Microcontroller Technical Information

SM78K0 78K0 System Simulator Usage Restrictions		Document No.	ZBG-CD-08-0009		1/2
		Date issued	March 12, 2008		
		Issued by	Development Tool Solution Group Multipurpose Microcomputer Systems Division Microcomputer Operations Unit NEC Electronics Corporation		
Related documents	SM78K Series Ver. 2.52 Operation: U16768EJ1V0 (1st edition) SM78K Series Ver. 2.30 or later External Part User Open Interface Specifications: U15802EJ1V0 (1st edition)	Notification classification	√	Usage restriction	
				Upgrade	
				Document modification	
				Other notification	

1. Affected product

    SM78K0 Ver. 2.70

2. New restrictions

    The following restrictions on debug functions (No. 13 to No. 16) and restrictions on simulation functions

    (No. 18 to No. 25) for the SM78K0 have been added.

    [Restrictions on debug functions]

    • No. 13   Restriction on installation of multiple simulators

    • No. 14   Restriction on Help display

    • No. 15   Restriction on timer event/break events

    • No. 16   Restriction on port register display in SFR window

    [Restrictions on simulation functions]

    • No. 18   Restriction on menu displayed in Parts window

    • No. 19   Restriction on display of waveforms output from 8-bit timers A0 and B0

    • No. 20   Restriction on Parts window operation after CPU reset

    • No. 21   Restriction on 7-/14-seg LED in Parts window

    • No. 22   Restriction on SFR Event & Action window

    • No. 23   Restriction on timer 01 when using μPD780078

    • No. 24   Restriction on serial interface when using μPD780058

    • No. 25   Restriction on LCD panel window

3. Workarounds

    The following workarounds are available for these restrictions. See the attachment for details.

    [Restrictions on debug functions]

    • No. 13   Uninstall SM78K0 V2.70 and then install it again.

    • No. 14   Open the help from the Start menu.

    • No. 15   There is no workaround.

    • No. 16   There is no workaround.

[Restrictions on simulation functions]

- No. 18   There is no workaround.
- No. 19   There is no workaround.
- No. 20   There is no workaround.
- No. 21   There is no workaround.
- No. 22   There is no workaround.
- No. 23   There is no workaround.
- No. 24   There is no workaround.
- No. 25   There is no workaround.

4. Modifications

   Modifications for these restrictions are as follows. See the attachment for details.

   [Restrictions on debug functions]

- No. 13   This issue will be corrected in the next version (planned to be released at the end of March 2008).
- No. 14   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 15   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 16   This issue has been corrected in the SM78K0 Ver. 2.70.

   [Restrictions on simulation functions]

- No. 18   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 19   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 20   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 21   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 22   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 23   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 24   This issue has been corrected in the SM78K0 Ver. 2.70.
- No. 25   This issue will be corrected in the next version (planned to be released at the end of March 2008).

5. List of restrictions

   See the attachment for a product history and a list of restrictions.

6. Document revision history

Document Number	Issued on	Description
SBG-TT-0139	June 17, 2002	Newly created.
SBG-DT-03-0158	May 23, 2003	Addition of new restrictions (simulation functions No. 36 to No. 44)
ZBG-CD-08-0009	March 12, 2008	Deletion of restrictions which have been corrected in Ver. 2.52 Modification of restriction numbers Addition of restrictions (debug functions No. 13 to No. 16, simulation functions No. 18 to No. 25)

List of Restrictions on SM78K0

1. PRODUCT HISTORY

This section explains the restrictions on the SM78K0. The restrictions are classified into the following two types.

- Restrictions on debug functions
- Restrictions on simulation functions

Among the restrictions reported in the previous edition (SBG-DT-03-0158), restrictions that have been corrected in SM78K0 V2.52 are deleted in this edition. In conjunction with this deletion, restrictions are renumbered in this document.

Among the restrictions listed in the previous edition (SBG-DT-03-0158), the following items that depend on the SM78K0 specifications have been revised as follows.

- Items related to the contents in the user's manual: Moved to **4. CHANGES IN USER'S MANUAL**.
- Items other than above: Moved to **3. CAUTIONS**.

