



# Mitsubishi Programmable Controllers

**Model :** MELSOFT GX Developer

**Title :** A/QnA -> Q Conversion Support Tool Operation Guide

**Outline :**

This guide explains the operation procedures of the A/QnA -> Q conversion support tool.

<b>Revision</b>	Indicated on next page
-----------------	------------------------

**mitsubishi electric corporation**

<b>File No.</b>	BCN-89999-1202
-----------------	----------------

## Revision Records

Sub-No.	Date of revision	Details
First edition	-	
A	2/23/2006	The font was changed.
B	5/19/2006	The number of total pages described to page 1 was corrected.
C	3/30/2007	The refresh program generation tool for MELSECNET (II) local station function was added.
D	4/1/2008	6.4 Special function module setting screen  The information of A0J2H was added. The selection method of an A0J2H special function module was added in explanation of screen.
		8.3 Refresh program generation tool for MELSECNET (II) local station start-up screen 10.2 Refresh program generation tool for MELSECNET (II) local station  The special notes and restrictions were changed. It improved the project is able to save another name.
		9.Program generated by refresh program generation tool for MELSECNET (II) local station  The statements and notes were replaced.
E	9/4/2009	6.4 Special function module setting screen  The information of AnS/QnAS was added. The selection method of an AnS/QnAS special function module was added in explanation of screen.
		9.Program generated by refresh program generation tool for MELSECNET (II) local station  The refresh start condition was changed. It improved the refresh program is able to start after 1st scan.
F	12/22/2010	The function to convert ASC instruction used the ladder program for ACPU into \$MOV instruction was added.
		4.Operating environment  Add Windows Vista ® and Windows ® 7 were added to operating environment.
		6.2 Flow of general operations 6.3 Select analyzing project screen 6.4 Special function module setting screen 6.5 Set program conversion screen 6.6 Specify output folder of analysis result screen 6.7 Confirm settings screen 6.8 Confirming the execution results  These changed by having added “Set program conversion” screen.
		7.2.2 Instruction statement generation (Line head %)  The output form was added, when ASC instruction was converted into \$MOV instruction.
G	5/9/2012	6.1 Newly supported PLC types targeted as projects after PLC type change.) Q00UJ, Q00U, Q01U, Q02U, Q03UD, Q03UDE, Q04UDH, Q04UDEH, Q06UDH, Q06UDEH, Q10UDH, Q10UDEH, Q13UDH, Q13UDEH, Q20UDH, Q20UDEH, Q26UDH, Q26UDEH

**P**

Sub-No.	Date of revision	Details
G	5/9/2012	8.3 Newly supported PLC types of the generated QCPU (Q mode) program.) Q00UJ, Q00U, Q01U, Q02U, Q03UD, Q03UDE, Q04UDH, Q04UDEH, Q06UDH, Q06UDEH, Q10UDH, Q10UDEH, Q13UDH, Q13UDEH, Q20UDH, Q20UDEH, Q26UDH, Q26UDEH
		9 'When powered ON, Initializes B/W devices' program section was partly changed in refresh program for MELSECNET(II) local station.
		1, 2.3, 3.3, 5.5, 10, 11.3 Description for MELSECNET(II)->MELSECNET/10(H) Parameter Conversion Tool.
		1, 3.1, 6.4, 7.2 XY device and No. of buffer memory replacement function was added to AQ conversion support tool.
		6.5 Function to delete the program after END instruction was added to AQ conversion support tool.
		4, 6.1, 8.3 Required version of GX Developer to operate newly added function.
H	10/30/2012	L series is added to the project after PC type change of AQ conversion support tool.
J	3/11/2014	4.Operating environment  Add Windows ® 8 was added to operating environment.
		8.4 Changed the device to be refreshed on the CPU side of the W device by the refresh program generation tool for MELSECNET (II) local station.

## Contents

1. Purpose of tool.....	5
2. Intended users .....	5
2.1 AQ conversion support tool .....	5
2.2 Refresh program generation tool for MELSECNET (II) local station.....	5
2.3 MELSECNET(II)->MELSECNET/10(H) parameter conversion tool.....	5
3. Outline of AQ conversion support tool .....	6
3.1 AQ conversion support tool .....	6
3.2 Refresh program generation tool for MELSECNET (II) local station.....	10
3.3 MELSECNET(II) -> MELSECNET/10(H) parameter conversion tool.....	11
4. Operating environment .....	12
5. Installing, Uninstalling and Starting the Tool .....	14
5.1 Downloading and extracting the compressed file .....	14
5.2 Installing .....	14
5.3 Uninstalling .....	14
5.4 Starting the tool .....	14
5.5 Tool selection screen.....	15
6. Using the AQ conversion support tool .....	16
6.1 Preparing to use the tool .....	16
6.2 Flow of general operations.....	17
6.3 Select analyzing project screen .....	19
6.4 Special function module setting screen.....	21
6.5 Set program conversion screen .....	25
6.6 Specify output folder of analysis result screen.....	26
6.7 Confirm settings screen .....	28
6.8 Confirming the execution results .....	29
7. AQ conversion support tool analysis results .....	30
7.1 Displaying the analysis results .....	30
7.2 Discrepancy generated project .....	30
7.2.1 Special relay and special register statement generation function (Line head #).....	31
7.2.2 Instruction statement generation (Line head % ).....	32
7.2.3 Adding statements to special function module circuit (Line head ! ) .....	33
7.3 Review information list .....	35
7.3.1 Outline of review information list.....	35
7.3.2 Menu screen.....	36
7.3.3 List display screen .....	37
7.3.4 Special relay/special register "Display by device number order" screen .....	38
7.3.5 Special relay/special register "Display by step number order" screen .....	39
7.3.6 Display by instruction name screen.....	40
7.3.7 Instruction "Display by step number order" screen .....	41
7.3.8 Display by name of special function module screen .....	42
7.3.9 Special function module "Display by step number order" screen.....	43
7.3.10 Recommended replacement module comparison table screen .....	45
7.3.11 Printing.....	45
8. Using the refresh program generation tool for MELSECNET (II) local station.....	46
8.1 Preparing to use the tool .....	46
8.2 Flow of general operations.....	46
8.3 Refresh program generation tool for MELSECNET (II) local station start-up screen .....	48
8.4 Refresh program setting screen.....	50
8.5 Generated project confirmation screen .....	51
9. Program generated by refresh program generation tool for MELSECNET (II) local station .....	52
10. Using MELSECNET(II)->MELSECNET/10(H) parameter conversion tool .....	58
10.1. Preparing to use the tool .....	58
10.2. Flow of general operations .....	60
10.3. Input project setting screen .....	62
10.4. Master station project setting screen .....	64
10.5. Conversion information setting screen.....	66
10.6. Output project setting screen. ....	68
11. Restrictions .....	70
11.1 AQ conversion support tool .....	70
11.2 Refresh program generation tool for MELSECNET (II) local station.....	71
11.3.Using MELSECNET (II)->MELSECNET/10(H) parameter conversion tool.....	71
12. Information on tools .....	72

## 1. Purpose of tool

This tool provides the following two functions.

- A/QnA to Q program conversion support

This tool is used to help the user manually correct the devices, instructions and programs that cannot be automatically converted when the A/QnA Series sequence program is converted to a Q/L series sequence program with the GX Developer's PLC type change function. The sections that could not be automatically converted are extracted, and the correction method is displayed. Also enables replacement as follows.

- ASC instruction (A series)->\$MOV instruction

- XY devices for special function module instructions, instructions using special function module devices (U[ ]G[ ]), and No. of buffer memory of FROM/FROMP/DFRO/DFROP/TO/TOP/DTO/DTOP instruction.

Hereafter, this tool is referred to as the "AQ Conversion Support Tool"

- Refresh program generation for MELSECNET (II) local station

The refresh program generation tool for MELSECNET (II) local station generates a program for refreshing the data between the module and QCPU with simple settings when replacing the A/QnA series MELSECNET(II) system or MELSECNET/B system local station with a Q series local station. Hereafter, this tool is referred to as the "Refresh program generation tool for MELSECNET (II) local station".

- MELSECNET(II)->MELSECNET/10(H) parameter conversion

This tool is used to help switching to Q series MELSECNET/10(H) network. A/QnA series MELSECNET(II) network parameter will be automatically converted to the ones for Q series. Hereafter, this tool is referred to as "MELSECNET(II)->MELSECNET/10(H) Parameter Conversion Tool"

## 2. Intended users

### 2.1 AQ conversion support tool

This tool is intended for users who are replacing the A/QnA series PLC with a Q/L series PLC, and need to convert A/QnA sequence programs into Q/L series sequence programs, as well as users who are creating Q/L series sequence program using an A/QnA sequence program.

### 2.2 Refresh program generation tool for MELSECNET (II) local station

This tool is intended for users to replace the A/QnA series MELSECNET (II) system or MELSECNET/B system local station with a Q series local station.

### 2.3 MELSECNET(II)->MELSECNET/10(H) parameter conversion tool

This tool is intended for users to replace the A/QnA series MELSECNET (II) network parameter to the ones for Q series MELSECNET/10(H).

## 3. Outline of AQ conversion support tool

### 3.1 AQ conversion support tool

#### (1) Features

The AQ conversion support tool features are as follows:

- 1) Differences with the original pre-converted program.  
The differences are shown as statements within the converted program, which disregards the need to reopen the original source project. (Refer to <Image of embedded discrepancies> on page 8.)
  - The differences (statements) from the original program are positioned at the corresponding instructions/devices after PLC Type change.
  - Suggested changes and information are displayed at the corresponding FROM/TO instructions.
- 2) Conversion of XY device of special function module, and No. of buffer memory.  
For the PLC type changed program, convert XV device and No. of buffer memory for A series special function module, to the ones for Q/L series that is compatible with the program after replacement.
- 3) Detailed support information for converting programs  
More detailed support information is displayed as an online help feature in HTML format. This information is initially executed from the corresponding link outlined in point 9).
  - The instructions and devices which could not be converted with PLC type change are listed, and detailed information is displayed.
  - When the original special module configuration is input, information and precautions for the recommended replacement module are displayed.

#### (2) Functions

The AQ conversion support tool has the following functions.

**Table 3-1 List of AQ conversion support tool functions**

Function	Details	Effect
Differential information embedded in the project	Instructions and devices that could not be converted are shown as statements including the original program source code for the corresponding unconverted instruction/device.	<ul style="list-style-type: none"><li>• The sections which could not be automatically converted are viewable within the program.</li><li>• The original program status is displayed so there is no need to compare the converted program with the original program.</li></ul>
	Converted FROM/TO instructions are displayed including additional information. Also convert to XY device and No. of buffer memory between A series and Q/L series.	Sections of the program containing FROM/TO instructions are shown. In addition, detailed review lists can be called up showing which sections of the program include non convertible FROM/TO instructions. XY address and No. of buffer memory replacing operation is not required.
Review information list	A list of instructions and devices which have not been converted is created, including alternative suggestions.	<ul style="list-style-type: none"><li>• This can be used for new programs or for deciding to change an existing program.</li><li>• A changed program can be created easily by viewing the corresponding sections showing points that need to be changed along with there respective procedures.</li></ul>
	Sections of the program that control special function modules are shown along with suggested replacement module information.	The recommended modules and applicable precautions for replacing to the Q/L series are shown.

#### (3) Special notes

- 1) This tool is intended for ladder programs, and does not support SFC programs.
- 2) Label projects are not supported.

### <AQ conversion support tool concept>

The conversion process is as follows:

- 1) The program is converted from an A/QnA program to a Q/L program by using GX Developer's PLC type change.
- 2) Configuration information of special function modules are done using the AQ conversion support tool.
- 3) Once the AQ conversion support tool is executed, a list is generated showing the discrepancies of the newly converted program.

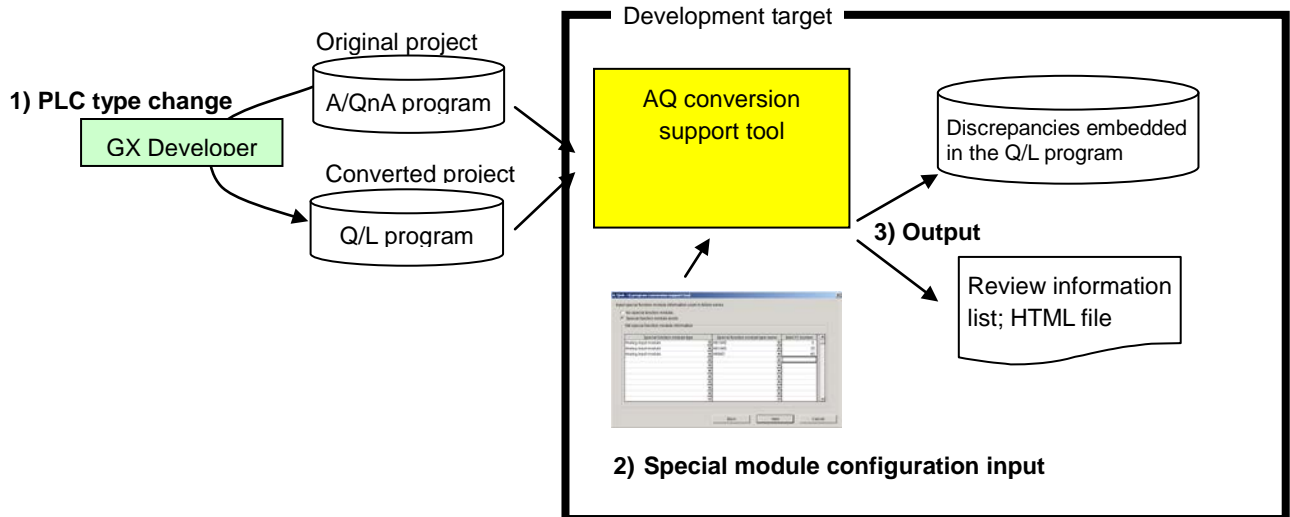
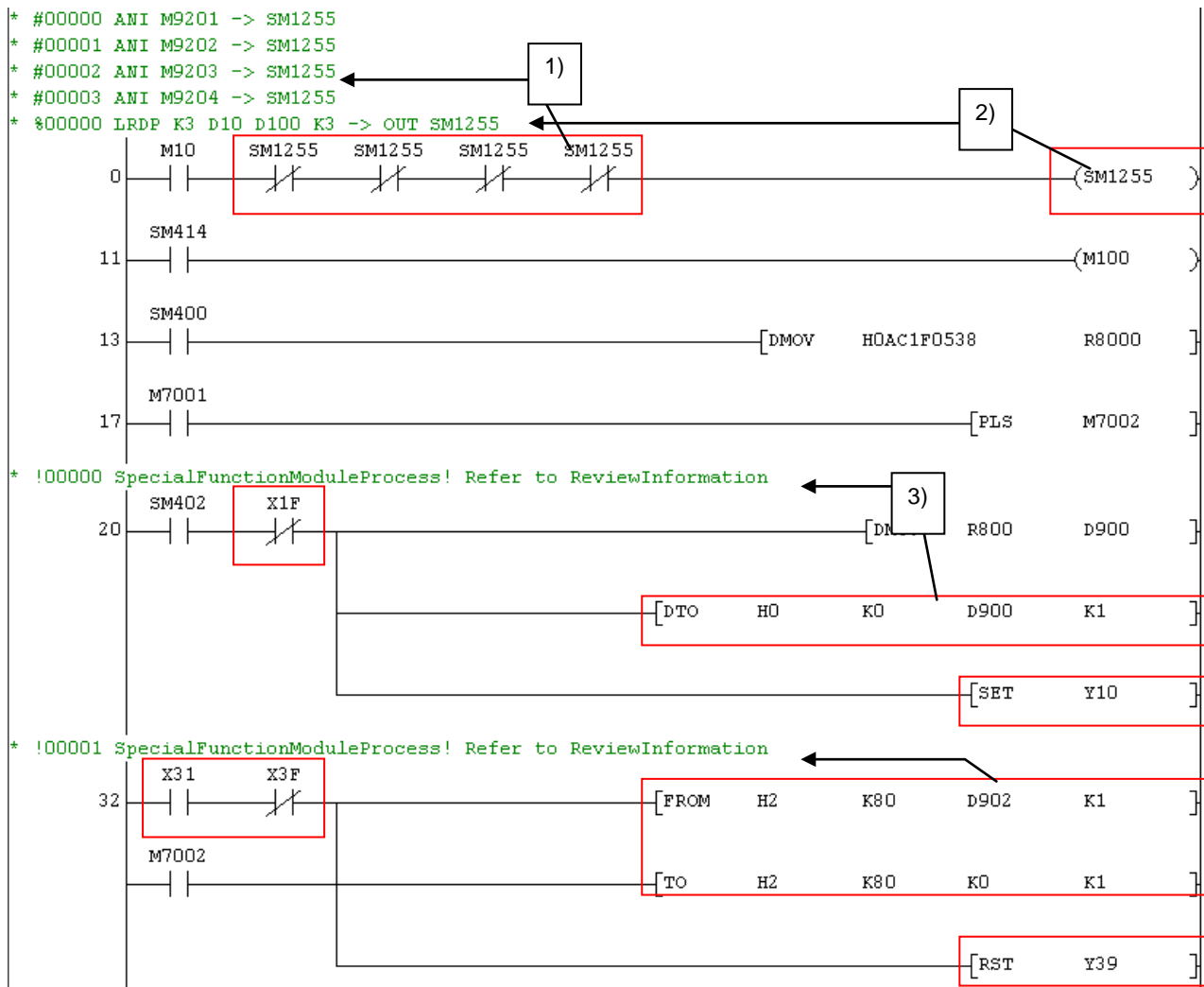


Fig. 3-1 AQ conversion support tool concept

### <Image showing embedded discrepancies>



**Fig. 3-2 Image of embedded discrepancies**

#### 1) Non-converted devices statement

The original device and converted device are displayed as shown below. The devices contained in that circuit block are displayed on one line at a time.

**(Example)** `#00001 ANI M9201 -> SM1255`

(#00001 is the search keyword from the review information list)

#### 2) Non-converted instructions statement

The original instruction and converted instruction are displayed as shown below. The instructions contained in that circuit block are displayed on one line at a time.

**(Example)** `%00001 [LRDP K3 D10 D100 K3] -> OUT SM1255`

(%00001 is search keyword from the review information list)

#### 3) Special function module access process statement

For the special function module access instructions (FROM, DFRO, TO, DTO and instructions using X/Y devices), a message indicating review is necessary is shown when needed.

**(Example)** `!00001 SpecialFunctionModuleProcess! Refer to ReviewInformation`

(!00001 is search keyword from the review information list)

When XY device and No. of buffer memory has been converted to the one that is compatible between A and Q/L special modules, the result will be shown.

**(Example)** `!00001 TOP H0 K11 K50 K1 -> TOP H0 K2 K50 K1`

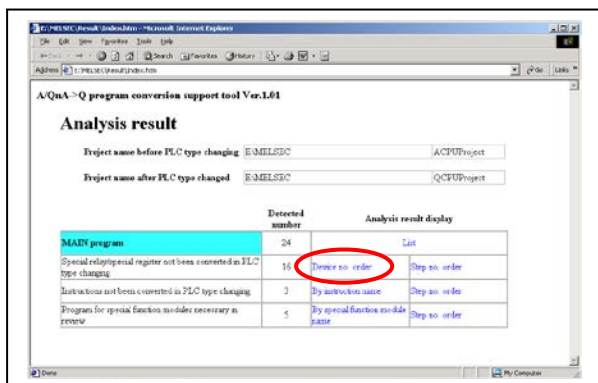
(!00001 is search keyword from the review information list)



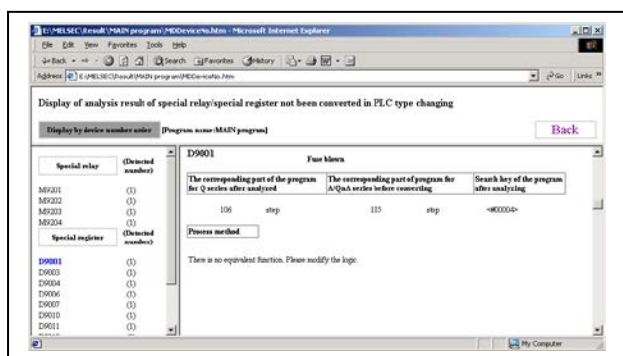
## <Review information list>

Detailed information can be displayed in a hierarchical method on a browser such as Internet Explorer. The differences from the original program that are embedded in the program and the list of review information are linked together.

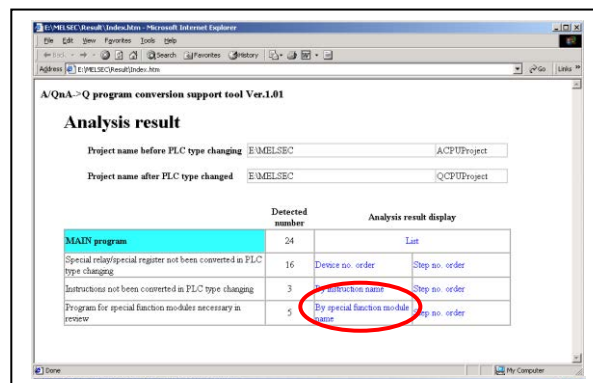
**(Example)** To display special relays and special registers which are not changed to Q.



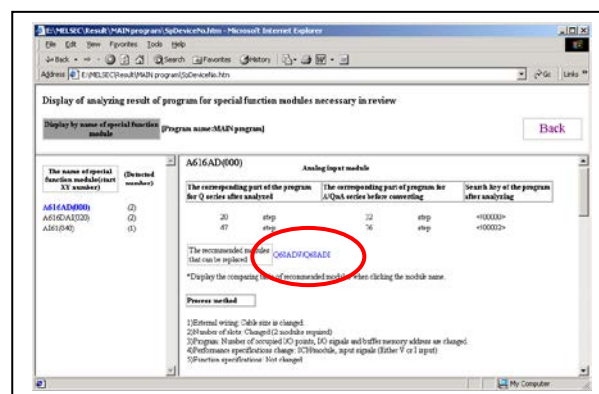
Click on "Device no. order" for "Special relay/special register not been converted in PLC type changing".



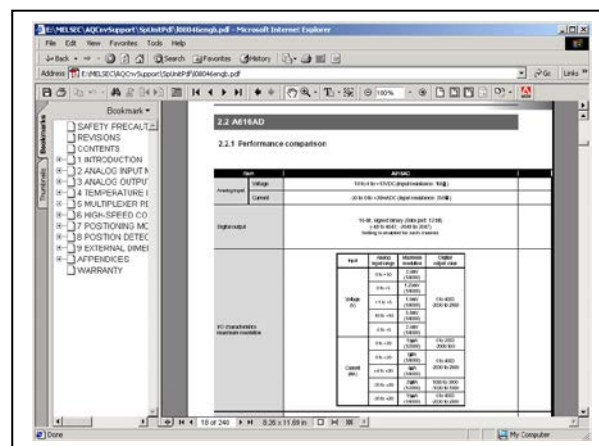
**(Example)** For section which must be changed with special module control process.



