

MPE720 Ver.7.95Version Up Information

1. Functional Additions and Improvements

1.1 Ver.7.95Version Up Information

MPE720 Ver.7.94→ Ver.7.95 features are added and improved as follows:

No.	Function items	classification
1.	The continuous latching function that was already supported by SVB is now supported on SVC.	Enhancements
2.	The usability of register mapping has been improved.	Functional Enhancements
3.	The usability of control device/group definitions has been improved.	Functional Enhancements
4.	The individual transfer function of multi-scan models has been improved.	Functional Enhancements
5.	Several bugs have been fixed.	Functional Enhancements

2. Details of the amendment

The **continuous** latching function that was already supported in the No. 1 SVB is now supported in the SVC.

The following parameters have been added for the servo axes of M-III. Motion modules SVC, SVC32, SVC64, SVC4 and SVC01.

1) The setting parameter "Latch operation selection (OBxx016)" can be set.

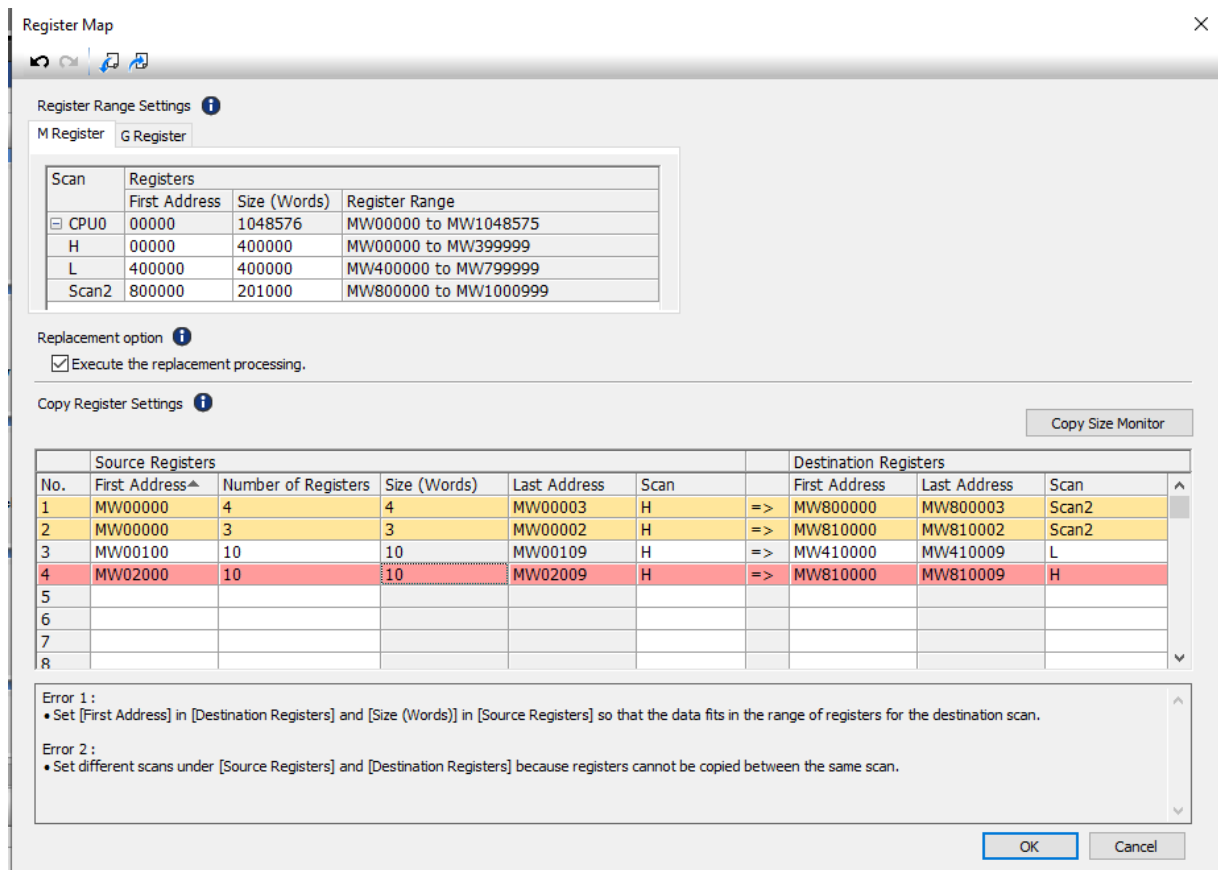
1 : Mode setting 1	0W8001	0000[H]
[Bit0]Excessive deviation error level...	0B80010	0 : Alarm
[Bit3]Speed loop P/PI switch	0B80013	0 : PI control
[Bit4]Gain switch	0B80014	0 : OFF
[Bit5]Gain switch 2	0B80015	0 : OFF
[Bit6]Latch Mode Selection	0B80016	0 : Usual Latch

