

Microcontroller Technical Information

QB-78K0LX3 In-Circuit Emulator for 78K0/LC3, 78K0/LD3, 78K0/LE3, 78K0/LF3 Usage Restrictions		Document No.	ZBG-CD-07-0049	1/2
		Date issued	August 8, 2007	
		Issued by	Development Tool Solution Group Multipurpose Microcomputer Systems Division Microcomputer Operations Unit NEC Electronics Corporation	
Related documents	QB-78K0LX3 User's Manual: U18511EJ1V0UM00	Notification classification	√	Usage restriction
				Upgrade
				Document modification
				Other notification

1. Affected product

Product	Outline	Control Code ^{Note}
QB-78K0LX3	In-circuit emulator for 78K0/LC3, 78K0/LD3, 78K0/LE3, 78K0/LF3	A, B

2. New restriction

Restriction No. 4 has been added. See the attachment for details.

3. Workaround

See the attachment for details.

4. Modification schedule

Product in which No. 4 is corrected is scheduled for release as follows.

Newly shipped products: Shipments as of September 6, 2007 (control code: C)

Upgrade for already shipped products: Available from September 3, 2007

* Note that this schedule is subject to change without notice. For the detailed release schedule of modified products, contact an NEC Electronics sales representative.

Note The "control code" is the second digit from the left in the 10-digit serial number.
 If the product has been upgraded, the control code can be checked in the About dialog box in the ID78K0-QB.
 "X" in version information "IECUBE **** X F/W: V*.**" is the control code.

5. List of restrictions

See the attachment.

6. Document revision history

Document Number	Issued on	Description
ZBG-CD-07-0022	April 2, 2007	Newly created
ZBG-CD-07-0049	August 8, 2007	Control code A, B

Operating Precautions for QB-78K0LX3

This document describes restrictions applicable only to the emulator and restrictions that are planned for correction in the emulator.

Refer to the following documents for the restrictions in the target device.

- User's manual of target device
- Restrictions notification document for target device

Also refer to the user's manual of the emulator for cautions on using the emulator.

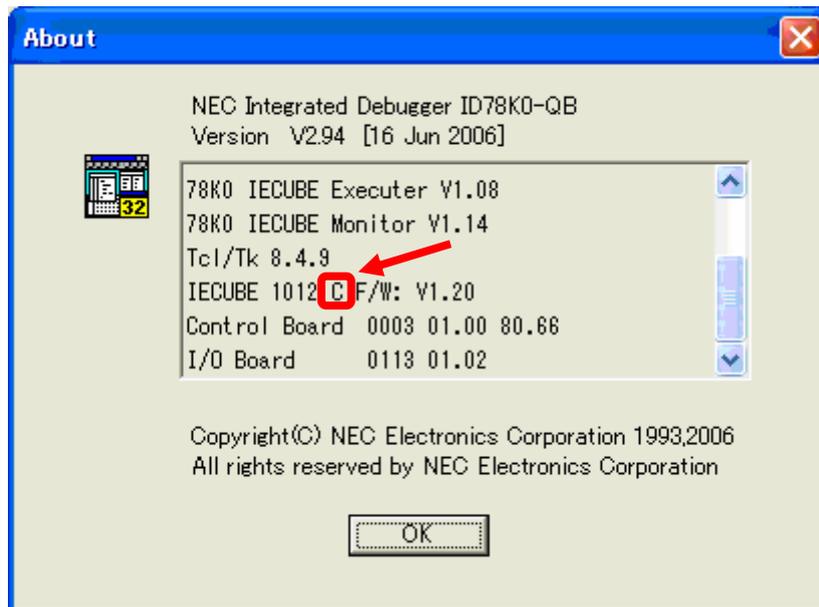
1. Product Version

Control Code ^{Note}	Emulation CPU	Remark
A	μ PD78F0495 1.0	–
B	μ PD78F0495 1.0	–
C	μ PD78F0495 1.1	–

Note The “control code” is the second digit from the left in the 10-digit serial number.

If the product has been upgraded, the control code can be checked by selecting [About] from the [Help] menu when the ID78K0-QB is running.