Click on "By instruction name" for "Instructions not have been converted in PLC type changing".



Click on the "recommended module name" displayed at "The recommended modules that can be replaced".



## (Reference)

The information(s) given are the same as what is contained in "Transition from MELSEC-A/QnA (Large Type) Series to Q Series Handbook".  
"Transition from MELSEC-AnS/QnAS (Small Type) Series to L Series Handbook".

3.2 Refresh program generation tool for MELSECNET (II) local station

(1) Features

By using this tool to automatically generate the refresh program, the replacement work can be reduced. The following modules are available to replace the A/QnA series MELSECNET (II) system and MELSECNET/B system local station with the Q series local station. When using these modules, a refresh program must be prepared for the QCPU to refresh the data between the module and QCPU.

Table 3-2 MELSECNET (II) module and MELSECNET/B module for Q series

No	Product model	Network I/F
1	A1SJ71AP23Q	Optical loop
2	A1SJ71AR23Q	Coaxial loop
3	A1SJ71AT23BQ	Twisted bus

(2) Functions

The refresh program generation tool for MELSECNET (II) local station automatically generates the following programs.  
These programs are generated as one program.

Table 3-3 Types of programs generated by tool

No	Generated sequence program	Details
1	Refresh program	Refreshes the set devices.
2	LRDP instruction receive program	Receives and processes the Q series local station device read request from the master station.
3	LWTP instruction receive program	Receives and processes the Q series local station device write request from the master station.
4	BW receive program of master station in third tier	If the own station is a three-tier local station, receives the data from the two-tier master station.

(3) Special notes

- 1) This tool can be used only when one Q series local station dedicated module is mounted. If two or more modules are mounted, the program must be added. Refer to the manual for the module.
- 2) The CPU device and start No. refreshed by this program must be set to the devices set with the parameters for the QCPU project which is importing the automatically generated program.

<Image of refresh program generation tool for MELSECNET (II) local station>

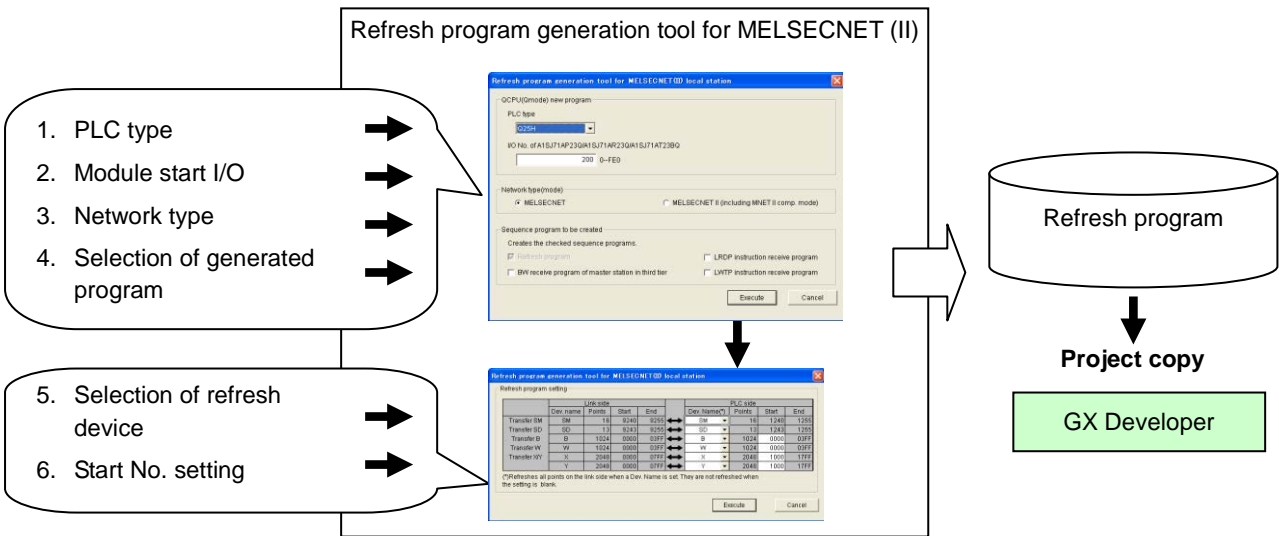


Fig. 3-3 Image of Refresh program generation tool for MELSECNET (II) local station

### 3.3 MELSECNET(II) -> MELSECNET/10(H) parameter conversion tool

#### (1) Features

This tool enables to automatically convert A/QnA series MELSECNET(II) network parameter to the ones for Q series MELSECNT/10(H). It reduce the conversion operation.

#### (2) Functions

A/QnA series MELSECNET(II) network parameter will be automatically converted to the ones for Q series MELSECNT/10(H). Conversion support tool will be executed to the project after conversion.

#### (3) Special notes

1) GX Developer Version 8.101F or higher is required to operate this tool.

<Image of MELSECNT(II)->MELSECNET/10(H) parameter conversion tool>

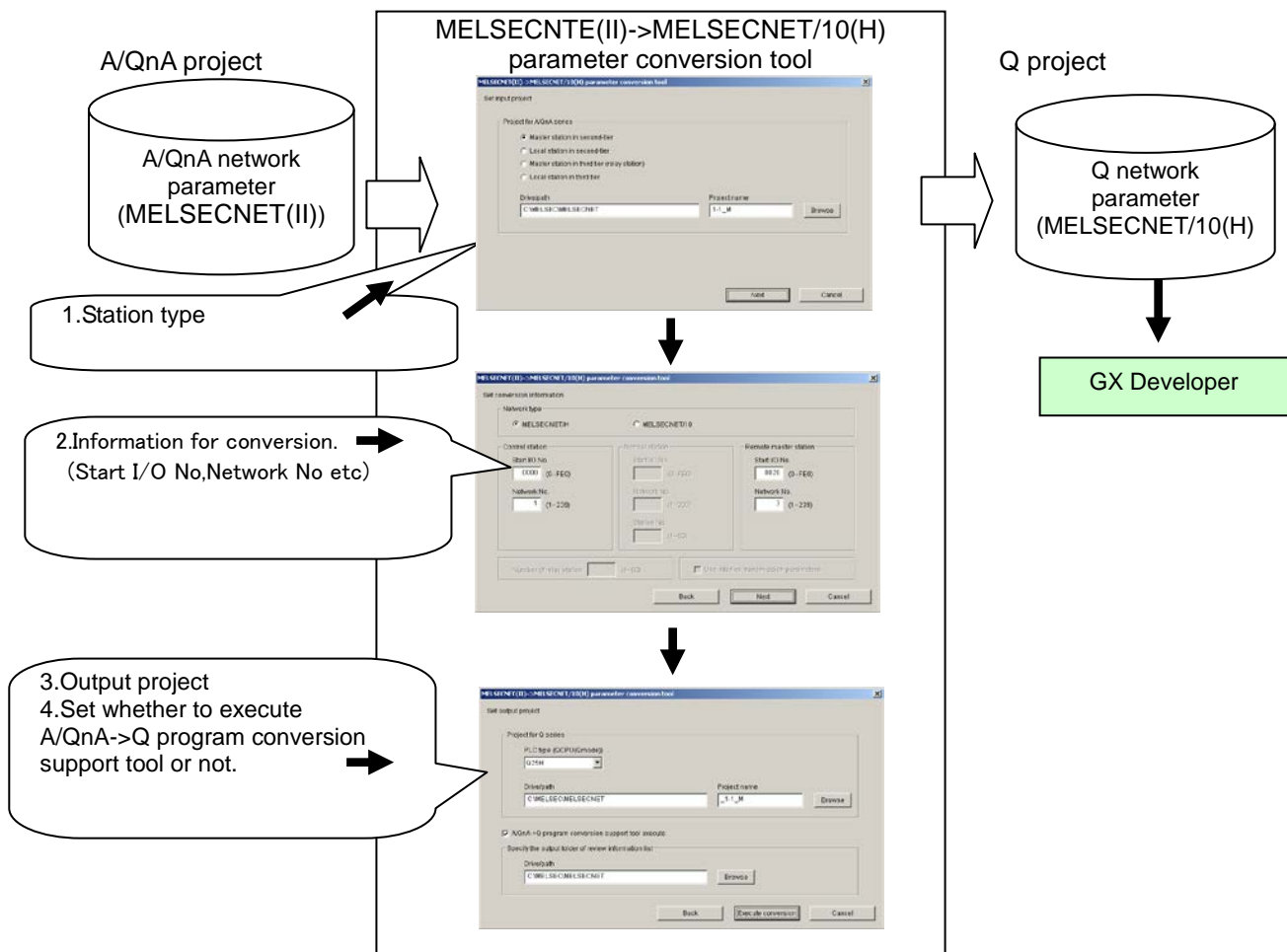


Fig. 3-4 Image of MELSECNT(II)->MELSECNET/10(H) parameter conversion tool

## 4. Operating environment

**Table 4-1 Operating environment**

Class	Explanation
Model	Personal computer running Windows ®
OS	Microsoft ® Windows ® 98 Operating System (English version) Microsoft ® Windows ® Millennium Edition Operating System (English version) Microsoft ® Windows NT ® Workstation Operating System Version 4.0 (English version) Microsoft ® Windows ® 2000 Professional Operating System (English version) Microsoft ® Windows ® XP Professional Operating System (English version) Microsoft ® Windows ® XP Home Edition Operating System (English version) 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) Microsoft ® Windows ® 7 Enterprise Operating System (English version) Microsoft ® Windows ® 8 Operating System (English Version) Microsoft ® Windows ® 8 Pro Operating System (English Version) Microsoft ® Windows ® 8 Enterprise Operating System (English Version)
Display	800*600 dots or later
Hard disk open capacity	150MB or more
Required software	GX Developer Version 8.25B or higher GX Developer Version 8.95Z or higher to use Universal Model QCPU by AQ conversion support tool. GX Developer Version 8.95Z or higher to output Universal Model QCPU program by Refresh program generation tool for MELSECNET(II) local station. GX Developer Version 8.101F or higher to use MELSECNET(II)-> MELSECNET/10(H) parameter conversion tool.
Browser	Microsoft ® Internet Explorer Version 6 or higher
PDF reading software	Adobe ® Reader ® Version 6 or higher

**Table 4-2 Applicable operating system and the corresponding PC performance**

Item	Required PC performance	
	CPU	Required memory
Windows ® 98	Pentium ® 133MHz or higher	32MB or more
Windows ® Millennium Edition	Pentium ® 150MHz or higher	32MB or more
Windows NT ® Workstation (Service Pack 3 or higher)	Pentium ® 133MHz or higher	32MB or more
Windows ® 2000 Professional	Pentium ® 133MHz or higher	64MB or more
Windows ® XP	Pentium ® 300MHz or higher	128MB or more
Windows Vista ®	Pentium ® 1GHz or higher	1GB or more
Windows ® 7	Pentium ® 1GHz or higher	1GB or more
Windows ® 8	1GHz or higher with support for PAE, NX, and SSE2	1GB or more (32-bit) 2GB or more (64-bit)

### [Special Notes]

- 1) If Internet Explorer is not installed, the review information list will not display.
- 2) If Internet Explorer is not designated as the default browser, the designated browser will start up when the analyzed review information list appears. The default browser must be set to Internet Explorer.

- 3) If the review information list is displayed with Windows XP SP2, the Internet Explorer security warning may appear. In this case, execution of the active contents must be enabled with the Internet Explorer security settings.
- 4) This tool will not run if GX Developer is not installed in the personal computer.
- 5) When Microsoft® Windows® XP, Windows Vista®, Windows® 7 or Windows® 8 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)Additionally, 64-bit Windows® XP, Windows Vista® and Windows® 7 are not available.
- 6) In Windows Vista®, Windows® 7 or Windows® 8 log in as a user having User authority or higher.
- 7) When Windows® 7 is used, the following new functions cannot be used.
  - Windows XP Mode
  - Windows Touch

## 5. Installing, Uninstalling and Starting the Tool

### 5.1 Downloading and extracting the compressed file

1. Create a new folder on the personal computer's hard disk.
2. Download and save the file into the created folder.
3. Double-click and execute the file.
4. The file will be extracting into that new folder.

### 5.2 Installing

1. Execute setup.exe in the AQCnvSupport folder.
2. Following the installer's on-screen instructions and install the tool.

### 5.3 Uninstalling

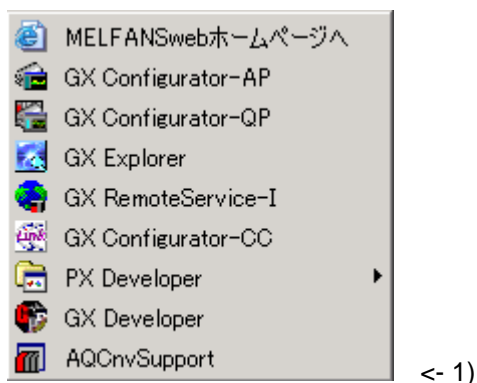
1. Select "Start Menu", "Settings" and then "Control Panel".
2. Double-click and start "Add/Remove Applications".
3. Select "AQCnvSupport" from the list, and then click on the "Add/Delete" button.
4. Uninstallation will start.
5. Uninstallation of the tool will end.

### 5.4 Starting the tool

Select Windows "Start" - "All Programs" - "MELSOFT Application" - "AQCnvSupport" to start the tool.

#### [Example of screen].

Example of menu display when [MELSOFT Application] is selected



#### [Explanation of screen]

No.	Item	Details of display/setting
1)	AQCnvSupport	The tool starts when [AQCnvSupport] is clicked with the mouse.

## 5.5 Tool selection screen

### [Outline]

Select whether to start the AQ conversion support tool's analysis process, to start the refresh program generation tool for MELSECNET (II) local station tool, or to end the tool.

### [Operation]

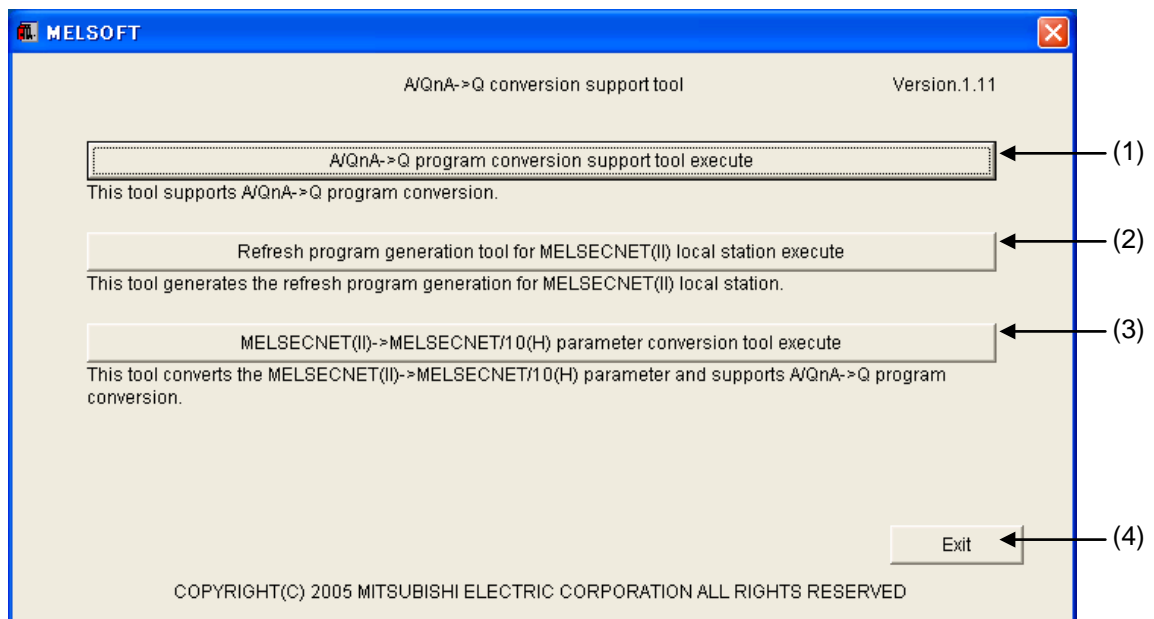
Press the [A/QnA -> Q program conversion support tool execute] button to start the AQ conversion support tool's analysis process.

Press the [Refresh program generation tool for MELSECNET (II) local station execute] button to start the refresh program generation tool for MELSECNET (II) local station.

Press the [MELSECNET( II )->MELSECNET/10(H) parameter conversion tool execute] button to start the MELSECNET( II )->MELSECNET/10(H) parameter conversion tool.

Press the [Exit] button to quit the tool.

### [Example of screen]



### [Explanation of screen]

No.	Item	Details of display/setting
(1)	AQ conversion support tool	The AQ conversion support tool's "Project Setting" screen opens when the [A/QnA -> Q program conversion support tool execute] button is pressed.
(2)	Refresh program generation tool for MELSECNET (II) local station	The "Refresh program generation tool for MELSECNET (II) local station start screen" opens when the [Refresh program generation tool for MELSECNET (II) local station execute] button is pressed.
(3)	MELSECNET( II )->MELSECNET/10(H) parameter conversion tool	"Input project setting" screen opens when the [MELSECNET( II )->MELSECNET/10(H) parameter conversion tool execute] button is pressed.
(4)	End	This tool is exited when the [Exit] button is pressed.

## 6. Using the AQ conversion support tool

### 6.1 Preparing to use the tool

The project before PLC type change (A/QnACPU project) and project after PLC type change (QCPU project) are required as tool inputs. Before using the tool, create the project after PLC type change from the project before PLC type change using the GX Developer's PLC type conversion function.

**Table 6-1 List of CPUs targeted as projects before PLC type change**

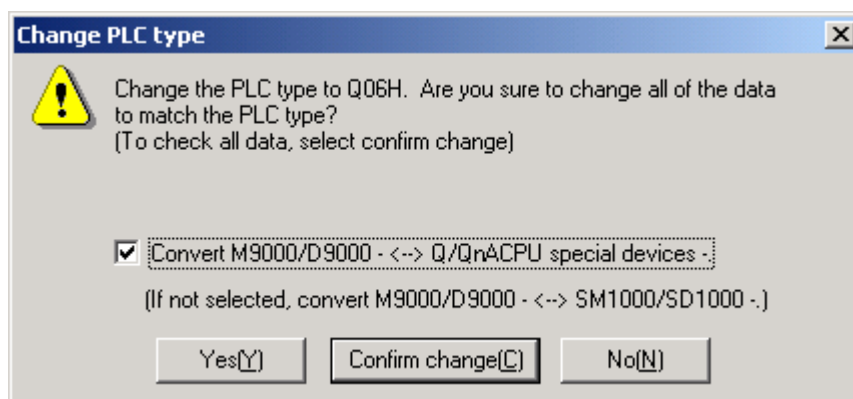
PLC Series	Target CPU
A series	A0J2H, A1S, A1FX, A1SJ, A1SH, A1SJH, A1N, A2C, A2CJ, A2N(S1), A2S, A2SH, A3N, A2A(S1), A3A, A2U(S1), A2US(S1), A2USH-S1, A3U, A4U
QnA series	Q2A, Q2AS(H), Q2AS1, Q2AS(H)S1, Q3A, Q4A, Q4AR

**Table 6-2 List of CPUs targeted as projects after PLC type change**

PLC Series	Target CPU
Q series	Q00J, Q00, Q01, Q02(H), Q06H, Q12H, Q25H, Q00UJ, Q00U, Q01U, Q02U, Q03UD, Q03UDE, Q04UDH, Q04UDEH, Q06UDH, Q06UDEH, Q10UDH, Q10UDEH, Q13UDH, Q13UDEH, Q20UDH, Q20UDEH, Q26UDH, Q26UDEH
L series	L02, L26CPU-BT

#### [Special notes]

- 1) When using the GX Developer's PLC type change function, always check "Convert M9000/D9000 <--> Q/QnACPU special devices" shown in the following dialog. If the conversion is executed without checking this, the special relays and special registers which could not be automatically converted cannot be detected. This is not checked in the default state.

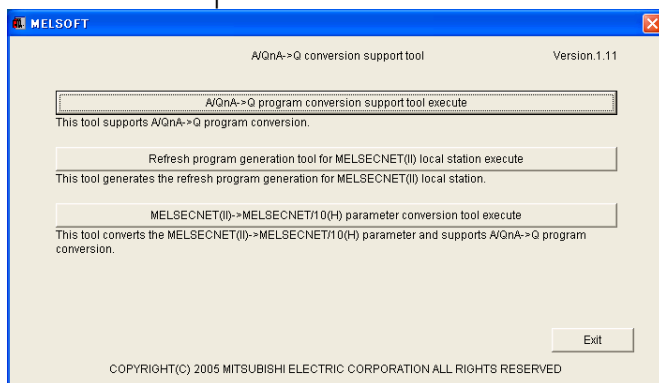


- 2) Do not edit the project input in the tool after the PLC type has been changed with GX Developer. The tool output may not operate correctly if an edited project is input.
- 3) GX Developer Version 8.95Z or higher is required to specify Universal Model QCPU to the project after PLC type change.

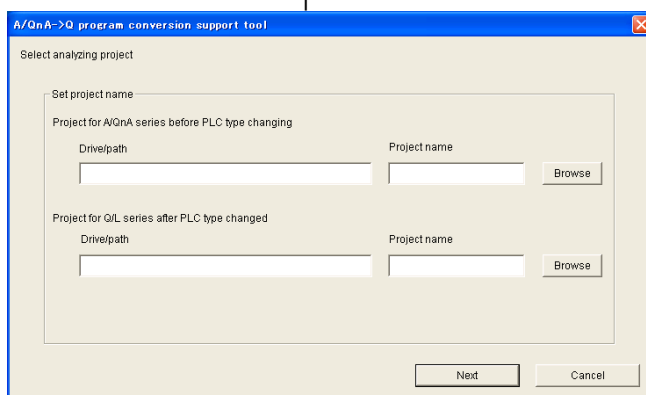


## 6.2 Flow of general operations

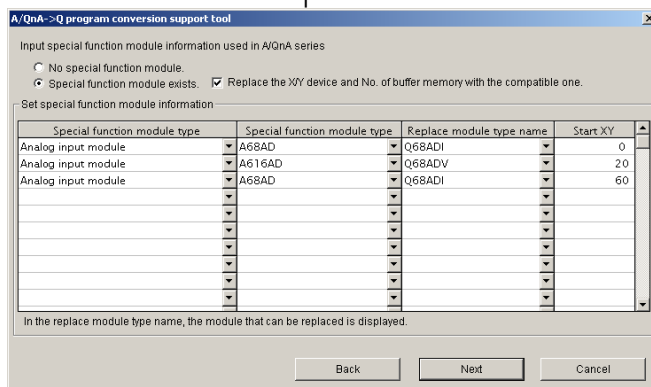
### 1) Starting the tool (Refer to section 5.4)



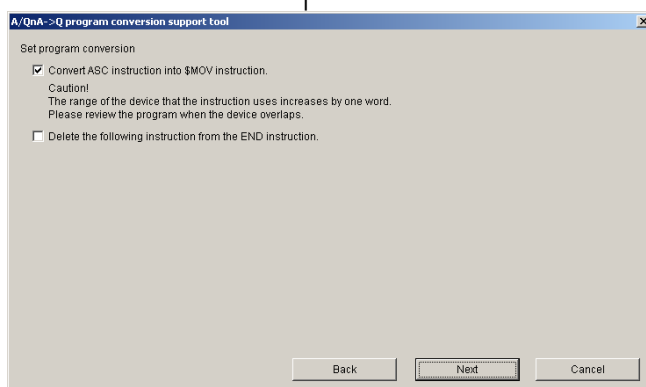
2) Tool Selection screen  
Refer to section 5.5 for details.



