# Upgrade Information of MPE720 Version 6

## 1. Add Function/ Item Improvements

The add function and the improvement from MPE720 version 6.01 to MPE720 version 6.02 are as follows.

| No. | Item of Function | Classification |
|---|---|---|
| 1 | Change of specification of system work (D register) in Ladder Editor | Change specification |
| 2 | Support of C language program | Add function |
| 3 | Add the register jump function of comment list | Add function |
| 4 | Additional function of search/ replace of comment list | Add function |
| 5 | Display the current value/ maximum value of scan time | Add function |
| 6 | Add the function of "save as a new project" | Add function |
| 7 | Import/ Export function of motion parameter | Add function |
| 8 | Function of disagreement data display of current value < - > setting of servopack parameter | Add function |
| 9 | Add C register use enable function in register list | Add function |
| 10 | Add the print function of program call (FUNC/ MSEE) in print manager | Add function |
| 11 | Function of display list of forced coil list | Add function |
| 12 | New support of transfer medium | Add function |
| 13 | Transfer function of comment | Add function |
| 14 | Function of detail compare of ladder program/ motion program | Add function |
| 15 | Add transfer function to Environment Setting | Add function |
| 16 | Variable function: Support of variable to all I/O module | Add function |
| 17 | Automatic creation of axis variable of SVB/ SVA/ PO/ SVR/ MECHATROLINK-II inverter | Add function |
| 18 | Function of trace registration from variable window | Add function |
| 19 | Management of read/ write of comment data | Add function |
| 20 | Communication Process: Extension of the number which simultaneously allocated by the serial port | Add function |
| 21 | Communication Process: Extended COM port number | Add function |
| 22 | Support ****SERVO as MECHATROLINK module | Add function |
| 23 | Communication Process: Support Gateway function | Add function |
| 24 | Bug of the error occurring which the Expression instruction of the ladder program | Bug fix |
| 25 | Bug of the error which restart the project file after shut down | Bug fix |
| 26 | Bug of the error which register/ variable registered in the watch | Bug fix |
| 27 | Bug of alarm registration of axis variable alarm | Bug fix |

| 28 | Bug of the error which save project | Bug fix |
|---|---|---|
| 29 | Bug of Undo processing of comment | Bug fix |
| 30 | Check function of Motion program saving size | Bug fix |
| 31 | Malfunction of ladder operation when use the register with subscript in the Expression instruction | Bug fix |
| 32 | Unusable "Compile to version 5 compatible" before version 5.34 | Preventive |
| 33 | Bug of the error of "Compile to version 5 compatible" | Preventive |
| 34 | Transfer error of servopack parameter of 16th axis | Preventive |
| 35 | Bug of transfer at Electronic CamTool | Preventive |
| 36 | Number of drawing of CP ladder program | Improvement |
| 37 | Conventional ladder was changed to CP ladder | Improvement |
| 38 | Enable to relay connection through MPLINK of 215AIF-01 | Improvement |
| 39 | Improvement of status of use in register map | Improvement |
| 40 | Error in track point central button of IBM ThinkPad | Improvement |
| 41 | Change error message in miscompare of FLASH comparison | Improvement |
| 42 | Display of confirmation message when all comment list is cleared | Improvement |
| 43 | Saving the status of tree/ data format when compiling the watch | Improvement |
| 44 | Impossibility of one-byte kana in the logical axis name of group definition | Improvement |

# 2. Description of change of specification
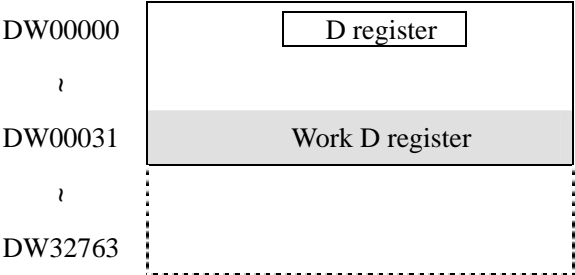
## No.1 Change of specification of system work (D register) in Ladder Editor

### < Change of specification >

The current work D register was allotted in order of the previous address the user was a property screen from the end of specified D register number.   Therefore, work D register used D register address which the user used.
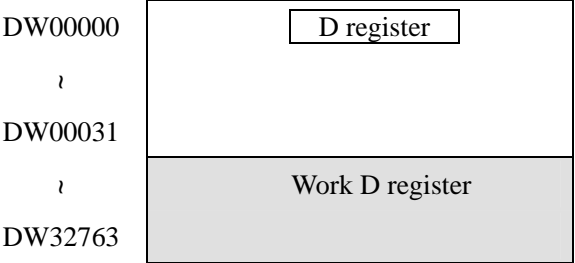
Example    Set the number of D register=32

Before change the specification

```
DW00000   ┌──────────────────────┐
          │        ┌───────────┐    │
          │        │ D register │    │
          │        └───────────┘    │
          │                          │
DW00031   │░░░░░░░Work D register░░░░│
          ├┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┤
          ┊                          ┊
DW32763   ┊                          ┊
          └┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┘
```

Work D register allotted from the following addresses of D register number which the user set, and prevented D register which the user used with the ladder in the program and the address the overlap.

After change the specification

```
DW00000   ┌──────────────────────┐
          │        ┌───────────┐    │
          │        │ D register │    │
          │        └───────────┘    │
          │                          │
DW00031   │                          │
          ├──────────────────────────┤
          │░░░░░░░Work D register░░░░│
DW32763   │░░░░░░░░░░░░░░░░░░░░░░░░░░│
          └──────────────────────────┘
```

**Confirm the number of D register at property screen**

Each use register size can be confirmed on the property screen.



| Setting Item | After Change (version 6.02) | Before Change (before version 6.01) |
|---|---|---|
| D register | Setting Value: 0-16384 The use size of D register which the user uses by the program is set. Work D register does not use this area. | Setting Value: 0-16384 The number is set including the use size of D register which the user uses by the program and the size of work D register. |
| Number of work register | none | The size of work D register used is displayed after compile. Data only of reference |

**< Error display of cannot secure area of work D register >**

When the area of work D register cannot be secured when compiling, the error is displayed on the output screen.
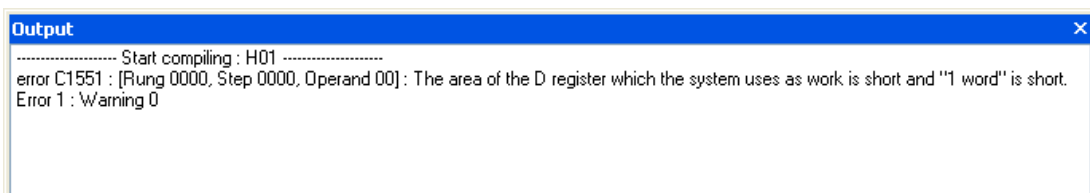
## No.2 Support of C language program

**< New Function >**

MPE720 version 6 is able to manage the C language program developed in environment "Multi" made by the Green Hills Software, Inc. It became a specification which succeeded a basic function of MPE720 version 5.

The functions of the following four items were add/ reinforced.

(1) Function of import for C language application.

Import can be executed from pop-up menu of C language program manager.

(2) Function of export for C language application.

Export can be executed from pop-up menu of C language program manager.

Offline only.

(3) Function of program control of C language task.

The C language task program can be controlled by the task control only online. The task control becomes non-display in the C language function program and while offline.

(4) Function of environment setting about C language.

Function of which show/ hide C language program manager for use the function of import of C language application, and linker setting function were added.

**(1) Function of import for C language application.**

Procedure of Import

1. Select the import from the pop-up menu.
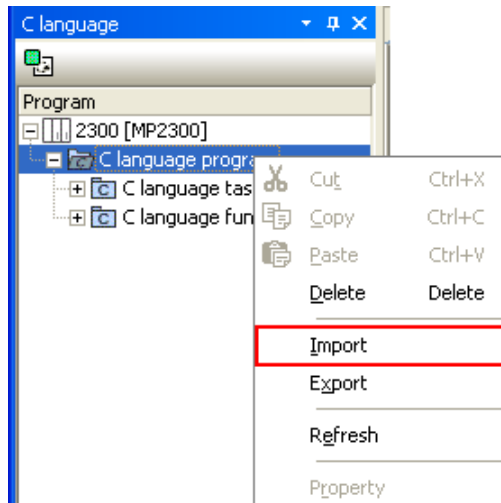


Displayed the import dialog.

2. Displayed the import dialog.

The program is selected, and click the [OK] button.
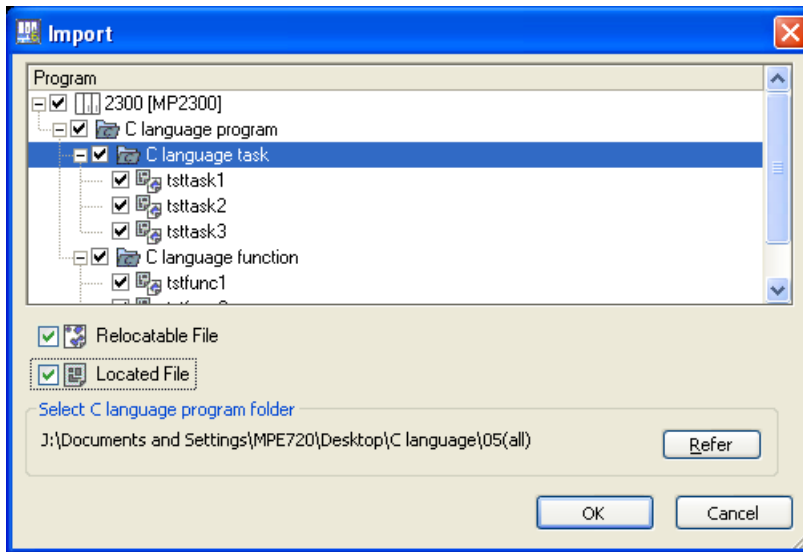


