Communication Setting Wizard)

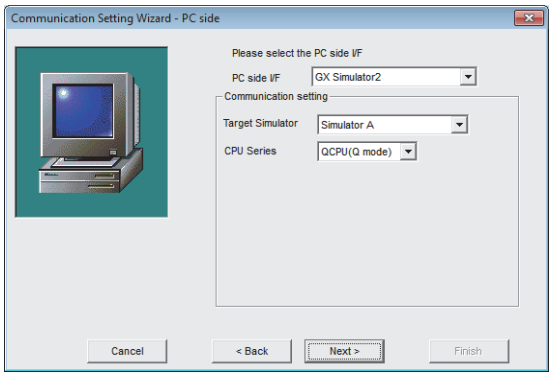
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



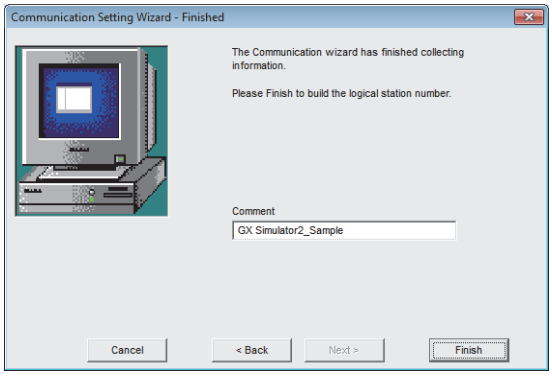
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "10" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: GX Simulator2**
Target Simulator	**: Simulator A**
CPU series	**: QCPU (Q mode)**



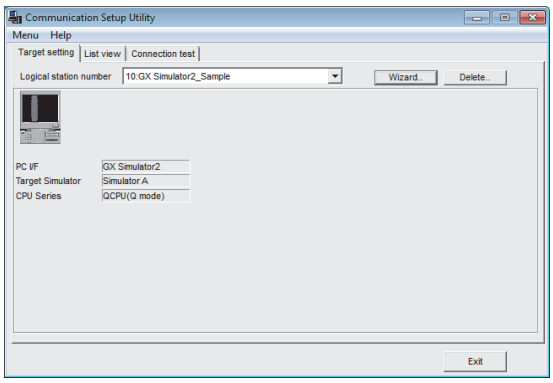
4. **Enter a comment and click the [Finish] button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

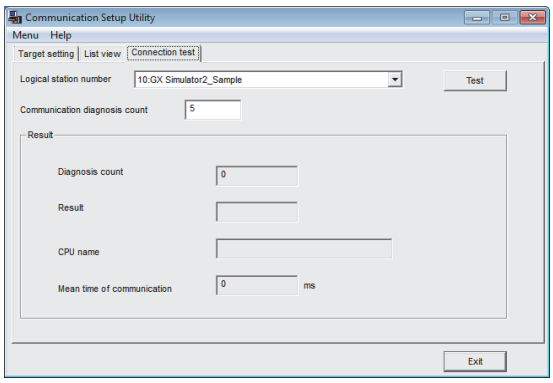
Check the GX Simulator2 communication settings, using the logical station number set in (2) in this section.

Operating procedure

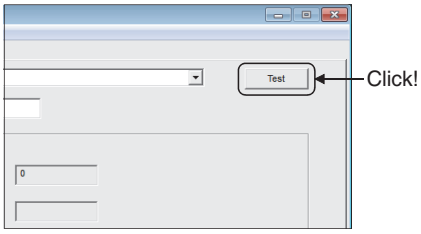


1. Click the <<Target setting>> tab and select the logical station number "10".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "10".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

Collect device data, using this logical station number.

8.12 MT Simulator2 Communication

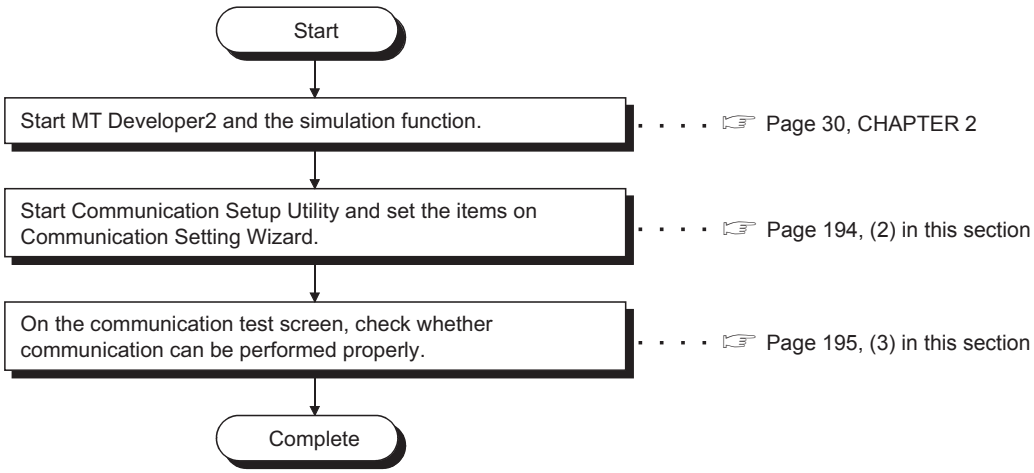
This section provides MT Simulator2 communication procedure and its setting example using the utility setting type.

Point

The communication will be disconnected when the simulation function is stopped by MT Developer2 while communicating to MX Component.

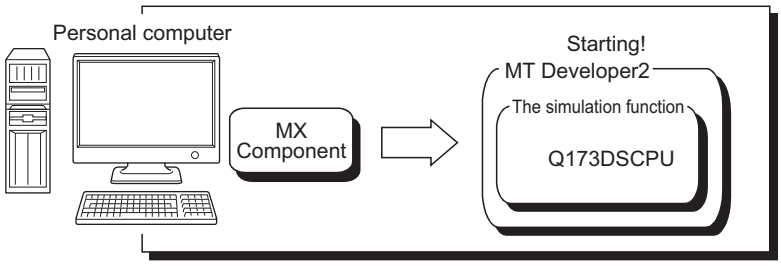
8.12.1 Access procedure

The following is the procedure for accessing the simulation function of MT Developer2 using MT Simulator2 communication.



(1) System example

The following system example is used in this section.

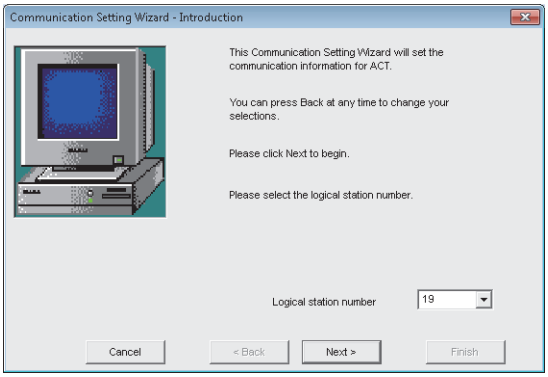


Logical station number of "19" is used.

(2) Setting the logical station number (setting on Communication Setting Wizard)

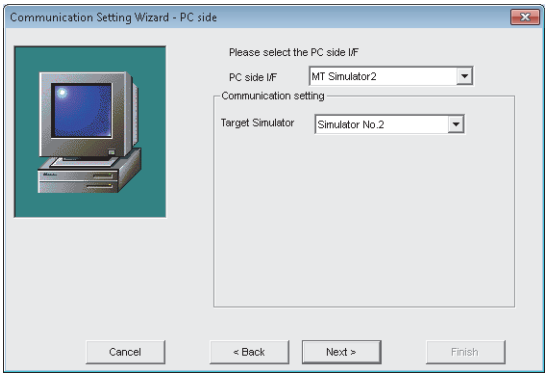
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



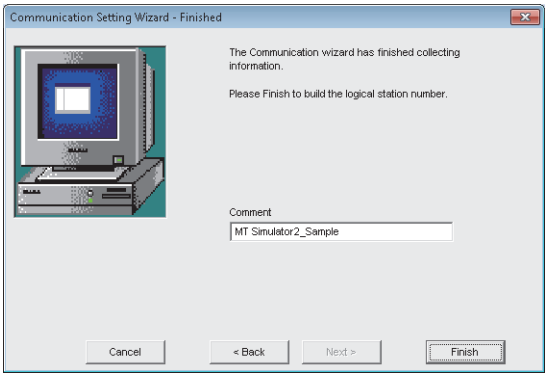
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "19" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F: MT Simulator2
Target Simulator: Simulator No.2



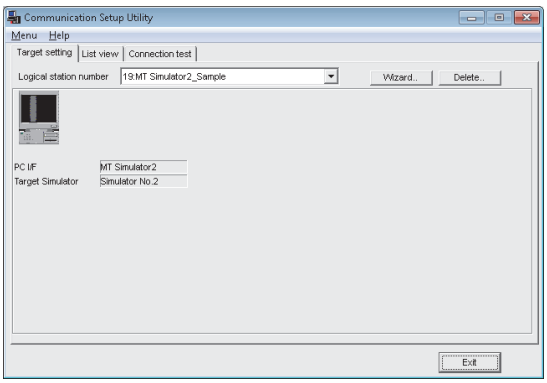
4. **Enter a comment and click the [Finish] button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

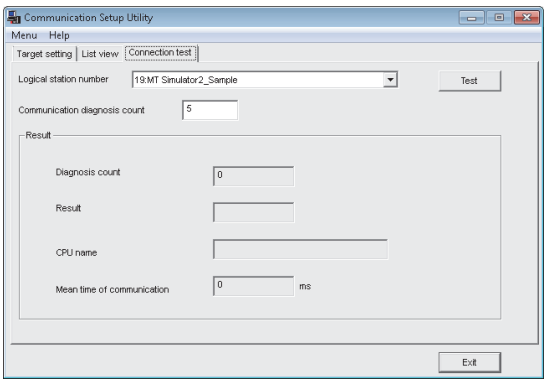
Check the MT Simulator2 communication settings, using the logical station number set in (2) in this section.

Operating procedure

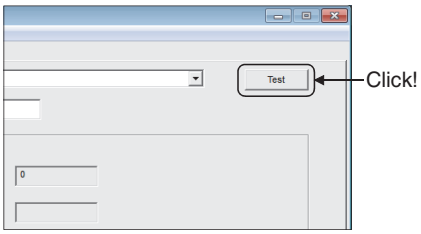


1. Click the <<Target setting>> tab and select the logical station number "19".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "19".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

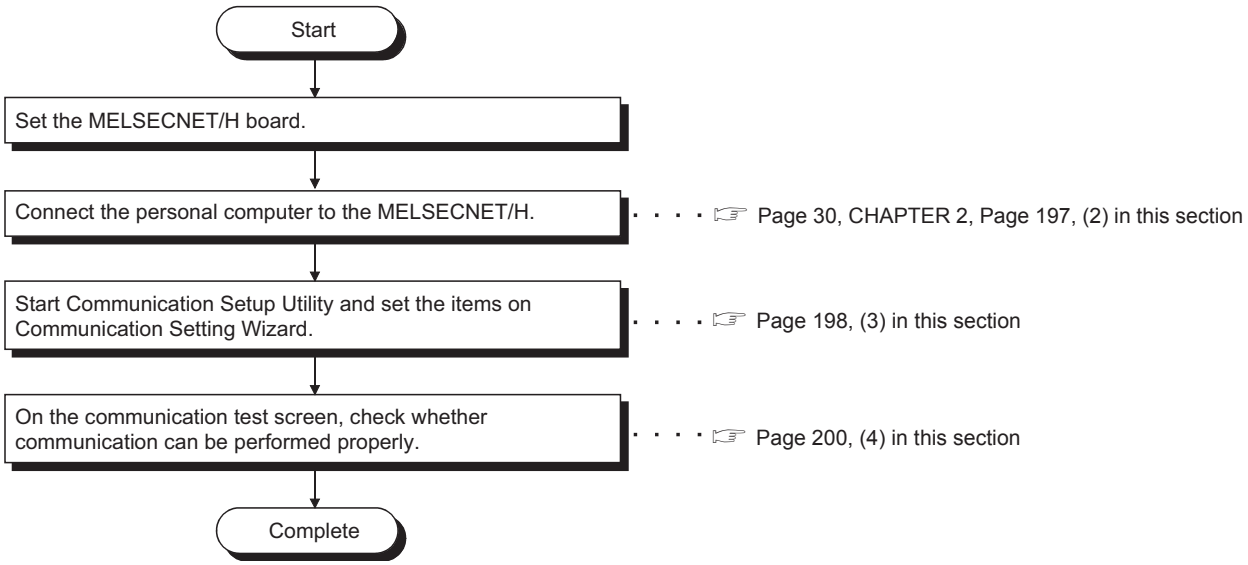
Collect device data, using this logical station number.

8.13 MELSECNET/H Communication

This section provides the MELSECNET/H communication procedure and its setting example using the utility setting type.

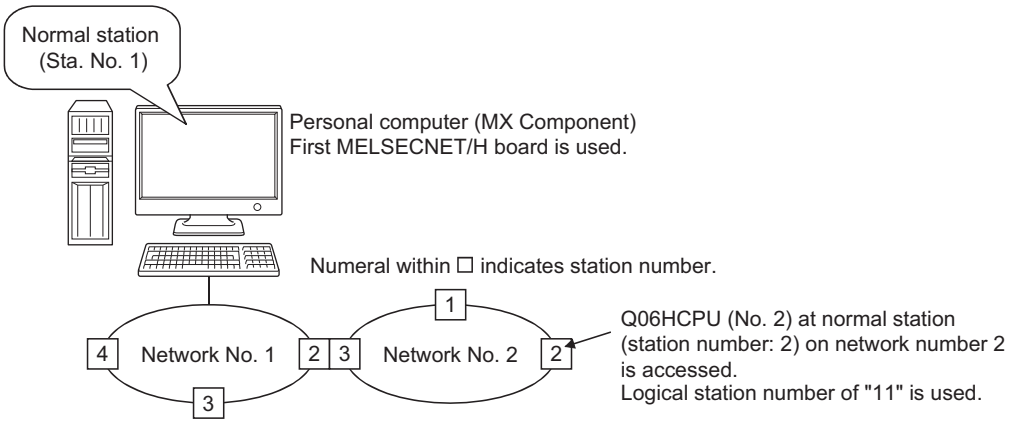
8.13.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using MELSECNET/H communication.



(1) System example

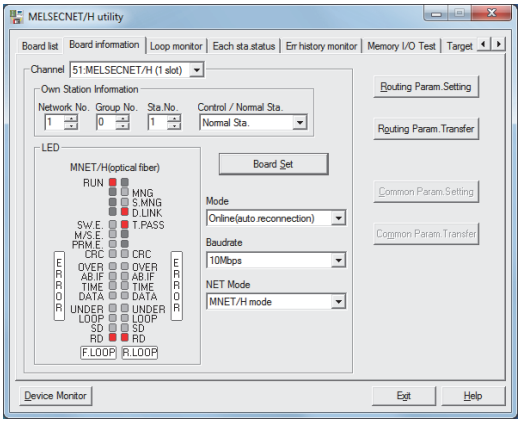
The following system example is used in this section.

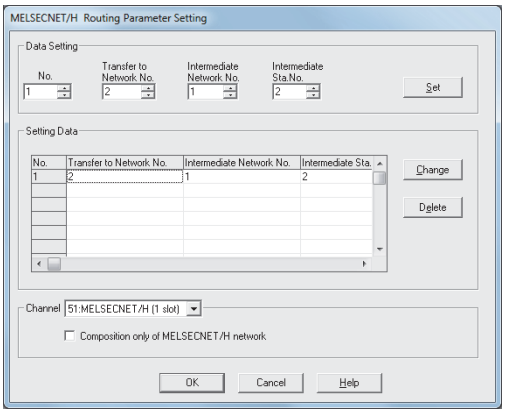


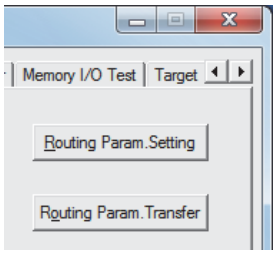
(2) Checking the MELSECNET/H board

Check whether the personal computer is connected properly to MELSECNET/H.

Operating procedure







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1. [Start] ⇨ [All Programs] ⇨ [MELSEC] ⇨ [MELSECNET/H Utility]

2. Click the <<Board information>> tab and set the following items, and click the Board Set button.

Channel	: 51: MELSECNET/H (1 slot)
Mode	: Online (auto.reconnection)
Baud rate	: Any (10Mbps is set for this example.)
NET mode	: MNET/H mode

Then, click the Routing Param.Setting button.

3. Set the following items and click the Set button.

Transfer to Network No.	: 2
Intermediate Network No.	: 1
Intermediate Sta.No.	: 2

Then, click the OK button to close the dialog box.

4. Click the Routing Param.Transfer button to transfer the routing parameters to the MELSECNET/H board.

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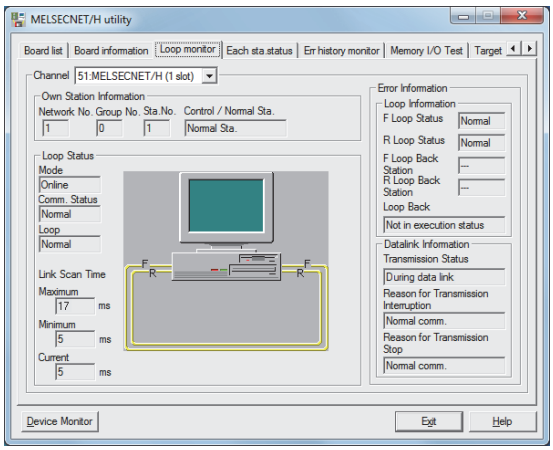


Check complete

5. **Click the <<Loop monitor>> tab.**

Check that the loop is normal.

6. **Click the [Exit] button to exit from the utility.**

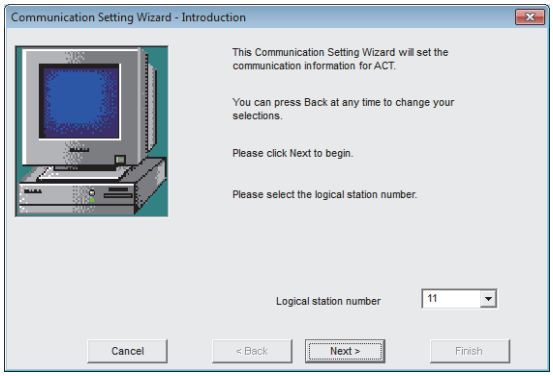
(3) Setting the logical station number (setting on Communication Setting Wizard)

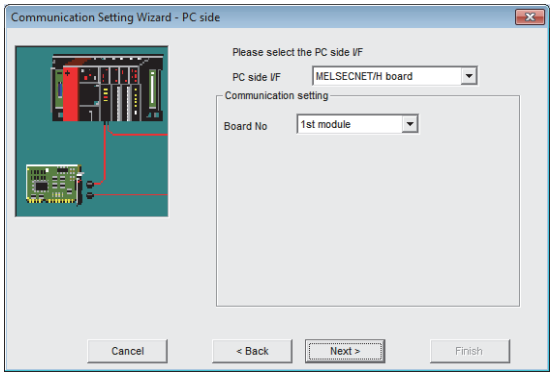
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure

1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "11" in Logical station number and click the [Next >] button.**





3. **Set the following items and click the [Next >] button.**

PC side I/F	**: MELSECNET/H board**
Board No	**: 1st module**

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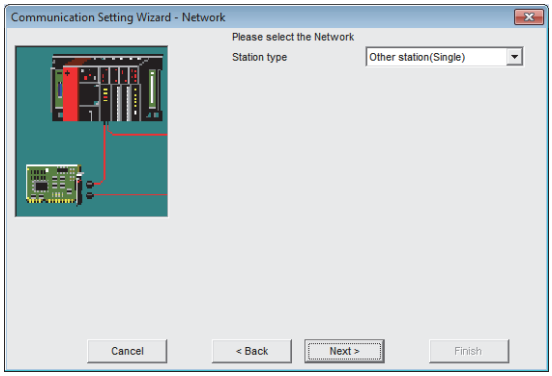
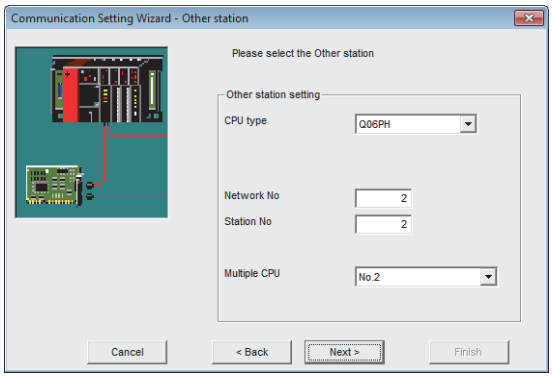


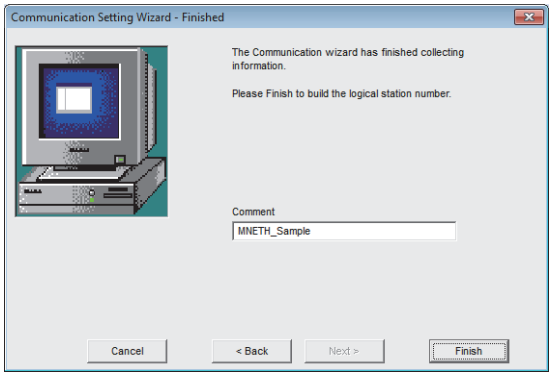
4. **Set the following items and click the Next > button.**

Station type : Other station (Single)



5. **Set the following items and click the Next > button.**

CPU type : Q06PH
Network No : 2
Station No : 2
Multiple CPU : No.2



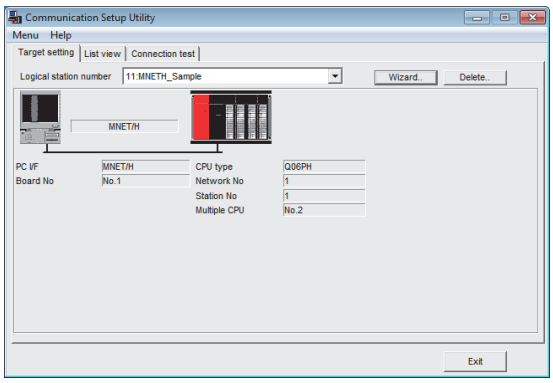
6. **Enter a comment and click the Finish button.**

Registration complete

(4) Checking the logical station number settings (conducting a communication test)

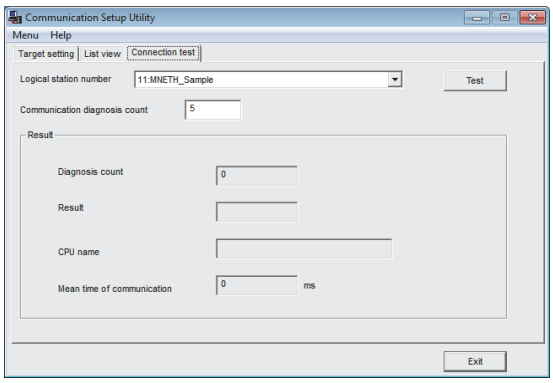
Check the MELSECNET/H communication settings, using the logical station number set in (3) in this section.

Operating procedure

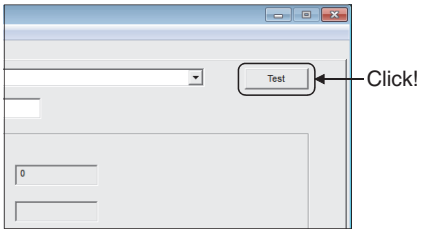


1. Click the <<Target setting>> tab and select the logical station number "11".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "11".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

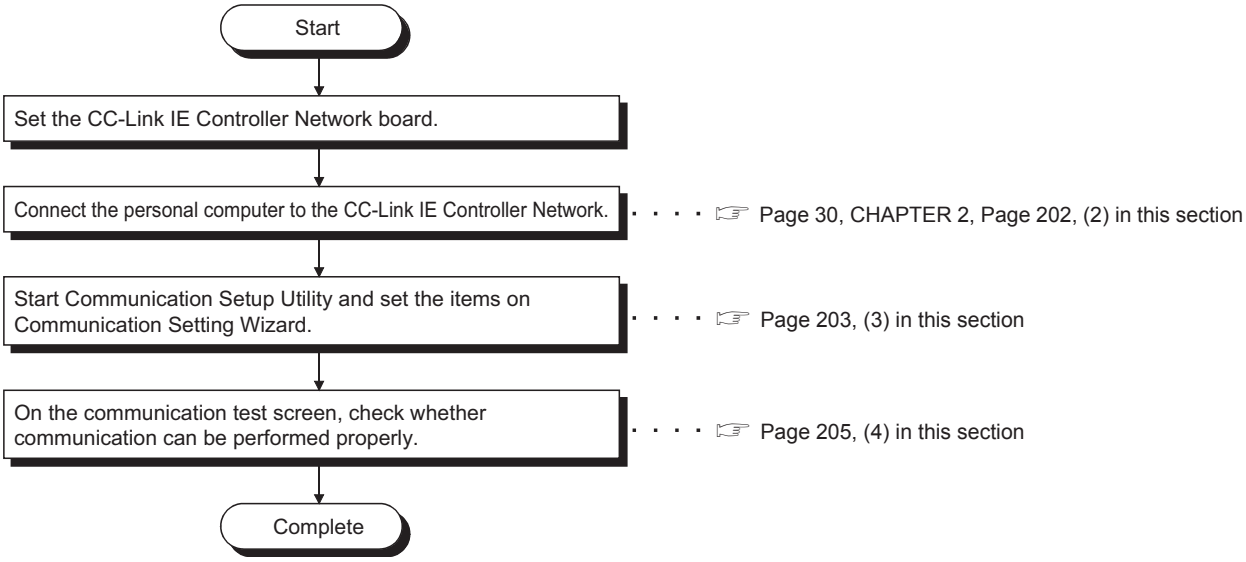
Collect device data, using this logical station number.

8.14 CC-Link IE Controller Network Communication

This section provides the CC-Link IE Controller Network communication procedure and its setting example using the utility setting type.

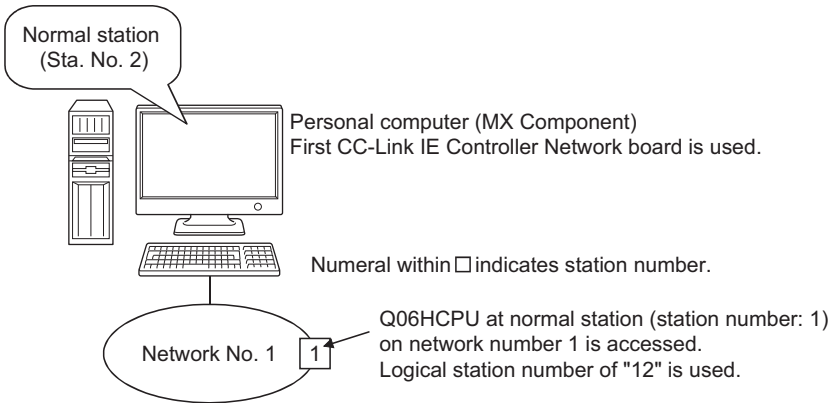
8.14.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using CC-Link IE Controller Network communication.



(1) System example

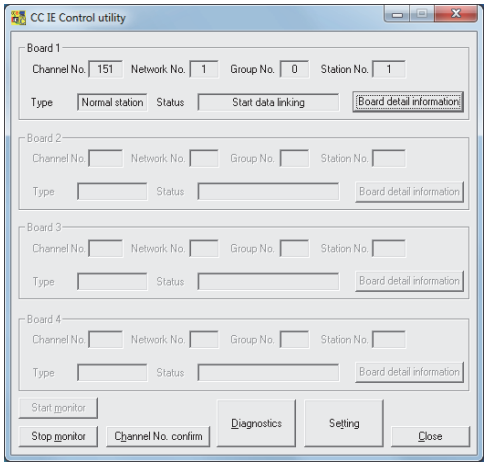
The following system example is used in this section.



(2) Checking the CC-Link IE Controller Network board

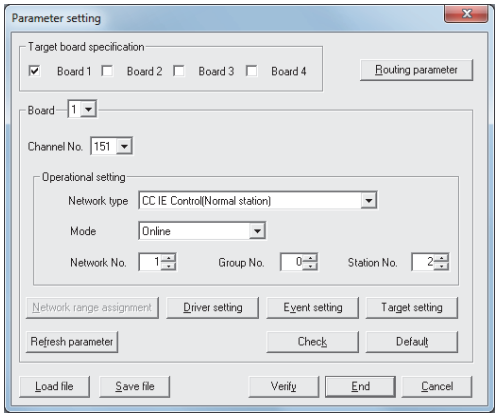
Check whether the personal computer is connected properly to CC-Link IE Controller Network.

Operating procedure



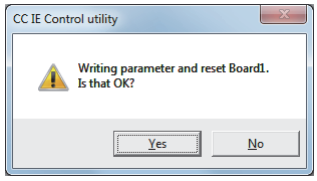
1. [Start] ⇨ [All Programs] ⇨ [MELSEC] ⇨ [CC IE Control Utility]

2. Click the Setting button.



3. Set the following items and click the End button.

Channel No.	: 151
Network type	: CC IE Control (Normal station)
Mode	: Online
Network No.	: 1
Group No.	: 0
Station No.	: 2



4. Click the Yes button and write the parameter to the CC-Link IE Controller Network board.

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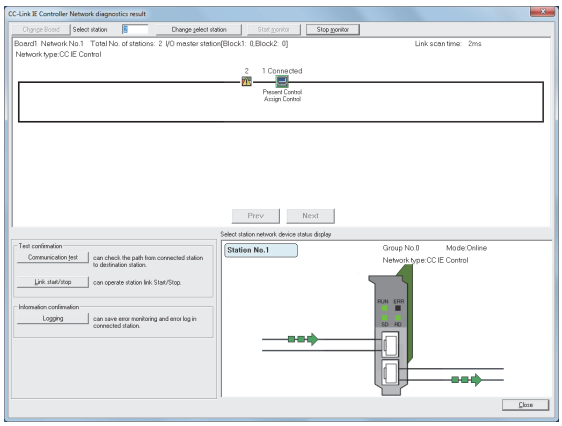


Check complete

5. **Click the Diagnostics button on the CC IE Control utility screen.**

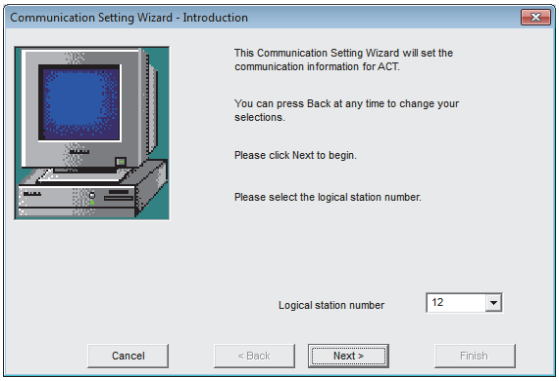
Check that the loop is normal.

6. **Click the Close button to exit from the utility.**

(3) Setting the logical station number (setting on Communication Setting Wizard)

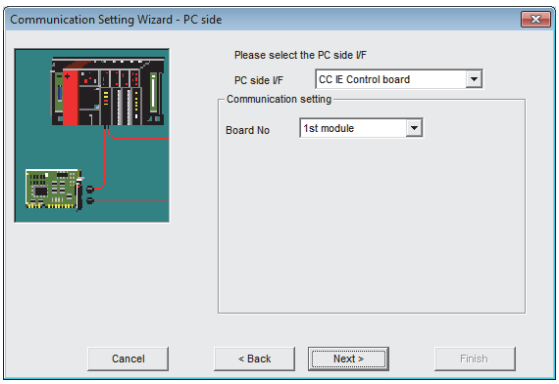
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



1. **Start Communication Setup Utility and click the Wizard button.**

2. **Enter "12" in Logical station number and click the Next > button.**



3. **Set the following items and click the Next > button.**

PC side I/F	**: CC IE Control board**
Board No	**: 1st module**

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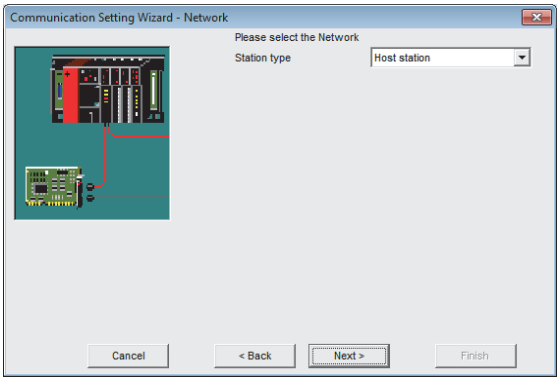
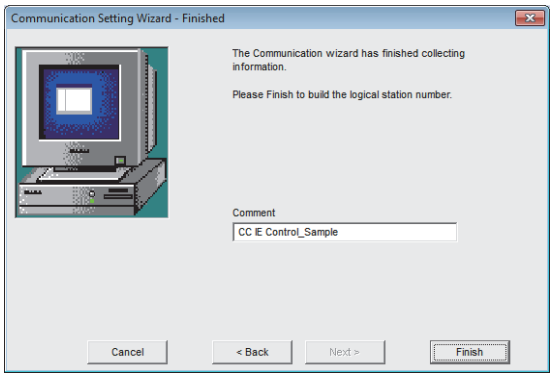


4. **Set the following items and click the [Next >] button.**

Station type : Host station



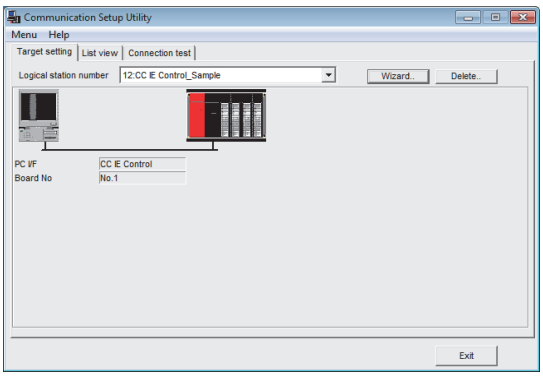
5. **Enter a comment and click the [Finish] button.**

Registration complete

(4) Checking the logical station number settings (conducting a communication test)

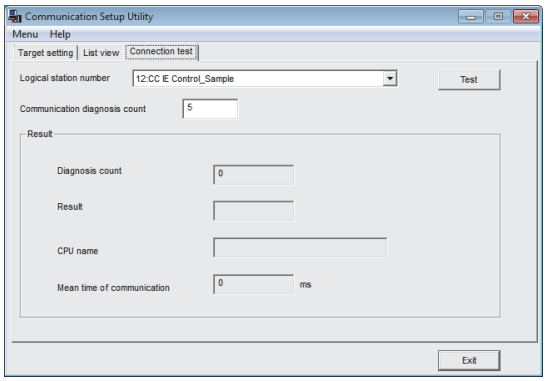
Check the CC-Link IE Controller Network communication settings, using the logical station number set in (3) in this section.

Operating procedure

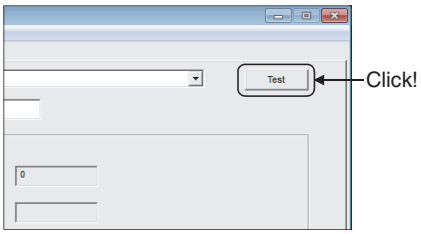


1. Click the <<Target setting>> tab and select the logical station number "12".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "12".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

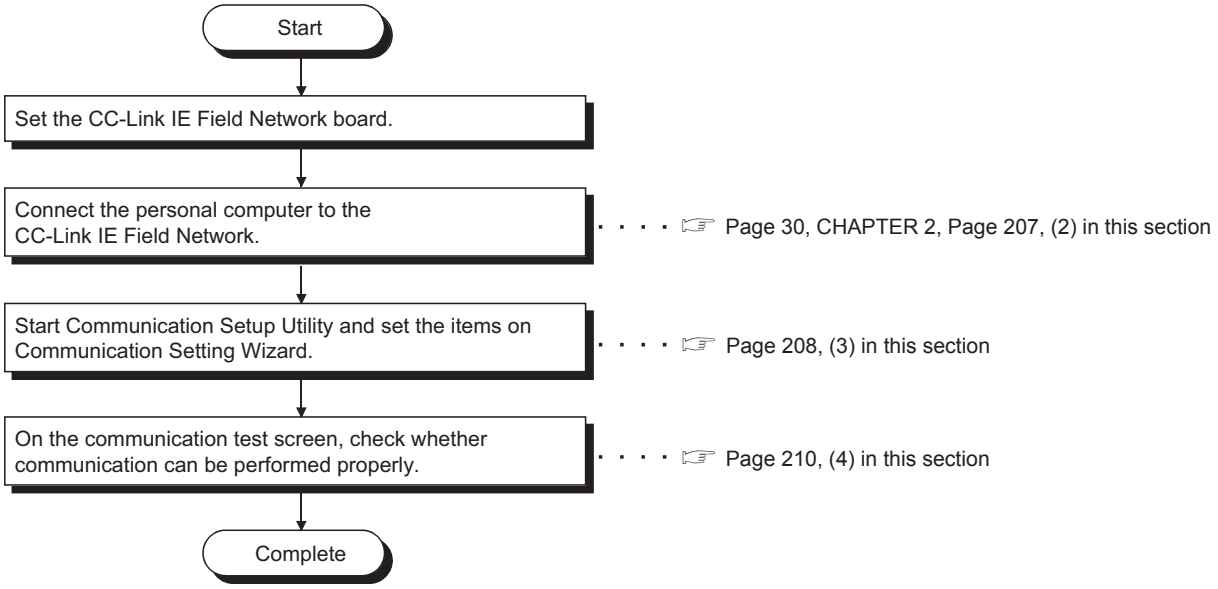
Collect device data, using this logical station number.

8.15 CC-Link IE Field Network Communication

This section provides the CC-Link IE Field Network communication procedure and its setting example using the utility setting type.

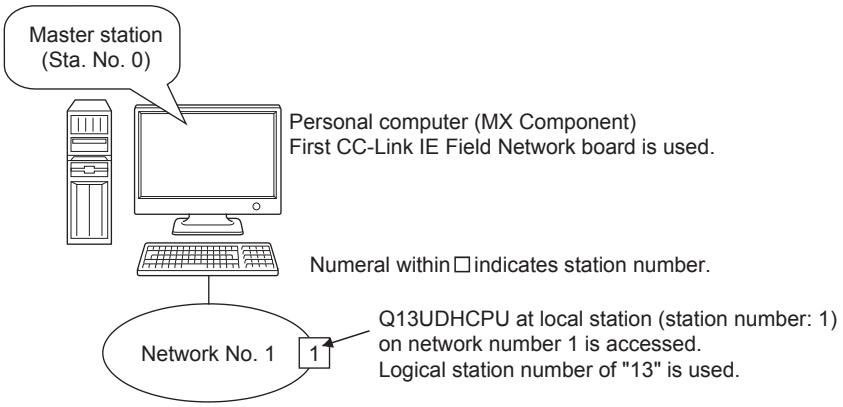
8.15.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using CC-Link IE Field Network communication.



(1) System example

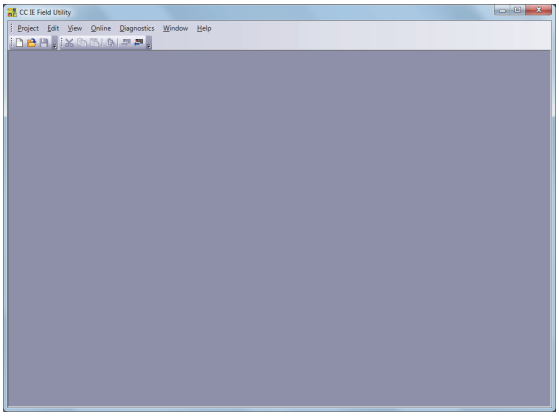
The following system example is used in this section.



(2) Checking the CC-Link IE Field Network board

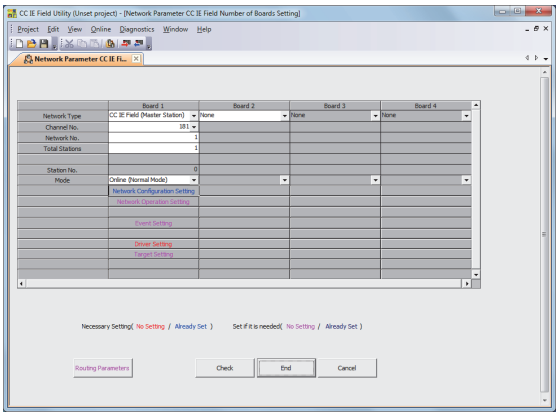
Check whether the personal computer is connected properly to CC-Link IE Field Network.

Operating procedure



1. **[Start] ⇨ [All Programs] ⇨ [MELSEC] ⇨ [CC IE Field Board] ⇨ [CC IE Field Utility]**

2. **[Project] ⇨ [New]**



3. **Set the following items and click the End button.**

Network Type	**: CC IE Field (Master Station)**
Channel No.	**: 181**
Network No.	**: 1**
Total Stations	**: 1**
Mode	**: Online (Normal Mode)**

4. **[Online] ⇨ [Write to Board]**

Write the parameter settings of the project to the CC-Link IE Field Network board.

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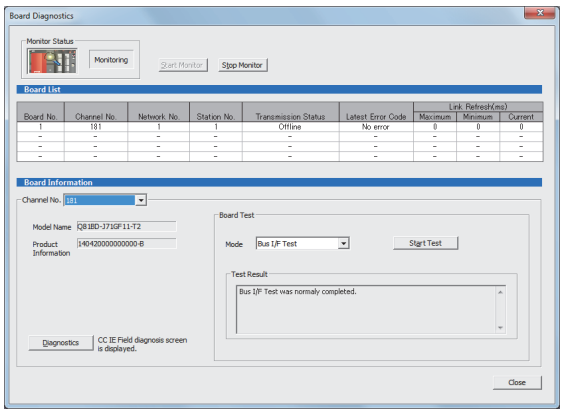


Check complete

5. **[Diagnostics] ⇨ [Board Diagnostics]**

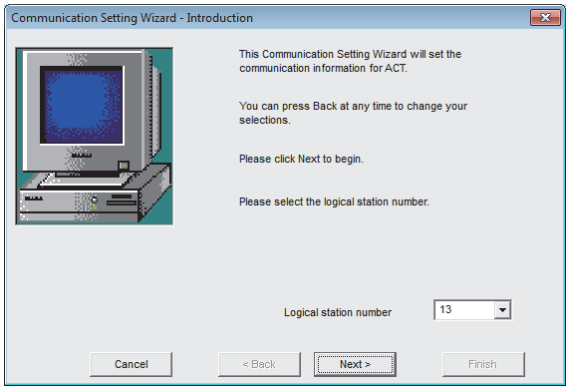
Check that the loop is normal.

6. **Click the Close button to exit from the utility.**

(3) Setting the logical station number (setting on Communication Setting Wizard)

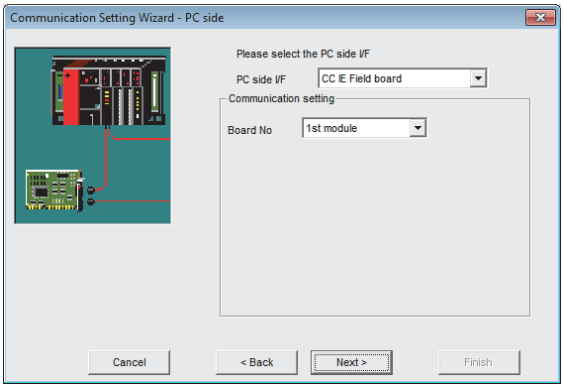
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



1. **Start Communication Setup Utility and click the Wizard button.**

2. **Enter "13" in Logical station number and click the Next > button.**



3. **Set the following items and click the Next > button.**

PC side I/F	**: CC IE Field board**
Board No	**: 1st module**

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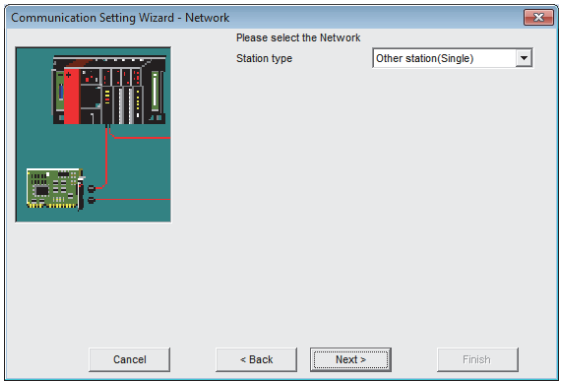
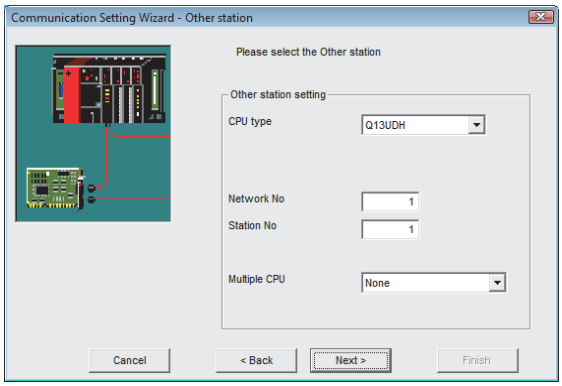


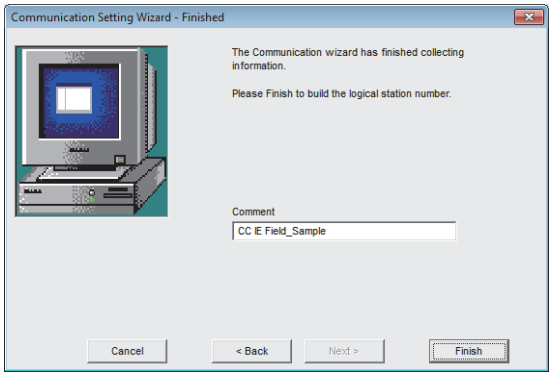
4. **Set the following items and click the Next > button.**

Station type : Other station (Single)



5. **Set the following items and click the Next > button.**

CPU type : Q13UDH
Network No : 1
Station No : 1
Multiple CPU : None



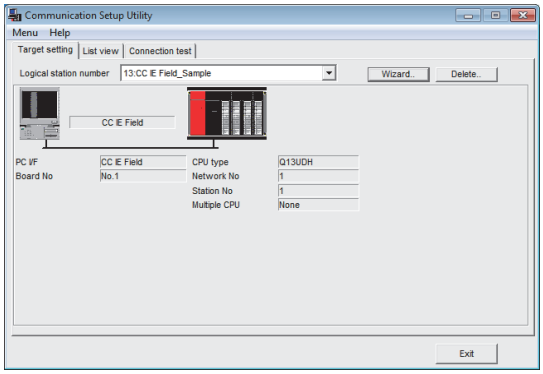
6. **Enter a comment and click the Finish button.**

Registration complete

(4) Checking the logical station number settings (conducting a communication test)

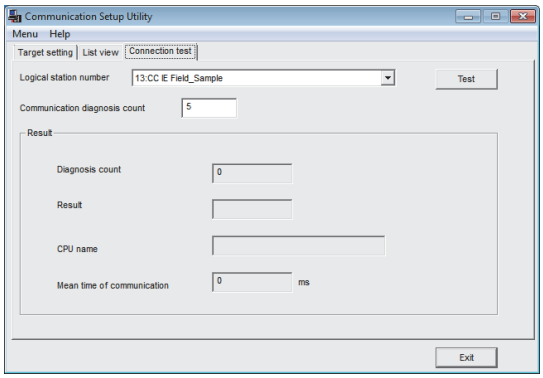
Check the CC-Link IE Field Network communication settings, using the logical station number set in (3) in this section.

