Introduction

Thank you for purchasing the Mitsubishi general-purpose MELSEC series sequencer.
Read this manual and make sure you understand the functions and performance of MELSEC series sequencer thoroughly in advance to ensure correct use.
Please make this manual available to the end user.

CONTENTS

10. SETTING STATEMENTS AND NOTES

Comments are added to make the sequence program easier to understand.
Note that the A series and the FX series do not have any integrated statement or integrated note function.

10.1 Statement

A	QnA	FX
•	•	•

This section describes the statements created by the A, QnA, and FX series.
FXGP (DOS) and FXGP (WIN) call such statements "circuit statements".

	Number of Characters
Line statement	64 x n *2 lines
Peripheral statement	64 x 1 line
Integrated statement	64 x 1 line

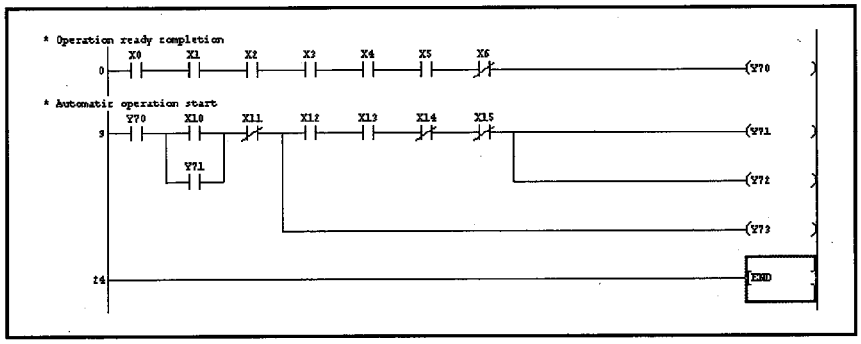
*1 : Each statement can be created within the range specified in the sequence program created.
*2 : Each note can be created within the range specified in the sequence program created.

- Integrated statement
  Since character strings are controlled as part of the sequence program, writing and reading statements to/from the PLC is automatically set.
  However, the number of steps consumed will increase in proportion to the number of characters created.
  Any space inserted in character strings will be counted as one character.
  <Number of steps consumed>

$$2+\frac{\text{Number of characters}}{2}\ \text{steps (Round off decimals.)}$$

Fixed

Example of display with integrated statements

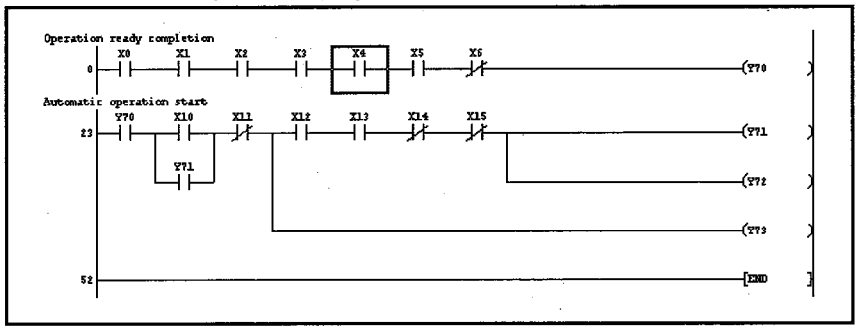


- Peripheral statement
  A peripheral statement is a character string controlled only by a peripheral device (it is writable and readable to/from the hard disk/floppy disk). When the sequence program is written to the PLC, "*" will be added to the steps with a statement.

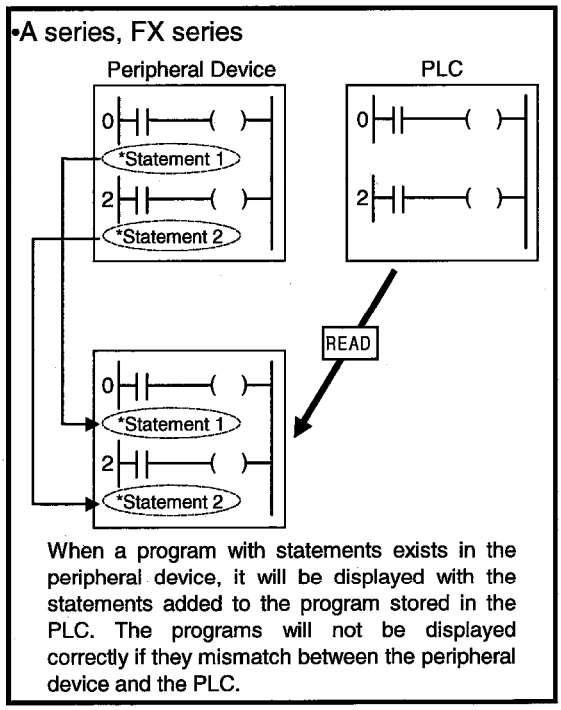
[A series, FX series]
The steps of statements will not be consumed.
However, statements will not be written to the PLC.
Also, FX series P,I statement will not be written to FXGP(DOS) and FXGP(WIN).

[QnA series]
The number of steps consumed is 1, regardless of the number of characters.
However, statements will not be written to the PLC.

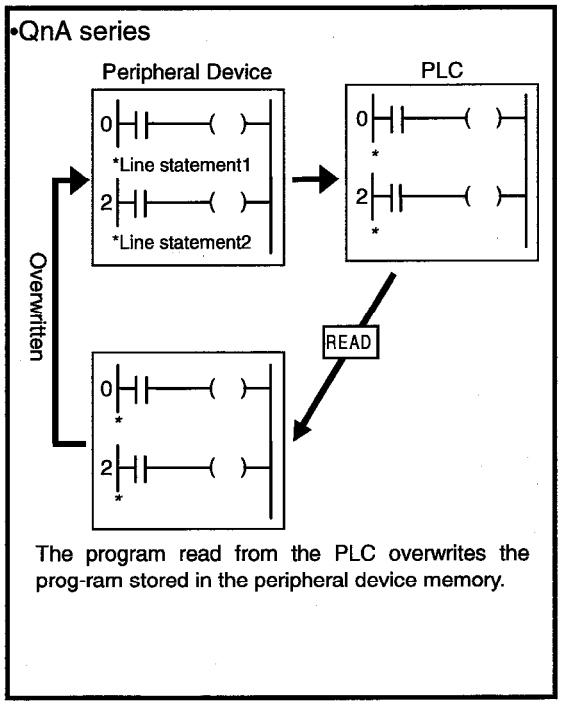
Example of displayed with peripheral statements



[Caution when reading statements from the PLC]
When overwriting a program without statements read from the PLC to the hard disk, the program stored in the hard disk will be overwritten by the program without statements. Before reading such a program, store the program (originally retained in the hard disk) in a floppy disk.
If any program is edited on a peripheral device and written during running, program mismatching may occur.



When a program with statements exists in the peripheral device, it will be displayed with the statements added to the program stored in the PLC. The programs will not be displayed correctly if they mismatch between the peripheral device and the PLC.



The program read from the PLC overwrites the prog-ram stored in the peripheral device memory.

10.2 Note

A	QnA	FX
•	•	•

This section describes the notes created by the A, QnA, and FX series.
Notes can be created for each coil and application instruction.
However, if notes are written to a peripheral device in the form of an ACPU or GPPA file, only the first note of a single circuit block will be written.
FXGP (DOS) and FXGP (WIN) call such notes as "coil comments."

	Number of Characters
Note	32 characters x 1 line *1

*1 : Each statement can be created within the range specified in the sequence program created.
*2 : Each note can be created within the range specified in the sequence program created.

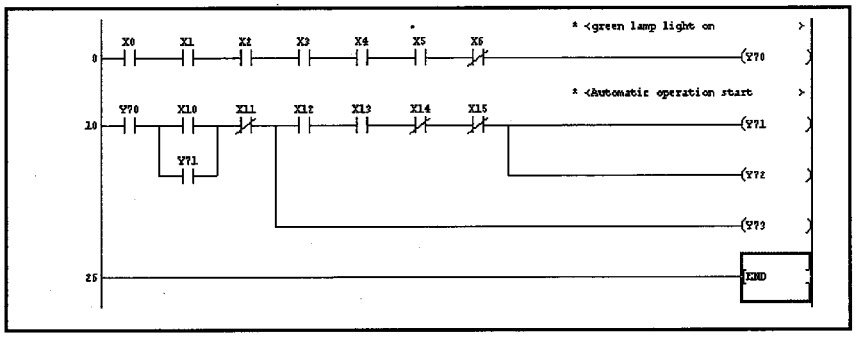
- Integrated note
  Since character strings are controlled as part of the sequence program, writing and reading notes to/from the PLC is automatically set.
  However, the number of steps consumed will increase in proportion to the number of characters created.
  Any space inserted in character strings will be counted as one character.

  <Number of steps consumed>

$$2+\frac{\text{Number of characters}}{2}\ \text{steps (Round off decimals.)}$$

  Fixed

Example of display with integrated notes

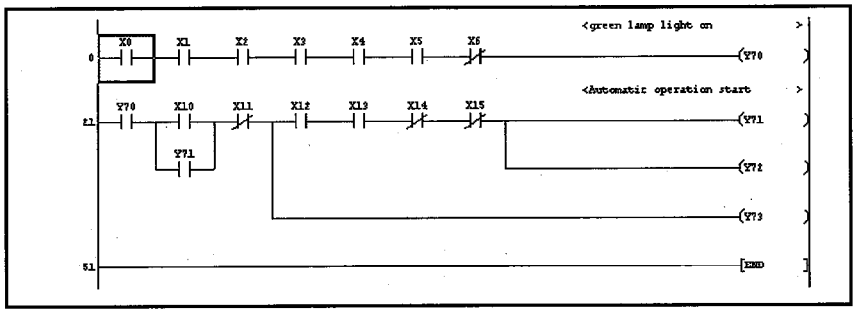


- Peripheral note
  A peripheral note is a character string controlled only by a peripheral device (it is writable and readable to/from the hard disk/floppy disk). When the sequence program is written to the PLC, "*" will be added to the steps with a statement.

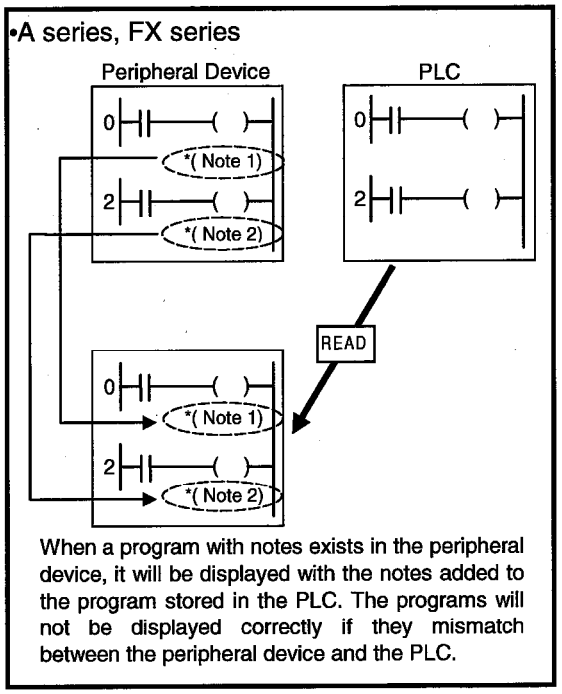
[A series, FX series]
The steps of notes will not be consumed.
However, notes will not be written to the PLC.

[QnA series]
The number of steps consumed is 1, regardless of the number of characters.
However, notes will not be written to the PLC.

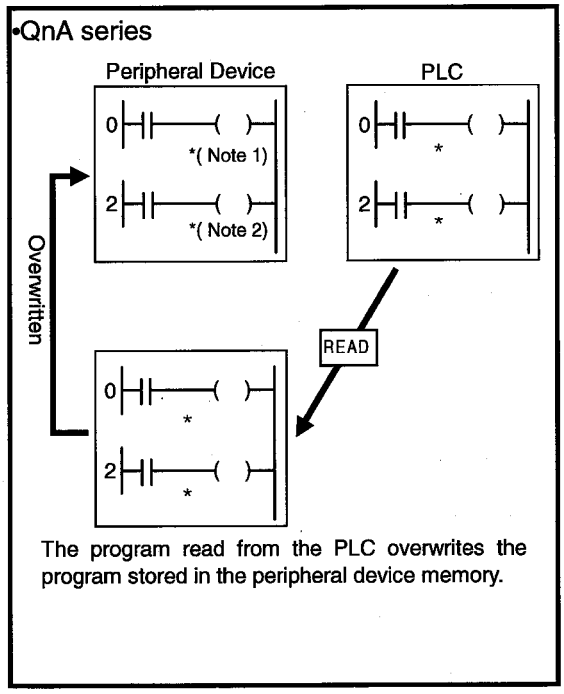
Example of display with peripheral notes



[Caution when reading notes from the PLC]
When overwriting a program without notes read from the PLC to the hard disk, the program stored in the hard disk will be overwritten by the program without notes. Before reading such a program, store the program, (originally retained on the hard disk) in a floppy disk.
If any program is edited on a peripheral device and written during running, program mismatching may occur.



When a program with notes exists in the peripheral device, it will be displayed with the notes added to the program stored in the PLC. The programs will not be displayed correctly if they mismatch between the peripheral device and the PLC.



The program read from the PLC overwrites the program stored in the peripheral device memory.

10.3 Creating and Deleting Statements

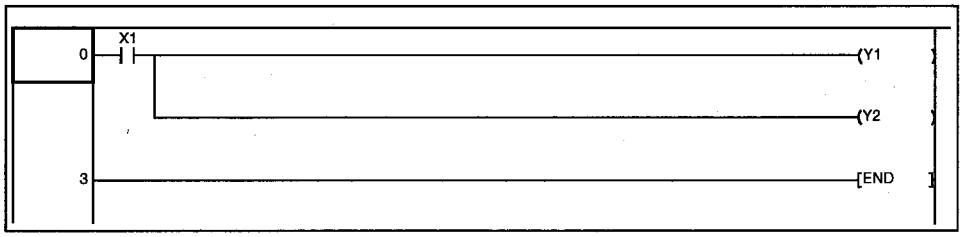
10.3.1(1) Creating statements in the circuit edit window

A	QnA	FX
•	•	•

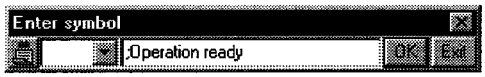
[Operating Procedure]

1. Enter Insert key to set the insert mode.

2. Move the cursor to the position shown in the following figure.



3. By entering a semicolon ";", the circuit input dialog box is displayed to enable the user to enter a statement.



To enter a P or I statement, enter a semicolon (;) after entering a P or I pointer. (Example)

PI: P, I statement → ENTER key or OK key

Enter a desired statement.

4. After entering the statement, press Enter key or click the OK button.

POINTS

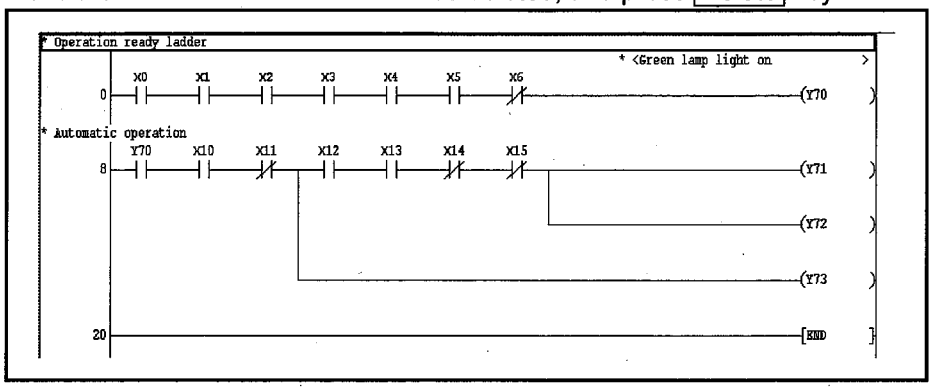
- For switching integrated statements/peripheral statements on the QnA series, see Section 6.4.9.
- For displaying statements created, see Section 6.5.2.

10.3.1(2) Deleting statements in the circuit edit window

A	QnA	FX
•	•	•

[Operating procedure]

1. Move the cursor to the statement to be deleted, and press Delete key.



2. After the statement has been deleted, convert the program.

10.3.2(1) Editing statements on the list edit window

A	QnA	FX
•	•	•

1. Move the cursor to the head of the position to which a statement will be added. (Move the cursor to the head of the circuit block of a circuit.)

2. By entering a semicolon ";", the list input dialog box is displayed.

PI: P, I statement → [ENTER] key or [OK] key

Enter a desired statement.