3. Import the selected C language program.
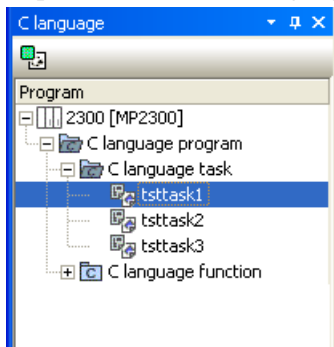


**(2) Function of export for C language application.**

  Procedure of Export

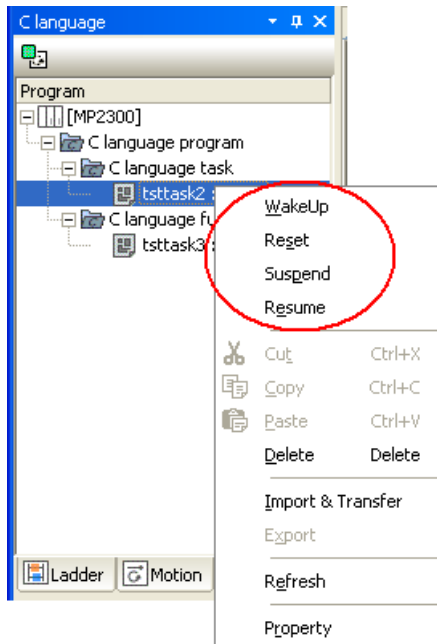1. Select the export from the pop-up menu.
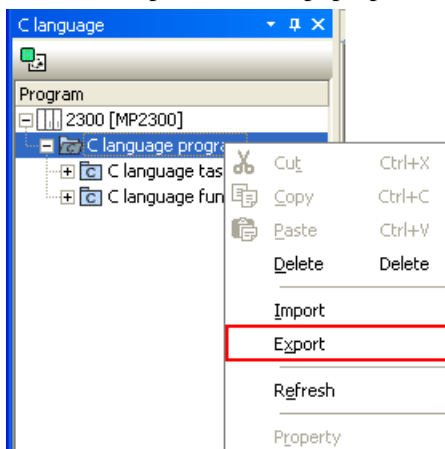
2. The program is selected, and click the [OK] button
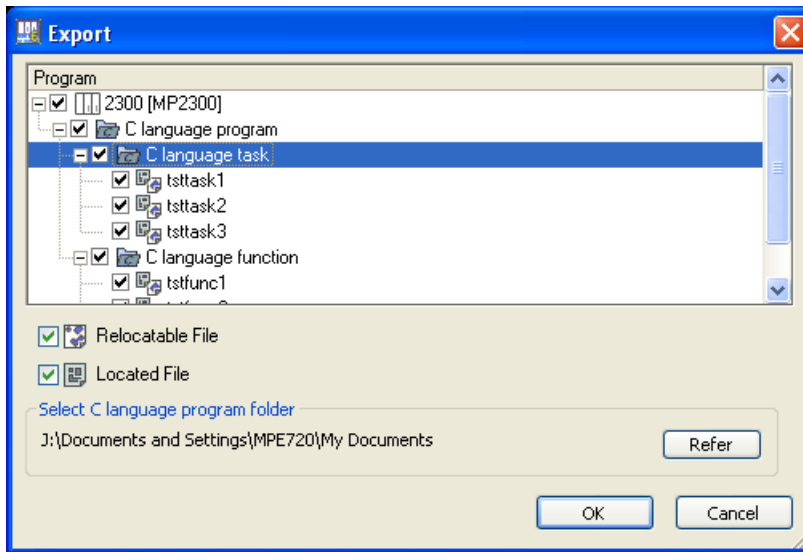


3. Import the selected C language program.
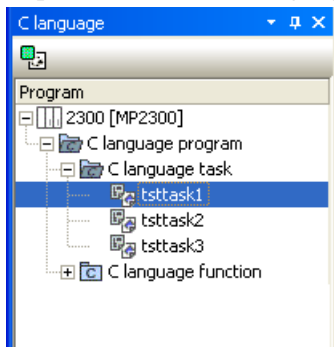
**(3) Function of program control of C language task.**



Wake Up: Start the task.

Reset: Stop the task.

Suspend: Suspend the task.

Resume: Release the suspension.

**(4) Function of environment setting about C language.**

Show/ hide the C language program manager

It can be set from [Environment Settings] -> [C language] -> [General].

C language program manager is displayed and possible to use the C language program while C language program of [Environment Setting] is "Yes".
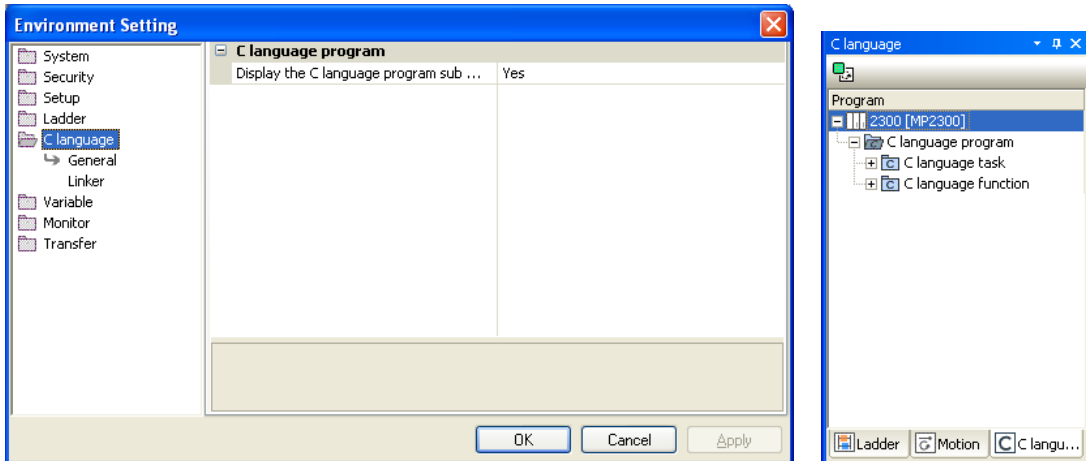
Linker Setting

It can be set from [Environment Setting] -> [C language] -> [Linker]

The linker is set in "Linker execution file".
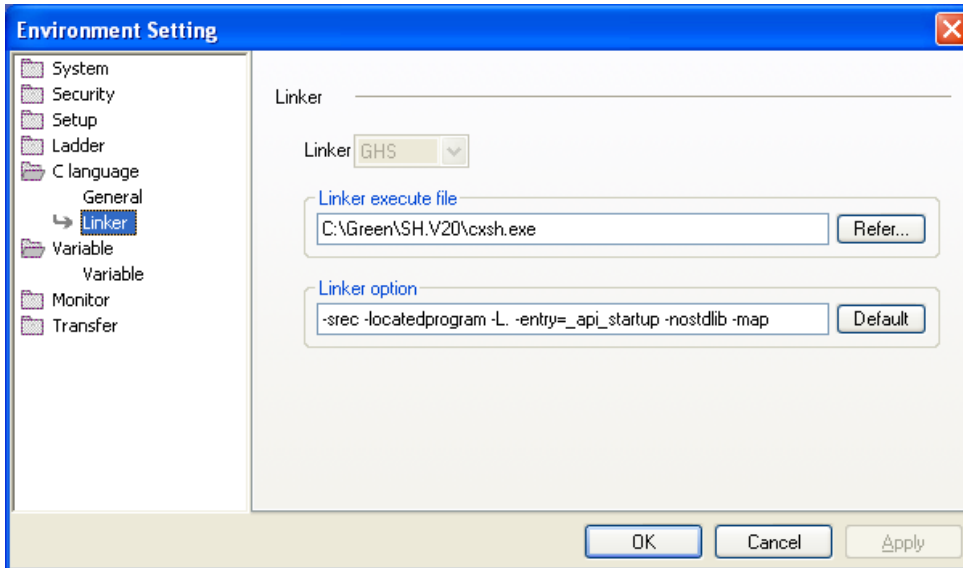


| Name | Description |
|---|---|
| Linker | Setting of linker used. (GHS) |
| Linker Execute File | Specification of path of file of execution of linker made by Hills Software, Inc.<br>(The execution EXE of the linker is specified by the absolute path.) |
| Linker Option | Set at the linker.<br>  Default<br>-srec -locatedprogram -L. -entry=_api_startup -nostdlib -map |

## No.3 Add the register jump function of comment list

**< New Function >**

The register address was input to the column of the input of the register of the comment list, and the jump function, which moved to the corresponding register was added.
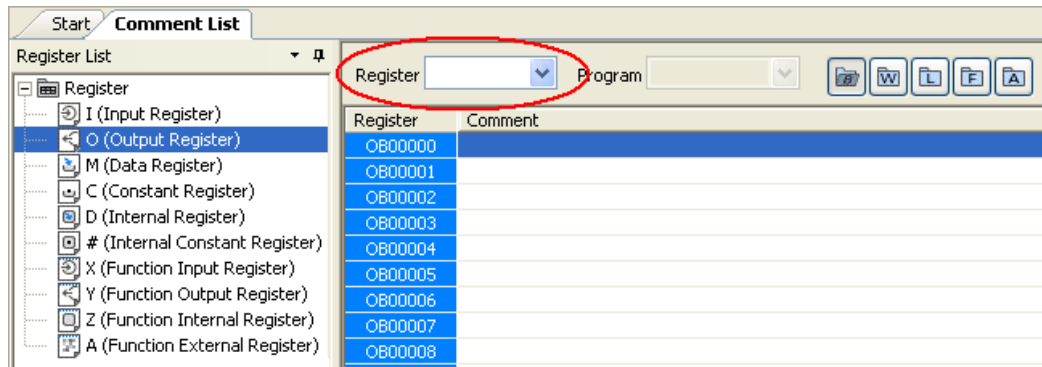


The register input column was added to the header.

When the register address is input to the column of the input of the address of the comment list, and clicks the Enter, it moves to the register of the correspondence.

## No.4 Additional function of search/ replace of comment list.

**< New Function >**

The comment can be search and replace for the register displayed in the comment list.