2) The following have been added to the monitor parameters:

Latch Completion Sequence Number (IWxx44)

Number of Consecutive Latch Sequence Completion Cycles (IWxx45)

No. 2 Improved the operability of register mapping.



- 1) Configuration lines with errors are displayed with a red background.
- 2) When you select the configuration line that is experiencing the error, the details of the error are displayed in the display area.
- 3) Configuration lines with warnings are displayed with a yellow background.
- 4) When you select the configuration row that has the alert, the details of the warning are displayed in the display area.
- 5) A warning is displayed when the scan of [Copy Destination Register] is duplicated in the same line and the first and end addresses of [Copy Source Register].
- 6) Checking for errors or warnings is performed immediately after the cell is edited.
- 7) Click each column to sort the rows by the items in that column. By repeating the click, the sort order switches to ascending/descending order.
- 8) You can delete all the configuration data by selecting multiple arbitrary rows and right-clicking – [Delete Row].
- 9) You can undo or redo changes with the arrow icon at the top of the screen or the shortcut keys "Ctrl+Z" (back) and "Ctrl+Y" (forward).
- 10) The register range setting can be opened and closed by selecting the CPU row.
- 11) The copy size monitor can be opened and closed for each scan.
- 12) You can import/export configuration information.

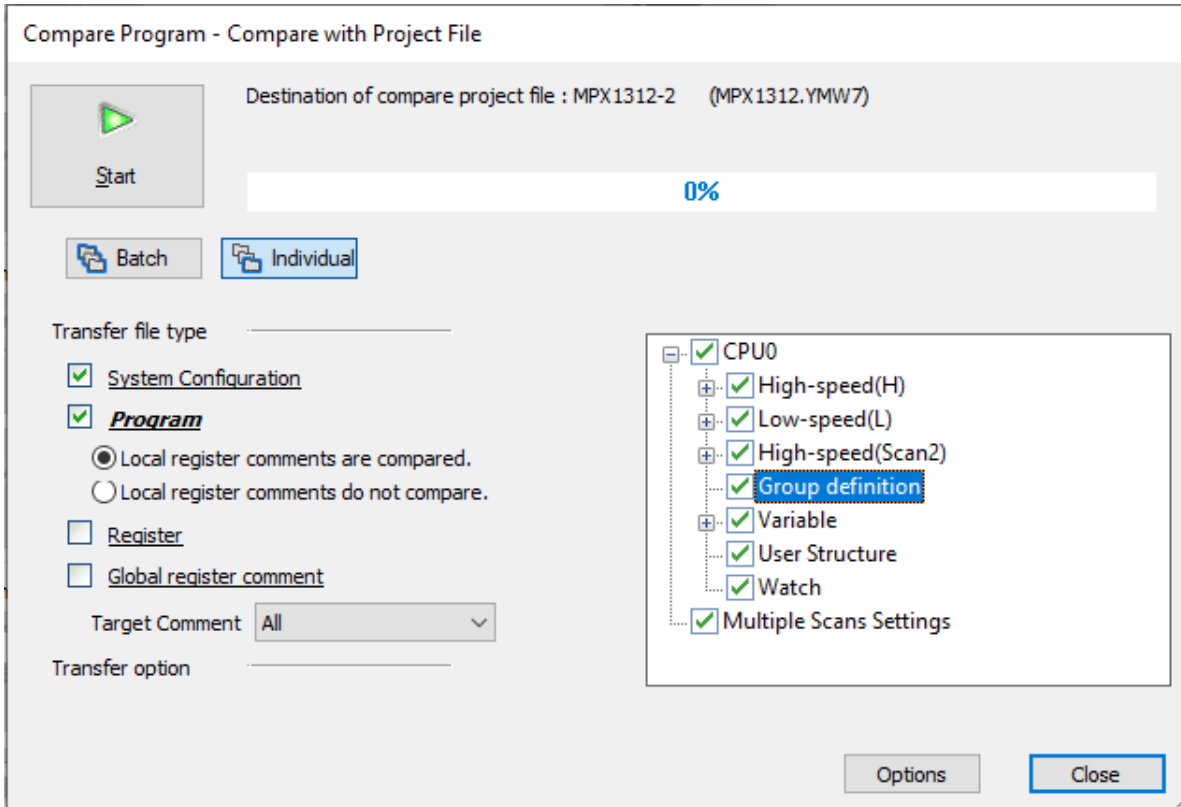
No. 3 Improved the operability of control device/group definitions.

