MPE720 Ver.7.93Version Up Information

1. Functional Additions and Improvements

1.1 Ver.7.93Version Up Information

MPE720 Ver.7.92→ Functions added and improved in Ver.7.93 are as follows.

No.	Function items	classification
1.	We have developed an import/export function for ladder programs.	New Function
2.	The import/export function of motion programs has been enhanced.	Function Enhancement
3.	We have developed a function to import/export logging settings.	New Function
4.	The serial communication unit CM-SC01 of the YRM controller has been added.	Function Enhancement
5.	The FL-net communication unit CM-FN01 of YRM controller has been added.	Function Enhancement
6.	Σ-MX pulse encoder model (SGPXS-****45*) has been added.	Function Enhancement
7.	Σ-MX 3-axis integrated servo pack model (SGPXT-****40*) has been added.	Function Enhancement
8.	In MECHATROLINK-III.Communication, motion commands (custom actions) have been added.	Function Enhancement
9.	In the project conversion of the YRM1000 series, the conversion of optional units is now supported.	Function Enhancement
10.	Multi-scan compatible models now support multiple functions.	Function Enhancement
11.	Improved the cut, copy, and paste handling of the program.	Function Enhancement
12.	Several improvements have been made to multi-scan compatible models.	Improving
13.	In the parameter setting of certain SLIO modules, Japanese and Chinese display are now supported.	Improving
14.	Added support for displaying IO system bus errors.	Improving
15.	Cross-referencing has been improved.	Improving
16.	Fixed a bug that prevented parameters from being written to the servo pack for multi-scan compatible models.	Improving
17.	Fixed a bug in online operations when security settings are enabled.	Improving
18.	Fixed a bug in the program's security features.	Improving
19.	Several bugs have been fixed.	Improving
20.	Fixed a bug in multi-scan compatible models.	Improving

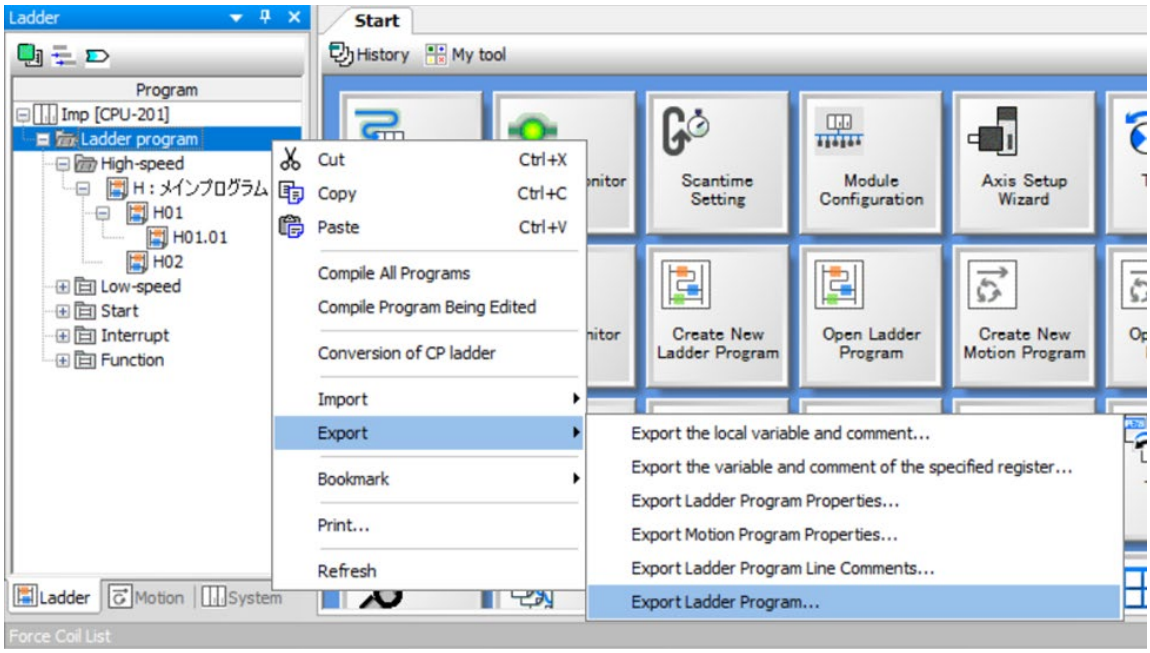
2. Description

No. 1 Developed an import/export function for ladder programs.

Added the import/export function of the ladder program.

1) You can import ladder programs from the Ladder Sub Window/Navigation Window.