Operating procedure

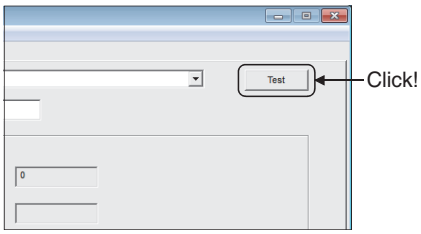


1. Click the <<Target setting>> tab and select the logical station number "13".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "13".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

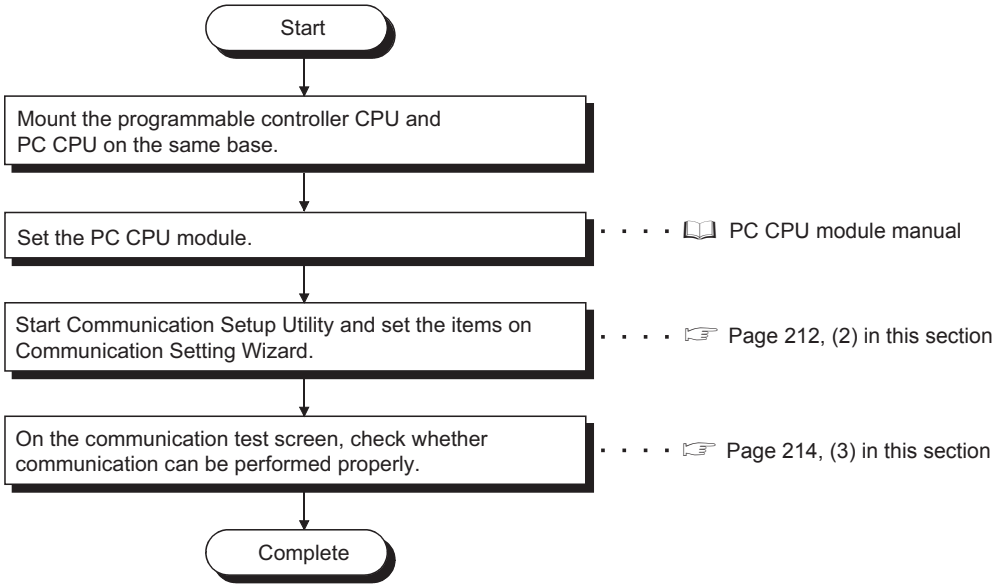
Collect device data, using this logical station number.

8.16 Q Series Bus Communication

This section provides the Q series bus communication procedure and its setting example using the utility setting type.

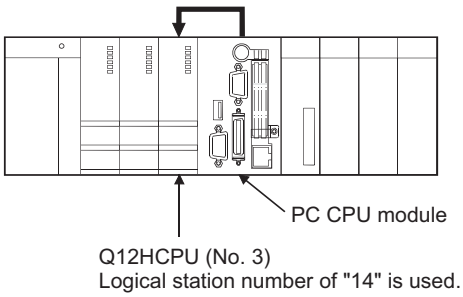
8.16.1 Access procedure

The following is the procedure for accessing the programmable controller CPU using Q series bus communication.



(1) System example

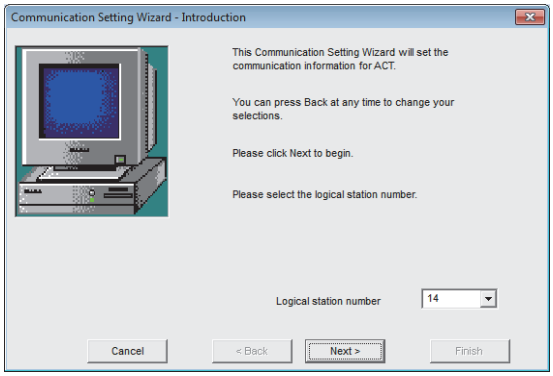
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

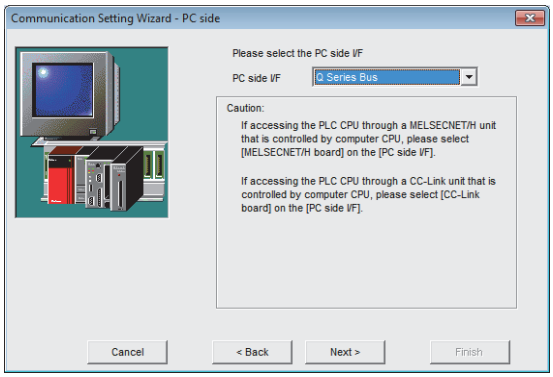
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



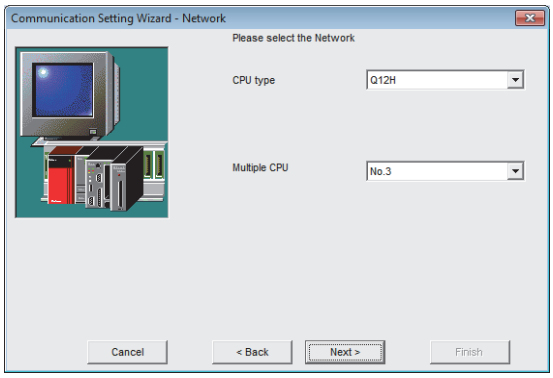
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "14" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F : Q Series Bus



4. **Set the following items and click the [Next >] button.**

CPU type : Q12H
Multiple CPU : No.3

Continued on next page

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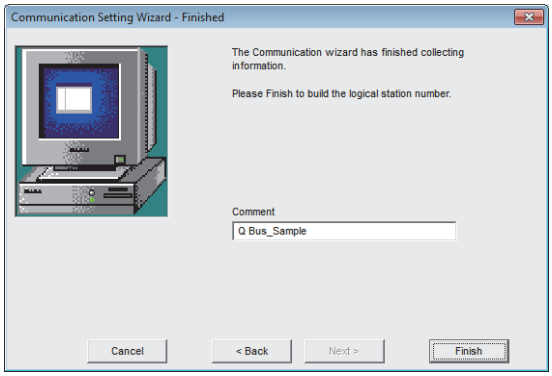


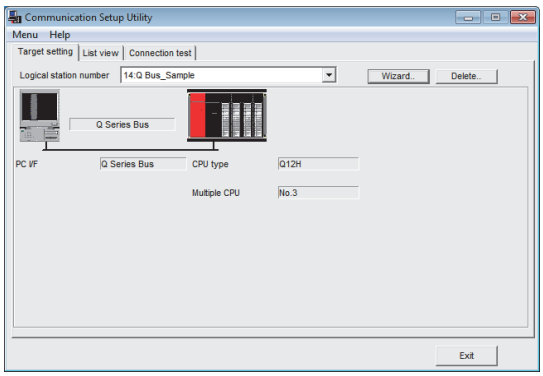
Registration complete

5. **Enter a comment and click the [Finish] button.**

(3) Checking the logical station number settings (conducting a communication test)

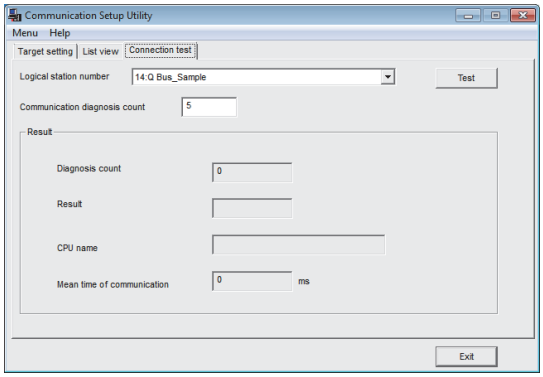
Check the Q series bus communication settings, using the logical station number set in (2) in this section.

Operating procedure

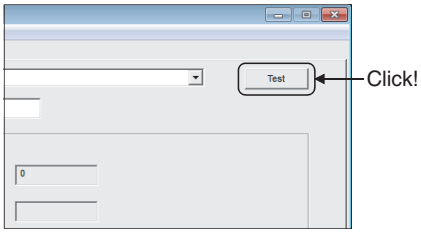


1. Click the <<Target setting>> tab and select the logical station number "14".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "14".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

Collect device data, using this logical station number.

8.17 Modem Communication

This section provides the modem communication procedures and its setting examples using the utility setting type.

Point

When performing modem communication for the first time on MX Component, check whether normal modem communication can be performed using GX Works2, and then start modem communication using MX Component.

8.17.1 Switch settings of Q series-compatible C24, L series-compatible C24

This section explains the switch settings of the modules for the use of MX Component.
The settings of MX Component need to be the same as the module.

Item	Setting		Setting value
	b15 to b8	b7 to b0	
Switch 1	CH1 communication speed *1	CH1 transmission setting *2	*1, *2
Switch 2	-	CH1 communications protocol	0005H
Switch 3	CH2 communication speed	CH2 transmission setting	As set by user
Switch 4	-	CH2 communications protocol	As set by user
Switch 5	Module station number		0000H (As set by user)

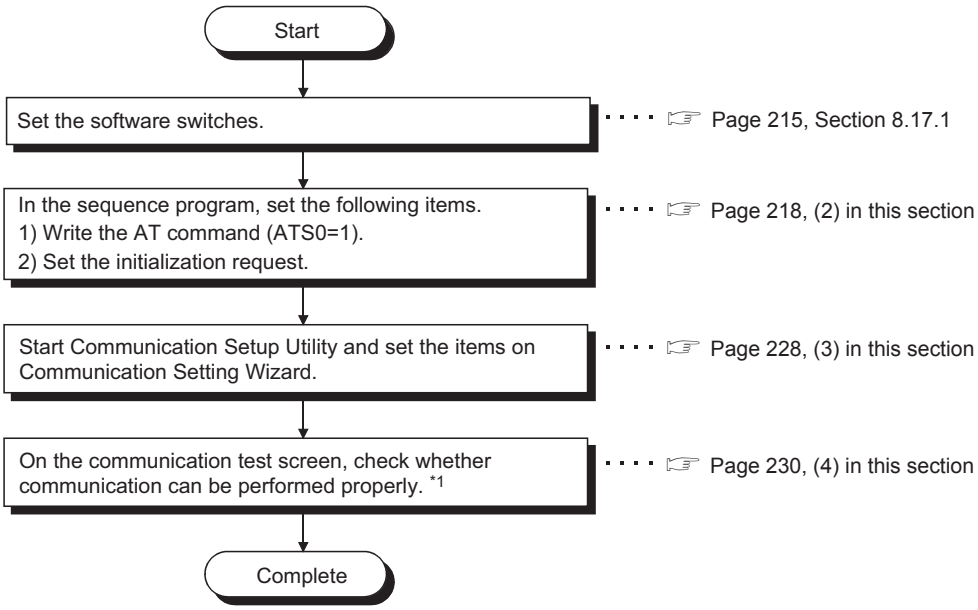
*1 : Set the settings to meet the modem specifications.
*2 : The transmission setting of CH1is indicated below.

Transmission setting	Setting
Operation setting	Independent
Data bit	8
Parity bit	No
Odd/even number parity	Odd number
Stop bit	1
Sum check code	Yes
Online change	Enable
Setting change	Enable/disable

8.17.2 Access procedure

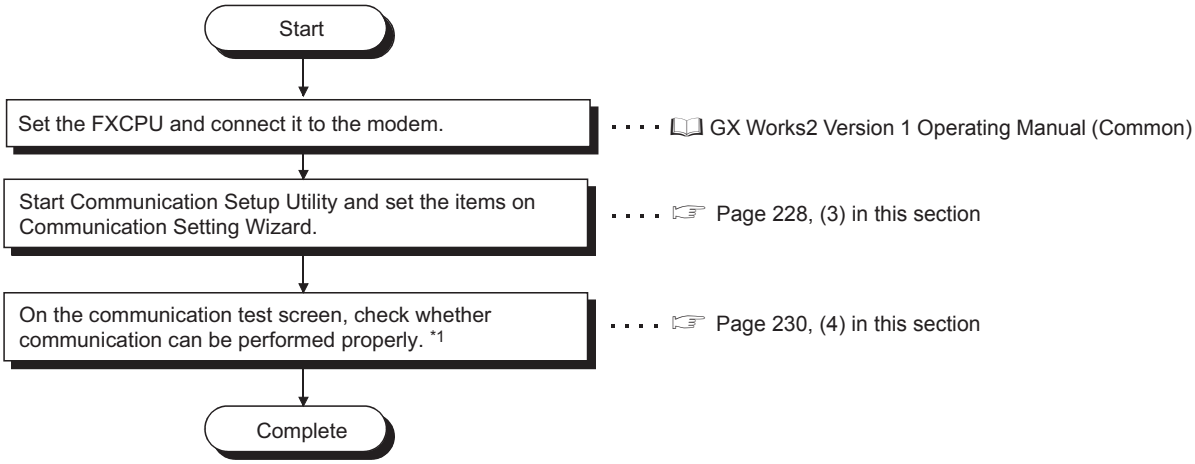
The following is the procedure for accessing the programmable controller CPU using modem communication.

<When Q series-compatible C24 or L series-compatible C24 is used>



*1 : If normal communication cannot be performed, refer to "Flowchart for When Access cannot be Performed during Modem Communication" (☞ Page 383, Appendix 6) and take corrective action.

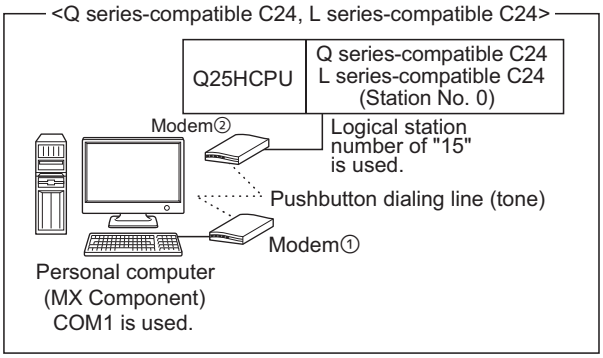
<When FXCPU is used>

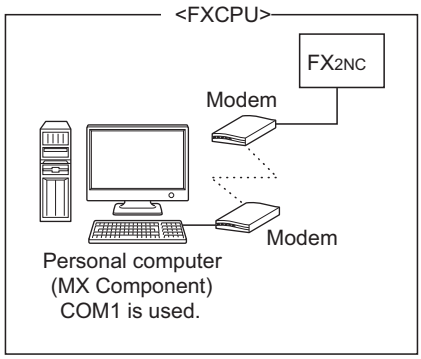


*1 : If normal communication cannot be performed, refer to "Flowchart for When Access cannot be Performed during Modem Communication" (☞ Page 383, Appendix 6) and take corrective action.

(1) System examples

The following system examples are used in this section.





(2) Connect Q series-compatible C24, L series-compatible C24 or FXCPU and the modem

(a) Q series-compatible C24, L series-compatible C24

Using the Q series-compatible C24 or L series-compatible C24 requires a sequence program to set the following buffer memory addresses.

The following table indicates the buffer memory addresses that must be set and the sequence program.

Setting Item (Buffer Memory Address)	Setting
Modem connection channel designation ($2E_H$)	0: Not connected (modem function is not used) 1: CH1 side interface 2: CH2 side interface
Initialization data number designation (34_H)*1	0_H : Send of initialization data specified in the sending user registration frame specifying area $7D0_H$ to $7DD_H$: Initialization data number
GX Developer/MELSOFT connection designation (36_H)	0: Not connected 1: Connected
Callback function designation (2001_H)	0_H : Auto line connect 1_H : Callback connect (Fixation) 3_H : Callback connect (Number specification) 7_H : Callback connect (Number specification (maximum of 10 modules)) 9_H : Auto line connect (Callback fixation) B_H : Auto line connect (Callback number specification) F_H : Auto line connect (Callback number specification (maximum of 10 modules))

*1 : The following initialization data are factory-registered to Q series-compatible C24.
When the modem used corresponds to the initialization data ($7D0_H$ to $7DA_H$), specify the following registration number.
When using the modem where the initialization data is not registered, register the AT command to the buffer memory address ($1B00_H$) of Q series-compatible C24.

Registration Number		Initialization Command	Corresponding Device	
Hexadecimal	Decimal		Manufacturer	Model
$7D0_H$	2000	ATQ0V1E1X1\J0\Q2\V2\N3S0=1	Aiwa	PV-AF2881WW PV-BF288M2
$7D1_H$	2001	ATQ0V1E1X1\Q2\V2\N3S0=1	Micro General Laboratory	MC288XE MC288X1
$7D2_H$	2002	ATQ0V1E1X1&K3\N3S0=1	Microcom	DESKPORTE22.8S DESKPORTE33.6S
$7D3_H$	2003	ATQ0V1E1X1&H1&R2&A3&D2S0=1	Omron	ME3314B
$7D4_H$	2004	ATQ0V1E1X1\J0\Q2\N3S0=1	Sun Electronic	MS336AF
$7D5_H$	2005	ATE1Q0V1&C1&D2&H1&I0&R2&S0S0=1	Omron	ME5614B
$7D6_H$	2006	ATE1Q0V1&C1&D2&K3&S0S0=1	Sun Electronic	MS56KAF
			Micro General Laboratory	MRV56XL
			Matsushita Electric	VS-2621A
$7D7_H$	2007	ATE1Q0V1&C1&D2&K3&S1S0=1		VC-173
$7D8_H$	2008	ATE1Q0V1&C1&D2&K3&S0S0=1	Omron	MT128B II -D
$7D9_H$	2009	ATE1Q0V1&C1&D1\Q2&S0S0=1	Sun Electronic	TS128JX II
$7DA_H$	2010	ATE1Q0V1&C1&D2\Q3&S0S0=1	Sharp	DN-TA1
$7DC_H$	2012	AT&S0S0=1	General * Use this device for operation check. If the device does not operate, create the initialization command which matches the modem specifications on the user side.	
$7DD_H$	2013	ATX1&S0S0=1		

1) When callback function is not used

Setting Item (Buffer Memory Address)	Setting
Modem connection channel designation (2E$_H$)	1 (CH1)
Initialization data number designation (34$_H$)	2006 (No. 2006)

Setting Item (Buffer Memory Address)	Setting
GX Developer/MELSOFT connection designation (36$_H$)	1 (Connected)
Callback function designation (2001$_H$)	-

Continued on next page

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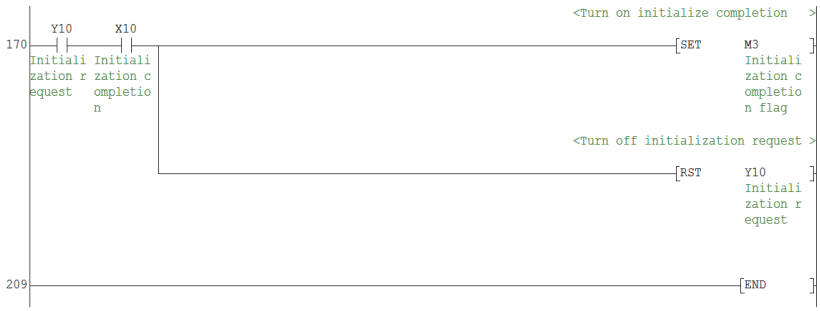


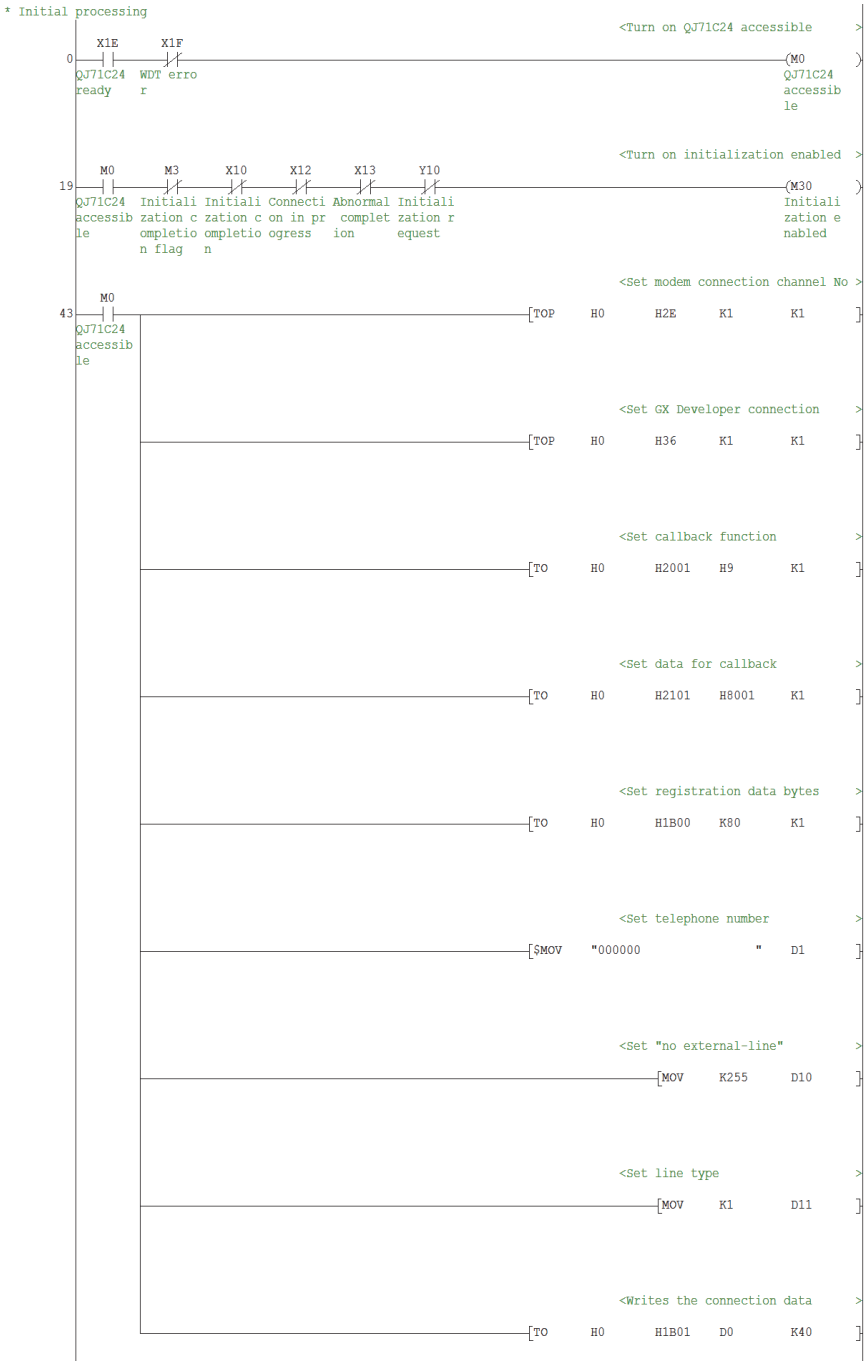
Point

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder] - [Act] - [Samples] - [GppW] - [QJ71C24TEL]

2) When "Auto line connect (Callback fixation)" is used as callback function

Setting Item (Buffer Memory Address)	Setting
Modem connection channel designation (2E$_H$)	1 (CH1)
Initialization data number designation (34$_H$)	2012 (No. 2012)

Setting Item (Buffer Memory Address)	Setting
GX Developer/MELSOFT connection designation (36$_H$)	1 (Connected)
Callback function designation (2001$_H$)	9$_H$ (Auto line connect (Callback fixation))



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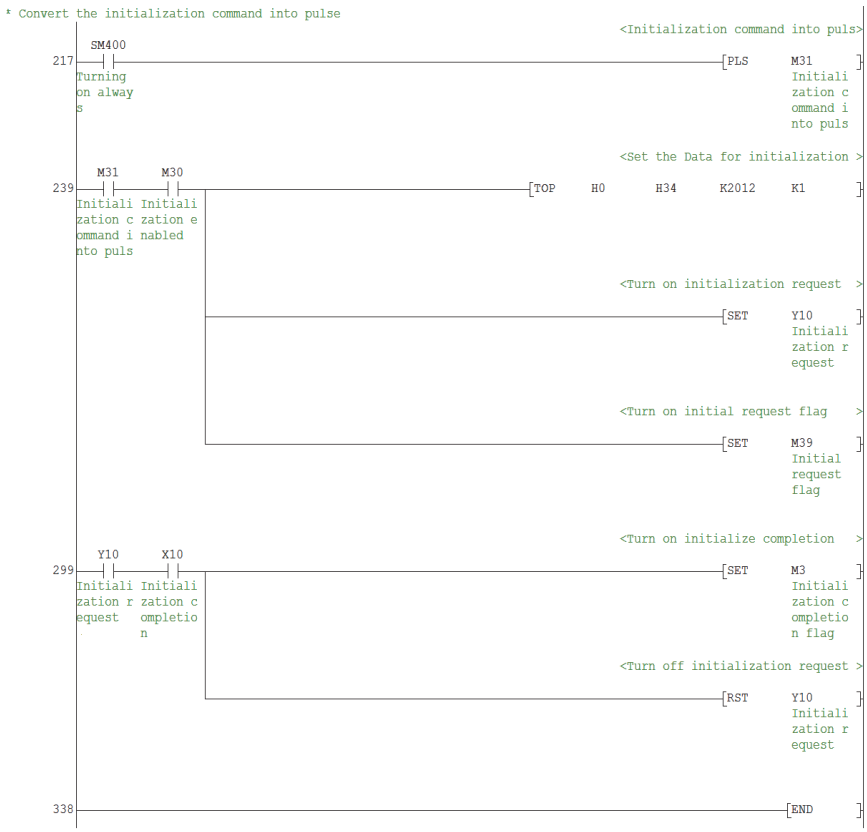


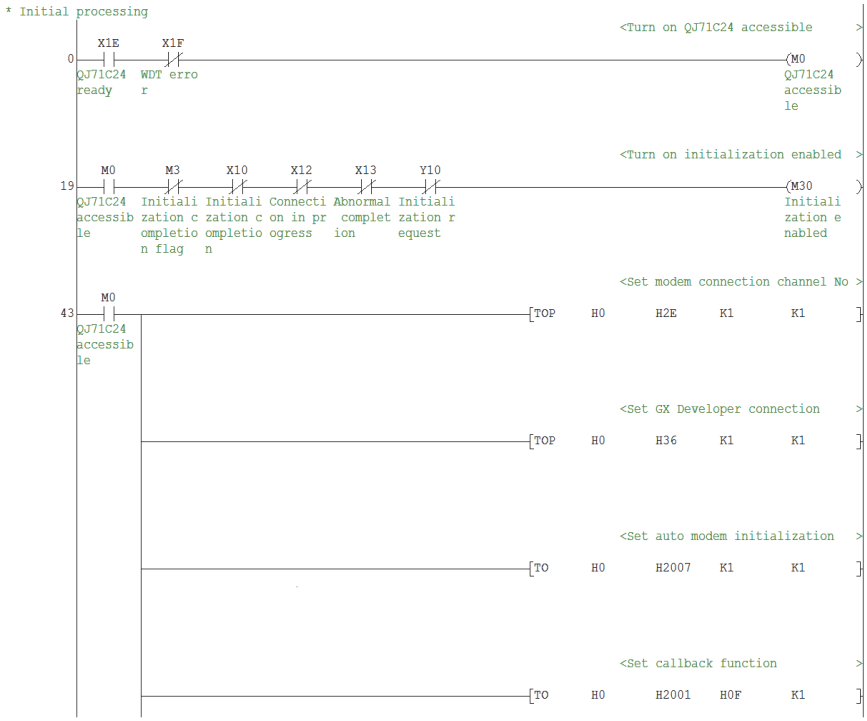
Point

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder] - [Act] - [Samples] - [GppW] - [QJ71C24Callback]

3) When "Auto line connect (Callback number specification (maximum of 10 modules))" is used as callback function

Setting Item (Buffer Memory Address)	Setting
Modem connection channel designation (2E$_H$)	1 (CH1)
Initialization data number designation (34$_H$)	2012 (No. 2012)

Setting Item (Buffer Memory Address)	Setting
GX Developer/MELSOFT connection designation (36$_H$)	1 (Connected)
Callback function designation (2001$_H$)	F$_H$ (Auto line connect (Callback number specification (maximum of 10 modules)))



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```
<Set the data for callback                    >
[TO    H0    H2101    H8001    K1    ]

<Set the data for callback                    >
[TO    H0    H2102    H8002    K1    ]

<Set the data for callback                    >
[TO    H0    H2103    H8003    K1    ]

<Set registration data bytes                  >
[TO    H0    H1B00    K80      K1    ]

<Set telephone number                         >
[$MOV  "1                "      D1    ]

<Set "no external-line"                       >
[MOV   K255     D10                   ]

<Set line type                                >
[MOV   K1       D11                   ]

<Writes the connection data                   >
[TO    H0    H1B2A    D0       K40   ]

<Set registration data bytes                  >
[TO    H0    H1B29    K80      K1    ]

<Set telephone number                         >
[$MOV  "2                "      D1    ]

<Set "no external-line"                       >
[MOV   K255     D10                   ]

<Set line type                                >
[MOV   K1       D11                   ]

<Writes the connection data                   >
[TO    H0    H1B2A    D0       K40   ]
```

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```
                                                    <Set registration data bytes    >
[TO      H0      H1B52    K80      K1      ]

                                                    <Set telephone number           >
[$MOV    "3                "        D1      ]

                                                    <Set "no external-line"         >
[MOV     K255     D10      ]

                                                    <Set line type                  >
[MOV     K1       D11      ]

                                                    <Writes the connection data     >
[TO      H0      H1B53    D0       K40     ]

* Convert the initialization command into pulse
                                                    <Initialization command into puls>
     SM400
461 --| |-------------------------------------------[PLS     M31     ]
Turning                                                    Initiali
on alway                                                   zation c
s                                                          ommand i
                                                           nto puls
                                                    <Set the Data for initialization >
     M31      M30
483 --| |------| |------------------------------[TOP     H0      H34     K2012    K1      ]
Initiali Initiali
zation c zation e
ommand i nabled
nto puls
                                                    <Turn on initialization request  >
                                                   [SET     Y10     ]
                                                           Initiali
                                                           zation r
                                                           equest
                                                    <Turn on initial request flag    >
                                                   [SET     M39     ]
                                                           Initial
                                                           request
                                                           flag
                                                    <Turn on initialize completion   >
     Y10      X10
543 --| |------| |------------------------------[SET     M3      ]
Initiali Initiali                                          Initiali
zation r zation c                                          zation c
equest   ompletio                                          ompletio
         n                                                 n flag
                                                    <Turn off initialization request >
                                                   [RST     Y10     ]
                                                           Initiali
                                                           zation r
                                                           equest

582 ------------------------------------------------------------------[END     ]
```

Point

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder] - [Act] - [Samples] - [GppW] - [QJ71C24Callback_Number]

(b) FXCPU

A sequence program is required for the use of FXCPU.

```
* The modem initialization command is set in D1000-D1025.
* The AT command of ATE0S0=2Q1&D0&M4\Q0\J0&W is set.
                                                                  * <"A" (H41) is set in D1000.      >
     M8002
0 ──┤ ├──────────────────────────────────────────────────────────[MOV    H41      D1000   ]
                                                                  * <"T"(H54) is set in D1001.      >
                                                                  [MOV    H54      D1001   ]
                                                                  * <"E"(H45) is set in D1002.      >
                                                                  [MOV    H45      D1002   ]
                                                                  * <"0"(H30) is set in D1003.      >
                                                                  [MOV    H30      D1003   ]
                                                                  * <"S"(H53) is set in D1004.      >
                                                                  [MOV    H53      D1004   ]
                                                                  * <"0"(H30) is set in D1005.      >
                                                                  [MOV    H30      D1005   ]
                                                                  * <"="(H3D) is set in D1006.      >
                                                                  [MOV    H3D      D1006   ]
                                                                  * <"2"(H32) is set in D1007.      >
                                                                  [MOV    H32      D1007   ]
                                                                  * <"Q"(H51) is set in D1008.      >
                                                                  [MOV    H51      D1008   ]
                                                                  * <"1"(H31) is set in D1009.      >
                                                                  [MOV    H31      D1009   ]
                                                                  * <"&"(H26) is set in D1010.      >
                                                                  [MOV    H26      D1010   ]
                                                                  * <"D"(H44) is set in D1011.      >
                                                                  [MOV    H44      D1011   ]
                                                                  * <"0"(H30) is set in D1012.      >
                                                                  [MOV    H30      D1012   ]
```

Continued on next page

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```
                                                                  * <"&"(H26) is set in D1013.      >
M8002
66 ─┤├──────────────────────────────────────────────────────────[MOV    H26      D1013   ]
                                                                  * <"M"(H4D) is set in D1014.      >
   ──────────────────────────────────────────────────────────[MOV    H4D      D1014   ]
                                                                  * <"4"(H34) is set in D1015.      >
   ──────────────────────────────────────────────────────────[MOV    H34      D1015   ]
                                                                  * <"\"(H5C) is set in D1016.      >
   ──────────────────────────────────────────────────────────[MOV    H5C      D1016   ]
                                                                  * <"Q"(H51) is set in D1017.      >
   ──────────────────────────────────────────────────────────[MOV    H51      D1017   ]
                                                                  * <"0"(H30) is set in D1018.      >
   ──────────────────────────────────────────────────────────[MOV    H30      D1018   ]
                                                                  * <"\"(H5C) is set in D1019.      >
   ──────────────────────────────────────────────────────────[MOV    H5C      D1019   ]
                                                                  * <"J"(H4A) is set in D1020.      >
   ──────────────────────────────────────────────────────────[MOV    H4A      D1020   ]
                                                                  * <"0"(H30) is set in D1021.      >
   ──────────────────────────────────────────────────────────[MOV    H30      D1021   ]
                                                                  * <"&"(H26) is set in D1022.      >
   ──────────────────────────────────────────────────────────[MOV    H26      D1022   ]
                                                                  * <"W"(H57) is set in D1023.      >
   ──────────────────────────────────────────────────────────[MOV    H57      D1023   ]
                                                                  * <"CR"(H0D) is set in D1024.     >
   ──────────────────────────────────────────────────────────[MOV    H0D      D1024   ]
                                                                  * <"LF"(H0A) is set in D1025.     >
   ──────────────────────────────────────────────────────────[MOV    H0A      D1025   ]

