

## Upgrade Information of MPE720 Version6.03

### 1. Added and Improved Functions

#### 1. 1 Ver. 6.03 upgrade information

The items added and improved functions from MPE720 version 6.02 to 6.03 are as follows.

No.	Item of Function	Classification
1	JAPMC-CM2380 (PCLINK-01Module)	Add module
2	AFMP-02 (CG-LINK/ANYWIRE Module)	Add module
3	MPALL00-0, MPAL000-0, MPAN000-0 Module	Add module
4	SJDE-**AN*servo addition (JUNMA-MII)	Add servo
5	Motion command addition - Absolute encoder reset	Add function
6	Motion parameter addition - Communication reset (0wxx00: Bit14) - Gain switch2 (0wxx01: Bit5) - Latch detection demand completion (lwxx00: Bit4)	Add function
7	Correspondence to high-resolution of SVR	Add function
8	CP Ladder converter	Add function
9	User structure of variable	Add function
10	Import and export of variable	Add function
11	Print manager addition to launcher	Add function
12	The license agreement on install screen	Add function
13	USB Driver update	Improvement
14	Improvement of print function	Add function
15	Improvement of the arrangement of MECHATROLINK definition	Improvement
16	Improvement of English messages during installation	Improvement
17	Improvement of naming error of the read-only attributed project	Improvement
18	Improvement of the error message due to the screen saver	Improvement
19	Improvement of the print function about [print error]	Improvement
20	Improvement of the print function about the display of unusable function	Improvement
21	Improvement the transfer function, transferring module configuration includes newer module	Improvement
22	Improvement the message displayed when closing a read-only project	Improvement
23	Improvement of ON/OFF control of IME Auto Switching	Improvement
24	Function improvement in branch block	Improvement
25	Function improvement in packet writing	Improvement
26	Modification of the display of auto-complete function of ladder	Bug fix

#### 1. 2 Past upgrade information

No.	Upgrade information	Remarks
1	<a href="#">MPE720 Ver. 6.02 upgrade information</a>	Ver. 6.01->Ver. 6.02

## 2. Description

### No. 1 JAPMC-CM2380 (PCLINK-01 Module)

It corresponded to the PCLINK-01 module.

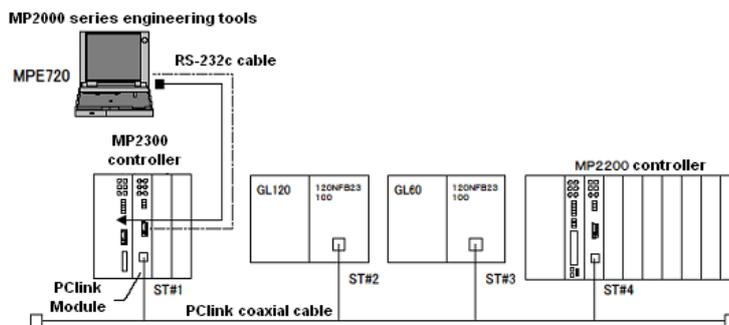
The PCLINK-01 module is an interface module with the PCLINK communication function and it is possible to mount on the MP2000 series controller directly. It is possible to use it as the controller level network between “programmable controller GL series” and “machine controller MP2000 series”. The replacement from the GL controller to machine controller MP series is made smooth.

It is possible to mount up to three modules or less on the option slot of machine controller MP2300.

It is possible to mount up to eight modules or less on the option slot of MP2200 and the extended slot of MP2100M.

The PCLINK communication supports the link communication and the message communication. The link communication is transmitted repeatedly at each scan set on the transmission definition. A memobus message and a general purpose message (non-protocol) are available by using the functions of MSG-SND and MSG-RCF in the ladder program.

**Example:** Connecting the MP2000 series controller with the GL series controller



### No. 2 AFMP-02 (CC-LINK/ANYWIRE Module)

It corresponded to the AFMP-02 module made in AnyWire Corporation.

AFMP-02 is an interface module for the AnyWire system with the CC-Link slave function that motion controller MP2200/MP2300 can mount directly.

The MP2000 series controller connected to the CC-LINK master equipment can develop the save wiring by AnyWireBus-DB of UNI-WIRE system high performance bus by using AFMP-02.

The AnyWire system is a save wiring system with a high-speed, high reliability by an original transmission method.

AnyWireBus-DB is function of the UNI-WIRE system enhancing BUS.

It is four-all duplicate transmission system with full duplex Bit-Bus and full duplex Word-Bus function.

The transmission distance 100m/200m/500m/1km, and the transmission point Three-all pile mode/Four-all duplicate mode can be selected with the dip switch.

Even if the divergence wiring is done, the disconnection detection is possible.

The I/O of 1 slot in the Dual-Bus function and the maximum input 256 points, the output 256 points, 64 data input words, 64 data output words can be transmitted simultaneously.

2560 points or less (Bit-bus: 512 points or less/word-bus: 2048 points or less) can be transmitted in single cycle mode.

#### <Controller version>

Supported version

MP2000 system software Ver. 2.51 or later

### No. 3 MPALLO0-0, MPAL000-0, MPAN000-0 Module

Three modules of MPALLO0-0, MPAL000-0, and MPAN000-0 made by ALGO System were added.

Form	Composition
MPALLO0-0	Line twice (A-link ×2)
MPAL000-0	Line once (A-link ×1)
MPAN000-0	Line once (A-net ×1)

#### \*A-link

Mastering is possessed in N:N communication, and the shape of the handshake is taken with each slave, and polling is done next, and order is cyclic transmitted from No.1 slave to No.n slave.

#### \*A-net

It can access between the per-devices by the memory packet in N:N communication. (It is also possible to construct the master, and to access it.)

The packet flows like the ring unlike 1:N communication, and R/W can be done to the packet that the bureau needs.

It is improper to do the light to the packet of another bureau though I/O situations of another bureau other than the bureau can be led.

#### <Controller version>

Supported version: MP2000 system software Ver.2.50 or later

### No. 4 SJDE-\*\*AN\* servo addition (JUNMA-MII)

In the MP2000 series (MP2100, MP2100M, MP2200, MP2200-02, MP2300), SJDE-\*\*AN \* servo is a new servo module of MECHATROLINK.

#### <Controller version>

When this servo is used, the firmware version of system software must be as shown below.

- Built-in SVB function: MP2000 system software Ver2.50 (MP2100/MP2100M/MP2300) or later
- SVB option module: SVB-01 system software Ver1.20 or later

### No. 5 Motion command addition

The following motion commands were added.

- Absolute encoder reset (ABS\_RST)

“ABS\_RST” command initializes the multiple rotation data of the absolute encoder (set 0). “ABS-RST” command clears “encoder backup alarm” and “encoder checksum alarm” when they occur.

## No. 6 Motion parameter addition

The following motion parameters were added.