3) Select analyzing project screen  
Designate the projects before and after PLC type changing.  
Refer to section 6.3 for details.



4) Special function module setting screen  
Set the usage state of special function modules.  
Refer to section 6.4 for details.



5) Set program conversion screen  
Set whether to convert ASC instruction into \$MOV instruction.  
Set whether to delete the following instruction from the END instruction.  
Refer to section 6.5 for details.

Next Page

6) Specify output folder of analysis result screen  
Designate the output destination for the analysis results.  
Refer to section 6.6 for details.

7) Confirm settings screen  
Check the set details and execute the analysis on this screen.  
Refer to section 6.7 for details.

8) Confirmation of execution results (Refer to section 6.8)

## 6.3 Select analyzing project screen

### [Outline]

The project to be analyzed is set on this screen.

For the analysis, designate the project for A/QnA series before PLC type change and the project for Q/L series after PLC type change.

### [Operation]

Set "Project for A/QnA series before PLC type change" and "Project for Q/L series after PLC type change" to be input into the tool.

### [Example of screen]

A/QnA->Q program conversion support tool

Select analyzing project

Set project name

Project for A/QnA series before PLC type changing

Drive/path

Project name

Browse

Project for Q/L series after PLC type changed

Drive/path

Project name

Browse

Next

Cancel

1)

2)

3)

4)

5)

6)

7)

8)

**[Explanation of screen]**

No.	Item	Display/set details
1)	Project for A/QnA series "Drive/path" setting field	Set the drive and path in which the project for A/QnA series before PLC type changing is saved. (Refer to 3)
2)	Project for A/QnA series "Project name" setting field	Set the project name in which the project for A/QnA series before PLC type change is saved. (Refer to 3)
3)	Project for A/QnA series "Browse" button	The "Open project" dialog will open, so designate the project for A/QnA series before PLC type change. The drive/path and project name for the A/QnA series before PLC type change will be set according to the selected project.
4)	Project for Q/L series "Drive/path" setting field	Set the drive and path in which the project for Q/L series after PLC type change is saved. (Refer to 6)
5)	Project for Q/L series "Project name" setting field	Set the Q/L series project name used after the project has been changed to a Q/L series after PLC type change. (Refer to 6)
6)	Project for Q/L series after PLC type change "Browse" button	The "Open project" dialog will open, so designate the project after PLC type change. The drive/path and project name for the Q/L series after PLC type change will be set according to the selected project.
7)	[Next] button	When the [Next] button is pressed, the set details are checked. If no problem is found, the "Select analyzing project" screen will close, and the "Special function module setting" screen will open.
8)	[Cancel] button	When the [Cancel] button is pressed, the "Select analyzing project" screen will close, and the "Tool Selection screen" will open.

**[Special notes]**

A network folder which starts with \\ cannot be designated for drive/path.

## 6.4 Special function module setting screen

**[Outline]**

The special function module information, used with the "project for A/QnA series before PLC type change" is input on this screen.

When the special module information is input, the special module's replacement information can be reviewed and displayed in the information list.

**[Operation]**

Set the special function module information used with the "project for A/QnA series before PLC type change".

**[Example of screen]**

The screenshot shows the 'A/QnA->Q program conversion support tool' window. It contains the following elements with corresponding callouts:

- 1)** Points to the 'No special function module.' radio button.
- 2)** Points to the 'Special function module exists.' radio button.
- 3)** Points to the first 'Special function module type' column header.
- 4)** Points to the second 'Special function module type' column header.
- 5)** Points to the 'Replace module type name' column header.
- 6)** Points to the 'Start XY' column header.
- 7)** Points to the 'Next' button.
- 8)** Points to the 'Back' button.

Additional interface details include a checked checkbox for 'Replace the XY device and No. of buffer memory with the compatible one.', a table with 4 columns and 10 rows, and a status message at the bottom: 'In the replace module type name, the module that can be replaced is displayed.'

## [Explanation of screen]

No.	Item	Display/set details
1)	[Special function module exists]/[No special function module] radio buttons	Select whether to set the special function module information. When [Special function module exists] is selected, the Set special function module information can be set.
2)	[Replace the X/Y device and No. of buffer memory with the compatible one.] check box	Check when replacing the X/Y device and No. of buffer memory with the compatible one.
3)	"Special function module type" setting field	Select the type of special function module. The field (3) Special function module name type selection details will change according to the type of special function module selected.  Select the following type of special function module when A0J2H. Analog input module (for A0J2H) Analog output module (for A0J2H) High-speed counter module (for A0J2H) Positioning module (for A0J2H)  Select the following type of special function module when AnS/QnAS. Analog input module (for AnS) Analog output module (for AnS) Temperature input module (for AnS) Temperature control module (for AnS) Positioning module (for AnS) High-speed counter module (for AnS)
4)	"Special function module type name" setting field	Select the special function module type name. If the designated module does not appear in the selectable items, set as follows. Special function module type: Other module Special function module type name; Other 32 points
5)	"Replace module type name" setting field	Specify module type for Q/L series after conversion to replace the X/Y device and No. of buffer memory with the compatible one. Select module that XY device and No. of buffer memory can be replaced from the one shown by combo box.
6)	"Start XY number" setting area	Designate the start XY number of the special function module as a hexadecimal.
7)	[Next] button	When the [Next] button is pressed, the set details are checked. If no problem is found, the "Special function module setting" screen will close, and the either of the following screens is opened. The "Set program conversion" screen will open, when the project of before PLC type change is for A series. The "Specify output folder of analysis result" screen will open, when the project of before PLC type change is for QnA series.
8)	[Back] button	When the [Back] button is pressed, the "Select analyzing project" screen will open again.
9)	[Cancel] button	When the [Cancel] button is pressed, the "Tool Selection screen" will open.

## [Special notes]

Special function modules are set on the special function module setting screen. All other modules are analyzed as 32-points occupation modules.

[Replace the X/Y device and No. of buffer memory with the compatible one.] is checked, replace the instruction for special function module of A/QnA series to compatible XY device and No. of buffer memory for with Q/L series. Replaced content is filled in as line statement.

When you replace, please set the right information to special function module information.

When the mistaken information is set up, the wrong device may be replaced and the program may not operate normally.

### <Instruction for special function module>

- Instructions using XY devices  
(Example) LD X0, OUT Y10
- Buffer memory access instruction(FROM/FROMP/DFRO/DFROP/TO/TOP/DTO/DTOP instruction)  
(Example) FROM H1 K0 D0 K1 TO U1 K0 D0 K1
- Instructions using special function module devices (U[ ]\G[ ])  
(Example) MOV D0 U1\G0

### <Precautions for XY device replacement>

- Exclusion from replacement
  - 1) Designated with index  
(Example) LD X0Z, FROM H1 K0 K4Y0Z K1
  - 2) After the first END instruction
- Replace to SM1255/SD1255 device (SM999/SD999 for Basic Model QCPU) if any of the following conditions met
  - 1) No compatible XY device exist in special function module after replacement
  - 2) XY device designated with digit  
(Example) FROM H1 K0 K4X0 K1

### <Example of XY device replacement>

Examples are shown below when converting X device for A68AD to the compatible one for Q68AD.

Table Compatible X device between A68AD and Q68AD

X device for A68AD	Compatible X device for Q68AD
X0 (Watchdog timer error)	No compatible device
X1 (READY)	X0 (READY)
X2 to X1F (Use prohibited)	No compatible device

#### A series program



#### Q/L series program after replacement

```

* !00000 SpecialFunctionModuleProcess! Refer to ReviewInformation
* !00000 LD X0 -> LD SM1255
* !00000 AND X1 -> AND X0
  
```

Adding statements of Replacement information.



X0->SM1255  
(X0 has no compatible device.)

X1->X0

<Precautions for No. of buffer memory replacement>

•Exclusion from replacement

- 1) Start I/O No. of buffer memory access instruction is any of the following.
    - Start I/O No. does not match with the one set in special function module setting screen.  
(Example) FROM H3 K0 D0 K1, or FROM U3 K0 D0 K1 that is set 10(0x10) as start XY No. in special function module setting screen.
    - Designated with index  
(Example)FROM H1Z K0 D0 K1
    - Not be designated as constant specification (K or H) or as special function module device (U[ ])   
(Example)FROM K4X10 K0 D0 K1, FROM U1\G0 K0 D0 K1
  - 2) Start XY No.(U[ ]) of special function module device (U[ ]\G[ ]) is either of the following conditions.
    - Start XY No. that is set in special function module does not match.  
(Example) MOV D0 U3\G0 that is set 10(0x10) as start XY No. in special function module setting screen.
    - Designated with index  
(Example)MOV D0 U1Z1\G0
  - 3) After the first END instruction
- Replace to SD1255 device (SD999 for Basic Model QCPU) if either of the following conditions met.
- 1) No compatible No. of buffer memory address exist in special function module after replacement
  - 2) No. of buffer memory designated with digit  
(Example)FROM H1 K0Z D0K1

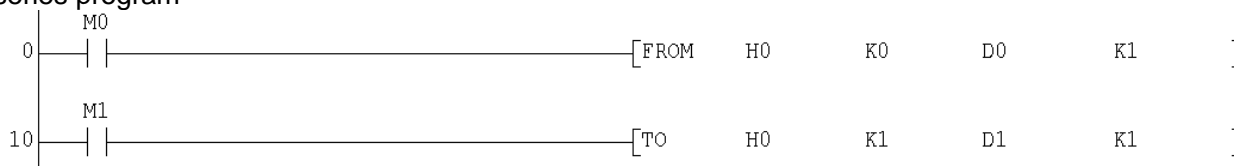
<Example of No. of buffer memory address replacement>

Examples are shown below, when converting No. of buffer memory address for A68AD to the compatible one for Q68ADI

Table Compatible No. of buffer memory between A68AD and Q68ADI

No. of buffer memory address of A68AD	Compatible no. of buffer memory address for Q68ADI
K 0 (Number of channels)	No compatible device
K 1 (Averaging process setting)	K9 (Averaging process setting)
K 2 (CH1 Average time, Average number of times)	K1 (CH1 Average time・Average No. of times)
--	--

A series program



Q/L series program after replacement

```
* !00000 SpecialFunctionModuleProcess! Refer to ReviewInformation
* !00000 FROM H0 K0 D0 K1 -> FROM H0 SD1255 D0 K1
0 | | | | |
* !00001 SpecialFunctionModuleProcess! Refer to ReviewInformation
* !00001 TO H0 K1 D1 K1 -> TO H0 K9 D1 K1
8 | | | | |
```

Adding statements of Replacement information.

K0->SD1255  
(Address 0 has no compatible device.)

K1->K9



## 6.5 Set program conversion screen

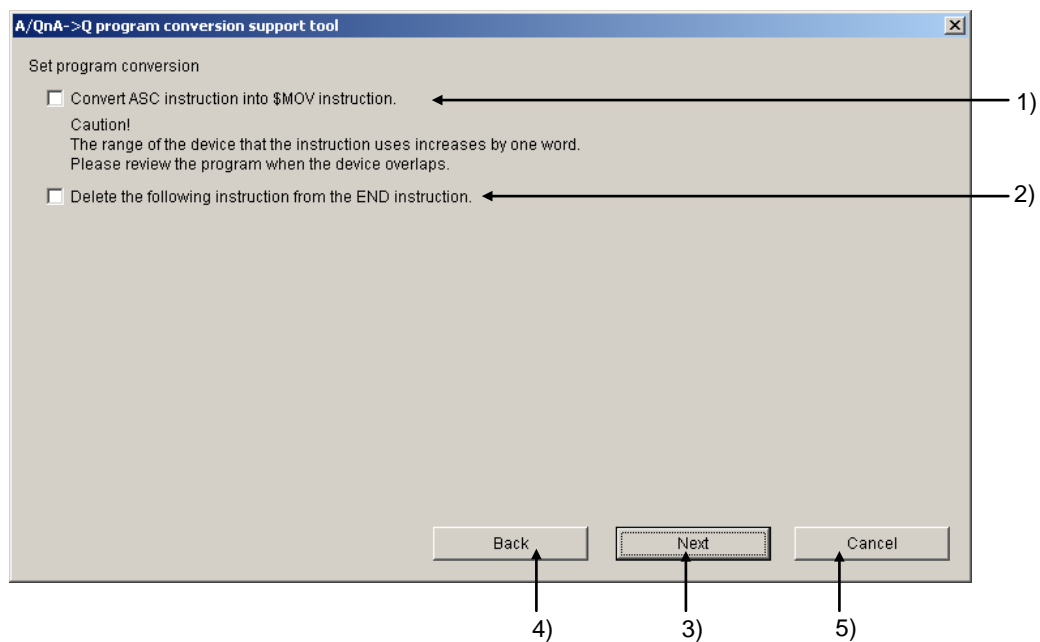
### [Outline]

When the project of before PLC type change is for A series, whether ASC instruction used the ladder program for ACPU is converted into \$MOV instruction is specified.

### [Operation]

Check the "Convert ASC instruction into \$MOV instruction", if ASC instruction used the ladder program for ACPU is converted into \$MOV instruction.

### [Example of screen]



### [Explanation of screen]

No.	Item	Display/set details
1)	Convert ASC instruction into \$MOV instruction	When the [Convert ASC instruction into \$MOV instruction] check box is checked, ASC instruction used the ladder program for ACPU is converted into \$MOV instruction.
2)	[Delete the following instruction from the END instruction] check box	Check when deleting the program after END instruction.
3)	[Next] button	When the [Next] button is pressed, the "Specify output folder of analysis result" screen will open.
4)	[Back] button	When the [Back] button is pressed, the "Special function module setting" screen will open again.
5)	[Cancel] button	When the [Cancel] button is pressed, the "Tool Selection screen" will open.

## 6.6 Specify output folder of analysis result screen

### [Outline]

The project in which the analysis results are filled and the folder to which the review information list is output are input on this screen.

Designate the project in which the analysis results are filled and the folder to which the review information list is output. Also designate the file output destination.

### [Operation]

Set the folder to which to output the tool analysis results.

### [Example of screen]

The screenshot shows a Windows-style dialog box titled "A/QnA->Q program conversion support tool". The main text inside is "Specify output folder of analysis result". Below this, there is a section titled "Set output folder of analysis result" which contains two sub-sections:

- Specify the Q/L series using project filled with analysis result**: This section has two input fields. The first is labeled "Drive/path" and the second is labeled "Project name". To the right of the "Project name" field is a "Browse" button. A callout line labeled "3)" points to this "Browse" button. Another callout line labeled "2)" points to the "Project name" field.
- Specify the output folder of review information list**: This section has one input field labeled "Drive/path". To its right is another "Browse" button. A callout line labeled "5)" points to this "Browse" button. Another callout line labeled "4)" points to the "Drive/path" field.

At the bottom of the dialog box, there are three buttons: "Back", "Next", and "Cancel". Callout lines point to these buttons: "7)" points to "Back", "6)" points to "Next", and "8)" points to "Cancel".

**[Explanation of screen]**

No.	Item	Display/set details
1)	"Drive/path" setting field the Specify the Q/L series using project filled with analysis result	Set the drive and path of the project for filling the discrepancy information statement. (Refer to 3.)
2)	"Project name" setting field the Specify the Q/L series using project filled with analysis result	Set the name of the project for filling the discrepancy information statement. (Refer to 3.)
3)	"Browse" button for Specify the Q/L series using project filled with analysis result	The "Open Project" dialog will open, so designate the project for filling the discrepancy information statement. The drive/path and project name for filling the discrepancy information statement will be set according to the selected project.
4)	"Drive/path" setting field for Specify the output folder of review information list	Set the drive /path to which the review information list is output. (Refer to 5.)
5)	"Browse" button for Specify the output folder of review information list	The "Browse folders" dialog will open, so designate the drive and path to which to output the review information list. The drive/path to which the review information list is output is set according to the selected folder.
6)	[Next] button	When the [Next] button is pressed, the set details are checked. If there is no problem, the "Confirm settings" screen opens.
7)	[Back] button	When the [Back] button is pressed, the either of the following screens will open again. The "Set program conversion" screen will open, when the project of before PLC type change is for A series. The "Special function module setting" screen will open, when the project of before PLC type change is for QnA series.
8)	[Cancel] button	When the [Cancel] button is pressed, the "Tool Selection screen" will open.

**[Special notes]**

- 1) A network folder which starts with \\ cannot be designated for drive/path.
- 2) The Briefcase cannot be directly designated as the destination for outputting the analysis results field project or the review information list. A folder created in the Briefcase can be designated as the output destination.

## 6.7 Confirm settings screen

### [Outline]

Confirm the set details on this screen.

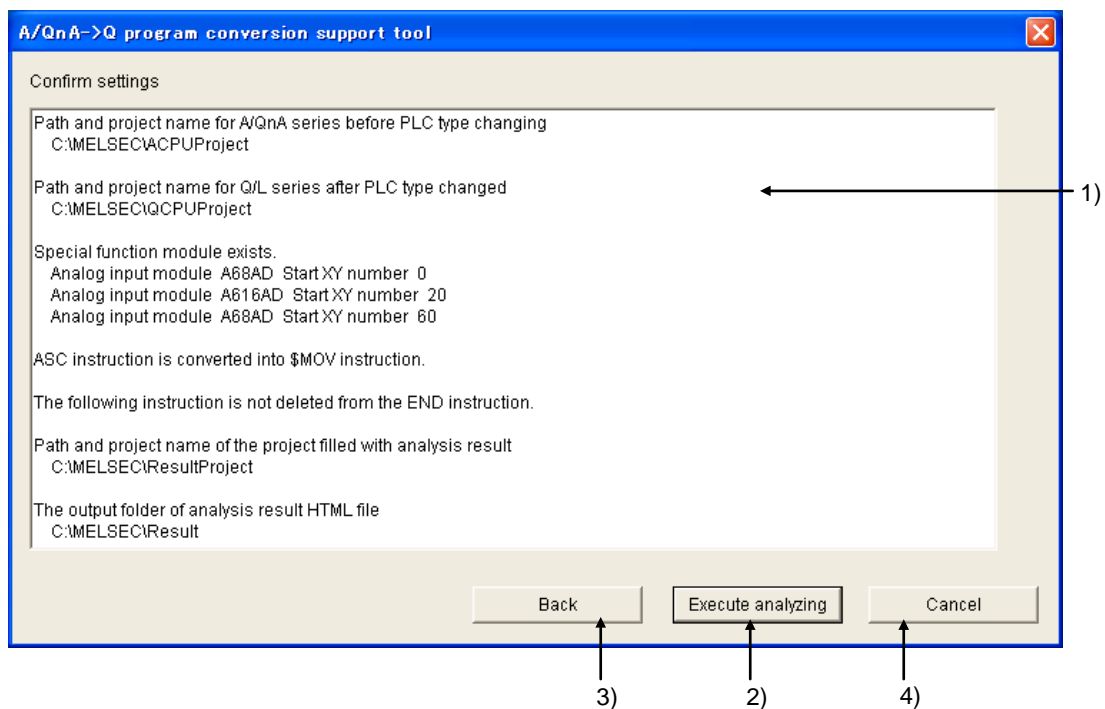
Confirm the settings. If there are no mistakes, execute the analysis.

### [Operation]

Confirm the set details. If there are no mistakes, press the [Execute analyzing] button.

To change any setting, press the [Back] button.

### [Screen example]



### [Explanation of screen]

No.	Item	Display/set details
1)	Set detail display area	The set details are displayed here.
2)	[Execute analyzing] button	If there are no mistakes in the details displayed in the set display area, press this button to execute the analysis with the set details.
3)	[Back] button	When the [Back] button is pressed, the "Specify output folder of analysis result" screen will open again.
4)	[Cancel] button	When the [Cancel] button is pressed, the "Tool Selection screen" will open.

## 6.8 Confirming the execution results

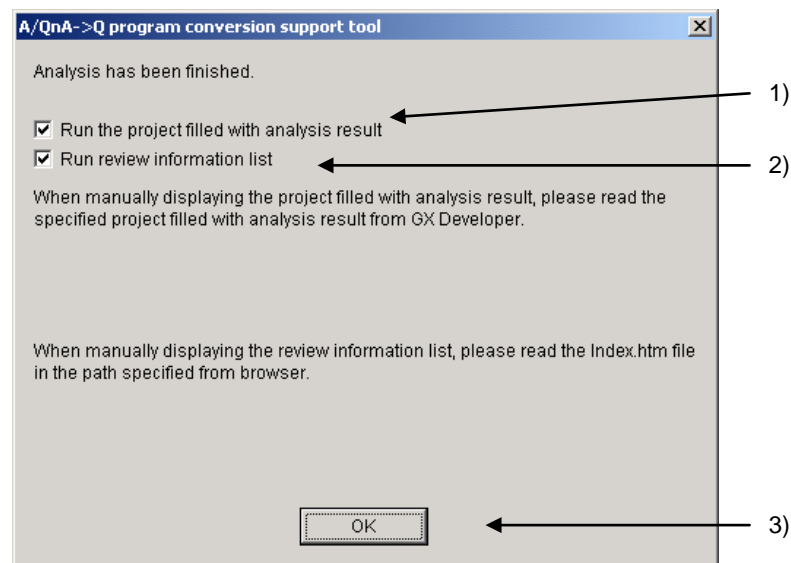
### [Outline]

The analysis result display selection screen appears when the analysis has been finished normally. Select whether to automatically display the analysis results.

### [Operation]

Select whether to display the analysis results, and then press [OK].

### [Screen example]



### [Explanation of screen]

No.	Item	Display/set details
1)	Run the project filled with analysis result	When the [Run the project filled with the analysis result] check box is checked and the [OK] button is pressed, GX Developer will start automatically, and the project with the statements filled will appear.
2)	Run review information list	When the [Run review information list] check box is checked and the [OK] button is pressed, Internet Explorer will start automatically, and the review information list, output as an HTML file, will appear.
3)	[OK] button	When the [OK] button is pressed, the dialog will close, and the "Tool Selection screen" will open.