- 1) Even if the control device adds an IO axis to a group definition while it is selected, the IO axis is not added to the group definition.
- 2) On the control device screen, the icon indicating that the group definition is undefined is not always displayed on the IO axis.

No. 4 The individual transfer function of the multi-scan model has been improved.

The following are now supported for multi-scan models.

- 1) The group definitions displayed in the program selection tree of individual transfers are displayed under the CPU, not under the motion program.



- 2) If "Multiple scan settings" is not checked on the individual transfer screen and a motion program is selected, the group definitions of the source and destination are compared, and if there is a discrepancy, a confirmation dialog is displayed
- 3) Fixed a bug that caused the motion program of the other high-speed scan (Scan2/H) to be transferred when all motion programs in the high-speed scan (H/Scan2) were selected and transferred individually.
- 4) If the multiple scan settings of the source and destination match, it is possible to transfer the program individually, but the group definition must match the judgment condition of "Multiple scan settings match" has been added.

No. 5 Several bugs have been fixed.

- 1) Fixed a problem in the ladder program where a rung with a specific branch may cause subsequent rungs to behave unintentionally.
- 2) In the module configuration definition window, when writing a fixed parameter, the write confirmation message after pressing "Write" and the write confirmation message after selecting the axis to be written are displayed twice, so the operation feels redundant, so the write confirmation message is displayed only once after selecting the axis to be written.
- 3) The English notation of the option "2: Absolute value encoder (Incremental encoder is used)" in [Fixed Parameters] → [30: Encoder Selection] is "2: Absolute encoder used as incremental encoder".
- 4) Fixed a problem where when the mouse wheel is executed on one motion program while the motion program screen is displayed in a split display, the text cursor on the other motion program moves up and down.
- 5) Move the text cursor upward in the motion program to select a line, and perform tab operations (insertion / deletion). After that, if you perform an "undo" operation, the tabs of the uncovered rows will be operated at the same time.
- 6) Fixed a problem where selecting the Insert Ladder Instruction menu and placing the cursor over each ladder instruction displayed an unrelated character string in the status bar.
- 7) When a multi-axis device with a control axis of 1 is assigned to the final station of the motion module in the module configuration definition, the expand button (+ mark) and the detailed definition button (wrench mark) at the bottom of the selected multi-axis slave are misaligned with the grid on the back.
- 8) Fixed a problem that caused the MPE720 to terminate forcibly when comparing with a Scan2 existing only in the comparison destination and the comparison was performed with the axis assigned to the Scan2 in the multi-scan model.

Appendix A: Compilation of Parallel Circuits

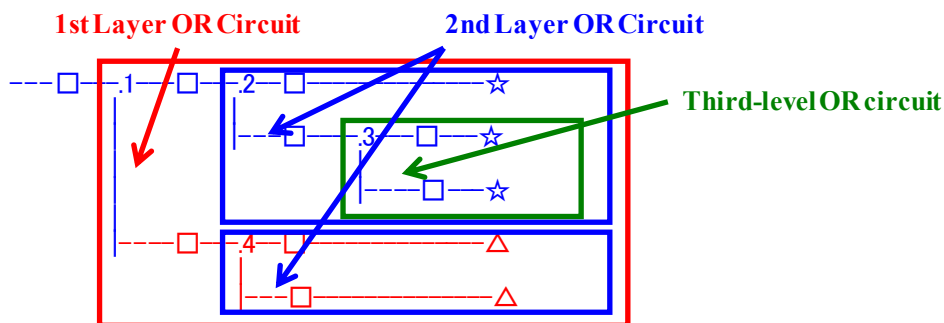
In the ladder program of MPE720 Ver7.23 or earlier, the following symptoms may occur when using parallel circuits.

