Q Corresponding Ethernet Interface Module

MITSUBISHI

User's Manual

(Web function)

Mitsubishi
Programmable Controller

MELSEC-Q

QJ71E71-100
QJ71E71-B5
QJ71E71-B2

• SAFETY PRECAUTIONS •

(Always read before starting use.)

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 user's manual for the CPU module to use.
In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".

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

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

Please store this manual in a safe place and make it accessible when required. Always forward it to the end user.

[Design Precautions]

◇ DANGER

- For the operating status of each station after a communication failure, refer to relevant manuals for the network. Erroneous outputs and malfunctions may lead to accidents.
  Not doing so can cause an accident due to false output or malfunction.
- To prevent the malfunction of the programmable controller system due to harmful e-mails, take preventive measures (such as antivirus measures) so that the mail server for this module does not receive harmful e-mails.
- To maintain the safety of the programmable controller system against unauthorized access from external devices via the Internet, take appropriate measures.
- When changing data of the running programmable controller from a peripheral connected to the CPU module or from a personal computer connected to an intelligent function module or special function module, configure an interlock circuit in the sequence program to ensure that the entire system will always operate safely. For program modification and operating status change, read relevant manuals carefully and ensure the safety before operation.
  Especially in the above mentioned control operations that are performed from an external device to a remote programmable controller, any problems on the programmable controller side may not be dealt with promptly due to abnormal data communication. To prevent this, configure an interlock circuit in the sequence program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.

[Design Precautions]

◇! DANGER

- Do not write any data in the "system area" of the buffer memory in the intelligent function module.
  Also, do not use any "use prohibited" signals as an output signal from the programmable controller CPU to the intelligent function module.
  Doing so may cause malfunction of the programmable controller system.

⚠ CAUTION

- Do not bundle the control wires and the communication cables with the main circuit and the power wires, and do not install them close to each other. They should be installed at least 100 mm (3.94 in.) away from each other. Failure to do so may generate noise that may cause malfunctions.
- When changing the operating status of the programmable controller CPU (such as remote RUN/STOP) from the external device, select "Always wait for OPEN (Communication possible at STOP time)" for the "Initial timing" setting in the network parameter. The communication line will be closed when "Do not wait for OPEN (Communications impossible at STOP time)" is selected and the remote STOP is executed from the external device. Consequently, the programmable controller CPU cannot reopen the communication line, and the external device cannot execute the remote RUN.

[Operating Precautions]

⚠ CAUTION

- When changing data and operating status, and modifying program of the running programmable controller from a personal computer connected to an intelligent function module, read relevant manuals carefully and ensure the safety before operation.
  Incorrect change or modification may cause system malfunction, damage to the machines, or accidents.

REVISIONS

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

Print Date	* Manual Number	Revision
Jun., 2001	SH (NA)-080180-A	First Edition
Apr., 2003	SH (NA)-080180-B	Additional model QJ71E71-B5, QJ71E71-B2 Correction About the Generic Terms and Abbreviations, Section 1.1, Section 2.1, 2.2, Section 4.1, Chapter 6 (1)
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Jun., 2007	SH (NA)-080180-D	Change of a term "PLC" was changed to "programmable controller". Correction About Manuals, About the Generic Terms and Abbreviations, Section 3.2 (1), Chapter 6 (3)
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Japanese Manual Version SH-080144-E

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INTRODUCTION

Thank you for purchasing the MELSEC-Q series programmable controller.
Before using the equipment, please read this manual carefully to develop full familiarity with the functions and performance of the Q series programmable controller you have purchased, so as to ensure correct use.

CONTENTS (This manual)

(Related Manual-1) ··· Q Corresponding Ethernet Interface Module User's Manual (Basic)
SH-080009-M

(Related Manual-1) ··· Q Corresponding Ethernet Interface Module User's Manual (Basic)

SH-080009-M

APPENDIX

(Related Manual-2) … Q Corresponding MELSEC Communication Protocol Reference Manual
SH-080008-K

About Manuals

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

Related Manuals

Manual name	Manual number (Model code)
Q Corresponding Ethernet Interface Module User's Manual (Basic) This manual explains the specifications of the Ethernet module, data communication procedures with opposite devices, line connections (open/close), fixed buffer communication, random access buffer communication, and troubleshooting. (sold separately)	SH-080009 (13JL88)
Q Corresponding Ethernet Interface Module User's Manual (Application) This manual explains the e-mail function of the Ethernet module, the programmable controller CPU status monitoring function, the communication function via CC-Link IE controller network, MELSECNET/H, MELSECNET/10 as well as the communication function using data link instructions, and how to use file transfer (FTP server), etc. (sold separately)	SH-080010 (13JL89)
Q Corresponding MELSEC Communication Protocol Reference Manual This manual explains the communication methods and control procedures through the MC protocol for the external devices to read and write data from/to the programmable controller CPU using the serial communication module/Ethernet module. (sold separately)	SH-080008 (13JF89)

● How to use this manual

This manual explains how to use the Web function of the Ethernet module (QJ71E71-100, QJ71E71-B5 and QJ71E71-B2).
Please refer to the applicable items of this manual by referring to the following outline of the contents of this manual:

(1) To find out how to use the Web function and to learn about the operating environment

- Chapter 1 describes an overview of the Web function.
- Chapter 2 describes a system configuration for utilizing the Web function.

(2) To find out about the procedure for using the Web function

- Section 3.1 describes the procedure up to communication using the Web function.
- Section 3.2 describes how to obtain and set up the communication library and sample screen.
- Section 4.2 describes the procedure for accessing the programmable controller using a sample screen.

(3) To check the operation of the Web function

Chapter 4 describes an example when accessing the programmable controller using a sample screen.

(4) To create data used to access the programmable controller by the user

- Section 4.5 describes an overview of ASP (Active Server Pages) files for accessing the programmable controller, as well as HTML (Hyper Text Markup Language) files to be displayed by the Web browser, both of which are to be created by the user.
- Chapter 5 describes an example of file creation for programmable controller access.
- Chapter 6 describes the communication library functions.

POINT

To know about the following items, see the Ethernet Interface Module User's Manual (Basic).

(1) To learn startup processing of Ethernet module
- Chapter 4 describes a general procedure up to operation of Ethernet module.
- Section 5.4 describes confirmation of initial processing completion.

(2) Detailed descriptions of the error codes
Chapter 11 describes troubleshooting, how to check for errors, and detailed descriptions of error codes for the Ethernet modules.

(3) Storage locations of the error codes for the Ethernet module
Section 11.3 lists the error code storage locations in the buffer memory.

About the Generic Terms and Abbreviations

Unless otherwise specified, this manual uses the following generic terms and abbreviations to describe Type QJ71E71-100, QJ71E71-B5 and QJ71E71-B2 Ethernet Interface Modules.

Generic Term/Abbreviation	Description
ASP	Abbreviation for Active Server Pages
External device	Generic term for personal computers, computers, workstations and Ethernet module etc. that are connected by the Ethernet for data communication
Ethernet module	Abbreviation for Model QJ71E71-100, QJ71E71-B5 and QJ71E71-B2 Ethernet Interface Modules
Ethernet network system	Abbreviation for 10BASE2, 10BASE5, and 10BASE-T, 100BASE-TX network systems
GX Developer	Generic product name for SWnD5C-GPPW-E, SWnD5C-GPPW-EA, SWnD5C-GPPW-EV, and SWnD5C-GPPW-EVA. ("n" means version 4 or later.) "-A" and "-V" mean "volume license product" and "version-upgrade product" respectively.
HTML	Abbreviation for Hyper Text Markup Language.
HTTP	Abbreviation for Hyper Text Transfer Protocol This protocol sends/receives the information on World Wide Web in the Internet.
MC protocol	Abbreviation for MELSEC communication Protocol Name of a communication system for accessing the programmable controller CPU from an external device using the communication procedure for Q serial communication modules or Ethernet interface modules etc. Two type of communication systems are available; one using ASCII code data and the other using binary code data. For more details, see to the Reference Manual.
MELSECNET/10	Abbreviation for MELSECNET/10 Network system
MELSECNET/H	Abbreviation for MELSECNET/H Network system
Personal computer	Generic term for IBM PC/AT(or 100% compatible) personal computer
QCPU	Generic term for Q00JCPU, Q00CPU, Q01CPU, Q02CPU, Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU, Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU, Q12PRHCPU, Q25PRHCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q13UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q13UDEHCPU and Q26UDEHCPU
Reference Manual	Abbreviation for the Q Corresponding MELSEC Communication Protocol Reference Manual
URL	Abbreviation for Uniform Resource Locator.
User's Manual (Application)	Abbreviation for the Q Corresponding Ethernet Interface Module Use's Manual (Application)
User's Manual (Basic)	Abbreviation for the Q Corresponding Ethernet Interface Module Use's Manual (Basic)
User's Manual (Web function)	Abbreviation for the Q Corresponding Ethernet Interface Module Use's Manual (Web function)
Web browsers	Abbreviation for software that views Web pages.
Web server	Abbreviation for the computer in which Web server software operates.
Web server software	Generic name of server software that supports the WWW (World Wide Web) services.

1 OVERVIEW

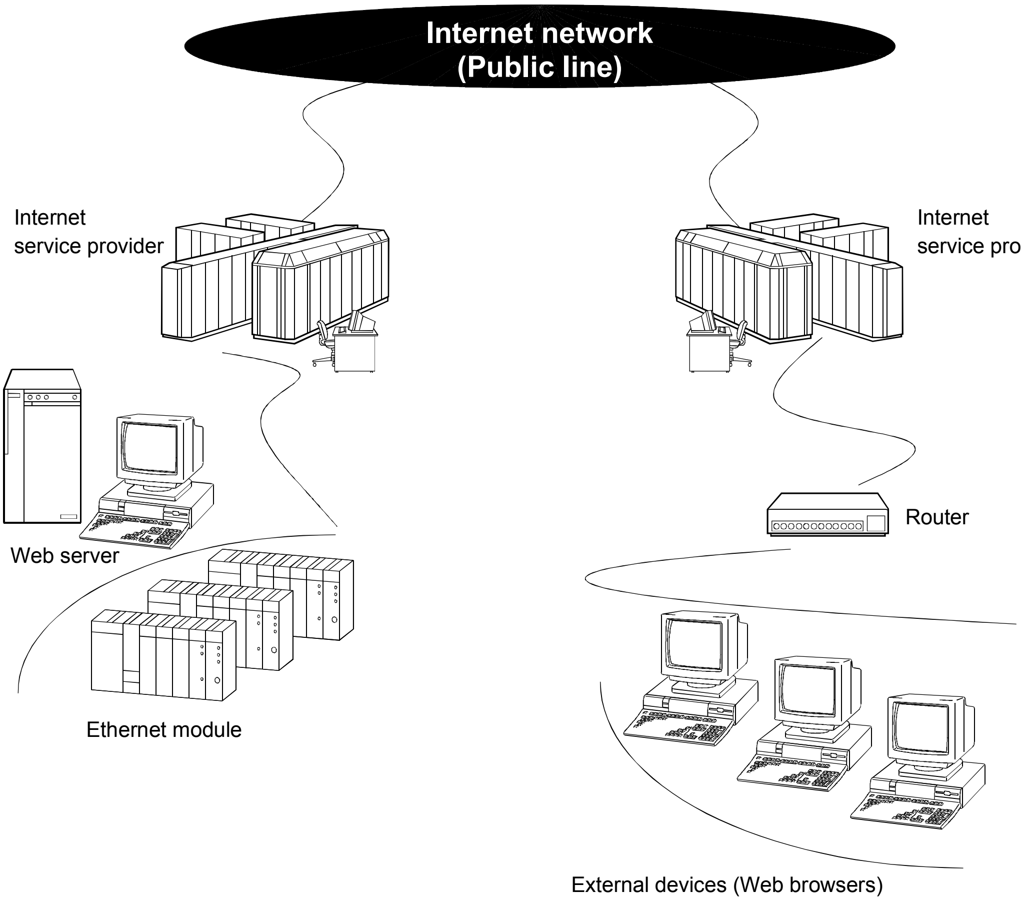
This manual explains the Web function of the MELSEC-Q Series model QJ71E71-100, QJ71E71-B5 and QJ71E71-B2 Ethernet interface module (hereinafter called the Ethernet module).
When applying the following program examples to the actual system, make sure to examine the applicability and confirm that it will not cause system control problems.

1.1 Overview

The following shows an overview of the Web function of the Ethernet module.

(1) Programmable controller monitoring via the Internet using the Web function

The Web function of the Ethernet module is used for the system administrator to monitor Q Series CPUs at a remote location via the Internet, using a commercially available Web browser.



(2) Access function to the programmable controller

By using the Web function, the programmable controller data can be collected or updated, the CPU module operation can be monitored, and the status control of the CPU module can be performed in order to control and monitor the equipment on the programmable controller side using a Web browser (＊1).

＊1 With the Web function, exchange of information between the Ethernet module and the Web server, and between the Web server and the Web browser is performed via HTTP.
With the Web function, the programmable controller is accessed by sending/receiving messages of the MC protocol, which are used for communication between the programmable controller and the external device, via HTTP.

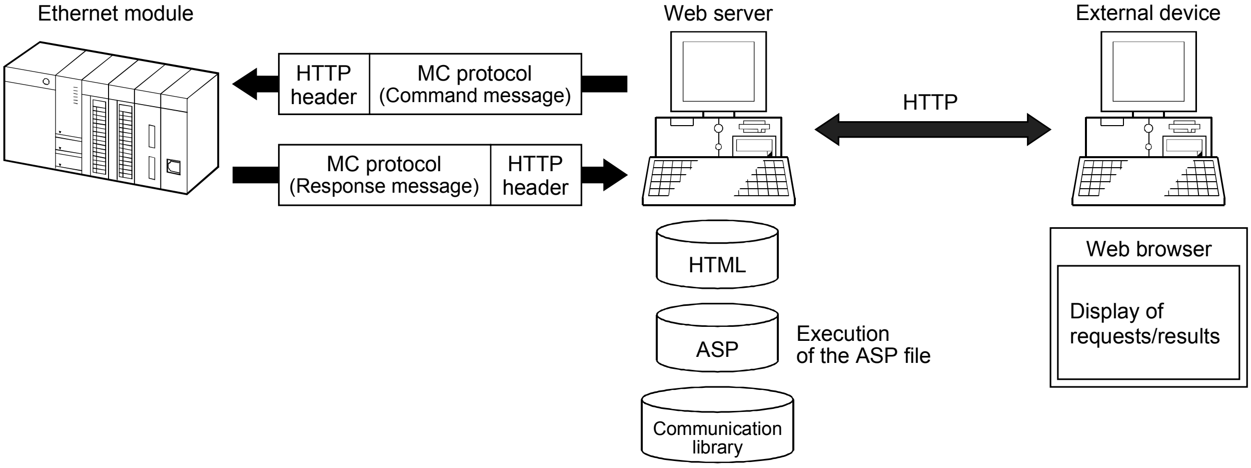
(3) Availability of a communication library and a sample screen

(a) The Web function can be used by installing the following:

	Required device/software	Description
Programmable controller side	Ethernet module	Subject module of this manual
Server computer (Web server)	Web server	See Section 2.1 (2).
	Communication library	See item (b).
	ASP files	Files created by the user to be used for accessing the programmable controller
	HTML files	Files created by the user to be used for displaying the Web browser
Device on the Web browser side	Web browser	See Section 2.1 (3).

