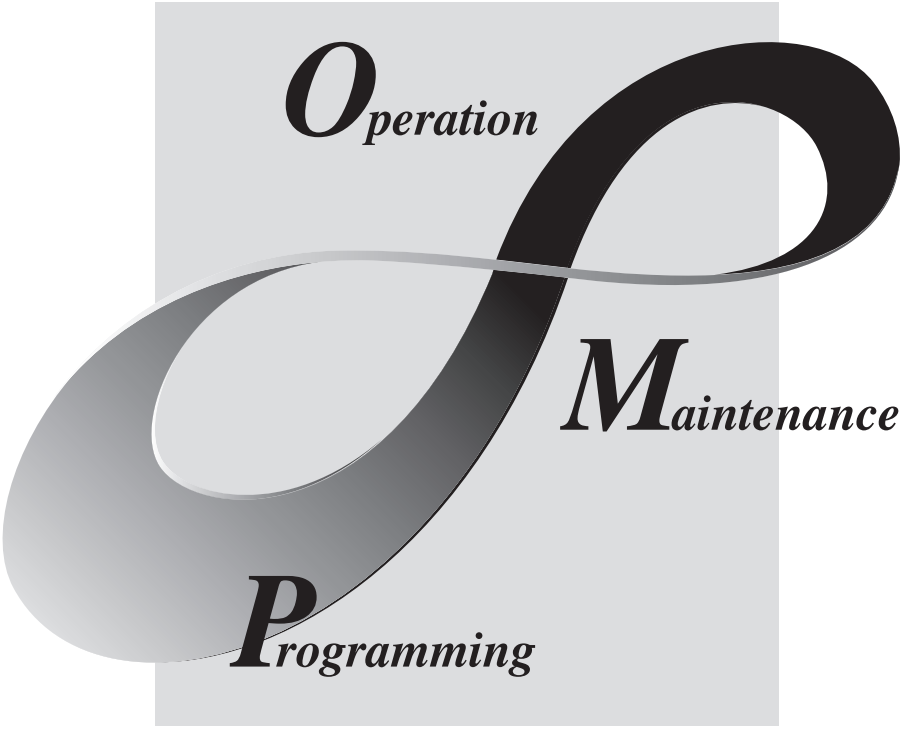
MX Component Version 3

Operating Manual

MITSUBISHI

MELSOFT



MELSOFT
Integrated FA Software

SW3D5C-ACT-E

• SAFETY PRECAUTIONS •

(Always read these instructions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.
The instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.
In this manual, the safety instructions are ranked as "⚠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.

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

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

[Design Instructions]

⚠ WARNING

- When performing data changes or status control from the personal computer to the running CPU module, configure up an interlock circuit outside the CPU module system to ensure that the whole system will operate safely.
  In addition, predetermine corrective actions for the system so that you can take measures against any communication error caused by a cable connection fault or the like in online operations performed from the peripheral device to the CPU module.

⚠ CAUTION

- Read the manual carefully before performing the online operations (especially forced output and operating status change) which will be executed with the personal computer connected to the running CPU module.
  Not doing so can damage the machine or cause an accident due to incorrect operation.

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• 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.

REVISIONS

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

Print Date	* Manual Number	Revision
Apr., 2002	SH (NA)-080271-A	First edition
Jun., 2002	SH (NA)-080271-B	Correction Operating Instructions, Section 6.12.1 Addition Section 6.12.2
Sep., 2002	SH (NA)-080271-C	Correction Section 6.12.1, Section 6.12.2, Appendix 2.3
Nov., 2003	SH (NA)-080271-D	Correction Operating Instructions, Section 1.1, Section 2.1.6, Section 2.2.1, Section 2.2.2, Section 6.1.1, Section 6.2.2, Section 6.7.2, Section 8.2.1, Section 8.2.2, Section 8.3.1, Section 8.3.2, Section 8.4.2, Section 8.5.2, Section 8.6.2, Section 8.9.1, Section 8.10.2 Addition Generic Terms and Abbreviations, Section 8.9.2
Dec., 2003	SH (NA)-080271-E	Correction Operating Instructions, Meaning and Definitions of Terms, Section 1.1, Section 2.2.1, Section 6.1.2, Section 6.2.2, Section 6.3.1, Section 6.8.1, Section 6.8.2, Section 6.13, Section 6.14.2, Section 6.15.1, Section 8.2.1, Section 8.2.2 Addition Generic Terms and Abbreviations, Section 2.2.2, Section 6.1.1, Appendix 3.4
Jun., 2004	SH (NA)-080271-F	Model Addition Q12PRHCPU, Q25PRHCPU, FX3UCCPU New Addition Appendix 7 Correction Section 6.1.1, Section 6.9.1, Section 6.12.2, Appendix 1, Appendix 3.4 Addition Generic Terms and Abbreviations, Section 2.1.3, Section 2.1.4, Section 2.1.5, Section 2.1.6, Section 2.1.7, Section 2.2.2, Section 2.3, Section 2.4, Section 3.2, Section 8.2, Section 8.3, Section 8.4, Section 8.5, Section 8.6, Section 8.7, Section 8.8, Section 8.9, Section 8.10, Section 8.12
Aug., 2004	SH (NA)-080271-G	New Addition Section 8.14 Addition Operating Instructions, Manuals, Section 2.2.1, Section 2.2.2, Section 2.3, Section 6.1.1, Chapter 8
Oct., 2004	SH (NA)-080271-H	Correction Manuals, Chapter 1, Section 6.2.2, Section 8.14.1

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Print Date	* Manual Number	Revision
Aug., 2005	SH (NA)-080271-I	Model Addition FX3UCPU Addition Generic term and Abbreviations, Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 5.1.4, Section 8.2.1, Section 8.2.2, Section 8.3.1, Section 8.3.2, Section 8.4.1, Section 8.5.1, Section 8.6.1, Section 8.6.2, Section 8.7.1, Section 8.8.1, Section 8.9.1, Section 8.10.1, Section 8.10.2, Section 8.12.1, Section 8.12.2
Nov., 2006	SH (NA)-080271-J	Correction Section 1.1, Section 2.1.6, Section 2.1.7, Section 2.2, Section 2.2.1, Section 2.2.2
Oct., 2007	SH (NA)-080271-K	Model Addition Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU New Addition Section 2.1.8, Section 6.13, Section 8.13, Appendix 8 Correction Section 6.13 to 6.15 changed to Section 6.14 to 6.16, Section 8.13 changed to Section 8.14 Addition Operating Instructions, Manuals, Generic term and Abbreviations, Section 2.1.1 to 2.1.7, Section 2.2, Section 2.3, Section 2.4, Section 3.2.1, Section 3.2.2, Section 4.1, Section 5.1.2, Section 5.1.6, Section 5.2.2 to 5.2.5, Section 6.4.1, Chapter 7, Section 8.2 to 8.12, Section 8.15 to 8.17, Appendix 2.2 to 2.5, Appendix 7
Jun., 2008	SH (NA)-080271-L	Model Addition Q13UDHCPU, Q26UDHCPU Correction Operating Instructions, Manuals, Generic term and Abbreviations, Section 2.1.1 to 2.1.8, Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 4.1, Section 5.1.2, Section 5.1.6, Section 6.4.1, Section 6.11, Section 6.11.1, Chapter 7, Section 8.2.1 to 8.11.2, Section 8.13.1, Section 8.13.2, Appendix 2.2 to 2.5, Appendix 3.4, Appendix 8, Appendix 8.1, Appendix 8.2
Sep., 2008	SH (NA)-080271-M	Model Addition Q02PHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q06PHCPU, Q13UDEHCPU, Q26UDEHCPU, QS001CPU New Addition Section 6.3, Section 8.3.3 Correction Operating Instructions, Generic term and Abbreviations, Section 1.1, Section 2.1.2 to 2.1.7, Section 2.2.1, Section 2.2.2, Section 2.4, Section 5.2.5 to 5.2.7, Section 6.2, Section 6.4.1 to 6.15.1, Chapter 7, Section 8.2.1 to 8.15.2, Appendix 5, Appendix 7

Print Date	* Manual Number	Revision
Dec., 2008	SH (NA)-080271-N	Model Addition Q00UCPU, Q00UJCPU, Q01UCPU, Q10UDHCPU, Q10UDEHCPU, Q20UDHCPU, Q20UDEHCPU, FX3GCPU New Addition Appendix 9 Correction Operating Instructions, Generic term and Abbreviations, Section 2.2.1, Section 2.2.2, Section 2.3, Section 2.4, Section 5.1.2, Section 6.1.1, Chapter 7, Section 8.2.1, Section 8.2.2, Section 8.3.1, Section 8.3.2, Section 8.3.3, Section 8.4.1, Section 8.4.2, Section 8.5.1, Section 8.5.2, Section 8.6.1, Section 8.7.1, Section 8.8.1, Section 8.9.1, Section 8.10.1, Section 8.11.1, Section 8.12.1, Section 8.13.1, Appendix 3.4
Dec., 2009	SH (NA)-080271-O	Model Addition L02CPU, L26CPU-BT Correction SAFETY PRECAUTIONS, CONDITIONS OF USE FOR THE PRODUCT, Operating Instructions, Manuals, Generic Terms and Abbreviations, Section 2.2.1, Section 2.2.2, Section 2.2.4, Section 5.2.6, Section 6.1.1, Section 8.2 to 8.13, Section 8.15, Section 8.17, Appendix 8.1
May, 2010	SH (NA)-080271-P	Model Addition Q50UDEHCPU, Q100UDEHCPU, Q12DCCPU-V New Addition Section 6.11, Section 6.11.1, Section 6.17, Section 6.17.1, Section 8.16 to 8.17.2 Correction Section 6.11 to 6.15 changed to Section 6.12 to 6.16 Addition SAFETY PRECAUTIONS, MANUALS, GENERIC TERMS AND ABBREVIATIONS, Section 1.1, Section 2.1.1 to 2.1.8, Section 2.2.1 to 2.4, Section 4.1, Section 5.1.2, Section 5.1.6, Section 6.5.1, Chapter 7, Section 8.2.1, Section 8.2.2, Section 8.3.1 to 8.3.3, Section 8.4.1, Section 8.4.2, Section 8.5.1, Section 8.5.2, Section 8.6.1, Section 8.6.2, Section 8.7.1, Section 8.8.1, Section 8.8.2, Section 8.9.1, Section 8.9.2, Section 8.10.1, Section 8.10.2, Section 8.11.1, Section 8.11.2, Section 8.13.1, Section 8.13.2, Section 8.15.2, Appendix 2.2 to 2.5, Appendix 7, Appendix 8, Appendix 9.3 to 9.5
Nov., 2010	SH (NA)-080271-Q	Correction Section 2.2.1, Section 6.3.1, Section 8.3.3, Section 8.17.1

Print Date	* Manual Number	Revision
May, 2011	SH (NA)-080271-R	New Addition Section 2.1.9, Section 6.4, Section 6.15, Section 8.3.4, Section 8.12 Correction Section 6.4 to 6.13 changed to Section 6.5 to 6.14, Section 6.14 to 6.17 changed to Section 6.16 to 6.19, Chapter 7, Section 8.2.1, Section 8.2.2, Section 8.3.1, Section 8.3.2, Section 8.3.3, Section 8.4.1, Section 8.4.2, Section 8.5.1, Section 8.5.2, Section 8.7.1, Section 8.7.2, Section 8.8.1, Section 8.8.2, Section 8.9.1, Section 8.9.2, Section 8.12.1, Section 8.12.2, Section 8.13.1, Section 8.13.2, Section 8.12 to 8.17 changed to Section 8.13 to 8.18, Section 8.14.1, Section 8.14.2, Section 8.18.1, Section 8.18.2, Appendix 9 Addition GENERIC TERMS AND ABBREVIATIONS, Section 2.1.1, Section 2.1.2, Section 2.1.3, Section 2.1.4, Section 2.1.5, Section 2.1.6, Section 2.1.7, Section 2.1.8, Section 2.2.1, Section 2.2.2, Section 2.3, Section 5.1.6, Section 8.18.2, Appendix 2.5

Japanese Manual Version SH-080274-R

OPERATING INSTRUCTIONS

This section gives explanation of instructions in the following order.

1) Instructions for used OS and personal computer
2) Instructions for installation and uninstallation
3) Programmable controller CPU-related instructions
4) Instructions for the use of other MELSOFT products
5) Instructions for the use of Ethernet modules
6) Instructions for the use of CC-Link modules
7) Instructions for the use of MELSECNET(II), MELSECNET/10 and MELSECNET/H
8) Instructions for the use of computer link and serial communication modules
9) Instructions for modem communication
10) Instructions for programming
11) Instructions for the use of Microsoft® Excel
12) Instructions for the use of Microsoft® Access
13) Instructions for the use of VBScript and ASP function

Instructions for used OS and personal computer

(1) When using Microsoft® Windows NT® Workstation Operating System Version 4.0, Microsoft® Windows® 2000 Professional Operating System, Windows® XP, Windows Vista® or Windows® 7

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

(a) Communication Setup Utility
- The logical station number cannot be created, changed or deleted.
- Target settings cannot be imported.
- This utility cannot be started up if the communication settings have been made using MX Component earlier than Version 3.00A. *1

(b) PLC Monitor Utility
- This utility cannot be started up if the communication settings have been made using MX Component earlier than Version 3.00A. *1
- Device registration cannot be performed on "Entry Device" tab.

(c) Communication board
- Various settings cannot be made on the CC-Link IE Controller Network, MELSECNET/H, MELSECNET/10, MELSECNET(II), CC-Link, AF and CPU board utilities.

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

(2) About Ethernet communication, computer link communication and CPU COM communication on Microsoft® Windows® 95 Operating System

(a) Making Ethernet communication using TCP/IP and UDP/IP on Windows® 95 of the version older than OSR2 will cause a memory leak. When performing continuous operation on Windows® 95, use Windows® 95 OSR2 or later.

(b) On Windows® 95, communication using the COM port, e.g. computer link communication or CPU COM communication, will cause a memory leak. Therefore, do not perform continuous operation.

(3) Precautions for the use of Microsoft® Windows® Millennium Edition Operating System
It is not recommended to use MX Component with the "system restoring function" made invalid by the operating system.
If the free space of the system drive becomes less than 200MB, the "system restoring function" is made invalid by the operating system. When using Windows® Me, reserve a 200MB or more free space for the system drive.

(4) About the resume and other functions of personal computer
A communications error may occur if communications are made 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 making communications with the programmable controller CPU.

(5) Restrictions by DEP (Data Execution Prevention)
Note that restrictions by DEP may apply when using Windows® XP Service Pack2 or later, Windows Vista® or Windows® 7.
For details, refer to "Appendix 9 Restrictions by DEP function".

Instructions for installation and uninstallation

(1) About installation

(a) When performing overwrite installation, install the software in the folder where it had already been installed.

(b) If you install the MELSEC board driver or GX Developer into the personal computer where MX Component has already been installed, communication using a specific path (e.g. ASCII packet of the AJ71E71) may result in a receive, device number or other error.
If any of these phenomena has occurred, perform overwrite installation of MX Component again.

(2) Precautions for performing installation and uninstallation on a dual boot machine where two different operating systems are installed in a single IBM-PC/AT compatible personal computer

On a dual boot machine having Windows NT® Workstation 4.0 (hereafter referred to as OS1) and Windows® 95 or Windows® 98 (hereafter referred to as OS2), note the following points when MX Component was installed on OS1 first and MX Component was then installed over the same folder on OS2.

(a) If MX Component is uninstalled first on the OS2 side, uninstallation does not delete the control DLLs and ACT folders, and they remain within the IBM-PC/AT compatible.
To delete the control DLLs and ACT folders, perform uninstallation also on the OS1 side.

(b) If MX Component is uninstalled first on the OS1 side, the control DLLs and ACT folders are deleted.
In this case, MX Component may not operate properly or cannot be uninstalled on the OS2 side.
Install MX Component again on the OS2 side to operate MX Component properly or uninstall it on the OS2 side.

(3) About start menu
When you have uninstalled MX Component, the item may remain in the start menu.
In that case, restart the IBM-PC/AT compatible personal computer.

Programmable controller CPU-related instructions

(1) About transmission speed
As the transmission speed of the QCPU(Q mode), LCPU and QCPU(A mode), you can set 9600bps, 19200bps, 38400bps, 57600bps or 11520bps.
For the QnACPU of version 9707B or later, you can set the transmission speed of 9600bps, 19200bps or 38400bps.
For the QnACPU of other versions, you can set 9600bps or 19200bps.
The transmission speeds of the ACPU (except A2USHCPU-S1), FXCPU and motion controller CPU are fixed to 9600bps. (The A2USHCPU-S1 may be set to 19200bps.)

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

(3) About clock data of the programmable controller CPU
(a) For the ACPU (including the motion controller CPU), clock data setting may be made only when the programmable controller CPU is in the STOP status.
For the QCPU (Q mode), LCPU, QCPU (A mode), QnACPU and FXCPU, clock data setting may be made if the programmable controller CPU is in the RUN status.
(b) For the A0J2HCPU, A2CCPU and A2CJCPU, setting cannot be made as they do not have the clock function.
(c) For the ACPU, setting can be made independently of whether the clock setting special relay "M9028" is ON or OFF. (Note that the special relay "M9028" turns OFF after execution.)
For the QCPU (Q mode), LCPU, QCPU (A mode) and QnACPU, setting can be made independently of whether the clock setting device "SM1028" is ON or OFF.
(d) Among the FXCPUs, setting may be made for only the FX_{1N} (clock built-in), FX_{1NC} (clock built-in), FX_{1S} (clock built-in), FX_{2N} (clock built-in), FX_{2NC} (when RTC cassette is fitted), FX_{U} (when RTC cassette is fitted), FX_{2C} (when RTC cassette is fitted) and FX_{3G} (clock built-in).
(e) Note that an error for transfer time will be produced in clock setting.

(4) Precautions for the use of Q4ARCPU
The redundant function cannot be used.

(5) Restrictions on use of the FXCPU
(a) When the FXCPU is used, access to the TN devices (timer present values) or CN devices (counter present values) is not permitted if the device numbers specified are split across 199 or earlier and 200 or later.
(b) As the FXCPU does not have a 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 the FXCPU, data cannot be written to 2 or more consecutive points using WriteDeviceBlock(). (Data may be written to only one point.)

(6) Serial communication function of Q00UJ/Q00/Q00U/Q01/Q01U/Q02U/CPU*1
When the following conditions are all satisfied, communication between the personal computer and the serial communication function compatible CPU is made at 9600bps speed.

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

1) The serial communication function of the connected CPU is valid.
2) The personal computer side transmission speed setting differs from the serial communication function compatible CPU side transmission speed setting.

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

(7) Precautions for the use of Built-in Ethernet port CPU
If you reset the programmable controller CPU during TCP/IP connection setting (during opening) using MX Component, a communication or receive error will occur at the time of communication after that. In that case, close the application that uses MX Component and then perform open processing again.

(8) Precautions for the use of QSCPU
In order to protect the safety programmable controller system, functions writing to buffer memory, writing and setting devices and writing clock data cannot be executed.

Instructions for use of other MELSOFT products

(1) About simultaneous use of MX Component and GX Developer
When using GX Developer and MX Component together for the same E71 module to make Ethernet communication, make the following settings.
(a) Set the protocol of the communication setting wizard screen to "UDP/IP".
(b) Set "SW2" of the communications setting switches of the E71 module to OFF (binary).

(2) Precautions for GX Simulator communication
Before executing the monitor utility, communication setting utility or user program, make sure that GX Simulator and GX Developer are operating.
In addition, do not terminate the GX Simulator and GX Developer while the user program is running.
If you do so, you will not be able to terminate the user program normally.

Instructions for use of Ethernet modules

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

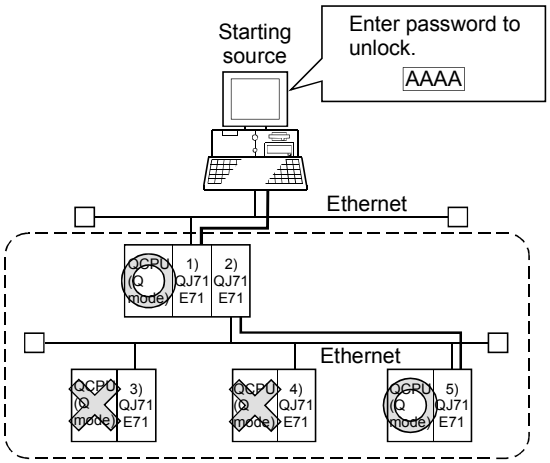
(2) About target existence check starting interval*1 of Ethernet module
If close processing (Close) is executed from the IBM-PC/AT compatible, the Ethernet module may not perform close processing (Close).
One of its causes is the open cable.
If open processing (Open) is executed from the IBM-PC/AT compatible with the Ethernet module not performing close processing (Close), open processing (Open) from the IBM-PC/AT compatible is not terminated normally until the Ethernet module makes a target existence check and executes close processing (Close).
If you want to terminate open processing (Open) early from the IBM-PC/AT compatible, shorten the target existence check starting interval setting of the Ethernet module.
(The target existence check starting interval setting of the Ethernet module defaults to 10 minutes.)

*1: It can be set for the E71 of AJ71E71-S3 or later.

(3) Replacement of Ethernet module
If you changed the Ethernet module during Ethernet communication due to debugging, failure or like, the other node (IBM-PC/AT compatible) must be restarted.
(Since 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 to be made simultaneously from multiple IBM-PC/AT compatibles 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 later 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 set also on the lower layer, communication cannot be made 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) About use of the Q4ARCPU
When using the UDP/IP protocol of Ethernet communication, use the Q4ARCPU whose year and month of manufacture is "0012" or later and whose function version is B or later.

(7) About Ethernet communication

(a) When access is made to the QnACPU, AnUCPU, QCPU (A mode) or motion controller CPU via the E71, the device range is equivalent to that of the AnACPU.

(b) When making access to the programmable controller CPU through Ethernet communication, the functions may not be executed depending on the programmable controller CPU status.

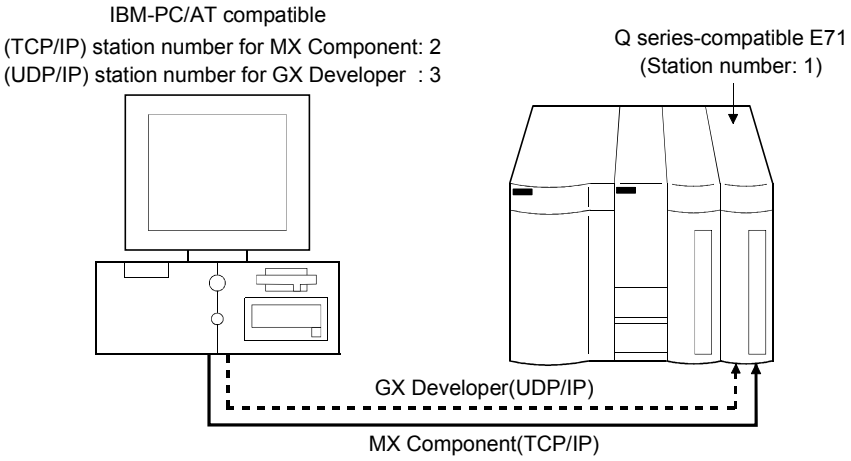
1) When the protocol is TCP/IP (target module: E71, QE71)
The functions can be executed only when the communication target programmable controller CPU is in the RUN mode.
An error is returned if the programmable controller CPU is in other than the RUN mode.

2) When the protocol is UDP/IP (target module: E71, QE71)
The functions cannot be executed until the communication target programmable controller CPU is RUN once.
An error is returned if the programmable controller CPU has not been RUN once.

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

(d) When two different communication systems (protocols) are used to make access from one IBM-PC/AT compatible to one Q series-compatible E71, two station numbers, i.e. for TCP/IP and for UDP/IP, must be set. However, it is not required to set different station numbers for TCP/IP and UDP/IP when using MX Component Version 3 or later and Q series-compatible E71 with serial No. 05051 or later.

(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.

(8) About switch settings of E71 and QE71

If the four lower digits of the error code that occurred during Ethernet communication using the E71 or QE71 is not indicated in the E71 or QE71 manual, check the DIP switch (SW2) setting of the E71 or QE71.

If the DIP switch is not set correctly, a difference has occurred in the packet format (ASCII/binary) and therefore the error code returned from the module cannot be recognized correctly.

Instructions for use of CC-Link modules

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

As the CC-Link master/local module used in CC-Link communication or CC-Link G4 communication (only when the AJ65BT-G4 is used), use the module of software version "N" or later.

The module of software version "M" or earlier will not operate properly.

(2) Software version of CC-Link G4 module

As the CC-Link G4 module used in CC-Link G4 communication (only when the AJ65BT-G4 is used), use the module of software version "D" or later.

The module of software version "C" or earlier will not operate properly.

Instructions for the use of MELSECNET(II), MELSECNET/10 and MELSECNET/H

(1) About relaying from the MELSECNET/10 loaded station
When the module is loaded to the AnNCPU or AnACPU, it is recognized as a MELSECNET(II) module.
When the connected station is the AnNCPU or AnACPU, set the relayed network as MELSECNET(II).
In addition, set the station number to "0" when making access to the control station.

(2) Instructions for relaying the MELSECNET(II)
When access is made to the QnACPU, AnUCPU, QCPU (A mode) or motion controller CPU via the MELSECNET(II), the device range is equivalent to that of the AnACPU.

Instructions for use of computer link and serial communication modules

(1) About computer link communication
(a) If the connected station CPU is the AnUCPU and the computer link module is the UC24 for computer link connection, remote operation will result in an error when access is made to the AnNCPU, AnACPU or QnACPU via the MELSECNET/10.
(b) On any computer link modules other than the UC24 and C24, remote "PAUSE" operation will result in an error for all connections.
(c) For the QC24, note that the illegal case of specifying the first I/O number of a non-existing module and reading/writing U∗\G will not return an error if the software version of the module is "k" or earlier.
(d) In any connection form (direct coupling, relaying) where the target station of the UC24 or C24 is the QnACPU, an error is returned if clock data read/write is executed.
(e) The FX extended port is required when performing the computer link communication using FX_{0N}, FX_{1S}, $FX_{1N(C)}$, FX_{3G}, $FX_{3U(C)}$CPU.

(2) Precautions for connecting personal computer and serial communication module
(a) When QJ71C24-R2 of function version A is used
An MX Component application can use only either of CH1 and CH2.
When the MELSOFT product, such as GX Developer or GOT, is using one channel, the application cannot use the other channel.
When the QJ71C24-R2 of function version B is used, the application can use both channels.
(b) When AJ71QC24-R2 or A1SJ71QC4-R2 or AJ71QC24N-R2 or A1SJ71QC24N-R2 is used
The MX Component application can use only CH1.
It cannot use CH2.

Instructions for modem communication

(1) Simultaneous modem communications
It is not allowed to simultaneously perform modem communications using MX Component and other application such as GX Developer.
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) Instructions for the use of telephone line
(a) Do not use the call-waiting phone line.
On the call-waiting phone line, data corruption, telephone line disconnection or similar 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 adaptor.
When the telephone line is of 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 connection.

(3) Instructions for the use of cellular phone
(a) Modem for radio communication using a cellular phone
Although the modem name is different depending on the maker, 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 has the ANS/ORG/TEL select switch.
If the cellular phone communication unit does not have the ANS/ORG/TEL select switch, it is impossible to connect the line.
The line connection procedure is different depending on the cellular phone company and cellular phone model.
For details, contact the maker of your cellular phone.

Instructions for programming

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

(a) Sample programs, test programs
The sample programs are attached for your reference to create user programs.
The test programs are attached to conduct communication tests.
Use these programs on your own responsibility.

(b) Sample sequence programs
The sample sequence programs attached to MX Component must be modified depending on the system configuration and parameter settings.
Modify them to be best for the system.
Please note that it is user's responsibility to use the same sequence programs.

(2) About forced termination of processes during communication
If communication is being made 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) About error at communication start
A communication error may occur within the preset time-out period at a communication start, e.g. when the communication diagnostic button is pressed, at a monitor start, or at the execution of any function.
These errors are assumed to be detected before a time-out error.
(Example: Connection cable not connected, at programmable controller power-off)

(4) CheckDeviceString
Do not use the CheckDeviceString method of each ACT control.

(5) About ActUMsg control, ActUWzd control, ActMnet2BD control and ActAFBD control
Installing MX Component registers the ActUMsg control, ActUWzd control, ActMnet2BD control and ActAFBD control, but do not use them.

(6) Precautions for the use of Act(ML)QJ71E71TCP, Act(ML)AJ71QE71TCP and Act(ML)AJ71E71TCP controls

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

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

(7) Instructions for execution of Disconnect
If execution of Disconnect cannot disconnect the telephone line for some reason, power off the modem used to make a call to forcibly disconnect the telephone line.

Instructions for use of Microsoft® Excel

(1) Precautions for starting multiple Excel files on Windows® Me
Note that Windows® Me has been confirmed to stop if you run multiple Excel files which use many control objects.
* This phenomenon is not attributable to this product.

(a) Conditions on which this phenomenon has been confirmed to occur
Graphic driver : Matrox make MGA Mystique display driver
OS : Windows® Me (English version)
Number of controls pasted to Excel files
: A total of 150 or more controls used in the whole BOOK
<Other devices checked by Mitsubishi (reference)>
CPU : Pentium® 166MHz
Memory : 64MB
Hard disk : 8GB (free space 6GB)

(b) Cause
The phenomenon has been confirmed to occur when the Matrox make MGA Mystique graphic card display driver is used.
This is because Version 4.12 of the MGA Mystique graphic card display driver is not compatible with Windows® Me.

(c) How to judge whether the phenomenon is the same or not
After changing the used graphic driver for the standard VGA driver, delete the temporary data (*.emf) left in the temporary folder.
After that, try starting multiple Excel files.
The phenomenon seems to be the same if it does not occur by changing the driver for the standard VGA driver.

(d) Corrective action
If this phenomenon occurs, the temporary data (*.emf) will be left in the temporary folder of the system.
You have to delete the remaining temporary data (*.emf) manually.
The temporary folder of the system is normally in "C:\Temp".
After that, take either of the following actions.
1) Use the graphic card and display driver which support Windows® Me.
2) Reduce the number of control objects pasted to the Excel files.

(2) Precautions for the use of EXCEL VBA
Do not set the page feed preview function in the application that uses EXCEL VBA. Doing so can cause a memory leak or OS basic operation (file operation, printing or other) fault.

(3) Precautions for the use of Microsoft® Excel

(a) If you paste the control to Excel, it may sometimes not be pasted.
This phenomenon occurs if the cache file (temporary file) of Excel remains.
In such a case, perform operation in the following procedure.
1) Close Excel.
2) Delete "*.exd" in the Excel 8.0 folder of the temp folders. *1, *2
3) Restart Excel.
*1: The temp folder is located depending on the OS.
*2: When the corresponding folder and file are not displayed, Make the settings in folder option setting. So that all files and folders will be displayed.

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

Instructions for use of Microsoft® Access

(1) Precautions for the use of Microsoft® Access

(a) When you paste the ACT control to an Access form and double-click the ACT control or select the custom control in the property, the following error message will appear but this does not affect the operation of ACT control. (Other error message may appear.)

(b) When you paste the ACT control and display the properties, the property names displayed may be broken.
As this phenomenon occurs for only the property indication, there will be no problem in the property functions.

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

Instructions for use of VBScript and ASP function

(1) Security of the Internet/intranet when using VBScript
MX Component does not have the Internet/intranet security function.
When you need the security function, make setting on the user side.

(2) Precautions for making CPU COM communication, computer link communication, CC-Link G4 communication or Ethernet (TCP/IP) communication on ASP page and application*1 when Windows® 2000 Professional is used.
If the ASP page opens CPU COM, computer link, CC-Link G4 or Ethernet (TCP/IP) communication earlier than the application, communication in the same path cannot be made on the application until the ASP page is closed. Therefore, note the following points.

(a) CPU COM, computer link, CC-Link G4 or Ethernet (TCP/IP) communication should be opened on the application earlier.
After it has been opened on the application, communication can be made on both the application and ASP page until it is closed.

(b) When CPU COM, computer link, CC-Link G4 or Ethernet (TCP/IP) communication has been opened on the ASP page, always close the communication.

*1: The application indicates any of the user applications created using the MX series and MELSOFT products.

INTRODUCTION

Thank you for choosing the Mitsubishi MELSOFT series Integrated FA software.
Read this manual and make sure you understand the functions and performance of MELSOFT series thoroughly in advance to ensure correct use.

CONTENTS

APPENDICES APP- 1 to APP-62

MANUALS

The following lists the manuals for this software package.
Refer to the following table when ordering manuals.

Related Manuals

Manual Name	Manual Number (Model Code)
MX Component Version 3 Operating Manual (Startup) Explains procedures for installing and uninstalling MX Component and for browsing the operating manual. (Sold separately)	SH-080270 (13JU31)
MX Component Version 3 Programming Manual Explains the programming procedures, detailed explanations and error codes of the ACT controls. (Sold separately)	SH-080272 (13JF66)
Type A70BDE-J71QLP23/A70BDE-J71QLP23GE/A70BDE-J71QBR13/A70BDE-J71QLR23 MELSECNET/10 Interface Board User's Manual (For SW3DNF-MNET10) Explains the features, specifications, part names and setting of the MELSECNET/10 board, and the installation, uninstallation and others of the driver. (Sold separately)	IB-0800035 (13JL93)
Type A80BDE-J61BT11 Control & Communication Link System Master/Local Interface Board User's Manual (For SW4DNF-CCLINK-B) Explains the features, specifications, part names and setting of the CC-Link master board, and the installation, uninstallation and others of the driver. (Sold separately)	IB-0800175 (13JR28)
Type A80BDE-J61BT13 Control & Communication Link System Local Interface Board User's Manual (For SW4DNF-CCLINK-B) Explains the features, specifications, part names and setting of the CC-Link local board, and the installation, uninstallation and others of the driver. (Sold separately)	IB-0800176 (13JR29)
Type Q80BD-J61BT11N/Q81BD-J61BT11 CC-Link System Master/ Local Interface Board User's Manual (For SW1DNC-CCBD2-B) Explains the system configuration, software package installation, uninstallation and each utility's operation method, accessible range, devices and troubleshooting. (Sold separately)	SH-080527ENG (13JR77)
Type A80BDE-A2USH-S1 programmable controller CPU Board User's Manual (For SW1DNF-ANU-B) Explains the features, specifications, part names and setting of the CPU board, and the installation, uninstallation and others of the driver. (Sold separately)	IB-0800174 (13JR27)
MELSECNET/H Interface Board User's Manual (For SW0DNC-MNETH-B) Explains the features, specifications, part names and setting of the MELSECNET/H board, and the installation, uninstallation and others of the driver. (Sold separately)	SH-080128 (13JR24)
CC-Link IE Controller Network Interface Board User's Manual (For SW1DNC-MNETG-B) Explains system configuration, installation/uninstallation of the software package, operating methods of each utility, accessible range, devices, and troubleshooting of the CC-Link IE Controller Network board. (Sold separately)	SH-080691ENG (13JZ02)
GX Simulator Version 7 Operating Manual Explains the setting and operating method for monitoring the device memory and simulating the machine side operations using GX Simulator. (Sold separately)	SH-080468ENG (13JU51)
GX Works2 Version 1 Operating Manual (Common) 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. (Sold separately)	SH-080779ENG (13JU63)

Note: The MX Component Version 3 Operating Manual (Startup) and MX Component Version 3 Programming Manual are stored on the CD-ROM of the corresponding software package in PDF format.
When you want to purchase the manual alone, it is optionally available as the printed matter of the manual number (Model code) in the above table.

HOW TO USE THIS MANUAL

"HOW TO USE THIS MANUAL" is given purpose-by-purpose for the use of MX Component.
Refer to the following outlines and use this manual.

(1) To know the features (Section 1.1)
Section 1.1 gives the features.

(2) To know the system configurations (Sections 2.1, 2.2)
The system configurations using MX Component are provided.

(3) To know the MX Component operating environment and usable programmable controller CPUs (Sections 2.3, 2.4)
Section 2.3 gives the operating environment of MX Component and Section 2.4 indicates usable programmable controller CPUs.

(4) To know the MX Component operating procedures (Chapter 3)
Chapter 3 provides the operation procedures of MX Component.

(5) To know how to operate the utilities (Chapters 4, 5)
Chapter 4 describes operations common to the utilities, and Chapter 5 explains how to operate the utilities.
Read these chapters when using the utilities.

(6) To know the communication setting examples of the utility setting type (Chapter 6)
Chapter 6 gives the setting example of each communication path using the utility setting type.

(7) To know the communication setting examples of the program setting type (Chapter 7)
Chapter 7 provides the setting example of each communication path using the program setting type.

(8) To know the accessible devices and ranges (Chapter 8)
Chapter 8 contains the accessible devices and accessible ranges.

GENERIC TERMS AND ABBREVIATIONS

Unless otherwise started, this manual uses the following abbreviations and terms for the explanation of MX Component.

Generic Term/Abbreviation	Description
MX Component	Generic product name for SWnD5C-ACT-E and SWnD5C-ACT-EA (n: version) -EA means a volume-license product.
IBM-PC/AT compatible	Abbreviation for IBM PC/AT or its compatible personal computer
PC CPU module	Abbreviation for MELSEC-Q series compatible PC CPU module (CONTEC CO., LTD. make)
GX Developer	Generic product name for SWnD5C-GPPW-E, SWnD5C-GPPW-EA, SWnD5C-GPPW-EV, and SWnD5C-GPPW-EVA (n: version) -EA means a volume-license product, and -EV an updated product.
GX Works2	Generic product name for SWnDNC-GXW2 (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/10 board	Abbreviation for Type A70BDE-J71QLP23/A70BDE-J71QLP23GE/A70BDE-J71QBR13/ A70BDE-J71QLR23 MELSECNET/10 interface board
MELSECNET/H board	Abbreviation for Type Q80BD-J71LP21-25/Q81BD-J71LP21-25/ Q80BD-J71LP21S-25/Q80BD-J71LP21G/Q80BD-J71BR11 MELSECNET/H board
CC-Link IE Controller Network board	Abbreviation for Type Q80BD-J71GP21-SX/Q80BD-J71GP21S-SX CC-Link IE Controller Network interface board
CC-Link IE Field Network board	Abbreviation for Type Q81BD-J71GF11-T2 CC-Link IE Field Network interface board
CC-Link board	Generic term for Type A80BDE-J61BT11 CC-Link system master/local interface board, Type A80BDE-J61BT13 CC-Link interface board, and Type Q80BD-J61BT11N/ Q81BD-J61BT11 CC-Link system master/local interface board
CPU board	Abbreviation for Type A80BDE-A2USH-S1 programmable controller CPU board
AnNCPU	Generic term for A0J2HCPU, A1SCPU, A1SCPU-S1, A1SCPUC24-R2, A1SHCPU, A1SJCPU, A1SJHCPU, A1NCPU, A2CCPU, A2CCPUC24, A2CCPUC24-PRF, A2CJCPU, A2NCPU, A2NCPU-S1, A2SCPU, A2SCPU-S1, A2SHCPU, A2SHCPU-S1, A3NCPU and A1FXCPU
AnACPU	Generic term for A2ACPU, A2ACPU-S1, A2ACPUP21/R21, A2ACPUP21-S1, A3ACPU and A3ACPUP21/R21
AnUCPU	Generic term for A2UCPU, A2UCPU-S1, A2USCPU, A2USCPU-S1, A2ASCPU, A2ASCPU-S1, A2ASCPU-S30, A2USHCPU-S1, A3UCPU and A4UCPU
QnACPU	Generic term for Q2ACPU, Q2ACPU-S1, Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1, Q3ACPU, Q4ACPU and Q4ARCPU
ACPU	Generic term for AnNCPU, AnACPU and AnUCPU
QCPU (A mode)	Generic term for Q02CPU-A, Q02HCPU-A and Q06HCPU-A
QCPU (Q mode)	Generic term for Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU, Q01UCPU, Q02CPU, Q02HCPU, Q02PHCPU, Q02UCPU, Q03UDCPU, Q03UDECPU, Q04UDHCPU, Q04UDEHCPU, Q06HCPU, Q06PHCPU, Q06UDHCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q12HCPU, Q12PHCPU, Q12PRHCPU, Q13UDHCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q25HCPU, Q25PHCPU, Q25PRHCPU, Q26UDHCPU, Q26UDEHCPU, Q50UDEHCPU and Q100UDEHCPU
Built-in Ethernet port QCPU	Generic term for Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q13UDEHCPU, Q26UDEHCPU, Q50UDEHCPU and Q100UDEHCPU
LCPU	Generic term for L02CPU, L26CPU-BT
Built-in Ethernet port CPU	Generic term for built-in Ethernet port QCPU and LCPU

Generic Term/Abbreviation	Description
QSCPU	Abbreviation for a safety CPU module (QS001CPU)
FXCPU	Generic term for FX0CPU, FX0SCPU, FX0NCPU, FX1CPU, FX1NCPU, FX1NCCPU, FX1SCPU, FXUCPU, FX2CCPU, FX2NCPU, FX2NCCPU, FX3GCPU, FX3UCPU and FX3UCCPU
Motion controller CPU	Generic term for A171SHCPU, A172SHCPU, A173UHCPU, A173UHCPU-S1, A273UHCPU and A273UHCPU-S3
C Controller CPU	Abbreviation for Q12DCCPU-V
Programmable controller CPU	Generic term for QCPU(Q mode), LCPU, QSCPU, QCPU(A mode), QnACPU, ACPU, FXCPU, motion controller CPU and C Controller CPU
C24	Generic term for A1SCPUC24-R2, A1SJ71C24-PRF, A1SJ71C24-R2, A1SJ71C24-R4, A2CCPUC24, A2CCPUC24-PRF, AJ71C24-S6 and AJ71C24-S8
UC24	Generic term for AJ71UC24, A1SJ71UC24-R2, A1SJ71UC24-R4 and A1SJ71UC24-PRF
QC24	Generic term for AJ71QC24, AJ71QC24-R2, AJ71QC24-R4, A1SJ71QC24-R2 and A1SJ71QC24-R2
QC24N	Generic term for AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4, A1SJ71QC24N and A1SJ71QC24N-R2
QC24(N)	Generic term for QC24 and QC24N
Q series-compatible C24	Generic term for QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2 and QJ71C24N-R4
L series-compatible C24	Generic term for LJ71C24, LJ71C24-R2
FX extended port	Generic term for FX0N-485ADP, FX2NC-485ADP, FX1N-485-BD, FX2N-485-BD, FX3G-485-BD, FX3U-485-BD and FX3U-485ADP
Computer link module (Serial communication module)	Generic term for C24, UC24, QC24(N), Q series-compatible C24, L series-compatible C24 and FX extended port Described as the serial communication module especially to indicate QC24(N) or Q series-compatible C24, L series-compatible C24.
E71	Generic term for AJ71E71, AJ71E71-S3, A1SJ71E71-B2, A1SJ71E71-B5, A1SJ71E71-B2-S3, A1SJ71E71-B5-S3, AJ71E71N-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-B5T, AJ71E71N3-T, A1SJ71E71N-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-B5T and A1SJ71E71N3-T
QE71	Generic term for AJ71QE71, AJ71QE71-B5, A1SJ71QE71-B2, A1SJ71QE71-B5, AJ71QE71N-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-B5T, AJ71QE71N3-T, A1SJ71QE71N-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-B5T and A1SJ71QE71N3-T
Q series-compatible E71	Generic term for QJ71E71, QJ71E71-B2, QJ71E71-B5 and QJ71E71-100
Ethernet module	Generic term for E71, QE71 and Q series-compatible E71
CC-Link G4 module	Generic term for AJ65BT-G4 GPP function peripheral connection module and AJ65BT-G4-S3 GPP function peripheral connection module
CC-Link IE Field Network Ethernet adapter module	Abbreviation for NZ2GF-ETB CC-Link IE Field Network Ethernet adapter module
A6TEL	Abbreviation for A6TEL modem interface module
Q6TEL	Abbreviation for Q6TEL modem interface module
GOT	Abbreviation for Graphic Operation Terminal
GOT1000	Abbreviation for Graphic Operation Terminal GOT1000 series

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Generic Term/Abbreviation	Description
Computer link communication (Serial communication)	Abbreviation for communication with programmable controller CPU using the computer link module Described as serial communication especially in communication that uses QC24(N) or Q series-compatible C24, L series-compatible C24.
Ethernet communication	Abbreviation for communication by connecting the IBM-PC/AT compatible to Ethernet module or the built-in Ethernet port CPU
CPU COM communication	Abbreviation of communication made by connecting the IBM-PC/AT compatible to the RS-232 or RS-422 connector of programmable controller CPU
CPU USB communication	Abbreviation for communication by connecting IBM-PC/AT compatible to the USB connector of QCPU (Q mode), LCPU
MELSECNET/10 communication	Abbreviation for communication with programmable controller CPU using MELSECNET/10 board
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
CPU board communication	Abbreviation for communication with programmable controller CPU using CPU board
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
Modem communication	Abbreviation for communication with programmable controller CPU via modems using QC24N (except AJ71QC24N-R4), Q series-compatible C24, L series-compatible C24, A6TEL, Q6TEL 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
Utility setting type	Abbreviation for user program creation using the communication settings utility
Program setting type	Abbreviation for user program creation without using the communication settings utility
ACT controls	Generic term for ActiveX controls offered 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

Generic Term/Abbreviation	Description
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 Note that the 32-bit version is designated as "32-bit Windows® 7", and the 64-bit version is designated as "64-bit Windows® 7".
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® Windows Vista® Enterprise Operating System
Windows® XP	Generic term for Microsoft® Windows® XP Professional Operating System and Microsoft® Windows® XP Home Edition Operating System
Visual Basic® .NET	Generic term for Visual Basic version Visual Studio® .NET 2003, Visual Studio® 2005, Visual Studio® 2008, and Visual Studio® 2010
Visual C++® .NET	Abbreviation for creation of an application using .NET Framework

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MEANINGS AND DEFINITIONS OF TERMS

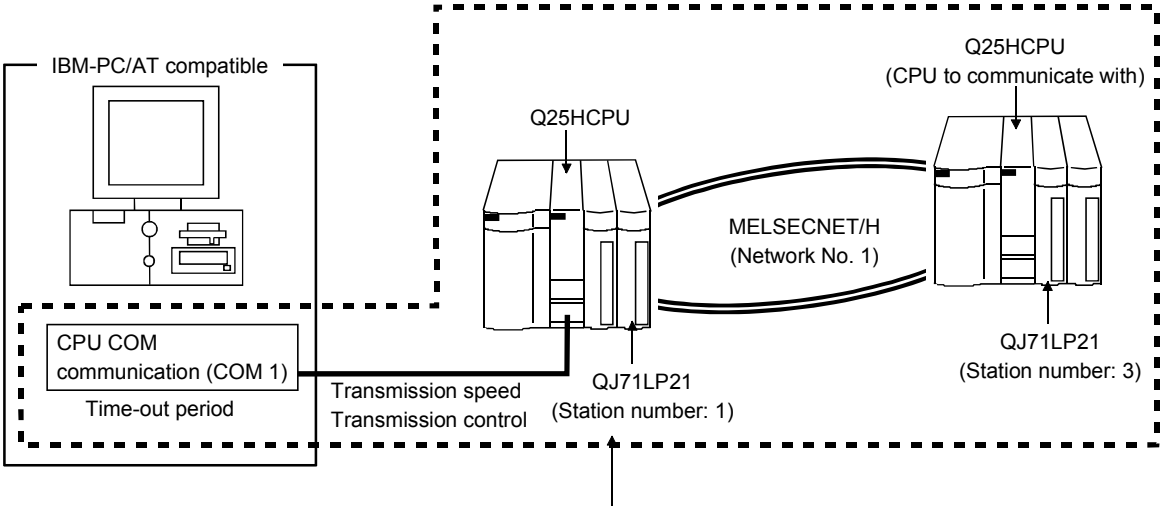
The terms used in this manual have the following meanings and definitions.

(1) Logical station number

The connection target information necessary to open the communication line is combined into one data using the communication setup utility, and that data is provided with a logical number.

This number may be used with the utility setting type only.

(Example) For CPU COM communication



(2) Utility setting type

The 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 the communication setting wizard.

Use ActEasyIF and ActMLEasyIF.

(3) Program setting type

A user program is created without using the communication setup utility.

Make ACT control settings for the corresponding communication in the user program or on the property page or like of Visual Basic® or Visual C++® .

The properties necessary to be set depend on the ACT control.

Use the control other than ActEasyIF and ActMLEasyIF.

1 OVERVIEW

MX Component is a tool designed to implement communication from an IBM-PC/AT compatible personal computer to the programmable controller without any knowledge of communication protocols and modules.
Use of common functions has made it extremely easy to develop serial communication and Ethernet communication programs which had been troublesome and complex.
When applying any of the following program examples to the actual system, make sure to examine the applicability and confirm that no problem will occur in the system control.

1.1 Features

MX Component has the following 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.

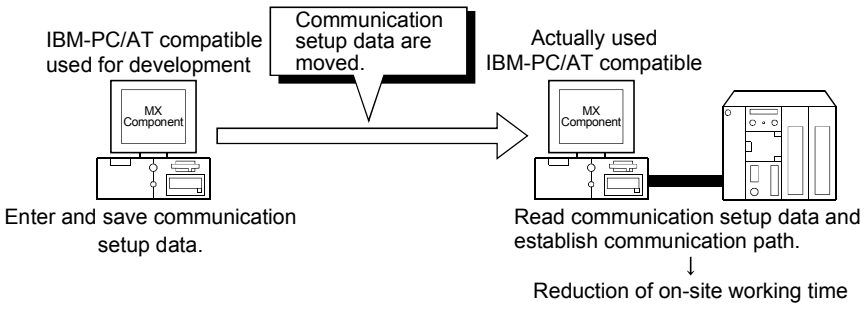
(2) Substantial improvement in user's development efficiency

MX Component comes with the wizard type communication setup utility.
By simply making interactive settings on the screen, the user can achieve communication settings to access the programmable controller CPU to communicate with.
Once the communication settings have been made, access can be made by merely specifying the logical station number of the programmable controller stored on the communication setup utility.

(3) Save and read of communication settings

MX Component has the functions to save and read the communication settings made on the communication setup utility.
You can move the set data easily from the IBM-PC/AT compatible used for development to the actually used IBM-PC/AT compatible.

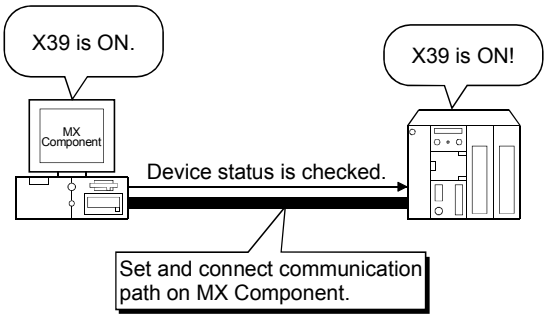
Note: MX Component must have been installed in both the IBM-PC/AT compatible used for development and the actually used IBM-PC/AT compatible.



1

(4) Device monitor function

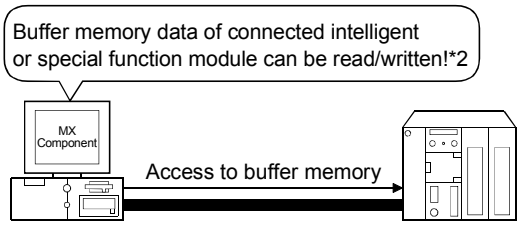
Utilizing the PLC monitor utility enables you to monitor the status of the specified device and change its data. *1



*1: Device data of the QSCPU cannot be changed.

(5) Access to buffer memory of special function module

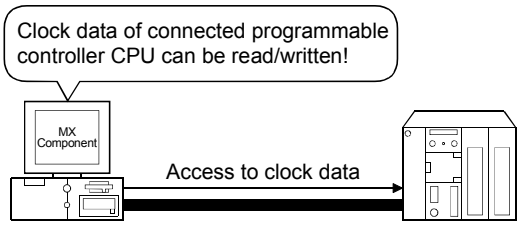
Access can be made to not only the devices of the programmable controller CPU but also the buffer memory of an intelligent function or special function module.



*2: Buffer memory data of the QSCPU cannot be written.

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

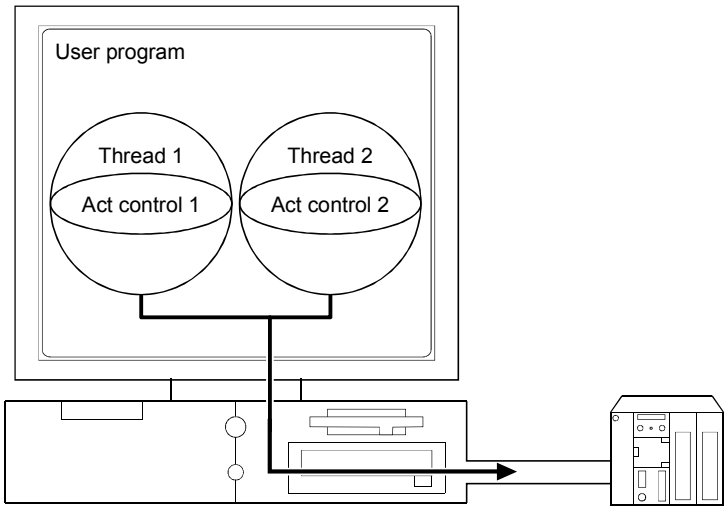
You can read and write the clock data of the programmable controller CPU connected to the IBM-PC/AT compatible. *3



*3: Clock data of the QSCPU cannot be written.

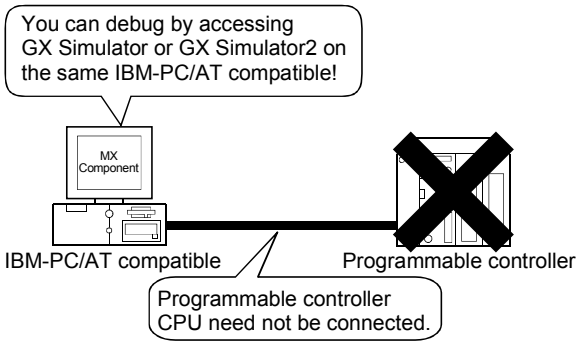
(7) Multithread communication

Access to the same communication path can be made from multiple threads at the same time.



(8) GX Simulator or the simulator function of GX Works2 (GX Simulator2) for offline debugging *4

By using GX Developer and GX Simulator or the simulation function of GX Works2, you can perform debugging on a single IBM-PC/AT compatible without connecting the programmable controller.



*4: This function is not available with the QSCPU.

POINT

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

(9) A wide variety of programming languages supported

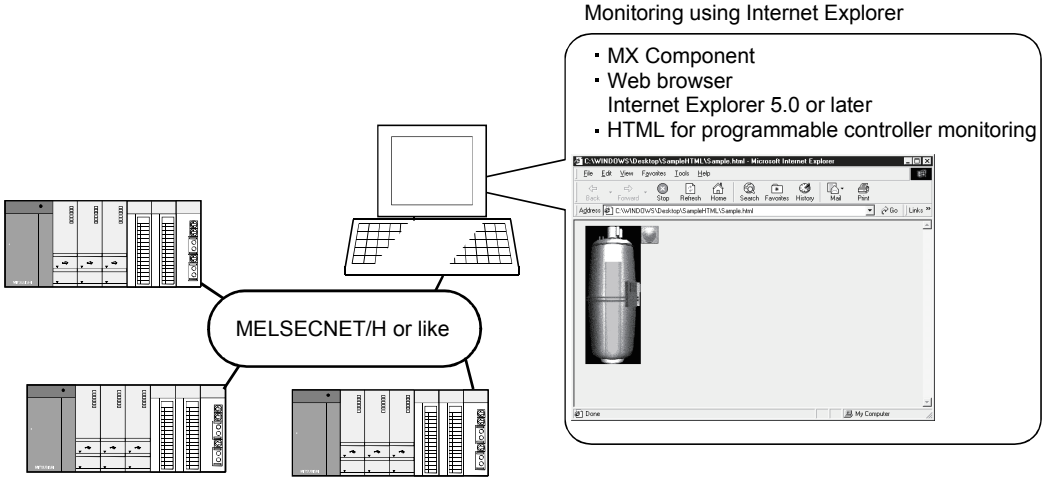
MX Component supports VBScript and VBA as well as Visual Basic® and Visual C++® .

(a) Creation of monitoring page using VBScript

1) Monitoring page can be created in HTML format

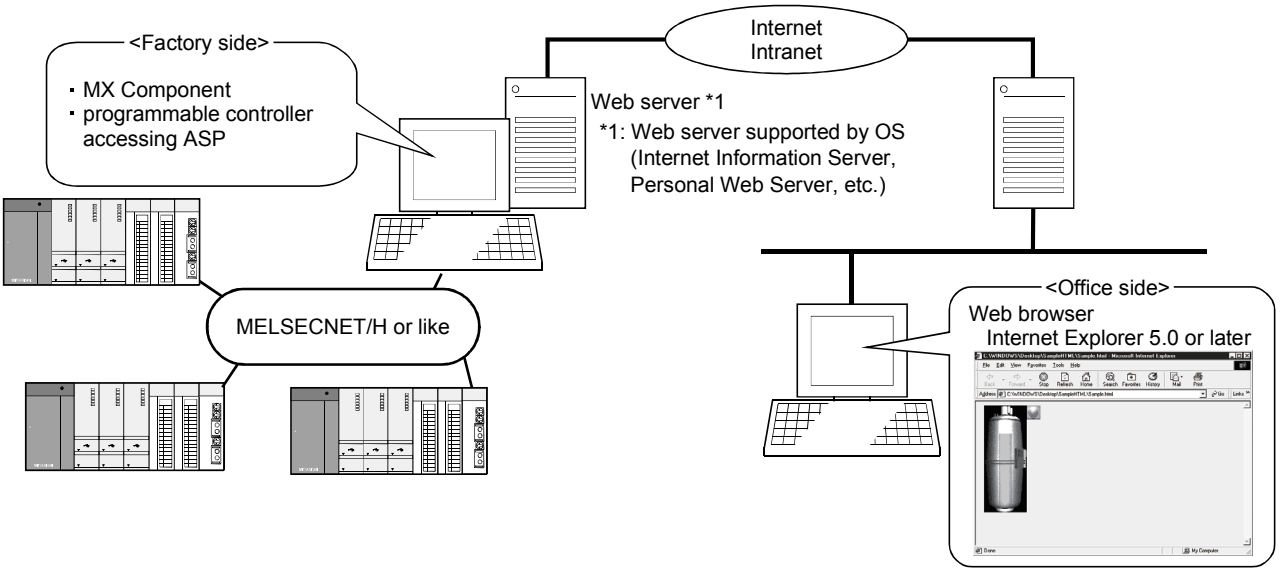
Using the text editor, you can create a graphical monitoring home page (HTML format).

You need not purchase Visual Basic® , Visual C++® or like.



2) Using ASP function for monitoring via Internet/intranet

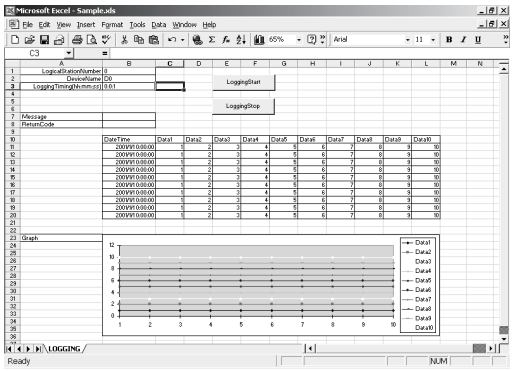
Using the ASP function of VBScript to make public the Web pages on the factory side (side which monitors data using MX Component) enables the programmable controller device status or fault occurrence time remote operation to be performed from a remote location or business destination via the Internet/intranet by merely specifying the factory side URL on Internet Explorer.



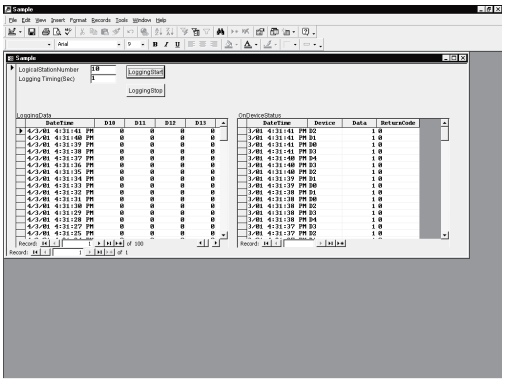
(b) VBA-driven data collection and monitoring function

Programming using VBA allows Excel or Access functions to be utilized to create an application for providing a real-time graph display.
You can log the device data of the programmable controller and collect/save the device data in real time.

<Excel>



<Access>

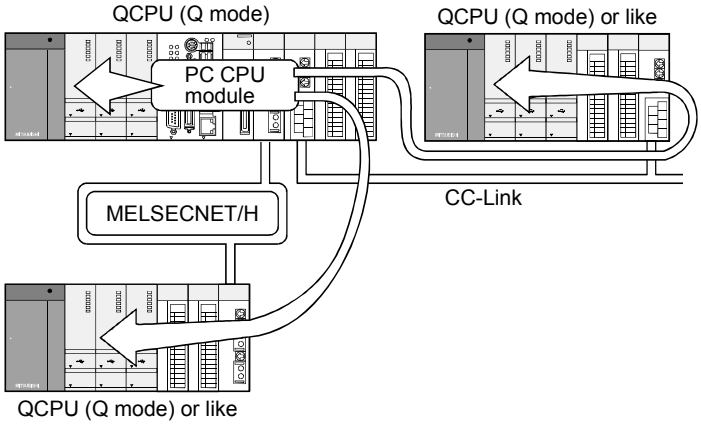


(10) Compatibility with multi-CPU system of QCPU (Q mode)

Setting the communication setting utility or ACT control properties enables access to the multi-CPU system.

(11) Operability on PC CPU module

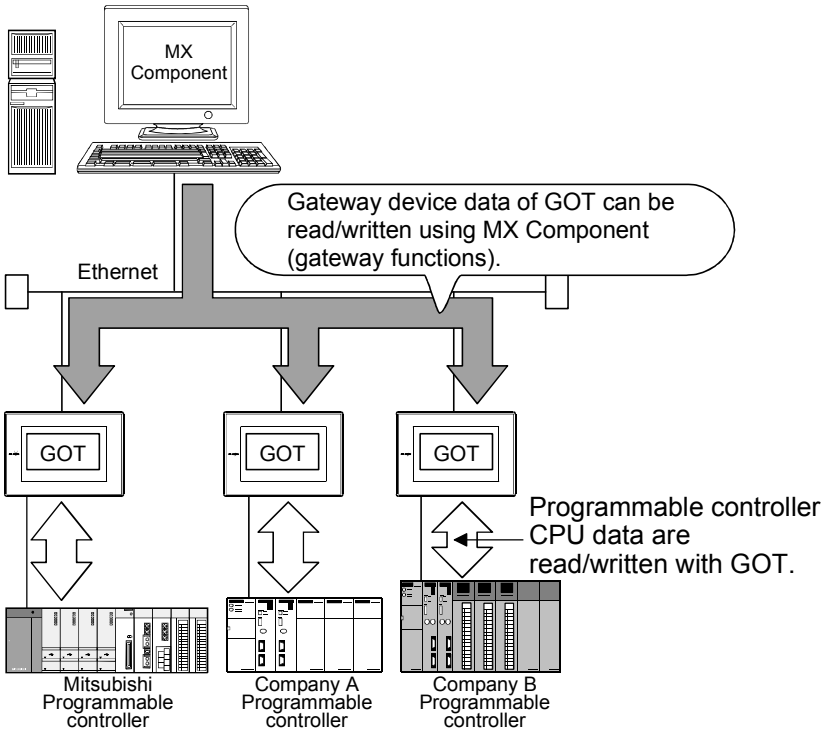
Q series bus communication from the PC CPU module enables access to the QCPU (Q mode) on the same base.
Using the MELSECNET/H communication control and CC-Link communication control enables access to other stations via the MELSECNET/H module and CC-Link module controlled by the PC CPU module.



(12) Accessibility to gateway devices of GOT

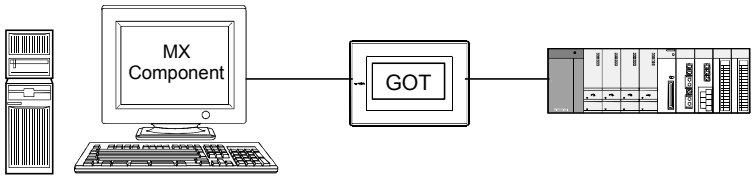
Using the gateway function communication of MX Component can read/write the gateway device data of the GOT.

Reading/writing the gateway device data of the GOT can read/write the device data of the programmable controller CPU that is being monitored by the GOT.



(13) Compatibility with GOT transparent function

Using the GOT transparent function, you can access the programmable controller CPU via GOT



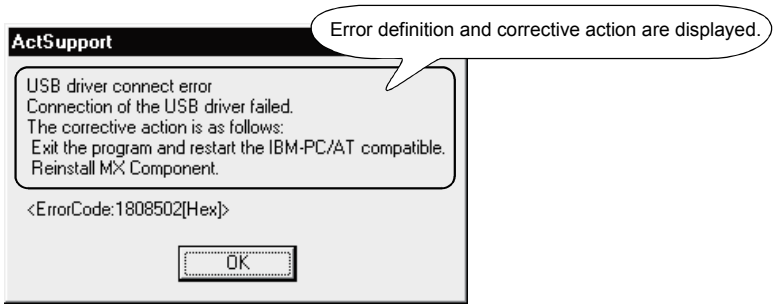
(14) Reduction of error definition search time

The ActSupport control for troubleshooting function is supported.

The error definition and corrective action appear within the user application by only specifying the error code.

This eliminates the need to find the error definition or corrective action by referring to the programming manual, if an error occurs in ACT control.

<Example of displaying error definition in message box>



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 may be configured for each operating system.

2.1.1 When using Windows NT® Workstation Operating System Version 4.0

The following table lists the systems that may be configured for the use of Windows NT® Workstation 4.0.

Item		Description
Computer link communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		× *1
MELSECNET/10 communication		○
	Usable board	MELSECNET/10 board
	Usable driver	SW2DNF-MNET10 or later
MELSECNET/H communication		○
	Usable board	MELSECNET/H board
	Usable driver	SW0DNC-MNETH-B or later
CC-Link IE Controller Network communication		×
CC-Link IE Field Network communication		×
CC-Link communication		○
	Usable board	CC-Link board
	Usable driver	SW2DNF-CCLINK or later
CC-Link G4 communication		○
CPU board communication		○
	Usable board	CPU board
	Usable driver	SW0DNF-ANU-B or later
Q series bus communication (only when PC CPU module is used)		○
GX Simulator communication		○
GX Simulator2 communication		×
Modem communication		○
Gateway function communication		○
GOT transparent communication	Serial	○
	USB	×

○: Configurable ×: Not configurable

*1: Does not support the used OS.

POINT

Use GX Developer and GX Simulator of the following version or later when making GX Simulator communication.
- GX Developer Version 5 (SW5D5C-GPPW-E)
- GX Simulator (SW5D5C-LLT-E 10B)

2.1.2 When using Windows® 95 Operating System

The following table lists the systems that may be configured for the use of Windows® 95.

Item		Description
Computer link communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		× *1
MELSECNET/10 communication		○
	Usable board	MELSECNET/10 board
	Usable driver	SW2DNF-MNET10 or later
MELSECNET/H communication		○
	Usable board	MELSECNET/H board
	Usable driver	SW0DNC-MNETH-B or later
CC-Link IE Controller Network communication		×
CC-Link IE Field Network communication		×
CC-Link communication		○
	Usable board	CC-Link board
	Usable driver	SW2DNF-CCLINK or later
CC-Link G4 communication		○
CPU board communication		×
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		×
Modem communication		○
Gateway function communication		○
GOT transparent communication	Serial	○
	USB	×

○: Configurable ×: Not configurable

*1: Does not support the used OS.

POINT

(1) On Windows® 95, a memory leak will occur if any of the following communications is made using the COM port. Therefore, do not perform continuous operation.
- Computer link communication
- CPU COM communication
- CC-Link G4 communication
- Modem communication

(2) Use GX Developer and GX Simulator of the following version or later when making GX Simulator communication.
- GX Developer Version 5 (SW5D5C-GPPW-E)
- GX Simulator (SW5D5C-LLT-E 10B)

2.1.3 When using Windows® 98 Operating System

The following table lists the systems that may be configured for the use of Windows® 98.

Item		Description
Computer link communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		○
MELSECNET/10 communication		○
	Usable board	MELSECNET/10 board
	Usable driver	SW2DNF-MNET10 or later
MELSECNET/H communication		○
	Usable board	MELSECNET/H board
	Usable driver	SW0DNC-MNETH-B or later
CC-Link IE Controller Network communication		×
CC-Link IE Field Network communication		×
CC-Link communication		○
	Usable board	CC-Link board
	Usable driver	SW2DNF-CCLINK or later
CC-Link G4 communication		○
CPU board communication		×
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		×
Modem communication		○
Gateway function communication		○
GOT transparent communication		○

○: Configurable ×: Not configurable

POINT

Use GX Developer and GX Simulator of the following version or later when making GX Simulator communication.

- GX Developer Version 5 (SW5D5C-GPPW-E)
- GX Simulator (SW5D5C-LLT-E 10B)

2.1.4 When using Windows® 2000 Professional Operating System

The following table lists the systems that may be configured for the use of Windows® 2000 Professional.

Item		Description
Computer link communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		○
MELSECNET/10 communication		× (Refer to POINT 2).)
MELSECNET/H communication		○
	Usable board	MELSECNET/H board
	Usable driver	SW0DNC-MNETH-B or later
CC-Link IE Controller Network communication		○
	Usable board	CC-Link IE Controller Network board
	Usable driver	SW1DNC-MNETG-B or later
CC-Link IE Field Network communication		○
	Usable board	CC-Link IE Field Network board
	Usable driver	SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later
CC-Link communication		○
	Usable board	CC-Link board
	Usable driver	SW4DNF-CCLINK or later
CC-Link G4 communication		○
CPU board communication		○
	Usable board	CPU board
	Usable driver	SW1DNF-ANU-B or later
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		○
Modem communication		○
Gateway function communication		○
GOT transparent communication		○

○: Configurable ×: Not configurable

POINT

(1) Use GX Developer and GX Simulator of the following version or later when making GX Simulator communication.
- GX Developer Version 7 (SW7D5C-GPPW-E)
- GX Simulator Version 6 (SW6D5C-LLT-E)

(2) Use the MELSECNET/H board (NET/10 mode), as the MELSECNET/10 board is incompatible.

2.1.5 When using Windows® Millennium Edition Operating System

The following table lists the systems that may be configured for the use of Windows® Me.

Item	Description
Computer link communication	○
Ethernet communication	○
CPU COM communication	○
CPU USB communication	○
MELSECNET/10 communication	×
MELSECNET/H communication	×
CC-Link IE Controller Network communication	×
CC-Link IE Field Network communication	×
CC-Link communication	×
CC-Link G4 communication	○
CPU board communication	×
Q series bus communication (only when PC CPU module is used)	×
GX Simulator communication	○
GX Simulator2 communication	×
Modem communication	○
Gateway function communication	○
GOT transparent communication	○

○: Configurable ×: Not configurable

POINT

(1) Use GX Developer and GX Simulator of the following version or later when making GX Simulator communication.
- GX Developer Version 7 (SW7D5C-GPPW-E)
- GX Simulator Version 6 (SW6D5C-LLT-E)

(2) The ASP function of VBScript cannot be used.

2.1.6 When using Windows® XP Professional Operating System

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

Item		Description
Computer link communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		○
MELSECNET/10 communication		× (Refer to POINT.)
MELSECNET/H communication		○ *1
CC-Link IE Controller Network communication		○
	Usable board	CC-Link IE Controller Network board
	Usable driver	SW1DNC-MNETG-B or later
CC-Link IE Field Network communication		○
	Usable board	CC-Link IE Field Network board
	Usable driver	SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later
CC-Link communication		○ *2
CC-Link G4 communication		○
CPU board communication		×
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		○
Modem communication		○
Gateway function communication		○
GOT transparent communication		○

○: Configurable ×: Not configurable

*1: Usable only when communication driver SW0DNC-MNETH-B Version 70H or later is used.

*2: Usable only when communication driver SW4DNF-CCLINK-B Version 40E or later is used.

POINT
Use the MELSECNET/H board (NET/10 mode), as the MELSECNET/10 board is incompatible.

2.1.7 When using Windows® XP Home Edition Operating System

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

Item		Description
Computer link communication		○
Ethernet communication		○
CPU COM communication		○
CPU USB communication		○
MELSECNET/10 communication		×
MELSECNET/H communication		×
CC-Link IE Controller Network communication		○
	Usable board	CC-Link IE Controller Network board
	Usable driver	SW1DNC-MNETG-B or later
CC-Link IE Field Network communication		○
	Usable board	CC-Link IE Field Network board
	Usable driver	SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later
CC-Link communication		×
CC-Link G4 communication		○
CPU board communication		×
Q series bus communication (only when PC CPU module is used)		×
GX Simulator communication		○
GX Simulator2 communication		×
Modem communication		○
Gateway function communication		○
GOT transparent communication		○

○: Configurable ×: Not configurable

POINT
The ASP function of VBScript cannot be used.

2.1.8 When using Windows Vista® Operating System

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

Item	Description
Computer link communication	○
Ethernet communication	○
CPU COM communication	○
CPU USB communication	○
MELSECNET/10 communication	×
MELSECNET/H communication	○
CC-Link IE Controller Network communication	○
CC-Link IE Field Network communication	○
CC-Link communication	○
CC-Link G4 communication	○
CPU board communication	×
Q series bus communication (only when PC CPU module is used)	×
GX Simulator communication	○
GX Simulator2 communication	○
Modem communication	○
Gateway function communication	○
GOT transparent communication	○

○: Configurable ×: Not configurable

2.1.9 When using Windows® 7 Operating System

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

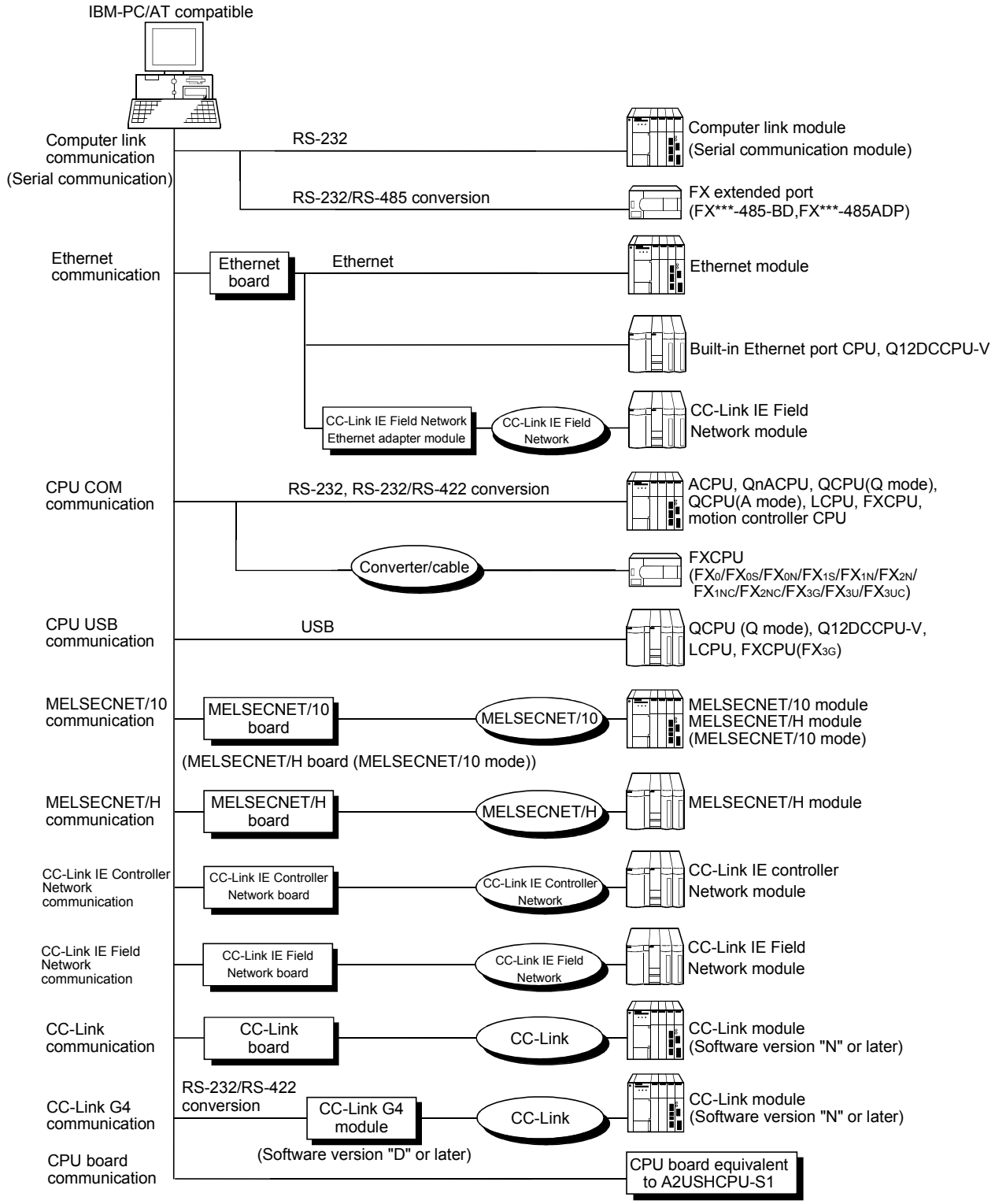
Item	Description	
	32-bit version	64-bit version
Computer link communication	○	○
Ethernet communication	○	○
CPU COM communication	○	○
CPU USB communication	○	○
MELSECNET/10 communication	×	×
MELSECNET/H communication	○	×
CC-Link IE Controller Network communication	○	×
CC-Link IE Field Network communication	○	×
CC-Link communication	○	×
CC-Link G4 communication	○	○
CPU board communication	×	×
Q series bus communication (only when PC CPU module is used)	×	×
GX Simulator communication	○	○
GX Simulator2 communication	○	○
Modem communication	○	○
Gateway function communication	○	○
GOT transparent communication	○	○

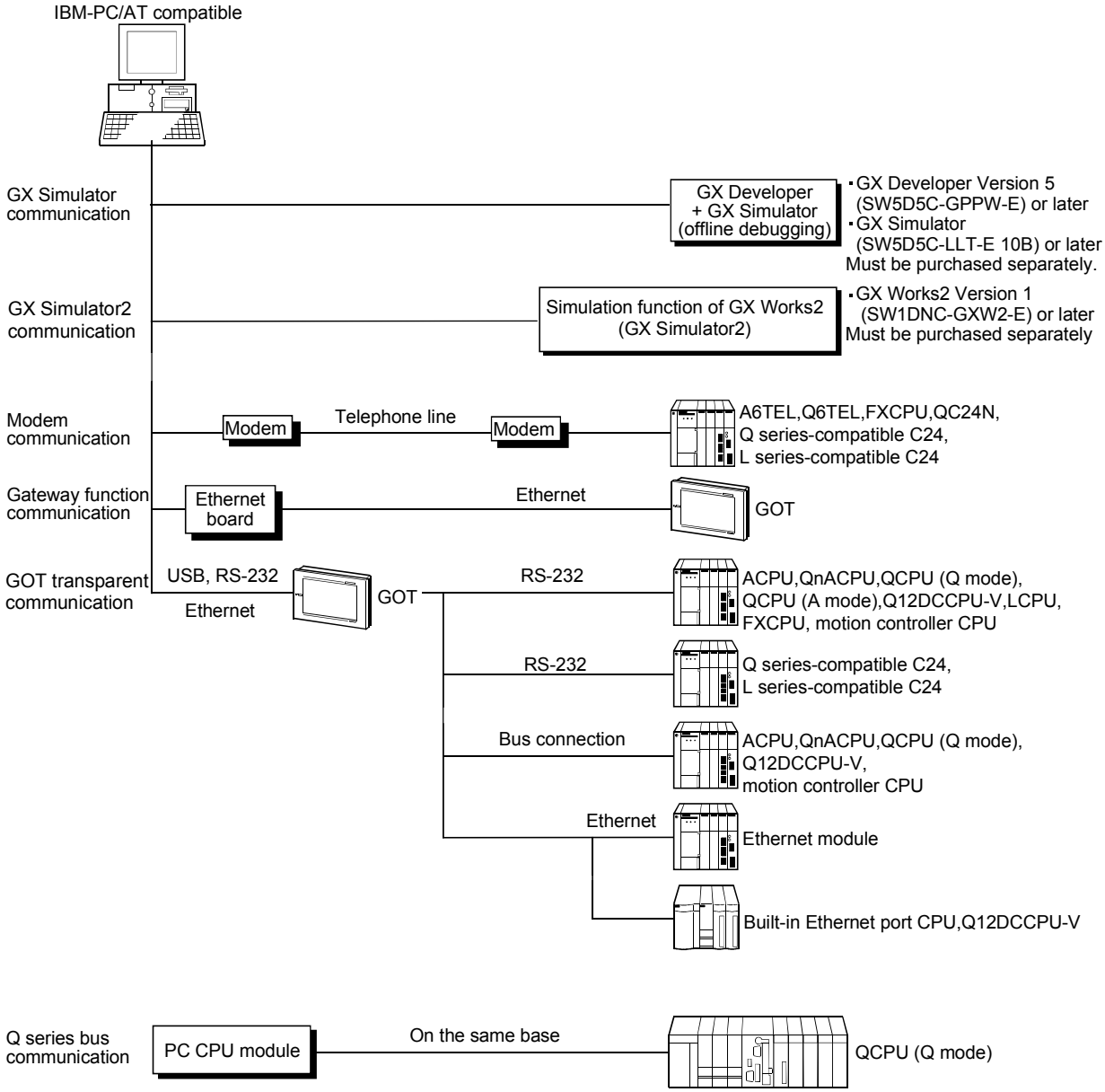
○: Configurable ×: Not configurable

2.2 System Configuration for the 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 precautions on each communication form, refer to Section 2.2.2.

2.2.1 System configurations




IBM-PC/AT compatible
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
Modem communication
Modem
Telephone line
Modem
A6TEL,Q6TEL,FXCPU,QC24N, Q series-compatible C24, L series-compatible C24
Gateway function communication
Ethernet board
Ethernet
GOT
GOT transparent communication
USB, RS-232
Ethernet
GOT
RS-232
ACPU,QnACPU,QCPU (Q mode), QCPU (A mode),Q12DCCPU-V,LCPU, FXCPU, motion controller CPU
RS-232
Q series-compatible C24, L series-compatible C24
Bus connection
ACPU,QnACPU,QCPU (Q mode), Q12DCCPU-V, motion controller CPU
Ethernet
Ethernet module
Built-in Ethernet port CPU,Q12DCCPU-V
Q series bus communication
PC CPU module
On the same base
QCPU (Q mode)

2.2.2 Details of the communication forms

The table at top right of each communication format explanation indicates whether the communication format can be made up when the OSes are used.

(Example) Windows NT® Workstation 4.0, Windows® 95, and 64-bit Windows® 7 are not supported.
Windows® 98, Windows® 2000 Professional, Windows® Me, Windows® XP, Windows Vista® , and 32-bit Windows® 7 are supported.

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
×	×	○	○	○	○	○	○	×

NT: Windows NT® Workstation 4.0, 95: Windows® 95, 98: Windows® 98, 2000: Windows® 2000 Professional, Me: Windows® Me, XP: Windows® XP, Vista: Windows Vista® ,
7(32): 32-bit Windows® 7, 7(64): 64-bit Windows® 7
○: Configurable ×: Not configurable

(1) Computer link communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

For the way to make connection to the computer link module, refer to the manual of your computer link module.

(a) Precaution

Computer link communication made on Windows® 95 will cause a memory leak. Therefore do not perform continuous operation.

(b) Usable modules

1) Any of the following computer link modules may be used to access the programmable controller CPU.

	Usable Modules
C24	A1SCPUC24-R2*1, A1SJ71C24-PRF*2, A1SJ71C24-R2*2, A1SJ71C24-R4*2, A2CCPUC24*3, A2CCPUC24-PRF*3, AJ71C24-S6, AJ71C24-S8
UC24	AJ71UC24, A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF
QC24(N)	AJ71QC24, AJ71QC24-R2, AJ71QC24-R4, A1SJ71QC24, A1SJ71QC24-R2, AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4, A1SJ71QC24N, A1SJ71QC24N-R2
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

*1: Handled as equivalent to the UC24.
*2: Modules of software version "M" or later are handled as equivalent to the UC24.
*3: Modules of software version "K" or later are handled as equivalent to the UC24.

2) About connection of usable modules

When a computer link module is used to make access from the IBM-PC/AT compatible to the programmable controller CPU, note that three are restrictions on the modules connectable directly to the IBM-PC/AT compatible.

If the module cannot be connected directly to the IBM-PC/AT compatible, it may be used as the "n"th module of multidrop.

Type	Interface	1:1 Connection	Multidrop	
			First module	"n"th module
A2CCPUC24 A2CCPUC24-PRF	RS-232	○	○	×
	RS-422	×	×	×
	RS-422/485	×	×	○
AJ71C24-S6 AJ71C24-S8	RS-232	○	○	×
	RS-422	×	×	○
A1SCPUC24-R2 A1SJ71C24-PRF A1SJ71C24-R2	RS-232	○	×	×
A1SJ71C24-R4	RS-422/485	×	×	○
AJ71UC24	RS-232	○	○	×
	RS-422/485	×	×	○
A1SJ71UC24-R2 A1SJ71UC24-PRF	RS-232	○	×	×
A1SJ71UC24-R4	RS-422/485	×	×	○
AJ71QC24/AJ71QC24N A1SJ71QC24/A1SJ71QC24N	RS-232	○	○	×
	RS-422/485	×	×	○
AJ71QC24-R2 A1SJ71QC24-R2 AJ71QC24N-R2 A1SJ71QC24N-R2	RS-232(CH.1)	○	×	×
	RS-232(CH.2)	×	×	×
AJ71QC24-R4 AJ71QC24N-R4	RS-422	×	×	×
	RS-422/485	×	×	○
QJ71C24/QJ71C24N	RS-232	○	○	×
	RS-422/485	×	×	○
QJ71C24-R2/QJ71C24N-R2	RS-232(CH.1)	○	×	×
	RS-232(CH.2)	○ *1	×	×
QJ71C24N-R4	RS-422/485(CH.1)	×	×	○
	RS-422/485(CH.2)	×	×	○
LJ71C24	RS-232	○	○	×
	RS-422/485	×	×	○
LJ71C24-R2	RS-232(CH.1)	○	×	×
	RS-232(CH.2)	○	×	×
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	○	○	○

*1: Function Version B or later is compatible.

(c) Switch settings of the computer link module

For the switch settings for the use of MX Component, refer to "Section 6.1.1 Switch settings of computer link modules".

(d) Cable for connection

For the connection cable, refer to the manual of your computer link module.
Refer to Appendix 3 for cable pin assignment.

POINT
Only the RS-232 connector may be used for connection of the IBM-PC/AT compatible and computer link (serial communication) module. The RS-422 connector or RS-422/485 terminal block cannot be used.

(2) Ethernet communication

1) In case of using Ethernet interface modules

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

For the way to make connection to the Ethernet module, refer to the manual of your Ethernet module.

(a) Precaution

The accessible range for Ethernet communication is the same segment only.
Access cannot be made beyond the router and gateway.

(b) Usable modules

Any of the following Ethernet modules may be used to access the programmable controller CPU.
For the FX series Ethernet module, refer to the user's manuals for the FX series.

	Usable Modules
E71 *1	AJ71E71, AJ71E71-S3, A1SJ71E71-B2, A1SJ71E71-B5, A1SJ71E71B2-S3, A1SJ71E71B5-S3, AJ71E71N-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-B5T, AJ71E71N3-T, A1SJ71E71N-T, A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-B5T
QE71 *2	AJ71QE71, AJ71QE71-B5, A1SJ71QE71-B2, A1SJ71QE71-B5, AJ71QE71N-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N3-T, AJ71QE71N-B5T, A1SJ71QE71N-T, A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-B5T
Q series-compatible E71	QJ71E71, QJ71E71-B2, QJ71E71-B5, QJ71E71-100

*1: Accessible as equivalent to the AnACPU when fitted to the AnUCPU.
*2: An error will occur if monitoring via QnA Ethernet and monitoring via other communication path are executed for the same CPU simultaneously.

(c) Switch settings of the Ethernet module

For the switch settings for the use of MX Component, refer to "Section 6.2.1 Switch settings of Ethernet modules".

2) In case of using Built-in Ethernet port QCPUs

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

For the way to make connection to the Built-in Ethernet port QCPU, refer to the manual of your Built-in Ethernet port QCPU.

(a) Precaution

The accessible range for the direct connection without specifying the IP address is the same segment only.
Access cannot be made beyond the router and gateway.

(3) CPU COM communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

(a) Precaution

CPU COM communication made on Windows® 95 will cause a memory leak. Therefore do not perform continuous operation.

(b) Cables for connection

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

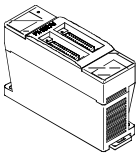
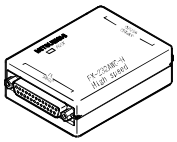
The following cable is needed to make communications between the IBM-PC/AT compatible and of QCPU(Q mode) and QCPU(A mode). RS232 adaptor (L6ADP-R2) is needed for the connection of LCPU.
When communication is to be made at 115200bps or 57600bps, fast communication cannot be performed if the used IBM-PC/AT compatible does not support 115200bps or 57600bps communication speed.
If a communication error occurs, reduce the transmission speed setting and restart communication.