< phenomenon >

When a circuit containing the following pattern was created, there was a phenomenon that the circuit on the lower side of the first-layer OR circuit originally received a conditional instruction in front of the first-level OR circuit and operated without being subjected to the condition.

< measures >

If this phenomenon occurs, recompile the corresponding ladder program with MPE720 Ver7.24 or later MPE720 Ver7. Alternatively, select "Compile All Program" from the "Compile" menu again.



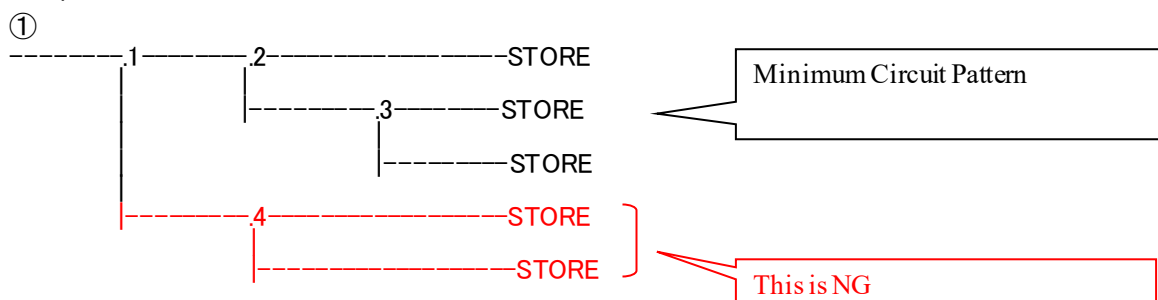
1st level OR circuit: OR circuit branched from Lang's busbar
 2nd layer OR circuit: OR circuit branched from within the 1st level OR circuit
 3rd level OR circuit: OR circuit branched from within the 2nd level OR circuit

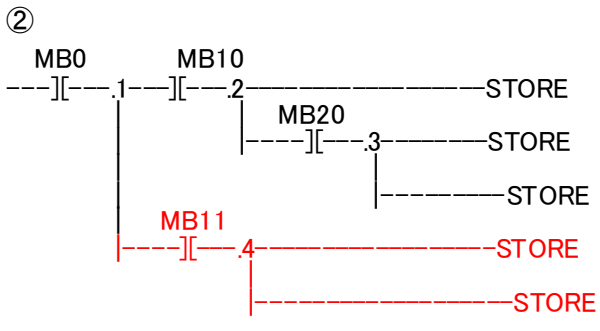
- (Conditional Instructions): A contact, B contact, comparison (=, !=, >, <) instructions, etc.
- * □ (conditional instructions) includes power wires (-----)
- ☆ (Output instructions): coils, block instructions (Expression, STORE, COPYW) instructions, etc.
- * However, if all ☆ are coil instructions, this phenomenon will not occur.
- Δ (Output instructions): Coils, block instructions (Expression, STORE, COPYW) instructions, etc.

[Phenomenon occurrence pattern]

symbol	order
][A contact
STORE	STORE command
()	coil

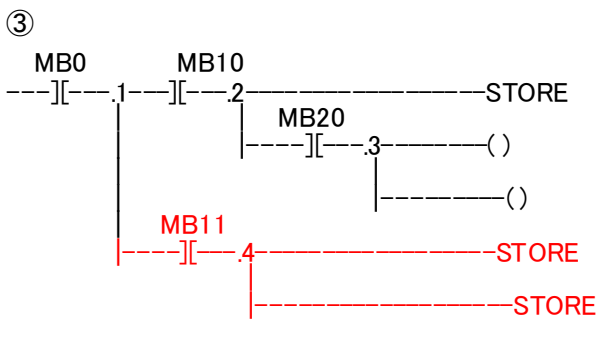
[NG pattern]