(b) A sample screen (HTML files, ASP files) is provided. It is used to check the access function to the programmable controller using the communication library and the Web function. Contact your local agency or marketing company.

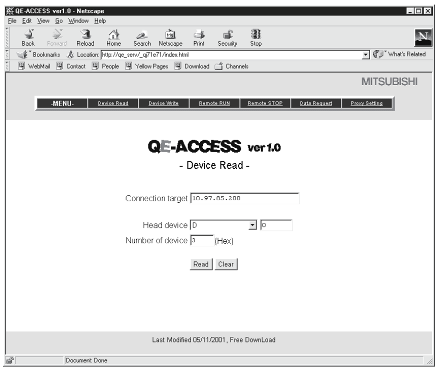
1) The user can easily create ASP files in order to access the programmable controller by using the communication library.
In addition, the result of access to the programmable controller using ASP files can arbitrarily be displayed on the Web browser using user-created HTML files.


Ethernet module
Web server
External device
HTTP header
MC protocol (Command message)
MC protocol (Response message)
HTTP header
HTTP
HTML
ASP
Execution of the ASP file
Communication library
Web browser
Display of requests/results

2) Device memory read/write, remote RUN/STOP and other operations can be performed for the QCPU of an Ethernet module mounted station by specifying the URL of the sample screen using the Web browser.

∗ The execution result is displayed by simply entering the access device, the number of devices, etc. in the items to be displayed in the Web browser.

(Example) To read three points of data registers D0 = 1234_H,
D1 = 5678_H and D2 = $9ABC_H$


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: http://qe_serv/_qj71e71/index.html
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
Read Clear
Document: Done

QE-ACCESS ver1.0

- Device Read -

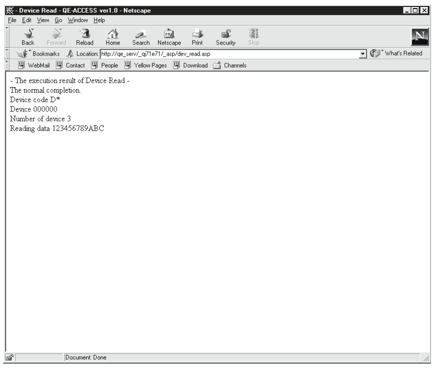
Connection target 10.97.85.200

Head device D 0

Number of device 3 (Hex)

Last Modified 05/11/2001, Free DownLoad

(Input screen)


- Device Read - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: http://qe_serv/_qj71e71/_asp/dev_read.asp
What's Related
WebMail Contact People Yellow Pages Download Channels
Document: Done

```
- The execution result of Device Read -
The normal completion.
Device code D*
Device 000000
Number of device 3
Reading data 123456789ABC
```

(Execution result screen)

(4) Utilizing the Web server

Access to the programmable controller using the Web function becomes possible by combining an Ethernet module and a Web server computer.

(a) A system can easily be configured by utilizing a Web server.

1) Complicated screens can be created.
The user can create multiple HTML files and HTML files of large sizes without being limited by the size of the Ethernet module memory by storing these HTML files in a Web server.

∗ The HTML files for Web browser can be created or changed easily if the user has knowledge of creating a web page.

2) Reducing the load on the Ethernet module
Since access programs for the programmable controller and control programs for Web browsers are executed in the Web server, the load on the Ethernet module can be minimized when accessing the programmable controller.

3) Separating an Ethernet line
By separating the line connecting between the Ethernet module and the Web server, and the line between the Web server and the Web browser, the screen data for the Web browser will not be sent to the line connecting between the Ethernet module and the Web server.
Therefore, it is possible to reduce effect on the transmission/reception of data for system control for communication between the Ethernet module and the external device.

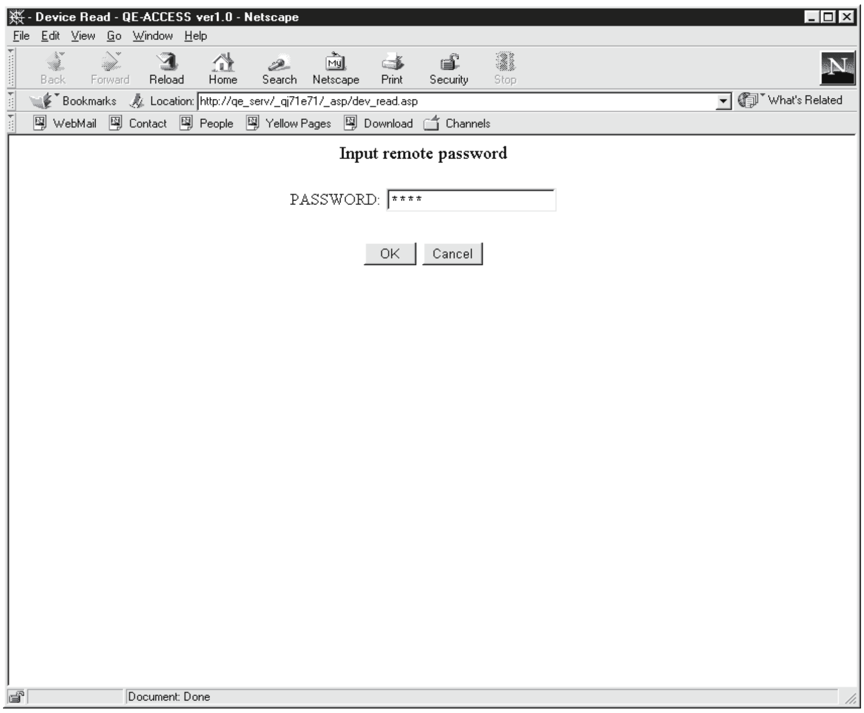
(b) System expansion can easily be achieved because the Web server and the Ethernet module are separated.
For example, the following function can be added:
If it is necessary to maintain the security of the programmable controller system against any unauthorized access (to damage programs or data, etc.) from external devices, the user can take a measure by adding a firewall function to the Web server.

(c) The communication information between the Ethernet module and the Web server, and between the Web server and the Web browser can be recorded and used for maintenance using the functions of the Web server.

(5) Remote password check function

(a) The remote password check function of the Ethernet module is provided to prevent any unauthorized access to the QCPU by the user at a remote location.
For details on the remote password check function, see Section 5.9 of the User's Manual (Basic).

(b) If the HTTP port is set as the target connection for remote password check, access to the QCPU will become possible by performing unlock processing of the remote password via the dialog box displayed in the Web browser.


- Device Read - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location:
What's Related
WebMail Contact People Yellow Pages Download Channels
OK Cancel
Document: Done

http://qe_serv/_qj71e71/_asp/dev_read.asp

Input remote password

PASSWORD: ****

The remote password lock processing is performed when the Web browser ends.

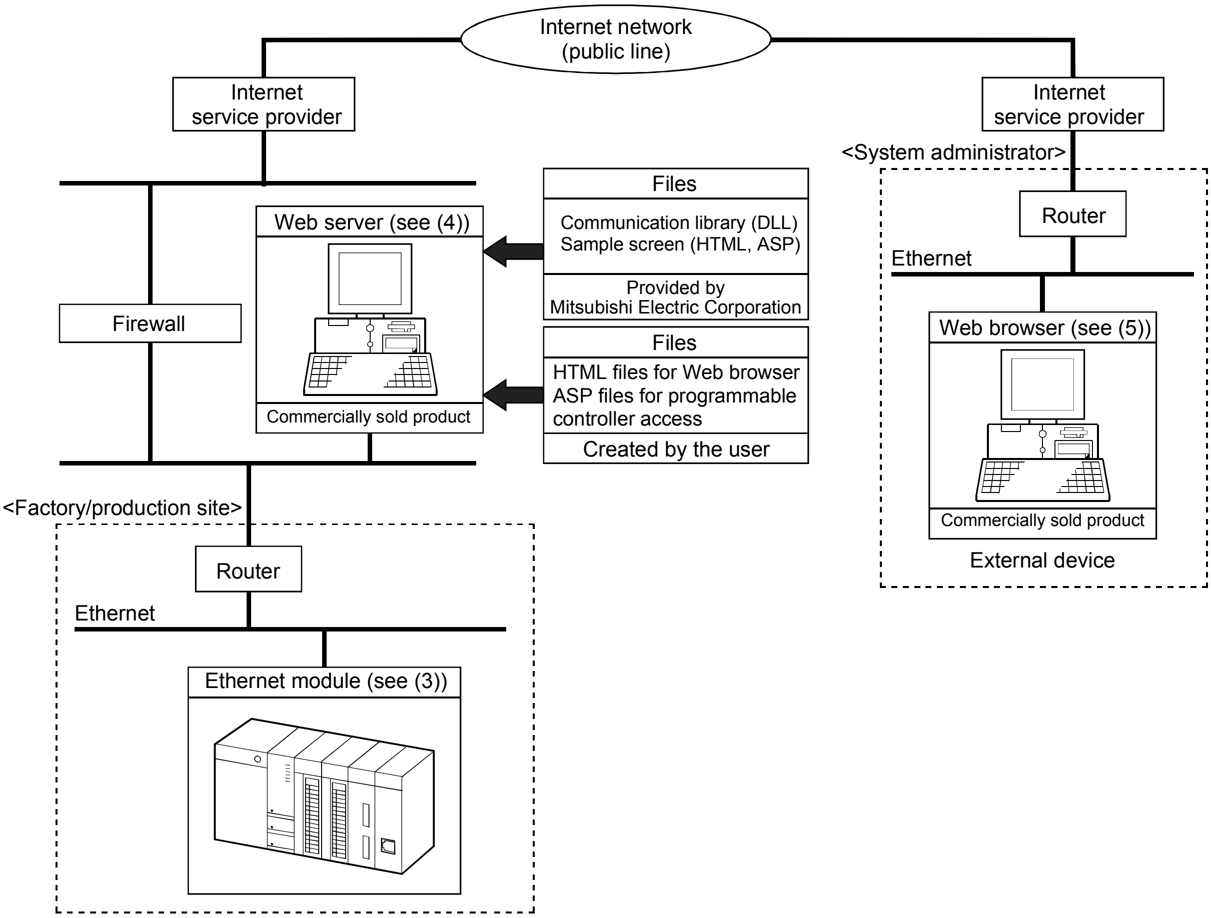
2 SYSTEM CONFIGURATIONS

2.1 System Configurations

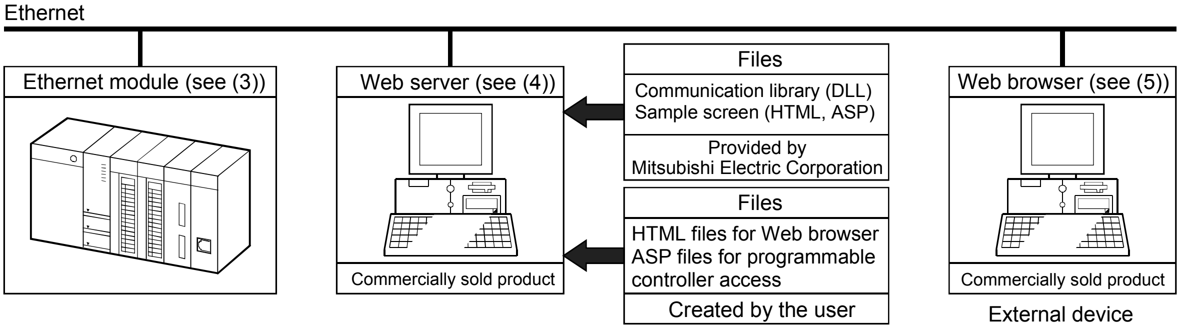
This section explains the environment and system configurations for using the Web function.

The following describes the system configurations for using the Web function of the Ethernet module.

(1) System configuration when accessing via the Internet


Internet network
(public line)
Internet service provider
Internet service provider
<System administrator>
Router
Ethernet
Web browser (see (5))
Commercially sold product
External device
Files
Communication library (DLL)
Sample screen (HTML, ASP)
Provided by Mitsubishi Electric Corporation
Files
HTML files for Web browser
ASP files for programmable controller access
Created by the user
Web server (see (4))
Commercially sold product
Firewall
<Factory/production site>
Router
Ethernet
Ethernet module (see (3))

(2) System configuration when accessing via the Intranet


Ethernet
Ethernet module (see (3))
Web server (see (4))
Commercially sold product
Files
Communication library (DLL)
Sample screen (HTML, ASP)
Provided by Mitsubishi Electric Corporation
Files
HTML files for Web browser
ASP files for programmable controller access
Created by the user
Web browser (see (5))
Commercially sold product
External device

(3) Ethernet module

The Ethernet module that can use the Web function is as follows:

- Model QJ71E71-100 Ethernet interface module
- Model QJ71E71-B5 Ethernet interface module
- Model QJ71E71-B2 Ethernet interface module

For the applicable systems and the devices required for network configuration of the above Ethernet module, see Chapter 2 of the User's Manual (Basic).

(4) Web server

The Web server is a computer in which the Web server software operates.

(a) The operating environment of the Web server is listed below.

Name	Operating system (OS)	Remarks
Internet Information Server 5.0 (IIS5.0)	Microsoft® Windows® 2000 Server Operating System	(＊1)
	Microsoft® Windows® 2000 Professional Operating System	
Internet Information Server 4.0 (IIS4.0)	Microsoft® Windows NT® Server Network Operating System Version 4.0	(＊2)
Peer Web Services 4.0 (PWS4.0)	Microsoft® Windows NT® Workstation Operating System Version 4.0	
Personal Web Server 4.0 (PWS4.0)	Microsoft® Windows® 98 Operating System	(＊3)

＊1 Set up Internet Information Server 5.0 when installing the OS.

＊2 Set up Personal Web Server 4.0 when installing Windows NT® 4.0 Service Pack 3 or later and Option Pack.
(Windows NT® 4.0 Service Pack 3 or later and Option Pack can be obtained by downloading them from the web page of Microsoft Corporation or requesting their CD-ROMs to be sent.)

＊3 Set up Windows® 98 when installing the OS.

(b) It is necessary to set up the following files in the Web server in order to use the Web function.