Procedure of Search/ Replace

1. The search of the pop-up menu is selected. (Same with replace.)
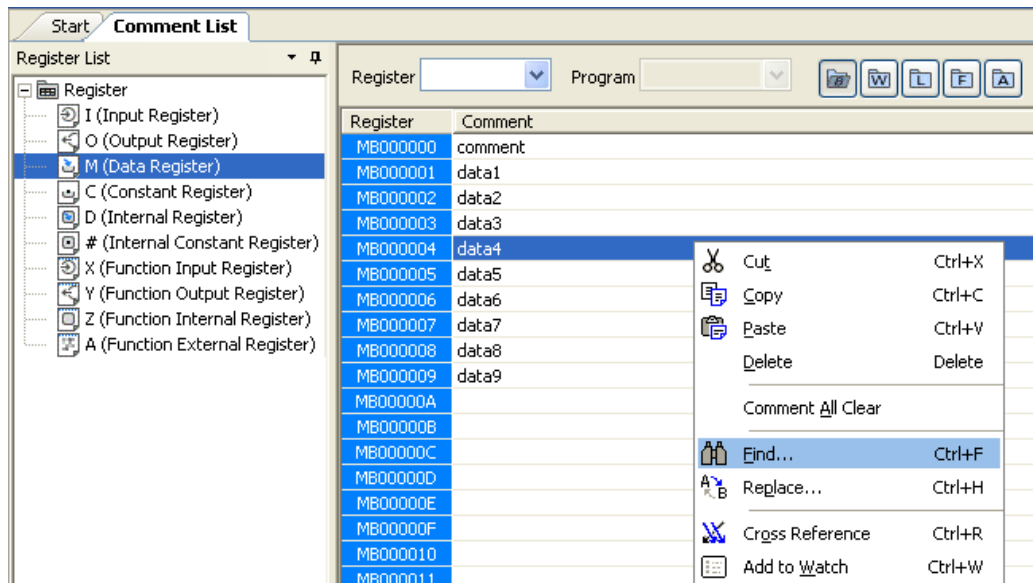
2. The character string which wants to be search (replace) is input, and click the "Find Next"(replace and next).
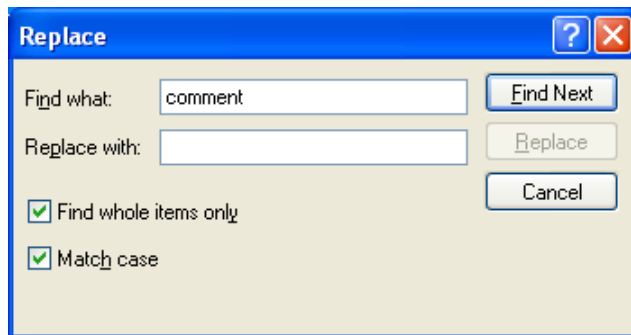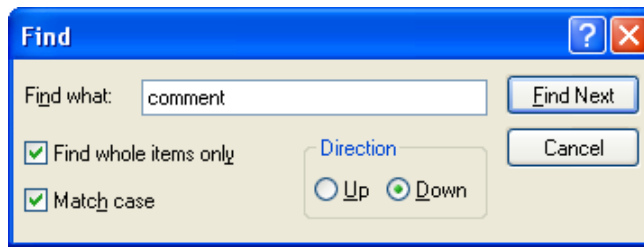




3. Focus hits the comment column which becomes a hit by the search.

(It searches for the character string input to "Searched character string", and it is replaced with the character string input to "Character string after replaced".)
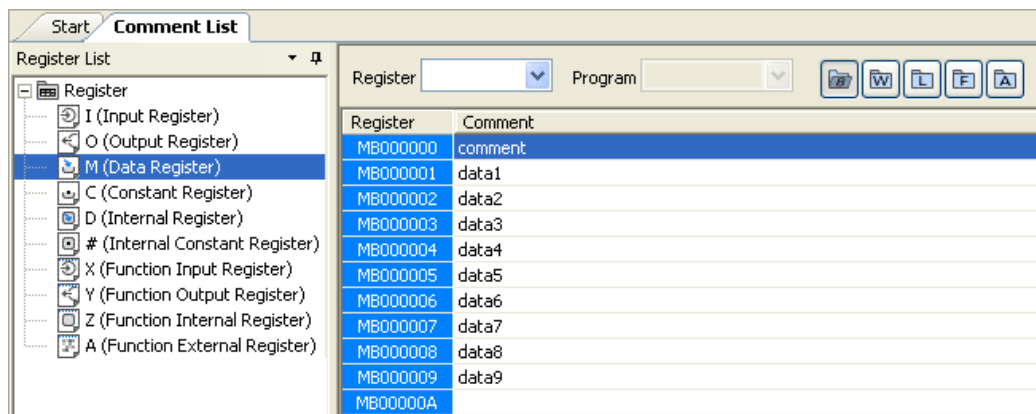
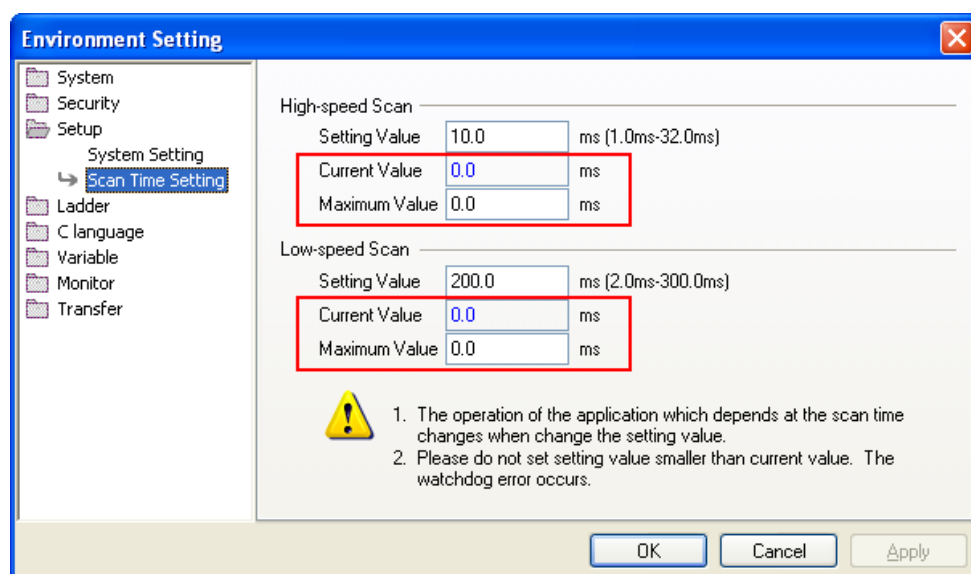## No.5 Display the current value/ maximum value of scan time

**< New Function >**

The monitor of a scanning time current value and the maximum value became an enable by "Scan time setting" of an environmental setting.

It comes to be able to set the appropriate scanning time setting value while monitoring a current value and the maximum value.

**< Environment Setting >**

Displayed by the [Environment Setting] -> [Setup] -> [Scan Time Setting].



| Item | Edit | Display |
|---|---|---|
| Current Value | Impossible | Online: Monitoring in real time<br>Offline: An initial display is 0.0. |
| Maximum Value | Possible<br>High-speed Scan: 0-32.0<br>Low-speed Scan: 0-300.0<br>　Even the value recorded on the side of the setting value and the same small number of places of the point can be input.<br>　If it is a range, the value can be freely set.<br>　The value can be cleared by inputting "0". | The maximum value (Value from there when the maximum value is set.) and the comparison of the maximum value by the user setting, and the value of large one are displayed from the power supply turning on of the controller. |

## No.6 Add the function of "save as a new project"

**< New Function >**

It can be save as a new project file, not the file was opened once and the edited data was not saved in the file.
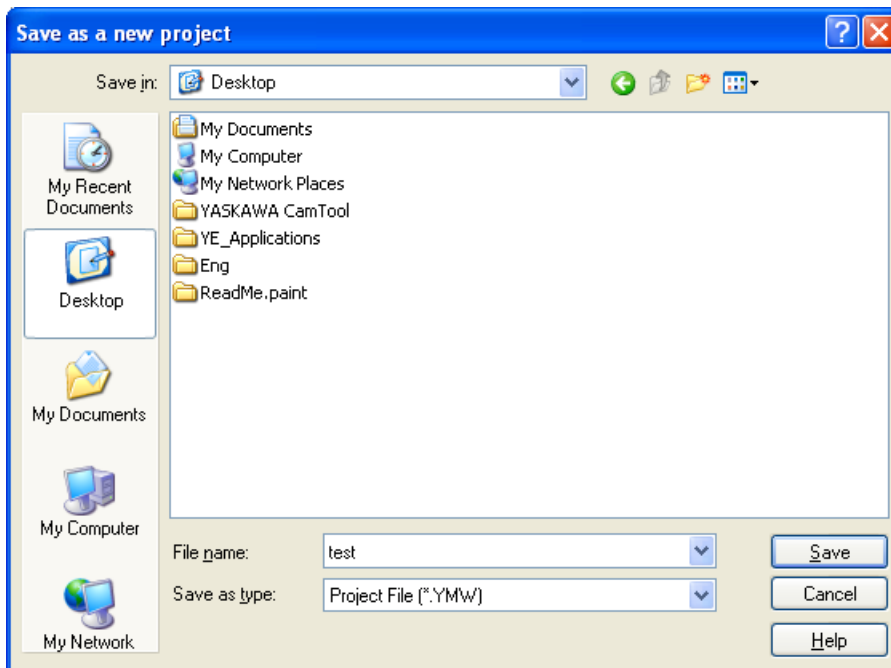
**< Procedure of Save >**

1. Select the "Save as a new project" from file menu.
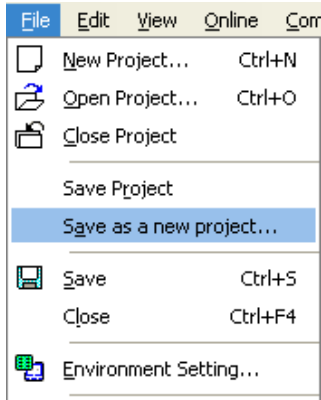


2. Display the dialog of save as a new project file.

The project name can be specified from the selection dialog.   When the specified project file name exists, it is overwrite.   However, when the project is opened with MPE720Ver6.02, it is not possible to save.



After operation of "Save as a new project", the project file displayed with MPE720 is closed and the project file which newly names the name opens with MPE720.

## No.7 Import/ Export function of motion parameter

**< New Function >**

Corresponded to the import/ export function of the motion parameter.

