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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (http://www.renesas.com)

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CUSTOMER NOTIFICATION

ZUD-CD-08-0126 (1/8)

August 4, 2008

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Development Tool Solution Group
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QB-78K0LX3
(Control Code: A, B, C, D)

Operating Precautions

Be sure to read this document before using the product.

CONTENTS

Operating Precautions for QB-78K0LX3

This document describes the following items. Refer to the user's manual for cautions on using an in-circuit emulator.

- Restrictions not applicable to the target device but applicable to an in-circuit emulator
- Restrictions applicable to both the target device and an in-circuit emulator but the correction is planned only for the in-circuit emulator

Also refer to the following documents for the restrictions in the target device.

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

1. Product Version

The product versions of NEC Electronics in-circuit emulators are indicated by a control code. 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 while the ID78K0-QB is running. "X" in version information "IECUBE **** X F/W: V*.**" is the control code.

Figure 1. Checking Control Code (Label on QB-78K0LX3)

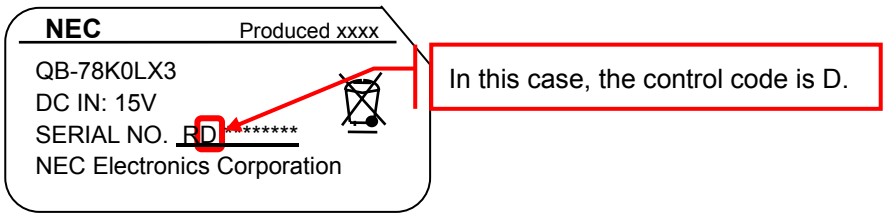
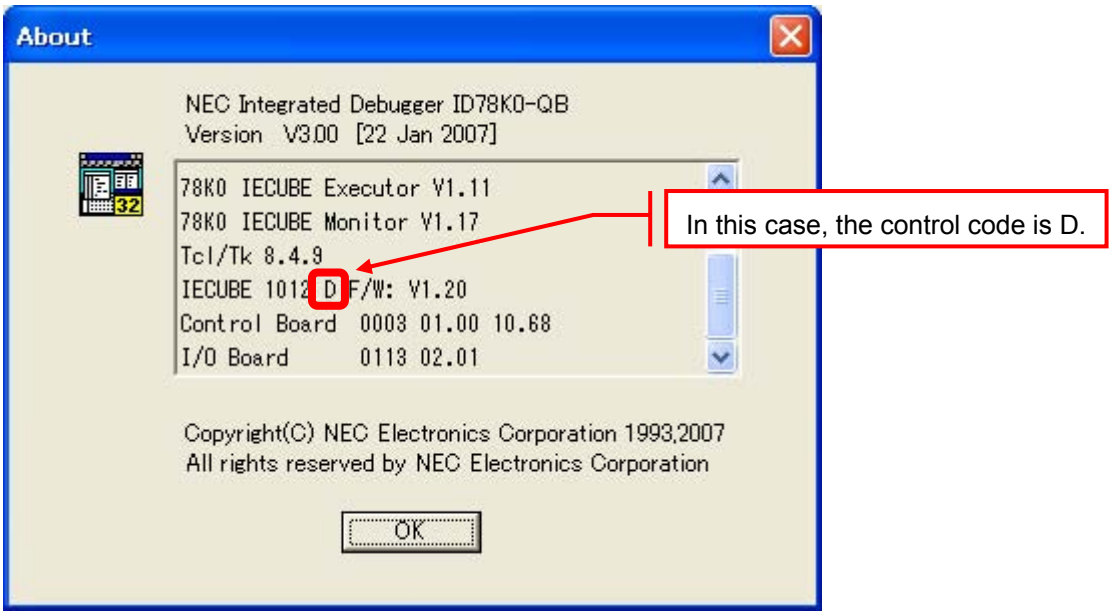


Figure 2. Checking Control Code (ID78K0-QB)



2. Supported Devices

Control Code	Supported Real Device
A	Equivalent to real device Ver. 1.1
B	Equivalent to real device Ver. 1.1
C	Equivalent to real device Ver. 1.1
D	Equivalent to real device Ver. 2.1

3. Product History

No.	Bugs and Changes/Additions to Specifications	Control Code			
		A	B	C	D
1	Restriction on interrupts	×	○	○	○
2	Restriction on flash self-programming	Deleted (not applicable to this product)			
3	Support for emulation for boot swap function	–	○	○	○
4	Restriction on TM51 source clock	×	×	○	○
5	Restriction on P113 read function	×	×	○	○
6	Restriction on A/D converter	×	×	×	○
7	Restriction on interrupts of real-time counter	×	×	×	○
8	Restriction on real-time counter when count operation is stopped	×	×	×	○
9	Restriction on LCD output when using a specific EA	Avoidable by upgrading EA			

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

4. Details of Restrictions and Changed Specifications

No. 1 Restriction on 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 Restriction on flash self-programming

[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 Restriction on 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 has been corrected in products with control code C and later.

No. 5 Restriction on P113 read function

[Description]

Reading from P113 is not available even if the ISC3 bit of the ISC register is set.

[Workaround]

There is no workaround.

[Correction]

Use device file (DF780495) V1.11 or later.

No. 6 Restriction on A/D converter

[Description]

The LCD controller/driver functions and 10-bit A/D converter functions are not available when $AV_{REF} < V_{LC0}$.

If operated under the above condition, an invalid pulse is output from the pins used by the LCD functions.

[Workaround]

There is no workaround.

[Correction]

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

No. 7 Restriction on interrupts of real-time counter

[Description]

When a fixed-cycle interrupt and an alarm interrupt occur at the same time, the WAFG flag is set after one cycle of the clock input to the real-time counter.