## 7. AQ conversion support tool analysis results

### 7.1 Displaying the analysis results

#### [Automatically displaying the results]

Select the items to be displayed in the dialog screen that appears when the analysis is finished normally. Refer to section 6.8 Confirming the execution results for details.

#### [Manually displaying the results]

Manually displaying the analysis results

1) Displaying project filled with discrepancy information

Using GX Developer, open the project set as the project for Q/L series into which the analysis results are filled designated on the analysis result output destination designation screen (refer to section 6.6).

2) Displaying review information list

Using Internet Explorer, open the Index.htm file in the folder designated as the review information list output destination folder on the analysis result output destination designation screen (refer to section 6.6).

### 7.2 Discrepancy generated project

When converting an A/QnACPU program with the GX Developer's PLC type change function into a QCPU program, some of the special relays, special registers, instructions, as well as the special function module instructions and I/O signals must be reviewed as shown below.

- Some special relays : Converted to SM1255 or SM999
- Some special registers : Converted to SD1255 or SD999
- Some instructions : Converted to OUT SM1255
- Special function module instructions : Must be reviewed as buffer memory address assignment is different
- Special function module I/O device : Must be reviewed as I/O signal assignment is different

With this function, discrepancy information which indicates the information before changing or the need for corrections is filled in the statements of each QCPU program converted with PLC type change. This clearly indicates the sections which must be reviewed with GX Developer's PLC type change.

Instruction for special function module or I/O device of special function is replaced to compatible XY device, No. of buffer memory that is available in the Q/L series special function module after replacement. Replaced content is filled in as line statement.

With statement filling, the statements are added as "peripherals".

#### [Special notes]

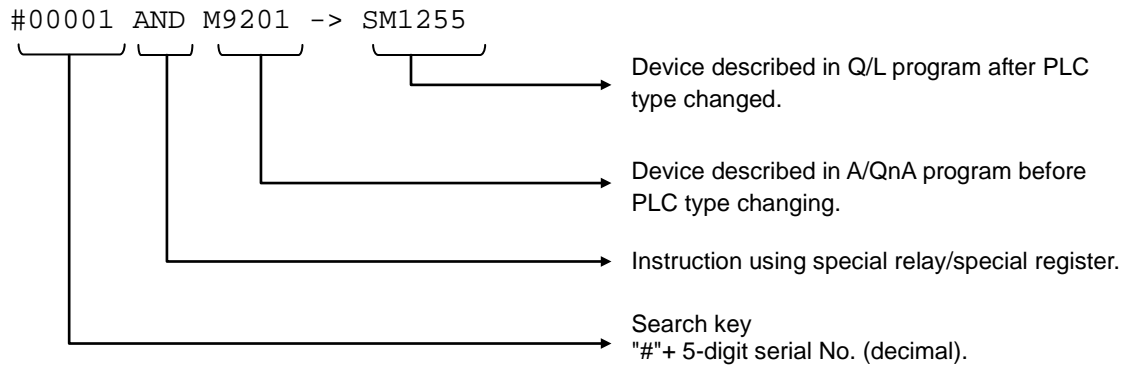
- 1) If the program capacity is exceeded while filling the discrepancy information into the folder, project field with analysis results and discrepancy information list will stop just before the capacity is exceeded.
- 2) If a program is described after the END instruction in the project for Q/L series after PLC type change, the program after the END instruction will not be reflected onto the project filled with the analysis results.
- 3) The ladders may appear in yellow because the number of statements which can be created in the GX Developer ladder block are limited. Check with the list mode in this case.

## 7.2.1 Special relay and special register statement generation function (Line head #)

### [Outline of function]

This function detects the SM1255/SD1255 (SM999/SD999 for basic model QCPU) found in the project after PLC type change, and fills the device information used before PLC type change as statements with the following format.

### [Filling format]



### [Example]



### [Special notes]

- 1) If there are multiple SM1255/SM999/SD1255/SD999 in the same ladder block, the statement will be filled by inserting the statement each time one SM1255/SM999/SD1255/SD999 is detected.
- 2) If multiple SM1255/SM999/SD1255/SD999 are found in the same ladder block, the search key will be assigned in order of instructions with smallest step number.
- 3) If multiple SM1255/SM999/SD1255/SD999 are found in the same instructions, statements for the same instruction will be inserted each for each detected relay/register.
- 4) An statement will not be inserted if SM1255/SM999/SD1255/SD999 are designated with an index, digit, bit or indirectly designated.
- 5) If a special relay or special register is used for the argument of an instruction which was not automatically converted, it will be converted as OUT M1255/OUT M999, and will not be detected as a special relay or special register.
- 6) This function can be used for an ACPU project before PLC type change. This cannot be used with QnACPU.

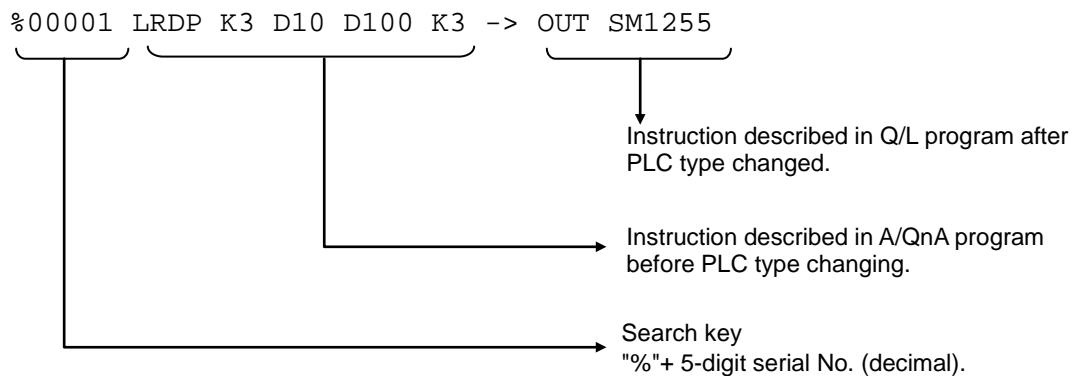
## 7.2.2 Instruction statement generation (Line head %)

### [Outline of function]

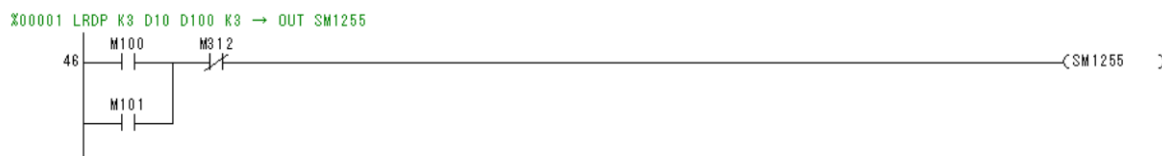
Statements for instructions which could not be automatically converted are filled by detecting the OUT SM1255/OUT SM999 with the Q/L program. The instructions used with the A/QnA program are extracted from the same position in the A/QnA program, and are filled in the statement of the ladder block converted to OUT SM1255/OUT SM999 in the Q/L program as shown below.

The following formats are used when specifying to convert ASC instruction into \$MOV instruction on "Set program conversion" screen. In this case, The instruction of Q/L program after PLC type changed becomes \$MOV instruction.

### [Filling format]



### [Example]



### [Special notes]

- 1) If there are multiple OUT SM1255/OUT SM999 in the same ladder block, the statements will be filled by adding one statement each time one OUT SM1255/OUT SM999 is detected.
- 2) If multiple OUT SM1255/OUT SM99 are detected in the same ladder block, the search key will be assigned in order of instructions with smallest step number.
- 3) If the instruction does not have an A dedicated instruction LEDR (ZRRD, ZRWR, ZRRDB, ZRWRB, etc.) or even if the instruction is a dedicated A type but LEDR is not described, the instruction will not be analyzed as an A dedicated instruction. In this case, the instruction will be analyzed as an LEDA/LEDB instruction.



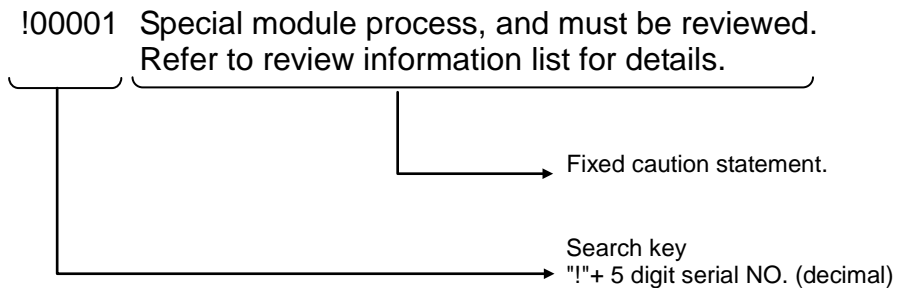
### 7.2.3 Adding statements to special function module circuit (Line head !)

#### [Outline of function]

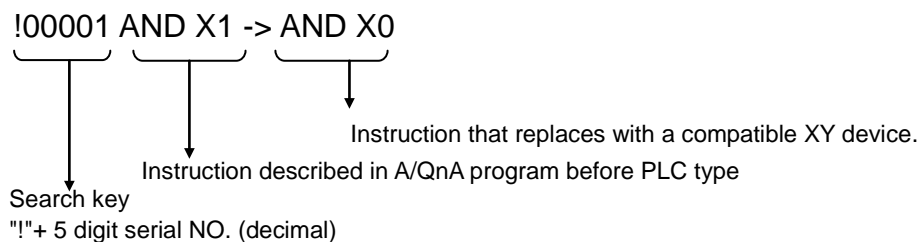
When filling the statements to the special function module circuit, the special function module I/O signals and special function module instructions are detected based on the I/O device numbers set in the special function module information settings. Thus, the information is filled in the statements of the corresponding ladder block as shown below.

When replacing executed from special function module setting screen (setting to replace compatible XY device No. of buffer memory), fill instruction before and after replacement into line statement as follows.

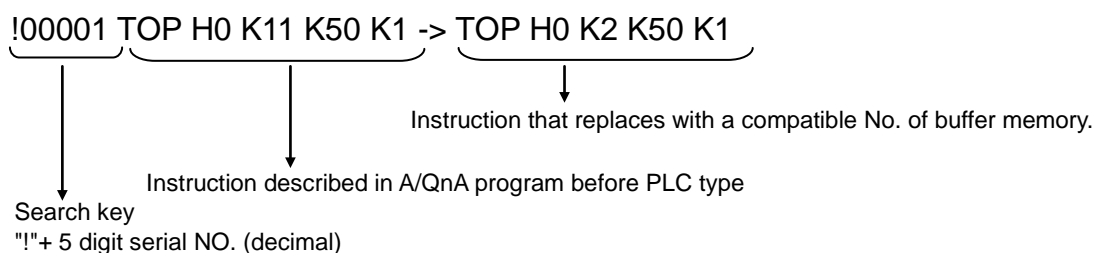
#### [Filling format]



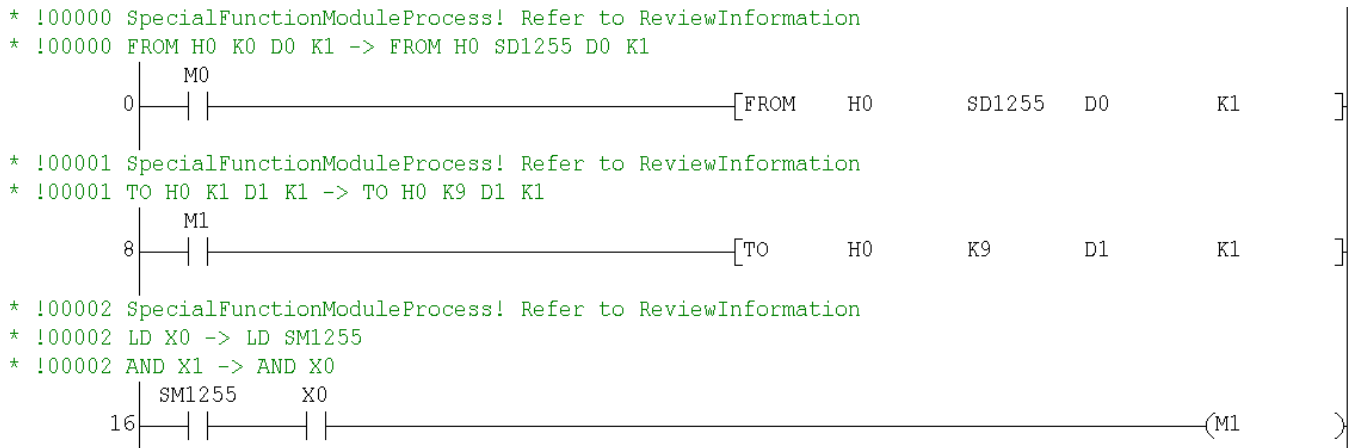
#### <Example of statement after XY device replacement>



#### <Example of statement after No. of buffer memory replacement>



### [Example]



### [Special notes]

- 1) The following instructions are searched for as special function module instructions.  
FROM, FROMP, DFRO, DFROP, TO, TOP, DTO, DTOP
- 2) If there are multiple special function module instructions or special function module I/O signals in the same ladder block, only one statement will be added.
- 3) A statement is filled even into ladder blocks in which only the special function module I/O signals are used.
- 4) If there are special function module instructions and special function module I/O signals for different special function modules in the same ladder block, statements will be filled for the detected number of special function modules.
- 5) If the special function module I/O signal is designated with an index, digit, bit or indirectly designated, the signal will be judged as an address which ignores this notation. (For example, X0Z1 will be judged as X0.)

## 7.3 Review information list

### 7.3.1 Outline of review information list

With the review information list, the special relays, special registers, instructions which could not be converted automatically and the special function module program sections which must be reviewed as a result of changing the PLC type from A/QnACPU to QCPU are generated as a HTML which can be viewed with Internet Explorer.

The details displayed in the review information list are explained in the following sections (7.3.2 to 7.3.10). Instructions for printing the information are given in 7.3.11.

#### (Supplement)

The following three projects are covered with the review information list.

- 1) Project before PLC type change
- 2) Project after PLC type change
- 3) Analyzed project, the result of analyzing 1 and 2 above

Projects 1) to 3) above are described in the HTML file as shown below.

**Table 7-3-1 Project indication method**

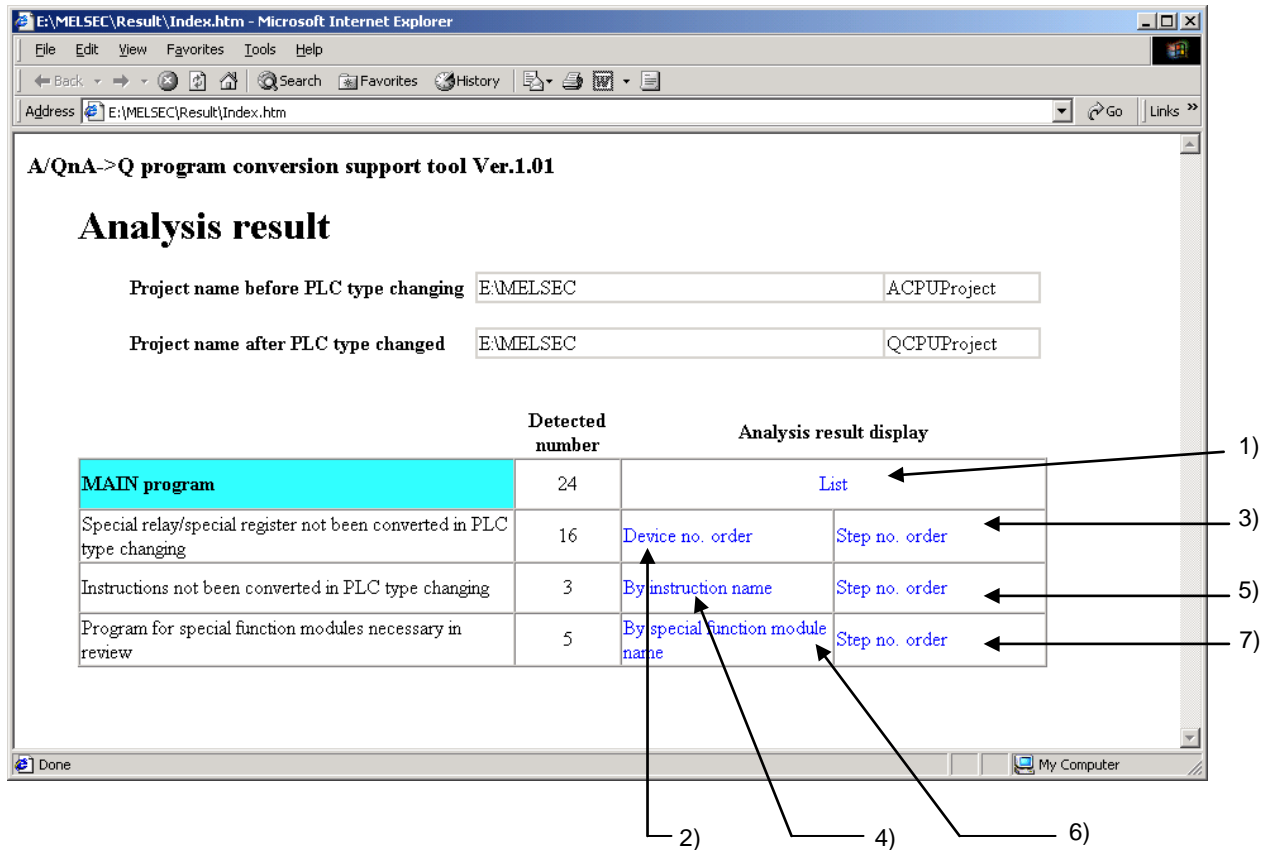
No.	Project	Details displayed in HTML file
1)	Project before PLC type change	Project before PLC type change (Menu screen) Program for A/QnA series before changing (Other than Menu screen)
2)	Project after PLC type change	Project after PLC type change (Menu screen) Program for Q/L series after changing (Other than Menu screen)
3)	Analyzed project	Program for Q/L series after analysis

## 7.3.2 Menu screen

### [Outline of function]

This is the start-up screen for the review information list function.  
Screens for each information can be opened from this screen.

### [Example of screen display]



### [Explanation of screen]

No.	Item	Explanation
1)	"List"	Opens the screen showing the special relays, special registers and instructions in the program which were not converted automatically, and the results of analyzing the special function module program. (Refer to section 7.3.3.)
2)	Special relay/special register "Device no. order"	Opens the screen which shows the correction information for the special relays and special registers in the program which were not converted automatically. The screen shows the special relays and special registers in order of device number. (Refer to section 7.3.4.)
3)	Special relay/special register "Step no. order"	Opens the screen which shows the correction information for the special relays and special registers in the program which were not converted automatically. The screen shows the sections using the special relays and special registers in order of step number. (Refer to section 7.3.5.)
4)	Instruction "By instruction name"	Opens the screen which shows the correction information for instructions in the program which were not converted automatically. The screen shows the information according to instruction name. (Refer to section 7.3.6.)
5)	Instruction "Step no. order"	Opens the screen which shows the correction information for instructions in the program which were not converted automatically. The screen shows the sections using the instructions in order of step number. (Refer to section 7.3.7.)
6)	Special function module "By special function module name"	Opens the screen which shows the correction information for special function modules in the program which must be reviewed. The screen shows the information in order of special function module type name. (Refer to section 7.3.8.)
7)	Special function module "Step no. order"	Opens the screen which shows the correction information for special function modules in the program which must be reviewed. The screen shows the sections containing a special function module program in order of step number. (Refer to section 7.3.9.)

### 7.3.3 List display screen

#### [Outline of function]

This screen lists the special relays, special registers and instructions which were not converted automatically, and the results of the special function module program analysis.

#### [Example of screen display]

Address: E:\MELSEC\Result\MAIN program\Display.htm

List of devices, instructions and program step numbers that are not changed

[Program name:MAIN program]

Back 1)

The corresponding place (step) of program for Q/L series after analyzing	The corresponding place(step)	The program of A/QnA series before PLC type changing			Search key of the program after analyzing
		Information of the corresponding place(step)			
		Special relay/special register	Instruction	Special function module	
6	1	M9201			<#00000>
7	2	M9202			<#00001>
8	3	M9203			<#00002>
9	4	M9204			<#00003>
10	5		LRDP		<%00000>
20	32			A616AD	<!00000>
32	53			A616DAI	<!00001>
47	76			A616AD	<!00002>
55	86			A616DAI	<!00003>
62	96			AI61	<!00004>
72	107		ASC		<%00001>
75	121		CMODE		<%00002>
106	185	D9001			<#00004>

#### [Explanation of screen]

No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)

#### (Special notes)

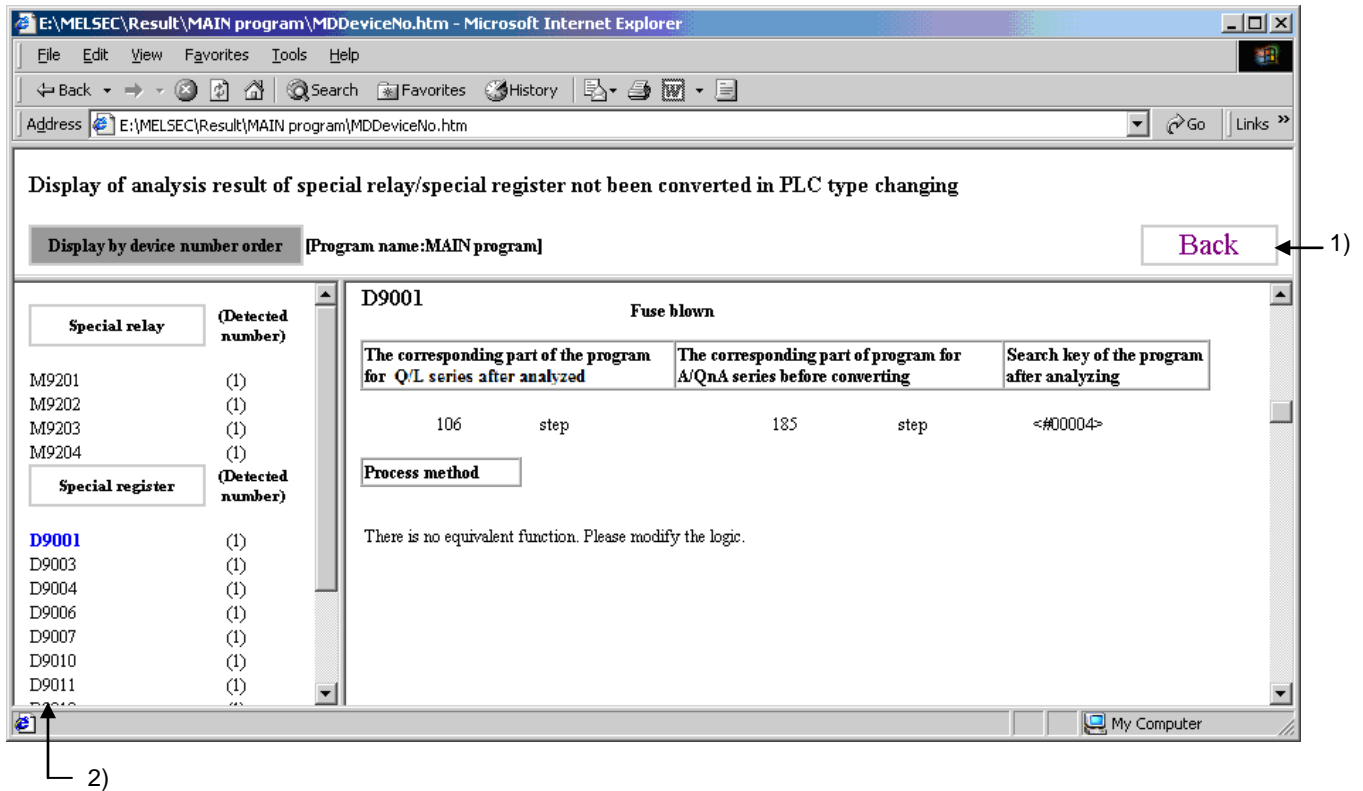
The "Search key of the program after analyzing" field shows the search keys used for searching corresponding sections in the program for Q/L series after analyzing. The corresponding section can be searched for from the GX Developer's program display screen using character string search.