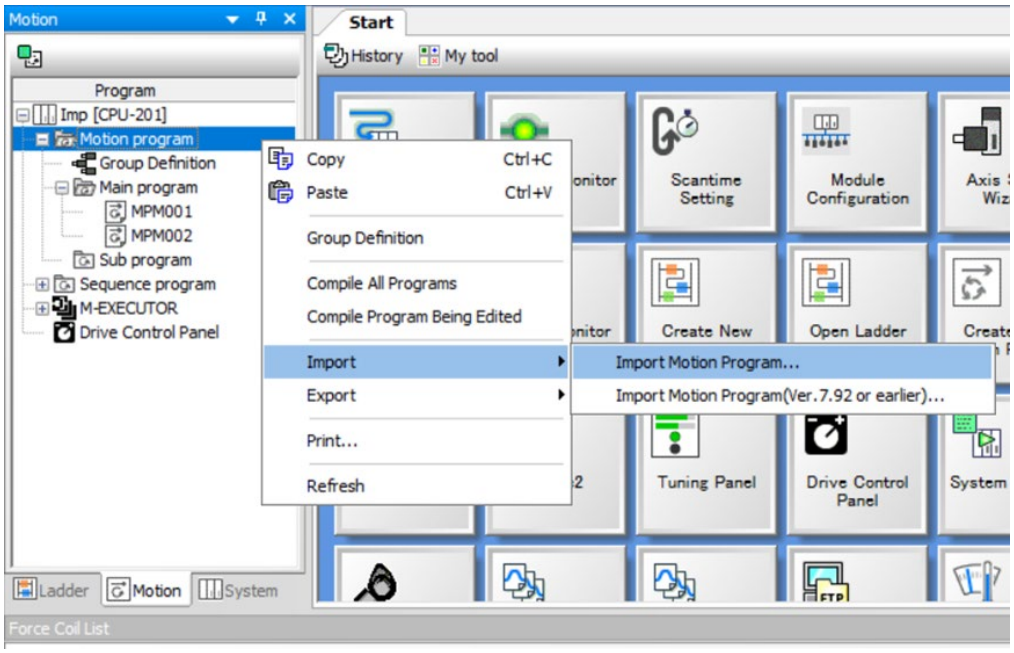
2) You can export the ladder program from the Ladder Sub Window/Navigation Window.



No. 2. Enhanced the import/export function of motion programs.

1) By importing motion programs, it is now possible to import even if there is no program with the same name.

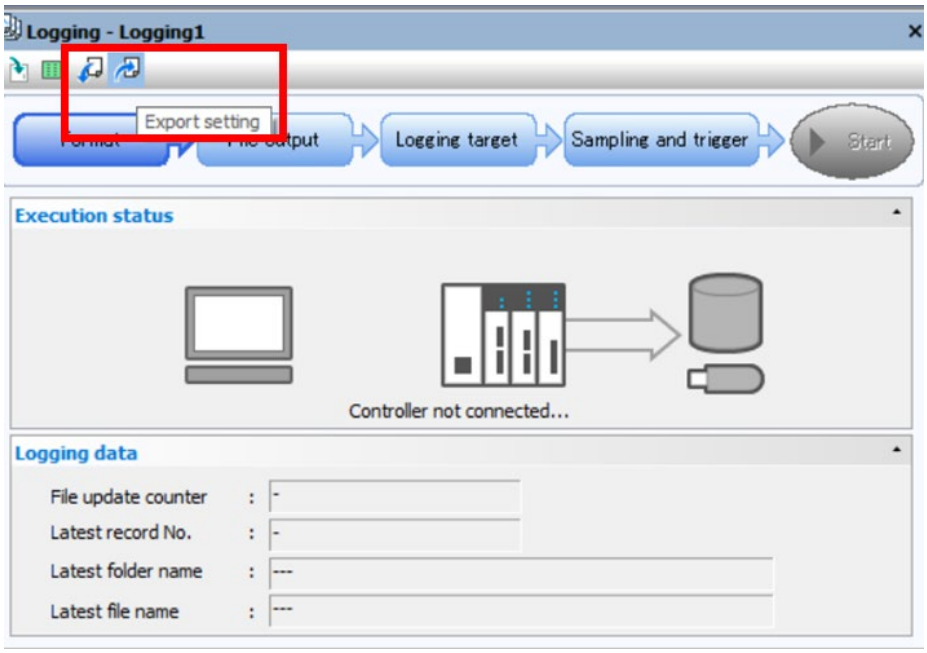
2) Changed the file format for exporting motion programs.



No. 3 Developed an import/export function for logging settings.

1) It is now possible to import logging settings from the toolbar of the logging screen.

2) From the toolbar of the logging screen, it is now possible to export logging settings.



[Supported versions]

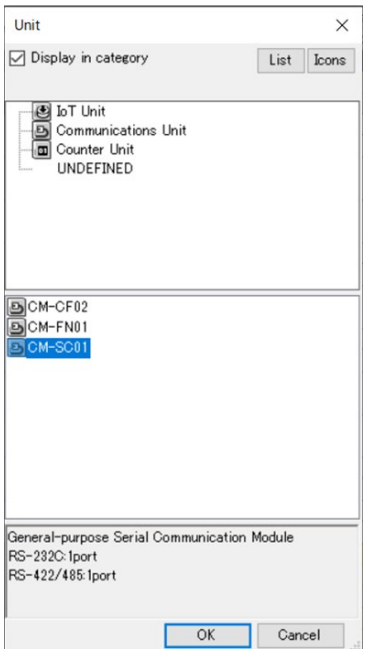
○ Controller

Controller/Option	Supported Firmware Versions
YRM1000	Version Independent
MPX1000	Version Independent
MP3000	Version Independent

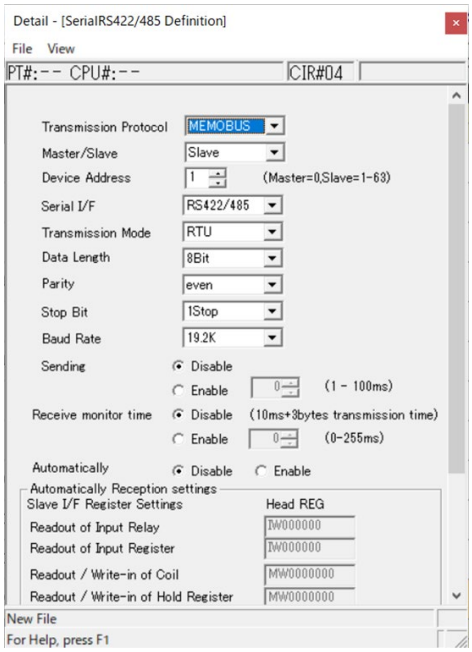
No. 4 YRM controller serial communication unit CM-SC01 has been added.