- Communication Reset (0wxx00: Bit14)  
This command resets MECHATROLINK communication and makes the parameters, that need cycle power, effective. Also it clears C-phase position data memorized in the interpolator for Sony Manufacturing Systems Corporation (SMS) linear scale.
- Gain switch2 (0wxx01: Bit5)  
The “gain switch 2 (0wxx01.bit5)” is added in setting parameters and combine with existing gain change parameter (0wxx01.bit4), user can choose 4 different gains.
- Latch detection demand completion (1wxx00: Bit4)  
Status that showed that it was a latch mode was added to the monitor parameter.

### <Controller version>

Supported Version

- Built-in SVB function: MP2000 system software Ver2.50 (MP2100/MP2100M/MP2300) or later
- SVB option module: SVB-01 system software Ver1.20 or later

## No. 7 SVR For high-resolution evaluation

SVR supports “Linear type” and “micron meter” is available in the unit selection for MP2000 series.

### <Controller version>

Supported Version: MP2000 system software Ver2.50 or later

## No. 8 CP Ladder converter

This is a function that converts programs made with CP ladder into the Ver.6 style ladder program. DWG property and comment are also converted.

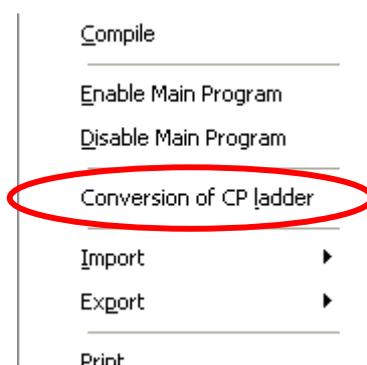
Single or multiple DWG can be converted and the result is displayed in output Sub-window.

This function is available only in “off-line.”

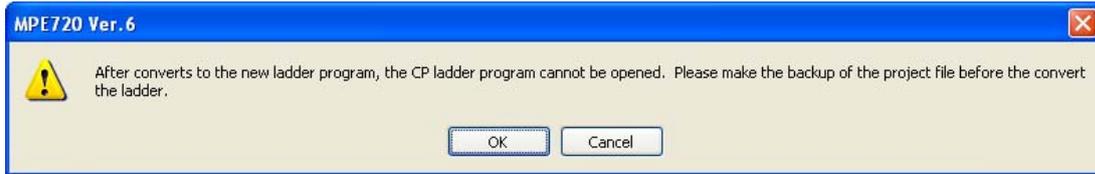
The DWG security and enable/disable status are also converted.

### <Function details>

1. This function is available by selecting “Conversion of CP ladder” from the pop-up menu from other than PLC folder nor ladder program in the ladder sub-window.



2. The message to note the backup making of the project file is displayed.



### 3. a. Conversion of plural program

Multiple programs can be converted by selecting the CP ladder program with its child and grand child DWGs.

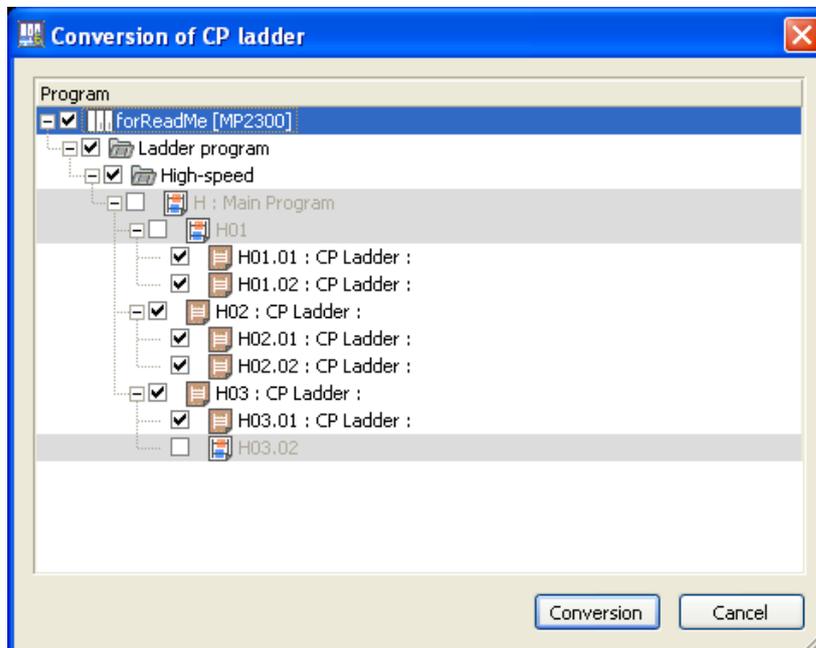
When the program is selected and "Conversion of the CP ladder" is clicked from the pop-up menu, the dialog shown below is displayed after "OK" is pressed on the dialogs shown above.



- 「Conversion」:The selected program is converted. The operation after this is the same as "Conversion of an individual program" operation described later.
- 「Select」:"Conversion of CP ladder" dialog box is displayed.
- 「Cancel」:The conversion of the program is canceled.

\*When you execute the conversion of the CP ladder selecting the program folder ("High-speed", "Low-speed", "Start", "Interrupt", "Function", "Ladder program") or ladder program with CP ladder program with child and grand child DWGs, it advances to "Program selection" dialog.

When "Select" is pressed, multiple program selection dialog is displayed.



The CP ladder program with the check mark is converted.

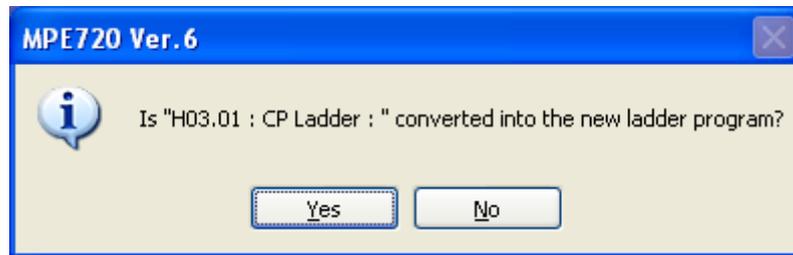
The ladder program cannot apply the check by disabling.

- 「Conversion」:The conversion of the selected program is executed.
- 「Cancel」:The conversion of the program is canceled.

### 3. b. Conversion of individual program

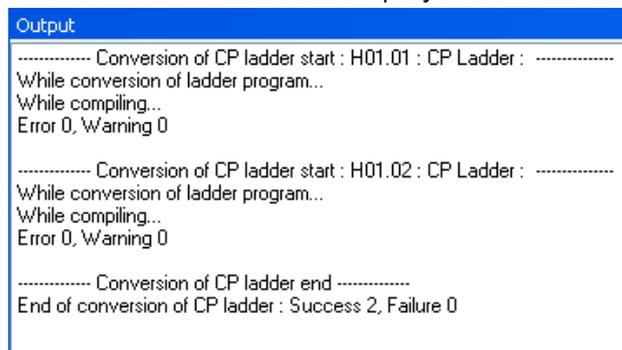
Single program can be converted by selecting the CP ladder program that doesn't have its child or grand child DWGs or in the non-hierarchical display mode.