Cable

QC30R2 (Connector of IBM-PC/AT compatible is D-sub 9-pin)

2) Cables for connection of ACPU, QnACPU or FXCPU

The following cables are needed to make communications between the IBM-PC/AT compatible and ACPU, QnACPU or FXCPU.

IBM-PC/AT Compatible Side (RS-232C Cable)	RS-232C/RS422 Converter	Programmable controller Side (RS-422 Cable)
 F2-232CAB-1*1 (When connector of IBM-PC/AT compatible is D-sub 9-pin)	 FX-232AW  FX-232AWC  FX-232AWC-H (FX series only)	For ACPU, QnACPU or FX1/FXU/FX2CCPU  FX-422CAB (0.3m/0.98feet) FX-422CAB-150 (1.5m/4.92feet) For FX0/FX0S/FX0N/FX1N//FX1NC/FX1S/FX2N/FX2NC/ FX3G/FX3U/FX3UCCPU  FX-422CAB0 (1.5m/4.92feet)

*1: How to identify compatible product of F2-232CAB-1 cable
Check the indication on the type label attached to the cable.

Incompatible product → Indicates as a compatible product (with indication of F/FX/A)

F2-232CAB-1 Y990C *****	→	F2-232CAB-1(F/FX/A) Y990C *****

- When connecting to the FX3GCPU, FX3UCPU or FX3UCCPU using the FX-232AWC-H, select any of 9600bps, 19200bps, 38400bps, 57600bps or 115200bps for the transmission speed.
  When connecting using the FX-232AWC or FX-232AW, select either 9600bps or 19200bps for the transmission speed.

3) Cables for connection of motion controller CPU

For communications between the IBM-PC/AT compatible and motion controller CPU, use the cables as indicated in 2).

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

- Applicable devices

FX-USB-AW

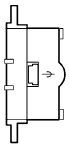
USB cable (Included with the product)

- Above devices can be used when the driver included in the product (CD-ROM) has been installed into either of the following operating systems; Windows® 98, Windows® Me, Windows® 2000 Professional, Windows® XP, Windows Vista® , and 32-bit Windows® 7.

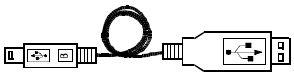
5) USB cable and function expansion board (FX3U, FX3UC compatible)

a) System configuration

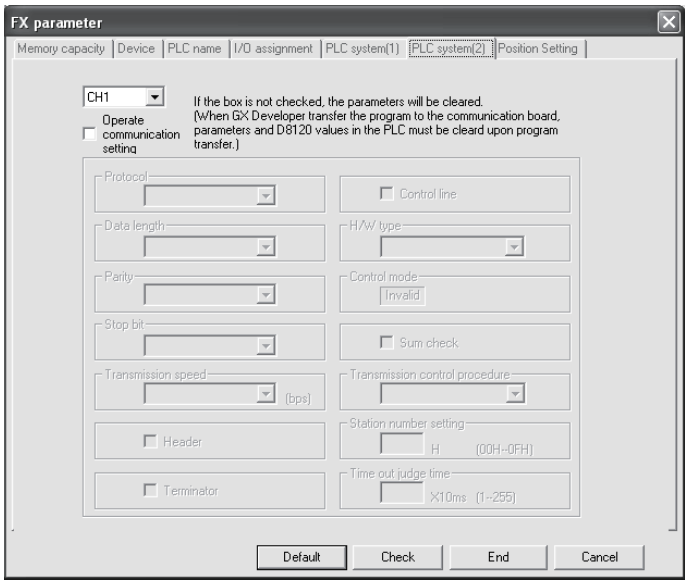
FX-USB-BD



USB cable (packed)



b) If "Operate communication setting" is checked on the <<PLC System (2)>> tab in the [FX Parameter] dialog box of GX Developer, the corresponding port cannot be used for communication with the programmable controller.
In this case, write the setting, where the above setting has been removed, from the built-in programming port of the programmable controller.



When the CPU type of the project is the FX3UC, the channel specification (CH1/CH2) combo box is displayed. Set to CH1 and check the settings.

c) When Windows® 98, Windows® Me, Windows® 2000 Professional, Windows® XP, Windows Vista® , or 32-bit Windows® 7 is used, the USB cable and function expansion board are available if the driver on the CD-ROM packed with the FX-USB-AW or FX3U -USB-BD has been installed.

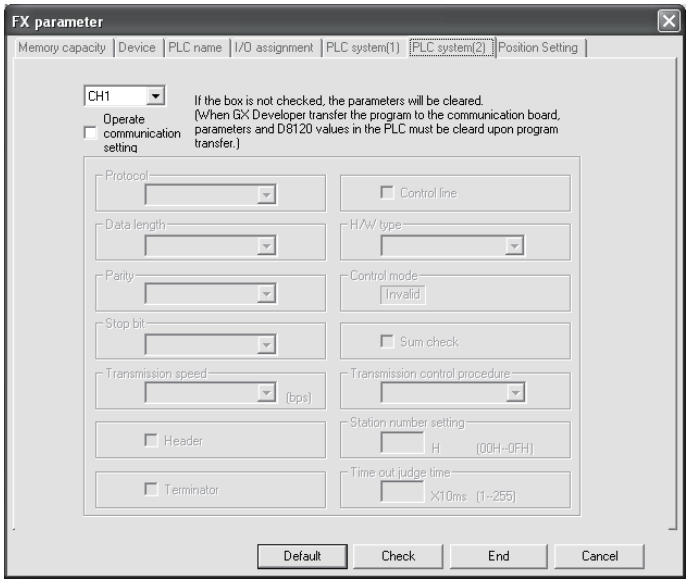
d) The USB cable and function expansion board are unavailable for Windows® 95 or Windows NT® Workstation 4.0.

e) For the precautions and restrictions on use of the FX3U-USB-BD, refer to the manual packed with the FX3U-USB-BD.

6) Function expansion board for FXCPU

Series	Function expansion board
FX3U, FX3UC	FX3U-422-BD
FX3G	FX3G-422-BD
FX2N	FX2N-422-BD
FX1S, FX1N	FX1N-422-BD

If "Operate communication setting" is checked on the <<PLC system (2)>> tab in the "FX Parameter" dialog box of GX Developer, the corresponding port cannot be used for communication with the programmable controller. In this case, write the setting, where the above setting has been removed, from the built-in programming port of the programmable controller.



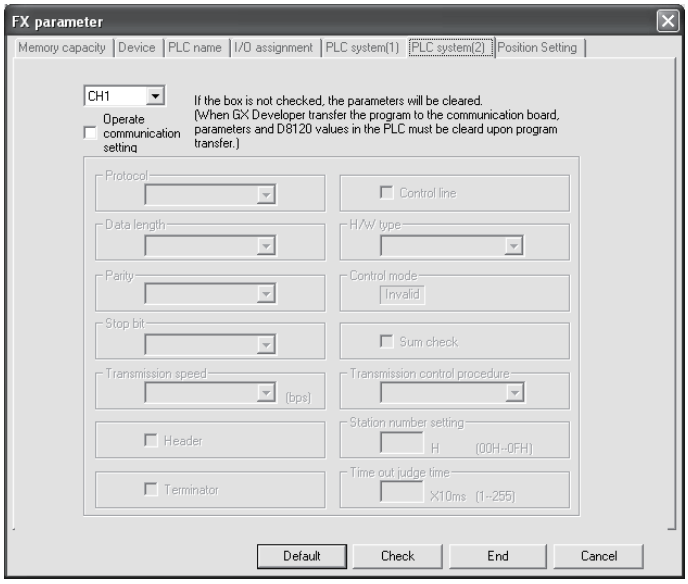
When the CPU type of the project is the FX3G or FX3U(C), the channel specification (CH1/CH2) combo box is displayed.
Set to CH1 and check the settings.

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

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

*1: *** of the function expansion board (FX_{3U}-***-BD) indicates 232, 485, 422, USB or CNV.
Regarding FX_{3UC} series, only FX_{3UC}-32MT-LTCPU and FX_{3UC}-32MT-LT-2 CPU are connectable.
The computer link communication is also available for the FX_{3U}-485-BD. For setting for the computer link communication, refer to Section 6.1.1 (4).

If "Operate communication setting" is checked on the <<PLC System (2)>> tab in the "FX Parameter" dialog box of GX Developer, the corresponding port cannot be used for communication with the programmable controller.
In this case, write the setting, where the above setting has been removed, from the built-in programming port of the programmable controller.



When the CPU type of the project is the FX3G or FX3U(C), the channel specification (CH1/CH2) combo box is displayed.
When using the FX3U-232-BD or the first FX3U-232ADP connected to the FX3U-CNV-BD, set CH1 and check the settings.
When using the FX3U-232ADP connected to other than the FX3U-CNV-BD or the second FX3U-232ADP connected to the FX3U-CNV-BD, set CH2 and check the settings.

POINT

- Before handling the RS-422 interface conversion cable/converter, please read its specifications, precautions, etc. carefully in the manual of the corresponding product and handle it correctly.
- When disconnecting or reconnecting the conversion cable/converter that receives 5VDC power from the RS-422 interface, power off the programmable controller CPU before starting work.
- When disconnecting or reconnecting the peripheral device or conversion cable that does not receive 5VDC power from the RS-422 interface (whose power is supplied from an external power supply), be sure to use an earth band or touch a grounded metal object, etc. before starting work to discharge static electricity from the cable, human body, etc. After that, handle it in the following procedure.
  1) Power off the personal computer.
  2) Power off the conversion cable/converter.
     When it has an FG terminal, ground it.
  3) Connect/disconnect the conversion cable/converter between the personal computer and programmable controller CPU.
  4) Power on the conversion cable/converter.
  5) Power on the personal computer.
  6) Start up the software package.

(4) CPU USB communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
×	×	○	○	○	○	○	○	○

(a) Precautions

1) Windows® 98, Windows® 2000 Professional, Windows® Me, Windows® XP, Windows Vista® , Windows® 7 may be used when the USB driver has been installed.

2) When using Windows® 2000 Professional, Windows® XP, Windows Vista® , Windows® 7, the user must install the USB driver.

(b) About the USB cable (QCPU (Q mode) compatible)

1) When the USB cable is used, only one programmable controller CPU may be connected.

2) Refer to "Operating Instructions" for the precautions for and restrictions on use of the USB cable to make communications.

(c) Usable modules

Refer to "Access Target" of the accessible device table in Section 8.5.1.

(5) MELSECNET/10 communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	×	×	×	×	×	×

(a) Precautions

1) Always use any of the following communication drivers.
Other communication drivers cannot be used.

Used OS	SW2DNF-MNET10	SW3DNF-MNET10
Windows NT® Workstation 4.0	○	○
Windows® 95	○	○
Windows® 98	○	○
Windows® 2000 Professional	×	×
Windows® Me	×	×
Windows® XP Professional	×	×
Windows® XP Home Edition	×	×
Windows Vista®	×	×
Windows® 7	×	×

○ : Usable, × : Unusable

(6) MELSECNET/H communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	×	○	○	○	×

(a) Precautions

1) As the communication driver, always use SW0DNC-MNETH or later.
Any other communication driver is unusable.
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 Controller Network communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
×	×	×	○	×	○	○	○	×

(a) Precautions

1) As the communication driver, always use SW1DNC-MNETG-B or later.
Any other communication driver is unusable.
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 IE Field Network communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
×	×	×	○	×	○	○	○	×

(a) Precautions

1) As the communication driver, always use SW1DNC-CCIEF-J, SW1DNC-CCIEF-B or later.
Any other communication driver is unusable.

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.

(9) CC-Link communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	×	○	○	○	×

(a) Precautions

1) Always use any of the following communication drivers.
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.

	A80BDE-J61BT11/A80BDE-J61BT13			Q80BD-J61BT11N	Q81BD-J61BT11
Used OS	SW2DNF-CCLINK	SW3DNF-CCLINK	SW4DNF-CCLINK-B	SW1DNC-CCBD2-B	
Windows NT® Workstation 4.0	○	○	○	○	×
Windows® 95	○	○	○	×	×
Windows® 98	○	○	○	×	×
Windows® 2000 Professional	×	×	○	○	○
Windows® Me	×	×	×	×	×
Windows® XP Professional	×	×	○ *1	○	○
Windows® XP Home Edition	×	×	×	○	○
Windows Vista®	×	×	×	○ *2	○ *2
32-bit Windows® 7	×	×	×	○ *3	○ *3

○ : Usable, × : Unusable

*1: Apply communication driver SW4DNF-CCLINK-B Version 40E or later to Windows® XP Professional.

*2: Apply communication driver SW1DNC-CCBD2-B Version 1.04E or later to Windows Vista® .

*3: Apply communication driver SW1DNC-CCBD2-B Version 1.08J or later to 32-bit Windows® 7.

3) The following are the CPUs that can be accessed by the communication drivers.

CPU Type	SW2DNF-CCLINK		SW3DNF- CCLINK		SW4DNF-CCLINK-B		SW1DNC-CCBD2-B
	A to V *1	W to *2	A to V *1	W to *2	A to V *1	W to *2	-
ACPU (including motion controller CPU)	○	○	○	○	○	○	○
QCPU(A mode)	○	○	○	○	○	○	○
QnACPU	○	○	○	○	○	○	○
QCPU(Q mode)	×	×	×	○	×	○	○
LCPU	×	×	×	×	×	×	○ *3

○ : Accessible, × : Inaccessible

*1: For ROM versions "A" to "V" of CC-Link board

*2: For ROM versions "W" and later of CC-Link board

*3: For Version 1.07H or later

4) The CC-Link master station module used should be of software version "N" or later.

(10) CC-Link G4 communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

(a) Precautions

1) Computer link communication made on Windows® 95 will cause a memory leak. Therefore do not perform continuous operation.

2) The CC-Link G4 module used should be of software version "D" or later.

3) The CC-Link master station module used should be of software version "N" or later.

(b) Switch settings of the CC-Link G4 module

For the switch settings for the use of MX Component, refer to "Section 6.7.1 Switch settings of CC-Link G4 module".

(c) About cables

Communications between the IBM-PC/AT compatible and CC-Link G4 module require the RS-232/RS-422 conversion cables as used in CPU COM communication.

For more information, refer to "(3) (b) 2) Cables for connection of ACPU, QnACPU or FXCPU".

(11) CPU board communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	×	×	○	×	×	×	×	×

(a) Precautions

1) Always use any of the following communication drivers.
Other communication drivers cannot be used.

Used OS	SW0DNF-ANU-B	SW1DNF-ANU-B
Windows NT® Workstation 4.0	○	○
Windows® 95	×	×
Windows® 98	×	×
Windows® 2000 Professional	×	○
Windows® Me	×	×
Windows® XP Professional	×	×
Windows® XP Home Edition	×	×
Windows Vista®	×	×
Windows® 7	×	×

○ : Usable, × : Unusable

2) Access to the QCPU (Q mode), LCPU and FXCPU cannot be made.

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

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	×	×	○	×	×	×	×	×

(a) Precautions

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

(13) GX Simulator communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	×	×	○	×	×	×	○	○

When making GX Simulator communication, use GX Developer and GX Simulator of the following versions or later.

Used OS	GX Developer	GX Simulator
Windows NT® Workstation 4.0	Version 5 (SW5D5C-GPPW-E) or later	Version 5 (SW5D5C-LLT-E 10B) or later
Windows® 95		
Windows® 98		
Windows® 2000 Professional	Version 7 (SW7D5C-GPPW-E) or later	Version 6 (SW6D5C-LLT-E) or later
Windows® Me		
Windows® XP Professional	Version 8 (SW8D5C-GPPW-E) or later	Version 7 (SW7D5C-LLT-E) or later
Windows® XP Home Edition		
Windows Vista®		
Windows® 7		

POINT

GX Developer and GX Simulator must be purchased separately.

(14) GX Simulator2 communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
×	×	×	○	×	○	○	○	○

When making GX Simulator2 communication, use GX Works2 Version1 (SW1DNC-GXW2) or later.

POINT

GX Works2 must be purchased separately.

(15) Modem communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

(a) Precautions

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

Module	GX Developer
A6TEL, Q6TEL, FXCPU, QC24N	Version 3 (SW3D5C-GPPW-E/SW3D5F-GPPW-E) or later
Q series-compatible C24	Version 4 (SW4D5C-GPPW-E) or later

2) For modem communication using the FXCPU, only the FX1S, FX1N, FX1NC, FX2N, FX2NC, FX3G, FX3U, and FX3UC are applicable.
3) Use the RS-232 cable supplied with the modem for connection between the personal computer and modem.

(b) Modem specifications
When performing modem communication, select the modem that satisfies the following specifications.

1) AT command compatibility (initialization command)
2) Only the DR terminal can be turned ON (High) independently.
(Example: The modem where the CD terminal turns ON when only the DR terminal is turned ON is not applicable.)
3) Communication Standards:
ITU-T V.90/V.34/V.32bis/V.32/V.22BIS/V.22/V.21/V.FC
Bell 212A/103

POINT

(1) 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.
(2) 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.
(3) For modem communication, the AT command, that is standard for some modems, is not executable.
If the line cannot be connected by selecting "Modem standard" for "AT command" within the communication settings utility, specify the AT command on the user side.
Refer to Section 5.1.7 for the setting of "AT command" within the communication settings utility.
(4) When using the callback function, use the Q Series Corresponding C24.

(16) Gateway function communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○	○	○	○	○	○	○	○	○

(a) Gateway function-compatible GOT

For the gateway function-compatible GOT, refer to the Operating Manual (Gateway Functions) of the GOT.

(b) About GOT setting and setting between GOT and programmable controller

For the GOT setting and the setting between the GOT and programmable controller, refer to the Operating Manual (Gateway Functions) of the GOT.

(17) GOT transparent communication

NT	95	98	2000	Me	XP	Vista	7(32)	7(64)
○*1	○	○	○	○*1	○	○	○	○

*1: Cannot be communicated via USB connection.

Communicable via GOT1000 series only.
For GOT setting and the setting between GOT and programmable controller, refer to the manual of GOT.
• GOT1000 Series Connection Manual

2.3 Operating Environment

The following table summarizes the operating environment for MX Component.

Item		Description
Computer	IBM PC/AT compatible personal computer	133MHz or more Pentium® *1 IBM PC/AT compatible personal computer where the OS operates.
	PC CPU module	MELSEC-Q series compatible PC CPU module (CONTEC CO., LTD. make)
Required memory		32MB or more *2
Hard disk free space		100MB or more
Disk drive		CD-ROM disk drive
Display		Resolution 800 × 600 pixels or higher (1024 × 768 pixels or higher for Windows Vista®)
System Software		Microsoft® Windows® 2000 Professional Operating System (English version), Microsoft® Windows® Millennium Edition Operating System (English version), Microsoft® Windows® 95 Operating System (English version), Microsoft® Windows® 98 Operating System (English version), Microsoft® Windows NT® Workstation Operating System Version 4.0 (English version) *3, Microsoft® Windows® XP Professional Operating System (English version) *4, Microsoft® Windows® XP Home Edition (English version) *4, Microsoft® Windows Vista® Home Basic Operating System (English version), Microsoft® Windows Vista® Home Premium Operating System (English version), Microsoft® Windows Vista® Business Operating System (English version), Microsoft® Windows Vista® Ultimate Operating System (English version), Microsoft® Windows Vista® Enterprise Operating System (English version), Microsoft® Windows® 7 Starter Operating System (English version), Microsoft® Windows® 7 Home Premium Operating System (English version), Microsoft® Windows® 7 Professional Operating System (English version), Microsoft® Windows® 7 Ultimate Operating System (English version) or Microsoft® Windows® 7 Enterprise Operating System (English version)

(To the next page)

*1: Pentium® 150MHz or more is recommended for the use of Windows® Me, Pentium® 300MHz or more for the use of Windows® XP, and 1GHz or more is recommended for the use of Windows Vista® and Windows® 7.

*2: 64MB or more is recommended for Windows® 2000 Professional, 128MB or more is recommended for Windows® XP, 1GB or more is recommended for Windows Vista® and 32-bit Windows® 7, and 2GB or more is recommended for 64-bit Windows® 7.

*3: Service Pack 3 or more is needed for the use of Windows NT® Workstation 4.0.

*4: MX Component cannot be used in the XP compatibility mode.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Programming language *5</td><td>
<table>
<tr><th>Programming language</th><th>Development software</th></tr>
<tr><td>Visual Basic®</td><td>Microsoft® Visual Basic® 6.0 (English version),
Microsoft® Visual Basic® .NET 2003 (English version),
Microsoft® Visual Studio® 2005 Visual Basic® (English version) *8,
Microsoft® Visual Studio® 2008 Visual Basic® (English version) *9 or
Microsoft® Visual Studio® 2010 Visual Basic® (English version) *10</td></tr>
<tr><td>Visual C++®</td><td>Microsoft® Visual C++® 6.0 (English version),
Microsoft® Visual C++® .NET 2003 (English version),
Microsoft® Visual Studio® 2005 Visual C++® (English version) *8,
Microsoft® Visual Studio® 2008 Visual C++® (English version) *9 or
Microsoft® Visual Studio® 2010 Visual C++® (English version) *10</td></tr>
<tr><td>VBScript *6, *7</td><td>Text editor and commercially available HTML tool</td></tr>
<tr><td>VBA</td><td>Microsoft® Excel 2000 (English version),
Microsoft® Excel 2002 (English version) *11,
Microsoft® Excel 2003 (English version) *12,
Microsoft® Excel 2007 (English version) *13 or
32-bit Microsoft® Excel 2010 (English version) *14
Microsoft® Access 2000 (English version),
Microsoft® Access 2002 (English version) *11,
Microsoft® Access 2003 (English version) *12,
Microsoft® Access 2007 (English version) *13 or
32-bit Microsoft® Access 2010 (English version) *14</td></tr>
</table>
</td></tr>
</table>

*5: User programs created in the English environment may be used in the English environment only. They cannot be used in the Japanese environment.

*6: To operate VBScript, use Internet Explorer (version 5.00.2919.6307 or later).

*7: When Windows® Me or Windows® XP Home Edition is used, the ASP function is unusable.

*8: Windows® 2000 Service Pack 4 or later, or Windows® XP Service Pack 2 or later is required for Visual Studio® 2005.
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: Windows® XP Service Pack 2, Windows Vista® or later is required for Visual Studio® 2008.
When using Visual Studio® 2008 on Windows® 7, Visual Studio® 2008 Service Pack 1 is required.

*10: For Visual Studio® 2010, Windows® XP Service Pack 3, Windows Vista® Service Pack 2 or higher, or Windows® 7 or later is required.

*11 When using Excel 2002 or Access 2002 on Windows® 7, Windows® XP Service Pack 3 or later is required.

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

*13: Windows® XP Service Pack 2 or later is required for Excel 2007 or Access 2007.

*14: For 32-bit Excel 2010 and 32-bit Access 2010, Windows® XP Service Pack 3, Windows Vista® Service Pack 1 or higher, or Windows® 7 or later is required.
64-bit Excel 2010 and 64-bit Access 2010 are not supported.

POINT

(1) When Windows® XP, Windows Vista® or Windows® 7 is used, the following new functions cannot be used.
If any of the following new functions is used, this product may not operate normally.
Start of application in Windows® compatible mode
Fast user switching
Remote desktop
Big fonts (Details setting of Screen properties)
64-bit Windows® XP and 64-bit Windows Vista® are not supported.

(2) When Windows® 7 is used, the following new functions cannot be used.
Windows XP Mode
Windows Touch

(3) When creating a user program, select "x86" (32 bits) "Target CPU".

2.4 Usable Programmable Controller CPUs

The usable programmable controller CPUs are given below.

	Programmable controller CPU Types
ACPU	A0J2HCPU, A1SCPU, A1SCPU-S1, A1SCPUC24-R2, A1SHCPU, A1SJCPU, A1SJHCPU, A1NCPU, A2CCPU, A2CCPUC24, A2CCPUC24-PRF, A2CJCPU, A2NCPU, A2NCPU-S1, A2SCPU, A2SCPU-S1, A2SHCPU, A2SHCPU-S1, A3NCPU, A1FXCPU, A2ACPU, A2ACPU-S1, A2ACPUP21/R21, A2ACPUP21/R21-S1, A3ACPU, A3ACPUP21/R21, A2UCPU, A2UCPU-S1, A2USCPU, A2USCPU-S1, A2ASCPU, A2ASCPU-S1, A2ASCPU-S30, A2USHCPU-S1, A3UCPU, and A4UCPU.
QnACPU	Q2ACPU, Q2ACPU-S1, Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1, Q3ACPU, Q4ACPU, and Q4ARCPU.
QCPU (A mode)	Q02CPU-A, Q02HCPU-A and Q06HCPU-A.
QCPU (Q mode)	Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU, Q01UCPU, Q02CPU, Q02HCPU, Q02PHCPU, Q02UCPU, Q03UDCPU, Q03UDECPU, Q04UDHCPU, Q04UDEHCPU, Q06HCPU, Q06PHCPU, Q06UDHCPU, Q06UDEHCPU, Q10UDHCPU, Q10UDEHCPU, Q12HCPU, Q12PHCPU, Q13UDHCPU, Q13UDEHCPU, Q20UDHCPU, Q20UDEHCPU, Q25HCPU, Q25PHCPU, Q26UDHCPU, Q26UDEHCPU, Q50UDEHCPU, and Q100UDEHCPU.
LCPU	L02CPU, L26CPU-BT
FXCPU	FX_0CPU, FX_{0S}CPU, FX_{0N}CPU, FX_1CPU, FX_{1N}CPU, FX_{1NC}CPU, FX_{1S}CPU, FX_UCPU, FX_{2C}CPU, FX_{2N}CPU, FX_{2NC}CPU, FX_{3G}CPU, FX_{3U}CPU, and FX_{3UC}CPU.
Motion controller CPU	A171SHCPU, A172SHCPU, A173UHCPU, A173UHCPU-S1, A273UHCPU, and A273UHCPU-S3.
QSCPU	QS001CPU.
C controller CPU	Q12DCCPU-V

*1: Cannot be used when the first five digits of the serial number is 12042 or later.

MEMO

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3 OPERATION PROCEDURES

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

3.1 Selecting the Development Type

When using MX Component to create user applications, choose the utility setting type or program setting type before creating a user application.
The utility setting type and program setting type will be described.

(1) Utility setting type

Make communication settings using the communication setting wizard.
Using the communication setup utility enables you to create a user program 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 the communication setting wizard to the ACT control property or into a user program.

(2) Program setting type

A user program is created without using the communication setup utility.
Make ACT control settings for the corresponding communication in the property window directly or within the user program.
The properties necessary to be set depend on the ACT control.

(3) Comparison

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

Item \ Setting Type	Utility Setting Type	Program Setting Type
Feature	Communication settings can be made easily using the communication setting wizard. In program creation, communication can be made by merely making the setting (logical station number) on the communication setting wizard. (The number of development processes can be reduced.)	All communication settings can be made in the user program. Communication settings can be changed flexibly in the user program.
Used ACT control	ActEasyIF, ActMLEasyIF	ACT control for corresponding communication
Whether communication setup utility is used or not	Used.	Not used.
How to connect PLC monitor utility	Choose the logical station number.	Change the settings every time you make connection. (Use the wizard)

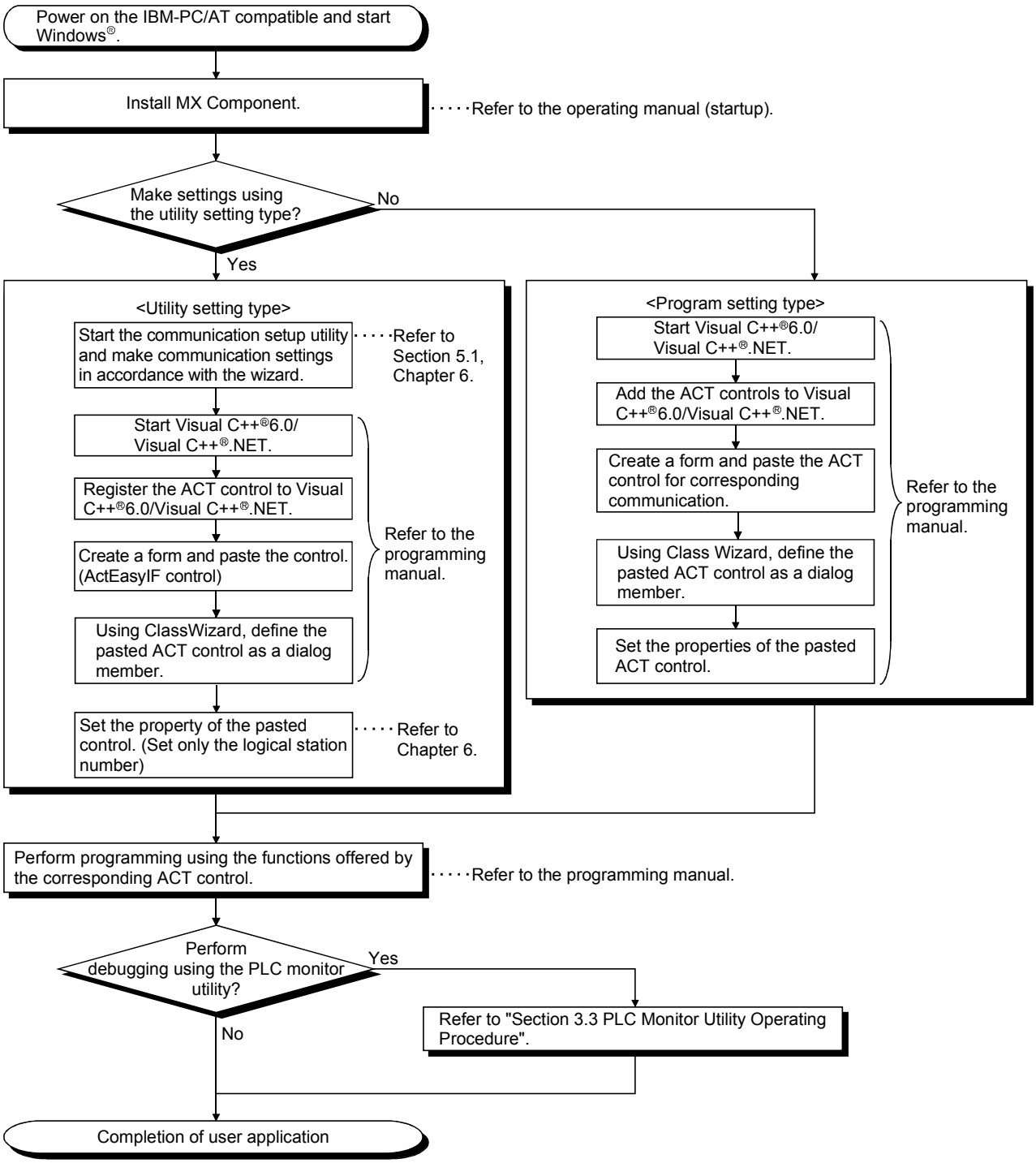
3.2 User Application Creating Procedures

3.2.1 When using Visual Basic® 6.0/Visual Basic® .NET

The following creation procedures assumes use of Visual Basic® 6.0/ Visual Basic® .NET.

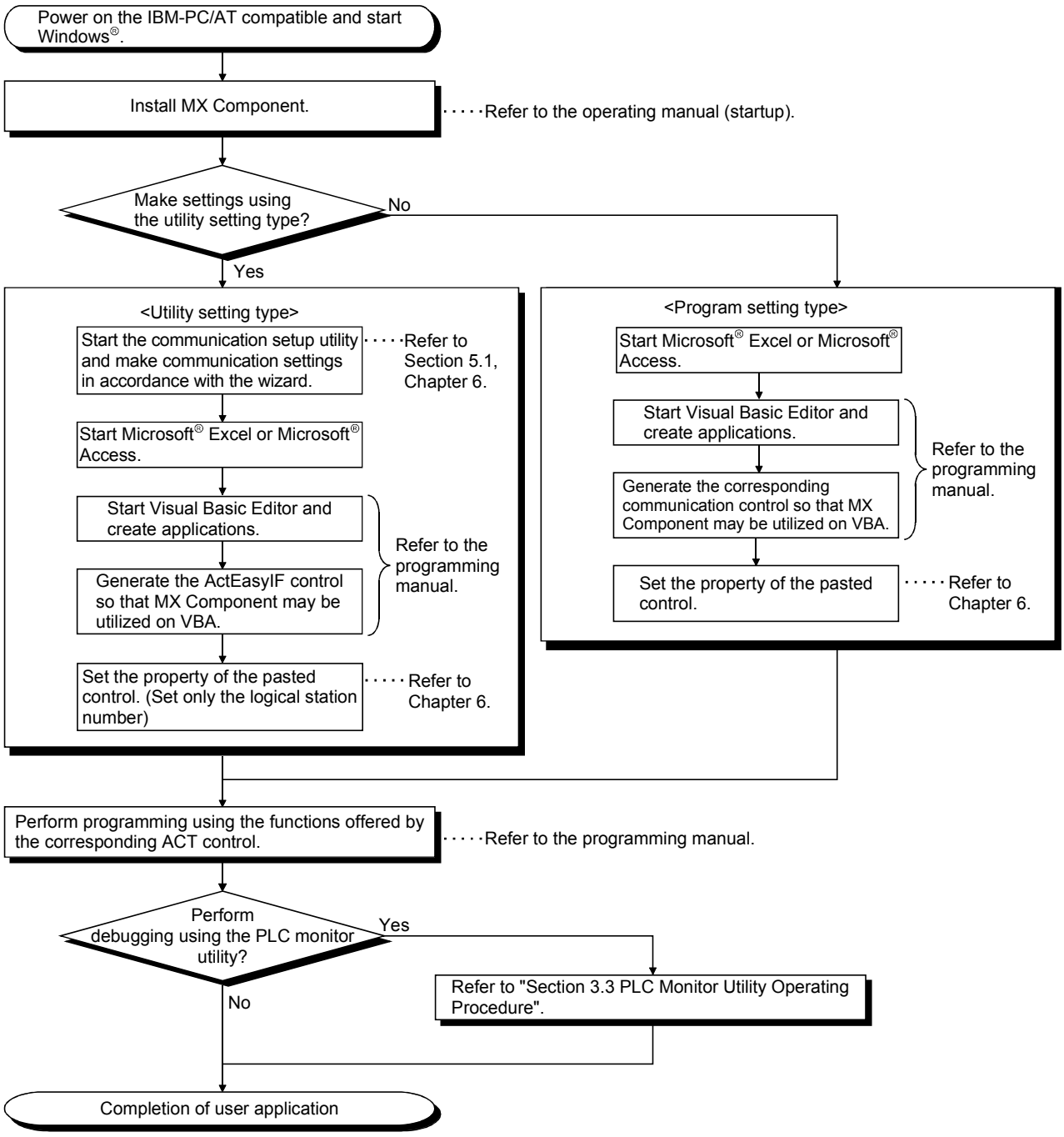
3.2.2 When using Visual C++® 6.0/Visual C++® .NET

The following creation procedures assumes use of Visual C++® 6.0/Visual C++® .NET.



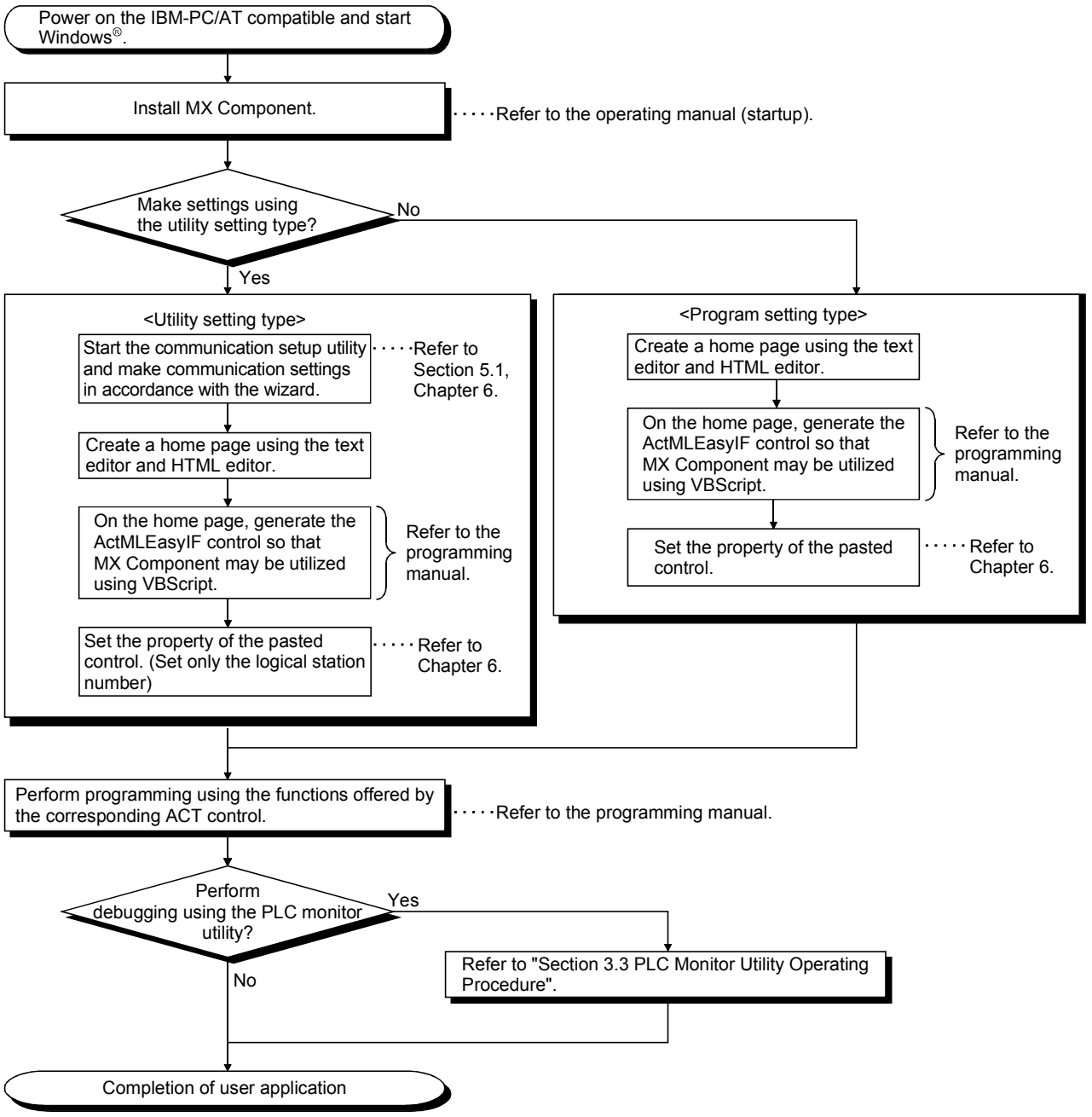
3.2.3 When using VBA

The following creation procedures assumes use of VBA.



3.2.4 When using VBScript

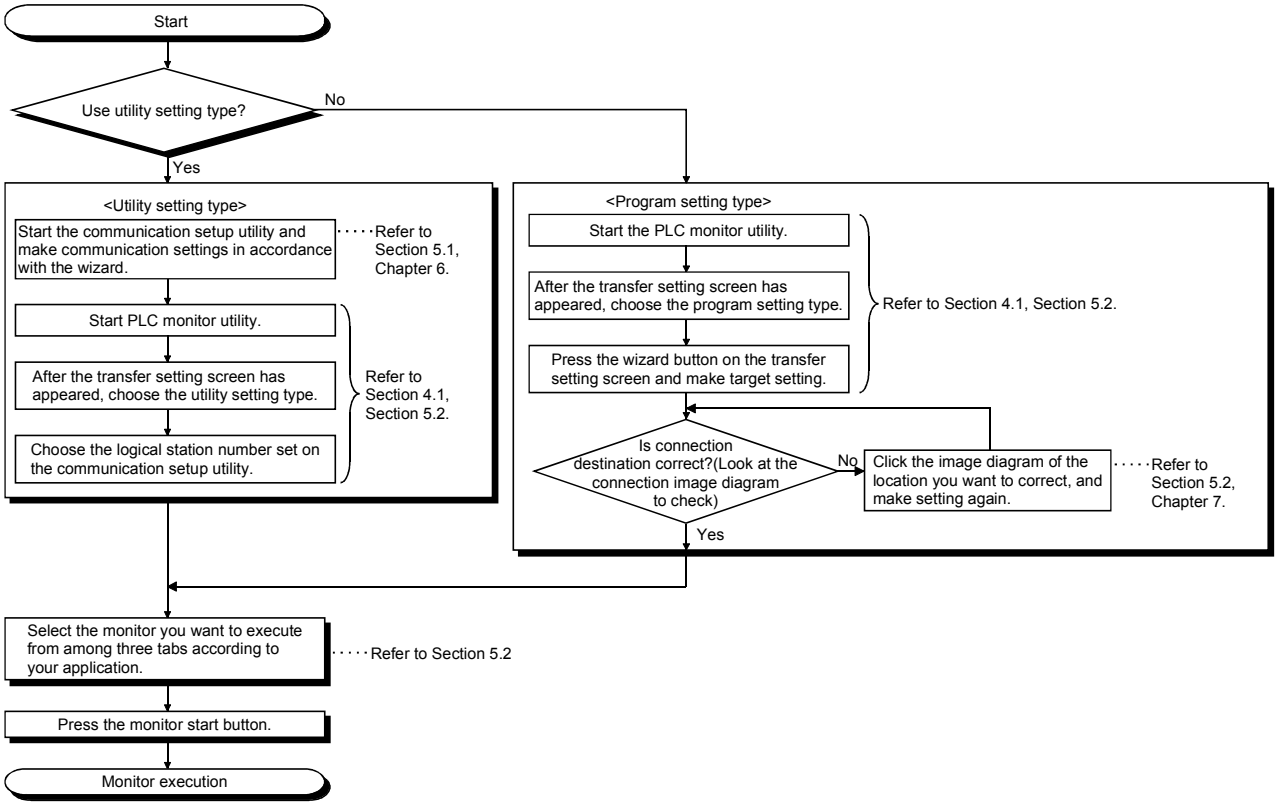
The following creation procedures assumes use of VBScript.



POINT
Refer to Appendix 2 for the way to start the Internet/intranet environment.

3.3 PLC Monitor Utility Operating Procedure

The following is the PLC monitor utility operating procedure.



4 OPERATIONS COMMON TO UTILITIES

This chapter explains the operations common to the utilities.

4.1 Starting the Utility

Each utility can be started by clicking the corresponding icon in the [Start]-[Programs *1] -[MELSOFT Application]-[MX Component] menu.
For the registered icons, refer to the operating manual (startup).

*1: [All programs] appears when using Windows® XP, Windows Vista® or Windows® 7.

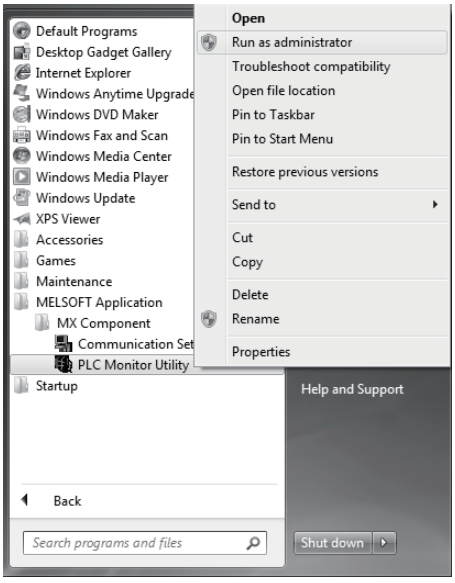
<Administrator authority when executing each utility on Windows Vista® >

(1) Administrator authority

1) When user account control (UAC) is enabled
All users including administrator are fixed at and operate as "standard user". To execute programs in 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 in administrator authority when UAC is enabled (The procedure also applies to PLC Monitor Utility).



1) Select "Communication Setup Utility", right-click, and select "Run as administrator" for execution.

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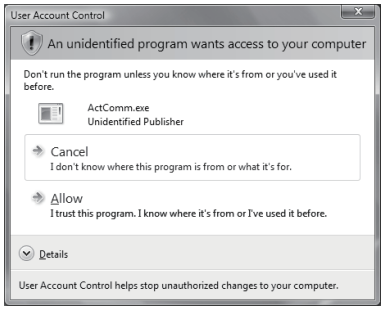
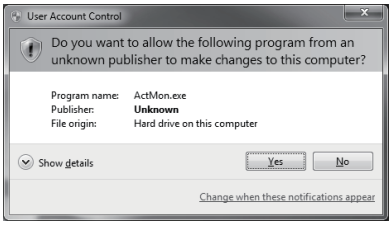
(From the previous page)

< Windows Vista® >



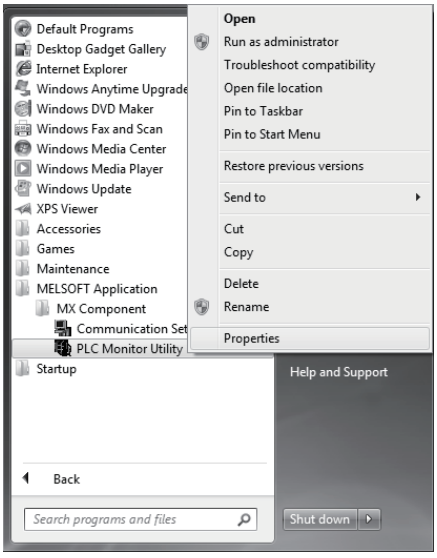
< Windows® 7 >



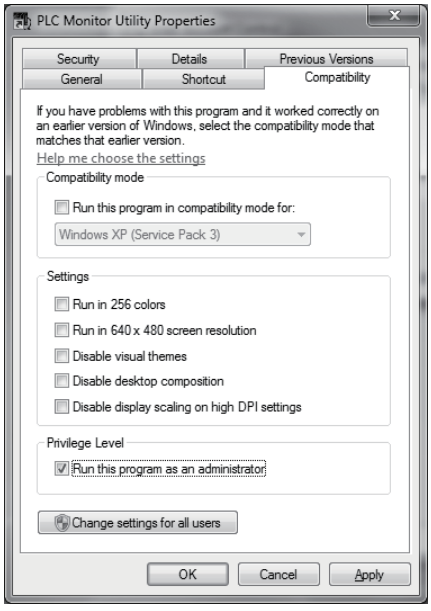
2) The left screen appears for administrator users.
Selecting "Allow" or Yes enables to execute a program in administrator authority.
Selecting "Cancel" or No disables the execution.

(3) Setting to always execute programs as an administrator

To always "execute programs as an administrator", set as follows. (The procedure also applies to PLC Monitor Utility).



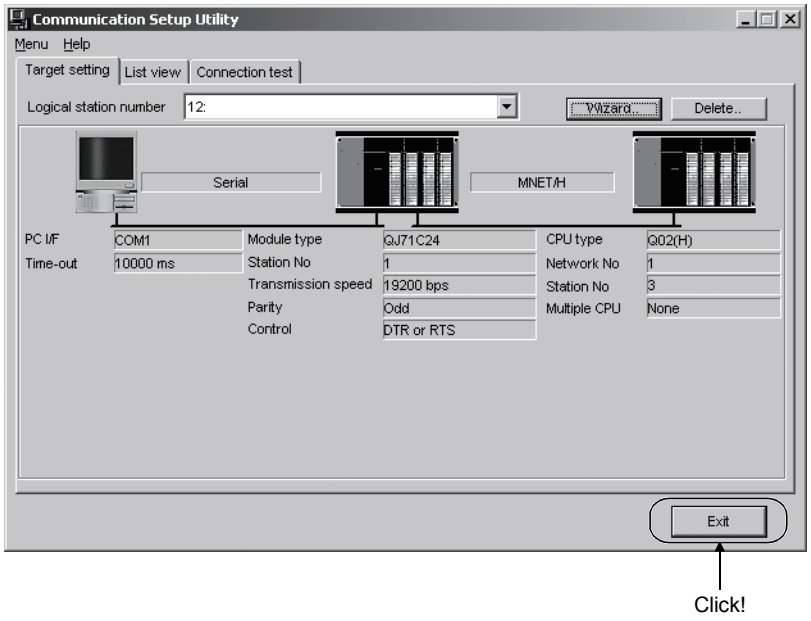
1) Select "Communication Setup Utility", right-click, and select "Properties".



2) Select the <<Compatibility>> tab and check "Run this program as an administrator".

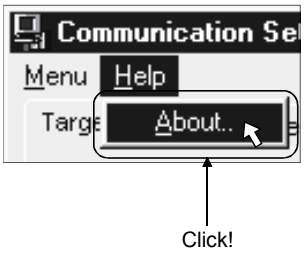
4.2 Exiting the Utility

To exit each utility, click Exit at bottom right of the screen.
As the dialog box appears, click Yes to exit the utility.



4.3 Confirming the Version

To confirm the version of each utility, click the [Help]-[About] menu.



5 UTILITY OPERATIONS

This chapter provides how to operate the communication setup utility and PLC monitor utility.

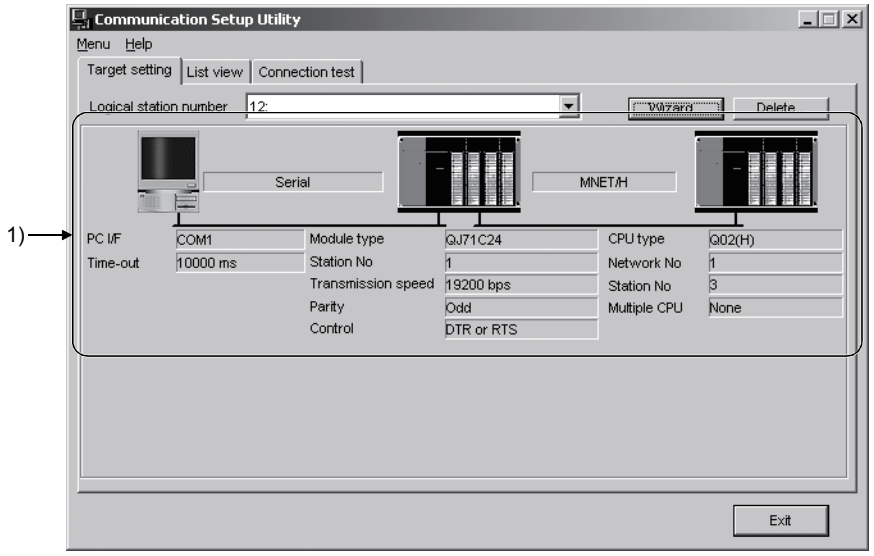
POINT
Refer to "CHAPTER 6 COMMUNICATION SETTING EXAMPLES OF THE UTILITY SETTING TYPE" for communication setting examples using the communication setup utility.

5.1 Communication Setup Utility

This section describes how to operate and set the communication setup utility used to make communication with the utility setting type.

5.1.1 Operations on target setting screen

This screen is used to display the setting details of the logical station number set on the communication setting wizard and to edit.



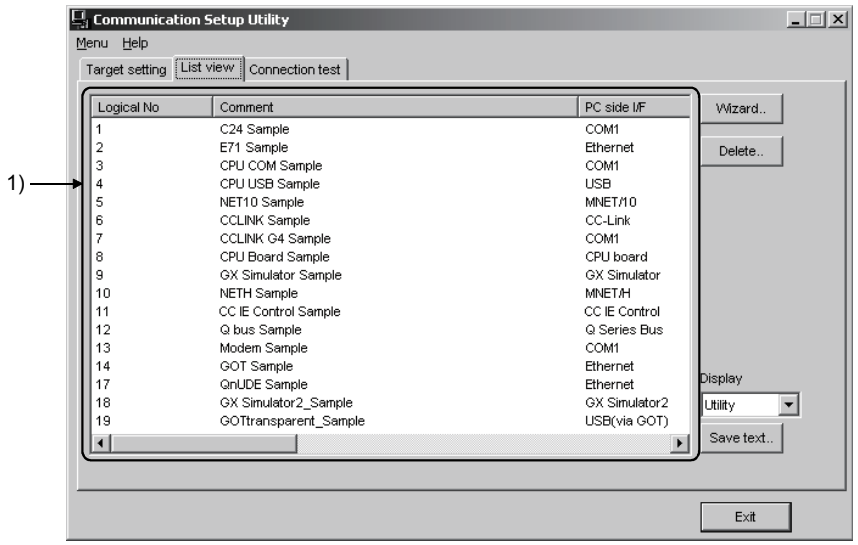
Item	Description
Logical station number	Select to display the setting details and the logical station number to be edited set on the communication setting wizard.
Wizard	Used to start the communication setting wizard and set the logical station number.
Delete	Used to delete the preset logical station number.
1) (Connection image diagram)	Shows the connection image diagram of the selected logical station number. Clicking any sketch (personal computer, programmable controller CPU) in the connection image diagram starts the communication setting wizard, enabling you to change the settings.

REMARK

For details of the communication setting wizard, refer to "Section 5.1.6 Operations on the communication setting wizard screen".

5.1.2 Operations on list view screen

This screen is used to list the logical station numbers registered, edit the logical station number, and list the properties necessary for the program setting type.



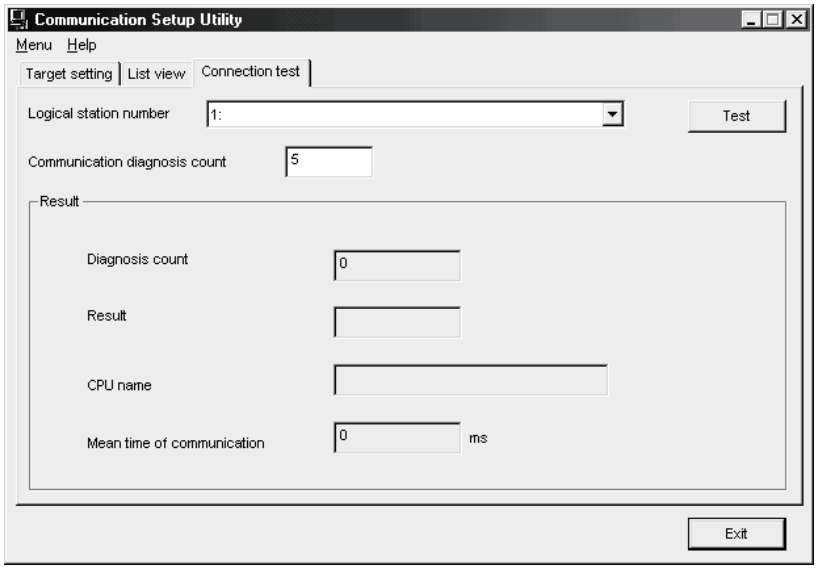
Item	Description
1) (Property list)	Shows the settings of the registered logical station numbers. Double-clicking the logical station number starts the communication setting wizard.
Wizard	Used to start the communication setting wizard and set the logical station number.
Delete	Used to delete the preset logical station number.
Display	Utility .....Shows the settings made for the logical station numbers in 1) (Property list). Program.....Shows the property list necessary for setting with the program setting type in 1) (Property list).
Save text	1) Used to save the settings of 1) (Property file) into a file in the txt format.

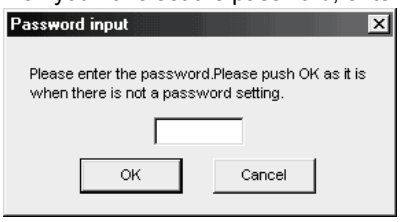
REMARK

For details of the communication setting wizard, refer to "Section 5.1.6 Operations on the communication setting wizard screen".

5.1.3 Operations on connection test screen

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



Item	Description
Logical station number	Select the logical station number on which a communication test will be made.
Communication diagnosis count	Set how many times the communication test will be repeated for the specified logical station number. (Default: 5) Setting range: 1 to 32767
Test (Cancel)	Used to start (stop) the communication test. When the logical station number where the modem communication data have been set is selected, the following screen appears after Test is clicked. When you have set the password, enter the password and click OK. 
Result	Shows the result of the communication test.

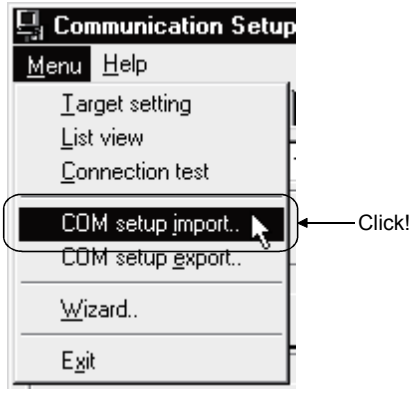
Item	Description
Diagnosis count	Shows the number of connections made during the communication test.
Result	Shows the test result. An error code appears at error occurrence. 0 appears at normal termination, or any value other than 0 appears at abnormal termination.
CPU name	Shows the connected CPU type.
Mean time of communication	Shows the average time taken until one communication test is established. (Unit: ms)

5.1.4 Operations on com setup import screen

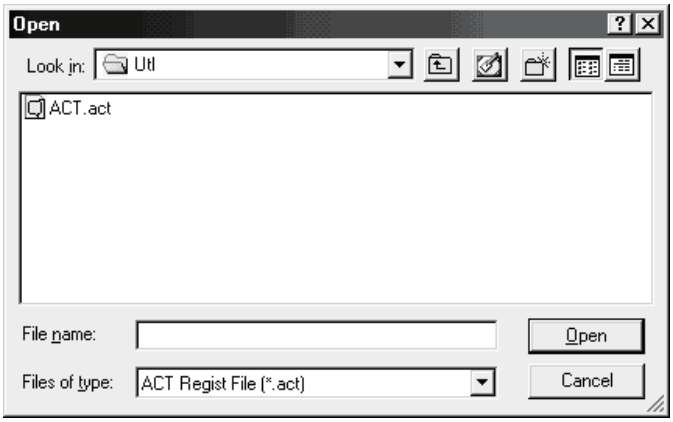
The communication settings saved in the file by the operations in Section 5.1.5 are reflected on the utility.
This screen is used when the communication settings made on the other IBM-PC/AT compatible are to be reflected on the IBM-PC/AT compatible being used.

(1) Selected menu item

Select the [Menu]-[COM setup import] on the menu bar.



(2) Dialog box



Item	Description
Look in	Specify the place where the file to be imported exists.
File name	Enter the file name to be imported.
Files of type	Set the type of the file to be imported.
Open	Used to execute import.
Cancel	Used to cancel importing the communication settings.

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

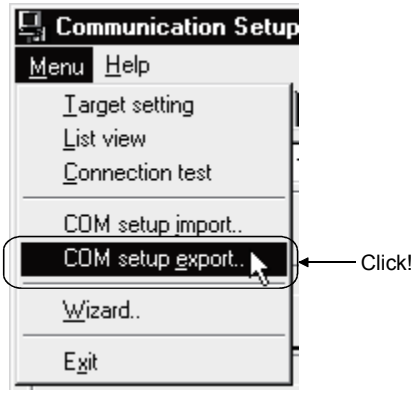
5.1.5 Operations on com setup export screen

The communication settings being made on the IBM-PC/AT compatible are saved in a file. (The file where data are saved is called the ACT registered file.)
This screen is used to reflect the communication settings on the other IBM-PC/AT compatible.

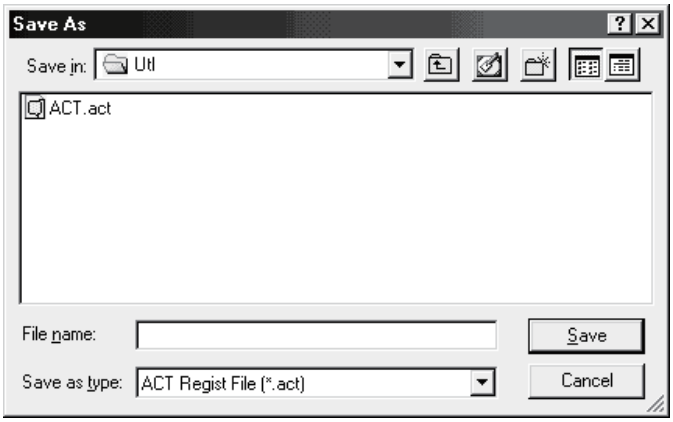
POINT
Uninstalling deletes all the settings within "Communication Setup Utility". To avoid this, export the file storing the settings.

(1) Selected menu item

Select the [Menu]-[COM setup export] on the menu bar.



(2) Dialog box



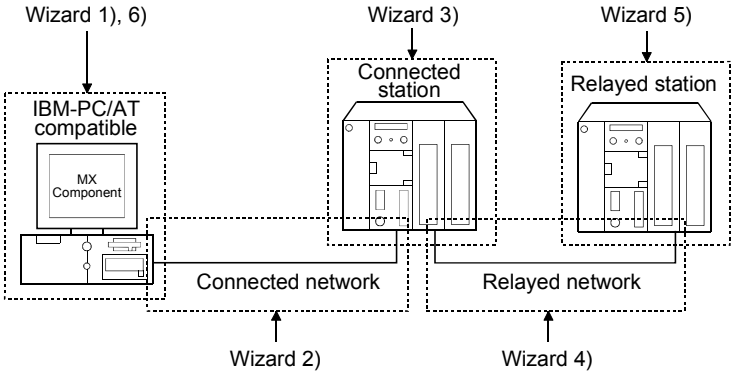
Item	Description
Save in	Specify the place where the file will be exported.
File name	Enter the file name to be saved.
Save as type	Set the type of the file to be saved.
Save	Used to export the communication settings.
Cancel	Used to cancel exporting the communication settings.

5.1.6 Operations on communication setting wizard screens

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

(1) Outline of the communication setting wizard

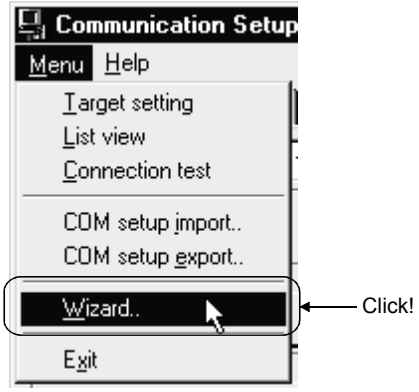
The logical station number necessary to make communication with the utility setting type is set in the wizard format.
The places and descriptions of the settings made on the communication setting wizard screens will be given below.
For the wizard screen settings, refer to "(3) Explanation of the communication setting wizard screens".



Screen Name	Description
Wizard 1)	Used to set the logical station number.
Wizard 2)	Used to set the connected network between the IBM-PC/AT compatible and connected station (programmable controller CPU and module).
Wizard 3)	Used to set the connected station (programmable controller CPU and module).
Wizard 4)	Used to set the relayed network between the connected station (programmable controller CPU and module) and relayed station (programmable controller CPU and module).
Wizard 5)	Used to set the relayed station programmable controller CPU.
Wizard 6)	Used to comment the logical station number.

(2) Starting procedure

Select the [Menu]-[Wizard] on the menu bar.
(You can also start by clicking Wizard displayed on the utility screen.)



(3) Explanation of the communication setting wizard screens

Communication setting wizard screens are shown from wizard 1) to wizard 6) in the order.

The following explains the communication setting wizard screens in the displayed order.

POINT

(1) The displays or available setting items of the communication setting wizard screens change with the communication settings.
Set all available setting items being displayed.

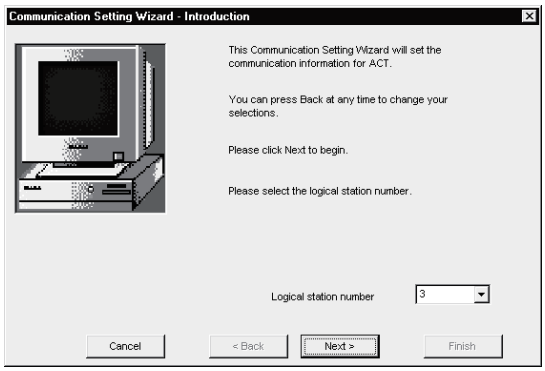
(2) Some of the communication setting wizard screens may not appear depending on the settings.

(3) If the communication setting wizard is repeatedly started, a memory shortage error may occur.
This problem occurs due to MS-IME95 or MS-IME97 of Microsoft Corporation. If the memory shortage error has occurred, change MS-IME95 or MS-IME97 for MS-IME2000.

Start the communication setting wizard.

↓

Wizard 1)



1) Type or select the logical station number and click Next>.
The logical station number can be registered between 0 and 1023.

↓

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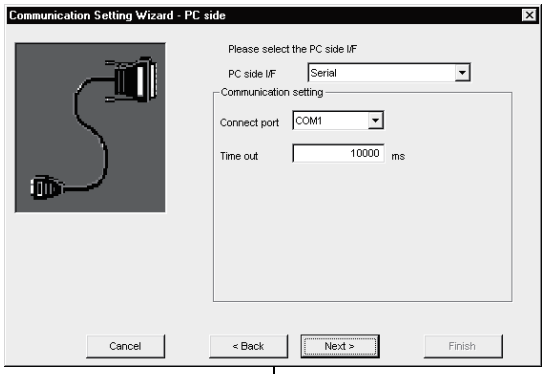
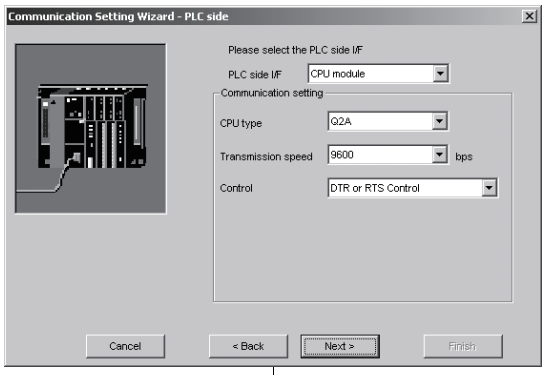
Wizard 2)



2) Select the "PC side I/F" to communicate with.
The items shown in "Communication setting" change with the setting made in "PC side I/F".
Set all available setting items and click Next>.
The choices corresponding to the communications in "PC side I/F" are indicated below.

Setting Item	Communication Name
USB	USB communication
USB(via GOT)	GOT transparent communication
Serial	Computer link 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
MELSECNET/10 board	MELSECNET/10 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
CPU board	CPU board communication

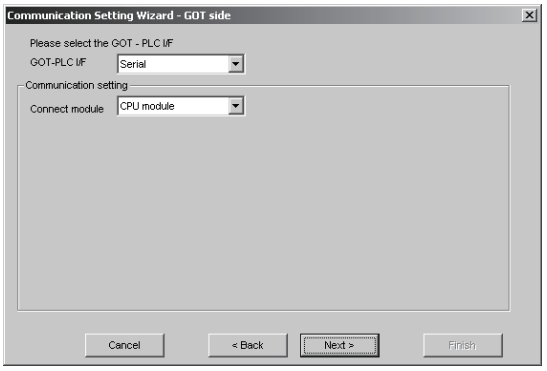
Wizard 3)



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

REMARK

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



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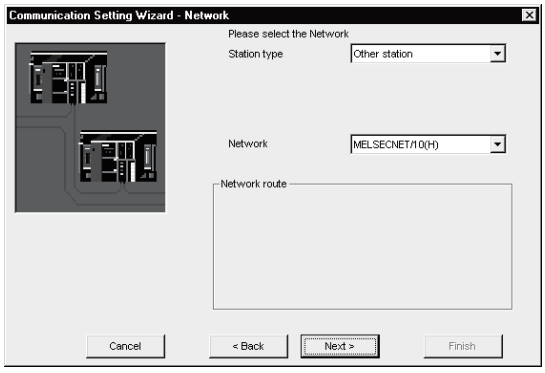
(From the previous page)

↓

Wizard 4)



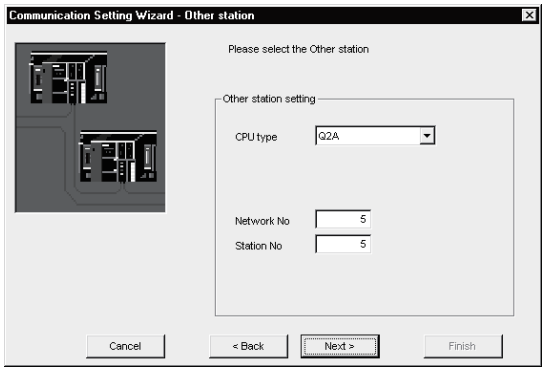
4) Wizard 4) differs in available setting items depending on the settings on Wizard 2) and Wizard 3).
Set all available setting items and click Next>.

REMARK

When the modem is selected on Wizard 2), the line setting screen appears on Wizard 3) and Wizard 4).
For details of the line setting screen, refer to "Section 5.1.7 Operations on line setting screen".

↓

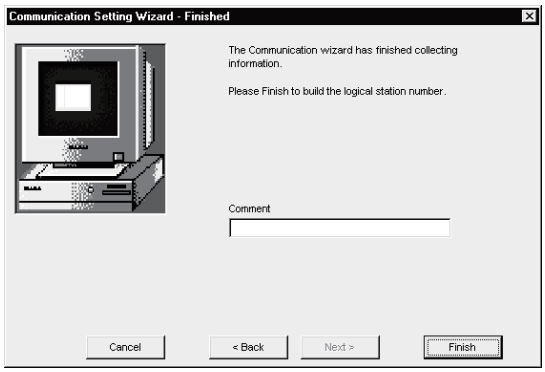
Wizard 5)



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 Next>.

↓

Wizard 6)



6) Comment the logical station number that was set.
A comment may be entered using up to 32 characters.
Enter a comment and click Finish.

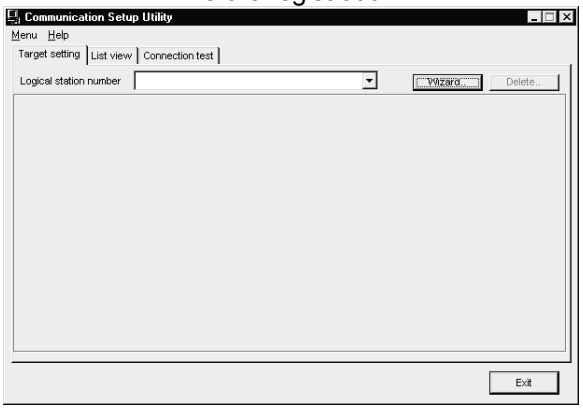
When you do not need a comment, click Finish without entering it.

↓

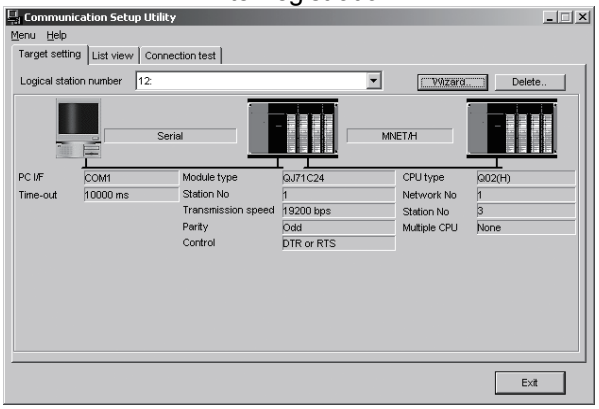
(Registration complete)

When the registration of the logical station number is completed on the communication setting wizard, the settings are displayed on the target setting screen.

<Before registration>



<After registration>



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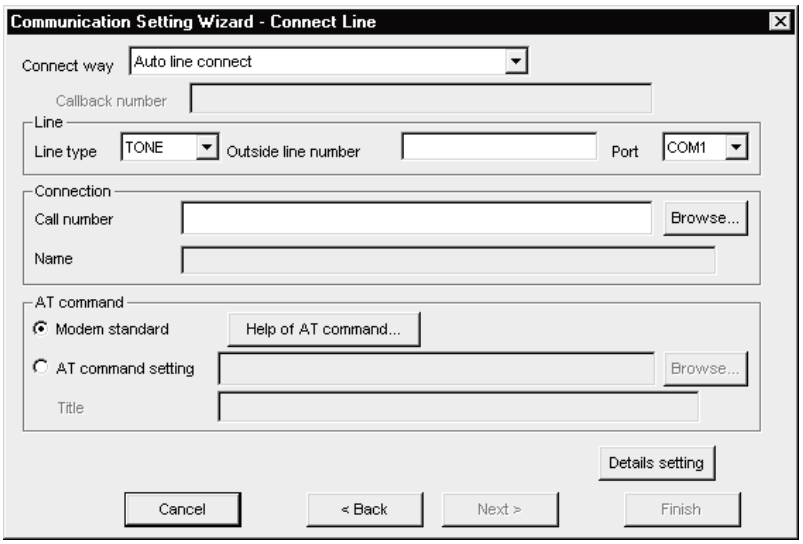
5.1.7 Operations on line setting screen

This screen is used to make the telephone line settings necessary to set modem communication in the communication settings utility.

(1) Connect Line screen

Set the line connection system, telephone line, AT command, etc.



Item	Description
Connect way	Set the line connection system. When the Q Series Corresponding C24 is used, any of the following items can be selected. (Fixed to "Auto line connect" when the A6TEL, Q6TEL, FXCPU or QC24N is used.)

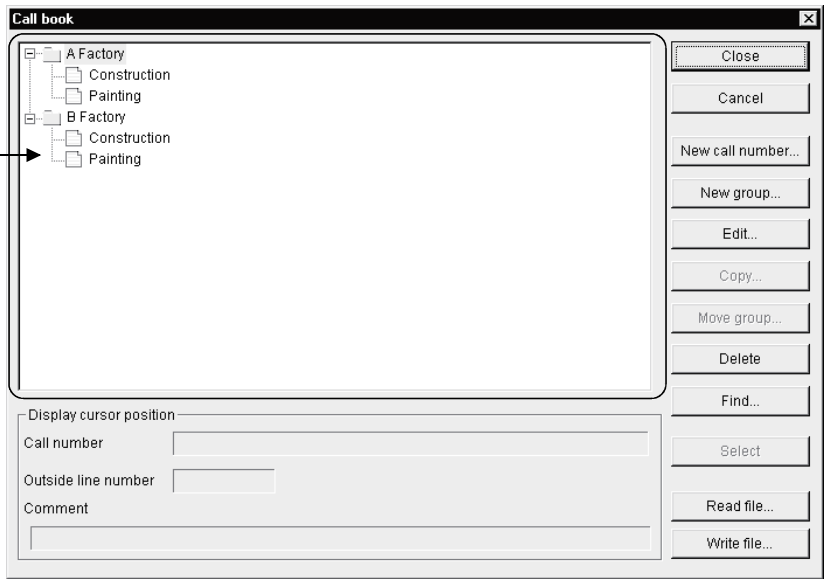
Item	Description
Auto line connect	Select this item when the callback function has not been set.
Auto line connect (Callback fixation)	For details on the connection format of each callback function, refer to the Programming Manual.
Auto line connect (Callback number specification)	
Callback connect (Fixation)	
Callback connect (Number specification)	
Callback request (Fixation)	
Callback request (Number specification)	
Callback reception waiting	

Callback number	Set the telephone number used with the callback function of the Q Series Corresponding 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. Setting range: 62 characters Setting characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, -, ＊, #

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td rowspan="3">Line</td><td>Line type</td><td>Set the line type. (Default: Tone)
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Pulse</td><td>Select this item when using dial line.</td></tr>
<tr><td>Tone</td><td>Select this item when using push button dial line.</td></tr>
<tr><td>ISDN</td><td>Select this item when using ISDN line.</td></tr>
</table></td></tr>
<tr><td>Outside line number</td><td>Set the outside line access number.
Setting range: 10 characters
Setting characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, -, *, #</td></tr>
<tr><td>Port</td><td>Set the COM port for modem communication. (Default: COM1)</td></tr>
<tr><td rowspan="3">Connection target</td><td>Call number</td><td>Enter the telephone number of the connection target.
When the connection target has been selected on the phone book screen, the telephone number of the connection target appears.
Setting range: 50 characters
Setting characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, -, *, #</td></tr>
<tr><td>Name</td><td>The other end name of the connection target selected on the phone book screen appears.</td></tr>
<tr><td>Browse</td><td>Used to display the phone book screen.
For details of the phone book screen, refer to "(2) Call book screen".</td></tr>
<tr><td rowspan="5">AT command</td><td>Modem standard</td><td>Select this item when using the modem-standard AT command to connect the line.</td></tr>
<tr><td>AT command setting</td><td>Enter the AT command.
If the modem standard cannot be selected to connect the line, select this item and enter the AT command.
If the AT command has been selected on the AT command registration screen, the data of the AT command is displayed.
Setting range: 70 characters
Setting characters: ASCII code</td></tr>
<tr><td>Title</td><td>The title of the AT command selected on the AT command registration screen appears.</td></tr>
<tr><td>Browse</td><td>Used to display the AT command registration screen.
For details of the AT command registration screen, refer to "(4)" AT command registration screen".</td></tr>
<tr><td>Help of AT command</td><td>Used to display the AT command help.</td></tr>
<tr><td colspan="2">Details setting</td><td>Used to display the detail setting screen.
For details of the detail setting screen, refer to "(6) Detail setting screen".</td></tr>
</table>

(2) Call book screen

Set the telephone numbers used on the line setting screen.



Item	Description
1) (Registered phone number display list)	Displays the group names and other end names.
Choice display	Displays the settings of the other end selected in the registered phone number display list.
Close	Used to update the edited data and close the call book screen.
Cancel	Used to discard the edited data and close the call book screen.
New call number	Used to display the new phone number setting screen of the other end selected in the registered phone number display list. For details of the new phone number setting screen, refer to "(3) New phone number setting, phone number editing screens".
New group	Used to create a new group. Setting range: 50 characters
Edit	Used to display the editing screen. For details of the phone number editing screen, refer to "(3) Call number setting, call number editing screens".
Copy	Used to copy the other end selected in the registered phone number display list to another group.
Move group	Used to move the other end selected in the registered phone number display list to another group.
Delete	Used to delete the other end in the group selected in the registered phone number display list. You cannot batch-delete a group. Delete a group after deleting all other ends in the group.
Find	Used to search the registered other end names or telephone numbers for data.
Select	Used to display on the line setting screen the other end selected in the registered phone number display list.
Read file	Used to read the settings of the phone book screen saved by file write.
Write file	Used to save the settings made on the phone book screen into a file.

POINT

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

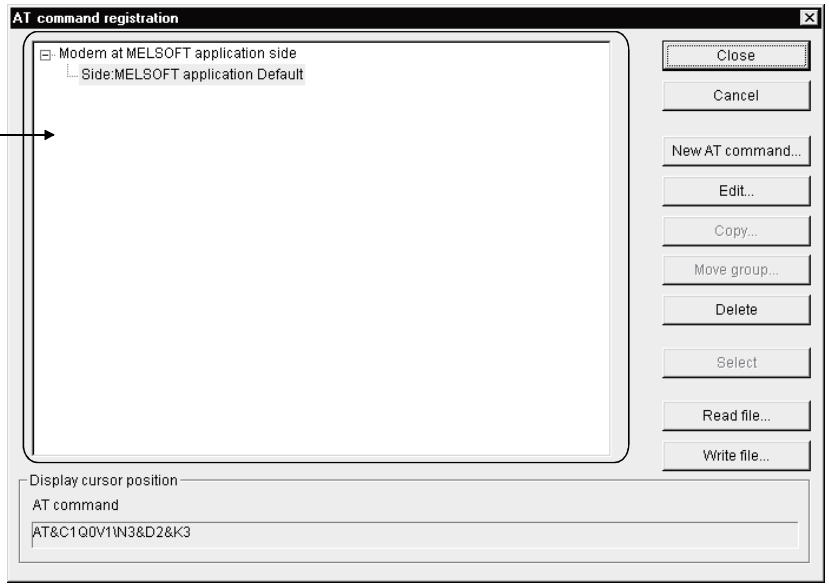
(3) Call number setting, call number editing screens

Set the telephone number to be registered to the phone book.

Item	Description
Group name	Displays the group name of the registration destination.
Destination name	Enter the other end of the telephone number to be registered. Setting range: 50 characters
Call number	Set the telephone number. Setting range: 50 characters Setting characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, -, ∗, #
Outside line number	Set the outside line access number. Setting range: 10 characters Setting characters: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, -, ∗, #
For only line connection	When the password has been set to the A6TEL, Q6TEL, Q Series Corresponding C24, making this setting automatically starts password setting and connects the line. If the password has not been set, this setting is ignored. Setting range: 4 characters Setting characters: ASCII code
Memo	Enter the memo for the registered data. Setting range: 60 characters

(4) AT command registration screen

Set the AT commands used on the line setting screen.



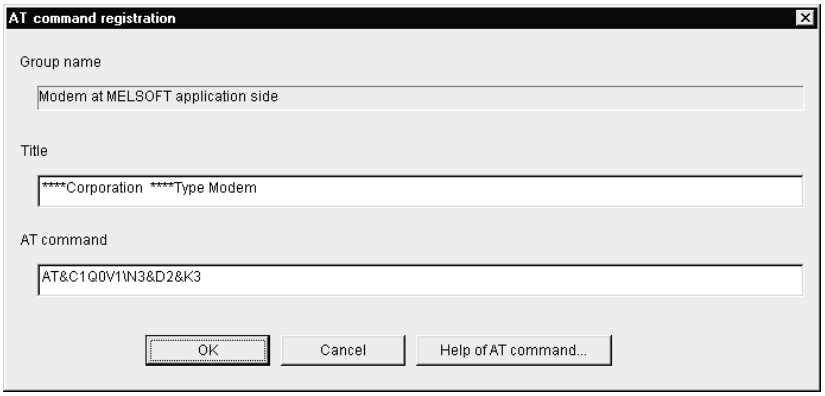
Item	Description
1) (Registered AT command display list)	Displays a list of titles of the registered AT commands.
Choice display	Used to display the registered data selected in the registered AT command display list.
Close	Used to update the edited data and close the AT command registration screen.
Cancel	Used to discard the edited data and close the AT command registration screen.
New AT command	Used to display the new AT command registration screen. For details of the new AT command registration screen, refer to "(5) New AT command registration, AT command editing screens".
Edit	Used to display the editing screen for the AT command selected in the registered AT command display list. For details of the AT command editing screen, refer to "(5) New AT command registration, AT command editing screens".
Copy	Used to copy the registered AT command. Selecting the registered data to be copied in the registered AT command display list and clicking Copy displays the group designation dialog box. Select the copy destination group and click OK.
Move group	Used to move the registered AT command to any other end. Selecting the registered data to be moved in the registered AT command display list and clicking Move group displays the group designation dialog box. Select the move destination group and click OK.
Delete	Used to delete the AT command selected in the AT command display list.
Select	Used to display the AT command selected in the AT command display list on the line setting screen.
Read file	Used to read the settings of the AT command registration screen saved by file write.
Write file	Used to save the settings made on the AT command registration screen into a file.

POINT

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

(5) New AT command registration, AT command editing screens

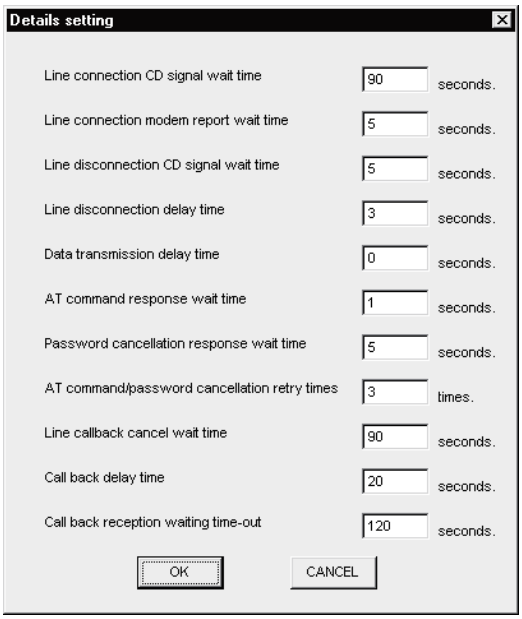
Register a new AT command and edit the AT command.



Item	Description
Group name	Displays the group name where the AT command to be registered.
Title	Enter the title of the AT command to be registered. Setting range: 60 characters
AT command	Enter the AT command for modem initialization. Setting range: 70 characters Setting characters: ASCII code
Help of AT command	Used to display the AT command help.

(6) Detail setting screen

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



Item	Description
Line connection CD signal wait time	Set the line connection CD signal confirmation time. (Default: 90) Increase the set time if the CD signal does not turn ON within the set time depending on the line-connected region (example: overseas). Setting range: 1 to 999
Line connection modem report waiting time	Set the line connection modem report wait time. (Default: 5) Increase the set time if the response speed of the modem is low. Setting range: 1 to 999
Line disconnection CD signal wait time	Set the line disconnection CD signal confirmation time. (Default: 5) Increase the set time if the CD signal does not turn OFF within the preset time depending on the line-connected region (example: overseas). Setting range: 1 to 999
Line disconnection delay time	Set the line disconnection delay time. (Default: 3) Increase the set time if the response speed of the modem is low. Setting range: 1 to 999
Data transmission delay time	Set the data transmission delay time. (Default: 0) Increase the set time if the response speed of the modem is low. Setting range: 1 to 999
AT command response wait time	Set the AT command response wait time. (Default: 1) Increase the set time if the response speed of the modem is low. Setting range: 1 to 999
Password cancellation response wait time	Set the password cancellation response wait time. (Default: 5) Increase the set time if the quality of the line with the other end is low. Setting range: 1 to 999

Item	Description
AT command/password cancellation retry count	Set the AT command/password cancellation retry count. (Default: 3) Increase the set count if the AT command cannot be sent or the password cannot be cancelled. Setting range: 1 to 999
Line callback cancel wait time	Set the Line callback cancel wait time. (Default: 90) Increase the set time if the line at the other end (Q series corresponding C24 side) is not disconnected within the set time depending on the line-connected region (example: overseas). Setting range: 1 to 180
Call back delay time	Set the callback delay time. (Default: 20) 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. Setting range: 1 to 999
Call back reception waiting time-out	Set the callback reception waiting time-out. (Default: 120) Increase the set time if a time-out occurs in a callback receive waiting status. Setting range: 1 to 3600

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5.2 PLC Monitor Utility

This section explains how to operate and set the PLC monitor utility.

5.2.1 Operations on transfer setting screen

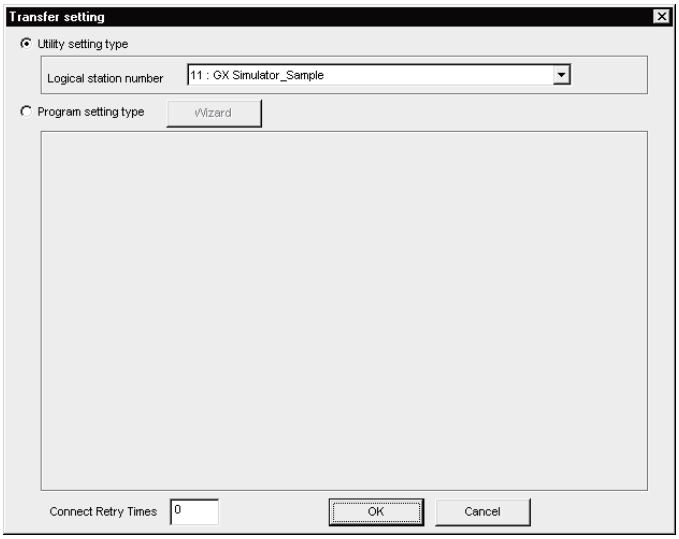
This screen is used to set connection from the IBM-PC/AT compatible to the programmable controller CPU.

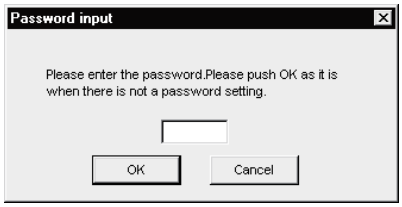
(1) Selected menu item

Select [Online]-[Transfer setup] on the menu bar.
(This screen also appears when the PLC monitor utility is started.)

(2) Dialog box

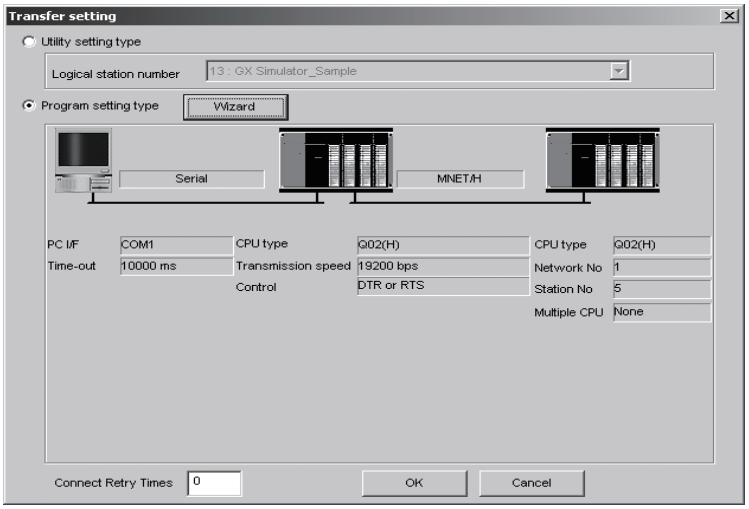
(a) When choosing the utility setting type

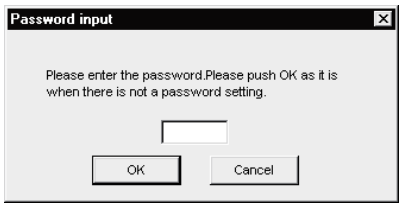


Item	Description
Utility setting type	Select when using the logical station number set on the communication setup utility to make transfer setting.
Logical station number	Select the logical station number set on the communication setup utility. When the logical station number where the modem communication data have been set is selected, the following screen appears after OK is clicked. When you have set the password, enter the password and click OK . 
Connect Retry Times	Set the number of retries to be made when an error occurs during monitoring with the PLC monitor utility. (default: 0) Setting range: 0 to 9

POINT
Before specifying the logical station number, confirm that the settings of the logical station number, such as the CPU type and station number, are correct on the communication setup utility.

