

CUSTOMER NOTIFICATION

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# 78K0 Series System Simulator SM78K0 V2.52 Operating Precautions

Windows Based

Be sure to read this document before using the product.

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Thank you for purchasing 78K0 Series system simulator SM78K0 V2.52.

This document explains the modifications from SM78K0 V2.40 to V2.52, cautions, and usage restrictions.

Be sure to read this document before using SM78K0 V2.52.

## 1. USER'S MANUAL

The following user's manual is available for this version as a PDF file only.

- SM78K Series V2.52 System Simulator - Operation (document number: U16768E)

## 2. SUPPORTED TOOLS

Use the following tool versions when used in combination with SM78K0 V2.52.

- Assembler: RA78K0 V3.60 or later
- Compiler: CC78K0 V3.50 or later
- Project manager: PM plus V5.10 or later

## 3. ITEMS REVISED FROM V2.40 TO V2.52

This section explains the changes from V2.40 to V2.52.

### 3.1 Added or Modified Functions

- Windows XP is now supported. Windows 95 is no longer supported in V2.52 and later.
- PM plus is now supported. Project Manager is no longer supported.
- The right-click menu has been modified.
- A variable, octadecimal, hexadecimal, and negative number can now be specified as a subscript of arrays in windows displaying variables such as the Watch window.  
Example) Variable: var[], octadecimal: var[010], hexadecimal: var[0xab], negative number: var[-6]
- The display file save/restore function has been separated into a display file and an environment file.
- The color of the frame at the start of a function in the Trace window has been changed to make it easier to see.
- The Help menu has been changed to an HTML-format help.

### 3.2 List of Handling of Restrictions (Debugger Block)

Since the numbers assigned to the restrictions have not been changed, the restriction numbers shown below are not consecutive.

No.	Bugs and Changes/Additions to Specifications	Version	
		V2.40	V2.52
2	Wrong error message is output in Symbol to Address dialog box	×	√
5	Maximum display address of Assemble window is not displayed	×	√*
7	Members of pointers cannot be displayed in Watch window	×	√*
8	Bug when mixed display is set in Source window	×	√*
17	320th and subsequent characters are not displayed	×	√*
21	Breakpoint cannot be set to the same address as the defined symbol value	×	√
24	Display may become illegible if right/left arrow key is used to scroll area	×	√*
26	Debugger (simulator) is abnormally terminated	×	√*
29	Bug in search file function in Source Search dialog box	×	—
30	Display in Watch and Local window is incorrect when an array is declared as a function argument	×	√
31	Program cannot be edited when Source window is in mixed-display mode	×	√*
32	Files with the same name cannot be displayed in Source window	×	√*
33	Dummy RRM is disabled in SFR area	×	√
39	Asterisk (*) indicating break-settable line is not displayed in Source window	×	√
47	Bug in saving a display file in Watch window	×	√

×: Applicable, √: Not applicable, √\*: Included in user's manual, —: Not relevant

### 3.3 Details of Handling of Restrictions (Debugger Block)

No.2 Wrong error message is output in 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.

[Action]

This bug has been corrected in V2.52.

No.5 Maximum display address of Assemble window is not displayed

[Description]

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

[Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

**No.7 Members of pointers cannot be displayed in 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.

**[Action]**

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

**No.8 Bug when mixed display is set in 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.

**[Action]**

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

**No.17 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 . The 320th and subsequent characters are not displayed.

**[Action]**

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

**No.21 Breakpoint cannot be set to the same address as the defined symbol value****[Description]**

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

**[Action]**

This bug has been corrected in V2.52.

**No.24 Display may become illegible if right/left arrow key is used to scroll 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.

**[Action]**

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

## No.26 Debugger (simulator) is abnormally terminated

## [Description]

In the debugger (simulator) 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 (simulator) is abnormally terminated.

## [Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

## No.29 Bug in search file function in Source Search dialog box

## [Description]

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

## [Action]

This function has been removed in V2.52.

## No.30 Display in 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.

## [Action]

This bug has been corrected in V2.52.