When the program is selected and "Conversion of the CP ladder" is clicked from the pop-up menu, the dialog shown below is displayed after "OK" is pressed on the dialogs shown above.



- [Yes] :The ladder program is executed and conversion is executed.
- [No] :Conversion is canceled.

### 4. The result of conversion displays it in the output window.

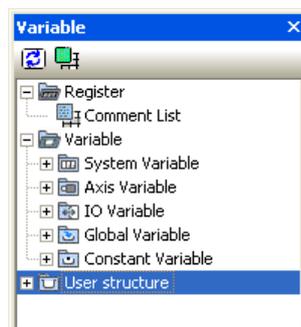


## No. 9 User structure of variable

The User structure can be created, and variables will be allocated it to.

The variables in the user structure are called "Structure member". 100 members can be registered to an user structure at maximum.

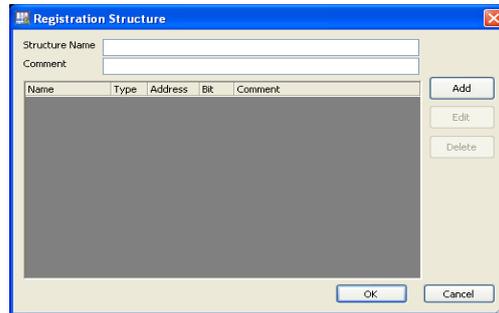
The User structure can be allocated to global or local variables.



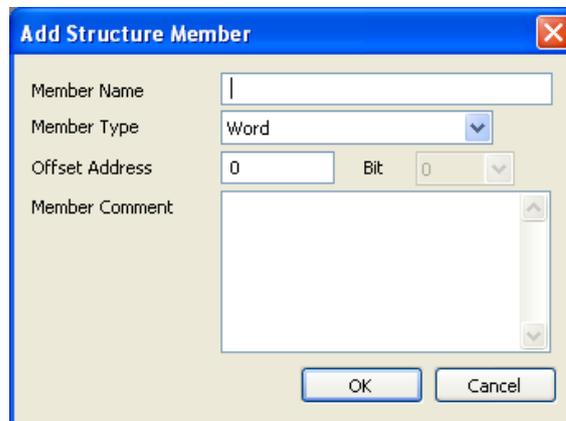
### <Function details>

\* The "Registration Structure" dialog box below can create a User structure.

1. The "Registration Structure" dialog box is displayed when "Add" is selected from the pop-up menu of "User structure" in the variable sub-window.

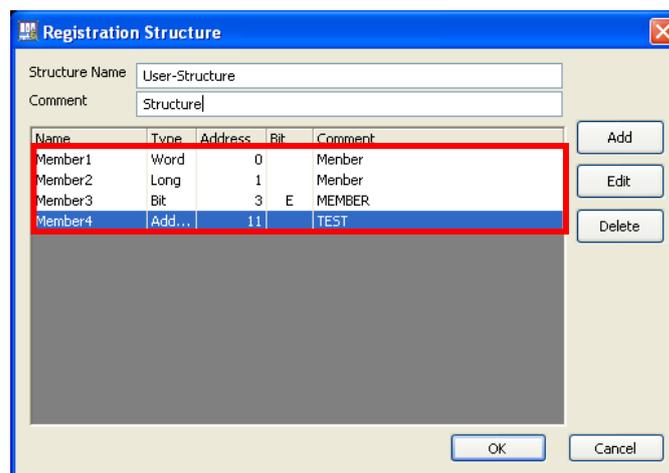


2. Input "Structure name" and "Comment" respectively then operate "add" button. "Add structure Member" dialog is displayed.

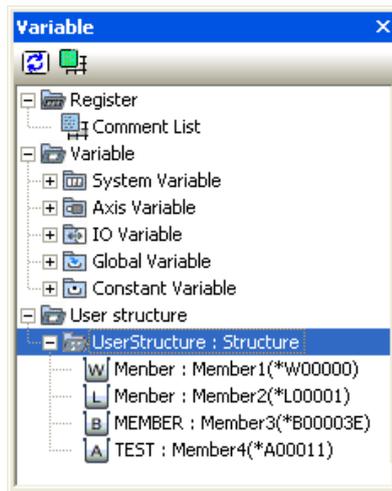


Input "Member Name", "Offset Address", and "Member Comment" respectively. Also select "Member Type" (Bit, Word, Long, Float, Address).

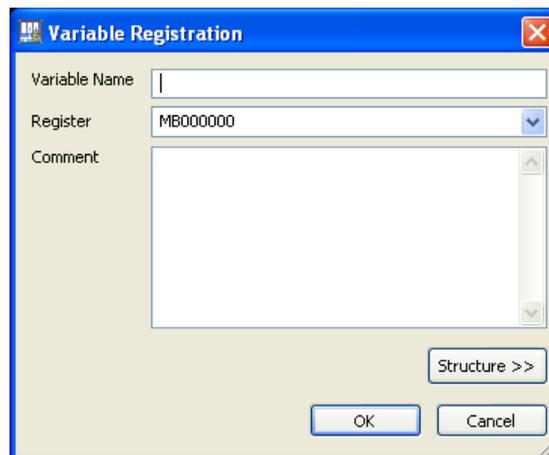
3. When "OK" is pressed, the structure member is displayed in the "Registration Structure" dialog box.



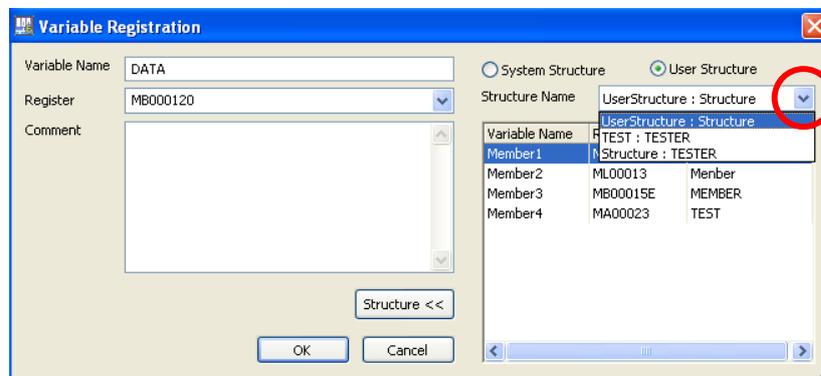
- When “OK” in the “Registration Structure” dialog is pressed, the dialog is closed and the user structure is displayed in the variable sub-window.



- \* “Variable Registration” dialog box can be used to allocate a structure of the global or local variables.
- Select “Add” from the pop-up menu of “Global variable” folder in the Variable sub-window then the following dialog comes up.

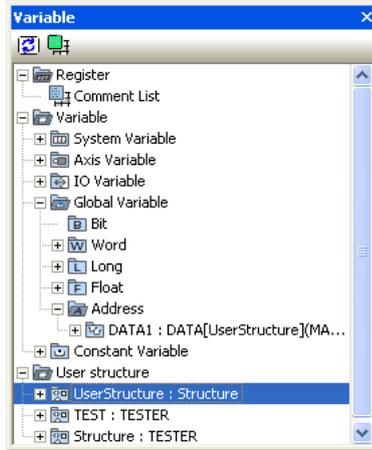


- A structure can be allocated by clicking “Structure”.  
Select the “User Structure”, then possible structure names are displayed. When the structure is selected, the variables that belong to the selected structure are displayed.