1.1 Restrictions on Debug Functions (List)

No.	Bugs and Changes/Additions to Specifications	Version	
		V2.52	V2.70
1	Restriction on source file name	×	×
2	Restriction on Coverage-Efficiency View dialog box	Described in **Chapter 4**.	
3	Restriction that symbols with the *func#var* format cannot be converted into addresses	Described in **Chapter 4**.	
4	Restriction on executing slow-motion	Described in **Chapter 3**.	
5	Restriction on Watch window	×	×
6	Restriction on saving a project file	Described in **Chapter 3**.	
7	Restriction on Help display	Described in **Chapter 4**.	
8	Restriction on switching active project in PM+	−	×
9	Restriction on changing file type	Described in **Chapter 3**.	
10	Restriction on source path addition	Described in **Chapter 4**.	
11	Restriction on redrawing the window	Described in **Chapter 3**.	
12	Restriction on event setting	Described in **Chapter 3**.	
13	Restriction on installation of multiple simulators	−	×
14	Restriction on Help display	×	○
15	Restriction on timer event/break events	×	○
16	Restriction on port register display in SFR window	×	○

×: Applicable, ○: Not applicable, −: Not relevant

1.2 Restrictions on Simulation Functions (List)

No.	Bugs and Changes/Additions to Specifications	Version	
		V2.52	V2.70
1	IIC arbitration function not supported	Described in **Chapter 3**.	
2	Bit shift detection function of SIO1 (3-wire, with automatic transfer function) not supported	Described in **Chapter 3**.	
3	1-bit shift output function of meter controller not supported	Described in **Chapter 3**.	
4	IEBus function not supported	Described in **Chapter 3**.	
5	Oscillation clock selection function by SFR not supported (μPD780973 Subseries)	Described in **Chapter 3**.	
6	ROM correction function not supported	Described in **Chapter 3**.	
7	Bug in interrupt	Described in **Chapter 4**.	
8	Bug in ADCR0 snd ADCR1 registers	Described in **Chapter 3**.	
9	Bug in time of the timer operating with the subclock	Described in **Chapter 4**.	
10	Bug in setting watch timer (μPD780344, 780354 Subseries)	Described in **Chapter 3**.	
11	Bug in scroll bar display	Described in **Chapter 4**.	
12	Restriction on minimizing I/O Panel window	Described in **Chapter 4**.	
13	LIN function of UART6 not supported	Described in **Chapter 3**.	
14	Internal oscillator not supported	Described in **Chapter 3**.	
15	Clock monitor not supported	Described in **Chapter 3**.	
16	Power-on clear not supported	Described in **Chapter 3**.	
17	Low-voltage detection circuit (LVI) not supported	Described in **Chapter 3**.	
18	Restriction on menu displayed in Parts window	×	○
19	Restriction on display of waveforms output from 8-bit timers A0 and B0	×	○
20	Restriction on Parts window operation after CPU reset	×	○
21	Restriction on 7-/14-seg LED in Parts window	×	○
22	Restriction on SFR Event & Action window	×	○
23	Restriction on timer 01 when using μPD780078	×	○
24	Restriction on serial interface when using μPD780058	×	○
25	Restriction on LCD panel window	×	×

×: Applicable, ○: Not applicable

2. DETAILS OF RESTRICTIONS

2.1 Details of Restrictions on Debug Functions

No. 1 Restriction on source file name

[Description]

If a file name that includes a minus (−) or plus (+) sign 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 (+) sign.

[Correction]

This issue will be corrected in the next version.

No. 5 Restriction on Watch window

[Description]

If a bit variable or bit field is 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.

[Correction]

This issue will be corrected in the next version. After correction, the bit variables and bit fields are displayed as 1 digit (0b1 or 0b0).

No. 8 Restriction on switching active project in PM+

[Description]

When both PM+ and the SM78K0 are running and the active project is switched by PM+, 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]

Before creating a project, select "Debugger settings…" on the [Tool] menu of PM+ to open the Debugger Settings dialog box, and then select "Execute symbol reset after download" in the dialog box.