132 ──────────────────────────────────────────────────────────[END                      ]
```

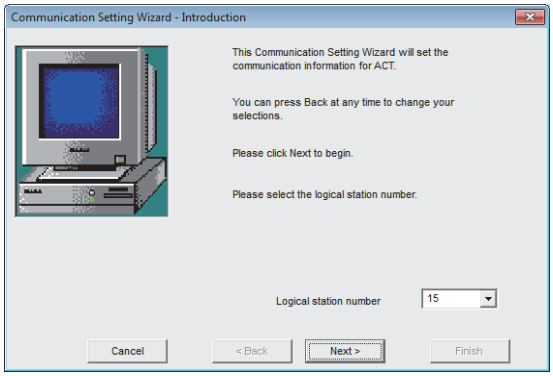
Point

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder] - [Act] - [Samples] - [GppW] - [FXCPUTEL]

(3) Setting the logical station number (setting on Communication Setting Wizard)

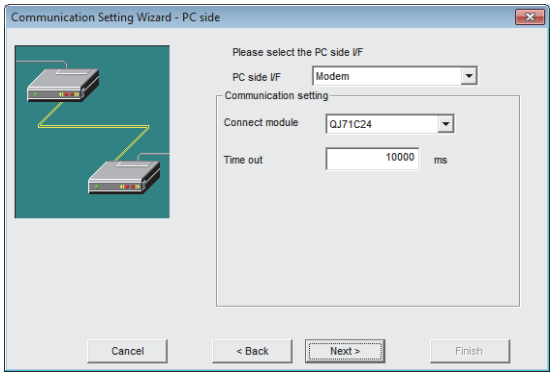
The following explains how to set the logical station number using the system example for Q series-compatible C24.

Operating procedure



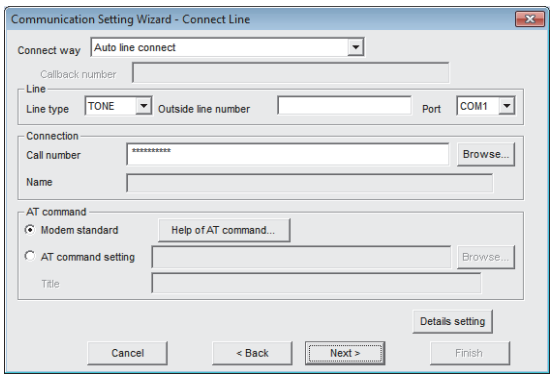
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "15" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Modem**
Connect module	**: QJ71C24**
Time out	**: 10000**



4. **Set the following items and click the [Next >] button.**

Line type	**: TONE**
Outside line number	**: None**
Port	**: COM1**
Call number	**: ************ (Enter the programmable controller side phone number.)
AT command	**: Modem standard**

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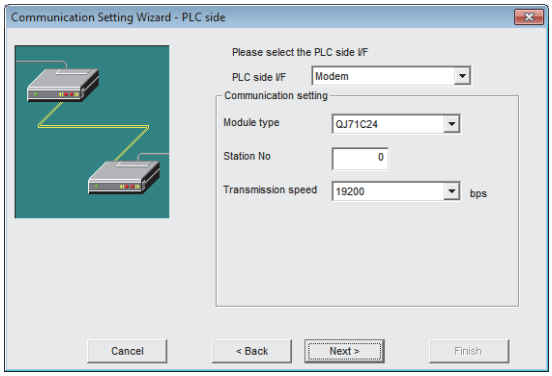
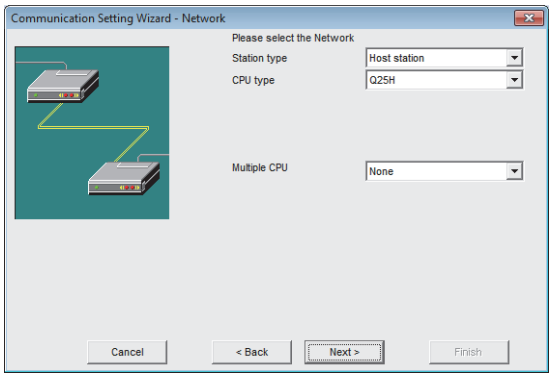


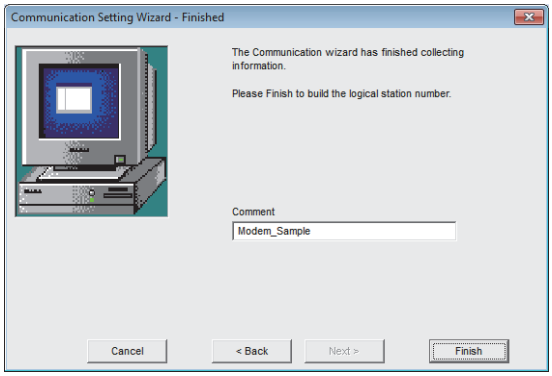
5. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Modem**
Module type	**: QJ71C24**
Station No	**: 0**
Transmission speed	**: 19200**



6. **Set the following items and click the [Next >] button.**

Station type	**: Host station**
CPU type	**: Q25H**
Multiple CPU	**: None**



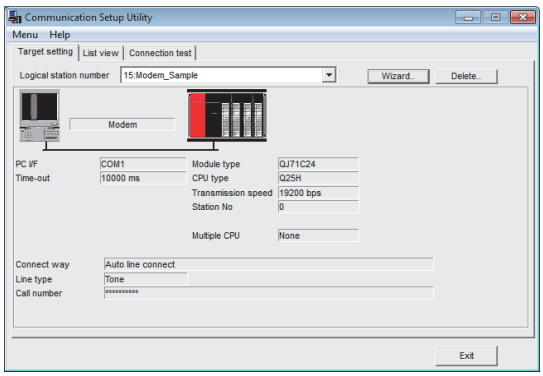
7. **Enter a comment and click the [Finish] button.**

Registration complete

(4) Checking the logical station number settings (conducting a communication test)

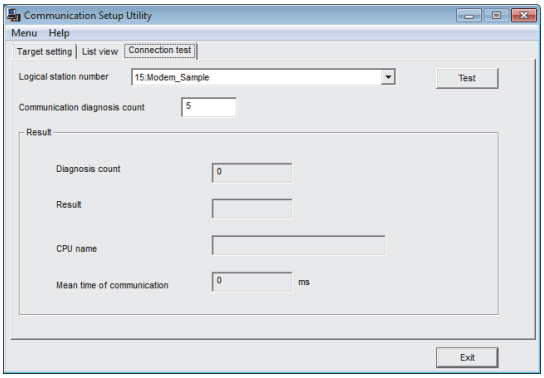
Check the modem communication settings, using the logical station number set in (3) in this section.

Operating procedure

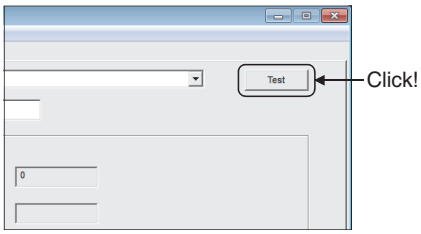


1. Click the <<Target setting>> tab and select the logical station number "15".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "15".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

📖 MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

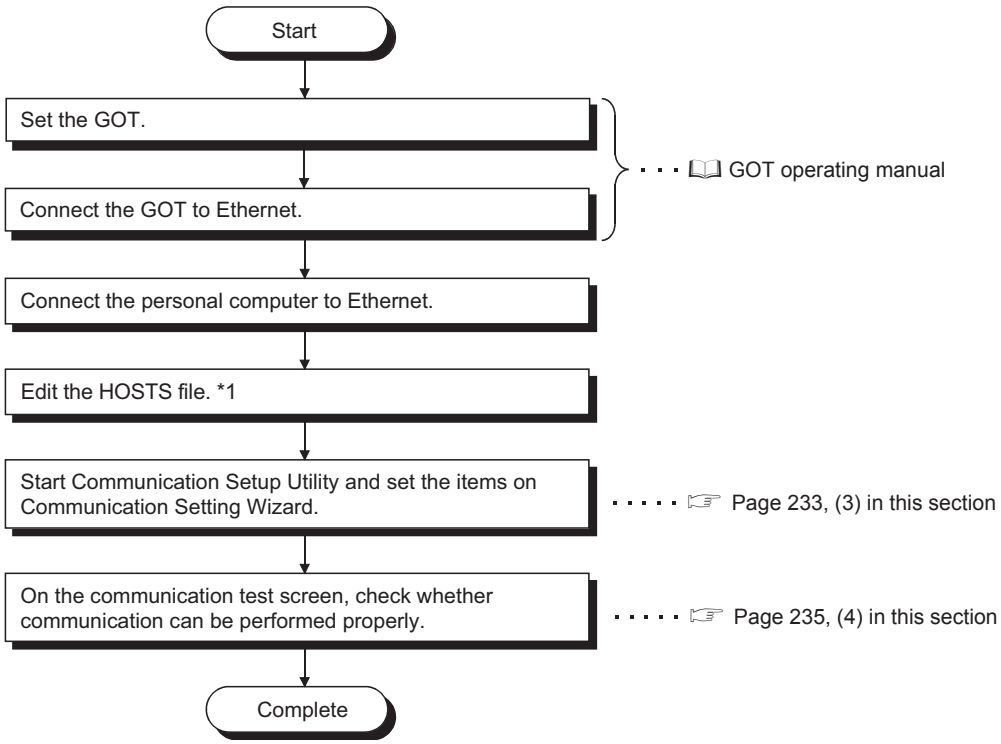
Collect device data, using this logical station number.

8.18 Gateway Function Communication

This section provides the gateway function communication procedure and its setting example using the utility setting type.

8.18.1 Access procedure

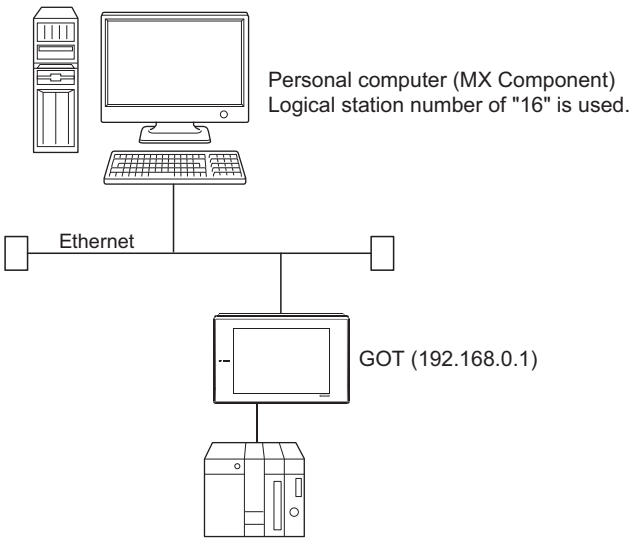
The following is the procedure for accessing the GOT using gateway function communication.



*1 : The HOSTS file is not required to be edited when the IP address is entered into the host name (IP Address) of Communication Setup Utility and the ActHostAddress property of the gateway function communication control.

(1) System example

The following system example is used in this section.



(2) Checking communication

After completion of preparations for performing gateway function communication, execute ping in the MS-DOS mode before starting communication using MX Component.

When normal
C:\>ping 192.168.0.1
Reply from 192.168.0.1 : bytes=32 time<10ms TTL=32

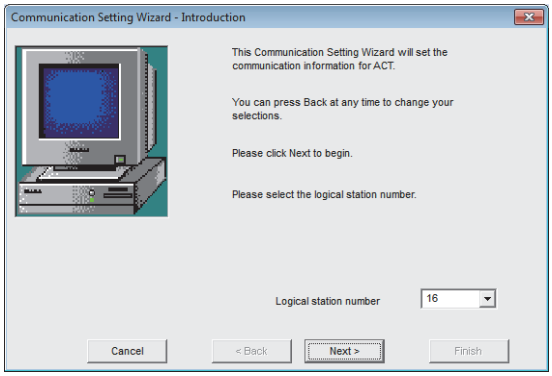
When abnormal
C:\>ping 192.168.0.1
Request timed out.

If ping does not pass through, check the settings of the GOT and the settings of the Windows® side IP address and others.

(3) Setting the logical station number (setting on Communication Setting Wizard)

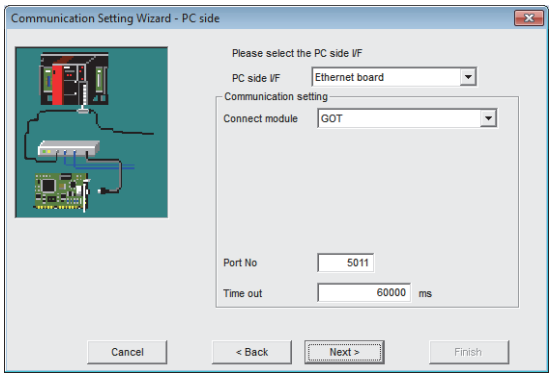
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



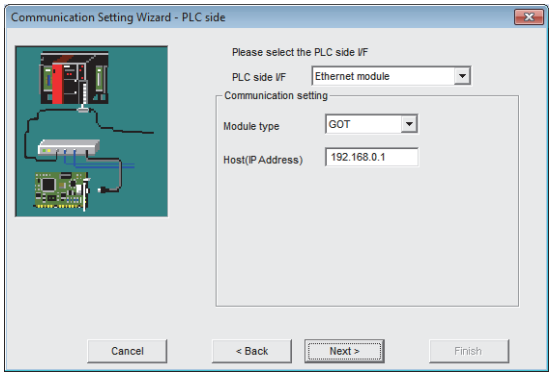
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "16" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Ethernet board**
Connect module	**: GOT**
Port No	**: 5011**
Time out	**: 60000**

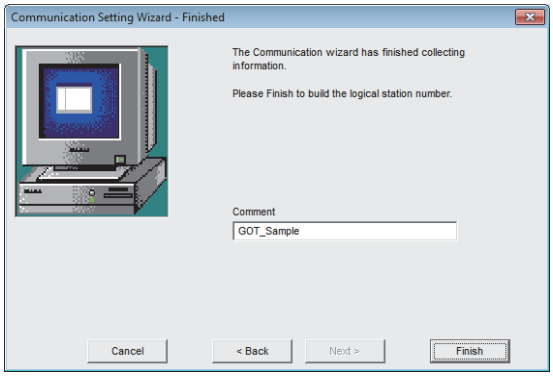


4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Ethernet module**
Module type	**: GOT**
Host (IP Address)	**: 192.168.0.1**

Continued on next page

Continued from previous page



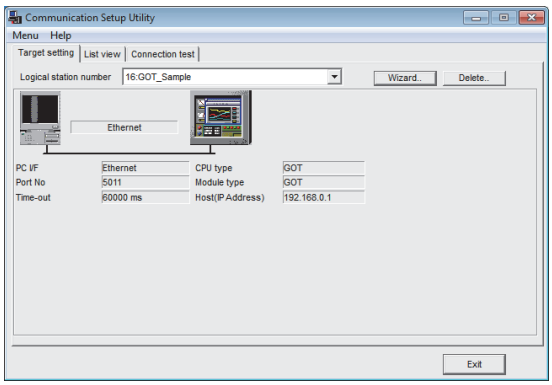
Registration complete

5. **Enter a comment and click the [Finish] button.**

(4) Checking the logical station number settings (conducting a communication test)

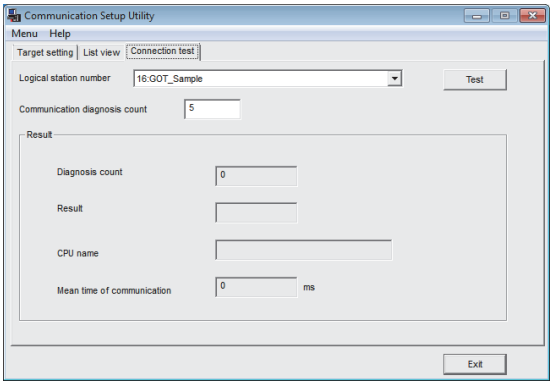
Check the gateway function communication settings, using the logical station number set in (3) in this section.

Operating procedure

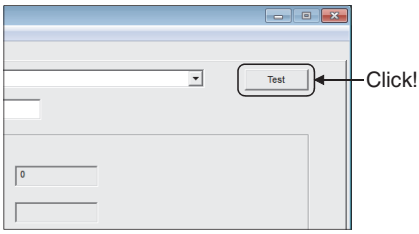


1. Click the <<Target setting>> tab and select the logical station number "16".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "16".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

Collect device data, using this logical station number.

8.19 GOT Transparent Communication

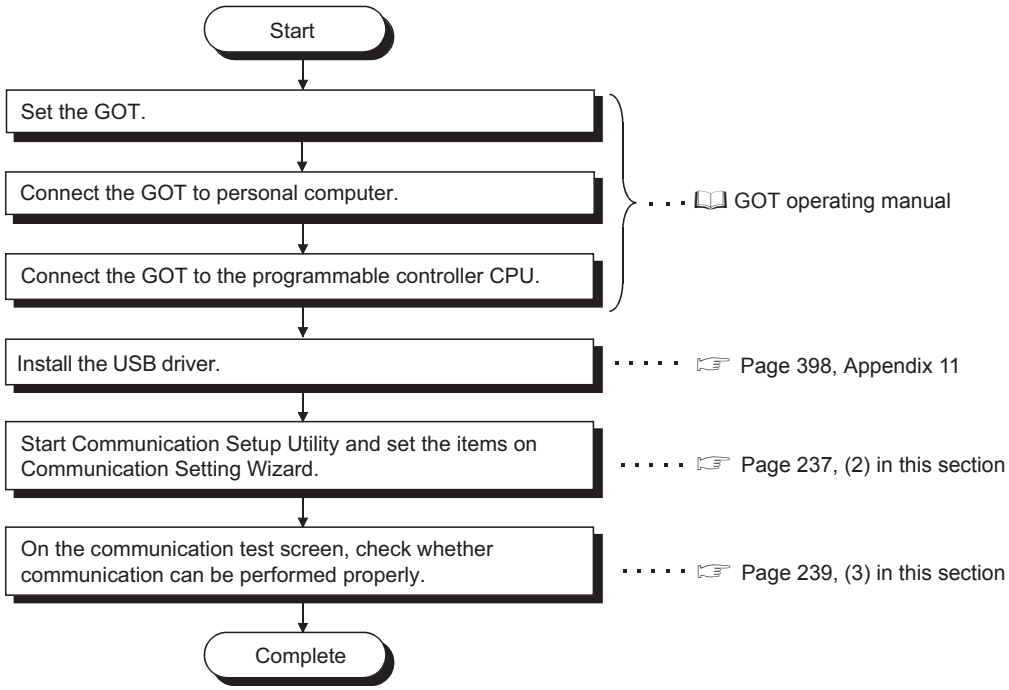
This section provides the GOT transparent communication procedure and its setting example using the utility setting type.

Point

For applicable system configuration, refer to the following manual.
Connection manuals for GOT2000 series
(Mitsubishi Products), (Non-Mitsubishi Products 1), (Non-Mitsubishi Products 2),
(Microcomputer, MODBUS Products,Peripherals)
Connection manuals for GOT1000 series
(Mitsubishi Products), (Non-Mitsubishi Products 1), (Non-Mitsubishi Products 2),
(Microcomputer, MODBUS Products,Peripherals

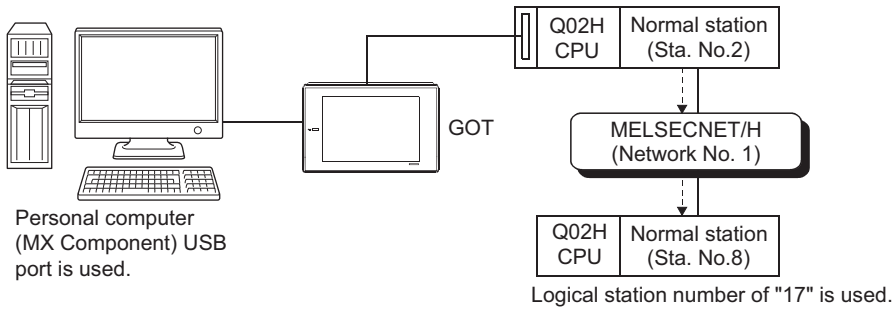
8.19.1 Access procedure

The following is the procedure for accessing the GOT using GOT transparent communication.



(1) System example

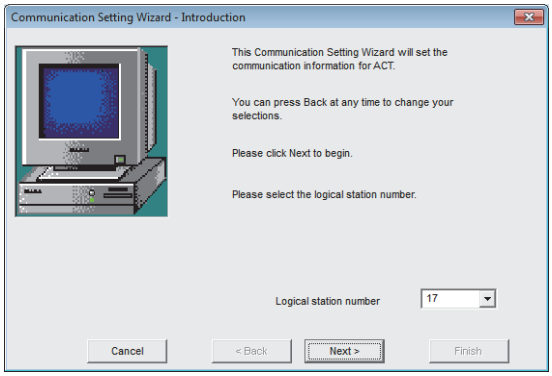
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

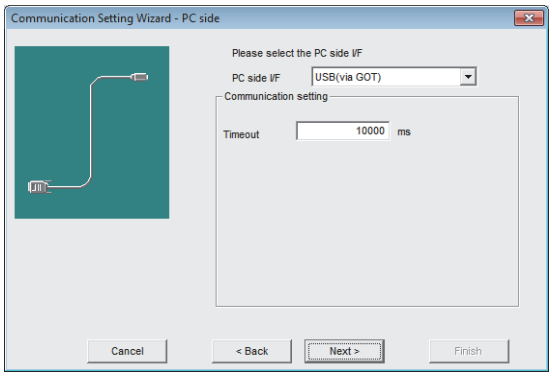
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



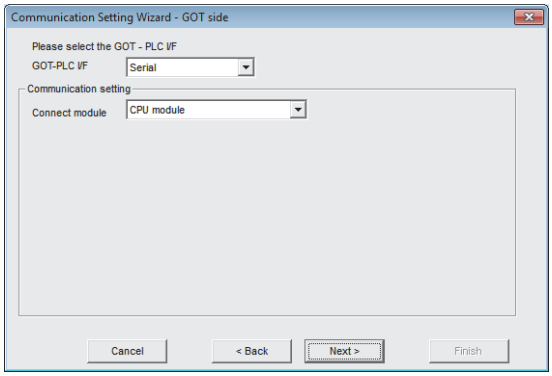
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "17" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F : USB (via GOT)
Time out : 10000



4. **Set the following items and click the [Next >] button.**

GOT - PLC I/F : Serial
Connect module : CPU module

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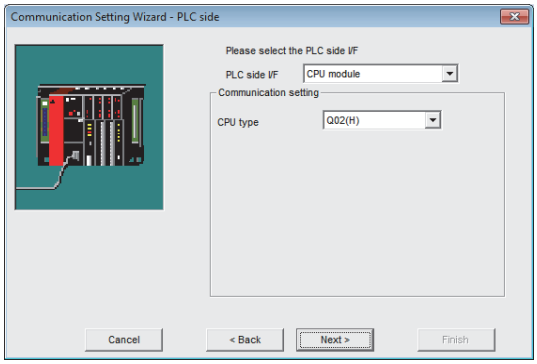
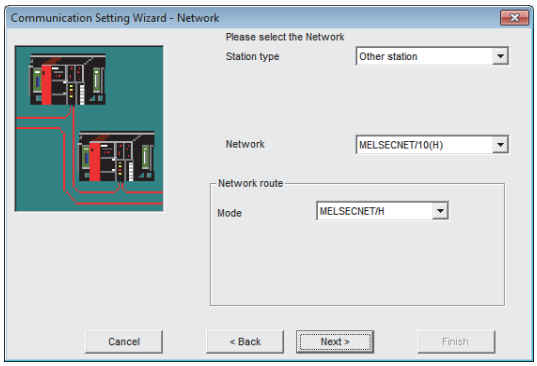


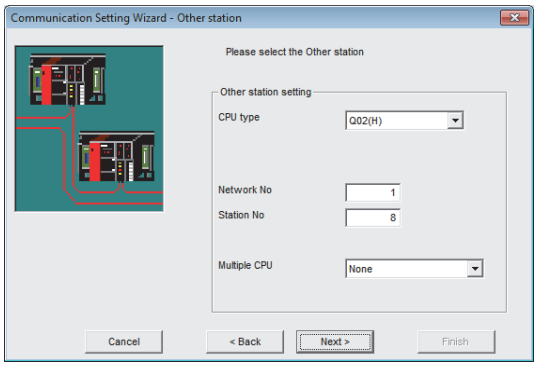
5. **Set the following items and click the Next > button.**

PLC side I/F	**: CPU module**
CPU type	**: Q02(H)**



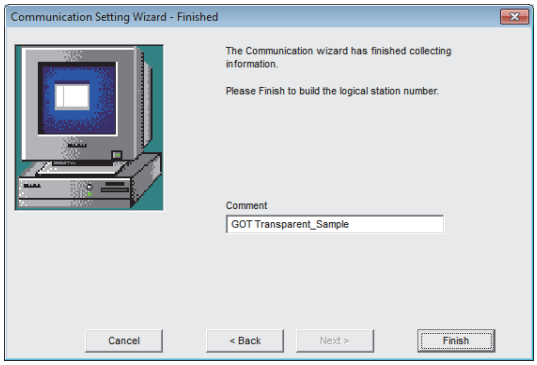
6. **Set the following items and click the Next > button.**

Station type	**: Other station**
Network	**: MELSECNET/10(H)**
Mode	**: MELSECNET/H**



7. **Set the following items and click the Next > button.**

CPU type	**: Q02(H)**
Network No	**: 1**
Station No	**: 8**
Multiple CPU	**: None**



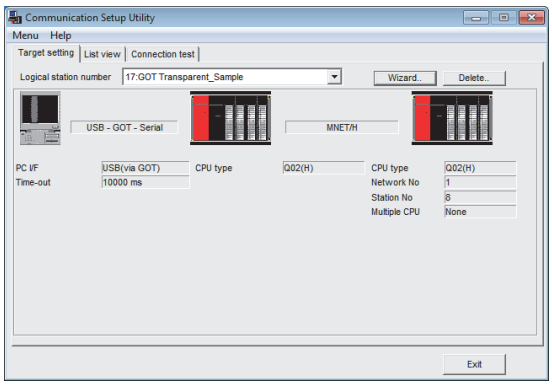
8. **Enter a comment and click the Finish button.**

Registration complete

(3) Checking the logical station number settings (conducting a communication test)

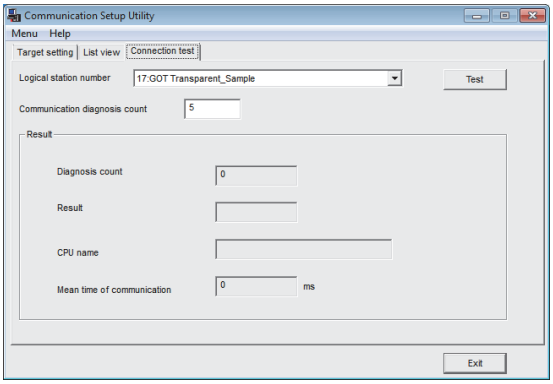
Check the GOT transparent communication settings, using the logical station number set in (2) in this section.

Operating procedure

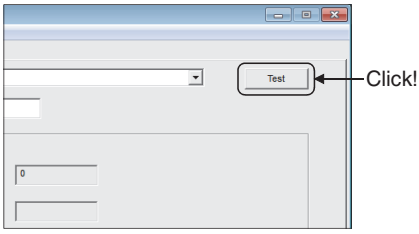


1. Click the <<Target setting>> tab and select the logical station number "17".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "17".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation and PLC Monitor Utility.

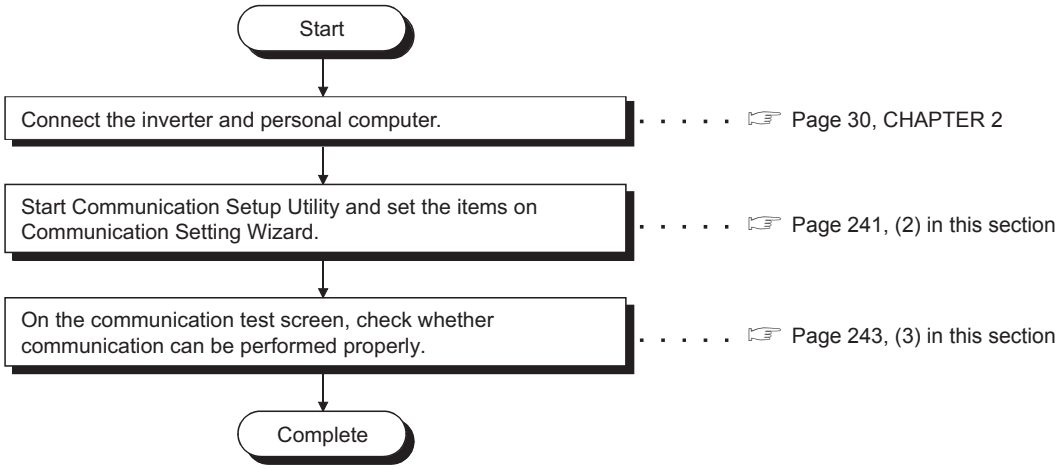
Collect device data, using this logical station number.

8.20 Inverter COM Communication

This section provides the inverter COM communication procedure and its setting example using the utility setting type.

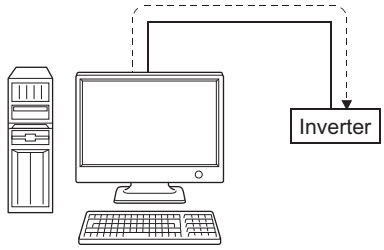
8.20.1 Access procedure

The following is the procedure for accessing the inverter using inverter COM communication.



(1) System example

The following system example is used in this section.

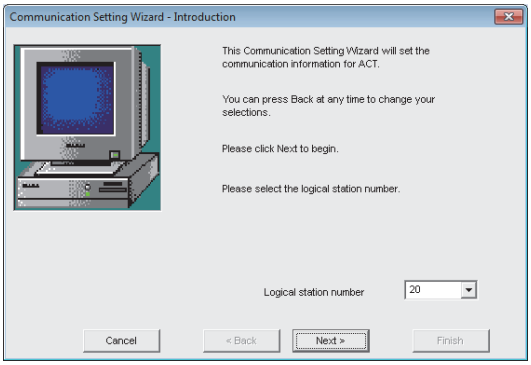


Personal computer
(MX Component) COM1
is used.

(2) Setting the logical station number (setting on Communication Setting Wizard)

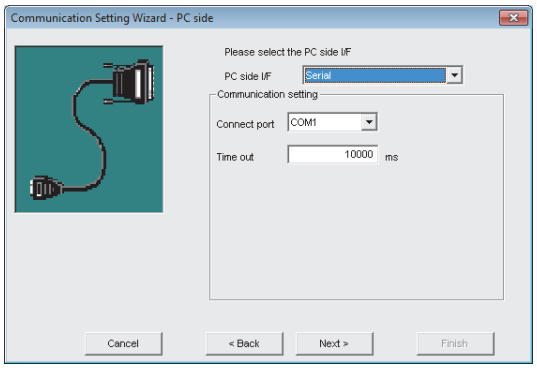
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



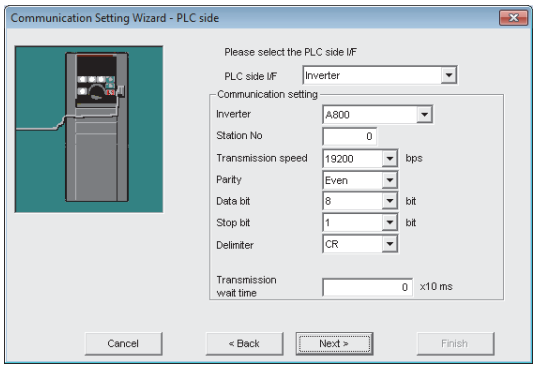
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "20" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Serial**
Connect port	**: COM1**
Time out	**: 10000**



4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Inverter**
Inverter	**: A800**
Station No	**: 0**
Transmission speed	**: 19200**
Parity	**: Even**
Data bit	**: 8**
Stop bit	**: 1**
Delimiter	**: CR**
Transmission wait time	**: 0**

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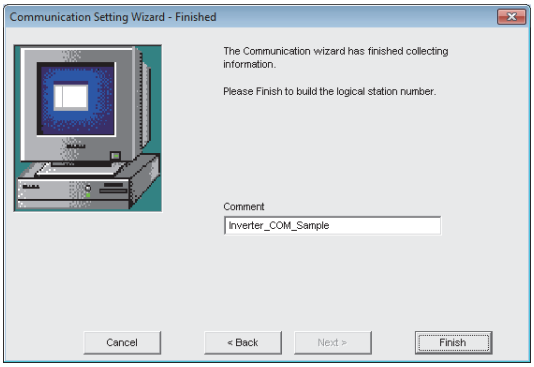


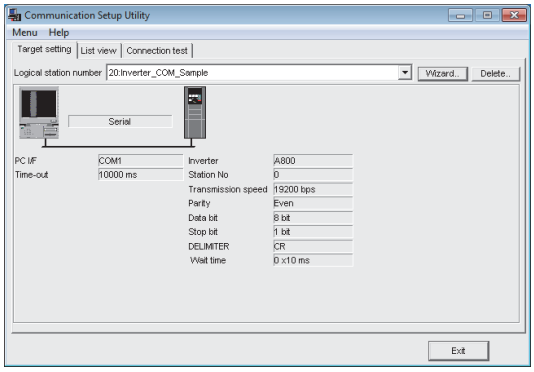
Registration complete

5. **Enter a comment and click the [Finish] button.**

(3) Checking the logical station number settings (conducting a communication test)

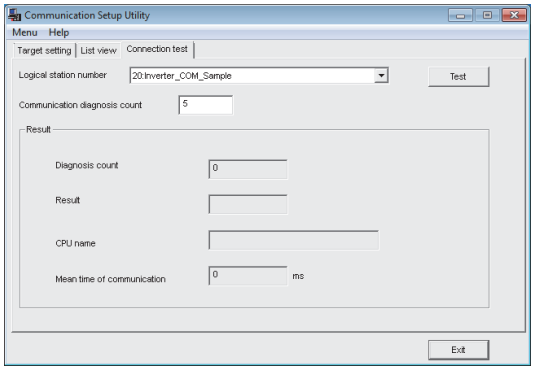
Check the inverter COM communication settings, using the logical station number set in (2) in this section.

Operating procedure

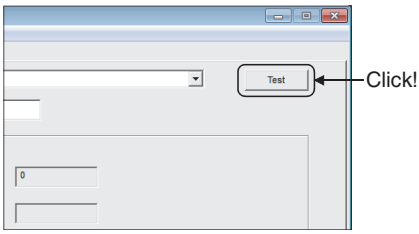


1. Click the <<Target setting>> tab and select the logical station number "20".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "20".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation.

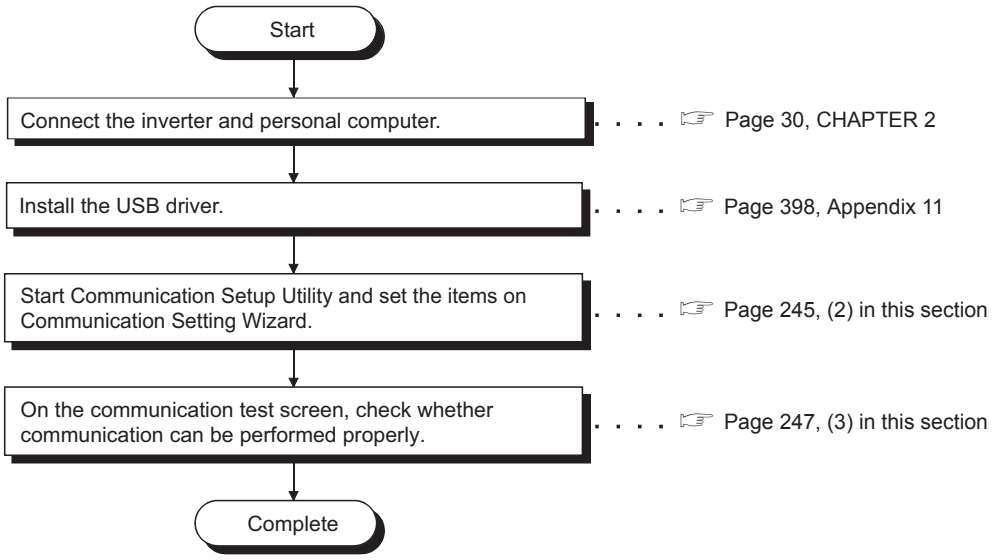
Collect device data, using this logical station number.

8.21 Inverter USB Communication

This section provides the inverter USB communication procedure and its setting example using the utility setting type.

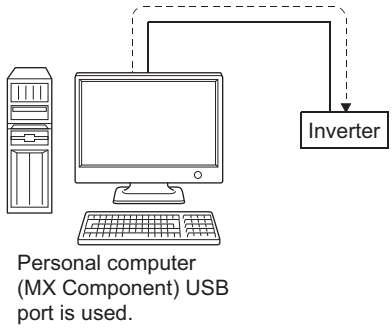
8.21.1 Access procedure

The following is the procedure for accessing the inverter using inverter USB communication.



(1) System example

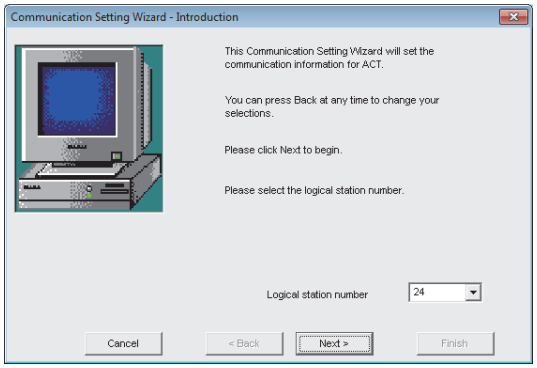
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

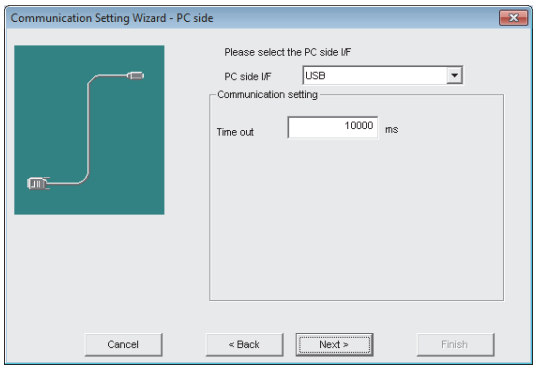
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



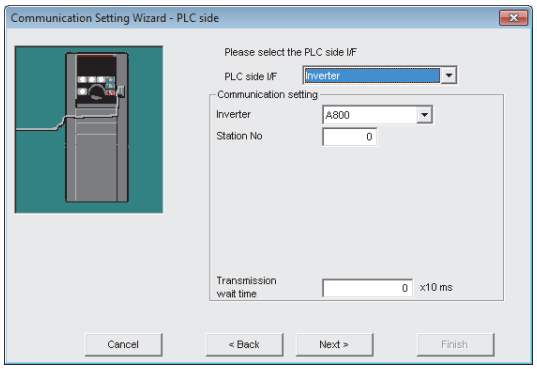
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "24" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F : USB
Time out : 10000



4. **Set the following items and click the [Next >] button.**

PLC side I/F : Inverter
Inverter : A800
Station No : 0
Transmission wait time : 0

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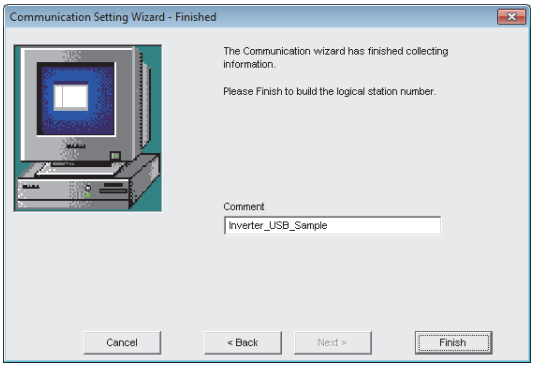


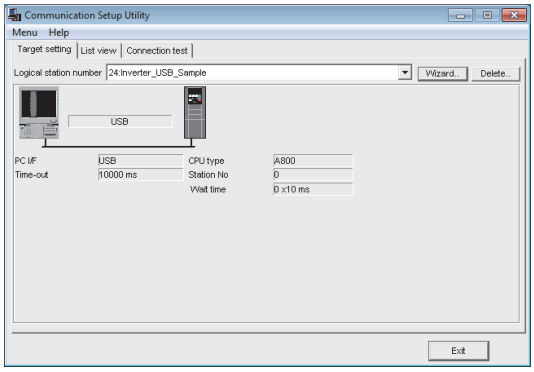
Registration complete

5. **Enter a comment and click the [Finish] button.**

(3) Checking the logical station number settings (conducting a communication test)

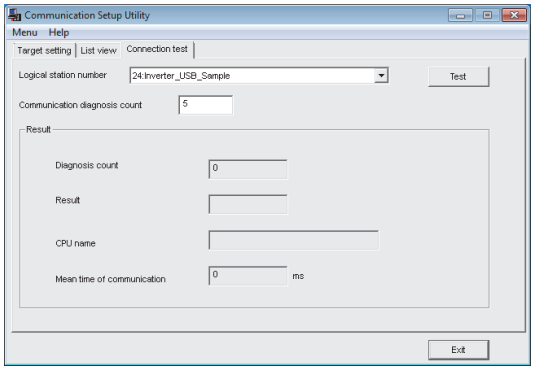
Check the inverter USB communication settings, using the logical station number set in (2) in this section.

Operating procedure

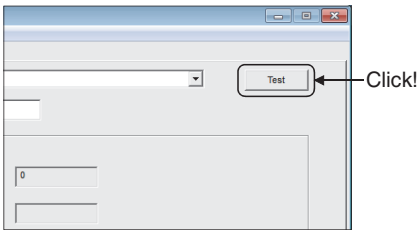


1. Click the <<Target setting>> tab and select the logical station number "24".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "24".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation.

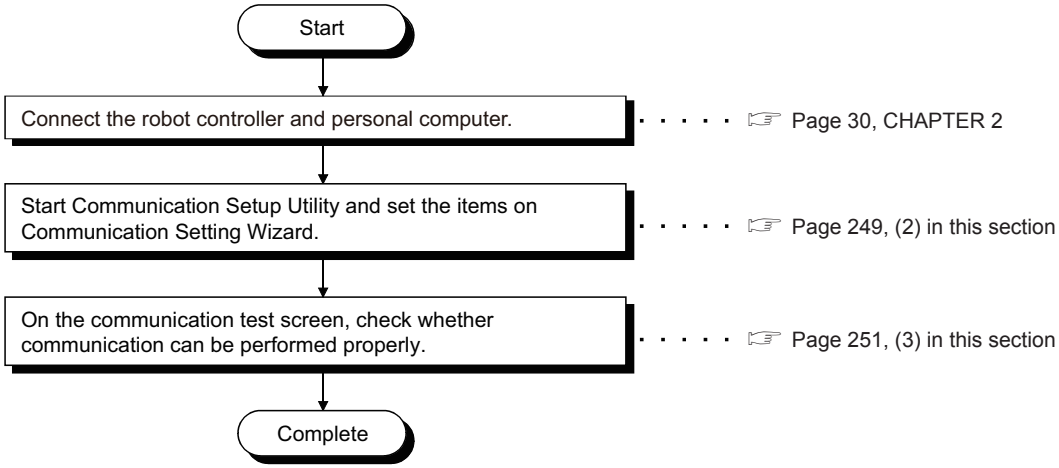
Collect device data, using this logical station number.

8.22 Robot controller COM Communication

This section provides the robot controller COM communication procedure and its setting example using the utility setting type.

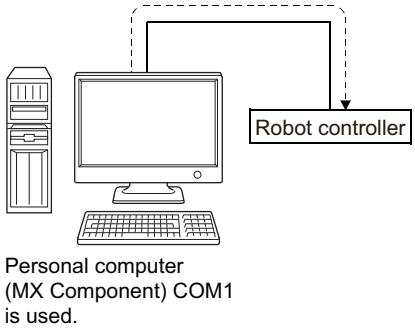
8.22.1 Access procedure

The following is the procedure for accessing the robot controller using robot controller COM communication.



(1) System example

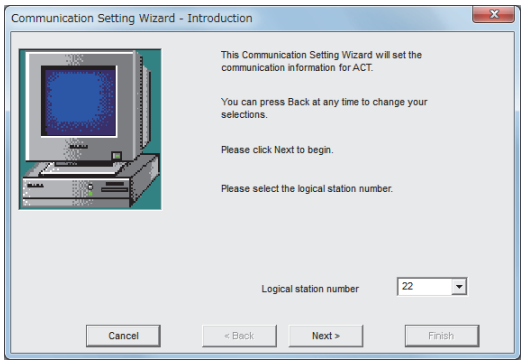
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

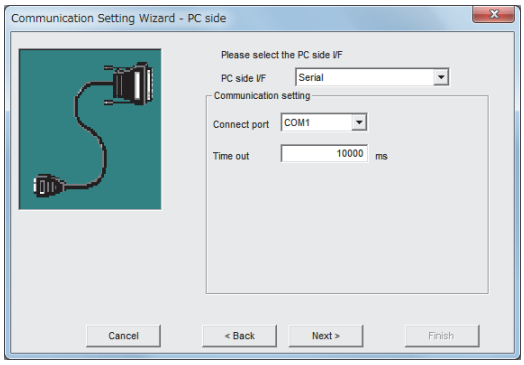
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



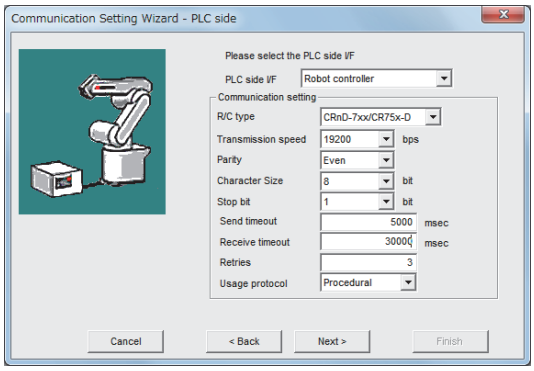
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "22" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Serial**
Connect port	**: COM1**
Time out	**: 10000**



4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Robot controller**
R/C type	**: CRnD-7xx/CR75x-D**
Transmission speed	**: 19200**
Parity	**: Even**
Character Size	**: 8**
Stop bit	**: 1**
Send timeout	**: 5000**
Receive timeout	**: 30000**
Retries	**: 3**
Usage protocol	**: Procedural**

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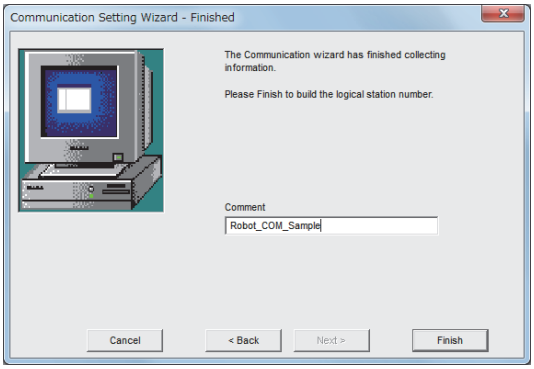


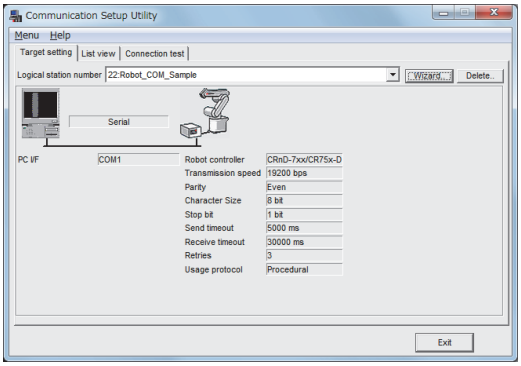
Registration complete

5. **Enter a comment and click the [Finish] button.**

(3) Checking the logical station number settings (conducting a communication test)

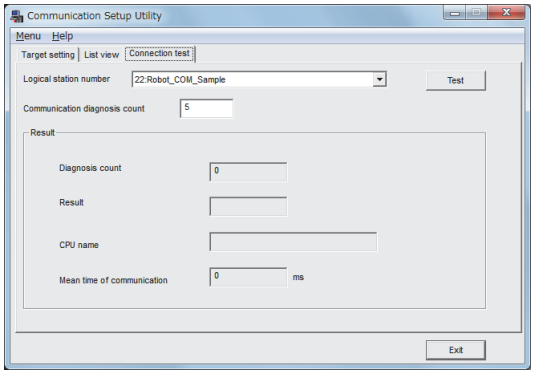
Check the robot controller COM communication settings, using the logical station number set in (2) in this section.

Operating procedure

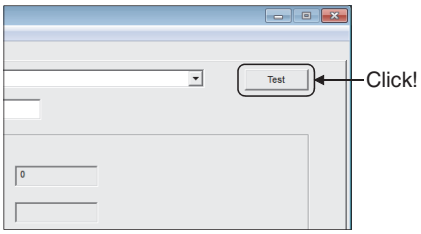


1. Click the <<Target setting>> tab and select the logical station number "22".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "22".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation.

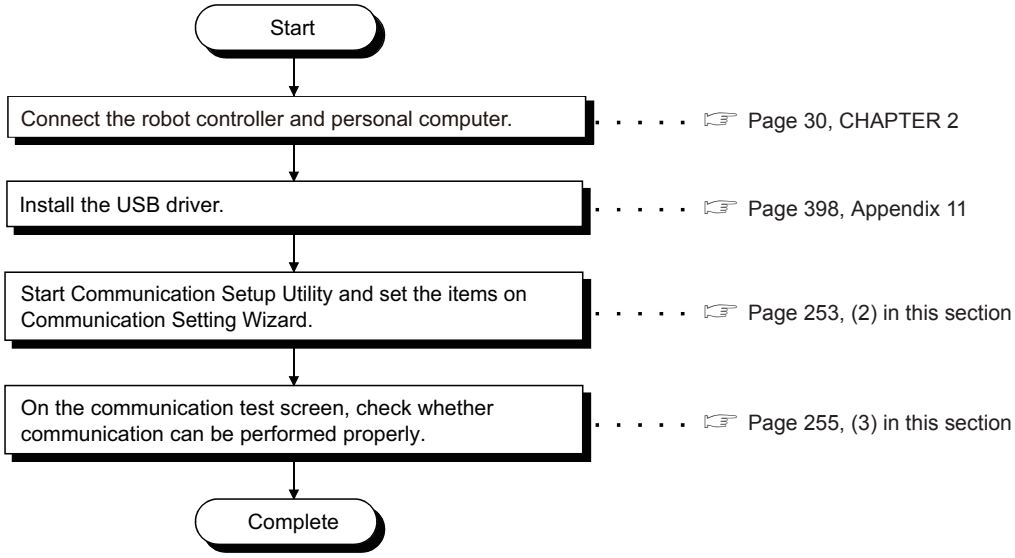
Collect device data, using this logical station number.

8.23 Robot controller USB Communication

This section provides the robot controller USB communication procedure and its setting example using the utility setting type.

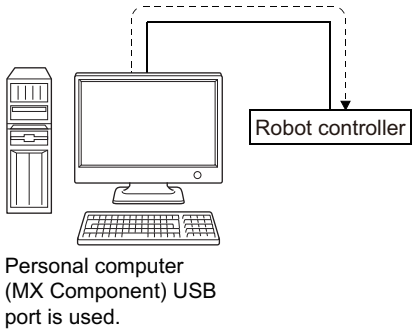
8.23.1 Access procedure

The following is the procedure for accessing the robot controller using robot controller USB communication.



(1) System example

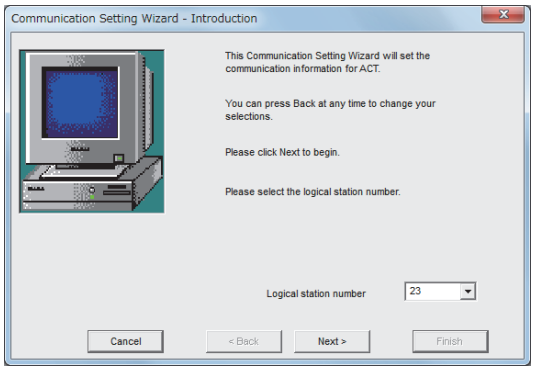
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

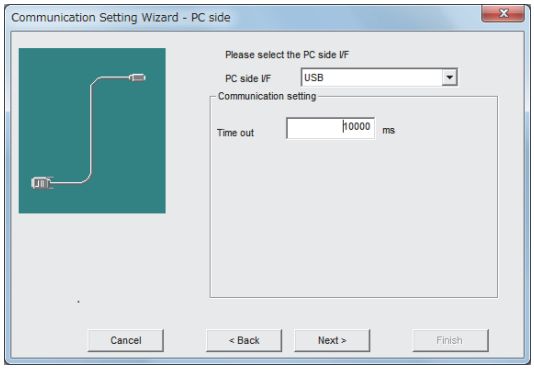
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



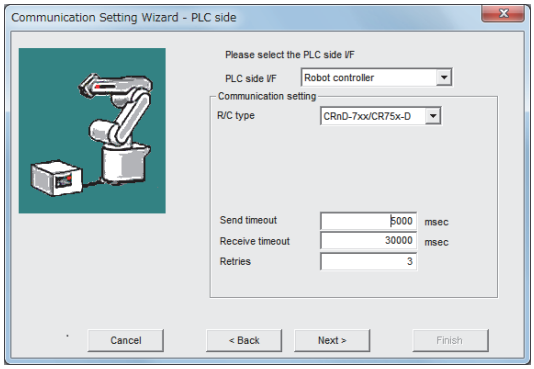
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "23" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: USB**
Time out	**: 10000**



4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Robot controller**
R/C type	**: CRnD-7xx/CR75x-D**
Send timeout	**: 5000**
Receive timeout	**: 30000**
Retries	**: 3**

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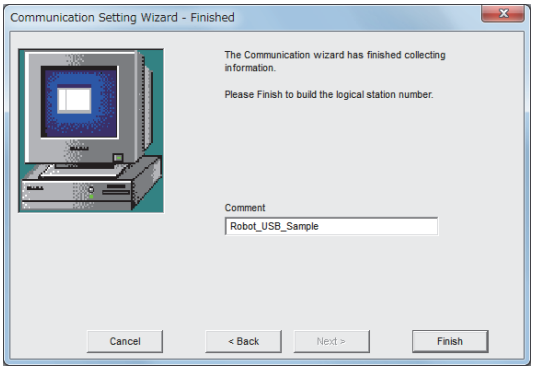


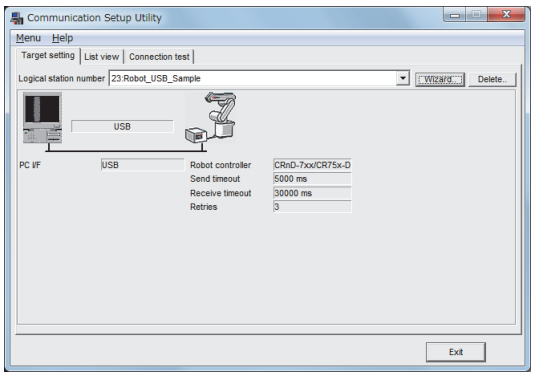
Registration complete

5. **Enter a comment and click the [Finish] button.**

(3) Checking the logical station number settings (conducting a communication test)

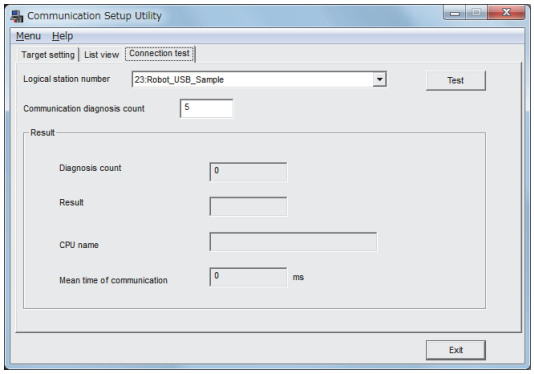
Check the robot controller USB communication settings, using the logical station number set in (2) in this section.

Operating procedure

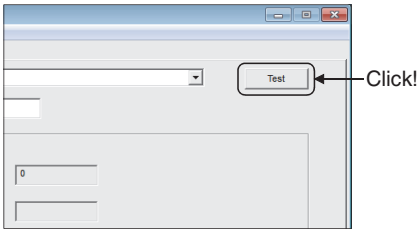


1. Click the <<Target setting>> tab and select the logical station number "23".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "23".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation.

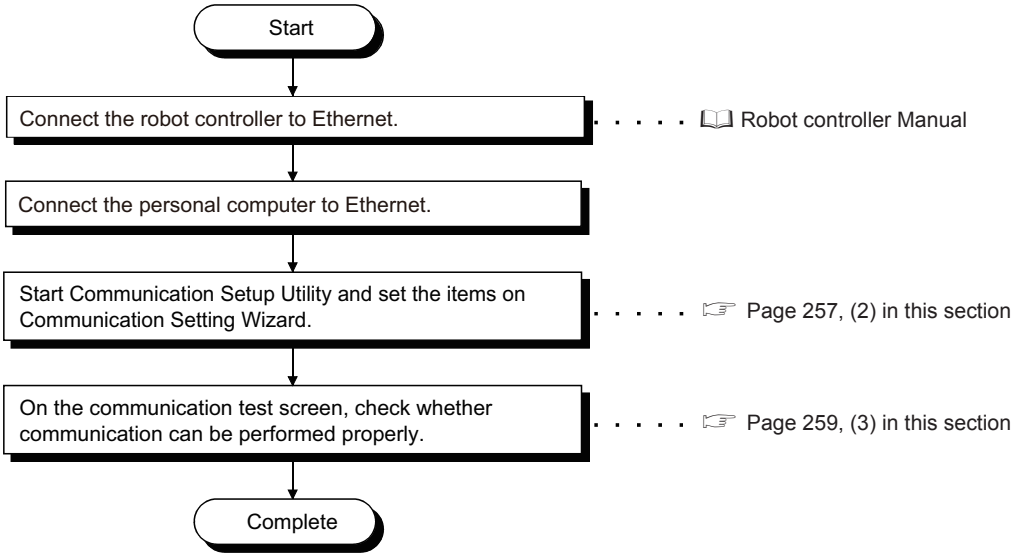
Collect device data, using this logical station number.

8.24 Robot controller Ethernet Communication

This section provides the robot controller Ethernet communication procedure and its setting example using the utility setting type.

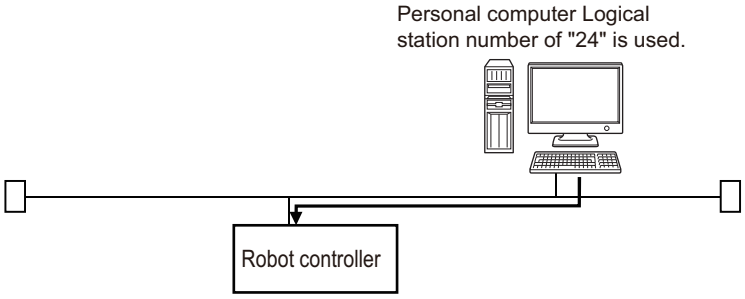
8.24.1 Access procedure

The following is the procedure for accessing the robot controller using robot controller Ethernet communication.



(1) System example

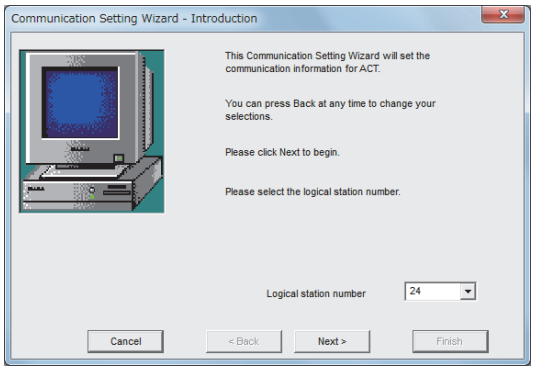
The following system example is used in this section.



(2) Setting the logical station number (setting on Communication Setting Wizard)

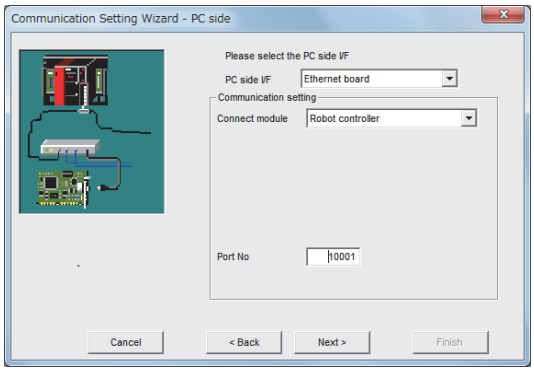
The following explains how to set the logical station number using the system example for (1) in this section.

Operating procedure



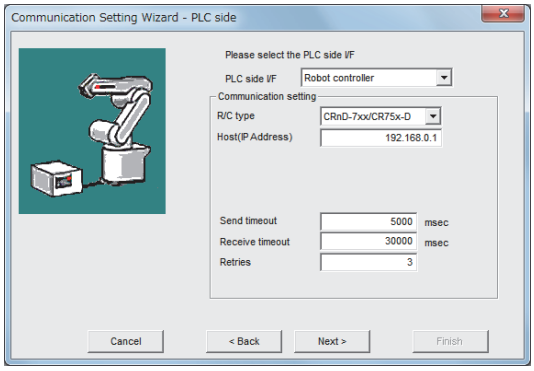
1. **Start Communication Setup Utility and click the [Wizard...] button.**

2. **Enter "24" in Logical station number and click the [Next >] button.**



3. **Set the following items and click the [Next >] button.**

PC side I/F	**: Ethernet board**
Connect module	**: Robot controller**
Port No	**: 10001**



4. **Set the following items and click the [Next >] button.**

PLC side I/F	**: Robot controller**
R/C type	**: CRnD-7xx/CR75x-D**
Host (IP Address)	**: 192.168.0.1**
Send timeout	**: 5000**
Receive timeout	**: 30000**
Retries	**: 3**

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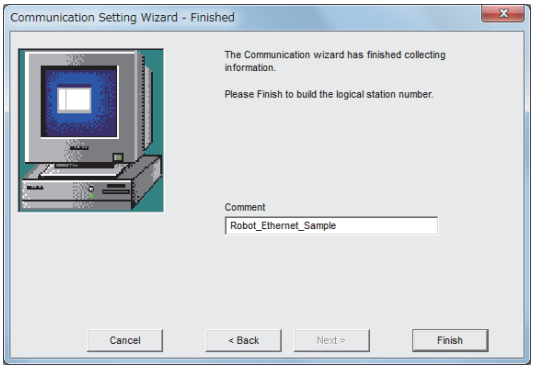


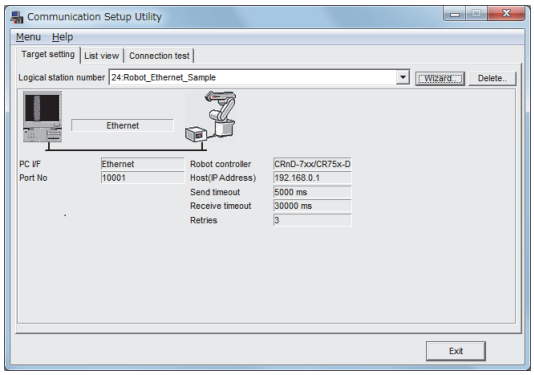
Registration complete

5. **Enter a comment and click the [Finish] button.**

(3) Checking the logical station number settings (conducting a communication test)

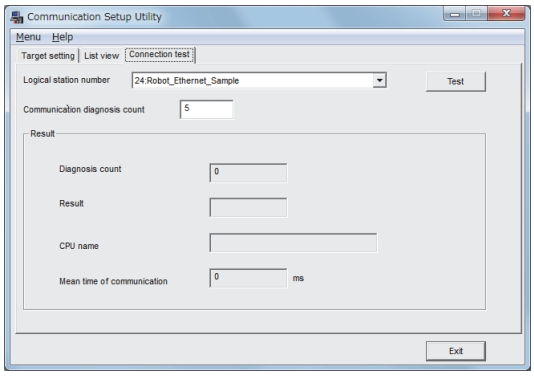
Check the robot controller USB communication settings, using the logical station number set in (2) in this section.

Operating procedure

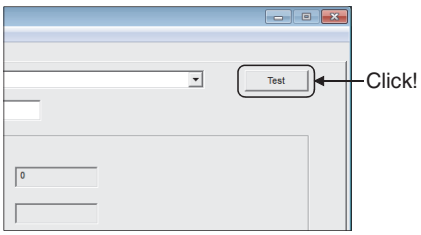


1. Click the <<Target setting>> tab and select the logical station number "24".

Check the logical station number settings.



2. Click the <<Connection test>> tab and select the logical station number "24".



3. Click the Test button to check that communication is being performed normally.

If an error occurs, check the error code and remove the error.

The error code is displayed in Result. (At normal termination, "0x00000000" is displayed in Result.)

For details of error code, refer to the following manual.

MX Component Version 4 Programming Manual

Communication test complete

Through the above steps, it is confirmed that the logical station number settings are correct.

This logical station number can be used for user program creation.

Collect device data, using this logical station number.

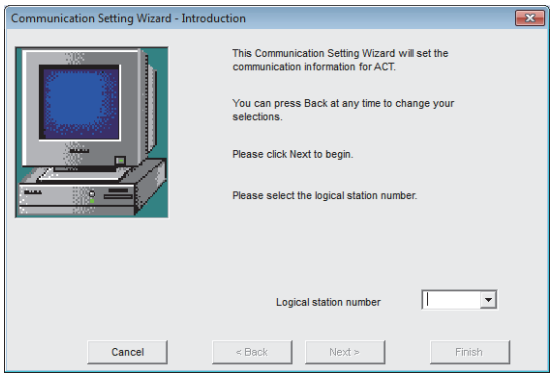
CHAPTER 9 COMMUNICATION SETTING EXAMPLES OF PROGRAM SETTING TYPE

To perform communication using the program setting type, the properties of the corresponding ACT controls is required to be set.
For the properties of the corresponding ACT controls, directly enter them on the property window or change their settings in the user program.
For details of the properties which must be set for the corresponding ACT controls, refer to the following manual.
📖 MX Component Version 4 Programming Manual
For the use if MX Component, refer to the following sections.

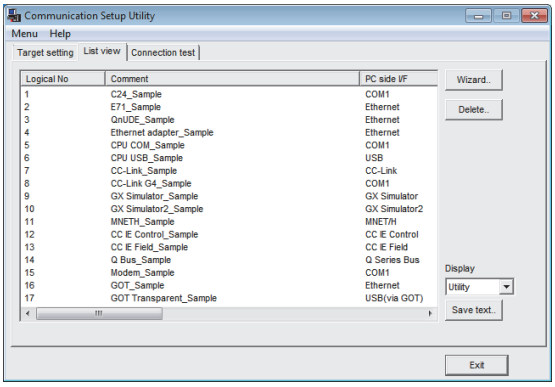
Item	Reference
Serial communication	Page 135, Section 8.1
Ethernet communication (when using Ethernet modules)	Page 145, Section 8.2
CC-Link G4 communication	Page 179, Section 8.9
Modem communication	Page 215, Section 8.17

Remark

On MX Component, the following property setting method is available for those who are not familiar with property setting.



1. **Specify the communication path where the property settings are to be set using the "Communication Setting Wizard" on Communication Setup Utility.**
   For details of Communication Setting Wizard, refer to the following section.
   ☞ Page 97, Section 7.1.6 Operations on Communication Setting Wizard screens



2. **Click the <<List View>> tab.**
   For details of the <<List View>> tab, refer to the following section.
   ☞ Page 93, Section 7.1.2 Operations on List view tab

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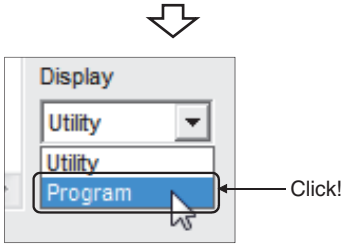
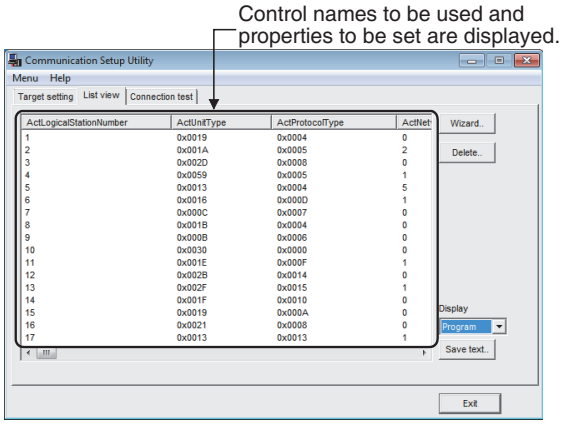
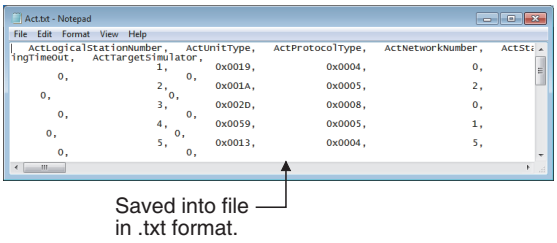


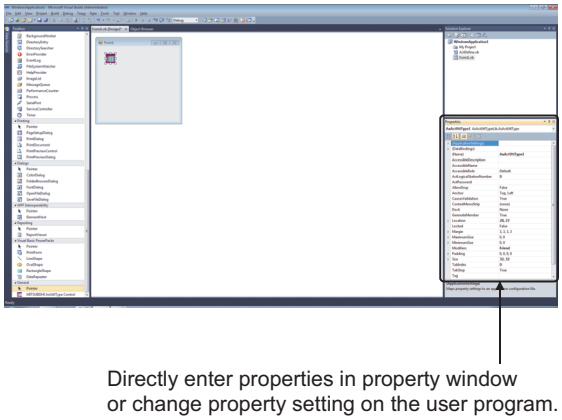
3. Select "Program" from "Display".



4. Control the scroll bar to confirm the properties.



The file can be saved in the .txt format by clicking the Save text.. button on the <<List View>> tab.



5. When creating a user program, directly enter the confirmed property values into Properties of the property window or change the property setting in the user program.

The screen shown left uses Visual Basic®.

CHAPTER 10 ACCESSIBLE RANGES

This chapter provides the accessible ranges in each communication form.

10.1 Considerations for Access Targets

The access targets, which are not described or marked with "×" (inaccessible) in the accessible list indicated in Section 10.2 and later, are not supported by MX Component.
Do not specify the inaccessible targets

10.2 For Serial Communication

This section provides the accessible devices and accessible ranges for serial communication.

10.2.1 Accessible devices

The following table indicates the accessible devices for serial communication.

(1) When access target is programmable controller CPU

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Function input (FX)		×	○	×	○	×	×
Function output (FY)		×	○	×	○	×	×
Function register (FD)		×	○	×	○	×	×
Special relay (SM)		○	○	○	○	×	×
Special register (SD)		○	○	○	○	×	×
Input relay (X)		○	○	○	○	×	○*1
Output relay (Y)		○	○	○	○	×	○*1
Internal relay (M)		○	○	○	○	×	○*1
Latch relay (L)		○	○	×	○	×	×
Annunciator (F)		○	○	×	○	×	×
Edge relay (V)		○	○	×	○	×	×
Link relay (B)		○	○	○*2	○	×	×
Data register (D)		○	○	○	○	×	○*1
Link register (W)		○	○	○*2	○	×	×
Timer (T)	Contact (TS)	○	○	×	○	×	○*1
	Coil (TC)	○	○	×	○	×	×
	Present value (TN)	○	○	×	○	×	○*1
Counter (C)	Contact (CS)	○	○	×	○	×	○*1
	Coil (CC)	○	○	×	○	×	×
	Present value (CN)	○	○	×	○	×	○*1
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	×	×
	Coil (STC/SC)	○	○	×	○	×	×
	Present value (STN/SN)	○	○	×	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Link special relay (SB)		○	○	×	○	×	×
Link special register (SW)		○	○	×	○	×	×
Step relay (S)		×	×	×	×	×	○*1
Direct input (DX)		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	○*1
	(V)	×	×	×	×	×	○*1
Long index register (LZ)		○	×	×	×	×	×
File register	(R)	○	○*3	×	○	×	○*4
	(ZR)	○	○*3	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×
	Link output (J*\Y)	○	○	○	○	×	×
	Link relay (J*\B)	○	○	○	○	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×
	Link register (J*\W)	○	○	○	○	×	×
	Link special register (J*\SW)	○	○	○	○	×	×
Special direct buffer memory (U*\G)		○	○*5	○	○	○	×

*1 : FX_0CPU, FX_{0S}CPU, FX_1CPU, FX_UCPU, and FX_{2C}CPU cannot be accessed when using the FX extended port.
*2 : Q12DCCPU-V (Basic mode) cannot be accessed.
*3 : Q00JCPU and Q00UJCPU cannot be accessed.
*4 : When accessing FX series CPU other than $FX_{3G(C)}$CPU and $FX_{3U(C)}$CPU, specify the data register (D).
The extended register (R) can be specified only when accessing $FX_{3G(C)}$CPU or $FX_{3U(C)}$CPU.
*5 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

(2) When access target is Motion CPU

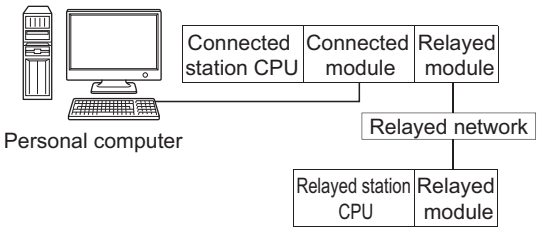
Device (Device Name)		Access Target			
		R16MT/R32MT	Q172/Q173/ Q172H/Q173H	Q172D/Q173D	Q172DS/Q173DS
Input relay (X)		○	○	○	○
Output relay (Y)		○	○	○	○
Internal relay (M)		○	○	○	○
Latch relay (L)		×	○	×	×
Annunciator (F)		○	○	○	○
Link relay (B)		○	○	○	○
Data register (D)		○	○	○	○
Link register (W)		○	○	○	○
Special register M (SPM)		×	○	×	×
Special register D (SPD)		×	○	×	×
Motion register (#)		○	○	○	○
Coasting timer (FT)		×	×	×	×
Special register (SD)		○	×	○	○
Special relay (SM)		○	×	○	○
CPU buffer memory access device	Multiple CPU area device (U3En\G)	×	×	○*1	○*1
	CPU buffer memory (U3En\G)	○	×	×	×
	CPU buffer memory fixed scan communication area (U3En\HG)	○	×	×	×
Module access device (U*\G)		○	×	×	×

*1 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

10.2.2 Accessible ranges

This section indicates the accessible ranges for serial communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU	R series-compatible C24	CC IE Control CC IE Field	○*2	×
		MELSECNET/H	×	×
		Ethernet	○	○
		Serial communication	○	○
		CC-Link	○	○
		Multi-drop connection (Independent mode)	○	×
		Multi-drop connection (Synchronous mode) *6	○	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×
		Multi-drop connection (Independent mode)	×	×	×	×	×	×
		Multi-drop connection (Synchronous mode) *6	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
R motion CPU *3	R series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
R motion CPU *3	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode), C Controller module *3	Q series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode)	×	×
		Multi-drop connection (Synchronous mode) *6	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), C Controller module *3	Q series-compatible C24	CC IE Control CC IE Field	○	○*1	○*2	○*1	○*1	×
		MELSECNET/H	○	○	×	○	○	×
		Ethernet	○	×	×	○	○	×
		Serial communication	○*4	×	○	×	○	×
		CC-Link	○	○	○	×	○	○*5
		Multi-drop connection (Independent mode)	○*4	×	○	×	×	×
		Multi-drop connection (Synchronous mode) *6	○*4	×	○	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
Q motion CPU	Q series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Q motion CPU	Q series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
LCPU	L series-compatible C24	CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode)	×	×
		Multi-drop connection (Synchronous mode)	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	L series-compatible C24	CC IE Field	○	○*1	○	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	○*4	×	○	×	×	×
		CC-Link	○	○	○	×	×	×
		Multi-drop connection (Independent mode)	○*4	×	○	×	×	×
		Multi-drop connection (Synchronous mode)	○*4	×	○	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
FXCPU	FX extended port	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU	FX extended port	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	○*7
		CC-Link	×	×	×	×	×	×

*1 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.

*2 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.

*3 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

*4 : For Redundant CPU, serial communication modules on the main base cannot be accessed.