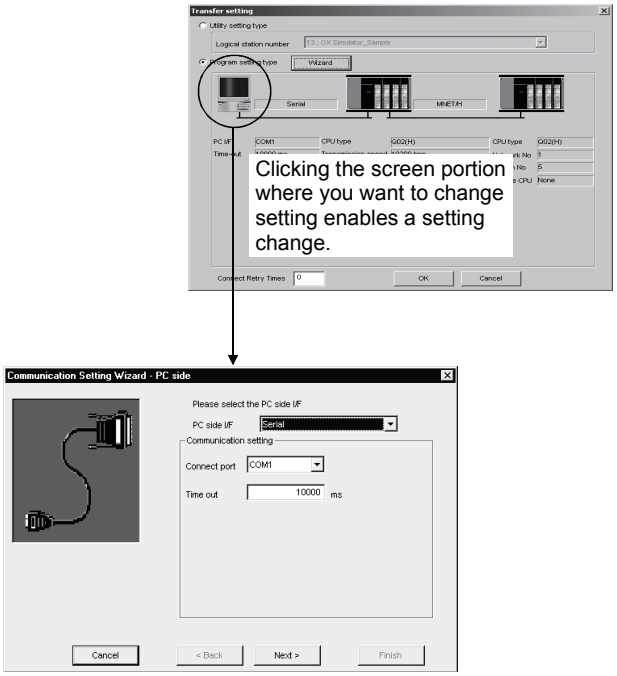
(b) When choosing the program setting type



Item	Description
Program setting type	Select when the program setting type is used to create programs.
Wizard	Used to start the communication setting wizard and make transfer setting. When the logical station number where the modem communication data have been set is selected, the following screen appears after OK is clicked. When you have set the password, enter the password and click OK . 
Connect Retry Times	Set the number of retries to be made when an error occurs during monitoring with the PLC monitor utility. (default : 0) Setting range: 0 to 9

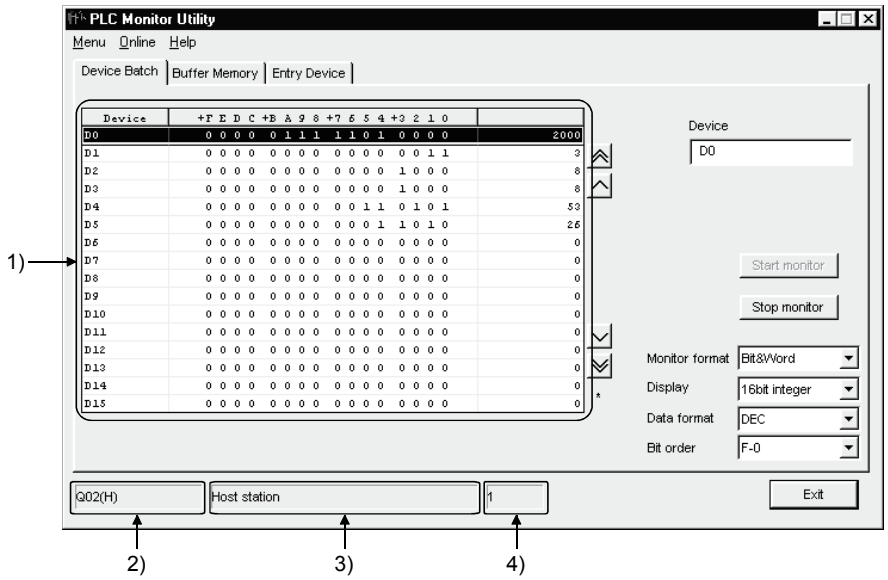
POINT

When the program setting type is selected, clicking the programmable controller or personal computer sketch enables you to change the details of the transfer setting.



5.2.2 Operations on device batch screen

This screen is used to monitor only the specified one type of devices.



Item	Description
Device	Enter the device name to be batch-monitored.
Start monitor (Stop monitor)	Used to start (stop) monitor.
Monitor format	Set the monitor format. (Default: Bit & Word) Bit & Word: Sets the monitor screen to the bit and word display. Bit: Sets the monitor screen to the bit display only. Word: Sets 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". (Default: 16 bit integer) 16 bit integer: Sets to the 16-bit integer display. 32 bit integer: Sets to the 32-bit integer display. Real number (single precision): Sets to the real number (single precision) display. Real number (double precision): Sets to the real number (double precision) display. ASCII character: Sets to the ASCII character string display.
Data format	Set the radix when the display is "16 bit integer" or "32 bit integer". (Default: DEC) DEC: Sets to the decimal display. HEX: Sets to the hexadecimal display.

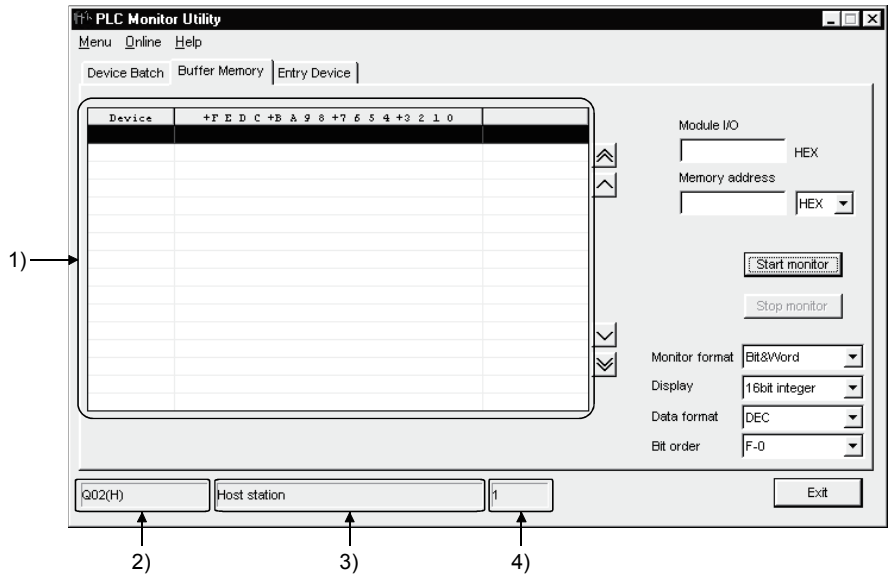
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Bit order</td><td>Set the order in which the bit devices being monitored are arranged.
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>F-0</td><td>Arranged in order of F, E, ... 1, 0 from left to right.</td></tr>
<tr><td>0-F</td><td>Arranged in order of 0, 1, ... E, F from left to right.</td></tr>
</table></td></tr>
<tr><td>1) (Monitor screen)</td><td>Shows the device statuses.
Clicking the device name shows the device write screen.
For details of the device write screen, refer to "Section 5.2.5 Operations on device write screen".</td></tr>
<tr><td>2) (Target CPU name)</td><td>Shows the communication target CPU name specified on the communication setting wizard screen.</td></tr>
<tr><td>3) (Communication path information)</td><td>Shows such information as the network type, network number, first I/O address and station number.</td></tr>
<tr><td>4) (Logical station number)</td><td>Shows the logical station number set for the utility setting type.
This does not appear when the program setting type is used.</td></tr>
</table>

POINT

(1) For the bit device statuses, 1 indicates an ON status and 0 an OFF status.
(2) 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".
(3) Specifying the device memory in the U＊\G format enables the buffer memory to be monitored.
(4) When monitoring the set values of the timers and counters, indirectly specify the data registers.
(5) For the X and Y devices of the FXCPU, type their device numbers in octal.
(6) For the C devices of the FXCPU, C0 to C199 (16 bit) and C200 and later (32 bit) are displayed separately.
(7) Devices cannot be monitored if the connection destination is not established.
(8) During monitoring, you cannot make transfer setting.
(9) During monitoring, "＊" flickers under the scroll button.

5.2.3 Operations on buffer memory screen

This screen is used to monitor only the specified one type of buffer memory.



Item	Description
Module I/O	Type the first address of the module to be monitored.
Memory address	Enter the address of the buffer memory to be monitored in hexadecimal or decimal.
Start monitor (Stop monitor)	Used to start (stop) monitor.
Monitor format	Set the monitor format. (Default: Bit & Word) Bit & Word: Sets the monitor screen to the bit and word display. Bit: Sets the monitor screen to the bit display only. Word: Sets 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". (Default: 16 bit integer) 16 bit integer: Sets to the 16-bit integer display. 32 bit integer: Sets to the 32-bit integer display. Real number (single precision): Sets to the real number (single precision) display. Real number (double precision): Sets to the real number (double precision) display. ASCII character: Sets to the ASCII character string display.
Data format	Set the radix when the display is "16 bit integer" or "32 bit integer". (Default: DEC) DEC: Sets to the decimal display. HEX: Sets to the hexadecimal display.

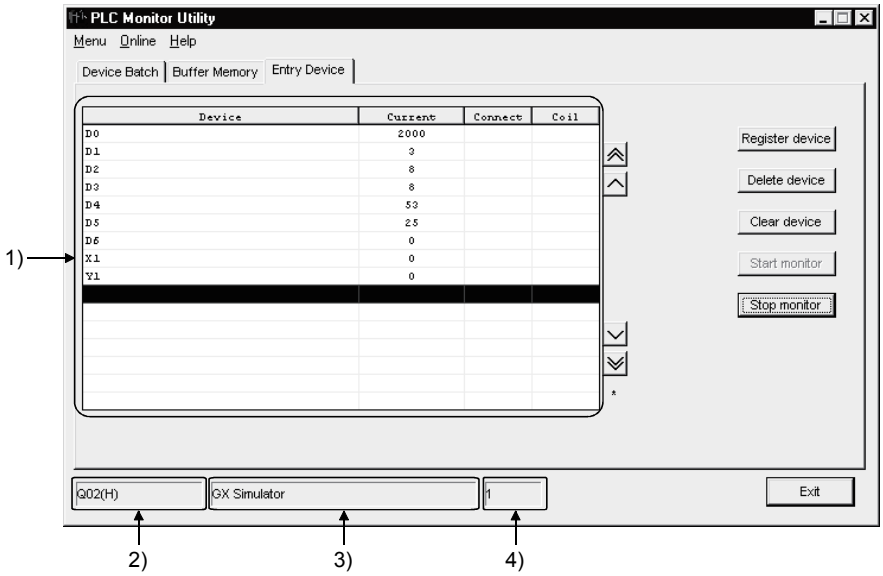
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Bit order</td><td>Set the order in which the bit devices being monitored are arranged.
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>F-0</td><td>Arranged in order of F, E, ... 1, 0 from left to right.</td></tr>
<tr><td>0-F</td><td>Arranged in order of 0, 1, ... E, F from left to right.</td></tr>
</table></td></tr>
<tr><td>1) (Monitor screen)</td><td>Shows the buffer memory status.</td></tr>
<tr><td>2) (Target CPU name)</td><td>Shows the communication target CPU name specified on the communication setting wizard screen.</td></tr>
<tr><td>3) (Communication path information)</td><td>Shows such information as the network type, network number, first I/O address and station number.</td></tr>
<tr><td>4) (Logical station number)</td><td>Shows the logical station number set for the utility setting type.
This does not appear when the program setting type is used.</td></tr>
</table>

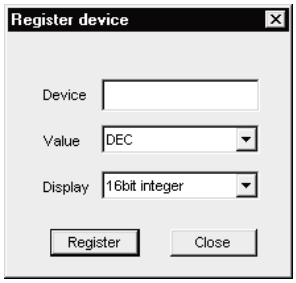
POINT

(1) For the bit device statuses, 1 indicates an ON status and 0 an OFF status.
(2) For access to the FXCPU, enter the block number of the special expansion equipment into Module I/O.
(3) Devices cannot be monitored if the connection destination is not established.
(4) During monitoring, you cannot make transfer setting.
(5) During monitoring, "∗" flickers under the scroll button.
(6) During gateway function communication, devices cannot be monitored.

5.2.4 Operation on entry device screen

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



Item	Description
Register device	Used to register the device to be monitored. Clicking [Register device] shows the following screen.  **Item / Description** Device: Type the device to be registered. Value: Set the value to be entered when a word device is specified. (Default: DEC) DEC: Sets to decimal. HEX: Sets to hexadecimal. Display: Set the display format when a word device is specified. (Default: 16 bit integer) 16 bit integer: Sets to the 16-bit integer display. 32 bit integer: Sets to the 32-bit integer display. Real number (single precision): Sets to the real number (single precision) display. Real number (double precision): Sets to the real number (double precision) display. ASCII character: Sets to the ASCII character string display. [Register]: Used to register the device. [Close]: Used to close the dialog box.
[Delete device]	Used to delete the device to be monitored.
[Clear device]	Used to delete all devices registered in device entry monitor from the monitor screen.
[Start monitor] ([Stop monitor])	Used to start (stop) monitor.

Item	Description
1) (Monitor screen)	Shows the device statuses. Clicking the device name shows the device write screen. For details of the device write screen, refer to "Section 5.2.5 Operations on device write screen".
2) (Target CPU name)	Shows the communication target CPU name specified on the communication setting wizard screen.
3) (Communication path information)	Shows such information as the network type, network number, first I/O address and station number.
4) (Logical station number)	Shows the logical station number set for the utility setting type. This does not appear when the program setting type is used.

POINT

(1) When monitoring the set values of the timers and counters, indirectly specify the data registers.
(2) Devices cannot be monitored if the connection destination is not established.
(3) During monitoring, you cannot make transfer setting.
(4) During monitoring, "∗" flickers under the scroll button.

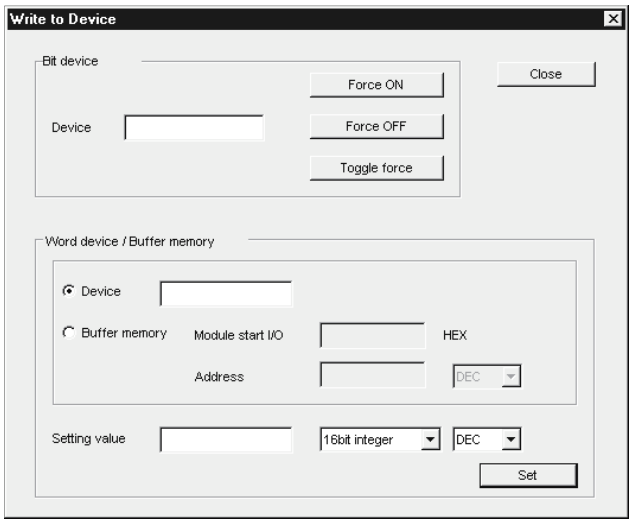
5.2.5 Operations on device write screen

(1) Selected menu item

Select [Online]-[Device write] on the menu bar.
[Device write] cannot be chosen when the QSCPU is connected.

(2) Dialog box

This screen is used to change the ON/OFF of a bit device or the present value of a word device or buffer memory.
This screen is displayed by double-clicking the monitor screen of the corresponding tab.



Item		Description
Bit device	Device	Enter the device name.
	Force ON	Used to forcibly change the specified device to the ON status.
	Force OFF	Used to forcibly change the specified device to the OFF status.
	Toggle force	Used to forcibly change the specified device from the ON to OFF status or from the OFF to ON status.
Word device/Buffer memory	Device	Choosing "Device" enables you to enter the word device to which write will be performed.
	Buffer memory	Choosing "Buffer memory" enables you to enter the module's first I/O and buffer memory address.
	Setting value	Type the value to be written. The input range is as indicated below.
	Set	Used to write the set data.

Item	Description
16 bit integer	–32768 to 32767
32 bit integer	–2147483648 to 2147483647
Real number (single precision)	-999999999999999 to 9999999999999999 Number of significant figures: 13 digits
Real number (double precision)	

5.2.6 Operations on clock setting screen

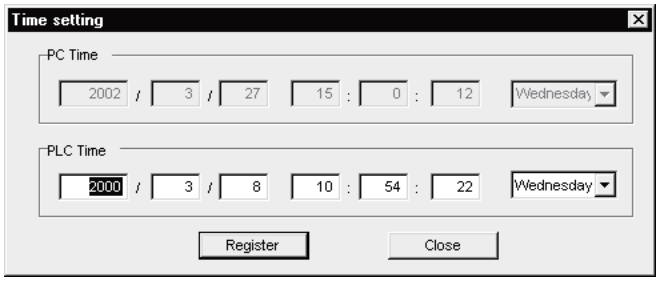
This screen is used to read or change the clock data of the programmable controller.

(1) Selected menu item

Select [Online]-[Set time] on the menu bar.

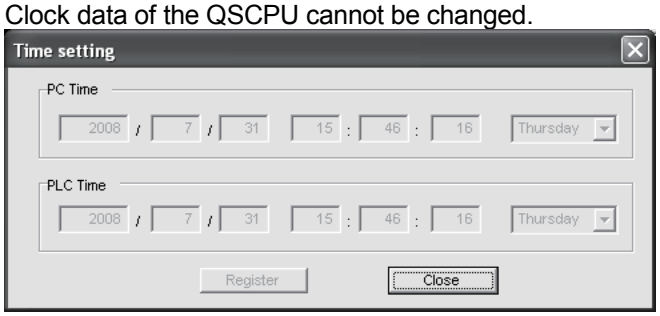
(2) Dialog box

1) When the QCPU (Q Mode) or LCPU is connected.



2) When the QSCPU is connected

Clock data of the QSCPU cannot be changed.



Item	Description
PC Time	Shows the time of the personal computer. (Write disabled)
PLC Time	Shows the time of the programmable controller CPU.
Register	Used to write the "PLC Time" information to the programmable controller CPU.
Close	Used to close the clock setting screen.

POINT

Clock 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.)

5.2.7 Operations on telephone line connection, disconnection screens

Connect and disconnect the telephone line for modem communication.

(1) Menu to be selected

(a) Telephone line connection

Select [Online] - [Connect] on the menu bar.

* [Connect] cannot be chosen when the QSCPU is connected.

(b) Telephone line disconnection

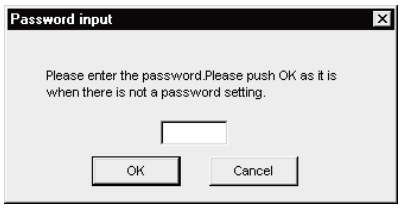
Select [Online] - [Disconnect] on the menu bar.

* [Disconnect] cannot be chosen when the QSCPU is connected.

(2) Dialog box for telephone line connection

For telephone line connection, the following dialog box appears.

Enter the password and click OK.



MEMO

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6 COMMUNICATION SETTING EXAMPLES OF THE 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.

6.1 Computer Link Communication

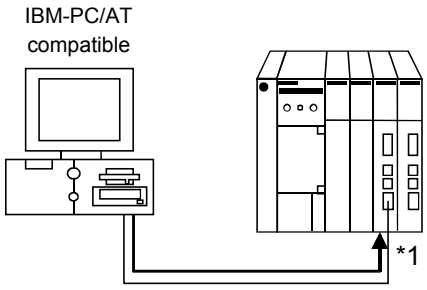
This section provides the computer link communication procedure and its setting example using the utility setting type.

6.1.1 Settings of computer link modules

This section gives the switch settings of computer link modules for the use of MX Component. The following sketches are used to explain each module.

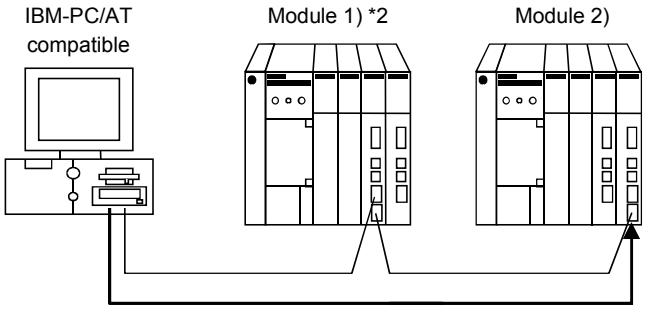
<When using C24, UC24, QC24(N), Q series compatible C24 or L series compatible C24>

(For 1:1 communication)



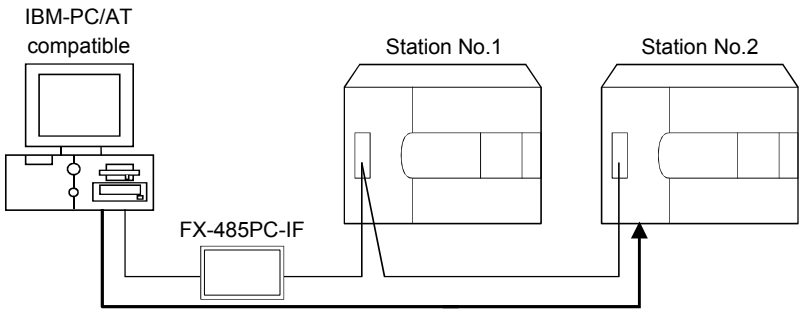
*1: Limited for use of only CH1

(For 1:n communication)



*2: Limited for use of both CH1 and CH2

<When using FX extended port>



POINT

When using MX Component, the settings other than "As set by user" in the tables are fixed as given in the tables.

(1) C24, UC24

Switch *1		Settings		
		For 1:1 communication	For 1:n communication	
			Module 1)	Module 2)
Mode setting switch		1 (format 1)	A (format 1)	5 (format 1)
Station number setting switches		0	As set by user	
Transmission specifications setting switches	Main channel setting	OFF (RS-232)	OFF (RS-232)	ON (RS-422)
	Data bit setting	As set by user	As set by user *2	
	Transmission speed setting	As set by user	As set by user *2	
	Parity bit yes/no setting	As set by user	As set by user *2	
	Stop bit setting	As set by user	As set by user *2	
	Sum check yes/no setting	As set by user	As set by user *2	
	Online change enable/disable setting	As set by user		
	Computer link/multidrop setting	ON (computer link)	ON (computer link)	ON (computer link)

*1: For switch numbers, refer to the computer link module manual.
*2: Make the same settings to Module 1 and Module 2.

(2) QC24(N)

Switch (Switch Number)		Settings					
		For 1:1 communication		For 1:n communication			
				Module 1)		Module 2)	
		CH1 side	CH2 side	CH1 side	CH2 side	CH1 side	CH2 side
Mode setting switch		5 (format 5)		0 or 5 (format 5)	5 (format 5)	5 (format 5)	
Station number setting switch		0		As set by user			
Transmission specifications setting switches	Operation setting switch (SW01)	OFF (independent operation)		OFF (independent operation)	ON or OFF *1	OFF (independent operation)	
	Data bit setting (SW02)	ON (8 bit)					
	Parity bit yes/no setting (SW03)	As set by user		As set by user *2			
	Even parity/odd parity setting (SW04)	As set by user		As set by user *2			
	Stop bit setting (SW05)	OFF (1 bit)					
	Sum check yes/no setting (SW06)	ON (yes)					
	Online change enable/disable setting (SW07)	As set by user					
	Setting change enable/disable setting (SW08)	As set by user		As set by user *2			
	Transmission speed setting (SW09 to SW12)	As set by user		As set by user *2			
	— (SW13 to SW15)	All OFF					

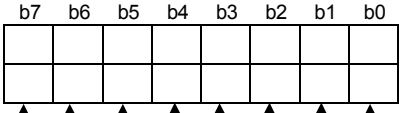
*1: Set to ON if the CH1 side mode setting switch setting is 0 or to OFF if the setting is 5 (format 5).
*2: Make the same settings to Module 1 and Module 2.

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

(a) For 1:1 communication

Item	Settings		Set Value
	b15 to b8	b7 to b0	
Switch 1	CH1 communication speed	CH1 transmission setting *1	0000H
Switch 2	—	CH1 communications protocol	0000H
Switch 3	CH2 communication speed	CH2 transmission setting *1	0000H
Switch 4	—	CH2 communications protocol	0000H
Switch 5	Module station number		0000H

*1: Settings of CH1 and CH2 are indicated below.



Bit	Description	Settings	
		CH1 transmission setting	CH2 transmission setting
b0	Operation setting	0 (independent)	0 (independent)
b1	Data bit	0 (7)	0 (7)
b2	Parity bit	0 (no) *3	0 (no) *3
b3	Odd/even parity	0 (odd) *3	0 (odd) *3
b4	Stop bit	0 (1)	0 (1)
b5	Sum check code	0 (no)	0 (no)
b6	Online change *2	0 (disable)	0 (disable)
b7	Setting change	0 (disable)	0 (disable)

*2: When the communication protocol is set to GX Developer connection (0H), the online change bit (b6) setting is made invalid to enable online change regardless of the online change setting.

*3: Set the followings to odd:
"Parity bit" of the communication setting utility/"ActParity" of the ActQJ71C24 control property.
Setting CH1/CH2 communication protocol to GX Developer connection (0H) makes the communication speed/transmission settings to 0H (all OFF).
Refer to the Q series-compatible C24 manual for details.

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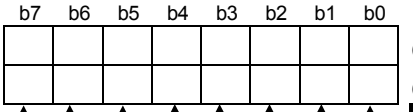
(b) For 1:n communication

Module 1)

Item	Settings		Set Value
	b15 to b8	b7 to b0	Independent operation
Switch 1	CH1 communication speed	CH1 transmission setting *1	07E6H
Switch 2	—	CH1 communications protocol	0008H
Switch 3	CH2 communication speed	CH2 transmission setting *1	07E7H
Switch 4	—	CH2 communications protocol	0000H
Switch 5	Module station number		As set by user

*1: Settings of CH1 and CH2 are indicated below.



Bit	Description	Settings	
		CH1 transmission setting	CH2 transmission setting
b0	Operation setting	Match to module 2) setting.	
b1	Data bit	Match to module 2) setting.	
b2	Parity bit	Match to module 2) setting.	
b3	Odd/even parity	Match to module 2) setting.	
b4	Stop bit	Match to module 2) setting.	
b5	Sum check code	Match to module 2) setting.	
b6	Online change	Match to module 2) setting.	
b7	Setting change	Match to module 2) setting.	

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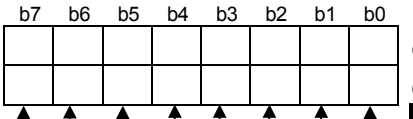
Module 2)

Item	Settings		Set Value
	b15 to b8	b7 to b0	Synchronous operation
Switch 1	CH1 communication speed	CH1 transmission setting *1	Set to meat the application of CH1.
Switch 2	—	CH1 communications protocol	
Switch 3	CH2 communication speed	CH2 transmission setting *1	07E6H
Switch 4	—	CH2 communications protocol	0005H
Switch 5	Module station number		As set by user

*1: Settings of CH1 and CH2 are indicated below.



Bit	Description	Settings	
		CH1 transmission setting	CH2 transmission setting
b0	Operation setting	0 (independent)	1 (synchronous)
b1	Data bit	1 (8)	1 (8)
b2	Parity bit	1 (yes)	1 (yes)
b3	Odd/even parity	0 (odd)	0 (odd)
b4	Stop bit	0 (1)	0 (1)
b5	Sum check code	1 (yes)	1 (yes)
b6	Online change *2	1 (enable)	1 (enable)
b7	Setting change	1 (enable)	1 (enable)

*2: When the communication protocol is set to GX Developer connection (0H), the online change bit (b6) setting is made invalid to enable online change regardless of the online change setting.
Refer to the Q series-compatible C24 manual for details.

(4) FX extended port

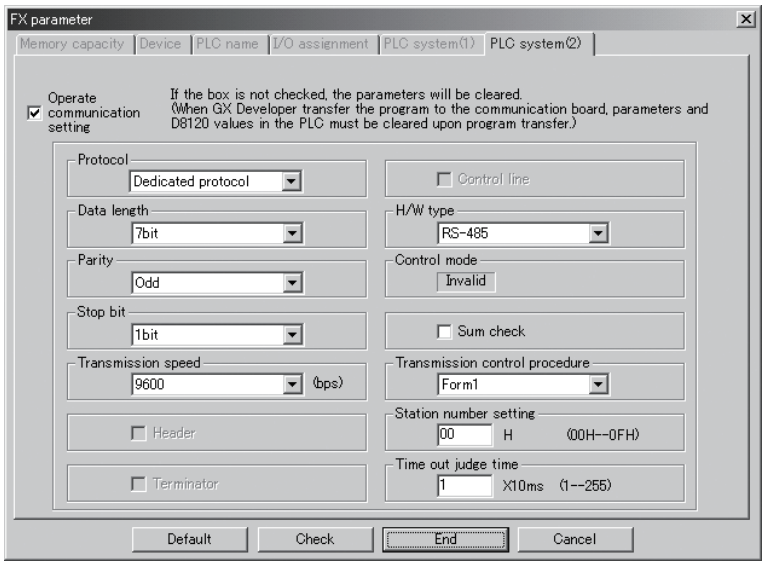
Set the FXCPU parameters with GX Developer before using FX extended port to perform communication. Carry out either of the following two setting methods.

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

The following shows the setting items.

(a) Settings with PLC parameters

Start GX Developer and select [Parameter]-[PLC parameter] in the project list. And then, select the <<PLC system (2)>> tab.



Item	Setting value
Operate communication setting	Check the corresponding check box.
Protocol	Dedicated protocol
Data length	As set by user.
Parity	As set by user.
Stop bit	As set by user.
Transmission speed	As set by user.
H/W type	RS-485
Sum check	As set by user.
Transmission control procedure	Form1
Station number setting	00H to 0FH
Time out judge time	1 to 255

POINT

- When communication setting is made, power the FXCPU again after writing to programmable controller.
- When performing multi-drop connection, make the same communication settings for the devices. However, make sure that the station No. is not overlapped.

(b) Settings by writing values to the special data registers (D8120, D8121, D8129) 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 details
b0	Data length	0: 7 bit 1: 8 bit
b1 b2	Parity	<table><tr><th></th><th>b2</th><th>b1</th></tr><tr><td>None</td><td>0</td><td>0</td></tr><tr><td>Odd number</td><td>0</td><td>1</td></tr><tr><td>Even number</td><td>1</td><td>1</td></tr></table>
b3	Stop bit	0: 1 bit 1: 2 bit
b4 b5 b6 b7	Transmission speed	<table><tr><th></th><th>b7</th><th>b6</th><th>b5</th><th>b4</th></tr><tr><td>300bps</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>600bps</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>1200bps</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>2400bps</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>4800bps</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>9600bps</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>19200bps</td><td>1</td><td>0</td><td>0</td><td>1</td></tr></table>
b8	—	0
b9		0
b10 b11	H/W type	<table><tr><th></th><th>b11</th><th>b10</th></tr><tr><td>RS-485</td><td>0</td><td>0</td></tr></table>
b12	—	0
b13	Sum check	0: N/A 1: Available
b14	Communication protocol	1: Computer link
b15	Transmission control procedure	0: Form 1

2) D8121 (Station No. setting)

Specify the station No.

The station No. can be specified in the range of 00H to 0FH

	b15 to b0
D8121	Station No. range: 00H to 0FH

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}, $FX_{1N(C)}$, FX_{3G}, and $FX_{3U(C)}$, 1 to 255 (10 to 2550ms).

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

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

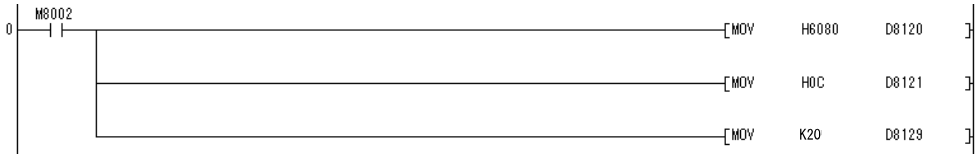
	b15 to b0
D8129	FX_{0N},FX_{1S},$FX_{1N(C)}$,FX_{3G},$FX_{3U(C)}$: 1 to 255 $FX_{2N(C)}$: 1 to 3276

POINT

- When communication setting is made, power the FXCPU again after writing to programmable controller.
- When performing multi-drop connection, make the same communication settings for the devices. However, make sure that the station No. is not overlapped.

REMARK

The following shows an example of setting values to the special data registers by using GX Developer.



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

(1) D8120

Transmission control procedure	: Form 1
Communication protocol	: Computer link
Sum check	: Available
H/W type	: RS-485
Transmission speed	: 9600bps
Stop bit	: 1 bit
Parity	: N/A
Data length	: 7 bit

(2) D8121

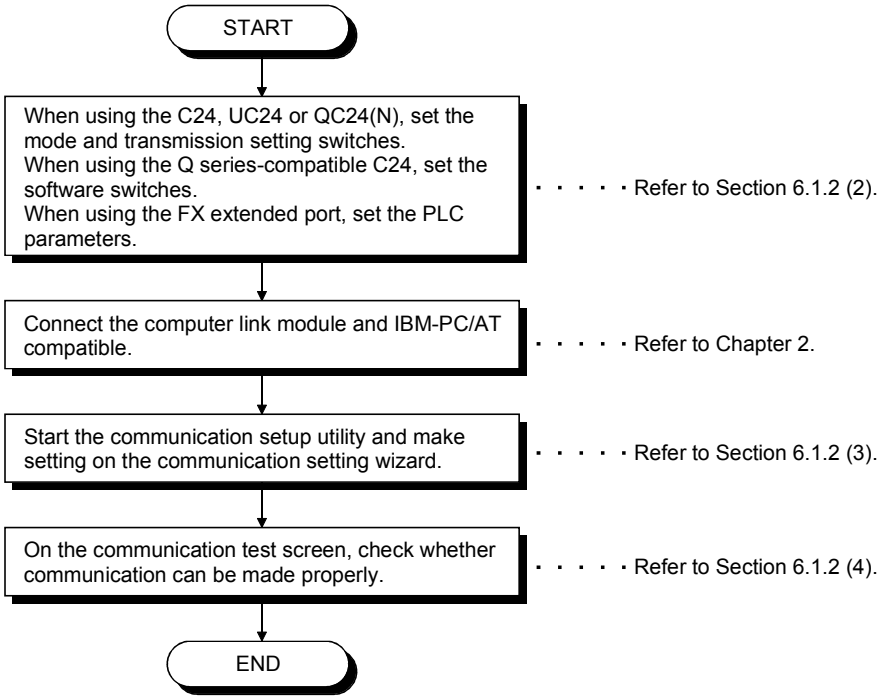
Station No.	: 12

(3) D8129

Time out time	: 200ms

6.1.2 Accessing procedure

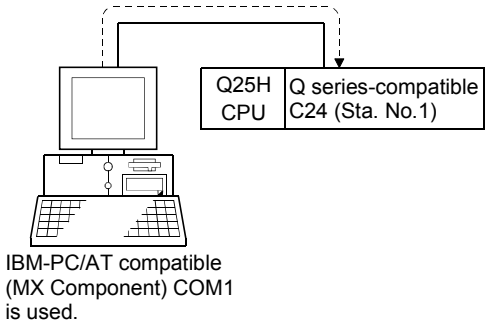
The procedure for making access to the programmable controller CPU using computer link communication will be explained in the following order.



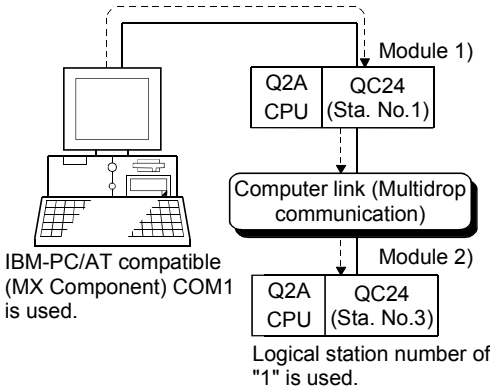
(1) System examples

The following system examples are used in this section.

<For 1:1 communication>



<For 1:n communication>



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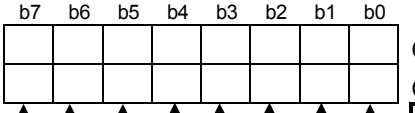
(2) Making the switch settings of the computer link module

(a) For 1:1 communication

Item	Settings		Set Value
	b15 to b8	b7 to b0	
Switch 1	CH1 communication speed	CH1 transmission setting *1	0000H
Switch 2	—	CH1 communications protocol	0000H
Switch 3	CH2 communication speed	CH2 transmission setting *1	0000H
Switch 4	—	CH2 communications protocol	0000H
Switch 5	Module station number		0000H

*1: Settings of CH1 and CH2 are indicated below.



Bit	Description	Settings	
		CH1 transmission setting	CH2 transmission setting
b0	Operation setting	0 (independent)	0 (independent)
b1	Data bit	0 (7)	0 (7)
b2	Parity bit	0 (no)	0 (no)
b3	Odd/even parity	0 (odd)	0 (odd)
b4	Stop bit	0 (1)	0 (1)
b5	Sum check code	0 (no)	0 (no)
b6	Online change *2	0 (disable)	0 (disable)
b7	Setting change	0 (disable)	0 (disable)

*2: When the communication protocol is set to GX Developer connection (0H), the online change bit (b6) setting is made invalid to enable online change regardless of the online change setting.
Refer to the Q series-compatible C24 manual for details.

(b) For 1:n communication

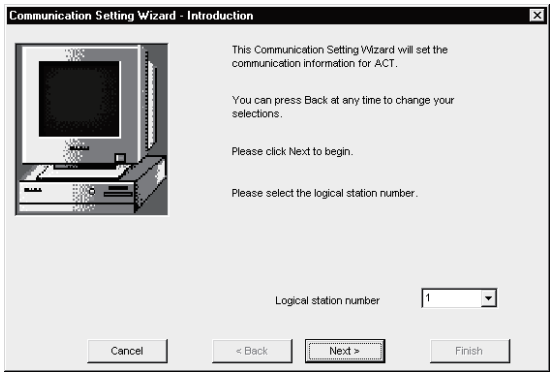
<table>
<tr><td colspan="2" rowspan="3">Switch (Switch Number)</td><td colspan="4">Settings</td></tr>
<tr><td colspan="2">Module 1)</td><td colspan="2">Module 2)</td></tr>
<tr><td>CH1 side</td><td>CH2 side</td><td>CH1 side</td><td>CH2 side</td></tr>
<tr><td colspan="2">Mode setting switch</td><td>0</td><td>5 (format 5)</td><td colspan="2">5 (format 5)</td></tr>
<tr><td colspan="2">Station number setting switches</td><td colspan="2">1</td><td colspan="2">3</td></tr>
<tr><td rowspan="9">Transmission specifications setting switches</td><td>Operation setting switch (SW01)</td><td>OFF (independent operation)</td><td>ON (synchronous operation)</td><td colspan="2">OFF (independent operation)</td></tr>
<tr><td>Data bit setting (SW02)</td><td colspan="2">ON (8 bit)</td><td colspan="2">ON (8 bit)</td></tr>
<tr><td>Parity bit yes/no setting (SW03)</td><td colspan="2">ON (yes)</td><td colspan="2">ON (yes)</td></tr>
<tr><td>Even parity/odd parity setting (SW04)</td><td colspan="2">OFF (odd)</td><td colspan="2">OFF (odd)</td></tr>
<tr><td>Stop bit setting (SW05)</td><td colspan="2">OFF (1 bit)</td><td colspan="2">OFF (1 bit)</td></tr>
<tr><td>Sum check yes/no setting (SW06)</td><td colspan="2">ON (yes)</td><td colspan="2">ON (yes)</td></tr>
<tr><td>Online change enable/disable setting (SW07)</td><td colspan="2">ON (enable)</td><td colspan="2">ON (enable)</td></tr>
<tr><td>Setting change enable/disable setting (SW08)</td><td colspan="2">OFF (disable)</td><td colspan="2">OFF (disable)</td></tr>
<tr><td>Transmission speed setting (SW09 to SW12)</td><td colspan="2">19200bps
SW09 OFF
SW10 ON
SW11 ON
SW12 OFF</td><td colspan="2">19200bps
SW09 OFF
SW10 ON
SW11 ON
SW12 OFF</td></tr>
<tr><td>— (SW13 to SW15)</td><td colspan="2">All OFF</td><td colspan="2">All OFF</td></tr>
</table>

6 - 11

(3) Setting the logical station number (Setting on communication setting wizard)

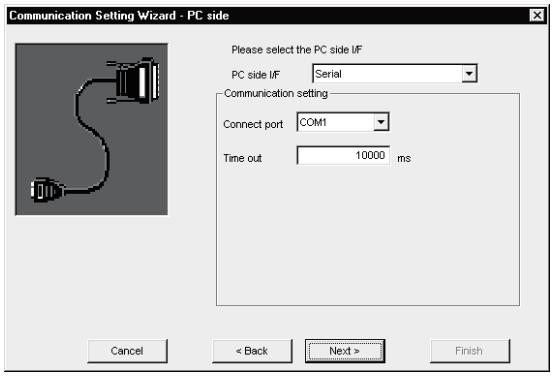
Logical station number setting will be described using the system example for 1:n communication.

1) Start the communication setup utility and select the communication setting wizard.
2) Type "1" in Logical station number and click Next>.



↓

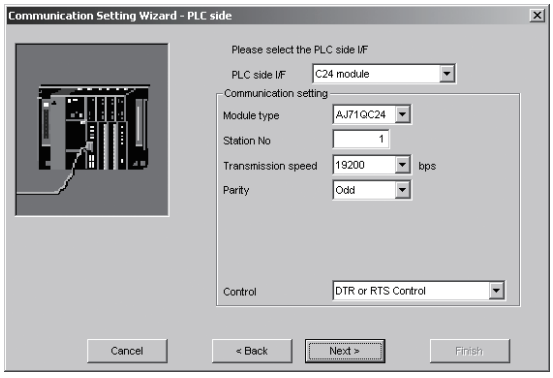
3) Make settings as indicated below and click Next>.



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

↓

4) Make settings as indicated below and click Next>.



PLC side I/F : C24 module
Module type : AJ71QC24
Station No : 1
Transmission speed : 19200
Parity : Odd
Control : DTR or RTS Control

↓

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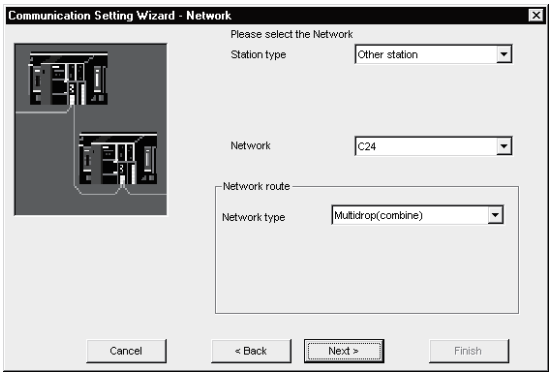
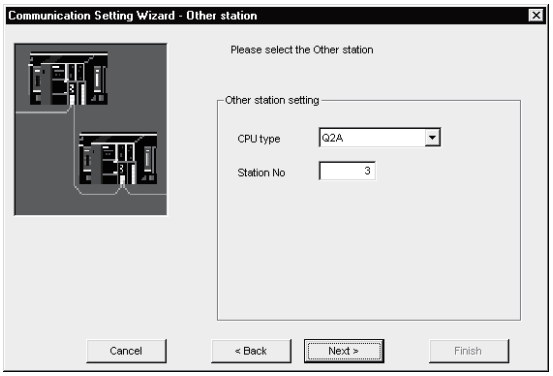
↓



5) Make settings as indicated below and click Next>.

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

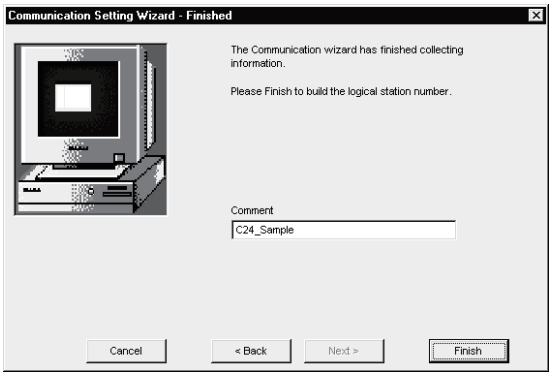
↓



6) Make settings as indicated below and click Next>.

CPU type : Q2A
Station No : 3

↓



7) Enter a comment and click Finish.

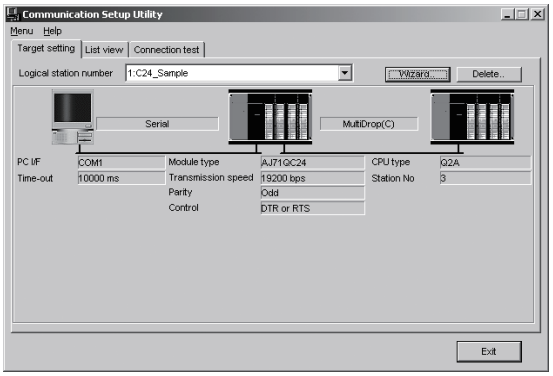
↓

(Registration complete)

6 - 13

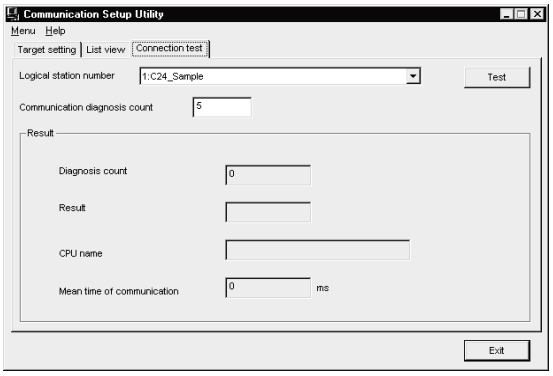
(4) Checking the logical station number settings (Conducting a communication test)

Check whether the computer link communication settings are correct or not, using the logical station number set in (3).



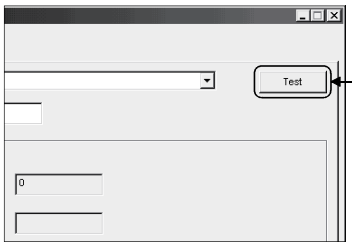
1) Display the "Target setting" tab screen and select the logical station number "1".
Check whether the logical station number settings are correct or not.

↓



2) Display the "Connection test" tab screen and set the logical station number "1".

↓



3) Click Test to check that communication is being performed normally.
If an error occurs, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

(Communication test complete)

4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.2 Ethernet Communication (In case of using Ethernet interface modules)

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

6.2.1 Switch settings of Ethernet modules

This section gives the switch settings of Ethernet modules for the use of MX Component.

POINT
When using MX Component, the settings other than "As set by user" in the tables are fixed as given in the tables.

(1) Q series-compatible E71

Set the Q series-compatible E71 in "MNET/10H Ethernet module count setting" of GX Developer.

(2) QE71

Switch (Switch Number)		Setting		
		TCP/IP		UDP/IP
		When ASCII packet is used	When binary packet is used	When binary packet is used
Operation mode setting switch		0 (online)		
Communications condition setting switches	Line processing selection for TCP time-out error (SW1)	OFF		
	Data code setting (SW2)	ON (ASCII code)	OFF (binary code)	As set by user
	Automatic start mode setting (SW3)	OFF		ON
	— (SW4 to SW6)	All OFF		
	CPU communications timing setting (SW7)	ON		
	Initial timing setting (SW8)	OFF		

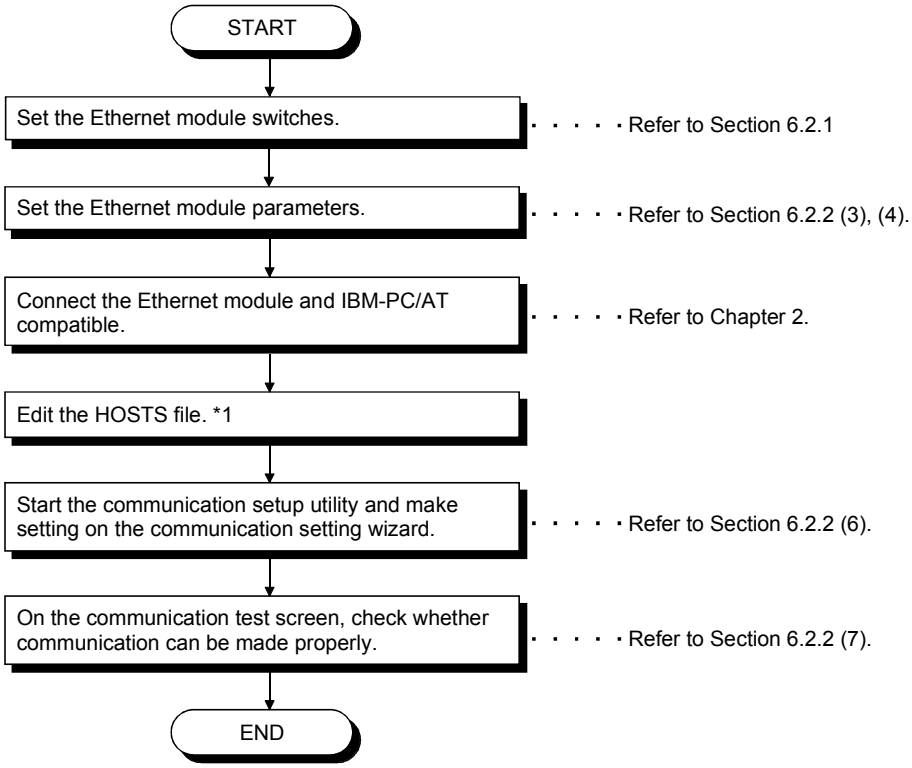
(3) E71

Switch *1		Setting			
		TCP/IP		UDP/IP	
		When ASCII packet is used	When binary packet is used	When ASCII packet is used	When binary packet is used
Operation mode setting switch		0 (online)			
Communications condition setting switches	Line processing selection for TCP time-out error	OFF			
	Data code setting	ON (ASCII code)	OFF (binary code)	ON (ASCII code)	OFF (binary code)
	CPU communications timing setting)	ON			
	Initial timing setting	OFF			

*1: For switch numbers, refer to the E71 module manual.

6.2.2 Accessing procedure

The procedure for making access to the programmable controller CPU using Ethernet communication will be explained in the following order.

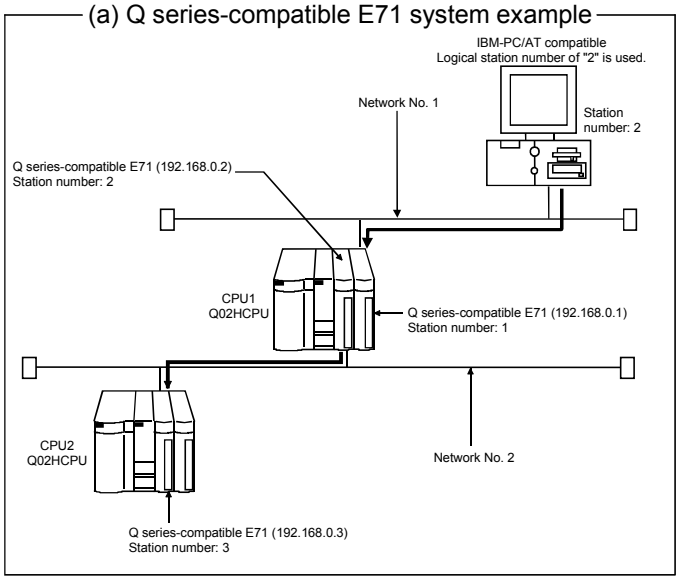


*1: You need not edit the HOSTS file when entering the IP address in the host name (IP Address) of the communication setting utility and the ActHostAddress property of the Ethernet communication control.

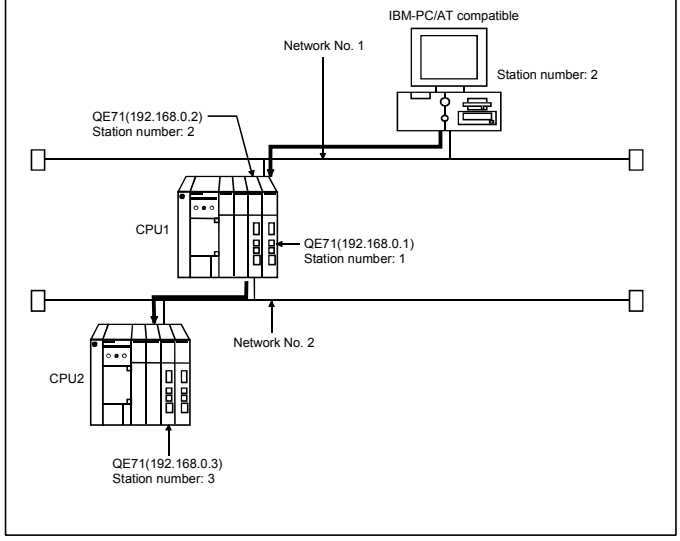
(1) System examples

The following system examples are used in this section.

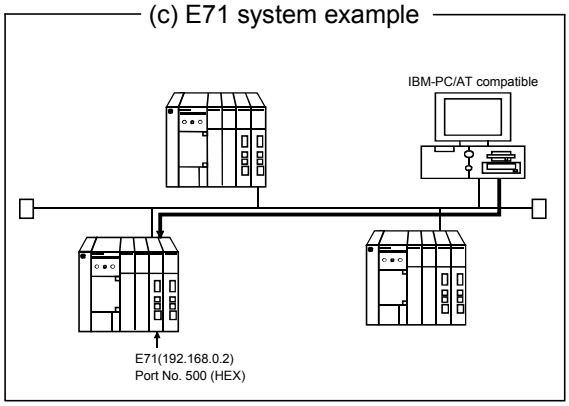
(a) Q series-compatible E71 system example



(b) QE71 system example



(c) E71 system example



(2) Making the switch settings of the Ethernet modules

The switch setting examples in this section are the same as in "Section 6.2.1 Switch settings of Ethernet modules".

For details, refer to "Section 6.2.1 Switch settings of Ethernet modules".

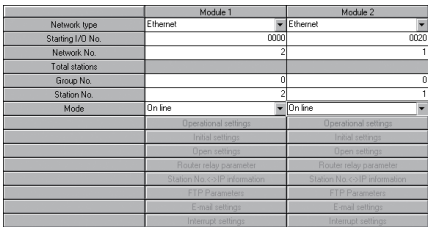
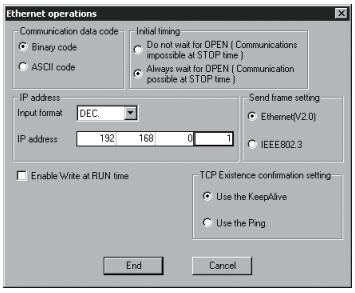
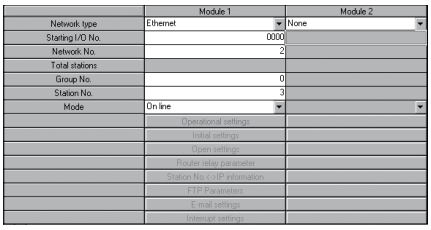
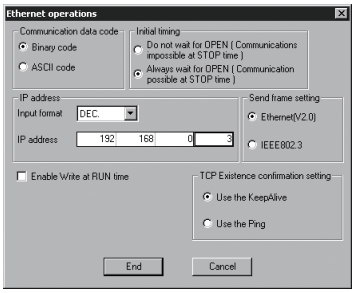
(3) Making parameter setting

Parameter setting may either be made from the network parameter "MELSECNET/ETHERNET setting screen" of GX Developer or from a sequence program.

The network parameters of GX Developer must be used to set the Q series-compatible E71 (TCP/IP, UDP/IP) or QE71 (UDP/IP), or a sequence program used to set the QE71 (TCP/IP) or E71 (TCP/IP, UDP/IP).

(a) Q series-compatible E71

In the network parameters, set the network type, first I/O No., network No., station number, mode and operational settings.

<table>
<tr><th>CPU to Be Set</th><th>Setting Screen Example</th></tr>
<tr><td rowspan="2">CPU1</td><td>Ethernet parameters
 
</td></tr>
<tr><td>Operational settings
 
</td></tr>
<tr><td rowspan="2">CPU2</td><td>Ethernet parameters
 
</td></tr>
<tr><td>Operational settings
 
</td></tr>
</table>

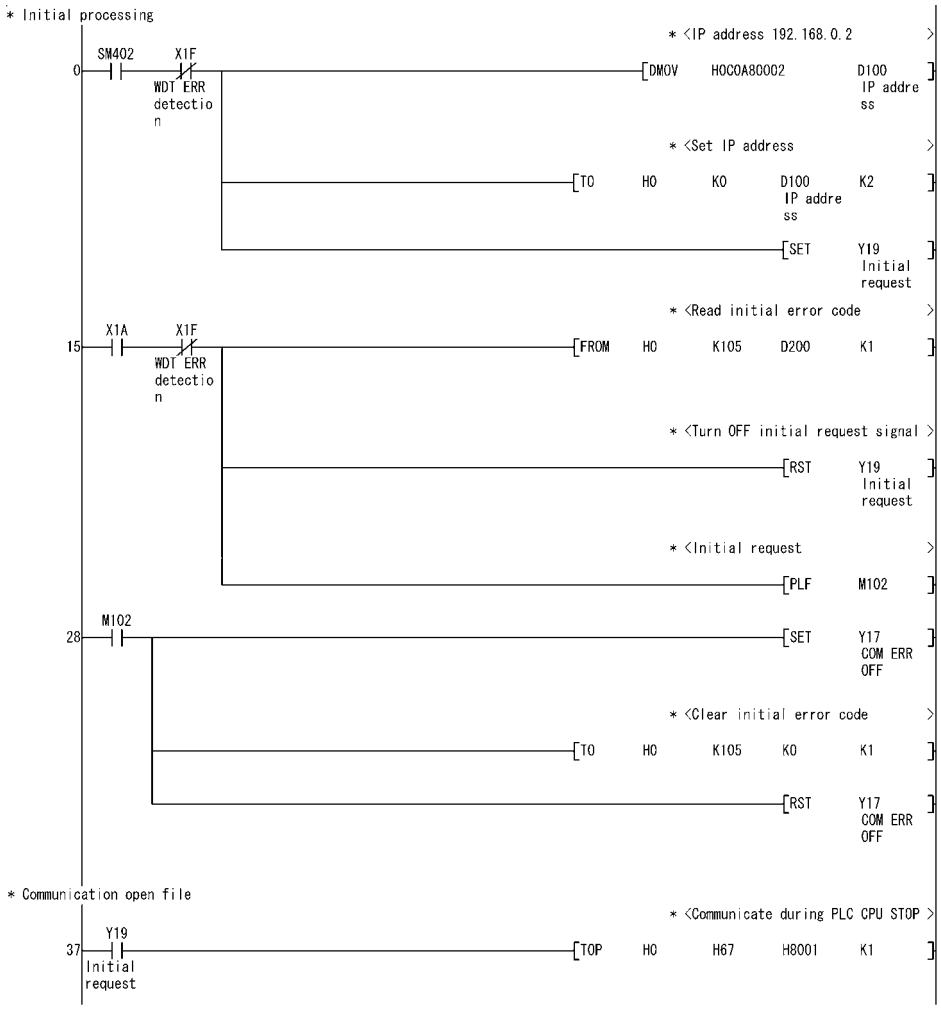
(b) QE71

1) For TCP/IP

The QE71 requires an initial processing and communication line open processing sequence program for the use of TCP/IP.
The sequence program example is given below.

Setting Item	Set Value
TCP/IP open system	8000H (TCP, fixed buffer send)
QE71's IP address	192.168.0.2

Setting Item	Set Value
QE71's port number	500H



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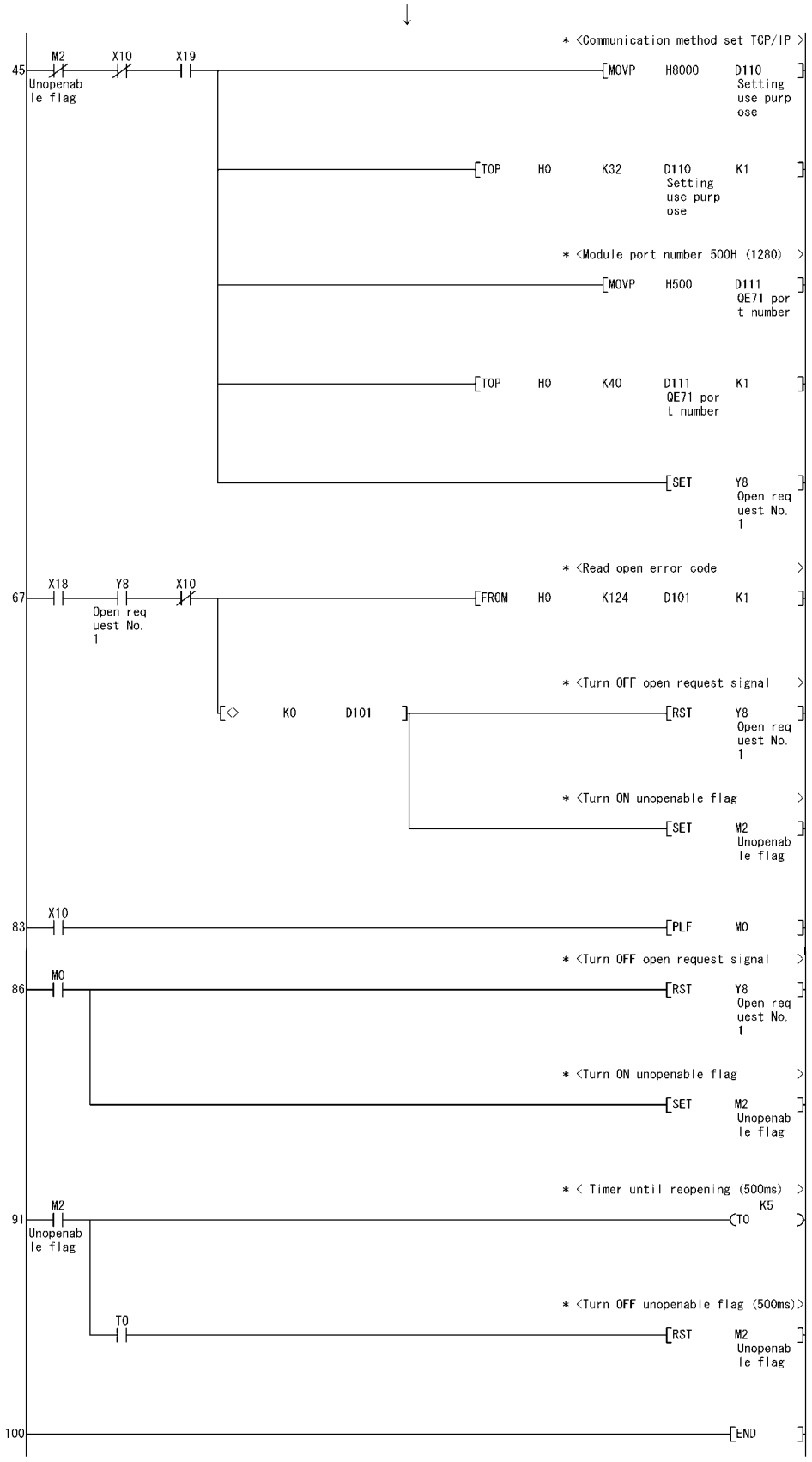
POINT

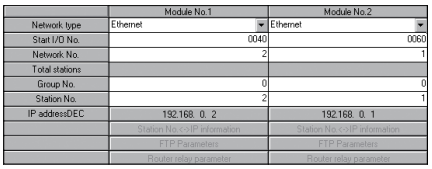
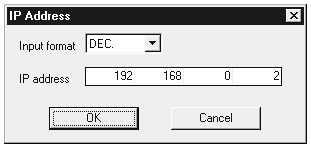
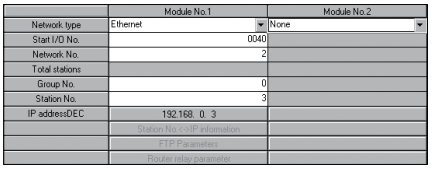
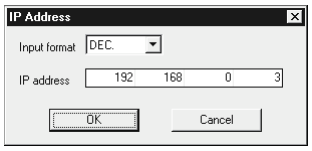
This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[Qe71_tcp]

(From the previous page)



2) For UDP/IP

For the QE71, set the network type, first I/O No., network No., group No., station number and IP address on the Ethernet parameter setting screen of GX Developer when using UDP/IP.

<table>
<tr><th>CPU to Be Set</th><th>Setting Screen Example</th></tr>
<tr><td rowspan="2">CPU1</td><td>Ethernet parameters
 
</td></tr>
<tr><td>Operational settings
 
</td></tr>
<tr><td rowspan="2">CPU2</td><td>Ethernet parameters
 
</td></tr>
<tr><td>Operational settings
 
</td></tr>
</table>

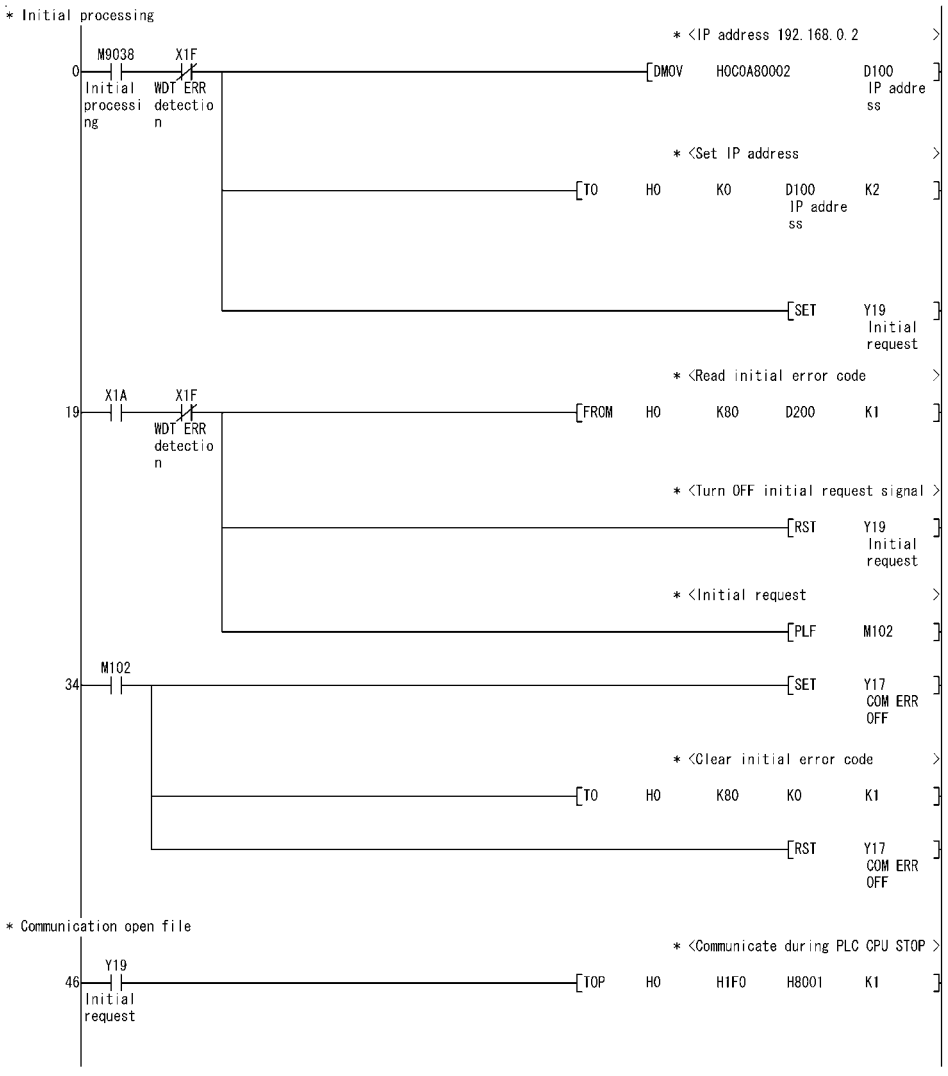
(c) E71

The E71 requires an initial processing and communication line open processing sequence program.
The sequence program example is given below.

1) For TCP/IP

Setting Item	Set Value
TCP/IP open system	8000H (TCP, fixed buffer send)
E71's IP address	192.168.0.2

Setting Item	Set Value
E71's port number	500H



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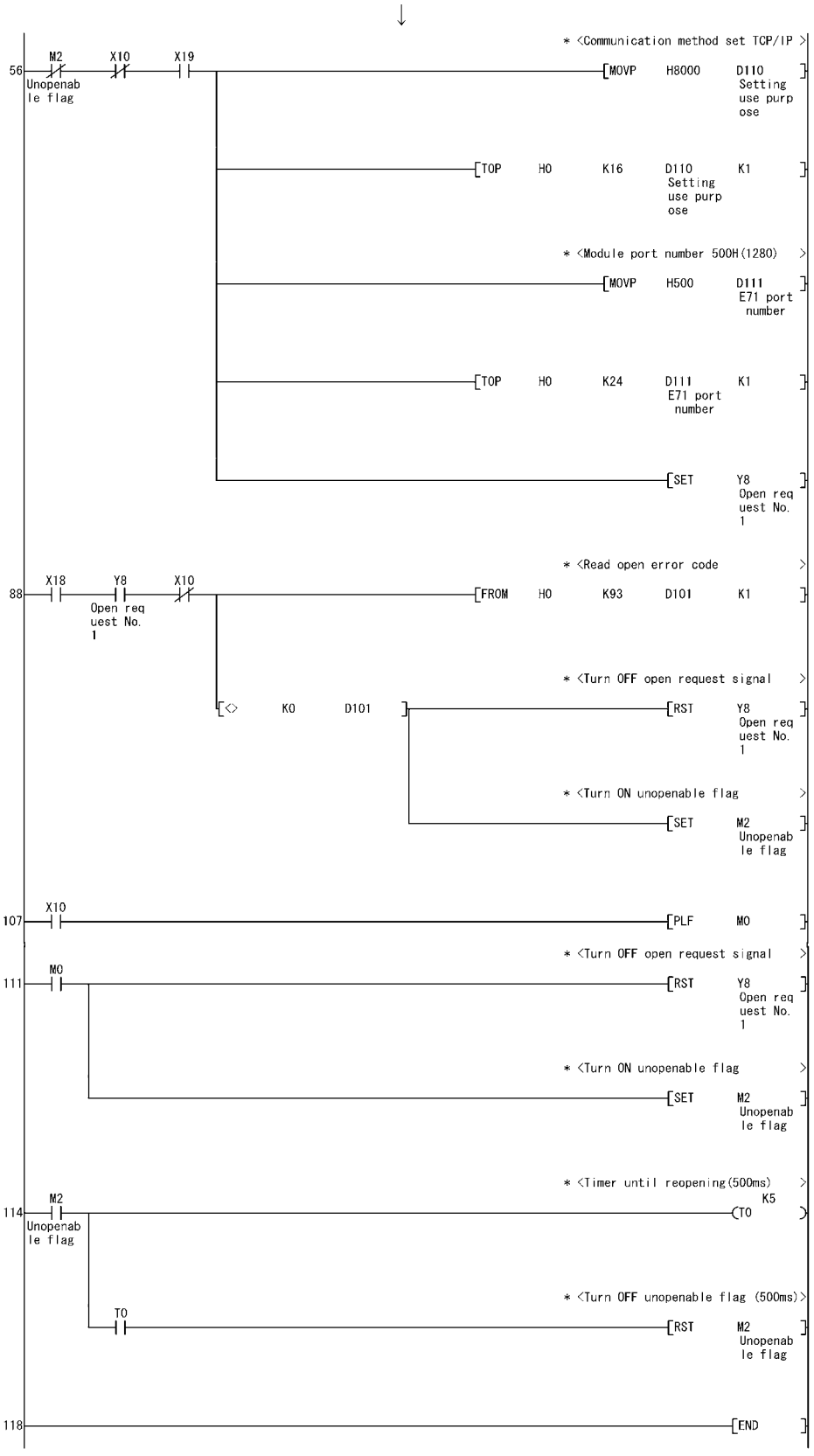
POINT

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[E71_tcp]

(From the previous page)



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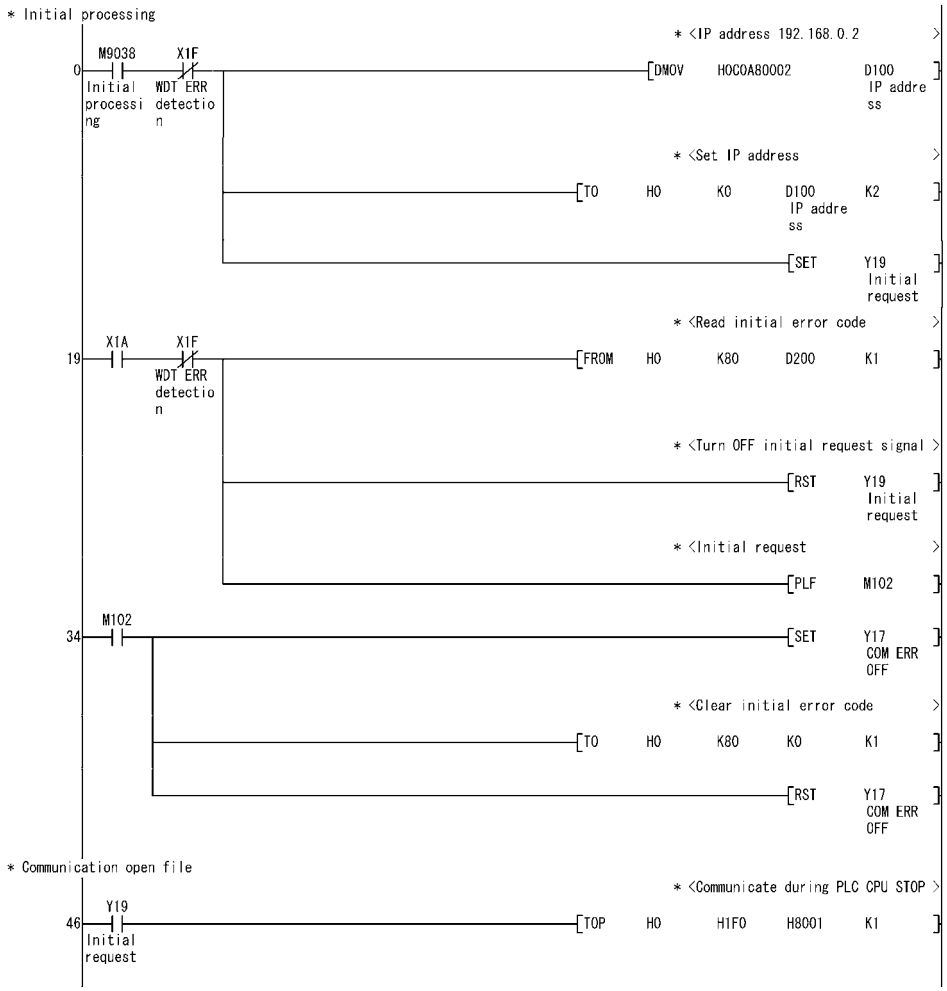
2) For UDP/IP

Setting Item	Set Value
UDP/IP open system	100H (UDP, fixed buffer send)
E71's IP address	192.168.0.2
E71's port number	500H

Setting Item	Set Value
Other node IP address *1	FFFFFFFFH
Other node port number *1	FFFFH



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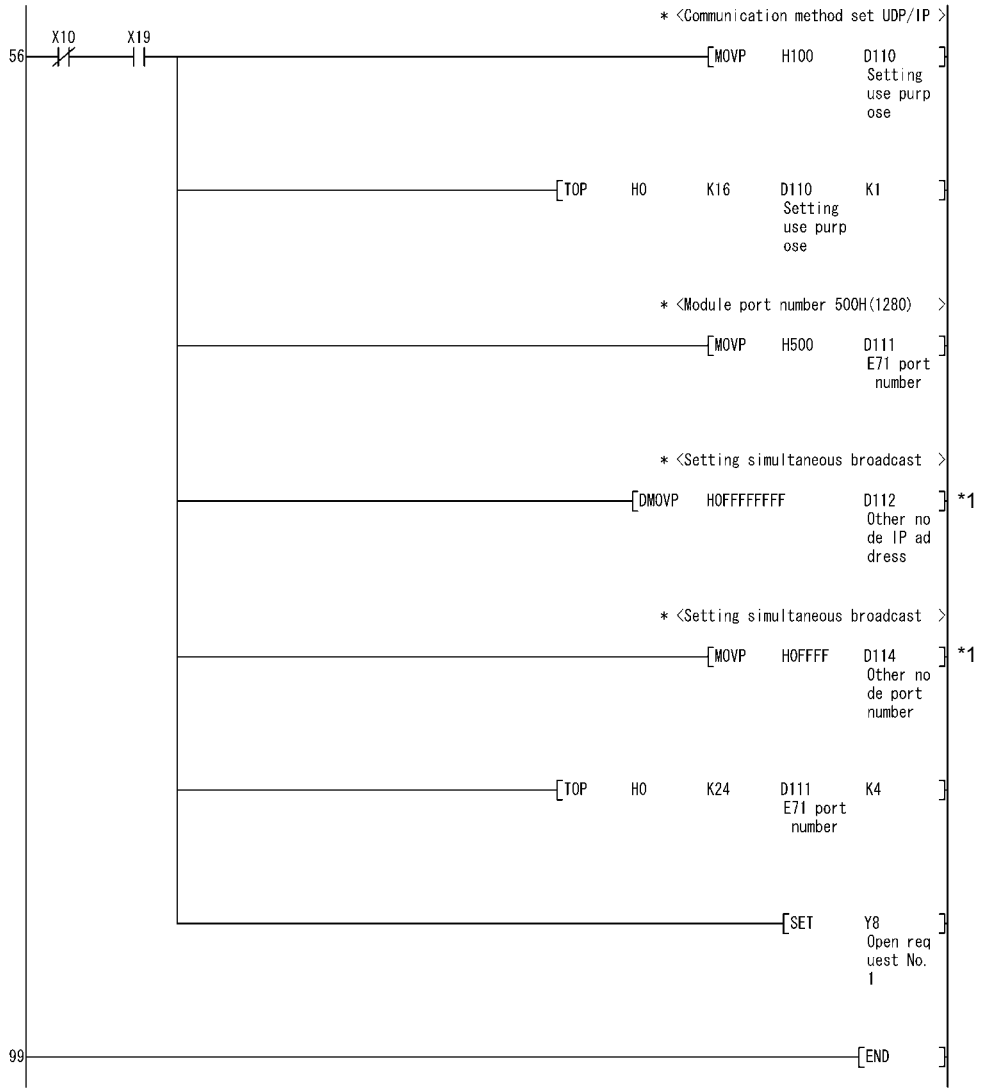


In the communications enabled status, the E71's RUN LED is lit and the RDY LED flickers.

*1: This sample sequence program represents a setting example for simultaneous broadcast.
When the E71 on the programmable controller side is the AJ71E71 or A1SJ71E71-B2/B5, the "simultaneous broadcast" function is not supported. In such a case, specify the following address in "Communication address setting".
Other node IP address: IP address of the personal computer where MX Component is running
Other node port number: Port number of the personal computer where MX Component is running

(Example) Making "Communication address setting" for the E71 by specifying a personal computer of the following IP address and port number:
Other node IP address: 192.168.0.1(C0A80001H)
Other node port number: 500 H

Change the "Setting simultaneous broadcast" parts in the above sample program as shown below.

DMOVP	H0FFFFFFFF	D112	→	DMOVP	HC0A80001	D112
MOVP	H0FFFF	D114	→	MOVP	H0500	D114

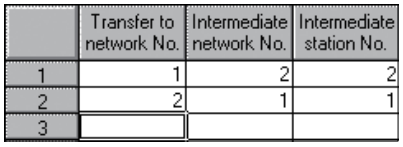
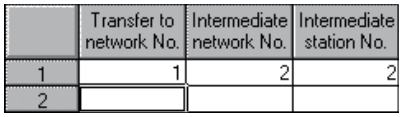
POINT

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[E71_udp]

(4) Making routing parameter setting

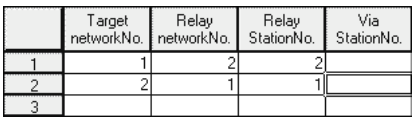
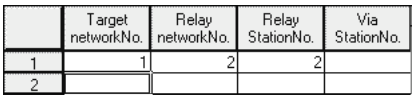
(a) Q series-compatible E71

Set the Q series-compatible E71 in "Ethernet parameter setting" of GX Developer.
For the concept of the routing parameters, refer to "Appendix 1 Concept of the Routing Parameters".

CPU to Be Set	Setting Screen Example
CPU1	
CPU2	

(b) QE71

Set the QE71 in "Ethernet parameter setting" of GX Developer.
For the concept of the routing parameters, refer to "Appendix 1 Concept of the Routing Parameters".

CPU to Be Set	Setting Screen Example
CPU1	
CPU2	

(5) Making 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.

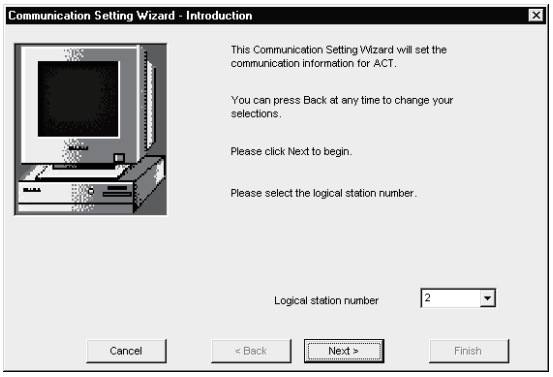
If ping does not pass through, check module connections and Windows® side IP address and other settings.

(6) Setting the logical station number (Setting on communication setting wizard)

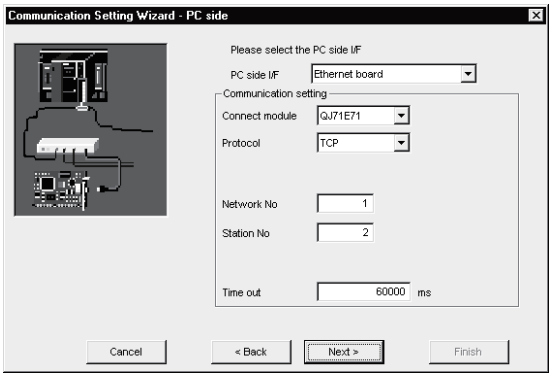
Logical station number setting will be described using the system example for Q series-compatible E71.

1) Start the communication setup utility and select the communication setting wizard.

2) Type "2" in Logical station number and click Next>.



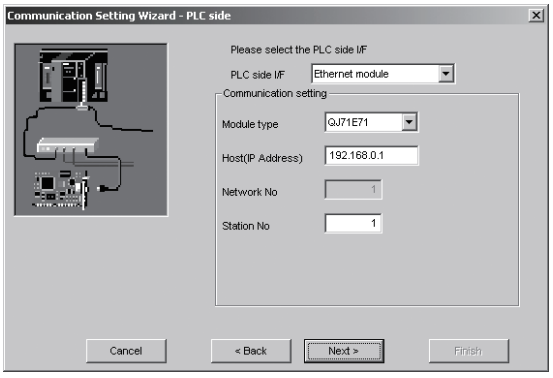
↓



3) Make settings as indicated below and click Next>.

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

↓



4) Make settings as indicated below and click Next>.

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

↓

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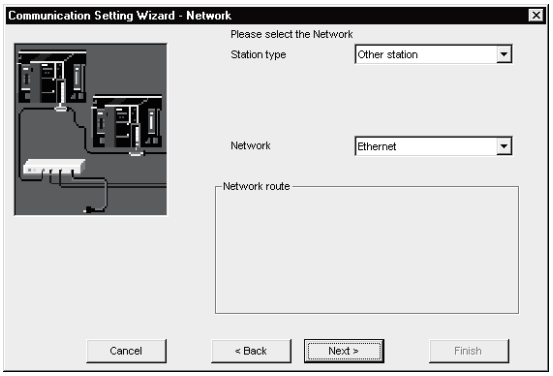
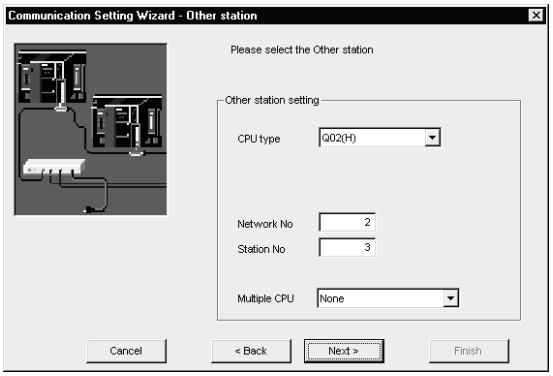
↓



5) Make settings as indicated below and click Next>.

Station type : Other station
Network : Ethernet

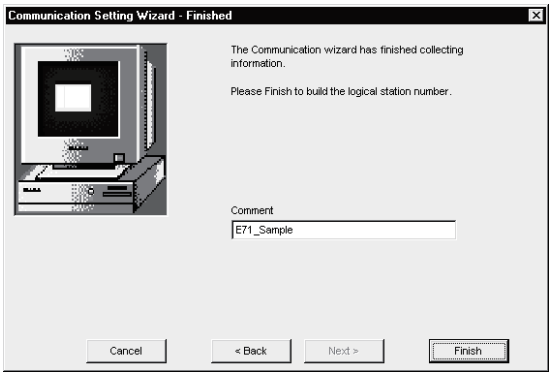
↓



6) Make settings as indicated below and click Next>.

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

↓



7) Enter a comment and click Finish.

↓

(Registration complete)

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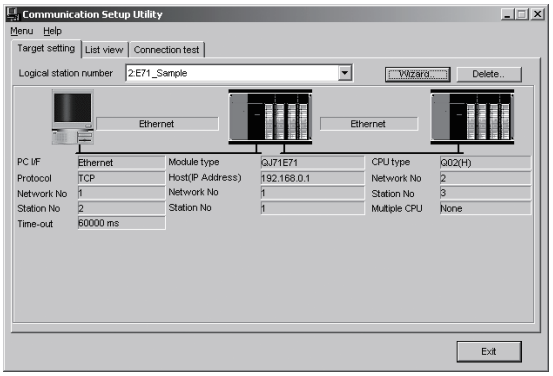
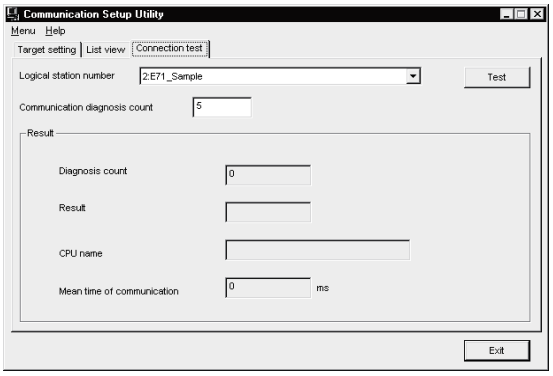
(7) Checking the logical station number settings (Conducting a communication test)

Check whether the computer link communication settings are correct or not, using the logical station number set in (6).



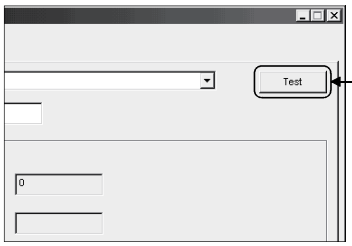
1) Display the "Target setting" tab screen and select the logical station number "2".
Check whether the logical station number settings are correct or not.

↓



2) Display the "Connection test" tab screen and set the logical station number "2".

↓



3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

(Communication test complete)

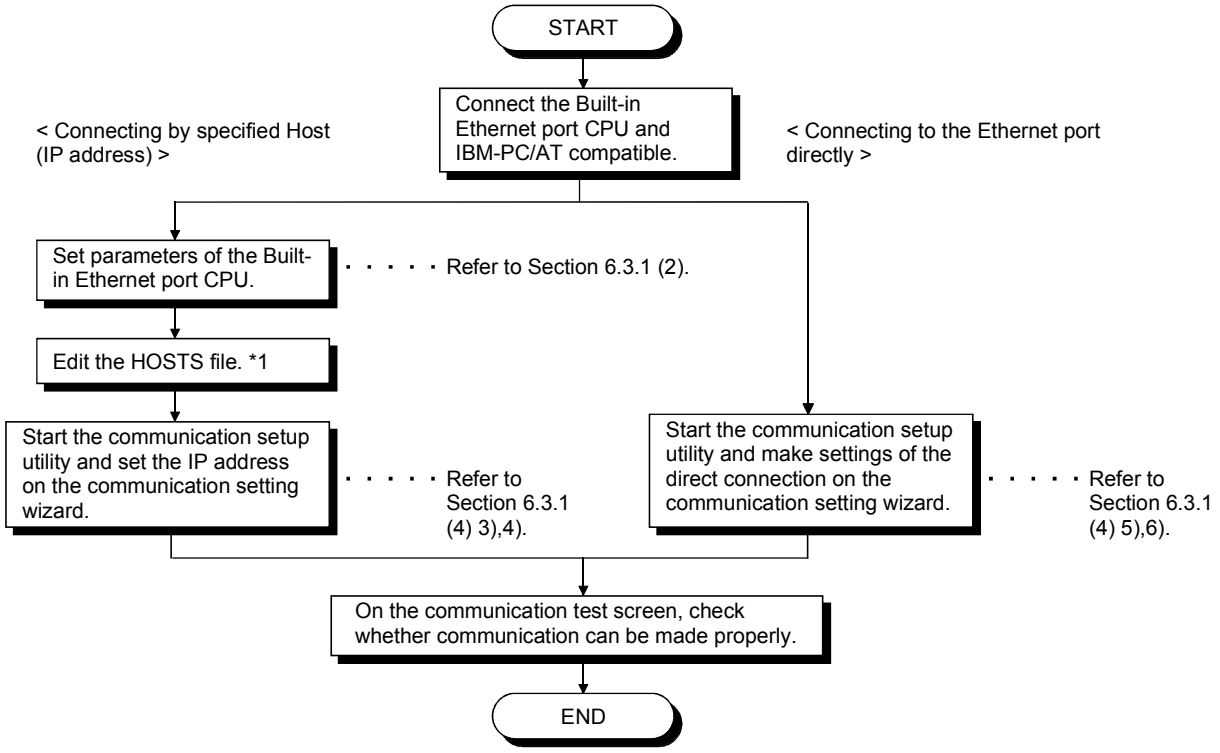
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.3 Ethernet Communication (In case of using Built-in Ethernet port CPUs)

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

6.3.1 Accessing procedure

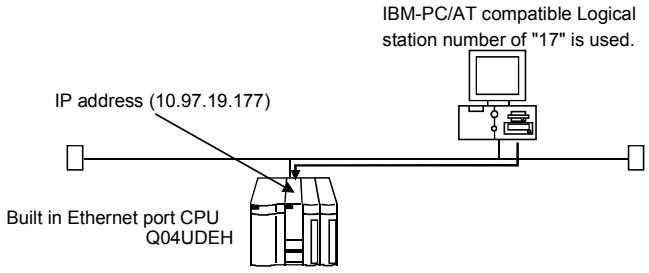
The procedure for making access to the programmable controller CPU using Ethernet communication will be explained in the following order.