## No.31 Program cannot be edited when Source window is in mixed-display mode

## [Description]

The program in the disassembled program section cannot be edited if the Source window is in mixed display mode.

## [Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

## No.32 Files with the same name cannot be displayed in 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].

[Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

No.33 Dummy RRM is disabled in SFR area

[Description]

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

[Action]

This bug has been corrected in V2.52.

No.39 Asterisk (\*) indicating break-settable line is not displayed in Source window

[Description]

An asterisk (\*) indicating a break-settable line is not displayed in the Source window when only a macro (instruction) reference line is described in an include file and the line number is the same as the instruction start line number in the file to be included.

[Action]

This bug has been corrected in V2.52.

No.47 Bug in saving a display file in Watch window

[Description]

If data is added to the Watch window by specifying the address, the data cannot be saved correctly even if the display file saving command is executed.

[Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.



### 3.4 List of Handling of Restrictions (Simulator Block)

Since the numbers assigned to the restrictions have not been changed, the restriction numbers shown below are not consecutive.

No.	Bugs and Changes/Additions to Specifications	Version	
		V2.40	V2.52
1	The data creation function of the input 0/1 editor and input timing chart is not supported.	×	√*
9	Bug in TAB key operation in Event & Action dialog box	×	√*
19	Bug in system menu in I/O Panel window (Windows NT/2000/XP only)	×	–
36	Bug in hold time of I/O panel button/key matrix	×	√
37	Illegal interrupt in serial interface CSIA0 ( $\mu$ PD780148 Subseries)	×	√
38	Illegal interrupt in 8-bit timer TMH1 ( $\mu$ PD780114, 780124, 780138, 780148 Subseries)	×	√
39	P14 cannot be used as output port ( $\mu$ PD780103, 780114, 780124, 780138, 780148 Subseries)	×	√
40	Inverted output is not possible in UART6	×	√
41	Waveform may be distorted when TM34 is used in carrier generator mode	×	√
42	High level is output from pin when UART0 operation is stopped	×	√
43	On-chip pull-up resistor cannot be connected to P4 ( $\mu$ PD780138, 780148 Subseries)	×	√
44	Read-only bit NRZ1 of TMCYC1 register of 8-bit timer TMH1 can be written ( $\mu$ PD780114, 780124, 780138, 780148 Subseries)	×	√

×: Applicable, √: Not applicable, √\*: Included in user's manual, –: Not relevant

### 3.5 Details of Handling of Restrictions (Simulator Block)

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.

[Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

No.9 Bug in TAB key operation in Event & 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.

[Action]

This item has been included in the SM78K Series V2.52 user's manual as a caution on use.

## No.19 Bug in system menu in I/O Panel window (Windows NT/2000/XP 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.

## [Action]

This item has been deleted from restrictions because the system menu function is not described in the user's manual.

## No.36 Bug in hold time of I/O panel button/key matrix

## [Description]

When the main clock is changed in the Configuration dialog box after the simulator is activated, the hold time of the button/key matrix in the I/O panel cannot be simulated correctly. The old main clock is used for simulation.

## [Action]

This bug has been corrected in V2.52.

No.37 Illegal interrupt in serial interface CSIA0 ( $\mu$ PD780148 Subseries)

## [Description]

When using the  $\mu$ PD780148 Subseries, the interrupt INTACSI occurs each time the last byte is transmitted in repeat transfer mode of serial interface CSIA0.

## [Action]

This bug has been corrected in V2.52.

No.38 Illegal interrupt in 8-bit timer TMH1 ( $\mu$ PD780114, 780124, 780138, 780148 Subseries)

## [Description]

When 8-bit timer H1 of the  $\mu$ PD780114, 780124, 780138, or 780148 Subseries is used in carrier generator mode, the interrupt INTTM51 is generated twice.

## [Action]

This bug has been corrected in V2.52.

No.39 P14 cannot be used as output port ( $\mu$ PD780103, 780114, 780124, 780138, 780148 Subseries)

## [Description]

P14 cannot be used as an output port in the  $\mu$ PD780103, 780114, 780124, 780138, and 780148 Subseries.