*5 : Only $FX_{3G(C)}$CPU and $FX_{3U(C)}$CPU can be accessed.

*6 : Validate "SW6 (sum check)" for the transmission specification software switch setting of the R series-compatible C24 and Q series-compatible C24 parameter.

*7 : FX_0CPU, FX_{0S}CPU, FX_1CPU, FX_UCPU, and FX_{2C}CPU cannot be accessed.

10.3 For Ethernet Communication

This section provides the accessible devices and accessible ranges for Ethernet communication.

10.3.1 Accessible devices

The following table indicates the accessible devices for Ethernet communication.

(1) When access target is programmable controller CPU

Device (Device Name)		Access Target						
		RCPU	FX5CPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU*2
Function input (FX)		×	×	○	×	○	×	×
Function output (FY)		×	×	○	×	○	×	×
Function register (FD)		×	×	○	×	○	×	×
Special relay (SM)		○	○	○	○	○	○	×
Special register (SD)		○	○	○	○	○	○	×
Input relay (X)		○	○	○	○	○	○	○
Output relay (Y)		○	○	○	○	○	○	○
Internal relay (M)		○	○	○	○	○	○	○
Latch relay (L)		○	○	○	×	○	×	×
Annunciator (F)		○	○	○	×	○	○	×
Edge relay (V)		○	×	○	×	○	○	×
Link relay (B)		○	○	○	○*3	○	○	×
Data register (D)		○	○	○	○	○	○	○
Link register (W)		○	○	○	○*3	○	○	×
Timer (T)	Contact (TS)	○	○	○	×	○	○	○
	Coil (TC)	○	○	○	×	○	○	○
	Present value (TN)	○	○	○	×	○	○	○
Counter (C)	Contact (CS)	○	○	○	×	○	○	○
	Coil (CC)	○	○	○	×	○	○	○
	Present value (CN)	○	○	○	×	○	○	○
Retentive timer (ST)	Contact (STS/SS)	○	○	○	×	○	○	×
	Coil (STC/SC)	○	○	○	×	○	○	×
	Present value (STN/SN)	○	○	○	×	○	○	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	○	×	×	×	×	×
	Coil (LCC)	○	○	×	×	×	×	×
	Present value (LCN)	○	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×	×
Link special relay (SB)		○	○	○	×	○	○	×

Device (Device Name)		Access Target						
		RCPU	FX5CPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU*2
Link special register (SW)		○	○	○	×	○	○	×
Step relay (S)		×	○	×	×	×	×	○
Direct input (DX)		×	×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×	×
Index register	(Z)	○	○	○	×	○	×	○
	(V)	×	×	×	×	×	×	○
Long index register (LZ)		○	○	×	×	×	×	×
File register	(R)	○	○	○*4	×	○	×	○
	(ZR)	○	×	○*4	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×	×
Direct link	Link input (J*\X)	○	×	○	○	○	×	×
	Link output (J*\Y)	○	×	○	○	○	×	×
	Link relay (J*\B)	○	×	○	○	○	×	×
	Link special relay (J*\SB)	○	×	○	○	○	×	×
	Link register (J*\W)	○	×	○	○	○	×	×
	Link special register (J*\SW)	○	×	○	○	○	×	×
Special direct buffer memory (U*\G)		○	×	○*5	○	○	○	○
Module access device	Module access device (U*\G)	×	○	×	×	×	×	×
	Multiple CPU area device (U*\G)	×	×	×	×	×	×	×

*1 : Writing to device data cannot be performed.
*2 : For the supported FXCPU and devices, refer to the manuals of Ethernet module and setting software.
*3 : Q12DCCPU-V (Basic mode) cannot be accessed.
*4 : Q00JCPU and Q00UJCPU cannot be accessed.
*5 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

(2) When access target is Motion CPU

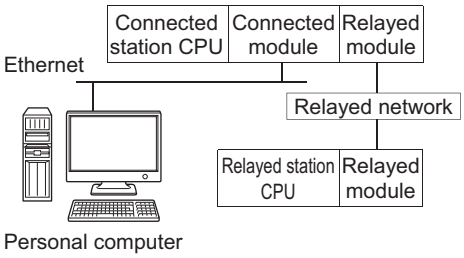
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.3.2 Accessible ranges (when using Ethernet modules)

This section indicates the accessible ranges for Ethernet communication using the Ethernet modules.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Point

The Ethernet parameters are required to be set in the PLC parameter setting of GX Works2.

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU, R motion CPU *4,*7	R series-compatible E71	CC IE Control CC IE Field	○*3	×
		MELSECNET/H	×	×
		Ethernet	○	○
		Serial communication	○	○
		CC-Link	○	○

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU, R motion CPU *4,*7	R series-compatible E71	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode), C Controller module *4	Q series-compatible E71	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), C Controller module *4	Q series-compatible E71	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
		MELSECNET/H	○	○	×	○	○	×
		Ethernet	○*5	×	×	○	○	×
		Serial communication	○*6	×	○	×	○	×
		CC-Link	○	○	○	×	○	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QSCPU *1, Q motion CPU *4,*5	Q series-compatible E71	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

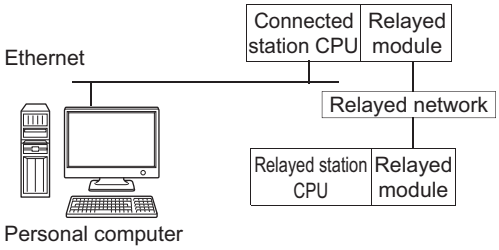
Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QSCPU *1, Q motion CPU *4,*5	Q series-compatible E71	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

*1 : Relayed stations cannot be accessed via QSCPU.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*5 : Only Q172D, Q173D, Q172DS, and Q173DS can be accessed.
*6 : For Redundant CPU, serial communication modules on the main base cannot be accessed.
*7 : Relayed stations cannot be accessed via R motion CPU.

10.3.3 Accessible ranges (when using Built-in Ethernet CPUs)

This section indicates the accessible ranges for Ethernet communication using the built-in Ethernet CPUs.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Point

When using TCP/IP on the built-in Ethernet CPU, the Ethernet parameters are required to be set in the PLC parameter setting of GX Works2.

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
RCPU	CC IE Control CC IE Field	○*2	×
	MELSECNET/H	×	×
	Ethernet	○	○
	Serial communication	○	○
	CC-Link	○	○

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
R motion CPU *5,*7	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
R motion CPU *5,*7	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FX5CPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FX5CPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QnUDE(H)CPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QnUDE(H)CPU	CC IE Control CC IE Field	○	○*1	○*2	○*1	○*1	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	○	×	×	○	○	×
	Serial communication	○*3	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *4,*5	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *4,*5	CC IE Control CC IE Field	○	○*1	○*2	○*1	○*1	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
Q motion CPU *5,*6	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Q motion CPU *5,*6	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

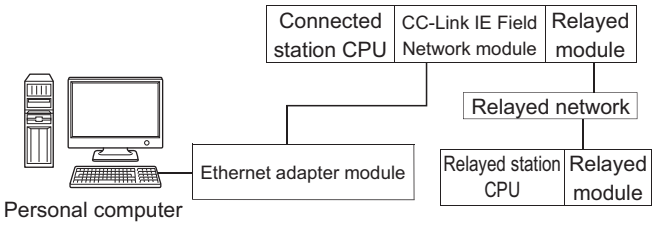
Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*1	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○*3	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

*1 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*2 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*3 : For Redundant CPU, serial communication modules on the main base cannot be accessed.
*4 : C Controller module does not support MELSOFT direct connection.
It cannot be accessed with Ethernet port direct connection.
*5 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*6 : Only Q172D, Q173D, Q172DS, and Q173DS can be accessed.
*7 : Relayed stations cannot be accessed via R motion CPU.

10.3.4 Accessible ranges (when using Ethernet adapter module)

This section indicates the accessible ranges for Ethernet communication using the Ethernet adapter module.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QnUDE(H)CPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QnUDE(H)CPU	CC IE Control CC IE Field	○	○*1	○*2	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	○	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*1	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

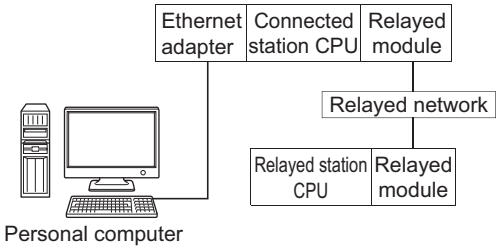
*1 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.

*2 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

10.3.5 Accessible ranges (when using Ethernet adapter)

This section indicates the accessible ranges for Ethernet communication using Ethernet adapter.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU*1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU*1	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : Only FX3SCPU, FX3G(C)CPU, and FX3U(C)CPU can be accessed.

10.4 For CPU COM Communication

This section provides the accessible devices and accessible ranges for CPU COM communication.

10.4.1 Accessible devices

The following table indicates the accessible devices for CPU COM communication.

(1) When access target is programmable controller CPU

Device (Device Name)		Access target						
		RCPU	FX5CPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Function input (FX)		×	×	○	×	○	×	×
Function output (FY)		×	×	○	×	○	×	×
Function register (FD)		×	×	○	×	○	×	×
Special relay (SM)		○	○	○	○	○	×	×
Special register (SD)		○	○	○	○	○	×	×
Input relay (X)		○	○	○	○	○	×	○
Output relay (Y)		○	○	○	○	○	×	○
Internal relay (M)		○	○	○	○	○	×	○
Latch relay (L)		○	○	○	×	○	×	×
Annunciator (F)		○	○	○	×	○	×	×
Edge relay (V)		○	×	○	×	○	×	×
Link relay (B)		○	○	○	○*1	○	×	×
Data register (D)		○	○	○	○	○	×	○
Link register (W)		○	○	○	○*1	○	×	×
Timer (T)	Contact (TS)	○	○	○	×	○	×	○
	Coil (TC)	○	○	○	×	○	×	○
	Present value (TN)	○	○	○	×	○	×	○
Counter (C)	Contact (CS)	○	○	○	×	○	×	○
	Coil (CC)	○	○	○	×	○	×	○
	Present value (CN)	○	○	○	×	○	×	○
Retentive timer (ST)	Contact (STS/SS)	○	○	○	×	○	×	×
	Coil (STC/SC)	○	○	○	×	○	×	×
	Present value (STN/SN)	○	○	○	×	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	○	×	×	×	×	×
	Coil (LCC)	○	○	×	×	×	×	×
	Present value (LCN)	○	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×	×
Link special relay (SB)		○	○	○	×	○	×	×

Device (Device Name)		Access target						
		RCPU	FX5CPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Link special register (SW)		○	○	○	×	○	×	×
Step relay (S)		×	○	×	×	×	×	○
Direct input (DX)		×	×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×	×
Index register	(Z)	○	○	○	×	○	×	○
	(V)	×	×	×	×	×	×	○
Long index register (LZ)		○	○	×	×	×	×	×
File register	(R)	○	○	○*2	×	○	×	○*3
	(ZR)	○	×	○*2	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×	×
Direct link	Link input (J*\X)	○	×	○	○	○	×	×
	Link output (J*\Y)	○	×	○	○	○	×	×
	Link relay (J*\B)	○	×	○	○	○	×	×
	Link special relay (J*\SB)	○	×	○	○	○	×	×
	Link register (J*\W)	○	×	○	○	○	×	×
	Link special register (J*\SW)	○	×	○	○	○	×	×
Special direct buffer memory (U*\G)		○	×	○*4	○	○	○	○*5
Module access device	Module access device (U*\G)	×	○	×	×	×	×	×
	Multiple CPU area device (U*\G)	×	×	×	×	×	×	×

*1 : Q12DCCPU-V (Basic mode) cannot be accessed.
*2 : Q00JCPU and Q00UJCPU cannot be accessed.
*3 : When accessing FX series CPU other than FX3G(C)CPU and FX3U(C)CPU, specify the data register (D).
The extended register (R) can be specified only when accessing FX3G(C)CPU or FX3U(C)CPU.
*4 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.
*5 : Only FX3U(C)CPU can be accessed.

(2) When access target is Motion CPU

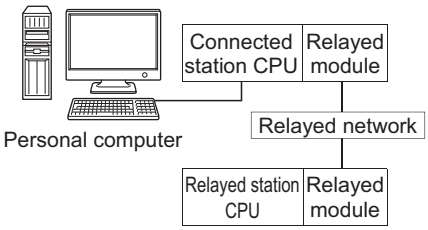
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.4.2 Accessible ranges

This section indicates the accessible ranges for CPU COM communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FX5CPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FX5CPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode), C Controller module *7	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), C Controller module *7	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	○	×	×	○	○	×
	Serial communication	○*5	×	○	×	○	×
	CC-Link	○	○	○	×	○	○*6

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*2	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○*5	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
Q motion CPU *4,*7	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Q motion CPU *4,*7	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	○*6

*1 : For Q00J/Q00UJ/Q00/Q00U/Q01/Q01UCPU, restrictions on the number of mountable modules are applied to some network cards. (☞ Page 382, Appendix 5)

*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.

*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

*4 : Only Q172D, Q173D, Q172DS, and Q173DS can be accessed.

*5 : For Redundant CPU, serial communication modules on the main base cannot be accessed.

*6 : Only FX3G(C)CPU and FX3U(C)CPU can be accessed.

*7 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

10.5 For CPU USB Communication

This section provides the accessible devices and accessible ranges for CPU USB communication.

10.5.1 Accessible devices

The following table indicates the accessible devices for CPU USB communication.

(1) When access target is programmable controller CPU

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU
Function input (FX)		×	○	×	○	×	×
Function output (FY)		×	○	×	○	×	×
Function register (FD)		×	○	×	○	×	×
Special relay (SM)		○	○	○	○	○	×
Special register (SD)		○	○	○	○	○	×
Input relay (X)		○	○	○	○	○	○*2
Output relay (Y)		○	○	○	○	○	○*2
Internal relay (M)		○	○	○	○	○	○*2
Latch relay (L)		○	○	×	○	×	×
Annunciator (F)		○	○	×	○	○	×
Edge relay (V)		○	○	×	○	○	×
Link relay (B)		○	○	○*3	○	○	×
Data register (D)		○	○	○	○	○	○*2
Link register (W)		○	○	○*3	○	○	×
Timer (T)	Contact (TS)	○	○	×	○	○	○*2
	Coil (TC)	○	○	×	○	○	○*2
	Present value (TN)	○	○	×	○	○	○*2
Counter (C)	Contact (CS)	○	○	×	○	○	○*2
	Coil (CC)	○	○	×	○	○	○*2
	Present value (CN)	○	○	×	○	○	○*2
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	○	×
	Coil (STC/SC)	○	○	×	○	○	×
	Present value (STN/SN)	○	○	×	○	○	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×
Link special relay (SB)		○	○	×	○	○	×
Link special register (SW)		○	○	×	○	○	×
Step relay (S)		×	×	×	×	×	○*2
Direct input (DX)		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	○*2
	(V)	×	×	×	×	×	○*2
Long index register (LZ)		○	×	×	×	×	×
File register	(R)	○	○*4	×	○	×	○*2
	(ZR)	○	○*4	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×
	Link output (J*\Y)	○	○	○	○	×	×
	Link relay (J*\B)	○	○	○	○	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×
	Link register (J*\W)	○	○	○	○	×	×
	Link special register (J*\SW)	○	○	○	○	×	×
Special direct buffer memory (U*\G)		○	○*5	○	○	○	×

*1 : Writing to device data cannot be performed.
*2 : When accessing FX series CPU other than FX3G(C)CPU and FX3U(C)CPU, specify the data register (D).The extended register (R) can be specified only when accessing FX3G(C)CPU or FX3U(C)CPU.
*3 : Q12DCCPU-V (Basic mode) cannot be accessed.
*4 : Q00JCPU and Q00UJCPU cannot be accessed.
*5 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

(2) When access target is Motion CPU

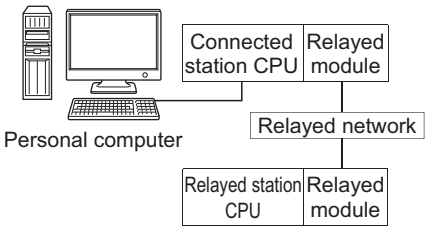
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.5.2 Accessible ranges

This section indicates the accessible ranges for CPU USB communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
RCPU, R motion CPU *4,*8	CC IE Control CC IE Field	○*3	×
	MELSECNET/H	×	×
	Ethernet	○	○
	Serial communication	○	○
	CC-Link	○	○

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU, R motion CPU *4,*8	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode), QSCPU *1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), QSCPU *1	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	○	×	×	○	○	×
	Serial communication	○*5	×	○	×	○	×
	CC-Link	○	○	○	×	○	○*6

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*2	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○*5	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
Q motion CPU *7	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Q motion CPU *7	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	○*6

*1 : Relayed stations cannot be accessed via QSCPU.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*5 : For Redundant CPU, serial communication modules on the main base cannot be accessed.
*6 : Only FX3G(C)CPU and FX3U(C)CPU can be accessed.
*7 : Except for Q172, Q173, Q172H, and Q173H, only CPU No.2 or later in multiple CPU configuration can be accessed.
*8 : Relayed stations cannot be accessed via R motion CPU.

10.6 For CC-Link Communication

This section provides the accessible devices and accessible ranges for CC-Link communication.

10.6.1 Accessible devices

The following table indicates the accessible devices for CC-Link communication.

(1) For another station access

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Function input (FX)		×	○	×	○	×	×
Function output (FY)		×	○	×	○	×	×
Function register (FD)		×	○	×	○	×	×
Special relay (SM)		○	○	○	○	×	×
Special register (SD)		○	○	○	○	×	×
Input relay (X)		○	○	○	○	×	○*1
Output relay (Y)		○	○	○	○	×	○*1
Internal relay (M)		○	○	○	○	×	○*1
Latch relay (L)		○	○	×	○	×	×
Annunciator (F)		○	○	×	○	×	×
Edge relay (V)		○	○	×	○	×	×
Link relay (B)		○	○	○*2	○	×	×
Data register (D)		○	○	○	○	×	○*1
Link register (W)		○	○	○*2	○	×	×
Timer (T)	Contact (TS)	○	○	×	○	×	○*1
	Coil (TC)	○	○	×	○	×	○*1
	Present value (TN)	○	○	×	○	×	○*1
Counter (C)	Contact (CS)	○	○	×	○	×	○*1
	Coil (CC)	○	○	×	○	×	○*1
	Present value (CN)	○	○	×	○	×	○*1
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	×	×
	Coil (STC/SC)	○	○	×	○	×	×
	Present value (STN/SN)	○	○	×	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Link special relay (SB)		○	○	×	○	×	×
Link special register (SW)		○	○	×	○	×	×
Step relay (S)		×	×	×	×	×	○*1
Direct input (DX)		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	○*1
	(V)	×	×	×	×	×	○*1
Long index register (LZ)		○	×	×	×	×	×
File register	(R)	○	○*3	×	○	×	×
	(ZR)	○	○*3	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×
	Link output (J*\Y)	○	○	○	○	×	×
	Link relay (J*\B)	○	○	○	○	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×
	Link register (J*\W)	○	○	○	○	×	×
	Link special register (J*\SW)	○	○	○	○	×	×
Special direct buffer memory (U*\G)		○	○*4	○	○	×	○*5

*1 : Only FX3G(C)CPU and FX3U(C)CPU can be accessed.
*2 : Q12DCCPU-V (Basic mode) cannot be accessed.
*3 : Q00JCPU and Q00UJCPU cannot be accessed.
*4 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.
*5 : Only FX3U(C)CPU can be accessed.

(2) For own board access

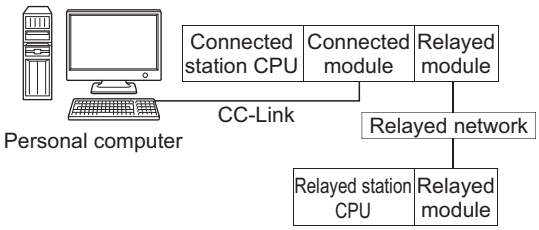
The following devices are usable only for own board access.

Device	Device Name	Remarks
Special relay	SM	Special relay of own board
Special register	SD	Special register of own board
Link special relay (for CC-Link)	SB	Link special relay of own board
Link special register (for CC-Link)	SW	Link special register of own board
Remote input	X	RX
Remote output	Y	RY
Link register	W	-
Remote register (write area for CC-Link)	WW	RW_w
Remote register (read area for CC-Link)	WR	RW_r
Buffer memory	ML	Buffer memory of own station CC-Link module
Random access buffer	MC	Random access buffer in buffer memory of own station CC-Link module
Automatic refresh buffer	MF	Automatic refresh buffer of own station CC-Link module

10.6.2 Accessible ranges

This section indicates the accessible ranges for CC-Link communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs and own board (CC-Link board) are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode), Q motion CPU *1,*4	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), Q motion CPU *1,*4	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	○	×	×	○	○	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *5	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *5	CC IE Control CC IE Field	○	○*2	×	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : Relayed stations cannot be accessed via Q motion CPU.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*5 : Q24DHCCPU-V and Q24DHCCPU-LS cannot be accessed because the communication route is not supported.

10.7 For CC-Link G4 Communication

This section provides the accessible devices and accessible ranges for CC-Link G4 communication.

10.7.1 Accessible devices

The following table indicates the accessible devices for CC-Link G4 communication.

(1) When access target is programmable controller CPU

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Function input (FX)		×	○	×	○	×	×
Function output (FY)		×	○	×	○	×	×
Function register (FD)		×	○	×	○	×	×
Special relay (SM)		○	○	○	○	×	×
Special register (SD)		○	○	○	○	×	×
Input relay (X)		○	○	○	○	×	×
Output relay (Y)		○	○	○	○	×	×
Internal relay (M)		○	○	○	○	×	×
Latch relay (L)		○	○	×	○	×	×
Annunciator (F)		○	○	×	○	×	×
Edge relay (V)		○	○	×	○	×	×
Link relay (B)		○	○	○*1	○	×	×
Data register (D)		○	○	○	○	×	×
Link register (W)		○	○	○*1	○	×	×
Timer (T)	Contact (TS)	○	○	×	○	×	×
	Coil (TC)	○	○	×	○	×	×
	Present value (TN)	○	○	×	○	×	×
Counter (C)	Contact (CS)	○	○	×	○	×	×
	Coil (CC)	○	○	×	○	×	×
	Present value (CN)	○	○	×	○	×	×
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	×	×
	Coil (STC/SC)	○	○	×	○	×	×
	Present value (STN/SN)	○	○	×	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×
Link special relay (SB)		○	○	×	○	×	×

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Link special register (SW)		○	○	×	○	×	×
Step relay (S)		×	×	×	×	×	×
Direct input (DX)		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	×
	(V)	×	×	×	×	×	×
Long index register (LZ)		○	×	×	×	×	×
File register	(R)	○	○*2	×	○	×	×
	(ZR)	○	○*2	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×
	Link output (J*\Y)	○	○	○	○	×	×
	Link relay (J*\B)	○	○	○	○	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×
	Link register (J*\W)	○	○	○	○	×	×
	Link special register (J*\SW)	○	○	○	○	×	×
Special direct buffer memory (U*\G)		○	○	○	○	○	×

*1 : Q12DCCPU-V (Basic mode) cannot be accessed.
*2 : Q00JCPU and Q00UJCPU cannot be accessed.

(2) When access target is Motion CPU

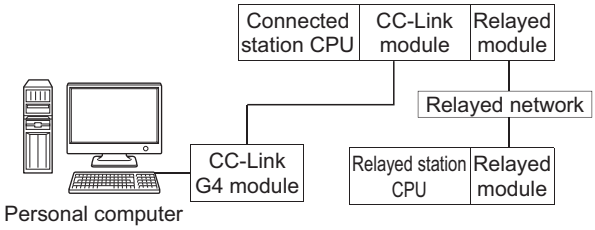
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.7.2 Accessible ranges

This section indicates the accessible ranges for CC-Link G4 communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode), Q motion CPU *1,*5	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), Q motion CPU *1,*5	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	○	×	×	○	○	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *4	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *4	CC IE Control CC IE Field	○	○*2	○*3	○*2	○*2	×
	MELSECNET/H	○	○	×	○	○	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : Relayed stations cannot be accessed via Q motion CPU.

*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode), QSCPU, and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.

*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

*4 : Q24DHCCPU-V and Q24DHCCPU-LS cannot be accessed because the communication route is not supported.

*5 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

10.8 For MELSECNET/H Communication

This section provides the accessible devices and accessible ranges for MELSECNET/H communication.

10.8.1 Accessible devices

The following table indicates the accessible devices for MELSECNET/H communication.

(1) When access target is programmable controller CPU or own board

Device (Device Name)		Access Target						
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU	Own board
Function input (FX)		×	○	×	○	×	×	×
Function output (FY)		×	○	×	○	×	×	×
Function register (FD)		×	○	×	○	×	×	×
Special relay (SM)		○	○	○	○	○	×	○
Special register (SD)		○	○	○	○	○	×	○
Input relay (X)		○	○	○	○	○	×	○
Output relay (Y)		○	○	○	○	○	×	○
Internal relay (M)		○	○	○	○	○	×	×
Latch relay (L)		○	○	×	○	×	×	×
Annunciator (F)		○	○	×	○	○	×	×
Edge relay (V)		○	○	×	○	○	×	×
Link relay (B)		○	○	○*2	○	○	×	○
Data register (D)		○	○	○	○	○	×	×
Link register (W)		○	○	○*2	○	○	×	○
Timer (T)	Contact (TS)	○	○	×	○	○	×	×
	Coil (TC)	○	○	×	○	○	×	×
	Present value (TN)	○	○	×	○	○	×	×
Counter (C)	Contact (CS)	○	○	×	○	○	×	×
	Coil (CC)	○	○	×	○	○	×	×
	Present value (CN)	○	○	×	○	○	×	×
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	○	×	×
	Coil (STC/SC)	○	○	×	○	○	×	×
	Present value (STN/SN)	○	○	×	○	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×	×

Device (Device Name)		Access Target						
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU	Own board
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×	×
Link special relay (SB)		○	○	×	○	○	×	○
Link special register (SW)		○	○	×	○	○	×	○
Step relay (S)		×	×	×	×	×	×	×
Direct input (DX)		×	×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	×	×
	(V)	×	×	×	×	×	×	×
Long index register (LZ)		○	×	×	×	×	×	×
File register	(R)	○	○*3	×	○	×	×	×
	(ZR)	○	○*3	×	○	×	×	×
Refresh device for modules (RD)		○	×	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×	×
	Link output (J*\Y)	○	○	○	○	×	×	×
	Link relay (J*\B)	○	○	○	○	×	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×	×
	Link register (J*\W)	○	○	○	○	×	×	×
	Link special register (J*\SW)	○	○	○	○	×	×	×
Special direct buffer memory (U*\G)		○	○*4	○	○	×	×	×

*1 : Writing to device data cannot be performed.
*2 : Q12DCCPU-V (Basic mode) cannot be accessed.
*3 : Q00JCPU and Q00UJCPU cannot be accessed.
*4 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

(2) When access target is Motion CPU

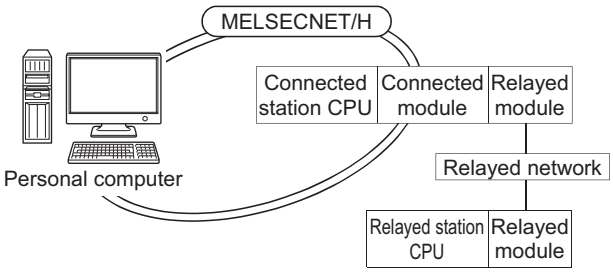
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.8.2 Accessible ranges

This section indicates the accessible ranges for MELSECNET/H communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs and own board (MELSECNET/H board) are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode), QSCPU *1,*6, Q motion CPU *1,*6	CC IE Control CC IE Field	×	×
	MELSECNET/H *4	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), QSCPU *1,*6, Q motion CPU *1,*6	CC IE Control CC IE Field	○	○*2	○*3	○*2	×	×
	MELSECNET/H *4	○	○	×	○	×	×
	Ethernet	○	×	×	○	×	×