[Correction]

This issue will be corrected in the next version.

No. 13 Restriction on installation of multiple simulators

[Description]

If a simulator (SM850, SM78K4 or SM78K0S) of V2.52 or earlier is installed in a computer where SM78K0 V2.70 is installed and then the simulator other than the SM78K0 is uninstalled, some files required by SM78K0 V2.70 are deleted. As a result, some bitmaps can no longer be displayed in the Parts window.

[Workaround]

Uninstall SM78K0 V2.70 and then install it again.

[Correction]

　This issue will be corrected in the next version.

No. 14 Restriction on Help display

　[Description]

　If an attempt is made to open the help from the simulator in the Windows XP SP2 environment, it is not displayed correctly. In addition, if an attempt is made to open the help by selecting the [Help] menu on the menu bar or by pressing the F1 key, the help is displayed erroneously or diagrams in the help are not displayed.

　[Workaround]

　Open the help from the Start menu.

　[Correction]

　This issue has been corrected in Ver. 2.70.

No. 15 Restriction on timer event/break events

　[Description]

　If the same event is set as a timer event condition and a break event condition, the measured execution time is erroneously displayed as follows.

　• Nothing is displayed.

　• The time of execution of only one instruction is displayed.

　[Workaround]

　There is no workaround.

　[Correction]

　This issue has been corrected in Ver. 2.70.

No. 16 Restriction on port register display in SFR window

　[Description]

　When ports are used in input mode, the level of the signals input to the port registers displayed in the SFR window cannot be confirmed. (Incorrect values may be read out.)

　　*　Values read in the SFR window are incorrect but the values read by executing a microcontroller instruction are correct.

　[Workaround]

　There is no workaround.

　[Correction]

　This issue has been corrected in Ver. 2.70.

2.2 Details of Restrictions on Simulation Functions

No. 18 Restriction on menu displayed in Parts window
  [Description]
    Even if [Show Menu] is clicked in the Parts window system menu (which is displayed by clicking the
    program icon on the title bar), hiding and showing of the menu display cannot be switched.
  [Workaround]
    There is no workaround.
  [Correction]
    This issue has been corrected in Ver. 2.70.

No. 19 Restriction on display of waveforms output from 8-bit timers A0 and B0
  [Description]
    When 8-bit timer A0 or B0 of the μPD780344, μPD780354, μPD780344Y and μPD700354Y
    microcontrollers is used as a carrier generator, the output waveforms cannot be monitored in the
    Output Timing Chart window.
    Even if the timer output is disabled when the timer is used for purposes other than the carrier generator,
    the waveform may continue to be displayed in the Output Timing Chart window.
  [Workaround]
    There is no workaround.
  [Correction]
    This issue has been corrected in Ver. 2.70.

No. 20 Restriction on Parts window operation after CPU reset
  [Description]
    When a CPU reset occurs, the buttons shown in the Parts window are reset to the initial state but the
    level of the signals connected to the buttons are not.
  [Workaround]
    There is no workaround.
  [Correction]
    This issue has been corrected in Ver. 2.70.

No. 21 Restriction on 7-/14-seg LED in Parts window
  [Description]
    Displays of 7-/14-seg LEDs in the Parts window are switched only at the valid edge of the digit signals.
  [Workaround]
    There is no workaround.
  [Correction]
    This issue has been corrected in Ver. 2.70.

No. 22 Restriction on SFR Event & Action window

[Description]

The action set in the SFR Event & Action window does not occur during stepwise execution.

If FETCH is specified as an action in the SFR Event & Action window, the action does not occur.

[Workaround]

There is no workaround.

[Correction]

This issue has been corrected in Ver. 2.70.

No. 23 Restriction on timer 01 when using μPD780078

[Description]

When a μPD780078 microcontroller (μPD780076, μPD780078, μPD78F0078, μPD780076Y, μPD780078Y or μPD78F0078Y) is used, no interrupt is output from 16-bit timer/event counter 01.

[Workaround]

There is no workaround.