The serial communication unit CM-SC01 has been added as an FC unit of the YRM controller.

1) "CM-SC01" can be selected from the FC unit selection screen of the YRM controller, and it can be assigned (up to 8 units).



2) Transmission parameters can be set on the detailed definition screen of the CM-SC01.



[Supported versions]

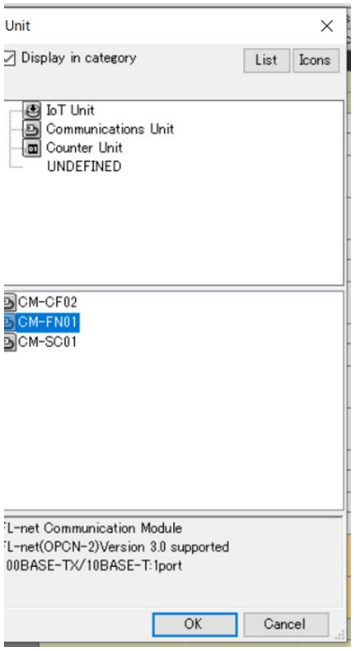
○ Controller

controller	Supported Firmware Versions
YRM1000： ：CPU-12	2.01

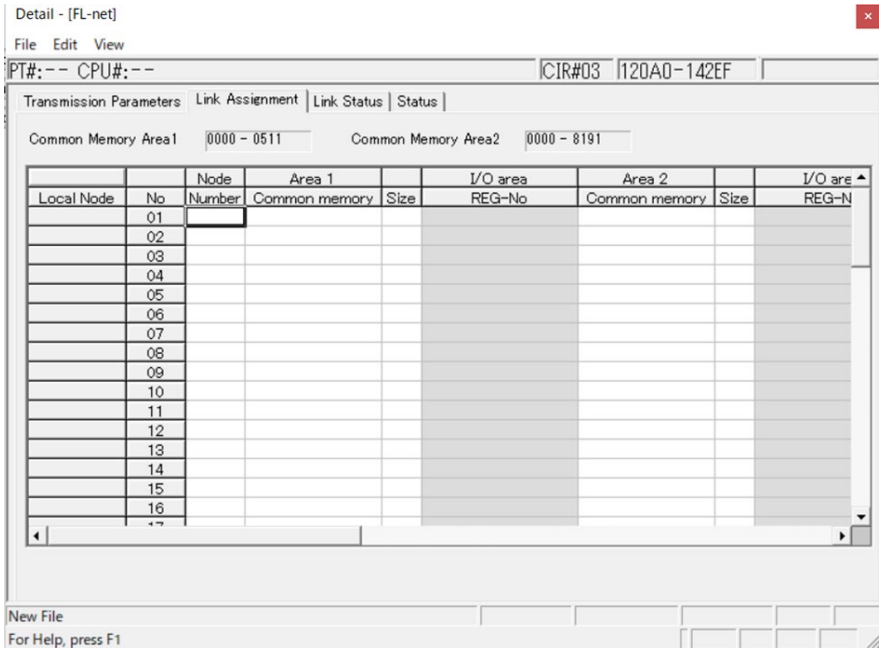
No. 5 FL-net communication unit CM-FN01 of YRM controller has been added.

The FL-net communication unit CM-FN01 has been added as an FC unit of the YRM controller.

1) "CM-FN01" can be selected from the FC unit selection screen of the YRM controller, and it can be randomized (up to 8 units).



2) On the detailed definition screen of the CM-FN01, you can set the transmission parameters and link assignment.



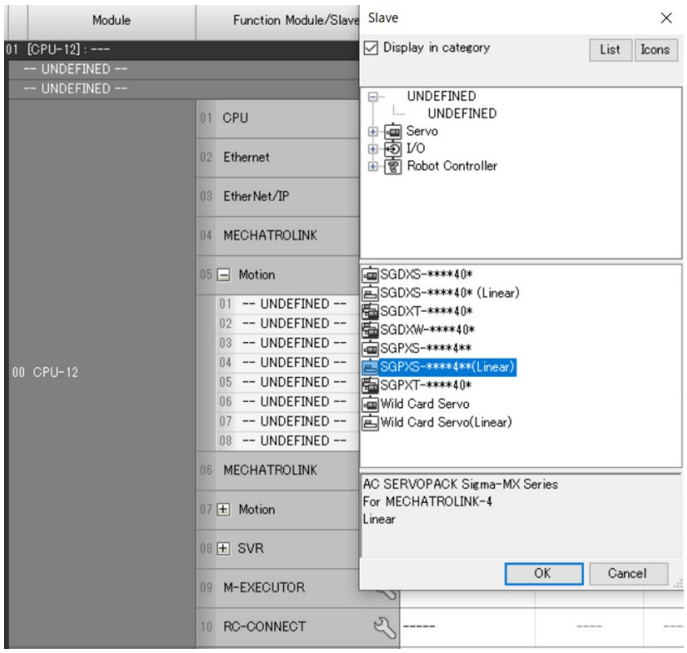
[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000： ：CPU-12	2.01

No. 6 Σ-Mx pulse encoder model (SGPXS-****45*) has been added.