- Communication library
- HTML files for Web browser
- ASP files for programmable controller access

(5) Web browser

Web browsers whose compatibility has been verified by Mitsubishi Electric Corporation are as follows:

- Internet Explorer 4.0 or later (Microsoft® Corporation)
- Netscape® Communicator 4.05 or later (Netscape® Communications Corporation)

2.2 Precautions for Using the Web Function

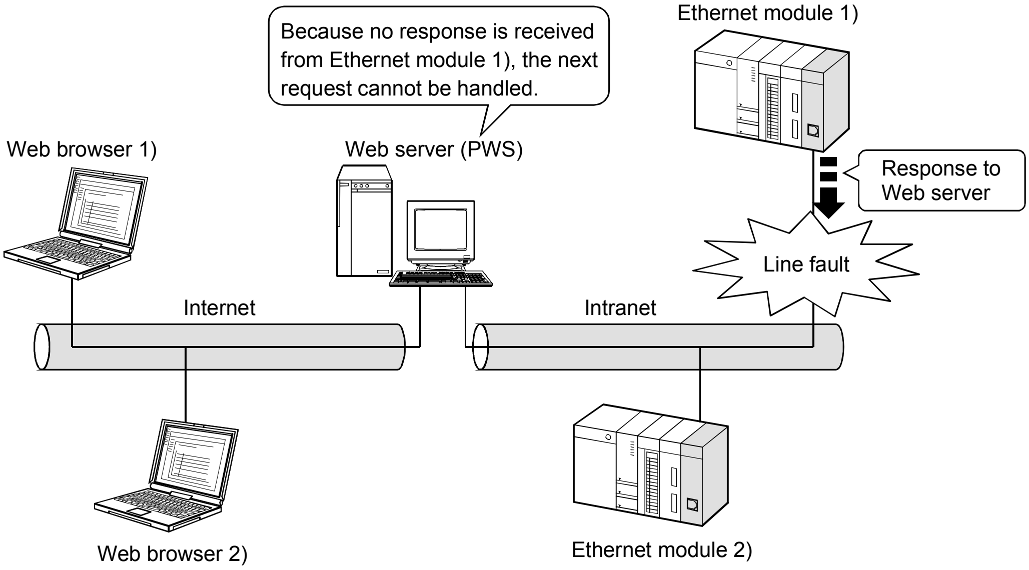
(1) Precautions for configuring a system

(a) It is necessary to take sufficient security measures for connection to the Internet.
Consult with a network installer, an Internet service provider, and a network administrator (person in charge of network planning and IP address management).
Mitsubishi Electric Corporation will not take any responsibility for any system problems that may occur while connecting to the Internet.

(b) If a firewall function is installed in the network, set it so that the HTTP protocol can pass the firewall function.

(c) When accessing multiple Ethernet modules via one Web server (Personal Web Server), the next processing may not be executed during the time from the request start through until the response is returned.
If no response is received due to a communication line fault, the next processing may be delayed until a timeout occurs on the Web server.

(Example) Accessing 2 Ethernet modules using one Web server



- Access from Web browser 1) to Ethernet module 1)
- Access from Web browser 2) to Ethernet module 2)

The line fault between the Web server and Ethernet module 1) disables the response from Ethernet module 1) to the Web server. This brings the Web server into the wait status and the access request from Web browser 2) to Ethernet module 2) has to wait at the Web server.

(2) Precautions relating to security

The remote password check function is not designed to completely prevent unauthorized access. When accessing a programmable controller CPU via the Internet, and if it is necessary to maintain the security of the programmable controller system, the user should take appropriate measures.
Mitsubishi Electric Corporation will not take any responsibility for any system problems that may occur due to unauthorized access.

＊ Examples of measures against unauthorized access

- Installing a firewall function
- Security measures by the Web server

Take necessary measures by referring to the User's Manual of the device used.

(3) Precautions for accessing the programmable controller CPU

(a) When the user creates an ASP or HTML file for the Web function, use the communication library (QeAccess.dll) provided by Mitsubishi Electric Corporation.
The communication library cannot be created by the user.
For details on the communication library functions, see Chapter 6.

(b) The Web server provides a log function that records file access, etc.
Periodically collect the access log for the programmable controller access file, and check the access status.
If there are too many unauthorized access logs to the Web server, the user should take appropriate measures to resolve unauthorized access.

(c) A maximum of four connections are allowed as the simultaneous access count when accessing the Ethernet module using the Web function.
If this maximum allowable access number is exceeded, a timeout error will be returned from a communication library function.
In case a timeout error occurs, extend the access interval time and retry.

(4) Precautions for registering the communication library (DLL file)

The regsvr32 may not be executed properly when registering the communication library (DLL file).
In that case, install the Microsoft® Corporation's Internet Explorer 5.5 or later and then, execute again.

3 OPERATING PROCEDURE

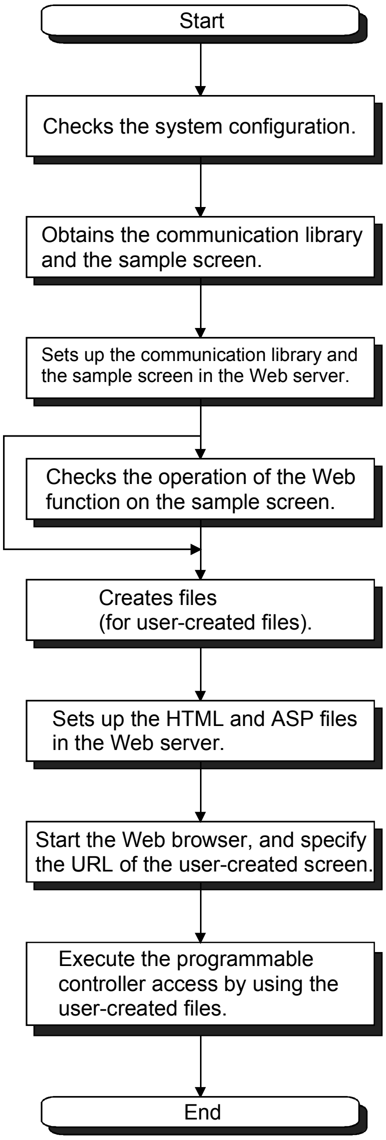
3.1 General Procedure up to Communication Using the Web Function

The following shows a general procedure up to access to the programmable controller from the Web server using the Web function.

(1) Settings on the Ethernet module side

Start the Ethernet module mounted station.
(When it is operating normally, the [INIT.] LED on the front of the Ethernet module lights up.)
For details, refer to the User's Manual (Basic).

(2) Settings on the external device side (Web server, Web browser)


Start
Checks the system configuration.
Obtains the communication library and the sample screen.
Sets up the communication library and the sample screen in the Web server.
Checks the operation of the Web function on the sample screen.
Creates files (for user-created files).
Sets up the HTML and ASP files in the Web server.
Start the Web browser, and specify the URL of the user-created screen.
Execute the programmable controller access by using the user-created files.
End

...... See Chapter 2.
＊This sets an environment that enables the connection of the Web server, Web browser and Ethernet module to the Internet.

...... See Section 3.2.

...... See Section 3.2.

...... See Chapter 4.

...... See Chapters 5 and 6.
- HTML files for Web browser
- ASP files for programmable controller access

3.2 How to Obtain and Set Up the Communication Library and the Sample Screen

The following explains how to obtain the communication library and the sample screen, and their setup procedures in the Web server.

(1) How to obtain the communication library and the sample screen

Contact your local agency or marketing company to obtain “qeaccess-e.exe.”
The “qeaccess-e.exe” is a self-decompressing file.

(2) Setup

Set up the qeacess.exe file in the Web server.

> **POINT**
>
> Web server software must be installed in the Web server in advance. For the operating environment, see Section 2.1.

(Procedure 1) Decompressing the qeaccess-e.exe file

Move the compressed qeaccess-e.exe file (approximately 75 KB) to any folder and decompress it. The following shows the file structure after decompression.

Folder name	File name	Remark
_qj71e71	dev_read.html dev_write.html foot.html index.html menu.html proxy_set.html req_cmd.html rmt_run.html rmt_stop.html	For sample screen • HTML files
_asp	dev_read.asp dev_write.asp proxy_set.asp req_cmd.asp rmt_run.asp rmt_stop.asp	For sample screen • ASP files
_dll	QeAccess.dll	Communication library • DLL file
_img	mitsubishi.gif qeaccess_logo.gif	For sample screen • Image files

(Procedure 2) Copying the files

Copy the decompressed folder (_qj71e71) under the root folder "\Inetpub\wwwroot" of the Web server.

(Procedure 3) Registering the communication library (DLL file)

Register the DLL file in the OS registry of the Web server. The following shows how to register it in MS-DOS mode.

＊ The regsvr32 may not be executed properly when registering the communication library (DLL file)
In that case, install the Microsoft® Corporation's Internet Explorer 5.5 or later and then, execute again.

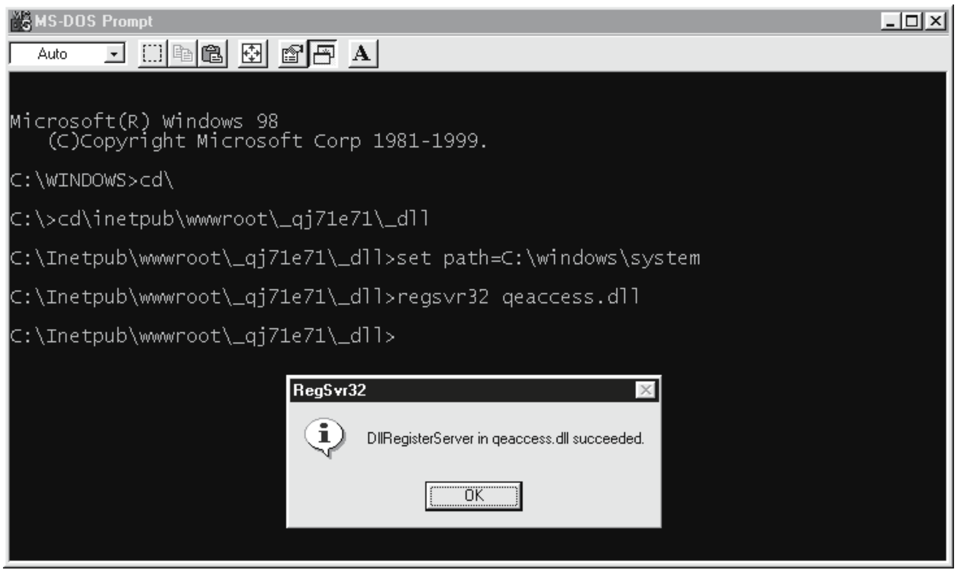
1) Set the Web server to MS-DOS mode.

2) Switch the current directory.
C:\> cd\Inetpub\wwwroot_qj71e71_dll

3) Input the directory path of the regsvr32 command for Windows.
set path = C:\windows\system

4) Register the communication library DLL with the regsvr32 command for Windows.
C:\> \Inetpub\wwwroot_qj71e71_dll> regsvr32 qeaccess.dll

(Example) When the root directory is in drive C



```
Microsoft(R) Windows 98
   (C)Copyright Microsoft Corp 1981-1999.

C:\WINDOWS>cd\

C:\>cd\inetpub\wwwroot\_qj71e71\_dll

C:\Inetpub\wwwroot\_qj71e71\_dll>set path=C:\windows\system

C:\Inetpub\wwwroot\_qj71e71\_dll>regsvr32 qeaccess.dll

C:\Inetpub\wwwroot\_qj71e71\_dll>
```

DllRegisterServer in qeaccess.dll succeeded.

(Procedure 4) When all settings are complete, restart the Web server.

REMARKS

When deleting the files that have been set up, delete all files below the _qj71e71 folder of the root folder "\Inetpub\wwwroot."

4 VERIFYING THE OPERATION OF THE WEB FUNCTION USING A SAMPLE SCREEN

This chapter explains how to access the QCPU using the Web function through a sample screen.

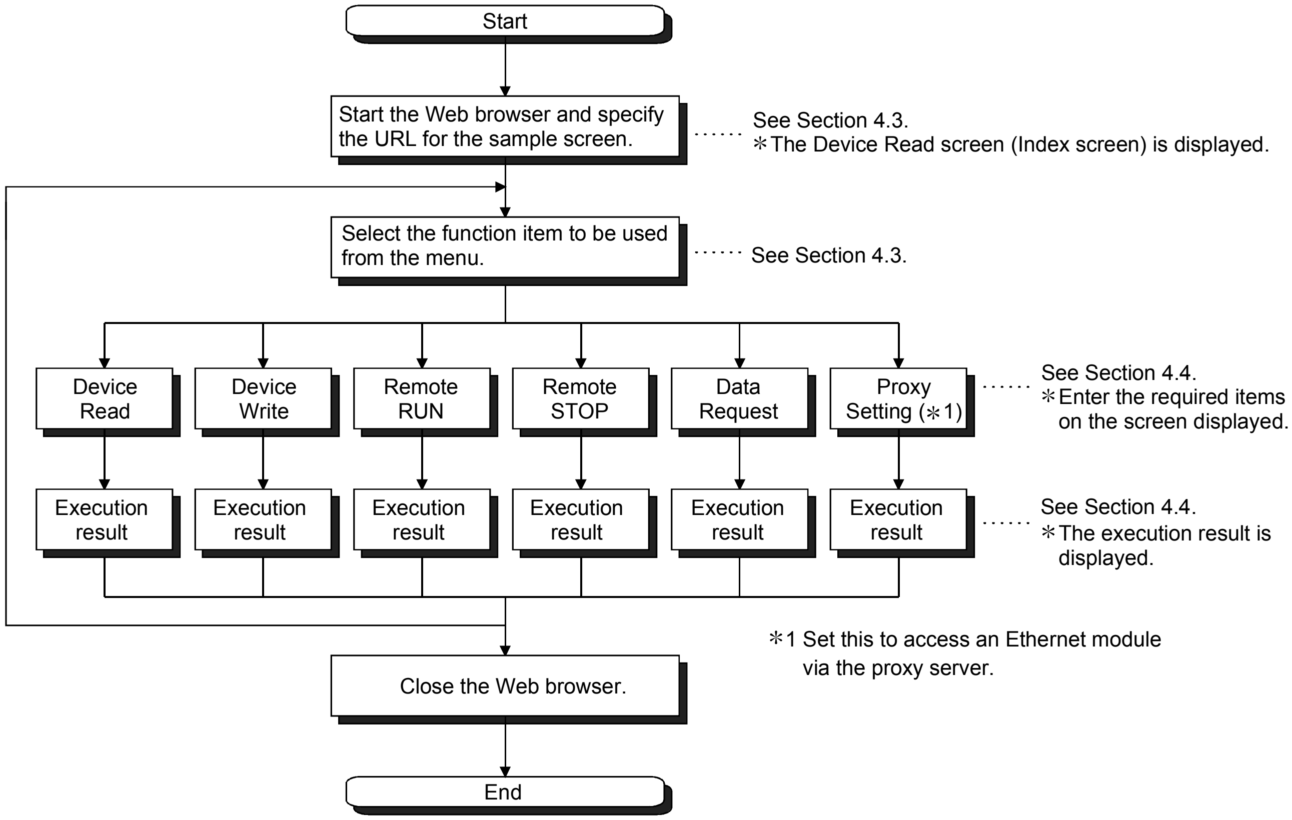
4.1 Web Function Items Available on the Sample Screen

The following lists the items of the Web function whose operations can be verified on the sample screen.