## [Action]

This bug has been corrected in V2.52.

## No.40 Inverted output is not possible in UART6

## [Description]

Inverted output is not possible in UART6 even if inverted output is specified for the TXD pin of UART6.

**[Action]**

This bug has been corrected in V2.52.

**No.41 Waveform may be distorted when TM34 is used in carrier generator mode****[Description]**

When TM34 is used in carrier generator mode, a waveform may be distorted depending on the setting value of the operating clock.

**[Action]**

This bug has been corrected in V2.52.

**No.42 High level is output from pin when UART0 operation is stopped****[Description]**

When UART0 operation is stopped, a high level is output from the pin. As a result, the pin cannot be used as a port pin.

**[Action]**

This bug has been corrected in V2.52.

**No.43 On-chip pull-up resistor cannot be connected to P4 ( $\mu$ PD780138, 780148 Subseries)****[Description]**

An on-chip pull-up resistor cannot be connected to port 4 in the  $\mu$ PD780138, 780148 Subseries.

**[Action]**

This bug has been corrected in V2.52.

**No.44 Read-only bit NRZ1 of TMCYC1 register of 8-bit timer TMH1 can be written ( $\mu$ PD780114, 780124, 780138, 780148 Subseries)****[Description]**

When using the  $\mu$ PD780114, 780124, 780138, or 780148 Subseries, the read-only bit NRZ1 can be written when the TMCYC1 register of the 8-bit timer TMH1 is accessed in byte units.

**[Action]**

This bug has been corrected in V2.52.

## 4. CAUTIONS

Cautions on using SM78K0 V2.52 are described below.

### 4.1 Device File

A device file is necessary to execute the SM78K0. The device file is not included in the SM78K0. Download the device file via ODS (online delivery service).

NEC Electronics Microprocessor website (URL: [http://www.necel.com/micro/index\\_e.html](http://www.necel.com/micro/index_e.html))

→ [Development Tools Download] → [DeviceFile]

## 4.2 Supported devices

The SM78K0 does not support some device subseries. The support status of each subseries is shown below.

Subseries	Device	Database File
780024	0021, 0022, 0023, 0024 0021y, 0022y, 0023y, 0024y 0021as, 0022as, 0023as, 0024as	s002x.78k s002xy.78k s002xas.78k
780034	0031, 0032, 0033, 0034 0031y, 0032y, 0033y, 0034y f0034 f0034y 0031as 0032as 0033as 0034as f0034as	s003x.78k s003xy.78k sf0034.78k sf0034y.78k s0031as.78k s0032as.78k s0033as.78k s0034as.78k sf0034as.78k
780233	0232, f0233	s023x.78k
780831	0831y, f0831y	s0831y.78k
780833	0830y 0832y 0833y 0836y 0837y 0838y f0833y f0838y	s0830y.78k s0832y.78k s0833y.78k s0836y.78k s0837y.78k s0838y.78k sf0833y.78k sf0838y.78k
780964	0921, 0922, 0923, 0924, f0924 0961, 0962, 0963, 0964, f0964	s092x.78k s096x.78k
780974	0973 f0974	s0973.78k sf0974.78k
780988	0982, 0983, 0984, 0986, 0988 f0988	s098x.78k sf0988.78k
780338	0316 0318 0326 0328 0336 0338 f0338	s0316.78k s0318.78k s0326.78k s0328.78k s0336.78k s0338.78k sf0338.78k
780948	0948, 0949, f0948, f0949	s094x.78k
780078	0076, 0078, f0078 0076y, 0078y, f0078y	s007x.78k s007xy.78k
780066	0065, f0066	s006x.78k
780354	0343, 0344 0353, 0354, f0354 0343y, 0344y 0353y, 0354y, f0354y	s034x.78k s035x.78k s034xy.78k s035xy.78k
780103	0101 f0103 0102, 0103	s0101.78k sf0103.78k s010x.78k
780114	0111, 0112, 0113, 0114, f0114	s011x.78k
780124	0121, 0122, 0123, 0124, f0124	s012x.78k