### 7.3.4 Special relay/special register "Display by device number order" screen

#### [Outline of function]

This screen shows the correction information for the special relays and special registers in the program which were not converted automatically. The special relays and special registers are shown in order of device number.

#### [Example of screen display]



#### [Explanation of screen]

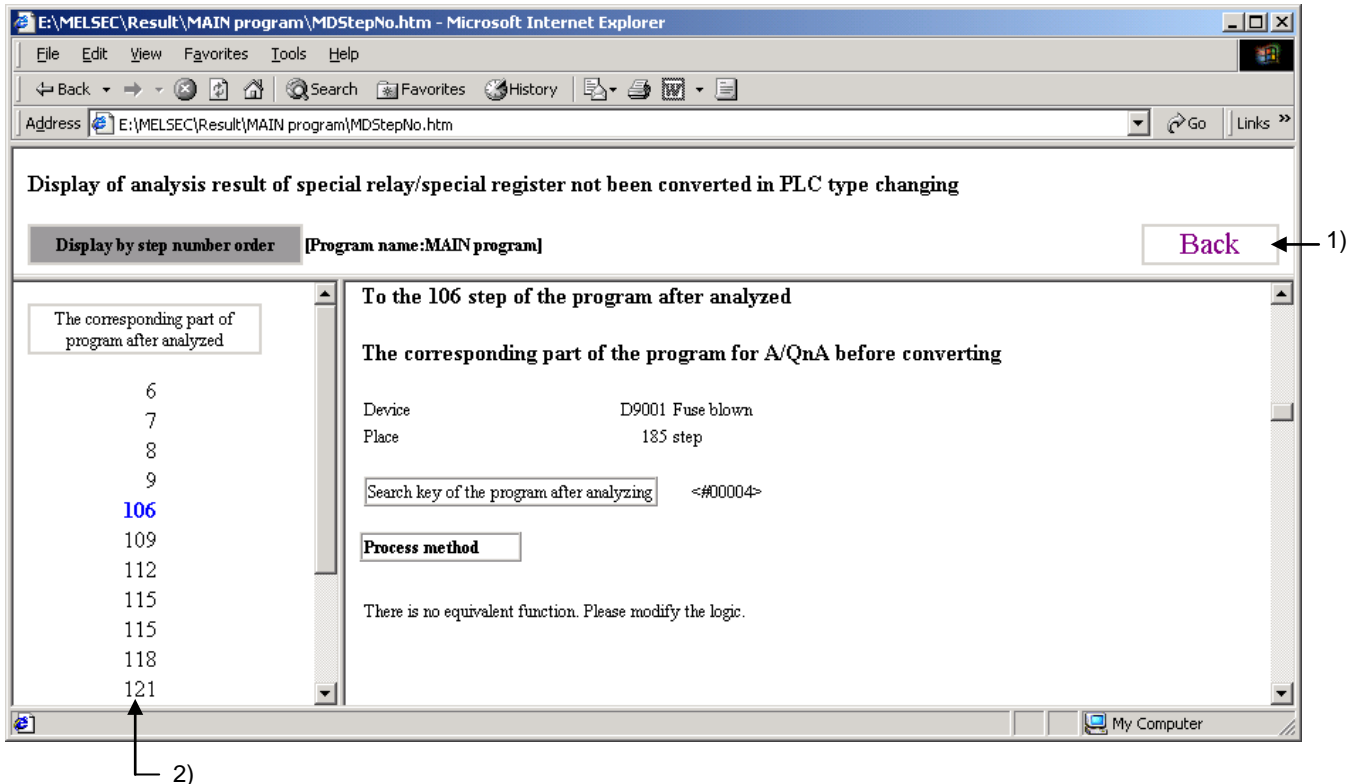
No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)
2)	Device display field	The special relays and special registers used in the program for A/QnA series before PLC type change, corresponding to SM1255/SM999/SD1255/SD999 in the program for Q/L series after analysis are displayed for each special relay and special register. The information appears on the right screen when the device name is clicked.

### 7.3.5 Special relay/special register "Display by step number order" screen

#### [Outline of function]

This screen shows the correction information for the special relays and special registers which were not converted automatically. The special relays and special registers are shown in order of step number.

#### [Example of screen display]



#### [Explanation of screen]

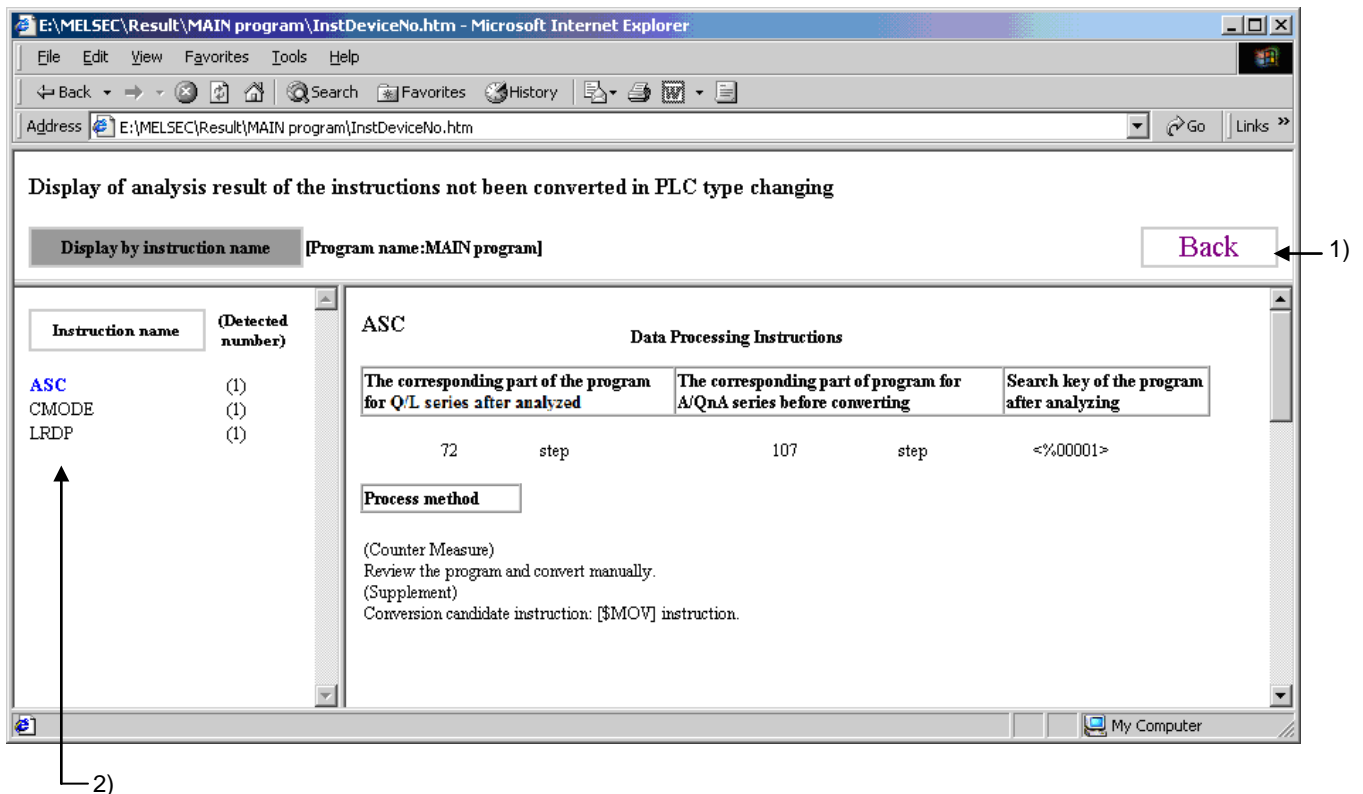
No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)
2)	Step number display field	The step numbers containing special relays and special registers which were converted to SM1255/SM999/SD1255/SD999 in the program for Q/L series after analysis are displayed. The information appears on the right screen when the step number is clicked.

## 7.3.6 Display by instruction name screen

### [Outline of function]

This screen shows the correction information for instructions which were not converted automatically. The information is shown according to instruction name.

### [Example of screen display]



### [Explanation of screen]

No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)
2)	Instruction name display field	The instructions used in the A/QnA series program before PLC type change, corresponding to the OUT SM1255/OUT SM999 in the program for Q/L series after analysis, are displayed. The information appears on the right screen when the instruction name is clicked.

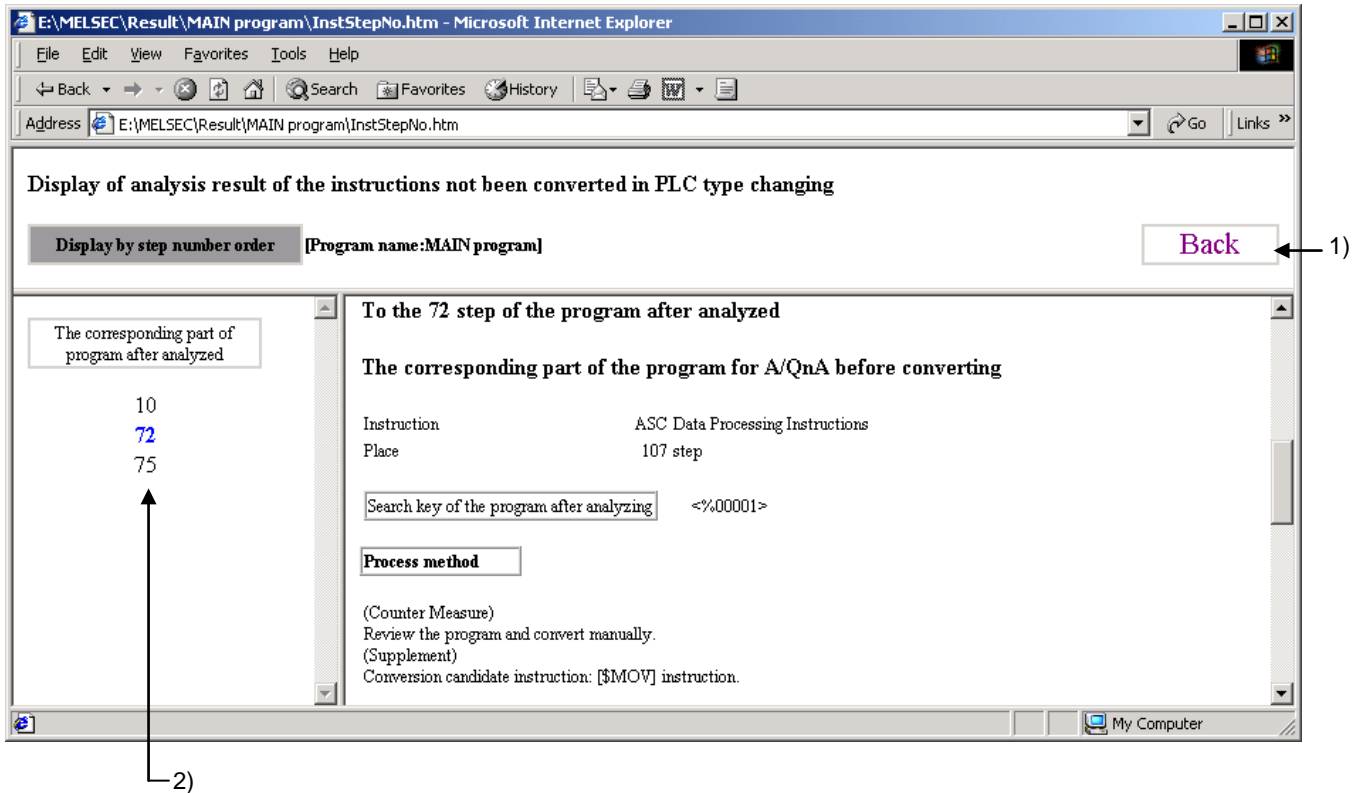


### 7.3.7 Instruction "Display by step number order" screen

#### [Outline of function]

This screen shows the correction information for instructions which were not converted automatically. The sections using the instructions are shown in order of step number.

#### [Example of screen display]



#### [Example of screen]

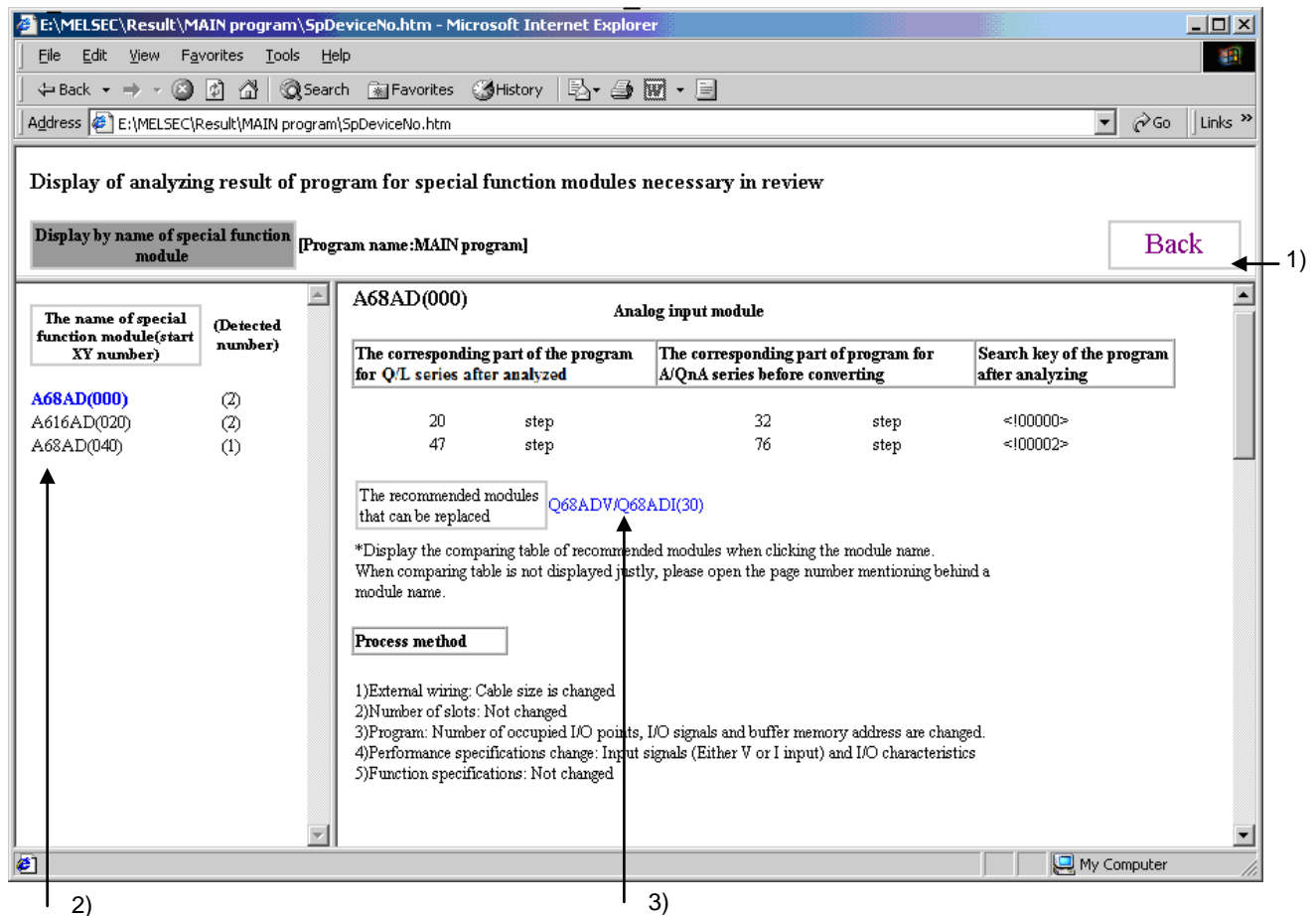
No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)
2)	Step number display field	The detected OUT SM1255/OUT SM99 step numbers are displayed in ascending order. The information appears on the right screen when the step number is clicked.

### 7.3.8 Display by name of special function module screen

#### [Outline of function]

This screen shows the correction information for special function modules which must be reviewed. The information is shown in order of special function module type name.

#### [Example of screen display]



#### [Explanation of screen]

No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)
2)	Special function module name display field	The name of the special function module used in the program for A/QnA series before PLC type change is displayed. The information appears on the right screen when the special function module name is clicked.
3)	Recommended replacement module field	This shows which module in the Q/L series the corresponding special function module corresponds to. When the Q/L series module type is clicked on, Adobe Acrobat Reader will start, and a comparison table of the buffer memory addresses and I/O signals will open. (Refer to section 7.3.10.)

#### (Special notes)

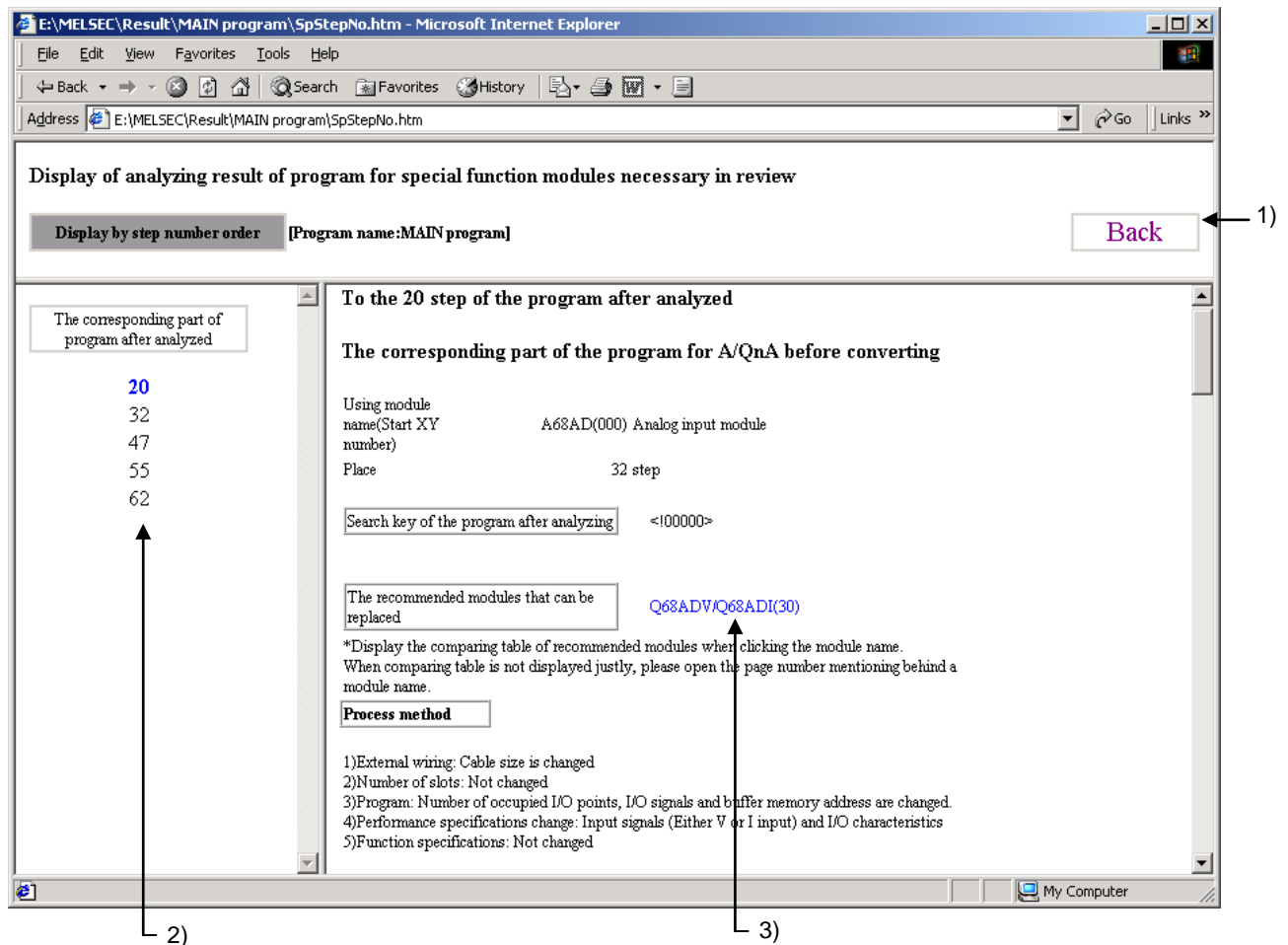
The recommended replacement module comparison table screen might not be able to be displayed by the environment used. In this case, please open the page number which has been described behind the module name.

### 7.3.9 Special function module "Display by step number order" screen

#### [Outline of function]

This screen shows the correction information for special function modules which must be reviewed. The sections containing a special function module program are shown in order of step number.

#### [Example of screen display]



#### [Explanation of screen]

No.	Item	Explanation
1)	Back	Switches the screen to the Menu screen. (Refer to section 7.3.2.)
2)	Step number display field	This field shows the steps numbers of the program for Q/L series after analysis, in which special function module instructions (FROM/FROMP/DFRO/DFROP/TO/TOP/DTO/DTOP) or special function module I/O signals are detected. The information appears on the right screen when the step number is clicked.
3)	Recommended replacement module field	This shows which module in the Q/L series the corresponding special function module corresponds to. When the Q/L series module type is clicked on, Adobe Acrobat Reader will start, and a comparison table of the buffer memory addresses and I/O signals will open. (Refer to section 7.3.10.)

**(Special notes)**

The recommended replacement module comparison table screen might not be able to be displayed by the environment used. In this case, please open the page number which has been described behind the module name.