Function	File name	Description
Device Read	dev_read.html	Reads from a bit devices (X, Y, M, etc.) in 16-point units.
		Reads from a word devices (D, R, T, C, etc.) in one-point units.
Device Write	dev_write.html	Writes to a bit devices (X, Y, M, etc.) in 16-point units.
		Writes to a word devices (D, R, T, C, etc.) in one-point units.
Remote RUN	rmt_run.html	Requests a remote RUN operation to the programmable controller CPU.
Remote STOP	rmt_stop.html	Requests a remote STOP operation to the programmable controller CPU.
Data Request	req_cmd.html	Sends one MC protocol application data (subheader + text) that was input.
Proxy Setting	proxy_set.html	Specifies the proxy server when a Ethernet module is connected via a proxy server.

4.2 Operating Procedure

The following shows the operating procedure for accessing a QCPU from a sample screen.
Set up both the sample screen and the communication library in the Web server in advance. (See Chapter 3.)

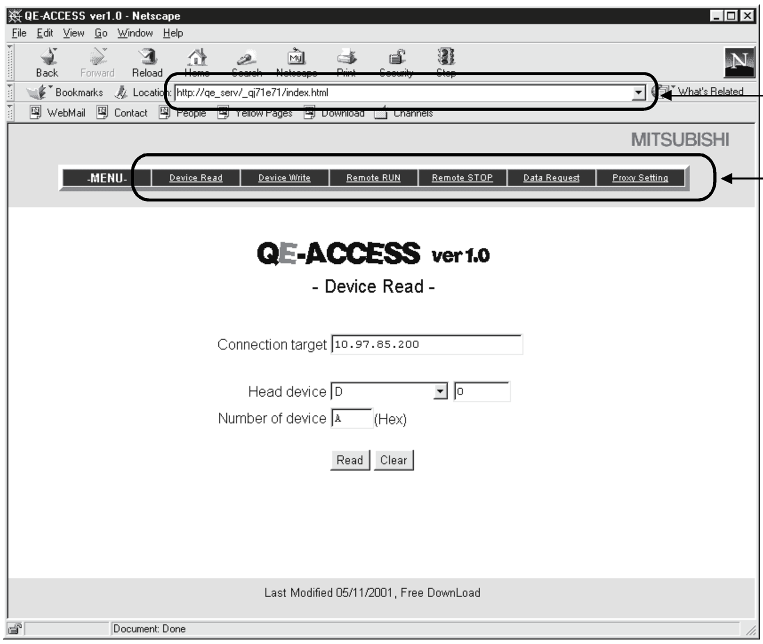


＊1 Set this to access an Ethernet module via the proxy server.

4.3 Explanation of the Sample Screen

The following shows the operations that are performed on the sample screen.

(1) Setting screen


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location:
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU-
Device Read
Device Write
Remote RUN
Remote STOP
Data Request
Proxy Setting
QE-ACCESS ver1.0
Read
Clear
Document: Done

Location: http://qe_serv/_qj71e71/index.html

- Device Read -

Connection target 10.97.85.200

Head device D 0

Number of device A (Hex)

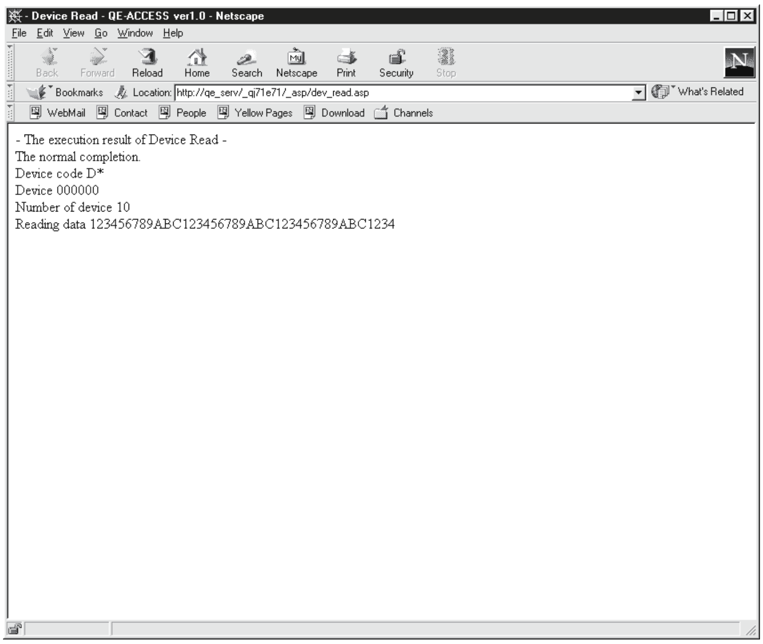
Last Modified 05/11/2001, Free DownLoad

1) Start the Web browser and specify the URL for the sample screen.
(Example) If the host name of the Web server is qe_serv, specify http://qe_serv/_qj71e71/index.html.

2) Select the Web function item to be used from the menu.

3) Enter the required items on each function screen and execute the selected Web function item.
(Example) The screen display when Device Read has been selected.

(2) Execution result screen


- Device Read - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location:
What's Related
WebMail Contact People Yellow Pages Download Channels

Location: http://qe_serv/_qj71e71/_asp/dev_read.asp

```
- The execution result of Device Read -
The normal completion.
Device code D*
Device 000000
Number of device 10
Reading data 123456789ABC123456789ABC123456789ABC1234
```

1) The execution result is displayed on a new screen.
(When completed normally)
The execution result is displayed.

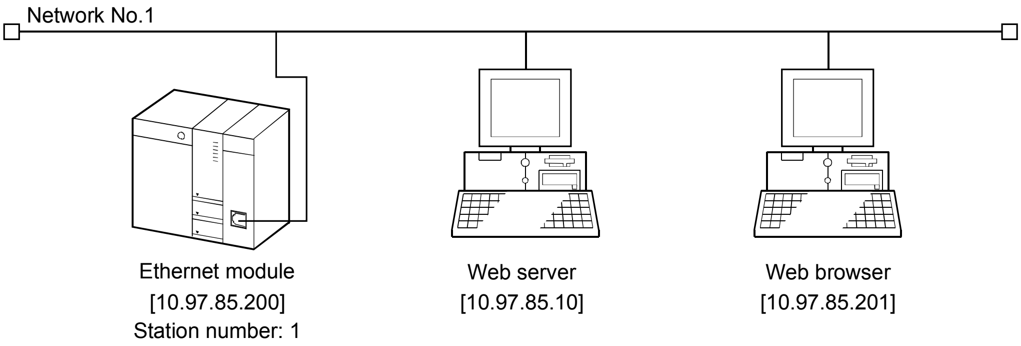
(When completed abnormally)
An error code is displayed.
＊Refer to the explanation of troubleshooting in the User's Manual (Basic).

4.4 Example of Data Communication on the Sample Screen

The following shows how to access a QCPU using the sample screen.

(1) System configuration

The following shows a system configuration for data communication.
(Explanation of proxy setting is omitted.)



(2) Execution environment for the above data communication example (Ethernet module side)

(a) Mount an Ethernet module to slot 0 of the basic base unit.

(b) Set the parameters for Ethernet using GX Developer.
For the setting items other than shown below, the default values will be used.

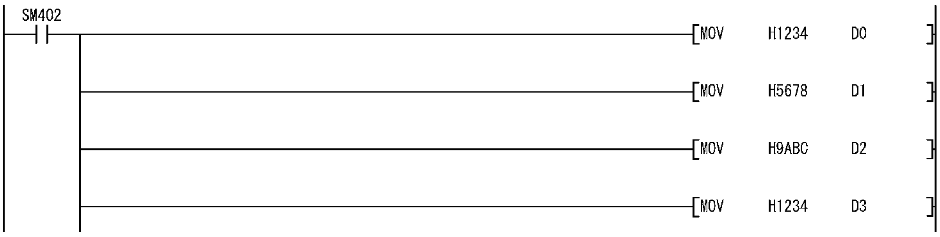
1) Network parameters

Setting screen	Setting item	Setting data
Network parameters setting the number of Ethernet/CC IE/MELSECNET cards	Network type	Ethernet
	Starting I/O No.	0000
	Network No.	1
	Group No.	1
	Station No.	1
Operational settings	IP address	[10. 97. 85. 200]

2) Remote password

Setting screen	Setting item		Setting data
Remote password settings	Password setting		＊＊＊＊
	Password active module settings	Model name	QJ71E71
		Start X/Y	0000
Remote password detail settings	System connection		Check "HTTP port."

(c) Write data to the data registers D0 through D3.



(d) Write the Ethernet parameters and programs to the programmable controller CPU and restart the programmable controller CPU.
When it is operating normally, the initial processing of the Ethernet module will be completed normally and the [INIT.] LED will be lit.

(3) Execution environment of the above data communication example (external device side)

(a) Web server

1) Set up the communication library and the sample screen. (See Section 3.2 (2).)

2) Register the DLL file in the OS registry. (See Section 3.2 (2).)
This registration is not required if it has already been registered.

3) After all settings are completed, restart the Web server.

(b) Web browser

Start the Web browser.

(4) Execution of data communication

(a) URL display on the sample screen

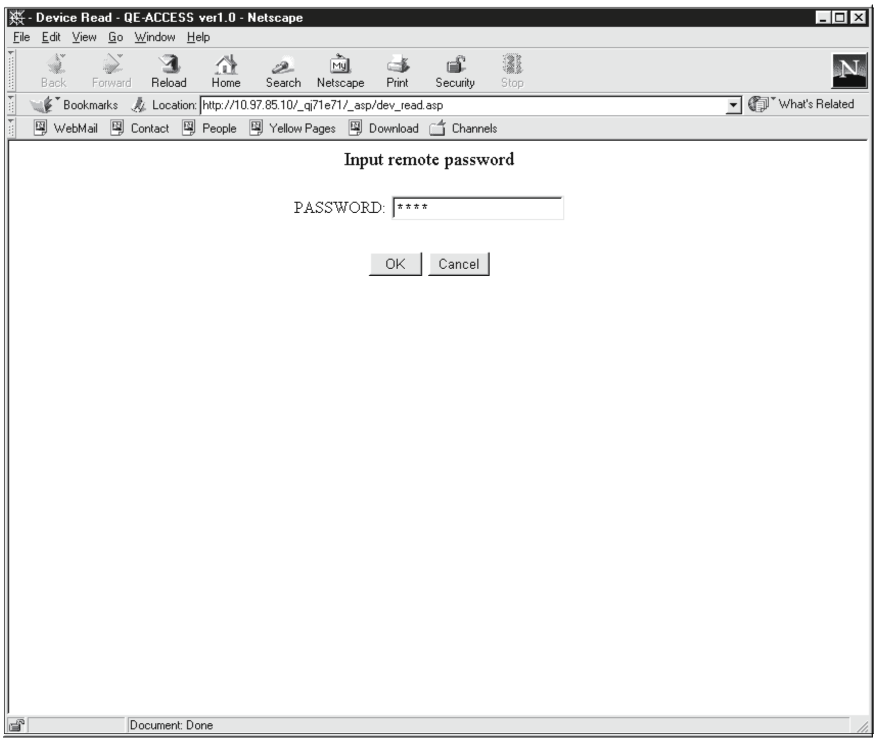
Specify the following URL for the sample screen in the Web browser.
http://10.97.85.10/_qj71e71/index.html

(b) Unlocking the remote password

If the port of the Ethernet module to be used for data communication with the Web server is subject to remote password check, the following dialog box will be displayed when access to a QCPU will start.

Enter the remote password to perform unlock processing.

＊ This operation is not required if the port of the Ethernet module is not subject to remote password check. (Therefore, the following dialog box will not be displayed.)



- Device Read - QE-ACCESS ver1.0 - Netscape

Location: http://10.97.85.10/_qj71e71/_asp/dev_read.asp

Input remote password

PASSWORD: ****

Document: Done

(c) Data communication

For an example of data communication, see Section 4.4.1 and subsequent sections.

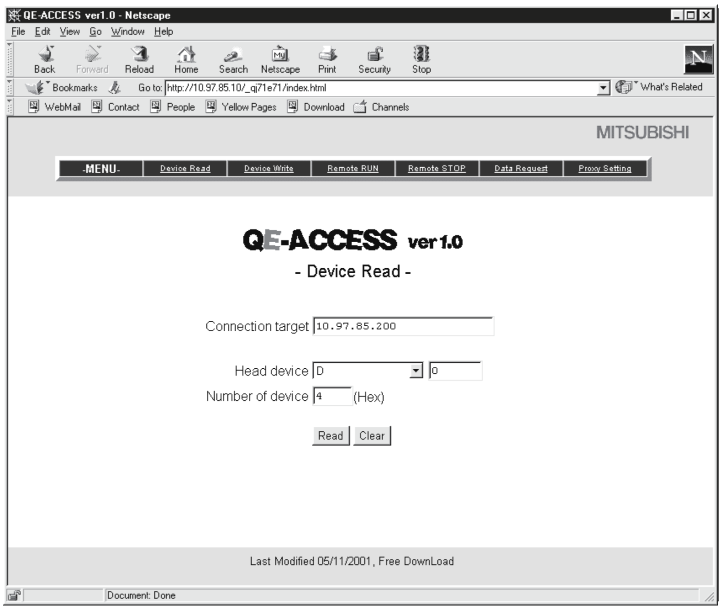
(d) End of data communication

Close the Web browser.

4.4.1 Device Read/Write

The Device Read and Device Write functions (QnA compatible 3E frame commands 0401 and 1401) read and write the bit device memory (16-bit units) and word device memory (1-word units) of the local station’s QCPU in batch mode.
For details on the MC protocol, refer to the Reference Manual.
This section explains an example of reading four points of the data registers D0 through D3.