3. Create a statement within up to 64 characters.
Up to 255 characters can be entered in the text box.

POINTS

- Statements will be displayed in the list mode at all times (it is impossible to not display statements).
- For integrated statements and peripheral statements, see Section 10.1.

10.3.2(2) Deleting statements on the list edit window

A	QnA	FX
•	•	•

1. Move the cursor to the statement to be deleted.

```
    ;* Operation ready ladder
  0 LD      X1
  1 MOV     K0      K1M1
  6 MOV     K0      K4Y60
 11 RST     C1
 14 LD      X0
 15 AND     X4
 16 AND     X5
 17 OR      Y70
 18 ANI     X1
 19 MC      N0      Y70
 24 LD      X2
 25 MPS
 26 ANI     M1
 27 ANI     Y72
 28 SET     Y71
 29 MPP
 30 SET     M1
 31 LD      Y71
 32 ANI     X2
 33 OUT     Y73
 34 END
 35
```

2. Press [Delete] key or [Shift] + [Delete] key.

```
    ;* Operation ready ladder
  0 LD      X1
  1 MOV     K0      K1M1
  6 MOV     K0      K4Y60
 11 RST     C1
 14 LD      X0
 15 AND     X4
 16 AND     X5
 17 OR      Y70
 18 ANI     X1
 19 MC      N0      Y70
 24 LD      X2
 25 MPS
 26 ANI     M1
 27 ANI     Y72
 28 SET     Y71
 29 MPP
 30 SET     M1
 31 LD      Y71
 32 ANI     X2
 33 OUT     Y73
 34 END
 35
```

10.4 Creating and Deleting Notes

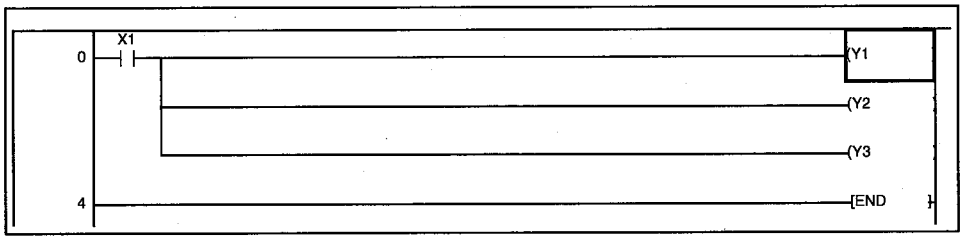
10.4.1 (1) Creating notes on the circuit edit window

A	QnA	FX
•	•	•

[Operating procedure]

1. Press Insert key to set the overwrite mode.
   Note that a circuit will be added by creating a note in the insert mode.

2. Move the cursor to the position shown in the following figure.



3. By pressing Enter key, the following dialog box is displayed.

4. Add a semicolon ";" after Y1, and enter a note.

5. After the note has been entered, press Enter key or click the OK button.

POINTS

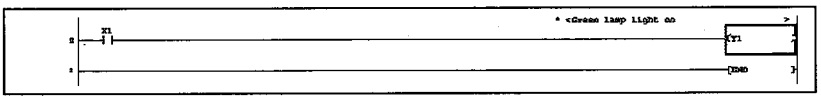
- For switching integrated notes and peripheral notes on the QnA series, see Section 6.4.9.
- For displaying notes created, see Section 6.5.3.

10.4.1 (2) Deleting notes in the circuit edit window

A	QnA	FX
•	•	•

[Operating procedure]

1. Press Insert key to set the overwrite mode.
2. Move the cursor to the note to be deleted, and press Enter key or double-click the mouse button.



3. Delete the statement Green lamp lights when operation preparations are completed. after the semicolon ";".

Delete this section.

4. After the statement has been deleted, press the Enter key or click the OK button.

10.4.2 Creating notes in the list edit window

10.4.2 (1) Creating notes in the list edit window

A	QnA	FX
•	•	•

[Operating procedure]

1. Move the cursor to the head of the position to which a note will be added. (Move the cursor to the head of the circuit block of a circuit.)

2. By entering a semicolon ";", the list input dialog box appears.

3. Create a note within up to 64 characters.
   Up to 255 characters can be entered in the text box.

POINTS

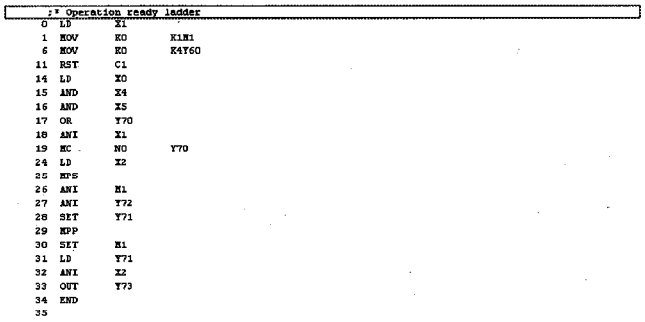
- Notes will be displayed in the list mode at all times (it is impossible to not display statements).
- For integrated notes and peripheral notes, see Section 10.2.

10.4.2 (2) Deleting notes in the list edit window

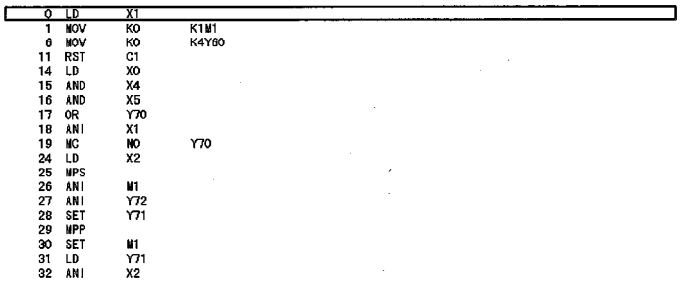
A	QnA	FX
•	•	•

[Operating Procedure]

1. Move the cursor to the note to be deleted.



2. Press Delete key or Shift + Delete key.



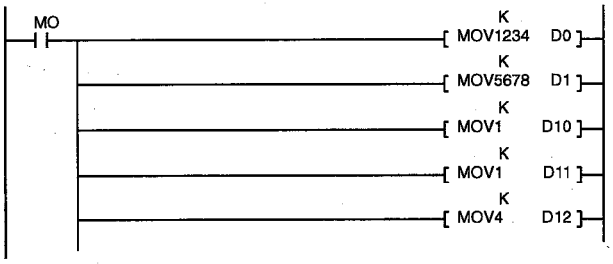
11. SETTING DEVICE MEMORY (DWR SETTING)

11.1 Device Memory

A	QnA	FX
•	•	•

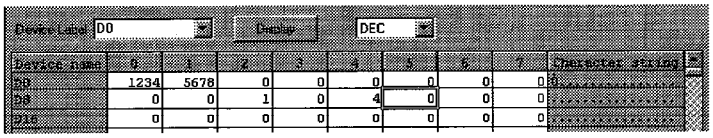
Using device memory, data (for example, data registers, link registers, and file registers) can be set online or read from the PLC and edited.
Although setting data using device memory makes it unnecessary to create a program for initial setting using the sequence program, the original data will be overwritten with the operating values which will be written when the PLC is running.
It is necessary to re-write data when the PLC mode is switched from reset to run.

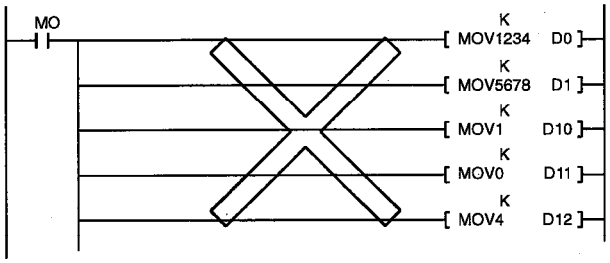
- When data is not set using device memory



The above program is required.

- When device memory is set





The above program is not required.

POINT

- On the QnA series, initial device values can be set using device memory. For initial device values, see the QnACPU Programming Manual (Fundamentals).
  For information about setting initial device values, see Chapter 12.

11.2 Device Value Input

A	QnA	FX
•	•	•

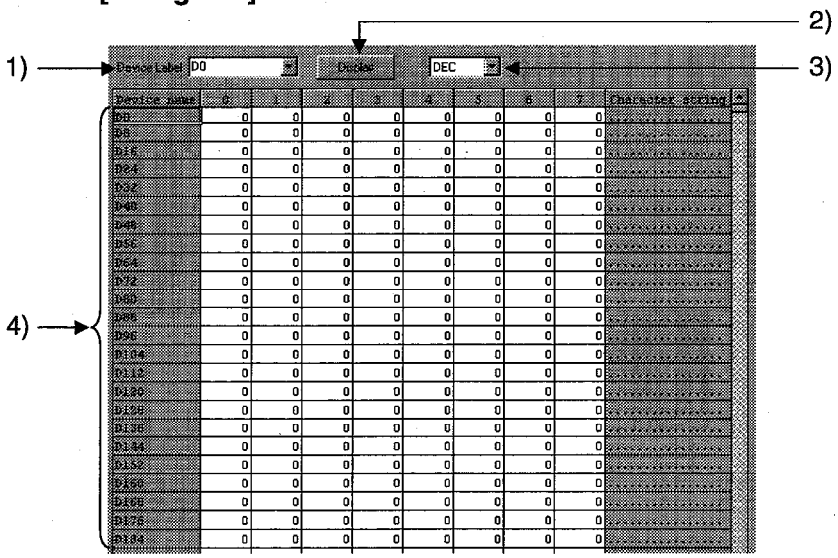
[Purpose]

Changes word device data in batch.

[Operating Procedure]

Select [Project] → [Edit data] → [New], and set the data type (device memory), the name of the data to be added, and the comment.

[Dialog Box]



[Description]

1) Device name

The types of devices that can be edited are listed below:

A series

Device Name	Symbol
Timer	T
Counter	C
Retentive timer	ST
Data register	D
Special register	SD
Link register	W
File register	R

QnA series

Device Name	Symbol
Timer	T
Counter	C
Retentive timer	ST
Data register	D
Special register	SD
Link register	W
Link special register	SW
File register	R
Through file register	ZR
I/O No. setting	U**/G***
Link No. setting	J**/W***
	J**/SW***

FX series

Device Name	Symbol	FX_0 FX_{0S}	FX_{ON}	FX_1	FX, FX_2 FX_{2C}	FX_{2N} FX_{2NC}
Data register	D	•	•	•	•	•
Special data register	D	•	•	•	•	•
File register	D	—	•	—	•	•
RAM file register	D	•	—	—	•	—

• Can be edited. —: No corresponding device.

2) Display button
Click this button after a device has been set.

3) Display switching
Switches the display form on the edit screen between decimal and hexa-decimal.

4) Edit screen
Device values can be entered within the following ranges:

Display Form	Numeric Input Range
Decimal	-32768 to 32767
Hexadecimal	0000 to FFFF

POINTS

- When setting device memory in a peripheral device
  Data can be edited or stored, irrespective of the parameter setting range.
- When writing data to the PLC
  Data will be written within the parameter setting range.

11.3 All Clear

11.3.1 Clearing all devices

A	QnA	FX
•	•	•

[Purpose]
Clears all device values for which device memory is set.

[Operating Procedure]
Display the device memory edit window, and select [Edit] → [Clear all (all clear)].

11.3.2 Clearing all display devices

A	QnA	FX
•	•	•

[Purpose]
Clears device values displayed in the window, for which device memory is set.

[Operating Procedure]
Display the device memory edit window, and select [Edit] → [Clear all (displayed devices)].

11.4 Making Fill Settings

A	QnA	FX
•	•	•

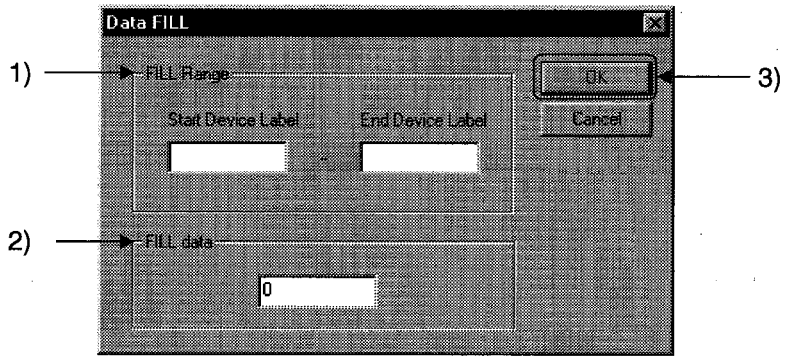
[Purpose]

Writes the same data to consecutive devices in batch.

[Operating Procedure]

Display the device memory edit window, and select [Edit] → [FILL] or press .

[Dialog Box]



[Description]

1) FILL Range
   Designates the devices to which the same data will be batch-written.
   <Example of device designation>
   D10-D20, T0-T30

2) FILL data
   Designates the data to be batch-written.
   Designate the data in the numeric form on the device memory edit window.

3) OK button
   Click this button after the setting has been completed.

11.5 Search and Replace

11.5.1 Search

A	QnA	FX
•	•	•

[Purpose]
Searches the devices set.

[Operating Procedure]
Display the device memory edit window, and select [Find/Replace] → [Find data].

[Description]
For the description, see Section 6.4.

11.5.2 Replace

A	QnA	FX
•	•	•

[Purpose]
Replaces the set device data.

[Operating Procedure]
Display the device memory edit window, and select [Find/Replace] → [Replace data].

[Description]
For the description, see Section 6.4.

12 SETTING DEVICE INITIALIZATION VALUES

A	QnA	FX
×	•	×

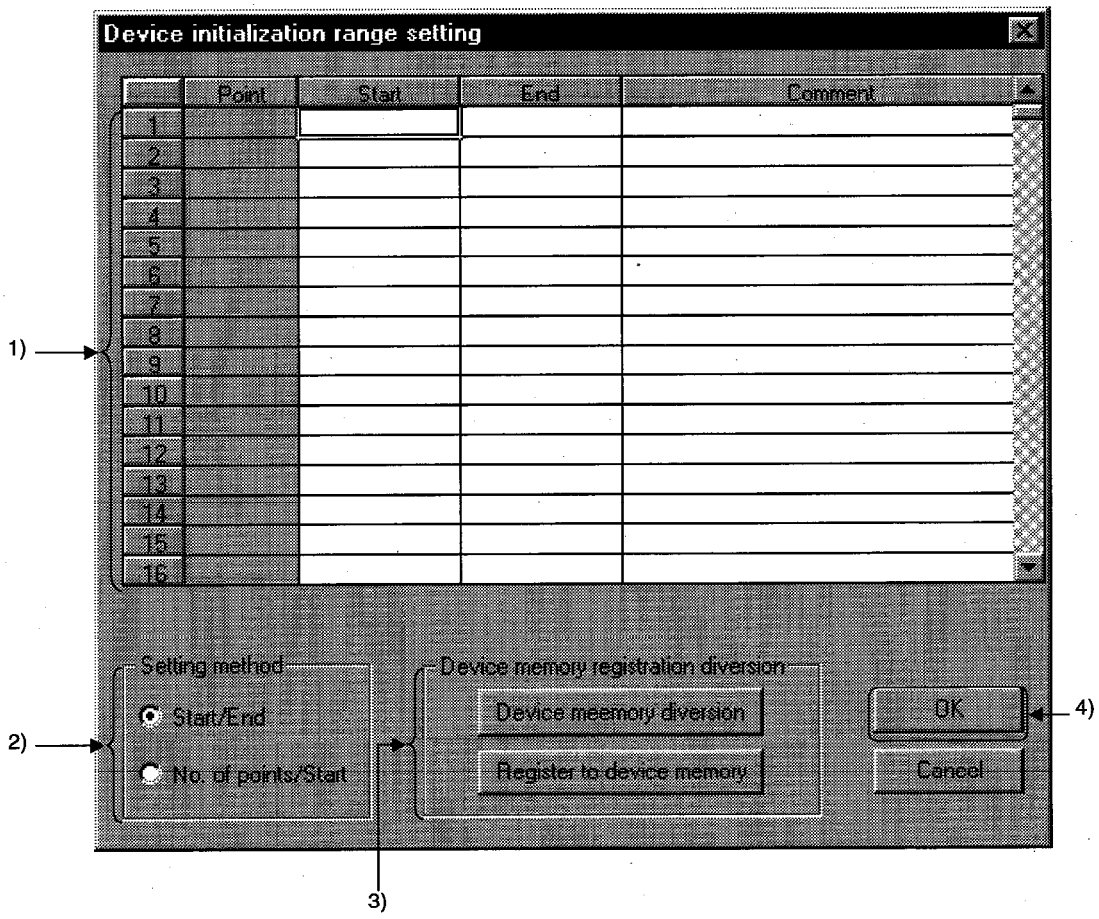
[Purpose]

Sets a device range to treat the device values set on the device value input dialog box as the initial values when starting the PLC.