[Workaround]

When an INTRTC interrupt occurs, check the RIFG flag first. If the RIFG flag has been set to “1”, wait for one cycle of the clock input to the real-time counter and then check the WAFG flag again.

[Correction]

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

No. 8 Restriction on real-time counter when count operation is stopped

[Description]

If the real-time counter (RTC) is stopped when the count value of the sub-count register (RSUBC) reaches 7FFDH or 7FFEH, the RTCE bit is cleared to “0” but the second count register (SEC) may not stop and continues to count up at the real-time counter input clock cycles.

[Workaround]

Before stopping the RTC, first set the RWAIT bit and then confirm that the RWST flag has set to “1”.

[Correction]

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

No. 9 Restriction on LCD output when using a specific EA

[Description]

When the QB-52GB-EA-03T or QB-48GA-EA-03T is connected with the QB-78K0LX3, the voltage level of the output for LCD (VLC, COM or SEG) may drop.

[Workaround]

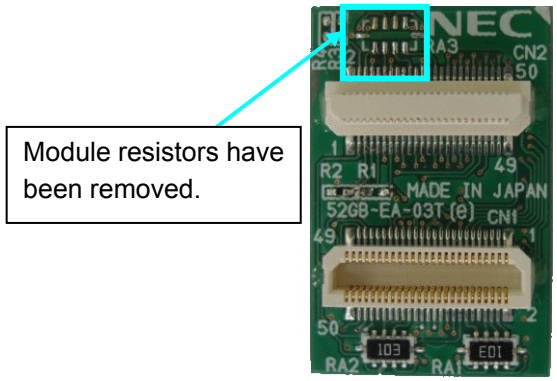
There is no workaround.

[Correction]

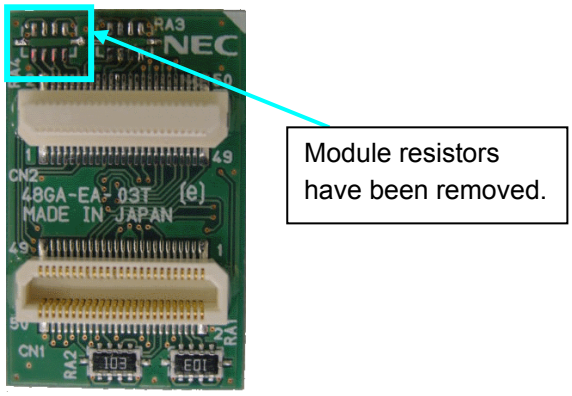
This issue is corrected by upgrading the QB-52GB-EA-03T or QB-48GA-EA-03T from the 1st to the 2nd revision.

See the figures below for the EA versions.

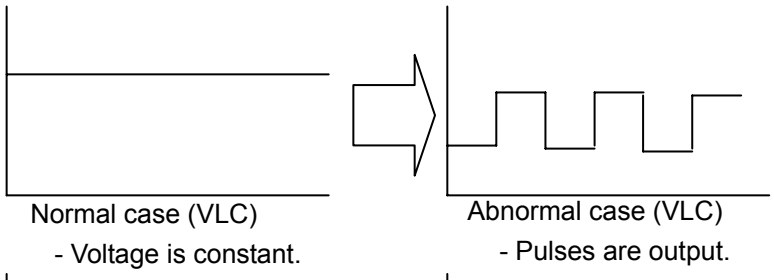
52GB-EA-03T Rev. 2



48GA-EA-03T Rev. 2

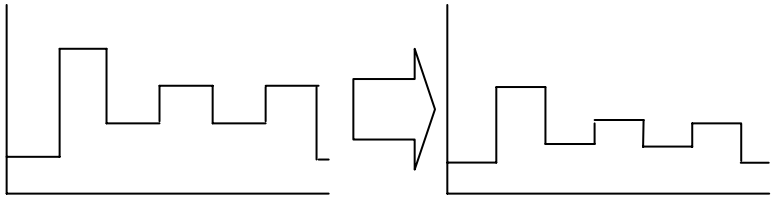


Cases where LCD output is normal and abnormal



Normal case (VLC)
- Voltage is constant.

Abnormal case (VLC)
- Pulses are output.



Normal case (COM and SEG)
- Normal stepped waveform

Abnormal case (COM and SEG)
- Voltage drops overall.

5. Changes in User's Manual

The following change has been made in the *In-Circuit Emulator QB-78K0LX3 Operation User's Manual* (document number: U18511EJ2V0UM00).

5.1 Correction in **1.4 System Configuration for Each Target Device**

- Location

  1.4 System Configuration for Each Target Device on page 13

- Description

  [Before change]

  Remark For notes on target system design and package drawings, refer to [Related Information] on the following URL.
  http://www.necel.com/micro/english/iecube/index.html

  [After change]

  Remark For the package drawings of connectors, adapters and probes, refer to the following URL.
  http://www.necel.com/micro/en/development/asia/Emulator/IE/iecube.html

6. 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.

7. Revision History

Document Number	Issued on	Description
ZUD-CD-07-0020	January 26, 2007	Newly created.
ZUD-CD-07-0061	March 22, 2007	Addition of specification and restrictions (Nos. 1 to 3)
ZUD-CD-07-0125	July 27, 2007	Addition of restriction (No. 4) Addition of differences from user's manual
ZUD-CD-07-0207	December 19, 2007	Addition of restrictions (Nos. 5 to 8) Modification of differences from user's manual (4.1) Deletion of differences from user's manual (4.21)
ZUD-CD-08-0126	August 4, 2008	Addition of restriction (No. 9)