[Correction]

This issue has been corrected in Ver. 2.70.

No. 24 Restriction on serial interface when using μPD780058

[Description]

When a μPD780058 microcontroller (μPD780053, μPD780054, μPD780055, μPD780056, μPD780053Y, μPD780054Y, μPD780055Y, μPD780056Y, μPD780058, μPD78F0058, μPD780058Y, or μPD78F0058Y) is used, UART communication that uses RXD1/TXD1 in serial interface channel 2 does not operate.

[Workaround]

There is no workaround.

[Correction]

This issue has been corrected in Ver. 2.70.

No. 25 Restriction on LCD panel window

[Description]

When using the LCD Panel window, if the segment which is displayed first is not the first segment (top of a segment), the segment may not be displayed as is set.

[Workaround]

There is no workaround.

[Correction]

This issue will be corrected in the next version.

3. CAUTIONS

3.1 Differences Between Simulator and Target Device

No. 1   Unsupported peripheral functions

The following peripheral functions are not supported.

- IIC arbitration function

- LIN function of serial interface UART6

- Function to detect bit shift due to busy signal of serial interface SIO1

- 1-bit shift output function of meter controller

- IEBUS controller function

- Oscillation clock switch function via SFRs of μPD780973 and μPD7809734

- ROM correction function

- Clock monitor function

- Power-on-clear circuit

- Low-voltage detector

- Operation of CPU and peripheral functions according to internal low-speed oscillator

No. 2   A/D converter

If a value is read from a conversion result register during A/D conversion, the value upon completion of the A/D conversion is read out in the simulator. In some target devices, the value before conversion is read out.

If A/D conversion ends at the same time as conversion is stopped (by writing to the relevant control register via an instruction), the A/D converter stops after completion of conversion in the simulator.   In some target devices, the A/D converter stops before completion of conversion.

3.2 Cautions on Debug Functions

No. 1   IAR compiler

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

No. 2   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.

No. 3   Read-only project file can be overwritten

Even if the file attribute is set to read-only in the Windows 2000 environment, project files can be overwritten if the project files are overwrite-saved via the simulator.

No. 4   Redrawing window

If the caret is moved when a window such as the Memory window or Coverage window becomes active, the line where the caret was placed may appear blank.

Click the [Refresh] button or click on the blanked line to restore the original display.
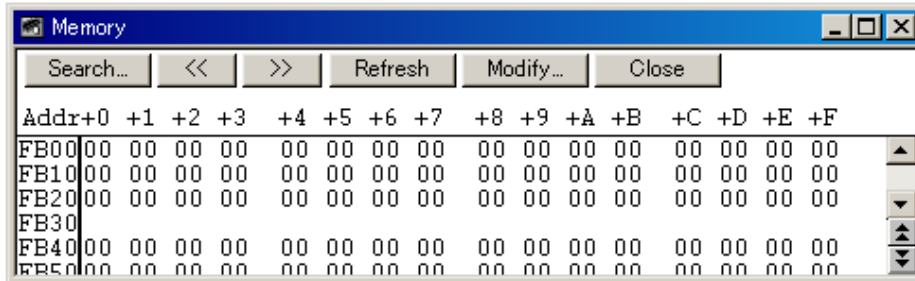
No. 5   Breakpoint setting during program execution

Setting and clearing of breakpoints are not possible during program execution, while the tracer function is on. To enable these operations, click [Tracer On] in the [Option] menu to disable the trace function.

No. 6   Execution of slow-motion during program execution

If [Slowmotion] is selected from the [Run] menu in the simulator during program execution, a forced break can no longer be executed. In such a case, forcibly terminate the simulator. (The [Slowmotion] menu is not usually available during program execution, but it is available under some conditions.)

No. 7   Changing file type by inputting a character string such as "*.hex"

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 such as the Download dialog box or Browse dialog box, the change may not be reflected internally.

Specify the file type in the Files of Type list.

No. 8   Event setting

If the address at which a label or variable is allocated in the program is changed due to modification or rebuilding of the program after an event such as a breakpoint or a snap event is set, the address at which the event is set is not reflected. Therefore, set the event again, as necessary.