- Input "Variable Name" and "Comment" respectively, select "ADDRESS" type in the "Register", then [OK].

The variables that belong to the structure are displayed in the Variable sub-window.



## No. 10 Import and export of variable

Import and export are available for "Global variable and comment", "Local variable and comment", "Constant variable", "User structure", and "Ver5 CMT file".

The result of import and export is displayed in the Output sub-window.

The exported file can be edited in Excel (GSV format) and imported to the other project.

Type	Type of file	Edit of data
The global variable and comment	CSV file	Possible by Microsoft Excel.
The local variable and comment	CSV file	Possible by Microsoft Excel
The constant variable	CTF file	Impossibility
The user structure	YST file	Impossibility
Ver.5 CMT file	CMT file	Impossibility

### <Function details>

- Import and export of the global variable and comment  
"I/O variable", "Global variable", and "Comment of I, O, M and C register" can be exported to the file. The file can be named. The extension becomes "CSV".

The file can be edited by Microsoft Excel and imported to MPE720 Ver. 6.

The Axis Variable cannot be exported and imported.

Specifying the range of the register is not available.

When open the CSV file, data is displayed in order of the Register Address, the Comment, the Variable, and the Structure. Unset column will be blank.

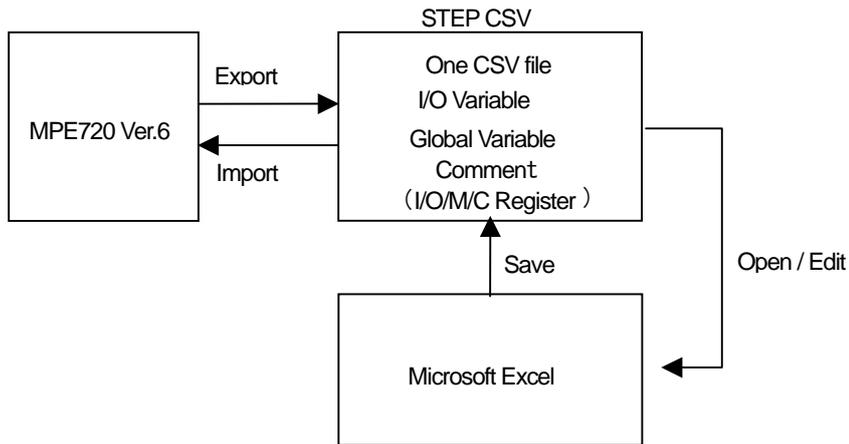
	A	B	C	D
1	MB000001	Run Switch	Run Switch	
2	MA00200	PIParameter	PIParameter	PI_W
3	CW00001	Acceleration	Acceleration	

A: The Register Address is displayed.

B: The Comment is displayed.

C: The Variable is displayed.

D: The Structure name is displayed.



(2) Import and export of the local variable and comment

The comment of a DWG local and function variable and D, #, X, Y, Z and A register can be exported. The exported file is saved in the specified folder per program. The file name will be the DWG number with extension "CSV".

The file can be edited by Microsoft Excel and imported to MPE720 Ver. 6. Specifying the range of the register is not available.

When open the CSV file, data is displayed in order of the Register Address, the Comment, the Variable, and the Structure. Unset column will be blank.

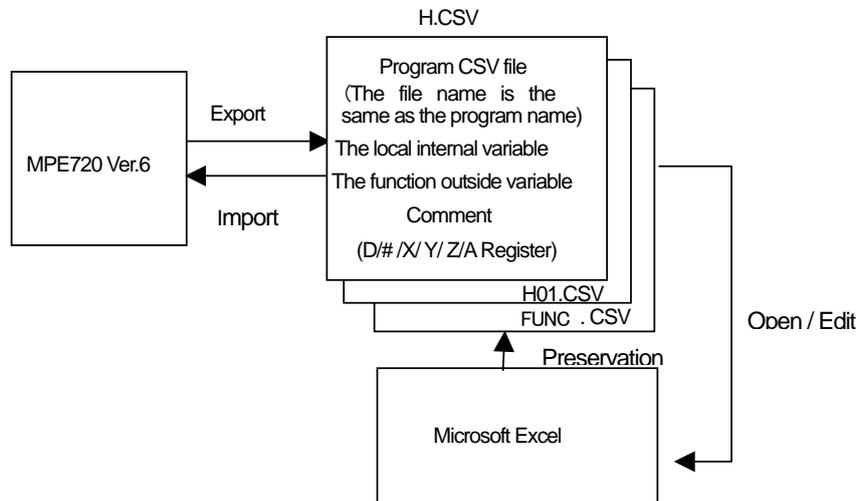
	A	B	C	D
1	DB000001	Start speed	VAR_D_Bit	
2	DA00300	Local	VAR_Local	Local_Structure
3	DL00017	Data		

A: The Register Address is displayed.

B: The Comment is displayed.

C: The Variable is displayed.

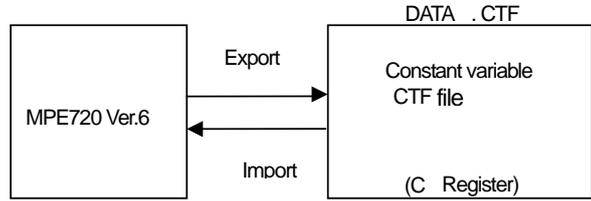
D: The Structure name is displayed.



(3) Import and export of the constant variable

The comment of a Constant group variable, register No. Comment, unit and value can be exported. The exported file is saved in the specified folder per constant group. The file name will be the name of the constant group with extension "CTF".

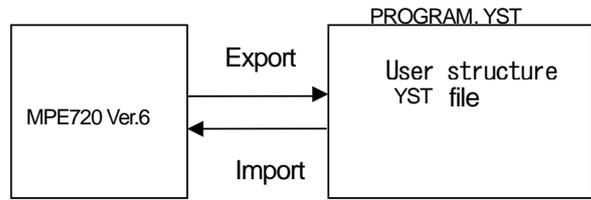
The exported file cannot be edited. The file can be imported to MPE720 Ver. 6.



(4) Import and export of the user structure

The data of each User structure (user structure and structure member, etc.) can be exported. The file name can be specified and the extension is "YST", it cannot be edited.

The file can be imported to MPE720 Ver. 6.



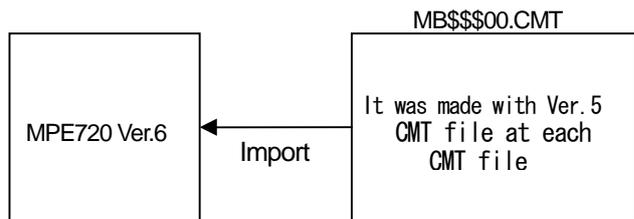
(5) Import of Ver5 CMT file

The register and comment used in MPE720 Ver.5 can be imported to Ver. 6.