(1) Device Read Screen


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Go to: http://10.97.85.10/_qj71e71/index.html What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
QE-ACCESS ver1.0
Read Clear
Document: Done

- Device Read -

Connection target 10.97.85.200

Head device D 0

Number of device 4 (Hex)

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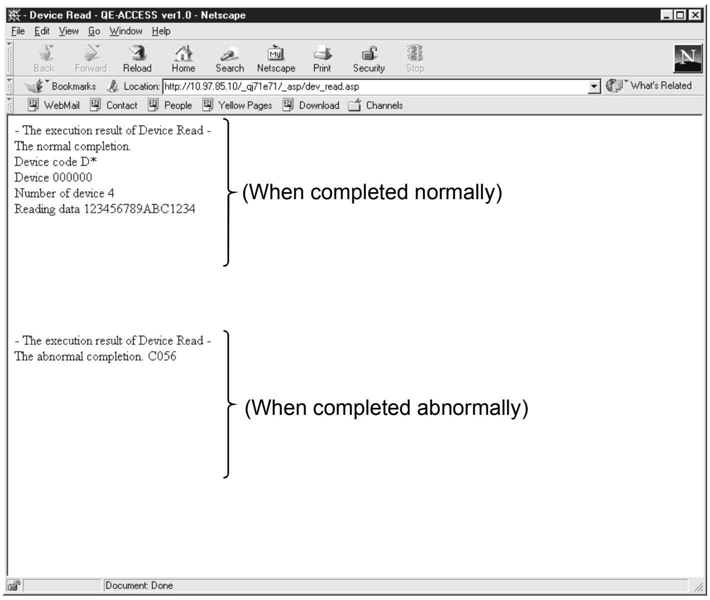
Setting item	Setting value
Connection target	10. 97. 85. 200
Head device	D000000
Number of device	0004

(2) Execution result


- Device Read - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: http://10.97.85.10/_qj71e71/_asp/dev_read.asp What's Related
WebMail Contact People Yellow Pages Download Channels
Document: Done

- The execution result of Device Read -
The normal completion.
Device code D*
Device 000000
Number of device 4
Reading data 123456789ABC1234

(When completed normally)

- The execution result of Device Read -
The abnormal completion. C056

(When completed abnormally)

(3) Setting items

The following explains the setting items on the Device Read/Write screen.

(a) Connection target (character string)

Specify the IP address or host name of the connection target Ethernet module.

(Example) To specify using the IP address, enter 10. 97. 85. 200.

(b) Head device

Specify the device code and head device of the device for reading/writing data.

1) Device code (selection)

Select the device memory.

2) Head device (character string)

Specify the head number of the device memory for which data is to be read/written. Specify the head device number in decimal/hexadecimal from the target device memory.

(Example) To specify the data register D100, select the device code "D" and specify "000100" for the head device. (Only "100" may be specified by omitting the first three "0's.")

(Example) To specify the link register W1FF, select the device code "W" and specify "0001FF" for the head device. (Only "1FF" may be specified by omitting the first three "0's.")

(c) Number of device (character string)

Specify the number of points (hexadecimal) of the device for which reading/writing are to be performed.

(Example) To specify 20 points as the number of device points, specify "0014." (Only "14" may be specified by omitting the first two "0's.")

(d) Read data/write data (character string) (See item (4).)

1) Read data (execution result screen)

Displays the content of data for the number of device points read from the specified device memory.

2) Write data

Specify the data to be written to the device for the number of device points.

(4) Arrangement of read/write data

The following explains the transmission method and placement of the bit device data and word device data handled by device read/write operation.
The data is handled in word units during device read/write operation on the sample screen.

(a) When reading/writing the bit device memory

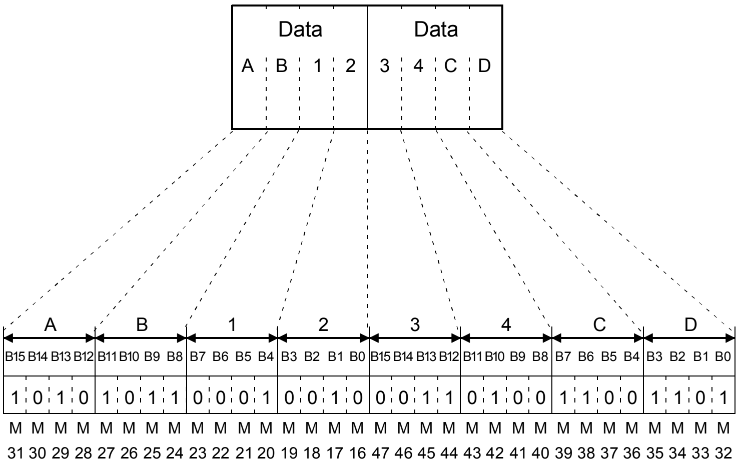
In the bit device memory, one word is expressed in 4-bit units sequentially from upper bits in hexadecimal.

(Example) To write data to 32 points from the internal relay M16
(In the case of data read operation, the content of data (ON/OFF status) when 32 points are specified from the internal relay M16 is shown.)

Specify each setting item as follows:

- Device code : Select "M."
- Head device : Specify "000016."
  (Only "16" may be specified by omitting the first four "0's.")
- Number of device : "0002"
  (Only "2" may be specified by omitting the first three "0's.")
- Write data : Specify "AB1234CD."

The following data will be written. (In the case of device read operation, the following data will be read.)



A				B				1				2				3				4				C				D			
B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0
1	0	1	0	1	0	1	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	0	0	1	1	0	0	1	1	0	1
M 31	M 30	M 29	M 28	M 27	M 26	M 25	M 24	M 23	M 22	M 21	M 20	M 19	M 18	M 17	M 16	M 47	M 46	M 45	M 44	M 43	M 42	M 41	M 40	M 39	M 38	M 37	M 36	M 35	M 34	M 33	M 32

1: Indicates ON.
0: Indicates OFF.

(b) When reading/writing the word device memory

In the word device memory, one word is expressed in 4-bit units sequentially from upper bits in hexadecimal.

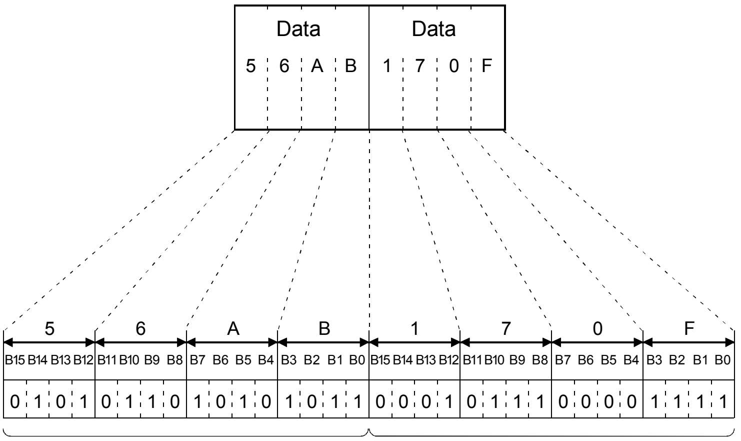
(Example) To write data to the data registers D350 and D351

(In the case of data read operation, the content of data when the data registers D350 and D351 are specified is shown.)

Specify each setting item as follows:

- Device code : Select "D."
- Head device : Specify "000350."
  (Only "350" may be specified by omitting the first three "0's.")
- Number of device : "0002"
  (Only "2" may be specified by omitting the first three "0's.")
- Write data : Specify "56AB170F."

The following data will be written. (In the case of device read operation, the following data will be read.)



5				6				A				B				1				7				0				F			
B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0	B15	B14	B13	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1	B0
0	1	0	1	0	1	1	0	1	0	1	0	1	0	1	1	0	0	0	1	0	1	1	1	0	0	0	0	1	1	1	1

1: Indicates ON.
0: Indicates OFF.

The content of D350 indicates 56AB$_H$ (22187 in decimal).

The content of D351 indicates 170F$_H$ (5903 in decimal).

POINT

If values (real numbers, character strings) other than integers are stored in the word device memory from which data is to be read, the Ethernet module reads the stored values as integer values.

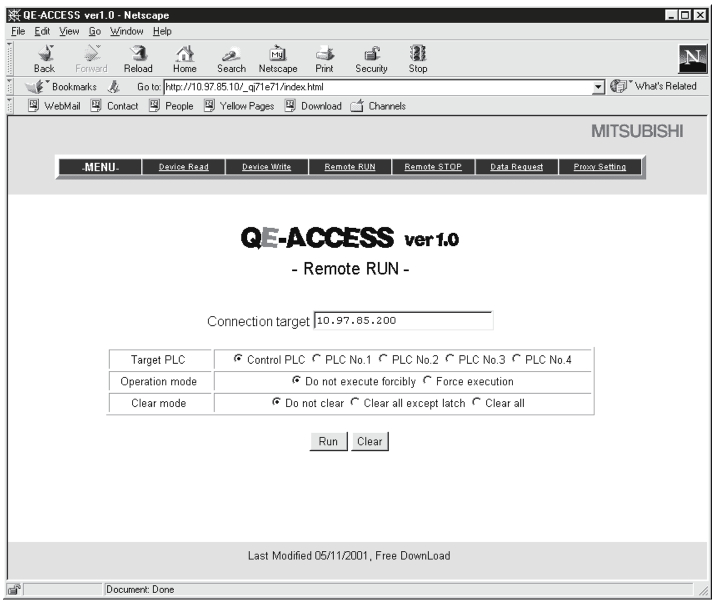
(Example 1) If a real number (0.75) is stored in D0 and D1, it will be read as the following integer value:
"00003F40" (D0 = 0000$_H$, D1 = 3F40$_H$)

(Example 2) If a character string ("12AB") is stored in D2 and D3, it will be read as the following integer value:
"32314241" (D2 = 3231$_H$, D3 = 4241$_H$)

4.4.2 Remote RUN/STOP

The Remote RUN and Remote STOP functions (QnA compatible 3E frame commands 1001 and 1002) stop and run the local station’s QCPU.
For details on the MC protocol, refer to the Reference Manual.
This section explains an example of Remote RUN.

(1) Remote RUN screen


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks
Go to: http://10.97.85.10/_qj71e71/index.html
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
Run Clear
Document: Done

QE-ACCESS ver1.0

- Remote RUN -

Connection target 10.97.85.200

Target PLC	● Control PLC ○ PLC No.1 ○ PLC No.2 ○ PLC No.3 ○ PLC No.4
Operation mode	● Do not execute forcibly ○ Force execution
Clear mode	● Do not clear ○ Clear all except latch ○ Clear all

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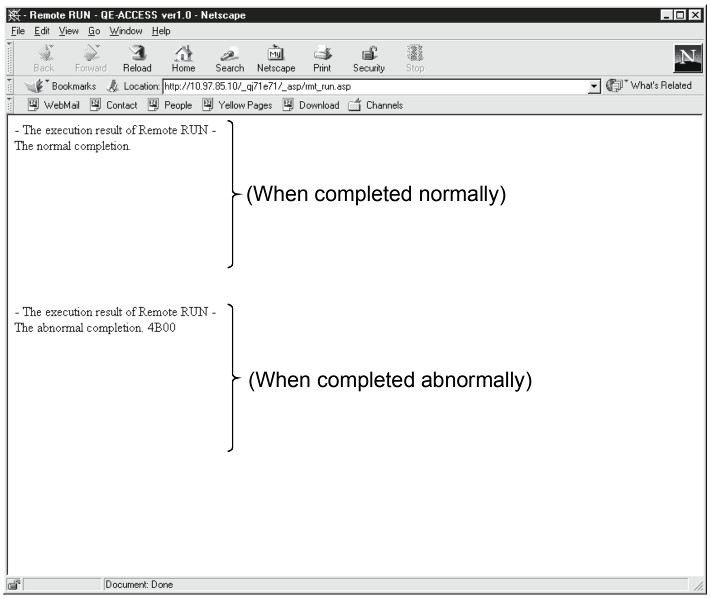
Setting item	Setting value
Connection target	10. 97. 85. 200
Operation mode	Do not execute forcibly.
Clear mode	Do not clear.

(2) Execution result


- Remote RUN - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks
Location: http://10.97.85.10/_qj71e71/_asp/rmt_run.asp
What's Related
WebMail Contact People Yellow Pages Download Channels
Document: Done

- The execution result of Remote RUN -
The normal completion.

(When completed normally)

- The execution result of Remote RUN -
The abnormal completion. 4B00

(When completed abnormally)

(3) Setting items

The following explains the setting items on the Remote RUN/STOP screen.

(a) Connection target (character string)

Specify the IP address or host name of the connection target Ethernet module.

(Example) To specify using the IP address, enter 10. 97. 85. 200.

(b) Target PLC (selection)

Select the target programmable controller for remote RUN/STOP operation.

＊ To perform remote RUN/STOP to a single CPU, specify the control CPU.

(c) Operation mode (selection)

Select whether or not to execute remote RUN forcibly.

1) Do not execute forcibly

Does not perform remote RUN when remote STOP is being executed from other external device.

2) Force execution

Performs remote RUN even if remote STOP is being executed from other external device.

(d) Clear mode (selection)

Specify clear (initialization) processing of QCPU's device clear when starting QCPU calculation by remote RUN.

1) Do not clear

Does not clear the device memory.

2) Clear all except latch

Clears the device memory outside the latch range.

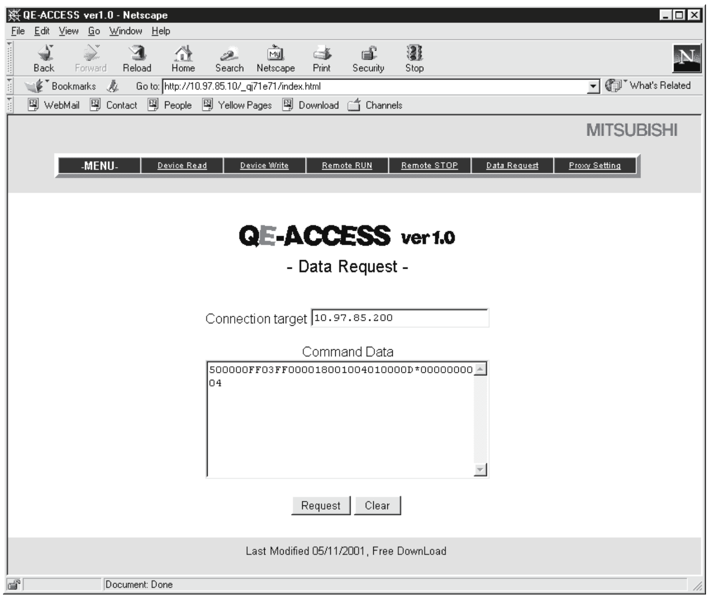
3) Clear all

Clears all device memory including the latch range.

4.4.3 Data Request

The Data Request function accesses the programmable controller CPU by inputting the application data of the MC protocol (QnA compatible 3E frame).
This section explains how to read four points of the data registers D0 through D3 by specifying the application data of Device Memory Batch Read (command 0401) for the QnA compatible 3E frame.