The motion parameter is exported to the CSV data, and data can be edited easily by the application of EXCEL and etc.　Moreover, the edited data is reflected and the edit data can be reflected easily by doing the import to MPE720.

The object parameters are fixed parameter, setting parameter and servopack parameter.

**< CSV File >**

The CSV file assumes an object individual parameter, and defines the rule and the data structure rule of the file name.

Convention of File Name

MPE720 is put a unique name to the each parameter regardless of the module of SVB-01/SVA-01/PO-01.　"xxyy" by which the circuit No. xx and the axis number yy are shown in it is added.

| Module | Fixed Parameter | Setting Parameter | Servopack Parameter |
|--------|-----------------|-------------------|---------------------|
| SVB-01 | FixPrm_xxyy.csv | SetPrm_xxyy.csv | SrvPrm_xxyy.csv |
| SVA-01 | same as above | same as above |  |
| PO-01 | same as above | same as above |  |
| SVR | same as above | same as above |  |

An arbitrary file name can be added. (ZZZ: arbitrary file name)

Format

Fixed Parameter: ZZZ_FixPrm_xxyy.csv

Setting Parameter: ZZZ_SetPrm_xxyy.csv

Servopack Parameter: ZZZ_SrvPrm_xxyy.csv

Convention of Data Structure

The CSV data structure is common to all parameters of fixed parameter/ setting parameter/ servopack parameter in the data array delimited by the comma (,).

Data Structure of CSV

| 1st Data | 2nd Data | 3rd Data | 4th Data |
|---|---|---|---|
| Parameter number | Parameter name | Setting data | Unit |

Detail of each data

| Data | Sample of Data | Import | Export |
|---|---|---|---|
| Parameter number | 1, 2, 3 | No read. | Parameter number on the screen is output. |
| Parameter name | Speed reference | No read. | The parameter name on the screen is output. |
| Setting data | 3000 (*) | Set data of a corresponding parameter to the parameter number is read, and it reflects in the parameter. | Setting data on the screen is output. |
| Unit | pulse | No read. | The unit on the screen is output. |

The following three are in set data.

Type of setting data

| Parameter Type | Data Form in EXCEL |
|---|---|
| Bit type | Hexadecimal |
| Example No.0 Run Command Setting OW8000 | [8001 H] |
| Combo type | Decimal |
| Example No.8 Motion Command OW8008 | [ 1 ] |
| Other data | Decimal/ Hexadecimal (Value of the same data on motion parameter screen) |
| Example No.28 Speed reference OL801C | [ 3000 ] |

Example of setting data)

Parameter of Bit type

Details are made to be displayed clicking data of No.0.　The check is put in turning on "bit0".



It is displayed that data is exported to the CSV file after data is saved by the hexadecimal.



Parameter of combo type

"Position mode" is selected from the combo box of data of "No.8".

It is displayed that data is exported to the CSV file after data is saved by the decimal.

Other Parameter

The data displayed to export data to the CSV file in set data is displayed.



Please refer to "Machine Controller MP2200/MP2300 Motion Module USER'S MANUAL [Document No. SIEP C880700 16A]" for a detailed content of setting data.

**< Procedure of Import Operation >**

    1. Select the "Import" of the file menu on motion parameter screen.

       This menu is displayed when the motion parameter screen is active.
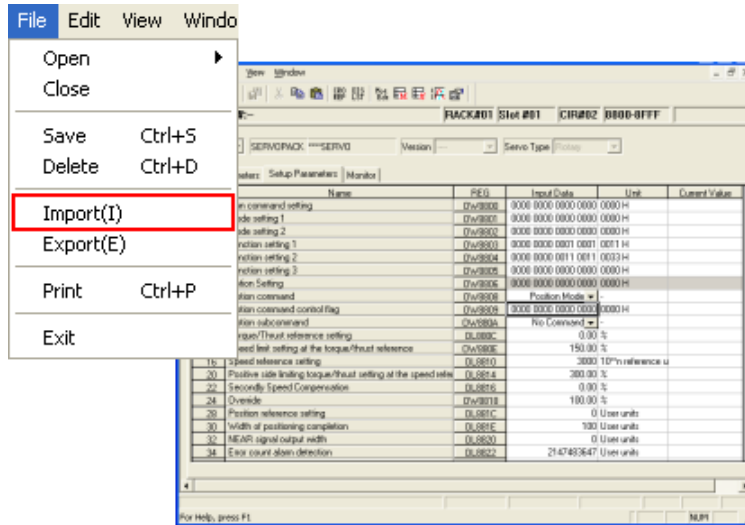
2. Batch import or individual import are specified, and the CSV file which does the import is selected.
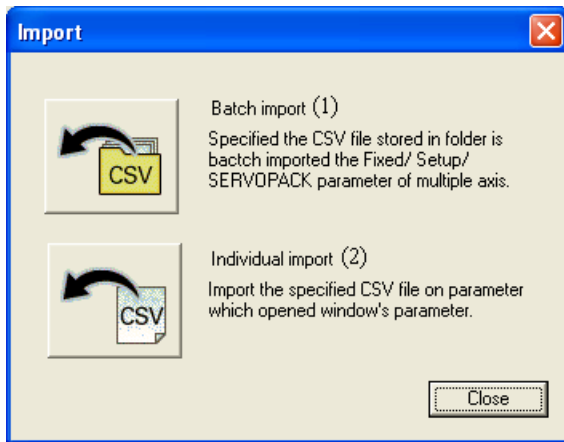


(1) Batch Import:

The storage path of the CSV file data which does the import is specified, and the axis and the parameter of the import object are selected.

When click the "Yes" of confirm message after click the "import" button, the import of the data which check ON and is done is executed.

Batch Import Screen
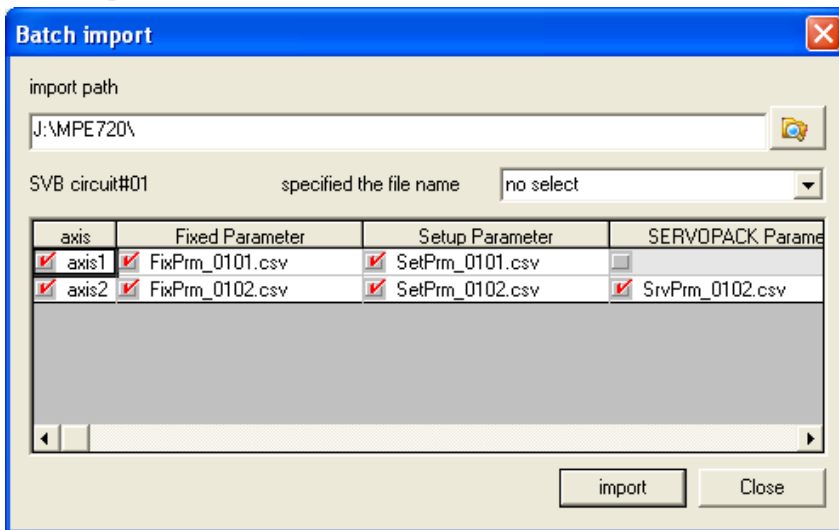
(2) Individual Import

The CSV file data which does the import is selected, and the import is done to the parameter screen where the selected file data is opened.

When click the "Yes" of confirm message after click the "import" button, the import of the data which check ON and is done is executed.

Individual Import Screen



**< Procedure of Export Operation >**

1. Select the "Export" of the file menu on motion parameter screen

This menu is displayed when the motion parameter screen is active.
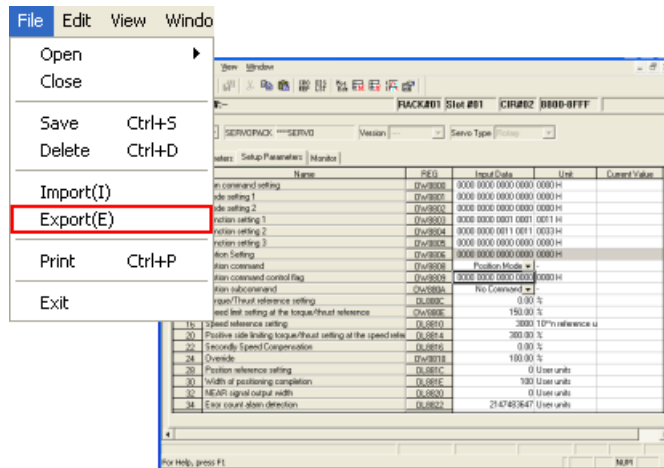
2. The export selection screen is displayed.

The path where the exporting CSV file data is stored is specified on the screen, and "axis for export" and "parameter" are selected.
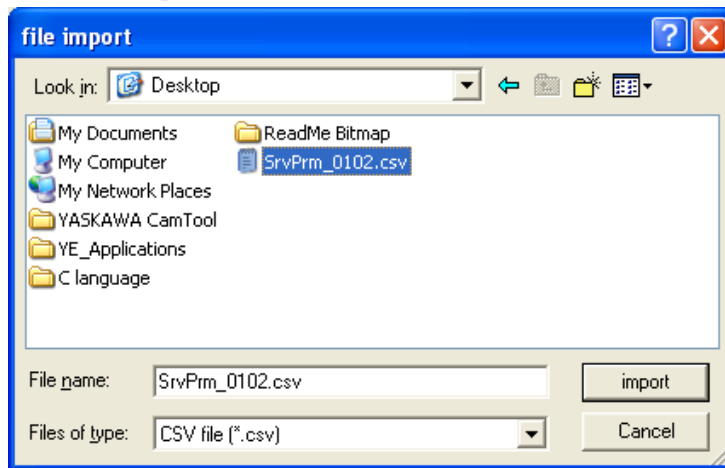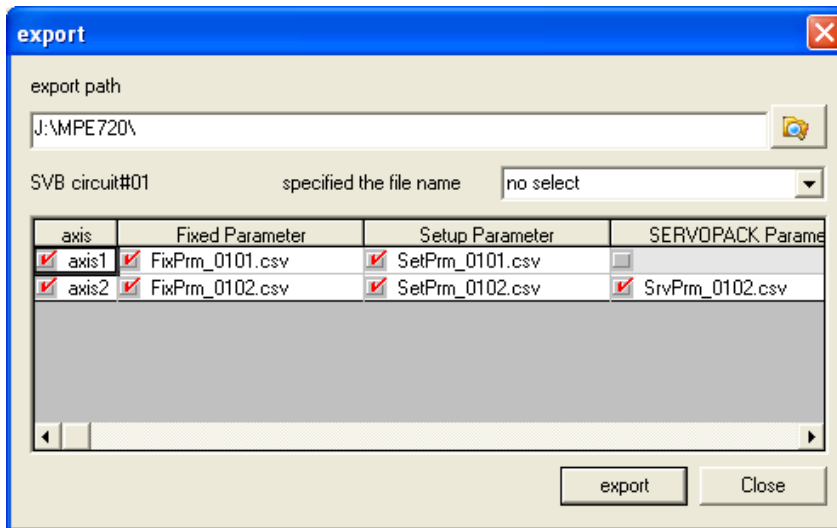