Subseries	Device	Database File
780138	0133 0134, f0134 0136 0138, f0138 0131, 0132	s0133.78k s0134.78k s0136.78k s0138.78k s013x.78k
780148	0146 0148, f0148 0143, 0144	s0146.78k s0148.78k s014x.78k
780001	0001	s000x.78k
78002	001 001b 001by 001y 002 002b 002by 002y	s001.78k s00x.78k s00xby.78k s001y.78k s002.78k s002b.78k s002by.78k s002y.78k
78014	011b, 011f, 011h, 012a, 012b, 012f, 012h, 013, 013f, 013h, 014, 014f, 014h, 015f, 016f, 018f, p014, p018f 011by, 011fy, 012by, 012fy, 013fy, 013y, 014fy, 014y, 015fy, 016fy, 018fy, p014y, p018fy	s01x.78k       s01xy.78k
78024	023, 024, p024	s02x.78k
780208	0204 0204y 0205 0205y 0206 0208, p0208	s0204.78k s0204y.78k s0205.78k s0205y.78k s0206.78k s0208.78k
780208a	0204a 0205a	s0204a.78k s0205a.78k
78044	042 042a 042b 042f 043 043a 043b 043f 044, p044 044a 044b 044f 044h 045a 045b 045f 045h 046h p048a p048b	s042.78k s042a.78k s042b.78k s042f.78k s043.78k s043a.78k s043b.78k s043f.78k s044.78k s044a.78k s044b.78k s044f.78k s044h.78k s045a.78k s045b.78k s045f.78k s045h.78k s046h.78k s048a.78k sp048b.78k

Subseries	Device					Database File
780058	0053, 0053y, 0058, 0058y,	0054, 0054y, f0058 f0058y	0055, 0055y,	0056 0056y		s005x.78k s005xy.78k s0058.78k s0058y.78k
78054	052, 058, 052y, 058y, p054 p054y	053, f054, 053y, f054y,	054, p058, 054y, p058y,	055, p058f 055y, p058fy	056, 056y,	s05x.78k  s05xy.78k  sp054.78k sp054y.78k
78064	0306, 0306y, 0308, 0308y, 062, 062y, 064, 064y,	0306a 0306ay p0308 p0308y	064b  p064b			s0306.78k s0306y.78k s0308.78k s0308y.78k s06x.78k s06xy.78k s064.78k s064y.78k
78078	070a 070ay 074, 074y, 076 076y 078 078y p078 p078y	075 075y				s070a.78k s070ay.78k s07x.78k s07xy.78k s076.78k s076y.78k s078.78k s078y.78k sp078.78k sp078y.78k
78083	081 082 p083					s081.78k s082.78k s083.78k
78098	094 095 096 098a, p098a					s094.78k s095.78k s096.78k s098.78k

### 4.3 Cautions on Installation

#### 4.3.1 Product ID

A product ID is required to install SM78K0 V2.52. The product ID is shown on the medium or medium case.

#### 4.3.2 Caution on activating installer

Insert the CD-ROM of SM78K0 V2.52 in the CD-ROM drive. The installer is started automatically. If it does not start automatically, execute "setup.exe" in the directory DISK1 under SM78K0 from Windows Explorer.

#### 4.3.3 Caution on restarting computer

Because it may be necessary to restart the computer after installation, terminate all other applications.

#### 4.3.4 Caution on authority for installation

Administrator right is required for installation of SM78K0 V2.52 in Windows NT, Windows 2000, or Windows XP.

#### 4.3.5 Caution on installation directory

Do not install SM78K0 V2.52 in a directory with a name containing a space or a multi-byte character; otherwise the development tools may not be correctly executed.

#### 4.3.6 Caution on re-installation

To re-install SM78K0 V2.52, uninstall the copy of SM78K0 V2.52 already installed. If this product is installed in a different directory without uninstalling the first copy of SM78K0 V2.52, the first copy of SM78K0 V2.52 already installed cannot be uninstalled.