“X” in version information “IECUBE **** X F/W: V*.***” is the control code.



2. Product History

No.	Bugs and Changes/Additions to Specifications	Control Code		
		A	B	C
1	Bug in interrupts	×	○	○
2	Self-programming function does not operate normally	Deleted (not applicable to this product)		
3	Support for emulation for boot swap function	×	○	○
4	Bug in TM51 source clock	×	×	○

–: Specification change not yet implemented, ×: Restriction applicable, ○: Restriction corrected or specification change implemented)

3. Details of Bugs and Added Specifications

No. 1 Bug in interrupts

[Description]

If an interrupt occurs immediately after accessing any of the following registers, execution does not jump to the interrupt vector but jumps to an incorrect address.

Address	Register Name
FF0BH	P11
FF2BH	PM11
FFB0H	LCDMD
FFB1H	LCDM
FFB2H	LCDC0
FFB5H	PF2
FFB6H	PFALL

[Workaround]

There is no workaround.

[Correction]

This issue has been corrected in products with control code B and later.

No. 2 Self-programming function does not operate normally

[Description]

This issue was deleted because this restriction was not applicable.

No. 3 Support for emulation for boot swap function

[Description]

Emulation for the boot swap function is now supported. When using this function, use the tools in the following combinations.

- ID78K0-QB: V3.00 or later
- QB-78K0LX3: Control code B or later

No. 4 Bug in TM51 source clock

[Description]

If the TCL512 to TCL510 bits are set to “111” in timer clock selection register 51 (TCL51) for 8-bit timer/event counter 51 (TM51), the timer operates at $f_{PRS}/2^{12}$ and the output signal of timer H1 is not selected.

TCL512	TCL511	TCL510	Target Device	Emulator
1	1	1	Output signal of timer H1	$f_{PRS}/2^{12}$

f_{PRS} : Peripheral hardware clock

[Workaround]

There is no workaround.

[Correction]

This issue will be corrected in products with control code C and later.

4. Changes in User’s Manual

The following change has been added to the *In-Circuit Emulator QB-78K0LX3 Operation User’s Manual*. (document number: U18511EJ1V0UM00)

4.1 Addition of note

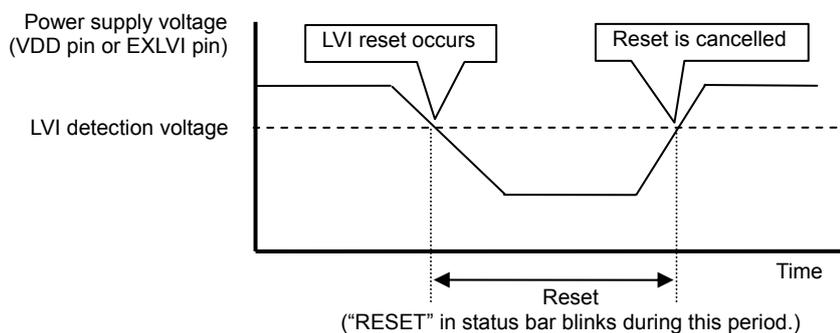
- Location

CHAPTER 5 NOTES (p. 45)

- Description

When LVI reset occurs, “RESET”, which is displayed in the status bar of the debugger during reset periods, blinks.

The blinking makes it seem as if the reset is set and cancelled repeatedly. It is in the reset state, however. It is just an indication problem in the debugger. See the following figure.



4.2 Correction on mounting and connecting connectors

- Location

2.5.2 Mounting YQ to TC (p. 23)

- Description

[Before change]

(1) After confirming that there are no broken or bent YQ contact pins, fit YQ in the TC and fasten the screw. If repeatedly inserting and removing, be sure to inspect the YQ pins before fitting. If pins are bent, correct them using something thin and flat such as the edge of a knife.

(2) Accessory holes are needed in prescribed positions in four places in the board for connecting YQ. Fasten YQ to the TC on the target system using the supplied M2 x 10 mm screws. The thickness of a board corresponding to these screws is 1.0 to 2.0 mm. Fasten the screws equally in the four corners using a #0 or #1 Phillips precision screwdriver or torque driver. The tightening torque of the screws is 0.054 Nm (MAX.). Too great tightening causes bad connections.