	Serial communication	○*5	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *7	CC IE Control CC IE Field	×	×
	MELSECNET/H *4	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *7	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H *4	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	○	×

*1 : Relayed stations cannot be accessed via QSCPU or Q motion CPU.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and QSCPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : The modules can be accessed when the MELSECNET/H module of the connected station is in the MELSECNET/H mode.
*5 : For Redundant CPU, serial communication modules on the main base cannot be accessed.
*6 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*7 : Q24DHCCPU-V and Q24DHCCPU-LS cannot be accessed because the communication route is not supported.

10.9 For CC-Link IE Controller Network Communication

This section provides the accessible devices and accessible ranges for CC-Link IE Controller Network communication.

10.9.1 Accessible devices

The following table indicates the accessible devices for CC-Link IE Controller Network communication.

(1) When access target is programmable controller CPU or own board

Device (Device Name)		Access Target						
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU	Own board
Function input (FX)		×	○	×	○	×	×	×
Function output (FY)		×	○	×	○	×	×	×
Function register (FD)		×	○	×	○	×	×	×
Special relay (SM)		○	○	○	○	○	×	○
Special register (SD)		○	○	○	○	○	×	○
Input relay (X)		○	○	○	○	○	×	○
Output relay (Y)		○	○	○	○	○	×	○
Internal relay (M)		○	○	○	○	○	×	×
Latch relay (L)		○	○	×	○	×	×	×
Annunciator (F)		○	○	×	○	○	×	×
Edge relay (V)		○	○	×	○	○	×	×
Link relay (B)		○	○	○*2	○	○	×	×
Data register (D)		○	○	○	○	○	×	×
Link register (W)		○	○	○*2	○	○	×	○
Timer (T)	Contact (TS)	○	○	×	○	○	×	×
	Coil (TC)	○	○	×	○	○	×	×
	Present value (TN)	○	○	×	○	○	×	×
Counter (C)	Contact (CS)	○	○	×	○	○	×	×
	Coil (CC)	○	○	×	○	○	×	×
	Present value (CN)	○	○	×	○	○	×	×
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	○	×	×
	Coil (STC/SC)	○	○	×	○	○	×	×
	Present value (STN/SN)	○	○	×	○	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×	×

Device (Device Name)		Access Target						
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU	Own board
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×	×
Link special relay (SB)		○	○	×	○	○	×	○
Link special register (SW)		○	○	×	○	○	×	○
Step relay (S)		×	×	×	×	×	×	×
Direct input (DX)		×	×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	×	×
	(V)	×	×	×	×	×	×	×
Long index register (LZ)		○	×	×	×	×	×	×
File register	(R)	○	○*3	×	○	×	×	×
	(ZR)	○	○*3	×	○	×	×	×
Refresh device for modules (RD)		○	×	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×	×
	Link output (J*\Y)	○	○	○	○	×	×	×
	Link relay (J*\B)	○	○	○	○	×	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×	×
	Link register (J*\W)	○	○	○	○	×	×	×
	Link special register (J*\SW)	○	○	○	○	×	×	×
Special direct buffer memory (U*\G)		○	○*4	○	○	×	×	×

*1 : Writing to device data cannot be performed.
*2 : Q12DCCPU-V (Basic mode) cannot be accessed.
*3 : Q00JCPU and Q00UJCPU cannot be accessed.
*4 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

(2) When access target is Motion CPU

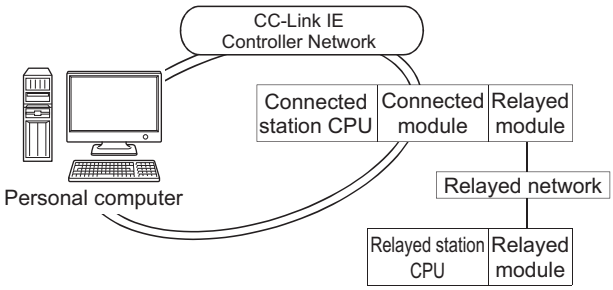
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.9.2 Accessible ranges

This section indicates the accessible ranges for CC-Link IE Controller Network communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs and own board (CC-Link IE Controller Network board) are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode), QSCPU *1,*6, Q motion CPU *1,*6	CC IE Control CC IE Field	×	×
	MELSECNET/H *4	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode), QSCPU *1,*6, Q motion CPU *1,*6	CC IE Control CC IE Field	○	○*2	○*3	○*2	×	×
	MELSECNET/H *4	○	○	×	○	×	×
	Ethernet	○	×	×	○	×	×
	Serial communication	○*5	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *7	CC IE Control CC IE Field	×	×
	MELSECNET/H *4	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *7	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H *4	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	○	×

*1 : Relayed stations cannot be accessed via QSCPU or Q motion CPU.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and QSCPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : The modules can be accessed when the MELSECNET/H module of the connected station is in the MELSECNET/H mode.
*5 : For Redundant CPU, serial communication modules on the main base cannot be accessed.
*6 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*7 : Q24DHCCPU-V and Q24DHCCPU-LS cannot be accessed because the communication route is not supported.

10.10 For CC-Link IE Field Network Communication

This section provides the accessible devices and accessible ranges for CC-Link IE Field Network communication.

10.10.1 Accessible devices

The following table indicates the accessible devices for CC-Link IE Field Network communication.

(1) When access target is programmable controller CPU or own board

Device (Device Name)		Access Target						
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU	Own board
Function input (FX)		×	○	×	○	×	×	×
Function output (FY)		×	○	×	○	×	×	×
Function register (FD)		×	○	×	○	×	×	×
Special relay (SM)		○	○	○	○	○	×	○
Special register (SD)		○	○	○	○	○	×	○
Input relay (X)		○	○	○	○	○	×	○
Output relay (Y)		○	○	○	○	○	×	○
Internal relay (M)		○	○	○	○	○	×	×
Latch relay (L)		○	○	×	○	×	×	×
Annunciator (F)		○	○	×	○	○	×	×
Edge relay (V)		○	○	×	○	○	×	×
Link relay (B)		○	○	○*2	○	○	×	×
Data register (D)		○	○	○	○	○	×	×
Link register (W)		○	○	○*2	○	○	×	○
Timer (T)	Contact (TS)	○	○	×	○	○	×	×
	Coil (TC)	○	○	×	○	○	×	×
	Present value (TN)	○	○	×	○	○	×	×
Counter (C)	Contact (CS)	○	○	×	○	○	×	×
	Coil (CC)	○	○	×	○	○	×	×
	Present value (CN)	○	○	×	○	○	×	×
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	○	×	×
	Coil (STC/SC)	○	○	×	○	○	×	×
	Present value (STN/SN)	○	○	×	○	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×	×

Device (Device Name)		Access Target						
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU*1	FXCPU	Own board
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×	×
Link special relay (SB)		○	○	×	○	○	×	○
Link special register (SW)		○	○	×	○	○	×	○
Step relay (S)		×	×	×	×	×	×	×
Direct input (DX)		×	×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	×	×
	(V)	×	×	×	×	×	×	×
Long index register (LZ)		○	×	×	×	×	×	×
File register	(R)	○	○*3	×	○	×	×	×
	(ZR)	○	○*3	×	○	×	×	×
Refresh device for modules (RD)		○	×	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×	×
	Link output (J*\Y)	○	○	○	○	×	×	×
	Link relay (J*\B)	○	○	○	○	×	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×	×
	Link register (J*\W)	○	○	○	○	×	×	×
	Link special register (J*\SW)	○	○	○	○	×	×	×
Special direct buffer memory (U*\G)		○	○*4	○	○	×	×	×

*1 : Writing to device data cannot be performed.
*2 : Q12DCCPU-V (Basic mode) cannot be accessed.
*3 : Q00JCPU and Q00UJCPU cannot be accessed.
*4 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

(2) When access target is Motion CPU

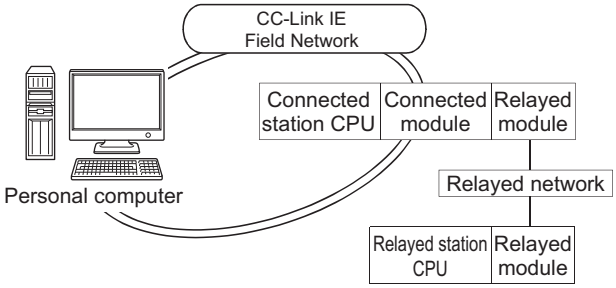
For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.10.2 Accessible ranges

This section indicates the accessible ranges for CC-Link IE Field Network communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs and own board (CC-Link IE Field Network board) are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode)	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode)	CC IE Control CC IE Field	○	○*1	○*2	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	○	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	×	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

*1 : Since CC-Link IE Controller Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Controller Network cannot be accessed.

*2 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

10.11 For Q Series Bus Communication

This section provides the accessible devices and accessible ranges for Q series bus communication.

10.11.1 Accessible devices

The following table indicates the accessible devices for Q series bus communication.

Device (Device Name)		Access Target Q02(H), Q06H, Q12H, Q25H, Q02PH, Q06PH, Q12PH, Q25PH	Device (Device Name)		Access Target Q02(H), Q06H, Q12H, Q25H, Q02PH, Q06PH, Q12PH, Q25PH
Function input (FX)		○	Link special relay (SB)		○
Function output (FY)		○	Link special register (SW)		○
Function register (FD)		○	Step relay (S)		×
Special relay (SM)		○	Direct input (DX)		×
Special register (SD)		○	Direct output (DY)		×
Input relay (X)		○	Accumulator (A)		×
Output relay (Y)		○	Index register	(Z)	○
Internal relay (M)		○		(V)	×
Latch relay (L)		○	File register	(R)	○
Annunciator (F)		○		(ZR)	○
Edge relay (V)		○	Extended file register (ER*\R)		×
Link relay (B)		○	Direct link	Link input (J*\X)	○
Data register (D)		○		Link output (J*\Y)	○
Link register (W)		○		Link relay (J*\B)	○
Timer (T)	Contact (TS)	○		Link special relay (J*\SB)	○
	Coil (TC)	○		Link register (J*\W)	○
	Present value (TN)	○		Link special register (J*\SW)	○
Counter (C)	Contact (CS)	○	Special direct buffer memory (U*\G)		○*1
	Coil (CC)	○			
	Present value (CN)	○			
Retentive timer (ST)	Contact (STS)	○			
	Coil (STC)	○			
	Present value (STN)	○			

*1 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.

10.11.2 Accessible ranges

This section indicates the accessible ranges for Q series bus communication.

(1) Another CPU on the same base can be accessed.
However, another CPU cannot be accessed via the network of another CPU.

(2) Another CPU can be accessed via the MELSECNET/H module controlled by the PC CPU module.
In this case, the accessible ranges are as in MELSECNET/H communication. (☞ Page 302, Section 10.8.2)

The personal computer used for MELSECNET/H communication corresponds to the PC CPU module, and the MELSECNET/H board to the MELSECNET/H module.

(3) Another CPU can be accessed via the CC-Link module controlled by the PC CPU module.
In this case, the accessible ranges are as in CC-Link communication. (☞ Page 294, Section 10.6.2)

The personal computer used for CC-Link communication corresponds to the PC CPU module, and the CC-Link board to the CC-Link module.

10.12 For Modem Communication

This section explains the accessible devices and accessible ranges for modem communication.

10.12.1 Accessible devices

The following table indicates the accessible devices for modem communication.

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Function input (FX)		×	○	×	○	×	×
Function output (FY)		×	○	×	○	×	×
Function register (FD)		×	○	×	○	×	×
Special relay (SM)		○	○	○	○	×	×
Special register (SD)		○	○	○	○	×	×
Input relay (X)		○	○	○	○	×	○*1
Output relay (Y)		○	○	○	○	×	○*1
Internal relay (M)		○	○	○	○	×	○*1
Latch relay (L)		○	○	×	○	×	×
Annunciator (F)		○	○	×	○	×	×
Edge relay (V)		○	○	×	○	×	×
Link relay (B)		○	○	○*2	○	×	×
Data register (D)		○	○	○	○	×	○*1
Link register (W)		○	○	○*2	○	×	×
Timer (T)	Contact (TS)	○	○	×	○	×	○*1
	Coil (TC)	○	○	×	○	×	○*1
	Present value (TN)	○	○	×	○	×	○*1
Counter (C)	Contact (CS)	○	○	×	○	×	○*1
	Coil (CC)	○	○	×	○	×	○*1
	Present value (CN)	○	○	×	○	×	○*1
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	×	×
	Coil (STC/SC)	○	○	×	○	×	×
	Present value (STN/SN)	○	○	×	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×
Link special relay (SB)		○	○	×	○	×	×
Link special register (SW)		○	○	×	○	×	×

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Step relay (S)		×	×	×	×	×	○*1
Direct input (DX)		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	○*1
	(V)	×	×	×	×	×	○*1
Long index register (LZ)		○	×	×	×	×	×
File register	(R)	○	○*3	×	○	×	○*4
	(ZR)	○	○*3	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×
	Link output (J*\Y)	○	○	○	○	×	×
	Link relay (J*\B)	○	○	○	○	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×
	Link register (J*\W)	○	○	○	○	×	×
	Link special register (J*\SW)	○	○	○	○	×	×
Special direct buffer memory (U*\G)		○	○*5	○	○	×	○*6

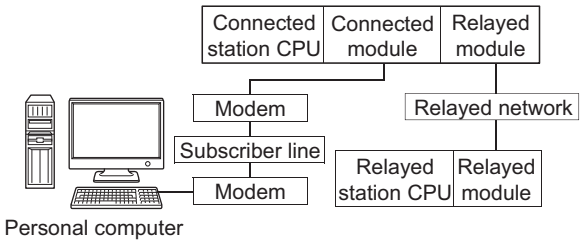
*1 : FX_0CPU, FX_{0S}CPU, FX_{0N}CPU, FX_1CPU, FX_UCPU, and FX_{2C}CPU cannot be accessed.
*2 : Q12DCCPU-V (Basic mode) cannot be accessed.
*3 : Q00JCPU and Q00UJCPU cannot be accessed.
*4 : When accessing FX series CPU other than $FX_{3G(C)}$CPU and $FX_{3U(C)}$CPU, specify the data register (D).
The extended register (R) can be specified only when accessing $FX_{3G(C)}$CPU or $FX_{3U(C)}$CPU.
*5 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed.
Writing to the shared memory cannot be performed regardless of the host or other CPU.
*6 : Only $FX_{3U(C)}$CPU can be accessed.

10.12.2 Accessible ranges

This section indicates the accessible ranges for Modem communication.

(1) When using Q series-compatible C24 and L series-compatible C24

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode)	Q series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *4	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode)	Q series-compatible C24	CC IE Control CC IE Field	○	○*1	○*2	○*1	×	×
		MELSECNET/H	○	○	×	○	×	×
		Ethernet	○	×	×	○	×	×
		Serial communication	○*3	×	○	×	×	×
		CC-Link	○	○	○	×	×	×
		Multi-drop connection (Independent mode) *4	○*3	×	○	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
LCPU	L series-compatible C24	CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode)*4	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	L series-compatible C24	CC IE Field	○	○*1	○	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	○*3	×	○	×	×	×
		CC-Link	○	○	○	×	×	×
		Multi-drop connection (Independent mode)*4	○*3	×	○	×	×	×

*1 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and QSCPU relayed by CC-Link IE Field Network cannot be accessed.

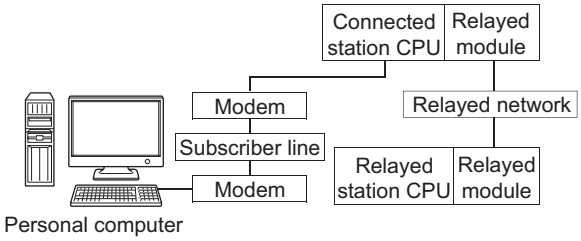
*2 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

*3 : For Redundant CPU, serial communication modules on the main base cannot be accessed.

*4 : Indicates the CH2 side setting. (The CH1 side is fixed to the independent mode.)

(2) When using FXCPU

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU *1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU *1	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : FX_0CPU, FX_{0S}CPU, FX_{0N}CPU, FX_1CPU, FX_UCPU, and FX_{2C}CPU cannot be accessed.

10.13 For Gateway Function Communication

This section describes the accessible devices and accessible ranges for gateway function communication.

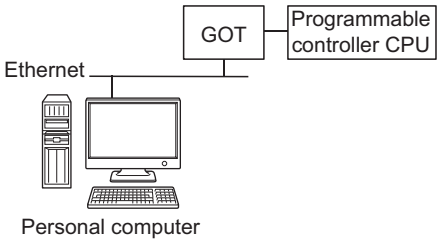
10.13.1 Accessible devices

This section indicates the accessible devices for gateway function communication.
Only the following device is accessible for gateway function communication.
Device : Gateway device
Device name: EG

10.13.2 Accessible ranges

This section indicates the accessible ranges for gateway function communication.

(1) Configuration



(2) Accessible ranges

Only the connected GOT can be accessed.

10.14 For GX Simulator Communication

This section describes the accessible devices and accessible ranges for GX Simulator communication.

10.14.1 Accessible devices

The accessible devices of other station during GX Simulator communication depends on the other station device settings set on the device manager of GX Simulator.
For other station device setting, refer to the following manual.
GX Simulator Version 7 Operating Manual

10.14.2 Accessible ranges

The following table indicates the accessible ranges for GX Simulator communication.
Whether the target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Target Station	Target CPU	
	RCPU	R motion CPU
Host station	×	×
Other station	×	×

Target Station	Target CPU					
	QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Host station	○	×	×	×	×	○
Other station	○	×	×	×	×	×

10.15 For GX Simulator2 Communication

This section describes the accessible devices and accessible ranges for GX Simulator2 communication.

10.15.1 Accessible devices

The accessible devices during GX Simulator2 communication depend on the device supported by GX Simulator2.
For details, refer to the following manual.
GX Works2 Version 1 Operating Manual (Common)

10.15.2 Accessible ranges

The following table indicates the accessible ranges for GX Simulator2 communication.
Whether the target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Target Station	Target CPU	
	RCPU	R motion CPU
Other station	×	×

Target Station	Target CPU					
	QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Other station	○	×	○	×	×	○

10.16 For MT Simulator2 Communication

This section describes the accessible devices and accessible ranges for MT Simulator2 communication.

10.16.1 Accessible devices

The accessible devices during MT Simulator2 communication depend on the device supported by MT Simulator2.
For accessible device list of Q motion CPU, refer to the following section.
☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.16.2 Accessible ranges

The following table indicates the accessible ranges for MT Simulator2 communication.
Whether the target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Target Station	Target CPU	
	RCPU	R motion CPU
Other station	×	×

Target Station	Target CPU					
	QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
Other station	×	×	×	×	○	×

10.17 For GOT Transparent Communication

This section provides the accessible devices and accessible ranges for GOT transparent communication.

10.17.1 Accessible devices

The following table indicates the accessible devices for GOT transparent communication.

(1) When access target is programmable controller CPU

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Function input (FX)		×	○	×	○	×	×
Function output (FY)		×	○	×	○	×	×
Function register (FD)		×	○	×	○	×	×
Special relay (SM)		○	○	○	○	×	×
Special register (SD)		○	○	○	○	×	×
Input relay (X)		○	○	○	○	×	○
Output relay (Y)		○	○	○	○	×	○
Internal relay (M)		○	○	○	○	×	○
Latch relay (L)		○	○	×	○	×	×
Annunciator (F)		○	○	×	○	×	×
Edge relay (V)		○	○	×	○	×	×
Link relay (B)		○	○	○*1	○	×	×
Data register (D)		○	○	○	○	×	○
Link register (W)		○	○	○*1	○	×	×
Timer (T)	Contact (TS)	○	○	×	○	×	○
	Coil (TC)	○	○	×	○	×	○
	Present value (TN)	○	○	×	○	×	○
Counter (C)	Contact (CS)	○	○	×	○	×	○
	Coil (CC)	○	○	×	○	×	○
	Present value (CN)	○	○	×	○	×	○
Retentive timer (ST)	Contact (STS/SS)	○	○	×	○	×	×
	Coil (STC/SC)	○	○	×	○	×	×
	Present value (STN/SN)	○	○	×	○	×	×
Long timer (LT)	Contact (LTS)	○	×	×	×	×	×
	Coil (LTC)	○	×	×	×	×	×
	Present value (LTN)	○	×	×	×	×	×
Long counter (LC)	Contact (LCS)	○	×	×	×	×	×
	Coil (LCC)	○	×	×	×	×	×
	Present value (LCN)	○	×	×	×	×	×
Long retentive timer (LST)	Contact (LSTS/LSS)	○	×	×	×	×	×
	Coil (LSTC/LSC)	○	×	×	×	×	×
	Present value (LSTN/LSN)	○	×	×	×	×	×
Link special relay (SB)		○	○	×	○	×	×

Device (Device Name)		Access Target					
		RCPU	QCPU (Q mode)	C Controller module	LCPU	QSCPU	FXCPU
Link special register (SW)		○	○	×	○	×	×
Step relay (S)		×	×	×	×	×	○
Direct input (DX)		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×
Index register	(Z)	○	○	×	○	×	○
	(V)	×	×	×	×	×	○
Long index register (LZ)		○	×	×	×	×	×
File register	(R)	○	○*2	×	○	×	○*3
	(ZR)	○	○*2	×	○	×	×
Refresh device for modules (RD)		○	×	×	×	×	×
Extended file register (ER*\R)		×	×	×	×	×	×
Direct link	Link input (J*\X)	○	○	○	○	×	×
	Link output (J*\Y)	○	○	○	○	×	×
	Link relay (J*\B)	○	○	○	○	×	×
	Link special relay (J*\SB)	○	○	○	○	×	×
	Link register (J*\W)	○	○	○	○	×	×
	Link special register (J*\SW)	○	○	○	○	×	×
Special direct buffer memory (U*\G)		○	○*4	○	○	○	○*5

*1 : Q12DCCPU-V (Basic mode) cannot be accessed.
*2 : Q00JCPU and Q00UJCPU cannot be accessed.
*3 : When accessing FX series CPU other than FX3G(C)CPU and FX3U(C)CPU, specify the data register (D). The extended register (R) can be specified only when accessing FX3G(C)CPU or FX3U(C)CPU.
*4 : In a multi-CPU configuration, reading from the shared memory of the host CPU cannot be performed. Writing to the shared memory cannot be performed regardless of the host or other CPU.
*5 : Only FX3U(C)CPU can be accessed.

(2) When access target is Motion CPU

For accessible device list of Motion CPU, refer to the following section.

☞ Page 265, Section 10.2.1 (2) When access target is Motion CPU

10.17.2 Accessible ranges

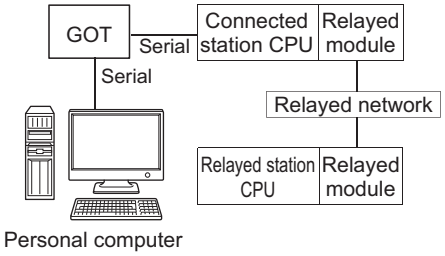
This section indicates the accessible ranges for GOT transparent communication.

Point

For usable system configuration, refer to GOT series connection manual.

(1) Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Direct connection

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode) *1, Q motion CPU *2, C Controller module *5	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, Q motion CPU *2, C Controller module *5	CC IE Control CC IE Field	○	○*3	○*4	×	○*3	×
	MELSECNET/H	○	○	×	×	○	×
	Ethernet	○	×	×	×	○	×
	Serial communication	○	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*3	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

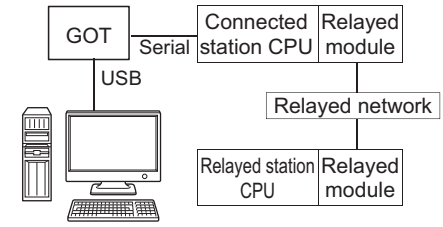
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	○*6

*1 : Redundant CPU cannot be accessed.
*2 : Relayed stations cannot be accessed via Q motion CPU.
*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*4 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*5 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*6 : Only FX3G(C)CPU and FX3U(C)CPU can be accessed.

(2) Personal computer side port: USB, GOT2000/1000 side port: USB, CPU side port: Direct connection

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode) *1, Q motion CPU *4,*6, C Controller module *6	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, Q motion CPU *4,*6, C Controller module *6	CC IE Control CC IE Field	○	○*2	○*3	×	○*2	×
	MELSECNET/H	○	○	×	×	○	×
	Ethernet	○	×	×	×	○	×
	Serial communication	○	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*2	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

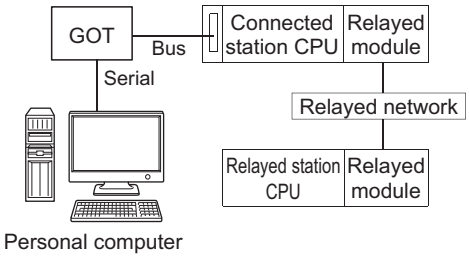
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	○*5

*1 : Redundant CPU cannot be accessed.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Relayed stations cannot be accessed via Q motion CPU.
*5 : Only FX3G(C)CPU and FX3U(C)CPU can be accessed.
*6 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

(3) Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Bus connection

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode) *1, Q motion CPU *2,*5	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, Q motion CPU *2,*5	CC IE Control CC IE Field	○	○*3	○*4	×	○*3	×
	MELSECNET/H	○	○	×	×	○	×
	Ethernet	○	×	×	×	○	×
	Serial communication	○	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

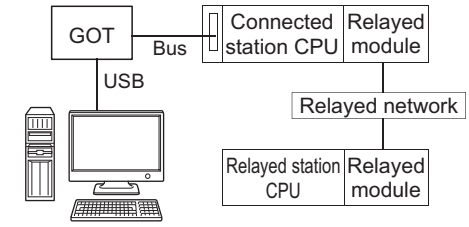
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *6	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *6	CC IE Control CC IE Field	○	○*3	○*4	×	○*3	×
	MELSECNET/H	○	○	×	×	○	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	○	×

*1 : Redundant CPU cannot be accessed.
*2 : Relayed stations cannot be accessed via Q motion CPU.
*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*4 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*5 : Only CPU No.2 or later in a multiple CPU system can be accessed.
*6 : Q24DHCCPU-V and Q24DHCCPU-LS cannot be accessed because the communication route is not supported.

(4) Personal computer side port: USB, GOT2000/1000 side port: USB, CPU side port: Bus connection

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode) *1, Q motion CPU *4,*5	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, Q motion CPU *4,*5	CC IE Control CC IE Field	○	○*2	○*3	×	○*2	×
	MELSECNET/H	○	○	×	×	○	×
	Ethernet	○	×	×	×	○	×
	Serial communication	○	×	○	×	○	×
	CC-Link	○	○	○	×	○	×

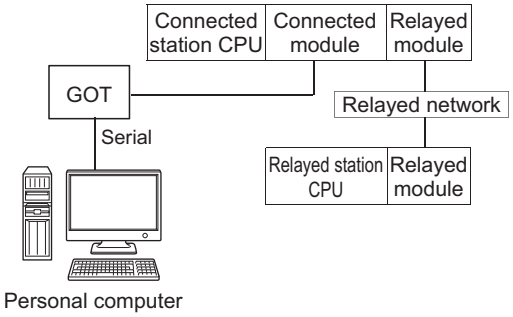
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

*1 : Redundant CPU cannot be accessed.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Relayed stations cannot be accessed via Q motion CPU.
*5 : Only CPU No.2 or later in a multiple CPU system can be accessed.

(5) Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Serial communication module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU	R series-compatible C24	CC IE Control CC IE Field	○*4	×
		MELSECNET/H	×	×
		Ethernet	○	○
		Serial communication	○	○
		CC-Link	○	○
		Multi-drop connection (Independent mode) *5	○	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×
		Multi-drop connection (Independent mode) *5	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
R motion CPU *6,*7	R series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *5	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
R motion CPU *6,*7	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×
		Multi-drop connection (Independent mode) *5	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode) *1, Q motion CPU *2,*7	Q series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *5	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, Q motion CPU *2,*7	Q series-compatible C24	CC IE Control CC IE Field	○	○*3	○*4	×	○*3	×
		MELSECNET/H	○	○	×	×	○	×
		Ethernet	○	×	×	×	○	×
		Serial communication	○	×	○	×	○	×
		CC-Link	○	○	○	×	○	×