The pop-up menu is displayed by right-clicking when both import and export select the CSV file, and the import/ export object item of the fixed parameter, setting parameter and SERVOPACK parameter can be set.
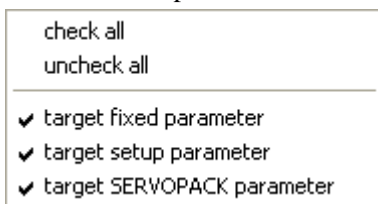


## No.8 Function of disagreement data display of current value <-> setting of servopack parameter

< New Function >

When the current value and the setting value are different opened servopack parameter, MPE720 displays the message to the user as an alarm.　The parameter of the miscompare of the current value and the setting value is displayed in red boldface.　As a result, it can be controlled that wrong data is written in the SERVOPACK.

**< Miscompare of Parameter screen and alarm display >**



## No.9 Add C register use enable function in register list

**< New Function >**

C register has newly become a monitoring enable up to now in addition to the register which can be monitored by the register list.

However, data cannot be edited.

## No.10 Add the print function of program call (FUNC/ MSEE) in print manager

**< New Function >**

When DWG list-DWG system chart was printed in the print manager, called information from FUNC to FUNC could not be printed.   However, the print became an enable as for call information from FUNC to FUNC.

**< DWG System Chart >**

Added place
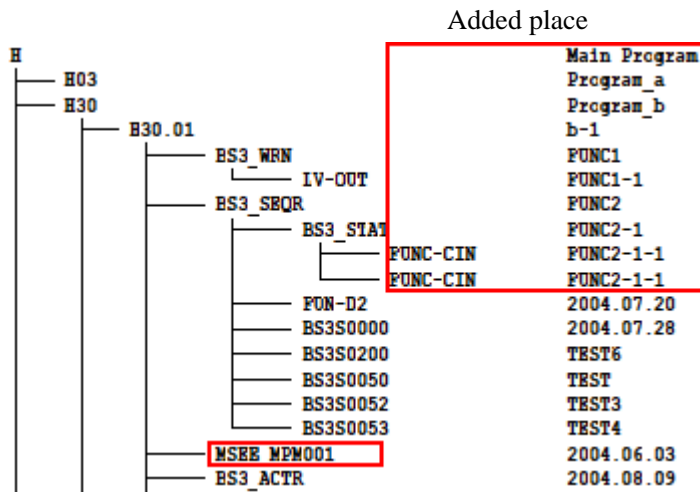


FUNC call/MSEE instruction is displayed in the tree and printed from FUNC.

Transaction stripes cork of call of function of seven layers after that as the maximum value to call layer.

Example)

7th layer        OK

H   H01.01   FUNC01   FUNC02   FUNC03   FUNC04   FUNC05   FUNC06   FUNC07

8th layer        NG

H   H01.01   FUNC01   FUNC02   FUNC03   FUNC04   FUNC05   FUNC06   FUNC07
      FUNC08

**< Display of MSEE >**

MSEE is displayed together with the variable set in the first operand of MSEE.   There is a case of the constant and the register in the variable.

| | |
|---|---|
| Constant: | --- MSEE MPM00 | …MPM is displayed in the constant value in addition. |
| Register : | ---MSEE DW000001 | …The register is displayed. |

## No.11 Function of display list of forced coil list

### < New Function >

Display the state of the forced coil of the ladder in the program by the list.

The forced coil that displays in the list can specify ("H": specify the program/ "H*": specify the multiple relation programs) the program.

It is possible to change (Forced ON/ OFF) and release of force status from the displayed list.

### < Display list of forced coil >

The forced coil list is composed as a sub window, it is possible to refer to the list of the forced coil while seeing the ladder program screen.

Forced Coil List



Force Coil Condition Setting



Display list of the force coil

The program for which searches as a searching condition is specified. Individual/ multiple can be selected.

Add "Forced coil list" under the "Multiple coil check".   When select the menu, search for the coil of force ON/ OFF to all programs and display the list.

"Forced coil list" was added under "Transfer" of "Other windows" of the View menu.   When the menu is selected, show/ hide of the forced coil list screen is switched.
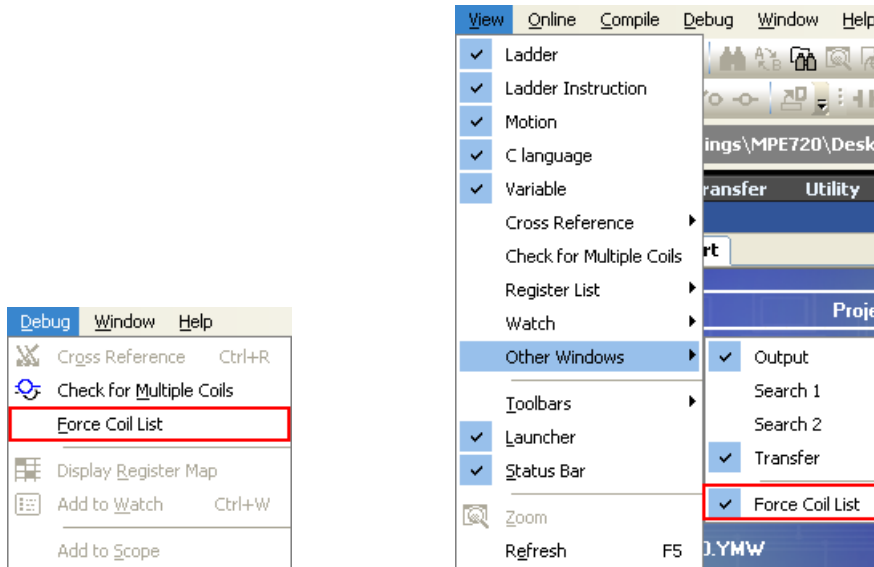
< Screen of Forced Coil Condition Setting >

The condition set screen to specify that the forced coil searching condition set button of the forced coil list is pressed the searched program is displayed.

When click the forced coil condition setting button of the forced coil list, display the condition setting screen to specify the searched program.   The program is selected from the program list displayed in the combo box of the searching program.   Jumps to the corresponding program when double-click on the searching result of a sub window.
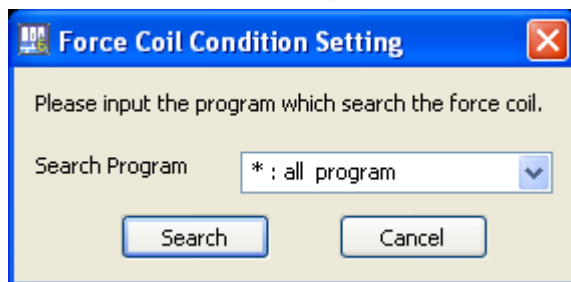
**< Change/ Release of Force Status >**

Force ON/ OFF/ Cancel of the coil displayed in the list can be done.

The state of the coil among controllers is changed when connecting with the controller.   The coil of off-line does not change.

The pop-up menu is displayed when right-clicking in the list part by the forced coil list, and can do operation of the force change/ release.

Pop-up Menu
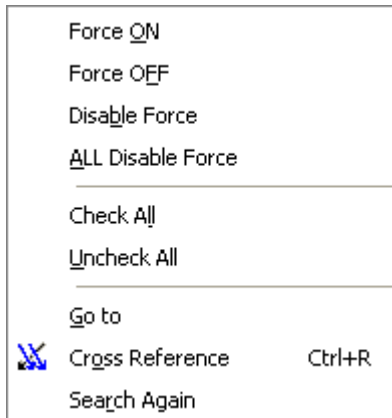


List of Pop-up Menu Specification

| Menu Item | Specification of Operation |
|---|---|
| Force ON | Force ON the selected coil. |
| Force OFF | Force OFF the selected coil. |
| Disable Force | Disable force the selected coil. |
| All Disable Force | Disable force all the selected coil. |
| Check All | Check all the all rows of the list. |
| Uncheck All | Uncheck all rows of the list. |
| Go to | Jumps to the coil at the cursor position of the ladder in the program. |
| Cross Reference    Ctrl+R | The cross reference is executed by the register set in the coil at the cursor position. |
| Search Again | Searches for the forced coil again. |

## No.12 New support of transfer medium

### < New Function >

The project file and the FC card were supported as a transfer medium.