Exporting from Ver.6 is not possible.

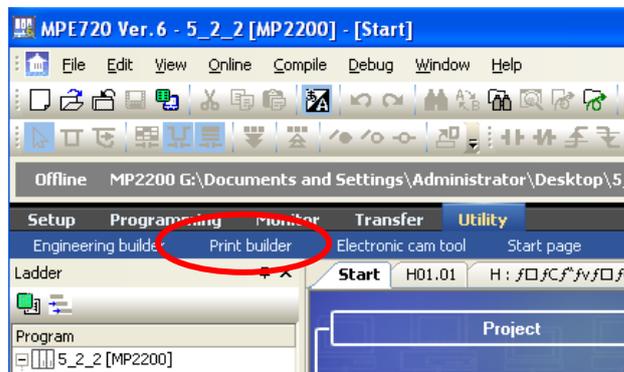
Comment file that import is possible

Comment file	Register	Data type of possible import
MB\$\$\$\$.CMT	M Register	Bit Comment on data
MW\$\$\$\$.CMT	M Register	Word, Long, Float, Address Comment on data
OB\$\$\$\$.CMT	O Register	Bit Comment on data
OW\$\$\$\$.CMT	O Register	Word, Long, Float, Address Comment on data
IB\$\$\$\$.CMT	I Register	Bit Comment on data
IW\$\$\$\$.CMT	I Register	Word, Long, Float, Address Comment on data
CB\$\$\$\$.CMT	C Register	Bit Comment on data
CW\$\$\$\$.CMT	C Register	Word, Long, Float, Address Comment on data
xxxxxxxx.CMT	—	Local comment of each program



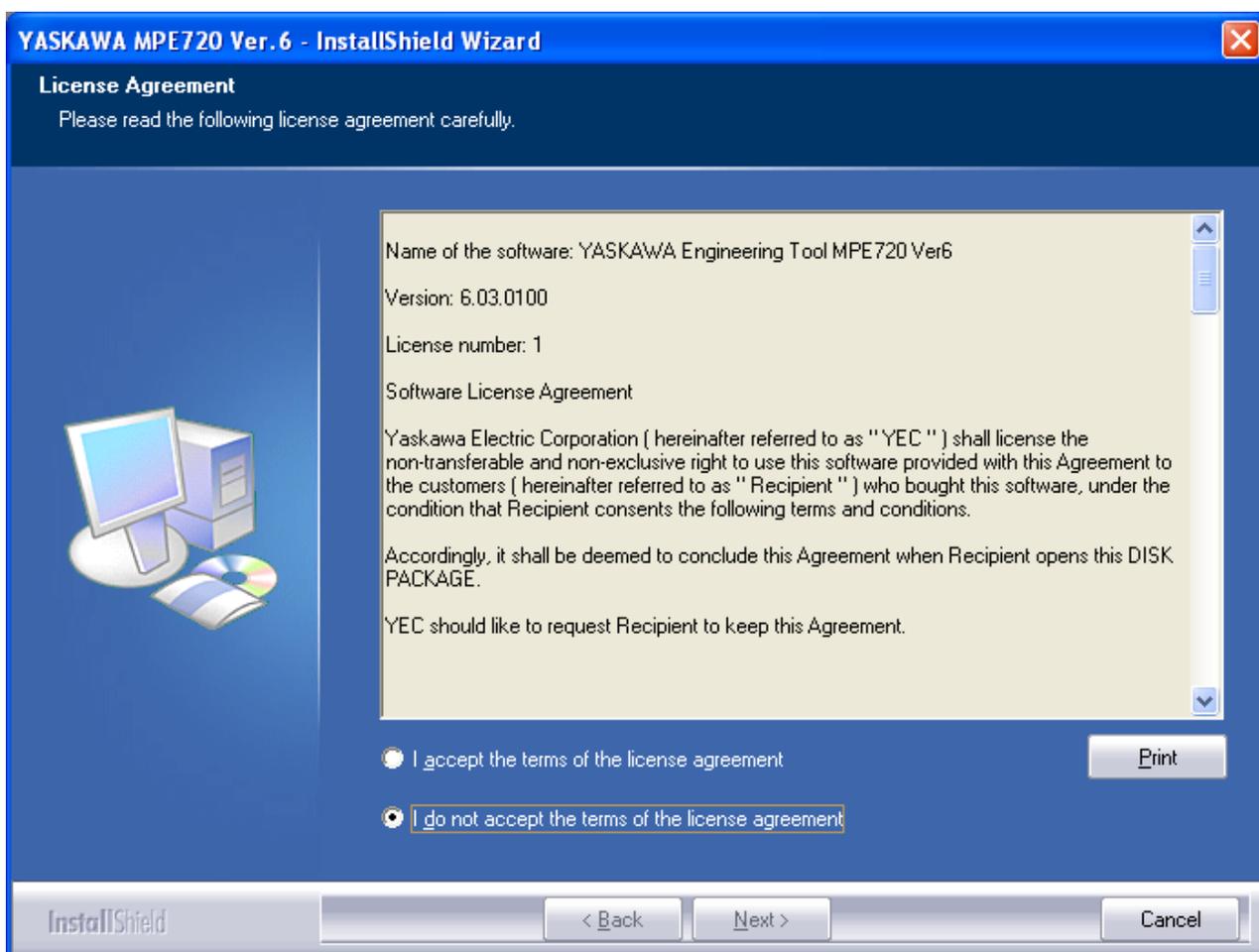
## No.11 Print manager addition to launcher

The item of "Print builder" was added to "Utility" in the launcher.  
When click "Print builder", print manager will open.



## No.12 The license agreement screen of installer

When install MPE720, the display of the license agreement was added.



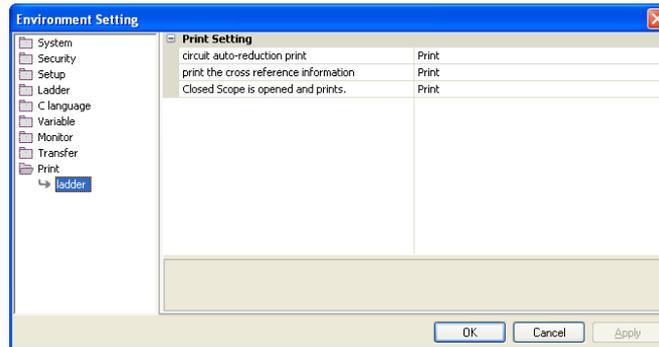
## No. 13 USB Driver update

The USB driver of MPE720 Ver. 6.02 was updated to 1.0.0.3, which is also used for Sigma Win+ 4.00. MPE720 and Sigma Win+ can use USB by sharing the same version on the same personal computer.