#### 4.3.7 Caution on file created at installation

The following file will be created after SM78K0 V2.52 has been installed. This file is necessary for uninstalling SM78K0 V2.52 and must not be deleted (the installation destination is assumed to be C:\NECTools32).

C:\NECTools32\SETUP\\*.\*

#### 4.3.8 Caution on help

The help is supplied in the HTML help format. If the help does not operate correctly, proceed as follows.

- Install Microsoft Internet Explorer 5.0 or later (IE5.5 SP2 or later recommended)

#### 4.3.9 Caution on font size of help

The font size of the help menu is affected by the font settings in Internet Explorer. The display is too large in the default size ("Medium") of Internet Explorer. Therefore, change the font size to "Smallest" in [Fonts] from the [View] menu and restart the help.

#### 4.3.10 Caution on project manager

The project manager is not supported in SM78K0 V2.52 or later. Use PM plus. PM plus is included in RA78K0 V3.60 or later, so upgrade to RA78K0 to V3.60 or later. If the project manager is used with SM78K0 V2.52, the following warning is displayed.

Wf109: project manager cannot be used with the debugger of this version. Please use PM plus.

#### 4.3.11 Caution on language used in Windows

SM78K0 V2.52 can be installed in the English Windows environment only.

If an attempt is made to install SM78K0 V2.52 in an environment other than English Windows, a message indicating a file transfer error is displayed and the installation is aborted.

This situation also occurs if a language other than English is specified as the system language in the "Regional Settings Properties" tab.

## 4.4 Cautions Related to SM78K0 (Debugger Block)

### 4.4.1 Memory window

The cursor in the ASCII display area does not follow changes in the display address on the memory window.

### 4.4.2 IAR compiler

The IAR compiler V3.30A or above is supported.

### 4.4.3 SFR selection dialog box

When the SFR names in several lines are selected in the SFR Select dialog box, the order of the selected SFR names cannot be changed. As a workaround for this problem, select the lines one by one and change the SFR display order.

### 4.4.4 Watch window

Up to 10,000 lines can be displayed in the Watch window. If the number exceeds 10,000, an error message will be output.

### 4.4.5 Number of lines in C source file

Up to 65535 lines can be supported (displayed) in a C source file. If the number exceeds 65535, divide the source.

### 4.4.6 Switching application while icon is being dragged

If an application is switched for any reason while an event icon is being dragged, the icon cannot be dropped. In such a case, release the drag status using the ESC key.

## 4.5 Cautions Related to SM78K0 (Simulator Block)

### 4.5.1 Input Timing Chart Editor window, Output Timing Chart Editor window, and Input 0/1 Editor window (1)

The Input Timing Chart Editor window, Output Timing Chart Editor window, and Input 0/1 Editor window can only be expanded up to a horizontal width of 1040 dots because the buffer size is limited.

### 4.5.2 Input Timing Chart Editor window and Output Timing Chart Editor window

If the screen in which ANI pins are displayed at the beginning is set on the input timing chart or output timing chart, the pins set as #47 and #48 are not displayed (may or may not be displayed depending on the size). They are correctly displayed if the screen is re-sized.

### 4.5.3 SFR Event & Action setting window

Only the representative interrupt name of interrupts having the same vectored interrupt address is displayed on the Interrupt drop down list of the SFR Event & Action setting window or output timing chart window.



#### 4.5.4 Input Timing Chart Editor window, Output Timing Chart Editor window, and Input 0/1 Editor window (2)

Do not use the data search function of the Input Timing Chart Editor window, Output Timing Chart Editor window, and Input 0/1 editor window because its search performance is poor.

#### 4.5.5 I/O panel window

Even if a customized component is moved to the I/O panel window, it is displayed at the position before it was moved if it is subsequently reloaded by the project file or custom menu of the I/O panel.

#### 4.5.6 Internal interrupt button

The interrupt name selection list of the internal interrupt button displays only the representative interrupt names of the interrupts having the same vector address.

#### 4.5.7 Scroll-bar level gauge of external parts

If a scroll-bar level gauge is connected to two or more AD pins, and if these pins are re-connected to a dial level gauge or vice versa, the array of the level gauges change/overlap.

