

This document is a compilation of the restrictions of the corresponding products that have already been reported, and will be utilized in the NEC microcomputer technical document browsing service. All the restrictions as of June 17, 2002 are included.

## NEC Microcomputer Technical Information

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<b>SM78K0S</b> 78K0S Series System Simulator  Usage Restrictions		Document No.	SBG-TT-0140-E	1/1
		Date issued	June 17, 2002	
		Issued by	Microcomputer Group System LSI Solutions Engineering Div. NEC Electron Devices NEC Corporation	
Related documents	<ul style="list-style-type: none"> <li>• SM78K Series System Simulator V2.30 or Later Operation U15373EJ1</li> <li>• SM78K0S System Simulator V2.30 Operating Precautions SBG-TT-0036-E</li> </ul>	Notification classification	√	Usage restriction
				Upgrade
				Document modification
				Other notification

1. Affected product

SM78K0S Ver.2.30

2. List of restrictions

A list of restrictions in the SM78K0S, including the revision history and detailed information, is described on the following pages.

## List of Restrictions in SM78K0S

### 1. DEBUGGER BLOCK

#### 1.1 Product History

No.	Bugs and Changes/Additions to Specifications	Affected Version	
		V2.10	V2.30
1	Bug that a mask value cannot be set in the Event dialog box	×	√
2	Bug that the wrong error message is output in the Symbol to Address dialog box	×	×
3	Bug that no error message is displayed in the Source Move dialog box	×	√
4	Bug in trace search	×	√
5	Bug that the maximum display address of the Assemble window is not displayed	×	×
6	Bug that "Coverage" on the Option menu stays valid	×	√
7	Bug that the members of pointers cannot be displayed in the Watch window	×	×
8	Bug when mixed display is set in the Source window	×	×
9	Bug that part of the status is not displayed on screens with less than 800 x 600 resolution	×	√
10	Bug that the Memory Compare Result dialog box cannot be closed with the return key	×	√
11	Bug related to the Add Link button in the Trace dialog box	×	√
12	Bug in error message during program execution	×	√
13	Bug when an illegal area is included in the Memory Compare dialog box	×	√
14	Bug that no error message is output when a project file is read	×	√
15	Bug that illegal data is saved when display file is saved in the Watch window	×	√
16	Bug that the object is also loaded in the Download dialog box	×	√
17	Bug that the 320th (200th) and subsequent characters are not displayed	×	×
18	Bug that an error occurs if an SFR name of 7 characters or longer is input in the Assemble window	×	√
19	Bug that the debugger cannot display a source file	×	√
20	Bug that a breakpoint to the same address as the defined symbol value cannot be set	×	×
21	Bug that the pointer variable value cannot be displayed correctly in the Variable window	×	√
22	Bug that an error occurs if a load module is downloaded again	×	√
23	Bug that the display may become illegible if the right/left arrow key is used to scroll the area	×	×

No.	Bugs and Changes/Additions to Specifications	Affected Version	
		V2.10	V2.30
		×: Applicable √: Not applicable -: Not relevant	
24	Bug that a break point cannot be set if a file name that includes a “-“ (minus) or “+” (plus) exists in a source file	×	×
25	Bug that the debugger (simulator) is abnormally terminated	-	×
26	Bug that the last line is not displayed in the Coverage-Efficiency View dialog box	×	×
27	Bug that the source contents are not displayed in the Source Window	×	√
28	Bug in search file function in Source Search dialog box	×	×
29	Bug that the display in the Watch and Local window is incorrect when an array is declared as a function argument	×	×
30	Bug that the program cannot be edited when the Source window is in mixed-display mode	×	×
31	Bug that files with the same name cannot be displayed in the Source window	×	×
32	Bug that a dummy RRM is disabled in the SFR area	×	×
33	Bug that symbols with a func#var (func: Function name, var: Variable name) format cannot be converted into addresses	×	×
34	Bug that the LMF file created in the IAR’s compiler or assembler may not be able to be read	×	√
35	Bug that a run may not stop	×	×
36	Bug that asterisks are displayed when the EEPROM area is running	×	√

## 1.2 Details of Usage Restrictions

No. 1 Bug that a mask value cannot be set in the Event dialog box

[Description]

A mask value cannot be set in a specified range of the address setting area in the Event dialog box. Even if a mask value is set, however, no error or warning message is output. An event is set with the mask ignored.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 2 Bug that the wrong error message is output in the Symbol to Address dialog box

[Description]

If an SFR bit is specified in the Symbol to Address dialog box, an error occurs but the wrong error message "F002(f), Illegal expression" is output.