[Operating Procedure]

Set the type and name of the data to be added in the dialog box displayed by selecting [Project] → [Edit data] → [New].

[Dialog Box]



[Description]

1) Range to be set
Up to 8,000 points (8K words) can be set within a range.
Each comment can be set within 32 characters.

The devices, which can be treated as initial values, are listed below:

Device Name	Device
Timer	The present value of T.
Retentive Timer	The present value of ST.
Counter	The present value of C.
Data register	D
Special register	SD
Link register	W
Link special register	SW
File register	R, ZR
Special direct device	U*/G*
Link direct device	J*/W*, J*/SW*

2) Setting method
Set the range of the devices to be set for device initial values by specifying [Start/End] or [No. of point/start] Device

3) Device memory registration diversion
[Device memory diversion] button
⊙ All devices
All of the devices or the device range edited in the device memory will be entered as device initial values.

⊙ Range to be set
Set a range to enter the data created in the device memory as device initial values.
<Example>
D0-D10, W0-W30

[Register to device memory] button
The data of the device initial values read from the PLC or peripheral device will be stored in the device memory.

4) [OK] button
Click this button after the setting has been completed.

POINT

- To treat each device value, to which the range is set, as an initial value when starting the PLC, use the PLC file setting function for PLC parameters.

13. Setting PLC Parameters

For each type of parameter, see the appropriate section listed below:

Parameter	Section
A series PLC parameter	Sections 13.4 to 13.8
QnA series PLC parameter	Sections 13.9 to 13.17
FX series PLC parameter	Sections 13.18 to 13.23
A series network parameter	Sections 14.1 to 14.7
QnA series network parameter	Sections 14.8 to 14.14.4

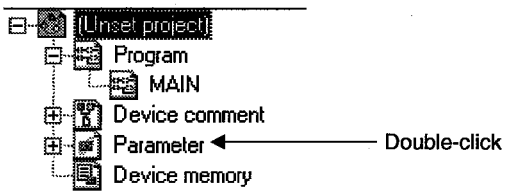
13.1 Displaying the Parameter Setup Dialog Box

A	QnA	FX
•	•	•

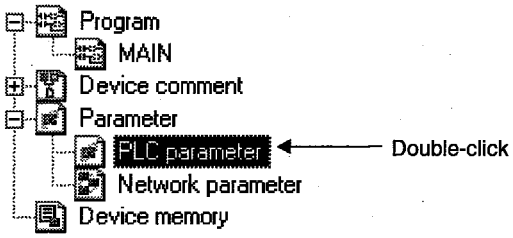
Parameters include PLC parameters and network parameters (the A series and the QnA series only).
Set the appropriate function and the device range to be set for the system used.

[How to display the Parameter Setup dialog box]
The Parameter Setup dialog box can be displayed in either of the following two ways:

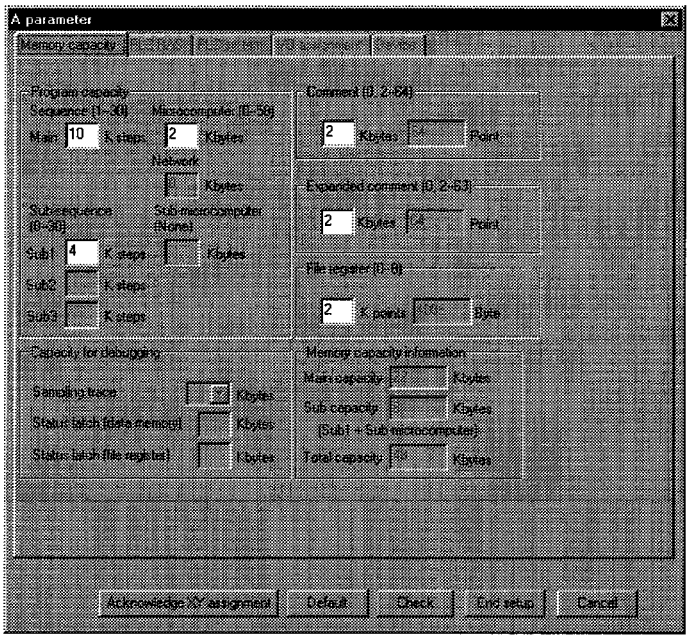
(1) Displaying the dialog box from the project data list
1. Double-click [Parameter] on the project data list.



2. PLC Parameter and Network Parameter icons are displayed.

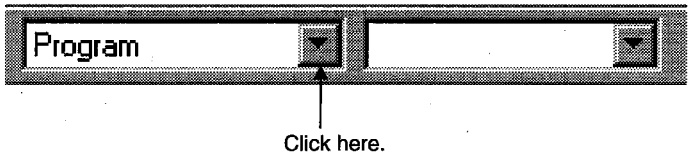


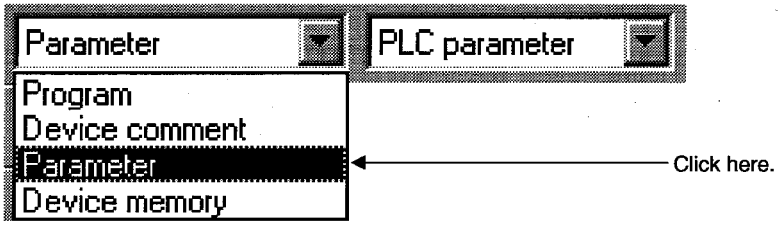
3. Double-click either icon, and the corresponding setup dialog box will open.
   - PLC Parameter Setup dialog box



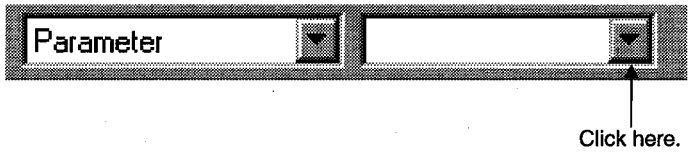
(2) Displaying the dialog box from the toolbar

1. Click in the toolbar, then [Parameter].





2. Click the right , then [PLC parameter].



13.2 Common Notes on Parameters

A	QnA	FX
•	•	•

[Parameter display]

This part describes the setting item tabs and network parameter setting items.

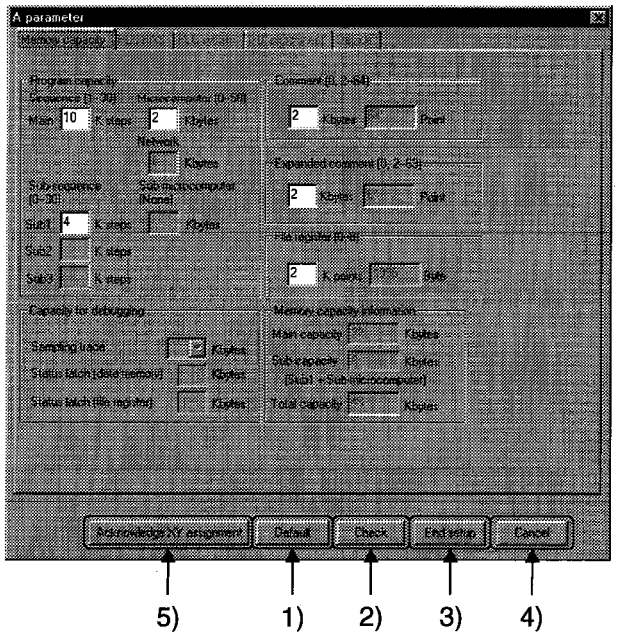
<Example>

The meanings of the symbols are the same also when displayed with network parameters.

Red :The PLC does not operate until data is set. (Data is not set.)
Blue :Data is set.
Magenta :The PLC operates without setting data or with the default. (Data is set.)
Dark blue :Data is set. (Data is set.)

[Common notes on parameters]

This part describes the settings common to PLC and network parameters.



1) Default button
Returns all of the set items or values to the previous settings.
This button is available only for the currently open tab.

2) Check button
Used to check the set items or values to see if they are correct.
This button is available only for the currently open tab.

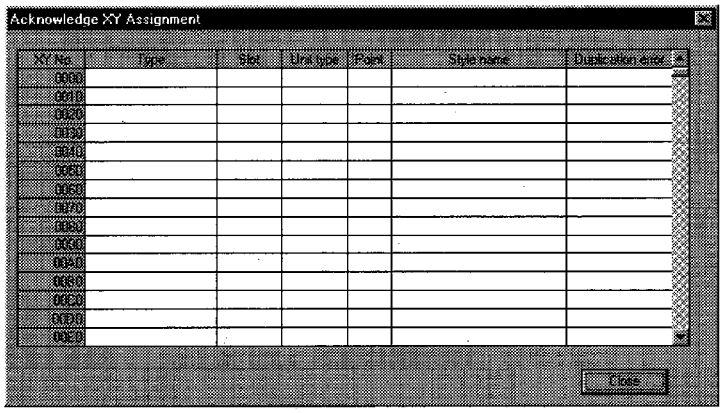
3) End setup
Defines the set items or values and terminates the setting.

4) Cancel button
Cancels the set items and terminates editing.

5) Acknowledge X/Y Assignment button

This button is available for the models A2ACPU(S1), A3ACPU, A2AS(S1), A2AS-S30, A2AS-S60, A2UCPU(S1), A2USCPU(S1), A2USHCPU(S1), A3UCPU, A4UCPU, and QnAXPU.

It is used to confirm the X/Y assignment numbers of the data set in the I/O assignment setting.



Display by type

Display	Description
I/O assignment	Displays I/O assignment information.
MINI	Displays I/O assignment information and MINI automatic refresh setting information.
CC-Link	Displays I/O assignment information and CC-Link automatic refresh setting information.
NET (II)	Master station : Displays I/O assignment information and refresh parameter information.
	Local station : Displays I/O assignment information and refresh parameter information.
NET/10	PLC-to-PLC network, remote I/O network : Displays network parameter information.

The priority of display is shown below:

1. I/O assignment (AnACPU, AnUCPU, QnA series)
2. Fourth MELSECNET network refresh parameter (AnUCPU, QnA series)
3. Third MELSECNET network refresh parameter (AnUCPU, QnA series)
4. Second MELSECNET network refresh parameter (AnUCPU, QnA series)
5. First MELSECNET network refresh parameter (AnUCPU, QnA series)
6. MELSECNET/MINI refresh (AnACPU, AnUCPU, QnA series)
7. CC-Link remote I/O (QnA series)

The Duplicate Error area displays the first duplicate item detected in checking the items according to the priority.

Duplicate Error	Description
First NET	First MELSECNET network parameter
Second NET	Second MELSECNET network parameter
Third NET	Third MELSECNET network parameter
Fourth NET	Fourth MELSECNET network parameter
MINI	MELSECNET/MINI refresh
CC-Link	CC-Link remote I/O

13.3 Comparison Table of Setting Items

A	QnA	FX
•	×	•

GPPA parameters and GPPW parameters use different setting locations and names. For the items required to be set, see the corresponding table shown below.

[PLC parameters]

GPPA		GPPW
Latch range setting		Device setting
I/O assignment		I/O assignment setting
Auxiliary setting	Step relay setting	Device setting
	Timer setting	Device setting
	Counter setting	Device setting
	RUN-PAUSE contact	PLC system setting
	STOP• "RUN output mode	PLC system setting
	Interrupt counter	PLC system setting
	WDT setting	PLC RAS setting
	Operation mode when an error occurs	PLC RAS setting
	Annunciator display mode	PLC RAS setting
	Remote I/O remote terminal setting	PLC system setting
	General data processing	PLC system setting (data communication request batch processing)
	MINI automatic refresh setting	Network parameter → MELSECNET/MINI setting
Network/Link setting		Network parameter

FXGP (DOS) parameters, FXGP (WIN) parameters, and GPPW parameters use different setting locations and names. For the items required to be set, see the corresponding table shown below.

[PLC parameters]

FXGP (DOS)	FXGP (WIN)	GPPW
Latch range	Latch range	Device setting
Program title setting	Print title setting	PLC name setting
PLC mode setting	PLC mode setting	PLC system setting (1)
Serial communication setting	Serial communication setting	PLC system setting (2)
—	Device assignment	I/O assignment setting

PLC Parameters (A Series)

13.4 Setting the Memory Capacity

A	QnA	FX
•	×	×

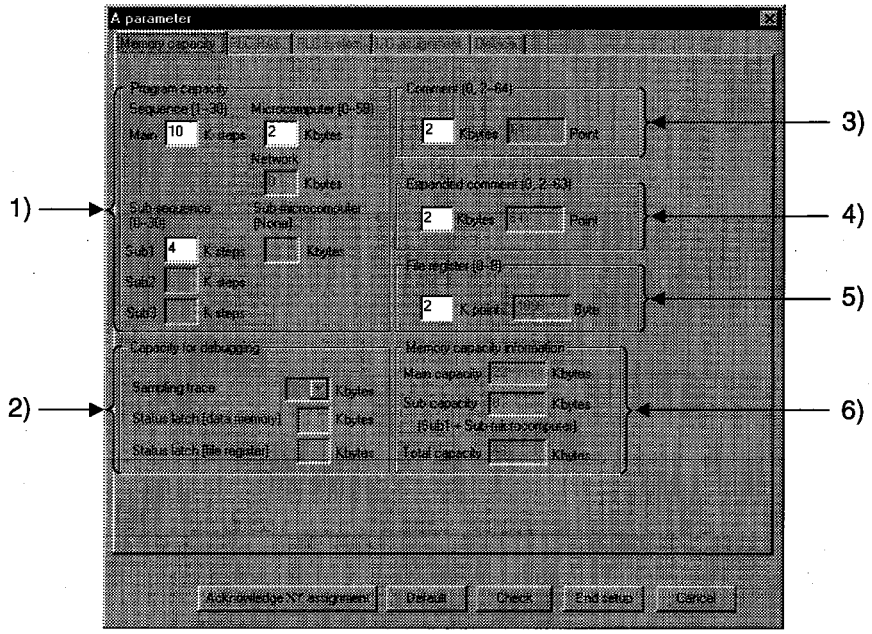
[Purpose]

Sets the memory capacity to store programs, comments, extended comments, and file registers.

[Operating procedure]

Select [PLC parameter], and click the <<Memory capacity>> tab.

[Dialog Box]



[Description]

1) Program capacity
   In the case of the model AnU, the network parameter setting capacity occupies the main program area. The available main program size is as shown below:

PLC Type	Available Main Program Size (Ksteps)
A2U	Max. 14
A3U, A4U, A2SH-S1	Max. 30 - (network parameter size* (Kbytes)÷2)

The network parameter size is between 0 Kbytes and 16 Kbytes depending on the data to be set.

2) Capacity for debugging
   (Applicable CPU : A0J2H, A1FX, A1S(S1), A1SJ, A1SH, A1SJH, A2C, A2CJ, A2N(S1), A2S(S1), A2SH(S1), A3N)
   Set the sampling trace capacity.
   The status latch will be displayed only when the debug size is set in the data read in a file in another format.

3) Comment
Set a comment in units of 1 Kbyte (0, 2 to 64 Kbytes).
The required number of bytes for the comment size can be calculated using the following expression:

$$\text{Required number of bytes} = \underbrace{\frac{\text{Number of comments}}{64}}_{\text{Round up}} + \underbrace{1\ (\text{Kbytes})}_{\text{Used in system}}$$

4) Expended comment
Set an extended comment in units of 2 Kbytes (0, 2 - 63 Kbytes).
The required number of bytes for the extended comment size can be calculated using the expression for setting the comment size.

5) File register
Set the file register size in units of 1 Kbyte.
One Kpoint is a file register of 1,024 points.

6) Memory capacity information
Main capacity ..... The total of the main sequence program, main microcomputer program, and network parameter (AnUCPU only) sizes is displayed.

Sub capacity ..... The total of the sub sequence program and sub microcomputer program sizes is displayed.

POINTS

- Precautions after setting the comment size
  (1) The following table shows the number of comments writable to the CPU.

PLC	Number of Comments Writable to CPU
A1N	128 comments (F0 to F127)
Others	Within the internal memory capacity or memory cassette capacity

  (2) Only the AnA and the AnUCPU can write extended comment 1 created to the PLC.
- Setting the microcomputer program size requires at least 1 Kstep of sequence program size.
  The microcomputer program cannot be edited.
- Set the PLC program size in units of "1 Kstep" and the microcomputer program size in units of "2 Kbytes."
  One Kstep is equal to 2 Kbytes.
- It is not necessary to set the comment size for extended comments 2 to 4.
- Precautions for setting the extended comment size in the AnA or AnUCPU
  In the AnA or AnUCPU CPU, the set extended comment size is not included in the total parameter memory capacity. Only the data in the internal memory of the peripheral devices is counted.
- AnUCPU requires 4 Kbytes of network parameter size.
  The maximum settable capacity of the main sequence program and main microcomputer program sizes is shown below:
  Max. main sequence program size - Number of MELSECNET link units x 4 Kbytes
  Although the parameter size is 2 Kbytes when the MELSECNET (II) is selected, 4 Kbytes of parameter size are actually required.