3.3 Cautions on Simulating Functions

No. 1   Input Timing Chart Editor window, Output Timing Chart Editor window and Input 0/1 Editor window

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.

No. 2   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. CHANGES IN USER'S MANUAL

This section describes changes in the *SM78K Series System Simulator Operation User's Manual* (U16768EJ1) and *SM78K Series System Simulator External Part User Open Interface Specifications* (U15802EJ1).

4.1 Changes in Operation

This section describes changes in the *SM78K Series System Simulator Operation User's Manual* (U16768EJ1). Some parts are underlined to clarify the changed points.

No. 1   Change in Operating Environment

➢ Location

1.4.2 Software environment on page 16

➢ Before change

(1)   Operating system (any of the following)

Windows98, Windows2000, Windows NT^{TM}4.0, Windows Me, Windows XP Home Edition, Windows XP Professional

➢ After change

(1)   Operating system (any of the following)

Windows2000, Windows XP Home Edition, Windows XP Professional

No. 2   Addition to Debugger Option dialog box

➢ Location

Under **Reference** on page 87

➢ Added description

Caution: When a project is saved in the simulator and then a new source path is added in PM+, the new source path is not added to the simulator. In this case, add the source path manually.

No. 3   Change in Source window

➢ Location
Above **Figure 6-24** on page 132

➢ Before change
Caution: **If program codes is described in an include file and these codes are included in multiple files, the line numbers and addresses do not correspond on a one-to-one bases. In such an include file, function that indicates the correspondence relationship between line numbers and addresses dose not correctly operate.**

➢ After change
Caution 1: **If program codes is described in an include file and these codes are included in multiple files, the line numbers and addresses do not correspond on a one-to-one bases. In such an include file, function that indicates the correspondence relationship between line numbers and addresses dose not correctly operate.**
Caution 2: **Up to 65,535 lines of a C source file can be displayed. If the number of lines exceeds 65,535, divide the source file.**

No. 4   Change in Watch window

➢ Location
Above **Figure 6-36** on page 176

➢ Before change
Caution: **If a local variable and a global variable exist with the same name, the local variable takes priority.**

➢ After change
Caution 1: **If a local variable and a global variable exist with the same name, the local variable takes priority.**
Caution 2: **Multiple lines cannot be selected in the Watch window.**
Caution 3: **Up to 10,000 lines can be displayed in the Watch window.**

No. 5   Addition to Add Watch dialog box

➢ Location

Under the index table for scope specification on page 189

➢ Added description

If an in-function static variable or an auto variable is specified in the format of *func#var*, the value is displayed as a question mark. In such a case, specify the variable in the format of *file#func#var* or *prog$file#func#var*.

No. 6   Change in SFR dialog box

➢ Location

Last line in description of **(1) Display, Pick Up, No Display (display SFR selection area)** on page 214

➢ Before change

When selecting a SFR from the list, two or more registers can be selected by clicking any of the above buttons with the Ctrl or Shift key held down.

➢ After change

When selecting a SFR from the list, two or more registers can be selected by clicking any of the above buttons with the Ctrl or Shift key held down. The display order cannot be changed while multiple lines are selected. (The Arrange area appears dimmed.)

No. 7   Addition to Trace window

➢ Location

Above **Figure 6-46** on page 219

➢ Added description

Caution: **When no trace result is displayed due to any reason such as immediately after the computer has booted, the Help is not displayed even if the F1 key is pressed. In such a case, select the [Help] menu → [Current Window] to open the Help.**

No. 8 Addition to Coverage-Efficiency View dialog box

➢ Location

Above **Figure 6-53** on page 252

➢ Added description

Caution: **In the English version windows, when an item consisting of 21 characters or more is included and the total number of items exceeds 12 in the survey list, the last line is hidden behind the horizontal scroll bar. In this case, add one or more dummy items at the end of the list.**

No. 9 Change in Timer dialog box

➢ Location

Description in **(4) Execution time display area** on page 304

➢ Before change

This area displays the result of measuring the execution time of the program.