[Workaround]

Check the address of an SFR bit with a map file.

[Correction]

Regard this as a usage restriction.

No. 3 Bug that no error message is displayed in the Source Move dialog box

[Description]

If the numeric value of a line number in the Source Move dialog box is illegal or omitted, no error message is displayed and the cursor moves to the first line. In addition, even if the line number is greater than the file line number, no error message is output nor does the cursor move.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 4 Bug in trace search

[Description]

If cursor is placed after the end frame and the rest of a specified range is searched forward during a trace search, the trace result is not searched from the end frame. Instead, an error message is displayed. Similarly, if cursor is placed before the first frame and the rest of the specified range is searched backward, an error message is displayed (F003(W): Already exceed search region.).

[Workaround]

Place cursor within the search range.

[Correction]

This bug has been corrected in ver.2.30.

No. 5 Bug that the maximum display address of the Assemble window is not displayed

[Description]

The maximum display address "0xFFFF" of the Assemble window is not displayed.

[Workaround]

There is no problem because 0xFFFF is in the SFR area.

[Correction]

Regard this as a usage restriction.

No. 6 Bug that "Coverage" on the Option menu stays valid

[Description]

"Coverage" on the Option menu stays valid even during program execution. Nothing can be set even if selected.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 7 Bug that the members of pointers cannot be displayed in the Watch window

[Description]

Even if the members of pointers such as structures and arrays are displayed and saved to the project file, the members are not displayed in the Watch window when the project file is loaded. At this time, the display radix of each member is not displayed.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 8 Bug when mixed display is set in the Source window

[Description]

If mixed display is set in the Source window and the cursor is scrolled downward (in the direction of the end of the file), a redundant scroll occurs. As a result, the displayed line numbers may not be sequential. While the end of the source is displayed, the last part cannot be displayed unless scroll is used during mixed display.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 9 Bug that part of the status is not displayed on screens with less than 800 x 600 resolution

[Description]

Part of the status is not displayed on screens with less than 800 x 600 resolution.

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 10 Bug that the Memory Compare Result dialog box cannot be closed with the return key

## [Description]

The Memory Compare Result dialog box cannot be closed with the return key even if the default button is "Close".

## [Workaround]

Close the dialog box using the mouse.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 11 Bug related to the Add Link button in the Trace dialog box

## [Description]

The Add Link button is disabled when the Trace dialog box is opened, but is enabled when the Event Link dialog box is opened (however, the Add Link button should be disabled because event link cannot be used in the Trace dialog box).

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 12 Bug in error message during program execution

## [Description]

If the Timer dialog box is opened during program execution, the error message "0302(F): User program is being traced" is displayed twice.

## [Workaround]

Read this message as "User program is running".

## [Correction]

This bug has been corrected in ver.2.30.

## No. 13 Bug when an illegal area is included in the Memory Compare dialog box

## [Description]

If an illegal area (guard area or area that cannot be mapped) is included in the comparison source address range or destination address range in the Memory Compare dialog box, the error message "F201(f), Memory mapping error" is displayed. If the OK button is clicked, the Memory Compare dialog box disappears.

## [Workaround]

Do not include an illegal area.

## [Correction]

This bug has been corrected in ver.2.30.

No. 14 Bug that no error message is output when a project file is read

[Description]

If a project file created with SM78K0S V2.10 or earlier is loaded, no error message is displayed and the file is ignored.

[Workaround]

Create a project file with V2.10.

[Correction]

This bug has been corrected in ver.2.30.

No. 15 Bug that illegal data is saved when display file is saved in Watch window

[Description]

When the display contents of the Watch window are saved to a file, the variable values that are not displayed in the window will be saved incorrectly.

[Workaround]

Before saving the display file, scroll the Watch window and display all the variables in the window once.

[Correction]

This bug has been corrected in ver.2.30.

No. 16 Bug that the object is also loaded in the Download dialog box

[Description]

The object is also loaded if HEX file is specified and it is specified to load only symbol information in the Download dialog box.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 17 Bug that the 201st (320th) and subsequent characters are not displayed

[Description]

The number of characters that can be input in a line in the Source window, Assemble window, or watch-related windows is up to 319 (199 in V2.10 and V2.11) . The 320th (200th in V2.10 and V2.11) and subsequent characters are not displayed.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 18 Bug that an error occurs if an SFR name of 7 characters or longer is input in the Assemble window

[Description]

An error occurs if an SFR name of 7 characters or longer is input in the Assemble window.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 19 Bug that the debugger cannot display a source file

[Description]

The debugger cannot display a source file that includes a comment starting with a 2-byte character (e.g. Kanji character) at the start line of the assembler source file.