		Multi-drop connection (Independent mode) *5	○	×	○	×	×	×

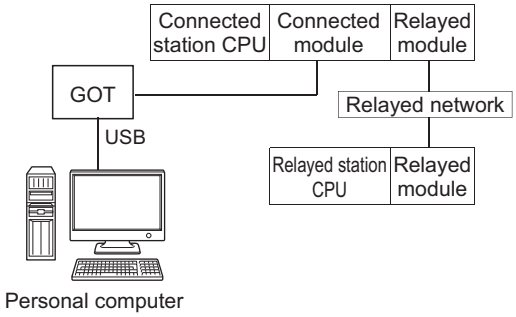
Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
LCPU	L series-compatible C24	CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *5	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	L series-compatible C24	CC IE Field	○	○*3	○	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	○	×	○	×	○	×
		CC-Link	○	○	○	×	○	×
		Multi-drop connection (Independent mode) *5	○	×	○	×	×	×

*1 : Redundant CPU cannot be accessed.
*2 : Relayed stations cannot be accessed via Q motion CPU.
*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*4 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*5 : Indicates the CH2 side setting. (The CH1 side is fixed to the independent mode.)
*6 : Relayed stations cannot be accessed via R motion CPU.
*7 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

(6) Personal computer side port: USB, GOT2000/1000 side port: USB, CPU side port: Serial communication module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU	R series-compatible C24	CC IE Control CC IE Field	○*3	×
		MELSECNET/H	×	×
		Ethernet	○	○
		Serial communication	○	○
		CC-Link	○	○
		Multi-drop connection (Independent mode) *4	○	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×
		Multi-drop connection (Independent mode) *4	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
R motion CPU *5,*7	R series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *4	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
R motion CPU *5,*7	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×
		Multi-drop connection (Independent mode) *4	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode) *1, Q motion CPU *6,*7	Q series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *4	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, Q motion CPU *6,*7	Q series-compatible C24	CC IE Control CC IE Field	○	○*2	○*3	×	○*2	×
		MELSECNET/H	○	○	×	×	○	×
		Ethernet	○	×	×	×	○	×
		Serial communication	○	×	○	×	○	×
		CC-Link	○	○	○	×	○	×
		Multi-drop connection (Independent mode) *4	○	×	○	×	×	×

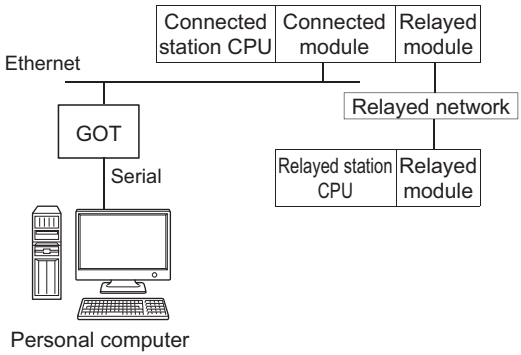
Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
LCPU	L series-compatible C24	CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×
		Multi-drop connection (Independent mode) *4	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	L series-compatible C24	CC IE Field	○	○*2	○	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	○	×	○	×	○	×
		CC-Link	○	○	○	×	○	×
		Multi-drop connection (Independent mode) *4	○	×	○	×	×	×

*1 : Redundant CPU cannot be accessed.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) and Q motion CPU relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Indicates the CH2 side setting. (The CH1 side is fixed to the independent mode.)
*5 : Relayed stations cannot be accessed via R motion CPU.
*6 : Relayed stations cannot be accessed via Q motion CPU.
*7 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

(7) Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Ethernet module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU	R series-compatible E71 *2	CC IE Control CC IE Field	○*4	×
		MELSECNET/H	×	×
		Ethernet	○	×
		Serial communication	○	×
		CC-Link	○	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU	R series-compatible E71 *2	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode) *1	Q series-compatible E71 *2	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1	Q series-compatible E71 *2	CC IE Control CC IE Field	○	○*3	○*4	×	×	×
		MELSECNET/H	○	○	×	×	×	×
		Ethernet	○	×	×	×	×	×
		Serial communication	○	×	○	×	×	×
		CC-Link	○	○	○	×	×	×

*1 : Redundant CPU cannot be accessed.

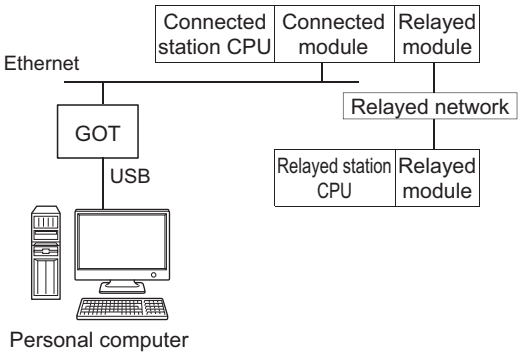
*2 : The communication cannot be established when a remote password is set to the connected station side R series-compatible E71 and Q series-compatible E71.

*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.

*4 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.

(8) Personal computer side port: USB, GOT2000/1000 side port: USB, CPU side port: Ethernet module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU	R series-compatible E71 *2	CC IE Control CC IE Field	○*4	×
		MELSECNET/H	×	×
		Ethernet	○	×
		Serial communication	○	×
		CC-Link	○	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU	R series-compatible E71 *2	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode) *1, C Controller module *5	Q series-compatible E71 *2	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, C Controller module *5	Q series-compatible E71 *2	CC IE Control CC IE Field	○	○*3	○*4	×	×	×
		MELSECNET/H	○	○	×	×	×	×
		Ethernet	○	×	×	×	×	×
		Serial communication	○	×	○	×	×	×
		CC-Link	○	○	○	×	×	×

*1 : Redundant CPU cannot be accessed.

*2 : The communication cannot be established when a remote password is set to the connected station side R series-compatible E71 and Q series-compatible E71.

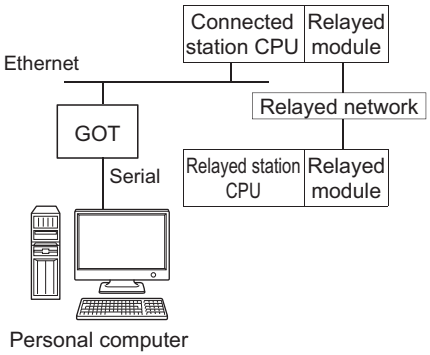
*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.

*4 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.

*5 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

(9) Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Ethernet port

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
RCPU, R motion CPU *5,*7	CC IE Control CC IE Field	○*4	×
	MELSECNET/H	×	×
	Ethernet	○	×
	Serial communication	○	×
	CC-Link	○	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU, R motion CPU *5,*7	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QnUDE(H)CPU *1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QnUDE(H)CPU *1	CC IE Control CC IE Field	○	○*3	○*4	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	○	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *6	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *6	CC IE Control CC IE Field	○	○*3	○*4	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×

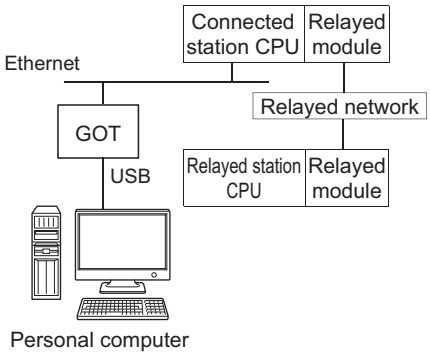
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU *1	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU *1	CC IE Field	○	○*3	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

*1 : The communication cannot be established when a remote password is set to the connected station CPU.
*2 : Redundant CPU cannot be accessed.
*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.
*4 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*5 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.
*6 : Q24DHCCPU-V and Q24DHCCPU-LS cannot be accessed because the communication route is not supported.
*7 : Relayed stations cannot be accessed via R motion CPU.

(10)Personal computer side port: USB, GOT2000/1000 side port: USB, CPU side port: Ethernet port

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
RCPU, R motion CPU *5,*6	CC IE Control CC IE Field	○*4	×
	MELSECNET/H	×	×
	Ethernet	○	×
	Serial communication	○	×
	CC-Link	○	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU, R motion CPU *5,*6	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QnUDE(H)CPU *1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QnUDE(H)CPU *1	CC IE Control CC IE Field	○	○*3	○*4	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	○	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module *1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module *1	CC IE Control CC IE Field	○	○*3	○*4	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×

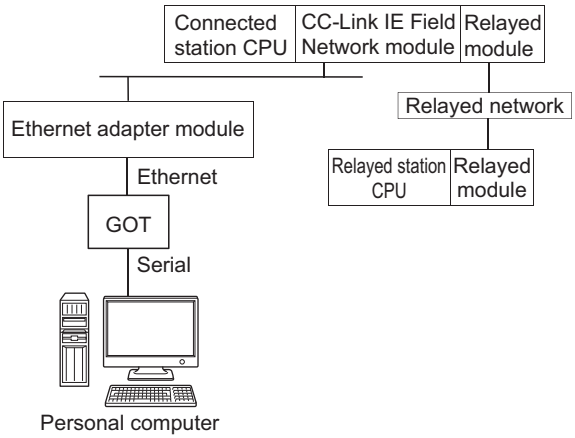
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU *1	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *2	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU *1	CC IE Field	○	○*3	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

*1 : The communication cannot be established when a remote password is set to the connected station CPU.
*2 : Redundant CPU cannot be accessed.
*3 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.
*4 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*5 : Relayed stations cannot be accessed via R motion CPU.
*6 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

(11)Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Ethernet adapter module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QnUDE(H)CPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QnUDE(H)CPU	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	○	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*2	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

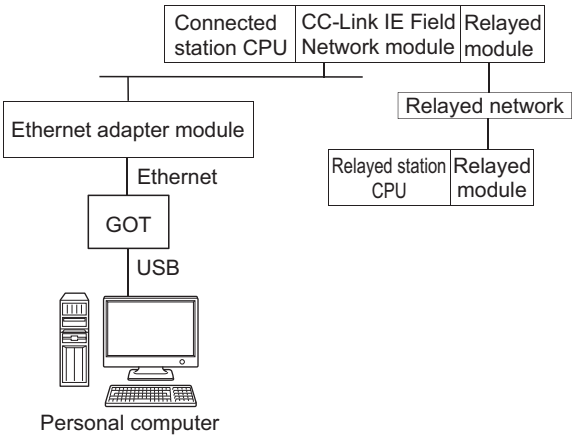
*1 : Redundant CPU cannot be accessed.

*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.

*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

(12)Personal computer side port :USB, GOT2000/1000 side port: USB, CPU side port: Ethernet adapter module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QnUDE(H)CPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QnUDE(H)CPU	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	○	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*2	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

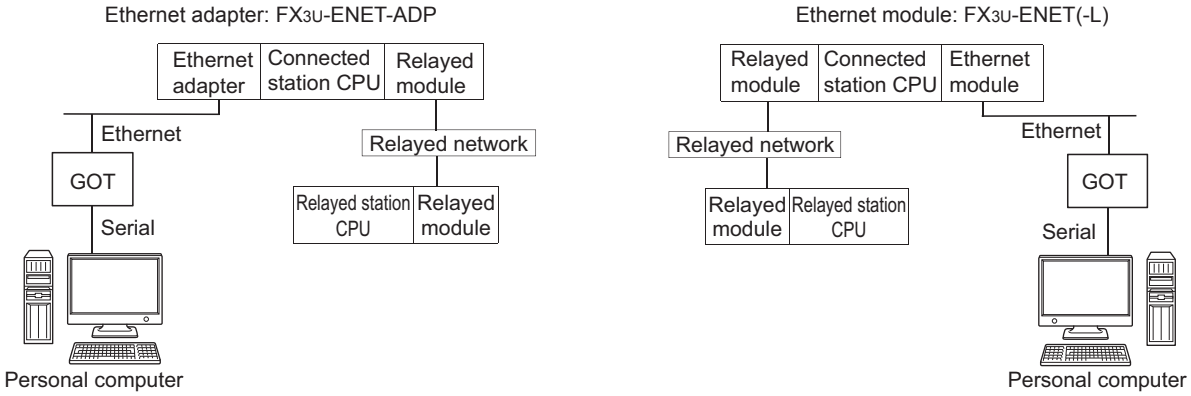
*1 : Redundant CPU cannot be accessed.

*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.

*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

(13)Personal computer side port: Serial, GOT2000/1000 side port: Serial, CPU side port: Ethernet adapter/module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

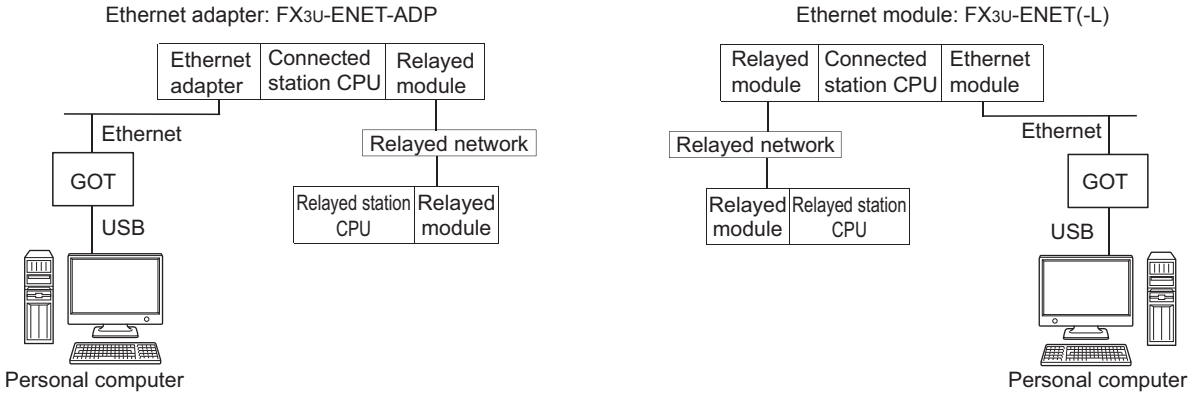
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU*1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU*1	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : Only FX3SCPU(FX3U-ENET-ADP), FX3G(C)CPU, and FX3U(C)CPU can be accessed.

(14)Personal computer side port: USB, GOT2000/1000 side port: USB, CPU side port: Ethernet adapter/module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

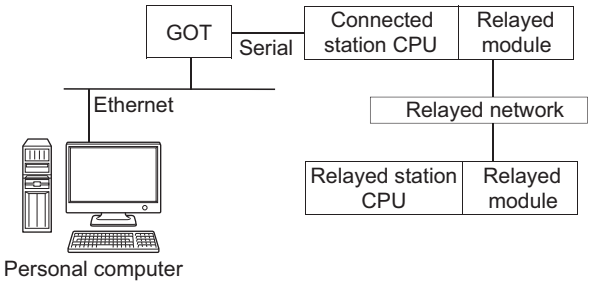
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU*1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode)	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU*1	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : Only FX3SCPU(FX3U-ENET-ADP), FX3G(C)CPU, and FX3U(C)CPU can be accessed.

(15)Personal computer side port: Ethernet board, GOT2000/1000 side port: Ethernet port, CPU side port: Serial

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode) *1, C Controller module *4	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, C Controller module *4	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
LCPU	CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	CC IE Field	○	○*2	○	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

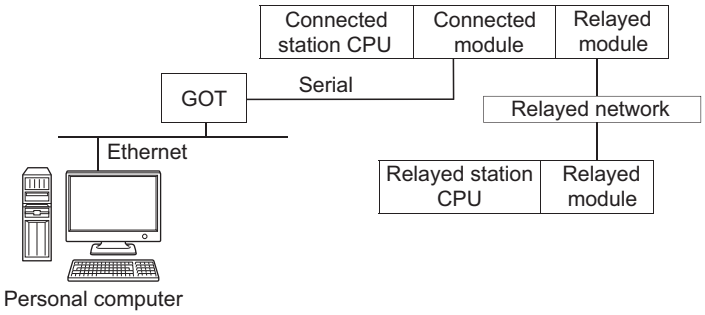
Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
FXCPU	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
FXCPU	CC IE Control CC IE Field	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×

*1 : Redundant CPU cannot be accessed.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : For Q24DHCCPU-V and Q24DHCCPU-LS, only CPU No.2 or later in a multiple CPU configuration can be accessed.

(16)Personal computer side port: Ethernet board, GOT2000/1000 side port: Ethernet port, CPU side port: Serial communication module

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.
The connected station CPUs are all accessible.
Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
RCPU, R motion CPU *4,*5	R series-compatible C24	CC IE Control CC IE Field	○*3	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	○	×
		CC-Link	○	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
RCPU, R motion CPU *4,*5	R series-compatible C24	CC IE Control CC IE Field	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×

Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
QCPU (Q mode) *1, C Controller module	Q series-compatible C24	CC IE Control CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1, C Controller module	Q series-compatible C24	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
		MELSECNET/H	○	○	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	○	×	○	×	×	×
		CC-Link	○	○	○	×	×	×

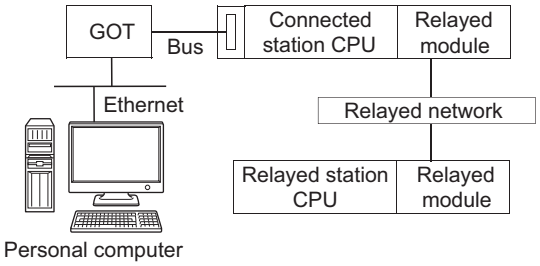
Connected Station		Relayed Network	Relayed station CPU	
CPU	Connected Module		RCPU	R motion CPU
LCPU	L series-compatible C24	CC IE Field	×	×
		MELSECNET/H	×	×
		Ethernet	×	×
		Serial communication	×	×
		CC-Link	×	×

Connected Station		Relayed Network	Relayed station CPU					
CPU	Connected Module		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
LCPU	L series-compatible C24	CC IE Field	○	○*2	○	×	×	×
		MELSECNET/H	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×
		Serial communication	○	×	○	×	×	×
		CC-Link	○	○	○	×	×	×

*1 : Redundant CPU cannot be accessed.
*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.
*3 : Since CC-Link IE Controller Network is not supported, RCPU and LCPU relayed by CC-Link IE Controller Network cannot be accessed.
*4 : Relayed stations cannot be accessed via R motion CPU.
*5 : Only CPU No.2 or later in a multiple CPU configuration can be accessed.

(17)Personal computer side port: Ethernet board, GOT2000/1000 side port: Ethernet port, CPU side port: Bus connection

(a) Configuration



(b) Accessibility list

The following table indicates whether the CPUs can be accessed.

The connected station CPUs are all accessible.

Whether the relayed station CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
QCPU (Q mode) *1	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
QCPU (Q mode) *1	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	○	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

Connected Station CPU	Relayed Network	Relayed station CPU	
		RCPU	R motion CPU
C Controller module	CC IE Control CC IE Field	×	×
	MELSECNET/H	×	×
	Ethernet	×	×
	Serial communication	×	×
	CC-Link	×	×

Connected Station CPU	Relayed Network	Relayed station CPU					
		QCPU (Q mode) *1	C Controller module	LCPU	QSCPU	Q motion CPU	FXCPU
C Controller module	CC IE Control CC IE Field	○	○*2	○*3	×	×	×
	MELSECNET/H	○	○	×	×	×	×
	Ethernet	×	×	×	×	×	×
	Serial communication	×	×	○	×	×	×
	CC-Link	○	○	○	×	×	×

*1 : Redundant CPU cannot be accessed.

*2 : Since CC-Link IE Field Network is not supported, Q12DCCPU-V (Basic mode) relayed by CC-Link IE Field Network cannot be accessed.

*3 : Since CC-Link IE Controller Network is not supported, LCPU relayed by CC-Link IE Controller Network cannot be accessed.

10.18 For Inverter Communication

This section provides the accessible monitor types during inverter communication.

10.18.1 Accessible monitor type

The following table indicates the accessible monitor type during inverter communication.

Monitor type (Decimal)	Name
1	Output frequency/speed
2	Output current
3	Output voltage
5	Frequency setting value/speed setting
6	Running speed
7	Motor torque
8	Converter output voltage
9	Regenerative brake duty
10	Electronic thermal O/L relay load factor
11	Output current peak value
12	Converter output voltage peak value
13	Input power
14	Output power
17	Load meter
18	Motor excitation current
19	Position pulse
20	Cumulative energization time
22	Orientation status
23	Actual operation time
24	Motor load factor
25	Cumulative power
32	Torque command
33	Torque current command
34	Motor output
35	Feedback pulse
40	PLC function user monitor 1
41	PLC function user monitor 2
42	PLC function user monitor 3
50	Energy saving effect
51	Cumulative energy saving
52	PID set point
53	PID measured value
61	Motor thermal load factor
62	Inverter thermal load factor
64	PTC thermistor resistance
67	PID measured value 2
87	Remote output value 1

Monitor type (Decimal)	Name
88	Remote output value2
89	Remote output value3
90	Remote output value4
91	PID manipulated variable
92	Second PID set point
93	Second PID measured value
94	Second PID deviation
95	Second PID measured value 2
96	Second PID manipulated variable
97	Dancer main speed setting

10.19 For Robot Controller Communication

The following table indicates the accessible monitor type during robot controller communication.

10.19.1 Accessible monitor type

The following table indicates the accessible monitor type during robot controller communication.

Specify the monitor type with the following format: (Request ID).(Data type).(Argument).

Monitor type			Acquired value
Request ID	Data type	Argument	
231	1	(1) Input signal read start number	Input signal information (16 points)
	2	(1) Output signal read start number	Output signal information (16 points)
237	1	(1) Register number	Input register description
238	1	(1) Register number	Output register description

APPENDIX

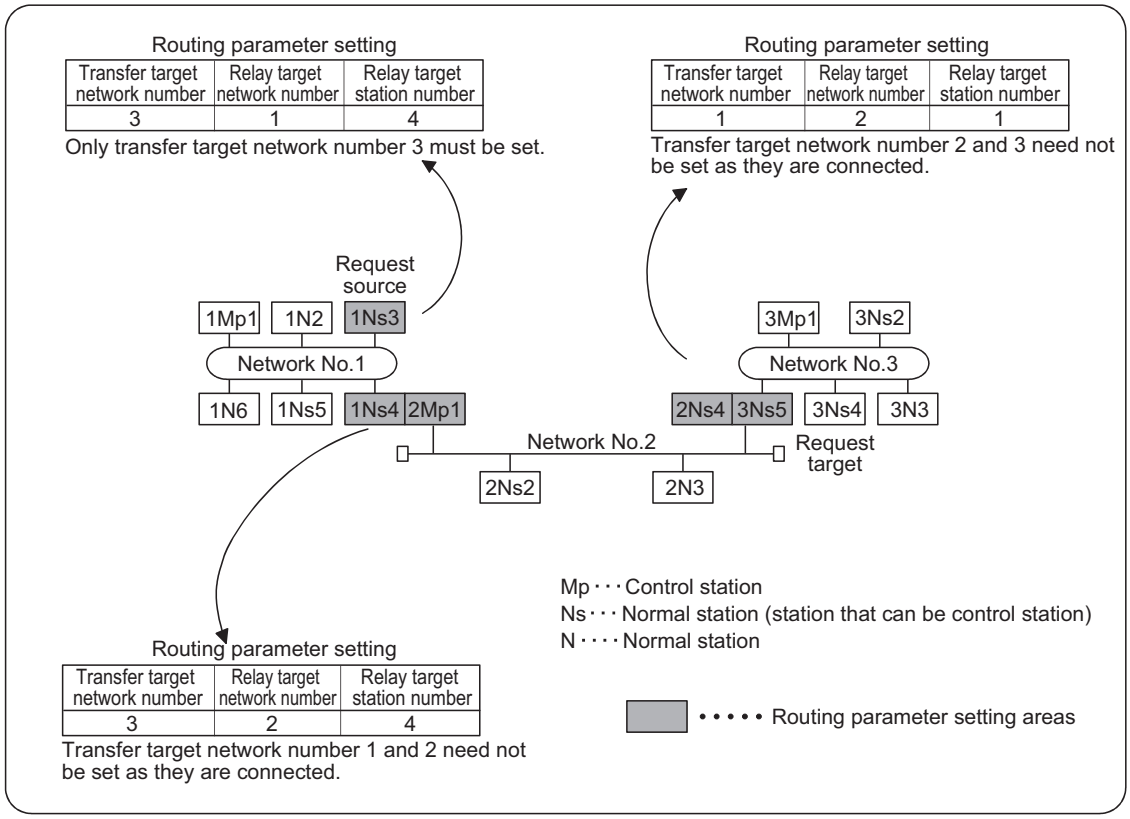
Appendix 1 Concept of Routing Parameters

The routing function is used by the station of the programmable controller CPU in a multi-level system to perform the transient transmission to the station of another network number.
To perform the routing function, the "Routing parameters" must be set to associate the network numbers and stations acting as bridges.

(1) The routing parameters must be set to the request source and relayed station of the programmable controller CPU.

- The request source must be set to access the request target.
- The relayed station must be set to access from the request source to the request target and vice versa.
- The request target is not required to be set.

For example, to perform the transient transmission from 1Ns3 to 3Ns4 in the following diagram, the routing parameters must be set to the programmable controller 1Ns3 which performs transient transmission, to the programmable controllers 1Ns4 and 2Mp1 which serve as bridges, and to the programmable controllers 2Ns4 and 3Ns5.



(2) Up to 16 "transfer target network numbers" can be set to the programmable controller CPU.

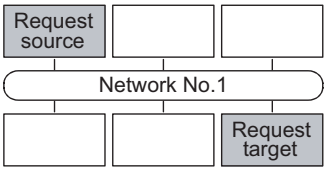
16 different network numbers allow the host station to be a request source or other stations to be accessed via the host station.

(3) Routing parameter setting areas and data

For transient transmission, the routing parameter setting areas differ according to the system.

(a) Two-level system

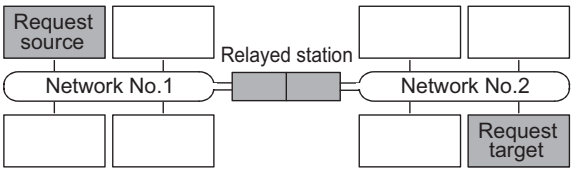
The routing parameters are not required to be set because transient transmission is performed to within the same network.



(b) Multi-level 1 (two networks)

Set the routing parameters only to the station of the request source. *1

To the request source, set the data to access the request target (network number 2).



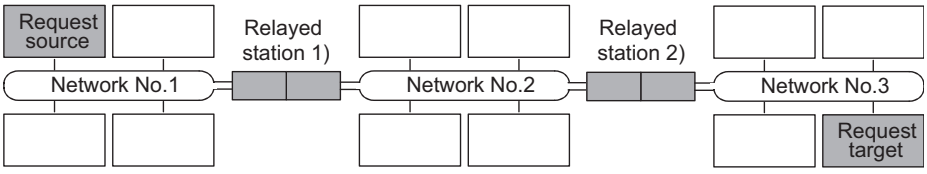
(c) Multi-level 2 (three networks)

Set the routing parameters to the request source and relayed stations. *1

To the request source, set the data to access the request target (network number 3).

To the relayed station 1), set the data to access the request target (network number 3).

To the relayed station 2), set the data to access the request source (network number 1).



(d) Multi-level 3 (four or more networks)

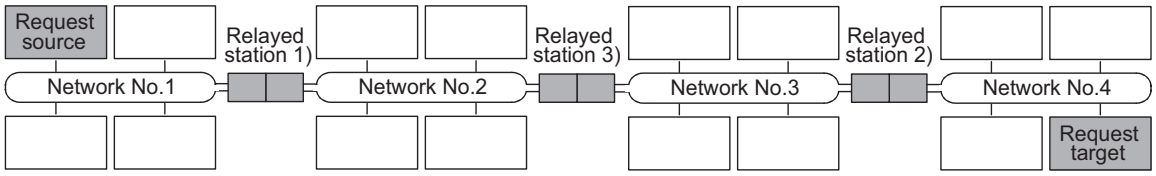
Set the routing parameters to the request source and relayed stations. *1

To the request source, set the data to access the request target (network number 4).

To the relayed station 1) (the nearest relayed station to the request source), set the data to access the request target (network number 4).

To the relayed station 2) (the nearest relayed station to the request target), set the data to access the request source (network number 1).

To the relayed station 3) (relayed station other than 1) and 2)), set the data to access the request target (network number 4) and request source (network number 1).



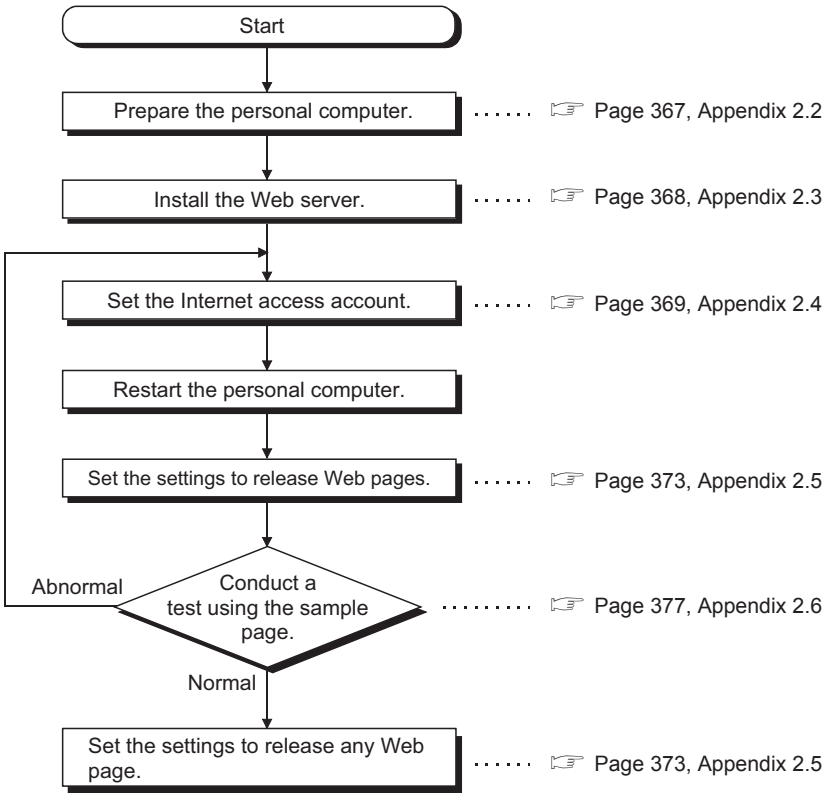
*1 : The following explains the case when the request source is the personal computer connected to Ethernet.
The routing parameter settings are not necessary for the request source.
The routing parameter settings are necessary for relay stations so that they can access the request source.
For settings, refer to the following manual.
Q Corresponding Ethernet Interface Module User's Manual (Application)

Appendix 2 How to Configure Internet/Intranet Environment

This section describes an example of configuring a system that uses MX Component to create a home page (HTML, ASP) for communication with the programmable controller CPU and display it using the browser (Internet Explorer®) via the Internet/intranet.

Appendix 2.1 Operating procedure

The following is the procedure to configure the Internet/intranet environment.



Point

Web pages using MX Component will not perform in the environment where a test using the sample page is not conducted properly.
Check the traffic, noise and others of the communication line to operate the sample page properly.

Appendix 2.2 Conditions of usable personal computers

The following are the conditions of the personal computers that can be used as a Web server and a Web client.

(1) Personal computer that can be used as Web server (factory side)

When using the personal computer as a Web server, use the personal computer that satisfies all of the following conditions 1 to 4.

	Description
Condition 1	Any of the following Operating Systems is operating on the personal computer. • Microsoft® Windows XP® Professional Operating System • Microsoft® Windows Vista® Home Premium Operating System • Microsoft® Windows Vista® Business Operating System • Microsoft® Windows Vista® Ultimate Operating System • Microsoft® Windows Vista® Enterprise Operating System • Microsoft® Windows® 7 Home Premium Operating System • Microsoft® Windows® 7 Professional Operating System • Microsoft® Windows® 7 Ultimate Operating System • Microsoft® Windows® 7 Enterprise Operating System • Microsoft® Windows® 8 Operating System • Microsoft® Windows® 8 Pro Operating System • Microsoft® Windows® 8 Enterprise Operating System • Microsoft® Windows® 8.1 Operating System • Microsoft® Windows® 8.1 Pro Operating System • Microsoft® Windows® 8.1 Enterprise Operating System
Condition 2	The personal computer can be connected to the Internet or intranet.
Condition 3	When Web pages are released on the Internet, external access must not be inhibited by a firewall or the like.
Condition 4	MX Component is installed and settings are set for communication with the programmable controller CPU.

(2) Personal computer that can be used as Web client (office side)

When using the personal computer as a Web client, use the personal computer that satisfies both of the following conditions 1 and 2.

	Description
Condition 1	Any of the following Operating Systems is operating on the personal computer. • Microsoft® Windows XP® Professional Operating System • Microsoft® Windows XP® Home Edition Operating System • Microsoft® Windows Vista® Home Basic Operating System • Microsoft® Windows Vista® Home Premium Operating System • Microsoft® Windows Vista® Business Operating System • Microsoft® Windows Vista® Ultimate Operating System • Microsoft® Windows Vista® Enterprise Operating System • Microsoft® Windows® 7 Starter Operating System • Microsoft® Windows® 7 Home Premium Operating System • Microsoft® Windows® 7 Professional Operating System • Microsoft® Windows® 7 Ultimate Operating System • Microsoft® Windows® 7 Enterprise Operating System • Microsoft® Windows® 8 Operating System • Microsoft® Windows® 8 Pro Operating System • Microsoft® Windows® 8 Enterprise Operating System • Microsoft® Windows® 8.1 Operating System • Microsoft® Windows® 8.1 Pro Operating System • Microsoft® Windows® 8.1 Enterprise Operating System
Condition 2	The personal computer can be connected to the Internet or intranet.

Appendix 2.3 How to install Web server

Install the Web server in the following method.

(1) When using Windows XP® Professional

Operating procedure

1. **[Start] ⇨ [Control Panel] ⇨ [Add/Remove Programs]**
2. **Install the Windows component "Internet Information Service (IIS)".**

   The Windows XP® Professional setup CD is required for installation.

(2) When using Windows Vista® or later

Operating procedure

1. **[Start] ⇨ [Control Panel] ⇨ [Program] ⇨ [Turn Windows features on or off]**
2. **Install "Internet Information Services".**

Point

For details of Web server installation method corresponding to the operating system, refer to the installation procedure attached to the corresponding operating system.

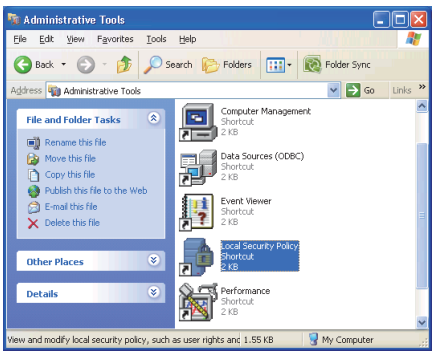
Appendix 2.4 Setting the Internet access account

Set the authorities to Internet access accounts.

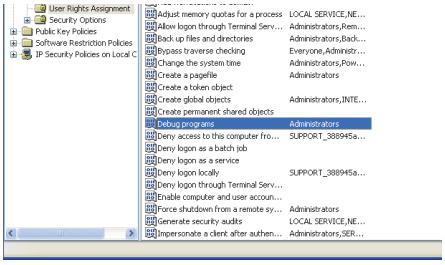
(1) When using Windows XP® Professional

When the Active Server Pages (ASP) pages using MX Component are released, the IUSR_Name (Internet Server Anonymous Access) must be given the "Debug programs" right.
Set the settings in the following procedure.

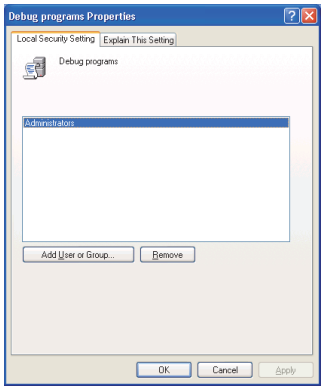
Operating procedure



1. **[Start] ⇨ [Control Panel] ⇨ [Administrative Tools] ⇨ [Local Security Policy]**



2. **Select [Local Policies] ⇨ [User Rights Assignment] in the tree structure and double-click "Debug programs".**



3. **Click the [Add User or Group...] button.**