### 7.3.10 Recommended replacement module comparison table screen

#### [Outline of function]

A comparison of the buffer memory addresses and I/O signals for the recommended replacement modules and the original module is displayed. Adobe Acrobat Reader must be installed to view this table.

#### [Example of screen display]

The screenshot shows a Microsoft Internet Explorer browser window displaying a PDF document. The address bar shows the file path: E:\MELSEC\AQConvSupport\SpUnitPdf\08046engb.pdf. The document content is titled '2.2 A616AD' and includes a section '2.2.1 Performance comparison'. This section contains a table with the following data:

Item	A616AD																															
Analog input																																
Voltage	-10 to 0 to +10VDC (input resistance: 1MΩ)																															
Current	-20 to 0 to +20mADC (input resistance: 250Ω)																															
Digital output	16-bit, signed binary (Data part: 12 bit) (-48 to 4047, -2048 to 2047) Setting is enabled for each channel.																															
I/O characteristics maximum resolution	<table border="1"><thead><tr><th>Input</th><th>Analog input range</th><th>Maximum resolution</th><th>Digital output value</th></tr></thead><tbody><tr><td rowspan="5">Voltage (V)</td><td>0 to +10</td><td>2.5mV (1/4000)</td><td rowspan="5">0 to 4000 -2000 to 2000</td></tr><tr><td>0 to +5</td><td>1.25mV (1/4000)</td></tr><tr><td>+1 to +5</td><td>1.0mV (1/4000)</td></tr><tr><td>-10 to +10</td><td>5.0mV (1/4000)</td></tr><tr><td>-5 to +5</td><td>2.5mV (1/4000)</td></tr><tr><td rowspan="6">Current (mA)</td><td>0 to +20</td><td>10μA (1/2000)</td><td>0 to 2000 -2000 to 0</td></tr><tr><td>0 to +20</td><td>5μA (1/4000)</td><td rowspan="2">0 to 4000 -2000 to 2000</td></tr><tr><td>+4 to +20</td><td>4μA (1/4000)</td></tr><tr><td>-20 to +20</td><td>20μA (1/2000)</td><td>1000 to 3000 -1000 to 1000</td></tr><tr><td>-20 to +20</td><td>10μA (1/2000)</td><td>0 to 4000 -2000 to 2000</td></tr></tbody></table>	Input	Analog input range	Maximum resolution	Digital output value	Voltage (V)	0 to +10	2.5mV (1/4000)	0 to 4000 -2000 to 2000	0 to +5	1.25mV (1/4000)	+1 to +5	1.0mV (1/4000)	-10 to +10	5.0mV (1/4000)	-5 to +5	2.5mV (1/4000)	Current (mA)	0 to +20	10μA (1/2000)	0 to 2000 -2000 to 0	0 to +20	5μA (1/4000)	0 to 4000 -2000 to 2000	+4 to +20	4μA (1/4000)	-20 to +20	20μA (1/2000)	1000 to 3000 -1000 to 1000	-20 to +20	10μA (1/2000)	0 to 4000 -2000 to 2000
Input	Analog input range	Maximum resolution	Digital output value																													
Voltage (V)	0 to +10	2.5mV (1/4000)	0 to 4000 -2000 to 2000																													
	0 to +5	1.25mV (1/4000)																														
	+1 to +5	1.0mV (1/4000)																														
	-10 to +10	5.0mV (1/4000)																														
	-5 to +5	2.5mV (1/4000)																														
Current (mA)	0 to +20	10μA (1/2000)	0 to 2000 -2000 to 0																													
	0 to +20	5μA (1/4000)	0 to 4000 -2000 to 2000																													
	+4 to +20	4μA (1/4000)																														
	-20 to +20	20μA (1/2000)	1000 to 3000 -1000 to 1000																													
	-20 to +20	10μA (1/2000)	0 to 4000 -2000 to 2000																													

#### [Explanation of screen]

The page showing the corresponding special function module information from the "Guide for Replacing from MELSEC-A/QnA (large) to Q/L series (Intelligent Function Module Section)" is displayed.

### 7.3.11 Printing

Use the Internet Explorer's print function to print each screen.

# 8. Using the refresh program generation tool for MELSECNET (II) local station

## 8.1 Preparing to use the tool

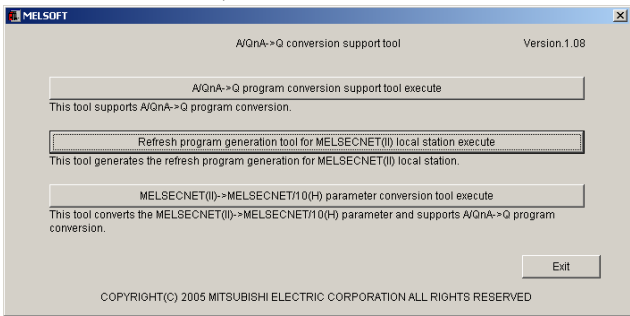
The following information must be decided and input in the tool.

Table 8-1 Explanation of information input in tool

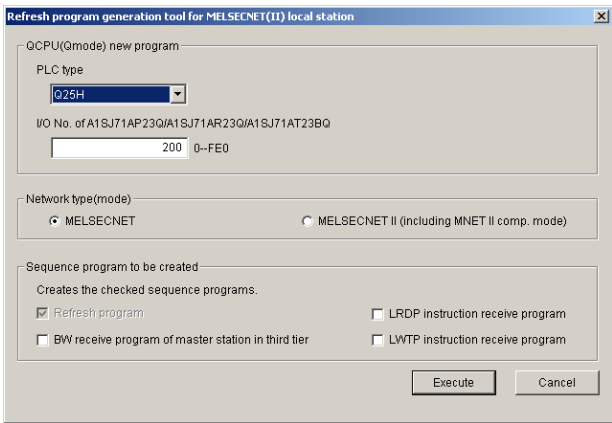
No.	Input information	Explanation of input information
1	PLC type	Designate the type of QCPU PLC using the module (A1SJ71AP23Q, etc.) (Refer to section 8.3)
2	Module start I/O	Designate the start I/O address of the module (A1SJ71AP23Q, etc.) (Refer to section 8.3)
3	Network type	Select MELSECNET or MELSECNET II (including combination mode) (Refer to section 8.3)
4	Type of generated program	Select the sequence program generated with the tool (Refer to section 8.3)
5	Refresh start device	Designate the device to be refreshed (Refer to section 8.4)

## 8.2 Flow of general operations

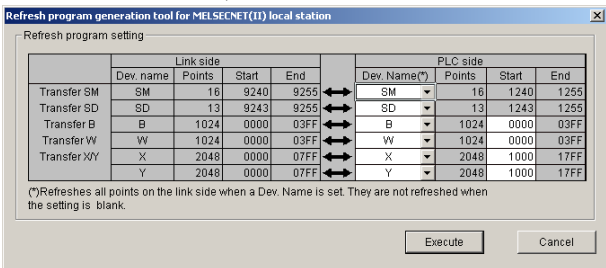
1) Starting the tool (Refer to section 5.4)



2) Tool selection screen.  
Refer to section 5.5 for details.



3) Refresh program generation tool for MELSECNET (II) local station screen  
Select the PLC type, module start I/O, network type, and sequence program to be created.  
Refer to section 8.3 for details.



4) Refresh program setting screen  
Set the device and start to be refreshed.  
Refer to section 8.4 for details.

5) Generated project confirmation screen  
Check the path of the generated project.  
Refer to section 8.5 for details.



## 8.3 Refresh program generation tool for MELSECNET (II) local station start-up screen

### [Outline]

The PLC type, module start I/O, network type and program to be generated are selected on this screen. The selected program is generated as one program.

### [Example of screen]

### [Explanation of screen]

No.	Item	Display/set details
1)	PLC type	Select the PLC type of the generated QCPU (Q mode) program. The following compatible CPUs can be selected. Q00UJ, Q00U, Q01U, Q02(H), Q02U, Q03UD, Q03UDE, Q04UDH, Q04UDEH, Q06H, Q06UDH, Q06UDEH, Q10UDH, 10UDEH, Q12H, Q13UDH, Q13UDEH, Q20UDH, Q20UDEH, Q25H, Q26UDH, Q26UDEH
2)	I/O No.	Input the I/O No. of the mounted module. The input range is 0 to FE0.
3)	Network type (mode)	Select the existing network type which is the target.
4)	Sequence program to be created	Select the following program to be generated with the refresh program.
	LRDP instruction receive program	The Q series local station device read request from the master station is received and processed.
	LWTP instruction receive program	The Q series local station device write request from the master station is received and processed.
	BW receive program of master station in third tier	If the own station is a local station in third tier, data from the master station in second tier is received.
5)	[Execute] button	The Refresh program setting screen will open.
6)	[Cancel] button	The set details are aborted and the dialog is closed.

### [Special notes]

- When generating multiple programs for multiple modules having the same CPU type and same I/O No., move the project or save another name project by GX Developer.  
The generated project name and program name are determined by the PLC type and module I/O No. set above.  
The project is saved in the tool's installation folder (default "C:\MELSEC\AQConvSupport\").  
With the above screen example, the project name and program name are generated as "Q25H\_200".



The generated project name and save folder can be confirmed on the "Generated Project Confirmation screen" which appears last.

- 2) GX Developer Version 8.95Z or higher is required to specify Universal Model QCPU as PLC type.

## 8.4 Refresh program setting screen

### [Outline]

The CPU side refresh device and start No. are set on this screen.

### [Example of screen]

Refresh program generation tool for MELSECNET(II) local station

Refresh program setting

	Link side					PLC side			
	Dev. name	Points	Start	End		Dev. Name(*)	Points	Start	End
Transfer SM	SM	16	9240	9255	↔	SM	16	240	1255
Transfer SD	SD	13	9243	9255	↔	SD	13	1243	1255
Transfer B	B	1024	0000	03FF	↔	B	1024	0000	03FF
Transfer W	W	1024	0000	03FF	↔	W	1024	0000	03FF
Transfer X/Y	X	2048	0000	07FF	↔	X	2048	1000	17FF
	Y	2048	0000	07FF	↔	Y	2048	1000	17FF

(\*)Refreshes all points on the link side when a Dev. Name is set. They are not refreshed when the setting is blank.

Execute Cancel

### [Explanation of screen]

No.	Item	Display/set details														
1)	Dev. name	<div>Select the device to be refreshed on the CPU side. The following devices can be selected.</div> <table><tr><th>Link side device name</th><th>List of CPU side device names</th></tr><tr><td>SM</td><td>Blank SB SW SM</td></tr><tr><td>SD</td><td>Blank SB SW SD</td></tr><tr><td>B</td><td>Blank X Y M L B T C ST D W R ZR</td></tr><tr><td>W</td><td>Blank T C ST D W R ZR</td></tr><tr><td>X</td><td>Blank X Y M L B T C ST D W R ZR</td></tr><tr><td>Y</td><td>Blank X Y M L B T C ST D W R ZR</td></tr></table> <div>R or ZR device cannot be specified for Q00UJ. When not refreshing, leave the setting blank.</div>	Link side device name	List of CPU side device names	SM	Blank SB SW SM	SD	Blank SB SW SD	B	Blank X Y M L B T C ST D W R ZR	W	Blank T C ST D W R ZR	X	Blank X Y M L B T C ST D W R ZR	Y	Blank X Y M L B T C ST D W R ZR
Link side device name	List of CPU side device names															
SM	Blank SB SW SM															
SD	Blank SB SW SD															
B	Blank X Y M L B T C ST D W R ZR															
W	Blank T C ST D W R ZR															
X	Blank X Y M L B T C ST D W R ZR															
Y	Blank X Y M L B T C ST D W R ZR															
2)	Start	<div>Input the start device No. on the CPU side. The SM and SD device numbers are fixed.</div>														
3)	[Execute] button	<div>If there is no error, the "Generated Project Confirmation screen" will open.</div>														
4)	[Cancel] button	<div>The set details are discarded, and the "Refresh program setting" screen is closed.</div>														

### [Special notes]

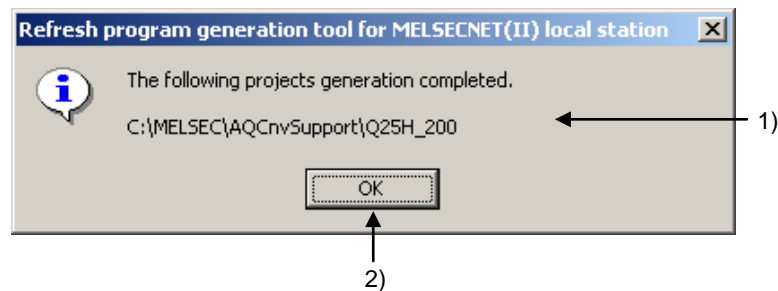
- The CPU device and start No. set with this tool must be set to the devices set with the parameters for the QCPU project which is importing the automatically generated program.
- The SM and SD start devices for refreshing a special M or special D on the link side are fixed. SB and SW can be set freely.
- The number of refresh points differs according to the network type set on the "Refresh program generation tool for MELSECNET (II) local station start-up screen".

## 8.5 Generated project confirmation screen

### [Outline]

The generated project path and project name can be confirmed with this dialog.

### [Example of screen]

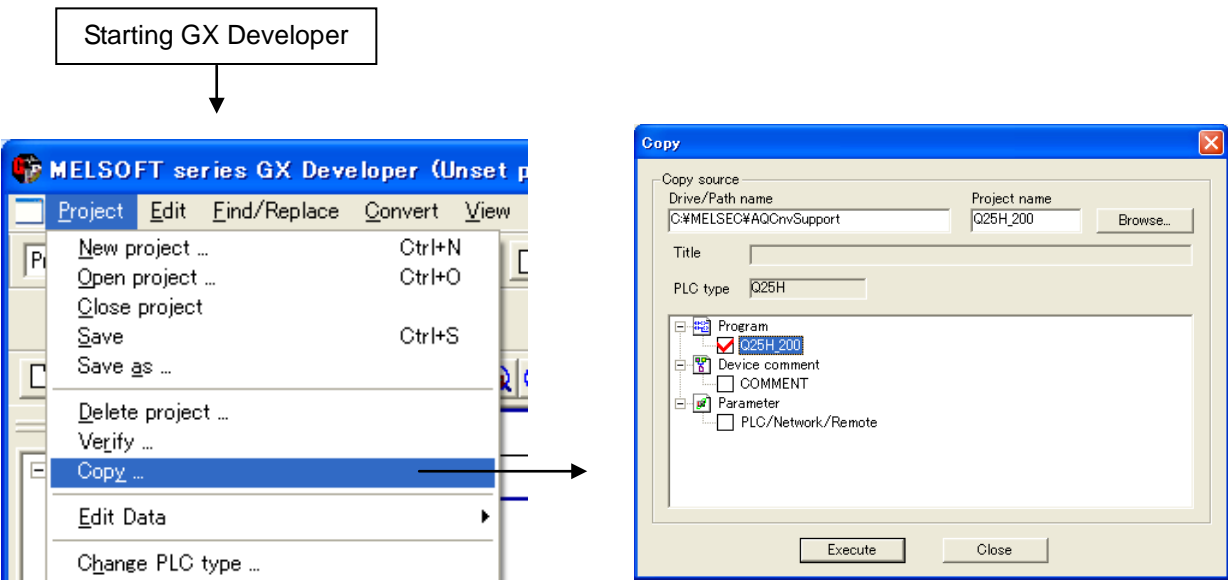


### [Explanation of screen]

No.	Item	Display/set details
1)	Path name	The generated project's save path and project name are displayed. The project name relies on the selected PLC type and I/O No.
2)	[OK] button	When the [OK] button is pressed, the "Tool selection screen" will open.

### [Special notes]

Import the generated program using the GX Developer's project copy function.  
The program can also be imported by starting up a separate GDX Developer and copying and pasting the circuit.



## 9. Program generated by refresh program generation tool for MELSECNET (II) local station

A setting example and generated program are shown below.

The setting example is shown below.

**Refresh program generation tool for MELSECNET(II) local station**

QCPU(Qmode) new program

PLC type  
Q25H

I/O No. of A1SJ71AP23Q/A1SJ71AR23Q/A1SJ71AT23BQ  
200 0--FE0

Network type(mode)  
☐ MELSECNET
 ☒ MELSECNET II (including MNET II comp. mode)

Sequence program to be created  
 Creates the checked sequence programs.
   
☒ Refresh program
 ☒ LRDP instruction receive program
   
☒ BW receive program of master station in third tier
 ☒ LWTP instruction receive program

Execute Cancel

---

**Refresh program generation tool for MELSECNET(II) local station**

Refresh program setting

	Link side					PLC side			
	Dev. name	Points	Start	End		Dev. Name(*)	Points	Start	End
Transfer SM	SM	16	9240	9255	↔	SM	16	1240	1255
Transfer SD	SD	13	9243	9255	↔	SD	13	1243	1255
Transfer B	B	1024	0000	03FF	↔	B	1024	0000	03FF
Transfer W	W	1024	0000	03FF	↔	W	1024	0000	03FF
Transfer XY	X	2048	0000	07FF	↔	X	2048	1000	17FF
	Y	2048	0000	07FF	↔	Y	2048	1000	17FF

(\*)Refreshes all points on the link side when a Dev. Name is set. They are not refreshed when the setting is blank.

Execute Cancel

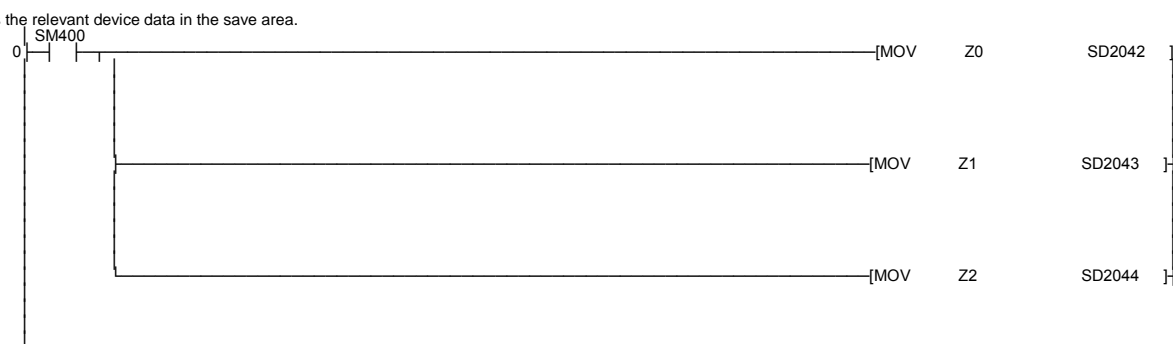
The following program which is generated is shown on the next page.

**Table 9-1 List of generated program items**

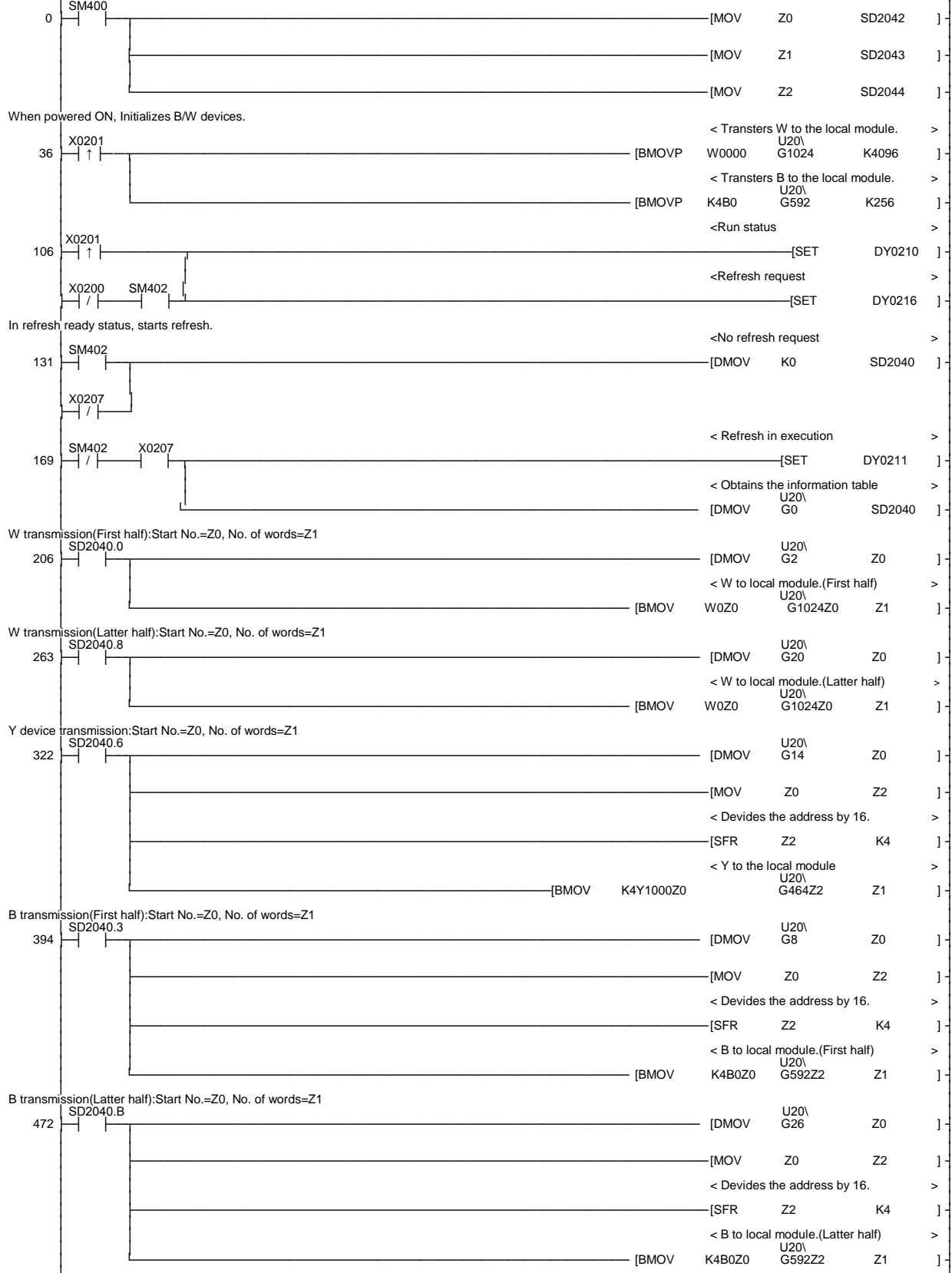
Check item	Program
Refresh program	1)
LRDP instruction receive program	2)
LWTP instruction receive program	3)
BW receive program of master station in third tier	4)
End process program	5)