Even if there is a conditional instruction (A contact, etc.) in the minimum circuit pattern, it is NG

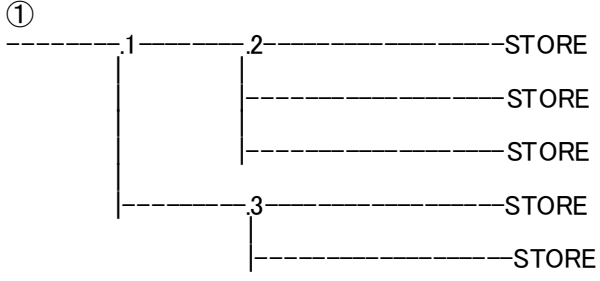
This is NG



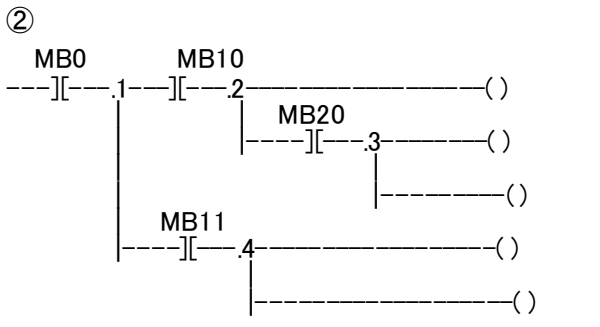
If there is even one block instruction (STORE instruction, etc.) here, it is NG

This is NG

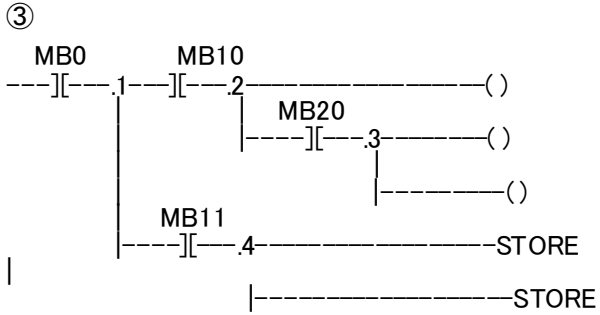
[OK pattern]



It's OK because it's a two-layer OR circuit



It's OK because it's all coils



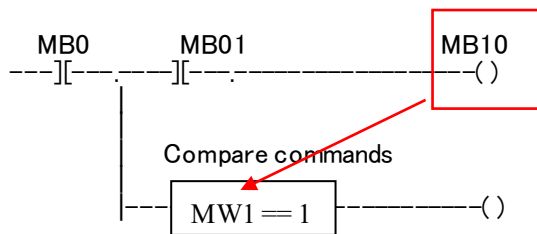
It's OK because it's all coils

Appendix B: Compilation when there are comparison instructions in a parallel circuit

MPE720 Ver7. In the ladder program of the MPE720 Ver7 before 63, the following symptoms may occur when using parallel circuits.

< phenomenon >

When a circuit containing the following pattern was created, the value of the register set in the upper circuit of the OR circuit was reflected in the next scan when it should have been reflected in the comparison instruction in the subsequent OR circuit in the same scan.



A pattern in which a register set in the circuit above the parallel circuit is referenced in subsequent comparison instructions in the parallel circuit.

< measures >

If this phenomenon occurs, recompile the corresponding ladder program with MPE720 Ver7.64 or later MPE720 Ver7. In addition, the number of internal steps changes in programs that include circuits with this pattern in Ver. 7.64 or later, so there is a possibility that you may jump to an unintended place when cross-referencing is performed in a project created in the previous version. In that case, please recompile the program. Alternatively, select "Compile All Program" from the "Compile" menu again.

Appendix C: High DPI

When the MPE720 Ver.7 was started on a computer that supports high DPI, such as a 4K display, part of the screen could not be displayed depending on the resolution and scale settings. Therefore, from MPE720 Ver.7.67, the high DPI setting of the MPE720 properties has been disabled. This avoids phenomena such as screen cutouts. If you need to use it at a high DPI setting due to circumstances, please change the high DPI setting from the properties screen of MPE720 Ver.7.