### < Transfer Medium Screen >

1. Select the Transfer from Online of main menu.
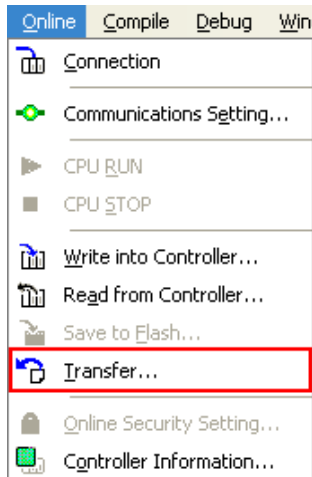


2. Display the transfer dialog.
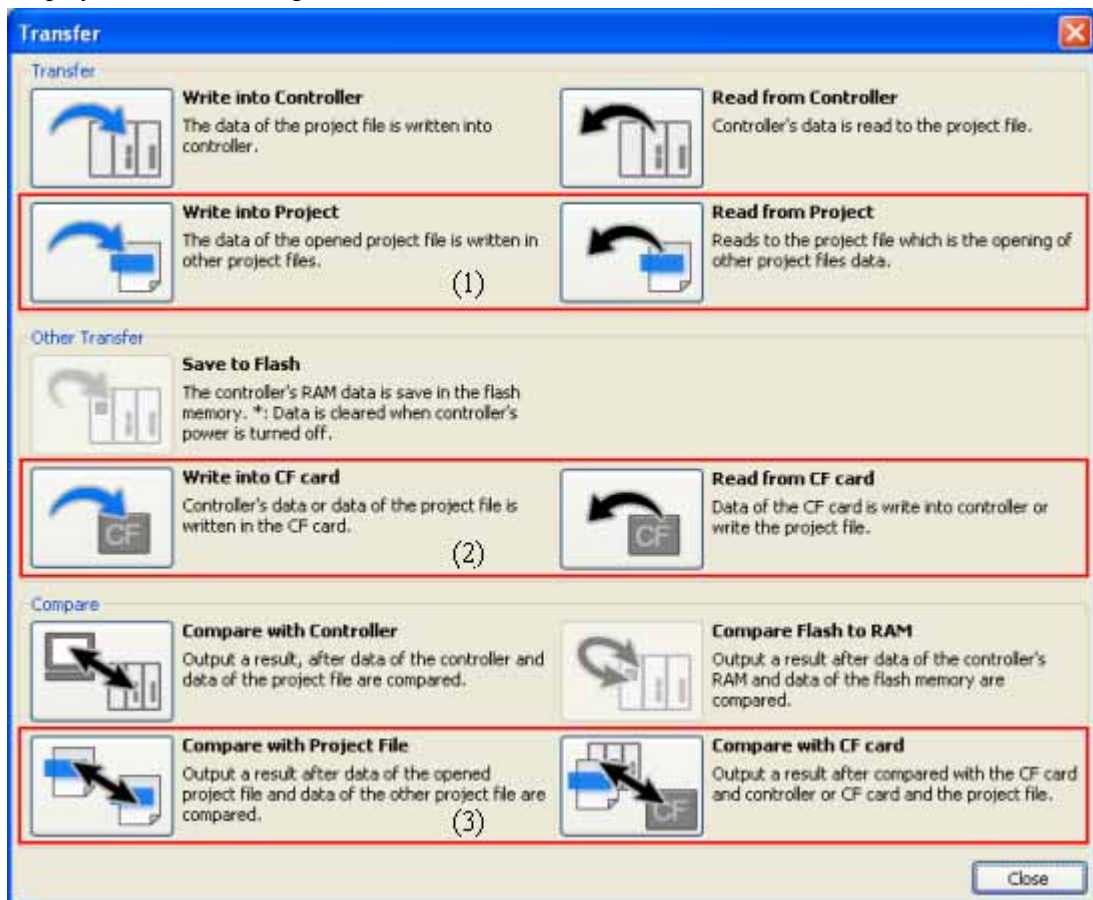
(1) Transfer function for project file
   Write into Project : The data of the opened project file is written in other project files.
   Read from Project : Reads to the project file which is the opening of other project files data.

(2) Transfer function for CF card.
   Write into CF card    : Controller's data or data of the project file is written in the CF card.
   Read from CF card    : Data of the CF card is write into controller or write the project file.

(3) Transfer function for project file and CF card
   Compare with Project File : Output a result after data of the opened project file and data the other project file are compared.
   Compare with CF card       : Output a result compared with CF card and controller or CF card and the project file.

## No.13 Transfer function of comment

**< New Function >**

Online transfer in addition to current off-line transfer was enabled.

The user was made to be able to install the selection item, and to select the comment arbitrarily as object data of transfer.

**< Transfer Screen >**

"Selection of the transfer data" The comment was added to the column.

When the check/ uncheck the comment of "Selection of the transfer data", the transfer data tree of the correspondence can be checked/ unchecked by the batch.   Details of the comment are displayed. Moreover, the displayed comment is arbitrarily selectable the user.
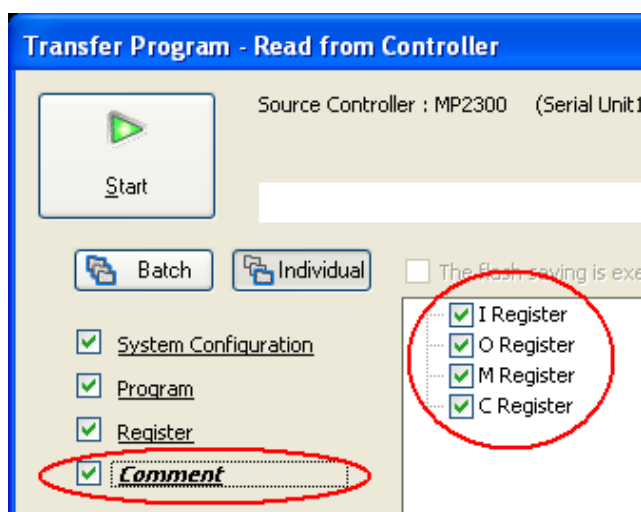
## No.14 Function of detail compare of ladder program/ motion program

**< New Function >**

Even data in the ladder program motion program came to be able to do a detailed comparison.

As for the ladder program, the motion program can compare in detail in each row, and displays the result on the output screen in each execution step.

When each miscompare information was double-clicked by the comparison result, it can be move to a pertinent part.

**< Detection of Miscompare >**

1. Add
2. Delete
3. Change

**< Compare of Detail >**

It can be execute the...

[ Online ] -> [ Transfer ] -> [ Compare with Controller ]

[ Online ] -> [Transfer ] -> [ Compare with Project File ]

[ Online ] -> [Transfer ] -> [ Compare with CF card ]

After a detailed comparison ends, the comparison result is displayed in the output.

Output window when finish the compare of details
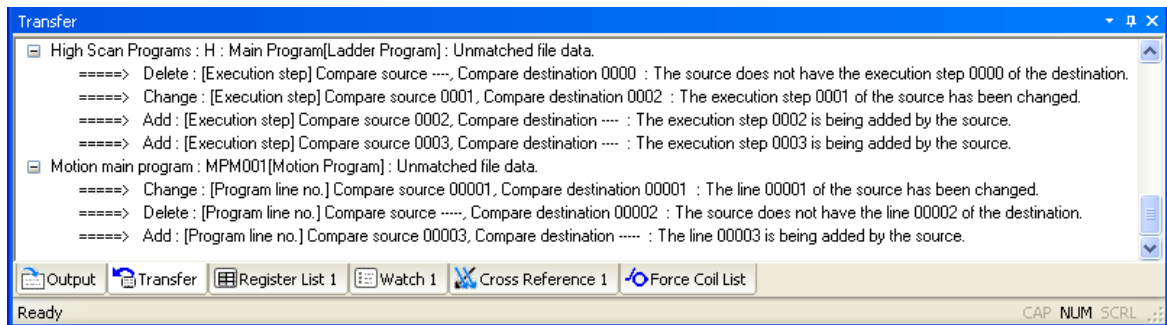


The movement from the comparison result to a pertinent part became an enable.

The ladder jumps to the pertinent execution step in double-clicking miscompare information displayed by the tree configuration of the ladder program displayed in the output and the motion program and the motion can jump to a pertinent row.

Example of Miscompare Inofrmation
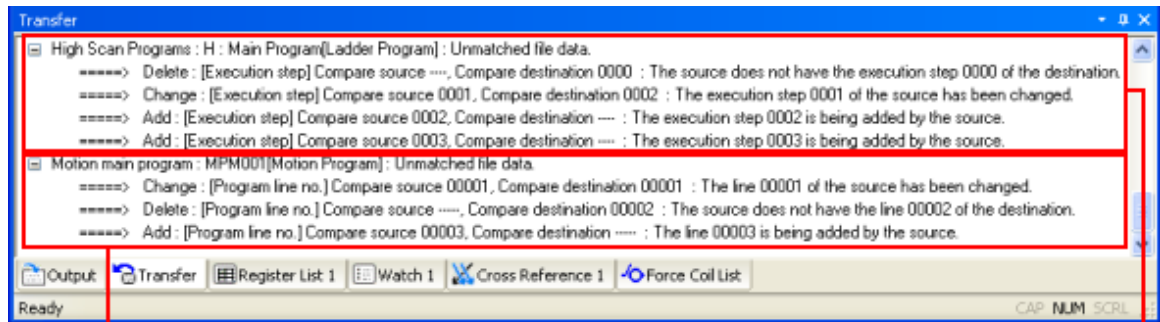


## No.15 Add transfer function to Environment Setting

**< New Function >**

Add the set function of C language program and "MPLoader" of transfer setting of an environmental setting.

**< C Language Program >**

"Transfer of C language program" is option data. When "relocate and transfer" is set to "Yes", relocate the relocatable file is transferred if failed to transfer of located file.

It can be set the [ Environment Setting ] ->  [ Transfer ] -> [ Transfer ] -> [ C language program ].

Environment Setting Dialog　　C language program
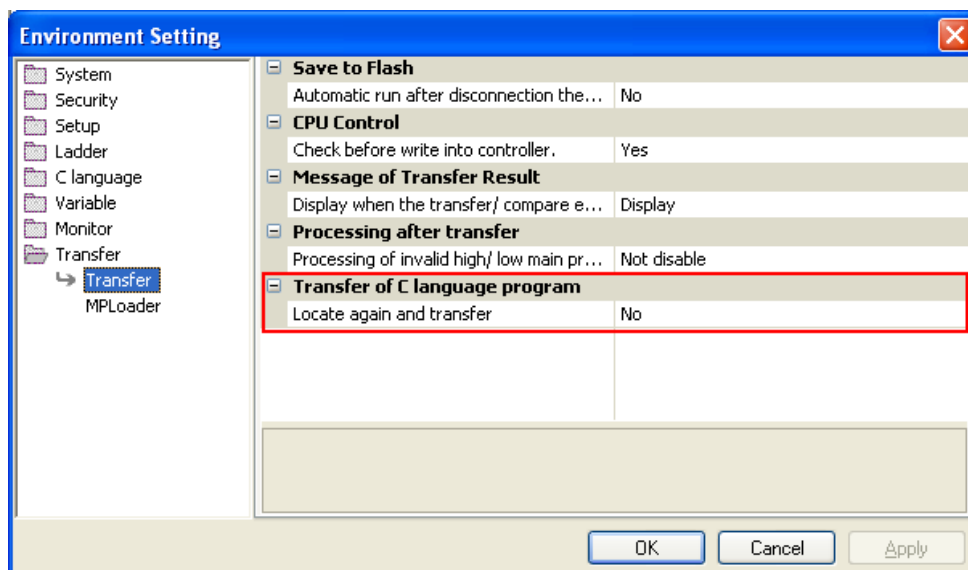
**< MPLoader >**

When the project file data is transferred, a detailed setting such as clear the memory of controller and the controller of the register data can be set.