13.5 Setting PLC RAS

A	QnA	FX
•	×	×

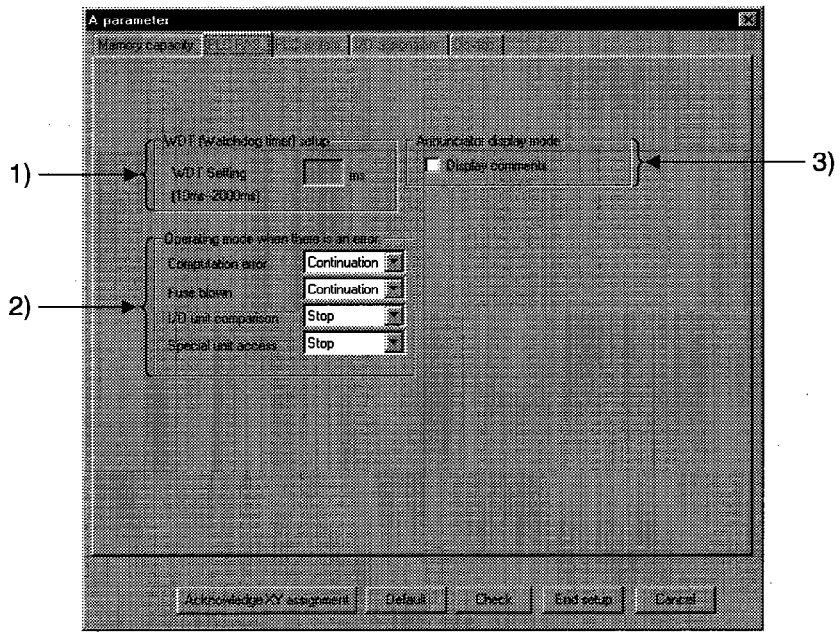
[Purpose]

Makes settings in order to control the PLC operation status (WDT setting, PLC processing conditions).

[Operating procedure]

Select [PLC parameter], and click the << PLC RAS>> tab.

[Dialog Box]



[Description]

1) WDT (watch dog timer) setting
   Set this item to detect any operation time error in the PLC.
   Set the time in units of 10 ms.

2) Operating mode when there is an error
   Sets whether to continue or discontinue the ongoing operation when an error occurs in each item.

3) Annunciator display mode
   Sets whether to alternately display the F number of the annunciator and its comment on the front indicator of the A3A, A3U or A4UCPU or display only the F number.

13.6 Setting the PLC System

A	QnA	FX
•	×	×

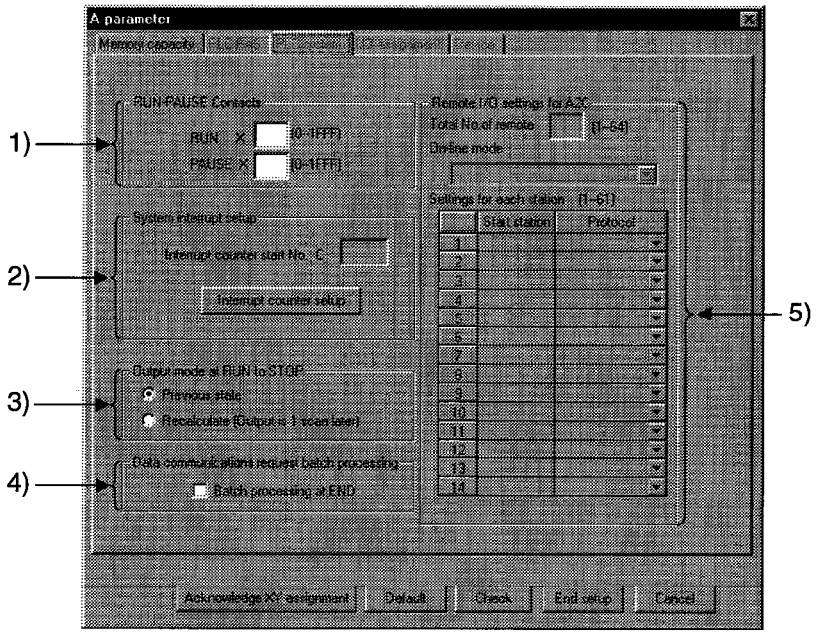
[Purpose]

Sets RUN-PAUSE contacts, system interrupt, and other items.

[Operating procedure]

Select [PLC parameter], and click the << PLC system>> tab.

[Dialog Box]



[Description]

1) RUN-PAUSE SE Contacts

- When RUN is set

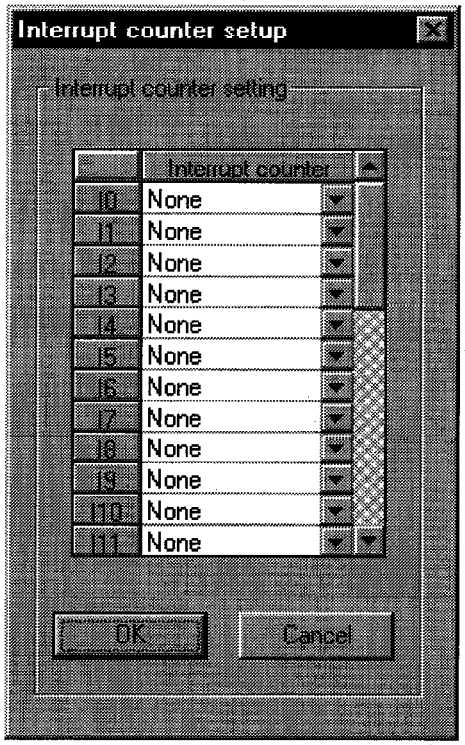
  Sets an input signal to switch the RUN status to the remote STOP status using input contacts.

- When PAUSE is set

  Sets an input signal to switch the RUN status to the remote PAUSE status using input contacts.

To switch the status with PAUSE set, turn ON the special relay M9040 in the sequence program or another program.

2) System interrupt setup
Sets the range of the counters to be used within the interrupt program.
In the AnA or AnUCPU, the range can be set by means of the interrupt counter setting function shown below:



3) Output mode at RUN to STOP
- The output (Y) status before the STOP status will be output.
When the PLC status changes from STOP to RUN, the output status before the STOP status will be output.

- Output (Y) will be cleared. (Output will take place after a scan operation.)
Output will not take place immediately after the PLC status changes to RUN, but the result of a scan operation will be output.

4) Data communications request batch processing
Sets whether to process in the AnA or AnUCPU any data communication request from the computer link unit, etc. in END processing.
(By checking off the check box, the same function will become available as when the M9029 is turned ON.)

5) Remote I/O settings for A2C
Sets the number of occupied slots of each station and remote I/O assignment when the A2C or A2CJCPU is selected.

POINT

- The following units perform data communication request batch processing: AJ71UC24, AJ71C24-S6/S8, AJ71C24(S3), AD51-S3, AD51H-S3, AD51FD, AJ71E71, AJ71P41, AJ71C23-S3, A64GOT-L, A64GOT-LT21B (when a bus is connected), A77GOT-S5, etc.

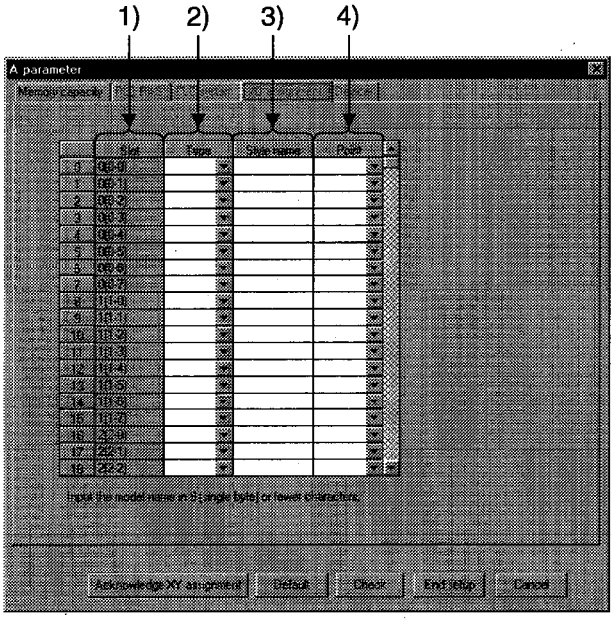
13.7 Setting I/O Assignments

A	QnA	FX
•	×	×

[Purpose]
Sets the I/O assignments of a unit in the PLC system.

[Operating procedure]
Select [PLC parameter], and click the << I/O assignment>> tab.

[Dialog box]



[Description]
1) Slot
The slot numbers shown in the table are described.
<Example> Main base
The number 0 (0-3) in the table represents the shaded slot shown below:

Power Supply	CPU	0-0	0-1	0-2	0-3	0-4	0-5	0-6	0-7

<Example> First extension base
The number 1 (1-0) in the table represents the shaded slot shown below:

Power Supply	1-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7

2) Type
Selects the type of the module to be loaded on the base unit.

3) Style name
Designates the model of the module to be loaded.
Set the style name within nine characters.

4) Point
Selects the number of points of the module to be loaded.

POINTS

- To set a special function module, set I/O assignment for all occupied points of the module.
- I/O assignment is not possible when the A1FXCPU is selected.

13.8 Setting Devices

A	QnA	FX
•	×	×

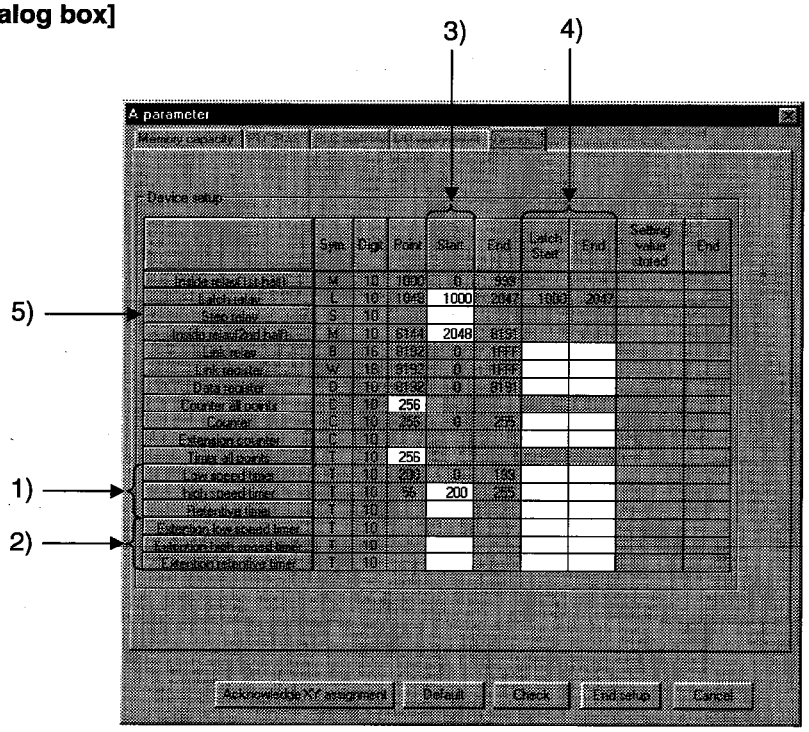
[Purpose]

Sets the M, L, and S relays, latch ranges, and timers/counters to be used in the sequence program.

[Operating procedure]

Select [PLC parameter], and click the <<Devices>> tab.

[Dialog box]



[Description]

1) Low-speed timer, High-speed timer, Retentive timer
Set the timer range from T0 and the timers in order of low-speed timer, high-speed timer, and retentive timer.

2) Extension low-speed timer, extension high-speed timer, extension retentive timer
These timers can be set only with the AnA and the AnUCPU.
Set timers T0 to T255 in units of eight points and timers.
T256 to T2047 in units of 16 points.

3) Start
Sets the head device of the device range to be used.

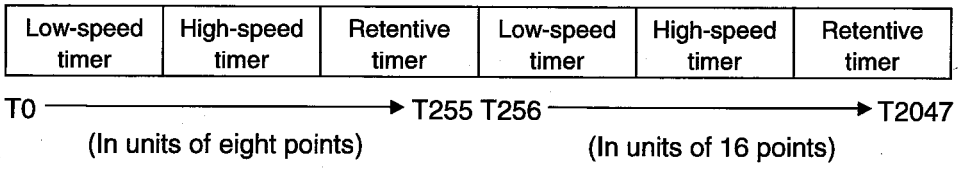
4) Latch Start/End
Sets the head and final latches in units of one point.

5) Step relay
Sets the range of step relays.
When there is a step relay set, specify it with a head number of S.

Condition	Specified Head Number Range of S
With L (latch relay)	0 to 2047
Without L (latch relay)	Head number of L + 1 to 2047

POINTS

- Relationship between latch relay (L) and step relay (S)
  If the latch relay range and the step relay range are set at the same time, the range last set will supersede the range first set.
- Internal relays (S) cannot be set when the A1FXCPU is selected.
- Relationship between timer setting and latch range
  (1) Set the latch range of the timer at 10 ms or 100 ms using the auxiliary parameter function after retentive timer range setting.
  (2) If the set latch range is changed in the timer setting mode, the original latch range will be replaced forcibly with the range set in the timer setting mode.
  However, the set latch range will be canceled if it is out of the range available in the timer setting mode.
- Timer range setting order
  Set timers T0 to T255 from T0 and the following timers from T256 in order of low-speed timer,high-speed timer, and retentive timer.



PLC Parameters (QnA Series)

13.9 Assigning PLC Names

A	QnA	FX
×	•	×

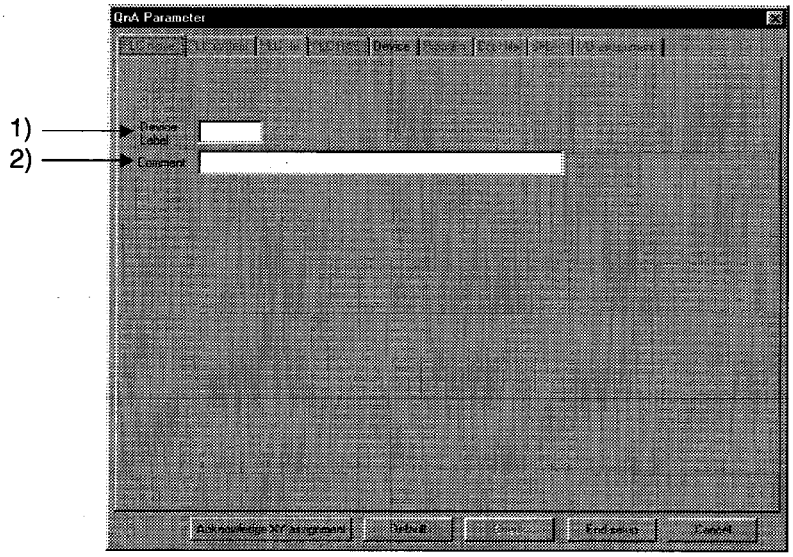
[Purpose]

Assigns labels and comments to the PLC.
When accessing the PLC from a peripheral device, such a label and comment make it easier to identify the CPU.

[Operating procedure]

Select [PLC parameter], and click the <<PLC name>> tab.

[Dialog box]



[Description]

1) Device Label
The label length must be as shown below:

	Number of characters
Label	10

The set label will be displayed on the Parameter Dialog Box.