A pulse encoder model has been added to the Σ-Mx servo for China. This model (SGPXS-****45*) is supported as a linear fixed control shaft. The basic functions are the same as the base servo.



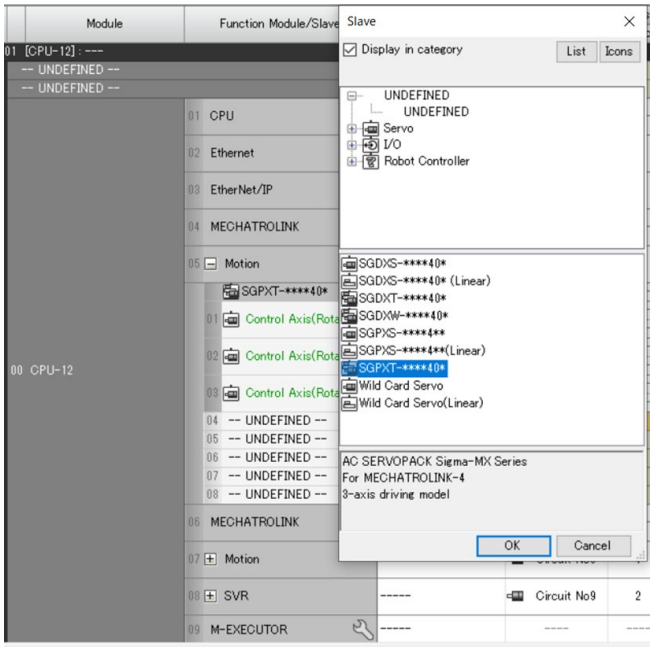
[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000 Series	Version Independent
YRM-7 Series	Version Independent
MPX1000 Series	Version Independent
MP3000 Series	Version Independent
MP2000 Series	Version Independent

No. 7 Σ-Mx 3-axis integrated servo pack model (SGPXT-****40*) has been added.

For the Σ-Mx servo for China, a 3-axis integrated servo pack model has been added. The basic functions are the same as the base servo.



[Supported versions]

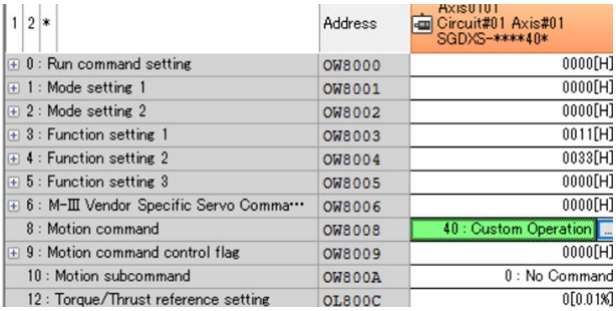
○ Controller

controller	Supported Firmware Versions
YRM1000 Series	Version Independent
YRM-7 Series	Version Independent
MPX1000 Series	Version Independent
MP3000 Series	Version Independent
MP2000 Series	Version Independent

No. 8 Added motion command (Custom Operation) for MECHATROLINK-III.

Added "Custom Action" to the servo motion command for M-III.

1) With the M-III servo placed, "40: Custom Action" can now be selected as the motion command of the setting parameter.



2) "Custom Directive 1~5" has been added to the setting parameters.

3) "Custom Action" has been added to the motion command response code for monitor parameters.

[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000 Series	Version Independent
YRM-7 Series	Version Independent
MPX1000 Series	Version Independent
MP3000 Series	Version Independent
MP2000 Series	Version Independent

No. 9 In the project conversion of the YRM1000 series, the conversion of optional units is supported.

In the project conversion from CPU-01 to CPU-12, the conversion of FC units is supported.