➢ After change

This area displays the result of measuring the execution time of the program.

Caution: **When the CPU is operating on the subclock, a slight error occurs in the measured time (see examples below.)**

Expected value of measurement time	500 ms	15.6 ms
Measured time displayed	498.0736 ms	15.5652 ms

No. 10 Change in SFR Event & Action window

➢ Location

Description in the table in **(4) Action Set (action setting area)** on page 325

➢ Before change

Interrupt	If this check box is checked, an interrupt signal is generated as an action. Select an interrupt name from the drop-down list, or input from the keyboard. For the specifiable interrupt names, refer to the user's manual of the device used.

➢ After change

Interrupt	If this check box is checked, an interrupt signal is generated as an action. Select an interrupt name from the drop-down list, or input from the keyboard. For the specifiable interrupt names, refer to the user's manual of the device used. If one or more interrupts have the same interrupt address, only the representative one is displayed.

No. 11 Addition to Input 0/1 Editor window

➢ Location

Above **Figure 6-70** on page 326

➢ Added description

Caution: This window cannot be maximized even if attempted.

No. 12 Addition to Input timing Chart Editor window

➢ Location

Above **Figure 6-71** on page 332

➢ Added description

Caution: This window cannot be maximized even if attempted.

No. 13 Addition to Output Timing Chart window

➢ Location
    <1> Above **Figure 6-75** on page 345
    <2> Under **Reference** in **(3) Timing chart display area** on page 347

➢ Added description
    <1> **Caution:**   **This window cannot be maximized even if attempted.**
    <2> **Caution:**   **When "INT: interrupt flag" is selected in the Pin Setting dialog box, the name of an interrupt source that has occurred may not be displayed. (If one or more interrupts occur at the same time, for example, only one interrupt is displayed.)**
                            If one or more interrupts have the same interrupt address, only the representative one is displayed.

No. 14 Change in Parts window

➢ Location
    In **Caution** on page 352

➢ Before change
    Caution: **For the operation of the I/O panel when the CPU is reset, refer to "4. 1. 3 Operation of external parts at CPU reset".**

➢ After change
    Caution 1:   **For the operation of the I/O panel when the CPU is reset, refer to "4. 1. 3 Operation of external parts at CPU reset".**
    Caution 2:   **The scroll bar is not displayed, even if a component is moved at an end of the Parts window or a component which is too large to be displayed in the window is loaded. In such a case, the scroll bar can be displayed by resizing the Parts window.**
    Caution 3:   **If the Parts window is minimized while it is in the placement mode, the window size cannot be restored even if the Parts window button, which is displayed on the task bar, is clicked. In such a case, right-click the Parts window button on the task bar and click "Restore".**
    Caution 4:   **When a customized component is moved in the Parts window and then the components are reloaded into a project file or reloaded by using the Customize menu in the Parts window, the component is displayed at the position before it was moved.**

No. 15 Change in Level Gauges window

➢ Location

    <1> Description of SB/D in the table in **(2) Connection information setting area** on page 415

    <2> In <Inputting via scroll bar> in **Setting** on page 416

➢ Before change

    <1>

SB/D	This check box specifies the type of the level gauge to be displayed.
	If this box is checked, the level gauge is displayed as a dial; if it is not checked, the level gauge is displayed as a scroll bar.

    <2>

By moving the scroll thumb, the analog value, which is displayed in black, can be changed.

When the analog value has reached the value to be input, click the right button of the mouse on the scroll bar. In this way, the displayed analog value can be input. At this time, the value is displayed in red.

➢ After change

    <1>

SB/D	This check box specifies the type of the level gauge to be displayed.
	If this box is checked, the level gauge is displayed as a dial; if it is not checked, the level gauge is displayed as a scroll bar.
	Caution: If a scroll-bar-type level gauge is connected to each of multiple analog input pins, and they are reconnected to a dial-type level gauge, or vice versa, the position at which each level gauge is displayed may overlap.

    <2>

By moving the scroll thumb, the analog value, which is displayed in black, can be changed.