*1: You need not edit the HOSTS file when entering the IP address in the host name (IP address) of the communication setting utility and the ActHostAddress property of the Ethernet communication control.

(1) System example

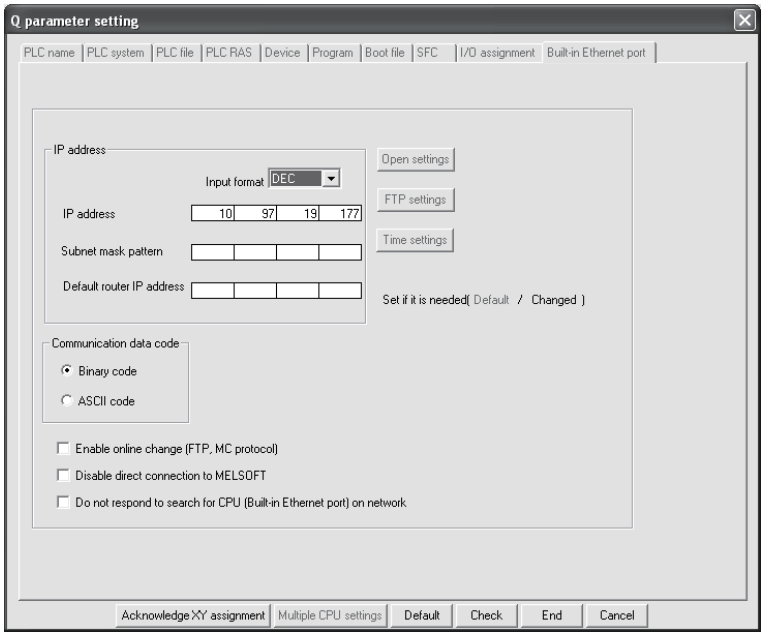
The following system example is used in this section.



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

Parameter setting may be made from the PLC parameter of GX Developer.

Select the <<Built-in Ethernet port>> tab and make communication settings such as IP address.



(3) Making 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 module connections and Windows side IP address and other settings.

(4) Setting the logical station number (Setting on communication setting wizard)

Logical station number setting will be described using the example for using the Built-in Ethernet port CPU (Q04UDEH) system example for (1).

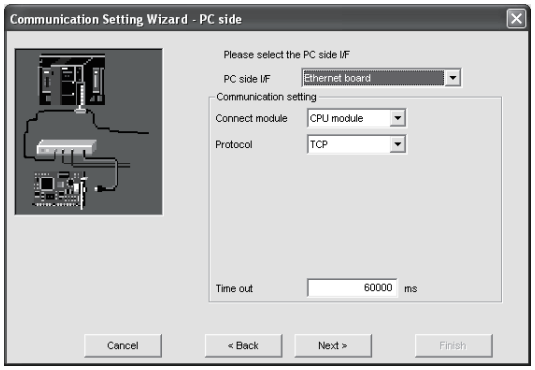
1) Start the communication setup utility and select the communication setting wizard.

2) Type "17" in Logical station number and click Next>.

Carry out either of the following two ways of steps of the programmable controller side settings.

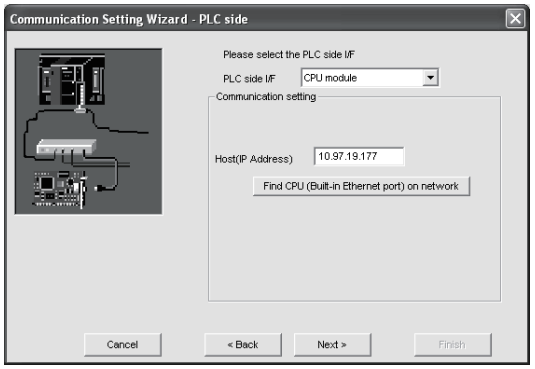
Follow 3) and 4) of steps in case of connection by specified Host (IP address).

Follow 5) and 6) of steps in case of Ethernet port direct connection.



3) Make settings as indicated below and click Next>.

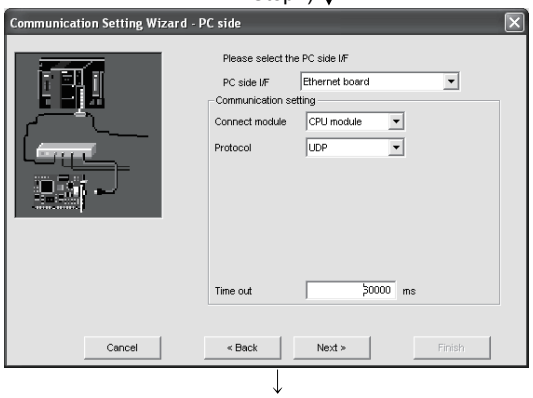
PC side I/F	: Ethernet board
Connect module	: CPU module
Protocol	: TCP
Time out	: 60000



4) Make settings as indicated below and click Next>.

PLC side I/F	: CPU module
Host (IP Address)	: 10.97.19.177

Step7)



5) Make settings as indicated below and click Next>.

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

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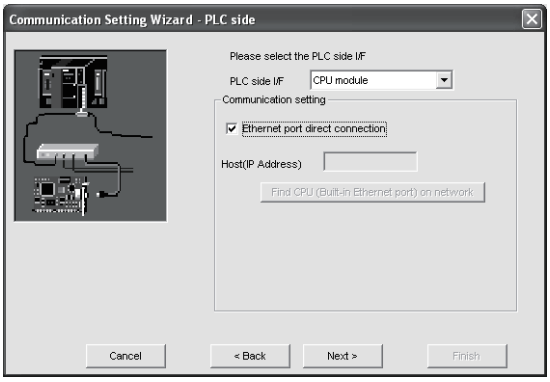
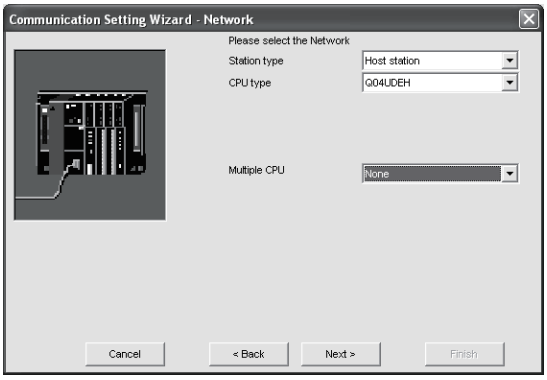
↓



6) Make settings as indicated below and click Next>.

Check the check box "Ethernet port direct connection".

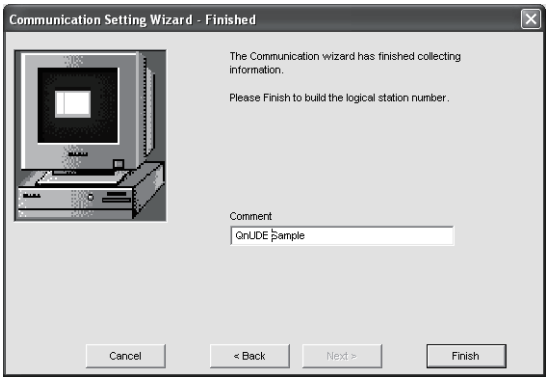
↓



7) Make settings as indicated below and click Next>.

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

↓

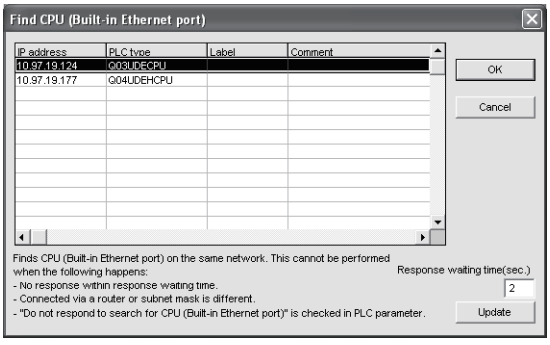


8) Enter a comment and click Finish.

↓

(Registration complete)

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



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

* Built-in Ethernet port CPUs on the same network may be the target of the search.

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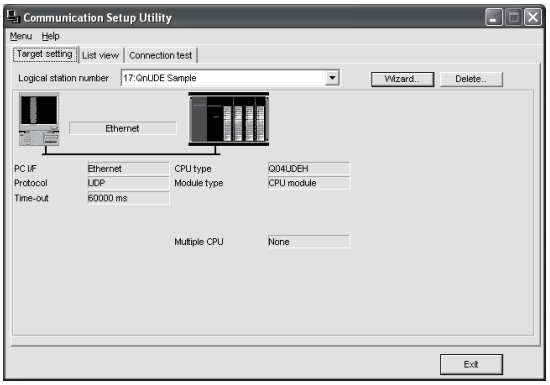
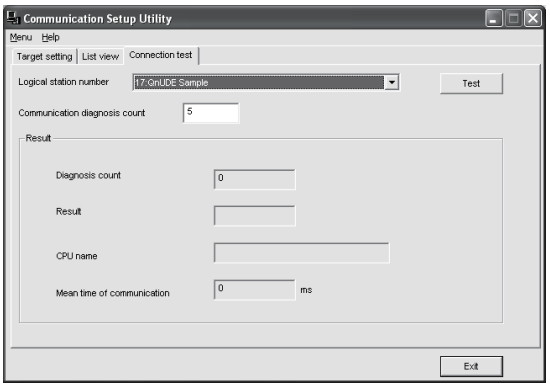
(5) Checking the logical station number settings (Conducting a communication test)

Check whether the Ethernet communication settings are correct or not, using the logical station number set in (4).



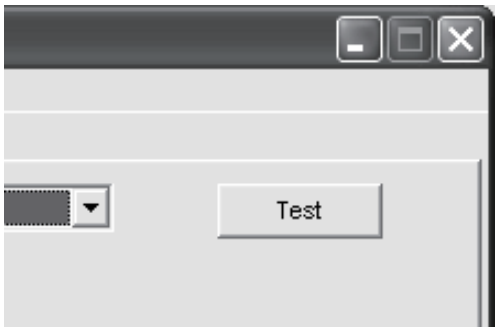
↓

1) Display the "Target setting" tab screen and select the logical station number "17". Check whether the logical station number settings are correct or not.



↓

2) Display the "Connection test" tab screen and set the logical station number "17".



3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error. The error code appears in Result. (At normal termination,"0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

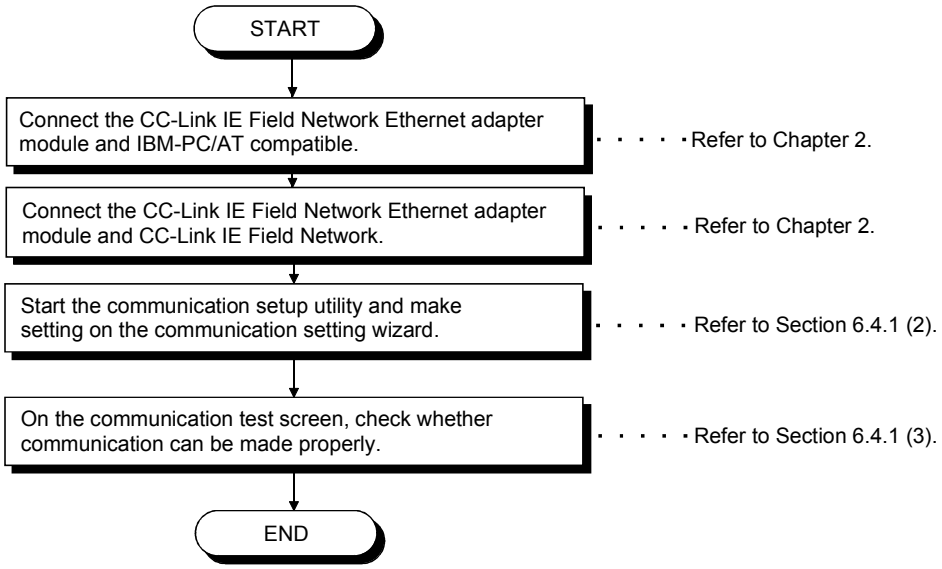
(Communication test complete)

6.4 Ethernet Communication
(In case of using CC-Link IE Field Network Ethernet adapter module)

This section provides the procedure for the Ethernet communication with the in case of using CC-Link IE Field Network Ethernet adapter module and its setting example using the utility setting type.

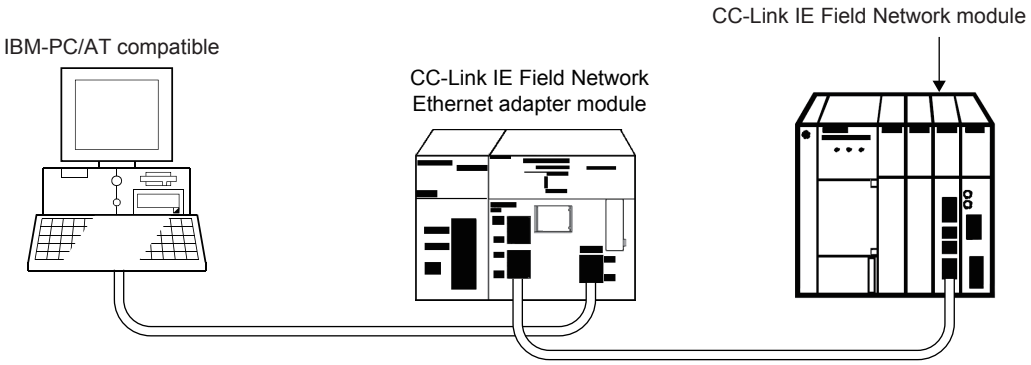
6.4.1 Accessing procedure

The procedure for making access to the programmable controller CPU using Ethernet communication will be explained in the following order.



(1) System example

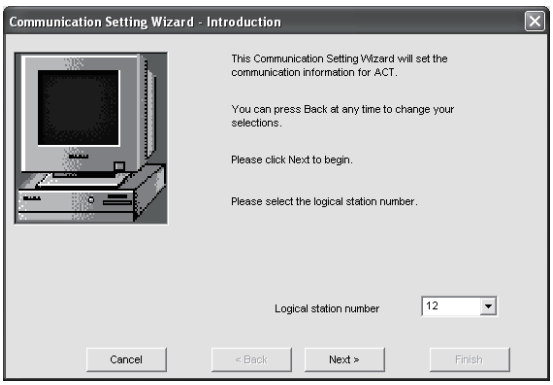
The following system example is used in this section.



(2) Setting the logical station number (Setting on communication setting wizard)

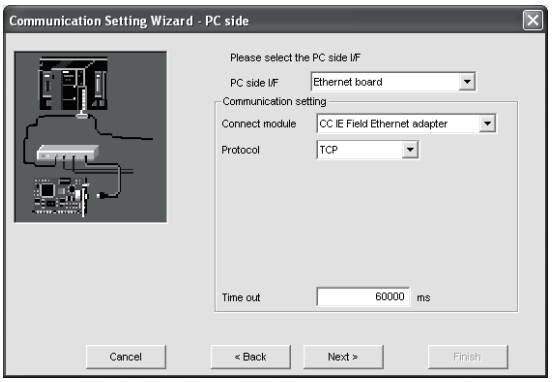
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "12" in Logical station number and click Next>.

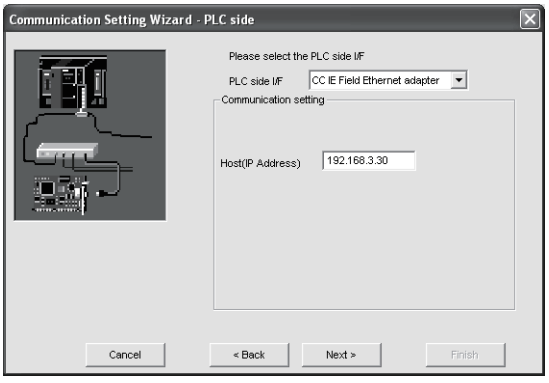
↓



3) Make settings as indicated below and click Next>.

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

↓



4) Make settings as indicated below and click Next>.

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

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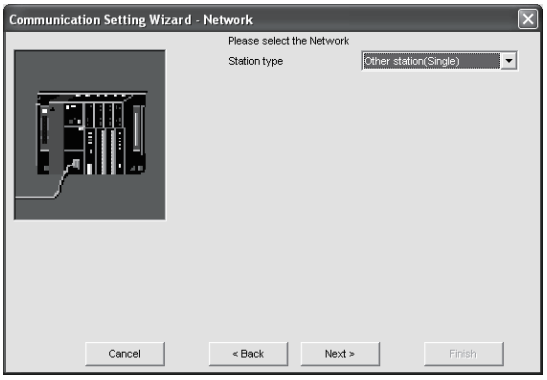
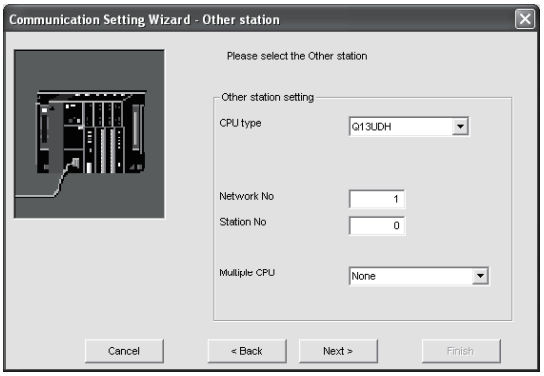


5) Make settings as indicated below and click Next>.

Station type : Other station(Single)

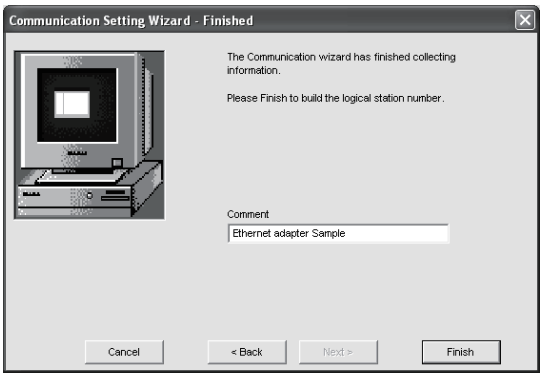
↓



6) Make settings as indicated below and click Next>.

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

↓



7) Enter a comment and click Finish.

↓

(Registration complete)

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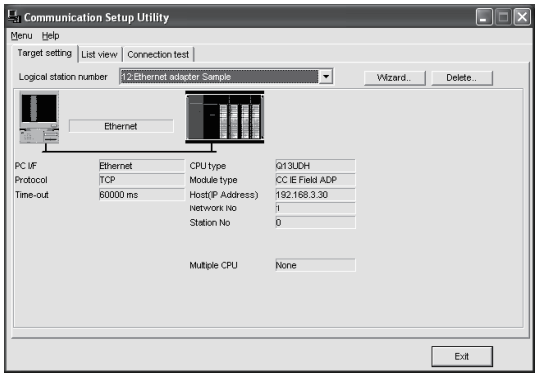
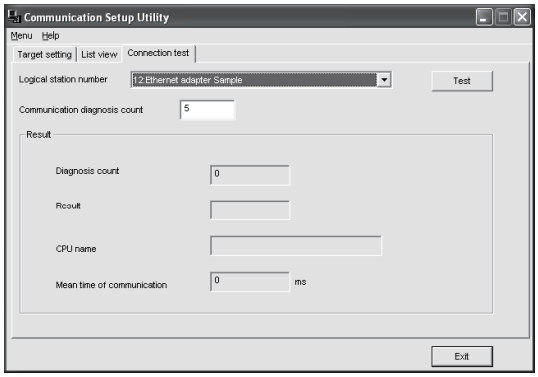
(3) Checking the logical station number settings (Conducting a communication test)

Check whether the computer link communication settings are correct or not, using the logical station number set in (2).



↓



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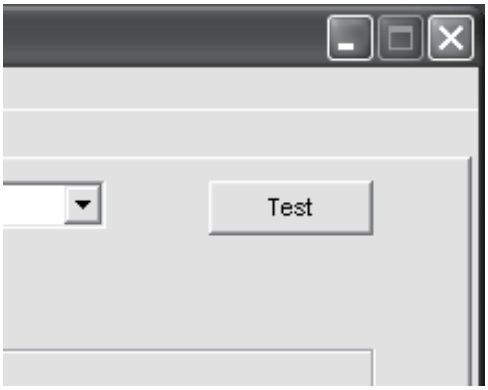


↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "12".
Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "12".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

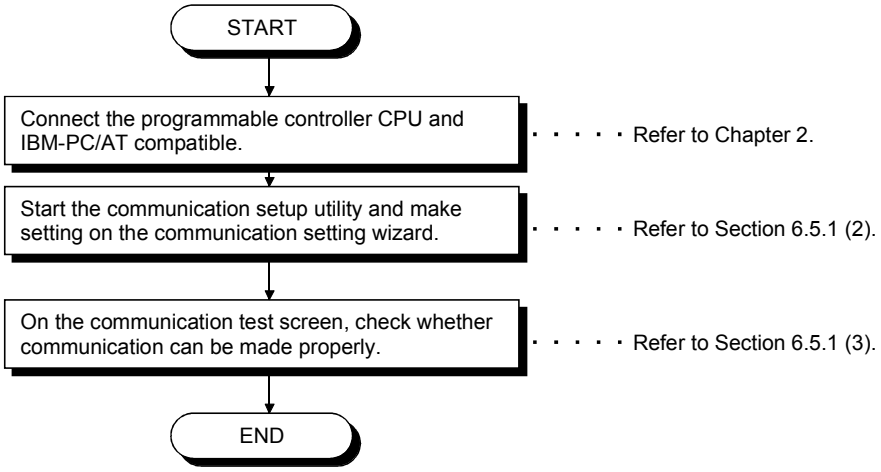
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.5 CPU COM Communication

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

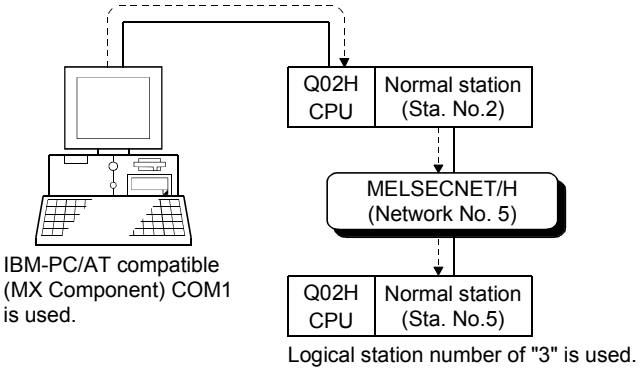
6.5.1 Accessing procedure

The procedure for making access to the programmable controller CPU using CPU COM communication will be explained in the following order.



(1) System example

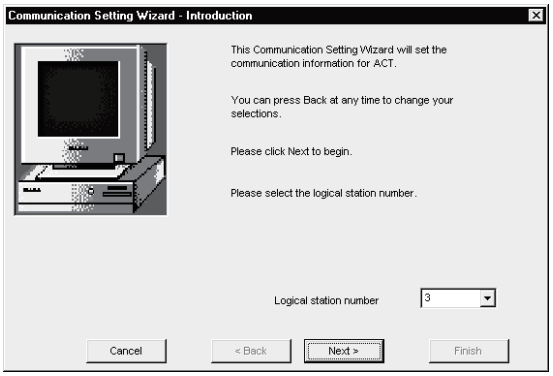
The following system example is used in this section.



(2) Setting the logical station number (Setting on communication setting wizard)

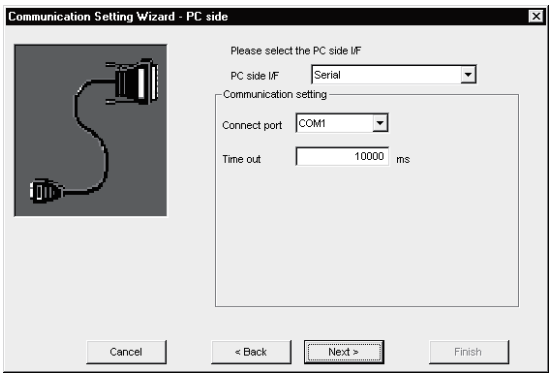
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "3" in Logical station number and click Next>.

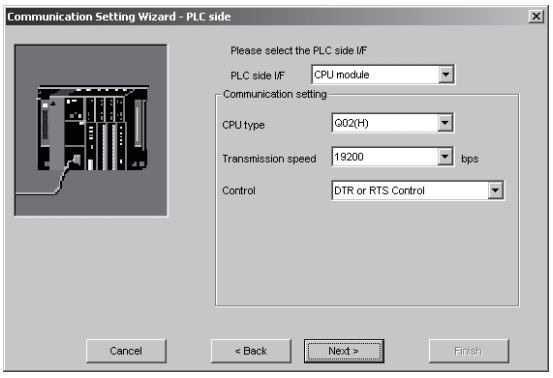
↓



3) Make settings as indicated below and click Next>.

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

↓



4) Make settings as indicated below and click Next>.

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

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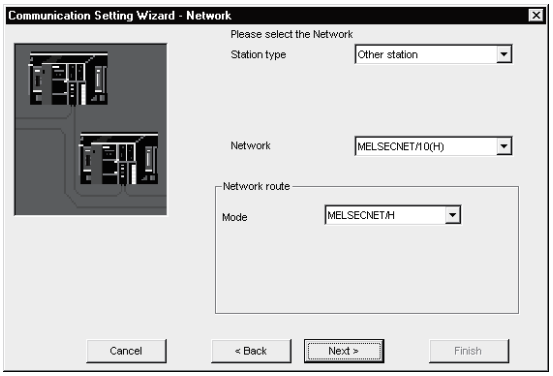
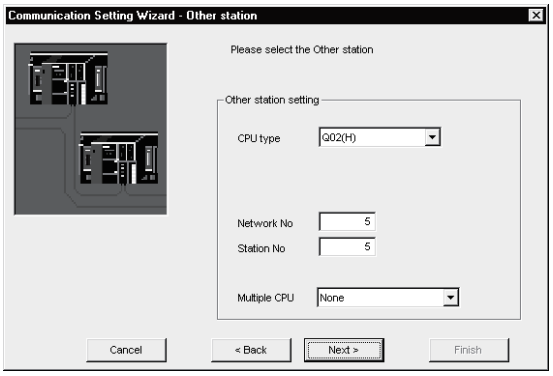


5) Make settings as indicated below and click Next>.

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

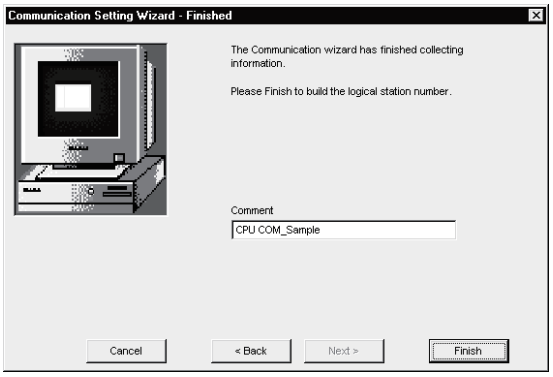
↓



6) Make settings as indicated below and click Next>.

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

↓



7) Enter a comment and click Finish.

↓

(Registration complete)

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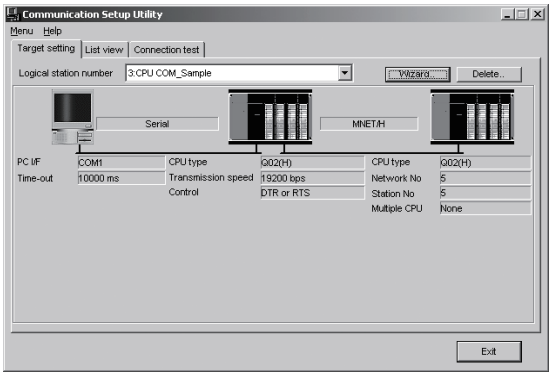
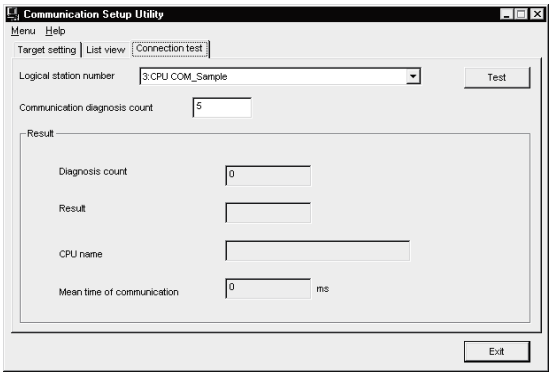
(3) Checking the logical station number settings (Conducting a communication test)

Check whether the CPU COM communication settings are correct or not, using the logical station number set in (2).



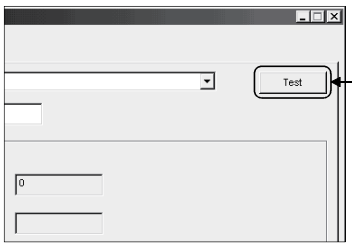
1) Display the "Target setting" tab screen and select the logical station number "3".
Check whether the logical station number settings are correct or not.

↓



2) Display "Connection test" tab screen and set the logical station number "3".

↓



3) Click the Test to check that communication is being performed normally.
If an error occurs, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

(Communication test complete)

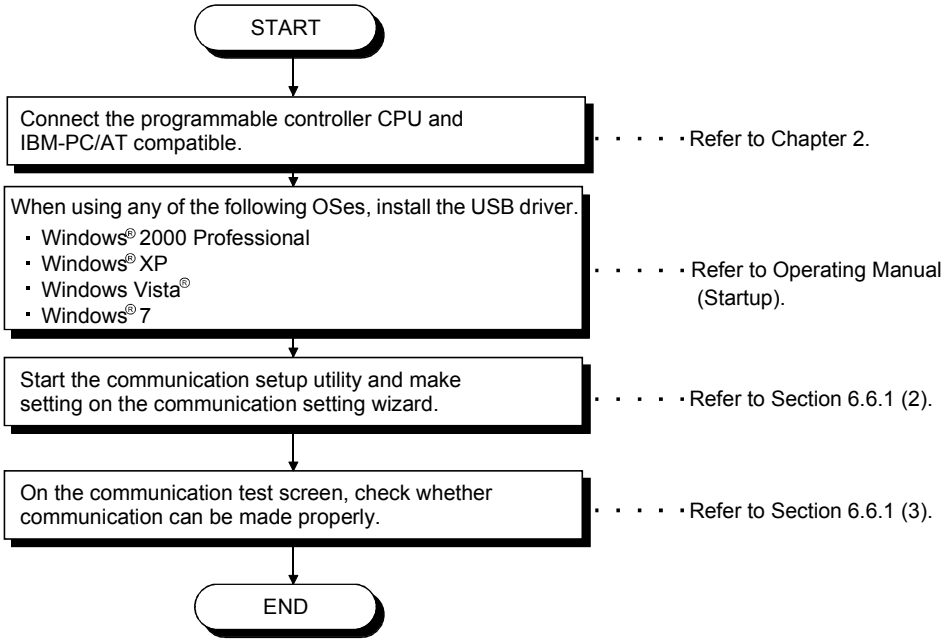
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.6 CPU USB Communication

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

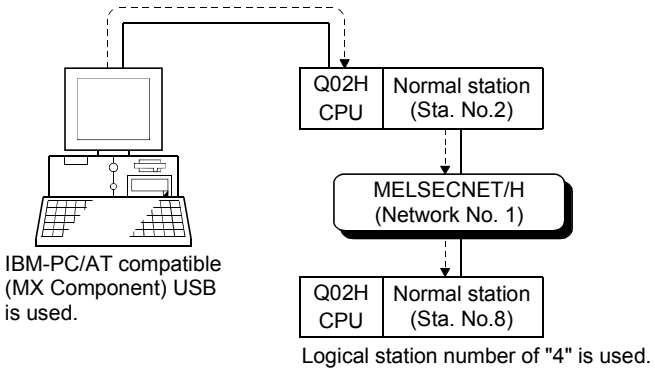
6.6.1 Accessing procedure

The procedure for making access to the programmable controller CPU using CPU USB communication will be explained in the following order.



(1) System example

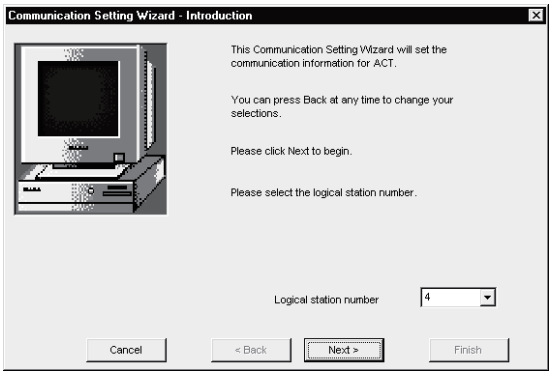
The following system example is used in this section.



(2) Setting the logical station number (Setting on communication setting wizard)

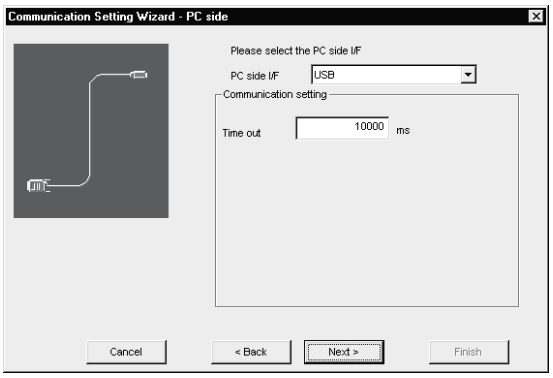
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "4" in Logical station number and click Next>.

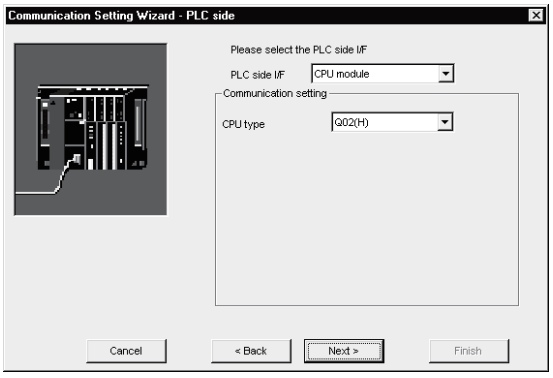
↓



3) Make settings as indicated below and click Next>.

PC side I/F : USB
Time out : 10000

↓



4) Make settings as indicated below and click Next>.

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

↓

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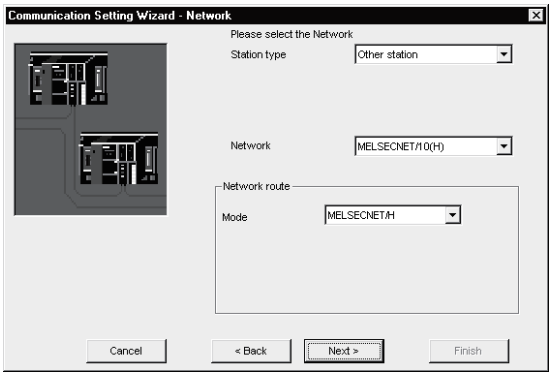
(From the previous page)

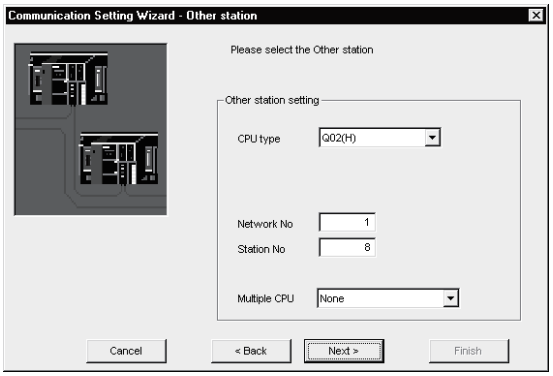
↓



5) Make settings as indicated below and click Next>.

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

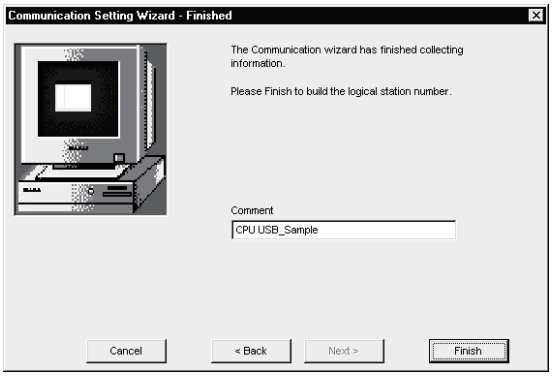
↓



6) Make settings as indicated below and click Next>.

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

↓



7) Enter a comment and click Finish.

↓

(Registration complete)

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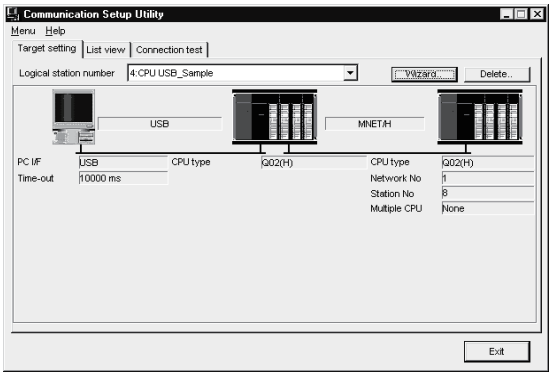
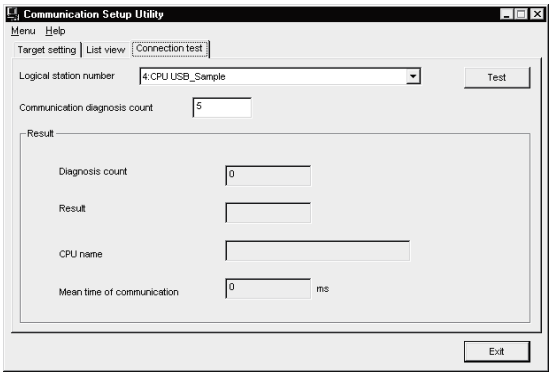
(3) Checking the logical station number settings (Conducting a communication test)

Check whether the CPU USB communication settings are correct or not, using the logical station number set in (2).



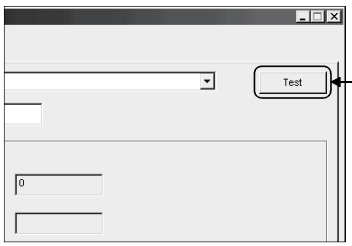
1) Display the "Target setting" tab screen and select the logical station number "4".
Check whether the logical station number settings are correct or not.

↓



2) Display the "Connection test" tab screen and set the logical station number "4".

↓



3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

(Communication test complete)

4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

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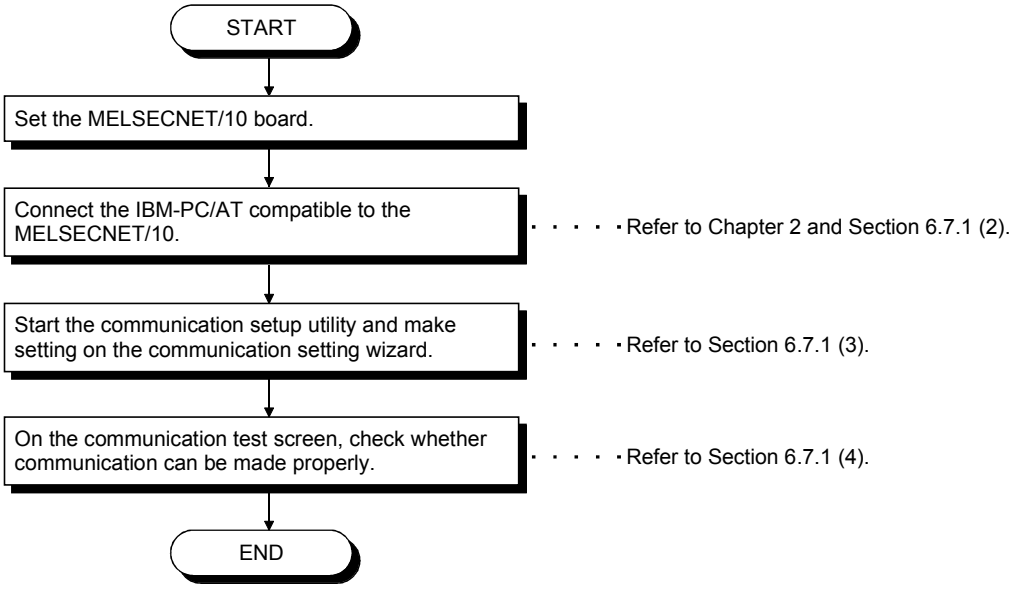
6.7 MELSECNET/10 Communication

This section provides the MELSECNET/10 communication procedure and its setting example using the utility setting type.

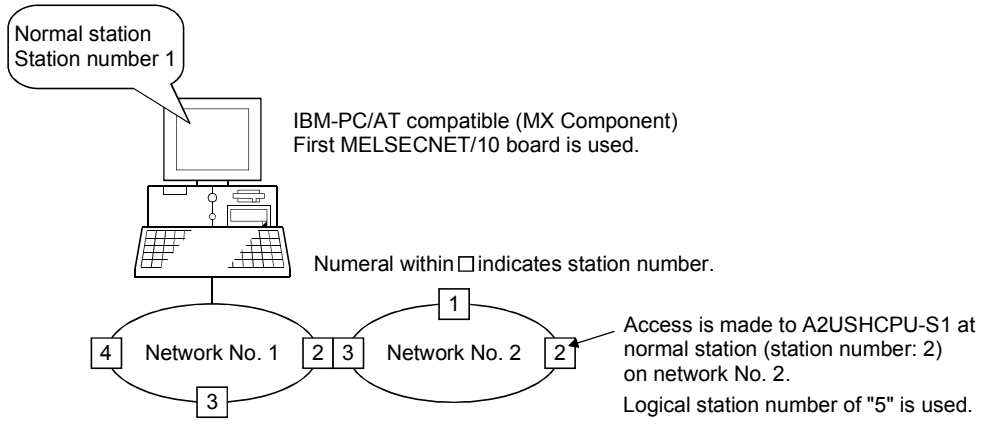
6.7.1 Accessing procedure

The procedure for making access to the programmable controller CPU using MELSECNET/10 communication will be explained in the following order.



(1) System example

The following system example is used in this section.



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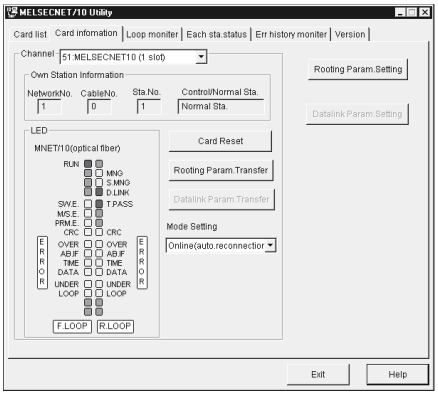
(2) Checking the MELSECNET/10 board

Check whether the IBM-PC/AT compatible is connected properly to the MELSECNET/10.

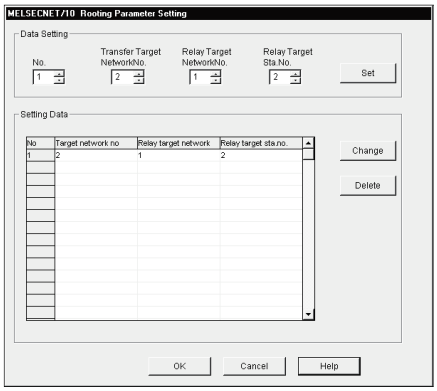
1) Click [Start]-[Program]-[Melsec]-[MELSECNET10 Utility] to start the MELSECNET/10 utility.



↓

2) Display the "Card information" tab, set as indicated below, and then click Routing Param. Setting.

Channel : 51: MELSECNET10 (1 slot)
Mode Setting : 1 On-line automatic return

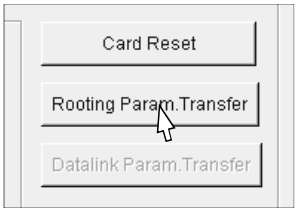


↓

3) Set the routing parameters and click Set.

Transfer Target networkNo. : 2
Relay Target NetworkNo. : 1
Relay Target Sta.No. : 2

After that, click the OK button to close the dialog box.



↓

4) Click Routing Param. Transfer to transfer the routing parameters to the MELSECNET/10 board.

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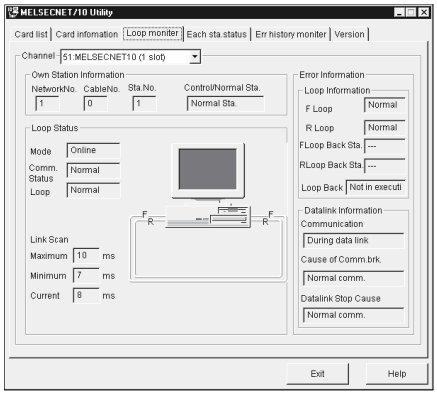
(From the previous page)

↓



↓

5) Display the "Loop monitor" tab screen and make sure that the loop is normal.

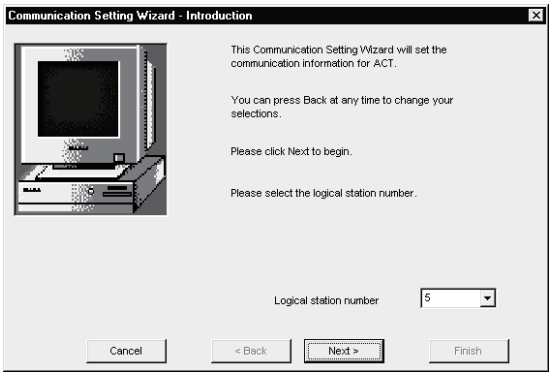
(Check complete)

6) Click Exit to exit from the utility.

(3) Setting the logical station number (Setting on communication setting wizard)

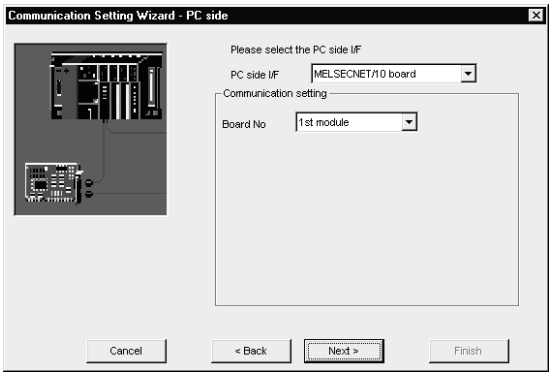
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "5" in Logical station number and click Next>.

↓



3) Make settings as indicated below and click Next>.

PC side I/F : MELSECNET/10 board
Board No : 1st module

↓

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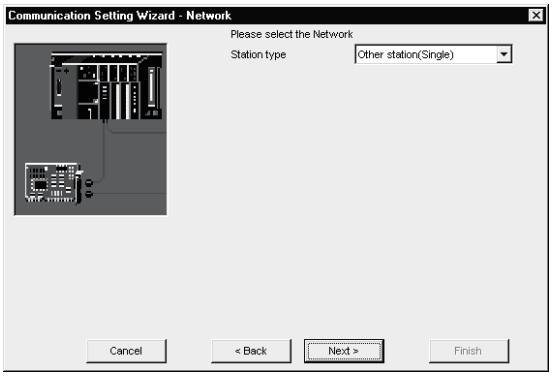
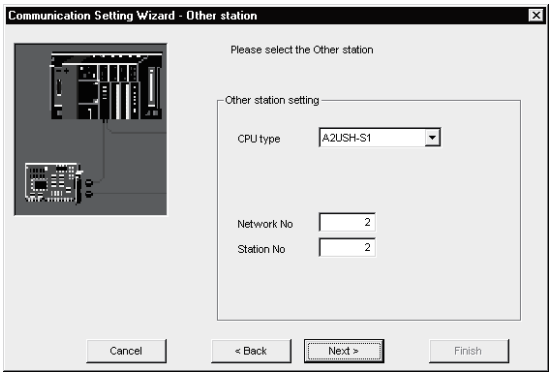
↓



4) Make settings as indicated below and click Next>.

Station type : Other station(Single)

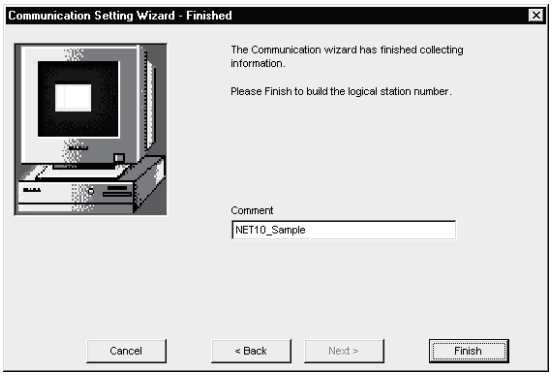
↓



5) Make settings as indicated below and click Next>.

CPU type : A2USH-S1
Network No : 2
Station No : 2

↓



6) Enter a comment and click Finish.

↓

(Registration complete)

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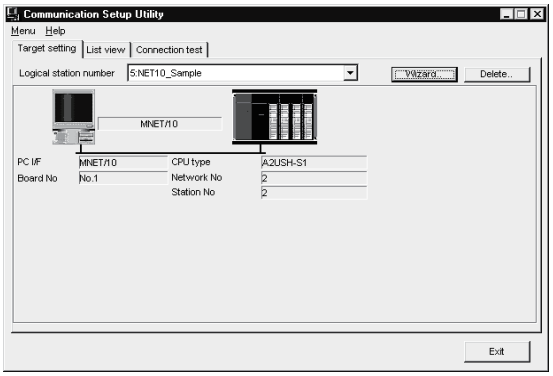
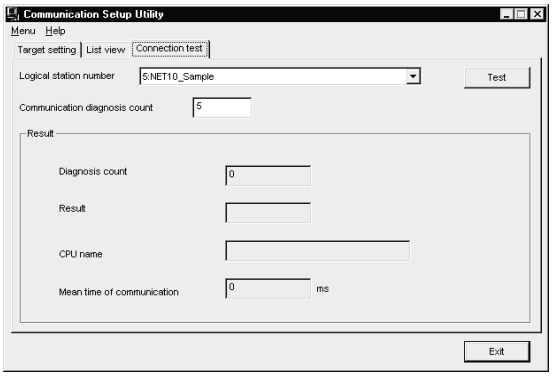
(4) Checking the logical station number settings (Conducting a communication test)

Check whether the MELSECNET/10 communication settings are correct or not, using the logical station number set in (3).



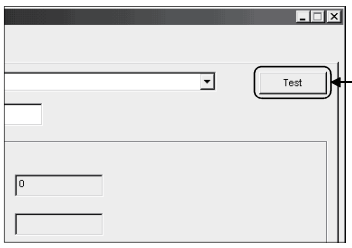
1) Display the "Target setting" tab screen and select the logical station number "5".
Check whether the logical station number settings are correct or not.

↓



2) Display the "Connection test" tab screen and set the logical station number "5".

↓



3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

(Communication test complete)

4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

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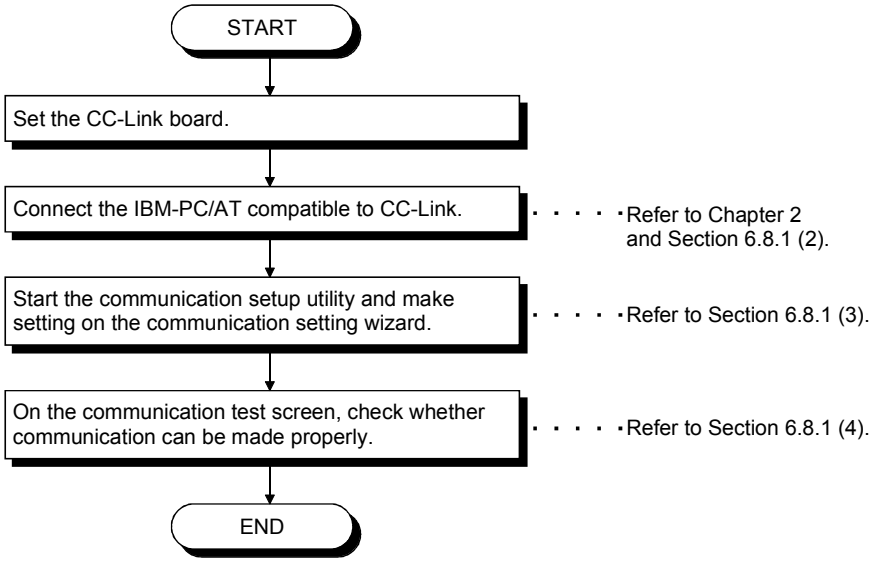
6.8 CC-Link Communication

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

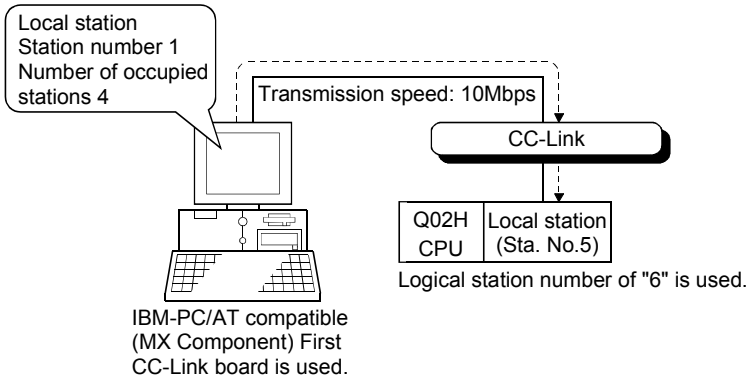
6.8.1 Accessing procedure

The procedure for making access to the programmable controller CPU using CC-Link communication will be explained in the following order.



(1) System example

The following system example is used in this section.



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

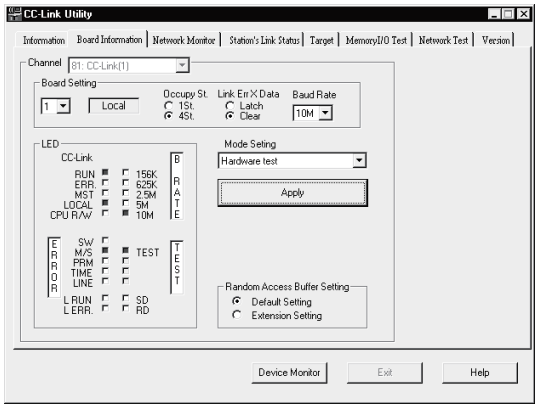
Supported CPUs and module in CC-Link communication to FXCPU are as follows.

CC-Link module	Compatible CPU	Station number
FX3U-64CCL	FX3G,FX3U(C)	1 to 63

(2) Checking the CC-Link board

Check whether the IBM-PC/AT compatible is connected properly to CC-Link.

1) Click [Start]-[Program]-[Melsec]-[CC-Link Board Utility] to start the CC-Link utility.

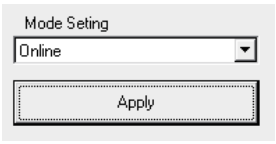


2) Display the "Board Information" tab screen and set the channel to "81:CC-Link (1)", and set the own station.

Station No. : 1
Station type : Local station
Occupy St. : 4 St.
Link Err X Data : Clear
Baud Rate : 10M

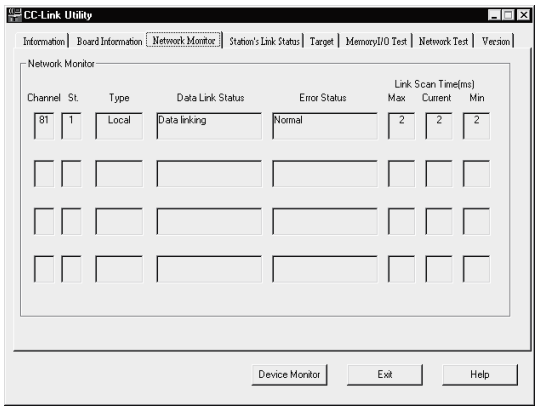
Set the mode to "Hardware test", click Apply, and check whether the CC-Link card is normal or not.

↓



3) Set the mode to "Online" and click Apply.

↓



4) Display the "Network Monitor" tab screen and make sure that the loop of the own station is normal.

↓

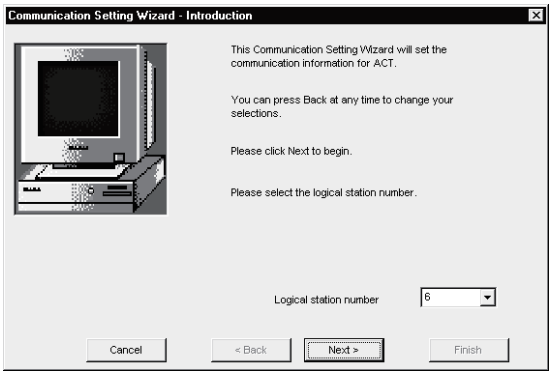
(Check complete)

5) Click Exit to exit from the utility.

(3) Setting the logical station number (Setting on communication setting wizard)

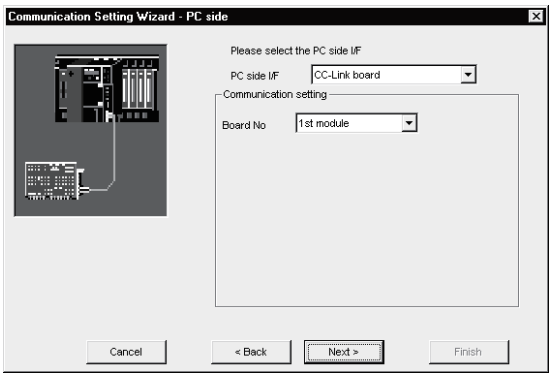
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "6" in Logical station number and click Next>.

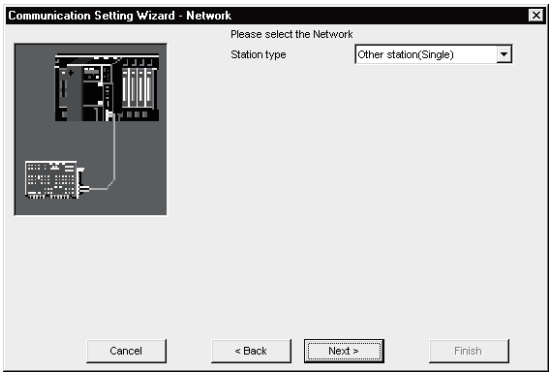
↓



3) Make settings as indicated below and click Next>.

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

↓



4) Make settings as indicated below and click Next>.

Station type : Other station(Single)

↓

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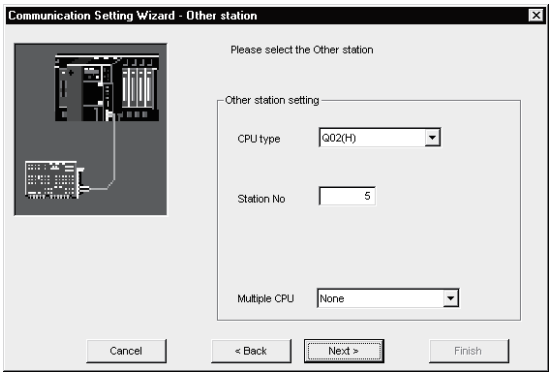
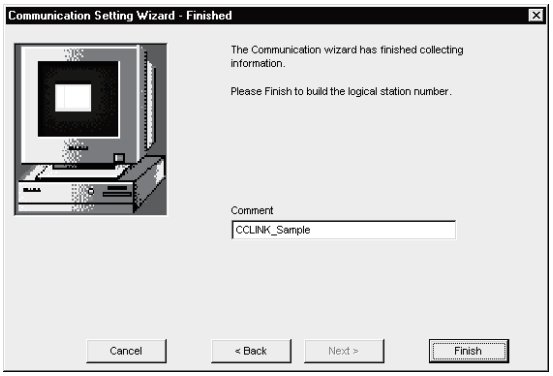
↓



5) Make settings as indicated below and click Next>.

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

↓



6) Enter a comment and click Finish.

↓

(Registration complete)

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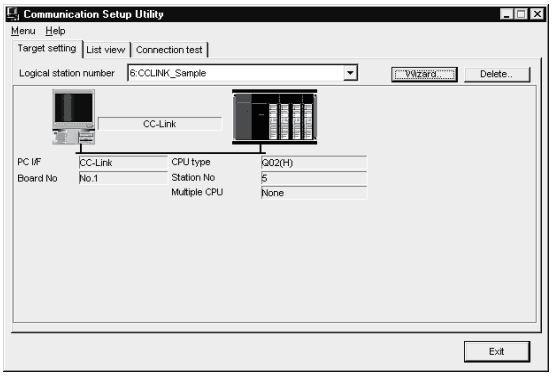
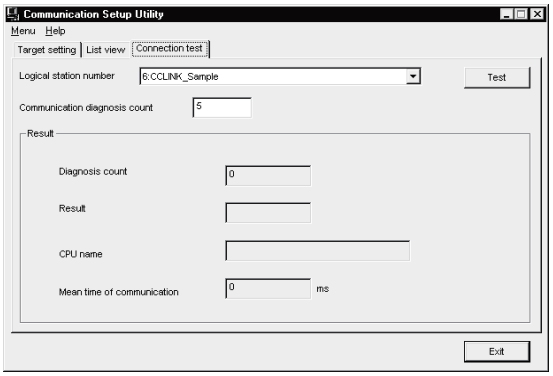
(4) Checking the logical station number settings (Conducting a communication test)

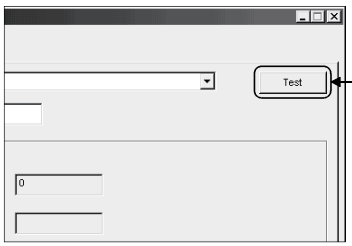
Check whether the CC-Link communication settings are correct or not, using the logical station number set in (3).



↓



↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "6".
Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "6".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

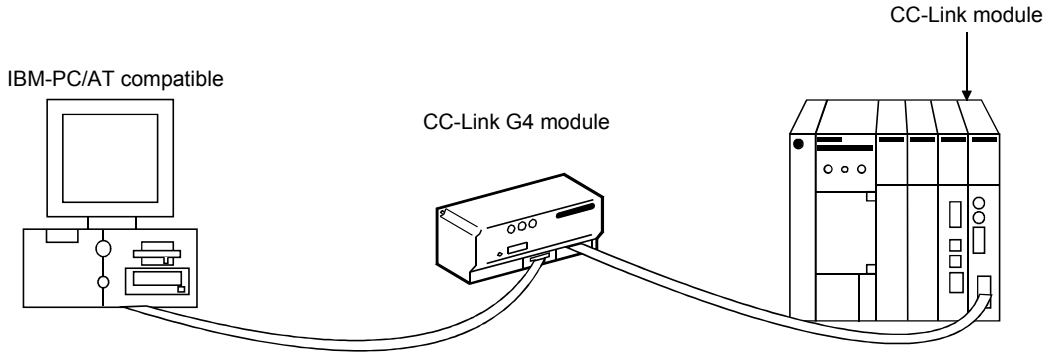
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.9 CC-Link G4 Communication

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

6.9.1 Switch settings of CC-Link G4 module

This section gives the switch settings of the CC-Link G4 module for the use of MX Component in the following system configuration.



POINT

When using MX Component, the settings other than "As set by user" in the tables are fixed as given in the tables.

(1) AJ65BT-G4

<table>
<tr><th colspan="2" rowspan="2">Switch (Switch Number)</th><th colspan="2">Setting</th></tr>
<tr><th>In QnA mode</th><th>In A mode</th></tr>
<tr><td colspan="2">Station number setting switches</td><td colspan="2">As set by user</td></tr>
<tr><td colspan="2">Data link transmission speed setting switch</td><td colspan="2">As set by user
(match to the transmission speed of the CC-Link module)</td></tr>
<tr><td rowspan="6">Operation setting DIP switches</td><td>Operation mode setting (SW1)</td><td>ON (QnA mode)</td><td>OFF (A mode)</td></tr>
<tr><td>Inter-peripheral transmission speed setting (SW2, SW3)</td><td>As set by user
(Match to the transmission speed of MX Component)</td><td>9600bps
<table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW2</td><td>OFF</td></tr><tr><td>SW3</td><td>OFF</td></tr></table></td></tr>
<tr><td>Parity bit yes/no setting (SW4, SW5)</td><td><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><td><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>— (SW6)</td><td>OFF</td><td>OFF</td></tr>
<tr><td>— (SW7)</td><td>OFF</td><td>OFF</td></tr>
<tr><td>Test mode setting (SW8)</td><td>OFF (online mode)</td><td>OFF (online mode)</td></tr>
</table>

(2) AJ65BT-G4-S3

<table>
<tr><th colspan="2" rowspan="2">Switch (Switch Number)</th><th colspan="3">Setting</th></tr>
<tr><th>In Q mode</th><th>In QnA mode</th><th>In A mode</th></tr>
<tr><td colspan="2">Station number setting switches</td><td colspan="3">As set by user</td></tr>
<tr><td colspan="2">Data link transmission speed setting switch</td><td colspan="3">As set by user
(match to the transmission speed of the CC-Link module)</td></tr>
<tr><td rowspan="5">Operation setting DIP switches</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><td><table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW1</td><td>ON</td></tr><tr><td>SW6</td><td>OFF</td></tr></table></td><td><table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW1</td><td>OFF</td></tr><tr><td>SW6</td><td>OFF</td></tr></table></td></tr>
<tr><td>Inter-peripheral transmission speed setting (SW2, SW3)</td><td>Setting need not be made
(Automatic setting)</td><td>As set by user
(Match to the transmission speed of MX Component)</td><td><table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW2</td><td>OFF</td></tr><tr><td>SW3</td><td>OFF</td></tr></table></td></tr>
<tr><td>Parity bit yes/no setting (SW4, SW5)</td><td><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><td><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><td><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><td>OFF</td><td>OFF</td></tr>
<tr><td>Test mode setting (SW8)</td><td>OFF (online mode)</td><td>OFF (online mode)</td><td>OFF (online mode)</td></tr>
</table>

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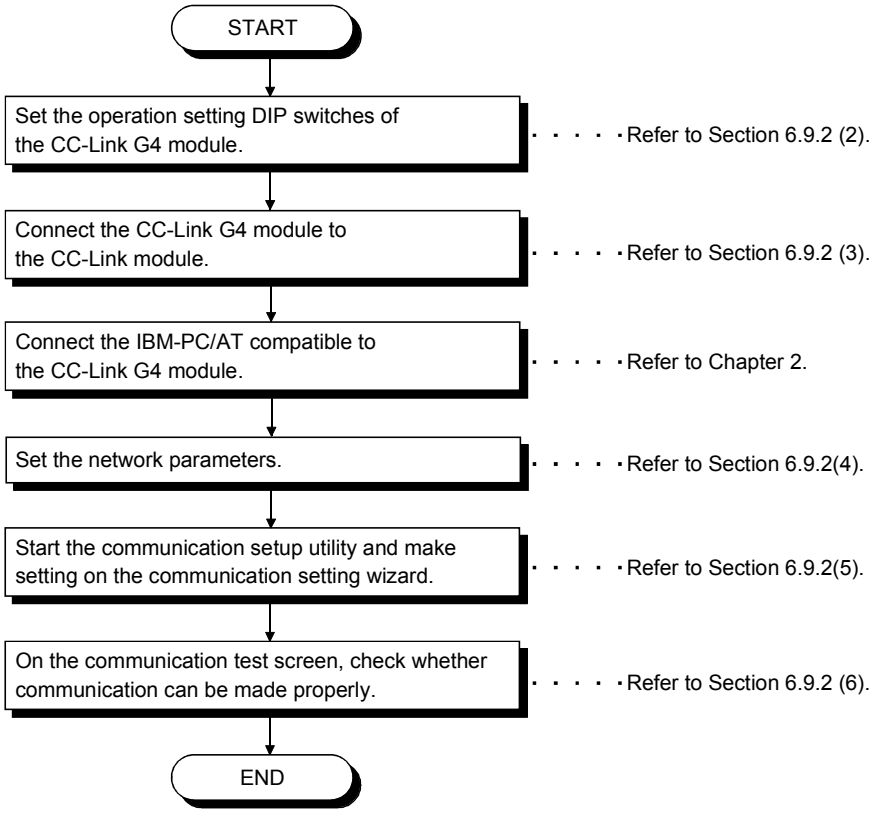
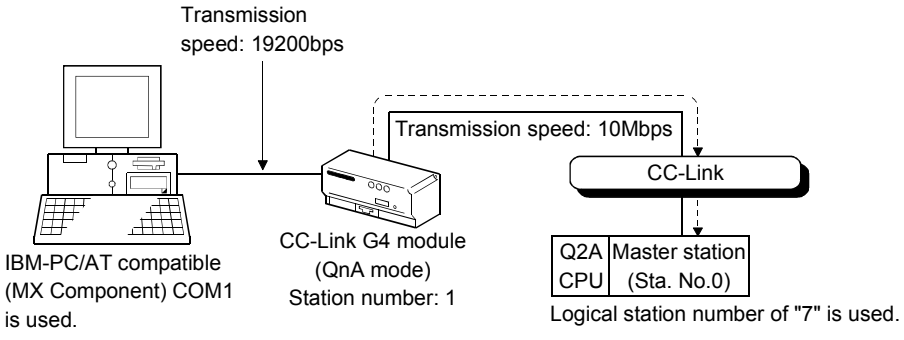
6.9.2 Accessing procedure

The procedure for making access to the programmable controller CPU using CC-Link G4 communication will be explained in the following order.



(1) System example

The following system example is used in this section.



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(2) Making switch settings of the CC-Link G4 module

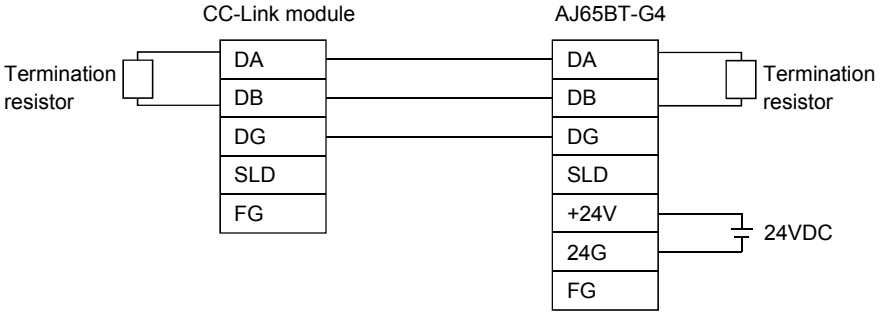
The switch settings of the CC-Link G4 module are indicated below.

<table>
<tr><th colspan="2">Switch (Switch Number)</th><th>Setting</th></tr>
<tr><td colspan="2">Station number setting switches</td><td>01 (station number 1)</td></tr>
<tr><td colspan="2">Data link transmission speed setting switch</td><td>4 (10Mbps)</td></tr>
<tr><td rowspan="5">Operation setting DIP switches</td><td>Operation mode setting (SW1)</td><td>ON (QnA mode)</td></tr>
<tr><td>Inter-peripheral transmission speed setting (SW2, SW3)</td><td>19200bps
<table><tr><th>SW</th><th>Setting</th></tr><tr><td>SW2</td><td>ON</td></tr><tr><td>SW3</td><td>OFF</td></tr></table></td></tr>
<tr><td>Parity bit yes/no setting (SW4, SW5)</td><td><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>— (SW6) *1</td><td>OFF</td></tr>
<tr><td>— (SW7)</td><td>OFF</td></tr>
<tr><td colspan="2">Test mode setting (SW8)</td><td>OFF (online mode)</td></tr>
</table>

*1: This switch acts as the operation mode setting switch on the AJ65BT-G4-S3.

(3) Wiring the CC-Link G4 module

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



(4) Setting the network parameters

Parameter setting may either be made from the network parameter "CC-Link setting screen" of GX Developer or from a sequence program.

POINT

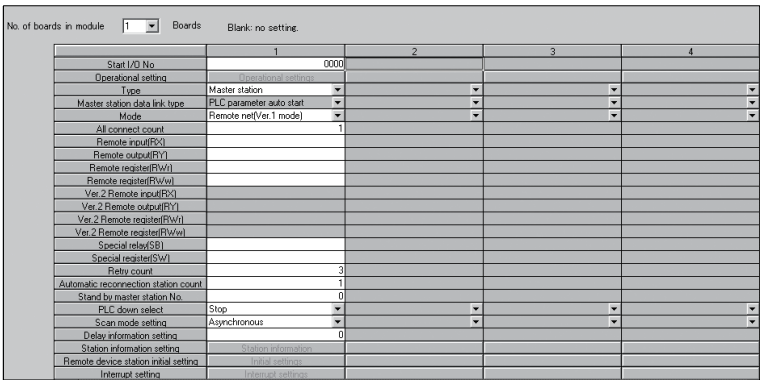
When using the CC-Link G4 module in the A mode, set the parameters in accordance with "(b) Making parameter setting in sequence program".

(a) Making parameter setting on CC-Link setting screen

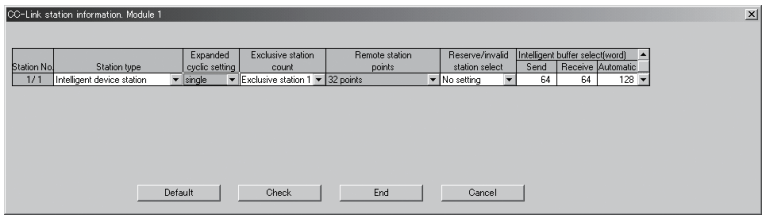
Set the first I/O No., type, total number of modules connected, and station information.

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.

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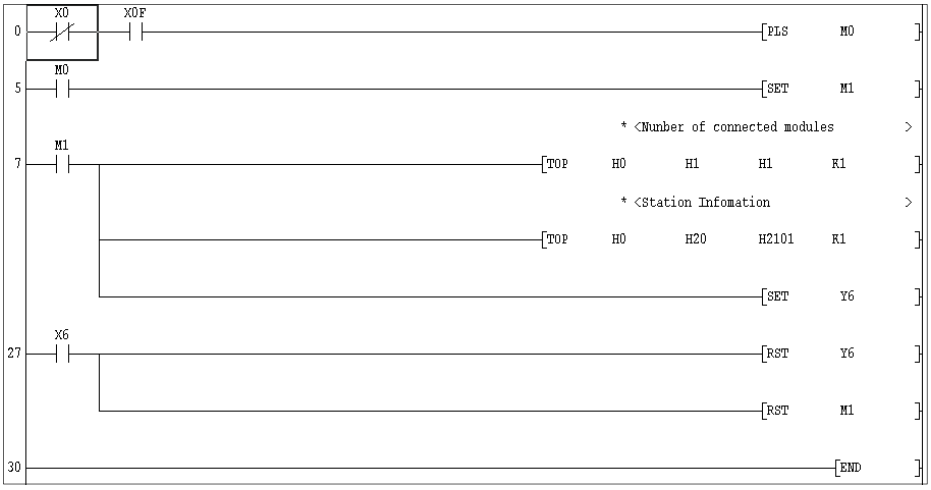
(b) Making parameter setting in sequence program

The parameter setting items for data link and the sequence program example are given below.

<Parameter setting items>

Address	Item	Description	Set 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>



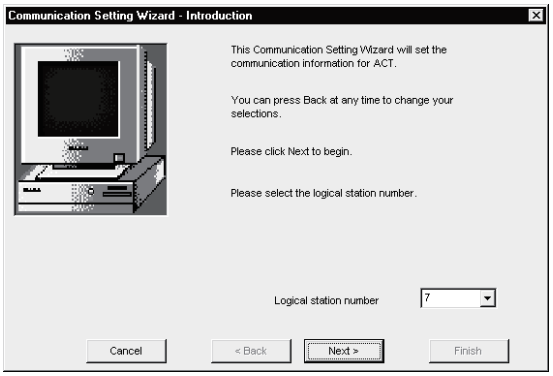
POINT

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[Ccg4a]

(5) Setting the logical station number (Setting on communication setting wizard)

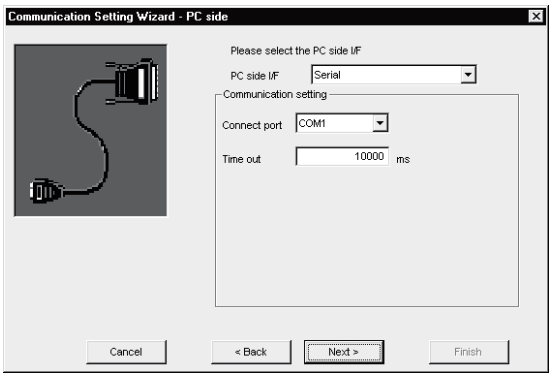
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "7" in Logical station number and click Next>.

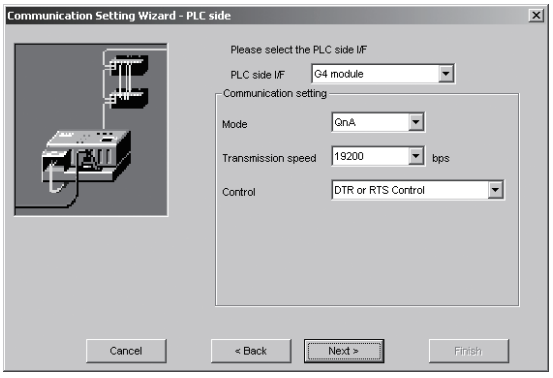
↓



3) Make settings as indicated below and click Next>.

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

↓



4) Make settings as indicated below and click Next>.

PLC side I/F : G4 module
Mode : QnA
Transmission speed : 19200
Control : DTR or RTS Control

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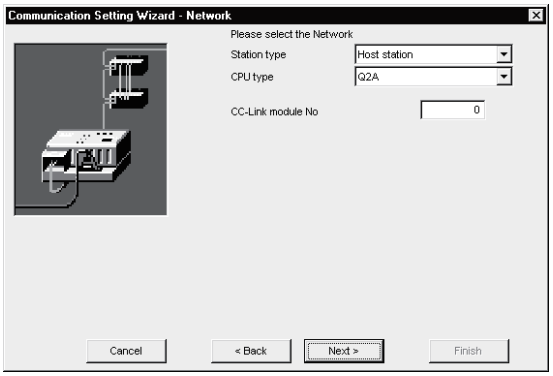
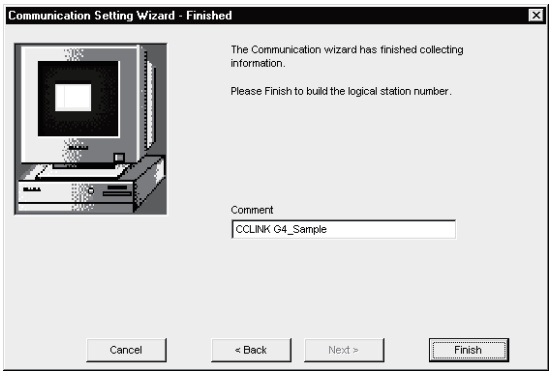
↓



5) Make settings as indicated below and click Next>.

Station type : Host station
CPU type : Q2A
CC-Link module No : 0

↓



6) Enter a comment and click Finish.

↓

(Registration complete)

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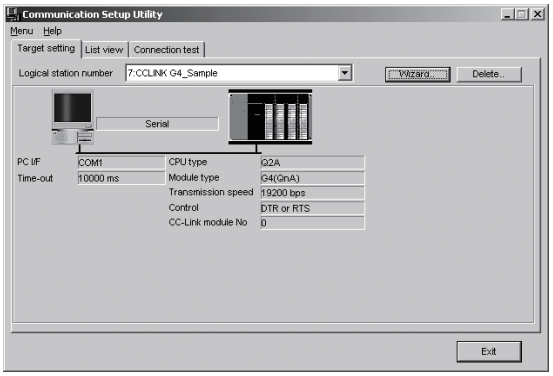
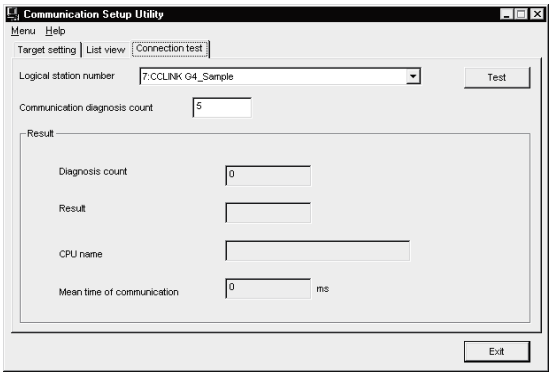
(6) Checking the logical station number settings (Conducting a communication test)

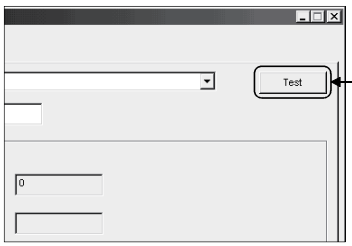
Check whether CC-Link G4 communication settings are correct or not, using the logical station number set in (5).



↓



↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "7".
Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "7".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

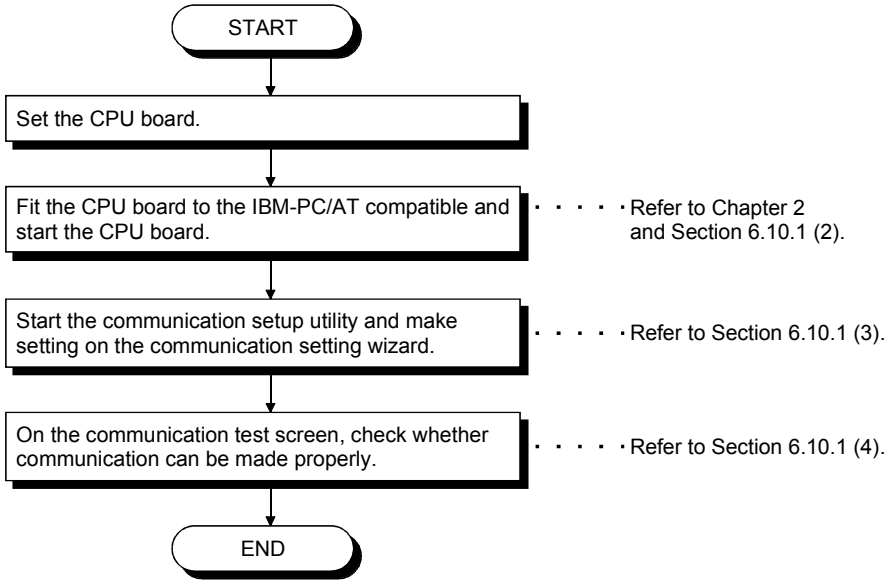
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.10 CPU Board Communication

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

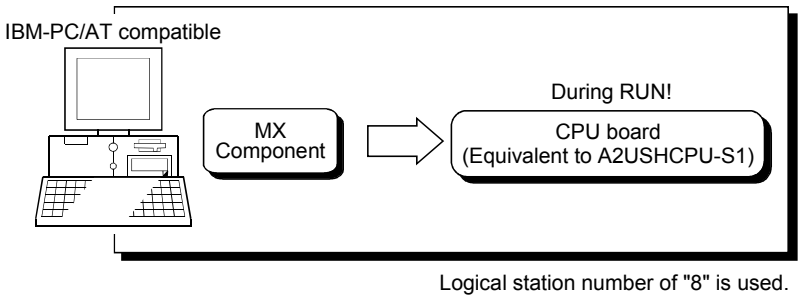
6.10.1 Accessing procedure

The procedure for making access to the CPU board using CPU board communication will be explained in the following order.



(1) System example

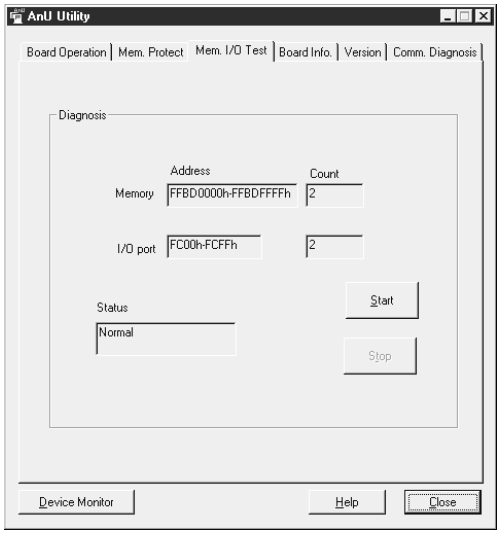
The following system example is used in this section.



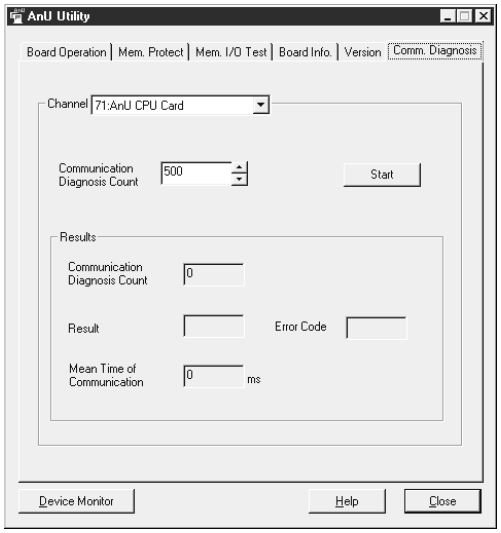
Logical station number of "8" is used.

(2) Checking and starting the CPU board

Check whether the CPU board is connected to the IBM-PC/AT compatible properly and start the CPU board.



↓



↓

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1) Click [Start]-[Programs]-[Melsec]-[AnU Utility] to start the AnU utility.
2) Check whether the CPU board is operating properly.
   Display the memory I/O test screen and click Start to perform the test any number of times.
   Then, click Stop to stop the test and make sure that the CPU board is normal.

3) Display the communication diagnosis screen and click Start to make sure that communication is made properly.
   If an error has occurred, check the error code and remove the error.
   Refer to the CPU board manual for error code details.

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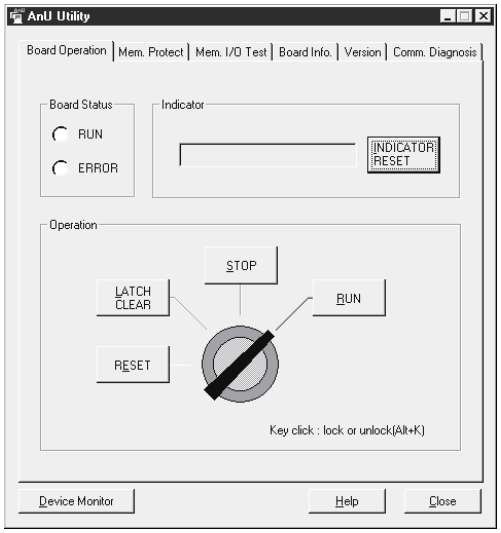
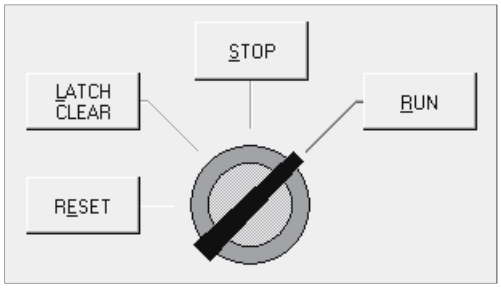
↓



4) In this section, you must perform setting to make the CPU board running on the board operation screen since access is made while the CPU board is running.

↓



5) Click the CPU operation key to select the unlock status. After choosing the unlock status, click RUN to make the CPU board running.

↓

6) Click Close to store the AnU utility into the taskbar.

(Check complete)

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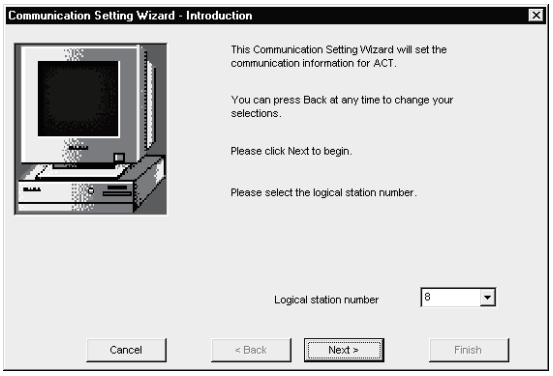
(3) Setting the logical station number (Setting on communication setting wizard)

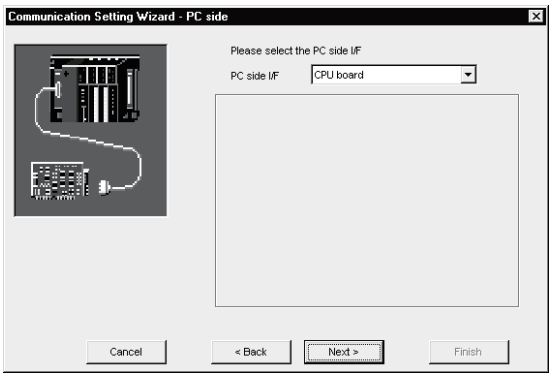
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "8" in Logical station number and click Next>.