It can be set the [ Environment Setting ]    [ Transfer ]    [MPLoader].

Environment Setting Dialog   MPLoader
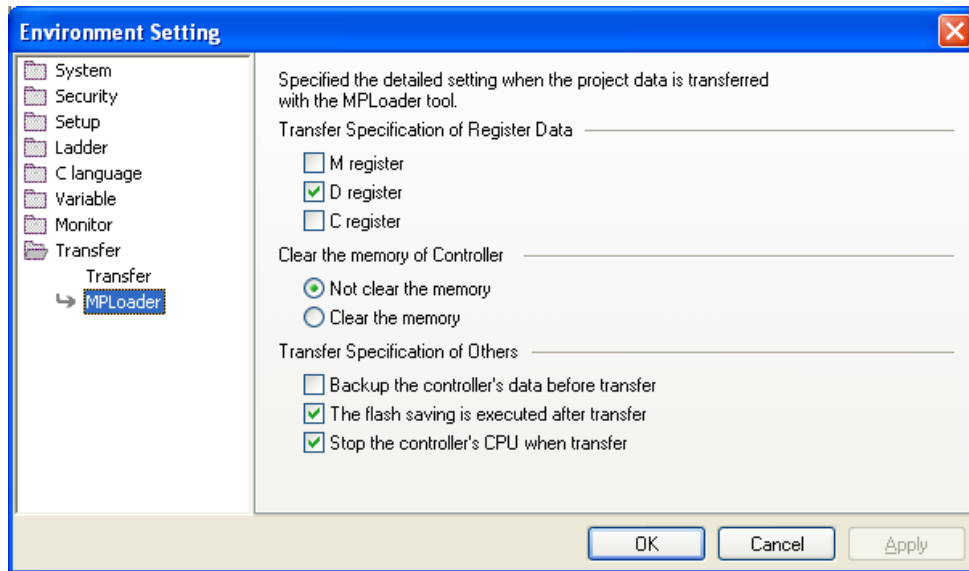
## No.16 Variable function: Support of variable to all I/O modules

< New Function >

The allocate/ comment setting of the variable was enabled for the I/O module and MECHATROLINK distributed IO module with the IO register.

After the main module is allocated by the module configuration, it comes to be able to allocate the variable and it is displayed in the variable window.

The system creates the variable/ comment to the module to which the configuration of I/O (variable configuration) is decided with the automatic operation. The variable/ comment after created with the automatic operation can be changed. The user can arbitrarily allocate the variable/ comment to the module to which the configuration of I/O is not decided.

< List of IO Module Support >

| Type | Module | | Version 6.02 | Version 6.01 |
| --- | --- | --- | --- | --- |
| | Main | Sub | Support | Support |
| CPU | MP2100 | IO | | |
| | | SVB | | × |
| | | BUSIF | | × |
| | MP2300 | IO | | |
| | | SVB | | × |
| Common | LIO-01/LIO-02 | LIO | | |
| | | CNTR | | |
| | LIO-04/LIO-05 | LIO32 | | |
| | DO-01 | DO | | |
| | AI-01 | AI | | × |
| | AO-01 | AVO | | × |
| | CNTR-01 | CNTR01 | | × |
| | 215AIF-01 | MPLINK | | × |
| | 260IF-01 | 260IF | | × |
| | 261IF-01 | 261IFS | | × |
| | AFMP-01 | ANYWIRE | | × |
| | SVB-01 | SVB01 | | × |
| | CSIF-01 | CSIF | | × |
| | MPANL00-0 | A-net | | × |
| | | A-Link | | × |
| | 216AIF-01 | 216IF | | × |

Support　×　Not support

**< List of distributed IO connected with MECHATROLINK >**

| Distributed IO (Variable name) | M-I | M-II | Distributed IO (Variable name) | M-I | M-II |
|---|---|---|---|---|---|
| JEPMC-IO350 (JEPMC_IO350) | | | 120AVI02030 (120AVI02030) | | |
| MP940 (MP940) | | | 120AVO01030 (120AVO01030) | | |
| VS-676H5 (VS_676H5) | | | 120EHC21140 (120EHC21140) | | |
| VS-676H5T (VS_676H5T) | | | 120MMB20230 (120MMB20230) | | |
| VS-616G5 (VS_616G5) | | | 120DAO83330 (120DAO83330) | | |
| RIO-01 (RIO_01) | | | JEPMC-IO2310/30 (JEPMC_IO2310_30) | | |
| RIO-06 (RIO_06) | | | JEPMC-IO2320 (JEPMC_IO2320) | | |
| ABS_CODER (ABS_CODER) | | | JEPMC-PL2900 (JEPMC_PL2900) | | |
| ******I/O (WildCard_IO) | | | JEPMC-PL2910 (JEPMC_PL2910) | | |
| 120DRA83030 (120DRA83030) | | | JEPMC-AN2900 (JEPMC_AN2900) | | |
| 120DAI53330 (120DAI53330) | | | JEPMC-AN2910 (JEPMC_AN2910) | | |
| 120DAI73330 (120DAI73330) | | | SVB-01 (SVB_01) | | |
| 120DDI34330 (120DDI34330) | | | YV250 (YV250) | | |
| 120DDO34340 (120DDO34340) | | | AB023-M1 (AB023_M1) | | |

\*:　M-I is MECHATROLINK-I and M-II is MECHATROLINK-II.

　　Distributed IO module of possible allocation

## No.17 Automatic creation of axis variable of SVB/ SVA/ PO/ SVR/ MECHATROLINK-II inverter

**< New Function >**

Up to now, all had been composed based on the axis variable of SVB as for any module. From now the axis type (SVB/ SVA/ PO/ SVR/ MECHATROLINK-II inverter) was judged and the best axis variable was generated.

## No.18 Function of trace registration from variable window

**< New Function >**

"Add to Trace" from the variable window can be done in drag and drop. However, " Add to Trace " became an enable from the pop-up menu at this time.

Added in the pop-up menu displayed in the variable window and "Add to the Scope" was added under the "Add to Watch".

It is a function equal with drag and drop.

**< Pop-up Menu >**
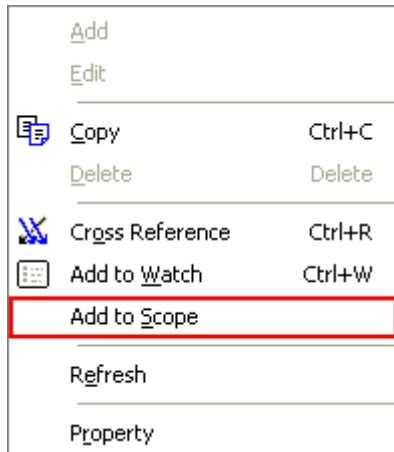


**< Register which can be registered to the trace. >**

The menu is made effective on the variable by which the register which can be registered has been allocated to the trace. In other cases, the menu is disabled.

| Item | Specification |
|---|---|
| Register Kind | S/ I/ O/ M/ D |
| | (D register of the motion program and the CP ladder is out of "add to scope".) |
| Register Type | Bit/Word/Long/Float |

### No.19 Management of read/ write of comment data

**< New Function >**

In three states of off-line (open the project file), project link (connected with the controller with the opened project), direct (connection with controller without project file), it defined source/ destination of a global comment (M/ I/ O/ C) and a local comment (D/ #/ X/ Y/ Z/ A).

**< Global Comment (M/ I/ O/ C) >**

The global comment targets M/ I/ O/ C register.

Because MPE720 prepares I/ O register which corresponds to the motion register by fixed default, therefore, it is off the subject of a global register.

[ List of management of global comment (M/ I/ O/ C) ]

| Comment | Source | Destination | Basic |
|---|---|---|---|
| Offline | Project file | Project file | - |
| Project link | Project file | Project file<br>Controller | 1. The controller is assumed to be corresponding to the data of the project file, and the destination of the handling of the comment is assumed to be a project.<br>2. The high response is achieved by assuming the handling destination to be a project file as a differentiation with a direct connection. |
| Direct | Controller | Controller | 1. The program edit and debugging in the state without the project file like a local adjustment etc. are assumed and the destination of the handling of the comment is made a controller.<br>2. Comment reference/ edit by no project file is achieved as a differentiation with Project link connection. |

[ List of management of constant variable (C) ]

| Comment | Source | Destination | Basic |
|---|---|---|---|
| Offline | Project file | Project file | - |
| Project link | Controller | Controller | 1. Because the constant was register data, it is necessary to have targeted controller's data of the connection destination. Moreover, only the controller in writing at the connection destination to handle the register data. |
| Direct | Controller | Controller | - |

### < Local Comment (D/ #/ X/ Y/ Z/ A) >

The local comment targets D/ #/ X/ Y/ Z/ A register.

[ List of management of local comment (D/ #/ X/ Y/ Z/ A) ]

| Comment | Source | Destination | Basic |
|---|---|---|---|
| Offline | Each program of project file | Each program of project file | - |
| Project link | Each program of controller | Each program of controller<br>Each program of project file | - |
| Direct | Each program of controller | Each program of controller | - |

## No.20 Communication Process: Extension of the number which simultaneously allocated by the serial port

< New Function >

Serial ports can be allocated to the port of the Communication Manager only up to two at the same time up to now.   They were allocated up to four.