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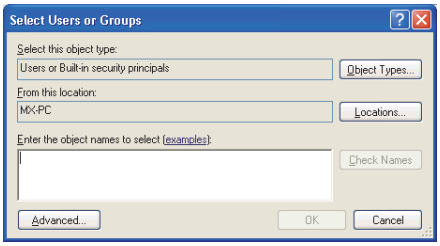
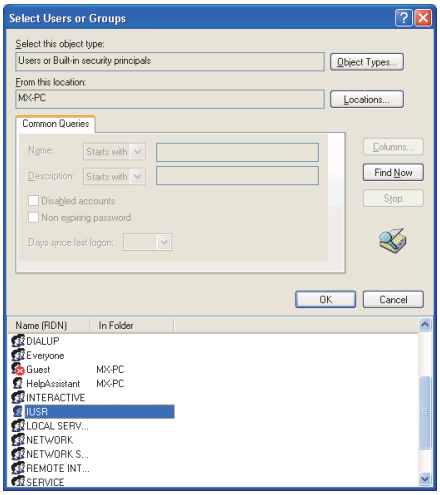
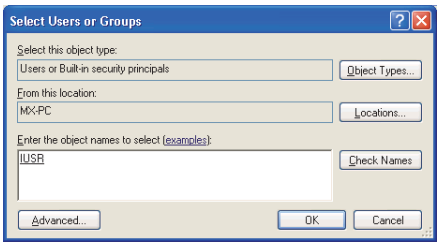


4. **If the computer name (name of the computer where Internet Information Service is set) is not displayed in "Locations", select the computer name.**
After confirming the above setting, click the [Advanced...] button.



5. **Click the [Find Now] button, and select the "IUSR_Name (Internet Server Anonymous Access)" account from the "Name" list box, and click the [OK] button.**



6. **After checking that the account is added, restart the personal computer.**

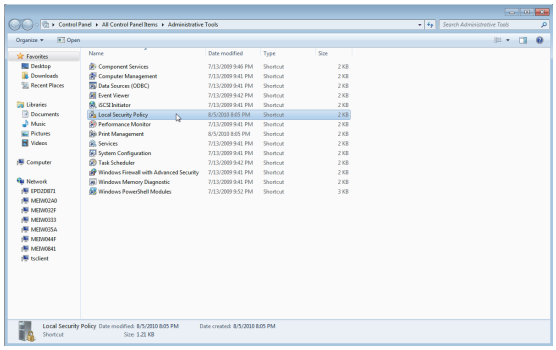
Setting complete

(2) When using Windows Vista® or later

When the Active Server Pages (ASP) pages using MX Component are released, the IUSR must be given the "Debug programs" right.

Set the settings in the following procedure.

Operating procedure

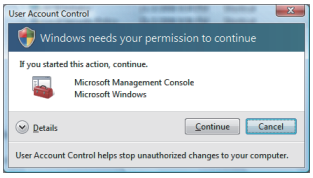


1. **[Start] ⇨ [Control Panel] ⇨ [Administrative Tools] ⇨ [Local Security Policy]**

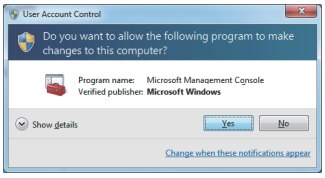
When user account control is enabled, the following screen is displayed.

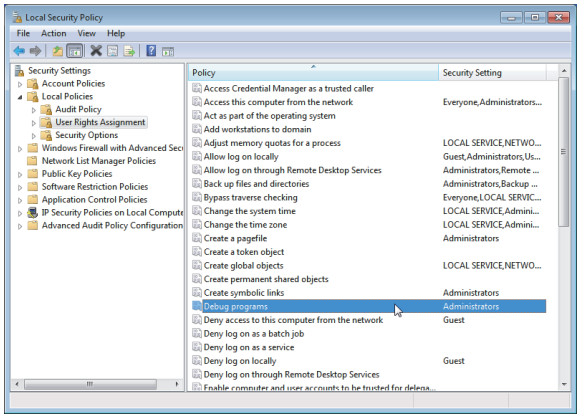
Click the Continue button or Yes button.

<Windows Vista®>

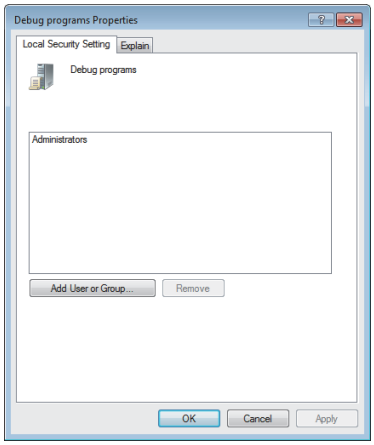


<Windows® 7 or later>





2. **Select [Local Policies] ⇨ [User Rights Assignment] in the tree structure and double-click "Debug programs".**



3. **Click the Add User or Group... button.**

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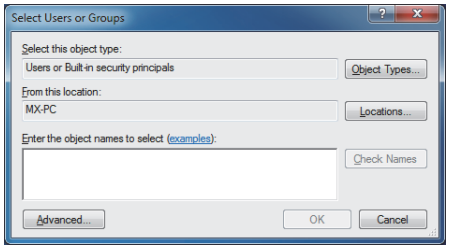
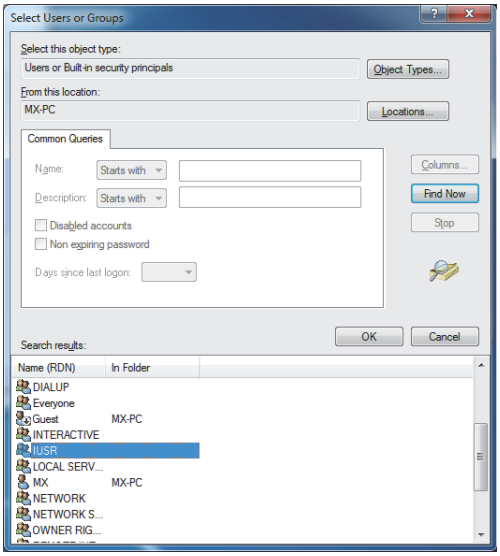
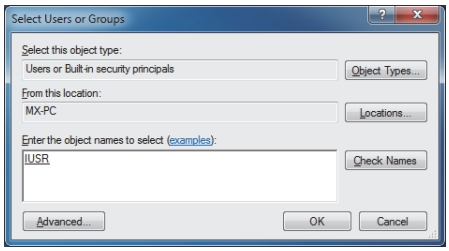


4. **If the computer name (name of the computer where Internet Information Service is set) is not displayed in "Locations", select the computer name. After confirming the above setting, click the [Advanced...] button.**



5. **Click the [Find Now] button, and select the "IUSR" account from the "Name" list box, and click the [OK] button.**



6. **After checking that the account is added, restart the personal computer.**

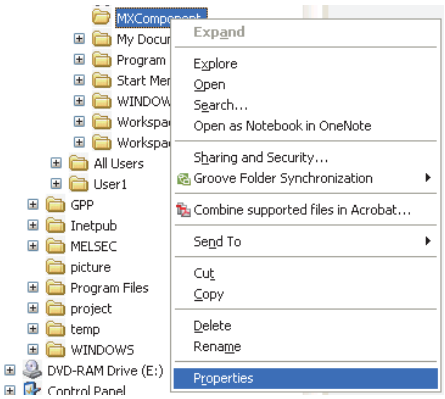
Setting complete

Appendix 2.5 Releasing Web pages

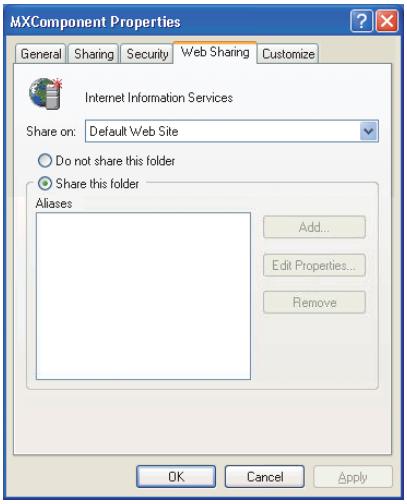
To release Web pages on the Internet/intranet, the folder must be Web shared.
The following is the procedure to share the folders on the Web.
Though the screen slightly varies according to the Web server operating system, the setting procedure is the same.

(1) When using Microsoft® Windows XP® Professional Operating System

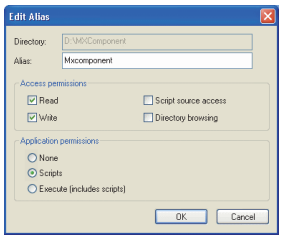
Operating procedure



1. **Start Explorer and right-click desired folder that contains the Web file (*.html, *.asp) to be released, and select [Properties].**



2. **Select the <<Web Sharing>> tab and select "Share this folder".**



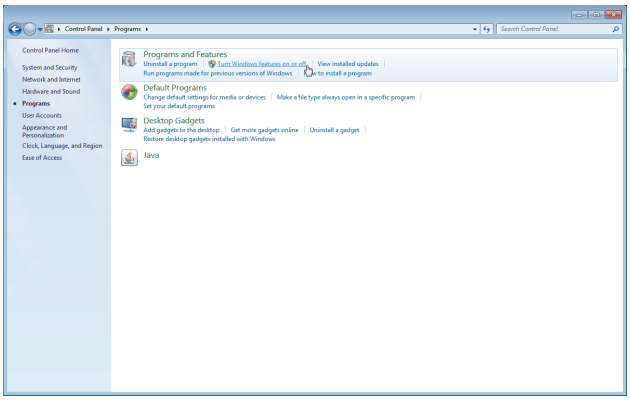
Setting complete

3. **For changing the alias, change the settings on the <u>Edit Alias</u> window.**

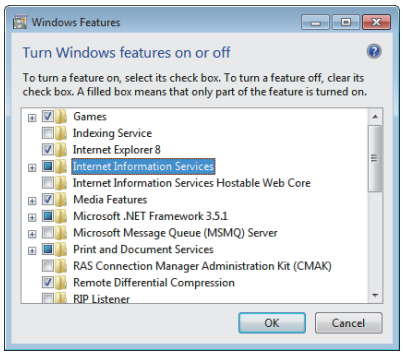
The alias is the underlined part of the URL to be specified on the Web browser.
http://**.**.**.**/<u>Mxcomponent</u>/NetTest.asp

(2) When using Windows Vista® or later

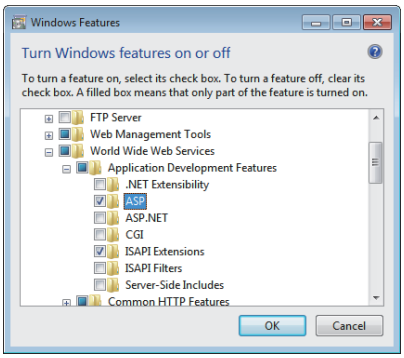
Operating procedure



1. **[Start] ⇨ [Control Panel] ⇨ [Programs] ⇨ [Turn Windows features on or off]**



2. **Select "Internet Information Services".**



3. **Expand the tree at [Application Development Features] under [Internet Information Services] ⇨ [World Wide Web Services], select "ASP" and click the [OK] button.**

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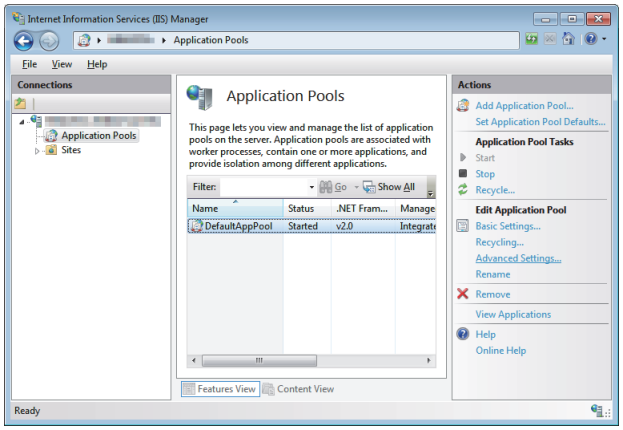
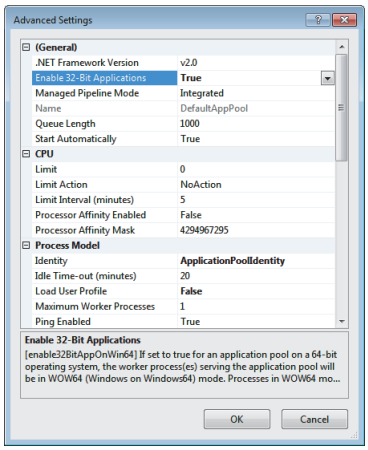
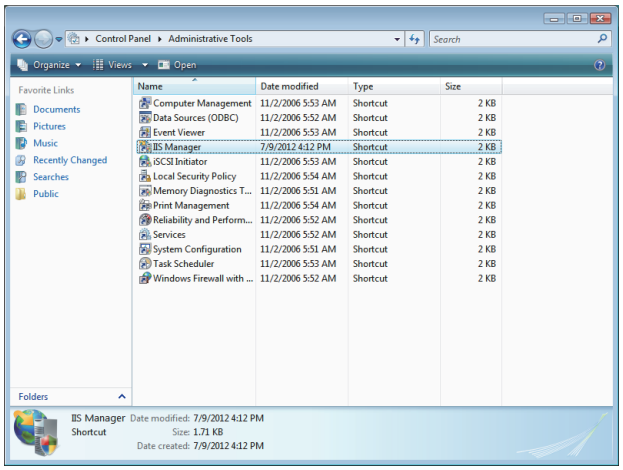


Only when using Windows® 7(64-bit version)/ Windows® 8 (64-bit version)/Windows® 8.1 (64-bit version), go to step 4 and 5.

4. **Select [Start] ⇨ [Administrative Tools] ⇨ [Internet Information Services (IIS) Manager] and select [Application Pools] from the left pane.**
Select an application pool to be changed and select [Advanced Settings...] from the right pane.



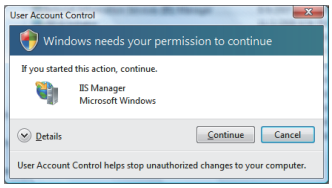
5. **Set "True" for [Enable 32-Bit Applications] and click the [OK] button.**



6. **Select [Start] ⇨ [Control Panel] ⇨ [Classic View] ⇨ [Administrative Tools], and double-click [IIS Manager].**

When user account control is enabled, the following screen is displayed.

Click the [Continue] button.



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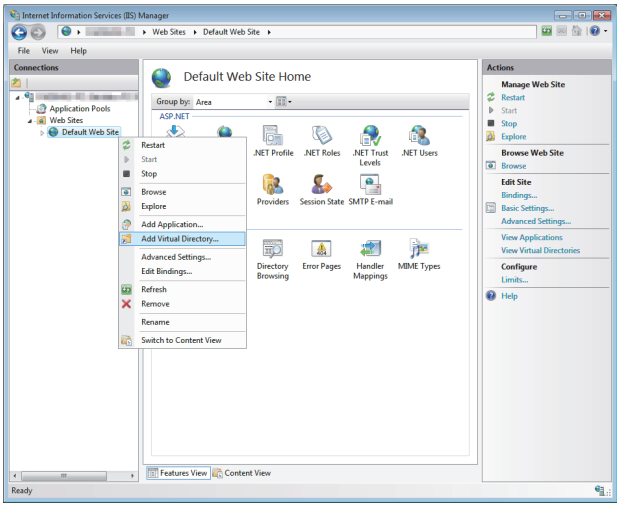
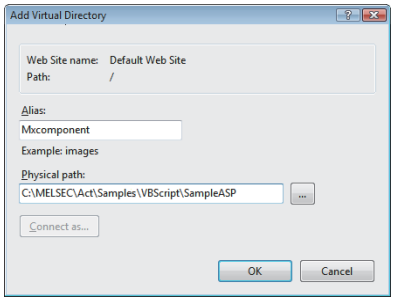


7. **Expand the tree on the [Connections] window, right-click on [Default Web Site], and select [Add Virtual Directory...].**



8. **Specify the desired name for "Alias:" and a folder path name to be released for "Physical path:", and click the [OK] button.**

The alias is the underlined part of the URL to be specified on the Web browser.
http://**.**.**.**/Mxcomponent/NetTest.asp

Setting complete

Appendix 2.6 Checking whether Web server can be accessed properly

When checking the accessibility via the Internet, the personal computer where the Web server is installed must be connected to the Internet.

After confirming that the Web server is connected to the Internet/intranet, start the Web browser (Internet Explorer®) on the Web client side personal computer, enter the URL as indicated below, and check that the Web page is displayed properly.

(URL input example) http://192.168.0.1/Mxcomponent/NetTest.asp

Alias set in Appendix 2.5

IP address of Web server

NetTest.asp is the Web server operation checking test page offered by MX Component.

Check that the system date and system time of the server are displayed on the Web browser.

Point

- If NetTest.asp cannot be accessed properly, the Web pages using MX Component cannot be accessed either.
  In such a case, reconfirm the Web server settings and Web client browser setting.
  Even if the settings are correct, the Web pages may not be displayed because communication cannot be performed properly due to dense traffic or the like of the communication line.
  In this case, check the status of the communication line.
- NetTest.asp is stored in the following folder.
  [user-specified folder] - [Act] - [Sample] - [VBScript] - [SampleASP]

Appendix 3 RS-232 Cable Wiring Examples for Serial Communication

Appendix 3.1 Q Series

The connector specifications are indicated below.

Pin number	Signal Name		Signal Direction Q series-compatible C24 ⇔ personal computer
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)

Q series-compatible C24		Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	Personal Computer Side
Signal Name	Pin number		Signal Name
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 performing DC code control or DTR/DSR control

Q series-compatible C24		Cable Connection and Signal Direction (Connection example for full duplex communication)	Personal Computer Side
Signal Name	Pin number		Signal Name
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		

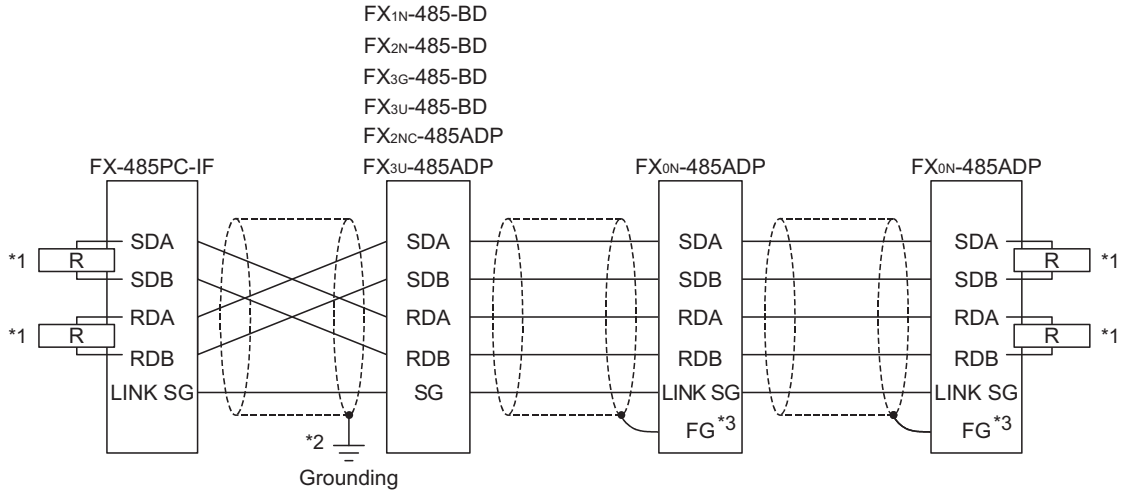
Appendix 3.2 FX Series

The following shows the example of wiring a personal computer and the FX extended port.

(1) Connection example of a personal computer and FX-485PC-IF converter with the RS-232 cable

Personal Computer side	Cable Connection and Signal Direction (Connection example for full duplex/half duplex communication)	FX-485PC-IF side	
Signal Name		Signal Name	Pin number
SD(TXD)		SD(TXD)	2
RD(RXD)		RD(RXD)	3
RS(RTS)		RS(RTS)	4
CS(CTS)		CS(CTS)	5
DR(DSR)		DR(DSR)	6
SG(GND)		SG(GND)	7
ER(DTR)		ER(DTR)	20

(2) Connection example of the FX-485PC-IF converter and the FX extended port (2-pair wiring)



*1 : R indicates a terminal resistance.
The terminal resistances must be installed at both ends of the circuit.
(For 2-pair wiring, use the terminal resistance of 330Ω, 1/4W.)
For FX3G-485-BD, FX3U-485-BD and FX3U-485ADP, terminal resistances are built in.
Set the terminal resistance by the setting switch.
For FX0N-485ADP, FX1N-485-BD, FX2N-485-BD, and FX2NC-485ADP, use the provided terminal resistances.

*2 : Ground the shields connected to FX1N-485-BD, FX2N-485-BD, FX2NC-485ADP, FX3G-485-BD, FX3U-485-BD, FX3U-485ADP.

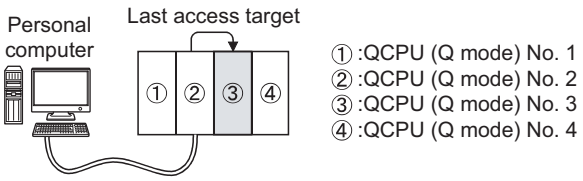
*3 : Connect the FG terminal to the ground terminal of the grounded programmable controller.

Appendix 4 Multi-CPU System

The valid CPU number specified for a multi-CPU system is that of the last accessed station only.
When accessing the non-controlled CPU of the relayed module on the accessed station, use the modules of function version B as the relayed modules and QCPUs (Q mode) on the host station, all relayed stations and accessed station.

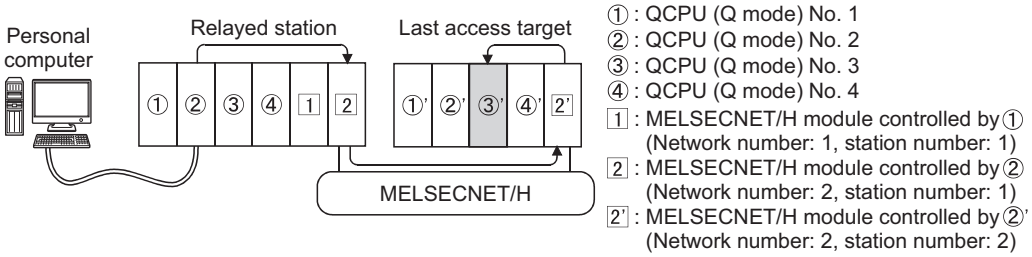
(1) Example CPU COM communication

When the programmable controller CPU number 3 (0x3E2) is specified for access, the CPU ③ can be accessed.



(2) Example CPU COM communication (via MELSECNET/H)

When the programmable controller CPU No. 3 (0x3E2), network number 2 and station number 2 are specified for access, the CPU ③' can be accessed.
The CPU number cannot be specified for the relayed station.
Therefore, if the network number 1 is accessed in the following case, an error will occur because the network number controlled by the CPU ② is only "2".



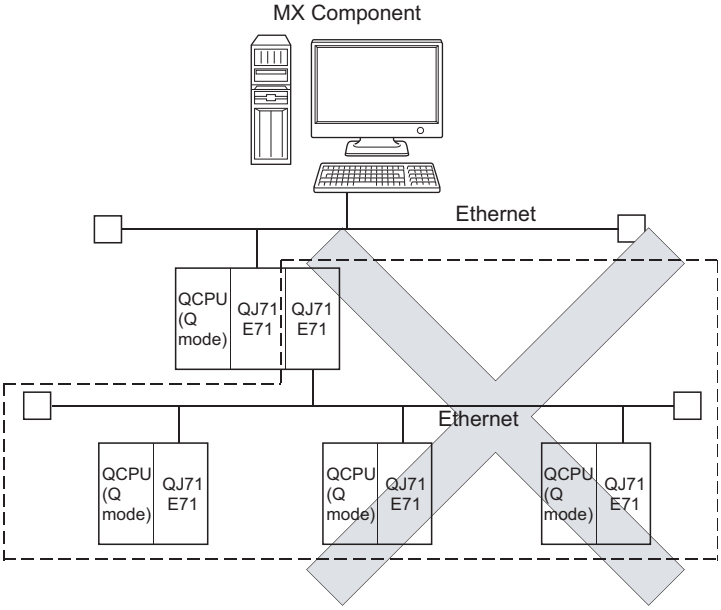
Appendix 5 Number of Mountable Network Modules for Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU or Q01UCPU

The following indicates the number of mountable network modules that can be connected when Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU, or Q01UCPU is used.

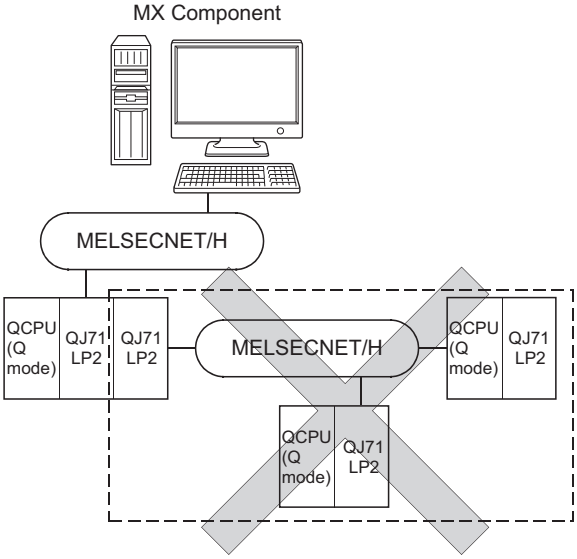
Network Module	Number of Mountable Modules
MELSECNET/H module	1 module
Ethernet module	1 module
CC-Link module (Function version B or later)	2 modules
CC-Link IE Controller Network module	1 module

Therefore, the following systems cannot be configured.

(Example 1) Since the number of applicable Ethernet modules is 1, the part of the system indicated by the dotted line cannot be configured.

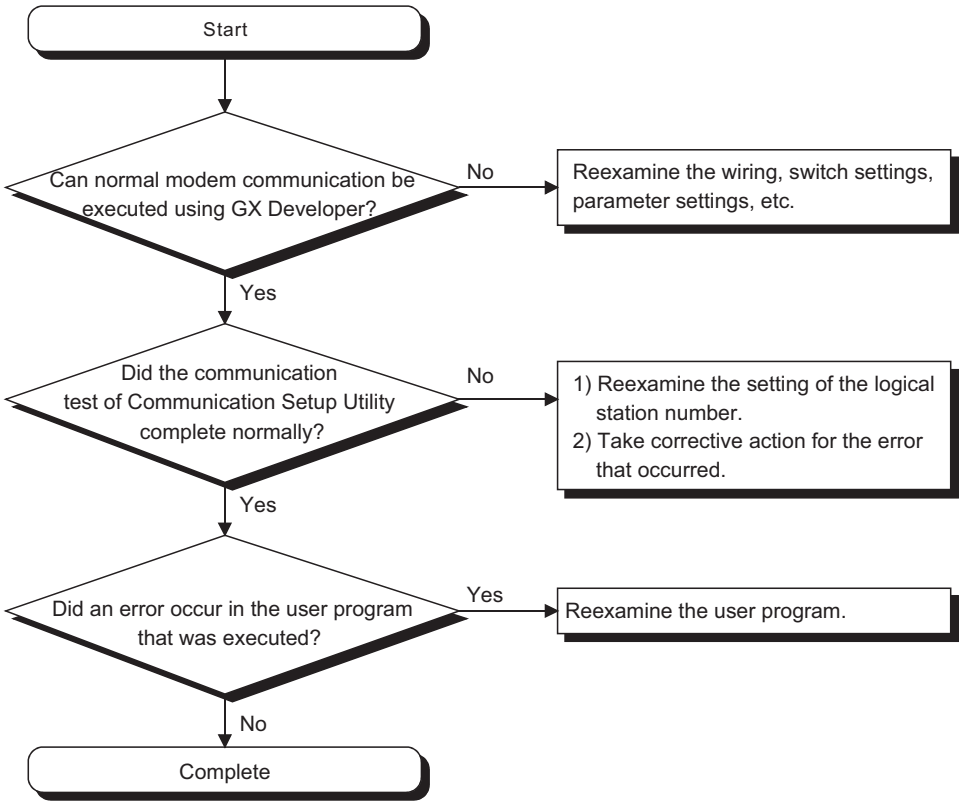


(Example 2) Since the number of applicable MELSECNET/H modules is one, the part of the system indicated by the dotted line cannot be configured.



Appendix 6 Flowchart for When Access cannot be Performed during Modem Communication

If the programmable controller CPU cannot be accessed using modem communication, refer to the following flowchart and take corrective action.



Appendix 7 Compatibility with Redundant CPU

This section explains the compatibility of MX Component with the Redundant CPU (Q12PRHCPU, Q25PRHCPU).

(1) Redundant CPU specification

In Redundant CPU specification*1, select either "Control system" or "Not specified" to access the compatible Redundant CPU.

- Control system: Connect to the control system and continue to access the control system in response to system switching.
- Not specified : Connect to the connection target programmable controller CPU as before.

*1 : Redundant CPU specification setting can either be set on the utility setting type Communication Setting Wizard screen or on the program setting type control property.

Point

To judge which system in the Redundant CPU system is being accessed by MX Component, monitor the following special relays.

● When checking which system is being accessed, System A or System B

SM1511	System A identification flag	• Indicate system A/system B of a redundant system. • Remain ON/OFF even if the tracking cable is disconnected while the redundant system is running.
SM1512	System B identification flag	

	System A	System B	At the time of TRK.CABLE ERR.(Error code: 6120) occurrence (System not determined.)
SM1511	ON	OFF	OFF
SM1512	OFF	ON	OFF

● When checking the control/standby system status

SM1515	Control/ standby system status	• Indicate the CPU module control/standby status • Remain ON/OFF even if the tracking cable is disconnected while the redundant system is running.
SM1516		

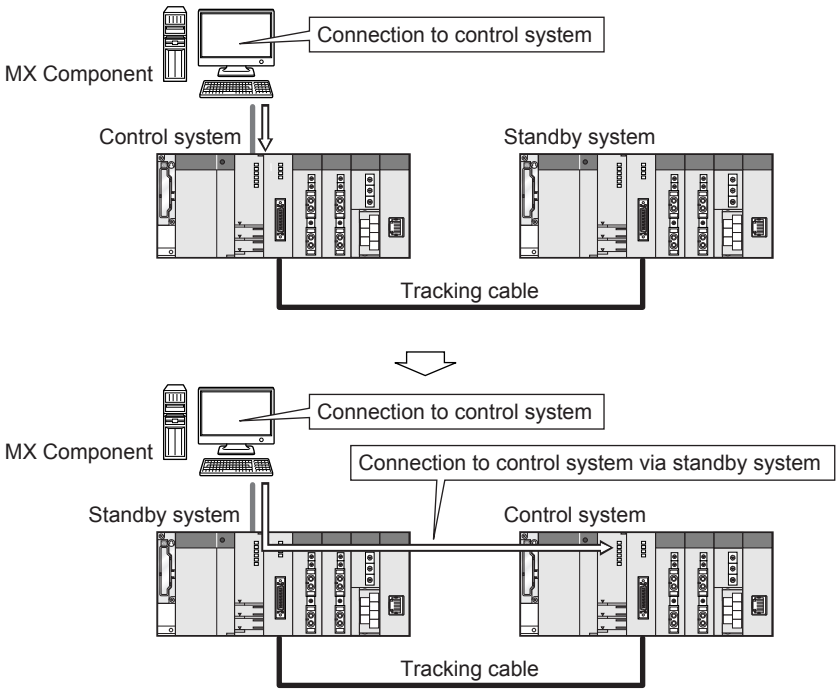
	Control system	Standby system	At the time of TRK.CABLE ERR.(Error code: 6120) occurrence (System not determined.)
SM1515	ON	OFF	OFF
SM1516	OFF	ON	OFF

(2) Operation at occurrence of system switching

When system switching occurs during access to the Redundant CPU after selection of "Control system", access is continued as described below.

(a) Connection via other than MELSECNET/H, Ethernet or CC-Link IE Controller Network

Access to the control system after system switching is continued.
The following shows an example of CPU direct connection.

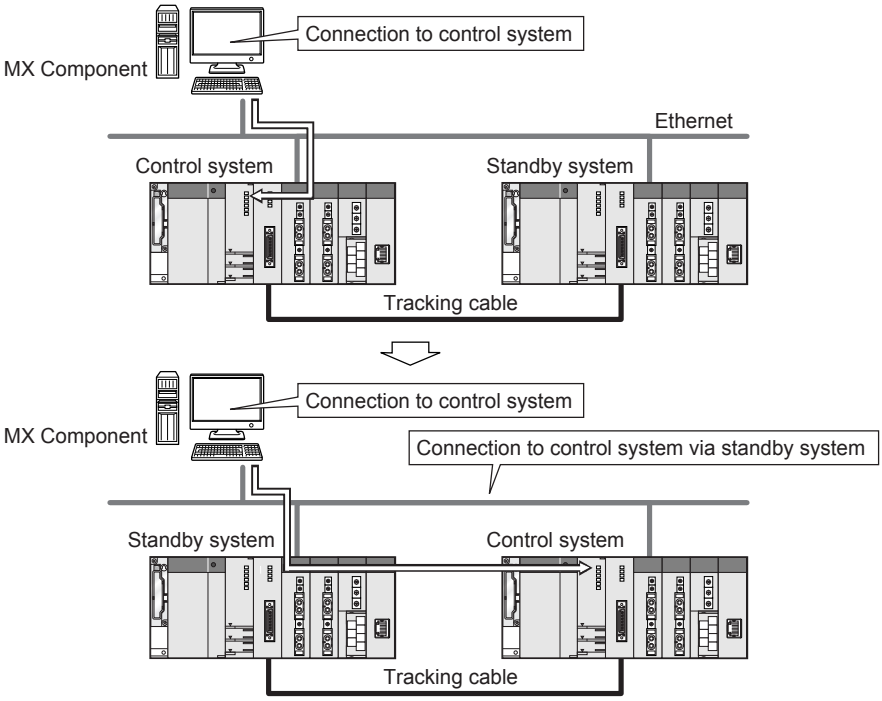


(b) Connection to MELSECNET/H, Ethernet or CC-Link IE Controller Network

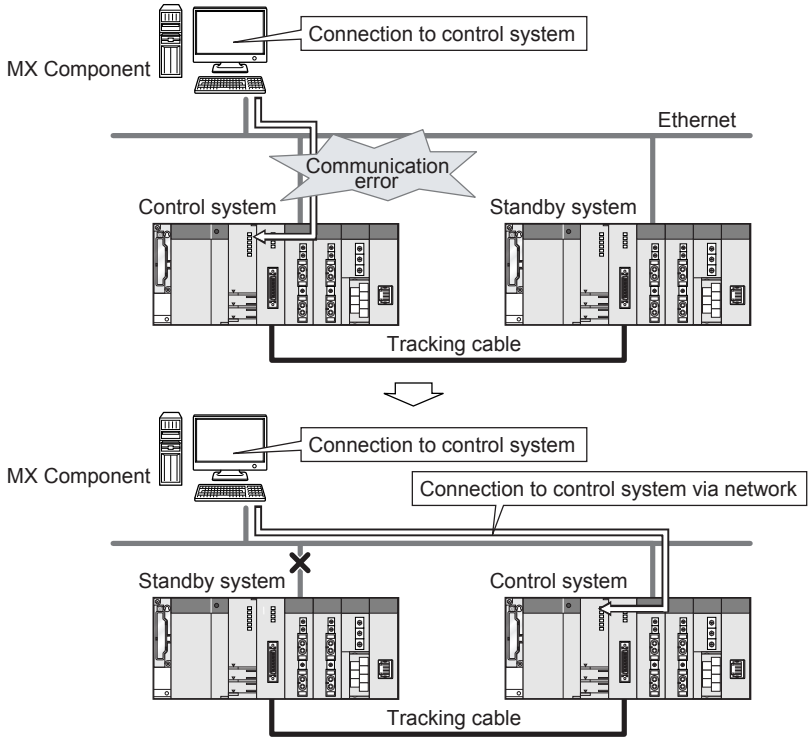
Access to the control system after system switching is continued as shown below, depending on communication error occurrence.

The following shows an example of Ethernet connection.

<When communication is normal>



<When communication error occurs>



Point

In the case of Ethernet connection, it may take time from when a communication error occurs until communication starts after connection to the control system.

(3) Automatic switching of communication path

If a communication error occurs during access to the Redundant CPU connected to MELSECNET/H, Ethernet or CC-Link IE Controller Network in Control system specification, the communication path is automatically switched to continue access to the control system.
Hereinafter, this automatic switching of the communication path is referred to as path switch.
The following describes the path switch conditions, how to check for path switch occurrence, and examples of access by path switch.

(a) Path switch conditions

When a CPU is accessed under the following conditions, access to the Redundant CPU is continued by path switch if a communication error occurs.

	Conditions for continued access
Operation mode	Backup mode, separate mode
Target system	Control system

However, if a tracking error*1 occurred at a start of communication, access to the control system is not continued by path switch even if tracking is recovered after that.

*1 : Includes the status in which either Redundant CPU is shut off or reset.

(b) How to check for path switch occurrence and examples of access by path switch

1) How to check whether path switch occurred or not

When communication is performed with the redundant system specified, whether communication is continued by path switch due to communication error can be estimated.

< Special relay and special registers to be monitored and estimated possibility of path switch >

SM1600 *1	SD1590 *2	SD1690 *2	Possibility of path switch	Reference
OFF	Either one is other than 0		Since a system switching request from the network module was detected, path switch may be executed.	2) in this section Fig. 1
ON	0	0	Since another system error occurred, path switch may be executed.	2) in this section Fig. 2
ON	Either one is other than 0		Since another system error occurred or a system switching request from the network module was detected, path switch may be executed.	2) in this section Fig. 1, Fig. 2

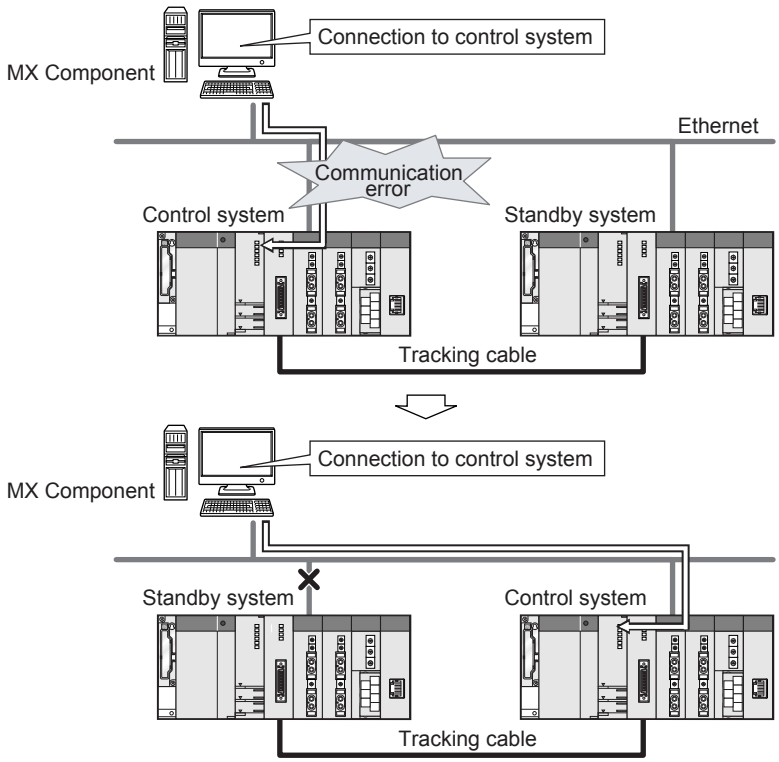
*1 : Even if SM1600 is ON, path switch does not occur when the CPU is not accessed via the tracking cable.
*2 : When using SM1600, SD1590 and SD1690 to estimate whether path switch has occurred or not for the Redundant CPU connected to Ethernet, select the following items in the redundant setting of the network parameter of GX Works2.
- Issue a system switching request at disconnection detection.
- Issue a system switching request at communication error.

Check the following based on the status of the above special relay and special registers, and remove the error cause.
- Check the Redundant CPU for an error.
- Check the tracking cable status and whether the tracking cable is correctly connected.
- Check the relevant network module for an error and the network where the relevant network module is connected for an error.

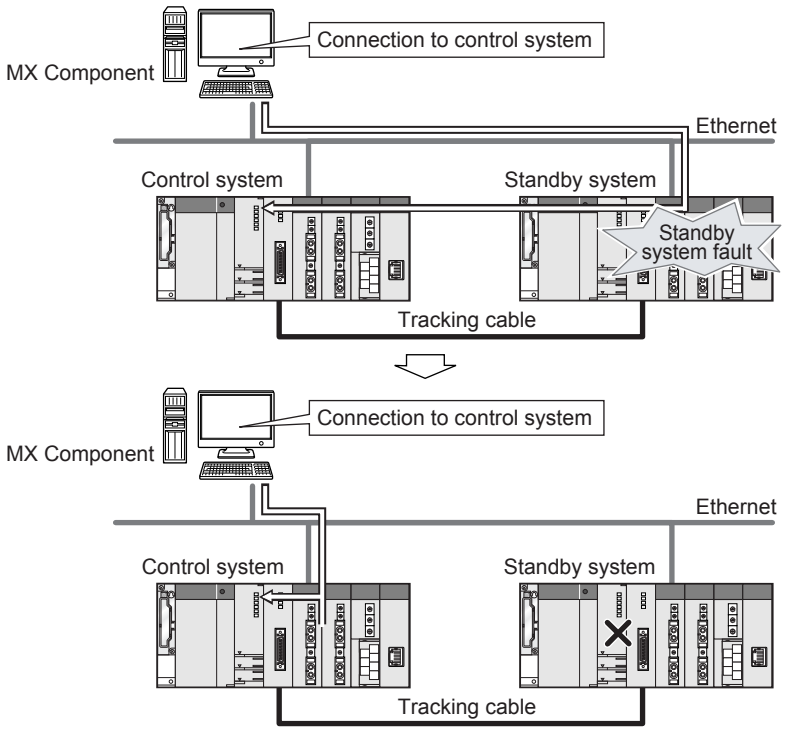
2)Examples of access by path switch

The following shows examples of path switch during access to the control system by Ethernet connection.

<Fig. 1 When system switching occurs at communication error>



<Fig. 2 When standby system error occurs>

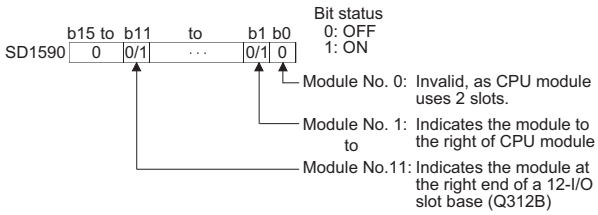
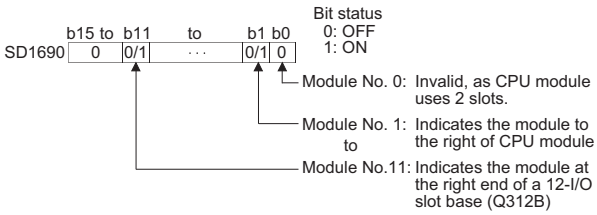


Point

- Path switch is not executed if a communication error occurs at a communication start for the Redundant CPU specified as the target. (A communication error occurs.)
- In the case of Ethernet connection, it may take time from when a communication error occurs until communication starts after connection to the control system.
- If a communication error occurs, refer to the following appendix, and remove the communication disturbance.
  ☞ Page 387, (3)(b) in this section How to check for path switch occurrence and examples of access by path switch

Remark

The following indicates details of the special relay and special registers to be monitored when estimating whether path switch occurred or not.

Number	Name	Meaning	Explanation
SM1600	Other system error flag	OFF : No error ON : Error	• Turn on when an error occurs during redundant system error check. (Turn on when either of bits for SD1600 is ON.) • Remain off when no errors are present.
SD1590	Module number for network module requesting path switch in host system	Module number for network module requesting path switch in host system	• Any of the following bits turns on corresponding to module number for network module requesting path switch in host system. • Turn off by the system after recovery from error of the relevant module by user.  • Refer to SD1690 for module number for network module requesting path switch in other system.
SD1690	Module number for network module requesting path switch in other system	Module number for network module requesting path switch in other system	• Any of the following bits turns on corresponding to module number for network module requesting path switch in other systems. • Turns off by the system after recovery from error of the relevant module by user.  • Refer to SD1590 for module number for network module requesting path switch in host system.

(4) Combination table

Communications via redundant type extension base unit (Q65WRB) are supported.
The following table shows the supported/unsupported combinations.

Product name	Model	Function version	Combination	
			When mounted to the main base	When mounted to the extension base
MELSECNET/H module	QJ71LP21-25	D or later	○	×
	QJ71LP21S-25	D or later	○	×
	QJ71LP21G	D or later	○	×
	QJ71BR11	D or later	○	×
	QJ72LP25-25	-	×	×
	QJ72LP25G	-	×	×
	QJ72BR15	-	×	×
	QJ71LP21	-	×	×
Ethernet module	QJ71E71	-	×	×
	QJ71E71(N1)-B2	D or later	○	○
	QJ71E71(N1)-B5	D or later	○	○
	QJ71E71-100	D or later	○	○
Serial communication module	QJ71C24N	-	×	○
	QJ71C24N-R2	-	×	○
	QJ71C24N-R4	-	×	○
CC-Link module	QJ61BT11	-	×	○
	QJ61BT11N	-	○*1	○
CC-Link IE Controller Network module	QJ71GP21-SX	D or later	○	×
	QJ71GP21S-SX	D or later	○	×

○: Can be used. ×: Cannot be used.

*1 : Cannot be used when the first five digits of the serial number is 06051 or lower.

Appendix 8 Differences with previous version of MX Component

Appendix 8.1 Comparison with MX Component Version 3

This section explains the differences between MX Component Version 3 and Version 4.00A.
For the functions added or changed in version 4.00A and later, refer to the following section.
☞ Page 421, Appendix 14 Functions Added Since Previous Versions

(1) Controls

The following are the modifications on controls.

- ACT control names are changed. (The program setting type controls are unified.)
- .NET controls are added. (Labels can be used.)

Type of control		Control name			
		Version 3		Version 4.00A	
ACT control	Program setting type	ActCCBD	ActMLCCBD	ActProgType	ActMLProgType
		ActCCG4A	ActMLCCG4A		
		ActCCG4Q	ActMLCCG4Q		
		ActCCG4QnA	ActMLCCG4QnA		
		ActCCIEFADPTCP	ActMLCCIEFADPTCP		
		ActCCIEFADPUDP	ActMLCCIEFADPUDP		
		ActCCIEFBD	ActMLCCIEFBD		
		ActFX485BD	ActMLFX485BD		
		ActFXCPU	ActMLFXCPU		
		ActFXCPUUSB	ActMLFXCPUUSB		
		ActFXENETTCP	ActMLFXENETTCP		
		ActGOT	ActMLGOT		
		ActGOTTRSP	ActMLGOTTRSP		
		ActLCPU	ActMLLCPU		
		ActLCPUTCP	ActMLLCPUTCP		
		ActLCPUUDP	ActMLLCPUUDP		
		ActLCPUUSB	ActMLLCPUUSB		
		ActLJ71C24	ActMLLJ71C24		
		ActLLT	ActMLLLT		
		ActMnet10BD	ActMLMnet10BD		
		ActMnet2BD	ActMLMnet2BD		
		ActMnetGBD	ActMLMnetGBD		
		ActMnetHBD	ActMLMnetHBD		
		ActQCPUA	ActMLQCPUA		
		ActQCPUQ	ActMLQCPUQ		
		ActQCPUQBus	ActMLQCPUQBus		
		ActQCPUQUSB	ActMLQCPUQUSB		
		ActQJ71C24	ActMLQJ71C24		
		ActQJ71E71TCP	ActMLQJ71E71TCP		
		ActQJ71E71UDP	ActMLQJ71E71UDP		
		ActQnACPU	ActMLQnACPU		
		ActQNUDECPUTCP	ActMLQNUDECPUTCP		
		ActQNUDECPUUDP	ActMLQNUDECPUUDP		
		ActSIM	ActMLSIM		

<table>
<tr><th colspan="2" rowspan="2">Type of control</th><th colspan="4">Control name</th></tr>
<tr><th colspan="2">Version 3</th><th colspan="2">Version 4.00A</th></tr>
<tr><td rowspan="5">ACT control</td><td rowspan="4">Program setting type</td><td>ActFXCPUTEL
ActLJ71C24TEL
ActQ6TEL
ActQJ71C24TEL</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>ActSupport</td><td>ActMLSupport</td><td>ActSupportMsg</td><td>ActMLSupportMsg</td></tr>
<tr><td>ActACPU
ActAFBD
ActAJ71C24
ActAJ71E71TCP
ActAJ71E71UDP
ActAJ71QC24
ActAJ71QE71TCP
ActAJ71QE71UDP
ActAJ71UC24
ActAnUBD</td><td>ActMLACPU
ActMLAFBD
ActMLAJ71C24
ActMLAJ71E71TCP
ActMLAJ71E71UDP
ActMLAJ71QC24
ActMLAJ71QE71TCP
ActMLAJ71QE71UDP
ActMLAJ71UC24
ActMLAnUBD</td><td rowspan="2">-</td><td rowspan="2">-</td></tr>
<tr><td>ActA6TEL
ActAJ71QC24TEL</td><td>-</td></tr>
<tr><td>Utility setting type</td><td>ActEasyIF</td><td>ActMLEasyIF</td><td>ActUtlType</td><td>ActMLUtlType</td></tr>
<tr><td>.NET control</td><td>Utility setting type</td><td>-</td><td>-</td><td>DotUtlType
DotSupportMsg</td><td>-</td></tr>
</table>

Remark

- Controls of MX Component Version 3
  Controls of MX Component Version 3 can also be used by installing MX Component Version 4.
  ☞ Page 394, Appendix 8.2 Compatibility
- Using unsupported communication paths
  Use the controls of MX Component Version 3 when using communication paths, such as the access to a MELSEC-A series programmable controller, which are not supported by MX Component Version 4.
- Details of controls and communication paths
  Refer to the following manuals.
  📖MX Component Version 4 Programming Manual
  📖MX Component Version 3 Programming Manual
  These manuals are included on the CD-ROM of MX Component Version 4 in a PDF file format.

(2) Engineering environment

The following table shows the engineering environment supported by MX Component Version 4.00A as compared to MX Component Version 3.

○: Supported, -: Not supported

Item		Software supported by Version 3	Version 4.00A
Operating system		Microsoft® Windows® 95 Microsoft® Windows® 98 Microsoft® Windows® Millennium Edition Microsoft® Windows NT® Microsoft® Windows® 2000	-
		Microsoft® Windows XP® Microsoft® Windows Vista®	○*1
		Microsoft® Windows® 7	○
Programming language	Visual Basic®	Microsoft® Visual Basic® 6.0 Microsoft® Visual Basic® .NET 2003	-
		Microsoft® Visual Studio 2005 Visual Basic® Microsoft® Visual Studio 2008 Visual Basic® Microsoft® Visual Studio 2010 Visual Basic®	○
	Visual C++®	Microsoft® Visual C++® 6.0 Microsoft® Visual C++® .NET 2003	-
		Microsoft® Visual Studio® 2005 Visual C++® Microsoft® Visual Studio® 2008 Visual C++® Microsoft® Visual Studio® 2010 Visual C++®	○
	VBScript	Text editor and commercially available HTML tool	○
	VBA	Microsoft® Excel® 2000 Microsoft® Excel® 2002	-
		Microsoft® Excel® 2003 Microsoft® Excel® 2007 32-bit Microsoft® Excel® 2010	○
		Microsoft® Access® 2000 Microsoft® Access® 2002	-
		Microsoft® Access® 2003 Microsoft® Access® 2007 32-bit Microsoft® Access® 2010	○

*1 : Limitations on the supported Service Pack

Remark

- Using the unsupported engineering environment
  Use MX Component Version 3 when using the engineering environment which is not supported by MX Component Version 4.
  MX Component Version 3 is included on the CD-ROM of MX Component Version 4.
- Details of engineering environment
  Refer to the following section and manual.
  ☞ Page 49, Section 2.3 Operating Environment
  📖MX Component Version 3 Operating Manual
  The manual is included on the CD-ROM of MX Component Version 4 in a PDF file format.

(3) Communication Setup Utility

Changes regarding Communication Setup Utility are not necessary; however, the settings of communication paths supported by MX Component Version 3 and MX Component Version 4 can be set.

Appendix 8.2 Compatibility

Programs and communication settings of MX Component Version 3 can be utilized in MX Component Version 4.

(1) Installation

MX Component Version 4 cannot be installed with MX Component Version 3.
Install MX Component Version 4 after uninstalling MX Component Version 3.

