

CUSTOMER NOTIFICATION

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Yoshiro Harada, Senior System Integrator Microcomputer Group 2nd Solutions Division Solutions Operations Unit NEC Electronics Corporation

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QB-78K0MINI
(Control Code: A)

Operating Precautions

Be sure to read this document before using the product.

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Notes on Using QB-78K0MINI

1. Caution

The underlined description has been added to **Caution** in **3.1.2 Clock socket for target device** in the user's manual.

Caution **Be sure to turn off the emulator's power supply before inserting or removing a clock in the clock socket for the target device. In addition, do not mount a clock in the clock socket when "System" is selected in the "Main Clock" field in the Configuration dialog box of the debugger.**

2. Difference Manual

This section explains modifications and additions to the user's manual (U17029EJ2V0UM00).

◆ Pages 11 to 13, 30, 38, and 40

- "OCD Checker" has been renamed "MINICUBE Checker".
- The MINICUBE Checker is bundled with the CD-ROM supplied with the QB-78K0MINI.

◆ Pages 25 and 26

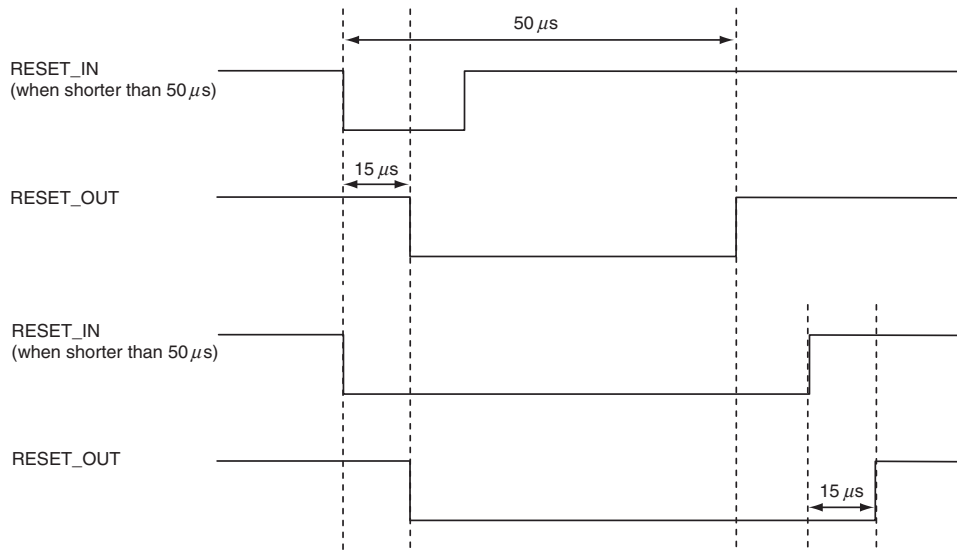
Incorrect: For description of pull-down resistance values, see the target device's User's Manual.

Correct: Connect a pull-down resistor of 470 Ω or higher.

◆ Pages 42 and 43

Replace the contents of **CHAPTER 5 RESTRICTIONS** with the following.

- (1) A delay period of about 15 μs is required between input of a target reset and actual execution of the reset for the entire chip. See Figure 5-1 below.
- (2) The delay between canceling a target reset and cancellation of reset for the entire chip is about 50 μs , which is the time between when the target reset is input (falling edge) for mode setting and the time when the entire chip's reset is canceled. See Figure 5-1 below.

Figure 5-1. Timing of Target Reset

- (3) When setting on-chip debugging mode via the normal port, without using pins X1 and X2, two of the user ports will be unavailable for use.
- (4) When the user program is downloaded, flash memory programming is performed by self-writing. At that time, be sure to use a clock that supports the self programming routine's operating frequency range.
- (5) A high-level signal is output from the QB-78K0MINI to the FLMD0 pin during emulation processing. When connecting pull-down resistors to the FLMD0 pin and using ports for manipulation, control is based on high/high-impedance levels, rather than on high/low levels.
- (6) Restriction on using the self-check board (V1.0)^{Note} for operation check
- <1> There is a communication problem due to a bug in the microcontroller mounted on the self-check board when the QB-78K0MINI operates on the subclock or Ring-OSC. The debugger takes a measure to avoid this problem by forcibly switching to the main clock when a break occurs, and re-switches to the subclock or Ring-OSC when the program is executed. Consequently, the QB-78K0MINI always operates on the main clock during a break.
- <2> A fail-safe break (Uninitialize Stack Pointer; a break that occurs due to a failure to perform stack pointer initialization) occurs when an internal reset is generated due to a bug in the microcontroller mounted on the self-check board.
- [Workaround]
- Stop the watchdog timer operation or repeat starting the count operation to suppress generation of the internal reset by the watchdog timer.

Note The part number is shown as "QB-78K0KX1H-TB X.X" on the label attached to the device mounted on the self-check board. "X.X" indicates the version.