## No. 14 Improvement of print function

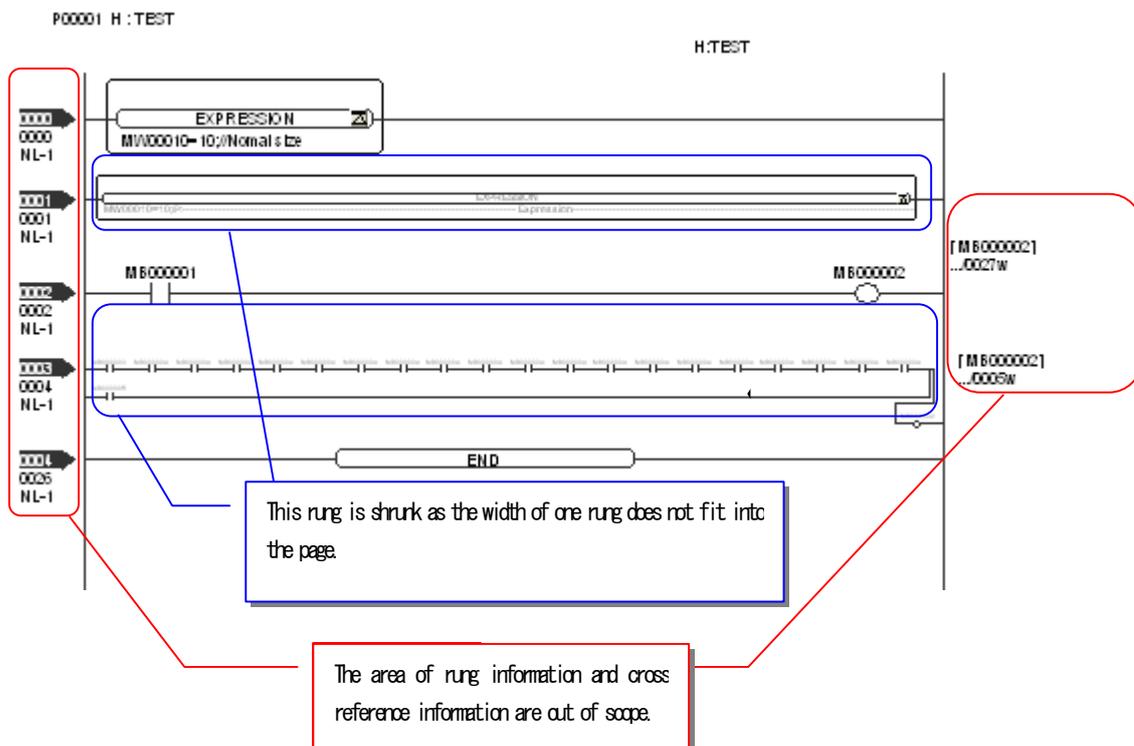
### 1. Environmental Setting of print function

“Environment setting” dialog is displayed from [file] → [Environmental Setting] of the main menu. Print setting is available by the menu [Print] → [ladder].



#### \* Auto reduced print of ladder circuit

The ladder program normally does not fit to the paper size can be shrunk and fit to the paper. When the function is enabled, shrunk is done per rung and only the rung which does not fit into the page are shrunk. The targets of shrinking is only circuits between bus lines and the rung information such as “Step No.” and Cross Reference information are not shrunk. Program comments or rung comments are out of scope.



\*Print the Cross reference information

The user sets whether to print the Cross reference information.

When the function is enabled, the Cross reference information is printed on the right side of the ladder program.

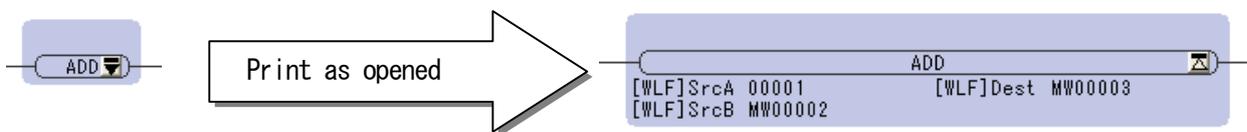
When there is a lot of Cross reference information, automatically the rung space is adjusted not to over wrap to the following rung.

\*Closed Scope is opened and prints

The user sets whether to open the closed scope in the ladder program to print.

When the function is enabled, the closed scope is printed as opened.

When set "Print the closed scope as opened"

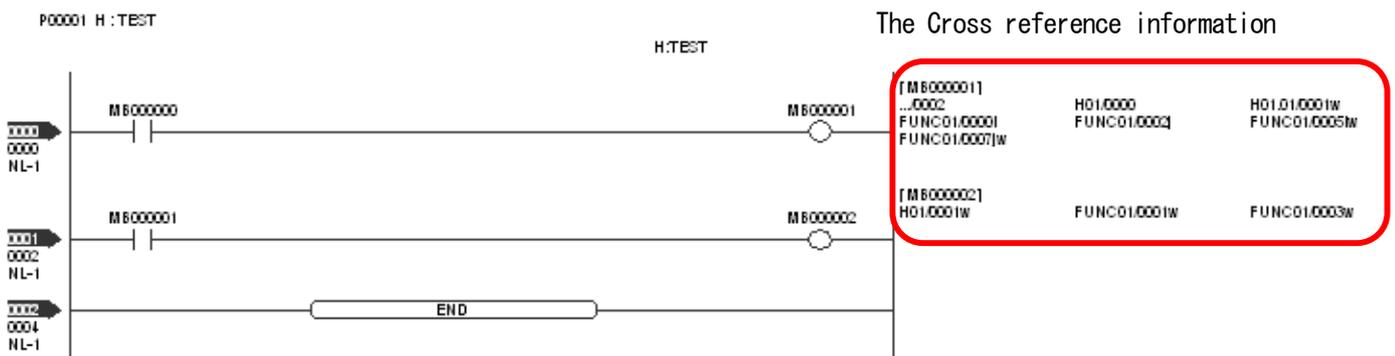


2. Print function of the Cross reference information

The Cross reference information can be printed on the right side of the ladder program.

Cross reference information are "Program name" and "Step number (execution step number)". The target of printing is M, I, O, D, Y, Z and A register.

This function is available only for off-line operation.



\* The detail of the Cross reference information

“Program name, step number and additional information” display the Cross reference information.

Basic pattern :H01.01/0010      FUNC01/0010  
 Add information :H01.01/0010w      H01.01/0010i      H01.01/0010iw

Display item	Specification	Example
Program name	The program number is displayed, and the comment is not displayed. The order is “High-speed→ Low-speed→ Start → Interrupt → Function”. The order is parent DWG → child DWG → grand child DWG.	H H01.01 FUNC01
Step number	In the order of ascending step No. in 4 digits 3 digits for CP ladder	0001 1000
Add information	Subscript: i and j	H01/0010i H01/0010j
	Store and coil: w CP ladder: @	H01/0010w H01/0010iw

### No. 15 Improvement the arrangement of MECHATROLINK definition

In the module configuration, the arrangement of the SVB MECHATROLINK module in the combo box was grouped in product classification.