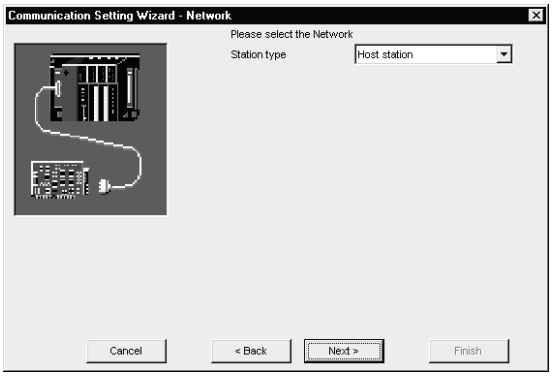
↓



3) Make settings as indicated below and click Next>.

PC side I/F : CPU board

↓



4) Make settings as indicated below and click Next>.

Station type : Host station

↓

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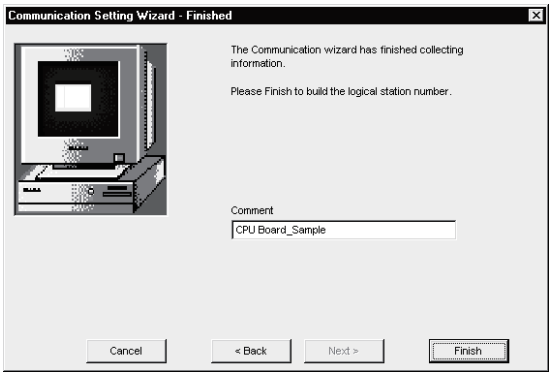
↓



5) Enter a comment and click Finish.

↓

(Registration complete)

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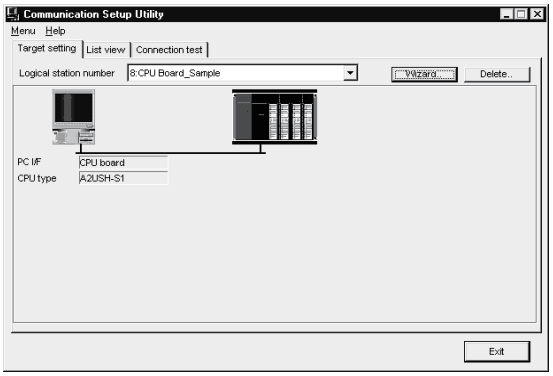
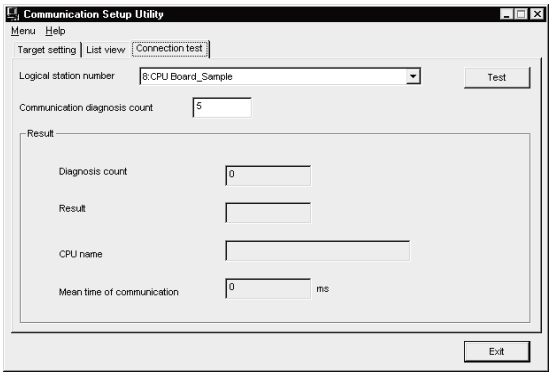
(4) Checking the logical station number settings (Conducting a communication test)

Check whether CPU board communication settings are correct or not, using the logical station number set in (3).



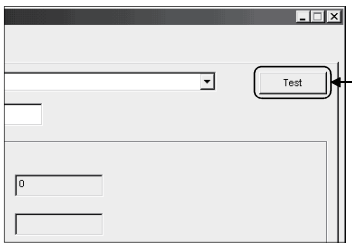
1) Display the "Target setting" tab screen and select the logical station number "8".
Check whether the logical station number settings are correct or not.

↓



2) Display the "Connection test" tab screen and set the logical station number "8".

↓



3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

↓

(Communication test complete)

4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

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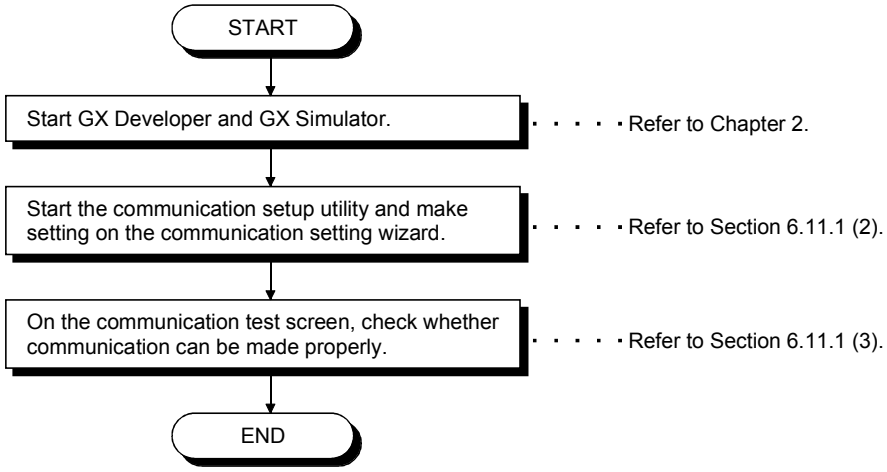
6.11 GX Simulator Communication

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

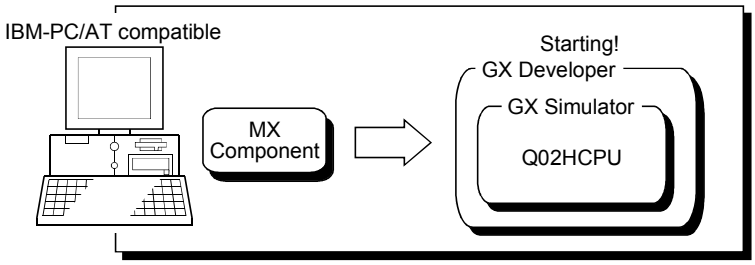
6.11.1 Accessing procedure

The procedure for making access to the GX Simulator using ladder logic communication will be explained in the following order.



(1) System example

The following system example is used in this section.

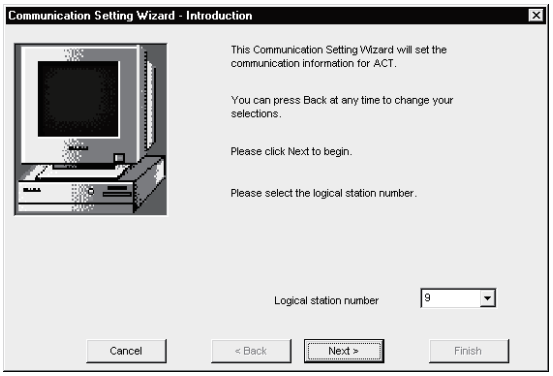


Logical station number of "9" is used.

(2) Setting the logical station number (Setting on communication setting wizard)

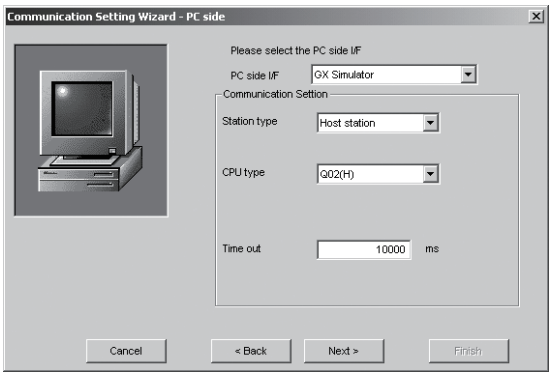
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "9" in Logical station number and click Next>.

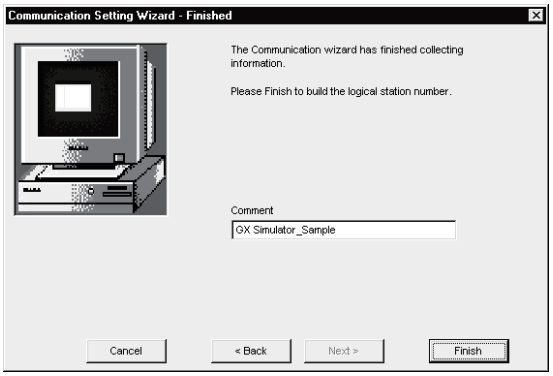
↓



3) Make settings as indicated below and click Next>.

PC side I/F	: GX Simulator
Station type	: Host station
CPU type	: Q02(H)
Time out	: 10000

↓



4) Enter a comment and click Finish.

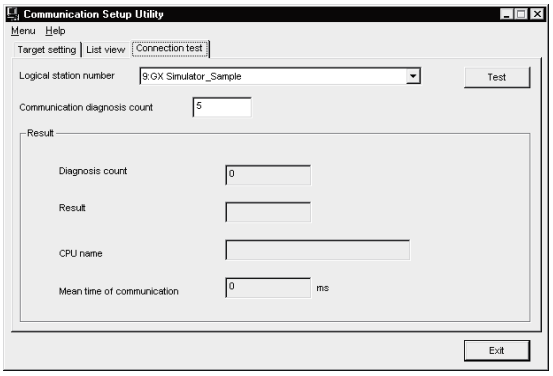
↓

(Registration complete)

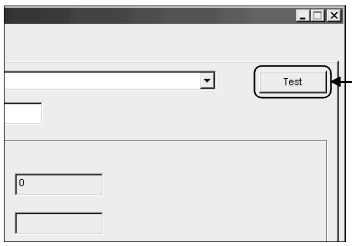
(3) Checking the logical station number settings (Conducting a communication test)

Check whether GX Simulator communication settings are correct or not, using the logical station number set in (2).

↓



↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "9".
Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "9".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.12 GX Simulator2 Communication

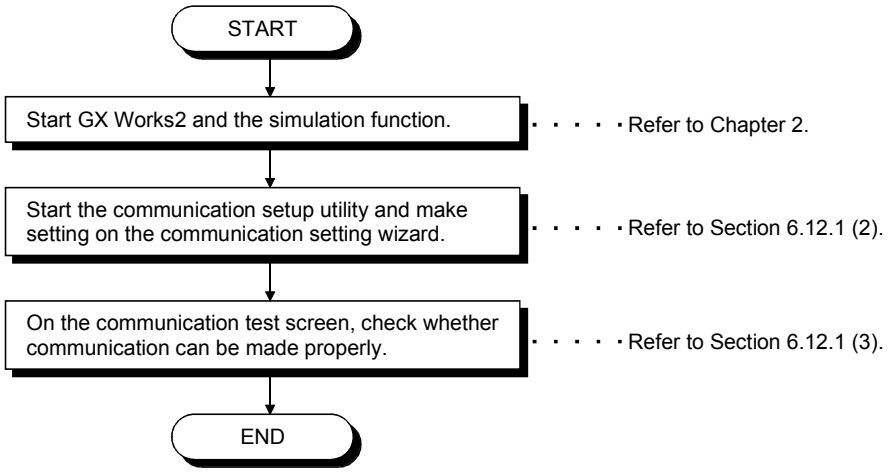
This section provides the GX Simulator2 communication procedure and its setting example using the utility setting type.

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.

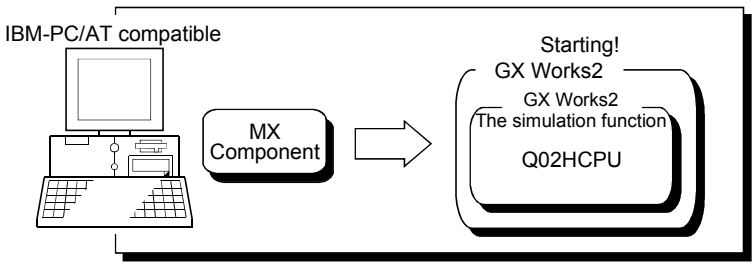
6.12.1 Accessing procedure

The procedure for making access to the GX Simulator using ladder logic communication will be explained in the following order.



(1) System example

The following system example is used in this section.

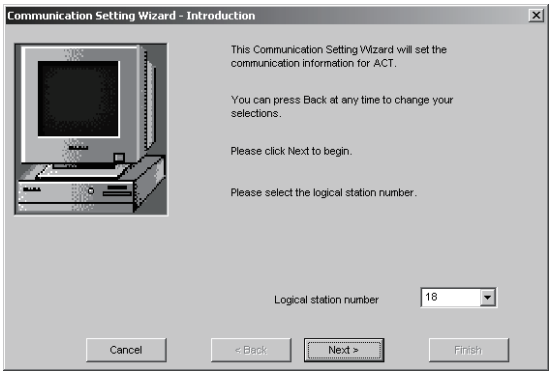


Logical station number of "18" is used.

(2) Setting the logical station number (Setting on communication setting wizard)

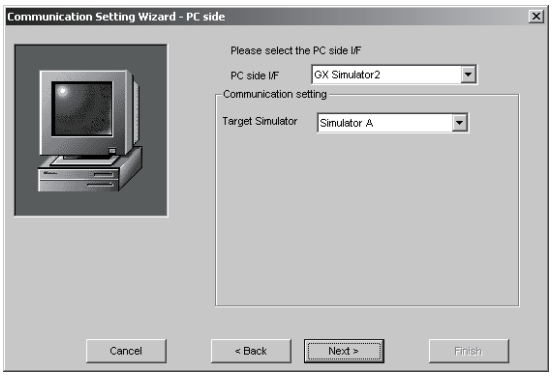
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "18" in Logical station number and click Next>.

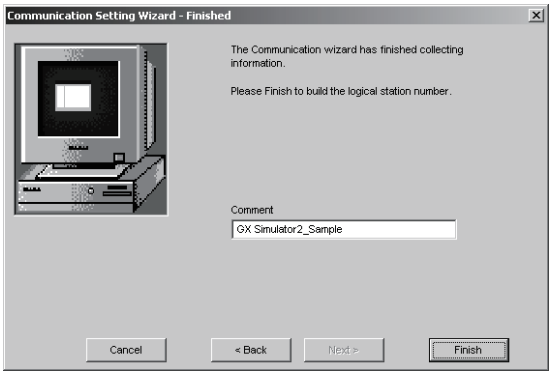
↓



3) Make settings as indicated below and click Next>.

PC side I/F : GX Simulator2
Target Simulator: Simulator A

↓



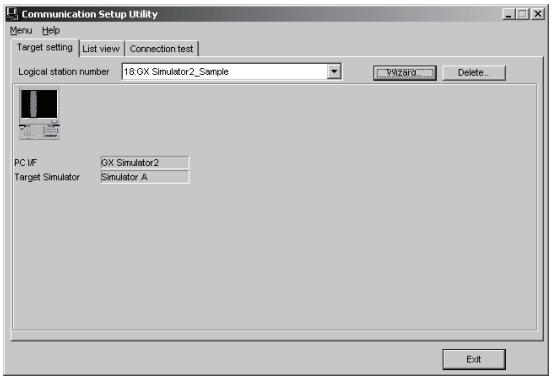
4) Enter a comment and click Finish.

↓

(Registration complete)

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

Check whether GX Simulator2 communication settings are correct or not, using the logical station number set in (2).



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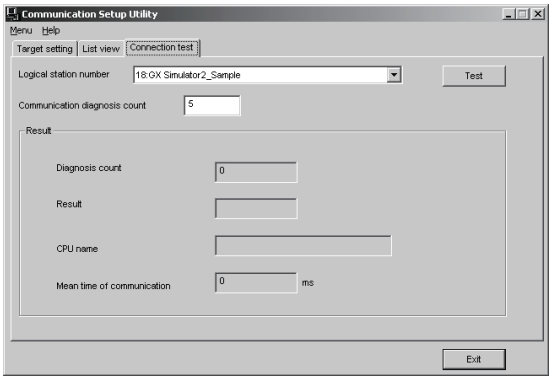

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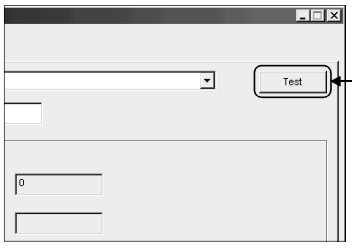


↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "18".
Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "18".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

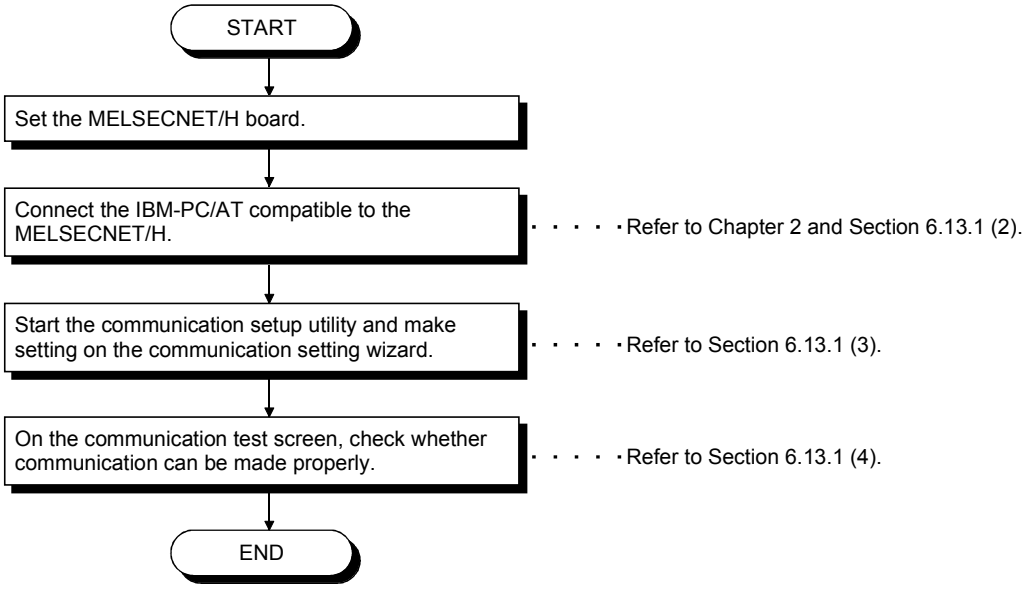
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.13 MELSECNET/H Communication

This section provides the MELSECNET/H communication procedure and its setting example using the utility setting type.

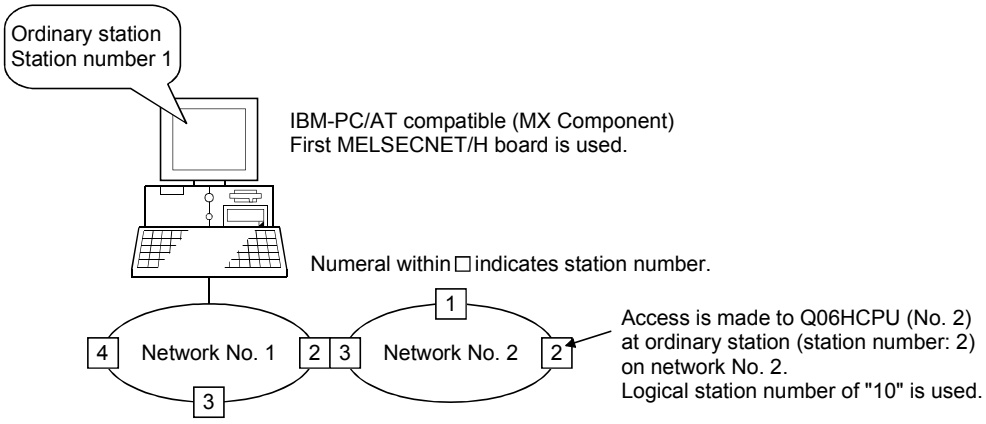
6.13.1 Accessing procedure

The procedure for making access to the programmable controller CPU using MELSECNET/H communication will be explained in the following order.



(1) System example

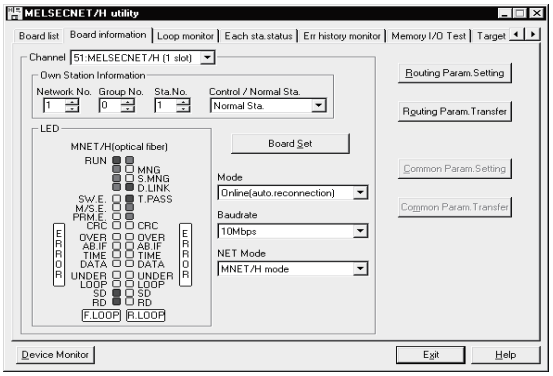
The following system example is used in this section.



(2) Checking the MELSECNET/H board

Check whether the IBM-PC/AT compatible is connected properly to the MELSECNET/H.

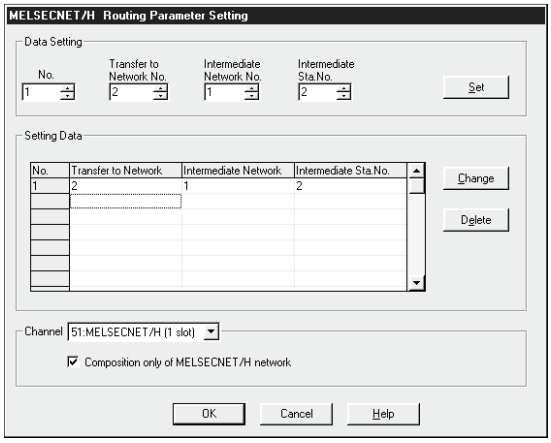
1) Click [Start]-[Program]-[Melsec]-[MELSECNETH Utility] to start the MELSECNET/H utility.



2) Display the "Board information" tab screen, make the following settings, and click Board Set.

After that, click Routing Param. Setting.

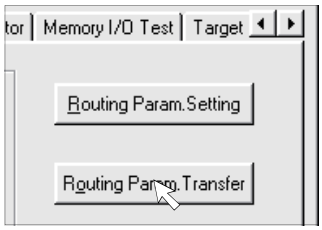
Channel	: 51:MELSECNET/H (1 slot)
Mode	: Online (auto.reconnection)
Baud rate	: Any (10Mbps here)
NET mode	: MNET/H mode



3) Set the routing parameters and click Set.

Target network No. : 2
Intermediate Network : 1
Intermediate Sta. No. : 2

After that, click OK to close the dialog box.



4) Click Routing Param. Transfer to transfer the routing parameters to the MELSECNET/H board.

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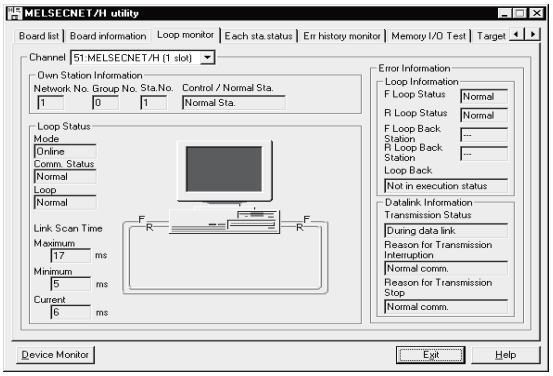


5) Click the "Loop monitor" tab and make sure that the loop is normal.

↓

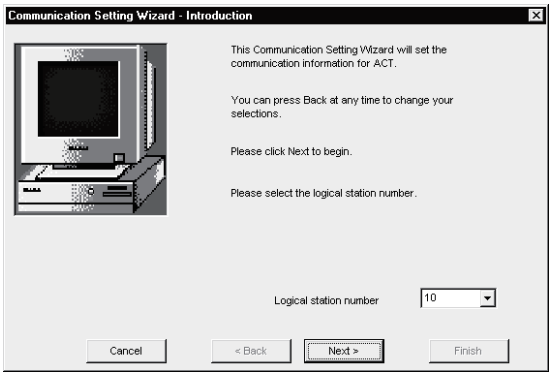
(Check complete)

6) Click Exit to exit from the utility.

(3) Setting the logical station number (Setting on communication setting wizard)

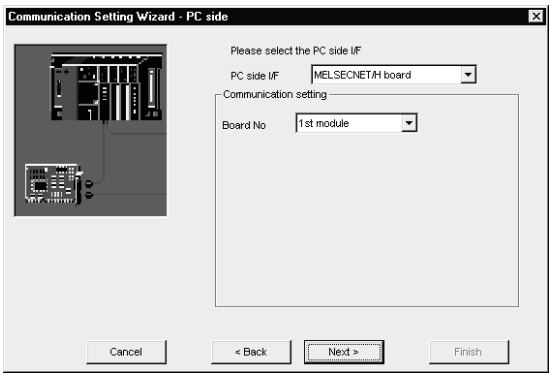
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "10" in Logical station number and click Next>.

↓



3) Make settings as indicated below and click Next>.

PC side I/F : MELSECNET/H board
Board No : 1st module

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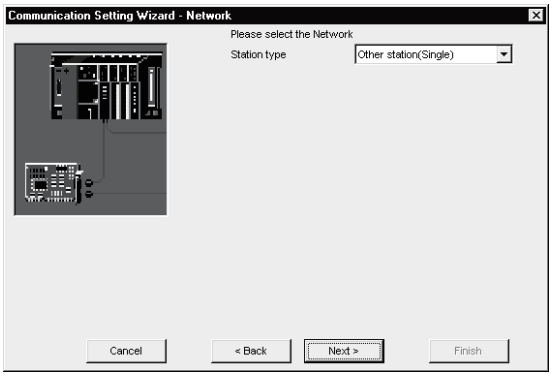
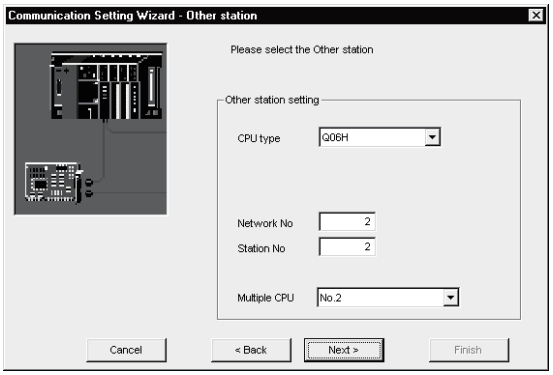


4) Make settings as indicated below and click Next>.

Station type : Other station(Single)

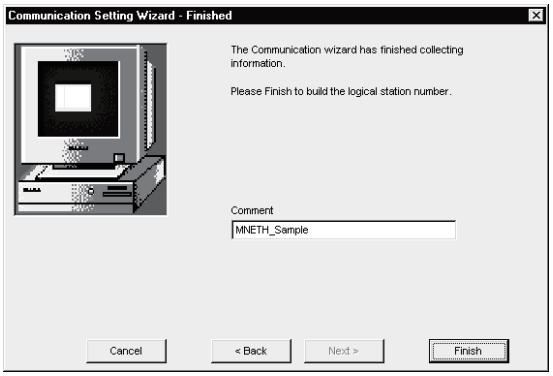
↓



5) Make settings as indicated below and click Next>.

CPU type : Q06H
Network No : 2
Station No : 2
Multiple CPU : No.2

↓



6) Enter a comment and click Finish.

↓

(Registration complete)

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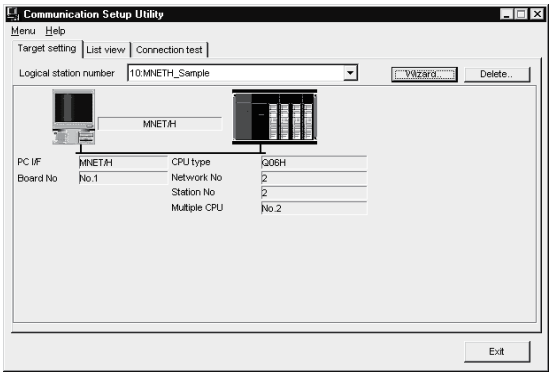
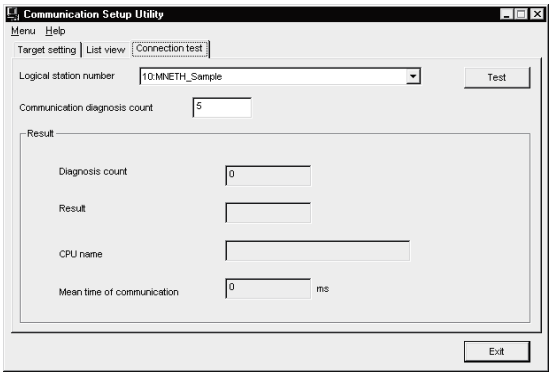
(4) Checking the logical station number settings (Conducting a communication test)

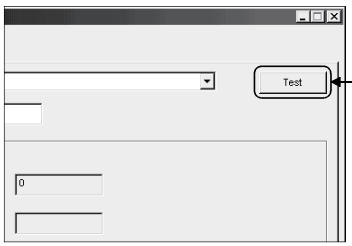
Check whether the MELSECNET/H communication settings are correct or not, using the logical station number set in (3).



↓



↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "10".
Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "10".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

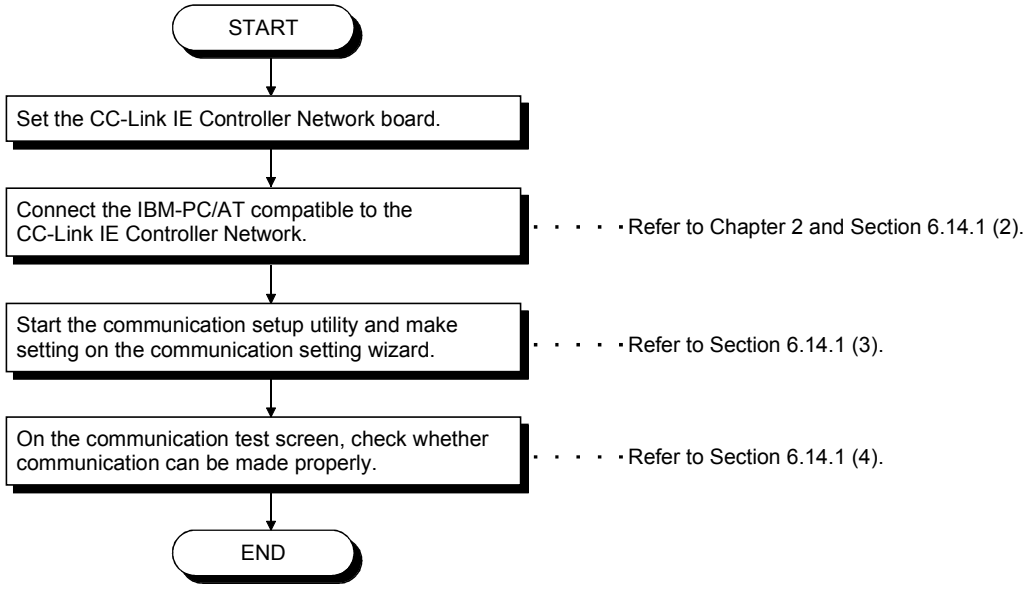
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.14 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.

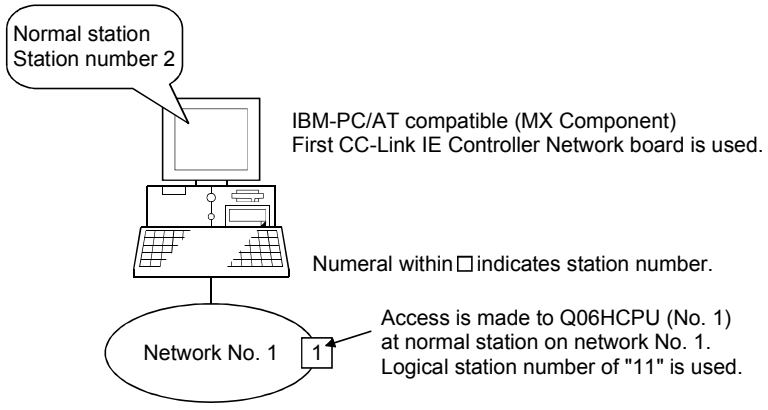
6.14.1 Accessing procedure

The procedure for making access to the programmable controller CPU using CC-Link IE Controller Network communication will be explained in the following order.



(1) System example

The following system example is used in this section.



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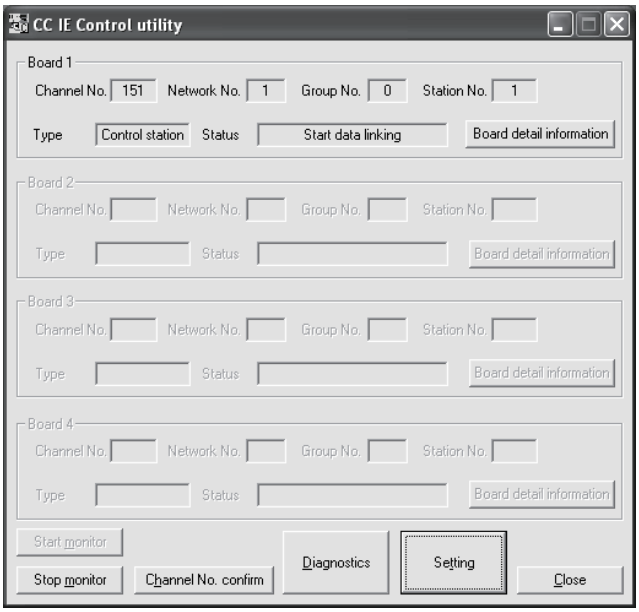
(2) Checking the CC-Link IE Controller Network board

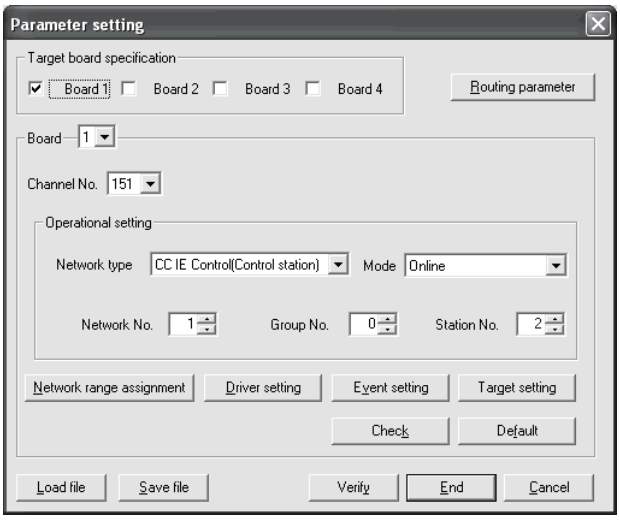
Check whether the IBM-PC/AT compatible is connected properly to the CC-Link IE Controller Network.

1) Click [Start]-[Program]-[Melsec]-[CC IE Control Utility] to start the CC IE Control utility.



2) The board list screen appears.
Click Setting.

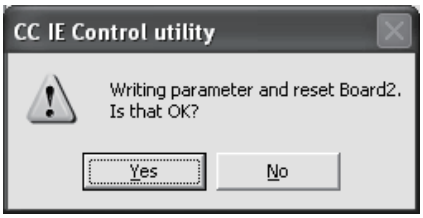
↓



3) The Parameter setting screen appears.
Make the following settings, and click End.

Channel No. : 151
Network type : CC IE Control (Normal station)
Mode : Online
Network No. : 1
Group No. : 0
Station No. : 2

↓



4) Click Yes and write the parameter to the CC-Link IE Controller Network board.

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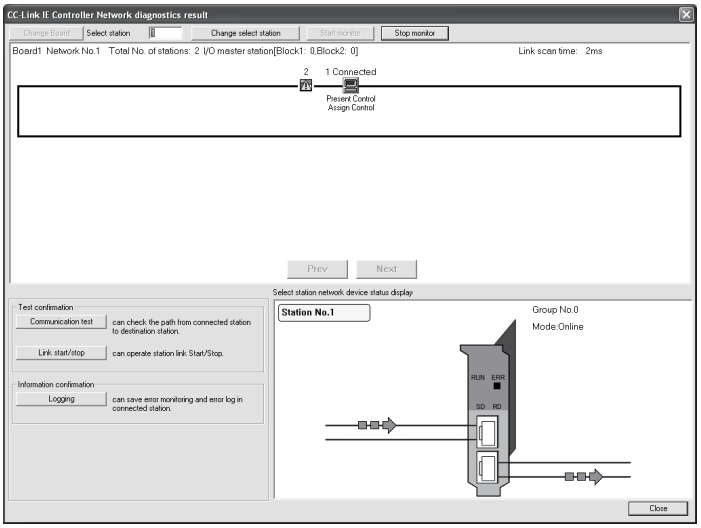


↓

(Check complete)

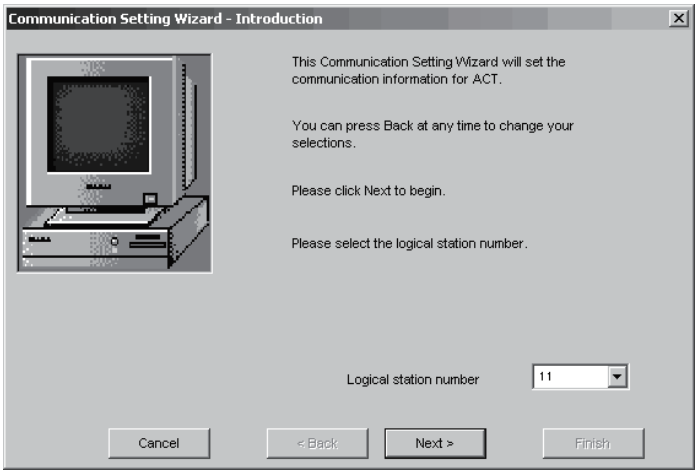
5) Click Diagnostics on the board list screen to check for the line.

6) Click Close to exit from the utility.

(3) Setting the logical station number (Setting on communication setting wizard)

Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "11" in Logical station number and click Next>.

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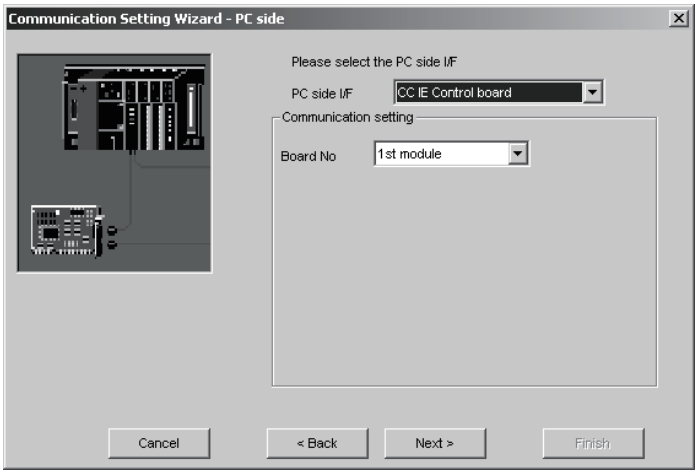
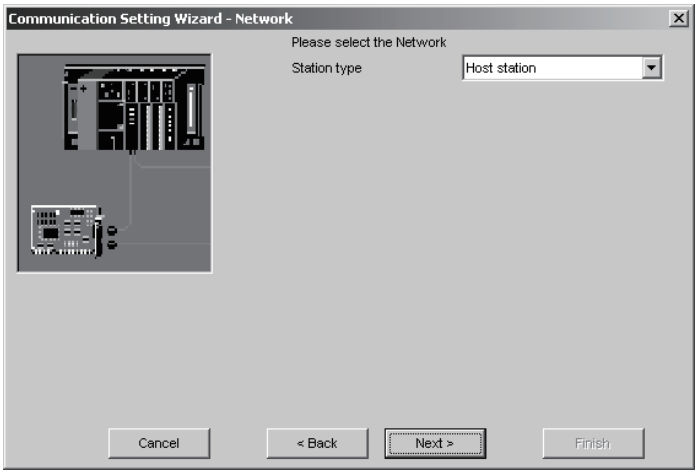


3) Make settings as indicated below and click Next>.

PC side I/F : CC IE Control board
Board No : 1st module

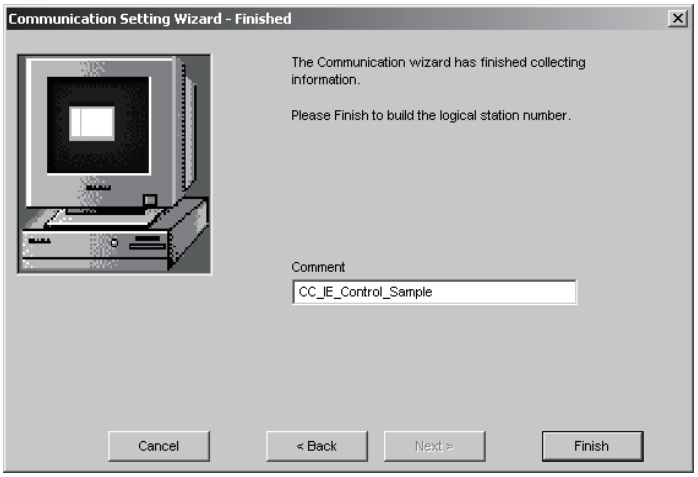
↓



4) Make settings as indicated below and click Next>.

Station type : Host station

↓



5) Enter a comment and click Finish.

↓

(Registration complete)

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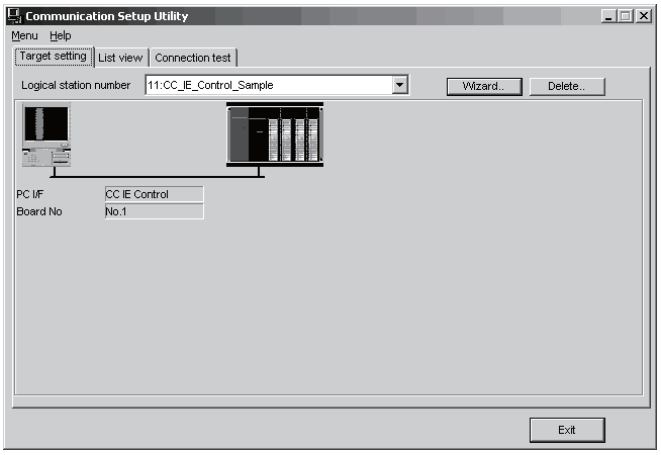
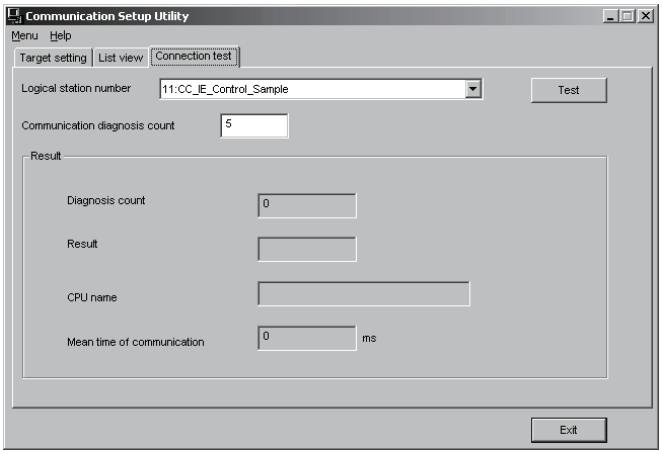
(4) Checking the logical station number settings (Conducting a communication test)

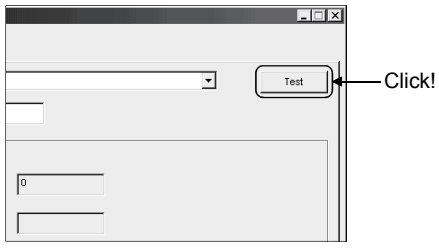
Check whether the CC-Link IE Controller Network communication settings are correct or not, using the logical station number set in (3).



1) Display the "Target setting" tab screen and select the logical station number "11".
Check whether the logical station number settings are correct or not.



2) Display the "Connection test" tab screen and set the logical station number "11".



3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

(Communication test complete)

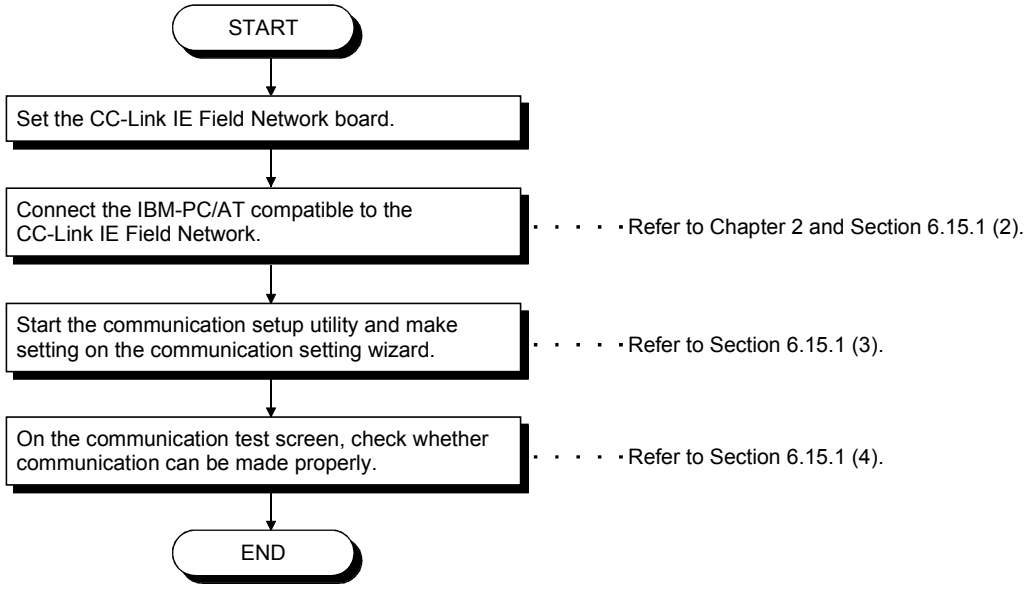
4) Through the above steps, it is confirmed that the logical station number settings are correct.
This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

6.15 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.

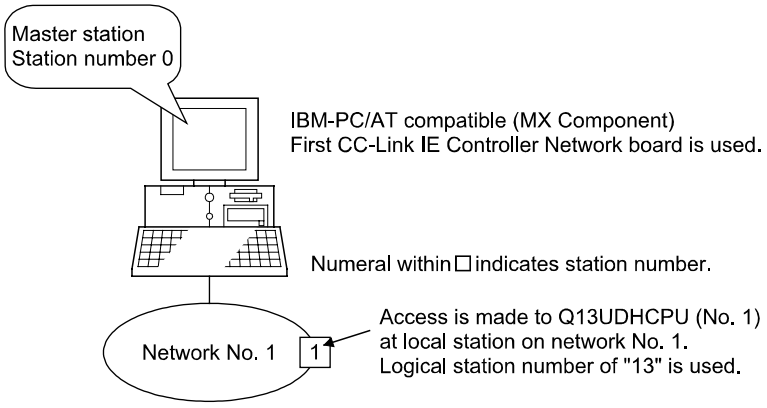
6.15.1 Accessing procedure

The procedure for making access to the programmable controller CPU using CC-Link IE Field Network communication will be explained in the following order.



(1) System example

The following system example is used in this section.



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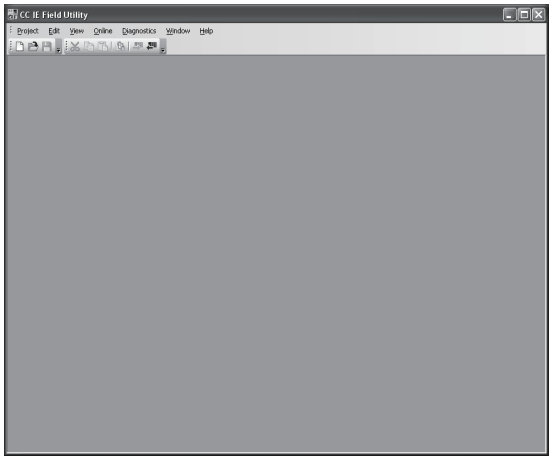
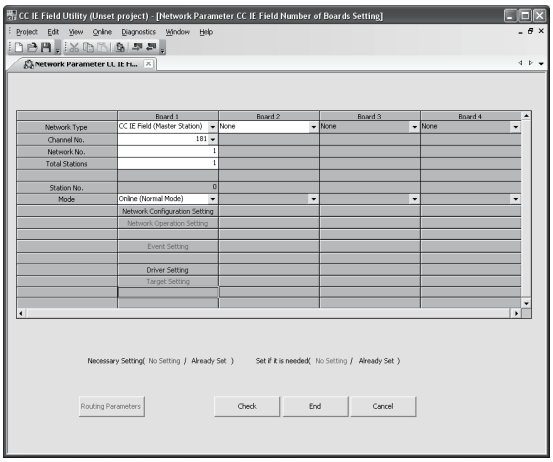
(2) Checking the CC-Link IE Field Network board

Check whether the IBM-PC/AT compatible is connected properly to the CC-Link IE Field Network.



1) Click [Start]-[Program]-[MELSEC] -[CC IE Field Board]-[CC IE Field Utility] to start the CC IE Field utility.
2) The CC IE Field Utility screen appears. Select [Project]-[New].

↓



3) The Parameter setting screen appears. Make the following settings, and click End.

   Network type : CC IE Field (Master station)
   Channel No. : 181
   Network No. : 1
   Total Stations : 1
   Mode : Online (Normal Mode)

↓

4) Select [Online]-[Write to Board] and write the parameter settings of the project to the board.

↓

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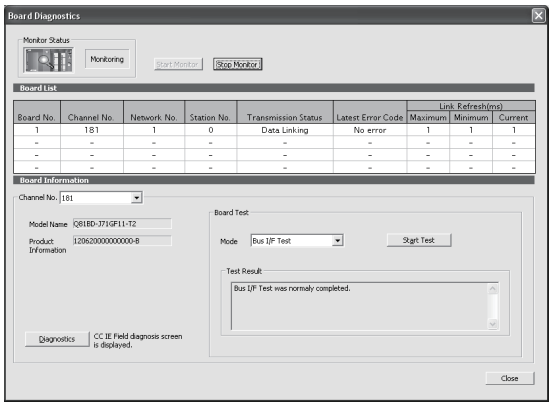

↓

(Check complete)

5) Select [Diagnostics]-[Board Diagnostics] to check for the line.

6) Click Close to exit from the utility.

(3) Setting the logical station number (Setting on communication setting wizard)

Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.

2) Type "13" in Logical station number and click Next>.

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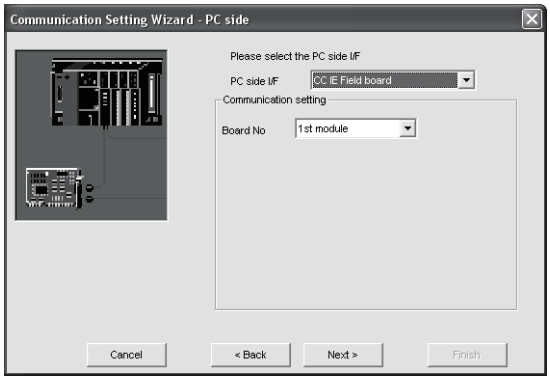
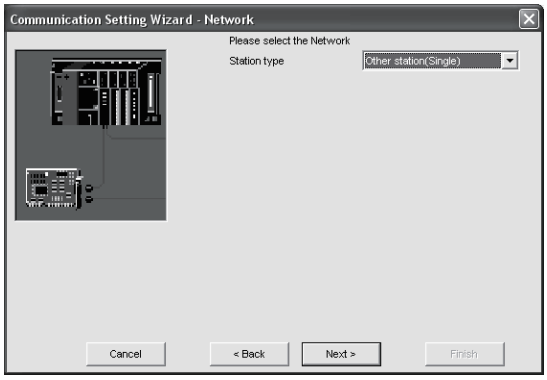


3) Make settings as indicated below and click Next>.

PC side I/F : CC IE Field board
Board No : 1st module

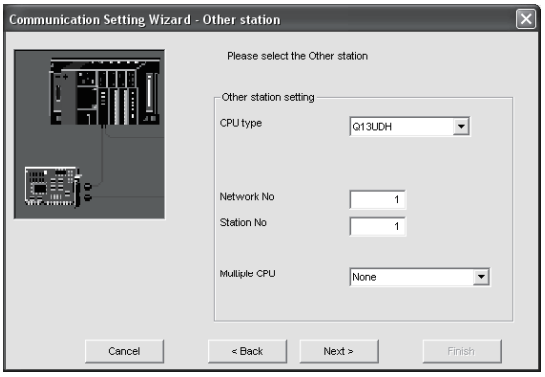
↓



4) Make settings as indicated below and click Next>.

Station type : Other station(Single)

↓



5) Make settings as indicated below and click Next>.

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

↓

(Registration complete)

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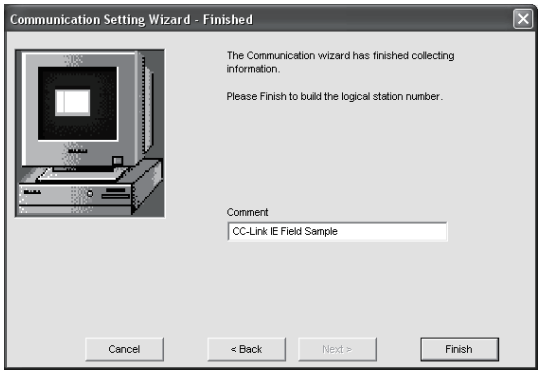

6) Enter a comment and click Finish.

↓

(Registration complete)

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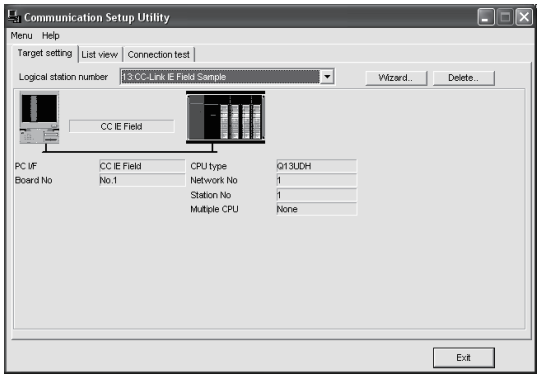
(4) Checking the logical station number settings (Conducting a communication test)

Check whether the CC-Link IE Field Network communication settings are correct or not, using the logical station number set in (3).



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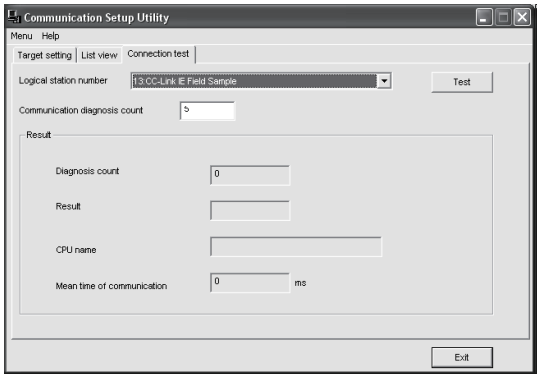

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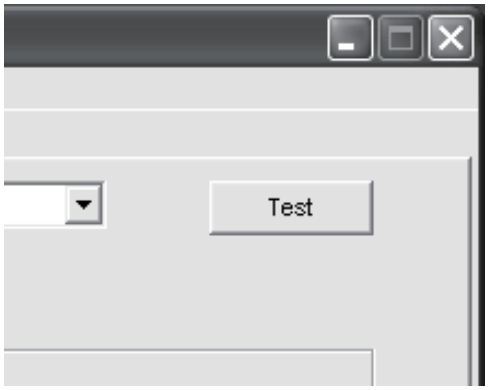

↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "13". Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "13".

3) Click Test to check that communication is being performed normally.
If an error occurred, check the error code and remove the error.
The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
Refer to the programming manual for error code details.

4) Through the above steps, it is confirmed that the logical station number settings are correct. This logical station number is made applicable by user program creation and PLC monitor utility.
Collect device data, using this logical station number.

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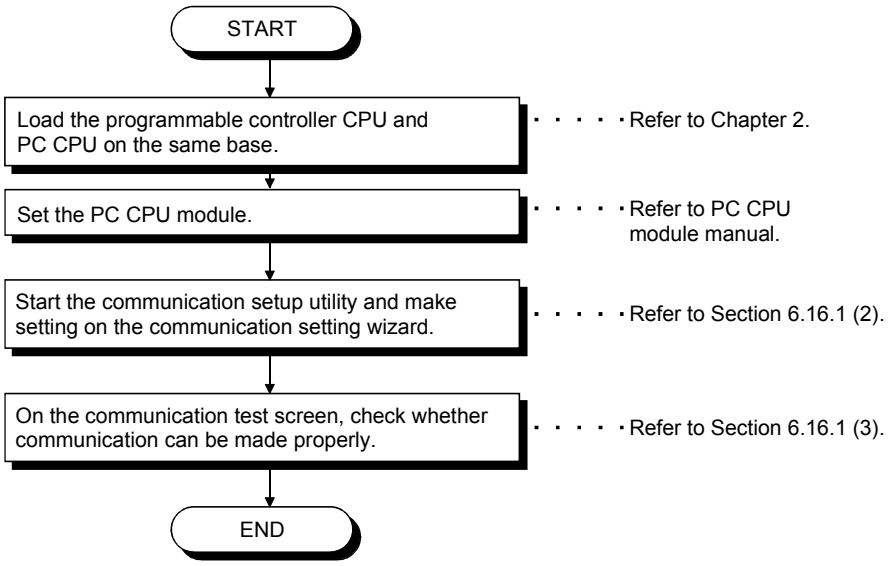
6.16 Q Series Bus Communication

This section provides the Q series bus communication procedure and its setting example using the utility setting type.

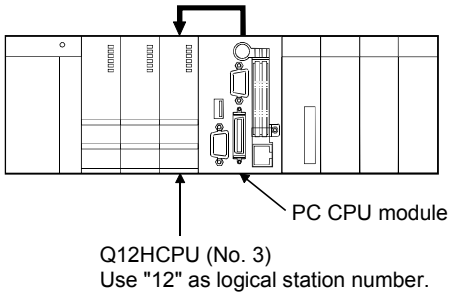
6.16.1 Accessing procedure

The procedure for making access to the programmable controller CPU using Q series bus communication will be explained in the following order.



(1) System example

The following system example is used in this section.



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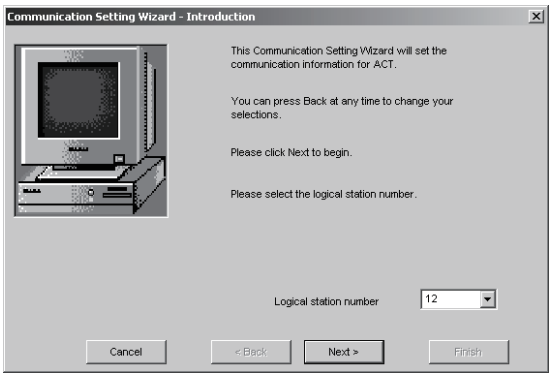
(2) Setting the logical station number (Setting on communication setting wizard)

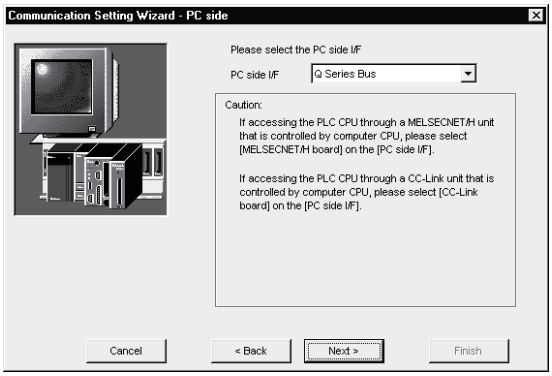
Logical station number setting will be described using the system example for (1).

1) Start the communication setup utility and select the communication setting wizard.



2) Type "12" in Logical station number and click Next>.

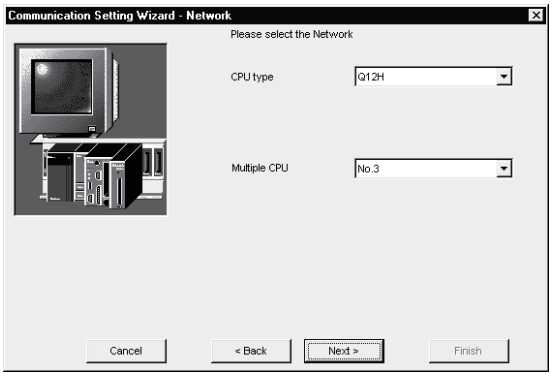
↓



3) Make settings as indicated below and click Next>.

PC side I/F : Q Series Bus

↓



4) Make settings as indicated below and click Next>.

CPU type : Q12H
Multiple CPU : No.3

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(From the previous page)

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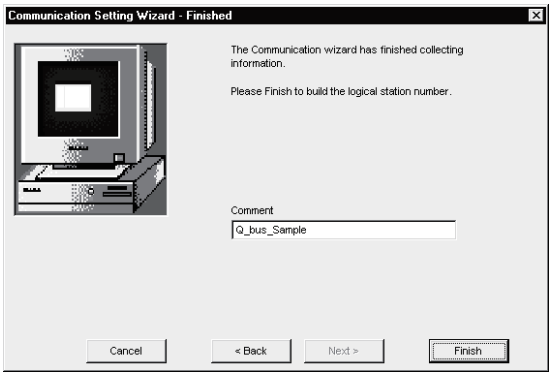

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(Registration complete)

5) Enter a comment and click Finish.

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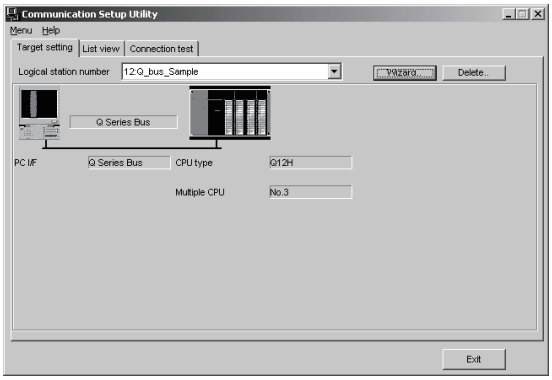
(3) Checking the logical station number settings (Conducting a communication test)

Check whether the Q series bus communication settings are correct or not, using the logical station number set in (2).



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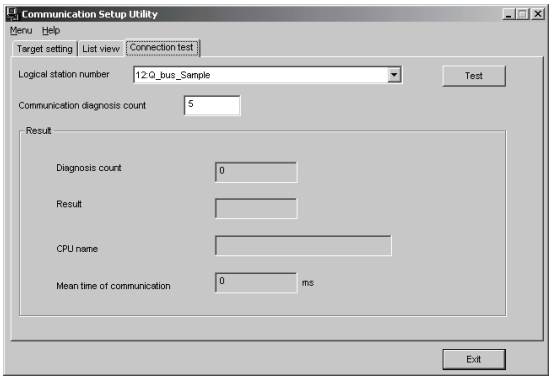
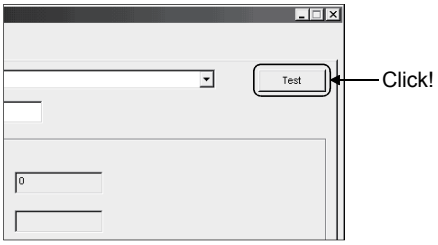


↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "12".
   Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "12".

3) Click Test to check that communication is being performed normally.
   If an error occurred, check the error code and remove the error.
   The error code appears in Result. (At normal termination, "0x00000000" appears in Result.)
   Refer to the programming manual for error code details.

4) Through the above steps, it is confirmed that the logical station number settings are correct.
   This logical station number is made applicable by user program creation and PLC monitor utility.
   Collect device data, using this logical station number.

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6.17 Modem Communication

This section explains the modem communication procedures and setting examples for 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 Developer, and then start modem communication using MX Component.

6.17.1 Switch settings of A6TEL, Q6TEL, QC24N, Q Series Corresponding C24, L Series Corresponding C24

This section explains the switch settings of the modules for the use of MX Component.

POINT

When MX Component is used, the settings of other than "As set by user" in the table are fixed to the settings in the table.

(1) A6TEL

Switch	Setting
DIP switches	Switch Number: 1 — Setting: OFF (Telephone line connection mode) Switch Number: 2 — Setting: OFF (Notification processing execution mode) Switch Number: 3 — Setting: OFF (Remote access enable mode) Switch Number: 4 — Setting: OFF

(2) Q6TEL

Switch	Setting	
	A mode	QnA mode
A/QnA select switch	A (A mode)	QnA (QnA mode)
MODEM/PLG select switch	MODEM (remote access) status	MODEM (remote access) status
DIP switches	Switch Number: 1 — Setting: OFF (Telephone line connection mode) Switch Number: 2 — Setting: OFF (Notification processing execution mode) Switch Number: 3 — Setting: OFF (Remote access enable mode) Switch Number: 4 — Setting: OFF	Switch Number: 1 — Setting: OFF (Telephone line connection mode) Switch Number: 2 — Setting: OFF Switch Number: 3 — Setting: OFF Switch Number: 4 — Setting: OFF

(3) QC24N

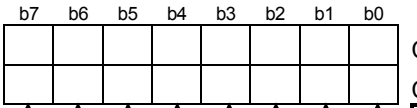
Switch (Switch Number)		Setting	
		CH1 side *1	CH2 side
Mode setting switch		5 format (5)	As set by user *3
Station number setting switch		0	
Transmission specification setting switches	Operation setting switch (SW01)	OFF (Independent operation)	OFF (Independent operation)
	Data bit setting (SW02)	ON (8)	As set by user *3
	Parity bit presence/absence setting (SW03)	OFF (No)	As set by user *3
	Even parity/odd parity setting (SW04)	OFF (Odd)	As set by user *3
	Stop bit setting (SW05)	OFF (1bit)	As set by user *3
	Sumcheck yes/no setting (SW06)	ON (Yes)	As set by user *3
	Online change enable/disable setting (SW07)	ON (Enable)	As set by user *3
	Setting change enable/disable setting (SW08)	As set by user	As set by user *3
	Transmission speed setting (SW09 to SW12)	As set by user *2	As set by user *3
	－ (SW13 to SW15)	All OFF	All OFF

*1: Modem communication is available on the CH1 side only.
*2: Make settings to meet the modem specifications.
*3: When using CH2, enter the values as set by the user.

(4) Q Series Corresponding C24, L Series Corresponding C24 (When performing modem communication on CH1 side)

Item	Settings		Set Value
	b15 to b8	b7 to b0	
Switch 1	CH1 communication speed *1	CH1 transmission setting *2	*3
Switch 2	－	CH1 communication protocol	0005H
Switch 3	CH2 communication speed	CH2 transmission setting *2	*4
Switch 4	－	CH2 communication protocol	*4
Switch 5	Module station number		As set by user

*1: Make settings to meet the modem specifications.
*2: Settings of CH1 and CH2 are indicated below.
*3: Confirm the settings of the CH1 communication speed and CH1 transmission setting, and enter the set values.
*4: When using CH2, enter the values as set by the user.



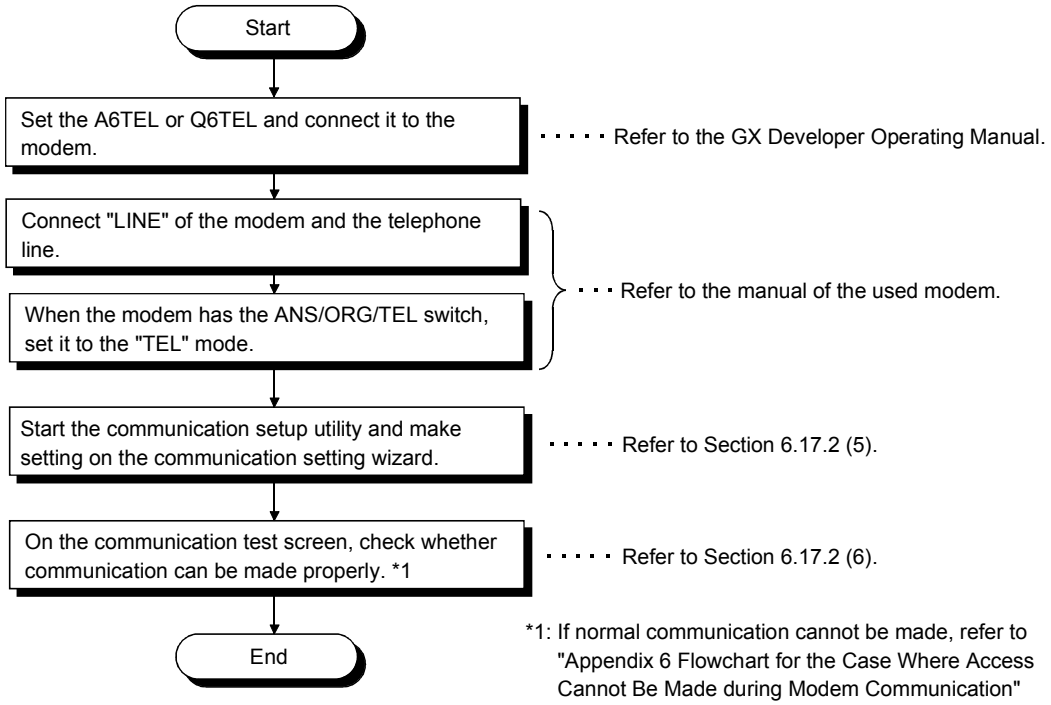
Bit	Description	Settings	
		CH1 transmission setting	CH2 transmission setting
b0	Operation setting	0 (Independent)	0 (Independent)
b1	Data bit	1 (8)	As set by user *5
b2	Parity bit	0 (No)	As set by user *5
b3	Odd/even parity	0 (Odd)	As set by user *5
b4	Stop bit	0 (1)	As set by user *5
b5	Sumcheck code	1 (Yes)	As set by user *5
b6	Online change	1 (Enable)	As set by user *5
b7	Setting change	As set by user	As set by user *5

*5: When using CH2, enter the values as set by the user.

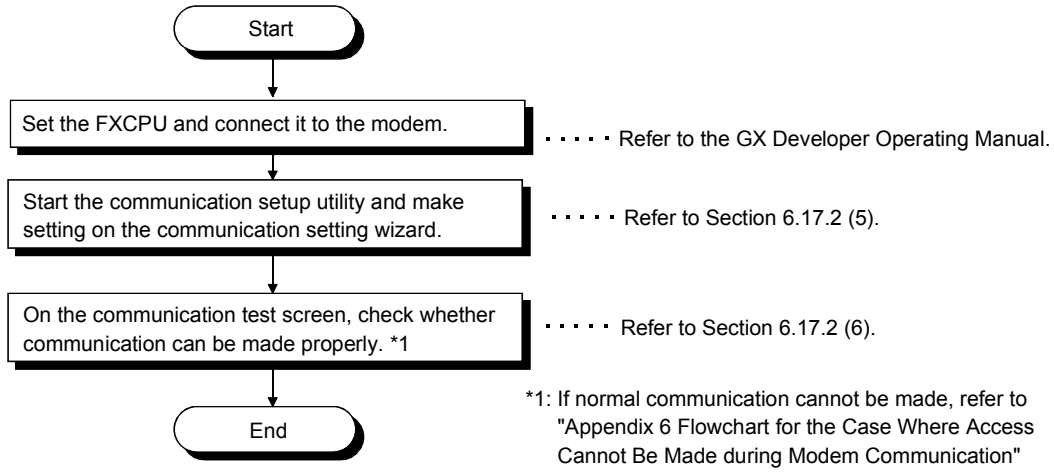
6.17.2 Access procedure

This section explains the procedure for accessing the programmable controller CPU using modem communication in the following flowchart.

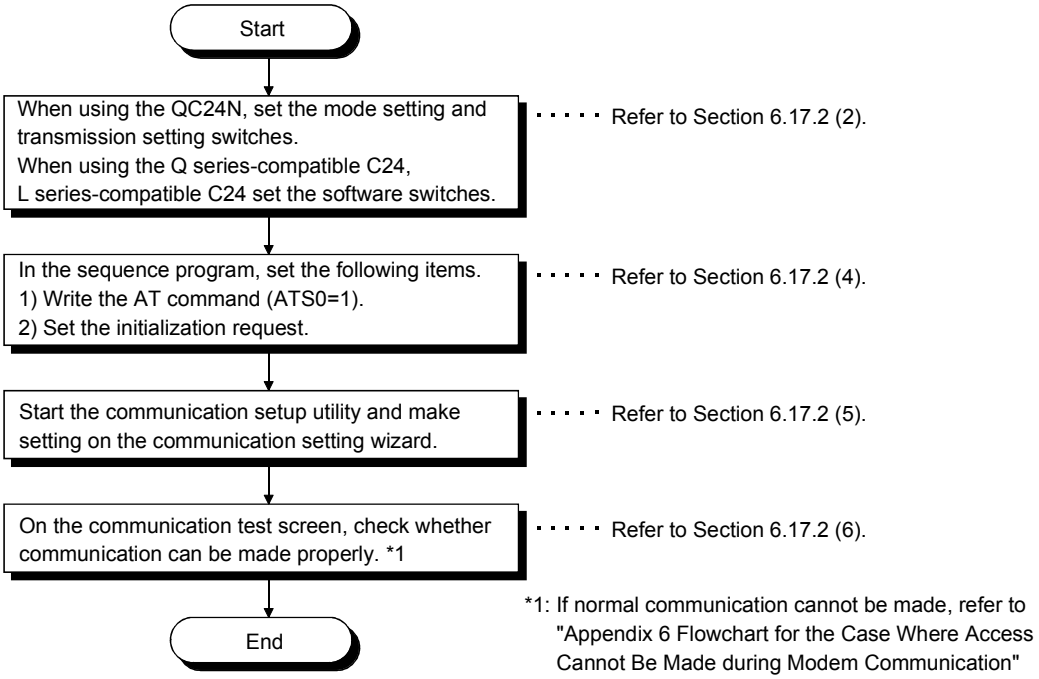
<When A6TEL or Q6TEL is used>



<When FXCPU is used>

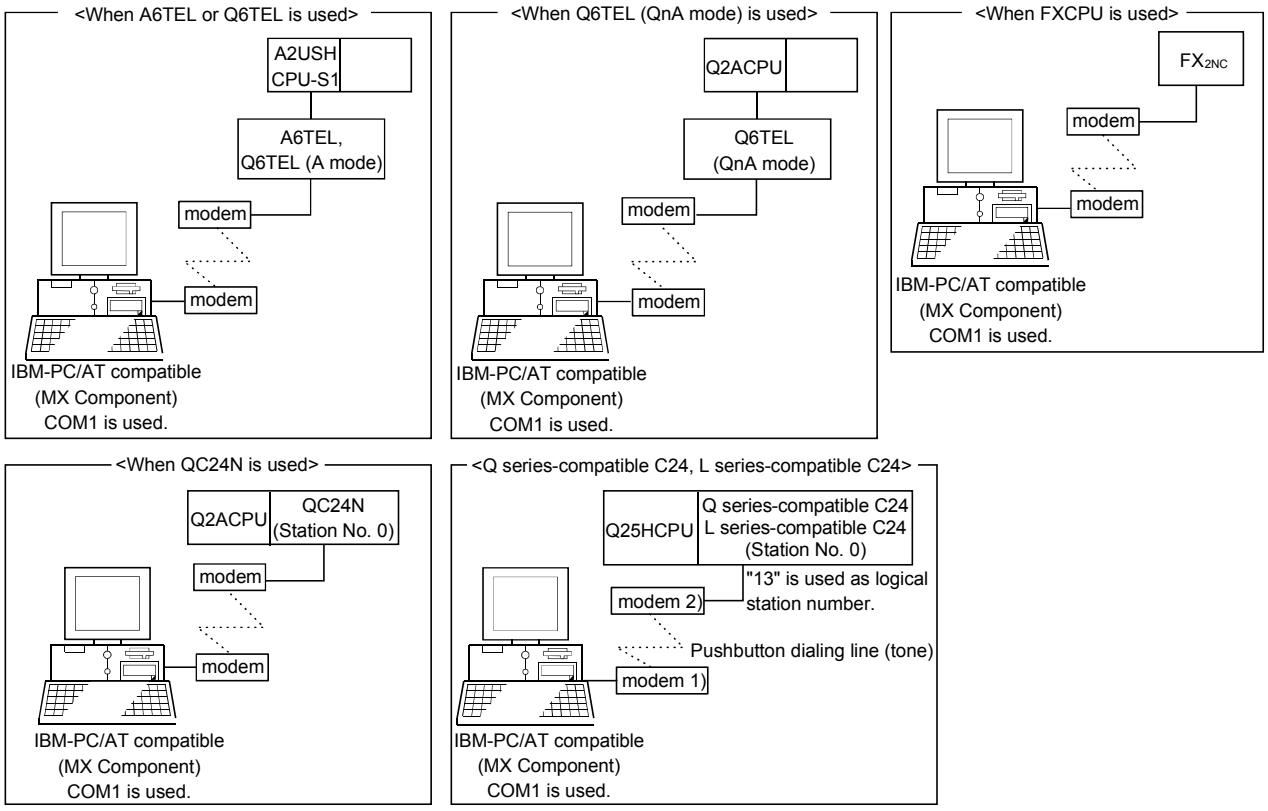


<When QC24N or Q series-compatible C24, L series-compatible C24 is used>



(1) System example

The following system example is used in this section.



(2) Setting the Switch of A6TEL, Q6TEL, QC24N, Q Series Corresponding C24, L series-compatible C24

(a) A6TEL, Q6TEL

The A6TEL and Q6TEL switch setting examples in this section are the same as in "Section 6.17.1 Switch settings of A6TEL, Q6TEL, QC24N, Q Series Corresponding C24, L Series Corresponding C24".
For details, refer to "Section 6.17.1 Switch settings of A6TEL, Q6TEL, QC24N, Q Series Corresponding C24, L Series Corresponding C24".

(b) QC24N

<table>
<tr><td colspan="2" rowspan="2">Switch (Switch Number)</td><td colspan="2">Settings</td></tr>
<tr><td>CH1 side *1</td><td>CH2 side</td></tr>
<tr><td colspan="2">Mode setting switch</td><td>5 (format 5)</td><td>5 (format 5)</td></tr>
<tr><td colspan="2">Station number setting switch</td><td colspan="2">0</td></tr>
<tr><td rowspan="10">Transmission specification setting switches</td><td>Operation setting switch (SW01)</td><td>OFF (Independent operation)</td><td>OFF (Independent operation)</td></tr>
<tr><td>Data bit setting (SW02)</td><td>ON (8)</td><td>ON (8)</td></tr>
<tr><td>Parity bit presence/absence setting (SW03)</td><td>OFF (No)</td><td>OFF (No)</td></tr>
<tr><td>Even parity/odd parity setting (SW04)</td><td>OFF (Odd)</td><td>OFF (Odd)</td></tr>
<tr><td>Stop bit setting (SW05)</td><td>OFF (1bit)</td><td>OFF (1bit)</td></tr>
<tr><td>Sumcheck yes/no setting (SW06)</td><td>ON (Yes)</td><td>ON (Yes)</td></tr>
<tr><td>Online change enable/disable setting (SW07)</td><td>ON (Enable)</td><td>ON (Enable)</td></tr>
<tr><td>Setting change enable/disable setting (SW08)</td><td>OFF (Disable)</td><td>ON (Enable)</td></tr>
<tr><td>Transmission speed setting (SW09 to SW12)</td><td>19200bps
<table><tr><td>SW</td><td>Settings</td></tr><tr><td>SW09</td><td>OFF</td></tr><tr><td>SW10</td><td>ON</td></tr><tr><td>SW11</td><td>ON</td></tr><tr><td>SW12</td><td>OFF</td></tr></table></td><td>19200bps
<table><tr><td>SW</td><td>Settings</td></tr><tr><td>SW09</td><td>OFF</td></tr><tr><td>SW10</td><td>ON</td></tr><tr><td>SW11</td><td>ON</td></tr><tr><td>SW12</td><td>OFF</td></tr></table></td></tr>
<tr><td>－ (SW13 to SW15)</td><td>All OFF</td><td>All OFF</td></tr>
</table>

*1: Modem communication is available on the CH1 side only.

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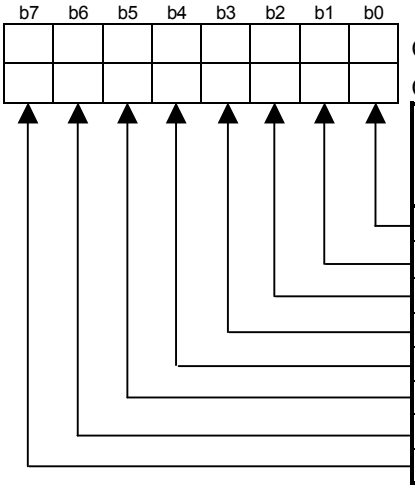
(c) Q series-compatible C24, L series-compatible C24 (When modem communication is made on CH1 side)

Item	Settings		Set Value
	b15 to b8	b7 to b0	
Switch 1	CH1 communication speed	CH1 transmission setting *1	0762H
Switch 2	—	CH1 communication protocol	0005H
Switch 3	CH2 communication speed	CH2 transmission setting *1	0000H
Switch 4	—	CH2 communication protocol	0000H
Switch 5	Module station number		0000H

*1: Settings of CH1 and CH2 are indicated below.



Bit	Description	Settings	
		CH1 transmission setting	CH2 transmission setting
b0	Operation setting	0 (Independent)	0 (Independent)
b1	Data bit	1 (8)	0 (7)
b2	Parity bit	0 (No)	0 (No)
b3	Odd/even parity	0 (Odd)	0 (Odd)
b4	Stop bit	0 (1)	0 (1)
b5	Sumcheck code	1 (Yes)	0 (No)
b6	Online change	1 (Enable)	0 (Disable)
b7	Setting change	0 (Disable)	0 (Disable)

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(3) Setting the A6TEL or Q6TEL data

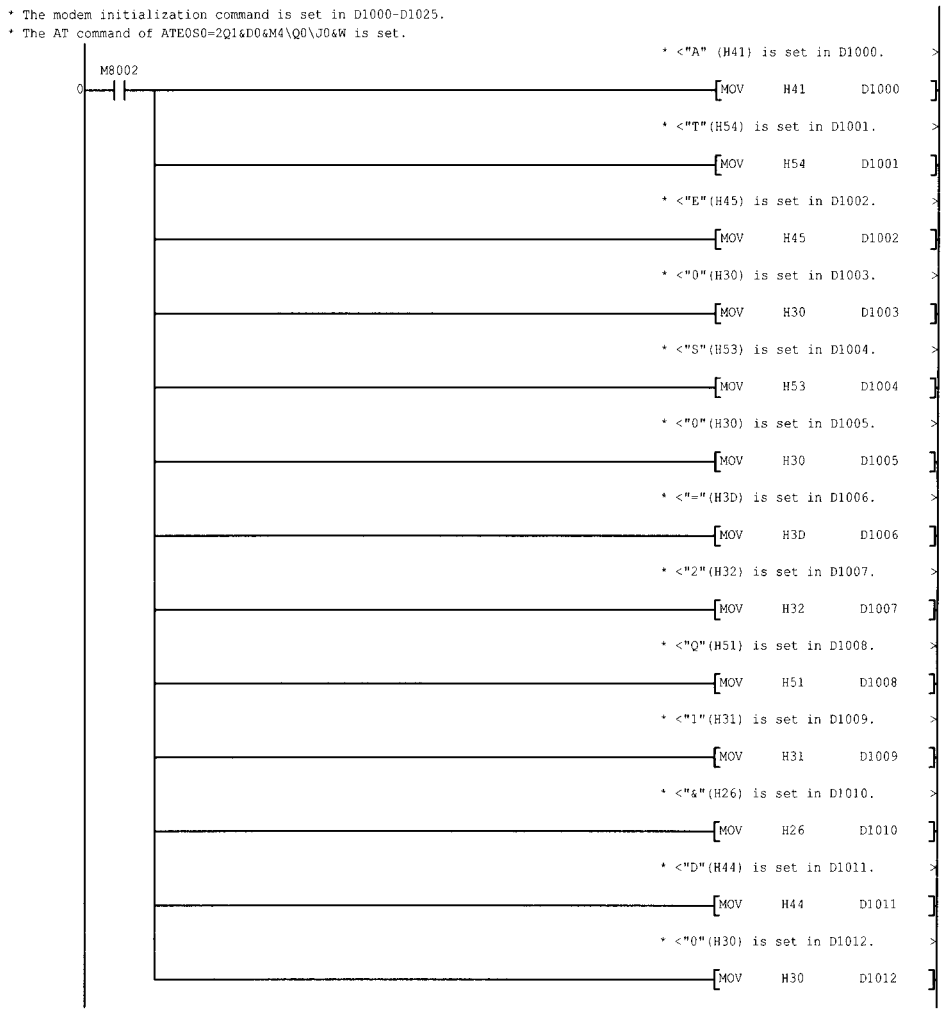
To use the A6TEL or Q6TEL, set the A6TEL or Q6TEL data.

For the settings and setting methods, refer to the GX Developer Operating Manual.

(4) Connect the FXCPU, QC24N, Q series-compatible C24 or L series-compatible C24 and the modem.

(a) FXCPU

A sequence program is required for the use of the FXCPU.



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POINT
This sample sequence program is installed into the following folders after installation of MX Component. [User-specified folder]-[Act]-[Sample]-[Gppw]-[Fxcp Bit utel]

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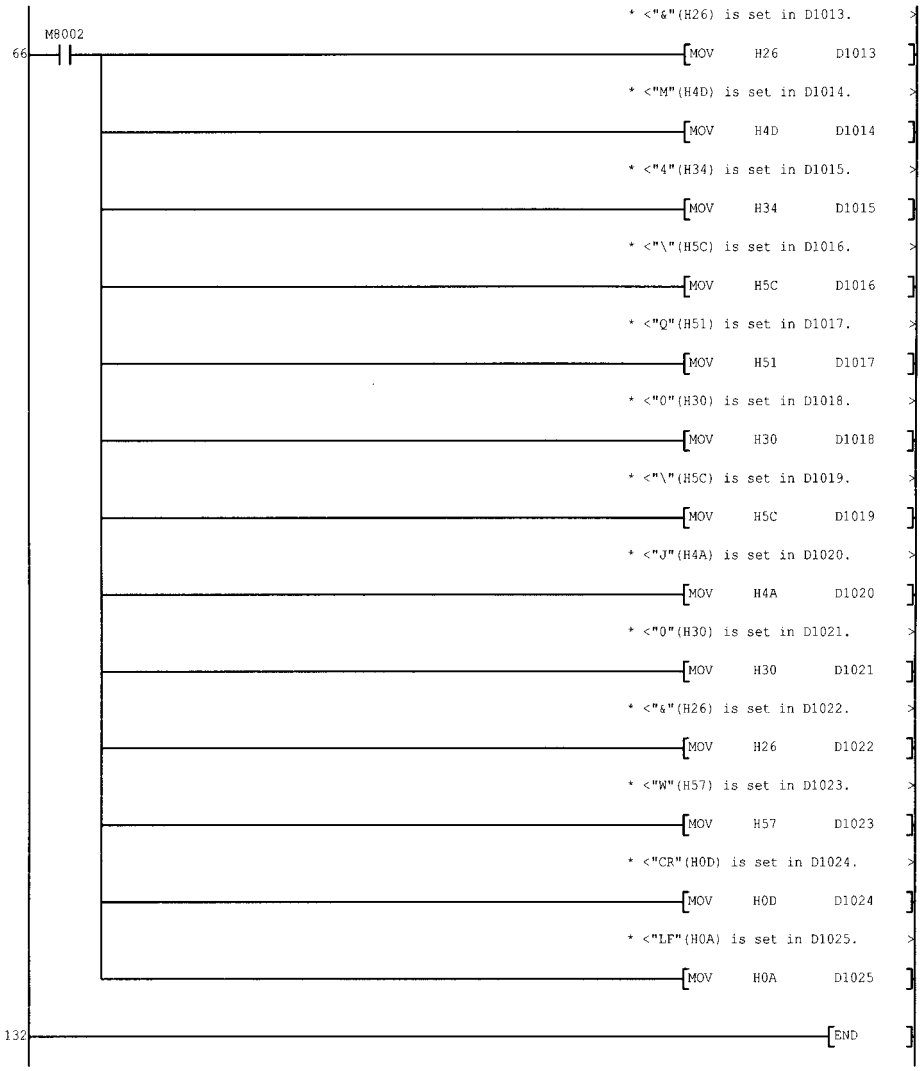

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(b) QC24N

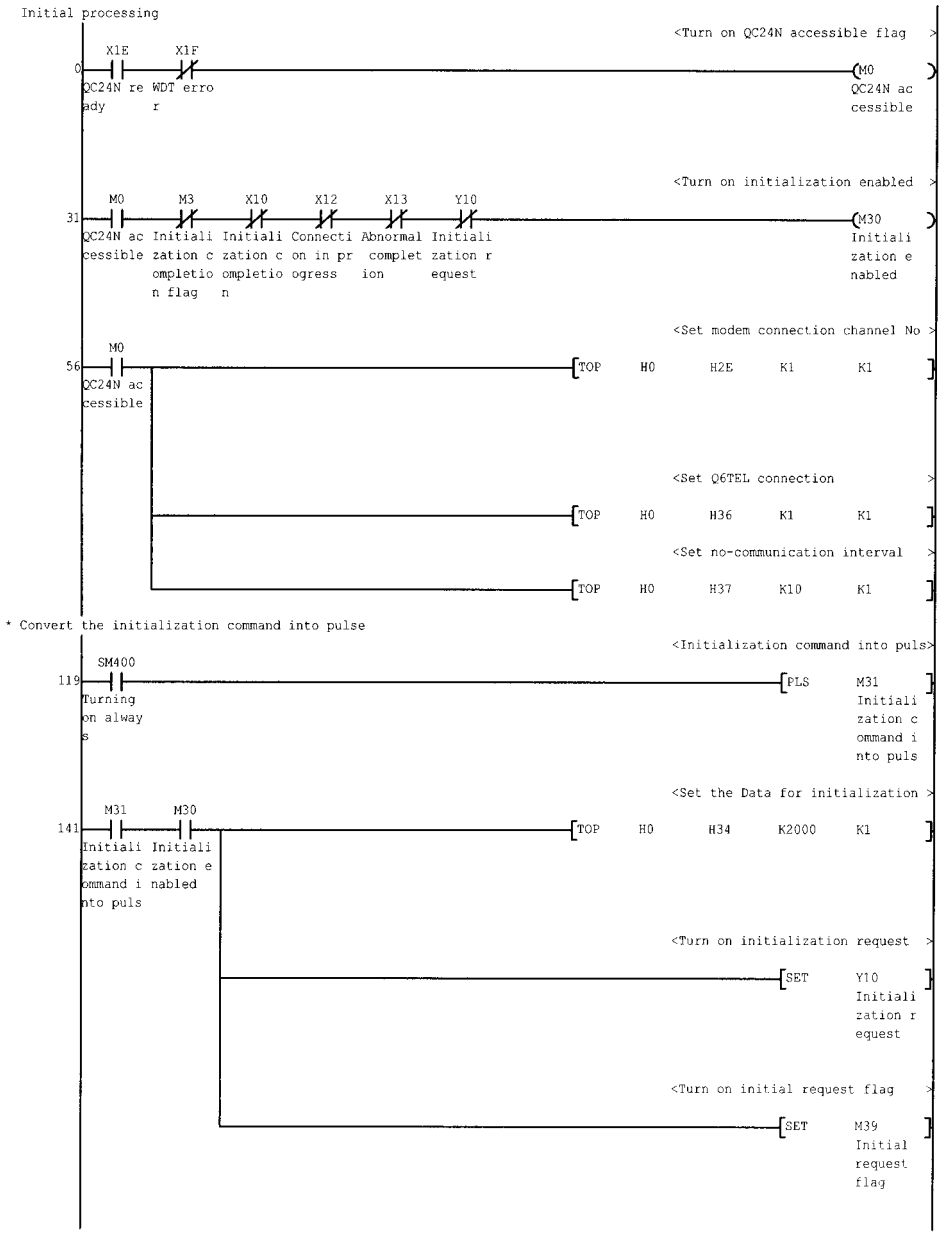
Using the QC24N requires a sequence program to set the following buffer memory addresses.