2) Comment
The comment length must be as shown below:

	Number of characters
Comment	64

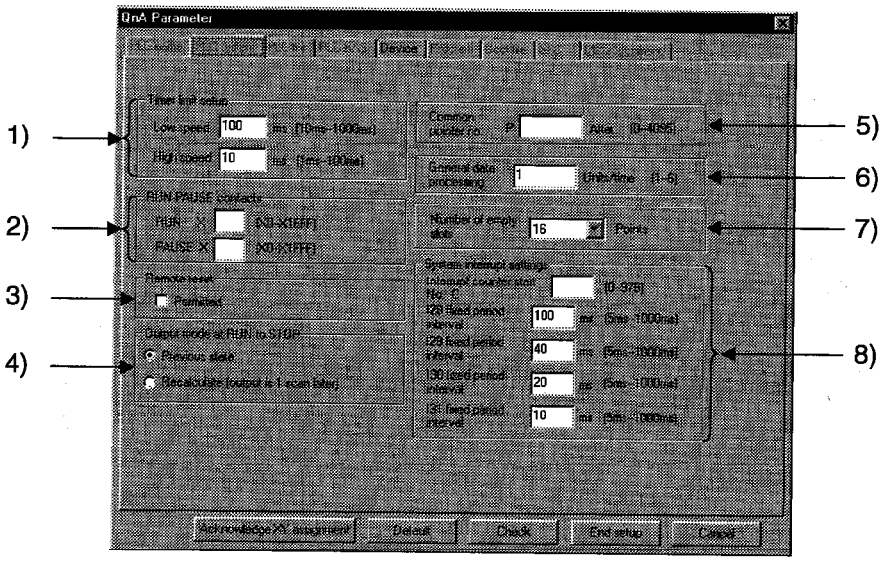
13.10 Setting the PLC System

A	QnA	FX
×	•	×

[Purpose]
Sets RUN-PAUSE contacts, system interrupt, and other items.

[Operating procedure]
Select [PLC parameter], and click the << PLC system>> tab.

[Dialog box]



[Description]

1) Timer limit setup
Set the time limit of the low-speed timer and of the high-speed timer.
- Low-speed timer :10 to 1000 ms (Set the time in units of 10 ms.)
- High-speed timer :1 to 100 ms (Set the time in units of 1 ms.)

2) RUN-PAUSE contacts
Set each input number to perform remote RUN/STOP or remote PAUSE using input contacts.
Devices can be set between X0 and X1FFF.
To perform remote RUN/STOP or remote PAUSE with PAUSE set, turn ON the special relay SM206 in the sequence program or another program.

3) Remote reset
Set whether to enable or disable remote resetting.

4) Output mode at RUN to STOP
- Previous state
When the PLC status changes from STOP to RUN, the output status before the STOP status will be output.
- Recalculate(output is 1scan later)
Output will not take place immediately after the PLC status changes to RUN, but the result of a scan operation will be output.

5) Common pointer No.
Set the head number of the pointers to be shared among all program files.

6) Greneral data processing
Set the number of units which will simultaneously communicate during an END processing operation. (By checking off the check box, the same function will become available as when the SM1029 is turned ON.)

7) Number of empty slots
Specify the number of I/O points occupied by the vacant slots.

8) System interrupt settings
Set the head counter to be used in the interrupt program and the regular intervals of interrupt pointers I28 to I31.

POINTS

- The following units perform general data processing:
AJ71UC24, AJ71C24-S6/S8, AJ71C24(S3), AD51H-S3, AD51FDAJ71E71, AJ71P41, AJ71C23-S3, A64GOT-L, A64GOT-LT21B (when a bus is connected), A77GOT-S5, AJ71QC24(-R2/R4), A1SJ71QC24(-R2), etc.
- If a pointer of the same number exists in two or more program files, an error will occur when the PLC status is switched from STOP to RUN, disabling the program from starting.

13.11 Setting PLC Files

A	QnA	FX
×	•	×

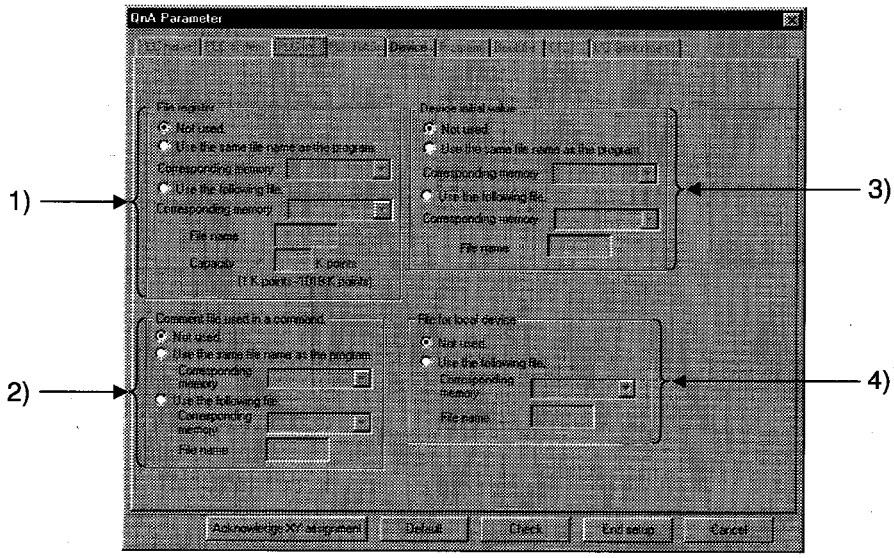
[Purpose]

Sets the file register, comment, device initial value, and local device files, which are stored in the memory area in the internal RAM or on an IC memory card, as files to be used by the PLC.

[Operating Procedure]

Select [PLC parameter], and click the << PLC file>> tab.

[Dialog Box]



[Description]

1) File register

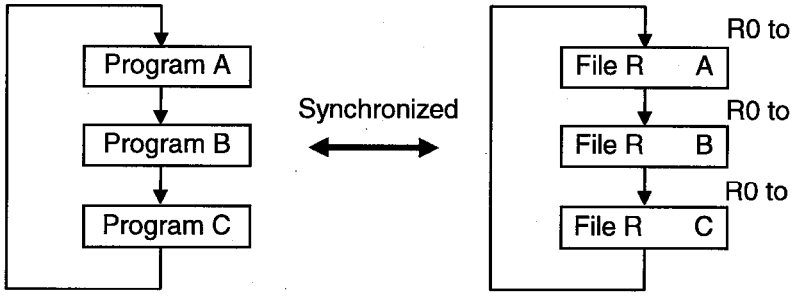
Set which of the files stored on the IC memory card will be used as the file register file, or set this item to newly reserve a file register area.

⊙ Not used

No file register will be set with parameters. Select this option to specify the file register to be used in the sequence program.

Use an ODRSET instruction to specify the file register.

⊙ Use the same file name as the program
The file whose name is the same as that of the sequence program will be used as a file register file.



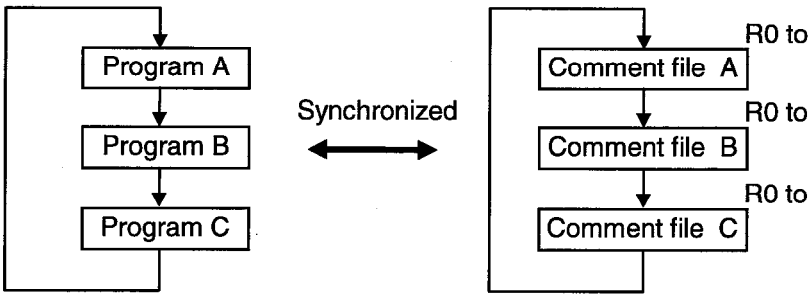
This function is helpful in using the file register of the same number in each program.

⊙ Use the following file
A new file register area will be created.
Set the drive (1 to 4), file name, and size of the file register.
If a file name with the same name already exists, change only the file register size.
The above information must be reset whenever the IC memory card is formatted.

2) Comment file used in a command
Set the file to be used as the device comment file.

⊙ Not used
No comment file will be set with parameters.
Select this option to specify the comment file to be used in the sequence program. Use an QCDSET instruction to specify the file register.

⊙ Use the same file name as the program
Specify the drive (1 to 4) set on memory card.
The valid comment file will be switched each time the execution program is switched.



⊙ Use the following file
Only the comment file whose drive and file name are specified will become valid.

3) Device initial value
Set the file to be used as the device initial value file.

⊙ Not used
No device initial value file will be set.

⊙ Use the same file name as the program
The device initial value file whose name is the same as that of the program will become valid.
The valid device initial value file will be switched each time the execution program is switched.
Specify a drive (0 to 4).

⊙ Use the following file
Only the device initial value file whose drive and file name are specified will become valid.

4) File for local device
Set a file to reserve a local device save area when a local device is used.

⊙ Not used
No local device file will be set.

⊙ Use the following file
The PLC will automatically create a local device file with the specified drive (1 to 4) and file name.
Set the device range of local devices using the [Device setting] tab.
See Section 16.7 for details on local device monitoring procedure.

POINT

- When the device initial value file is set, the device initial values will precede even devices for which a latch range is set.

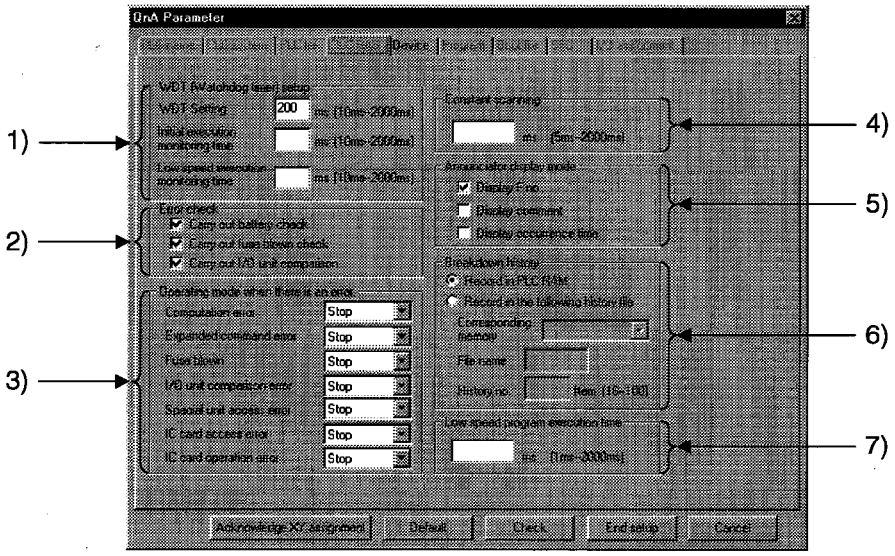
13.12 Setting PLC RAS

A	QnA	FX
×	•	×

[Purpose]
Increases the reliability, operability, and service of the system.

[Operating procedure]
Select [PLC parameter], and click the << PLC RAS>> tab.

[Dialog Box]



[Description]

1) WDT (watch dog timer) setup
Set a watch dog timer, a watch dog timer valid only during a scan (initial execution monitoring time), and a watch dog timer valid throughout the execution of a low-speed program (low-speed execution monitoring time).

2) Error check
This item is used to set whether to check each error item in END processing.
The END processing time can be reduced when the check box is not checked.

3) Operating mode when there is an error
Set whether to continue or discontinue the PLC operation when an error occurs.

4) Constant scanning
Set the constant scan time.

5) Annunciator display mode
Set whether to display the annunciator number, the comment, and the occurrence time on the front indicator of the Q3A, Q4A or Q4ARCPU when the annunciator is turned ON.

6) Break down history
Specify the location to store the result of a self-diagnosis performed by the PLC as a fault log.
When "Record in internal RAM" is selected, the latest 16 errors will be stored in the internal RAM in the PLC.

7) Lowspeed program execution time
Set the low-speed program execution time.
The time can be set in units of 1 ms.

13.13 Setting Devices

A	QnA	FX
×	•	×

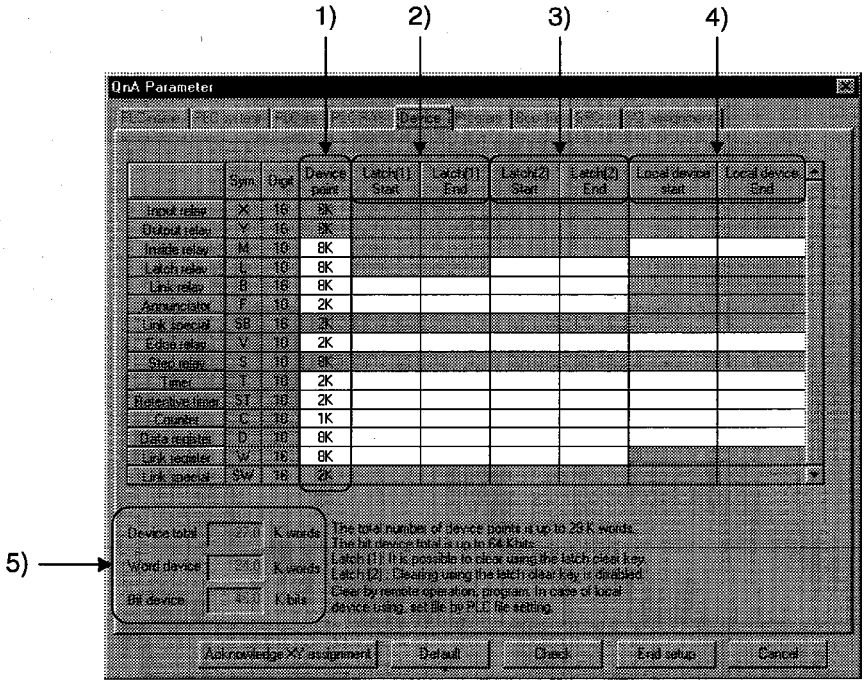
[Purpose]

Sets the number of points for each device, latch ranges, and local devices to be used in the sequence program.

[Operating procedure]

Select [PLC parameter], and click the <<Devices>> tab.

[Dialog Box]



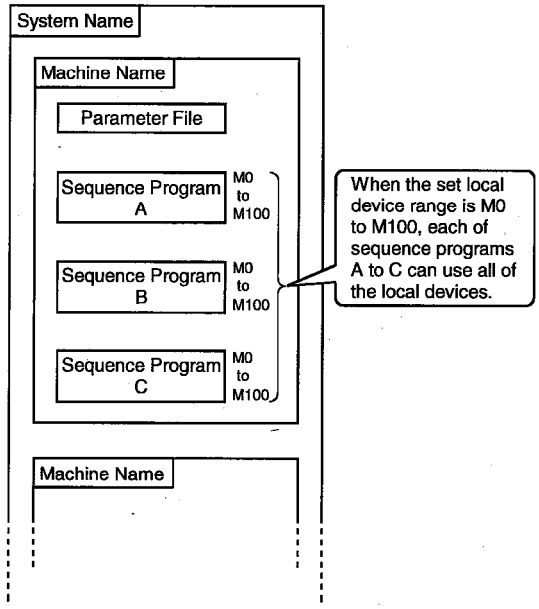
[Description]

1) Device point
   Up to 32 Kbytes can be set for a device as device points.
   The total number of bit device points must not exceed 64 Kpoints.
   Set all device points so that the total will not exceed 29 Kwords.

2) Latch (1) Start/End
   Set the latch range that can be cleared with the latch clear key of the PLC.

3) Latch (2) Start/End
   Set the latch range that can be executed by remote operation of the PLC menu or the sequence program.
   The latch range can be set in units of one point.
   However, it cannot be set again in latch clear key enabled/disabled setting.

4) Local device Start/End
Set the local device range to be used in each program.
Setting the local device range enables the use of the same device number in each program file.
Before using a local device, make file settings under [PLC file].
See Section 16.7 for details on local device monitoring procedure.



5) Memory status
The memory status is calculated based on the following bit and word definitions:

- 1 word = 16 bits
- 1 Kword = 1024 words = 16384 bits

<Example> Calculation at default
44 Kbits = 44 Kbits ÷ 16 bits = 2.75 Kwords
Word device (26.0 Kwords) + Bit device (2.75 Kwords) = 28.8 Kwords

POINT

- The following data, which is already written to the PLC, must also be written again whenever any of the device settings are changed and written to the PLC:
  - Sequence program
  - SFC program
  - Monitor entry
  - Sampling trace data

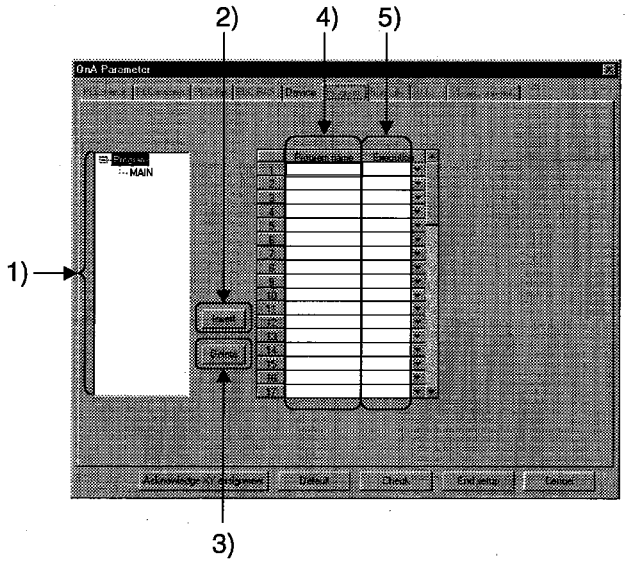
13.14 Setting Programs

A	QnA	FX
×	•	×

[Purpose]
Makes settings in the program to manage two or more programs as files.