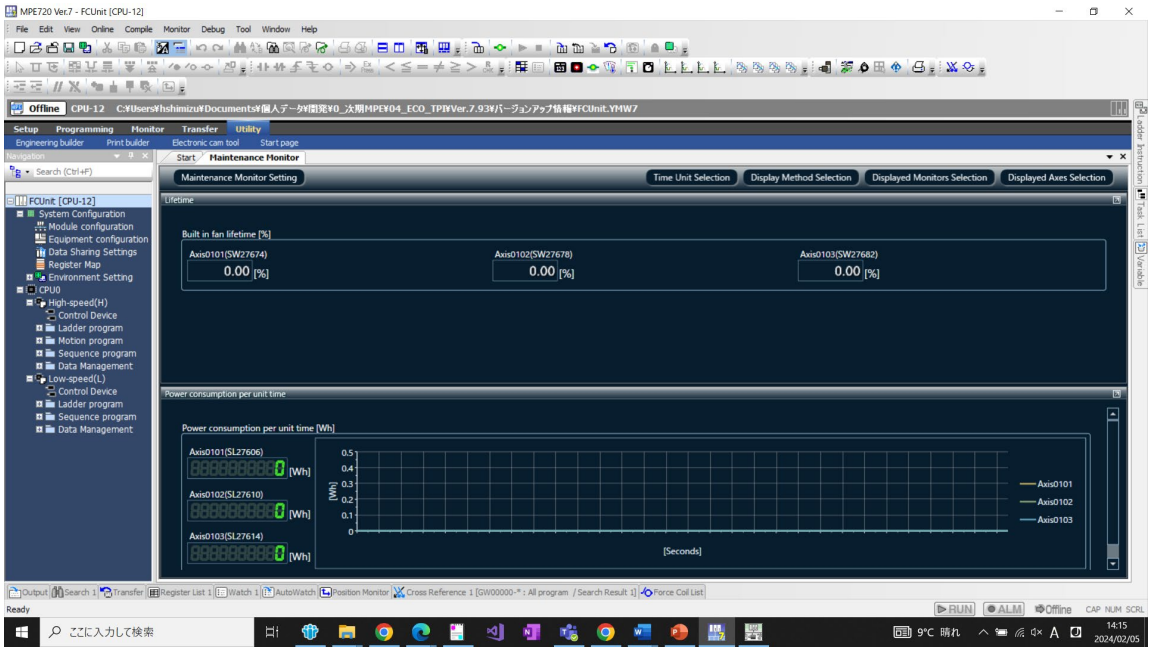
○Optional unit

Unit Name	explanation
IOT-01	IOT UNIT
CM-CF02	CC-Link IEFierldSlave Communication Unit
PI-01C	Counter Unit

No. 10 Multi-scan compatible models now support multiple functions.

The following are now supported for multi-scan compatible models.

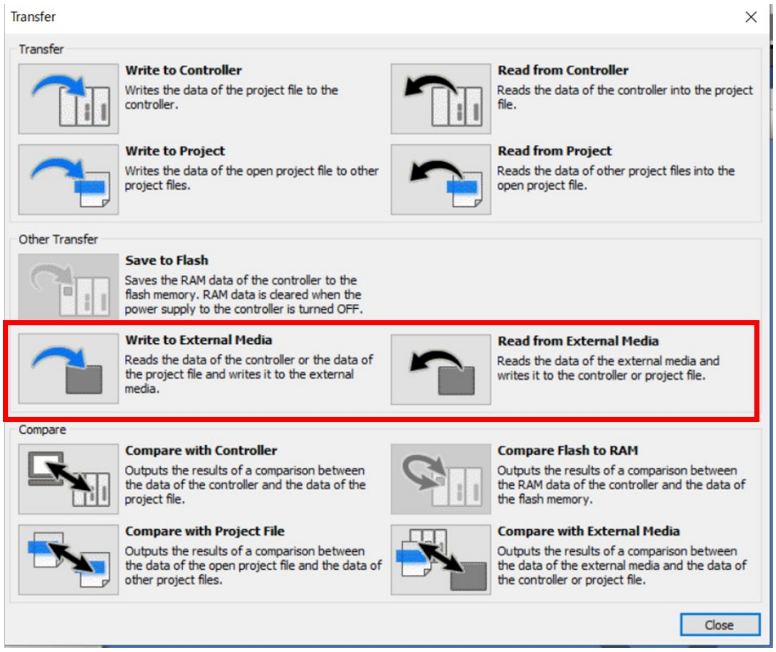
1) The maintenance monitor function is now supported.



2) Printing function is now supported. High-speed (Scan2) drawing printing is now possible.

3) Added support for displaying program steps in the display of controller information. High-speed (Scan2) drawings can be displayed.

4) Added support for the write/read/compare function of the transfer function to external media.



[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000 Series	Version Independent
MPX1000 Series	Version Independent

No. 11 Improved the cut, copy, and paste process of the program.

1） Cut, copy, and paste processing of motion programs and sequence programs in folders is now supported.

* Cutting, copying, and pasting are not possible online.

* Copying of different program types is not possible.

2) It is now possible to copy and paste the subprogram of the motion program to another group.

3) It is now possible to cut and paste to a different group of motion programs, a different group of sequence programs, or another scan (multi-scan compatible models).

4) It is now possible to cut and paste to another scan of the function program (multi-scan compatible models).

No. 12 Several improvements have been made to Multi-Scan compatible models.

The following functions have been improved for multi-scan compatible models.

1） The compilation time has been shortened in the compilation process when "Access Control Support" is enabled.

2） In the scan time setting, the input control has been changed to a text box.

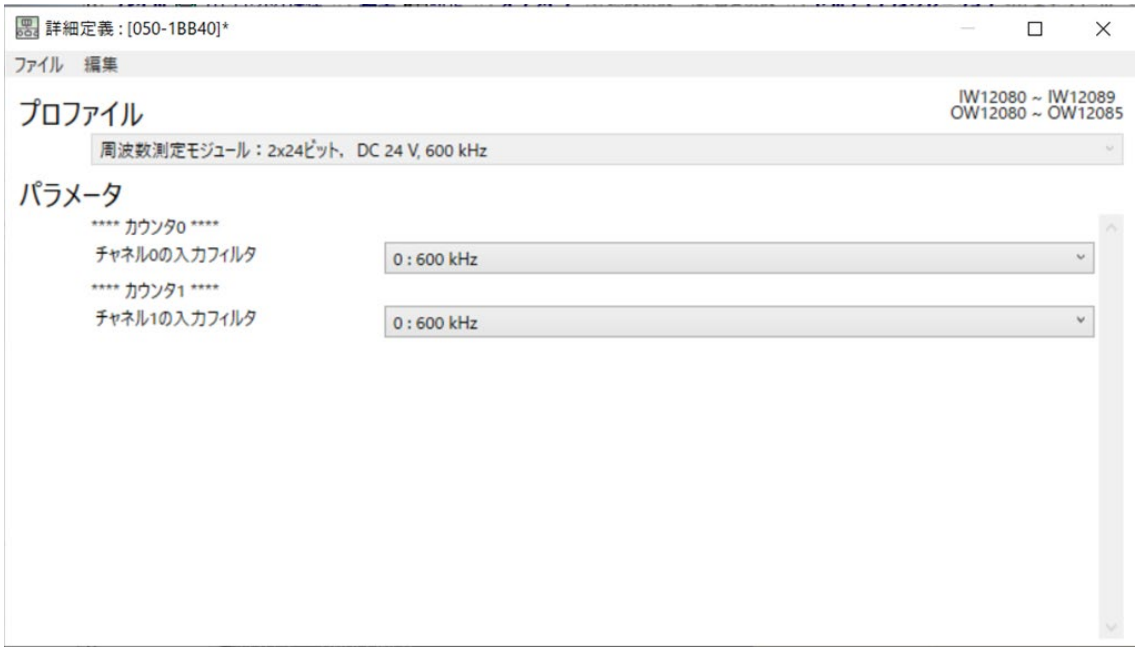
[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000 Series	Version Independent
MPX1000 Series	Version Independent