The following table indicates the buffer memory addresses that must be set and the sequence program.

Setting Item (Buffer Memory Address)	Settings	Setting in Sample Sequence Program
Modem connection channel designation (2E$_H$)	0: Not connected (modem function is not used) 1: CH1 side interface 2: CH2 side interface	1 (CH1)
Initialization data No. designation (34$_H$) *1	0$_H$: Send of initialization data specified in the sending user registration frame specifying area 7D0$_H$ to 7D4$_H$: Initialization data No.	2000 (No. 2000)
Q6TEL connection designation (36$_H$)	0: Does not make communication as Q6TEL. 1: Makes communication as Q6TEL.	1 (Communicate as Q6TEL)
No-communication interval time designation (37$_H$)	0: Unlimited waiting 1 to 120: No-communication interval time (line disconnection waiting time)	10 (10 minutes)

*1: The following initialization data are factor-registered to the QC24N. When the modem used corresponds to the initialization data (7D0$_H$ to 7D4$_H$), specify the following registration number.
When using the modem where the initialization data have not been registered, register the AT command to the E^2PROM or buffer memory address (1B00$_H$) of the QC24N.

Registration No.		Initialization Command	Corresponding Device	
Hexadecimal	Decimal		Maker	Type
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



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POINT

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[AJ71QC24NTEL]

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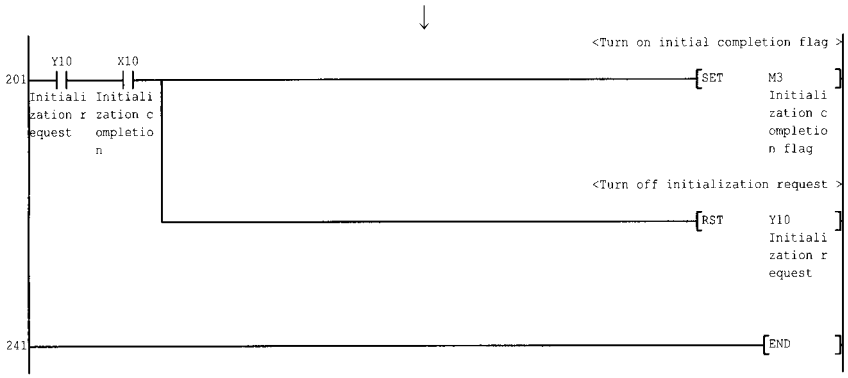

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(c) Q series-compatible C24, L series-compatible C24

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)	Settings
Modem connection channel designation (2EH)	0: Not connected (modem function is not used) 1: CH1 side interface 2: CH2 side interface
Initialization data No. designation (34H) *1	0H: Send of initialization data specified in the sending user registration frame specifying area 7D0H to 7D4H: Initialization data No.
GX Developer connection designation (36H)	0: Not connected 1: Connected.
Callback function designation (2001H)	0H: Auto line connect 1H: Callback connect (Fixation) 3H: Callback connect (Number specification) 7H: Callback connect (Number specification (max. 10 units)) 9H: Auto line connect (Callback fixation) BH: Auto line connect (Callback number specification) FH: Auto line connect (Callback number specification (max. 10 units))

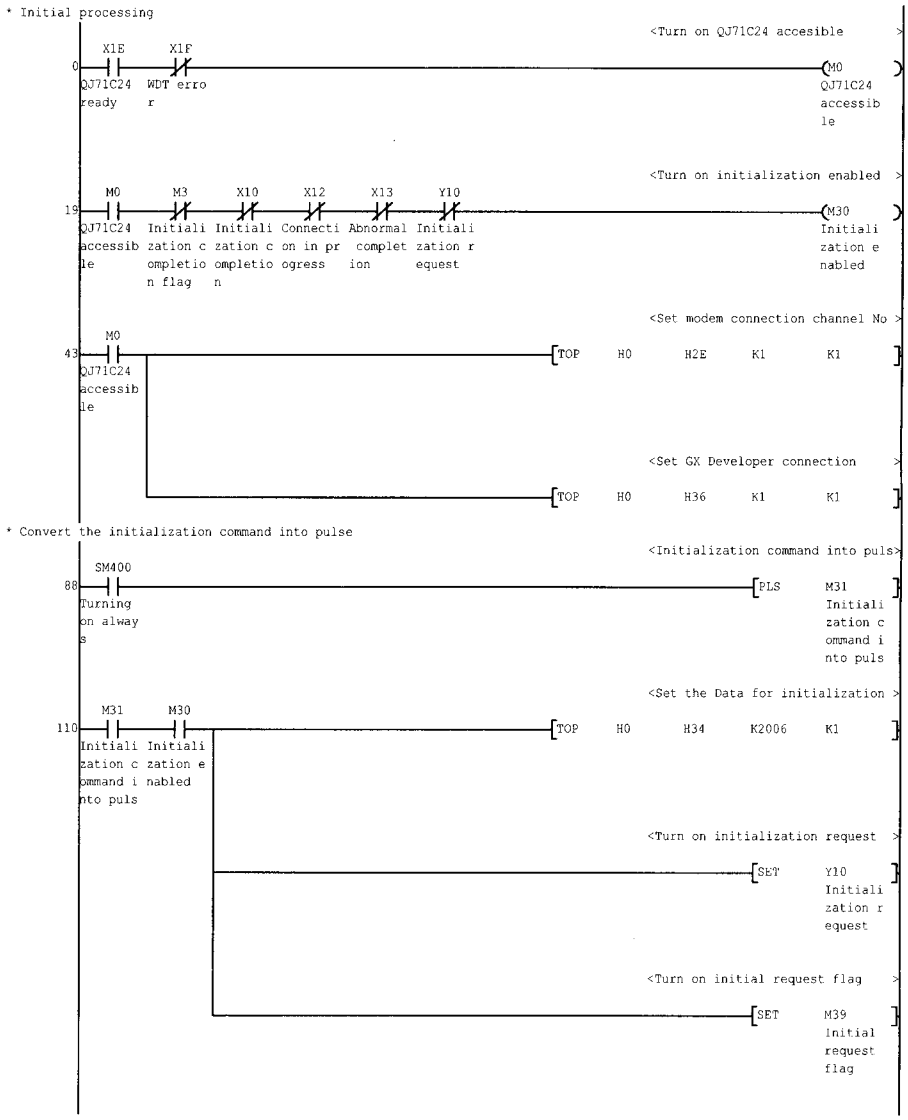
*1: The following initialization data are factor-registered to the Q series-compatible C24.
When the modem used corresponds to the initialization data (7D0H to 7DAH), specify the following registration number.
When using the modem where the initialization data have not been registered, register the AT command to the buffer memory address (1B00H) of the Q series-compatible C24.

Registration No.		Initialization Command	Corresponding Device	
Hexadecimal	Decimal		Maker	Type
7D0H	2000	ATQ0V1E1X1\J0\Q2\V2\N3S0=1	Aiwa	PV-AF2881WW PV-BF288M2
7D1H	2001	ATQ0V1E1X1\Q2\V2\N3S0=1	Micro General Laboratory	MC288XE MC288X1
7D2H	2002	ATQ0V1E1X1&K3\N3S0=1	Microcom	DESKPORTE22.8S DESKPORTE33.6S
7D3H	2003	ATQ0V1E1X1&H1&R2&A3&D2S0=1	Omron	ME3314B
7D4H	2004	ATQ0V1E1X1\J0\Q2\N3S0=1	Sun Electronic	MS336AF
7D5H	2005	ATE1Q0V1&C1&D2&H1&I0&R2&S0S0=1	Omron	ME5614B
7D6H	2006	ATE1Q0V1&C1&D2&K3&S0S0=1	Sun Electronic	MS56KAF
			Micro General Laboratory	MRV56XL
			Matsushita Electric	VS-2621A
7D7H	2007	ATE1Q0V1&C1&D2&K3&S1S0=1		VC-173
7D8H	2008	ATE1Q0V1&C1&D2&K3&S0S0=1	Omron	MT128B -D
7D9H	2009	ATE1Q0V1&C1&D1\Q2&S0S0=1	Sun Electronic	TS128JX
7DAH	2010	ATE1Q0V1&C1&D2\Q3&S0S0=1	Sharp	DN-TA1
7DCH	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.	
7DDH	2013	ATX1&S0S0=1		

1) When callback function is not used

Setting Item (Buffer Memory Address)	Settings
Modem connection channel designation (2EH)	1 (CH1)
Initialization data No. designation (34H)	2006 (No.2006)

Setting Item (Buffer Memory Address)	Settings
GX Developer connection designation (36H)	1 (Connected.)
Callback function designation (2001H)	—



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POINT

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[QJ71C24TEL]

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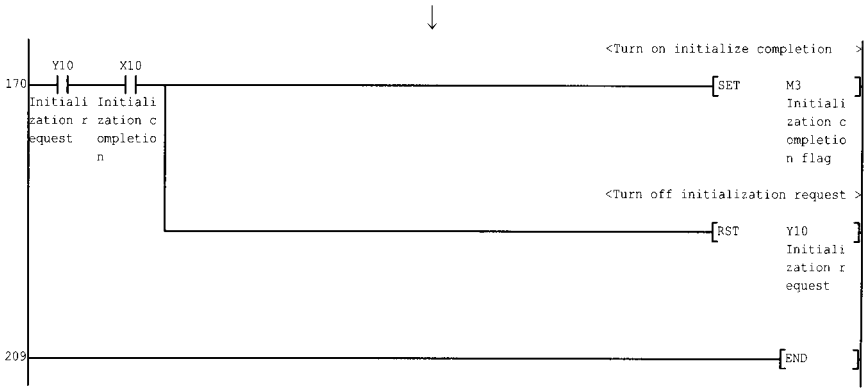

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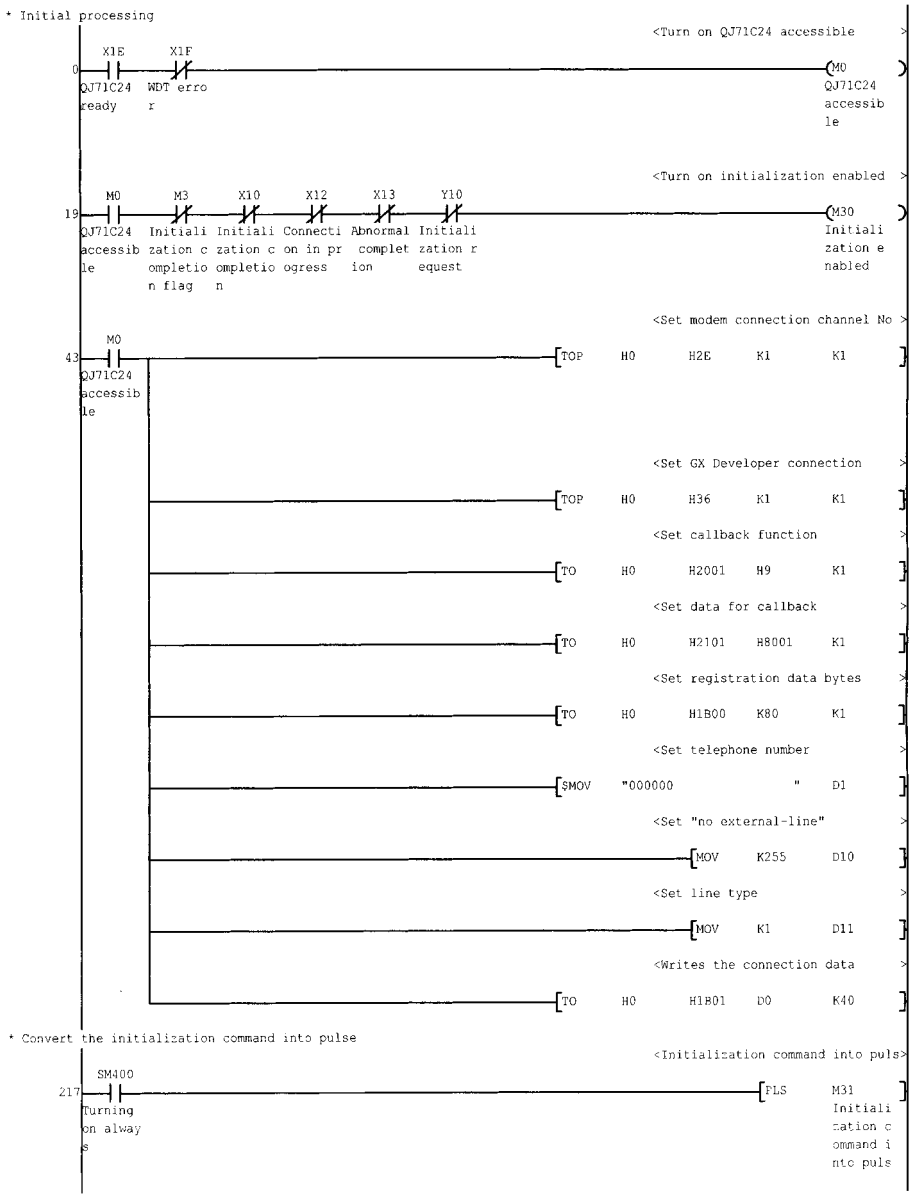
2) When "Auto line connect (Callback fixation)" is used as callback function

Setting Item (Buffer Memory Address)	Settings
Modem connection channel designation (2E$_H$)	1 (CH1)
Initialization data No. designation (34$_H$)	2012 (No.2012)

Setting Item (Buffer Memory Address)	Settings
GX Developer connection designation (36$_H$)	1 (Connected.)
Callback function designation (2001$_H$)	9H (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]-[Sample]-[Gppw]-[QJ71C24Callback]

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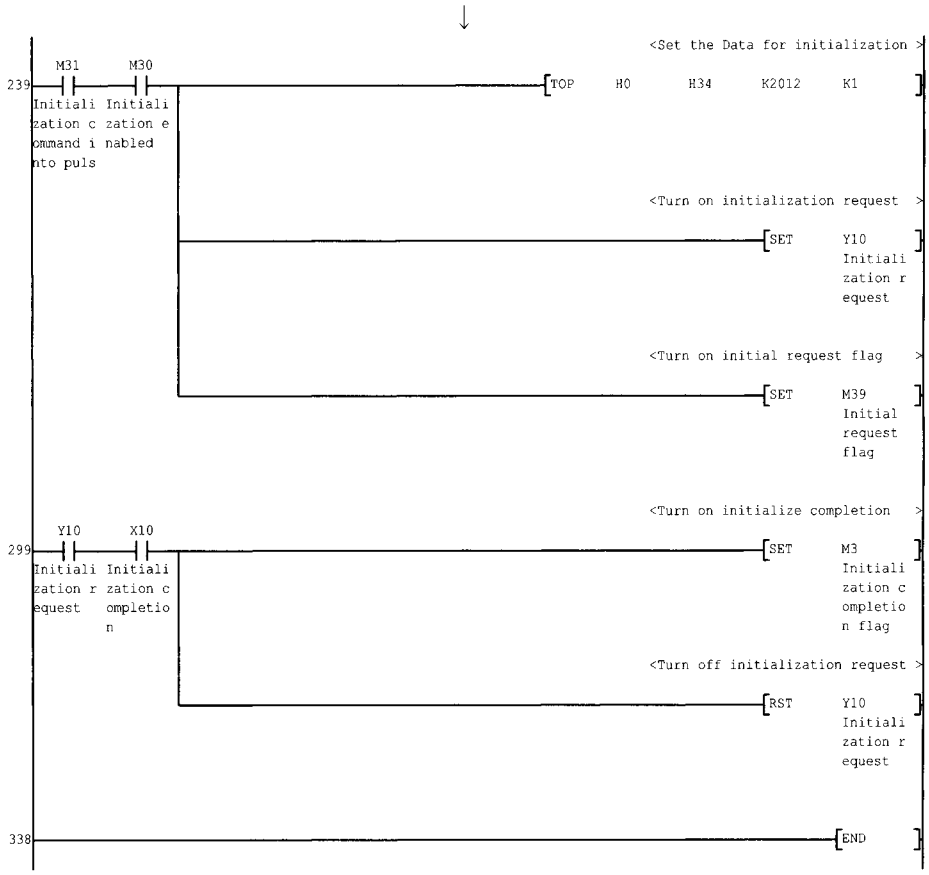

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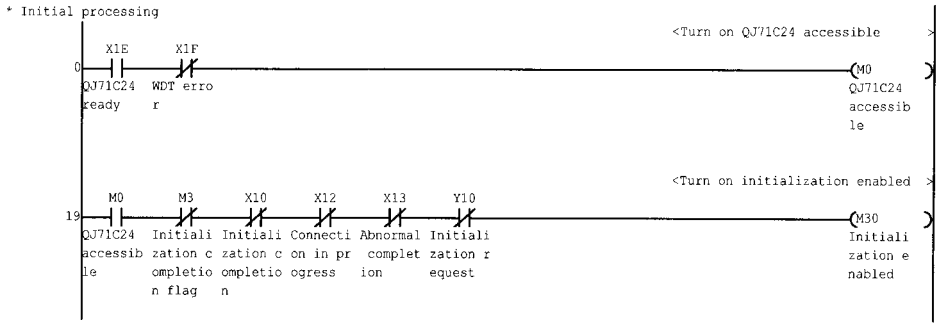
3) When "Auto line connect (Callback number specification (max. 10 units))" is used as callback function

Setting Item (Buffer Memory Address)	Settings
Modem connection channel designation (2EH)	1 (CH1)
Initialization data No. designation (34H)	2012 (No.2012)

Setting Item (Buffer Memory Address)	Settings
GX Developer connection designation (36H)	1 (Connected.)
Callback function designation (2001H)	FH (Auto line connect (Callback number specification (max. 10 units)))



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POINT

This sample sequence program is installed into the following folders after installation of MX Component.
[User-specified folder]-[Act]-[Sample]-[Gppw]-[QJ71C24CallbackNumber]

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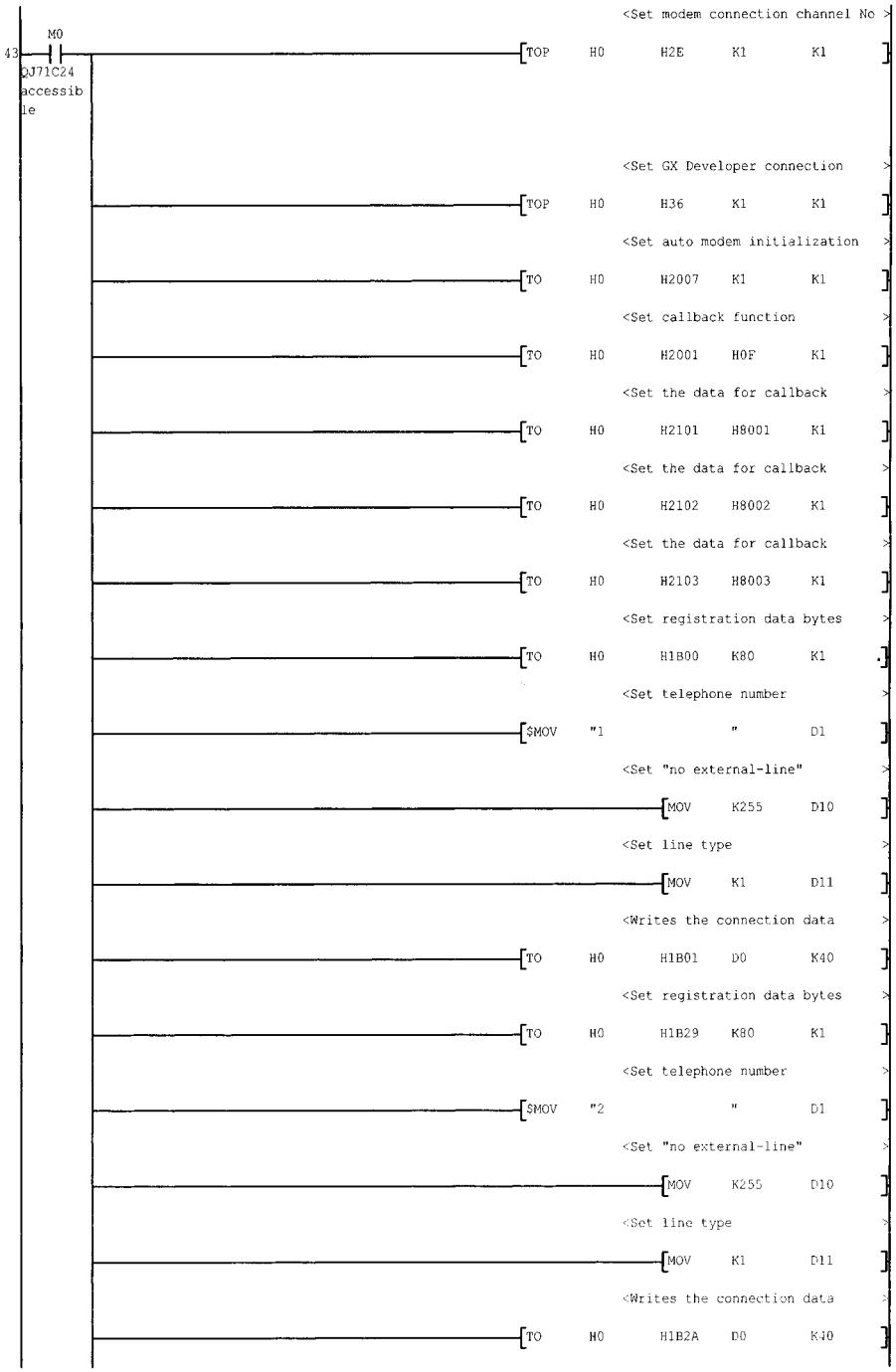

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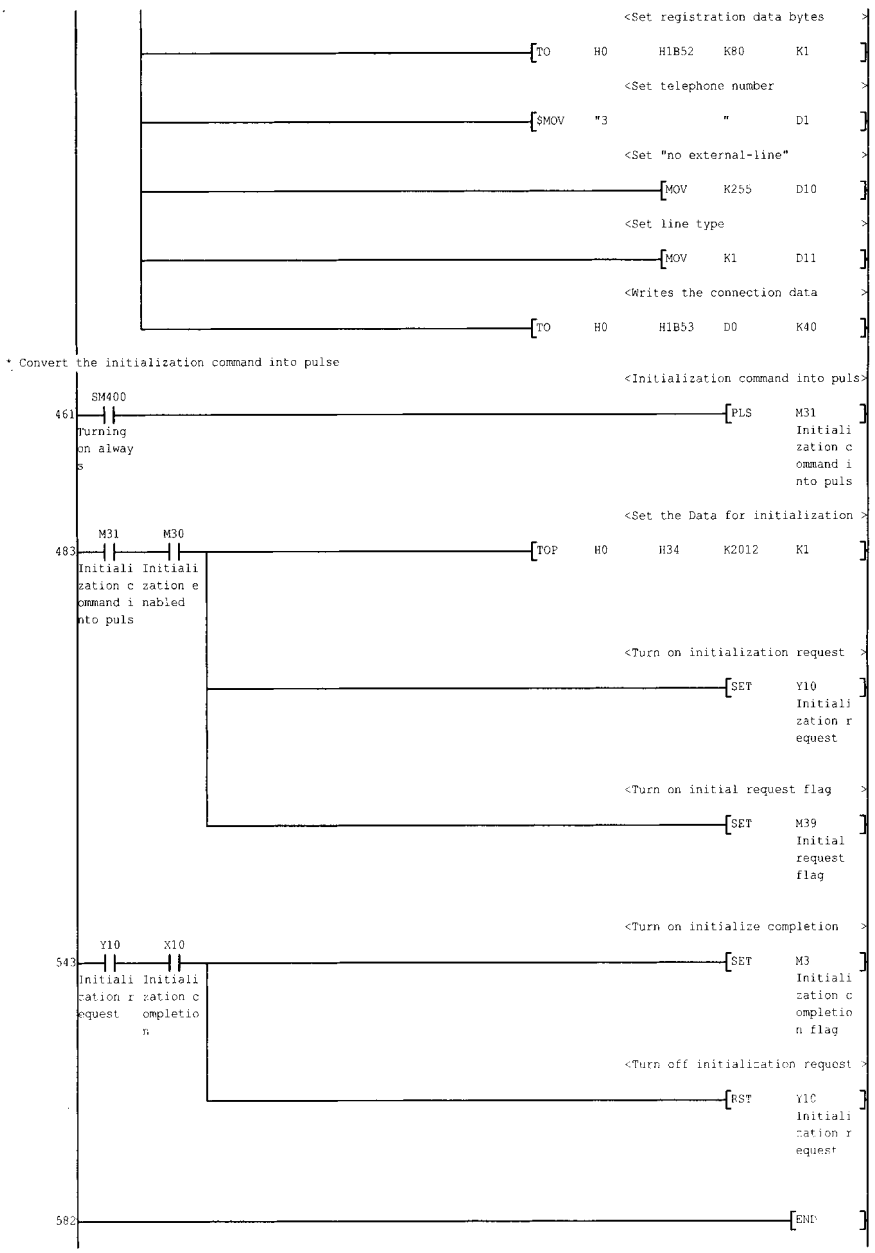
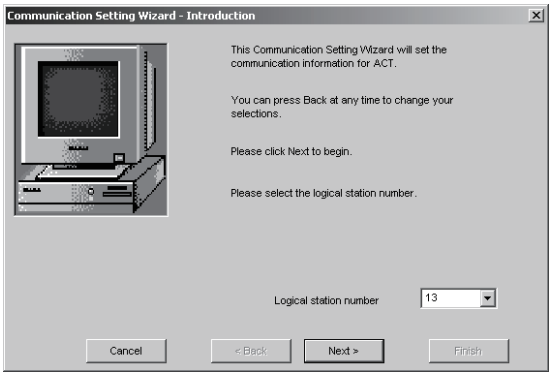


6 - 116

(5) Setting the Logical station number (Setting on communication setting wizard)

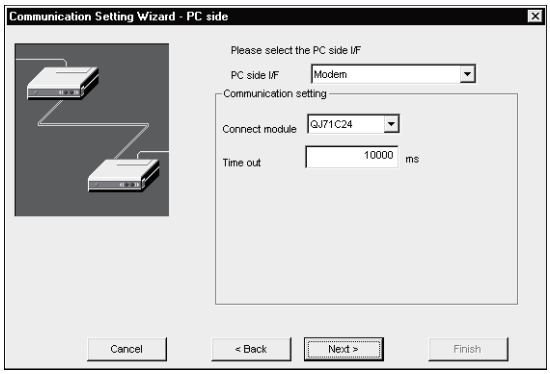
This section describes the setting of the logical station number using the Q series-compatible C24 system example.

1) Start the communication setup utility and select the communication setting wizard.



2) Type "13" in Logical station number and click Next>.

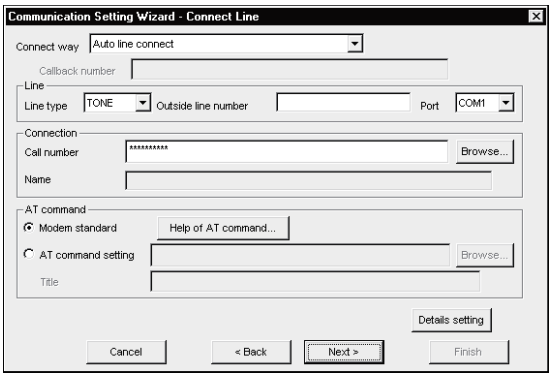
↓



3) Make settings as indicated below and click Next>.

PC side I/F : Modem
Connect module : QJ71C24
Time out : 10000

↓



4) Make settings as indicated below and click Next>.

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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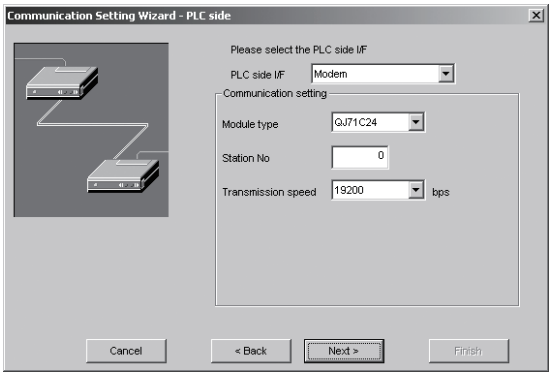
(From the previous page)

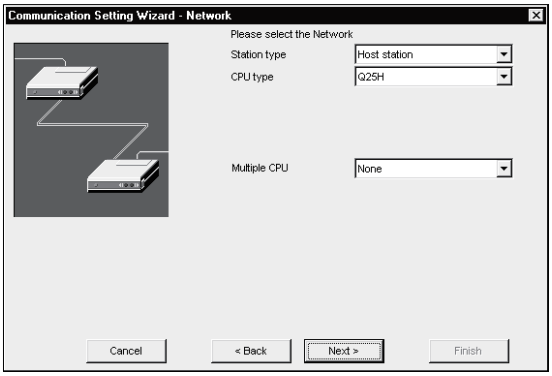
↓



5) Make settings as indicated below and click Next>.

PLC side I/F : Modem
Module type : QJ71C24
Station No : 0
Transmission speed: 19200

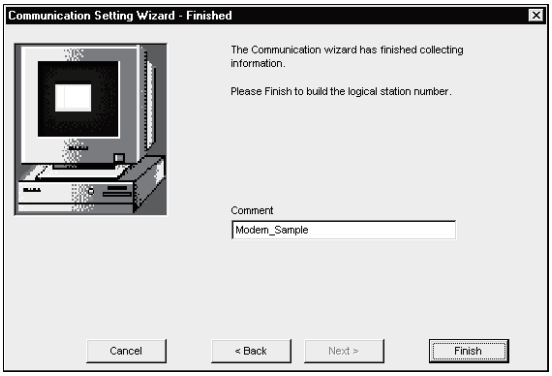
↓



6) Make settings as indicated below and click Next>.

Station type : Host station
CPU type : Q25H
Multiple CPU : None

↓



7) Enter a comment and click Finish.

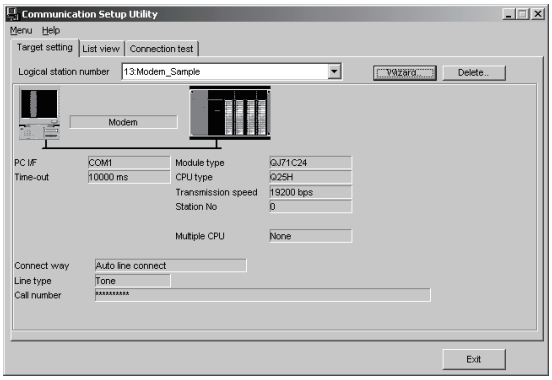
↓

(Registration complete)

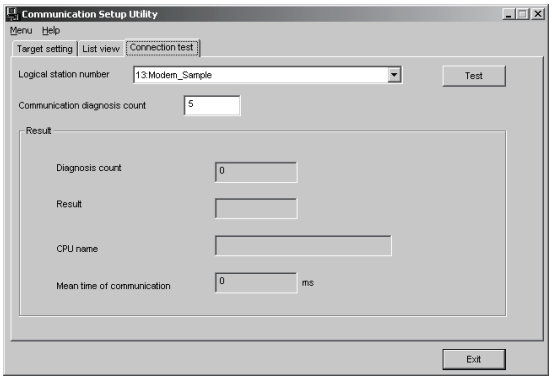
6 - 118

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

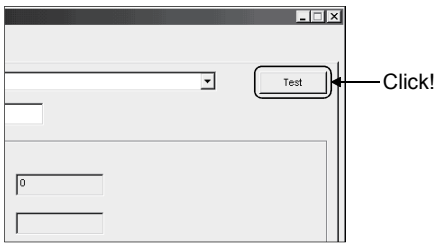
Check whether modem communication settings are correct or not, using the logical station number set in (5).



↓



↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "13".
   Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "13".

3) Click Test to check that communication is being performed normally.
   If an error occurred, check the error code and remove the error.
   The error code occurs in Result. (At normal termination, "0x00000000" appears in Result.)
   Refer to the programming manual for error code details.

4) Through the above steps, it is confirmed that the logical station number settings were correct.
   This logical station number is made applicable by user program creation and PLC monitor utility.
   Collect device data, using this logical station number.

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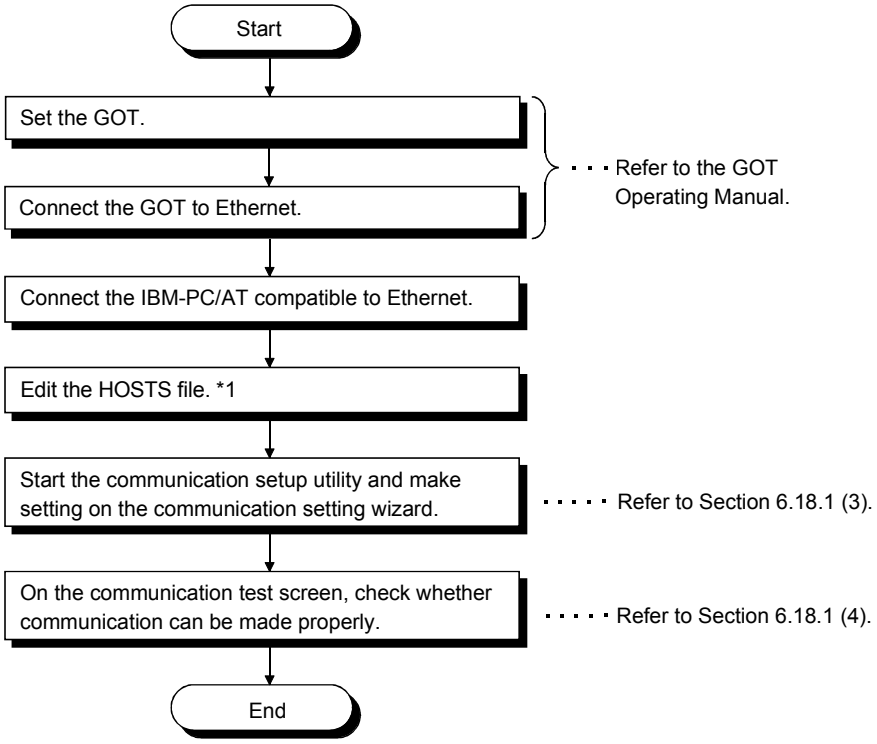
6.18 Gateway Function Communication

This section describes the gateway function communication procedure and setting example for the utility setting type.

6.18.1 Access procedure

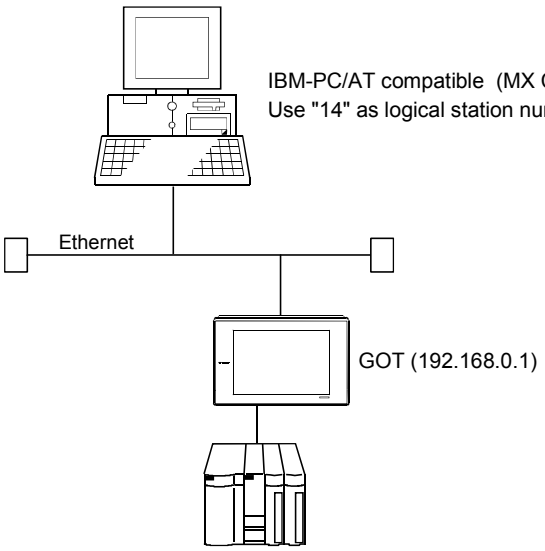
This section explains the procedure for accessing the GOT using gateway function communication in the following flowchart.



*1: The HOSTS file need not be edited when the IP address is entered into the host name (IP Address) of the communication settings utility and the ActHostAddress property of the gateway function communication control.

(1) System examples

The following system examples are used in this section.



(2) Checking communication

After completion of preparations for making 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.

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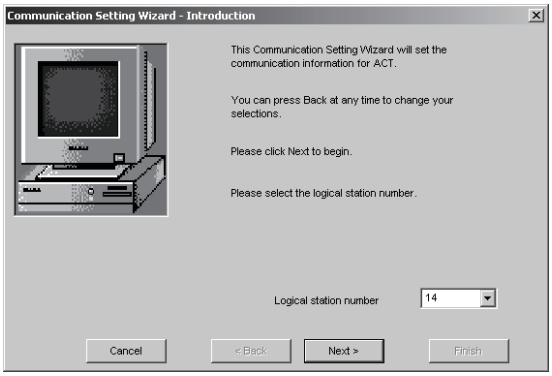
(3) Setting the Logical station number (Setting on communication setting wizard)

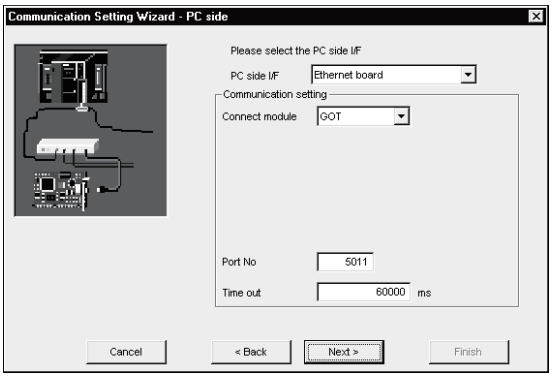
This section describes the setting of the logical station number using (1) system example.

1) Start the communication setup utility and select the communication setting wizard.



2) Type "14" in Logical station number and click Next>.

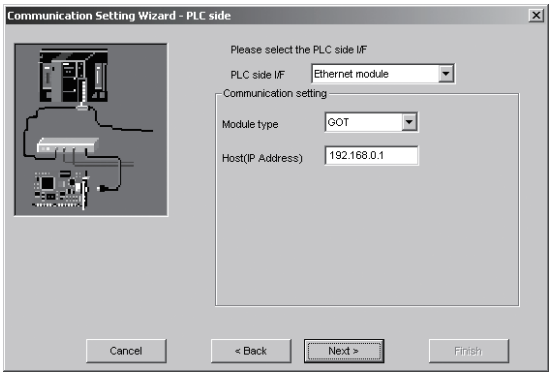
↓



3) Make settings as indicated below and click Next>.

PC side I/F	: Ethernet board
Connect module	: GOT
Port No	: 5011
Time out	: 60000

↓



4) Make settings as indicated below and click Next>.

PLC side I/F	: Ethernet board
Module type	: GOT
Host (IP Address)	: 192.168.0.1

↓

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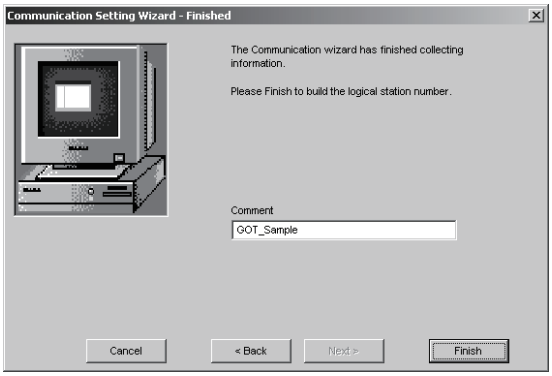
↓



5) Enter a comment and click Finish.

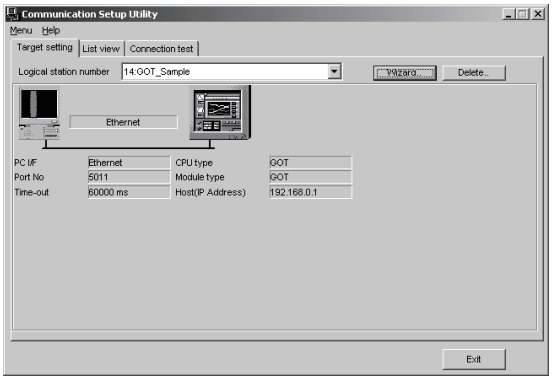
↓

(Registration complete)

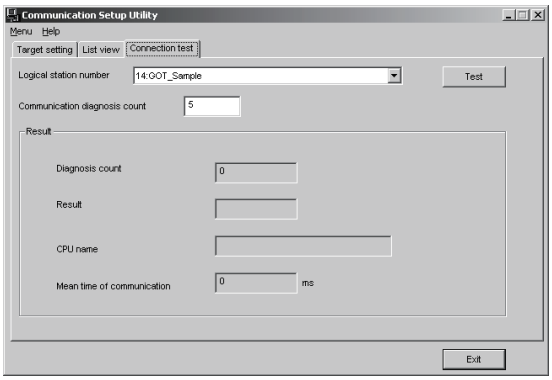
6 - 123

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

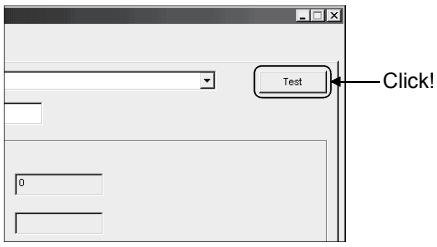
Check whether gateway function communication settings are correct or not, using the logical station number set in (3).



↓



↓



↓

(Communication test complete)

1) Display the "Target setting" tab screen and select the logical station number "14".
   Check whether the logical station number settings are correct or not.

2) Display the "Connection test" tab screen and set the logical station number "14".

3) Click Test to check that communication is being performed normally.
   If an error occurred, check the error code and remove the error.
   The error code occurs in Result. (At normal termination, "0x00000000" appears in Result.)
   Refer to the programming manual for error code details.

4) Through the above steps, it is confirmed that the logical station number settings were correct.
   This logical station number is made applicable by user program creation and PLC monitor utility.
   Collect device data, using this logical station number.

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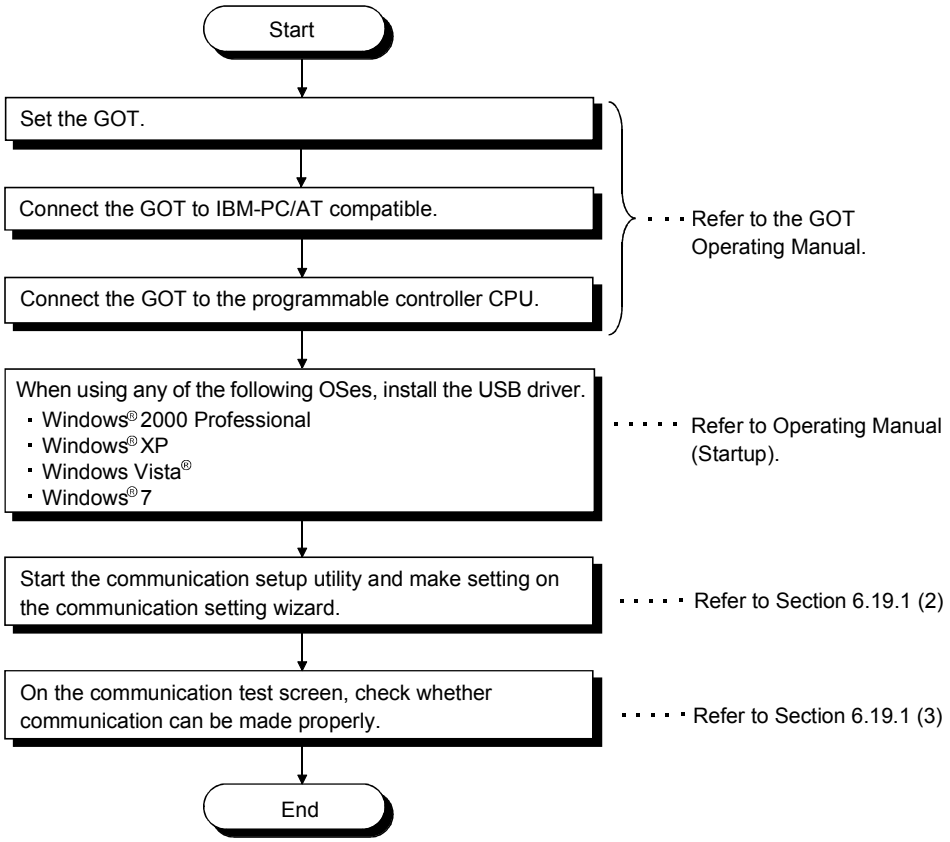
6.19 GOT Transparent Communication

This section describes the GOT transparent communication procedure and setting example for the utility setting type.

POINT
For usable system configuration, refer to GOT1000 Series Connection Manual

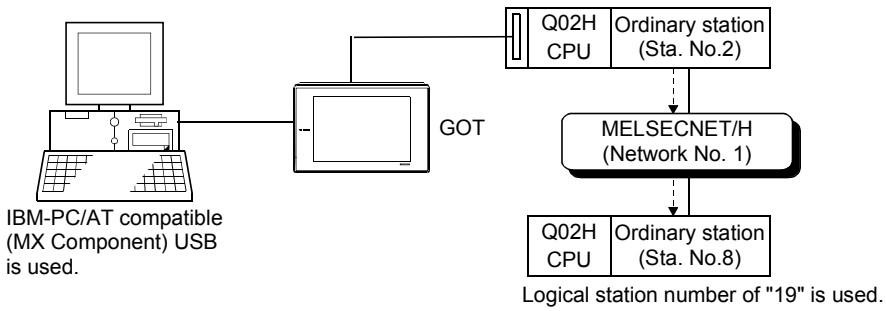
6.19.1 Access procedure

This section explains the procedure for accessing the GOT using GOT transparent communication in the following flowchart.



(1) System examples

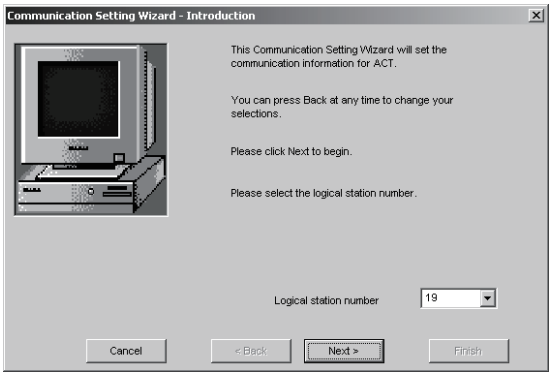
The following system examples are used in this section.



(2) Setting the Logical station number (Setting on communication setting wizard)

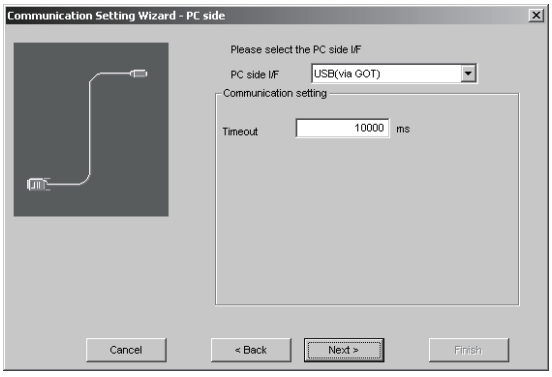
This section describes the setting of the logical station number using (1) system example.

1) Start the communication setup utility and select the communication setting wizard.



2) Type "19" in Logical station number and click Next>.

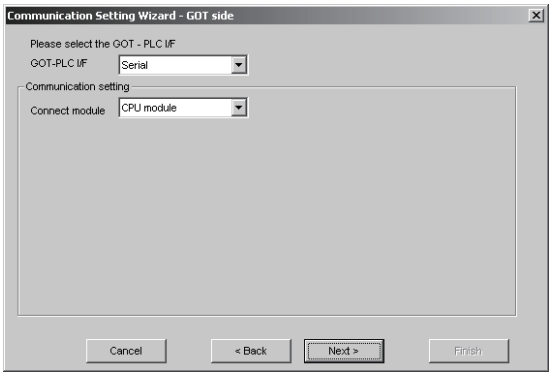
↓



3) Make settings as indicated below and click Next>.

PC side I/F : USB(via GOT)
Time out : 10000

↓



4) Make settings as indicated below and click Next>.

GOT-PLC I/F : Serial
Connect module : CPU module

↓

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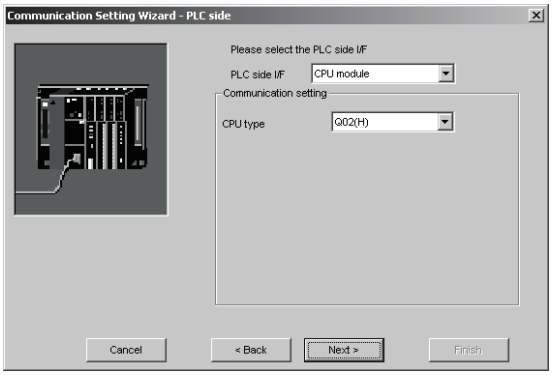
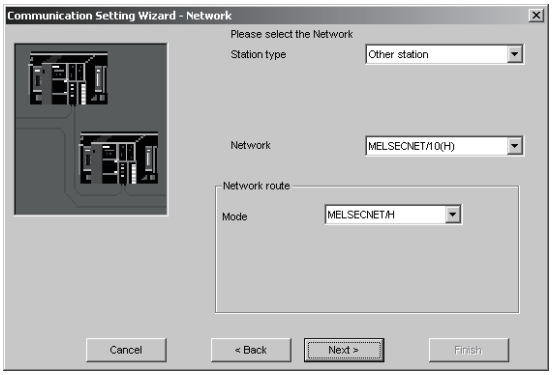
↓



5) Make settings as indicated below and click Next>.

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

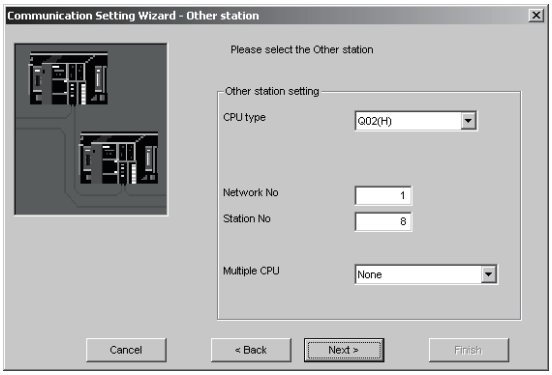
↓



6) Make settings as indicated below and click Next>.

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

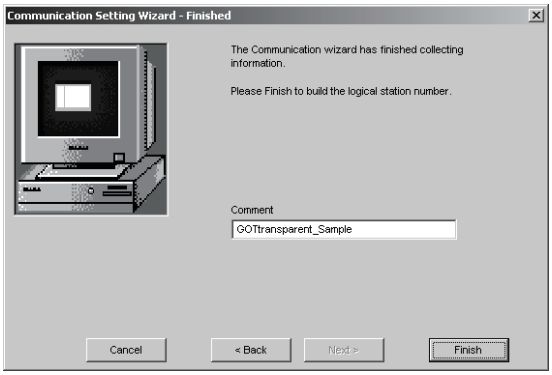
↓



7) Make settings as indicated below and click Next>.

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

↓



8) Enter a comment and click Finish.

↓

(Registration complete)

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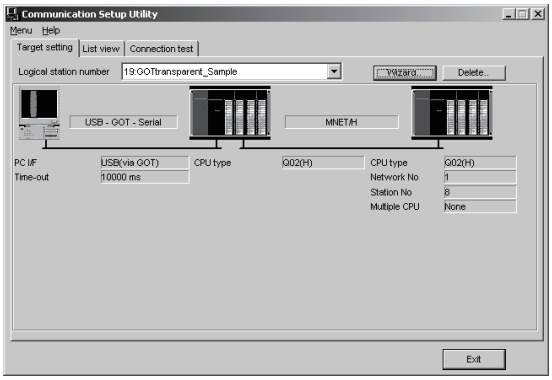
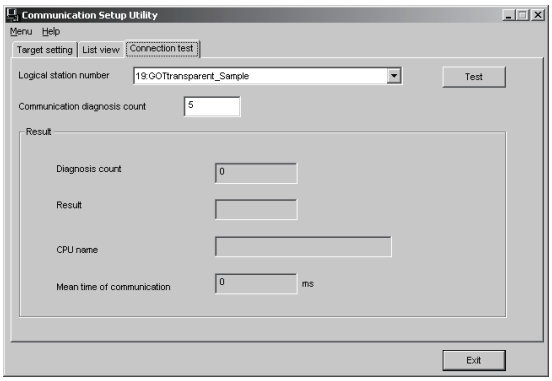
(3) Checking the logical station number settings (Conducting a communication test)

Check whether GOT transparent communication settings are correct or not, using the logical station number set in (2).



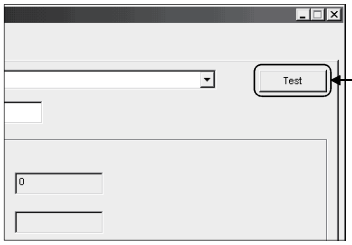
1) Display the "Target setting" tab screen and select the logical station number "19".
   Check whether the logical station number settings are correct or not.

↓



2) Display the "Connection test" tab screen and set the logical station number "19".

↓



3) Click Test to check that communication is being performed normally.
   If an error occurred, check the error code and remove the error.
   The error code occurs in Result. (At normal termination, "0x00000000" appears in Result.)
   Refer to the programming manual for error code details.

↓

(Communication test complete)

4) Through the above steps, it is confirmed that the logical station number settings were correct.
   This logical station number is made applicable by user program creation and PLC monitor utility.
   Collect device data, using this logical station number.

7 COMMUNICATION SETTING EXAMPLES OF THE PROGRAM SETTING TYPE

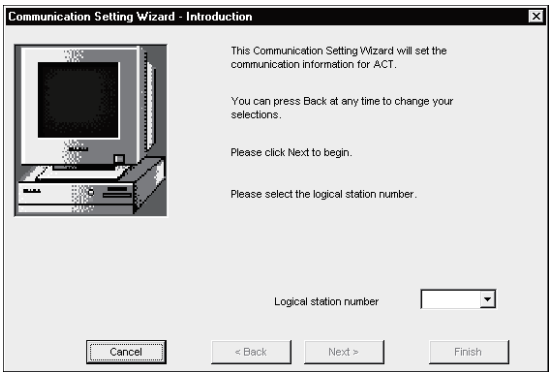
To make communication using the program setting type, you must set the properties of the corresponding ACT controls.
For the properties of the corresponding ACT controls, directly enter them in the property window or change their settings in the user program. the user program.
Refer to the MX Component programming manual for details of the properties which must be set for the corresponding ACT controls.
Refer to the following sections for the settings of the modules for the use of MX Component.

- Computer link communication : Section 6.1
- Ethernet communication (In case of using Ethernet interface modules) : Section 6.2
- CC-Link G4 communication : Section 6.9
- Modem communication : Section 6.17

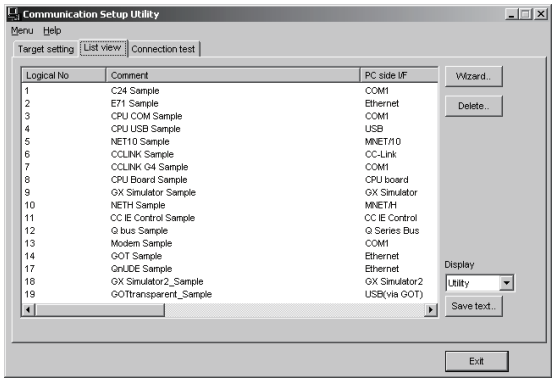
REMARK

On MX Component, the following property setting method is available for those who are not familiar with property setting.

<Property setting changing procedure>



↓



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1) Specify the communication path where you want to make property setting using the "Communication Setting Wizard" on the communication setup utility.
For details of the communication setting wizard, refer to "Section 5.1.6 Operations on communication setting wizard screen".

2) Display the "List view" screen of the communication setup utility.
For details of the "List view" screen, refer to "Section 5.1.2 Operations on list view screen".

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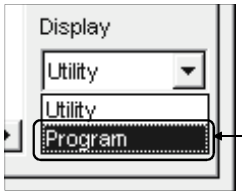
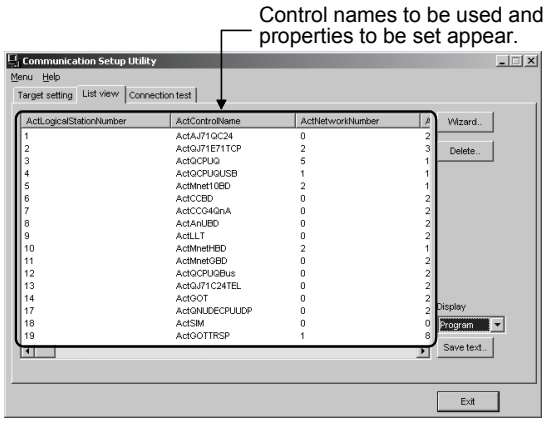
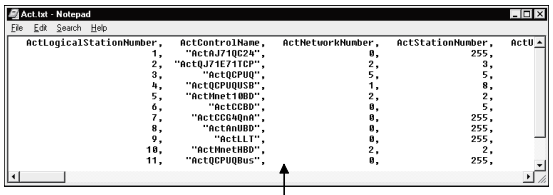


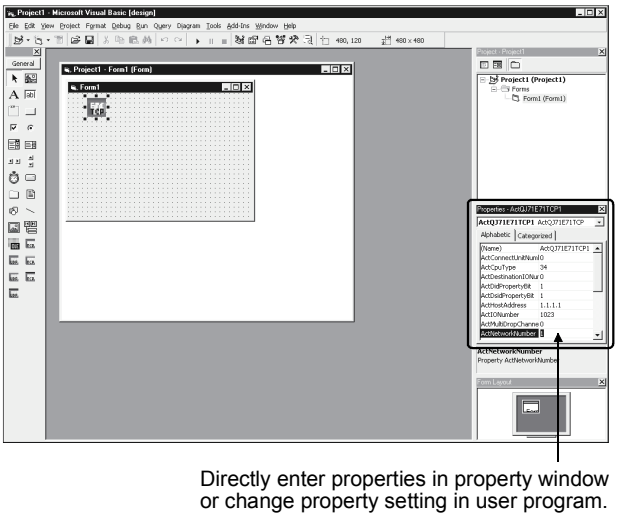
3) Select "Program" in "Display" on the "List view" screen.



4) Control the scroll bar on the "List view" screen to confirm the properties.
The "List view" screen shows the properties that are needed for setting using the program setting type.



Clicking [Save text] on the "List view" screen enables you to save the data into a file in the txt format.



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® .

7 - 2

8 ACCESSIBLE DEVICES AND RANGES

This chapter describes the accessible devices and accessible ranges in each communication form.

8.1 Precautions for Device Access

(1) About accessible devices

For accessible devices, the devices not given or devices marked × (inaccessible) in the accessible device list indicated in Sections 8.2 and later are not supported by MX Component.
Do not specify the inaccessible devices.

(2) Precautions for making access to extended file registers

It is possible (depending on the type of memory cassette mounted on the programmable controller CPU) that no errors will occur even when a device is read and written by specifying a block number which does not exist. In such a case, the data read is not correct. Further, writing to that device may destroy the user memory of the programmable controller CPU.
Make sure to use the function described here, after fully confirming the kind of memory cassette, details of parameter setting, etc.
For details, refer to the AnACPU and AnUCPU User's Manual.

8.2 For Computer Link Communication

This section provides the accessible devices and accessible ranges for computer link communication.

8.2.1 Accessible devices

The following table indicates the accessible devices for computer link communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	×	×	○
Data register (D)		○	○	○	○	○	○		○	○	×	○ *1	○
Link register (W)		○	○	○	○	○	○		○	×	×	×	○
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 (SS)	×	×	×	×	×	○		○	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○ *1	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		×	×	×	×	×	×		×	×	×	×	×

*1: Accessible to FX_{0N}CPU, FX_{1S}CPU, $FX_{1N(C)}$CPU, $FX_{2N(C)}$CPU, FX_{3G}CPU, $FX_{3U(C)}$CPU only when using the FX extended port.

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Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	×	×	×	×	×	○		○	×	×	○ *1*2	×
	(V)	×	×	×	×	×	×		×	×	×	○ *1*2	×
File register	(R)	○	○	○	○	○	○ *3		○	×	×	○ *4	○
	(ZR)	×	×	×	×	×	○ *3		○	×	×	×	×
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: Accessible to FX_{0N}CPU, FX_{1S}CPU, $FX_{1N(C)}$CPU, $FX_{2N(C)}$CPU, FX_{3G}CPU, $FX_{3U(C)}$CPU only when using the FX extended port.

*2: It is not possible to write to more than 2 points successively using WriteDeviceBlock or WriteDeviceBlock2. (Writing to only 1 point is allowed.)

*3: Disabled for the use of Q00JCPU or Q00UJCPU.

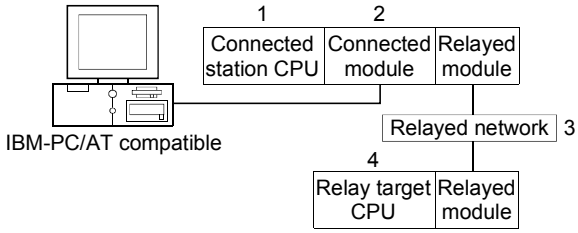
*4: When accessing to FX series CPU other than FX_{3G}CPU and specify $FX_{3U(C)}$CPU, specify the data register. The file register (R) can be specified only when accessing to FX_{3G}CPU or $FX_{3U(C)}$CPU.

*5: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.2.2 Accessible ranges

This section indicates the accessible ranges for computer link communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected module (Usable control name)		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU (Q mode)	Q series-compatible C24 (ActQJ71C24, ActMLQJ71C24)	CC IE Control CC IE Field	○	○ *2	○ *7	○ *2	×	×	×	×	×
		MELSECNET/H	○	○	×	○	×	×	×	×	×
		MELSECNET/10	○	○	×	○	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○ *3	×	×	○	×	○ *3	×	×	×
		Computer link	○ *4	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	○ *5	○
		Multidrop (Independent mode)	○ *4	×	○	×	×	○	×	×	×
		Multidrop (Synchronous mode) *6	○ *4	×	○	×	×	×	×	×	×
LCPU	L series-compatible C24 (ActLJ71C24, ActMLLJ71C24)	CC IE Field *7	○	×	○	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	○ *4	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○
		Multidrop (Independent mode)	○ *4	×	○	×	×	○	×	×	×
		Multidrop (Synchronous mode)	○ *4	×	○	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.
*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".
*4: The Redundant CPU is inaccessible to the computer link module which is on the main base.
*5: Accessible to FX3GCPU, FX3U(C)CPU only.
*6: Make sure to enable the sum check in the software switch settings.
*7: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected module (Usable control name)		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QnACPU	QC24(N) (ActAJ71QC24, ActMLAJ71QC24)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	○ *3	×	×	×
		Computer link	×	×	×	×	×	○	×	×	×
		CC-Link	×	×	×	×	×	○	×	×	×
		Multidrop (Independent mode)	×	×	×	×	×	○	×	×	×
		Multidrop (Synchronous mode)	×	×	×	×	×	○	×	×	×
QCPU (A mode), QnACPU *8, ACPU, motion controller CPU	UC24 (ActAJ71UC24, (ActMLAJ71UC24)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	○	○ *8	○	×	○
		MELSECNET(II)	×	×	×	×	○	○ *8	○	×	○
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×
		Multidrop	×	×	×	×	○	○ *8	○	×	○
QCPU (A mode) *9, QnACPU *10, ACPU *9, motion controller CPU *9	C24 (ActAJ71C24, ActMLAJ71C24)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	○ *9	○ *9	○ *9	×	○ *9
		MELSECNET(II)	×	×	×	×	○ *9	○ *9	○ *9	×	○ *9
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×
		Multidrop	×	×	×	×	○ *9	○ *10	○ *9	×	○ *9
FXCPU	FX extended port (ActFX485BD, ActMLFX485BD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	○ *11	×
		CC-Link	×	×	×	×	×	×	×	×	×
		Multidrop	×	×	×	×	×	×	×	○ *11	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*3: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".

*8: Operates as the one equivalent to AnACPU. (except type character string)
Access can be made within the AnACPU device range except the following devices.
- File register(R), accumulator (A), index register (V), index register (Z).
- The following devices, latch relay (L) and step relay (S) make access to the internal relay (M).

*9: For AnUCPU, QCPU (A mode), A173UHCPU (-S1) and A273UHCPU (-S3)
Operates as the one equivalent to AnACPU. (except type character string)
Access can be made within the AnACPU device range except the following devices.
- Accumulator (A), index register (V), index register (Z).

*10: Operates as the one equivalent to AnA.
Access can be made within the AnACPU device range except the following devices.
- File register(R), accumulator (A), index register (V), index register (Z).
- The following devices, Latch relay (L) and Step relay (S) make access to the internal relay (M).

*11: Accessible to FX_{0N}CPU, FX_{1S}CPU, $FX_{1N(C)}$CPU, $FX_{2N(C)}$CPU, FX_{3G}CPU, $FX_{3U(C)}$CPU only.

8.3 For Ethernet Communication

This section provides the accessible devices and accessible ranges for Ethernet communication.

8.3.1 Accessible devices

The following table indicates the accessible devices for Ethernet communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU *2	Motion controller CPU
Function input (FX)		×	×	×	×	×	○ *3		○	×	×	×	×
Function output (FY)		×	×	×	×	×	○ *3		○	×	×	×	×
Function register (FD)		×	×	×	×	×	○ *3		○	×	×	×	×
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)		○	○	○	○	○	○		○	×	○	×	○
Data register (D)		○	○	○	○	○	○		○	○	○	○	○
Link register (W)		○	○	○	○	○	○		○	×	○	×	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	○	○	○
	Coil (TC)	○	○	○	○	○	○		○	×	○	○	○
	Present value (TN)	○	○	○	○	○	○		○	×	○	○	○
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	○	○	○
	Coil (CC)	○	○	○	○	○	○		○	×	○	○	○
	Present value (CN)	○	○	○	○	○	○		○	×	○	○	○
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	○	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	○	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	○	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	○	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	○	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

*1: Write to device data cannot be performed.

*2: For the supported FXCPU and devices, refer to the manuals of your Ethernet module and setting software.

*3: Disabled when QE71 (TCP/IP) is used.

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Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU *2	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	○	○
	(V)	○	○	○	○	○	×		×	×	×	○	○
File register	(R)	○	○	○	○	○	○ *4		○	×	×	○	○
	(ZR)	×	×	×	×	×	○ *4		○	×	×	×	×
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: Write to device data cannot be performed.

*2: For the supported FXCPU and devices, refer to the manuals of your Ethernet module and setting software.

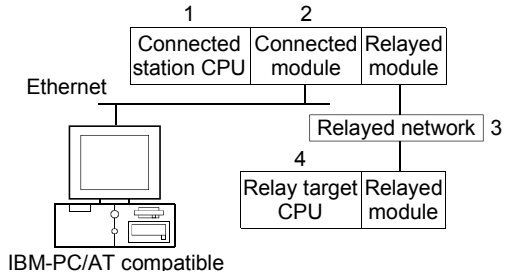
*4: Disabled for the use of Q00JCPU or Q00UJCPU.

*5: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.3.2 Accessible ranges (For the use of Ethernet interface modules)

This section indicates the accessible ranges for Ethernet communication using the Ethernet interface modules.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

POINT

When using the Q series-compatible E71 or QE71 (when UDP/IP is used), you must set the Ethernet parameters in GX Developer parameter setting.

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected module (Usable control name)		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU (Q mode), QSCPU *2	Q series-compatible E71 (ActQJ71E71TCP, ActMLQJ71E71TCP)	CC IE Control CC IE Field	○	○ *3	○ *7	○ *3	×	×	×	×	×
		MELSECNET/H *4	○	○	×	○	×	×	×	×	×
		MELSECNET/10 *4	○	○	×	○	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○ *5	×	×	○	×	○ *5	×	×	×
		Computer link	○ *6	×	○	×	×	×	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○
QCPU (Q mode), QSCPU *2	Q series-Compatible E71 (ActQJ71E71UDP, ActMLQJ71E71UDP)	CC IE Control CC IE Field	○	○ *3	○ *7	○ *3	×	×	×	×	×
		MELSECNET/H *4	○	○	×	○	×	×	×	×	×
		MELSECNET/10 *4	○	○	×	○	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○ *5	×	×	○	×	○ *5	×	×	×
		Computer link	○ *6	×	○	×	×	×	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*2: Relayed stations cannot be accessed through the QSCPU.

*3: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*4: On the connected station side (Q series-compatible E71), always specify the station number set in the Ethernet parameter.

*5: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".

*6: The Redundant CPU is inaccessible to the computer link module which is on the main base.

*7: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected module (Usable control name)		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QnACPU *8	QE71 (ActAJ71QE71TCP, ActMLAJ71QE71TCP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	○ *8	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×
QnACPU	QE71 (ActAJ71QE71UDP, ActMLAJ71QE71UDP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	○	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	○ *5*9	×	×	×
		Computer link	×	×	×	×	×	○ *9	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×
QCPU (A mode) *10, QnACPU *11, ACPU *10, motion controller CPU *10	E71 (ActAJ71E71TCP, ActMLAJ71E71TCP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	○ *10	○ *10	○ *10	×	○ *10
		MELSECNET(II)	×	×	×	×	○ *10	○ *10	○ *10	×	○ *10
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×
QCPU (A mode) *10, QnACPU *11, ACPU *10, motion controller CPU *10	E71 (ActAJ71E71UDP, ActMLAJ71E71UDP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	○ *10	○ *10	○ *10	×	○ *10
		MELSECNET(II)	×	×	×	×	○ *10	○ *10	○ *10	×	○ *10
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*5: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the " Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the " Station No.↔ IP information system".

*8: CPU codes acquired are all 0x21.

*9: Inaccessible when TCP/IP is selected.

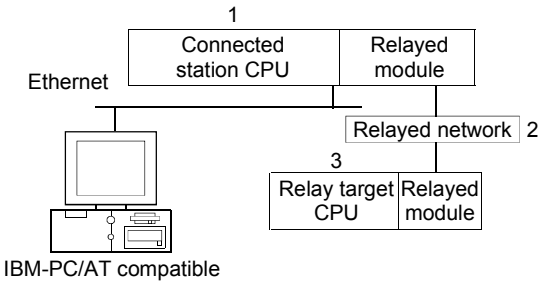
*10: For AnUCPU, QCPU (A mode), A173UHCPU (-S1) and A273UHCPU (-S3)
Operates as the one equivalent to AnACPU. (except type character string)

*11: Operates as the one equivalent to AnACPU. (except type character string)
Access can be made within the AnACPU device range except the following devices.
• File register(R), accumulator (A), index register (V), index register (Z).
• The following devices, latch relay (L) and step relay (S) make access to the internal relay (M).

8.3.3 Accessible ranges (For the use of Built-in Ethernet port CPUs)

This section indicates the accessible ranges for Ethernet communication using the Built-in Ethernet port CPUs.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

POINT
When using TCP/IP on the Built-in Ethernet port CPU, you must set the Ethernet parameters in the PLC parameter setting of GX Developer.

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QnUDE(H)CPU (ActQNUDECPUTCP, ActMLQNUDECPUTCP)	CC IE Control CC IE Field	○	○ *2	○ *5	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	○	×	×	×
	Computer link	○ *3	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V*4 (ActQNUDECPUTCP, ActMLQNUDECPUTCP)	CC IE Control CC IE Field	○	○ *2	○ *5	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	×	○	×	×	×	×	×	×
QnUDE(H)CPU (ActQNUDECPUUDP, ActMLQNUDECPUUDP)	CC IE Control CC IE Field	○	○ *2	○ *5	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	○	×	×	×
	Computer link	○ *3	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V*4 (ActQNUDECPUUDP, ActMLQNUDECPUUDP)	CC IE Control CC IE Field	○	○ *2	○ *5	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	×	○	×	×	×	×	×	×
LCPU (ActLCPUTCP, ActMLLCPUTCP)	CC IE Field *5	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○ *3	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActLCPUUDP, ActMLLCPUUDP)	CC IE Field *5	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○ *3	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*3: The Redundant CPU is inaccessible to the computer link module which is on the main base.

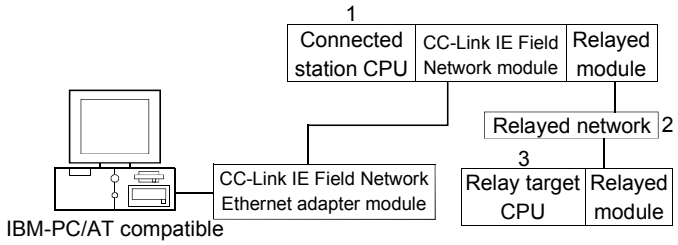
*4: Q12DCCPU-V does not support MELSOFT direct connection.
It is inaccessible when using Ethernet port direct connection.

*5: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.3.4 Accessible ranges (For the use of CC-Link IE Field Network Ethernet adapter module)

This section indicates the accessible ranges for Ethernet communication using the CC-Link IE Field Network Ethernet adapter module.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnUDE(H)CPU (ActCCIEFADPTCP, ActMLCCIEFADPTCP)	CC IE Control CC IE Field	○	○ *1	○*2	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
QnUDE(H)CPU (ActCCIEFADPUDP, ActMLCCIEFADPUDP)	CC IE Control CC IE Field	○	○*1	○*2	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActCCIEFADPTCP, ActMLCCIEFADPTCP)	CC IE Field *2	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActCCIEFADPUDP, ActMLCCIEFADPUDP)	CC IE Field *2	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*2: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.4 For CPU COM Communication

This section provides the accessible devices and accessible ranges for CPU COM communication.

8.4.1 Accessible devices

The following table indicates the accessible devices for CPU COM communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	×	×	○
Data register (D)		○	○	○	○	○	○		○	○	×	○	○
Link register (W)		○	○	○	○	○	○		○	×	×	×	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	×	○	○
	Coil (TC)	○	○	○	○	○	○		○	×	×	○	○
	Present value (TN)	○	○	○	○	○	○		○	×	×	○	○
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	×	○	○
	Coil (CC)	○	○	○	○	○	○		○	×	×	○	○
	Present value (CN)	○	○	○	○	○	○		○	×	×	○	○
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

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Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	○ *1	○
	(V)	○	○	○	○	○	×		×	×	×	○ *1	○
File register	(R)	○	○	○	○	○	○ *2		○	×	×	○ *3	○
	(ZR)	×	×	×	×	×	○ *2		○	×	×	×	×
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: Data cannot be written to 2 or more consecutive points using WriteDeviceBlock or WriteDeviceBlock2. (Data may be written to only one point.)

*2: Disabled for the use of Q00JCPU or Q00UJCPU.

*3: When accessing to FX series CPU other than FX_{3G}CPU and $FX_{3U(C)}$CPU, specify the data register. The file register (R) can be specified only when accessing to FX_{3G}CPU or $FX_{3U(C)}$CPU.

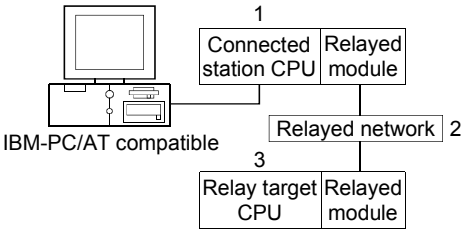
*4: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

*5: The device can be used to execute Read/WriteDeviceRandom, Read/Write/DeviceRandom2, Get/SetDevice or Get/SetDevice2, only when accessing to $FX_{3U(C)}$CPU.

8.4.2 Accessible ranges

This section indicates the accessible ranges for CPU COM communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU(Q mode) (ActQCPUQ, ActMLQCPUQ) *2	CC IE Control CC IE Field	○	○ *3	○ *8	○ *3	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	○	×	○ *4	×	×	×
	Computer link	○ *5	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *6	○ *6	○ *6	○ *7	○ *6
LCPU (ActLCPU, ActMLLCPU)	CC IE Field *8	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○ *5	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *6	○ *6	○ *6	×	○ *6

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*2: For the Q00J/Q00UJ/Q00/Q00U/Q01/Q01UCPU, some network cards have restrictions on the number of loadable cards. Refer to Appendix 5 for details.

*3: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".

*5: The Redundant CPU is inaccessible to the computer link module which is on the main base.

*6: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.

*7: Accessible to FX_{3G}CPU, $FX_{3U(C)}$CPU only.

*8: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU(A mode) (ActQCPUA, ActMLQCPUA)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
QnACPU (ActQnACPU, ActMLQnACPU)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	○	×	×	×
	Ethernet	×	×	×	×	×	○ *4	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
ACPU, Motion controller CPU (ActACPU, ActMLACPU)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
FXCPU (ActFXCPU, ActMLFXCPU)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number. Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting. At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".

8.5 For CPU USB Communication

This section provides the accessible devices and accessible ranges for CPU USB communication.

8.5.1 Accessible devices

The following table indicates the accessible devices for CPU USB communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	○	×	○
Data register (D)		○	○	○	○	○	○		○	○	○	○ *2	○
Link register (W)		○	○	○	○	○	○		○	×	○	×	○
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 (SS)	×	×	×	×	×	○		○	×	○	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	○	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	○	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	○	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	○	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○ *2	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

*1: Write to device data cannot be performed.

*2: Accessible to FX3GCPU only.

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Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	○*2*3	○
	(V)	○	○	○	○	○	×		×	×	×	○*2*3	○
File register	(R)	○	○	○	○	○	○ *4		○	×	×	○*2	○
	(ZR)	×	×	×	×	×	○ *4		○	×	×	×	×
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		○	○	×	○ *2	×

*1: Write to device data cannot be performed.

*2: Accessible to FX3GCPU only.

*3: It is not possible to write to more than 2 points successively using WriteDeviceBlock or WriteDeviceBlock2. (Writing to only 1 point is allowed.)

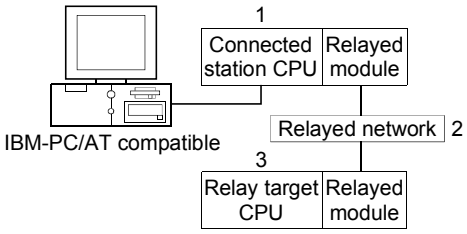
*4: Disabled for the use of Q00JCPU or Q00UJCPU.

*5: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.5.2 Accessible ranges

This section indicates the accessible ranges for CPU USB communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode), QSCPU *1 (ActQCPUQUSB, ActMLQCPUQUSB)	CC IE Control CC IE Field	○	○ *2	○ *6	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *3	×	×	○	×	○ *3	×	×	×
	Computer link	○ *4	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	○ *5	○ *5
Q12DCCPU-V (ActQCPUUSB, ActMLQCPUUSB)	CC IE Control CC IE Field	○	○ *2	○ *6	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5

*1: Relayed stations cannot be accessed through the QSCPU.
*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".
*4: The Redundant CPU is inaccessible to the computer link module which is on the main base.
*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.
*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
LCPU (ActLCPUUSB, ActMLLCPUUSB)	CC IE Field *6	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○ *4	×	○	×	×	○	×	×	×
	CC-Link	○	×	○	×	○ *5	○ *5	○ *5	×	○ *5
FXCPU (ActFXCPUUSB, ActMLFXCPUUSB	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*4: The Redundant CPU is inaccessible to the computer link module which is on the main base.

*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.

*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.6 For MELSECNET/10 Communication

This section provides the accessible devices and accessible ranges for MELSECNET/10 communication.

8.6.1 Accessible devices

The following table indicates the accessible devices for MELSECNET/10 communication.

Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU	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)		○	○	○	○	○	○		○	×	×	×	○	○
Data register (D)		○	○	○	○	○	○		○	○	×	×	○	×
Link register (W)		○	○	○	○	○	○		○	×	×	×	○	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	×	×	○	×
	Coil (TC)	○	○	○	○	○	○		○	×	×	×	○	×
	Present value (TN)	○	○	○	○	○	○		○	×	×	×	○	×
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	×	×	○	×
	Coil (CC)	○	○	○	○	○	○		○	×	×	×	○	×
	Present value (CN)	○	○	○	○	○	○		○	×	×	×	○	×
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×	○
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×	○
Step relay (S)		○	○	○	○	○	×		×	×	×	×	○	×
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○	×

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Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU	Own board
Index register	(Z)	○	○	○	○	○	○		○	×	×	×	○	×
	(V)	○	○	○	○	○	×		×	×	×	×	○	×
File register	(R)	○	○	○	○	○	○ *1		○	×	×	×	○	×
	(ZR)	×	×	×	×	×	○ *1		○	×	×	×	×	×
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)		×	×	×	×	×	○ *2		○	○	×	×	×	×

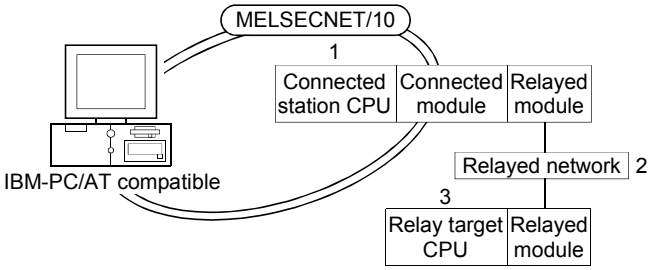
*1: Disabled for the use of Q00JCPU or Q00UJCPU.

*2: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.6.2 Accessible ranges

This section indicates the accessible ranges for MELSECNET/10 communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs and own board (MELSECNET/10 board) are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU(Q mode) (ActMnet10BD, ActMLMnet10BD)	CC IE Control CC IE Field	○	○ *2	○ *4	○ *2	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	×	×	×	×
	Computer link	○ *3	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActMnet10BD, ActMLMnet10BD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
QnACPU, (ActMnet10BD, ActMLMnet10BD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	○	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.
*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: The Redundant CPU is inaccessible to the computer link module which is on the main base.
*4: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU(A mode), ACPU, Motion controller CPU (ActMnet10BD, ActMLMnet10BD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

8.7 For CC-Link Communication

This section provides the accessible devices and accessible ranges for CC-Link communication.

8.7.1 Accessible devices

The following table indicates the accessible devices for CC-Link communication.

(1) For another station access

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	×	×	○
Data register (D)		○	○	○	○	○	○		○	○	×	○ *1	○
Link register (W)		○	○	○	○	○	○		○	×	×	×	○
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 (SS)	×	×	×	×	×	○		○	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○ *1	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	○ *1 *2	○

*1: Accessible to FX3GCPU, FX3U(C)CPU only.

*2: It is not possible to write to more than 2 points successively using WriteDeviceBlock or WriteDeviceBlock2. (Writing to only 1 point is allowed.)

(To the next page)

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	○ *1 *2	○
	(V)	○	○	○	○	○	×		×	×	×	○ *1 *3	○
File register	(R)	○	○	○	○	○	○ *4		○	×	×	×	○
	(ZR)	×	×	×	×	×	○ *4		○	×	×	×	×
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 *6	×

*1: Accessible to FX_{3G}CPU, $FX_{3U(C)}$CPU only.

*2: It is not possible to write to more than 2 points successively using WriteDeviceBlock or WriteDeviceBlock2. (Writing to only 1 point is allowed.)

*3: When accessing to FX series CPU other than FX_{3G}CPU and $FX_{3U(C)}$CPU, specify the data register. The file register (R) can be specified only when accessing to FX_{3G}CPU or $FX_{3U(C)}$CPU.

*4: Disabled for the use of Q00JCPU or Q00UJCPU.

*5: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

*6: The device can be used to execute Read/WriteDeviceRandom, Read/Write/DeviceRandom2, Get/SetDevice or Get/SetDevice2, only when accessing to $FX_{3U(C)}$CPU.

(2) For own board access

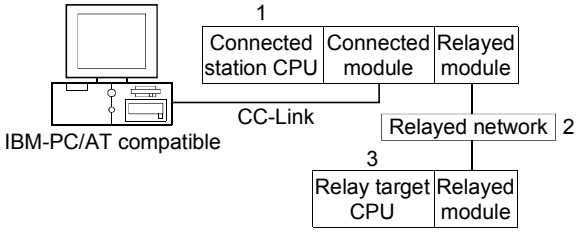
The following devices are usable only for own board access.

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	RWw
Remote register (read area for CC-Link)	WR	RWr
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

8.7.2 Accessible ranges

This section indicates the accessible ranges for CC-Link communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs and own board (CC-Link board) are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU(Q mode) (ActCCBD, ActMLCCBD)	CC IE Control CC IE Field	○	○ *1	○ *2	○ *1	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
Q12DCCPU-V (ActCCBD, ActMLCCBD)	CC IE Control CC IE Field	○	○ *1	×	○ *1	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	○	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
QnACPU (ActCCBD, ActMLCCBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	○	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
LCPU, QCPU(A mode), ACPU, Motion controller CPU (ActCCBD, ActMLCCBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*2: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.8 For CC-Link G4 Communication

This section provides the accessible devices and accessible ranges for CC-Link G4 communication.

8.8.1 Accessible devices

The following table indicates the accessible devices for CC-Link G4 communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	×	×	○
Data register (D)		○	○	○	○	○	○		○	○	×	×	○
Link register (W)		○	○	○	○	○	○		○	×	×	×	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	×	×	○
	Coil (TC)	○	○	○	○	○	○		○	×	×	×	○
	Present value (TN)	○	○	○	○	○	○		○	×	×	×	○
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	×	×	○
	Coil (CC)	○	○	○	○	○	○		○	×	×	×	○
	Present value (CN)	○	○	○	○	○	○		○	×	×	×	○
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	×	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

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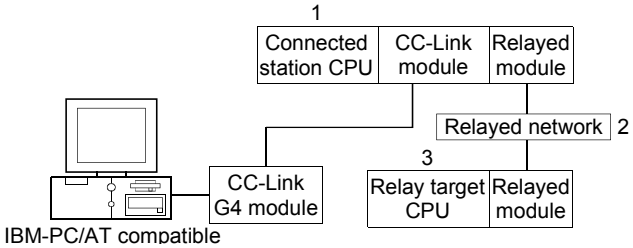
Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	×	○
	(V)	○	○	○	○	○	×		×	×	×	×	○
File register	(R)	○	○	○	○	○	○ *1		○	×	×	×	○
	(ZR)	×	×	×	×	×	○ *1		○	×	×	×	×
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: Disabled for the use of Q00JCPU or Q00UJCPU.

8.8.2 Accessible ranges

This section indicates the accessible ranges for CC-Link G4 communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

(a) When CC-Link G4 module is in Q mode or LCPU

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode) (ActCCG4Q, ActMLCCG4Q)	CC IE Control CC IE Field	○	○ *1	○ *2	○ *1	×	×	×	×	×
	MELSECNET/H	○	○	×	○	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	○	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
Q12DCCPU-V (ActCCG4Q, ActMLCCG4Q)	CC IE Control CC IE Field	×	○ *1	○ *2	○ *1	×	×	×	×	×
	MELSECNET/H	×	○	×	○	×	×	×	×	×
	MELSECNET/10	×	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
LCPU (ActCCG4Q, ActMLCCG4Q)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*2: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(b) When CC-Link G4 module is in QnA mode

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnACPU (ActCCG4QnA, ActMLCCG4QnA)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	○	×	×	×
	Ethernet	×	×	×	×	×	○	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

(c) When CC-Link G4 module is in A mode

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU(A mode), ACPU, Motion controller CPU (ActCCG4A, ActMLCCG4A)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

8.9 For CPU Board Communication

This section provides the accessible devices and accessible ranges for CPU board communication.

8.9.1 Accessible devices

The following table indicates the accessible devices for CPU board communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Function input (FX)		×	×	×	×	×	○ *1		×	×	×	×	×
Function output (FY)		×	×	×	×	×	○ *1		×	×	×	×	×
Function register (FD)		×	×	×	×	×	○ *1		×	×	×	×	×
Special relay (SM)		○	○	○	○	○	○ *1		×	×	×	×	○
Special register (SD)		○	○	○	○	○	○ *1		×	×	×	×	○
Input relay (X)		○	○	○	○	○	○ *1		×	×	×	×	○
Output relay (Y)		○	○	○	○	○	○ *1		×	×	×	×	○
Internal relay (M)		○	○	○	○	○	○ *1		×	×	×	×	○
Latch relay (L)		○	○	○	○	○	○ *1		×	×	×	×	○
Annunciator (F)		○	○	○	○	○	○ *1		×	×	×	×	○
Edge relay (V)		×	×	×	×	×	×		×	×	×	×	×
Link relay (B)		○	○	○	○	○	○ *1		×	×	×	×	○
Data register (D)		○	○	○	○	○	○ *1		×	×	×	×	○
Link register (W)		○	○	○	○	○	○ *1		×	×	×	×	○
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 (SS)	×	×	×	×	×	×		×	×	×	×	×
	Coil (SC)	×	×	×	×	×	×		×	×	×	×	×
	Present value (SN)	×	×	×	×	×	×		×	×	×	×	×
Link special relay (SB)		×	×	×	×	×	×		×	×	×	×	×
Link special register (SW)		×	×	×	×	×	×		×	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	×	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

*1: Access to QCPU (Q mode) cannot be made.
When making access to QnACPU, the range is equivalent to that of AnACPU.