They are the serial allocation enable at the same time up to four.
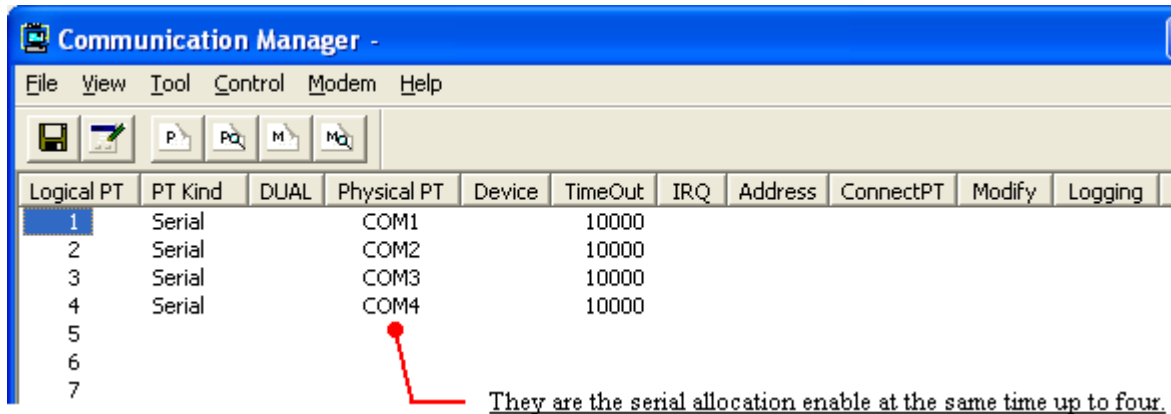
## No.21 Communication Process: Extended COM port number

< New Function >

The use of the USB -> Serial converter cable becomes an enable, and the number of COM ports increases.   Therefore, number of COM port which was able to be used when the serial port of the communication manager was set was made to be able to be set up to 16.
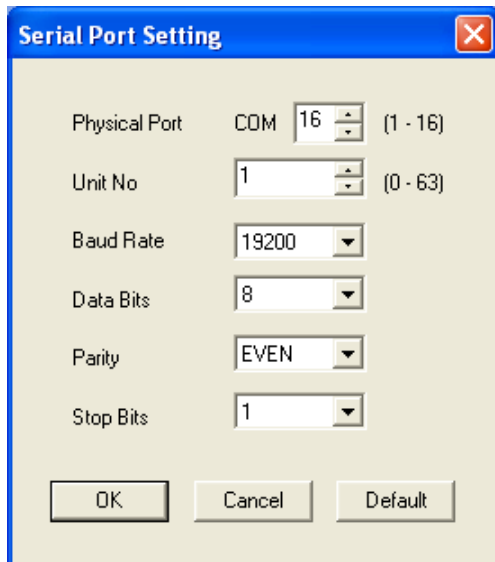
## No.22 Support ****SERVO as MECHATROLINK module

### < New Function >

The ****SERVO module which was able to be allocated as a general-purpose MECHATROLINK servo was added.   As a result, the MECHATROLINK servo etc. made by the third party become the allocation enable.



## No.23 Communication Process: Support Gateway function

### < New Function >

When the personal computer which uses MP2100/ MP2100M has Ethernet, MP2100/ MP2100M installed in the personal computer can be engineered from outside MPE720 through Ethernet.

## No.24 Bug of the error occurring which the Expression instruction of the ladder program.

It was corrected that the application error did not occur even if the operation without the left side was input and fixed because in the Expression instruction of the ladder program, the application error occurred when the operation without the left side was input.
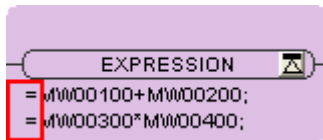


State that there is no left side, and the expression is input from the operation.

= MW00100+MW00200;

= MW00300*MW00400;

## No.25 Bug of the error which restart the project file after shut down

When MPE720 shut down with the project file opened, the project file was not opened again.

It was necessary to reactivate PC to open the project file before.   From now, it was corrected that the project file was opened even if shut down the MPE720.

### < Occurrence Condition >

The error does not occur if the default user (USER-A/ USER-A) is used, but the error occurs if opened the project file by the character string with different user name and password.

Example)

| User name: USER-A | User name: YE |
| --- | --- |
| Password: USER-A | Password: MP |
| | |
| Not occur | Occur |

## No.26 Bug of the error which register/ variable registered in the watch

It was corrected that watch registration information was not deleted even if FLASH saved because the register/ variable registered in the watch had been deleted with the FLASH saving.

### < Procedure of Occurrence >

1. Connect the online.

2. Register the register/ variable in the watch.

3. Save to FLASH of transfer function.

4. Switch OFF -> switch ON the controller (save to FLASH)

## No.27 Bug of alarm registration of axis variable alarm

The display of the alarm of the axis variable was IWxx04.  Actually ILxx04 is correct, so the display of the alarm was corrected to ILxx04.

## No.28 Bug of the error which save project

The project file might disappear by the error code (0xA0050109) occurring when "Save project" was executed with MPE720 version 6.  From now, the backup file was made so that the project file should not disappear.

### < Backup File >

"***.YMW~Backup" is made for the storage folder of the project file.  It is possible to open with MPE720 version 6 by the backup of the project file before the superscription is saved this file, and changing the extension to "YMW".

## No.29 Bug of Undo processing of comment

"......." was displayed and garbled when input Japanese to the rung comment/ element comment/ program comment/ other comment and click the Ctrl+Z while edited.  This was corrected.

## No.30 Check function of Motion program saving size

When the size of the motion text was checked when saving the program, we corrected the display the warning when the size exceeds 64 kilobytes.

## No.31 Malfunction of ladder operation when use the register with subscript in the Expression instruction

It was different from the operation before compiled the ladder program which the register display was switched to variable and compiled, when the register was register with subscript.

### < Occurrence Condition >

1. When you order Expression of the ladder program...

2. The register with subscript (exp. ML00100i) of L/F is used...

3. The variable divides into the register...

**< Procedure of Occurrence >**

1. The subscript register is described by the Expression instruction.   The register must be a data type of Long/Float.
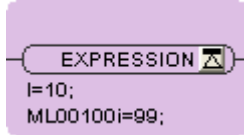


2. 99 correctly enters ML00110 from which ten of affixing characters i is added to ML00100 when compiling.

3. Variable name "Result" is defined in ML00100.

4. The register is switched to the variable display with the " Switch Variable" button.



5. The register in Expression is a variable, and ML00100i changes into Result I, and becomes an array data type becoming the display.
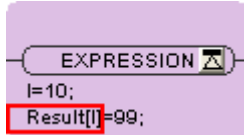


6. 99 enters array ML00120 of the LONG data type which is tenthly because it becomes an array when the compilation is executed.

## No.32 Unusable "Compile to version 5 compatible" before version 5.34

The program of compile to version 5 compatible cannot be opened by older version than MPE720 version 5.34.   The program of compile to version 5 compatible assumed, and described this clearly on the compilation option screen as the use since MPE720 version 5.34.
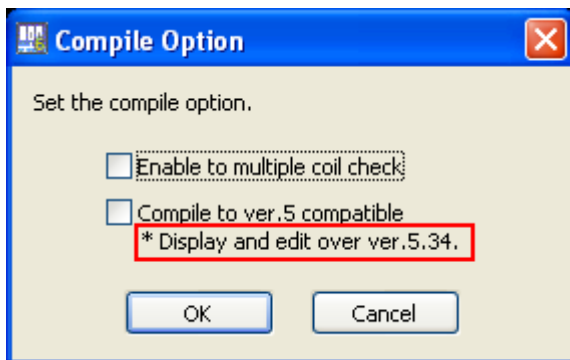
## No.33 Bug of the error of "Compile to version 5 compatible"

It corrected the current value correctly displaying, because the current value might not be normally displayed when the ladder program compiled by "Compile to version 5 compatible" was opened with MPE720 version 5.

**< Occurrence Condition >**

The phenomenon occurred when the condition instruction (<, <=, >, >=, =, =!, RCHK, IF) was used as a ladder instruction.    However, there is no problem in the operation of the ladder.

## No.34 Transfer error of servopack parameter of 16th axis

In the transfer function, it was corrected that transfer was able to be done because the servopack parameter data of the 16th axis had not been transferred.

## No.35 Bug of transfer at Electronic CamTool

After the file had been selected without fail first because the data made by the transfer procedure might not be correctly transferred, the transfer condition was set, when transfer at Electronic CamTool.

## No.36 Number of drawing of CP ladder program

It was corrected that open the CP ladder program to 16 drawings or less because the CP ladder program was not able to open more than 5 drawings.

## No.37 Conventional ladder was changed to CP ladder

The name of "conventional ladder" was changed to "CP ladder".

## No.38 Enable to relay connection through MPLINK of 215AIF-01

In 215AIF-01, it became the controller of a specified network number and the station number through MPLINK and the connection became an enable.

## No.39 Improvement of status of use in register map

In the register map by which the use state of the register used by the program was displayed, because the adjustment panel was an object, displayed by the color the register's not used by the ladder program using because the tuning panel was an object of the display.   From now, it was assumed the register for which the object data of the register map was used by the ladder program, and excluded the tuning panel.

### No.40 Error in track point central button of IBM ThinkPad

It was corrected that the error did not occur because the error message (0x8001010D) was displayed in case of operation with a track point central button from IBM ThinkPad while data was edited.

### No.41 Change error message in miscompare of FLASH comparison

When the comparison between flash and RAM is executed, and the miscompare occurs, the "reply error from controller" is displayed in the output window.   Because this error was indefinite, message changed to " The data of controller's RAM and the data of the flash memory are miscompare.".

### No.42 Display of confirmation message when all comment list is cleared

The confirmation message was displayed by the comment list at "Clear all comments".
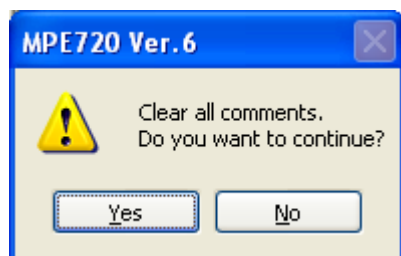


### No.43 Saving the status of tree/ data format when compiling the watch

Because the status (status of tree, data format) displayed in the watch was default, keep the status after compiled.

**< Status of Default >**

| | |
|---|---|
| Status of tree | : Tree closes |
| Data format | : Decimal |

### No.44 Impossibility of one-byte kana in the logical axis name of group definition

Strengthen the check function which one-byte kana cannot input in the logical axis name of group definition.   When the group definition is changed, the logical axis name is checked.   The logical axis name of the group definition which has already been set can be used as it is.