No. 13 Japanese and Chinese display are now supported in the parameter settings of certain SLIO modules.

For certain SLIO modules, the parameter setting screen is now supported in Japanese and Chinese.



[Supported modules]

module	explanation
050-1BB40	Frequency Measurement Module 2x24Bit DC24V/600kHz
050-1BA00	Counter Module 1x32Bit DC24V/400kHz
050-1BB30	Counter Module 2x32Bit DC24V/400kHz
050-1BS00	Synchron Serial Interface (Encoder Interface) RS422 100/300/600 kBit/s
040-1BA00	Communication Module, Serial Interface (RS232),
040-1CA00	Communication Module, Serial Interface (RS422/RS485)
054-1BA00	1xStepper Motor Controller, 24V, 1.5A
054-1CB00	2xDC Motor Controller, 24V, 1.5A
054-1DA00	1xPulstrain Output for external Drive Control, RS422, 4xDIO

No. 14 Added support for the display of IO system bus errors.

In the system monitor, the display of the A120H alarm is now supported.

[Supported versions]

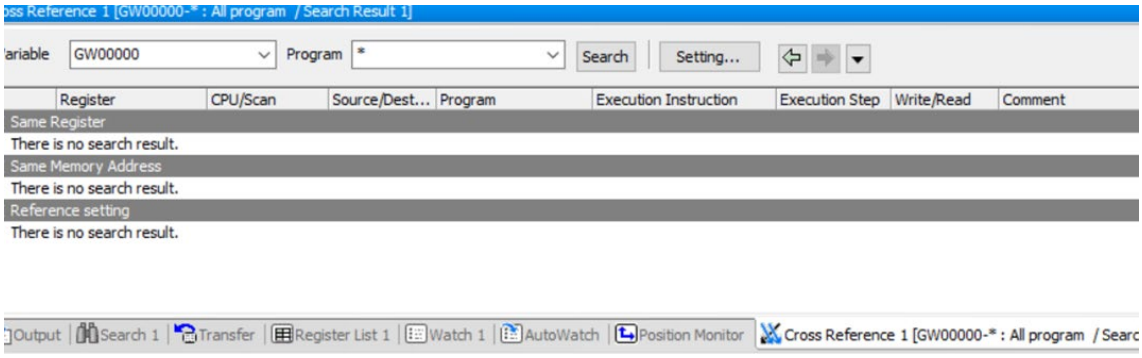
○ Controller

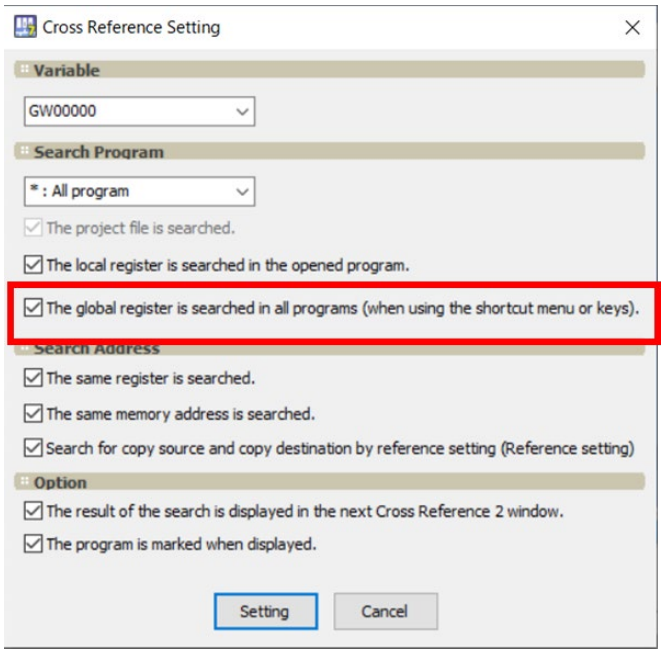
controller	Supported Firmware Versions
YRM1000 Series	Version Independent
MPX1000 Series	Version Independent

No. 15 Cross referencing has been improved.

The item "Global register searches all programs" has been added to the cross-reference condition settings.

When this setting is enabled, all programs will be searched.





No. 16 Fixed a bug that prevented parameters from being written to the servo pack for multi-scan compatible models.

When the "Write servo parameters to servo pack" option is selected in the transfer function, there was a bug that the write process to the servo pack failed, so this has been fixed.

[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000 Series	2.02
MPX1000 Series	2.02

No. 17 Fixed a bug in online operation when security settings are enabled.

When online security is enabled, there was a bug that MPE was forcibly terminated when the local register was registered with the watch function, so this has been fixed.