(2) Utilizing programs

Controls of MX Component Version 3 are included in MX Component Version 4.
Therefore, programs with the controls of MX Component Version 3 can be used in MX Component Version 4 without modifications.

(3) Utilizing communication settings

Import the setting file (.ACT file) of MX Component Version 3 using Communication Setup Utility of MX Component Version 4. (☞ Page 95, Section 7.1.4)
The settings can be used for controls of both MX Component Version 3 and MX Component Version 4.

Appendix 9 Version Compatibility

(1) Installation of ACT version

When do not use labels, the installation of .NET Framework and label functions can be avoided by using another installer stored on the CD-ROM.

Run the SETUP.EXE stored in the VerACT folder.

The communication route that can be used for ACT version is as follows:

- When the connected station is a programmable controller or motion controller

Appendix 10 Character Strings that cannot be Used for Label Names

(1) Reserved word

The reserved words cannot be used for label names.

The following tables shows character strings that cannot be used for label names.

Category	Character string
Class identifier	VAR, VAR_RETAIN, VAR_ACCESS, VAR_CONSTANT, VAR_CONSTANT_RETAIN, VAR_INPUT, VAR_INPUT_RETAIN, VAR_OUTPUT, VAR_OUTPUT_RETAIN, VAR_IN_OUT, VAR_IN_EXT, VAR_EXTERNAL, VAR_EXTERNAL_CONSTANT, VAR_EXTERNAL_CONSTANT_RETAIN, VAR_EXTERNAL_RETAIN, VAR_GLOBAL, VAR_GLOBAL_CONSTANT, VAR_GLOBAL_CONSTANT_RETAIN, VAR_GLOBAL_RETAIN
Data type	BOOL, BYTE, INT, SINT, DINT, LINT, UINT, USINT, UDINT, ULINT, WORD, DWORD, LWORD, ARRAY, REAL, LREAL, TIME, STRING, TIMER, COUNTER, RETENTIVETIMER, POINTER, Bit, Word [Unsigned]/Bit String [16-bit], Double Word [Unsigned]/Bit String [32-bit], Word [Signed], Double Word [Signed], FLOAT (Single Precision), FLOAT (Double Precision), String, Time, Timer, Counter, Retentive Timer, Pointer
Data type hierarchy	ANY, ANY_NUM, ANY_BIT, ANY_REAL, ANY_INT, ANY_DATE
	ANY_SIMPLE, ANY16, ANY32
Device name	X, Y, D, M, T, B, C, F, L, P, V, Z, W, I, N, U, J, K, H, E, A, SD, SM, SW, SB, FX, FY, DX, DY, FD, TR, BL, SG, VD, ZR, ZZ
Character string recognized as device (Device name + numeral)	X0 or the like
ST operator	NOT, MOD
	(,), -
IL operator	LD, LDN, ST, STN, S, S1, R, R1, AND, ANDN, OR, ORN, XOR, XORN, ADD, SUB, MUL, DIV, GT, GE, EQ, NE, LE, LT, JMP, JMPC, JMPCN, CAL, CALC, CALCN, RET, RETC, RETCN
	LDI, LDP, LDF, ANI, ANDP, ANDF, ANB, ORI, ORP, ORF, ORB, MPS, MRD, MPP, INV, MEP, MEF, EGP, EGF, OUT(H), SET, RST, PLS, PLF, FF, DELTA(P), SFT(P), MC, MCR, STOP, PAGE, NOP, NOPLF
SFC instruction	SFCP, SFCPEND, BLOCK, BEND, TRANL, TRANO, TRANA, TRANC, TRANCA, TRANOA, SEND, TRANOC, TRANOCA, TRANCO, TRANCOC, STEPN, STEPD, STEPSC, STEPSE, STEPST, STEPR, STEPC, STEPG, STEPI, STEPID, STEPISC, STEPISE, STEPIST, STEPIR, TRANJ, TRANOJ, TRANOCJ, TRANCJ, TRANCOJ, TRANCOCJ
ST code body	RETURN, IF, THEN, ELSE, ELSIF, END_IF, CASE, OF, END_CASE, FOR, TO, BY, DO, END_FOR, WHILE, END_WHILE, REPEAT, UNTIL, END_REPEAT, EXIT, TYPE, END_TYPE, STRUCT, END_STRUCT, RETAIN, VAR_ACCESS, END_VAR, FUNCTION, END_FUNCTION, FUNCTION_BLOCK, END_FUNCTION_BLOCK, STEP, INITIAL_STEP, END_STEP, TRANSITION, END_TRANSITION, FROM, UNTILWHILE
Function name in application function	Function names in application functions AND_E, NOT_E or the like
Function block name in application function	Function block names in application functions CTD, CTU or the like
Symbol	/, \, *, ?, <, >, |, ", :, [,], ., =, +, %, ', ~, @, {, }, &, ^, ., tab character
	;
	!, #, $, `
Date and time literal	DATE, DATE_AND_TIME, DT, TIME, TIME_OF_DAY, TOD
Others	ACTION, END_ACTION, CONFIGURATION, END_CONFIGURATION, CONSTANT, F_EDGE, R_EDGE, AT, PROGRAM, WITH, END_PROGRAM, TRUE, FALSE, READ_ONLY, READ_WRITE, RESOURCE, END_RESOURCE, ON, TASK, EN, ENO, BODY_CCE, BODY_FBD, BODY_IL, BODY_LD, BODY_SFC, BODY_ST, END_BODY, END_PARAMETER_SECTION, PARAM_FILE_PATH, PARAMETER_SECTION, SINGLE, RETAIN, INTERVAL

Category	Character string
String that starts with K1 to K8	K1AAA or the like
Statement in ladder language	;FB BLK START, ;FB START, ;FB END, ;FB BLK END, ;FB IN, ;FB OUT, ;FB_NAME, ;INSTANCE_NAME, ;FB, ;INSTANCE
Common instruction	MOV or the like
Windows® reserved word	COM1, COM2, COM3, COM4, COM5, COM6, COM7, COM8, COM9, LPT1, LPT2, LPT3, LPT4, LPT5, LPT6, LPT7, LPT8, LPT9, AUX, CON, PRN, NUL

(2) Considerations on using labels

- More than 32 characters cannot be used for system label Ver.1.
- More than 256 characters cannot be used for system label Ver.2.
  (More than 32 characters cannot be used for a system label list name, and more than 246 characters cannot be used for a structure name.)
- A space cannot be used.
- A numeral cannot be used at the beginning of label name.
- A label name is not case-sensitive.
- An underscore (_) cannot be used at the beginning or end of label name.
  Consecutive underscores (_) cannot be used for a data name or a label name.
- The digit-specified bit devices cannot be used.
- The indexing cannot be used.
- The buffer memory cannot be specified.
- The device check cannot be executed when registering labels.

Appendix 11 USB Driver Installation

In order to communicate with a programmable controller CPU via USB, a USB driver is required to be installed.
The following explains the USB driver installation procedure.

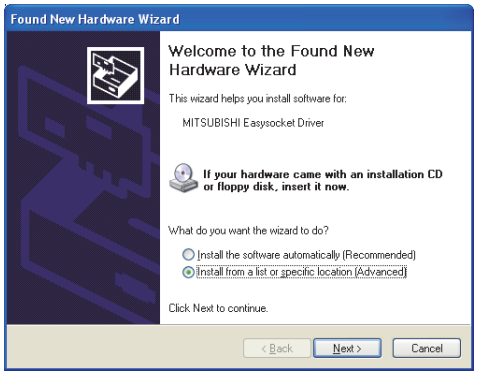
Point

When more than one MELSOFT product is installed, the USB driver is installed in the folder to which the first MELSOFT product is installed.
This section explains using the USB driver installation destination folder:
C:\Program Files\MELSOFT\Easysocket\USBdrivers, as an example.

(1) Windows XP®

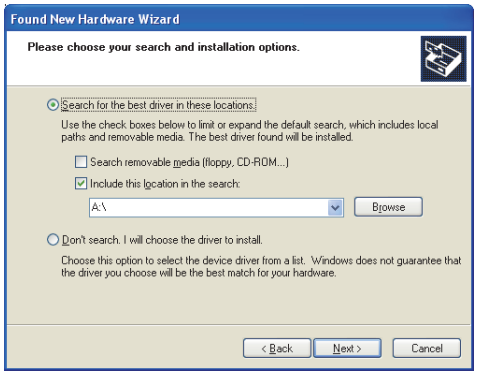
The following explains the procedure of USB driver installation for Windows XP®.

Operating procedure



1. **Connect the personal computer and the programmable controller CPU with USB cable, and turn on the programmable controller CPU.**
→ The screen shown on the left is displayed.

2. **Select "Install from a list or specific location [Advanced]" and click the Next > button.**



3. **Select "Search for the best driver in these locations", and select "Include this location in the search".**

4. **Click the Browse button.**

Continued on next page

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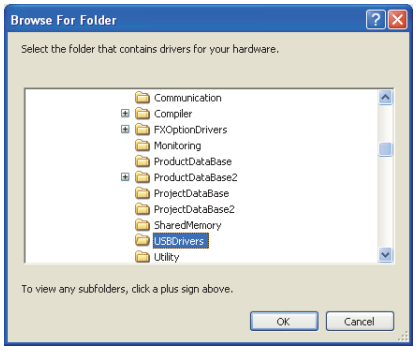
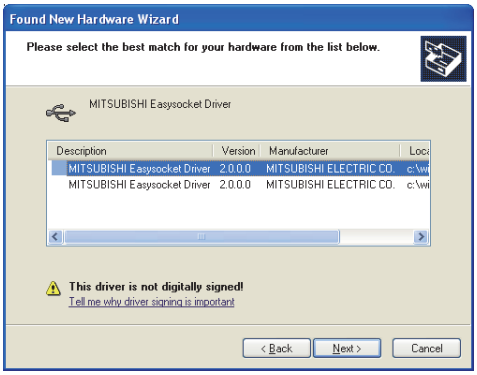
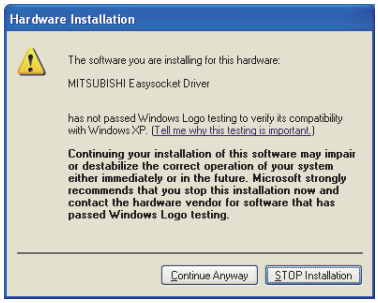


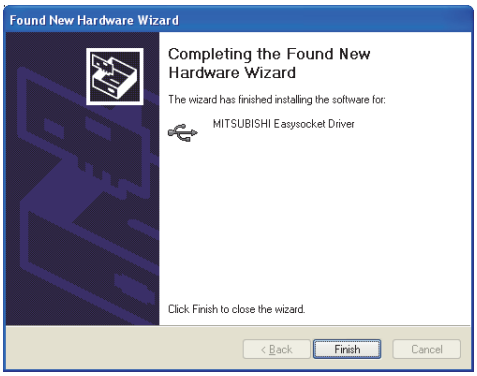
5. **Select the USB driver installation destination folder, select [Easysocket] ⇨ [USBDrivers], and click the [OK] button.**



6. **Select "MITSUBISHI Easysocket Driver", and click the [Next >] button.**



7. **Click the [Continue Anyway] button.**



The screen shown on the left is displayed and the USB driver installation is complete.

8. **Click the [Finish] button to close the window.**

Installation complete

A

Appendix 11 USB Driver Installation

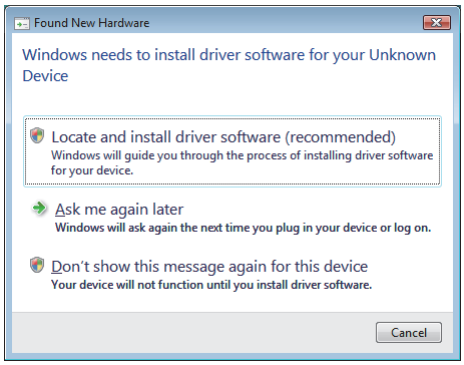
Point

If the USB driver cannot be installed, confirm the following settings.
If "Block - Never install unsigned driver software" is selected under [Control Panel] - [System] - [Hardware] - [Driver Signing], the USB driver may not be installed.
Select "Ignore - Install the software anyway and don't ask for my approval", or "Warn - Prompt me each time to choose an action" in [Driver Signing], and execute the USB driver installation.

(2) Windows Vista®

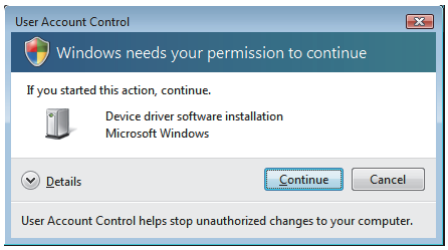
The following explains the procedure of USB driver installation for Windows Vista®.

Operating procedure

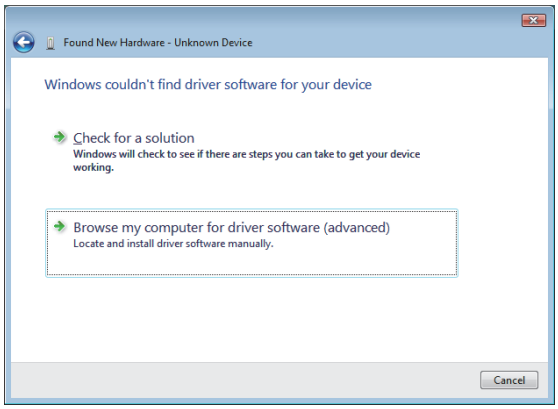


1. **Connect the personal computer and the programmable controller CPU with USB cable, and then turn on the programmable controller CPU.**
→ The screen shown on the left is displayed.

2. **Select "Locate and install driver software (recommended)" and wait for a search to finish.**



3. **When User Account Control is turned ON, the screen shown on the left is displayed. Click the Continue button.**



4. **Select "Browse my computer for driver software (advanced)".**

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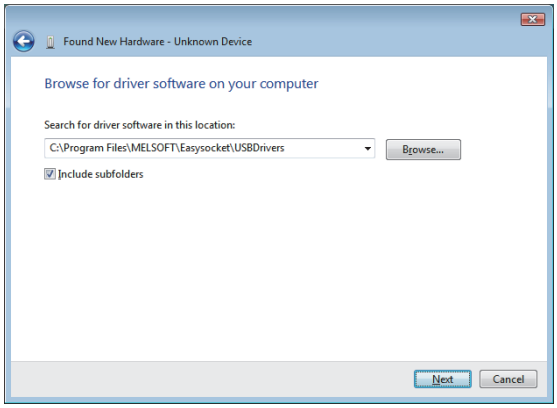
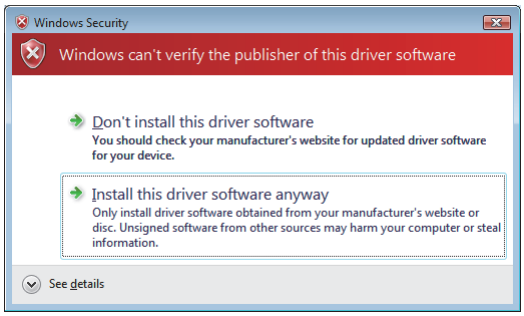
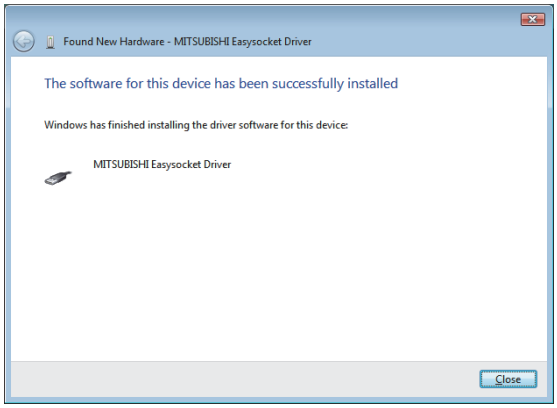


5. **Specify "Easysocket\USBdrivers", and click the Next button.**



6. **Select "Install this driver software anyway".**



The screen shown on the left is displayed, and the USB driver installation is complete.

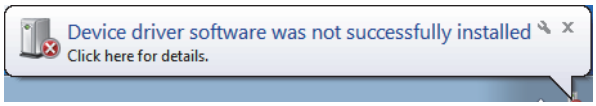
7. **Click the Close button.**

Installation complete

(3) Windows® 7 or later

The following explains the procedure of USB driver installation for Windows® 7 or later.

Operating procedure



1. Connect the personal computer and the programmable controller CPU with USB cable, and then turn on the programmable controller CPU.

<When using Windows® 7>

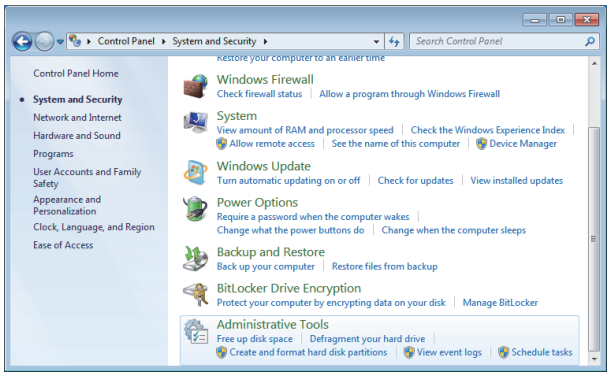
→ The screen shown on the left is displayed.

<When using Windows® 8 or Windows® 8.1>

The screen is not displayed.

2. Select "System and Security" from the Control Panel.

(To display the Control Panel, select [Start] ⇨ [Control Panel].)



3. Select "Administrative Tools".

Continued on next page

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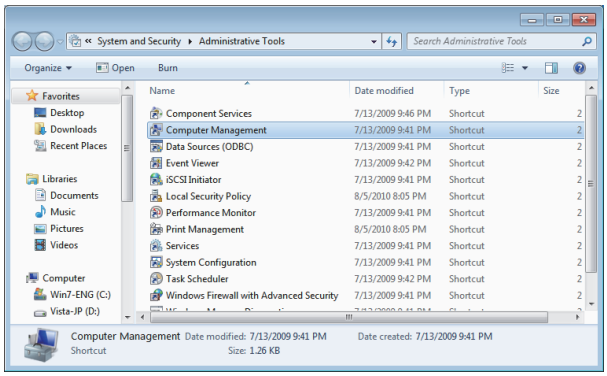
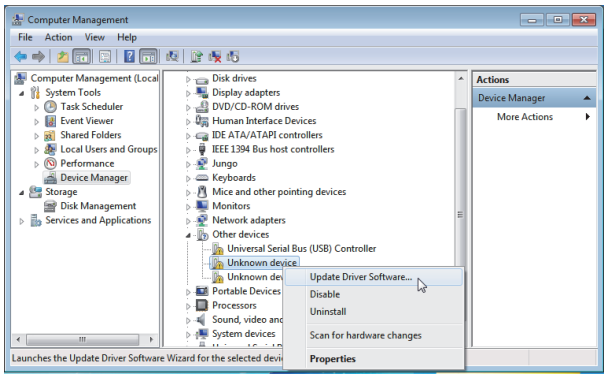
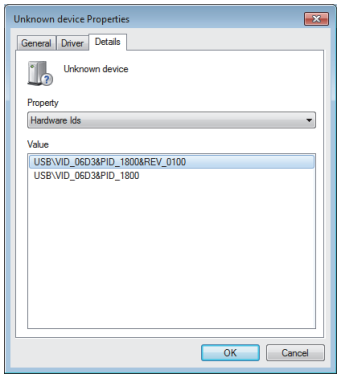


4. **Select "Computer Management" and double-click it.**



5. **Right-click "Unknown device" in Device Manager, and select "Update Driver Software".**

When the USB driver cannot be specified because more than one "Unknown device" exists, right-click "Unknown device" and select "Properties". The "Unknown device", whose "Hardware Ids" is "USB\VID_06D3&PID_1800" on the <<Details>> tab of the properties screen, is the update target.



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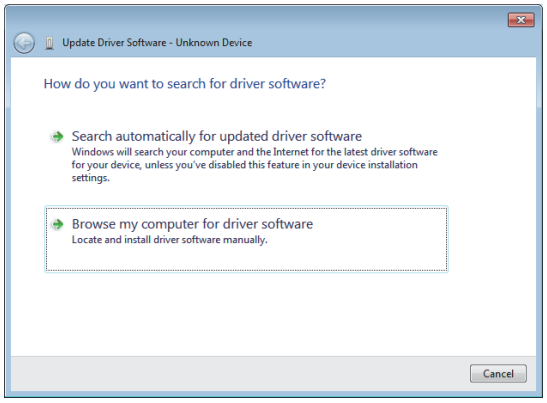
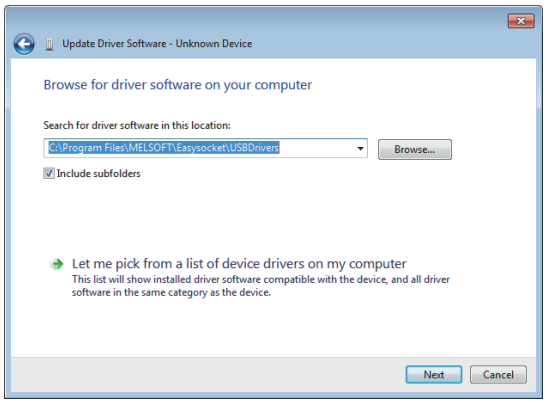


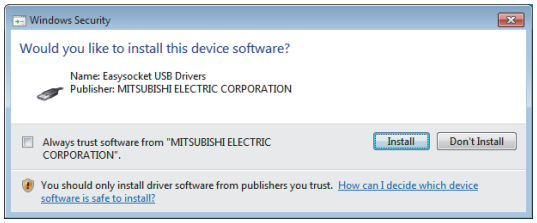
6. **Select "Browse my computer for driver software".**



7. **Specify "Easysocket\USBdrivers", and click the [Next] button.**

The left screen is an example when C:\Program Files\MELSEC\Easysocket\USBdrivers is set.

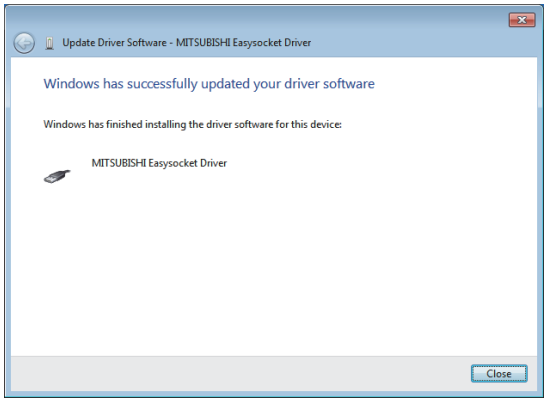
If more than one MELSOFT product is installed, browse for the installation destination of the first product.



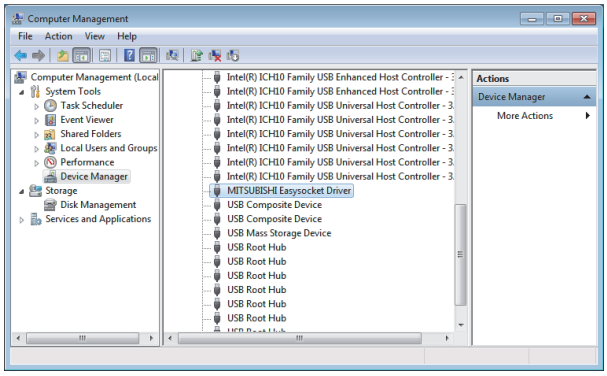
8. **Click the [Install] button.**

Continued on next page

Continued from previous page



9. **Click the Close button.**



10. **"MITSUBISHI Easysocket Driver" is registered under "Universal Serial Bus controllers".**

Installation complete

Appendix 12 Updating USB Driver

In Windows Vista® or later, when upgrading the MELSOFT version that is incompatible with each operating system to compatible, updating the USB drivers is also required.

The USB driver has the following two types:

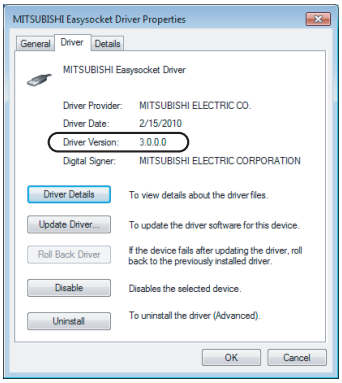
- USB driver for programmable controller connection
- USB driver for GOT connection (Used for the GOT transparent mode.)

(1) Procedure for updating the USB driver for programmable controller connection

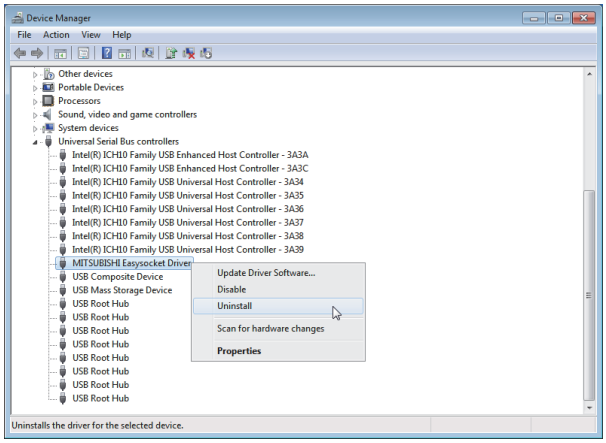
(a) Checking method

Whether an update of the USB driver is required or not can be checked by its version.
Start the Windows Device Manager while the personal computer is connected to the programmable controller with USB, right-click "MITSUBISHI Easysocket Driver", and select "Properties".
Update is required if the version shown on the <<Driver>> tab of the properties screen is the following.

- Windows Vista® : "2.0.0.0" or earlier
- Windows® 7 : "3.0.0.0" or earlier
- Windows® 8 or Windows® 8.1 : "4.0.0.0" or earlier



(b) Procedure for update



1. Connect the personal computer and the programmable controller CPU with USB cable.

2. Start the Device Manager, right-click "MITSUBISHI Easysocket Driver", and select "Uninstall".

Continued on next page

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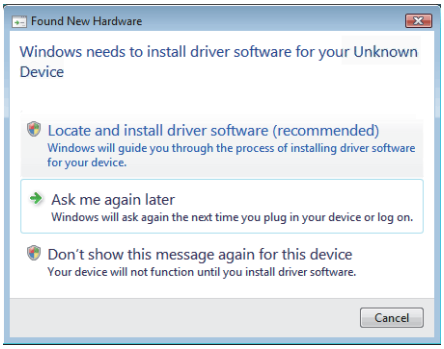
3. **Select the "Delete the driver software for this device" check box, and click the OK button.**

4. **Disconnect the USB cable and reconnect it to the same USB port after 5 seconds.**

When using Windows Vista®, the following screen is displayed. Select "Ask me again later".



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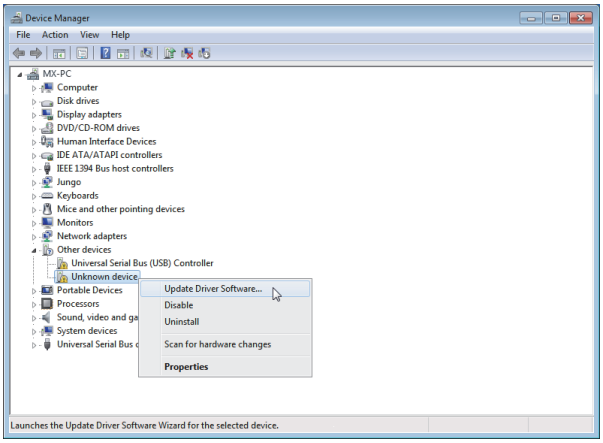
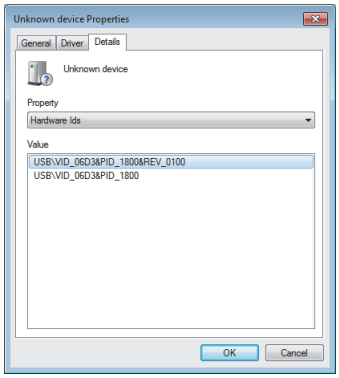
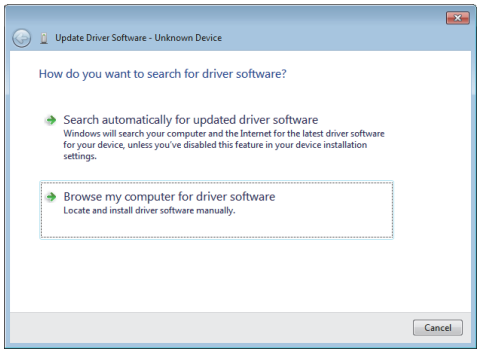


5. Right-click "Unknown device" in Device Manager, and select "Update Driver Software".

When the USB driver cannot be specified because more than one "Unknown device" exists, right-click "Unknown device" and select "Properties". The "Unknown device", whose "Hardware Ids" is "USB\VID_06D3&PID_1800" on the <<Details>> tab of the properties screen, is the update target.





6. Select "Browse my computer for driver software".

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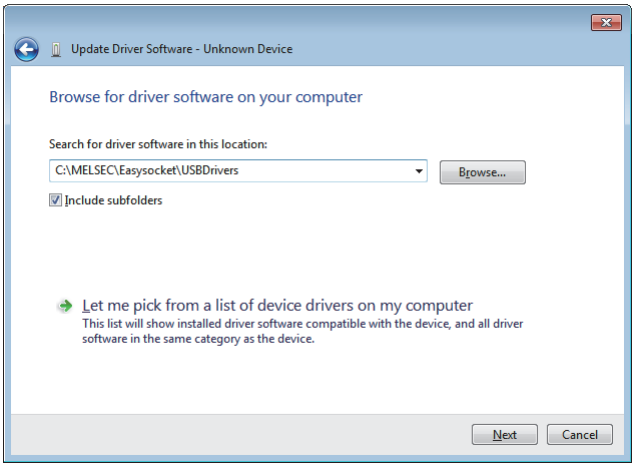
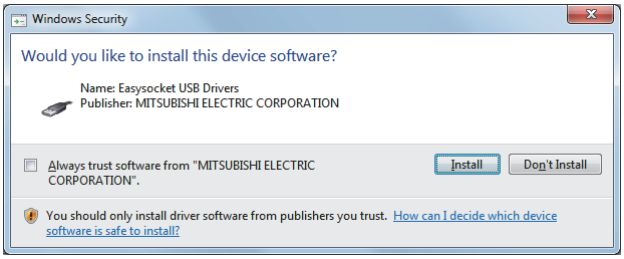


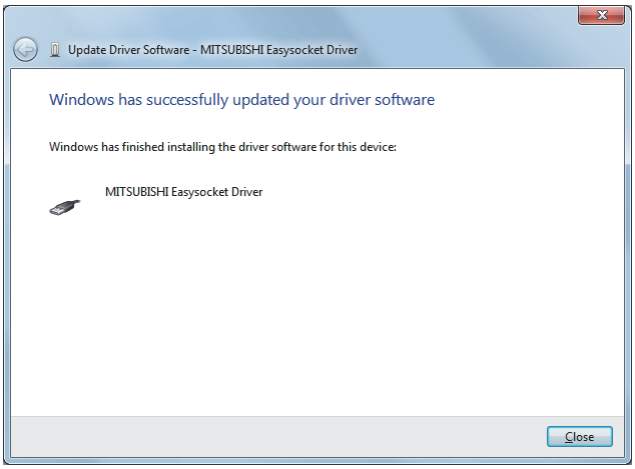
7. **Specify "Easysocket\USBdrivers", and click the Next button.**

The left screen is an example when C:\MELSEC\Easysocket\USBDrivers is set.

If more than one MELSOFT product is installed, browse for the installation destination of the first product.



8. **Click the Install button.**



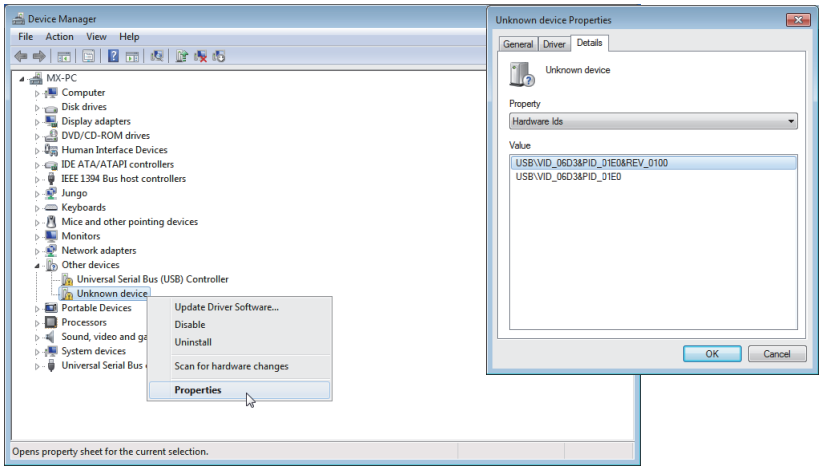
9. **Click the Close button.**

Complete

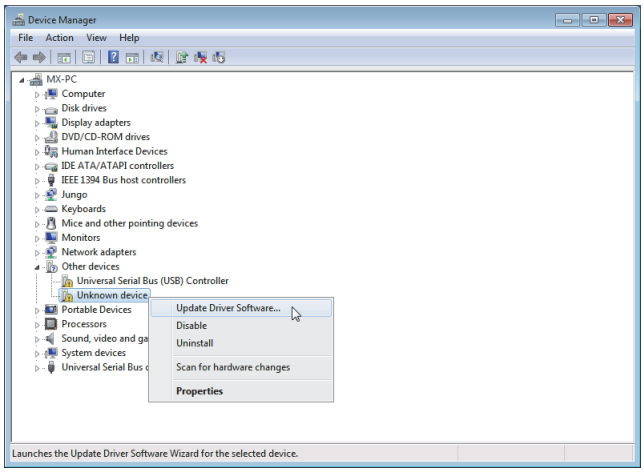
(2) Procedure for updating the USB driver for GOT connection

(a) Checking method

Restart the GOT while the personal computer is connected to the GOT with USB and start the Windows Device Manager. If "MITSUBISHI GOT2000 USB Controller" or "MITSUBISHI GOT1000 USB Controller" is not displayed under "Universal Serial Bus controllers", but "Unknown device" is displayed under "Other devices", the device is required to be updated.
The "Unknown device", whose "Hardware Ids" is "USB\VID_06D3&PID_01E0" on the <<Details>> tab of the properties screen, is the update target.



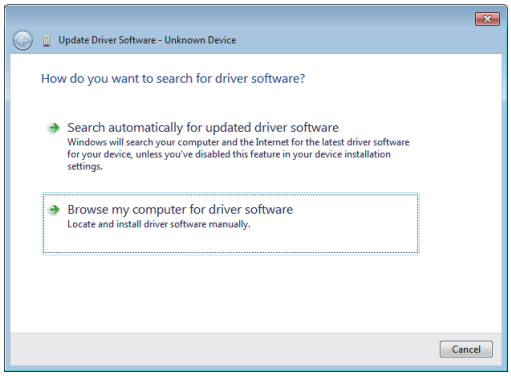
(b) Procedure for update



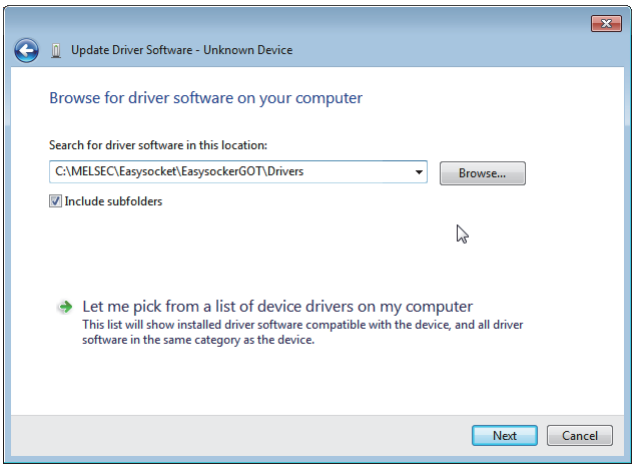
Continued on next page

1. **Connect the personal computer and the GOT with USB cable.**
2. **Start the Device Manager, right-click "Unknown device", and select "Update Driver Software...".**

Continued from previous page



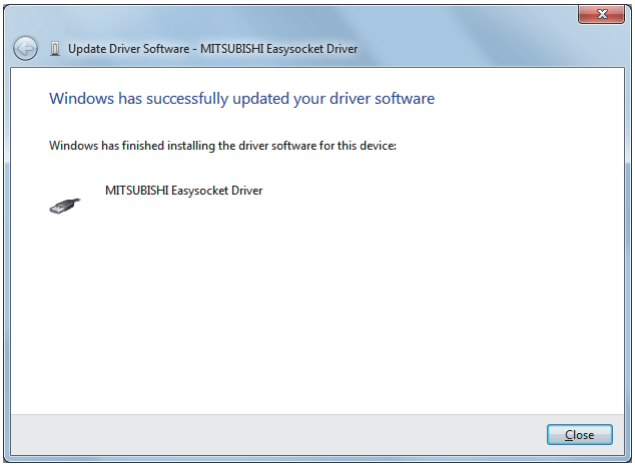
3. **Select "Browse my computer for driver software".**



4. **Specify "Easysocket\USBdrivers", and click the Next button.**

The left screen is an example when C:\MELSEC\Easysocket\USBdrivers is set.

If more than one MELSOFT product is installed, browse the installation destination of the first product.



5. **Click the Close button.**

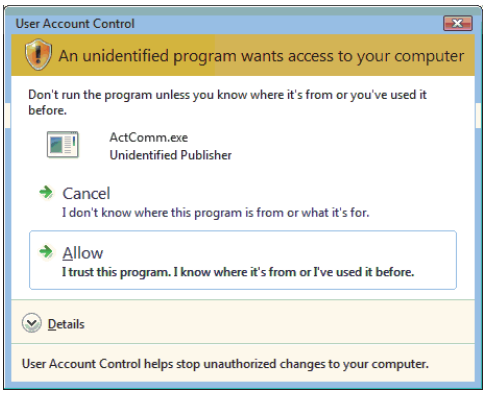
Complete

Appendix 13 Warning Messages on Windows®

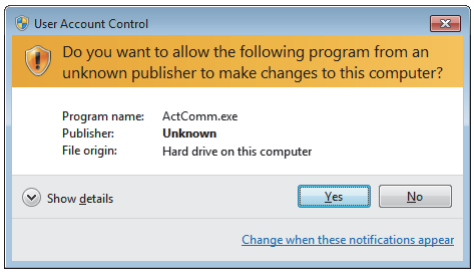
Appendix 13.1 Overview of warning messages

The user account control function is added to Windows Vista® or later.
By this function, a warning message is displayed when executing utilities with the administrator authority.
(☞ Page 87, Section 6.1)

<Windows Vista®>



<Windows® 7 or later>



Appendix 13.2 Methods for disabling warning messages

Point

The user account control (UAC) function prevents a crash (e.g. prevention of startup of a program which executes unintended operation).
Before setting this function, grasp that the security function offered by UAC will be disabled and fully understand the risk.

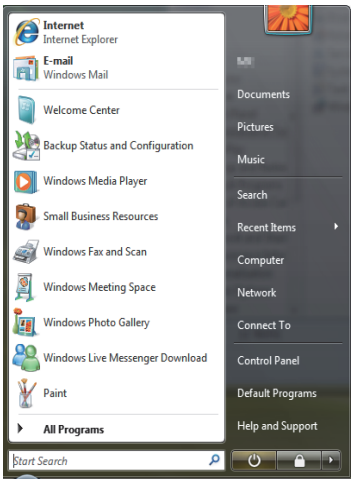
The following two methods are available for preventing a warning message.

(1) Disabling the user account control function

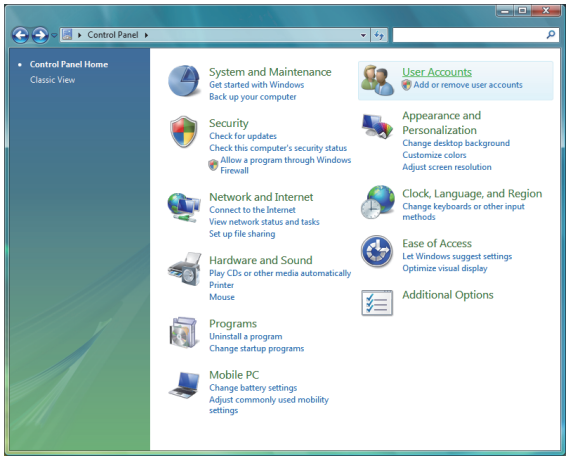
The following shows a procedure for disabling the user account control function.

(a) When using Windows Vista®

Operating procedure



1. **[Start] ⇨ [Control Panel]**



2. **Select [User Accounts].**

Continued on next page

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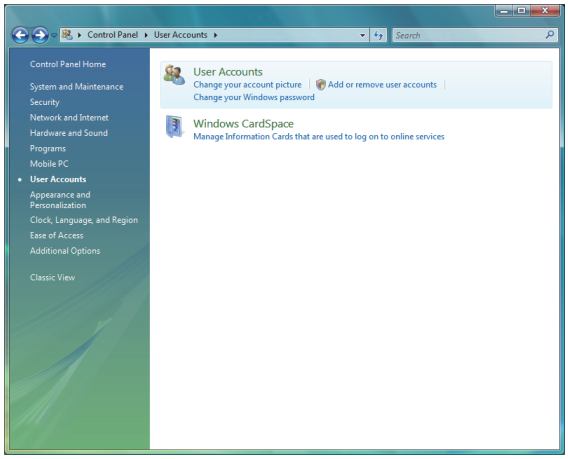
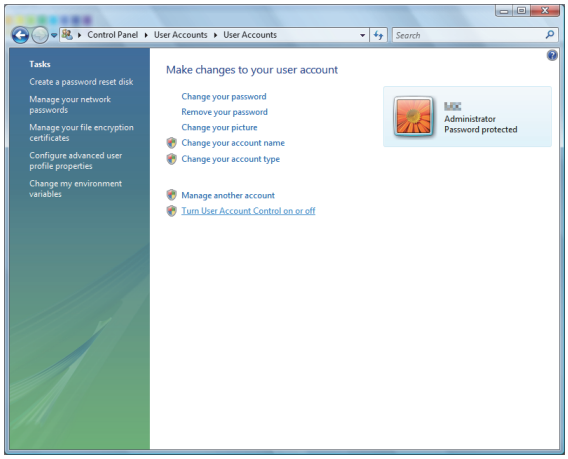
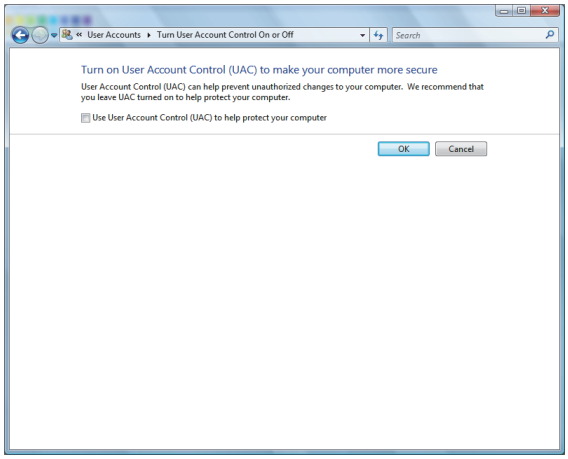


3. **Select [User Accounts].**



4. **Select [Turn User Account Control on or off].**



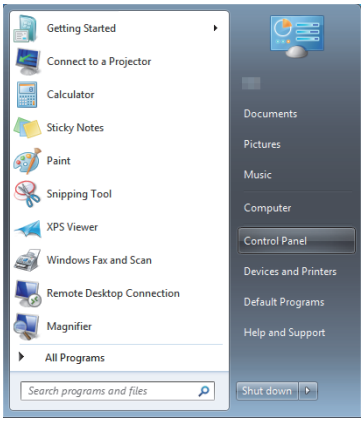
5. **Clear [Use User Account Control (UAC) to help protect your computer] and click the OK button.**

Setting complete

A

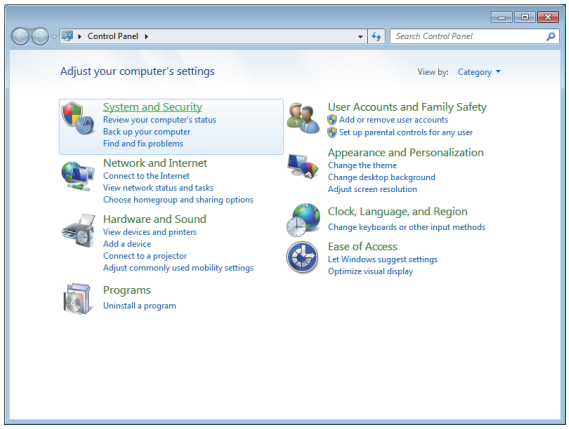
(b) When using Windows® 7 or later

Operating procedure

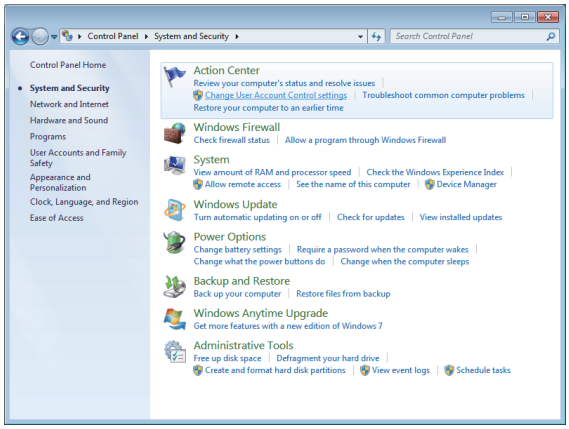


1. **[Start] ⇨ [Control Panel]**

For Windows® 8 or Windows® 8.1, right-click the lower left corner of the screen, and select [Control Panel].



2. **Select [System and Security].**



3. **Select [Change User Account Control settings].**

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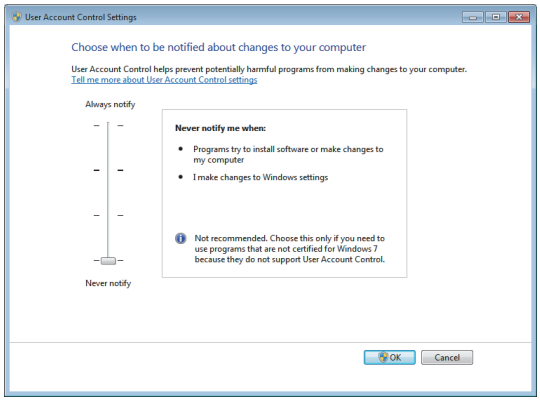


Setting complete

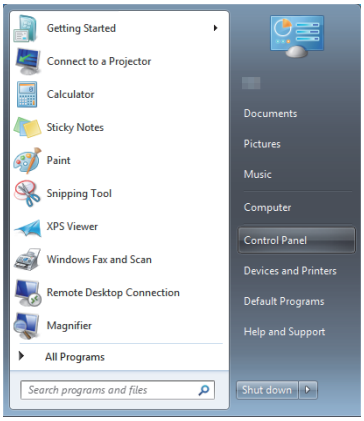
4. **Set the slide bar "Never notify" and click the OK button.**

A

(2) Allowing the setting without displaying the warning message

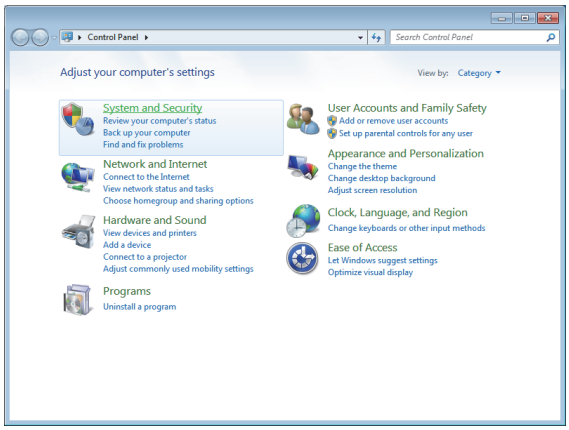
The following shows a procedure for allowing the setting without displaying the warning message.

Operating procedure



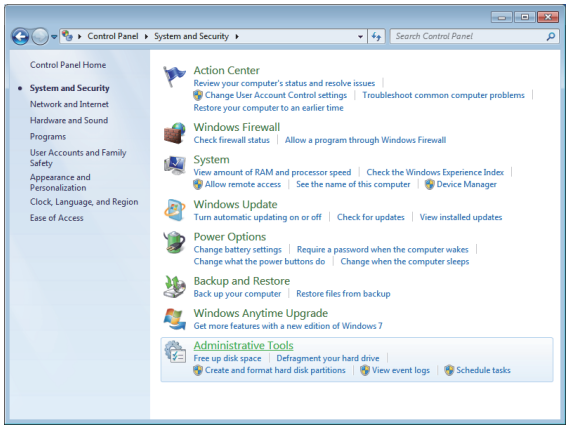
1. **[Start] ⇨ [Control Panel]**

For Windows® 8 or Windows® 8.1, right-click the lower left corner of the screen, and select [Control Panel].



2. **Select [System and Security].**

When using Windows Vista®, select [Classic View].



3. **Select [Administrative Tools].**

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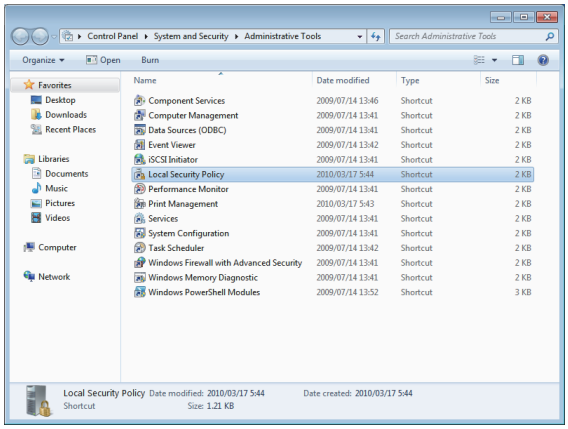
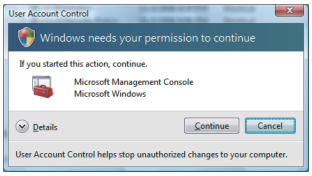


4. **Select [Local Security Policy].**

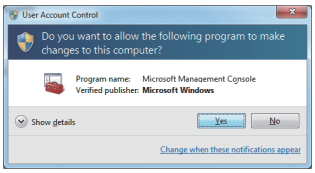
When user account control is enabled, the following screen is displayed.

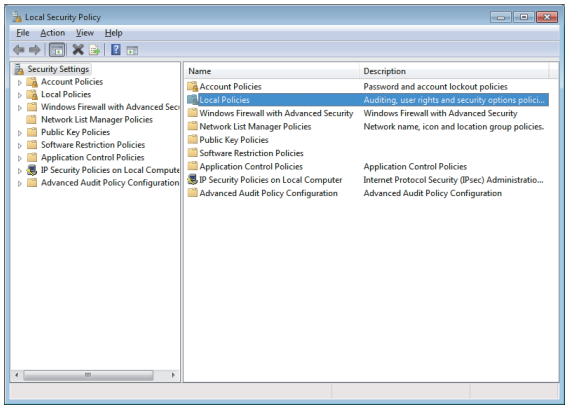
Click the [Continue] button or [Yes] button.

<Windows Vista®>

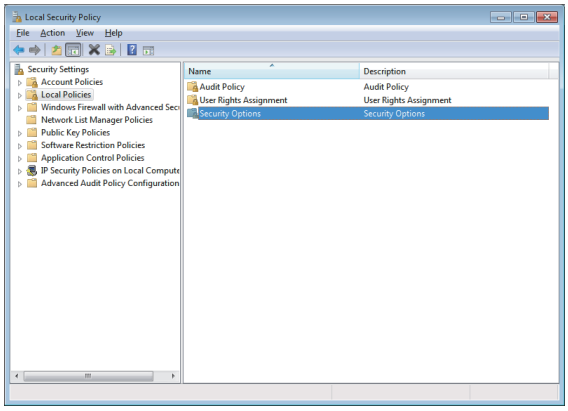


<Windows® 7 or later>





5. **Select [Local Policies].**



6. **Select [Security Options].**

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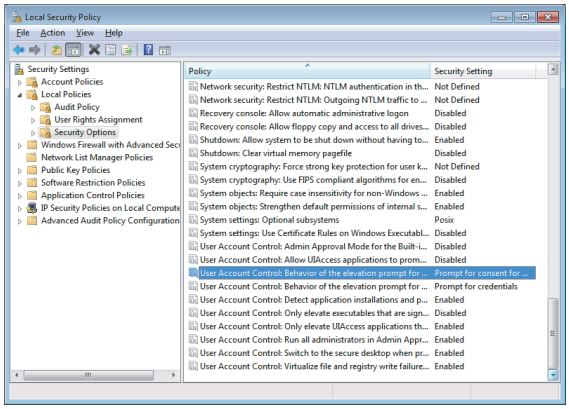
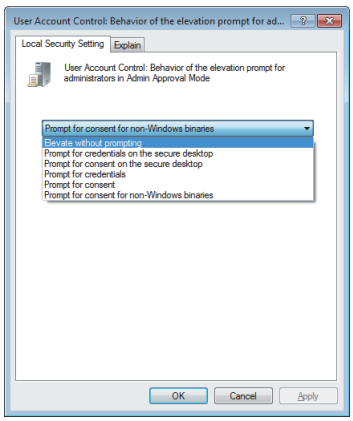


7. **Select [User Account Control: Behavior of the elevation prompt for administrators in Admin Approval Mode Prompt for consent].**



8. **Select [Elevate without prompting] on the <<Local Security Setting>> tab, and click the OK button.**

Setting complete

Appendix 14 Functions Added Since Previous Versions

This section shows major functions added/changed with upgrade.

Version	Major function added/ changed	Description	Reference
Version4.00A	Programmable controller type	The following modules are supported. • Q172CPU, Q173CPU, Q172HCPU, Q173HCPU, Q172DCPU, Q173DCPU, Q172DSCPU, Q173DSCPU	Page 19
	Label	The system label is supported.	Page 70, CHAPTER 5
Version4.02C	Programmable controller type	The following modules are supported. • Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU • Q24DHCCPU-V • FX3GCCPU	Page 19
Version4.04E	Programmable controller type	L02SCPU, L06CPU, and L26CPU are supported.	-
	Operation Environment	Windows® 8 is supported.	Page 49, Section 2.3
	Programming language	Visual C#® .NET is supported.	Page 66, Section 4.3.3
	Development software	Visual Studio® 2012 is supported.	Page 49, Section 2.3
	Network route	The following connections are supported. • The CPU COM communication (via CC-Link other station) whose connected station is FXCPU • The CPU USB communication (via CC-Link other station) whose connected station is FXCPU • The Ethernet communication whose connected station is Ethernet adapter • MT Simulator2 Communication • The GOT transparent communication (via CC-Link other station) with serial connection whose connected station is FXCPU • The GOT transparent communication (via CC-Link other station) with USB connection whose connected station is FXCPU • The GOT transparent communication whose connected station is Ethernet adapter/module • The GOT transparent communication with Ethernet connection whose connected station is FXCPU	Page 262, CHAPTER 10
Version4.05F	Programmable controller type	The following modules are supported. • Q12DCCPU-V (Extended mode), Q24DHCCPU-LS • FX3S • GOT2000 • Inverter	Page 19
	Development software	The following softwares are supported. • Microsoft® Excel® 2013 (32-bit version) • Microsoft® Access® 2013 (32-bit version)	Page 49, Section 2.3
	Network route	The following connections are supported. • The inverter COM communication whose connected station is inverter • The inverter USB communication whose connected station is inverter	Page 262, CHAPTER 10
Version4.06G	Programmable controller type	The following modules are supported. • R04CPU, R08CPU, R16CPU, R32CPU, R120CPU • R16MTCPU, R32MTCPU	Page 19
	Operation Environment	Windows® 8.1 is supported.	Page 49, Section 2.3

Version	Major function added/ changed	Description	Reference
Version4.07H	Programmable controller type	The following modules are supported. • Robot controller	Page 19
	Development software	Visual Studio® 2013 is supported.	Page 49, Section 2.3
	Label	The system label Ver.2 is supported.	Page 70, CHAPTER 5
	Network route	The following connections are supported. • The robot controller COM communication whose connected station is robot controller • The robot controller USB communication whose connected station is robot controller • The robot controller Ethernet communication whose connected station is robot controller	Page 262, CHAPTER 10
Version4.09K	Programmable controller type	The following modules are supported. • FX5UCPU and FX5UCCPU	Page 19
	Network route	The following connections are supported. • The Ethernet communication whose connected station is FX5CPU • The CPU COM communication whose connected station is FX5CPU	Page 262, CHAPTER 10

REVISIONS

*The manual number is written at the bottom left of the back cover.

Print date	*Manual number	Revision
Jul., 2012	SH-081084ENG-A	First edition
Feb., 2013	SH-081084ENG-B	Model Addition Q03UDV, Q04UDV, Q06UDV, Q13UDV, Q26UDV, Q24DHCCPU-V, FX3GC Addition Appendix 8.1, Appendix 8.2, Appendix 13 Correction OPERATING CONSIDERATIONS, TERMS, Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 8.1.1, Section 8.4, Section 8.4.1, Section 8.7.1, Section 10.2 to 10.16
Mar., 2013	SH-081084ENG-C	Correction Section 2.3, Chapter 8, Appendix 8.1
Aug., 2013	SH-081084ENG-D	Model Addition L02S, L06, L26 Addition Section 2.1.5, Section 4.3.3, Section 8.5, Section 8.5.1, Section 8.12, Section 8.12.1, Section 10.3.5, Section 10.16, Section 10.16.1, Section 10.16.2 Correction OPERATING CONSIDERATIONS, TERMS, Section 1.2, Section 2.1.1 to Section 2.1.4 Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 3.1, Section 3.3, Section 4.3.1, Section 4.3.2, Section 4.3.4, Section 4.3.5, Section 5.1, Section 6.1, Section 7.1.6, Chapter 8, Section 8.1.1, Section 8.1.2, Section 8.3, Section 8.3.1, Section 8.9.1, Section 8.9.2, Section 8.17.1, Section 8.17.2, Section 10.3.3, Section 10.4.2, Section 10.5.2, Section 10.17.2, Appendix 2.2 to Appendix 2.5, Appendix 10, Appendix 11, Appendix 12.1, Appendix 13
Dec., 2013	SH-081084ENG-E	Model Addition FX3S, Q12DC-V(Extended mode), Q24DHC-LS, GOT2000, A800 Addition Section 8.20, Section 8.21, Section 10.18 Correction OPERATING CONSIDERATIONS, RELATED MANUALS, TERMS, Section 2.1.1 to Section 2.1.5, Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 3.1, Section 8.1.1, Section 8.19, Section 10.2.1, Section 10.2.2, Section 10.3.1 to Section 10.3.4, Section 10.4.1, Section 10.5.1, Section 10.6.1, Section 10.6.2, Section 10.7.1, Section 10.7.2, Section 10.8.1, Section 10.8.2, Section 10.9.1, Section 10.9.2, Section 10.10.1, Section 10.10.2, Section 10.12.1, Section 10.12.2, Section 10.17.1, Section 10.17.2, Appendix 9, Appendix 13

Print date	*Manual number	Revision
May, 2014	SH-081084ENG-F	Model Addition R04, R08, R16, R32, R120, R16MT, R32MT Correction TERMS, Section 2.1.5, Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 3.1, Section 7.1.7, Section 7.2.3, Section 8.1.1, Chapter 10, Appendix 2.2, Appendix 2.5, Appendix 10, Appendix 11, Appendix 12.2, Appendix 13
Dec., 2014	SH-081084ENG-G	Model Addition CR750-D/CRnD-700 Series Addition Section 8.22 to Section 8.24, Section 10.19, Appendix 9 Correction TERMS, Section 2.1.1 to Section 2.1.5, Section 2.2.1, Section 2.2.2, Section 2.3, Section 3.1, Section 5.1, Section 7.3.2, Section 7.3.3, Appendix 14
Apr., 2015	SH-081084ENG-H	Correction TERMS, Section 2.2.1, Section 2.2.2, Section 2.4, Section 10.3.1, Section 10.3.3, Section 10.4.1, Section 10.4.2, Appendix 14
Apr., 2015	SH-081084ENG-I	Correction Section 3.1, Section 3.3

Japanese Manual Version SH-081082-I

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MODEL: SW4DNC-ACT-O-E
MODEL CODE: 13JU75

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