#### 4.5.8 Buttons of external parts

The default value of a pin when a button is connected is 0 for both the active-high and active-low models. As a workaround, set Hi → 0 and Lo → 1 using the pull-up/pull-down function of an external part.

#### 4.5.9 Level gauge of external parts

When using Windows 2000, if right mouse button is clicked once to fix the level gage value of the external parts, the value is not fixed but a pull-down menu is displayed, but the value will still be set.

## 5. RESTRICTIONS

### 5.1 List of Restrictions (Debugger Block)

Since the numbers assigned to the restrictions have not been changed, the restriction numbers shown below are not consecutive.

No.	Bugs and Changes/Additions to Specifications	Version	
		V2.40	V2.52
25	Break point cannot be set if a file name that includes a “-“ (minus) or “+” (plus) exists in a source file	×	×
27	Last line is not displayed in Coverage-Efficiency View dialog box (applicable to English version only)	×	×
34	Symbols with the func#var (func: Function name, var: Variable name) format cannot be converted into addresses	×	×
36	Run may not stop	×	×
38	Display digit of bit variable and bit field is wrong in Watch window	×	×
40	Read-only project file can be overwritten	×	×
41	Help does not open in Trace window even if F1 key is pressed	×	×
42	Active project cannot be switched correctly in PM	–	×
43	Bug in changing file type by inputting “*.hex”	×	×
44	Source path cannot be added even if addition is specified by PM plus	–	×
45	Bug in redraw	×	×
46	Modification of the address of a label to be snapped is not reflected in snapshot execution	×	×

×: Applicable, √: Not applicable, –: Not relevant

### 5.2 Details of Restrictions (Debugger Block)

No.25 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).

No.27 Last line is not displayed in 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.

No.34 Symbols with the func#var (func: Function name, var: Variable name) format cannot be converted into addresses

## [Description]

Symbols with the 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.

No.36 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.

No.38 Display digit of bit variable and bit field is wrong in Watch window

## [Description]

If both a bit variable and bit field are displayed in the Watch window, the digit is not displayed as 1 digit, but as 16 digits (in binary, not 0b1 but 0b0000000000000001). The contents of data are correct.

## [Workaround]

There is no workaround.

No.40 Read-only project file can be overwritten

## [Description]

Project files (\*.prj, \*.pri) can be overwritten depending on the OS even if the file attribute is set to Read-only. In Windows XP, an error is output when attempting to overwrite the file, but the file can be overwritten in Windows 2000.

## [Workaround]

There is no workaround.

No.41 Help does not open in Trace window even if F1 key is pressed

## [Description]

The Help window is not displayed when the F1 key is pressed while no trace result is displayed, such as immediately after activation of the debugger. This is because the Help window can be opened by the F1 key only in the window on which the caret is placed, and the caret cannot be moved if there are no trace results.

## [Workaround]

Open the Help window by selecting [Current Window Help] under the Help menu.

## No.42 Active project cannot be switched correctly in PM plus

## [Description]

When both PM plus and the SM are activated and the active project is switched by PM plus, if the activated project does not include the project file (.pri) of the debugger, the load module loaded by the previous active project is not reset and remains as is.

## [Workaround]

Select "Execute symbol reset after download" in the Debugger Settings dialog box by selecting [Debugger settings...] on the [Tool] menu of PM plus before creating a project.

## No.43 Bug in changing file type by inputting "\*.hex"

## [Description]

Even if the display of the extension select area is changed by specifying the file type as "\*.hex" in the file selection area in a file selection dialog box, the change is not reflected internally.

## [Workaround]

Specify the file type in the extension select area.

## No.44 Source path cannot be added even if addition is specified by PM plus

## [Description]

When a project is saved in the SM78K0 and then a new source path is added in PM plus, the new source path cannot be added to the debugger.

## [Workaround]

Add the source path manually.

## No.45 Bug in redraw

## [Description]

If the caret is moved when the Memory window or Coverage window is activated, the line on which the caret was placed cannot be redrawn normally.

## [Workaround]

Redraw can be performed by moving the caret to a line on which redraw was not performed.