In addition, the following functions were rolled out horizontally.

- Cross reference
- Comment list

No. 18 Fixed a bug in the security function of the program.

MPE720 Ver.7.92 fixes a bug related to program password settings.

1) When compiling all programs, there was a bug that the password confirmation screen was displayed for programs that had passwords, so the password confirmation screen was hidden.
2) In the Ladder Program Sub Window, Motion Program Sub Window, and Navigation Window, it took a lot of time to expand the program tree with a password, so it has been improved.

No. 19 Fixed several bugs.

MPE720 Ver.7.92 had the following bugs, which have been fixed.

1) There was a bug that caused an out-of-range error when compiling after registering a LONG type register in the constant table, so it was corrected so that it could be registered normally.
2) When you open a PDF from Help, the PDF is opened, but an inappropriate error message is displayed, so the error message is hidden.
3) There was a bug that 65 or more pieces of data to be logged could not be printed, so it was modified so that it could be printed up to the upper limit for each model.
4) When the tuning result of the axis setup wizard is reflected, the process is executed, but an inappropriate error message is displayed, so the error message is hidden.
5) When a visual comparison of a program is executed without a file in the comparison source, there was a bug that MPE was forcibly terminated, so it has been fixed.
6) On the simplified OS, there was garbled characters in the error message when variable registration was executed, so it has been resolved.
7) There was a bug that the LED display of the system monitor could not display segments of 0x0B, 0x0C, 0x0D, and 0x0F, so the corresponding error could be displayed.
8) There was a bug in the instruction input assist of the motion program that displayed the axes of groups that could not be set, so it has been fixed so that only the corresponding groups are displayed.
9) When compiling all programs of the program, there was a bug that the redrawing of the My Tools screen was repeatedly executed, so it has been fixed.
10) When printing the local register of a grandchild drawing, there was a problem that the title at the time of printing was inappropriate, so it has been fixed.
11) When printing the local register of the interrupt drawing, there was a bug that the title at the time of printing was inappropriate, so it has been fixed.
12) There was a bug that the MPE720 was forced to quit due to the cut, copy, and paste processes of the program, so it has been fixed.
13) When the detailed definition screen was started for the first time after the placement of the 262-IF module, there was a bug that could not be saved in an unedited state, so it has been fixed so that it can be saved.
14) In servo traces, there was a bug that tracing execution could not be set for two or more axes, so it has been fixed.
15) In the YRM controller, there was a bug that changes in the settings of the RC-CONNECT module were not reflected on the device configuration definition screen, so the latest RC-CONNECT information was displayed.
16) After the transfer process, there was a bug that an error message was displayed when the jump execution from the group definition row could be selected in the transfer result window, so the jump function from the group definition line was disabled.

No. 20 Fixed a bug in the Multi-Scan compatible model.

MPE720 Ver.7.92 fixes a bug related to the multi-scan model.

1） After compiling and executing the entire program, there was a bug that it was not possible to jump from the cross-reference, so it was fixed so that it could be jumped.

2） In the import/export of local variables, grandchild drawings of P2 drawings were not included, so they were modified to be imported/exported. In addition, there was a bug that function programs with a drawing name of 8 characters were not targeted, so it was corrected so that it was targeted.

3） For SLIO modules with an input/output size of 1 word or less, there was a bug that allowed overlapping between modules when 0000 was selected for the input/output register, so it was fixed so that duplication is not possible.

4） There was a bug that a window that should be hidden was displayed due to the layout restore function, so it has been fixed.

5） In the project search, all function programs were displayed in the fast folder, so they were displayed under the appropriate scan folder. In addition, there was a bug that motion programs and sequence programs were not displayed, so this has been fixed.

6） There was a bug that the ladder program folder was not displayed on the program selection screen, so it has been fixed.

7） As a system variable of MPX, the variable related to the IOT unit was displayed, so I hid it.

8） The display of H and L scans in the transfer window was inappropriate, and this has been fixed.

[Supported versions]

○ Controller

controller	Supported Firmware Versions
YRM1000 Series	Version Independent
MPX1000 Series	Version Independent

Appendix A:

【About compile of the parallel circuit】

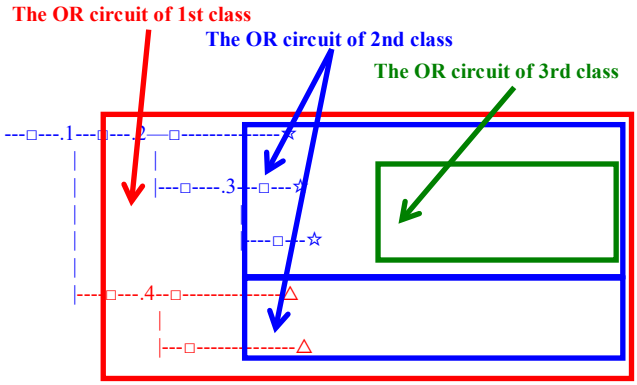
In the Ladder program of MPE720 Ver7 before MPE720 Ver7.23, when the parallel circuit is used, the following phenomena may occur.

<Phenomena>

When the circuit containing the following pattern was created, there was a phenomenon of operating without receiving the condition that the circuit below the OR circuit of 1st class must operate essentially in response to the conditional instruction before the OR circuit of 1st class.

<Measures>

When a phenomenon occurs, please carry out re-compile about the Ladder program in MPE720 Ver7 after MPE720 Ver7.24. Or please carry out again "Compile All Programs" of "Compile" menu.