(**Note** Because this bug is caused by 2-byte codes, it occurs only in Japanese-version products.)

[Workaround]

Insert a single-byte code such as a space in the comment at the start line of the assembler source file so that it does not start with a 2-byte character.

[Correction]

This bug has been corrected in ver.2.30.

No. 20 Bug that a breakpoint to the same address as the defined symbol value cannot be set

[Description]

If valid EQU symbols are defined only in an assembler source file, a breakpoint to the same address as the defined symbol value cannot be set.

[Workaround]

Take workarounds such as defining EQU symbols in a header file so that they can be referenced by all the assembler source files.

[Correction]

Regard this as a usage restriction.

No. 21 Bug that the pointer variable value cannot be displayed correctly in the Variable window

[Description]

The pointer variable value that indicates the void type cannot be displayed correctly in the Variable window.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 22 Bug that an error occurs if a load module is downloaded again

[Description]

An error occurs if a load module that is read by a project file is downloaded again from the file list on the [File] menu immediately after a project file is read.

[Workaround]

A load module is downloaded by reading a project file. To read the value of the load module again, either use the [File] → [Download] menu, or read the same project file again.

## [Correction]

This bug has been corrected in ver.2.30.

No. 23 Bug that the display may become illegible if the right/left arrow key is used to scroll the area

## [Description]

When there is insufficient space in the data value display/setting area (in the SFR or Register window, etc.), if the right/left arrow key is used to scroll the area, the display in the data value display/setting area may become illegible.

## [Workaround]

Expand the size of the window before operating.

## [Correction]

Regard this as a usage restriction.

No. 24 Bug that a break point cannot be set if a file name that includes a “-” (minus) or “+” (plus) exists in a source file

## [Description]

If a file name that includes a “-” (minus) or “+” (plus) exists in a source file, a break point cannot be set in the debugger.

## [Workaround]

Change the file name so that it does not include a “-” (minus) or “+” (plus).

## [Correction]

Regard this as a usage restriction.

No. 25 Bug that the debugger (simulator) is abnormally terminated

## [Description]

In the debugger specifications, if there is a script file with the same name as the load module to be downloaded and with the extension “.tcl”, the script is automatically executed immediately before downloading. If the program to download the load module is written in a script, the download loops and the debugger is abnormally terminated.

## [Workaround]

Change the script file name to one that does not have the same name as a load module file name if the script file should not automatically be executed immediately before downloading. In addition, do not write the instruction to download the load module to the script file that should automatically be executed immediately before downloading.

## [Correction]

Regard this as a usage restriction.

No. 26 Bug that the last line is not displayed in the Coverage-Efficiency View dialog box

## [Description]

The last line is not displayed in the Coverage-Efficiency View dialog box. The last line is hidden behind the horizontal scroll bar when an item consisting of 21 characters or more is

included and the total number of items exceeds 12 in the survey list. (This bug occurs only in the English Windows environment.)

[Workaround]

Add one or more dummy items at the end of the list.

[Correction]

Regard this as a usage restriction.

No. 27 Bug that the source contents are not displayed in the Source Window

[Description]

The source files in a folder whose name ends with a 2-byte character may not be displayed in the Source window. (The window in which no source files are displayed is displayed.)

[Workaround]

Do not use folders whose name ends with a 2-byte character.

[Correction]

Regard this as a usage restriction.

No. 28 Bug in search file function in Source Search dialog box

[Description]

The search file function cannot be used in the Source Search dialog box.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 29 Bug that the display in the Watch and Local window is incorrect when an array is declared as a function argument

[Description]

When an attempt is made to reference the contents of an array from the Watch or Local window when an array is declared as a function argument, the incorrect memory location is displayed.

[Workaround]

When receiving (referencing) an array variable as the function argument, do not declare the array as the argument. Instead, declare a pointer and make a pointer access.

[Correction]

Regard this as a usage restriction.

No. 30 Bug that the program cannot be edited when the Source window is in mixed-display mode

[Description]

The mnemonic cannot be edited if the Source window is in mixed display mode.

[Workaround]

Edit in the Assemble window.