When the analog value has reached the value to be input, click the right button of the mouse on the scroll bar. In this way, the displayed analog value can be input. At this time, the value is displayed in red.

Caution:　　**When the right mouse button is clicked to input a value, the context menu is displayed, but the input was performed correctly.**

No. 16 Change in Internal Interrupt Button window

➢ Location

   Caution in **(2) Interrupt (internal interrupt name setting area)** on page 424

➢ Before change

   Caution: **For the specifiable interrupt names, refer to the user's manual of the device used.**

➢ After change

   Caution 1:   **For the specifiable interrupt names, refer to the user's manual of the device used.**

   Caution 2:   **If one or more interrupts have the same interrupt address, only the representative one is displayed.**

No. 17 Change in Expansion window

➢ Location

   Reference in **B. 2 Activation** on page 489

➢ Before change

   Reference: Each .tcl file is installed in NECTools32\BIN\idtcl\tools.

➢ After change

   Reference: Each .tcl file is installed in the following folder.

   NEC Electronics Tools*product name**version*\bin\idtcl\tools

   (The *product name* will be either of SM78K4, SM78K0, or SM78K0S.)

4.2 Changes in External Part User Open Interface Specifications

This section describes changes in the *SM78K Series System Simulator External Part User Open Interface Specifications* (U15802EJ1). Some parts are underlined to clarify the changed points.

No. 1   Change in operating environment

➢ Location
   1.3.1 Development environment on page 15

➢ Before change
   (1)   Software environment: Windows98, Windows2000, Windows NTTM4.0
          Microsoft Visual C++ V5.00 or later

➢ After change
   (1)   Software environment: Windows2000, WindowsXP
          Microsoft Visual C++ V6.00 or later

No. 2   Change in 1.4 Cautions When Transferring External Parts...

➢ Location
   1.4.2 Change of make environment on page 15

➢ Before change
   (1)   Add the uparts32.cpp file to the project.
          uparts32.cpp is in .\smp78kx\sm78kx under the SM78K installation directory (e.g. c:\nectools32).

➢ After change
   (1)   Add the uparts32.cpp file to the project.
          uparts32.cpp is in the following folder.
          NEC Electronics Tools*product name1**version*\smp *product name2**product name1*\\
          * Product name1: Either SM78K4, SM78K0, or SM78K0S
           Product name2: Either 78K4, 78K0, or 78K0S

No. 3   Change in Example of Parts Customized via Parts Window

➢ Location

Change of entire contents of **<3> Definition file UPsw00.def** on page 87

Deletion of **<4> Make file UPsw00.mak** on pages 88 to 91

Addition of **<4> Project file UPsw00.dsp** on pages 88 to 91

Addition of **<5> Workspace file UPsw00.dsw** on pages 88 to 91

➢ Before change

See the relevant pages shown in Location above.

➢ After change

<3> Definition file *UPsw00.def*

(1/1) UPsw00.def

```
LIBRARY UPSW00


DESCRIPTION        'User Open I/F Panel sw00'


EXPORTS
        UParts_sw00
```

<4> Project file *UPsw00.dsp*

(1/4) UPsw00.dsp

```
# Microsoft Developer Studio Project File - Name="UPsw00" - Package Owner=<4>
# Microsoft Developer Studio Generated Build File, Format Version 6.00
# ** DO NOT EDIT **

# TARGTYPE "Win32 (x86) Dynamic-Link Library" 0x0102

CFG=UPsw00 - Win32 Debug
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "UPsw00.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "UPsw00.mak" CFG="UPsw00 - Win32 Debug"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "UPsw00 - Win32 Release" (based on "Win32 (x86) Dynamic-Link Library")
!MESSAGE "UPsw00 - Win32 Debug" (based on "Win32 (x86) Dynamic-Link Library")
!MESSAGE

# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe
```