(1) Data Request screen


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Go to: http://10.97.85.10/_qj71e71/index.html
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
QE-ACCESS ver1.0
- Data Request -
Request Clear
Last Modified 05/11/2001, Free DownLoad
Document: Done

Connection target 10.97.85.200

Command Data
500000FF03FF000018001004010000D*00000000
04

Setting item	Setting value
Connection target	10. 97. 85. 200
Command Data	500000FF03FF000018001004010000D ∗ 0000000004

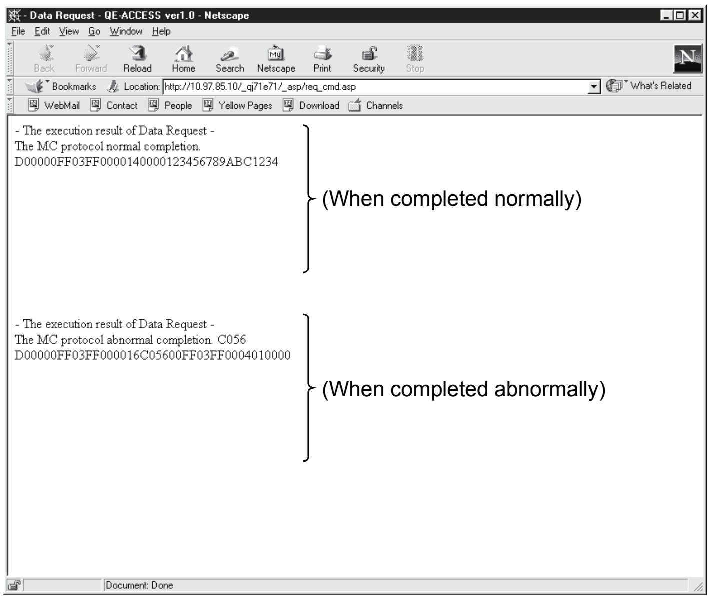
(Example) The following shows an example of the format for the application data of the MC protocol that is equivalent to the command data.

Text (Command)

	Q header										
Subheader	Network No.	PC No.	Request destination module I/O No.	Request destination module station No.	Request data length	CPU monitoring timer	Command	Subcommand	Device code	Head device	Number of device
	H L	H L	H - - L	H L	H - - L	H - - L	H - - L	H - - L		H - - - - L	H - - L
5 0 0 0	0 0	F F	0 3 F F	0 0	0 0 1 8	0 0 1 0	0 4 0 1	0 0 0 0	D *	0 0 0 0 0 0	0 0 0 4
35_H 30_H 30_H 30_H	30_H 30_H	46_H 46_H	30_H 33_H 46_H 46_H	30_H 30_H	30_H 30_H 31_H 38_H	30_H 30_H 31_H 30_H	30_H 34_H 30_H 31_H	30_H 30_H 30_H 30_H	44_H $2A_H$	30_H 30_H 30_H 30_H 30_H 30_H	30_H 30_H 30_H 34_H

∗ Specify this part in the command data.

(2) Execution result



Location: http://10.97.85.10/_qj71e71/_asp/req_cmd.asp

```
- The execution result of Data Request -
The MC protocol normal completion.
D00000FF03FF0000140000123456789ABC1234
```

(When completed normally)

```
- The execution result of Data Request -
The MC protocol abnormal completion. C056
D00000FF03FF000016C05600FF03FF0004010000
```

(When completed abnormally)

(3) Setting items

The following explains the setting items on the Data Request screen.

(a) Connection target (character string)

Specify the IP address or host name of the connection target Ethernet module.

(Example) To specify using the IP address, enter 10. 97. 85. 200.

(b) Command data (character string)

Specify the MC protocol application data using the same character string as the setting for ASCII code transmission.

For details on the MC protocol, refer to the Reference Manual.

(4) Precautions for use of Data Request

(a) Available communication frame

Application data of the QnA compatible 3E frame command can be specified.

Specification of the 4E or A compatible 1E frame is not allowed.

(b) No. of commands that can be specified at a time

Only one command can be specified at a time.

Continuous specification of more than one command is not allowed.

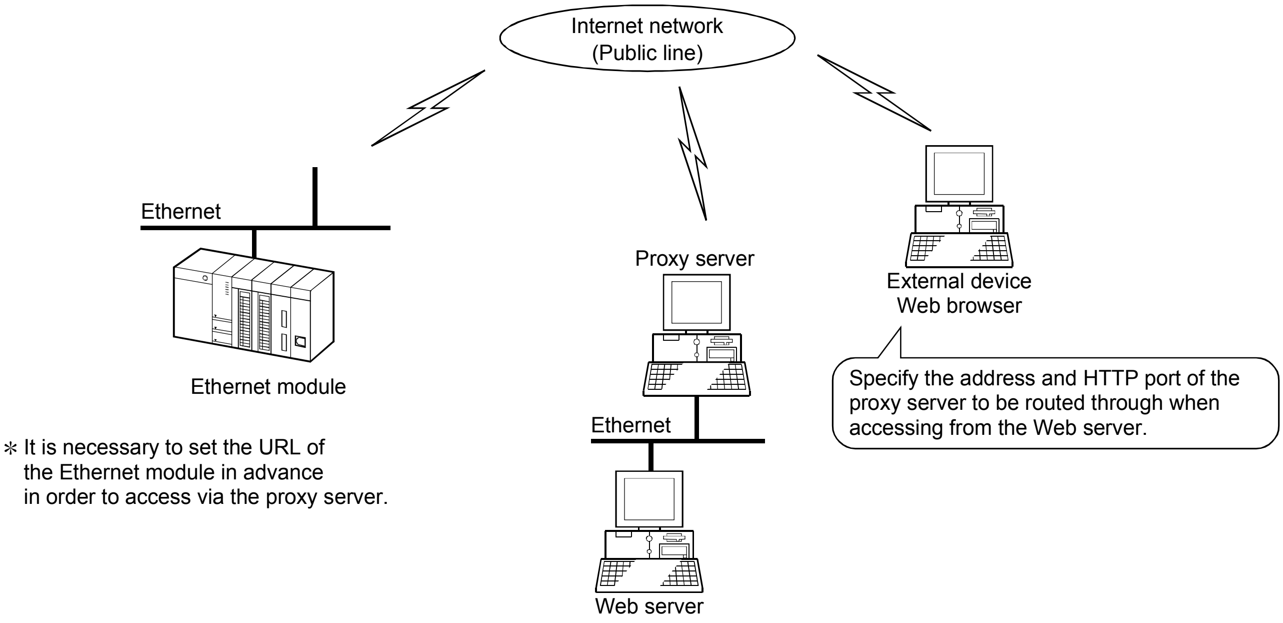
(c) Remote password unlock/lock (Command: 1630/1631)

Remote password unlock/lock (Command: 1630/1631) is not available.

The remote password to the HTTP port is unlocked in the dialog box, which is displayed in the Web browser when accessing to a programmable controller CPU. (See Section 1.1 (5).)

4.4.4 Proxy Setting

In case an Ethernet module is connected via a proxy server, specify the address and HTTP port of the proxy server to be routed through when accessing from the Web server to the Ethernet module.
It is necessary to set the URL of the Ethernet module in advance in order to access via the proxy server.

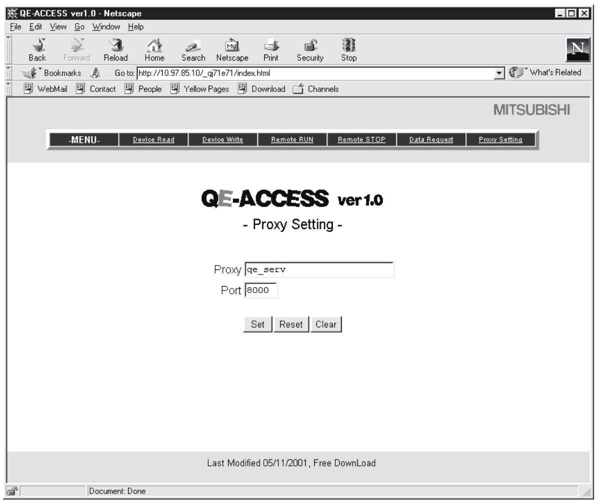


Specify the address and HTTP port of the proxy server to be routed through when accessing from the Web server.

∗ It is necessary to set the URL of the Ethernet module in advance in order to access via the proxy server.

(1) Proxy setting

(Example) To set the port 8000 of the proxy server (qe_serv)


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
QE-ACCESS ver1.0
Set Reset Clear
Document: Done

Go to: http://10.97.85.10/_qj71e71/index.html

- Proxy Setting -

Proxy qe_serv
Port 8000

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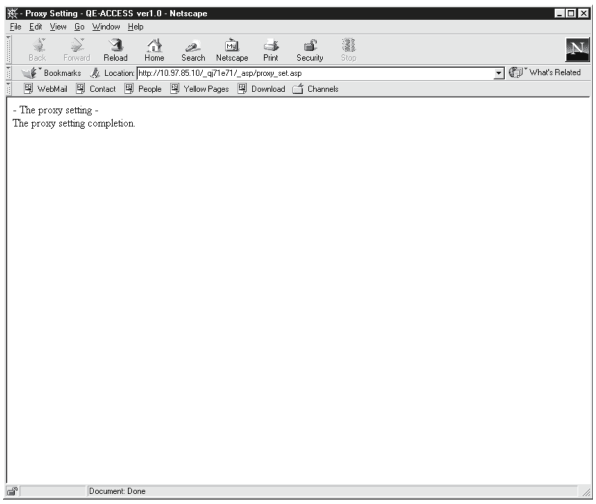
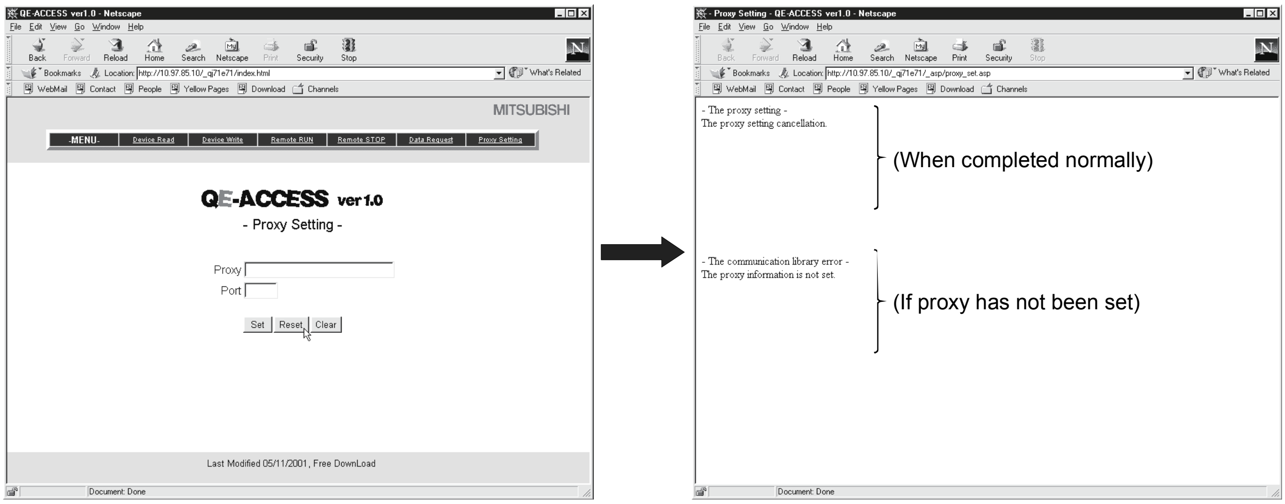

- Proxy Setting - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks
What's Related
WebMail Contact People Yellow Pages Download Channels
Document: Done

Location: http://10.97.85.10/_qj71e71/_asp/proxy_set.asp

- The proxy setting -
The proxy setting completion.

(2) Resetting proxy


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: http://10.97.85.10/_qj71e71/index.html
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
QE-ACCESS ver1.0
- Proxy Setting -
Proxy
Port
Set Reset Clear
Last Modified 05/11/2001, Free DownLoad
Document: Done
- Proxy Setting - QE-ACCESS ver1.0 - Netscape
Location: http://10.97.85.10/_qj71e71/_asp/proxy_set.asp
Document: Done

- The proxy setting -
The proxy setting cancellation.

(When completed normally)

- The communication library error -
The proxy information is not set.

(If proxy has not been set)

(3) Setting items

The following explains the setting items on the Proxy Setting screen.
For the IP address and port of the proxy server to be used, consult with the network administrator (the person in charge of network planning and IP address management), and then specify them.

(a) Proxy (character string)

Specify the IP address or host name of the proxy server to be routed through.
(Example) To specify using the IP address, enter 10. 97. 85. 200.

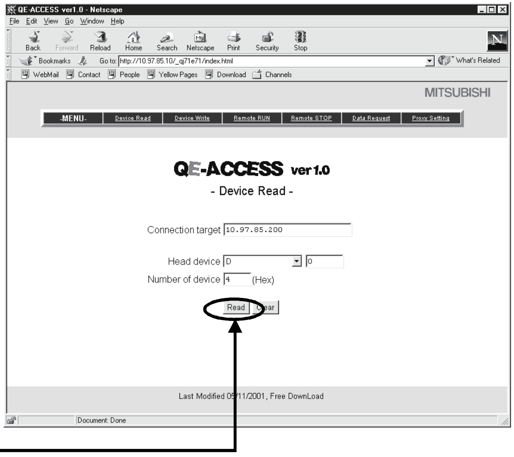
(b) Port (character string)

Specify the port to be used.

4.5 Configurations of Files on the Sample Screen

The following shows the configuration of the HTML files for Web browser and the configuration of the ASP files for accessing the programmable controller, using the Device Read sample screen.
For communication library functions, see Chapter 6.