[Operating procedure]
Select [PLC parameter], and click the <<Program>> tab.

[Dialog Box]



[Description]

1) Data display list
Select from this list a program to set.

2) Insert button
This button sets the data selected from the data display list in the Program Setting area.

3) Delete button
This button deletes specified data from the Data area.

4) Program name
This area shows all data names specified in the data setting list.
The programs will be executed in the order in which they were entered.

5) Execution
The executing conditions are described below:
Standby ..... : A file composed only of subroutines and interrupt routines.
Scan ..... : A file that is executed in each scan.
Initial ..... : A file that is executed only once when the power is turned ON or when the PLC status changes from STOP to RUN. After this file is executed, the system will automatically stand by.
Low-speed .....: A file composed only of subroutines and interrupt routines, which stands by for a start by an instruction.

[Setting procedure]

1. Select from the data display list the sequence program to set.
2. Click the Insert button.
3. Set the program type (scan, initial, standby, low-speed) according to 5).

13.15 Setting a Boot File

A	QnA	FX
×	•	×

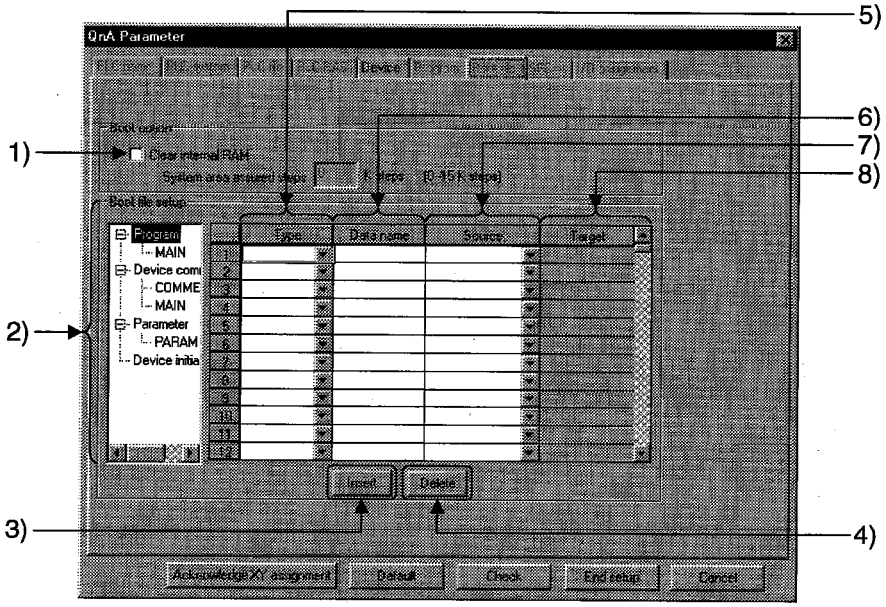
[Purpose]

Sets a file to automatically transfer a program from the IC memory card to the internal RAM in the PLC.

[Operating procedure]

Select [PLC parameter], and click the <<Boot file>> tab.

[Dialog Box]



[Description]

1) Clear internal RAM
   Sets whether to clear the internal RAM in the PLC before the boot operation.
   By increasing the system area, operations, such as monitoring from another station, can be performed at higher speed.

2) Boot file setup
   This area displays the data for boot operation.

3) Insert button
   Sets the data selected from the data display list in the Data Name area.

4) Delete button
   Deletes specified data from the Data area.

5) Type
   Sets the type of the specified data as shown below.
   The data type will be set automatically when the data is selected from the data setting list.
   - Sequence
   - Parameter
   - Device initi
   - Comment

6) Data name
This area shows all data names specified in the data setting list.

7) Source
Sets the area where the data to be booted exists.

8) Target
All data will be transferred to the internal RAM.

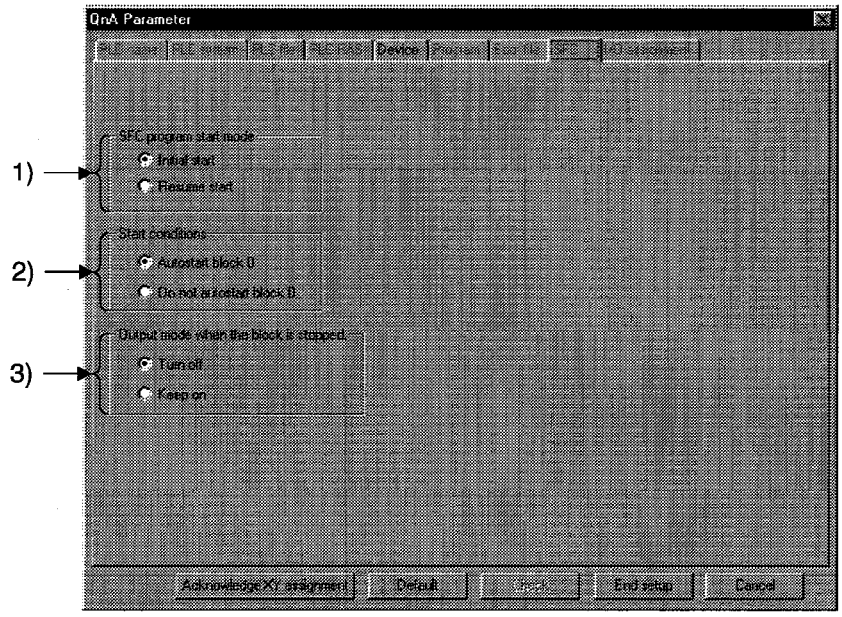
13.16 Setting SFC

A	QnA	FX
×	•	×

[Purpose]
Sets the conditions for starting the SFC program.

[Operating procedure]
Select [Setting PLC parameters], and click the <<Setting SFC>> tab.

[Dialog Box]



[Description]

1) SFC program start mode
Selects Initial Start or Continue to start for starting the SFC program.

2) Start conditions
Sets whether to automatically start block 0 at the initial start of the SFC program.

3) Output mode when the block is stopped.
Sets whether to stop coil output, which is turned ON by an OUT instruction, by turning it OFF or while it remains ON, when a stop request is issued to each block.

POINT
- SFC circuit creation is not possible.

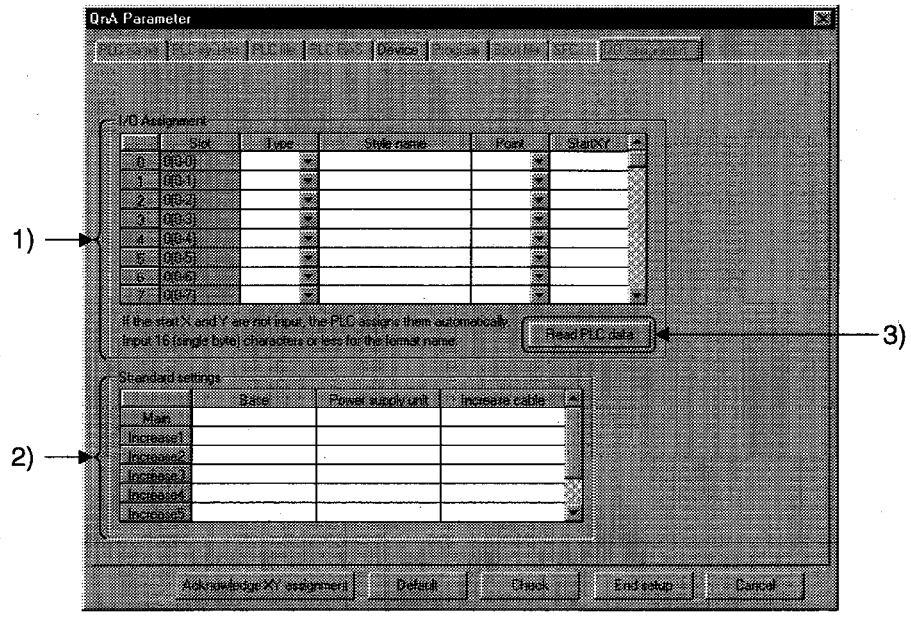
13.17 Making I/O Assignments

A	QnA	FX
×	•	×

[Purpose]
Sets the I/O assignments on the base unit of the PLC system.

[Operating procedure]
Select [PLC parameter], and click the <<I/O assignment>> tab.

[Dialog Box]



[Description]

1) I/O Assignment
Sets the unit type and model, number of points, and head X/Y for each slot.

2) Strandard settings
Sets the model name of each of bases, power supply units, and extension cables within 16 characters.

3) Read PLC data key
- When there are parameters in the PLC
The parameters preserved in the PLC will be read.
- When there are no parameters in the PLC (reading by loading)
Before reading data, delete the parameter file from the PLC, and switch the PLC status from RESET to RUN.

PLC Parameters (FX Series)

13.18 Setting the Memory Capacity

A	QnA	FX
×	×	•

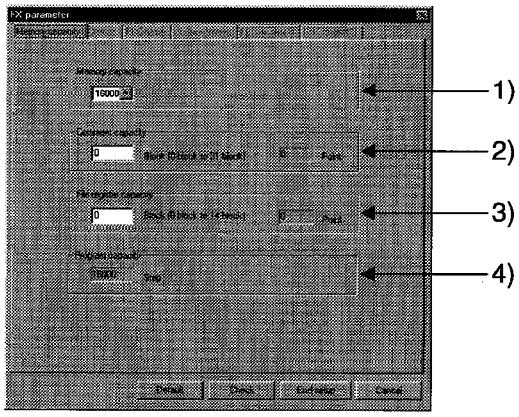
[Purpose]

Sets the capacity to store programs, comments, and file registers.

[Operating procedure]

Select [PLC parameter], and click the <<Memory capacity>> tab.

[Dialog Box]



[Description]

1) Memory capacity
   Sets the memory capacity of the PLC.
   The following table shows the memory capacity setting range of each PLC:

Memory Capacity	FX_0 *1 FX_{0S} *1	FX_{0N}	FX_1	FX FX_2 FX_{2C}	FX_{2N} FX_{2NC}
2,000 steps	●	●	●	◎	*
4,000 steps	—	—	—	*	
8,000 steps	—	—	—	*	◎
16,000 steps	—	—	—	—	*

● Fixed value ◎ Default value * Settable — Not settable

*1 : Although the actual memory capacity of the FX_0 and FX_{0S} PLCs is 800 steps, 2,000 steps will be programmed as the memory capacity parameter.

2) Comment capacity
Sets the size of each comment to be written to the PLC.
Up to 32 blocks can be specified, each of which preserves 50 comments.
The default value for all PLCs is 0 blocks.
The program capacity will decrease by 500 steps per block.
The following table shows the comment size setting range of each PLC:

Memory Capacity	FX_0 FX_{0S}	FX_{0N}	FX_1	FX FX_2 FX_{2C}	FX_{2N} FX_{2NC}
2,000 steps	0 (fixed)	0 to 3	0 to 4	0 to 4	0 to 4
4,000 steps	—	—	4 to 8	0 to 8	0 to 8
8,000 steps	—	—	—	0 to 8	0 to 16
16,000 steps	—	—	—	—	0 to 32

(Unit : Blocks)

3) File register capacity
Up to 14 blocks can be specified, each of which preserves 500 file registers.
The default value for all PLCs is 0 blocks.
The program capacity will decrease by 500 steps per block.
The following table shows the file register size setting range of each PLC:

Memory Capacity	FX_0 FX_{0S}	FX_{0N}	FX_1	FX FX_2 FX_{2C}	FX_{2N} FX_{2NC}
2,000 steps	0 (fixed)	0 to 3	0 (fixed)	0 to 4	0 to 4
4,000 steps	—	—	0 (fixed)	0 to 4	0 to 8
8,000 steps	—	—	—	0 to 4	0 to 14
16,000 steps	—	—	—	0 to 4	0 to 14

(Unit : Blocks)

4) Program capacity
The capacity of the sequence program area is displayed.
The number of steps displayed is calculated as expressed below:
[Memory capacity] - [Comment size (number of blocks x 500 steps)] - [File register size (number of blocks x 500 steps)] = Program capacity

13.19 Setting Devices

A	QnA	FX
×	×	•

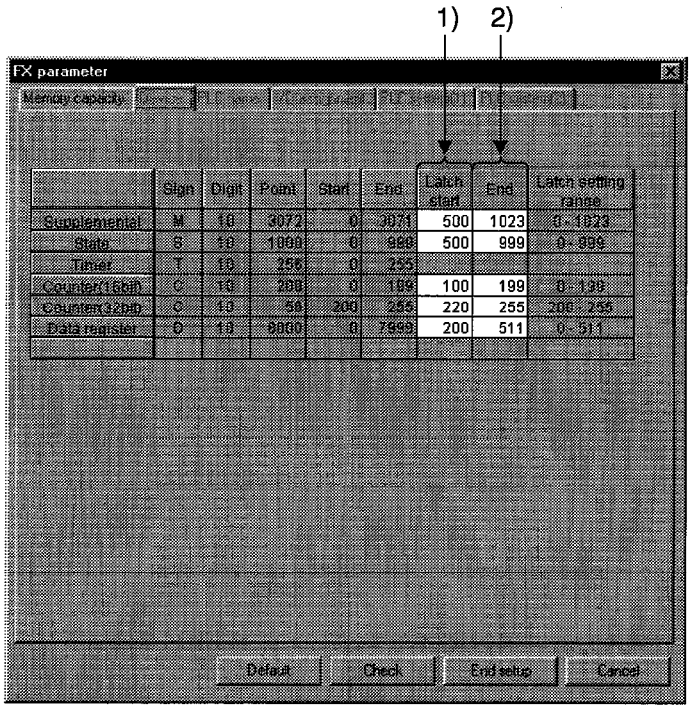
[Purpose]

Sets devices to change their power failure compensation ranges.

[Operating procedure]

Select [PLC parameter], and click the << Device>> tab.

[Dialog Box]



[Description]

1) Latch start
   Specify the head device of the latch range.

2) End
   Specify the final device of the latch range.

The following table shows the ranges that can be changed, and the default values.

Device	FX_1		FX, FX_2, FX_{2C}, FX_{2N}, FX_{2NC}	
	Range	Default	Range	Default
Auxiliary relay (M)	0 to 1023	500 to 1023	0 to 1023	500 to 1023
State (S)	0 to 999	500 to 999	0 to 999	500 to 999
16-bit counter (C)	0 to 135	100 to 135	0 to 199	100 to 199
32-bit counter (C)	235 to 254	235 to 254	200 to 255	220 to 255
Data register (D)	0 to 127	100 to 127	0 to 511	200 to 511

Do not change the latch range of the FX_0, FX_{0S}, and FX_{0N} series.
The same default value is set for the FX_2, FX_{2C}, FX_{2N}, and FX_{2NC} PLCs.

13.20 Assigning PLC Names

A	QnA	FX
×	×	•

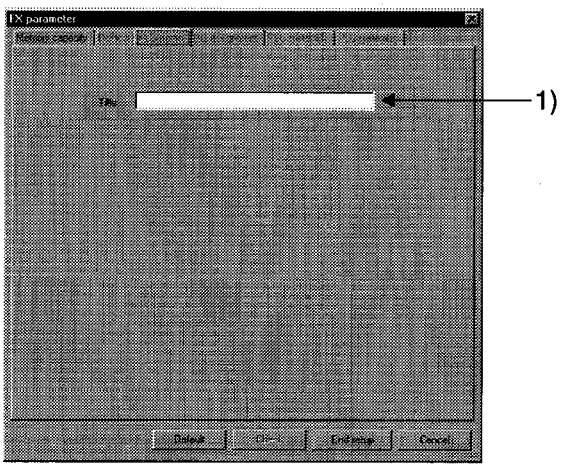
[Purpose]

Assigns comments to PLC programs.
Such comments are called "program titles" in the FXGP (DOS) and the FXGP (WIN).

[Operating procedure]

Select [PLC parameter], and click the << PLC name>> tab.

[Dialog Box]



[Description]

1) Title
   A program title can be entered within 32 characters.
   Titles cannot be entered when the FX_0 or FX_{0S} PLC is selected.