[Correction]

Regard this as a usage restriction.

No. 31 Bug that files with the same name cannot be displayed in the Source window

[Description]

The source file in the folder set in the source path under [Option] → [Debugger Option] is opened by priority in the Source window.

C:\TEST\TEST.C ← Source file of C:\TEST\TEST.LMF  
C:\TEST\TEST.LMF

D:\TEST\TEST.C ← Source file of D:\TEST\TEST.LMF  
D:\TEST\TEST.LMF

C:\TEST\ is set in the source path under [Option] → [Debugger Option].

At this time, C:\TEST\TEST.LMF is displayed even if D:\TEST\TEST.LMF is opened from [File] → [Download].

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 32 Bug that a dummy RRM is disabled in the SFR area

[Description]

Dummy RRM (real-time RAM monitor function) is disabled in the SFR area and in the SFR area.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 33 Bug that symbols with a func#var (func: Function name, var: Variable name) format cannot be converted into addresses

[Description]

Symbols with a func#var (func: Function name, var: Variable name) format cannot be converted into addresses.

[Workaround]

Only convert var (variable name). When there is a variable with the same name as a static variable in a function, convert the variable when the PC exists in that function.

[Correction]

Regard this as a usage restriction.

No. 34 Bug that the LMF file created in the IAR's compiler or assembler may not be able to be read

[Description]

The LMF file created in the IAR's compiler or assembler may not be able to be read.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

No. 35 Bug that a run may not stop

[Description]

When [Run] → [Slowmotion] is selected while Go & Go is under execution, the program does not stop even if [Run] → [Stop] is selected (or the stop button is clicked).

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 36 Bug that asterisks are displayed when the EEPROM area is running

[Description]

Asterisks are displayed when the EEPROM area is running.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

## 2. SIMULATOR BLOCK

### 2.1 Product History

No.	Bugs and Changes/Additions to Specifications	Affected Version	
		V2.10	V2.30
		×: Applicable √: Not applicable -: Not relevant	
1	The data creation function of the input 0/1 editor and input timing chart is not supported.	×	×
2	SMB arbitration function not supported (affected product: 78916x)	×	×
3	POM register function not supported	×	√
4	Power-on-clear circuit not supported	×	×
5	Low-voltage detector not supported	×	×
6	Bug in TAB key operation in Event & Action dialog box	×	×
7	Bug that SFR name in Event & Action dialog box differs from the actual device	×	√
8	Bug in interrupt	×	×
9	Bug in ADCR0, ADCR1 register	×	×
10	Bug that time of the timer operating with the subclock may include an error	×	×
11	Bug that noise occurs in comparator output	×	
12	Control of P90 and P92 by PU2 not supported (affected products: 78940x and 78941xx).	×	√
13	Restrictions in $\mu$ PD789870, 78F9871	×	√
14	Restrictions in $\mu$ PD789860, 789861	×	×
15	Bug that scroll bar is not displayed in I/O Panel window	×	×
16	Bug that scroll bar is not displayed in Key Matrix Pin dialog box	×	√
17	Bug in system menu in I/O Panel window (Windows NT only)	×	×
18	Bug in system menu in I/O Panel window	×	×
19	Bug that the instruction following SET1 will be skipped	×	
20	Bug that P23 and P24 cannot be connected to parts	×	
21	Bug that higher SFR of 16-bit register TM9 always holds '0x00'	×	√
22	Bug in error message when trace size is changed	×	√
23	Bug that the set value for level gauge cannot be input immediately after reset	×	√
24	Bug that the simulator inadvertently loops due to real-time RAM monitor function	×	√
25	Bug that real-time RAM monitor does not function after reading a project file	×	√
26	Bug that error is output at step execution of infinite loop	×	√
27	Bug that capture function of TM20 may not operate	×	√
28	Bug that the trace information on SET1 and CLR1 instructions is missing	×	√
29	Bug that count processing in TM8 is illegal	×	
30	Bug that undefined RXB value is read by SIO0	×	√

## 2.2 Details of Usage Restrictions

No. 1 The data creation function of the input 0/1 editor and input timing chart is not supported

[Description]

The data creation function of the input 0/1 editor and input timing chart is not supported.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 2 SMB arbitration function not supported (affected product: 78916x)

[Description]

The SMB arbitration function is not supported (affected product: 78916x).

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 3 POM register not supported (affected product: 78980x)

[Description]

The POM register function is not supported (affected product: 78980x).