(2/4) UPsw00.dsp

```
!IF  "$(CFG)" == "UPsw00 - Win32 Release"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"
# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir "Release"
# PROP Intermediate_Dir "Release"
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D "_WINDOWS" /D "_MBCS" /D
"_USRDLL" /D "UPSW00_EXPORTS" /YX /FD /c
# ADD CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D "_WINDOWS" /D "_MBCS" /D
"_USRDLL" /D "UPSW00_EXPORTS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /mktyplib203 /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /win32
# ADD BASE RSC /l 0x411 /d "NDEBUG"
# ADD RSC /l 0x411 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib
ole32.lib oleaut32.lib uuid.lib odbc32.lib odbccp32.lib /nologo /dll /machine:I386
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib
oleaut32.lib uuid.lib odbc32.lib odbccp32.lib /nologo /dll /machine:I386
```

(3/4) UPsw00.dsp

```
!ELSEIF  "$(CFG)" == "UPsw00 - Win32 Debug"


# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir "Debug"
# PROP Intermediate_Dir "Debug"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MTd /W3 /Gm /GX /ZI /Od /D "WIN32" /D "_DEBUG" /D "_WINDOWS" /D
"_MBCS" /D "_USRDLL" /D "UPSW00_EXPORTS" /YX /FD /GZ  /c
# ADD CPP /nologo /MTd /W3 /Gm /GX /ZI /Od /D "WIN32" /D "_DEBUG" /D "_WINDOWS" /D "_MBCS" /D
"_USRDLL" /D "UPSW00_EXPORTS" /YX /FD /GZ  /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /win32
# ADD BASE RSC /l 0x411 /d "_DEBUG"
# ADD RSC /l 0x411 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib
ole32.lib oleaut32.lib uuid.lib odbc32.lib odbccp32.lib /nologo /dll /debug /machine:I386 /pdbtype:sept
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib
oleaut32.lib uuid.lib odbc32.lib odbccp32.lib /nologo /dll /debug /machine:I386 /pdbtype:sept
```

(4/4) UPsw00.dsp

```
# Begin Target

# Name "UPsw00 - Win32 Release"
# Name "UPsw00 - Win32 Debug"
# Begin Group "Source Files"

# PROP Default_Filter "cpp;c;cxx;rc;def;r;odl;idl;hpj;bat"
# Begin Source File

SOURCE=.\uparts32.cpp
# End Source File
# Begin Source File

SOURCE=.\UPsw00.c
# End Source File
# Begin Source File

SOURCE=.\UPsw00.def
# End Source File
# End Group
# Begin Group "Header Files"

# PROP Default_Filter "h;hpp;hxx;hm;inl"
# Begin Source File

SOURCE=.\uparts32.h
# End Source File
# End Group
# Begin Group "Resource Files"

# PROP Default_Filter "ico;cur;bmp;dlg;rc2;rct;bin;rgs;gif;jpg;jpeg;jpe"
# End Group
# End Target
# End Project
```

<5> Workspace file *UPsw00.dsw*

(1/1) UPsw00.dsw

```
Microsoft Developer Studio Workspace File, Format Version 6.00
# WARNING: DO NOT EDIT OR DELETE THIS WORKSPACE FILE!


###############################################################################


Project: "UPsw00"=.\UPsw00.dsp - Package Owner=<4>


Package=<5>
{{{
}}}


Package=<4>
{{{
}}}



###############################################################################


Global:


Package=<5>
{{{
}}}


Package=<3>
{{{
}}}


###############################################################################
```

No. 4   Change in Example of Parts Customized via User Window

➢ Location

Deletion of **<1> Target program** on page 93

Deletion of **<2> Custom part source file U0port.c** on pages 94 to 100

Deletion of **<3> Definition file U0port.def** on page 101

Deletion of **<4> Make file U0port.mak** on pages 102 to 105

➢ Before change

See the relevant pages shown in Location above.

➢ After change

<1> Target program sample.c

<2> Custom part source file U0port.c

<3> Definition file U0port.def

<4> Project file U0port.dsp

<5> Workspace file U0port.dsw

For the contents of the above files, see the following folder.

NEC Electronics Tools*product name1**version*\smp*product name2**product name1*\\

* *Product name1*: Either SM78K4, SM78K0, SM78K0S

   Product name2: Either 78K4, 78K0, 78K0S