(Device Read screen)


QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks
What's Related
WebMail Contact People Yellow Pages Download Channels
MITSUBISHI
-MENU- Device Read Device Write Remote RUN Remote STOP Data Request Proxy Setting
QE-ACCESS ver1.0
- Device Read -
Read Clear
Document: Done

Go to: http://10.97.85.10/_qj71e71/index.html

Connection target 10.97.85.200

Head device D 0

Number of device 4 (Hex)

Last Modified 05/11/2001, Free DownLoad

HTML file (dev_read.html)

```
<HTML>
<TITLE>
- Device Read - QE-ACCESS ver1.0
</TITLE>
<BODY BGCOLOR="#FFFFFF"><BR>
<CENTER>
<IMG SRC=_img/qeaccess_logo.gif><BR>
<TT><FONT SIZE=5 FACE="Arial,Lucida,Sans,Time Roman">- Device Read -</FONT></TT><BR>

<!Action>
<FORM ACTION="_asp/dev_read.asp" METHOD="POST" TARGET="_BLINK"><BR>
<TABLE BORDER="0">
<!Connection target>
<TR>
<TD WIDTH="140" ALIGN="RIGHT"><FONT FACE="Arial,Lucida,Sans,Time Roman">Connection target</FONT></TD>
<TD WIDTH="200" COLSPAN="2"><INPUT TYPE="TEXT" SIZE="26" NAME="iHostName"></TD>
</TR>
                    .
                    .
<!Input type>
<INPUT TYPE="SUBMIT" VALUE="Read">
<INPUT TYPE="RESET"  VALUE="Clear">
</CENTER>
</BODY>
</HTML>
```

(Specify the transmission destination)

(Execute an ASP file)

1)

1)

ASP file (dev_read.asp)

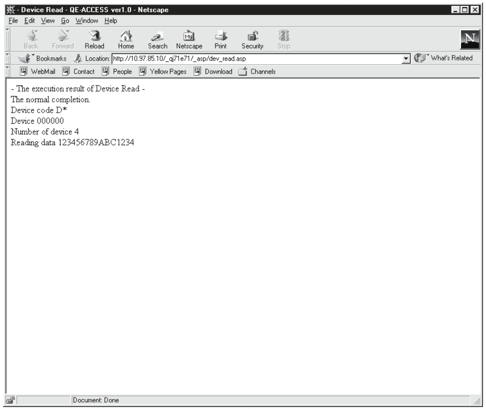
```
<%@ LANGUAGE="VBScript" %>
<HTML>
<HEAD>
<TITLE>- Device Read - QE-ACCESS ver1.0</TITLE>
</HEAD>
<BODY>
<!Getting of input data>
<%
HostName = Request.Form("iHostName")
DevCode  = Request.Form("iDevCode")
DevNo    = Request.Form("iDevNo")
DevNum   = Request.Form("iDevNum")
PassWord = Request.Form("iPassWord")
PassInf  = Request.Form("iPassInf")
PassCnt  = Request.Form("iPassCnt")
%>
<!Setting of default value>
<%
NetNo   = "00"
PcNo    = "FF"
CpuTime = "0028"
RetType = "0"
%>
<!Calling of DLL>
<%
Set Object = Server.CreateObject("QeAccess.McProtcol")
disp = Object.DevRead( HostName, NetNo, PcNo, CpuTime, DevCode, DevNo, DevNum, PassWord, RetType )
%>
<!Showing of execution result(When the password error occurs, it makes input a password.)>
<%
If InStr( disp, "<!HTTP error 401>" ) <> 0 Then
        If PassCnt < 3 Then
                If PassInf <> "Cancel" Then
                        Response.Write("<CENTER>")
                        Response.Write("<FONT SIZE=4>Input remote password</FONT>")
                        Response.Write("<FORM ACTION=""dev_read.asp"" METHOD=""POST"" TARGET=""_BLINK"">")
                        Response.Write("<TABLE>")
                        Response.Write("<TD VALIGN=""middle"">PASSWORD:</TD><TD><INPUT TYPE=""PASSWORD""
                        SIZE=""20"" NAME=""iPassWord""></TD>")
                        Response.Write("</TABLE>")
                        Response.Write("<P>")
                        Response.Write("<TABLE>")
                        Response.Write("<TD>")
                        Response.Write("<INPUT TYPE=""SUBMIT"" NAME=""iPassInf"" VALUE=""  OK  "">")
                        Response.Write("</TD>")
                        Response.Write("<TD>")
                        Response.Write("<INPUT TYPE=""SUBMIT"" NAME=""iPassInf"" VALUE=""Cancel"">")
                        Response.Write("</TD>")
                        Response.Write("</TABLE>")
                        Response.Write("<INPUT TYPE=""hidden"" NAME=""iHostName"" VALUE=" & HostName& ">")
                        Response.Write("<INPUT TYPE=""hidden"" NAME=""iDevCode"" VALUE=" & DevCode & ">")
                        Response.Write("<INPUT TYPE=""hidden"" NAME=""iDevNo"" VALUE=" & DevNo & ">")
                        Response.Write("<INPUT TYPE=""hidden"" NAME=""iDevNum"" VALUE=" & DevNum & ">")
                        Response.Write("<INPUT TYPE=""hidden"" NAME=""iPassCnt"" VALUE=" & PassCnt+1 & ">")
                        Response.Write("</FORM>")
                        Response.Write("</CENTER>")
                Else
                        Response.Write(disp)
                End If
        Else
                Response.Write(disp)
        End If
Else
        Response.Write(disp)
End If
%>
</BODY>
</HTML>
```

(Create an object (call the communication library))

(Execute device read)

Description relating to the remote password

(Execution result screen)


- Device Read - QE-ACCESS ver1.0 - Netscape
File Edit View Go Window Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: http://10.97.85.10/_qj71e71/_asp/dev_read.asp
What's Related
WebMail Contact People Yellow Pages Download Channels
Document: Done

- The execution result of Device Read -
The normal completion.
Device code D*
Device 000000
Number of device 4
Reading data 123456789ABC1234

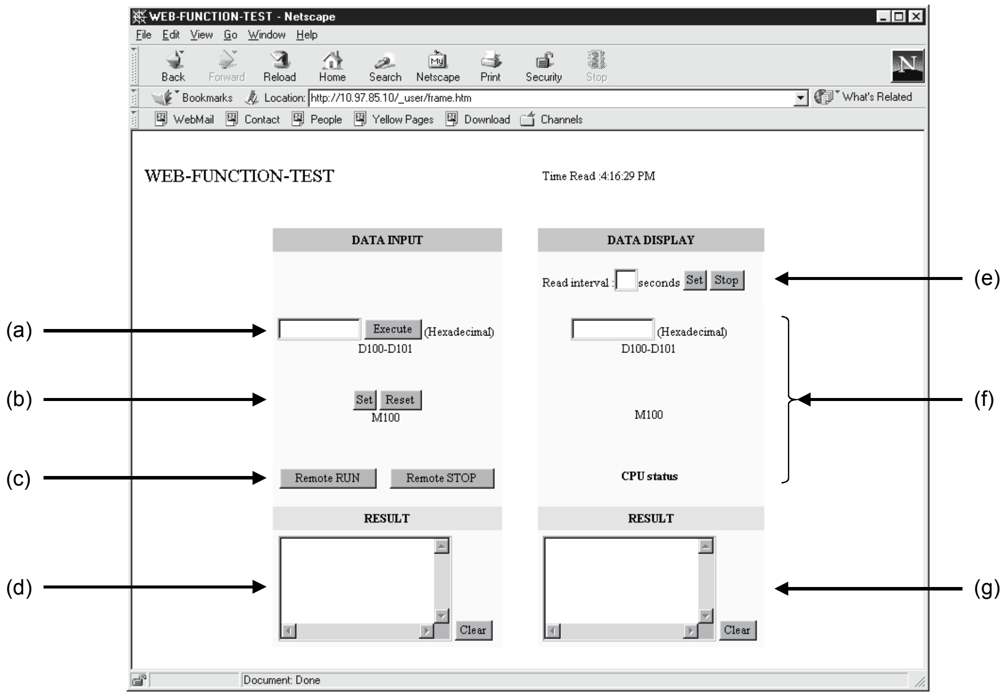
5 EXAMPLE OF CREATING A FILE FOR ACCESSING THE PROGRAMMABLE CONTROLLER

This chapter explains an example of creating a file for accessing the programmable controller.

∗ This file (sample-e.exe) can be obtained by contacting your local agency or marketing company.

(1) Configuration of a user-created screen

The following shows the screen configuration of a file used for accessing the programmable controller to be created in this chapter. (The function being used is enclosed with parentheses.)



(a) Device Write (DevWrite)
Writes data into D100 and D101.

(b) Device Write (DevWrite)
Turns ON/OFF M100.

(c) Remote RUN/STOP (RmtRun/RmtStop)
Performs remote RUN/STOP.

(d) Results
Displays the execution results of items (a) through (c) above.

(e) Read interval
Sets the read interval time. Performs random read (see item (f) below) processing for each set time interval after the read interval is set. Ends random read processing by STOP.

(f) Random read (ReqCmd)
Reads the following device memory.
- D100 and D101 (2 points), M100, SD203

(g) Result
Displays the execution result of item (f) above.

(2) File configuration

(a) The following shows the file configuration of a file used for accessing the programmable controller.

```
_user ──┬── frame.htm (HTML file for Web browser)
        ├── test1.asp (ASP file for data input)
        └── test2.asp (ASP file for data display)
```

(b) Copy the above files to the root directory "\Inetpub\wwwroot" of the Web server.

```
Inetpub ──── wwwroot ──┬── _qj71e71 (sample screen (See Chapter 4.))
                       └── _user (user-created screen)
```

(c) Register the communication library (DLL file). (See Section 3.2.)
If the communication library has already been registered, it is not necessary to register it.

(3) File content

Shows the content of the file to be created.
Enter the host name for "HostName" in the program.

(a) frame.htm

```
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-Type" Content="text/html; charset=x-sjis">
<META NAME="GENERATOR" Content="Microsoft Visual Studio 6.0">
</HEAD>
<TITLE>WEB-FUNCTION-TEST</TITLE>
<FRAMESET COLS="50%,*" FRAMEBORDER=0>

<!Specify a read file>
<FRAME SRC="test1.asp">
<FRAME NAME="DATA" SRC="test2.asp">

</FRAMESET>
```

(b) test1.asp

```
<%@ Language=VBScript %>
<%
        Option Explicit

        Dim Password 'Password(not set)

        Dim disp        'Return value
        Dim Value       'Result

        Dim DevData     'Device data(use input value)

        Dim Answer      'For display
%>
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-Type" Content="text/html; charset=x-sjis">
<META NAME="GENERATOR" Content="Microsoft Visual Studio 6.0">
</HEAD>
<%
        If Request.ServerVariables("REQUEST_METHOD")="POST" Then

              Dim Object       'Communication library
              Set Object=Server.CreateObject("QeAccess.McProtcol")

              Dim HostName  'Host name
              HostName="□.□.□.□"

              Dim NetNo        'Network number
              NetNo="00"

              Dim PcNo         'PC number
              PcNo="FF"

              Dim CpuTime     'CPU monitering timer
              CpuTime="0040"

              'Click Set,Clear
              If Request.Form("SetData")<>"" Then

                     'Call command data
                     Dim DevCode    'Device code
                     DevCode="M*"

                     Dim DevNo       'Device number
                     DevNo="000100"
```

```
            Dim DevNum     'Number of device
            DevNum="0001"

            Dim SetData    'Set data
            Select Case Request.Form("SetData")
            Case "Set"
                SetData="0001"
            Case "Reset"
                SetData="0000"
            End Select

            disp = Object.DevWrite( HostName, NetNo, PcNo, CpuTime, DevCode, DevNo,
DevNum, SetData, PassWord )

        Else

            'Click remote RUN,remote STOP
            If Request.Form("CpuNo")<>"" Then

                Dim CpuNo      'CPUNo
                CpuNo="03FF"

                Dim CmdMode    'Commmand mode
                CmdMode="0001"

                Select Case Request.Form("CpuNo")
                Case "Remote RUN"

                    Dim ClrMode    'Clear mode
                    ClrMode="02"

                    disp=Object.RmtRun( HostName, NetNo, PcNo, CpuTime, CpuNo,
CmdMode, ClrMode, PassWord )
                Case "Remote STOP"

                    disp=Object.RmtStop( HostName, NetNo, PcNo, CpuTime, CpuNo,
CmdMode, PassWord )

                End Select

            Else

                'Dim DevCode   'Device code
                DevCode="D*"

                'Dim DevNo     'Device number
                DevNo="000100"
                'Dim DevNum     'Number of device
                DevNum="0002"

                'Device data(use input value)
                DevData=Trim(Request.Form("DevData"))
                DevData=UCase(String(8-Len(DevData),"0") & DevData)

                disp = Object.DevWrite( HostName, NetNo, PcNo, CpuTime, DevCode,
DevNo, DevNum, DevData, PassWord )
            End If
        End If
    End If
%>
<BODY>
<TABLE HEIGHT=80>
<TR><TD>
<FONT SIZE=+2>WEB-FUNCTION-TEST</FONT><P>
</TD></TR>
</TABLE>
<FORM METHOD=POST>
<TABLE BGCOLOR=LIGHTYELLOW ALIGN=RIGHT CELLPADDING=5 CELLSPACING=0 BORDER=0>
<TR BGCOLOR=CCCCFF><TH COLSPAN=2>DATA INPUT</TH></TR>
<TR><TD COLSPAN=2 HEIGHT=50><BR></TD></TR>
<TR>
<TD COLSPAN=2 ALIGN=CENTER HEIGHT=50>
<INPUT TYPE=TEXT NAME="DevData" SIZE=10 MAXLENGTH=8 VALUE=<%=DevData%>>
<INPUT TYPE=SUBMIT VALUE="Execute">
(Hexadecimal)
<BR>
D100-D101
</TD>
</TR>
<TR>
<TD ALIGN=CENTER COLSPAN=2 HEIGHT=80>
<INPUT TYPE=SUBMIT NAME="SetData" VALUE="Set">
<INPUT TYPE=SUBMIT NAME="SetData" VALUE="Reset"><BR>
M100
</TD>
</TR>
<TR>
<TH HEIGHT=50><INPUT TYPE=SUBMIT NAME="CpuNo" VALUE="Remote RUN"></TH>
<TH HEIGHT=50><INPUT TYPE=SUBMIT NAME="CpuNo" VALUE="Remote STOP"></TH>
</TR>
<TR><TH COLSPAN=2 BGCOLOR="CCFFCC">RESULT</TH></TR>
<TR><TH COLSPAN=2>
 <%
    Select Case Left(disp,5)
    Case "<!OK>"
```

```
                Answer="Normal completion"
        Case "<!NG>"

                Answer="Abnormal completion " & Mid(disp,Instr(disp,"error")+Len("error")+1,4)
        End Select
 %>
<TEXTAREA NAME="Answer" ROWS=5><%=Answer%></TEXTAREA>
<INPUT TYPE=BUTTON VALUE=Clear ONCLICK="this.form.elements['Answer'].value="">
</TH></TR>
</TABLE>
</FORM>
</BODY>
</HTML>
```