The screenshot displays the 'Module Details' for an MP2300 controller module. In the 'Slot Number' table, Slot 3 is set to 'SVB' and 'MECHATROLINK'. A callout window shows a list of module types, with 'SVB-01' and 'AB023-M1' highlighted in red, indicating the improved grouping.

ST#	TYPE	D
01		
02		
03	SGDH-***E+NS115	
04	SGDS-***1**	
05	SGDX-***1**	
06	SJDE-***AN*	
07	SteppingMotorDRV	
08	***SERVO	
09	JEPMC-I02310/30	
10	JEPMC-I02320	
11	JEPMC-PL2900	
12	JEPMC-PL2910	
13	JEPMC-AN2900	
14	JEPMC-AN2910	
15	SVB-01	
16	YV250	
17	AB023-M1	

## No. 16 Improvement the English message in installation

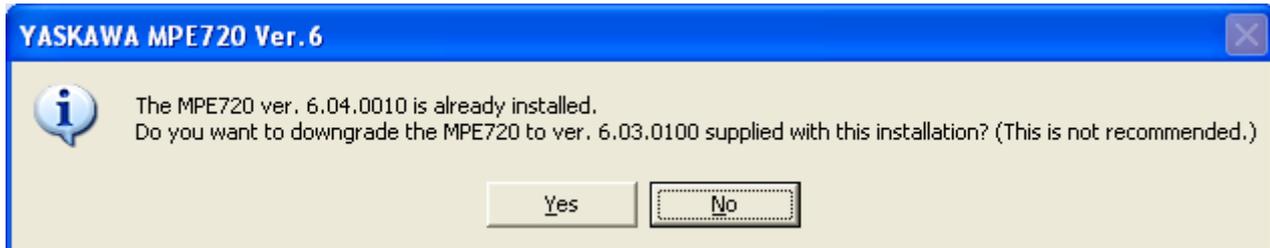
The English messages, which were displayed for over write installation of MPE720, communication manager and electronic cam tool were changed.

### ① Downgrade installation

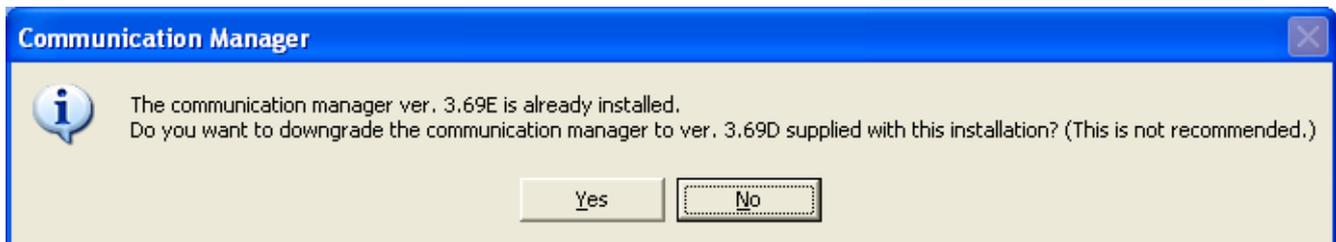
When install MPE720Ver.6.03 to the PC which already installed higher version(Ver6.04 etc.), the following message is displayed.

(Same)

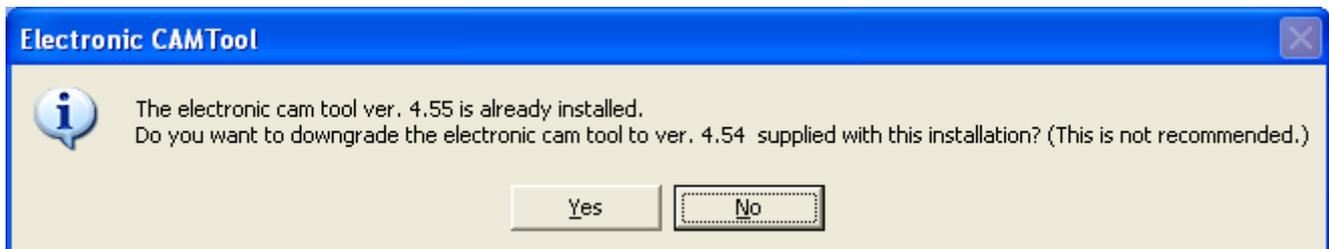
MPE720



The communication manager



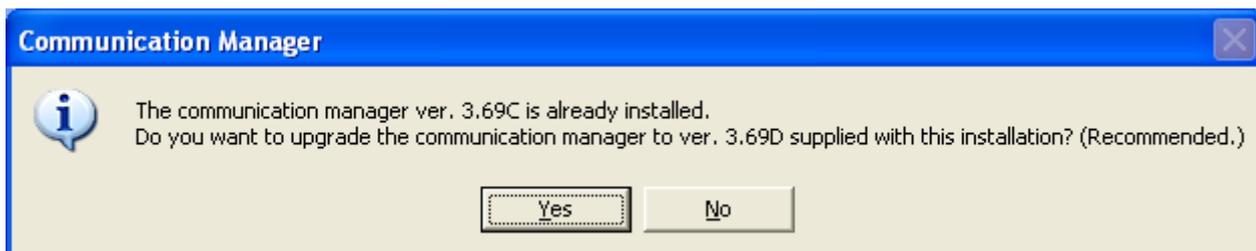
The electronic cam tool



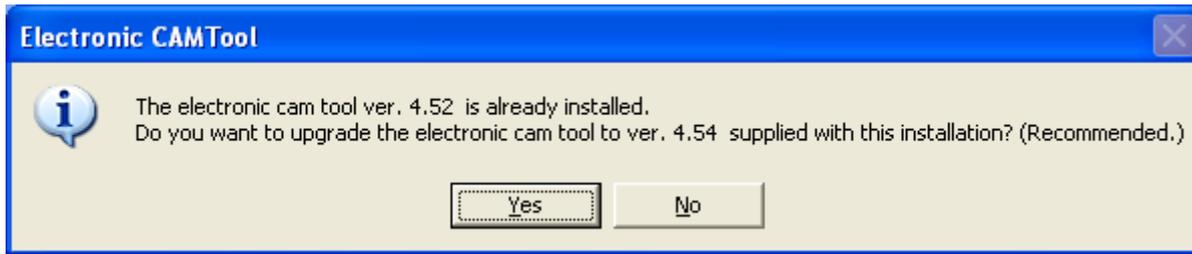
### ② Upgrade installation

When install MPE720Ver.6.03 to the PC which already installed lower version(Ver.6.02 etc.), the following message is displayed.

The communication manager



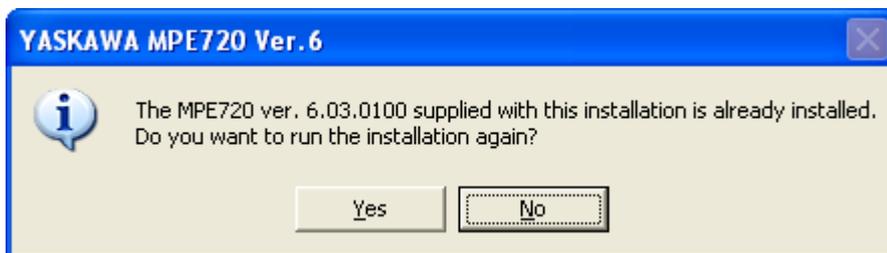
The electronic cam tool



Installation of the same version

When MPE720Ver. 6.03 is installed in the environment in which same version (Ver.6.03) is installed, the following message is displayed.