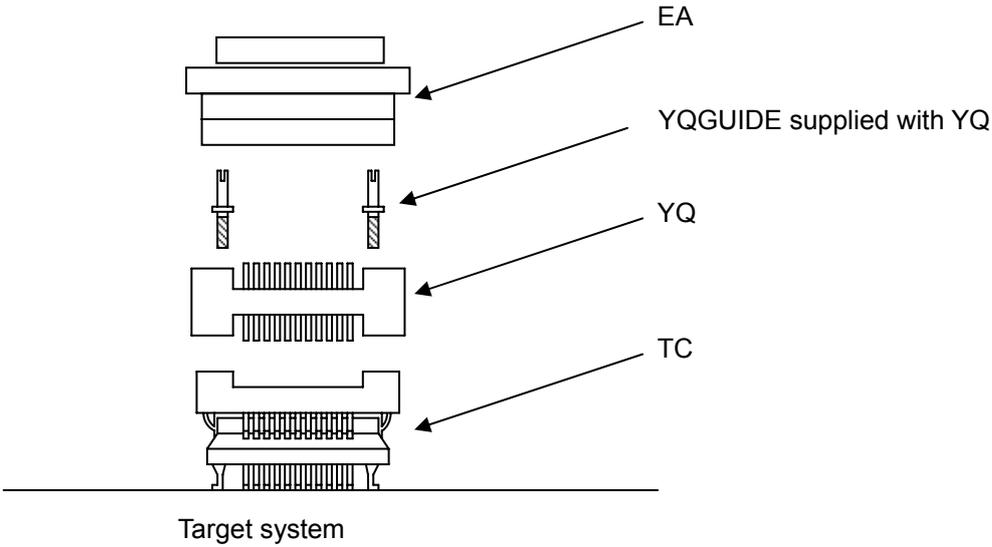
Four screws for fitting to the TC (M2 x 10 mm / 4 units) are included with YQ.

[After change]

(1) After confirming that there are no broken or bent YQ contact pins, fit YQ in the TC and fasten it using the supplied YQGUIDE (for the fastening method, see the next step, (2)). If repeatedly inserting and removing, be sure to inspect the YQ pins before fitting. If pins are bent, correct them using something thin and flat such as the edge of a knife.

(2) Fasten YQ to the TC on the target system using the supplied YQGUIDE. Fasten the screws equally in the four corners using the supplied flat-blade screwdriver or a torque driver. The tightening torque of YQGUIDE is 0.054 Nm (MAX.). Too great tightening causes bad connections.

Four screws for fitting to the MA (M2 x 10 mm / 4 units) are included with YQ.



5. Cautions

General cautions on handling this product

a. Circumstances not covered by product guarantee

- If the product was disassembled, altered, or repaired by the customer
- If it was dropped, broken, or given another strong shock
- Use at overvoltage, use outside guaranteed temperature range, storing outside guaranteed temperature range
- If power was turned on while the AC adapter, interface cable, or target system connection was in an unsatisfactory state
- If the AC adapter cable, interface cable, emulation probe, or the like was bent or pulled excessively
- If an AC adapter other than the one supplied with the product is used
- If the product got wet
- If the product and target system were connected while a potential difference existed between the GND of the product and the GND of the target system
- If a connector or cable was removed while the power was being supplied to the product
- If an excessive load was placed on a connector or socket
- If a metal part of the power switch or another such part comes in contact with an electrostatic charge.
- If the product is used or stored in an environment where an electrostatic or electrical noise is likely to occur

b. Safety precautions

- If used for a long time, the product may become hot (50°C to 60°C). Be careful of low temperature burns and other dangers due to the product becoming hot.
- Be careful of electrical shock. There is a danger of electrical shock if the product is used as described above in **a. Circumstances not covered by product guarantee.**
- The AC adapter supplied with the product is exclusively for this product, so do not use it with other products.