13.21 Making I/O Assignments

A	QnA	FX
×	×	•

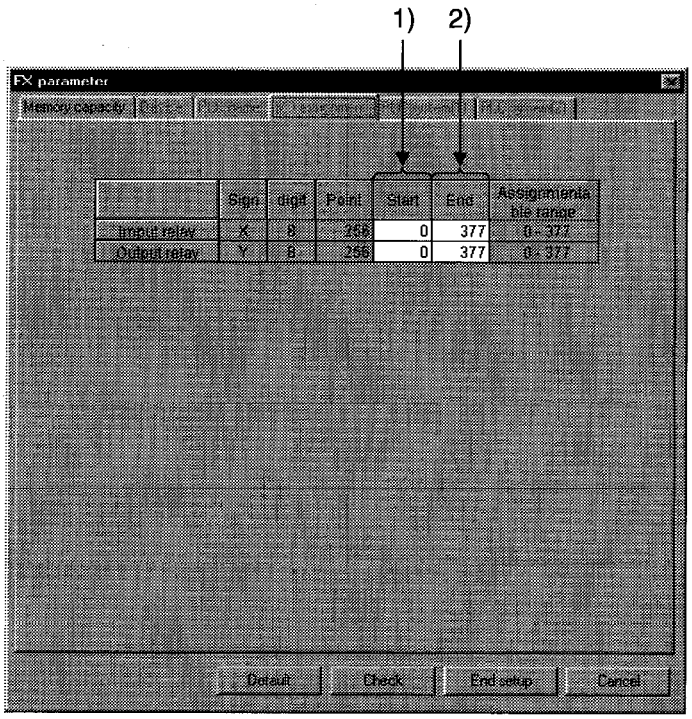
[Purpose]

Sets element restrictions on program entry in addition to the I/O range conforming to the PLC specifications.
The settings will not be stored in the parameters in the PLC but will be preserved as a project for a peripheral device.

[Operating procedure]

Select [PLC parameter], and click the << I/O assignment>> tab.

[Dialog Box]



[Description]

1) Start
Specify the head element number of the I/O assignment in octal.

2) End
Specify the final element number of the I/O assignment in octal.
The following table shows the ranges that can be changed (X, Y: octal):

I/O	FX_0 FX_{0S}	FX_{0N}	FX_1	FX FX_2 FX_{2C}	FX_{2N} FX_{2NC}
Input (X)	000 to 017	000 to 177	000 to 177	000 to 377	000 to 377
Output (Y)	000 to 015	000 to 177	000 to 177	000 to 377	000 to 377

The default is the maximum range that can be set.

13.22 Setting the PLC System (1)

A	QnA	FX
×	×	•

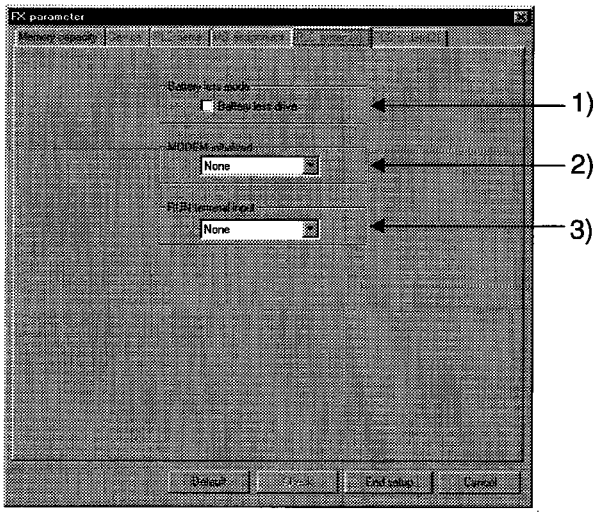
[Purpose]

Makes the batteryless mode, modem, and RUN terminal settings among the parameters for the FX_{2N} and FX_{2NC} PLCs.

[Operating procedure]

Select [PLC parameter], and click the << PLC System (1) >> tab.

[Dialog Box]



[Description]

1) Battery less mode
Check off the check box when the FX_{2N} or FX_{2NC} PLC is to be operated with the memory backup battery removed.

2) MODEM initialized
Sets the modem initialization command for remote access to the FX_{2N} or FX_{2NC} PLC using the FXGP (WIN) software.

"None" (default)
"User register mode"
"AIWA (PV-AF288)"
"OMRON (ME3314B)"

By specifying the "user entry mode," the data stored at data registers D1000 to D1059 will be sent as initialization commands.
Write an AT command, which controls the modem according to the sequence program, to these data registers beforehand.

For details of remote access to the PLC, see the manual name - FX-PLCS/WIN-E type programming software operation manual.

3) RUN terminal input
To use the inputs (X) of the FX_{2N} or FX_{2NC} PLC as external RUN/STOP terminals, set the input numbers.
"None" (default)
"X000" to "X017," ("X000" to "X007" for a 16-point basic unit)

13.23 Setting the PLC System (2)

A	QnA	FX
×	×	•

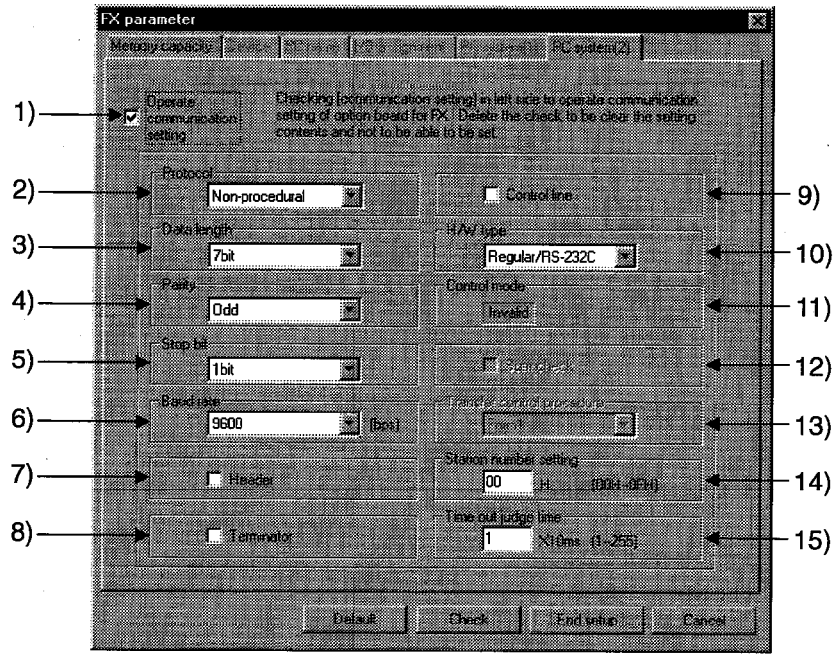
[Purpose]

Enters the specified data as FX_{2N} and FX_{2NX} PLC parameters and overwrites the data at special registers D8120 (communication format), D8121 (station number setting), and D8129 (timeout judgment time) when the power to the PLC is turned ON.

[Operating procedure]

Select [PLC parameter], and click the <<PLC system (2) >> tab.

[Dialog Box]



[Description]

1) Operate communication setting.
Checking the checkmark of the check box makes the settings valid. By clearing the checkmark, the settings will become invalid, and the data at D8120, D8121, and D8129 will remain unchanged.

2) Protocol
"Non-procedural
"Dedicated protocol"

3) Data length
"7 bits" (default)
"8 bits"

4) Parity
"Odd" (default)
"None"
"Even"

5) Stop bit
"1 bit" (default)
"2 bit"

6) Baud rate
"19200"
"9600" (default)
"4800"
"2400"
"1200"
"600"
"300"

7) Header
The header will become valid by checking the check box.

8) Terminater
The footer will become valid by checking the check box.

9) Control line
The control line will become valid by checking the check box.

10) H/W type
"Regular/RS-232C" (default)
"RS-485"

11) Control mode
The description of the control mode will be displayed.

12) Sum check
A sum check will be added by checking the check box.

13) Transfer control procedure
"Form 1" (default)
"Form 4"

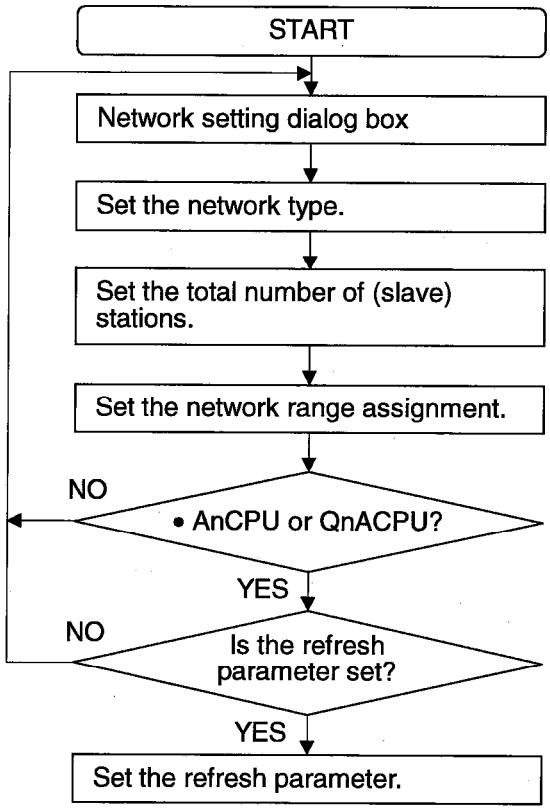
14) Station number setting
Sets station numbers between 00_H and $0F_H$ (default : 00_H).

15) Time out judge time
Sets the timeout time between 1 and 255 (default : 1).

14. SETTING NETWORK PARAMETERS

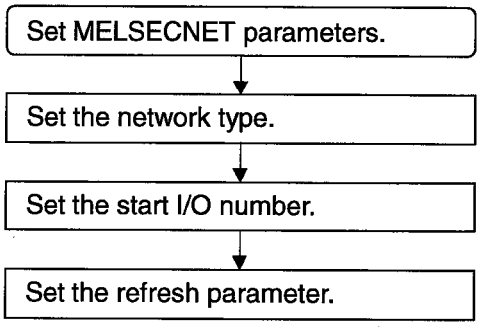
This page and the next three pages show the flow of creating the network parameters for the A series and the QnA series.

MELSECNET master station
MELSECNET II compound master station
MELSECNET II master station



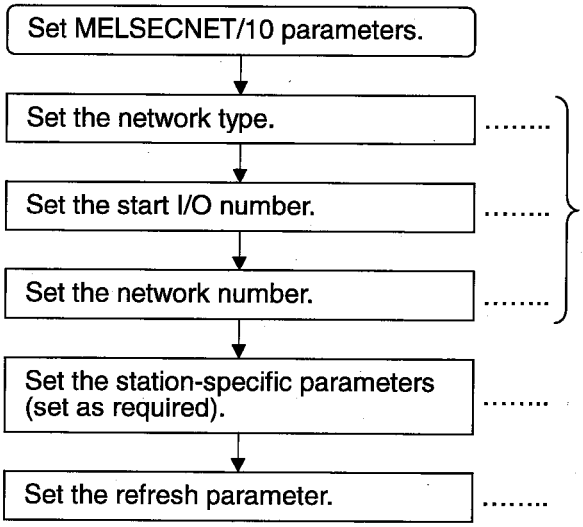
	A series	QnA series
Set the network type. / Set the total number of (slave) stations.	See Section 14.1.	See Section 14.8.
Set the network range assignment.	See Section 14.2.2.	See Section 14.10.
Set the refresh parameter.	See Section 14.2.1.	See Section 14.9.

MELSCENET local station
MELSECNET II compound local station
MELSECNET II local station



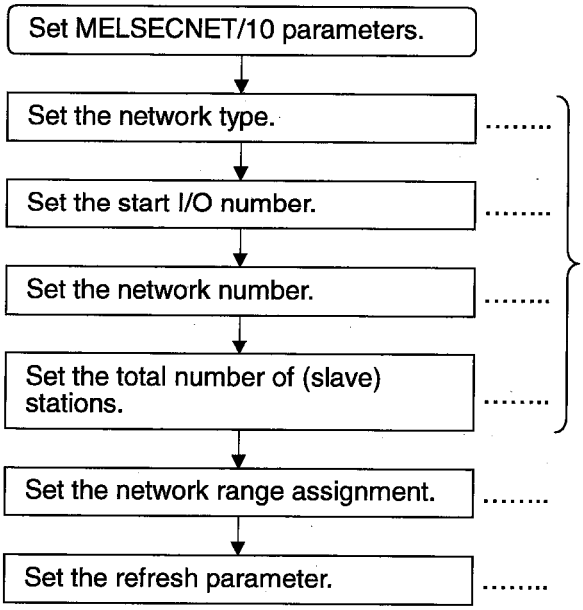
	QnA series
Set the network type. / Set the start I/O number.	See Section 14.8.
Set the refresh parameter.	See Section 14.9.

MELSECNET/10 default station



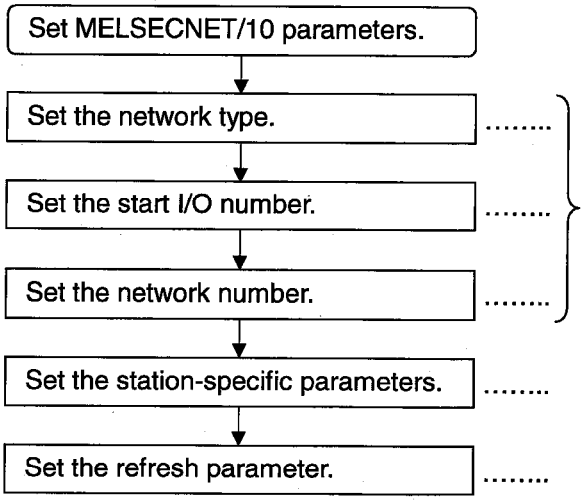
	A series	QnA series
Set the network type.	See Section 14.1.	See Section 14.8.
Set the start I/O number.		
Set the network number.		
Set the station-specific parameters (set as required).	See Section 14.3.3.	See Section 14.11.3.
Set the refresh parameter.	See Section 14.3.1.	See Section 14.9.

Administration station



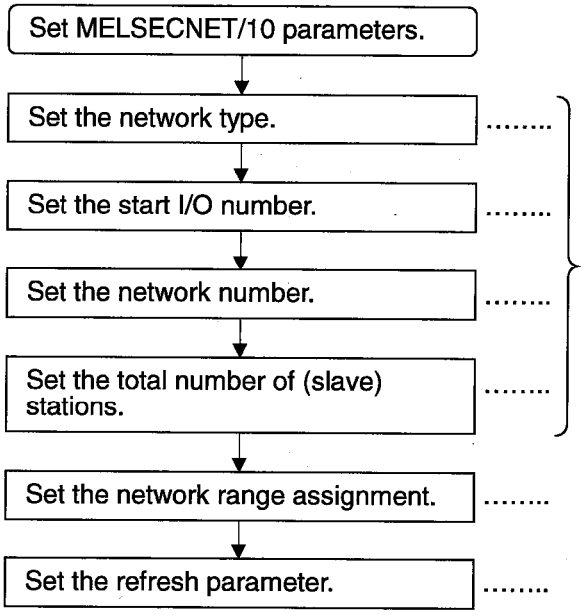
	A series	QnA series
Set the network type.	See Section 14.1.	See Section 14.8.
Set the start I/O number.		
Set the network number.		
Set the total number of (slave) stations.		
Set the network range assignment.	See Section 14.3.2 (1).	See Section 14.11.1.
Set the refresh parameter.	See Section 14.3.1.	See Section 14.9.

Normal station



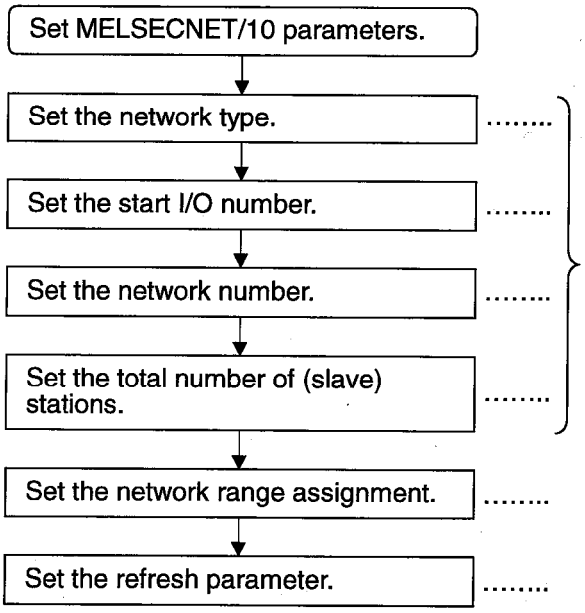
	A series	QnA series
Set the network type.	See Section 14.1.	See Section 14.8.
Set the start I/O number.		
Set the network number.		
Set the station-specific parameters.	See Section 14.3.3.	See Section 14.11.3.
Set the refresh parameter.	See Section 14.3.1.	See Section 14.9.