[Workaround]

There is no workaround.

[Correction]

This restriction has been removed in ver.2.30.

No. 4 Power-on-clear circuit not supported

[Description]

The power-on-clear circuit is not supported.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 5 Low-voltage detector not supported

[Description]

The low-voltage detector is not supported.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

## No. 6 Bug in TAB key operation in Event &amp; Action dialog box

## [Description]

The function to jump to the next input field by pressing TAB cannot be used in the Event & Action dialog box.

## [Workaround]

There is no workaround.

## [Correction]

Regard this as a usage restriction.

## No. 7 Bug that SFR name in Event &amp; Action dialog box differs from the actual device

## [Description]

The following SFR name in the Event & Action dialog box differs from the SFR name of the actual device.

Device name:  $\mu$ PD78097X

SFR name on Event & Action dialog box: SIO3, CSIM3

SFR name of actual device: SIO, CSIM

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 8 Bug in interrupt

## [Description]

If an interrupt occurs from the interrupt controller peripheral unit when execution of one instruction has been completed, the interrupt signal information is not displayed on the timing chart. In addition, if two or more non-maskable interrupts having a separate vector address occur at the same time (multiple interrupts), only one interrupt can be acknowledged.

## [Workaround]

There is no workaround.

## [Correction]

Regard this as a usage restriction.

## No. 9 Bug in ADCR0, ADCR1 register

## [Description]

If conversion is completed by ADCTL0 while a read operation is being executed by the instruction of the ADCR0 register, the value of ADCR0 should be changed after reading ADCR0 according to the specifications. Actually, however, the updated value is read. If a write access to the ADCR0 register, a write access to the ADM0 register by a command, and a write access to the ADS0 register conflict with each other, the write access to the ADCR0 register is enabled if the conversion operation is enabled, and an interrupt signal (INTAD) is generated. This bug also applies to the ADS1 register.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 10 Bug that time of the timer operating with the subclock may include an error

[Description]

The time of the timer operating with the subclock may include an error.

Example:           <1> Specification: 500.0 ms, SM: 498.0736 ms  
                       <2> Specification: 15.6 ms, SM: 15.5652 ms

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 11 Bug that noise occurs in comparator output

[Description]

Noise may occur in the comparator output when CMPREF < CMPIN. In addition, the interrupt output signal is not synchronized with the comparator output.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 12 Control of P90 and P92 by PU2 not supported (affected products: 78940x and 78941xx).

[Description]

Control of P90 and P92 by PU2 is not supported (affected products: 78940x and 78941xx).

[Workaround]

Set control of P90 and P92 in the Pull-up/Pull-down dialog box by selecting [Connection] → [Pull-up/pull-down setting...] from the menu bar in the I/O Panel Window.

[Correction]

Regard this as a usage restriction.

No.13 Restrictions in  $\mu$ PD789870, 78F9871

[Description]

The following restrictions exist in the  $\mu$ PD789870 and 78F9871.

- The value of TM50 cannot be read.
- The corresponding interrupt names are as follows.

INTTM50 → INTTM90  
 INTTM51 → INTTM91  
 INTTM52 → INTTM92

- The corresponding SFR names are as follows on the data file.

TMC50 → TMC90

TM50 → Cannot be read

CP50 → CP90

CP51 → CP91

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

#### No.14 Restrictions in $\mu$ PD789860, 789861

[Description]

The following restrictions exist in the  $\mu$ PD789860 and 789861.

- "TO4" that is missing in the Output Timing Chart is displayed instead as the alternate-function pin of "TMO".
- If INTWDT (non-maskable) and INTKR1 occur at the same time, one of them may be ignored.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

#### No. 15 Bug that scroll bar is not displayed in I/O Panel window

[Description]

The scroll bar is not displayed if a component is moved to the edge of the I/O panel in the layout mode or if the customized component for the I/O panel is too big to be displayed.

[Workaround]

The scroll bar is displayed by re-sizing the I/O Panel window.

[Correction]

Regard this as a usage restriction.

#### No. 16 Bug that scroll bar is not displayed in Key Matrix Pin dialog box

[Description]

The scroll bar is not displayed if a component is moved to the edge of the I/O panel in the layout mode or if the customized component for the I/O panel is too big to be displayed.

[Workaround]

Move the cursor after pin setting.

[Correction]

This bug has been corrected in ver.2.30.