The OR circuit of 1st class：The OR circuit branched from the bus-bar of langue.
The OR circuit of 2nd class：The OR circuit branched out of the OR circuit of 1st class.
The OR circuit of 3rd class：The OR circuit branched out of the OR circuit of 2nd class.

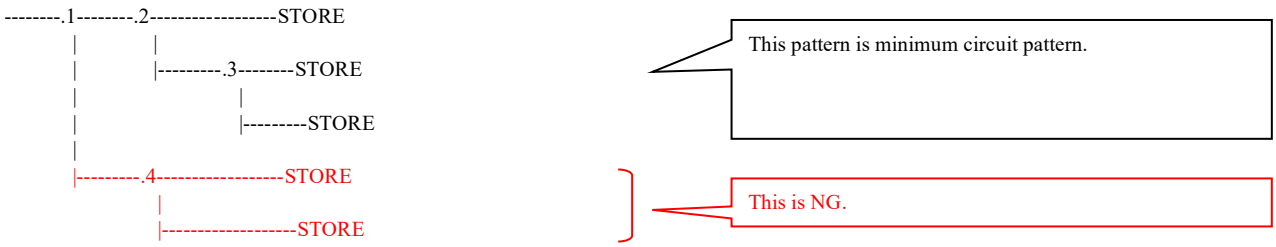
□(Conditional instruction)：NO Contact, NC Contact, Coil, instruction(==, !=, >, <), power line (-------) etc.
☆(Output instruction)：Coil, Block instruction(Expression, STORE, COPYW) etc
※However, when all ☆ is coil commands, a phenomenon does not occur.
△(Output instruction)：Coil, Block instruction(Expression, STORE, COPYW)etc

＜Pattern＞

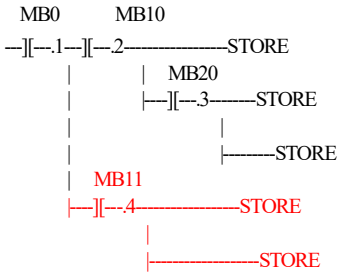
Symbol	Instruction
][	NO Contact
STORE	STORE instruction
( )	Coil

＜NG Pattern＞

①



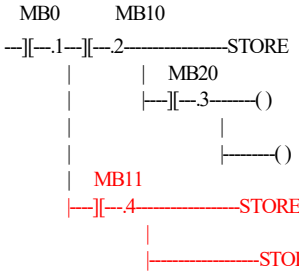
②



It is NG even if the minimum circuit pattern has conditional instructions (NO Contact etc.).

This is NG

③

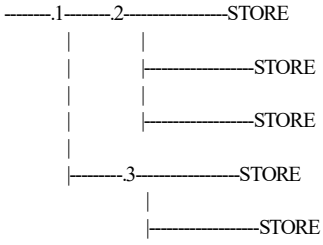


It is NG when there are at least one block commands (STORE command etc.) here.

This is NG

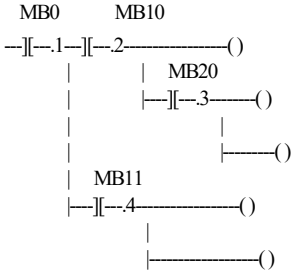
＜OK Pattern＞

①



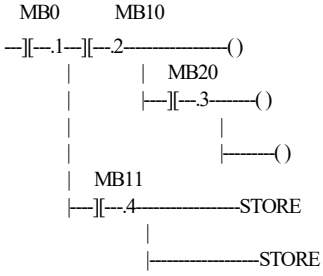
Since it is the OR circuit of 2nd, it is OK.

②



Since it is the coil altogether, it is OK.

③



Since it is the coil altogether, it is OK.

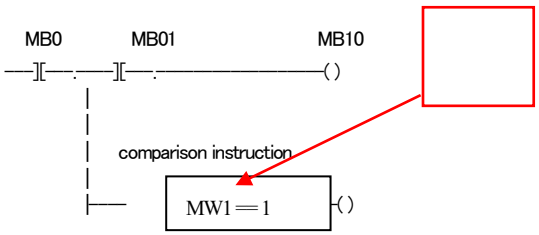
Appendix B:

【About compile with a comparison instruction in branch】

In the Ladder program of MPE720 Ver7 before MPE720 Ver7.63, when a comparison instruction is used in branch, the following phenomena may occur.

<Phenomena>

When the circuit containing the following pattern was created, the value of the register set in the upper OR circuit must be reflected to the comparison instructions in the lower OR circuit in the same scan. However, there was a phenomenon that it was reflected in the next scan.



MB000010 (MW00001) is referred in the comparison instruction of the next OR circuit.

<Measures>

When a phenomenon occurs, please carry out re-compile about the Ladder program in MPE720 Ver7 after MPE720 Ver7.64. Or please carry out again "Compile All Programs" of "Compile" menu. Also, about these programs that include circuits with this pattern, the number of internal steps will change in Ver7.64 or later, so when cross-reference is performed in a project created in an earlier version, there is a possibility of jumping to an unintended location. In this case, please recompile too.

Appendix C:

【About high DPI setting】

When MPE720 Ver.7 is started on a computer that supports high DPI such as a 4K display, part of MPE720 screen may not be displayed depending on the resolution and scale settings. From MPE720 Ver.7.67, the high DPI setting of MPE720's property is set to disable. This avoids phenomena such as the screen being cut off. If you want to use the high DPI setting, please change the MPE720 Ver.7's property setting.