## No.46 Modification of address of a label to be snapped is not reflected in snapshot execution

## [Description]

When a label is specified for a memory address subject to snap in the Snap Shot dialog box, if the address of the registered label is changed in line with a user program modification, the address before modification is snapped.

## [Workaround]

When the address of the registered label is changed, re-register the snap information using the Change button.

### 5.3 List of Restrictions (Simulator Block)

Since the numbers assigned to the restrictions have not been changed, the restriction numbers shown below are not consecutive.

No.	Bugs and Changes/Additions to Specifications	Version	
		V2.40	V2.52
2	IIC arbitration function not supported	×	×
4	Bit shift detection function of SIO1 (3-wire, with automatic transfer function) not supported	×	×
5	1-bit shift output function of meter controller not supported	×	×
6	IEBUS function not supported	×	×
7	Oscillation clock selection function by SFR not supported ( $\mu$ PD780973 Subseries)	×	×
8	ROM correction function not supported	×	×
11	Bug in interrupt	×	×
12	Bug in ADCR0, ADCR1 register	×	×
13	Time of the timer operating with the subclock may include an error	×	×
14	Bug in setting watch timer ( $\mu$ PD780344, 780354 Subseries)	×	×
17	Scroll bar is not displayed in I/O Panel window	×	×
20	Bug in system menu in I/O Panel window	×	×
31	LIN function of UART6 not supported	×	×
32	RING-OSC clock not supported	×	×
33	Clock monitor not supported	×	×
34	Power-on clear not supported	×	×
35	Low-voltage detection circuit (LVI) not supported	×	×

×: Applicable, √: Not applicable, -: Not relevant

### 5.4 Details of Restrictions (Simulator Block)

No.2 IIC arbitration function not supported

[Description]

The IIC arbitration function is not supported.

[Workaround]

There is no workaround.

No.4 Bit shift detection function of SIO1 (3-wire, with automatic transfer function) not supported

[Description]

The Bit shift detection function of SIO1 (3-wire, with automatic transfer function) is not supported.

[Workaround]

There is no workaround.

**No.5 1-bit shift output function of meter controller not supported****[Description]**

The 1-bit shift output function of meter controller is not supported.

**[Workaround]**

There is no workaround.

**No.6 IEBUS function not supported****[Description]**

The IEBUS function is not supported.

**[Workaround]**

There is no workaround.

**No.7 Oscillation clock selection function by SFR not supported ( $\mu$ PD780973 Subseries)****[Description]**

The oscillation clock selection function is not supported.

**[Workaround]**

Set the oscillation clock in the Configuration dialog box.

**No.8 ROM correction function not supported****[Description]**

The ROM correction function is not supported.

**[Workaround]**

There is no workaround.

**No.11 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.

**No.12 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.

## No.13 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.

No.14 Bug in setting watch timer ( $\mu$ PD780344, 780354 Subseries)

## [Description]

This is a bug in setting the watch timer operating clock in the  $\mu$ PD780344, 780354 Subseries.

## [Workaround]

When setting the watch timer operating clock to  $f_{XT}/2$  in the  $\mu$ PD780344, 780354 Subseries, set the WTS bit of the WTIM register first and then set the WTNM register.

## No.17 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.

## No.20 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.

## No.31 LIN function of UART6 not supported

## [Description]

The LIN function of UART6 is not supported.

## [Workaround]

There is no workaround.

## No.32 RING-OSC clock not supported

## [Description]

The RING-OSC clock is not supported and not supplied with the mounted macro. Therefore, the operation when the RING-OSC clock is selected as a count clock is not guaranteed.

[Workaround]

There is no workaround.

No.33 Clock monitor not supported

[Description]

The clock monitor is not supported.

[Workaround]

There is no workaround.

No.34 Power-on clear not supported

[Description]

Power-on clear is not supported.

[Workaround]

There is no workaround.

No.35 Low-voltage detection circuit (LVI) not supported

[Description]

The low-voltage detection circuit (LVI) is not supported.

[Workaround]

There is no workaround.