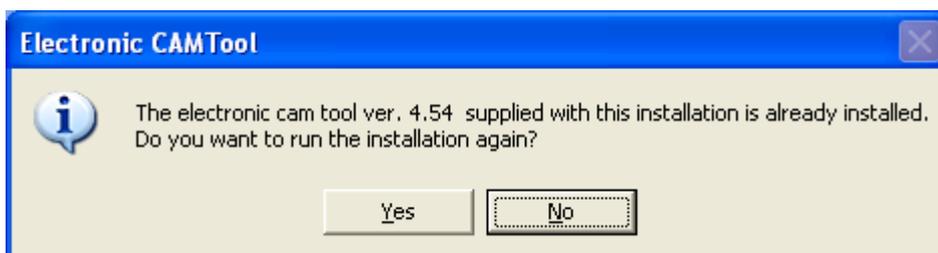
MPE720



The communication manager



The electronic cam tool



## No.17 Improvement the naming error of the read-only attributed project

### <Measures>

It was modified to save with giving a name when execute "Save as ..." to the project attributed read-only.

### <Phenomenon>

When open the project file attributed read-only and execute "Save as ..." with MPE720, the error is occurred because of copying with attributes of read-only together.

Moreover, the project file (it is called B), which is a copy of A, is created but A is still opened in MP720. Therefore the project can not be opened because the error is occurred without restart MPE720.

## No.18 Improvement the error message due to the screen saver

### <Measures>

It was modified to do not display error message which is occurred when the screen setting is changed in "Display Properties" etc. of Windows and work the function such as Screen Saver etc..

### <Phenomenon>

The error code "0x8001010D" might be displayed when the screen setting was changed in "Display Properties" etc. of Windows and worked the function such as Screen Saver etc..

## No.19 Improvement the print function about [print error]

### <Measures>

It was modified to print without the print error information when print the new ladder program by print manager.

### <Phenomenon>

The print error information was printed such as "impossible to print because of created by CP ladder" with printing the new ladder program from engineering manager.

## No.20 Improvement the print function about the display of unusable function

### <Measures>

It was modified to be impossible to print which are unusable functions in Ver.6.03.

They are SFC, I/O conversion table, interlock table, part assembly table. Also function is displayed as "disable".

### <Phenomenon>

When print from print manager, unusable functions in Ver.6 (SFC, I/O conversion table, interlock table, part assembly table) of CP ladder were set disabled, but function programs were not set disabled.

## No.21 Improvement the transfer function, transferring module configuration include newer module

### <Measures>

It becomes possible to transfer the module configuration file which corresponds to new module with MPE720 which does not correspond to the module.

### <Phenomenon>

When transfer the module configuration file with MPE720 which did not correspond to the (new) module, transfer error was occurred and not completed.

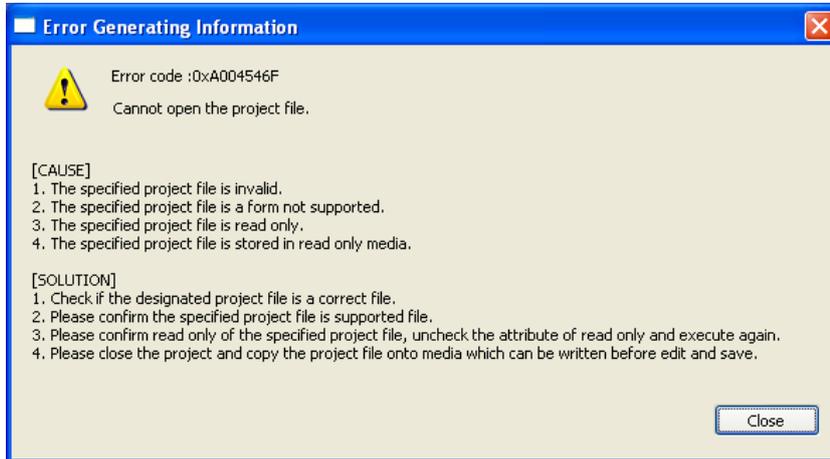
## No. 22 Improvement the message displayed when close read-only project

### <Measures>

It was modified to display the message includes the information of read-only to “Cause” and “Corrective Actions” when close the read-only project file.

### <Phenomenon>

When close the read-only project file, the error of failure to save was displayed. But the contents of error message of saving error was backup error and it was not easy to understand.



## No. 23 Improvement of ON/OFF control of IME Auto Switching

### <Measures>

It was modified to be possible to select enable/disable of IME Auto Switching function. Selection of enable/disable of IME Auto Switching was registered in the menu and the toolbar.

### <Phenomenon>

In the input part of the comment of the ladder, the register comment, and the register list, the function automatically change the “direct input” and “hiragana input” of IME at the same time as the cursor’s being set is provided. However the automatic change function was a troublesome function when inputting directly.

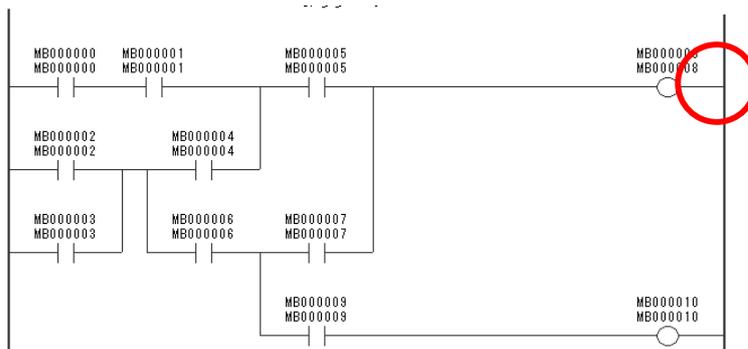
## No. 24 Function improvement in branch block

### <Measures>

It was modified to be possible to select branch block and complete to compile in the ladder program below.

### <Phenomenon>

When hit the cursor to the part of the sign in the ladder below, it was not likely to be able to select and not complete to compile.



## No. 25 Improvement of the packet writing function

### <Measures>

It was modified to be possible to save the variable and comment data (Register type : M, I, O and C, Register type: W, L, F and A) which sized 32kB or more at online.

### <Phenomenon>

The error was occurred when save the bigger size data, which is 32kB or more of variable or comment data, at online.

## No. 26 Modification the display of auto-complete function of ladder

### <Measures>

It was modified to display the instruction key which was changed in editor option of ladder in auto-complete.

### <Phenomenon>

The instruction key changed was not displayed in auto-completion after change the key assignment. I.e. If assign the timer instruction to "tim( in the small letter)", it was not displayed at auto-complete of ladder instruction.