(To the next page)

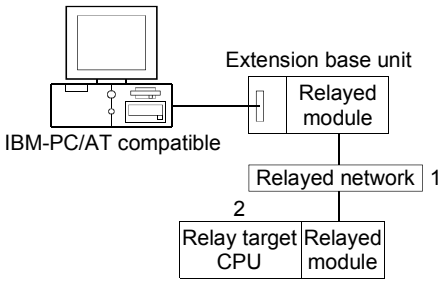
Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○ *1		×	×	×	×	○
	(V)	○	○	○	○	○	×		×	×	×	×	○
File register	(R)	○	○	○	○	○	×		×	×	×	×	○
	(ZR)	×	×	×	×	×	×		×	×	×	×	×
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: Access to QCPU (Q mode) cannot be made.
When making access to QnACPU, the range is equivalent to that of AnACPU.

8.9.2 Accessible ranges

This section indicates the accessible ranges for CPU board communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The own board (CPU board) is accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Network Board (Usable control name)	1. Relayed Network	2. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
CPU board (ActAnUBD, ActMLAnUBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	○ *2	○	×	○
	MELSECNET(II)	×	×	×	×	○	○ *2	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*2: Operates as the one equivalent to AnACPU. (except type character string)
Access can be made within the AnACPU device range except the following devices.

- File register(R), accumulator (A), index register (V), index register (Z).
- The following devices, latch relay (L) and step relay (S) make access to the internal relay (M).

8.10 For MELSECNET/H Communication

This section provides the accessible devices and accessible ranges for MELSECNET/H communication.

8.10.1 Accessible devices

The following table indicates the accessible devices for MELSECNET/H communication.

Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU	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)		○	○	○	○	○	○		○	×	○	×	○	○
Data register (D)		○	○	○	○	○	○		○	○	○	×	○	×
Link register (W)		○	○	○	○	○	○		○	×	○	×	○	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	○	×	○	×
	Coil (TC)	○	○	○	○	○	○		○	×	○	×	○	×
	Present value (TN)	○	○	○	○	○	○		○	×	○	×	○	×
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	○	×	○	×
	Coil (CC)	○	○	○	○	○	○		○	×	○	×	○	×
	Present value (CN)	○	○	○	○	○	○		○	×	○	×	○	×
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	○	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	○	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	○	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	○	×	×	○
Link special register (SW)		×	×	×	×	×	○		○	×	○	×	×	○
Step relay (S)		○	○	○	○	○	×		×	×	×	×	○	×
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○	×

*1: Write to device data cannot be performed.

(To the next page)

Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU	Own board
Index register	(Z)	○	○	○	○	○	○		○	×	×	×	○	×
	(V)	○	○	○	○	○	×		×	×	×	×	○	×
File register	(R)	○	○	○	○	○	○ *2		○	×	×	×	○	×
	(ZR)	×	×	×	×	×	○ *2		○	×	×	×	×	×
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)		×	×	×	×	×	○ *3		○	○	×	×	×	×

*1: Write to device data cannot be performed.

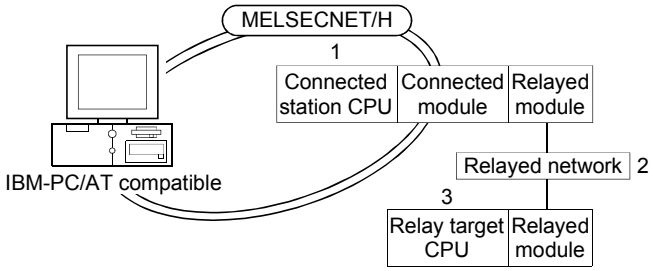
*2: Disabled for the use of Q00JCPU or Q00UJCPU.

*3: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.10.2 Accessible ranges

This section indicates the accessible ranges for MELSECNET/H communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs and own board (MELSECNET/H board) are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU (Q mode), QSCPU *2 (ActMnetHBD, ActMLMnetHBD)	CC IE Control CC IE Field	○	○ *3	○ *7	○ *3	×	×	×	×	×
	MELSECNET/H *4	○	○	×	○	×	×	×	×	×
	MELSECNET/10 *5	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	×	×	×	×
	Computer link	○ *6	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActMnetHBD, ActMLMnetHBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H *4	×	×	×	×	×	×	×	×	×
	MELSECNET/10 *5	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.
*2: Relayed stations cannot be accessed through the QSCPU.
*3: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Accessible when the MELSECNET/H module of the connected station is in the MELSECNET/H mode.
*5: Accessible when the MELSECNET/H module of the connected station is in the MELSECNET/10 mode.
*6: The Redundant CPU is inaccessible to the computer link module which is on the main base.
*7: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QnACPU *4 (ActMnetHBD, ActMLMnetHBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	○	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
QCPU (A mode), ACPU, Motion controller CPU (ActMnetHBD, ActMLMnetHBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*4: Accessible when the MELSECNET/H module of the connected station is in the MELSECNET/H mode.

8.11 For CC-Link IE Controller Network Communication

This section provides the accessible devices and accessible ranges for CC-Link IE Controller Network communication.

8.11.1 Accessible devices

The following table indicates the accessible devices for CC-Link IE Controller Network communication.

Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU	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)		○	○	○	○	○	○		○	×	○	×	○	×
Data register (D)		○	○	○	○	○	○		○	○	○	×	○	×
Link register (W)		○	○	○	○	○	○		○	×	○	×	○	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	○	×	○	×
	Coil (TC)	○	○	○	○	○	○		○	×	○	×	○	×
	Present value (TN)	○	○	○	○	○	○		○	×	○	×	○	×
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	○	×	○	×
	Coil (CC)	○	○	○	○	○	○		○	×	○	×	○	×
	Present value (CN)	○	○	○	○	○	○		○	×	○	×	○	×
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	○	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	○	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	○	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	○	×	×	○
Link special register (SW)		×	×	×	×	×	○		○	×	○	×	×	○
Step relay (S)		○	○	○	○	○	×		×	×	×	×	○	×
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○	×

*1: Write to device data cannot be performed.

(To the next page)

Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU	Own board
Index register	(Z)	○	○	○	○	○	○		○	×	×	×	○	×
	(V)	○	○	○	○	○	×		×	×	×	×	○	×
File register	(R)	○	○	○	○	○	○ *2		○	×	×	×	○	×
	(ZR)	×	×	×	×	×	○ *2		○	×	×	×	×	×
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)		×	×	×	×	×	○ *3		○	○	×	×	×	×

*1: Write to device data cannot be performed.

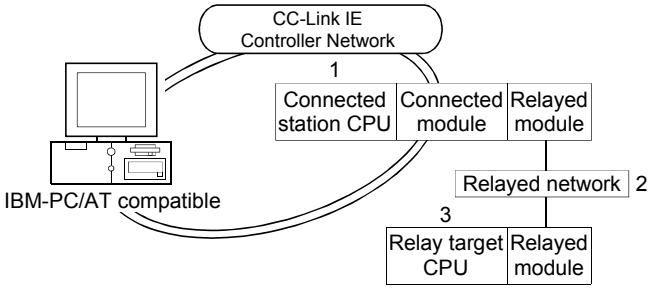
*2: Disabled for the use of Q00JCPU or Q00UJCPU.

*3: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.11.2 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 access can be made or not.
The connected station CPUs and own board (CC-Link IE Controller Network board) are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *1
QCPU(Q mode) QSCPU *2 (ActMnetGBD, ActMLMnetGBD)	CC IE Control CC IE Field	○	○ *3	○ *7	○ *3	×	×	×	×	×
	MELSECNET/H *4	○	○	×	○	×	×	×	×	×
	MELSECNET/10 *5	○	○	×	○	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	○	×	×	×	×	×
	Computer link	○ *6	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActMnetGBD, ActMLMnetGBD)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H *4	×	×	×	×	×	×	×	×	×
	MELSECNET/10 *5	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.
*2: Relayed stations cannot be accessed through the QSCPU.
*3: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Accessible when the MELSECNET/H module of the connected station is in the MELSECNET/H mode.
*5: Accessible when the MELSECNET/H module of the connected station is in the MELSECNET/10 mode.
*6: The Redundant CPU is inaccessible to the computer link module which is on the main base.
*7: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.12 For CC-Link IE Field Network Communication

This section provides the accessible devices and accessible ranges for CC-Link IE Field Network communication.

8.12.1 Accessible devices

The following table indicates the accessible devices for CC-Link IE Field Network communication.

Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU	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)		○	○	○	○	○	○		○	×	○	×	○	×
Data register (D)		○	○	○	○	○	○		○	○	○	×	○	×
Link register (W)		○	○	○	○	○	○		○	×	○	×	○	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	○	×	○	×
	Coil (TC)	○	○	○	○	○	○		○	×	○	×	○	×
	Present value (TN)	○	○	○	○	○	○		○	×	○	×	○	×
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	○	×	○	×
	Coil (CC)	○	○	○	○	○	○		○	×	○	×	○	×
	Present value (CN)	○	○	○	○	○	○		○	×	○	×	○	×
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	○	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	○	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	○	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	○	×	×	○
Link special register (SW)		×	×	×	×	×	○		○	×	○	×	×	○
Step relay (S)		○	○	○	○	○	×		×	×	×	×	○	×
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○	×

*1: Write to device data cannot be performed.

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Device (Device Name)		Access Target												
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU *1	FXCPU	Motion controller CPU	Own board
Index register	(Z)	○	○	○	○	○	○		○	×	×	×	○	×
	(V)	○	○	○	○	○	×		×	×	×	×	○	×
File register	(R)	○	○	○	○	○	○ *2		○	×	×	×	○	×
	(ZR)	×	×	×	×	×	○ *2		○	×	×	×	×	×
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)		×	×	×	×	×	○ *3		○	○	×	×	×	×

*1: Write to device data cannot be performed.

*2: Disabled for the use of Q00JCPU or Q00UJCPU.

*3: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

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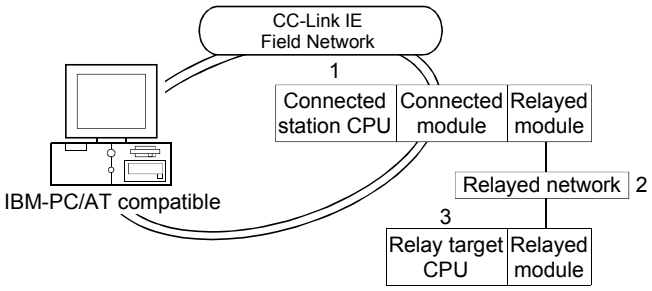
8.12.2 Accessible ranges

This section indicates the accessible ranges for CC-Link IE Field Network communication.

(1) Configuration



(2) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs and own board (CC-Link IE Field Network board) are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU(Q mode) (ActCCIEFBD, ActMLCCIEFBD)	CC IE Control CC IE Field	○	○ *1	○*2	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActCCIEFBD, ActMLCCIEFBD)	CC IE Field *2	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*2: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.13 For Q Series Bus Communication

This section provides the accessible devices and accessible ranges for Q series bus communication.

8.13.1 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 (SS)	○			
	Coil (SC)	○			
	Present value (SN)	○			

*1: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

8.13.2 Accessible ranges

This section indicates the accessible ranges for Q series bus communication.

(1) Access can be made to another CPU on the same base.
However, access cannot be made to another CPU via the network of another CPU.

(2) Access can be made to another CPU via the MELSECNET/H module controlled by the PC CPU module.
In this case, the accessible ranges are as in MELSECNET/H communication. Refer to Section 8.10.2.

The IBM-PC/AT compatible used for MELSECNET/H communication corresponds to the PC CPU module, and the MELSECNET/H board to the MELSECNET/H module.

(3) Access can be made to another CPU via the CC-Link module controlled by the PC CPU module.
In this case, the accessible ranges are as in CC-Link communication. Refer to Section 8.7.2.

The IBM-PC/AT compatible used for CC-Link communication corresponds to the PC CPU module, and the CC-Link board to the CC-Link module.

8.14 For Modem Communication

This section explains the accessible devices and accessible ranges for modem communication.

8.14.1 Accessible devices

The following table indicates the accessible devices for modem communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	×	×	○
Data register (D)		○	○	○	○	○	○		○	○	×	○ *1	○
Link register (W)		○	○	○	○	○	○		○	×	×	×	○
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 (SS)	×	×	×	×	×	○		○	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○ *2	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

*1: Only the FX_{1S}CPU, FX_{1N}CPU, FX_{1NC}CPU, FX_{2N}CPU, FX_{2NC}CPU, FX_{3G}CPU or FX_{3UC}CPU can be used.

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Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	○ *1 *2	○
	(V)	○	○	○	○	○	×		×	×	×	○ *1 *2	○
File register	(R)	○	○	○	○	○	○ *3		○	×	×	○ *4	○
	(ZR)	×	×	×	×	×	○ *3		○	×	×	×	×
Extended file registers (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: Only the FX_{1S}CPU, FX_{1N}CPU, FX_{1NC}CPU, FX_{2N}CPU, FX_{2NC}CPU, FX_{3G}CPU or FX_{3UC}CPU can be used.

*2: WriteDeviceBlock or WriteDeviceBlock2 cannot be used to write data to 2 or more points consecutively. (Data can be written to one point only.)

*3: Disabled for the use of Q00JCPU or Q00UJCPU.

*4: When accessing to FX series CPU other than FX_{3G}CPU and $FX_{3U(C)}$CPU, specify the data register. The file register (R) can be specified only when accessing to FX_{3G}CPU or $FX_{3U(C)}$CPU.

*5: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

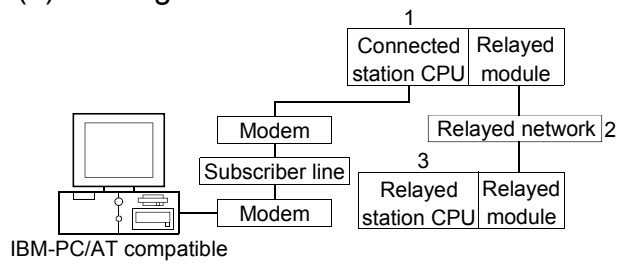
*6: The device can be used to execute Read/WriteDeviceRandom, Read/Write/DeviceRandom2, Get/SetDevice or Get/SetDevice2, only when accessing to $FX_{3U(C)}$CPU.

8.14.2 Accessible ranges

This section indicates the accessible ranges for Modem communication.

(1) When using A6TEL and Q6TEL

(a) Configuration



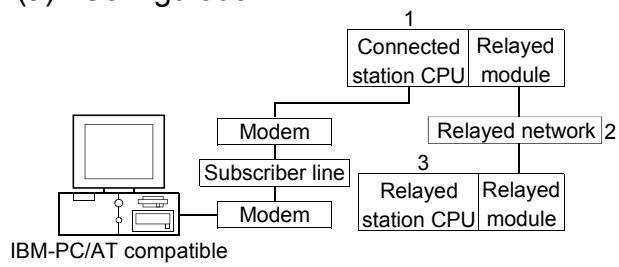
(b) Accessibility list

The following table indicates whether access can be made or not.
The connected CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	3. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnACPU	Q6TEL (QnA mode) (ActQ6TEL)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	○	×	×	×
		MELSECNET(II)	×	×	×	×	×	○	×	×	×
		Ethernet	×	×	×	×	×	○	×	×	×
		Computer link	×	×	×	×	×	○	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×
ACPU, Motion controller CPU	A6TEL, Q6TEL (A mode) (ActA6TEL)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	○	×	○	×	○
		MELSECNET(II)	×	×	×	×	○	×	○	×	○
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	×	×	×	×	×	×	×	×	×
		CC-Link	×	×	×	×	×	×	×	×	×

(2) When using FXCPU

(a) Configuration



(b) Accessibility list

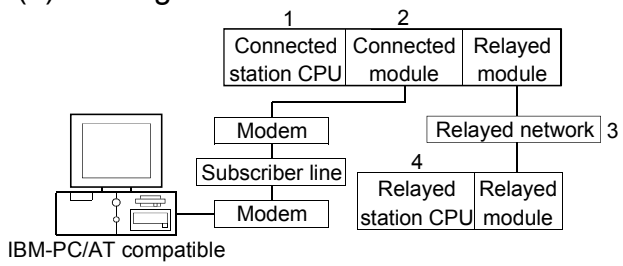
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
FXCPU *1 (ActFXCPUTEL)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Only the FX_{1S}CPU, FX_{1N}CPU, FX_{1NC}CPU, FX_{2N}CPU, FX_{2NC}CPU, FX_{3U}CPU or FX_{3UC}CPU can be used.

(3) When using Q series-compatible C24, L series-compatible C24 and QC24N

(a) Configuration



(b) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode)	Q series-compatible C24 (ActQJ71C24TEL)	CC IE Control CC IE Field	○	○*1	○ *4	○ *1	×	×	×	×	×
		MELSECNET/H	○	○	×	○	×	×	×	×	×
		MELSECNET/10	○	○	×	○	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	○	×	○	×	×	×
		Computer link	○ *2	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○
		Multidrop (Independent mode) *3	○ *2	×	○	×	×	○	×	×	×
LCPU	L series-compatible C24 (ActLJ71C24TEL)	CC IE Field *4	○	×	○	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	○ *2	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○
		Multidrop (Independent mode) *3	○ *2	×	○	×	×	○	×	×	×
QnACPU	QC24N (ActAJ71QC24TEL)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	○	×	×	×
		MELSECNET(II)	×	×	×	×	×	○	×	×	×
		Ethernet	×	×	×	×	×	○	×	×	×
		Computer link	×	×	×	×	×	○	×	×	×
		CC-Link	×	×	×	×	×	○	×	×	×
		Multidrop (Independent mode) *3	×	×	×	×	×	○	×	×	×

*1: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*2: The Redundant CPU is inaccessible to the computer link module which is on the main base.
*3: Indicates the CH2 side setting. (The CH1 side is fixed to the independent mode.)
*4: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

8.15 For Gateway Function Communication

This section describes the accessible devices and accessible ranges for gateway function communication.

8.15.1 Accessible devices

This section indicates the accessible devices for gateway function communication.

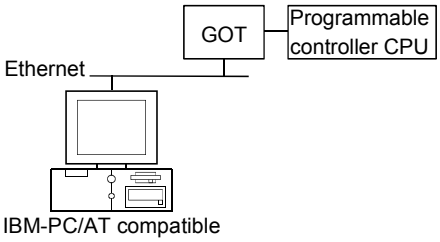
(1) Accessible devices

Only the following device is accessible for gateway function communication.
Device : Gateway device
Device name: EG

8.15.2 Accessible ranges

This section indicates the accessible ranges for gateway function communication.

(1) Configuration



(2) Accessible ranges

Access can be made to only the connected GOT.

8.16 For GX Simulator Communication

This section describes the accessible devices and accessible ranges for GX Simulator communication.

8.16.1 Accessible devices

The accessible devices of other station during GX Simulator communication depends on the other station device settings made on the device manager of GX Simulator.
For other station device setting, refer to "GX Simulator Version 7 Operating Manual".

8.16.2 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 (Usable control name)	Target CPU								
	QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode) *1	QnACPU	ACPU	FXCPU	Motion controller CPU *1
Own station (ActLLT, ActMLLLT)	○	×	×	×	○	○	○	○	○
Other station (ActLLT, ActMLLLT)	○	×	×	×	○	○	○	×	○

*1: When making an access to other station, set to "ACPU".

8.17 For GX Simulator2 Communication

This section describes the accessible devices and accessible ranges for GX Simulator2 communication.

8.17.1 Accessible devices

The accessible devices during GX Simulator2 communication depend on the device supported by GX Simulator2.
For details, refer to "GX Works2 Version 1 Operating Manual (Common)".

8.17.2 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).

Usable control name	Target CPU								
	QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
ActSIM, ActMLSIM	○	×	○	×	×	×	×	○	○

8.18 For GOT Transparent Communication

This section provides the accessible devices and accessible ranges for GOT transparent communication.

8.18.1 Accessible devices

The following table indicates the accessible devices for GOT transparent communication.

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
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)		○	○	○	○	○	○		○	×	×	×	○
Data register (D)		○	○	○	○	○	○		○	○	×	○	○
Link register (W)		○	○	○	○	○	○		○	×	×	×	○
Timer (T)	Contact (TS)	○	○	○	○	○	○		○	×	×	○	○
	Coil (TC)	○	○	○	○	○	○		○	×	×	○	○
	Present value (TN)	○	○	○	○	○	○		○	×	×	○	○
Counter (C)	Contact (CS)	○	○	○	○	○	○		○	×	×	○	○
	Coil (CC)	○	○	○	○	○	○		○	×	×	○	○
	Present value (CN)	○	○	○	○	○	○		○	×	×	○	○
Retentive timer (ST)	Contact (SS)	×	×	×	×	×	○		○	×	×	×	×
	Coil (SC)	×	×	×	×	×	○		○	×	×	×	×
	Present value (SN)	×	×	×	×	×	○		○	×	×	×	×
Link special relay (SB)		×	×	×	×	×	○		○	×	×	×	×
Link special register (SW)		×	×	×	×	×	○		○	×	×	×	×
Step relay (S)		○	○	○	○	○	×		×	×	×	○	○
Direct input (DX)		×	×	×	×	×	×		×	×	×	×	×
Direct output (DY)		×	×	×	×	×	×		×	×	×	×	×
Accumulator (A)		○	○	○	○	○	×		×	×	×	×	○

(To the next page)

Device (Device Name)		Access Target											
		A1N	A0J2H A1S(-S1) A1SH A1SJ(H) A2C(J) A2N(-S1) A2S(-S1) A2SH(-S1) A1FX	A2A(-S1) A2U(-S1) A2US(-S1) A2AS (-S1/-S30) A2USH-S1 Q02(H)-A Q06H-A	A3N A3A A3U	A4U	QnACPU	QCPU (Q mode)	LCPU	Q12DCCPU-V	QSCPU	FXCPU	Motion controller CPU
Index register	(Z)	○	○	○	○	○	○		○	×	×	○ *1	○
	(V)	○	○	○	○	○	×		×	×	×	○ *1	○
File register	(R)	○	○	○	○	○	○ *2		○	×	×	○ *3	○
	(ZR)	×	×	×	×	×	○ *2		○	×	×	×	×
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: Data cannot be written to 2 or more consecutive points using WriteDeviceBlock or WriteDeviceBlock2. (Data may be written to only one point.)

*2: Disabled for the use of Q00JCPU or Q00UJCPU.

*3: When accessing to FX series CPU other than FX_{3G}CPU and $FX_{3U(C)}$CPU, specify the data register. The file register (R) can be specified only when accessing to FX_{3G}CPU or $FX_{3U(C)}$CPU.

*4: In a multi-CPU configuration, read from the shared memory of the host CPU cannot be performed.
In addition, write to the shared memory cannot be performed independently of the host or other CPU.

*5: The device can be used to execute Read/WriteDeviceRandom, Read/Write/DeviceRandom2, Get/SetDevice or Get/SetDevice2, only when accessing to $FX_{3U(C)}$CPU.

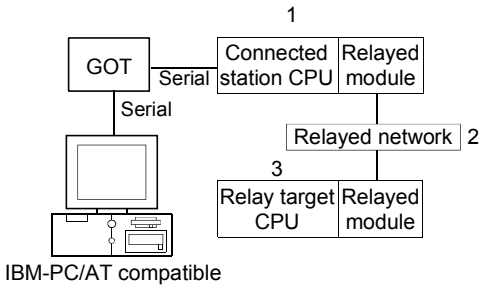
8.18.2 Accessible ranges

This section indicates the accessible ranges for GOT transparent communication.

POINT
For usable system configuration, refer to GOT1000 Series Connection Manual

(1) IBM-PC/AT compatible side port: Serial, GOT1000 side port: Serial, CPU side port: Direct connection

(a) Configuration



(b) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QCPU(Q mode) *1 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *6	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	×	×	○ *4	×	×	×
	Computer link	○	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5

*1: Inaccessible to Redundant CPU.
*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.
*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".
*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.
*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *6	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5
QCPU(A mode) (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
QnACPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	○	×	×	×
	Ethernet	×	×	×	×	×	○ *4	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	○	×	×	×
ACPU, Motion controller CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
FXCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*1: Inaccessible to Redundant CPU.

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

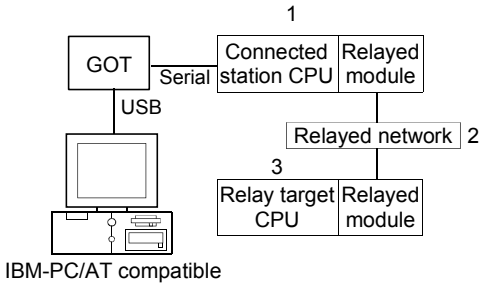
*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number. Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting. At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".

*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.

*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(2) IBM-PC/AT compatible side port: USB, GOT1000 side port: USB, CPU side port: Direct connection

(a) Configuration



(b) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QCPU(Q mode) *1 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *6	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	×	×	○ *4	×	×	×
	Computer link	○	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *6	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5

*1: Inaccessible to Redundant CPU.

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".

*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.

*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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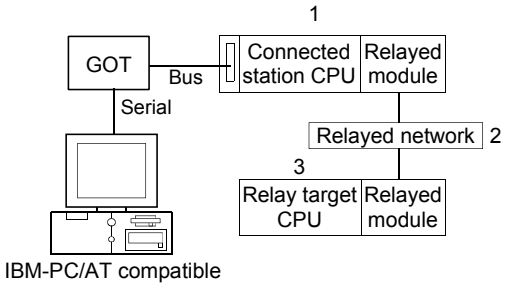
1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QCPU(A mode) (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
QnACPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	○	×	×	×
	Ethernet	×	×	×	×	×	○ *4	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	○	×	×	×
ACPU, Motion controller CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×
FXCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".

(3) IBM-PC/AT compatible side port: Serial, GOT1000 side port: Serial, CPU side port: Bus connection

(a) Configuration



(b) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QCPU(Q mode) *1 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *6	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	×	×	○ *4	×	×	×
	Computer link	○	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5
Q12DCCPU-V (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *6	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5

*1: Inaccessible to Redundant CPU.

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".

*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.

*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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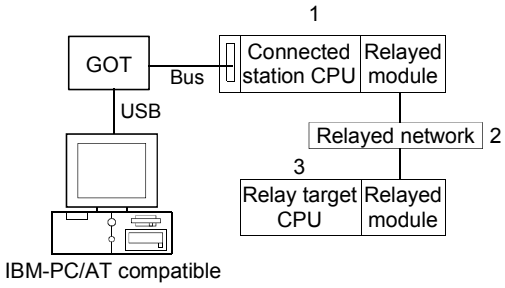
1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QnACPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	○	×	×	×
	Ethernet	×	×	×	×	×	○ *4	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	○	×	×	×
ACPU, Motion controller CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".

(4) IBM-PC/AT compatible side port: USB, GOT1000 side port: USB, CPU side port: Bus connection

(a) Configuration



(b) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QCPU(Q mode) *1 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *6	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	×	×	○ *4	×	×	×
	Computer link	○	×	○	×	×	○	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5
Q12DCCPU-V (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *6	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	○ *5	○ *5	○ *5	×	○ *5

*1: Inaccessible to Redundant CPU.

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔IP information system".

*5: As the relayed station CPU side CC-Link system master/local module, use the module of software version "S" or later.

*6: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

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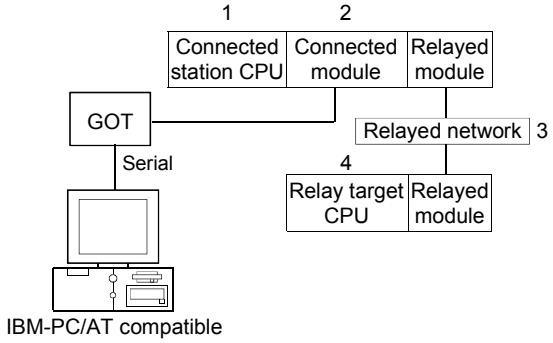
1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode)	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU *2
QnACPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	○	×	×	×
	MELSECNET(II)	×	×	×	×	×	○	×	×	×
	Ethernet	×	×	×	×	×	○ *4	×	×	×
	Computer link	×	×	×	×	×	○	×	×	×
	CC-Link	×	×	×	×	×	○	×	×	×
ACPU, Motion controller CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	×	×	×	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	○	×	○	×	○
	MELSECNET(II)	×	×	×	×	○	×	○	×	○
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	×	×	×	×	×	×	×	×	×

*2: Accessible to the A171SHCPU, A172SHCPU, A173UHCPU(-S1) or A273UHCPU(-S3) only.

*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".

(5) IBM-PC/AT compatible side port: Serial, GOT1000 side port: Serial, CPU side port: Q series-compatible C24 or L series-compatible C24

(a) Configuration



(b) Accessibility list

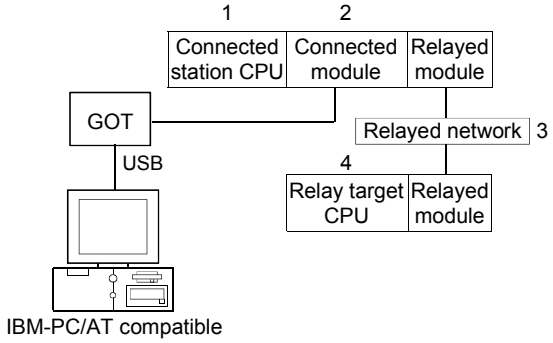
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode) *1	Q series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○ *4	×	×	×	×	×	×
		MELSECNET/H	○	○	×	×	×	×	×	×	×
		MELSECNET/10	○	○	×	×	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	×	×	○	×	×	×
		Computer link	○	○	○	×	×	○	×	×	×
		CC-Link	○	×	○	×	○	○	○	×	○
		Multidrop (Independent mode) *3	○	×	○	×	×	○	×	×	×
LCPU	L series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *4	○	×	○	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	○	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○
		Multidrop (Independent mode) *3	○	×	○	×	×	○	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Indicates the CH2 side setting. (The CH1 side is fixed to the independent mode.)
*4: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(6) IBM-PC/AT compatible side port: USB, GOT1000 side port: USB, CPU side port: Q series-compatible C24 or L series-compatible C24

(a) Configuration



(b) Accessibility list

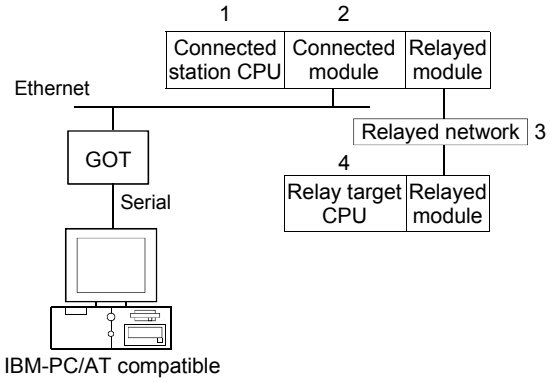
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode) *1	Q series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○ *4	×	×	×	×	×	×
		MELSECNET/H	○	○	×	×	×	×	×	×	×
		MELSECNET/10	○	○	×	×	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	×	×	○	×	×	×
		Computer link	○	○	○	×	×	○	×	×	×
		CC-Link	○	×	○	×	○	○	○	×	○
		Multidrop (Independent mode) *3	○	×	○	×	×	○	×	×	×
LCPU	L series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *4	○	×	○	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	○	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○
		Multidrop (Independent mode) *3	○	×	○	×	×	○	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Indicates the CH2 side setting. (The CH1 side is fixed to the independent mode.)
*4: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(7) IBM-PC/AT compatible side port: Serial, GOT1000 side port: Serial, CPU side port: Q series-compatible E71

(a) Configuration



(b) Accessibility list

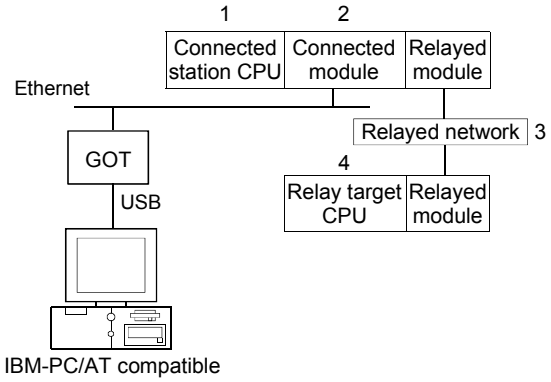
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode) *1, QSCPU	Q series-compatible E71 *2 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *4	×	×	×	×	×	×
		MELSECNET/H	○	○	×	×	×	×	×	×	×
		MELSECNET/10	○	○	×	×	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	×	×	○	×	×	×
		Computer link	○	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○

*1: Inaccessible to Redundant CPU.
*2: Cannot make communication if a remote password has been set to the connected station side Q series-compatible E71.
*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(8) IBM-PC/AT compatible side port: USB, GOT1000 side port: USB, CPU side port: Q series-compatible E71

(a) Configuration



(b) Accessibility list

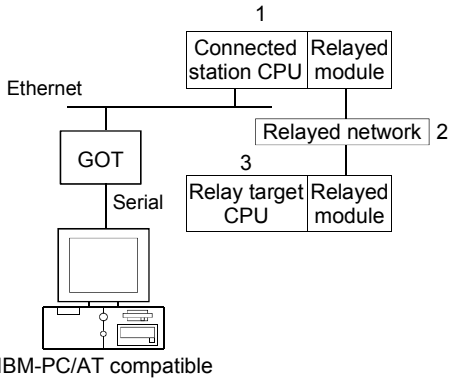
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode) *1, QSCPU	Q series-compatible E71 *2 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *4	×	×	×	×	×	×
		MELSECNET/H	○	○	×	×	×	×	×	×	×
		MELSECNET/10	○	○	×	×	○	○	○	×	○
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	×	×	○	×	×	×
		Computer link	○	×	○	×	×	○	×	×	×
		CC-Link	○	○	○	×	○	○	○	×	○

*1: Inaccessible to Redundant CPU.
*2: Cannot make communication if a remote password has been set to the connected station side Q series-compatible E71.
*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(9) IBM-PC/AT compatible side port: Serial, GOT1000 side port: Serial, CPU side port: Ethernet port

(a) Configuration



(b) Accessibility list

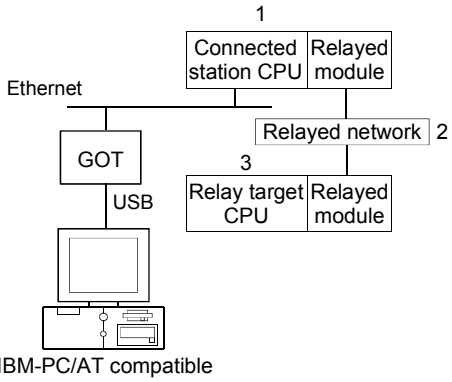
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU *1 (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *2	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnUDE(H)CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *5	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	×	×	○ *4	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *5	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *5	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Cannot make communication if a remote password has been set to the connected station CPU.
*2: Inaccessible to Redundant CPU.
*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".
*5: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(10) IBM-PC/AT compatible side port: USB, GOT1000 side port: USB, CPU side port: Ethernet port

(a) Configuration



(b) Accessibility list

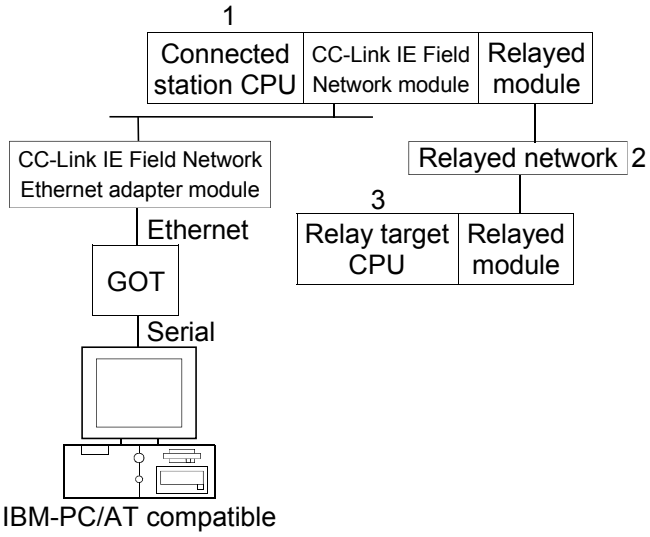
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU *1 (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *2	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnUDE(H)CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *5	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○ *4	×	×	×	×	○ *4	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *3	○ *5	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	○	○	○	×	○
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	×	×	×	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *5	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Cannot make communication if a remote password has been set to the connected station CPU.
*2: Inaccessible to Redundant CPU.
*3: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*4: Set the parameter-set values of the target station side Q series-compatible E71 or QE71 to the network number and station number.
Also set the "Station No.↔ IP information" of the Q series-compatible E71 or QE71 parameter setting.
At that time, specify any of the IP address calculation system, table conversion system and combined system as the "Station No.↔ IP information system".
*5: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(11) IBM-PC/AT compatible side port: Serial, GOT1000 side port: Serial, CPU side port: CC-Link IE Field Network Ethernet adapter module

(a) Configuration



(b) Accessibility list

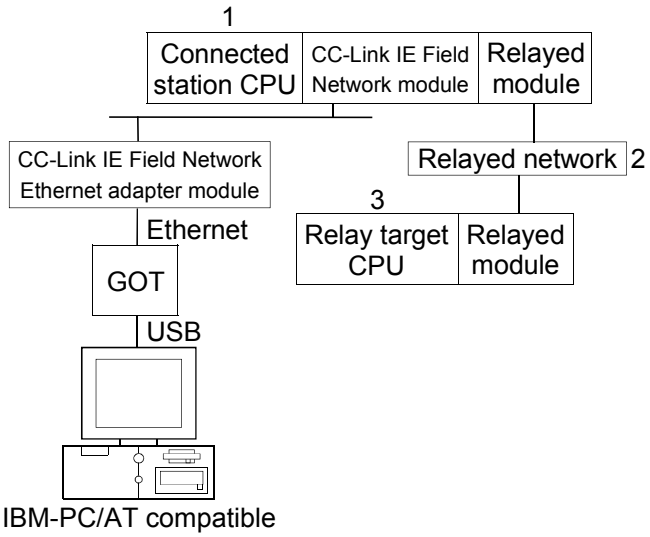
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnUDE(H)CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *3	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(12) IBM-PC/AT compatible side port: USB, GOT1000 side port:USB, CPU side port: CC-Link IE Field Network Ethernet adapter module

(a) Configuration



(b) Accessibility list

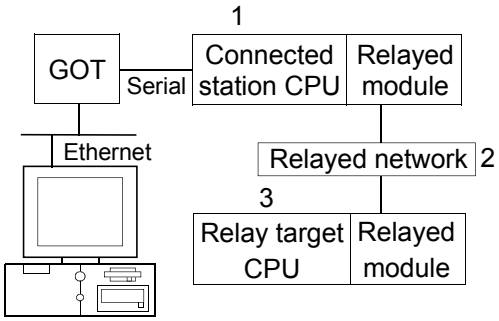
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QnUDE(H)CPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	○	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *3	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(13) IBM-PC/AT compatible side port: Ethernet board, GOT1000 side port: Ethernet port, CPU side port: Serial

(a) Configuration



(b) Accessibility list

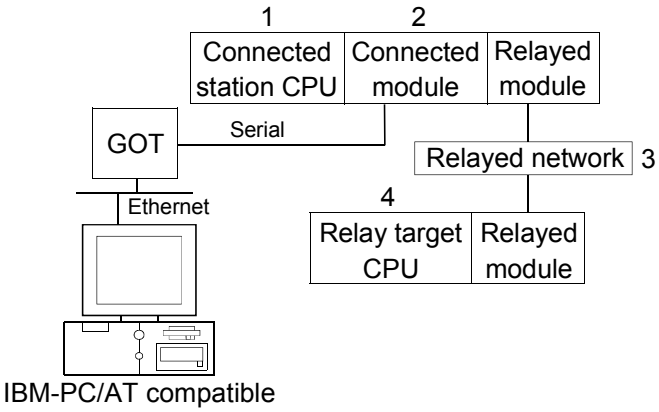
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU(Q mode) *1 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
LCPU (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *3	○	×	○	×	×	×	×	×	×
	MELSECNET/H	×	×	×	×	×	×	×	×	×
	MELSECNET/10	×	×	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(14) IBM-PC/AT compatible side port: Ethernet board,
GOT1000 side port: Ethernet port,
CPU side port: Q series-compatible C24 or L series-compatible C24

(a) Configuration



(b) Accessibility list

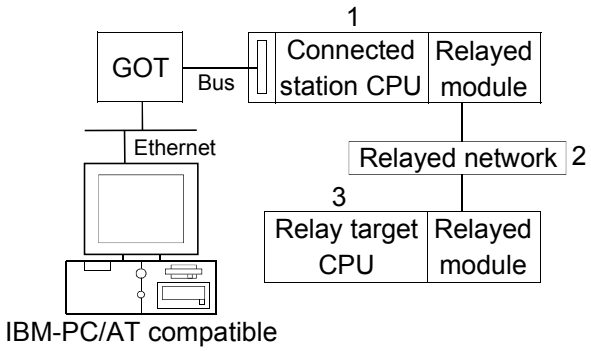
The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

Connected Station		3. Relayed Network	4. Relay Target CPU								
1. CPU	2. Connected unit (Usable control name)		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU (Q mode) *1	Q series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
		MELSECNET/H	○	○	×	×	×	×	×	×	×
		MELSECNET/10	○	○	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	×	×	×	×	×	×
		Computer link	○	○	○	×	×	×	×	×	×
		CC-Link	○	×	○	×	×	×	×	×	×
Q12DCCPU-V	Q series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
		MELSECNET/H	○	○	×	×	×	×	×	×	×
		MELSECNET/10	○	○	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	○	×	×	×	×	×	×	×	×
		Computer link	○	○	○	×	×	×	×	×	×
		CC-Link	○	×	○	×	×	×	×	×	×
LCPU	L series-compatible C24 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Field *3	○	×	○	×	×	×	×	×	×
		MELSECNET/H	×	×	×	×	×	×	×	×	×
		MELSECNET/10	×	×	×	×	×	×	×	×	×
		MELSECNET(II)	×	×	×	×	×	×	×	×	×
		Ethernet	×	×	×	×	×	×	×	×	×
		Computer link	○	×	○	×	×	×	×	×	×
		CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

(15) IBM-PC/AT compatible side port: Ethernet board,
GOT1000 side port: Ethernet port, CPU side port: Bus connection

(a) Configuration



(b) Accessibility list

The following table indicates whether access can be made or not.
The connected station CPUs are all accessible.
Whether the relay target CPU is accessible or not is indicated by ○ (accessible) or × (inaccessible).

1. Connected Station CPU (Usable control name)	2. Relayed Network	3. Relay Target CPU								
		QCPU (Q mode) *1	Q12DC CPU-V	LCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FXCPU	Motion controller CPU
QCPU(Q mode) *1 (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×
Q12DCCPU-V (ActGOTTRSP, ActMLGOTTRSP)	CC IE Control CC IE Field	○	○ *2	○*3	×	×	×	×	×	×
	MELSECNET/H	○	○	×	×	×	×	×	×	×
	MELSECNET/10	○	○	×	×	×	×	×	×	×
	MELSECNET(II)	×	×	×	×	×	×	×	×	×
	Ethernet	×	×	×	×	×	×	×	×	×
	Computer link	○	×	○	×	×	×	×	×	×
	CC-Link	○	○	○	×	×	×	×	×	×

*1: Inaccessible to Redundant CPU.
*2: Inaccessible to Q12DCCPU-V and QSCPU relayed by CC-Link IE Field Network since CC-Link IE Field Network is not supported.
*3: Inaccessible to LCPU relayed by CC-Link IE Controller Network since CC-Link IE Controller Network is not supported.

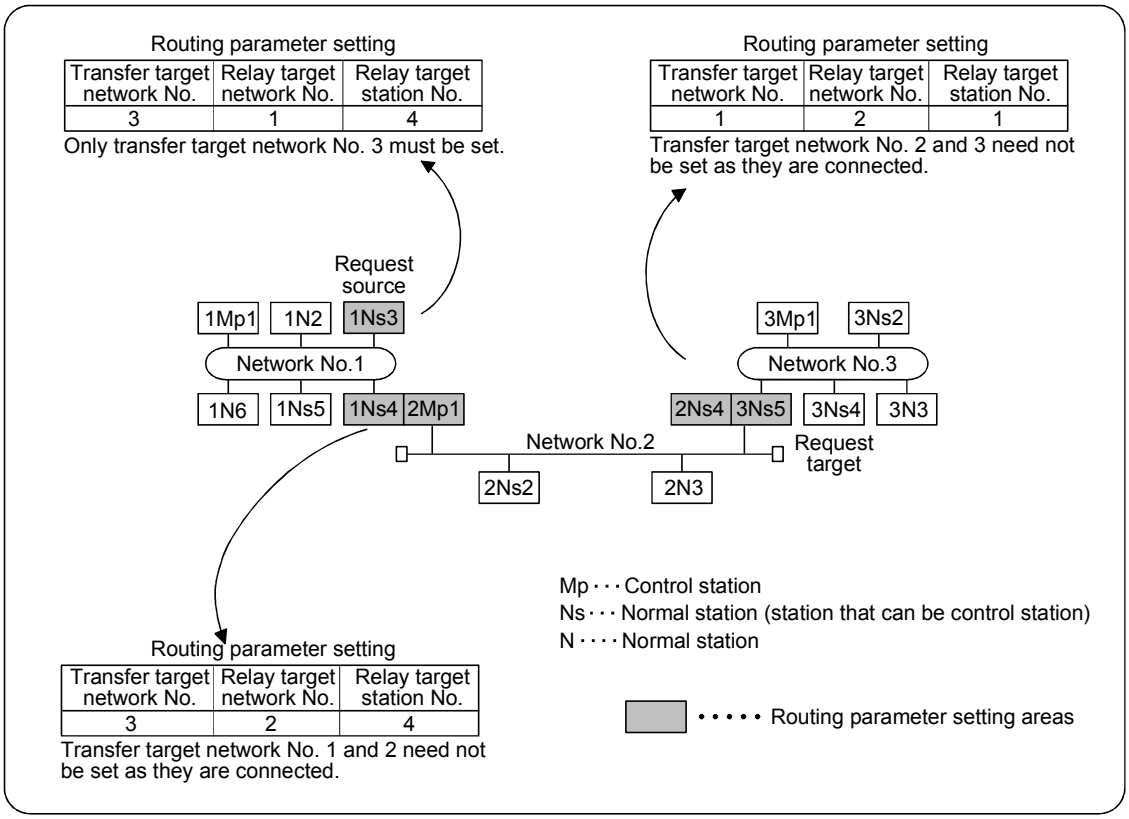
APPENDICES

Appendix 1 Concept of the Routing Parameters

The routing function is used by the station of the programmable controller in a multi-level system to make transient transmission to the station of another network No.
To perform the routing function, the "Routing parameters" must be set to associate the network No.s and stations acting as bridges.
For communication via the MELSECNET(II), the routing function cannot be used.

(1) The routing parameters must be set to the request source and relay station of the programmable controller.
  (a) The request source must be set to make access to the request target.
  (b) The relay station must be set to make access from the request source to the request target and to make access from the request target to the request source.
  (c) The request target needs no setting.

For example, to make transient transmission from 1Ns3 to 3Ns4 in the following diagram, the routing parameters must be set to the programmable controller 1Ns3 which makes 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 No.s" can be set to the programmable controller. 16 different network No.s allow the own station to be a request source or other stations to be accessed via the own station.

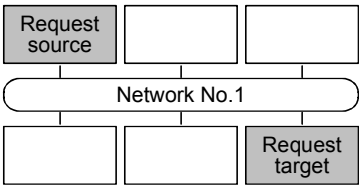
APP

(3) Routing parameter setting areas and data

For transient transmission, the routing parameter setting areas depend on the system.

(a) Two-level system

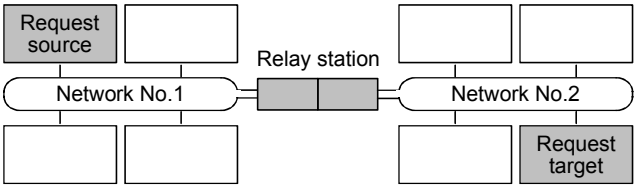
The routing parameters need not be set because transient transmission is made to within the same network.



(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 No. 2).



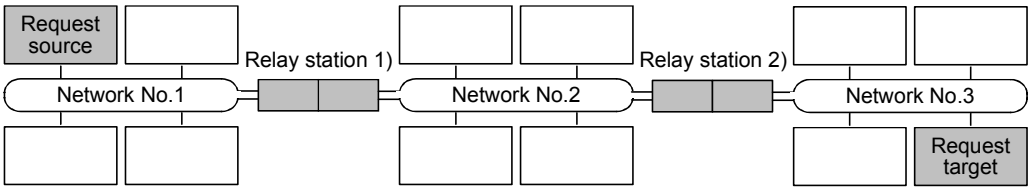
(c) Multi-level 2 (three networks)

Set the routing parameters to the request source and relay stations. *1

To the request source, set the data to access the request target (network No. 3).

To the relay station 1), set the data to access the request target (network No. 3).

To the relay station 2), set the data to access the request source (network No. 1).



(d) Multi-level 3 (four or more networks)

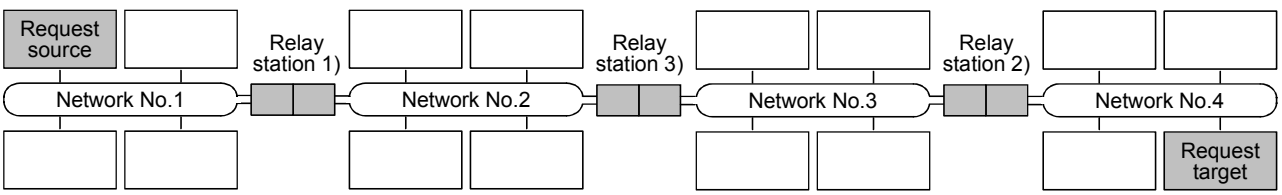
Set the routing parameters to the request source and relay stations. *1

To the request source, set the data to access the request target (network No. 4).

To the relay station 1) (the nearest relay station to the request source), set the data to access the request target (network No. 4).

To the relay station 2) (the nearest relay station to the request target), set the data to access the request source (network No. 1).

To the relay station 3) (relay station other than 1) and 2)), set the data to access the request target (network No. 4) and request source (network No. 1).



APP

APP - 2

*1: The following explains the case when the request source is the personal computer connected to Ethernet.
(1) The parameter settings are not necessary for the request source.
(2) The routing parameter settings are necessary for relay stations so that they can access the request source.
Refer to the following manual according to the connected programmable controllers.
• When connecting to Q series compatible E71
Q Corresponding Ethernet Interface Module User's Manual (Application)
• When connecting to QE71
For QnA Ethernet Interface Module User's Manual

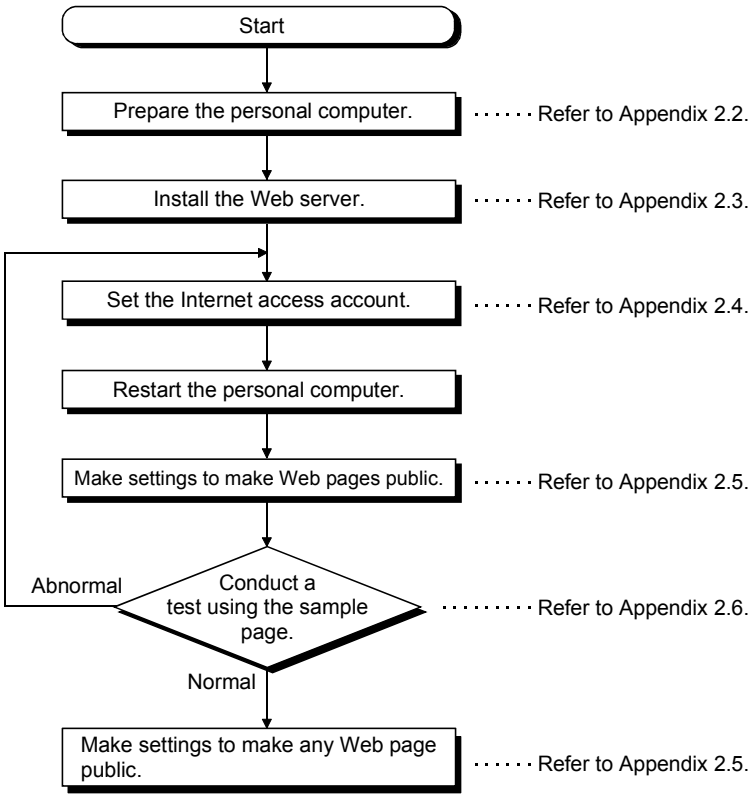
APP - 3

Appendix 2 How to Start the 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 start the Internet/intranet environment.



POINT
Web pages using MX Component will not operate 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 may be used as a Web server and a Web client.

(1) Personal computer usable 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 NT® Workstation Operating System Version 4.0 • Microsoft® Windows® 2000 Professional Operating System Version 4.0 • Microsoft® Windows® 98 Operating System • Microsoft® Windows® XP Professional Operating System • Microsoft® Windows Vista® Home Premium Operating System • Microsoft® Windows Vista® Business Operating System • Microsoft® Windows Vista® Enterprise Operating System • Microsoft® Windows Vista® Ultimate 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
Condition 2	The personal computer can be connected to the Internet or intranet.
Condition 3	When Web pages are to be made public on the Internet, external access must not be inhibited by a firewall or like.
Condition 4	MX Component has been installed and settings have been made for communication with the programmable controller.

(2) Personal computer usable 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 NT® Workstation Operating System Version 4.0 • Microsoft® Windows® 2000 Professional Operating System Version 4.0 • Microsoft® Windows® 98 Operating System • Microsoft® Windows® 95 Operating System • Microsoft® Windows® Millennium Edition Operating System • 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
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® 98

Install Personal Web Server stored on the Windows® 98 setup CD.
It can be installed using the CD drive: \add-ons\pws\setup.exe.

(2) When using Windows NT® Workstation 4.0

Get "Windows NT® Option Pack 4.0" and install Peer Web Services 4.0.
It can be installed using the CD drive: \setup.exe.

(3) When using Windows® 2000 Professional

Select [Control Panel]-[Add/Remove Programs] and install the Windows component "Internet Information Service (IIS)".
The Windows® 2000 Professional setup CD is required for installation.

(4) When using Windows® XP Professional

Select [Control Panel]-[Add/Remove Programs] and install the Windows component "Internet Information Service (IIS)".
The Windows® XP Professional setup CD is required for installation.

(5) When using Windows Vista® or Windows® 7

Select [Control Panel] – [Programs] and start [Turn Windows features on or off], and then install "Internet Information Services".

POINT
For detailed Web server installation method corresponding to the OS, refer to the installation procedure attached to the corresponding OS.

APP - 6

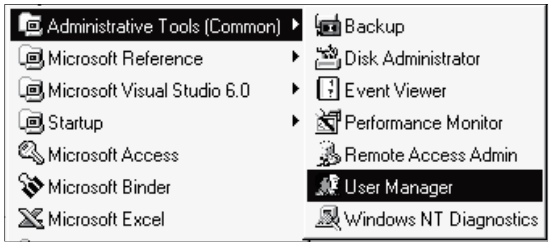
Appendix 2.4 Setting the Internet access account

When the OS of the personal computer where the Web server is operating is Windows NT® Workstation 4.0, Windows® 2000 Professional, Windows® XP Professional or Windows® 7, a special right must be set to the Internet access account.

POINT
The settings in this section are not needed when the OS of the personal computer where the Web server is operating is Windows® 98.

(1) When using Windows NT® Workstation 4.0

When the Active Server Pages (ASP) pages using MX Component are to be made public, the IUSR_Name (Internet Server Anonymous Access) must be given the "Debug programs" right.
Make settings in the following procedure.

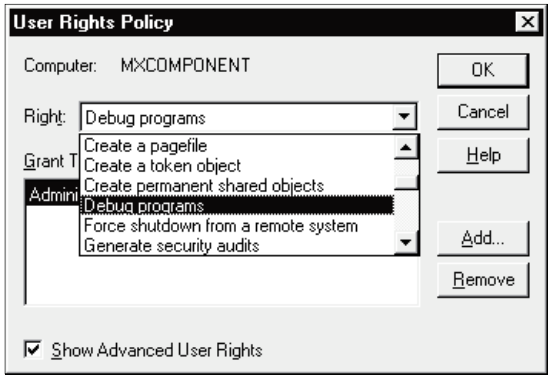


↓

1) Select the [Start]-[Programs]-[Administrative Tool (Common)]-[User Manager] menu.

↓

2) As User Manager starts, select the [Policies]-[User Rights] menu.



↓

3) Check "Show Advanced User Rights" and select "Debug programs" from the "Right" list box.

4) Click Add.

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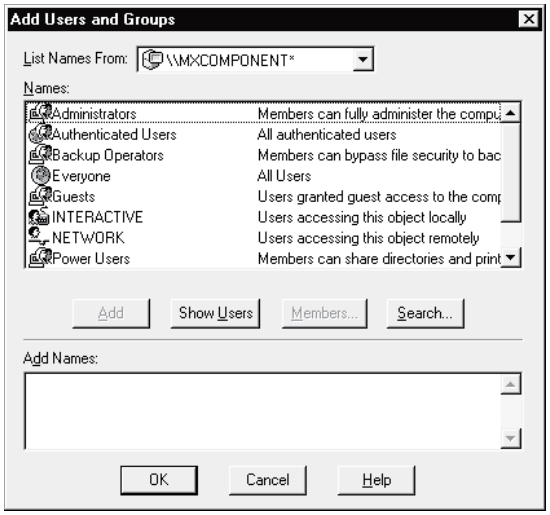
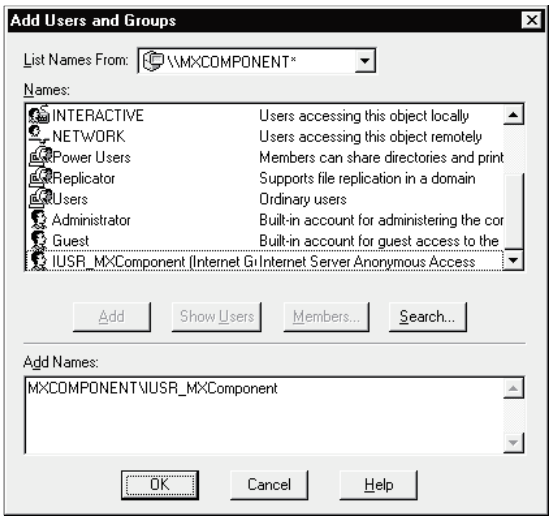


5) The "Add User and Groups" dialog box appears.
At this time, if the computer name (name of the computer where Peer Web Server 4.0 has been set up) is not displayed in "List Names Form", select the computer name.

6) With the computer name selected, click Show Users.

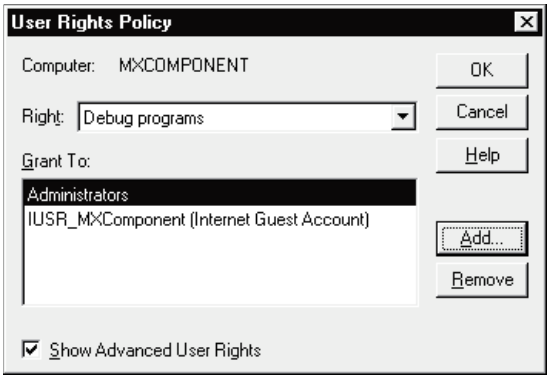
↓



7) Select the "IUSR_ computer name (Internet Server Anonymous Access)" account from the "Names" list box, and click Add.

8) Click OK.

↓



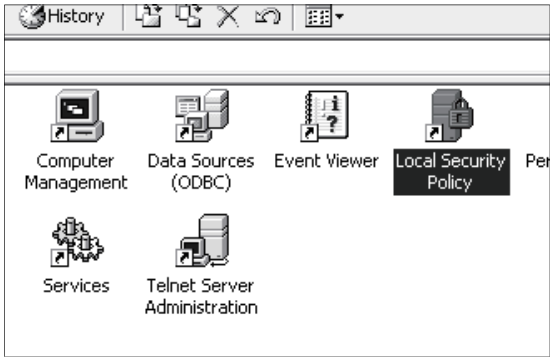
9) After making sure that the account has been added, reboot the personal computer.

↓

(Setting completion)

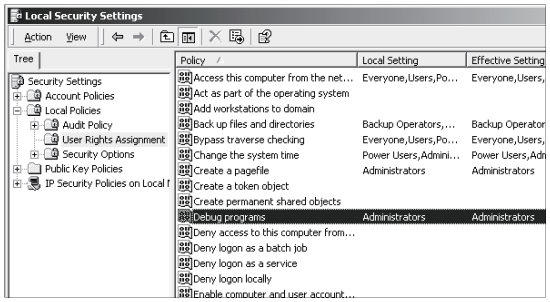
(2) When using Windows® 2000 Professional

When the Active Server Pages (ASP) pages using MX Component are to be made public, the IUSR_Name(Internet Server Anonymous Access) must be given the "Debug programs" right.
Make settings in the following procedure.



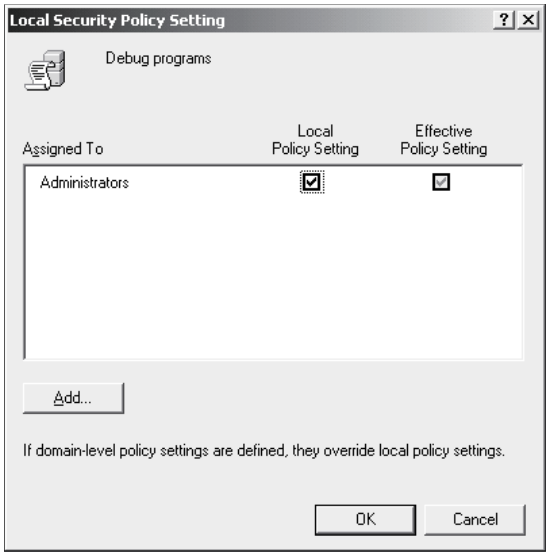
1) Select [Administrative Tools]-[Local Security Policy].

↓



2) Select [Local Policies]-[User Rights Assignment] in the tree structure and double-click "Debug programs".

↓



3) As the "Local Security Policy Setting" dialog box appears, click Add.

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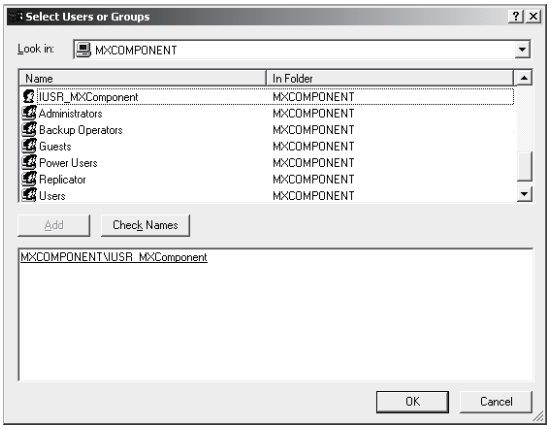
↓

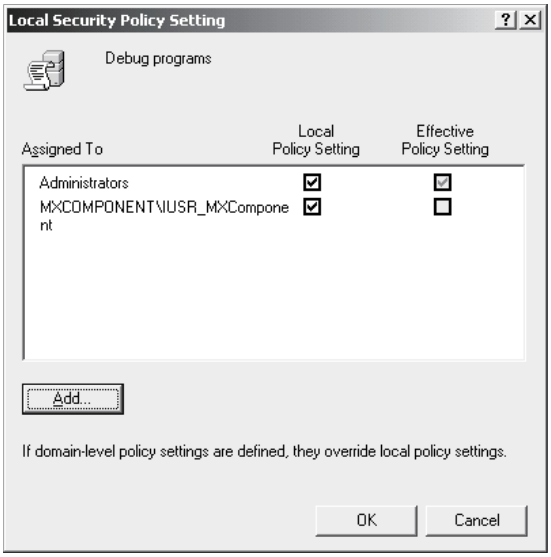


4) The "Select Users or Groups" dialog box appears.
At this time, if the computer name (name of the computer where Internet Information Service has been set up) is not displayed in "Lock in", select the computer name.

5) Select the "IUSR_Name (Internet Server Anonymous Access)" account from the "Name" list box, and click Add.

6) Click OK.

↓



7) After making sure that the account has been added, reboot the personal computer.

↓

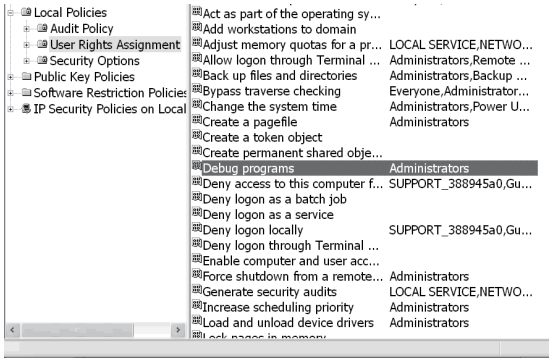
(Setting completion)

(3) When using Windows® XP Professional

When the Active Server Pages (ASP) pages using MX Component are to be made public, the IUSR_Name (Internet Server Anonymous Access) must be given the "Debug programs" right.
Make settings in the following procedure.

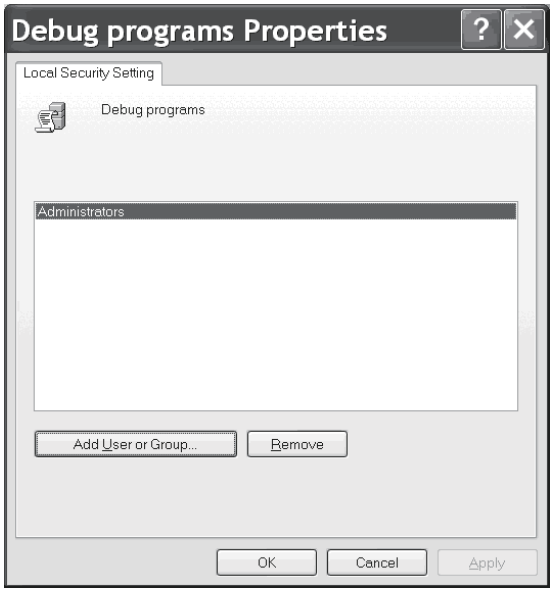
1) Select [Administrative Tools]-[Local Security Policy].

↓



2) Select [Local Policies]-[User Rights Assignment] in the tree structure and double-click "Debug programs".

↓



3) As the "Local Security Policy Setting" dialog box appears, click Add User or Group.

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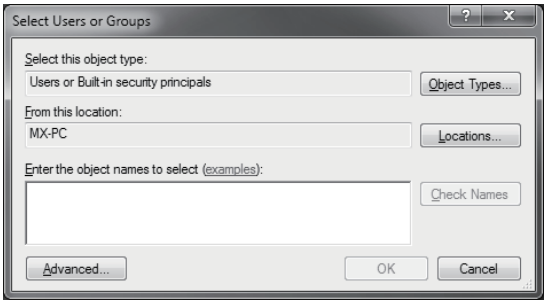
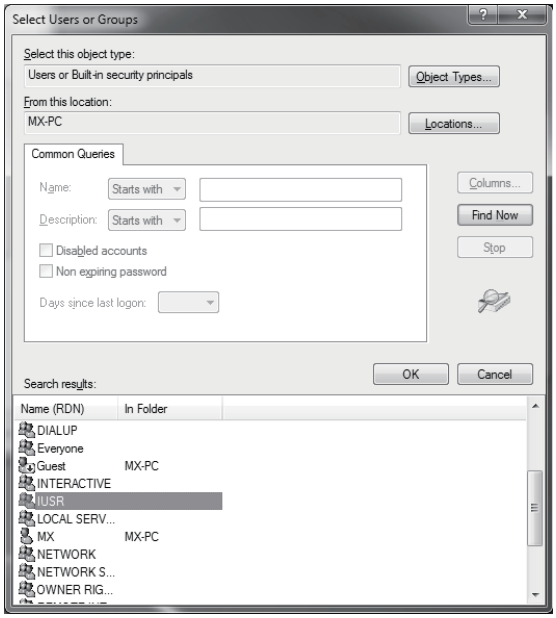


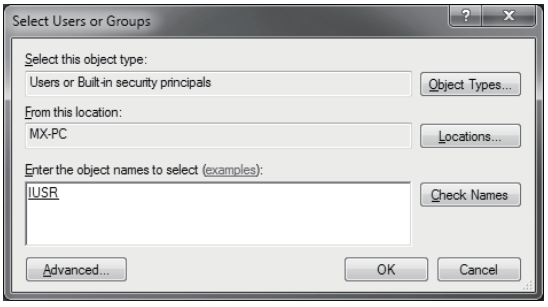
4) The "Select Users or Groups" dialog box appears.
At this time, if the computer name (name of the computer where Internet Information Service has been set up) is not displayed in "Locations", select the computer name.
After confirming the above setting, click Advanced.

↓



5) Click Find Now, and select the "IUSR_Name (Internet Server Anonymous Access)" account from the "Name" list box, and click OK.

↓



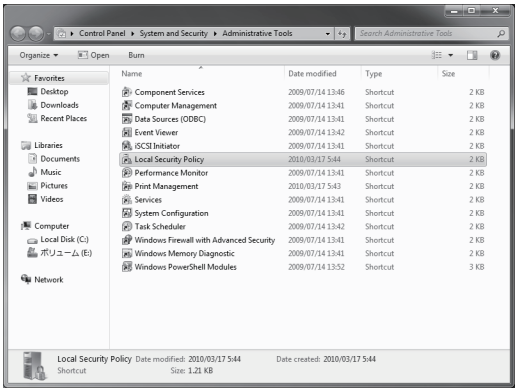
6) After making sure that the account has been added, reboot the personal computer.

↓

(Setting completion)

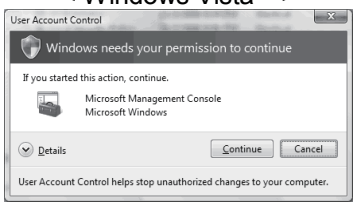
(4) When using Windows Vista® or Windows® 7

When the Active Server Pages (ASP) pages using MX Component are to be made public, the IUSR must be given the "Debug programs" right.
Make settings in the following procedure.

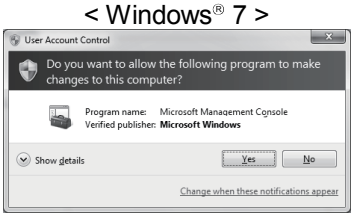


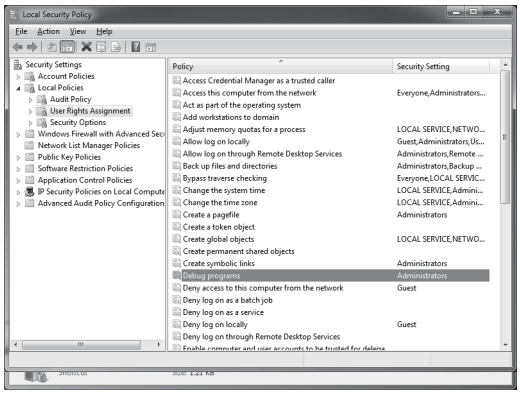
1) Select [Administrative Tools]-[Local Security Policy].
   * When user account control is enabled in Windows Vista® , the following screen appears.
   Click Continue or Yes .

< Windows Vista® >

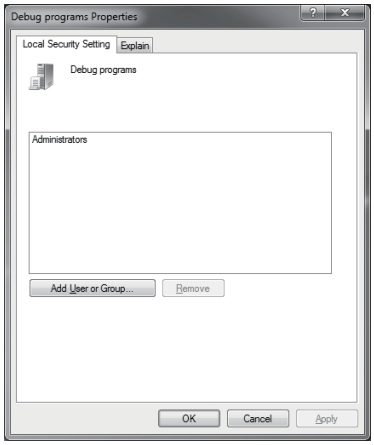


< Windows® 7 >





2) Select [Local Policies]-[User Rights Assignment] in the tree structure and double-click "Debug programs".



3) As the "Local Security Policy Setting" dialog box appears, click Add User or Group .

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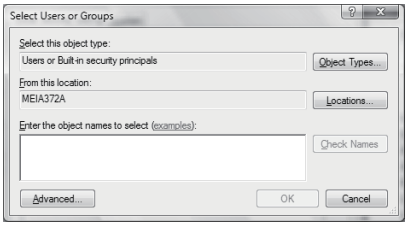
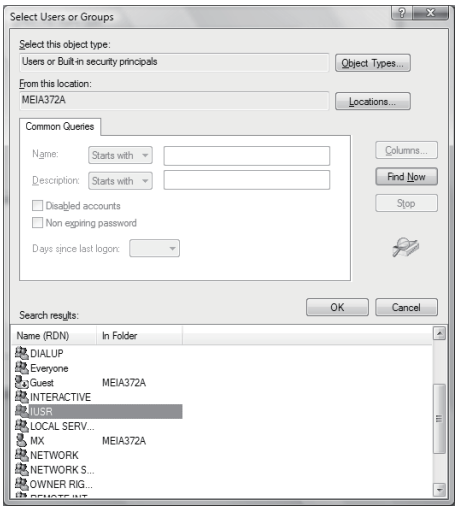
↓



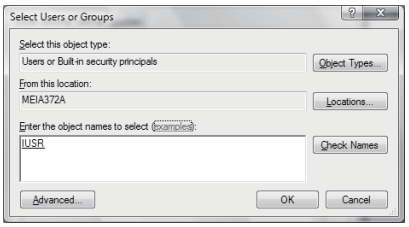
↓

4) The "Select Users or Groups" dialog box appears.
At this time, if the computer name (name of the computer where Internet Information Service has been set up) is not displayed in "Locations", select the computer name.
After confirming the above setting, click Advanced.



↓

5) Click Find Now button, and select the "IUSR" account from the "Name" list box, and click OK.



↓

6) After making sure that the account has been added, reboot the personal computer.

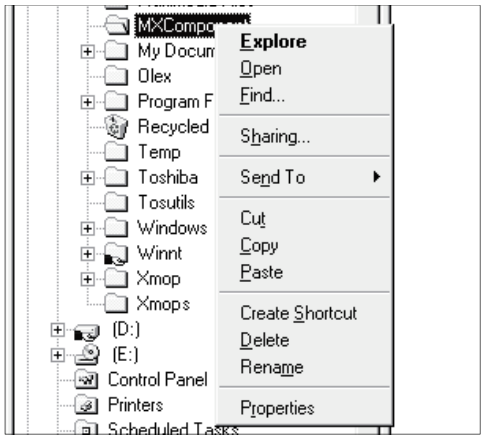
↓

(Setting completion)

Appendix 2.5 Making Web pages public

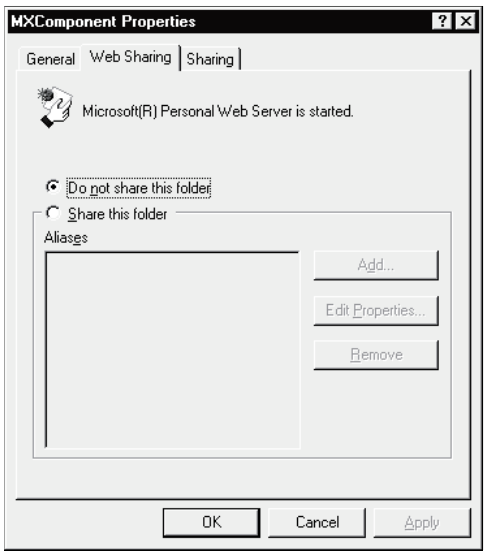
To make Web pages public on the Internet/intranet, the folder must be Web shared.
The following is the procedure to make the folder Web shared.
Though the screen slightly varies with the Web server OS, the setting procedure is the same.

(1) When using Microsoft® Windows NT® Workstation Operating System Version 4.0, Microsoft® Windows® 2000 Professional Operating System, Microsoft® Windows® XP Professional, Microsoft® Windows® XP Home Edition or Windows® Vista



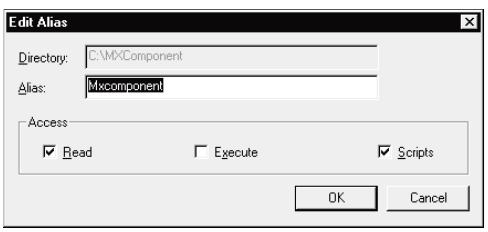
↓

1) Boot Explorer and right-click any folder that contains the Web file (*.html, *.asp) to be made public to display the folder properties.



↓

2) As the properties screen appears, select the "Web Sharing" tab and select "Share this folder".



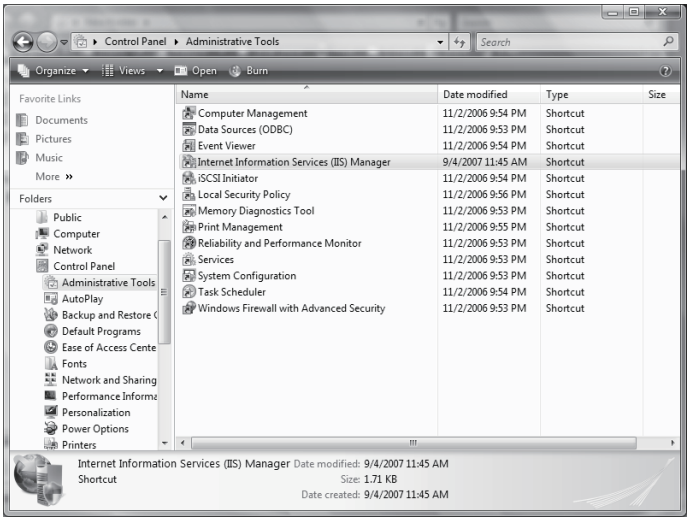
↓

(Setting completion)

3) As the "Edit Alias" dialog box appears, change the alias here if you change it.

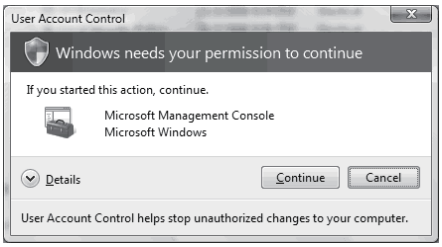
The alias is the underlined part of the URL to be specified on the Web browser.
http://**.**.**.**/Mxcomponent/NetTest.asp

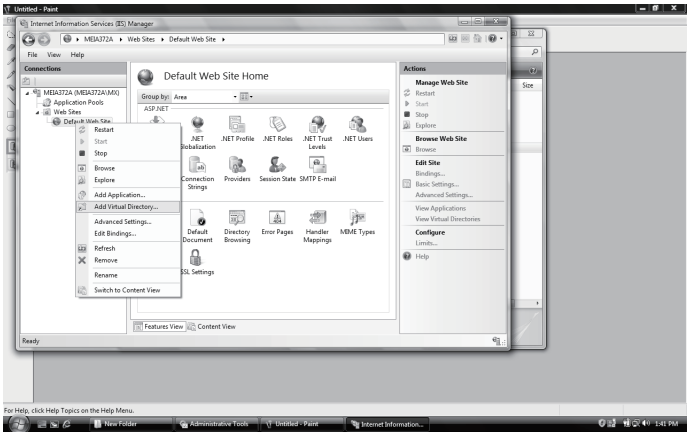
(2) When using Windows Vista®



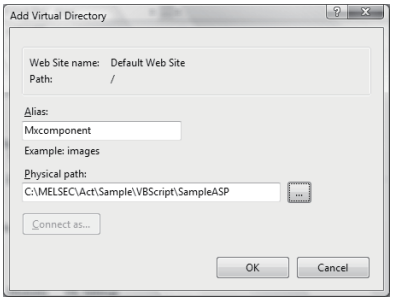
1) Select [Control Panel] – [Classic View] – [Administrative Tools] and double-click [Internet Information Services (IIS) Manager].

   * When user account control is enabled in Windows Vista® , the following screen appears.
   Click Continue .





2) Internet Information Services (IIS) Manager starts. Expand the tree on [Connections] window, right-click on [Default Web Site], and then click [Add Virtual Directory…].

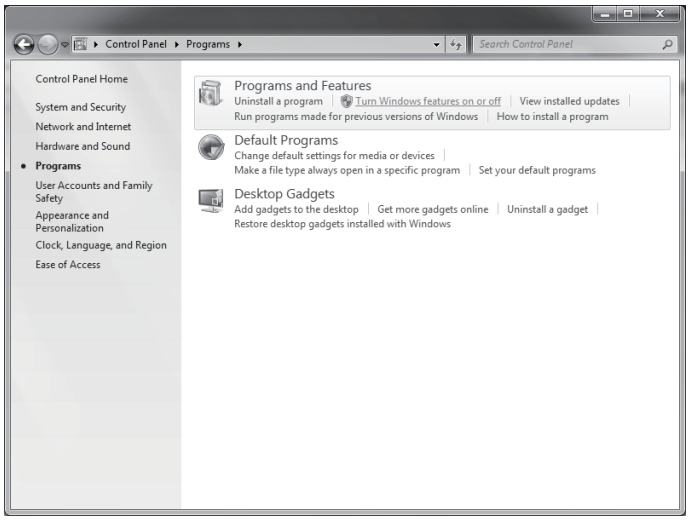


3) The “Add Virtual Directory” dialog box appears.
   Specify any name at “Alias:”, and specify a folder path name to be released at “Physical path:” and click OK .

   The alias is the underlined part of the URL to be specified on the Web browser.
   http://**.**.**.**/Mxcomponent/NetTest.asp

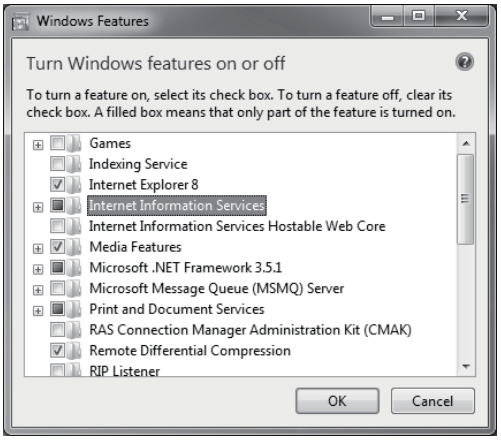
(Setting completion)

(3) When using Windows® 7



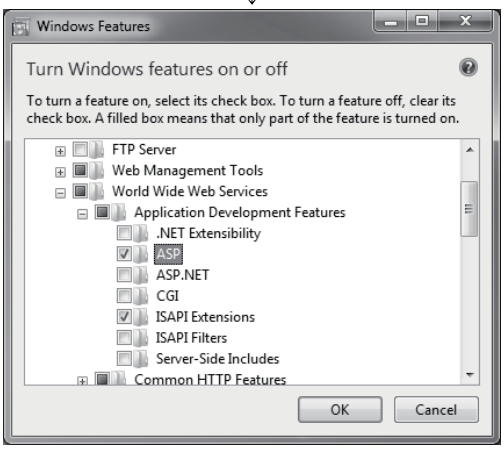
↓

1) Select [Control Panel] – [Programs] – [Turn Windows features on or off].



↓

2) Check "Internet Information Services".



↓

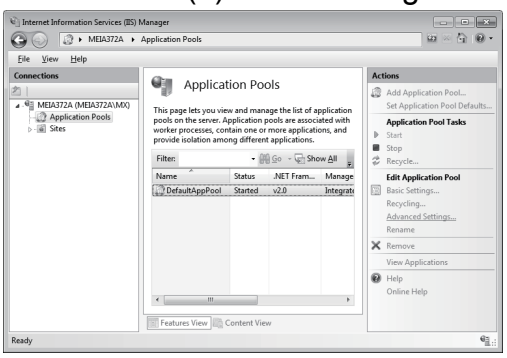
3) Select [Internet Information Services] – [World Wide Web Services] – [Application Development Features], check "ASP" and click OK .

* When using 64-bit Windows® 7, configure the settings on the next page.

↓

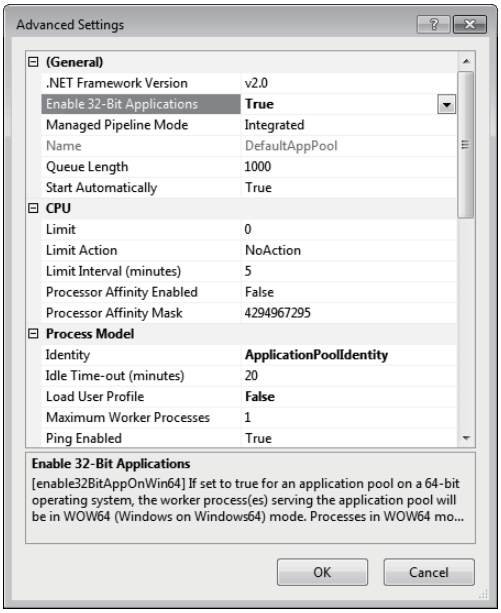
(Setting completion)

(4) When using 64-bit Windows® 7



↓

1) 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.



2) Set "True" for [Enable 32-Bit Applications] and click OK .

↓

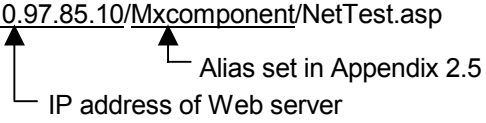
(Setting completion)

APP - 18

Appendix 2.6 Checking whether access can be made to Web server properly or not

When a check is to be made via the Internet, the personal computer where the Web server has been installed must be connected to the Internet.
After confirming that the Web server is connected to the Internet/intranet, boot the Web browser (Internet Explorer) on the Web client side personal computer, enter the URL as indicated below, and make sure that the Web page is displayed properly.

(URL input example) http://10.97.85.10/Mxcomponent/NetTest.asp



NetTest.asp is the Web server operation checking test page offered by MX Component. Make sure that the system date and system time of the server are displayed on the Web browser.

POINT

(1) If access to NetTest.asp cannot be made properly, access cannot be made to the Web pages using MX Component, either.
In such a case, reconfirm the Web server settings and Web client browser settings.
If the settings are correct, the Web pages may not be displayed because communication cannot be made properly due to dense traffic or like of the communication line.
In this case, check the status of the communication line.

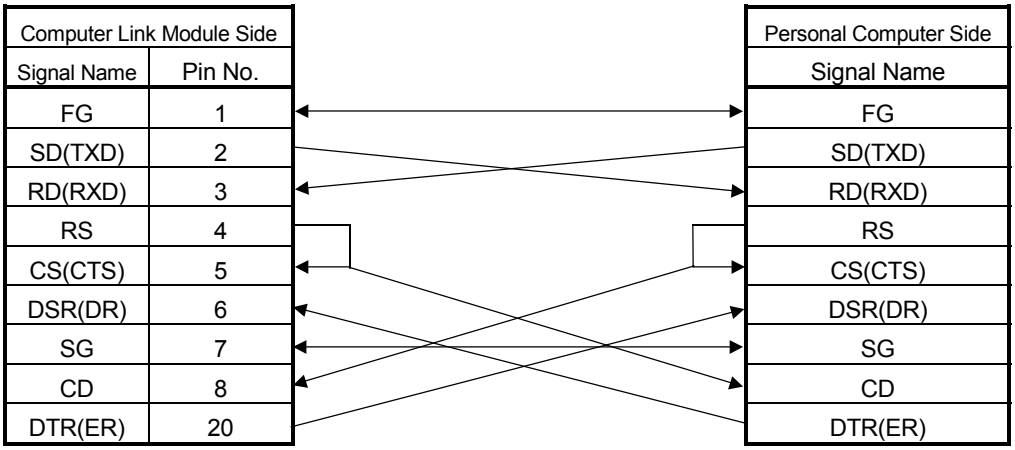
(2) NetTest.asp is stored in the following folder.
[user-specified folder]-[Act]-[Sample]-[VBScript]-[SampleASP]

Appendix 3 RS-232 Cable wiring example when performing computer link communication

Appendix 3.1 A Series

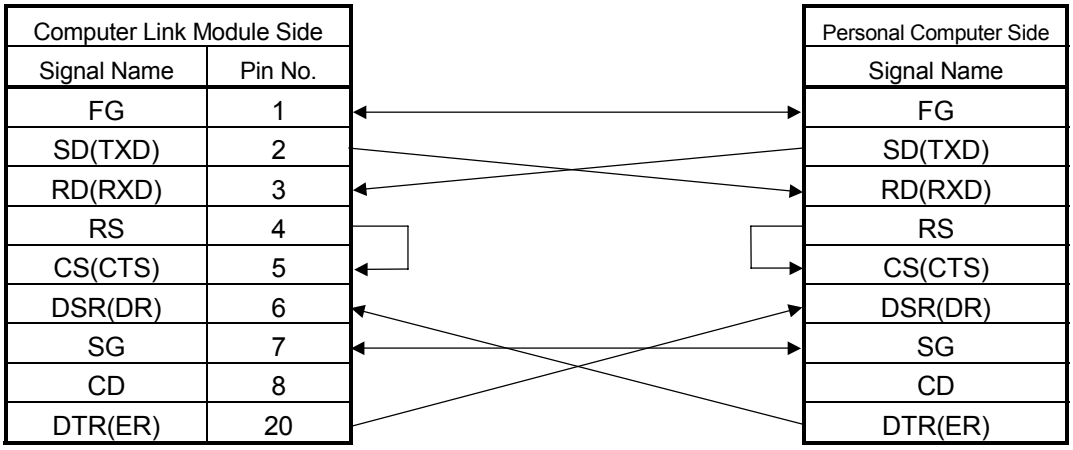
(1) When a 25-pin connector is used in a C24(computer link module)

(Example of connection 1)



The CD signal need not be connected when the following connection is used for communication. Select no CD terminal check (write 1) as the RS-232 CD terminal check setting (setting made at buffer memory address 10BH).