(C) test2.asp

```
<%@ Language=VBScript %>
<%
        Option Explicit

        Dim Time        'Time

        Dim Password    'Password(not set)

        Dim disp        'Return value
        Dim Value       'Result

        Dim Answer      'For display
%>
<HTML>
<HEAD>
<META HTTP-EQUIV="Content-Type" Content="text/html; charset=x-sjis">
<META NAME="GENERATOR" Content="Microsoft Visual Studio 6.0">
<%
        If Request.QueryString("stop")="" And Request.QueryString("time")<>"" Then

                'Time setting
                Time=Request.QueryString("time")
%>
<!--Refresh by time-->
<META HTTP-EQUIV="Refresh" CONTENT="<%=Time%>">
<%
        End If
%>
</HEAD>
<%

        'Execute if time is specified
        If Time<>"" Then
                Dim Object      'Communication library
                Set Object=Server.CreateObject("QeAccess.McProtcol")

                Dim HostName  'Host name
                HostName="□.□.□.□"

                Dim CmdData   'Command data

        CmdData="500000FF03FF0000340040040600000201SD0002030001D*0001000002M*0001000001"

                Dim RetType     'Execution result type
                RetType = "1"

                disp=Object.ReqCmd( HostName, CmdData, PassWord, RetType )

                Select Case Left(disp,5)
                Case "<!OK>"
                    Value=Mid(disp,Len("<!OK>")+1)
                End Select
        End If
%>
<BODY STYLE="RIGHT">

<TABLE HEIGHT=80>
<TR><TD>
Time Read :<%=FormatDateTime(Now(),3)%><P>
</TD></TR>
</TABLE>
<FORM>
<TABLE BGCOLOR=lightyellow CELLPADDING=5 CELLSPACING=0 BORDER=0>
<TR BGCOLOR=#ccccff><TH COLSPAN=2>DATA DISPLAY</TH></TR>
<TR>
<TD HEIGHT=50>
Read interval :<INPUT SIZE=2 MAXLENGTH=2 NAME=time VALUE="<%=Time%>"
ONCHANGE="check_number(this);">seconds
<INPUT TYPE=submit VALUE="Set">
<INPUT TYPE=submit NAME="stop" VALUE="Stop">
</TD>
</TR>
<TR>
<TD COLSPAN=2 ALIGN=middle HEIGHT=50>
<!Dara register read result>
<INPUT TYPE=TEXT SIZE=10 MAXLENGTH=8 VALUE=<%=Mid(Value,27,8)%>>
(Hexadecimal)
<BR>
D100-D101
</TD>
</TR>
<TR>
```

```
<TD ALIGN=middle COLSPAN=2 HEIGHT=80>
<FONT SIZE=+0><B>
<%
        Select Case Mid(Value,38,1)
        Case "0"
%>
OFF
<%

        Case "1"
%>
ON
<%
        End Select
%>
</B></FONT>
<BR>
M100
</TD>
</TR>
<TR>
<TH COLSPAN=2 HEIGHT=50 VALIGN=TOP>
<%
        Select Case Mid(Value,26,1)
        Case "0"
%>
RUN
<%

        Case "2"
%>
STOP
<%
        End Select
%>
<BR>CPU status
</TH>
</TR>
<TR><TH COLSPAN=2 BGCOLOR="#ccffcc">RESULT</TH></TR>
<TR><TH COLSPAN=2>
<%
        Select Case Left(disp,5)
        Case "<!OK>"

                Select Case Mid(Value,19,4)
                Case "0000"
                        Answer="Normal completion"
                Case Else
                Answer="Abnormal completion " & Mid(Value,19,4)
            End Select
        Case "<!NG>"
            Answer="Abnormal completion" & Mid(disp,Instr(disp,"error")+Len("error")+1,4)
        End Select
%>
<TEXTAREA NAME="Answer" ROWS=5><%=Answer%></TEXTAREA>
<INPUT TYPE=BUTTON VALUE=Clear ONCLICK="this.form.elements['Answer'].value=''">
</TH></TR>
</TABLE>
</FORM></P>
</BODY>
</HTML>
<SCRIPT LANGUAGE=javascript>
<!--
function check_number(element)
{
        var i;

        for(i=0;i<element.value.length;i++)
        {
                if ("0123456789".indexOf(element.value.charAt(i))==-1)
                {
                        alert(element.name+'Enter using a numeric value');
                        element.value='';

                        element.focus();

                        return false;
                }
        }

        return true;
}
//-->
</SCRIPT>
```

6 COMMUNICATION LIBRARY FUNCTIONS

This chapter explains the communication library functions.

(1) List of supported communication library functions

The following table lists the functions supported for the communication library.

Web function item	Function	Overview	Remarks
Device Read	DevRead	Reads from a bit device (X, Y, M, etc.) in 16-point units. Reads from a word device (D, R, T, C, etc.) in one-point units.	Corresponds to command 0401 (00□0) for QnA compatible 3E frame.
Device Write	DevWrite	Writes to a bit device (X, Y, M, etc.) in 16-point units. Writes to a word device (D, R, T, C, etc.) in one-point units.	Corresponds to command 1401 (00□0) for QnA compatible 3E frame.
Remote RUN	RmtRun	Requests a remote RUN operation to the programmable controller CPU.	Corresponds to command 1001 (0000) for QnA compatible 3E frame.
Remote STOP	RmtStop	Requests a remote STOP operation to the programmable controller CPU.	Corresponds to command 1002 (0000) for QnA compatible 3E frame.
Data Request	ReqCmd	Sends a user-specified command (an application data (subheader + text) of the MC protocol), and receives the result.	—
Proxy Setting	ProxySet	Specify the proxy server when connecting a Ethernet module via a proxy server.	—
Proxy Reset	ProxyReset	Resets the proxy setting.	—

(2) Communication library functions

The following table lists the communication library functions.

Web function item	Function		
Device Read	BSTR ＊p = DevRead (HostName, NetNo, PcNo, CpuTime, DevCode, DevNo, DevNum, PassWord, RetType)		
	Argument	HostName: Connection target	Input
		NetNo: Network No.	Input
		PcNo: PC No.	Input
		CpuTime: CPU monitoring timer	Input
		DevCode: Device code	Input
		DevNo: Head device	Input
		DevNum: Number of device	Input
		PassWord: Password	Input
		RetType: Execution result type (1: Actual data only; Other than 1: Normal execution result)	Input
		*p: Pointer to the execution result character string	Output

Web function item	Function		
Device Write	BSTR ＊p = DevWrite (HostName, NetNo, PcNo, CpuTime, DevCode, DevNo, DevNum, DevData, PassWord)		
	Argument	HostName: Connection target	Input
		NetNo: Network No.	Input
		PcNo: PC No.	Input
		CpuTime: CPU monitoring timer	Input
		DevCode: Device code	Input
		DevNo: Head device	Input
		DevNum: Number of device	Input
		DevData: Write data	Input
		PassWord: Password	Input
		*p: Pointer to the execution result character string	Output
Remote Run	BSTR ＊p = RmtRun (HostName, NetNo, PcNo, CpuTime, CpuNo, CmdMode, ClrMode, PassWord)		
	Argument	HostName: Connection target	Input
		NetNo: Network No.	Input
		PcNo: PC No.	Input
		CpuTime: CPU monitoring timer	Input
		CpuNo: Target programmable controller (Request destination module I/O No.)	Input
		CmdMode: Operation mode	Input
		ClrMode: Clear mode	Input
		PassWord: Password	Input
		*p: Pointer to the execution result character string	Output
Remoto Stop	BSTR ＊p = RmtStop (HostName, NetNo, PcNo, CpuTime, CpuNo, CmdMode, PassWord)		
	Argument	HostName: Connection target	Input
		NetNo: Network No.	Input
		PcNo: PC No.	Input
		CpuTime: CPU monitoring timer	Input
		CpuNo: Target programmable controller (Request destination module I/O No.)	Input
		CmdMode: Operation mode	Input
		PassWord: Password	Input
		*p: Pointer to the execution result character string	Output
Data Request	BSTR ＊p = ReqCmd (HostName, CmdData, PassWord, RetType)		
	Argument	HostName: Connection target	Input
		CmdData: Application data part (subheader + text (command))	Input
		PassWord: Password	Input
		RetType: Execution result type (1: Actual data only; Other than 1: Normal execution result)	Input
		*p: Pointer to the execution result character string	Output
Proxy Setting	BSTR ＊p = ProxySet (ProxyName, PortNo)		
	Argument	ProxyName: Proxy server address	Input
		PortNo: HTTP port No.	Input
		*p: Pointer to the execution result character string	Output
Proxy Reset	BSTR ＊p = ProxyReset ( )		
	Argument	*p: Pointer to the execution result character string	Output

(3) Arguments used by the functions

The following table lists the arguments used by the communication library functions.

All of the arguments of the communication library are specified using the same character string as used for the communication settings of the MC protocol in ASCII code.

Argument	Data type	Overview	Setting range	Reference section
ClrMode	Character string	Specifies the clear mode.	00, 01, 02	Section 3.6
CmdData		Specifies the application data (subheader + text (command)) of the MC protocol (QnA compatible 3E frame).	Enter according to the MC protocol format.	Chapter 3
CmdMode		Specifies the remote operation mode.	0001, 0003	Section 3.6
CpuTime		Specifies the CPU monitoring timer.	0000 to FFFF	Section 3.1.3
CpuNo		Specifies the target CPU (request destination module I/O No.).	0000 to 01FF, 03E0 to 03E3, 03FF	Section 3.1.6
DevCode		Specifies the device code.	(See item (a).)	Section 3.3
DevData		Specifies data for the number of device.	—	
DevNo		Specifies the head device number.	(See item (a).)	
DevNum		Specifies the number of device.	1 to 960	
HostName		Specifies the IP address or host name of the connection target Ethernet module.	—	—
NetNo		Specifies the network No. to be routed thorough last.	00 to EF, FE	Section 3.1.3
PassWord		Specifies the remote password.	—	—
PcNo		Specifies the PC No. of the access station.	01 to 40, 7D, 7E, FF	Section 3.1.3
PortNo		Specifies the HTTP port No.	—	—
ProxyName		Specifies the IP address or host name of the proxy server.	—	—
RetType		Specifies the execution result type. 1: Actual data only Returns only the application data (subheader + text (response)) returned from the programmable controller CPU. Other than 1: Normal execution result Returns the data edited in the communication library.	—	—

(a) Device codes and head device numbers

The following table lists the device codes and head device numbers.

The devices that can be accessed using device memory read/write vary, depending on the target programmable controller CPU. For details, refer to the Reference Manual.

Device		Device type		Device code	Device No. range (at default assignment)	Notation	
		Bit	Word			Decimal	Hexadecimal
Special relay		○		SM	000000 to 002047	○	
Special register			○	SD	000000 to 002047	○	
Input relay		○		X＊	000000 to 001FFF		○
Output relay		○		Y＊	000000 to 001FFF		○
Internal relay		○		M＊	000000 to 008191	○	
Latch relay		○		L＊	000000 to 008191	○	
Annunciator		○		F＊	000000 to 002047	○	
Edge relay		○		V＊	000000 to 002047	○	
Link relay		○		B＊	000000 to 001FFF		○
Data register			○	D＊	000000 to 012287	○	
Link register			○	W＊	000000 to 001FFF		○
Timer	Contact	○		TS	000000 to 002047	○	
	Coil	○		TC		○	
	Current value		○	TN		○	
Retentive timer	Contact	○		SS		○	
	Coil	○		SC		○	
	Current value		○	SN		○	
Counter	Contact	○		CS	000000 to 001023	○	
	Coil	○		CC		○	
	Current value		○	CN		○	
Special link relay		○		SB	000000 to 007FF		○
Special link register			○	SW	000000 to 007FF		○
Step relay		○		S＊	000000 to 008191	○	
Direct input		○		DX	000000 to 001FFF		○
Direct output		○		DY	000000 to 001FFF		○
Index register			○	Z＊	000000 to 000015	○	
File register			○	R＊	000000 to 032767	○	
				ZR	000000 to 0FE7FF		○

(4) Return values of the functions

The following explains the return values of the communication library functions.

(a) A code for judging the execution result is added to the head of the return value.
For normal completion, <!OK> is added.
For abnormal completion, <!NG> is added.
✻ For ReqCmd, <!OK> is added in the case of an MC protocol error.

(b) A code for judging an error is added at abnormal completion.

1) In the case of an HTTP error, <!NG><!HTTP error “HTTP error code”> is added.

2) In the case of a WinSock error, <!NG><!WinSock error “WinSock error code”> is added.

3) In the case of an MC protocol error, <!NG><!MCP error “error code (end code)”> is added.
✻ Refer to either of the following manuals according to the error code, verify the error content, and take an appropriate action.
<Error codes>

4FFF$_H$ or lower	: QCPU User's Manual (Hardware Design, Maintenance and Inspection)
C000$_H$ and higher	: Section 11.3.3 of the User's Manual (Basic)

4) In the case of a communication library error, an error message is displayed.

(c) If the HTTP port is used or a remote password has been set in the programmable controller CPU of access destination, create a program for remote password input processing, using the error code for the following return value as a condition. (For an example of how to describe a program for remote password input processing, see Section 4.5.)
<!HTTP error 401>

(d) The following table lists examples of the return values of the communication library functions.

Function	Condition		Return value (example)
DevRead	Normal completion	RetType = other than “1”	<!OK>- The execution result of Device Read -<BR>The normal completion.<BR>Device code D*<BR>Device 000000<BR>Number of device 4<BR>Reading data 123456789ABC1234
		RetType = “1”	<!OK>123456789ABC1234
	Abnormal completion		<!NG><!MCP error C056>- The execution result of Device Read -<BR>The abnormal completion. C056<BR>
DevWrite	Normal completion		<!OK>- The execution result of Device Write -<BR>The normal completion.<BR>
	Abnormal completion		<!NG><!MCP error C056>- The execution result of Device Write -<BR>The abnormal completion. C056<BR>
RmtRun	Normal completion		<!OK>- The execution result of Remote RUN -<BR>The normal completion.<BR>
	Abnormal completion		<!NG><!MCP error 4B00>- The execution result of Remote RUN -<BR>The abnormal completion. 4B00<BR>
RmtStop	Normal completion		<!OK>- The execution result of Remote STOP -<BR>The normal completion.<BR>
	Abnormal completion		<!NG><!MCP error 4B00>- The execution result of Remote STOP -<BR>The abnormal completion. 4B00<BR>
ReqCmd	Normal completion	RetType = other than “1”	<!OK>- The execution result of Data Request -<BR>The MC protocol normal completion.<BR>D00000FF03FF0000140000123456789ABC1234<BR>
		RetType = “1”	<!OK>D00000FF03FF0000140000123456789ABC1234
	Abnormal completion	RetType = other than “1”	<!OK>- The execution result of Data Request -<BR>The MC protocol abnormal completion. C056<BR>D00000FF03FF000016C05600FF03FF0004010000<BR>
		RetType = “1”	<!OK>D00000FF03FF000016C05600FF03FF0004010000
ProxySet	Normal completion		<!OK>- The proxy setting -<BR>The proxy setting completion.<BR>
	Abnormal completion		<!NG>- The communication library error -<BR>Check the setting value of the proxy.<BR>
ProxyReset	Normal completion		<!OK>- The proxy setting -<BR>The proxy setting cancellation.<BR>
	Abnormal completion		<!NG>- The communication library error -<BR>The proxy information is not set.<BR>

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MEMO

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

(1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(2) Even within the gratis warranty term, repairs shall be charged for in the following cases.

1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
2. Failure caused by unapproved modifications, etc., to the product by the user.
3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation of damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not , compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

6. Product application

(1) In using the Mitsubishi MELSEC programmable controller, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the programmable controller device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.

(2) The Mitsubishi programmable controller has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the programmable controller applications.

In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation, equipment for recreation and amusement, and safety devices, shall also be excluded from the programmable controller range of applications.

However, in certain cases, some applications may be possible, providing the user consults their local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at the users discretion.

Q Corresponding Ethernet Interface Module

User's Manual (Web function)

MODEL	QJ71E71-U-WEB-E
MODEL CODE	13JR40
SH(NA)-080180-E(0810)MEE	

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When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.

Specifications subject to change without notice.