#### No. 17 Bug in system menu in I/O Panel window (Windows NT only)

[Description]

If the simulator is executed in Windows NT, the menu cannot be deleted or recovered using "Display Menu" on the system menu in the I/O Panel window.

[Workaround]

There is no workaround.

[Correction]

Regard this as a usage restriction.

No. 18 Bug in system menu in I/O Panel window

[Description]

If the I/O panel is minimized in the layout mode, it is not restored to its original size even if the icon on the taskbar is clicked.

[Workaround]

Right-click the icon and select "Restore" from the system menu.

[Correction]

Regard this as a usage restriction.

No. 19 Bug that the instruction following SET1 will be skipped

[Description]

The instruction following the "SET1[HL].5" instruction will be skipped. When the 2-byte instruction "SET1[HL].5" is executed, the program counter is incremented by 3.

[Workaround]

Insert a NOP instruction immediately after the SET instruction.

[Correction]

This bug has been corrected in ver.2.30.

No. 20 Bug that P23 and P24 cannot be connected to parts

[Description]

In the  $\mu$ PD789166, 789167, 789176, 789177, 78F9176 and 78F9177 Subseries, pins P23 and P24 cannot be connected to the external parts. In addition, these pins are not displayed in the pin list of the Output Timing Chart and Pin Set dialog box under the Input 0/1 Editor. Even if these pins output 1 in output mode, the value is soon returned to 0.

[Workaround]

There is no workaround, however, this bug does not occur in the Y product of the above subseries.

[Correction]

This bug has been corrected in ver.2.30.

No. 21 Bug that higher SFR of 16-bit register TM9 always holds '0x00'

[Description]

In the  $\mu$ PD78917x Subseries, the higher SFR of the 16-bit register TM9 always holds '0x00' even if it is counted up.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.

## No. 22 Bug in error message when trace size is changed

## [Description]

When the trace size is changed to 3 MB or more (varies depending on the machine) in the Extended Options dialog box, the error message "e000(f): Illegal argument" is displayed and trace is turned OFF.

## [Workaround]

Increase the virtual memory size in the PC.

## [Correction]

This bug has been corrected in ver.2.30.

Since the trace size depends on the machine, set the appropriate size for each machine.

The error message has been modified to "Not enough memory for trace-buffer" and the program has been corrected so that the trace is not turned OFF at error occurrence.

## No. 23 Bug that the set value for level gauge cannot be input immediately after reset

## [Description]

Even if a set value for the level gauge of the I/O Panel is input immediately after CPU reset, the input value is not correctly reflected in the conversion result.

## [Workaround]

Set the value for level gauge after executing one or more instructions following CPU reset.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 24 Bug that the simulator inadvertently loops due to real-time RAM monitor function

## [Description]

When a program is executed for a certain period while the Memory window or Watch window is open, the program may inadvertently loop or an illegal break may occur. In the case of program loop, even if the program is stopped using the forced break, the message "User program is running" may be displayed when the program is next executed.

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 25 Bug that real-time RAM monitor does not function after reading a project file

## [Description]

The real-time RAM monitor does not function after reading a project file even if the Memory window is displayed.

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 26 Bug that error is output at step execution of infinite loop

## [Description]

The error message "e000(F): Illegal argument" will be output when a step execution is performed on one line in a **for** or **while** statement.

## [Workaround]

There is no workaround.

In addition, the error message "7801(f): Cancelled step wait" will also be output, but this is just the processing when step execution is not terminated after a certain time, so it is not a bug.

## No. 27 Bug that capture function of TM20 may not operate

## [Description]

In the  $\mu$ PD789014, 789026 and 789418 Subseries, the capture function of the 16-bit timer (TM20) may not operate.

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 28 Bug that the trace information on SET1 and CLR1 instructions is missing

## [Description]

A memory write of the SET1 and CLR1 instructions is traced in the Trace window, but a memory read is not.

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 29 Bug that count processing in TM8 is illegal

## [Description]

In the  $\mu$ PD789046, 789136, 789178, 789218, 789842, 789835, 789076, 789803, 789872 and 789088 Subseries, if read access to the TM register of TM8 is performed too often, timer count processing may be illegal.

## [Workaround]

There is no workaround.

## [Correction]

This bug has been corrected in ver.2.30.

## No. 30 Bug that undefined RXB value is read by SIO0

## [Description]

In the  $\mu$ PD789014, 789026 and 789418 Subseries, an undefined RXB value is read by SIO0.

[Workaround]

There is no workaround.

[Correction]

This bug has been corrected in ver.2.30.