Remote I/O master station



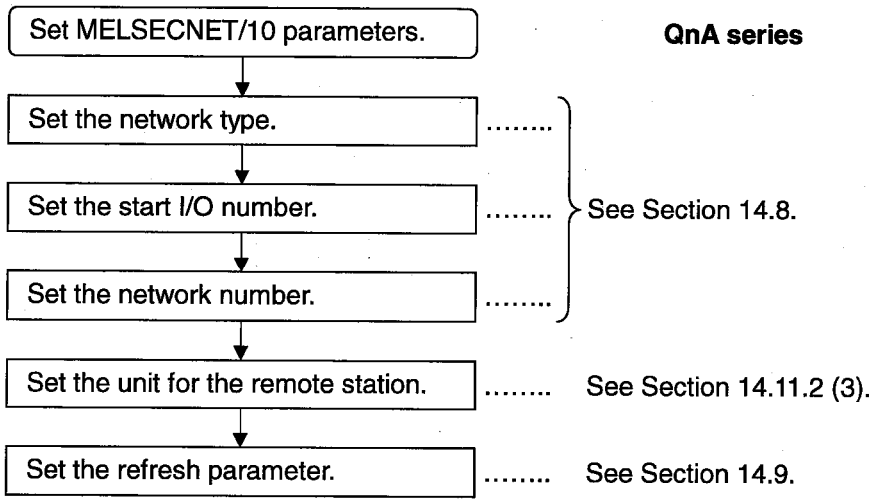
	A series	QnA series
Set the network type.	See Section 14.1.	See Section 14.8.
Set the start I/O number.		
Set the network number.		
Set the total number of (slave) stations.		
Set the network range assignment.	See Section 14.3.2 (2).	See Section 14.11.2 (1).
Set the refresh parameter.	See Section 14.3.1.	See Section 14.9.

Multi-remote master station/Parallel remote master station

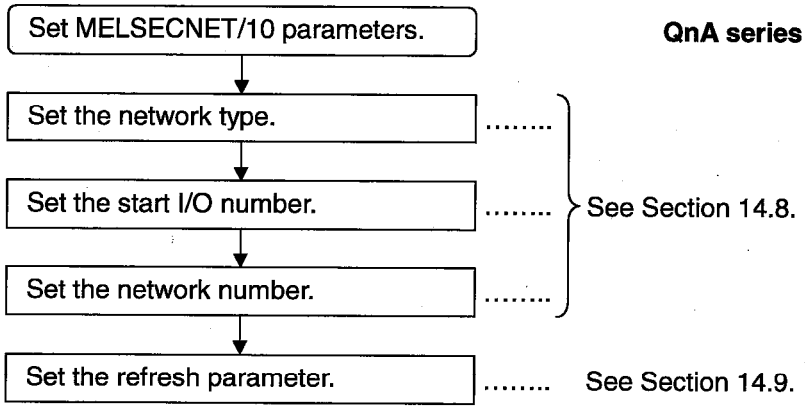


	QnA series
Set the network type.	See Section 14.8
Set the start I/O number.	
Set the network number.	
Set the total number of (slave) stations.	
Set the network range assignment.	See Section 14.11.2 (2).
Set the refresh parameter.	See Section 14.9.

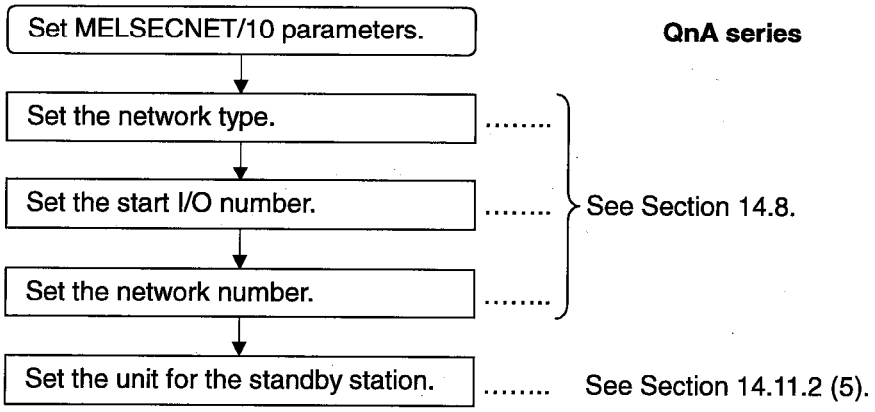
Multi-remote substation



Parallel remote substation



Standby station (QnA series)



POINT

- The parameters for the multi-remote master station, the parallel remote master station, the multi-remote substation, the parallel remote substation, and the standby station can be set only with the QnA series.

Network Parameters (A Series)

14.1 Setting the Network Screen

A	QnA	FX
•	×	×

The configuration of MELSECNET systems is different depending on the PC type used.
The following table shows the master stations for the MELSECNET system, the MELSECNET II system, and the MELSECNET II compound system, and the administration stations for the MELSECNET/10 system.

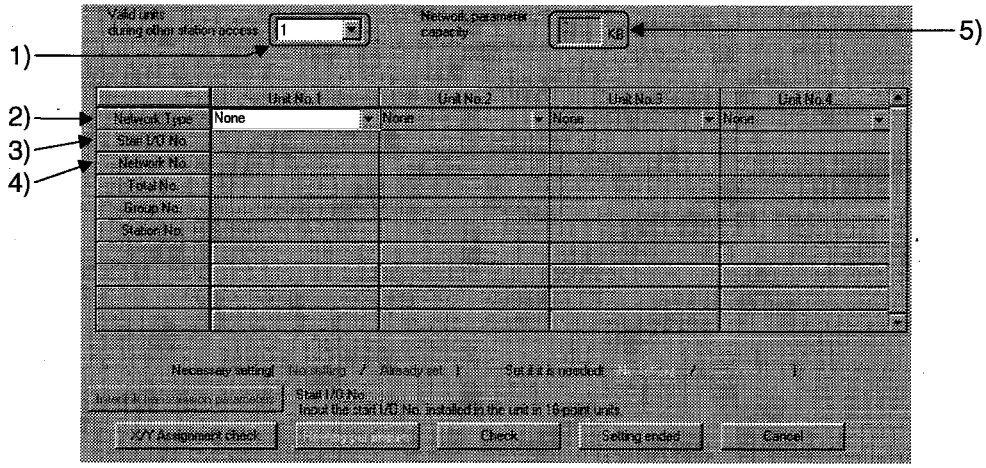
System	CPU Type
MELSECNET	A0J2H, A1S(S1), A1SJ, A1SH, A1SJH, A1N, A2C, A2CJ, A2N(S1), A2S(S1), A2SH, A3N, A2AS(S1), A2AS-S30, A2AS-S60, A3A, A4U
MELSECNET II	A2A(S1), A3A, A2U(S1), A2USH(S1), A2USH-S1, A2AS(S1), A2AS-S30, A2AS-S60, A3U, A4U
MELSECNET II compound	A2A(S1), A3A, A2U(S1), A2USH(S1), A2USH-S1, A2AS(S1), A2AS-S30, A2AS-S60, A3U, A4U
MELSECNET/10	A2U(S1), A2USH(S1), A2USH-S1, A3U, A4U
MELSECNET/MINI	A2A(S1), A3A, A2U(S1), A2USH(S1), A2USH-S1, A3U, A4U

- Set network parameters if necessary.

[Purpose]
Sets communication data for constructing a MELSECNET, MELSECNET II or MELSECNET/10 system.

[Operating procedure]
Select [Network parameter] to display the network parameter selection dialog box, and click the MELSECNET button.

[Dialog box]



[Description]

1) Valid units during other station access
Sets which network connected to which unit will be made valid when accessing another station from a peripheral unit that does not match the MELSECNET/10.

2) Network type
Sets the network type.

3) Start I/O No.
Sets the network number to which the unit will be connected when the network unit concerned is a unit matching the MELSECNET/10.

4) Network No.
Sets the last two digits of the head I/O number of the network unit concerned in units of 16 points.

5) Network parameter capacity
If the network parameters are not set in the PLC, the loading status will be read.
When the network parameters are set in the PLC, they will be read.

14.2 Setting MELSECNET (II) Link Parameters

Set the data to be communicated between the master station (M), the local station (L), and the remote I/O station when constructing a system.

14.2.1 Setting the refresh parameter

A	QnA	FX
•	×	×

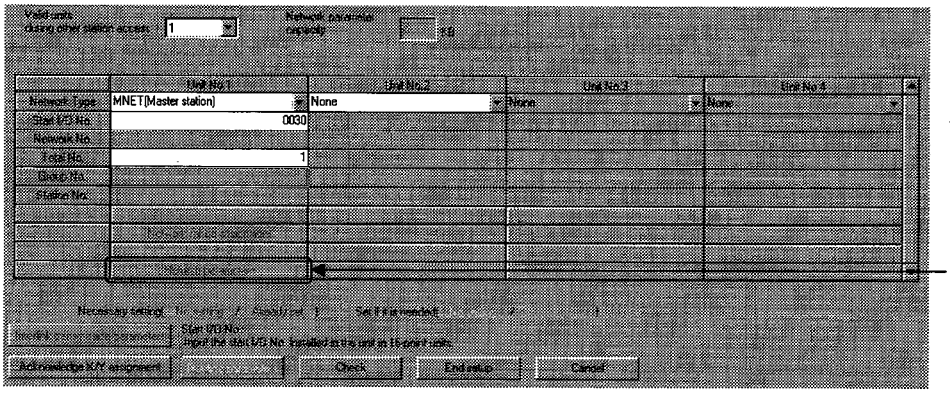
[Purpose]

Sets the communication status (SB, SW) data on the link device (LB, LW, LX, LY) or data link stored in the network unit in order to transfer it to the device available to the sequence program.

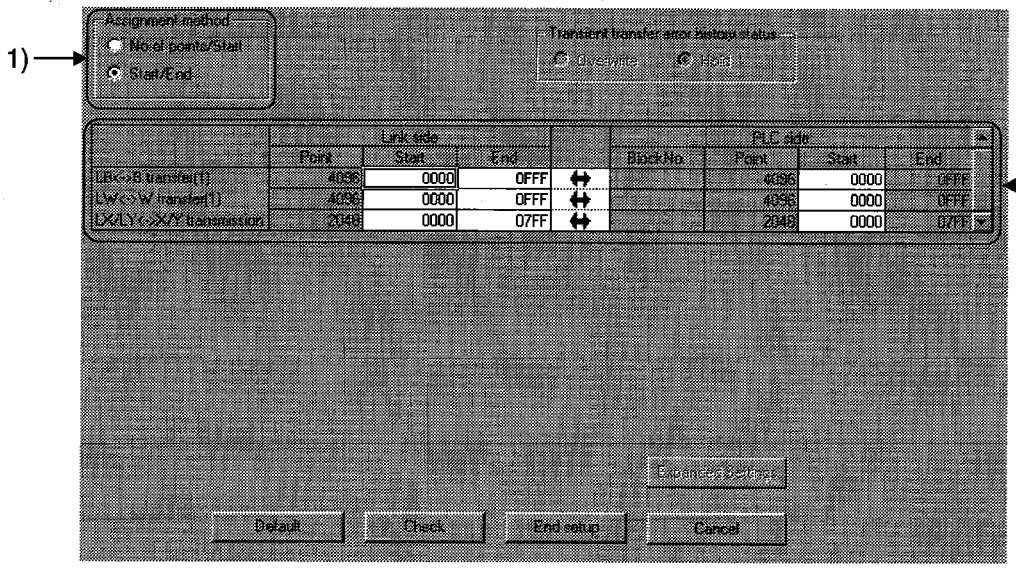
[Operating procedure]

Display the Network setting dialog box (set the network type, the start I/O number, and the total number of (slave) stations on this dialog box), and click the Refresh parameters button.

[Network setting dialog box]



[MELSECNET master station setting dialog box]



[Description]

1) Assignment method
   Sets the device range to be transmitted by specifying Number of Points/Head or Head/Final.

2) Link side, PC side
   Set Number of Points, the head device, and the final device in units of 16 points.

14.2.2 Setting the MELSECNET (II) network range

A	QnA	FX
•	×	×

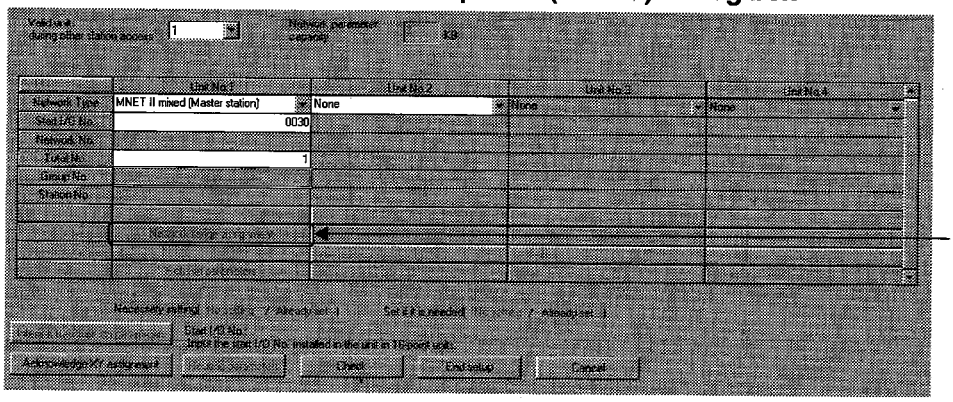
[Purpose]

Sets the range for cyclic transfer in the data link system by link relays (LB), link registers (LW), link inputs (LX), and link outputs (LY).
The dialog box, on which MELSECNET II compound (master) is specified, is cited for description.

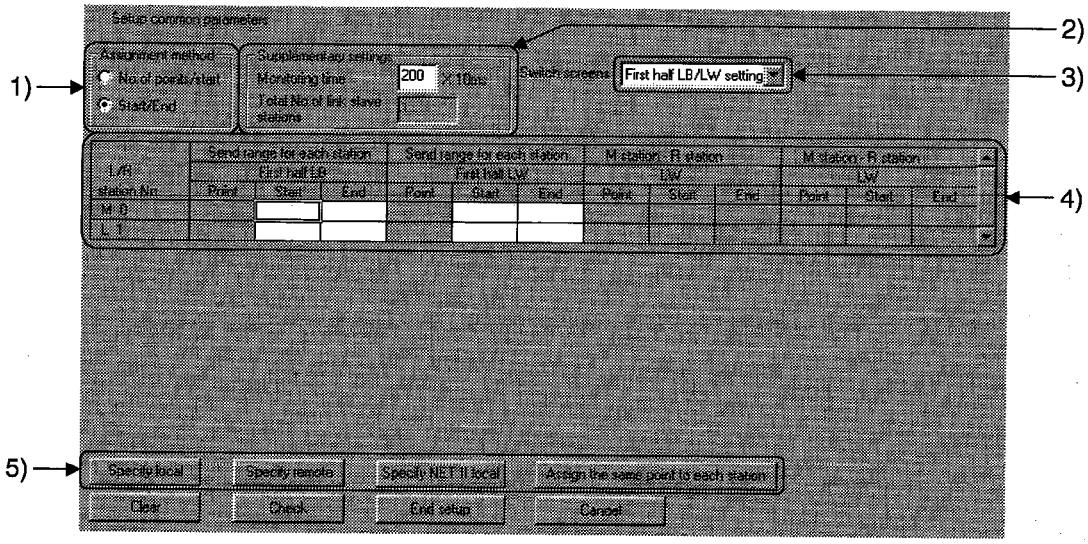
[Operating procedure]

Display the network setting dialog box (set the network type, the start I/O number, and the total number of (slave) stations on this dialog box), and click the Network range assignment button.

[Dialog box] MELSECNET II Compound (Master) Dialog box



[MELSECNET II compound (master) dialog box]



[Description]

1) Assignment method
Sets the device range to be transmitted by specifying Number of Points/Head or Head/Final.

2) Supplementary settings
The monitoring time of the link scan time will be displayed.
The monitoring time can be set between 1 ms and 200 ms.

3) Switch screens
The window will be switched between BW Setting and XY Setting.
Set window switching according to the following table in the case of the MELSECNET II compound system:

	First Half Data	Second Half Data
NET II → MNET	M ← L, M → L: Set BW and X/Y data will be utilized. If B/W400 and the following exist in the first half data, the final area will be 3FF.	The data will be displayed again when MNET → MENT.
MNET II ← MNET	M ← L Set BW data will be utilized.	The data will be unset. It will be displayed when M → L.

4) Send range for each station, M station → R station, M station ← R station
Set the number of points, the head device, and the final device in units of 16 points.

- Each station's transmission range ... B, W
Sets the range within which the local station will write data and will be linked to the master station and other local stations.

- M station → R station
Sets the range of data transfer to the special function unit within the remote I/O station according to an "RTOP" instruction.

- M station ← R station
Sets the range of data transfer from the special function unit within the remote I/O station to the link register (W) of the master station according to an "RFRP" instruction.

5) Description of each button
See Section 14.4.