(Example of connection 2)



(2) When a 9-pin connector is used in a C24(computer link module)

(Example of connection 1)

Computer Link Module Side		Personal Computer Side
Signal Name	Pin No.	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)

(Example of connection 2)

Computer Link Module Side		Personal Computer Side
Signal Name	Pin No.	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)

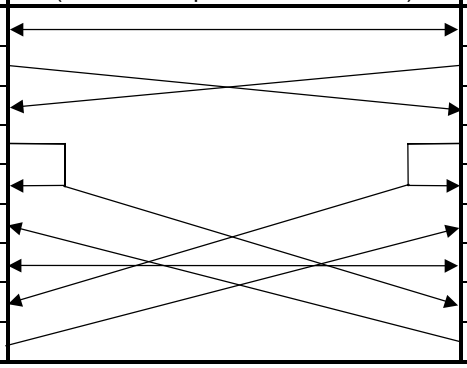
* Connecting the DTR and DSR signals of the C24 (computer link module) to the external device as shown above enables DC code control or DTR/DSR control.

Appendix 3.2 QnA Series

(1) For large-scale QC24(N)

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

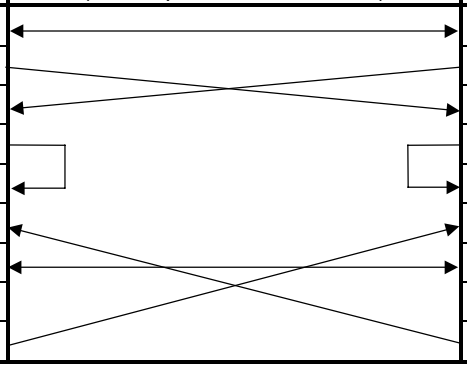
Large-scale QC24(N) Side		Cable Connection and Signal Direction	Personal Computer Side
Signal Name	Pin No.	(Full-/Half-Duplex Communication)	Signal Name
FG	1		FG
SD(TXD)	2		SD(TXD)
RD(RXD)	3		RD(RXD)
RS	4		RS
CS(CTS)	5		CS(CTS)
DSR(DR)	6		DSR(DR)
SG	7		SG
CD	8		CD
DTR(ER)	20		DTR(ER)



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

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

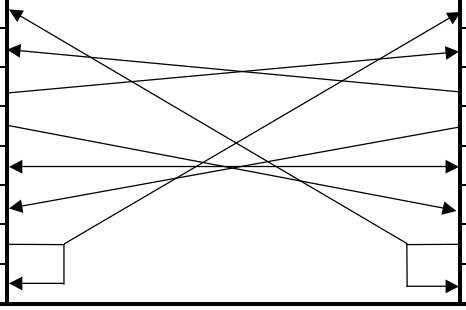
Large-scale QC24(N) Side		Cable Connection and Signal Direction	Personal Computer Side
Signal Name	Pin No.	(Full-Duplex Communication)	Signal Name
FG	1		FG
SD(TXD)	2		SD(TXD)
RD(RXD)	3		RD(RXD)
RS	4		RS
CS(CTS)	5		CS(CTS)
DSR(DR)	6		DSR(DR)
SG	7		SG
CD	8		CD
DTR(ER)	20		DTR(ER)



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

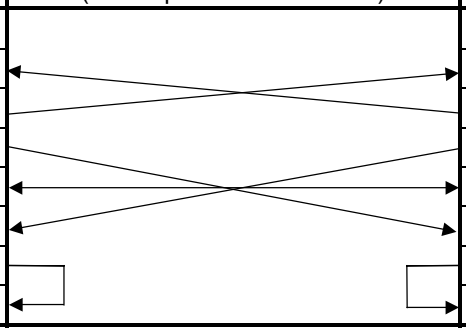
(2) For compact QC24(N)

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

Compact QC24(N) Side		Cable Connection and Signal Direction (Full-/Half-Duplex Communication)	Personal Computer Side
Signal Name	Pin No.		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)

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

(b) Example of connection to an external device that dose not allows the CD signal(No.1 pin) to be turned ON/OFF

Compact QC24(N) Side		Cable Connection and Signal Direction (Full-Duplex Communication)	Personal Computer Side
Signal Name	Pin No.		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)

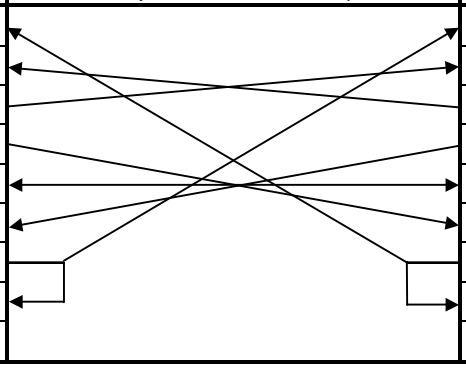
DC code control or DTR/DSR control is enabled by connecting the QC24(N) to an external device as shown above.

Appendix 3.3 Q Series

The connector specifications are indicated below.

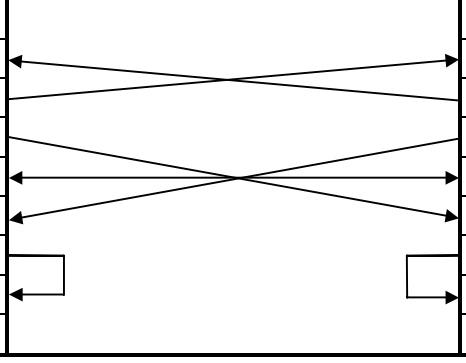
Pin No.	Signal Code	Signal Name	Signal Direction Q series-compatible C24↔external device
1	CD	Receive carrier detection	←
2	RD(RXD)	Receive data	←
3	SD(TXD)	Send data	→
4	DTR(ER)	Data terminal ready	→
5	SG	Send ground	←
6	DSR(DR)	Data set ready	←
7	RS(RTS)	Request to send	→
8	CS(CTS)	Clear to send	←
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 No.		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 exercising 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 No.		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		

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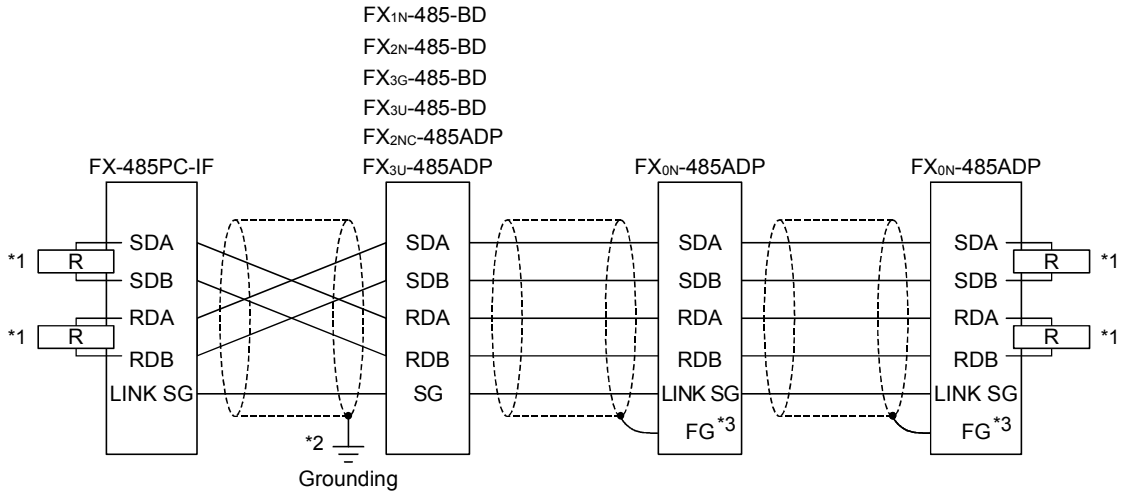
Appendix 3.4 FX Series

The following shows the example of wiring a personal computer and the FX extended port. For details of the FX-485PC-IF converter, refer to the FX SERIES USER'S MANUAL-Data Communication Edition.

(1) Example of connecting a personal computer and FX-485PC-IF converter with the RS-232 cable

Personal computer side	Cable connection and signal direction	FX-485PC-IF side	
Signal name	(Full-/Half-Duplex Communication)	Signal name	Pin No.
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) Example of connecting the FX-485PC-IF converter and the FX extended port (2-pair wiring)



*1: R indicates a terminal resistance.
Make sure to install terminal resistances at both ends of the circuit.
(For 2-pair wiring, use the terminal resistance of 330Ω, 1/4W.)
For the FX3G-485-BD, FX3U-485-BD and FX3U-485ADP, terminal resistances are built in.
Set the terminal resistance by the setting switch.
For the FX0N-485ADP, FX1N-485-BD, FX2N-485-BD, and FX2NC-485ADP use the provided terminal resistances.

*2: Make sure to ground the shield connected to the FX1N-485-BD, FX2N-485-BD, FX2NC-485ADP, FX3G-485-BD, FX3U-485-BD, FX3U-485ADP.

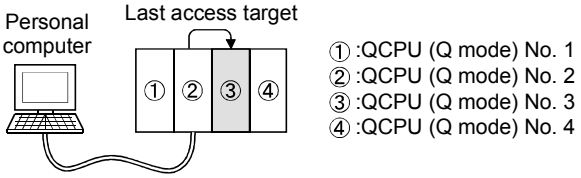
*3: Make sure to connect the FG terminal to the ground terminal of the grounded programmable controller.

Appendix 4 Multi-CPU System

The valid CPU number specified for a multi-CPU system is that of the last accessed station only.
When making access to the non-control CPU of the relay module on the accessed station, use the modules of function version B as the relay modules and QCPUs (Q mode) on the own station, all relay stations and accessed station.

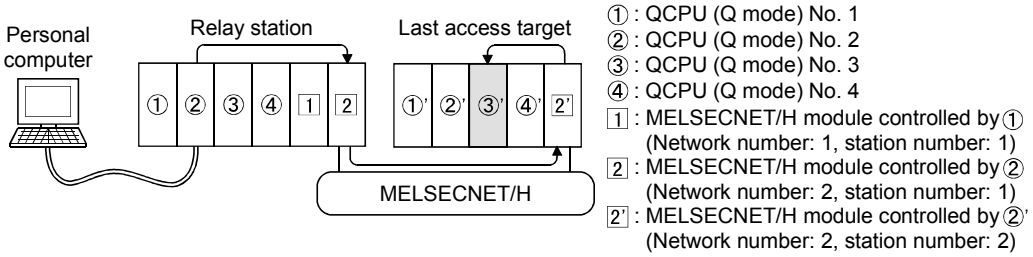
(Example 1) CPU COM communication

When the programmable controller CPU No. 3 (0x3E2) is specified for access, access is made to the CPU ③.



(Example 2) 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, access is made to the CPU ③'.
The CPU number cannot be specified for the relay station.
Therefore, if access is made to the network No. 1 in the following case, an error will occur since the network number controlled by the CPU ② is only "2".



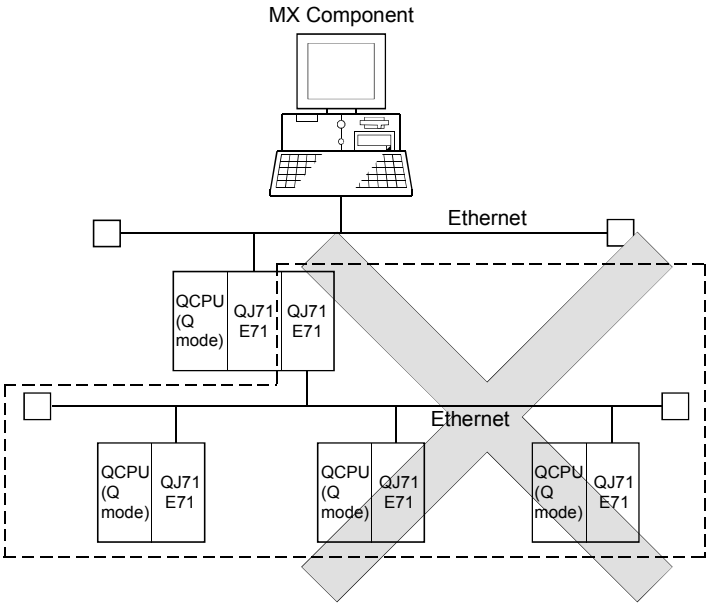
Appendix 5 Number of Loadable Network Modules When Q00JCPU, Q00UJCPU, Q00CPU, Q00UCPU, Q01CPU or Q01UCPU Is Used

The following indicates the number of loadable network modules that may be connected when the Q00JCPU, Q00CPU or Q01CPU is used.

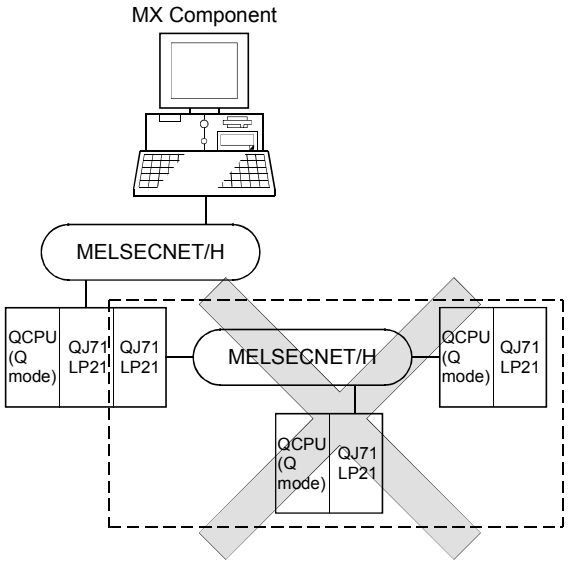
Network Module	Number of Loadable Modules
MELSECNET/H module	1 module in all
Ethernet module	
CC-Link module (Function version B or later)	2 modules
CC-Link IE Controller Network module	1 module

Therefore, the following systems cannot be configured.

(Example 1) Since the number of loadable Ethernet modules is 1, the part of the system indicated by the dotted line cannot be configured.

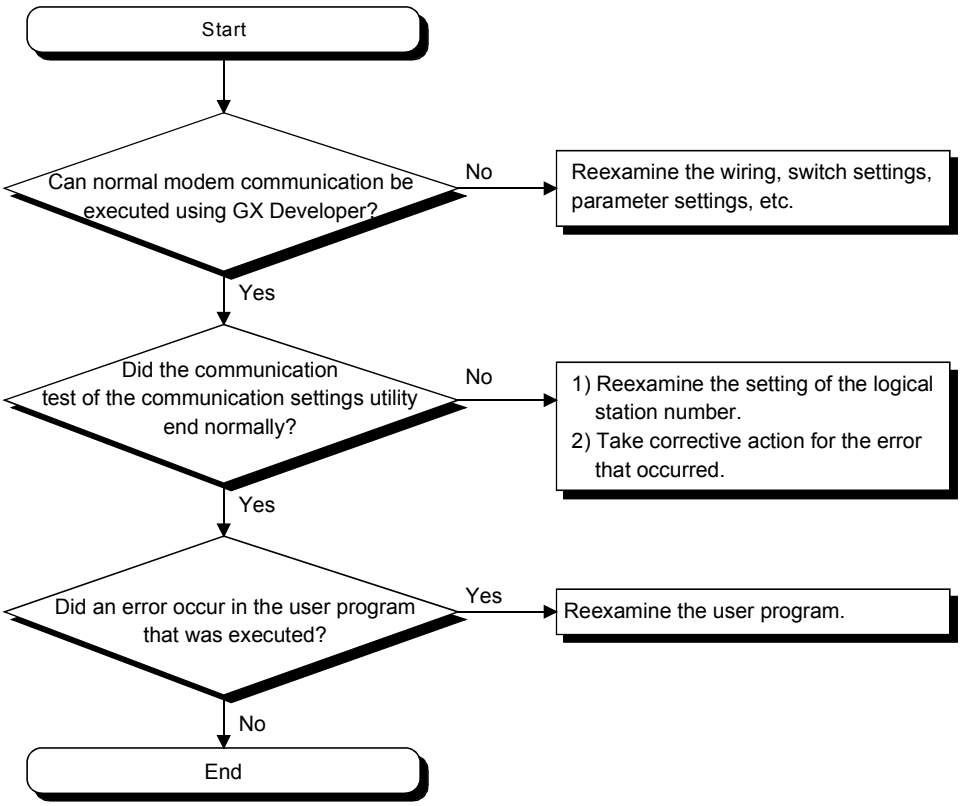


(Example 2) Since the number of loadable MELSECNET/H modules is one, the part of the system indicated by the dotted line cannot be configured.



Appendix 6 Flowchart for the case where 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) Target system

In Target system, select either "Control system" or "Not specified" to access the compatible Redundant CPU.

Control system: Connects to the control system and continues access to the control system in response to system switching.

Not specified: Connects to the connection target programmable controller CPU as before.

*1: Target system setting can either be made on the utility setting type communication setting wizard screen or by 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.

(1) When checking which system is being accessed, System A or System B

SM1511	System A identification flag	• Identifies system A/system B of a redundant system. • Remains 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

(2) When checking the operation system status

SM1515	Control/ Standby system status	• Indicates the CPU module operation status • Remains ON/OFF even if the tracking cable is disconnected while the redundant system is running.
SM1516		

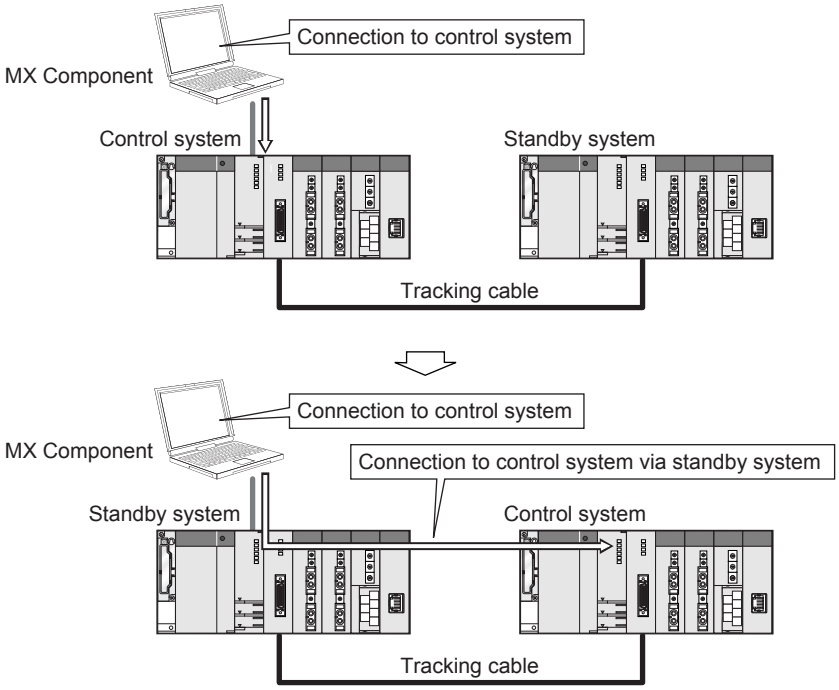
	Control system	Standby system	At the time of TRK.CABLE ERR.(Error code: 6120) occurrence (System not determined.)
SM1515	ON	OFF	OFF
SM1516	OFF	ON	OFF

(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 direction connection.

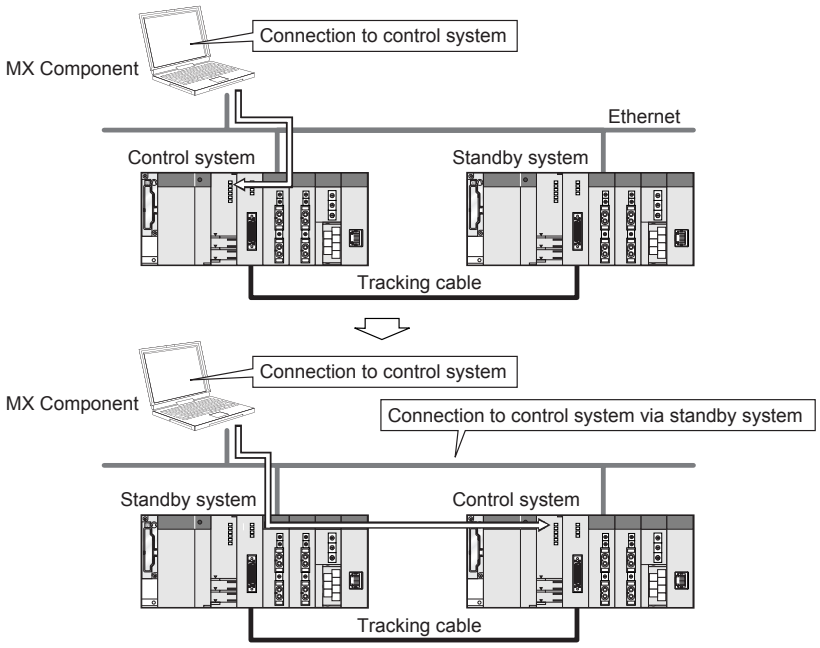


(b) Connection to MELSECNET/H, Ethernet or CC-Link IE Controller Network

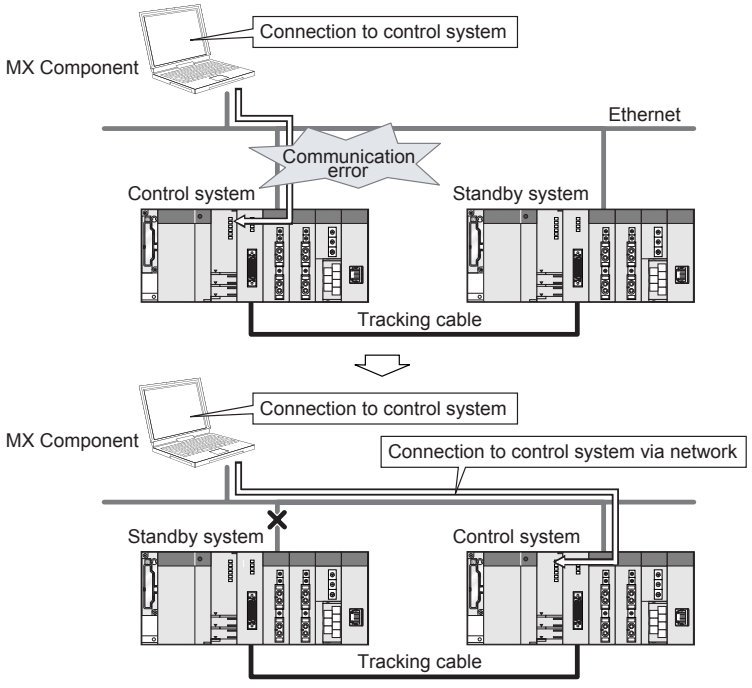
Access to the control system after system switching is continued as shown below, depending on whether a communication error occurs or not.

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.

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(3) Automatic switching of communication route

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 route is automatically switched to continue access to the control system.
Hereinafter, this automatic switching of the communication route is referred to as route switching.

The following describes the route switching conditions, how to check for route switching occurrence, and examples of access by route switching.

(a) Route switching conditions

When access is being made under the following conditions, access to the Redundant CPU is continued by route switching 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 had already occurred at a start of communication, access to the control system is not continued by route switching even if tracking is recovered after that.

*1: Includes the status in which either Redundant CPU is powered off or reset.

(b) How to check for route switching occurrence and examples of access by route switching

1) How to check whether route switching occurred or not

When communication is being made in Target system, whether communication is continued by route switching due to communication error can be estimated.

<Special relay and special registers to be monitored and estimated possibility of route switching>

SM1600*1	SD1590*2	SD1690*2	Possibility of route switching	Reference
OFF	Either one is other than 0		Since a system switching request from the network module was detected, route switching may have been executed.	2) Fig. 1
ON	0	0	Since an other system fault occurred, route switching may have been executed.	2) Fig. 2
ON	Either one is other than 0		Since an other system fault occurred or a system switching request from the network module was detected, route switching may have been executed.	2) Fig. 2 2) Fig. 1

*1: Even if SM1600 is ON, route switching does not occur when the CPU is not accessed via the tracking cable.

*2: When using SM1600, SD1590 and SD1690 to estimate whether route switching has occurred or not for the Redundant CPU connected to Ethernet, check the following items in the redundant setting of the network parameter dialog box of GX Developer.
- Issue a system switching request at disconnection detection.
- Issue a system switching request at communication error.

Check the following based on the statuses 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 route switching

The following shows examples of route switching during access to the control system by Ethernet connection.

<When system switching occurs at communication error>

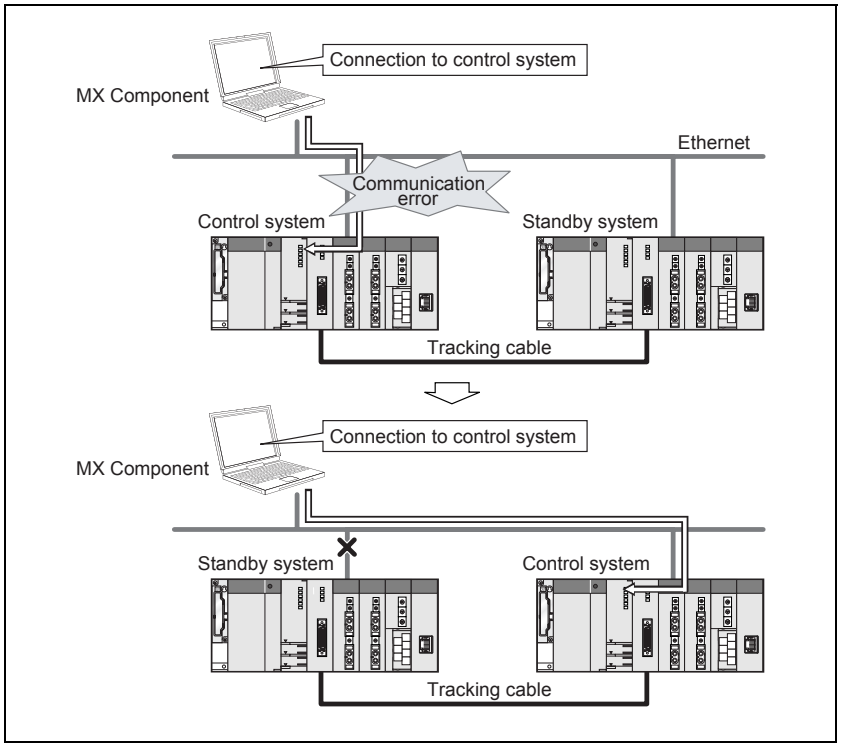


Fig. 1 Route switching example 1

<When standby system fault occurs>

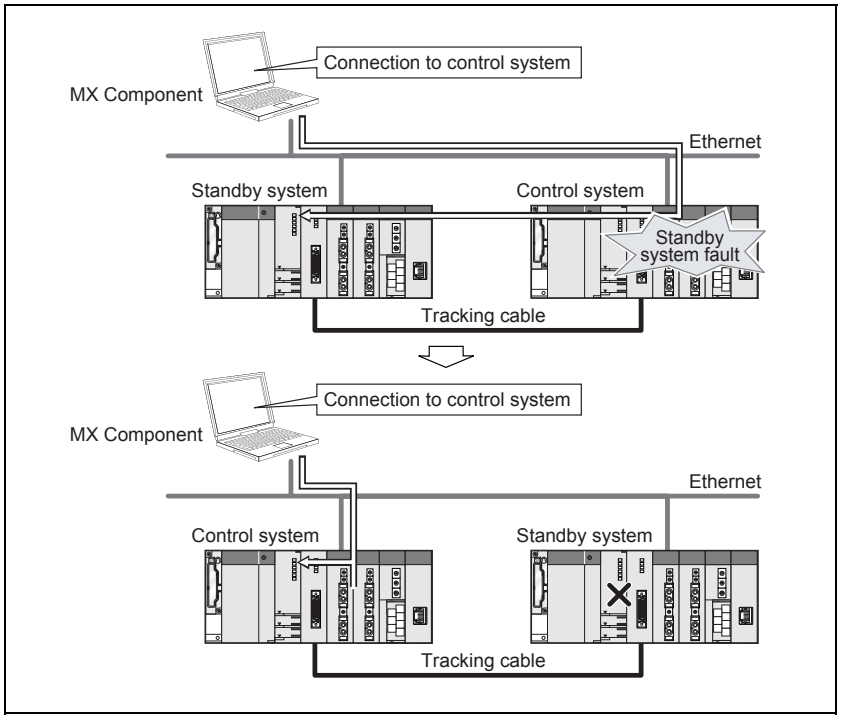


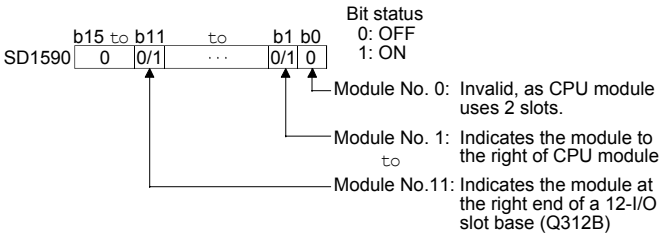
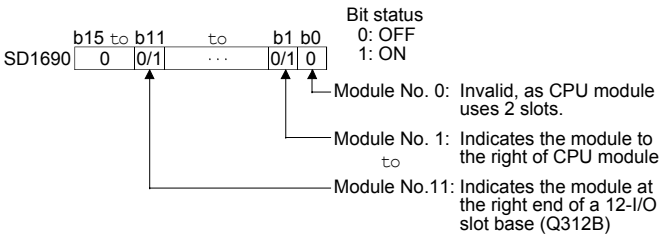
Fig. 2 Route switching example 2

POINT

- Route switching is not executed if a communication error has already occurred 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 has occurred, refer to (b) in (3) Automatic switching of communication route, and remove the communication disturbance.

REMARK

The following indicates details of the special relay and special registers to be monitored when estimating whether route switching occurred or not.

Number	Name	Meaning	Explanation
SM1600	Other system error flag	OFF: No error ON: Error	• Turns on when an error occurs during redundant system error check. (Turns on when either of bits for SD1600.) • Remains off when no errors are present.
SD1590	Module No. for network module requesting route switching in host system	Module No. for network module requesting route switching in host system	• Any of the following bits turns on corresponding to module No. for network module requesting route switching in host system. • Turns off by the system after recovery from error of the relevant module by user.  • Refer to SD1690 for module No. for network module requesting route switching in other system.
SD1690	Module No. for network module requesting route switching in other system	Module No. for network module requesting route switching in other system	• Any of the following bits turns on corresponding to module No. for network module requesting route switching in other system. • Turns off by the system after recovery from error of the relevant module by user.  • Refer to SD1590 for module No. for network module requesting route switching 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	○	○
Modem module	QJ71CMO	B 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.

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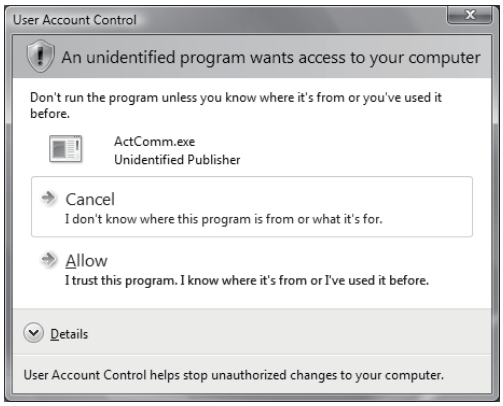
Appendix 8 Warning Message Appears on Windows Vista® and Windows® 7

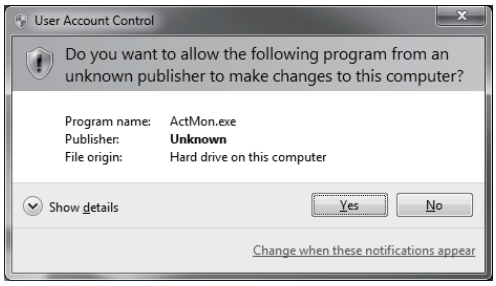
Appendix 8.1 Overview of warning message

The user account control function has been added to Windows Vista® and Windows® 7.
By this function, a warning message appears when executing Communication Setup Utility or PLC Monitor Utility with Administrator authority. (Refer to Section 4.1)

< Windows Vista® >



< Windows® 7 >



Appendix 8.2 Methods for preventing the warning message

POINT

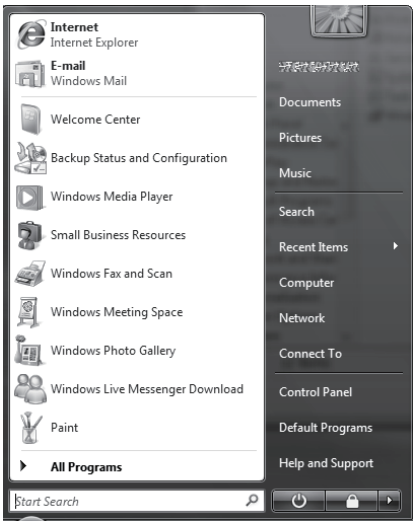
The user account control (UAC) function prevents a crash (e.g. prevention of start-up of a program which executes unintended operation).
Before setting this function, grasp that the security function offered by UAC will be disabled and fully understand the risk.

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®



1) Select [Start] – [Control Panel].

2) Select [User Accounts].

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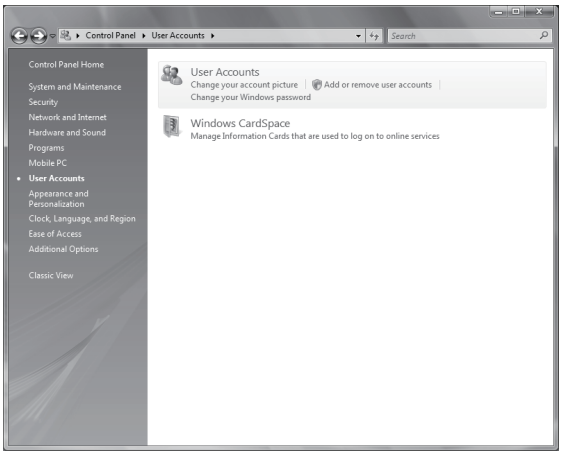
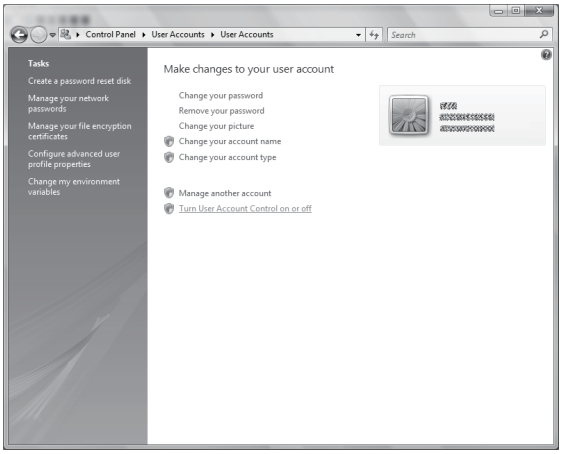
(From the previous page)

↓



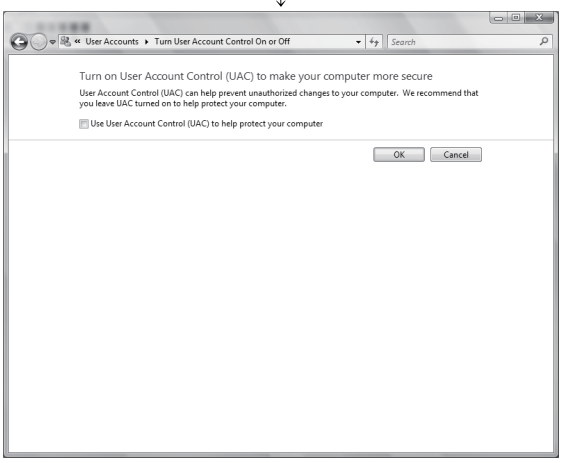
3) Select [User Accounts].

↓



4) Select [Turn User Account Control on or off].

↓



5) Deselect [Turn on User Account Control (UAC) to make your computer more secure] and click OK.

↓

(Setting completion)

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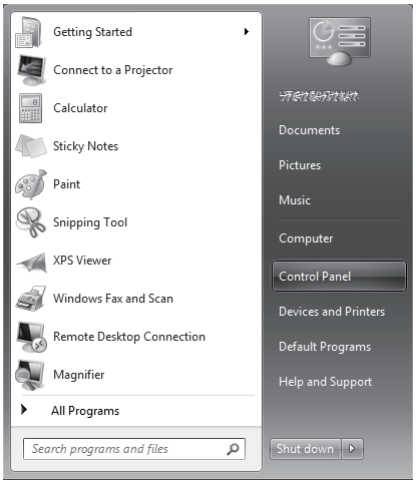
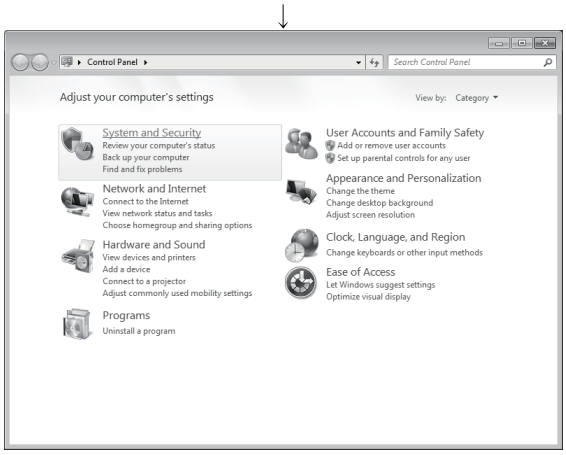
(b) When using Windows® 7



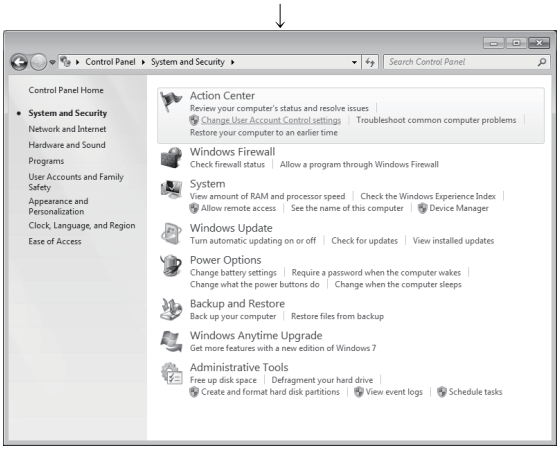
1) Select [Start] – [Control Panel].

↓



2) Select [System and Security].

↓



3) Select [Change User Account Control settings].

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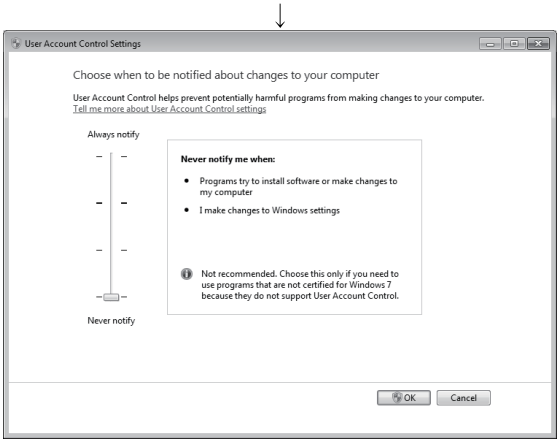
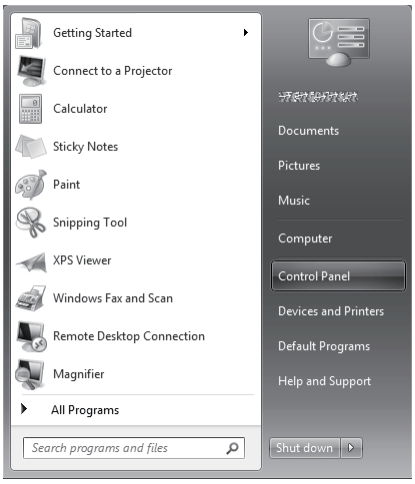


4) Set the slide bar "Never notify" and click OK .

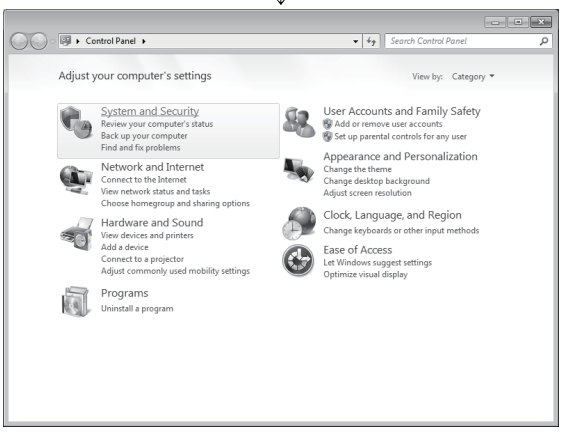
(Setting completion)

(2) Allowing the warning message without showing it

The following shows a procedure for allowing a warning message without showing it.



1) Select [Start] – [Control Panel].



2) Select [System and Security].

When using Windows Vista® , select [Classic View].

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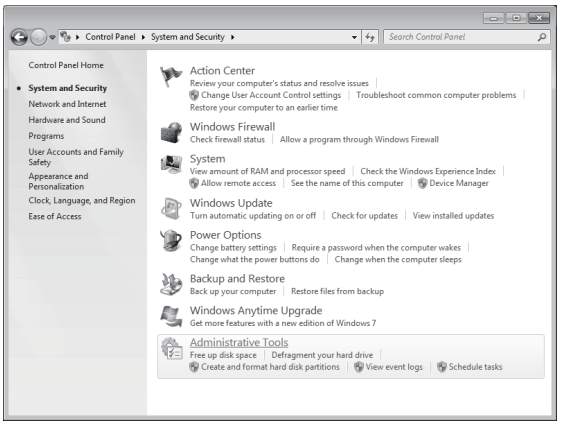
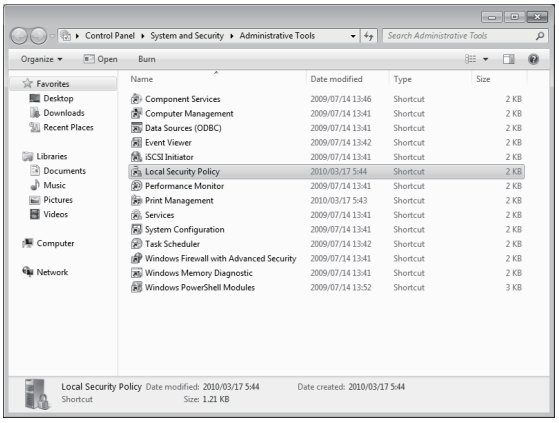


3) Select [Administrative Tools].

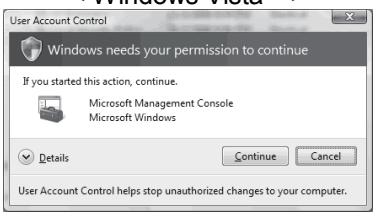
↓



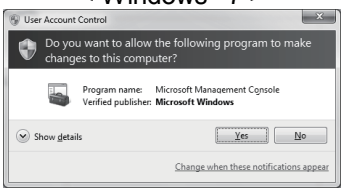
4) Select [Local Security Policy].

* When user account control is enabled in Windows Vista® , the following screen appears. Click Continue or Yes .

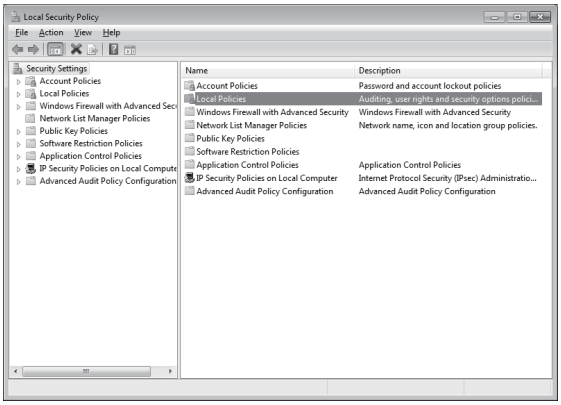
< Windows Vista® >



< Windows® 7 >



↓



5) Select [Local Policies].

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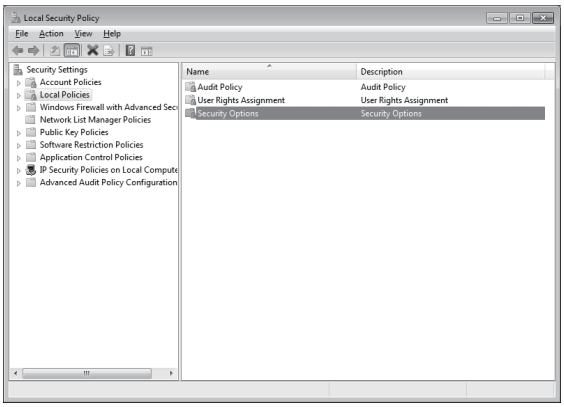
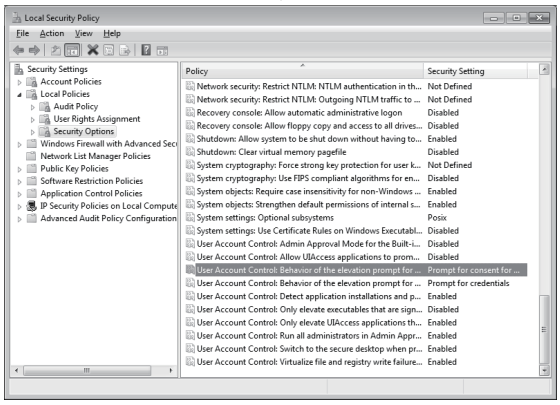


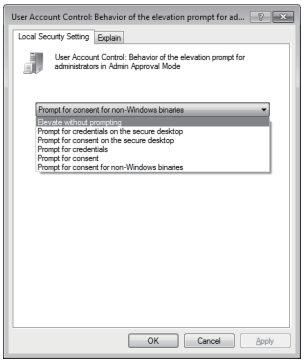
6) Select [Security Options].

↓



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 OK.

↓

(Setting completion)

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Appendix 9 Restrictions by DEP function

Appendix 9.1 Data Execution Prevention (DEP)

Beginning with Windows XP® SP2, Microsoft Corporation implements DEP for Security Enhancement. For details of DEP, refer to the following documents provided by Microsoft Corporation.

1) "How to Configure Memory Protection in Windows® XP SP2" available at TechNet Security ThechCenter
   http://technet.microsoft.com/en-us/library/cc700810.aspx
2) Microsoft® Help and Support Article ID: 875352
   http://support.microsoft.com/kb/875352/en-us
   (URLs as of Nov 10, 2008)

Appendix 9.2 Symptoms

The effect of DEP may cause problems as the creation of a user application using an ACT control or the execution of them.
We have confirmed the occurrence of the following problems due to the effect of DEP.
For details of each symptom, refer to "Appendix 9.5 Workarounds for Problems".

Situation	No	Symptom	Description
Creation of a user application	1	An ACT control added on a form may not be displayed.	An ACT control may not be displayed if it is added on a form in a Visual Studio® .NET project.
	2	Adding an ACT control to a form ends Visual Studio® in error.	When a Visual Studio® .NET project is created and an ACT control is added to a form, Visual Studio® ends in error.
	3	The designer display may be failed.	An error may occur if a form on which an ACT control is added is opened in a Visual Studio® .NET project.
	4	Displaying a designer fails to display an ACT control.	If a form on which an ACT control is added is opened in a Visual Studio® .NET project, the ACT control is not displayed.
	5	Displaying a designer ends Visual Studio® in error.	If a form on which an ACT control is added is opened in a Visual Studio® .NET project, Visual Studio® ends in error.
	6	Testing a dialog box may end Visual Studio® in error.	Adding an ACT control and testing a dialog box in an MFC project may end Visual Studio® in error.
Execution of a user application	7	Executing an MFC project program may cause an error.	An error may occur if an MFC project program including a form with an ACT control is created and executed.

Appendix 9.3 DEP Configurations that May Cause Problems

In the creation environment and execution environment of user applications, problems may occur due to the combination of the versions of the OS/Visual Studio® being used and the DEP configurations. The following shows the combinations that may cause problems.
If your environment corresponds to any of the following combinations, make settings in accordance with the 'Flow chart for avoiding problems' (Refer to "Appendix 9.4 Configurations for Avoiding Problems due to the Effect of DEP").

POINT
In Windows® XP, Windows Vista® and 32-bit/64-bit Windows® 7 alike, the DEP configuration is "OptIn" by default. If the configuration is uncertain, confirm it. (For the method for confirming, refer to Appendix 9.4.)

(1) Creation environment of user applications

The following shows the DEP configurations that may cause problems in the creation environment of user applications.

Creation environment		DEP configurations that may cause problems
Windows Vista®, 32-bit/64-bit Windows® 7	Visual Studio® 2010	OptIn, OptOut, AlwaysOn
	Visual Studio® 2008	
	Visual Studio® 2005	AlwaysOn
Windows® XP	Visual Studio® 2010	
	Visual Studio® 2008	
	Visual Studio® 2005	

(2) Execution environment of user applications

Problem may occur depending on the execution environment when an MFC project user application is created with Visual Studio® 2008 and Visual Studio® 2010. (For distinguishing MFC projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)
The following shows the DEP configurations that may cause problems in the execution environment of user applications.

Execution environment	DEP configurations that may cause problems
Windows Vista®, 32-bit Windows® 7	OptIn, OptOut, AlwaysOn
Windows® XP	AlwaysOn

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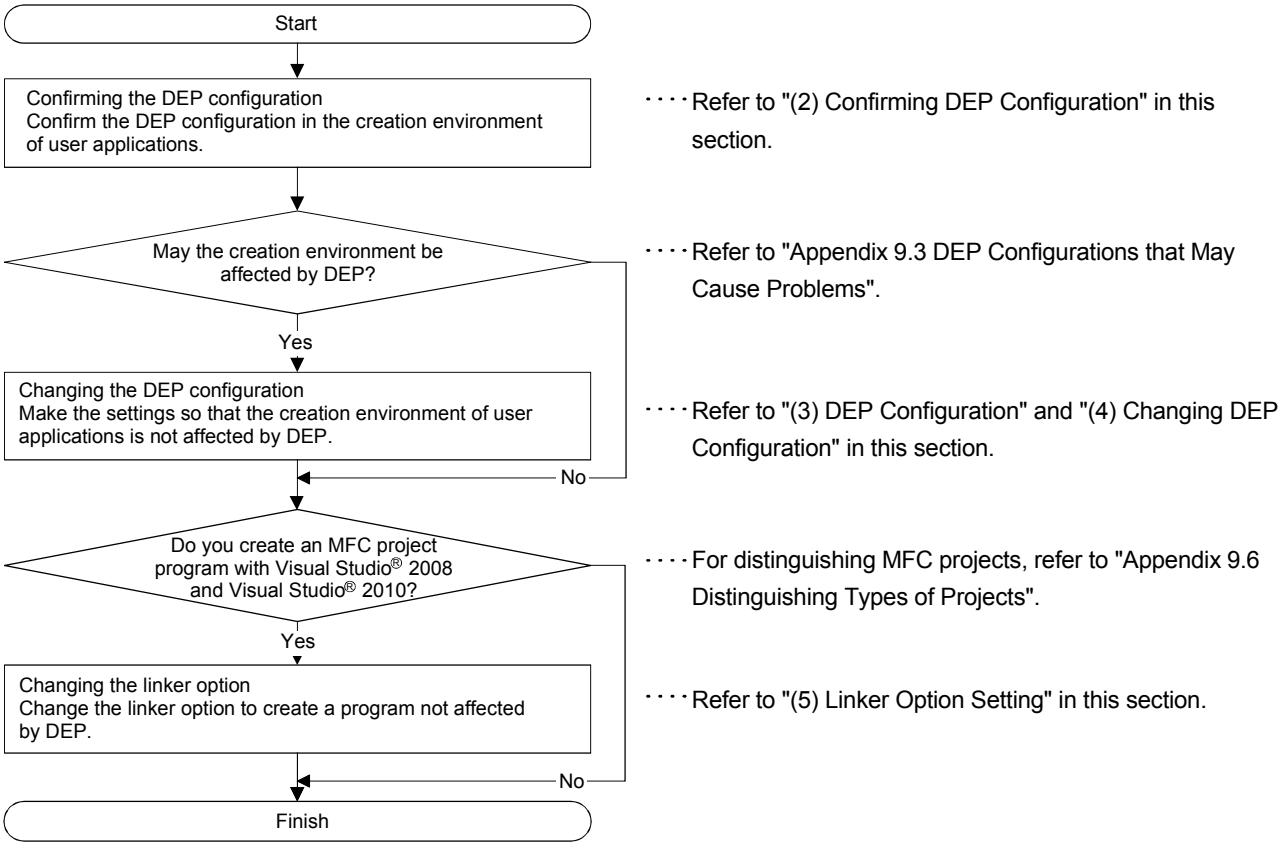
Appendix 9.4 Configurations for Avoiding Problems due to the Effect of DEP

(1) Flow Chart for Avoiding Problems

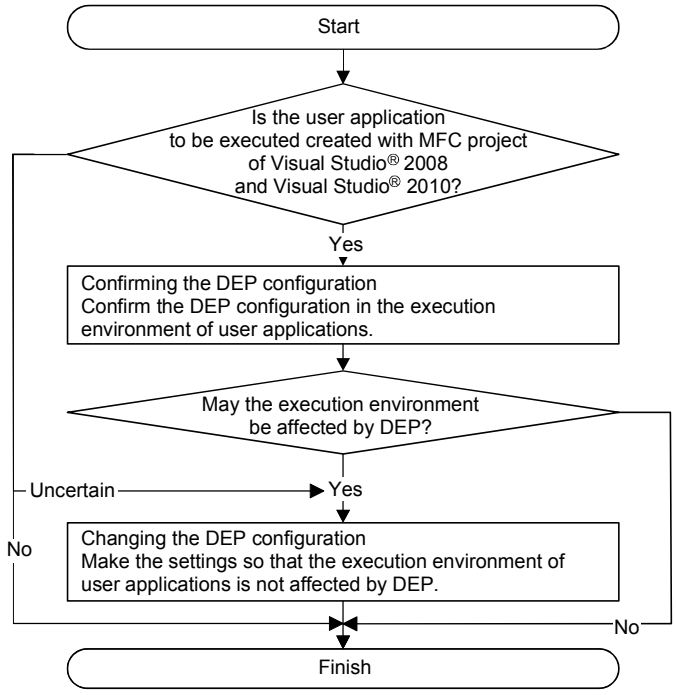
Make settings in accordance with the following flow chart to avoid problems caused by the effect of DEP.

(a) Creation environment of user applications



<Flow chart for avoiding problems in the creation environment>

(b) Execution environment of user applications



<Flow chart for avoiding problems in the execution environment>

- For distinguishing MFC projects, refer to "Appendix 9.6 Distinguishing Types of Projects".
- Refer to "(2) Confirming DEP Configuration" in this section.
- Refer to "Appendix 9.3 DEP Configurations that May Cause Problems".
- Refer to "(3) DEP Configuration" and "(4) Changing DEP Configuration" in this section.

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(2) Confirming DEP Configuration

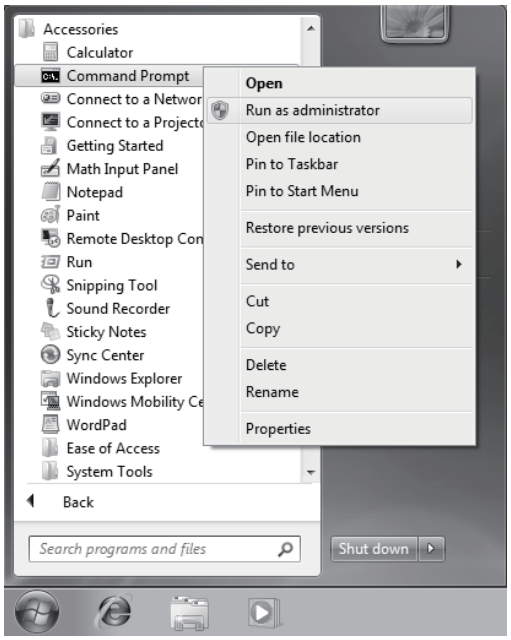
In Windows® XP, Windows Vista® and 32-bit/64-bit Windows® 7 alike, the DEP configuration is "OptIn" by default.
If the configuration is uncertain, confirm it in the following way.

(a) Windows Vista® and 32-bit/64-bit Windows® 7

Perform the following operations with administrator privileges.

1) Select [Start]-[All Programs]-[Accessories].

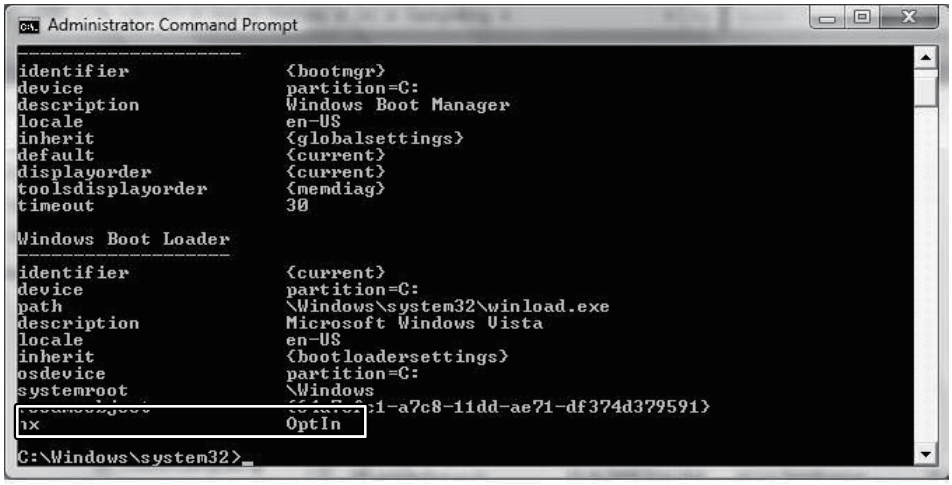
2) Right click on [Command Prompt] and select [Run As Administrator].



3) Input the following command.

```
BCDEDIT
```

4) The current DEP configuration is shown on the line "nx" in the following screen.



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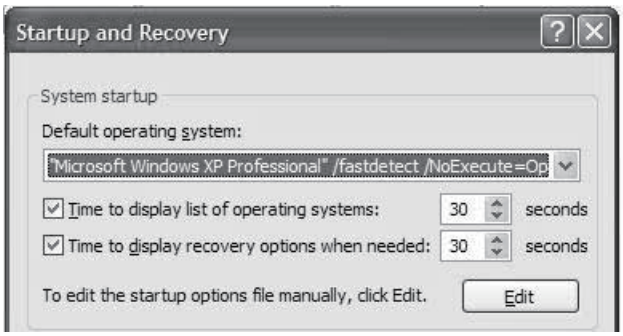
(b) Windows® XP

Perform the following operations with administrator privileges.

1) Select [Start]-[Control Panel].
2) Under "Pick a category", Select "Performance and Maintenance".
3) Under "or pick a Control Panel icon", select "System".
4) In the <<Advanced>> tab, and select Settings in the "Startup and Recovery" area.
5) Select Edit in the "System startup" area.



6) Refer to the next line to [operating systems] in your boot.ini file.

*1: Might be different depending on the environment.

Confirm the DEP configuration from the description of the line starting with "multi…". Refer to the following table.

Description of boot.ini	DEP configuration
Not including "/noexecute="	OptIn
"/noexecute=OptIn"	OptIn
"/noexecute=OptOut"	OptOut
"/noexecute=AlwaysOn"	AlwaysOn
"/noexecute=AlwaysOff"	AlwaysOff

(3) DEP Configuration

The following shows the configurations for avoiding problems due to the effect of the DEP.

(a) Creation environment of user applications

In the environment where user applications are created, configure DEP as follows.

Creation environment		DEP configuration
Windows Vista®, 32-bit/64-bit Windows® 7	Visual Studio® 2010	AlwaysOff
	Visual Studio® 2008	
	Visual Studio® 2005	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows® XP	Visual Studio® 2010	
	Visual Studio® 2008	
	Visual Studio® 2005	

(b) Execution environment of user applications

When user applications are created with MFC projects of Visual Studio® 2008 and Visual Studio® 2010, configure DEP in the execution environment as follows. Problems can be avoided by changing the DEP configuration and linker option (recreating programs).

1) Possible to change the linker option and create user applications

Select "Image is not compatible with DEP (/NXCOMPAT:NO)" in [Linker]-[Advanced]-[Data Execution Prevention (DEP)] in the MFC project Property Pages, and create user applications.
Configure DEP as follows.

Execution environment	DEP configuration
Windows Vista®, 32-bit Windows® 7	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows® XP	

2) Impossible to change the linker option

When the linker option cannot be changed (when programs cannot be recreated), configure DEP to "AlwaysOFF".

Execution environment	DEP configuration
Windows Vista®, 32-bit Windows® 7	AlwaysOff
Windows® XP	

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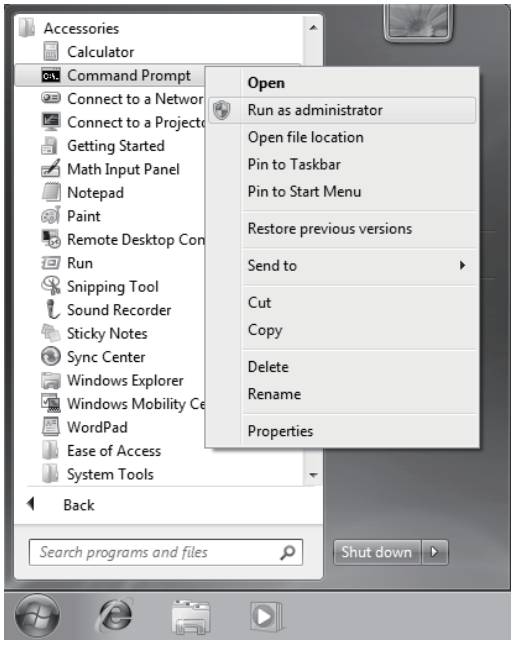
(4) Changing DEP Configuration

(a) Windows Vista® and 32-bit/64-bit Windows® 7

Perform the following operations with administrator privileges.

1) Select [Start]-[All Programs]-[Accessories].

2) Right click on [Command Prompt] and select [Run As Administrator].



3) Execute the following command.

DEP to be configured	Command that should be executed
OptIn	BCDEDIT /SET nx OptIn
OptOut	BCDEDIT /SET nx OptOut
AlwaysOff	BCDEDIT /SET nx AlwaysOff

4) Restart the personal computer.

(b) Windows® XP

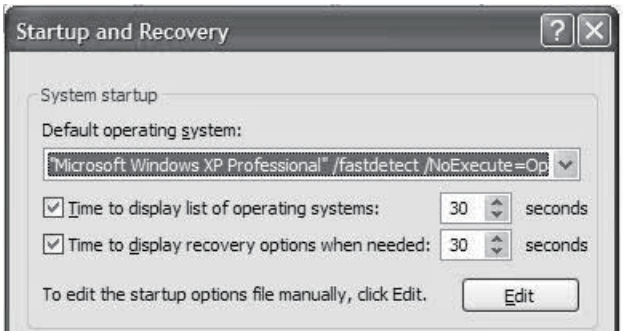
1) Select [Start]-[Control Panel].

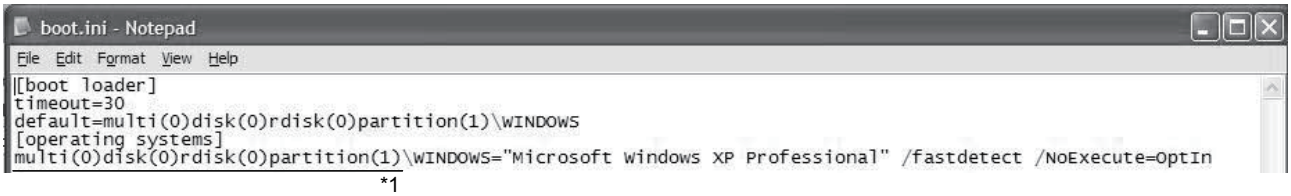
2) Under "Pick a category", Select "Performance and Maintenance".

3) Under "or pick a Control Panel icon", select "System".

4) In the <<Advanced>> tab, and select Settings in the "Startup and Recovery" area.

5) Select Edit in the "System startup" area.





*1

*1: Might be different depending on the environment.

6) Edit the boot.ini file as follows.

Description of boot.ini	Modification method
Not including "/noexecute="	Add the following description at the end of the line starting with "multi…", which is the next to the line [operation systems]. When changing to OptOut: "/noexecute=OptOut" When changing to AlwaysOff: "/noexecute=AlwaysOff"
Including "/noexecute="	Replace a description following "/noexecute=" to the DEP configuration to be. When changing to Optin: "/noexecute=OptIn" When changing to OptOut: "/noexecute=OptOut" When changing to AlwaysOff: "/noexecute=AlwaysOff"

POINT

Be sure to edit the boot.ini carefully. The default configuration (OptIn) may be taken for incorrect settings.
Changing settings not explained above may result in Windows® XP not being able to start up.

7) In Notepad, select [File]-[Save].
8) Exit Notepad.
9) Click OK to close the Startup and Recovery dialog box.
10) Click OK to close the System Properties dialog box.
11) Restart the personal computer.

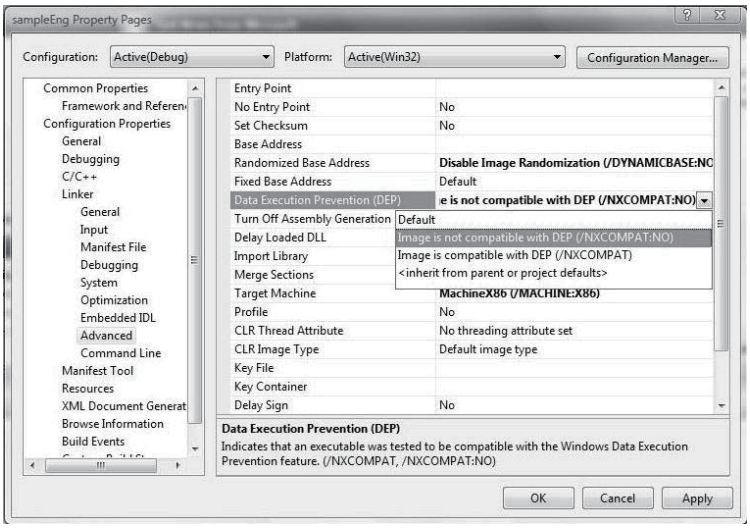
(5) Linker Option Setting

When creating an MFC project program with Visual Studio® 2008 and Visual Studio® 2010, build the program after making the following setting. (For distinguishing MFC projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)

1) Set Data Execution Prevention (DEP) in the MFC project Property Pages.

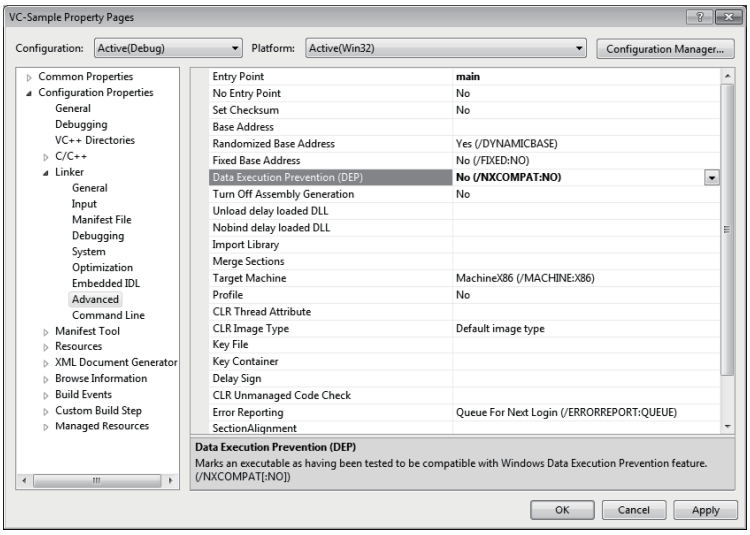
< Visual Studio® 2008 >

Select "Image is not compatible with DEP (/NXCOMPAT:NO)" in [Linker]-[Advanced]-[Data Execution Prevention (DEP)] in the MFC project Property Pages.



< Visual Studio 2010 >

Select "No (/NXCOMPAT:NO)" in [Linker]-[Advanced]-[Data Execution Prevention (DEP)] in the MFC project Property Pages.



2) Build the program.

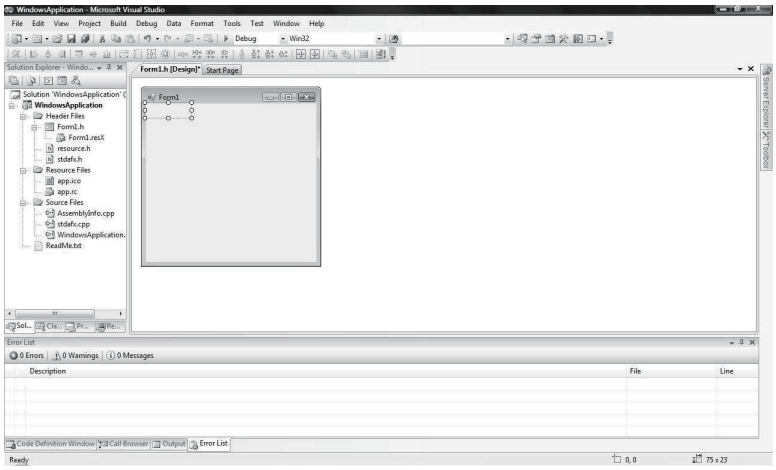
Appendix 9.5 Workarounds for Problems

This chapter explains the occurrence cause and workaround for each symptom caused due to the effect of DEP.

(1) An ACT Control Added on a Form May not be Displayed

(a) Symptom

As a Visual Studio® .NET project program is created, an ACT control added on a form is not displayed. Only its solid border is shown as selected. (For distinguishing Visual Studio® .NET projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)



(b) Occurrence Cause

This problem occurs if an ACT control is added on a form in a Visual Studio® .NET project when DEP is enabled to ACT controls.
The following shows the cases that DEP is enabled.

Creation environment		DEP Configuration	
		OptIn, OptOut	AlwaysOn
64-bit Windows® 7	Visual Studio® 2010	○	○
	Visual Studio® 2008		
	Visual Studio® 2005	-	
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2008	○	
	Visual Studio® 2005	-	
Windows® XP	Visual Studio® 2008		
	Visual Studio® 2005		

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration as follows.

Creation environment		DEP Configuration
64-bit Windows® 7	Visual Studio® 2010	AlwaysOff
	Visual Studio® 2008	
	Visual Studio® 2005	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows Vista® , 32-bit Windows® 7	Visual Studio® 2008	AlwaysOff
	Visual Studio® 2005	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows® XP	Visual Studio® 2008	
	Visual Studio® 2005	

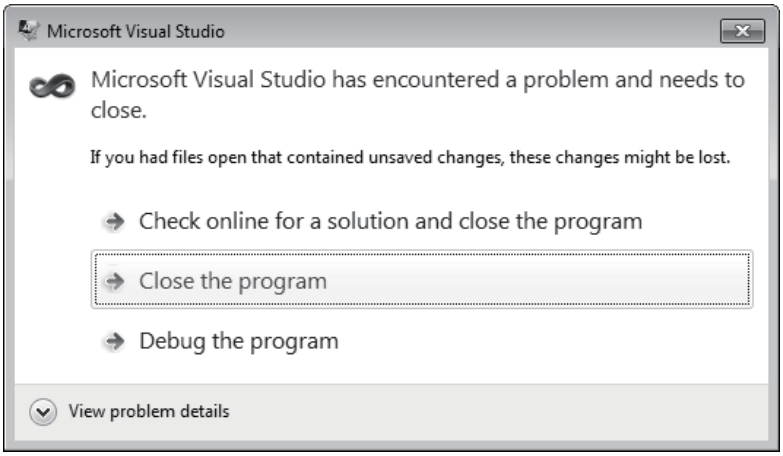
When the DEP configuration cannot be changed, this problem can be avoided by creating a program using an ACT control without pasting it to a form (Reference).

(2) Adding an ACT Control to a Form Ends Visual Studio® in Error

(a) Symptom

When a Visual Studio® .NET project program is created, adding an ACT control to a form with the designer displays the following dialog box and ends Visual Studio® in error.

If a Visual Studio® .NET project program including a form with an ACT control is debugged, an exception may occur (0xC0000005:Access violation) and the program may be closed. (For distinguishing Visual Studio® .NET projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)



(b) Occurrence Cause

The problem occurs if an ACT control is added to a form in a Visual Studio® .NET project while DEP is enabled to ACT controls.
The following table lists whether a problem occurs with DEP enabled.

Creation environment		DEP Configuration	
		OptIn, OptOut	AlwaysOn
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2010	○	○
Windows® XP	Visual Studio® 2010	-	

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration as follows.

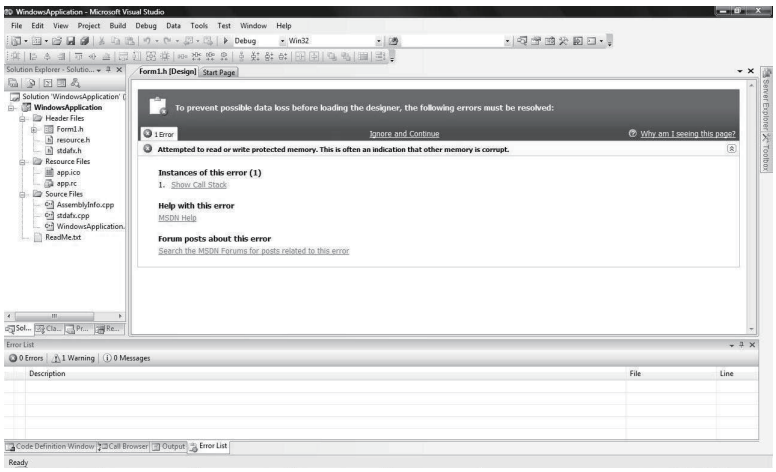
Creation environment		DEP Configuration
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2010	AlwaysOff
Windows® XP	Visual Studio® 2010	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)

When the DEP configuration cannot be changed, this problem can be avoided by creating a program using an ACT control without pasting it to a form (Reference).

(3) Designer Display May be Failed

(a) Symptom

When a Visual Studio® .NET project program is created, opening a form including an ACT control with the designer may cause an error. (For distinguishing Visual Studio® .NET projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)



(b) Occurrence Cause

This problem occurs if a form including an ACT control is opened with the designer in a Visual Studio® .NET project when DEP is enabled to ACT controls.

The following shows the cases that DEP is enabled.

Creation environment		DEP Configuration	
		OptIn, OptOut	AlwaysOn
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2008	○	○
	Visual Studio® 2005	-	
Windows® XP	Visual Studio® 2008		
	Visual Studio® 2005		

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration as follows.

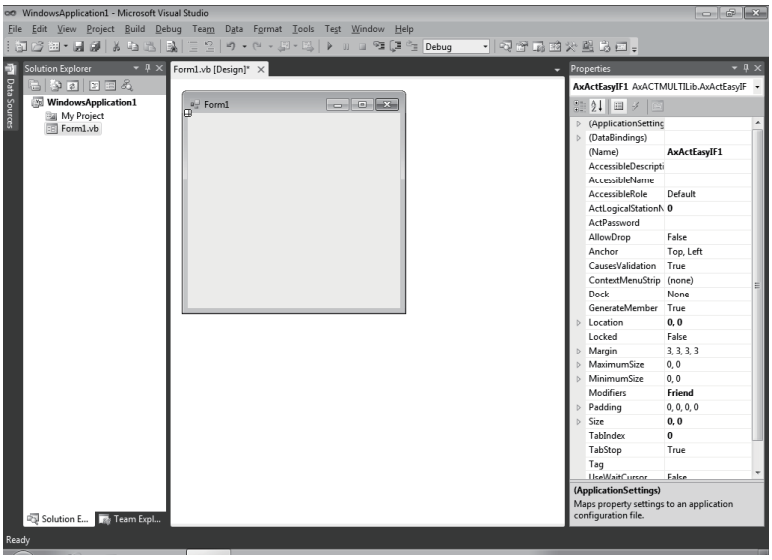
Creation environment		DEP Configuration
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2008	AlwaysOff
	Visual Studio® 2005	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows® XP	Visual Studio® 2008	
	Visual Studio® 2005	

When the DEP configuration cannot be changed, this problem can be avoided by creating a program using an ACT control without pasting it to a form (Reference).

(4) Displaying a Designer Fails to Display an ACT Control

(a) Symptom

If a form including an ACT control is opened with the designer when a Visual Studio® .NET project program is created, the ACT control is not displayed. Only its solid border is shown as selected. (For distinguishing Visual Studio® .NET projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)



(b) Occurrence Cause

This problem occurs if a form including an ACT control is opened with the designer in a Visual Studio® .NET project when DEP is enabled to ACT controls.
The following shows the cases that DEP is enabled.

Creation environment		DEP Configuration	
		OptIn, OptOut	AlwaysOn
64-bit Windows® 7	Visual Studio® 2010	○	○
	Visual Studio® 2008		
	Visual Studio® 2005	-	

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration as follows.

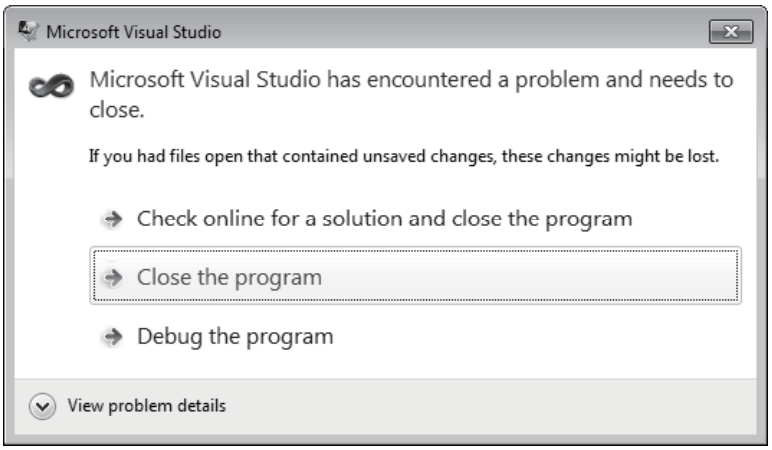
Creation environment		DEP Configuration
64-bit Windows® 7	Visual Studio® 2010	AlwaysOff
	Visual Studio® 2008	
	Visual Studio® 2005	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)

When the DEP configuration cannot be changed, this problem can be avoided by creating a program using an ACT control without pasting it to a form (Reference).

(5) Displaying a Designer Ends Visual Studio® in Error

(a) Symptom

If a form including an ACT control is opened with the designer when a Visual Studio® .NET project program is created, the following dialog box appears and Visual Studio® ends in error.
If a Visual Studio® .NET project program including a form with an ACT control is debugged, an exception may occur (0xC0000005:Access violation) and the program may be closed. (For distinguishing Visual Studio® .NET projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)



(b) Occurrence Cause

The problem occurs if a form including an ACT control is opened with the designer in a Visual Studio® .NET project while DEP is enabled to ACT controls.
The following shows the cases that DEP is enabled.

Creation environment		DEP Configuration	
		OptIn, OptOut	AlwaysOn
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2010	○	○
Windows® XP	Visual Studio® 2010	-	

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration as follows.

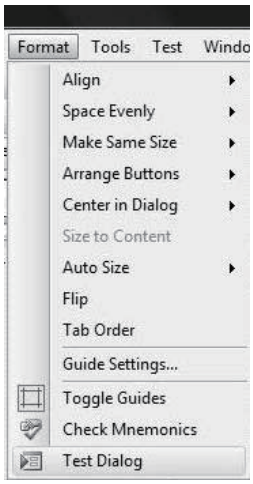
Creation environment		DEP Configuration
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2010	AlwaysOff
Windows® XP	Visual Studio® 2010	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)

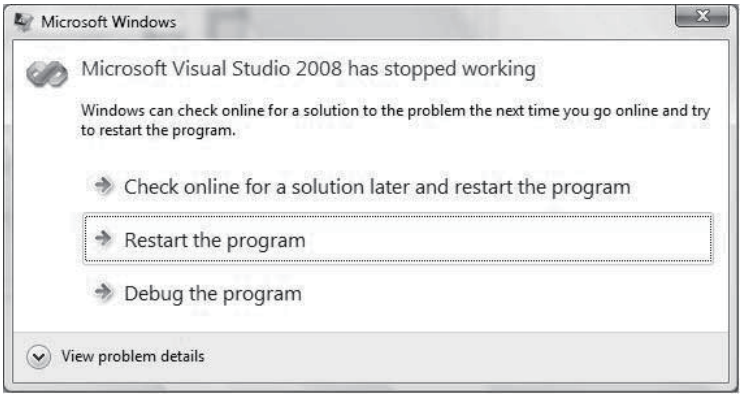
When the DEP configuration cannot be changed, this problem can be avoided by creating a program using an ACT control without pasting it to a form (Reference).

(6) Testing a Dialog Box May End Visual Studio® in Error

(a) Symptom

When an MFC project program is created, testing a dialog box may end Visual Studio® in error. (For distinguishing MFC projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)





(b) Occurrence Cause

This problem occurs if an ACT control is added on a form and then "Test Dialog" is performed in an MFC project when DEP is enabled to ACT controls.

The following shows the cases that DEP is enabled.

Creation environment		DEP Configuration	
		OptIn, OptOut	AlwaysOn
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2010	○	○
	Visual Studio® 2008		
	Visual Studio® 2005	-	
Windows® XP	Visual Studio® 2010		
	Visual Studio® 2008		
	Visual Studio® 2005		

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration as follows.

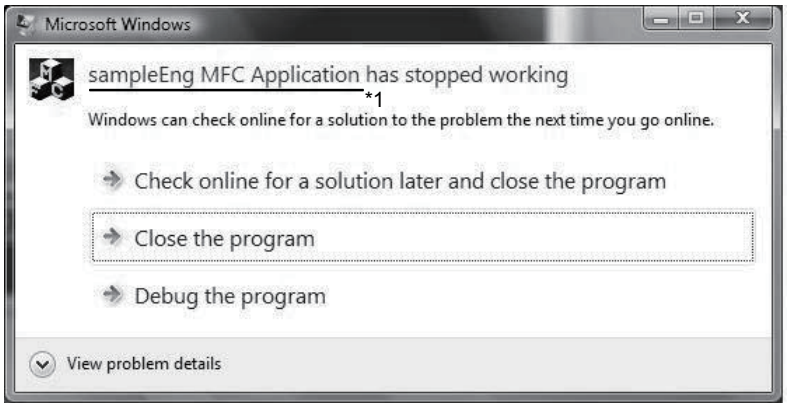
Creation environment		DEP Configuration
Windows Vista®, 32-bit Windows® 7	Visual Studio® 2010	AlwaysOff
	Visual Studio® 2008	
	Visual Studio® 2005	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows® XP	Visual Studio® 2010	
	Visual Studio® 2008	
	Visual Studio® 2005	

When the DEP configuration cannot be changed, this problem can be avoided by creating a program using an ACT control without pasting it to a form (Reference).

(7) Executing an MFC Project Program May Cause an Error

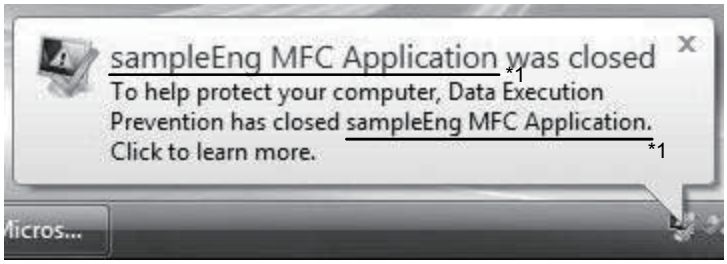
(a) Symptom

When an MFC project program including a form with an ACT control is created and executed, the following dialog box may be displayed and the program may be closed. When an MFC project program including a form with an ACT control is debugged with Visual Studio® 2008 and Visual Studio® 2010, an exception may occur (0xC0000005:Access violation) and the program may be closed. (For distinguishing MFC projects, refer to "Appendix 9.6 Distinguishing Types of Projects".)



*1: The character string specified in "FileDescription" of "VS_VERSION_INFO" in the resource is displayed as the program name.

When Close the program is clicked, the message "To protect your computer, Data Execution Prevention has closed the program[*1]." is displayed on the task bar.



*1: The character string specified in "FileDescription" of "VS_VERSION_INFO" in the resource is displayed as the program name.

(b) Occurrence Cause

This problem occurs if any of the following conditions is true when a program including a form with an ACT control is created.

Execution environment	DEP configuration	
	OptIn, OptOut	AlwaysOn
Windows Vista®, 32-bit Windows® 7	Causes problems only if "Image is compatible with DEP" is selected in [Linker]-[Advanced]-[Data Execution Prevention (DEP)] in the Property Pages when the program is created (built).	○
Windows® XP	-	

○: Causes problems -: Does not causes problems

(c) Workaround

To workaround this problem, change the DEP configuration and the linker option (recreate the program).

1) Possible to change the linker option and create user applications

Select "Image is not compatible with DEP (/NXCOMPAT:NO)" in [Linker]-[Advanced]-[Data Execution Prevention (DEP)] in the MFC project Property Pages, and create user applications.
Configure DEP as follows.

Execution environment	DEP configuration
Windows Vista®, 32-bit Windows® 7	Other than AlwaysOn (When AlwaysOn: Change to OptIn, When other than AlwaysOn: No change necessary)
Windows® XP	

2) Impossible to change the linker option

When the linker option cannot be changed (when programs cannot be recreated), configure DEP to "AlwaysOFF".

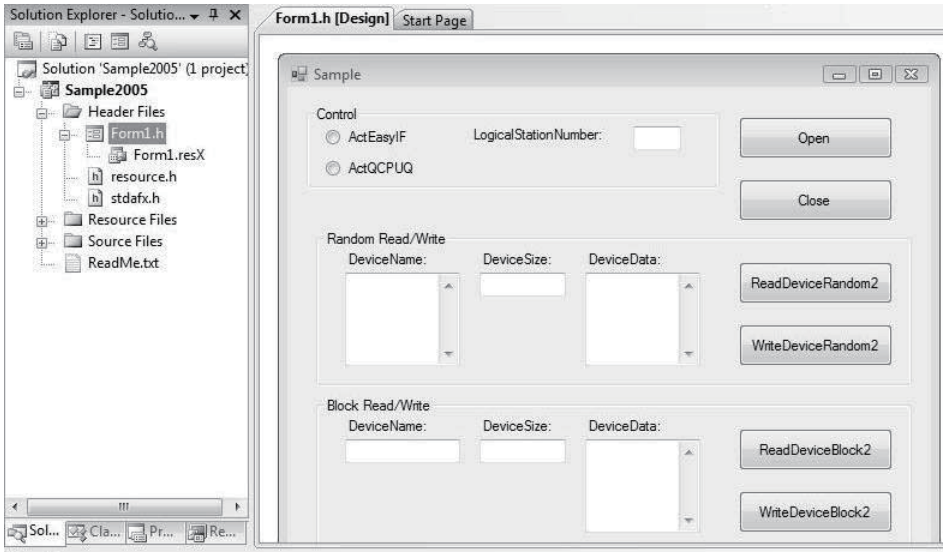
Execution environment	DEP configuration
Windows Vista®, 32-bit Windows® 7	AlwaysOff
Windows® XP	

Appendix 9.6 Distinguishing Types of Projects

Types of projects can be distinguished based on the way of opening its form in the designer.
The following shows the both cases of a Visual Studio® .NET project and MFC project.

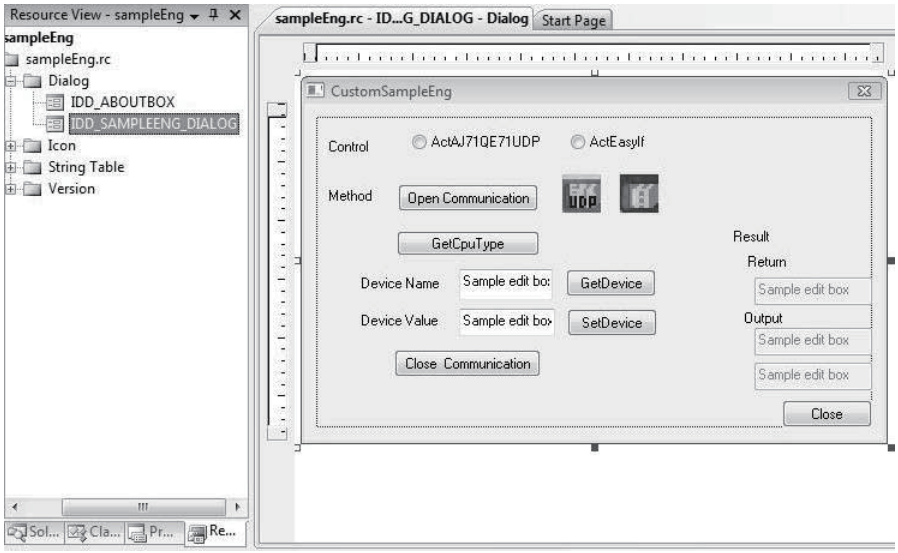
(1) Visual Studio® .Net project

In the "Solution Explorer", double click a form (*.h file or *.vb file).
When a form is opened in this way, its project type is the Visual Studio® .NET project.



(2) MFC project

In the "Resource view", double click a resource ID under [Dialog].
When a form is opened in this way, its project type is the MFC project.



SH (NA)-080271-R

MX Component Version 3

Operating Manual

MODEL	MELS3-ACTE-O-E
MODEL CODE	13JU32
SH(NA)-080271-R(1105)MEE	

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