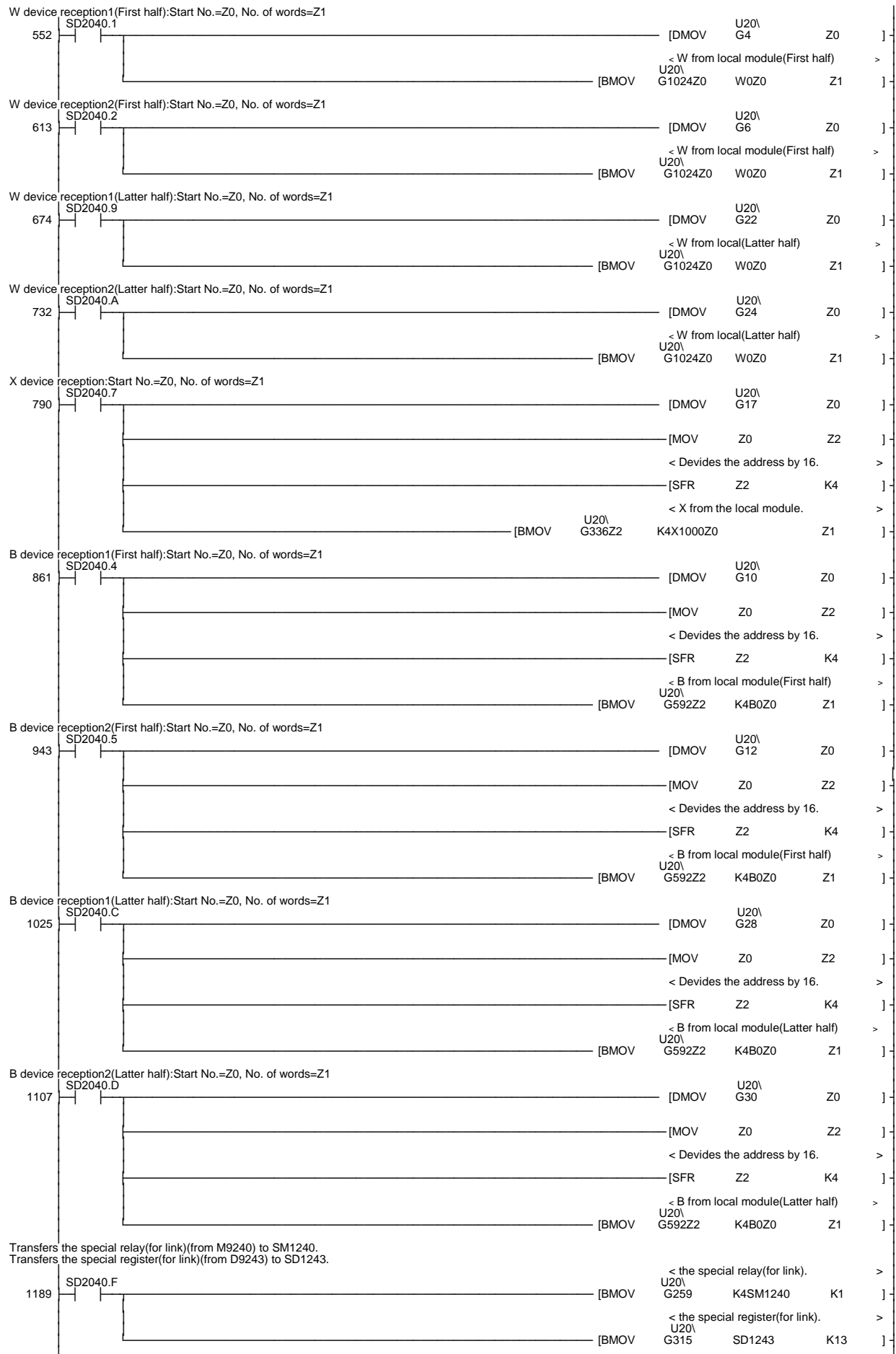
## 1) Refresh program

Saves the relevant device data in the save area.

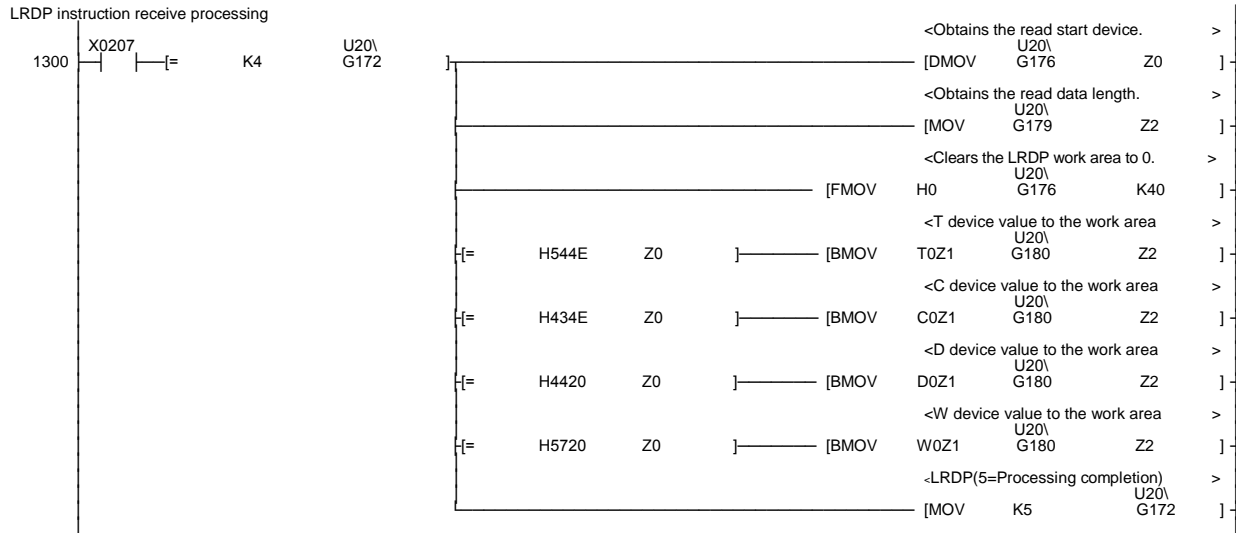


Saves the relevant device data in the save area.

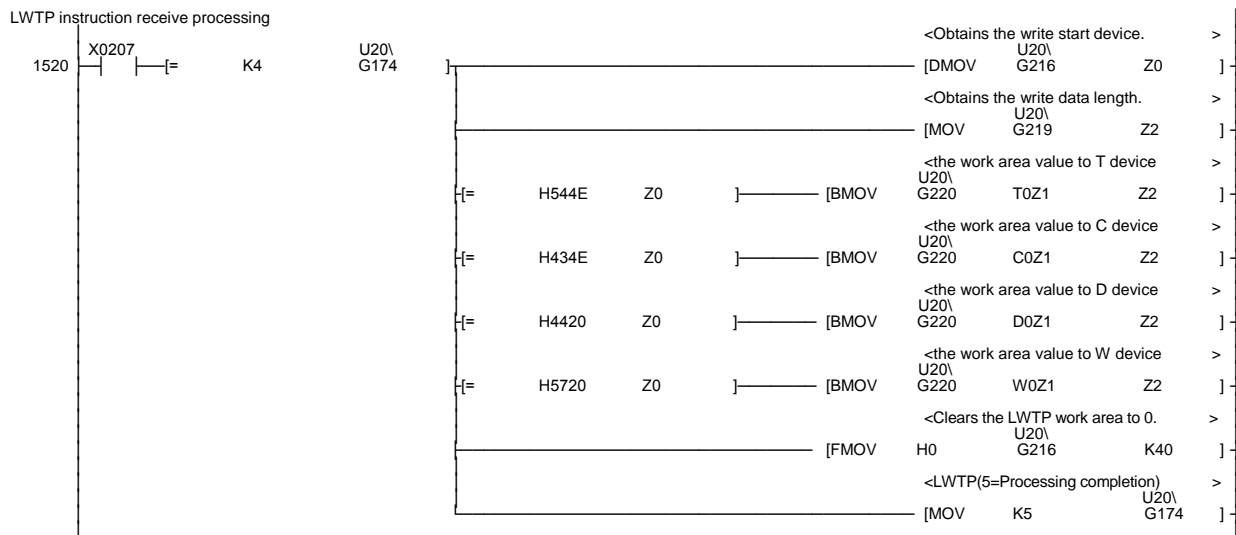




## 2) LRDP instruction receive program



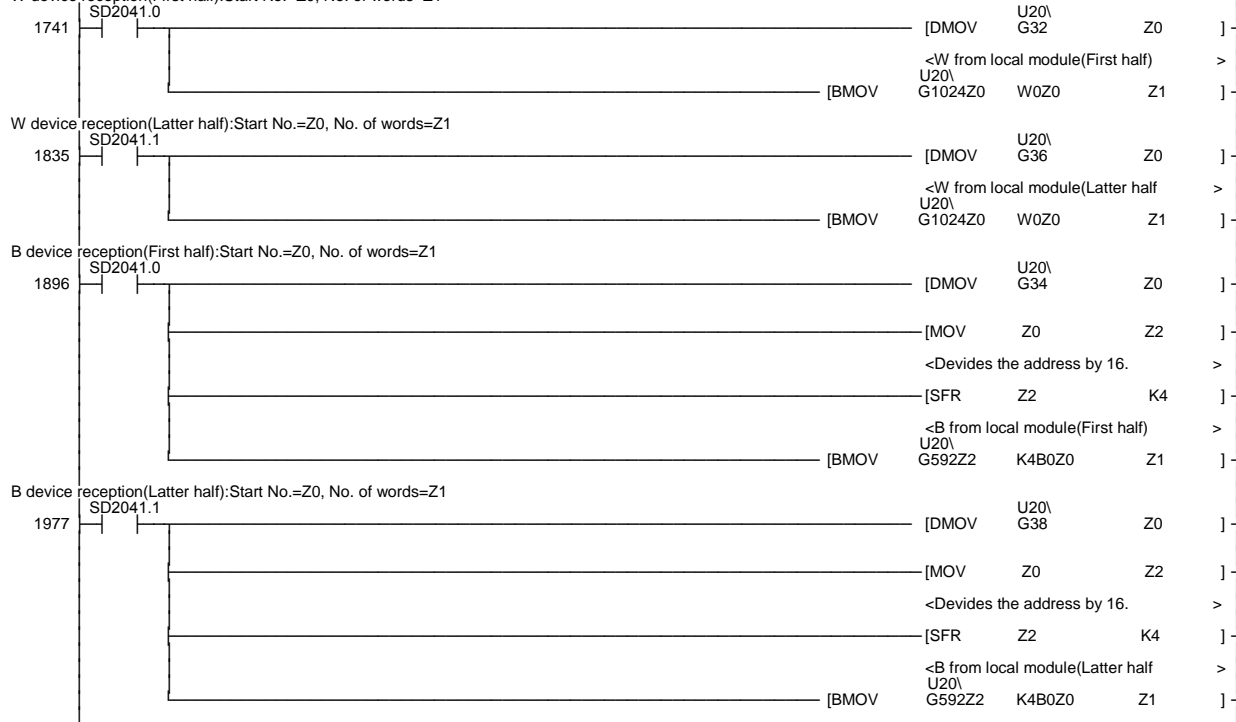
### 3) LWTP instruction receive program



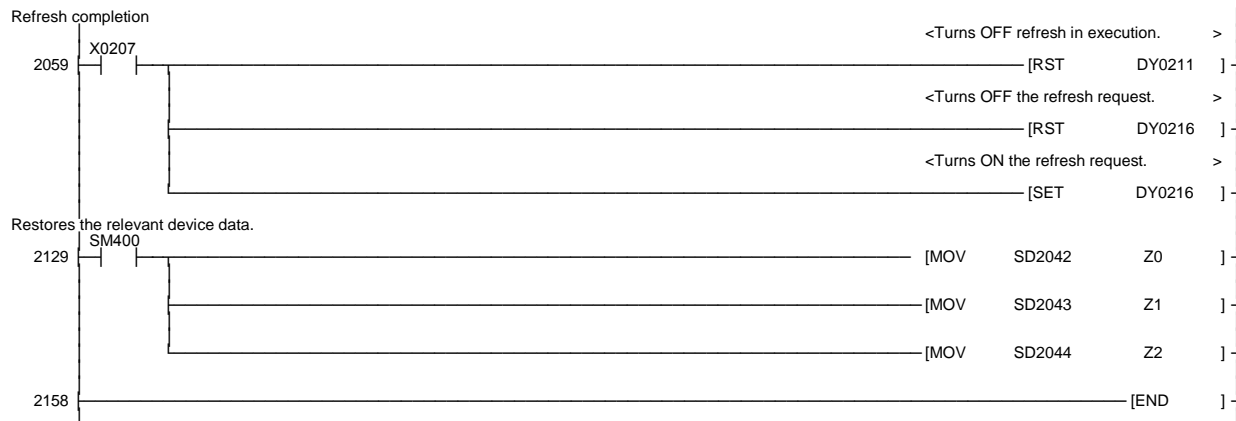


#### 4) BW receive program of master station in third tier

For a local in the third tier, receives the second-tier master.  
W device reception(First half):Start No.=Z0, No. of words=Z1



#### 5) End process program

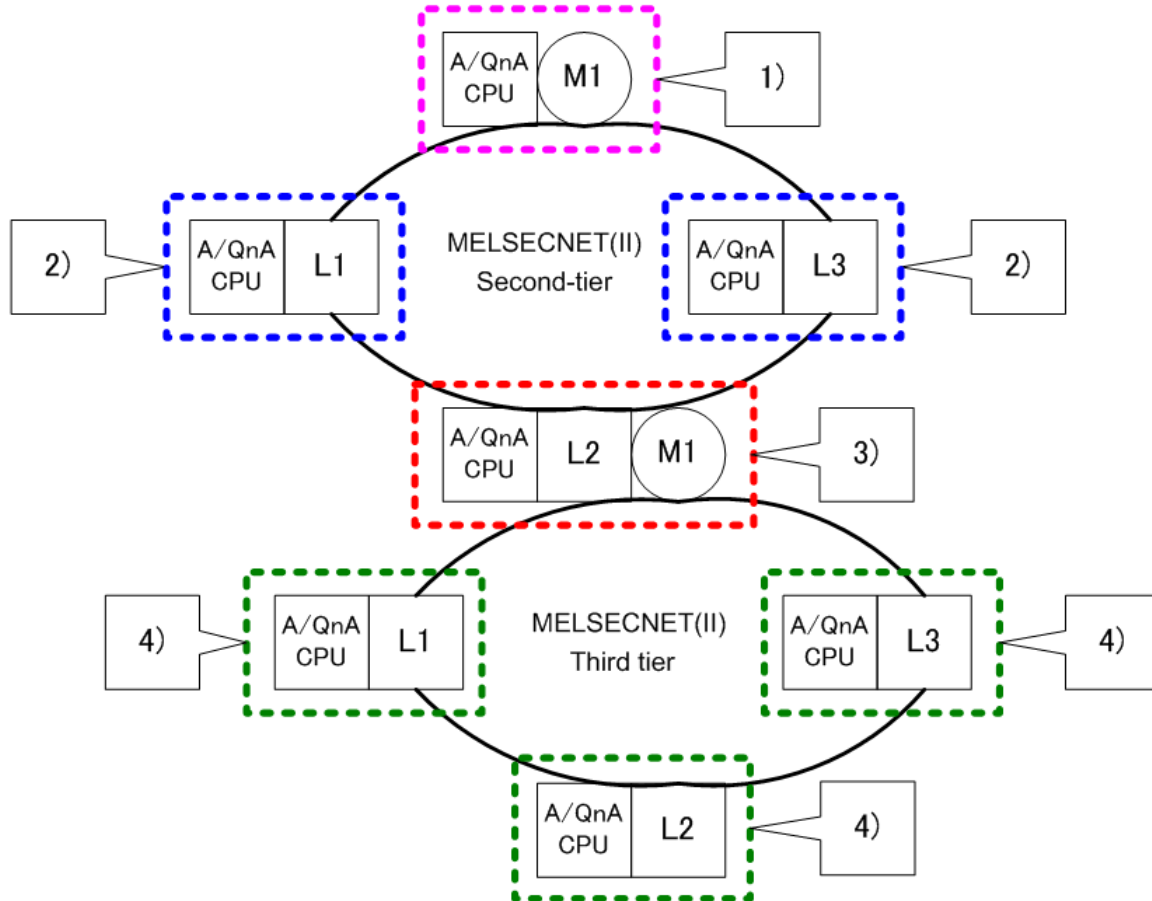


## 10. Using MELSECNET(II)->MELSECNET/10(H) parameter conversion tool

### 10.1. Preparing to use the tool

MELSECNET(II) station as replacement target source is shown below. Prepare project data of target station or the project of master station if needed (Table 10-1) as input data.

GX Developer version 8.101F is required to use this tool.



- 1): Master station in-second tier
- 2): Local station in second-tier
- 3): Master station in third tier, Relay station
- 4): Local station in third tier

Fig. 10-1 Station types (project) in MELSECNET(II) network

Table 10-1. Required/Not required of master station project for station types as conversion target.  
●: Required, -: Not required

Station type of conversion target	Project of master station in second-tier	Project of master station in third tier
Master station in-second tier	● (Conversion target station)	-
Local station in second-tier	●	-
Master station in third tier (relay station)	●	● (Conversion target station)
Local station in third tier	●	●

Target PLCs for A/QnA project set by this tool are shown by Table 10-2.  
Target PLCs for Q series project are shown by Table 10-3

Table 10-2 Target PLCs for A/QnA project

No.	Target PLC
1	A0J2HCPU
2	A1SCPU/A1SJCPU/A1SHCPU/A1SJHCPU
3	A1NCPUP21/ A1NCPUP21/ A1NCPUR21/A1NCPUP21-S3
4	A2CCPU/A2CCPUP21/A2CCPUR21/A2CCPUC24-PRF/A2CCPUC24/A2CJCPU-S3
5	A2NCPUP21/A2NCPUP21/A2NCPUR21/A2NCPUP21-S1/A2NCPUP21-S1/A2NCPUR21-S1/ A2NCPUP21-S3/A2NCPUP21-S4
6	A2SCPU/A2SHCPU
7	A3NCPUP21/A3NCPUP21/A3NCPUR21/A3NCPUP21-S3
8	A2ACPU/A2ACPUP21/A2ACPUR21/A2ACPU-S1/A2ACPUP21-S1/A2ACPUR21-S1/ A2ACPUP21-S3/A2ACPUP21-S4
9	A3ACPU/A3ACPUP21/A3ACPUR21/A3ACPUP21-S3
10	A2UCPU/A2UCPU-S1/ A2USCPU/A2USCPU-S1/ A2USHCPU-S1
11	A3UCPU/ A4UCPU
12	Q2ACPU/ Q2ASCPU/Q2ASHCPU/ Q2ACPU-S1/ Q2ASCPU-S1/Q2ASHCPU-S1/ Q3ACPU/Q4ACPU/Q4ARCPU

(Caution) A1FXCPU is not included because it doesn't have network parameter

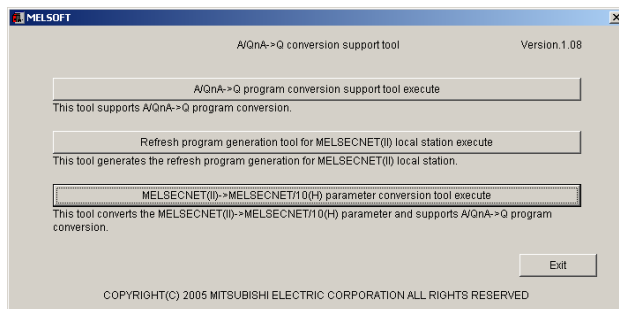
Table 10-3 Target PLCs for Q series project

No.	Target PLC
1	Q02(H)CPU/ Q06HCPU/ Q12HCPU/ Q25HCPU/
2	Q02PHCPU/ Q06PHCPU/ Q12PHCPU/ Q25PHCPU/
3	Q00UJCPU/ Q00UCPU/ Q01UCPU/ Q02UCPU/
4	Q03UDCPU/ Q04UDHCPU/ Q06UDHCPU/ Q10UDHCPU/ Q13UDHCPU/ Q20UDHCPU/ Q26UDHCPU/
5	Q03UDECPU/ Q04UDEHCPU/ Q06UDEHCPU/ Q10UDEHCPU/ Q13UDEHCPU/ Q20UDEHCPU/ Q26UDEHCPU/

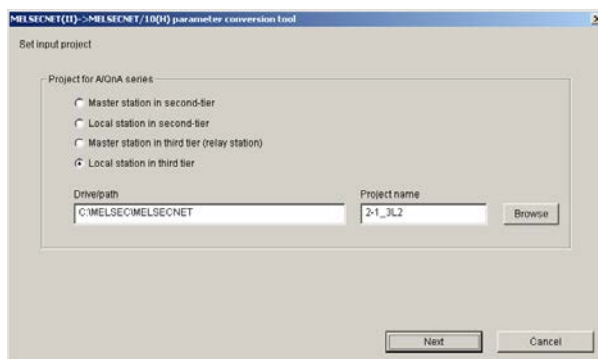
(Caution) Basic model (Q00J, Q00, Q01) and PRH (Q12PRH, Q25PRH) are not included.

## 10.2. Flow of general operations

### 1) Starting the tool (Refer to section 5.4)

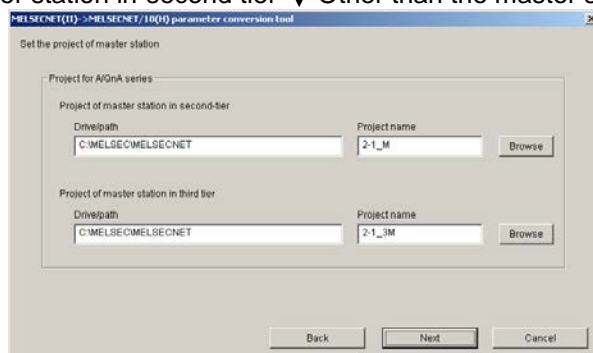


2) Tool selection screen.  
Refer to section 5.5 for details.

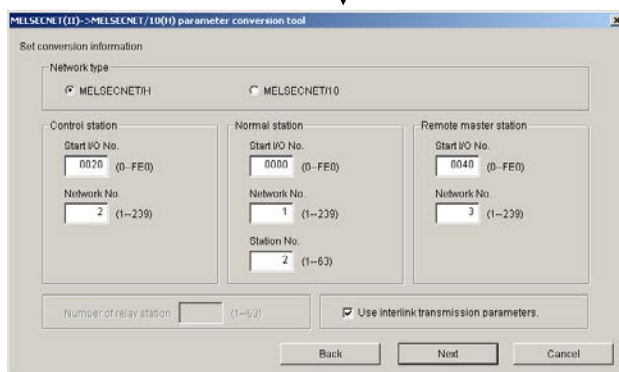


3) Input project setting screen  
Set station type and project of conversion target.  
Refer to section 10.3 for details.

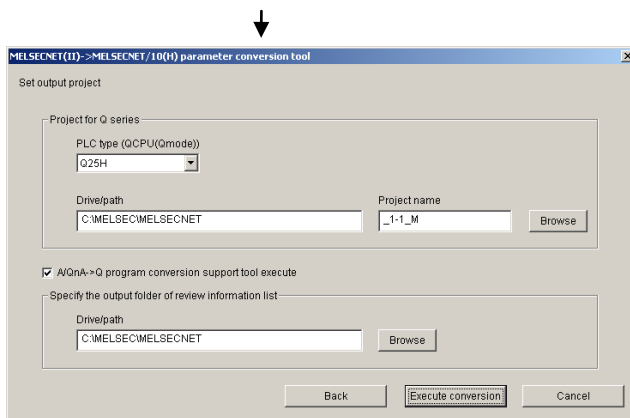
Master station in second tier ↓ Other than the master station in second tier



4) Master station project setting screen  
Set MELSECNET(II) master station project as information for converting the target project.  
Refer to section 10.4 for details.



5) Conversion information setting screen  
Set required information (other than project information) for conversion.  
Refer to section 10.5 for details.



6) Output project setting screen  
Set output project setting.  
Set whether to execute A/QnA->Q  
program conversion support tool or not.  
Refer to section 10.6 for details.

Execute conversion. Start the AQ conversion support tool based on setting.

### 10.3. Input project setting screen

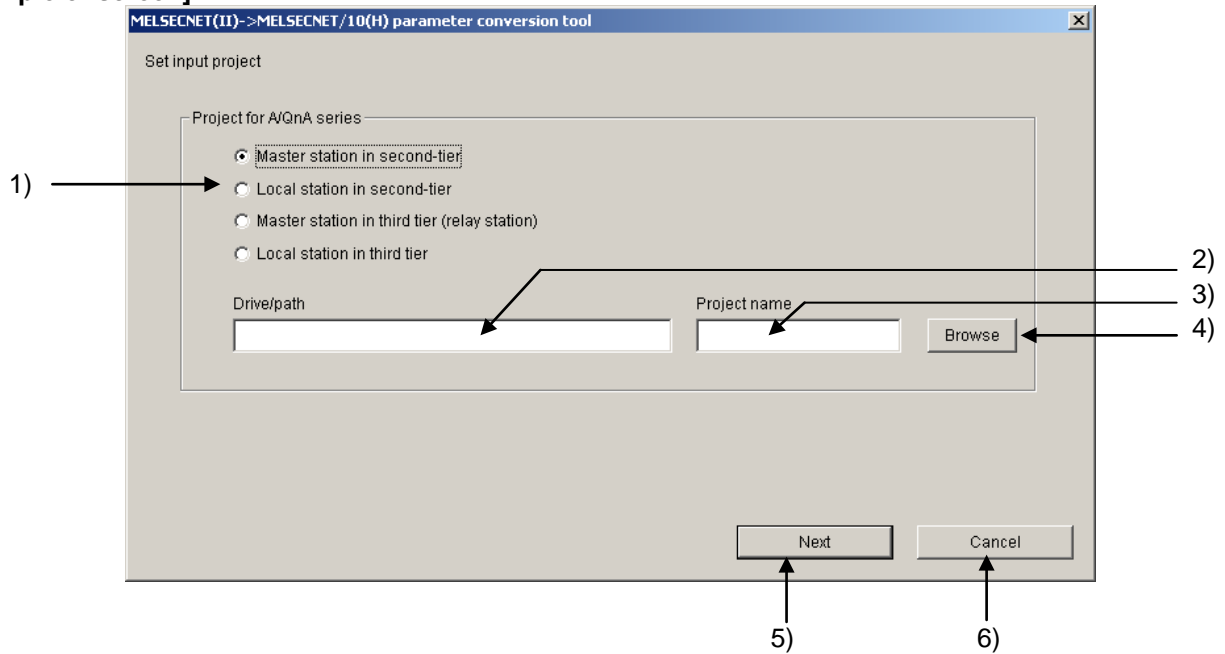
#### [Outline]

Station type and project of conversion target MELSECNET (II) for A/QnA series are set on this screen.

#### [Operation]

Set station type and project of conversion target MELSECNET (II) for A/QnA series.

#### [Example of screen]



## [Explanation of screen]

No.	Item	Display/set details
1)	Station type setting for MELSECNET (II)	Select a conversion target station type from followings. <ul style="list-style-type: none"> <li>• Master station in-second tier</li> <li>• Local station in-second tier</li> <li>• Master station in third tier (relay station)</li> <li>• Local station in third tier</li> </ul>
2)	Project for A/QnA series "Drive/path" setting field	Set the drive and path in which the project for MELSECNET (II) A/QnA series is saved.
3)	Project for A/QnA series "Project name" setting field	Set the project name in which the project for MELSECNET (II) A/QnA series is saved.
4)	Project for A/QnA series "Browse" button	The "Open project" dialog will open, so designate the project for MELSECNET (II) A/QnA series. The drive/path and project name for A/QnA series will be set according to the selected project.
5)	[Next] button	When the [Next] button is pressed, the set details are checked. If no problem is found, the "Input project setting" screen will close, and next screen will open. (Next screen) Master station in second-tier: "Conversion information setting" screen Other than the master station in second-tier: "Master station project setting" screen
6)	[Cancel] button	When the [Cancel] button is pressed, the "Input project setting" screen will close, and the "Tool Selection screen" will open.

## [Special notes]

- A network folder which starts with ¥¥ cannot be designated for drive/path.
- Do not change the project set by this screen from GX Developer or others, while this tool is running.

## 10.4. Master station project setting screen

### [Outline]

MELSECNET(II) master station project is set on this screen as information for converting the target project.

\* This screen will not be shown if the target project is in master station second-tier.

### [Operation]

Set MELSECNET(II) master station project as information for converting the target project.

Masked item is not required.

### [Example of screen]

The screenshot shows a window titled "MELSECNET(II) -> MELSECNET/10(H) parameter conversion tool". The main area is titled "Set the project of master station". Inside, there is a section "Project for A/QnA series" which contains two sub-sections: "Project of master station in second-tier" and "Project of master station in third tier". Each sub-section has a "Drive/path" text box, a "Project name" text box, and a "Browse" button. Arrows point from numbered labels 1) through 9) to these elements: 1) points to the "Project of master station in second-tier" label; 2) points to the "Drive/path" text box for the second tier; 3) points to the "Browse" button for the second tier; 4) points to the "Project of master station in third tier" label; 5) points to the "Drive/path" text box for the third tier; 6) points to the "Browse" button for the third tier; 7) points to the "Back" button; 8) points to the "Next" button; and 9) points to the "Cancel" button.



### [Explanation of screen]

No.	Item	Display/set details
1)	Project of master station in second-tier "Drive/path" setting field	Set the drive and path in which the project for MELSECNET (II) project of master station in second-tier is saved.
2)	Project of master station in second-tier "Project name" setting field	Set the project name in which the project for MELSECNET (II) project of master station in second-tier is saved.
3)	Project of master station in second-tier "Browse" button	The "Open project" dialog will open, so designate the MELSECNET (II) project of master station in second-tier. The drive/path and project name for the project of master station in second-tier will be set according to the selected project
4)	Project of master station in third tier "Drive/path" setting field	Set the drive and path in which the project for MELSECNET (II) project of master station in third tier is saved.
5)	Project of master station in third tier "Project name" setting field	Set the project name in which the project for MELSECNET (II) project of master station in third tier is saved.
6)	Project of master station in third tier "Browse" button	The "Open project" dialog will open, so designate the MELSECNET (II) project of master station in third tier. The drive/path and project name for the project of master station in third tier will be set according to the selected project.
7)	[Back] button	
8)	[Next] button	When the [Next] button is pressed, the set details are checked. If no problem is found, the "Project of master station setting" screen will close, and "Conversion information setting" screen will open.
9)	[Cancel] button	When the [Cancel] button is pressed, the "Input project setting" screen will close, and the "Tool Selection screen" will open.

### [Special notes]

- A network folder which starts with \\ cannot be designated for drive/path.
- Do not change the project set by this screen, from GX Developer or others, while this tool is running.
  - Refer to the following table for the items required or not required.

Table 10-4. Required/Not required of master station project setting for station types.

●: Required, - (Masked display): Not required

Station type of input project	Project of master station in second-tier	Project of master station in second-tier
Station type of input project	●	- (Masked display)
Master station in third tier (relay station)	●	- (Masked display)
Local station in third tier	●	●

## 10.5. Conversion information setting screen

### [Outline]

Required information (other than project information) is set on this screen.

### [Operation]

Set required information (other than project information) for conversion.

(Required information)

- Network type
- Start I/O No.
- Network No.
- Station No.
- Use interlink transmission parameters or not

Masked item is not required.

### [Example of screen]

The screenshot displays the 'MELSECNET(II)->MELSECNET/10(H) parameter conversion tool' window. The title bar includes a close button. The main area is titled 'Set conversion information' and contains three columns of settings: 'Control station', 'Normal station', and 'Remote master station'. Each column has a 'Start I/O No.' field (range 0--FE0) and a 'Network No.' field (range 1--239). The 'Normal station' column also has a 'Station No.' field (range 1--63). Below these columns is a 'Number of relay station' field (range 1--63) and a checkbox labeled 'Use interlink transmission parameters.' which is checked. At the bottom are 'Back', 'Next', and 'Cancel' buttons. Numbered arrows (1-13) point to specific elements: 1) MELSECNET/H radio button, 2) Control station Start I/O No. field, 3) Control station Network No. field (value 2), 4) Normal station Start I/O No. field, 5) Normal station Network No. field (value 1), 6) Normal station Station No. field, 7) Remote master station Start I/O No. field, 8) Remote master station Network No. field (value 3), 9) Number of relay station field, 10) Use interlink transmission parameters checkbox, 11) Back button, 12) Next button, and 13) Cancel button.

Field	Value	Range
Network type	MELSECNET/H	MELSECNET/H or MELSECNET/10
Control station Start I/O No.		0--FE0
Control station Network No.	2	1--239
Normal station Start I/O No.		0--FE0
Normal station Network No.	1	1--239
Normal station Station No.		1--63
Remote master station Start I/O No.		0--FE0
Remote master station Network No.	3	1--239
Number of relay station		1--63
Use interlink transmission parameters	Checked	

## [Explanation of screen]

No.	Item	Display/set details
1)	"Network type" radio buttons	Select the network type after conversion •MELSECNET/H •MELSECNET/10
2)	Control station "Start I/O No." setting field	Set the start I/O No. in hexadecimal for control station (PLC network) after conversion. (Refer to Table 2-3)
3)	Control station "Network No." setting field	Set the network No. for control station (PLC network) after conversion. (Refer to Table 2-3)
4)	Normal station "Start I/O No." setting field	Set the start I/O No. in hexadecimal for normal station (PLC network) after conversion. (Refer to Table 2-3)
5)	Normal station "Network No.." setting field	Set the network No. for normal station (PLC network) after conversion. (Refer to Table 2-3)
6)	Normal station "Station No." setting field	Set the station No. for normal station (PLC network) after conversion. (Refer to Table 2-3)
7)	Remote master station "Start I/O No." setting field	Set the start I/O No. in hexadecimal for remote master station (PLC network) after conversion. (Refer to Table 2-3)
8)	Remote master station "Network No." setting field	Set the network No. for remote master station (remote network). (Refer to Table 2-3)
9)	"Number of relay station" setting field	Set the number of relay station
10)	"Use interlink transmission parameters" check box	"Use interlink transmission parameters" check box
11)	[Back] button	When the [Back] button is pressed, previous screen will open. (Previous screen) One of the following screen will open based on the station type set in "Input project setting" Master station in second-tier: "Input project setting" screen Other than the master station in second-tier: "Master station project setting" screen
12)	[Next] button	When the [Next] button is pressed, the set details are checked. If no problem is found, the "Conversion information setting" screen will close, and the "Output project setting" screen will open.
13)	[Cancel] button	When the [Cancel] button is pressed, the "Conversion information setting" screen will close, and the "Tool Selection screen" will open.

## [Special notes]

- Refer to the following table for the items required or not required.

Table 10-5. Required/Not required of each item for station types.

•: Required, - (Masked display): Not required

Station type of input project	Control station	Normal station	Remote master station	Number of relay station	Use interlink transmission parameters
Master station in-second tier	• (Note 1)	- (Masked display)	• (Note 3)	- (Masked display)	- (Masked display)
Local station in-second tier	- (Masked display)	•	- (Masked display)	- (Masked display)	- (Masked display)
Master station in third tier (relay station)	• (Note 1)	• (Note 2)	• (Note 3)	- (Masked display)	• (Note 1)
Local station in third tier	- (Masked display)	•	- (Masked display)	• (Note 2)	- (Masked display)

Note 1: This item will be masked when remote station only used.

Note 2: Set the information for the local station in second-tier.

Note 3: This item will be masked when no remote station is used.

## 10.6. Output project setting screen.

### [Outline]

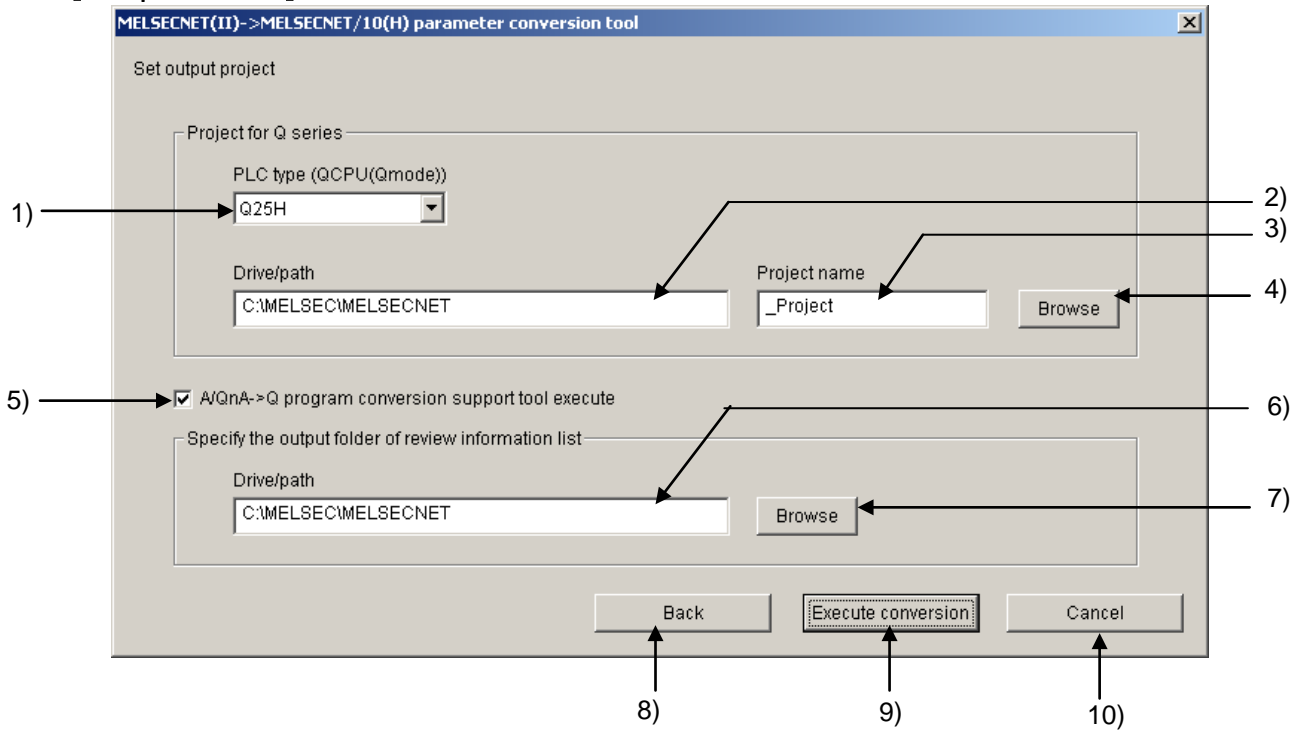
Output project is set on this screen.

### [Operation]

Set output project setting.

Set whether to execute A/QnA->Q program conversion support tool or not.

### [Example of screen]



## [Explanation of screen]

No.	Item	Display/set details
1)	"PLC type (QCPU(Qmode))" combo box	Set PLC type for the output project.
2)	Project for Q series "Drive/path" setting field	Set the drive and path to save Q series output project.
3)	Project for Q series "Project name" setting field	Set the project name to save Q series output project.
4)	Project for Q series "Browse" button	The "Open project" dialog will open, so designate the Q series output project. The drive/path and project name for Q series output project will be set according to the selected project.
5)	"A/QnA→Q program conversion support tool execute" check box	Set whether to execute A/QnA→Q program conversion support tool or not. When it is checked, the program status of output project will be the one after execution of A/QnA→Q program conversion support tool.
6)	"Drive/path" setting field to specify the output folder of review information list	Set the drive and path to save "Review information list" output by A/QnA→Q program conversion support tool.
7)	"Browse" button to specify the output folder of review information list	The "Browse folders" dialog will open, so designate the folder to which to save the "Review information list" output by A/QnA→Q program conversion support tool. The drive/path to which the "Review information list" output by A/QnA→Q program conversion support tool is saved is set according to the selected folder.
8)	[Back] button	When the [Back] button is pressed, the "Conversion information setting" screen will open.
9)	[Execute conversion] button	Execute conversion. When A/QnA→Q program conversion support tool is used, setting screen for the tool will be displayed after conversion.
10)	[Cancel] button	When the [Cancel] button is pressed, the "Output project setting" screen will close, and the "Tool Selection screen" will open.

## 11. Restrictions

### 11.1 AQ conversion support tool

- 1) This tool does not support SFC programs. (Refer to Chapter 3.)
- 2) This tool does not support label projects. (Refer to Chapter 3.)
- 3) If Internet Explorer is not installed, the review information list will not be displayed. (Refer to Chapter 4.)
- 4) If Internet Explorer is not designated as the default browser, the designated browser will start up when the analyzed review information list appears. The default browser must be set to Internet Explorer. (Refer to Chapter 4.)
- 5) If the review information list is displayed with Windows XP SP2, the Internet Explorer security warning may appear. In this case, execution of the active contents must be enabled with the Internet Explorer security settings. (Refer to Chapter 4.)
- 6) This tool will not run if GX Developer is not installed in the personal computer. (Refer to Chapter 4.)
- 7) When using the GX Developer's PLC type change function, always check 'Convert M9000/D9000 <--> Q/QnACPU special devices' shown in the following dialog. If the conversion is executed without checking this, the special relays and special registers which could not be automatically converted cannot be detected. (Refer to section 6.1.)
- 8) Do not edit the project input in the tool after the PLC type has been changed with GX Developer. The tool output may not operate correctly if an edited project is input. (Refer to section 6.1.)
- 9) A network folder which starts with \\ cannot be designated for drive/path on the Select analyzing project screen or Specify output folder of analysis result screen. (Refer to section 6.6 and 6.8.)
- 10) The Briefcase cannot be directly designated as the destination for outputting the analysis results field project or the review information list. A folder created in the Briefcase can be designated as the output destination. (Refer to section 6.6.)
- 11) Special function modules are set on the special function module setting screen. All other modules are analyzed as 32-points modules. (Refer to section 6.4.)
- 12) If the program capacity is exceeded while filling the discrepancy information into the folder, project field with analysis results and discrepancy information list will stop just before the capacity is exceeded. (Refer to section 7.2.)
- 13) If a program is described after the END instruction in the project for Q series after PLC type change, the program after the END instruction will not be reflected onto the project filled with the analysis results. (Refer to section 7.2.)
- 14) The ladders may appear in yellow because the number of statements which can be created in the GX Developer ladder block are limited. Check with the list mode in this case. (Refer to section 7.2.)
- 15) The special relay and special register statement filling function can be used for an ACPUCPU project before PLC type change. This cannot be used with QnACPU. (Refer to section 7.2.1.)
- 16) If the instruction does not have an A dedicated instruction LEDR (ZZRRD, ZRWR, ZRRDB, ZRWRB, etc.) or even if the instruction is a dedicated A type but LEDR is not described, the instruction will not be analyzed as an A dedicated instruction. In this case, the instruction will be analyzed as an LEDA/LEDB instruction. (Refer to section 7.2.2.)
- 17) The recommended replacement module comparison table screen might not be able to be displayed, except when Acrobat Reader is version 6. In this case, please open the page number which has been described behind the module name.

## 11.2 Refresh program generation tool for MELSECNET (II) local station

- 1) This tool will not run if GX Developer is not installed in the personal computer. (Refer to Chapter 4.)
- 2) This tool can be used only when one Q series local station dedicated module is mounted. If two or more modules are mounted, the program must be added. Refer to the manual for the module. (Refer to section 3.2.)
- 3) The CPU device and start No. refreshed by this program must be set to the devices set with the parameters for the QCPU project which is importing the automatically generated program. (Refer to sections 3.2 and 8.4.)
- 4) The SM and SD start devices for refreshing a special M or special D on the link side are fixed. SB and SW can be set freely. (Refer to section 8.4.)
- 5) When generating multiple programs for multiple modules having the same CPU type and same I/O No., move the project or save another name project by GX Developer. The generated project name and program name are determined by the PLC type and module I/O No. set above.

## 11.3.Using MELSECNET (II)->MELSECNET/10(H) parameter conversion tool

- 1) MELSECNET (II) network with the total of 64 (slave) stations will not be supported for replacement. This is because the maximum connectable number for MELSECNET (II) network with the total of 64 (slave) stations are 65, but the ones for MELSECNET (II) are 64.
- 2) If parameter range assigned by MELSECNET (II) common parameters overlaps, it will not be supported for replacement.
- 3) Depending on the MELSECNET (II) network parameter setting, interlink transmission parameter or refresh parameter setting may over their upper limit during conversion. (Warning message appear, the out put project will be deleted.) In this case, please check the project setting (Whether the project specified to input project or master station project is an appropriate one or not.). If no problem is found, the project will not be supported for replacement.
- 4) In project conversion of the station served as master in third tier and relay, it will not be supported for replacement if XY assignment range overlaps between master station in third tier and relay station (of local station in second-tier).
- 5) As for the conversion of the project served as master in third tier and relay or the local station in third tier, LB or LW range assignment of master station in third tier and relay station in second-tier should be done based on the rules described in manual chapter 7 (type MELSECNET, MELSECNET/B Data Link System Reference Manual). If the project does not follow the rules, the conversion result will not be supported.

## 12. Information on tools

For more information on this tool, please contact your local Mitsubishi Electric representative.

Microsoft, Windows, Windows NT, Windows Vista are registered trademarks of Microsoft Corporation in the United States and other countries.

Adobe is a registered trademark of Adobe Systems Incorporated.

Pentium is a trademark of Intel Corporation in the United States and other countries.

All other company names and product names used in this manual are trademarks or registered trademarks of their respective companies.