

Microcontroller Technical Information

<p style="text-align: center;">QB-780714</p> <p style="text-align: center;">In-Circuit Emulator for μPD78F0711, μPD78F0712, μPD78F0714</p> <p style="text-align: center;">Usage Restrictions</p>		Document No.	ZBG-CD-07-0080	1/1
		Date issued	November 19, 2007	
		Issued by	Development Tool Solution Group Multipurpose Microcomputer Systems Division Microcomputer Operations Unit NEC Electronics Corporation	
Related documents	QB-780714 User's Manual: U17366EJ5V0UM00	Notification classification	√	Usage restriction
				Upgrade
				Document modification
				Other notification

1. Affected product

Product	Outline	Control Code ^{Note}
QB-780714	In-circuit emulator for μ PD78F0711, μ PD78F0712, μ PD78F0714	C, D, E, F

2. New restriction

Restriction No. 7 has been added. See the attachment for details.

3. Workaround

See the attachment for details.

4. Modification schedule

Product in which No. 7 is corrected is scheduled for release as follows.

Newly shipped products: Shipments as of the end of November 2007 (control code: F)

Upgrade for already shipped products: Available from November 26, 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.

5. List of restrictions

See the attachment.

6. Document revision history

QB-780714 In-Circuit Emulator for μ PD78F0711, μ PD78F0712, μ PD78F0714 - Usage Restrictions

Document Number	Issued on	Description
ZBG-CD-06-0040	May 29, 2006	Addition of new restriction (No. 4)
ZBG-CD-06-0094	November 9, 2006	Addition of new restriction (No. 5) Addition of new specification (No. 6)
ZBG-CD-07-0080	November 19, 2007	Addition of new restriction (No. 7)

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.

Operating Precautions for QB-780714

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.

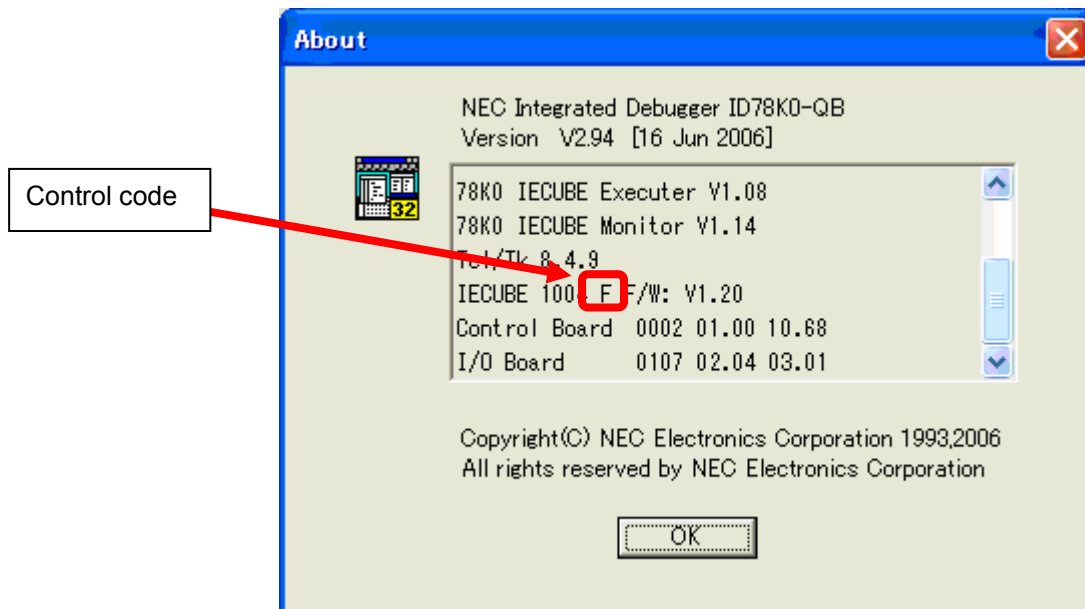
- User's manual of target device
- Restrictions notification document for target device

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

1. Product Version

Control Code ^{Note}	Remark
C	—
D	—
E	—
F	—

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 while 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			
		C	D	E	F
1	Bug that occurs when a software break and an interrupt conflict	×	○	○	○
2	A peripheral function operates when an SFR that generates waits is accessed during a break.	×	○	○	○
3	The program operation may be illegal when an instruction is re-executed after a software break.	×	○	○	○
4	The operation of LVI interrupts (LVIINT) differs from that in the real device.	×	×	○	○
5	Internal ROM area is overwritten during program execution	×	×	○	○
6	Support of μ PD78F0711 and μ PD78F0712	—	—	○	○
7	Restriction on accessing registers for A/D function	×	×	×	○

—: Specification change not yet implemented, ×: Applicable, ○: Not applicable

3. Details of Bugs and Added Specifications

No. 1 Bug that occurs when a software break and an interrupt conflict

[Description]

When a software break and an interrupt conflict, the position of the PC becomes invalid.

[Workaround]

Use a hardware break.

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

No. 2 A peripheral function operates when an SFR that generates waits is accessed during a break.

[Description]

When an SFR (special function register) that generates waits is accessed during a break that is enabled by selecting “Break” in the Peripheral break area in the Configuration dialog box, a peripheral function operates. Refer to the user’s manual of the device for the number of wait clocks.

Example:

Each time the SFR window or Watch window is refreshed, the counter of the timer register is counted up.

[Workaround]

There is no workaround. This issue has been corrected in products with control code D and later.

No. 3 The program operation may be illegal when an instruction is re-executed after a software break.

[Description]

If a software break is set to an instruction of 2 bytes or more and the 2nd byte of the instruction code is set to C0H, the values in the stack area become invalid after the break. As a result, if the instruction is re-executed as is, the program operation may be illegal.

[Workaround]

Use a hardware break.

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

No. 4 The operation of LVI interrupts (LVIINT) differs from that in the real device.

[Description]

The LVI interrupts (LVIINT) operate as non-maskable interrupts in the real device, but as maskable interrupts in the QB-780714.

Device: The IF flag of the LVI circuit is fixed to "0". Interrupts are not masked even if the mask flag is set to "1".

QB-780714: The IF flag of the LVI circuit is set to "1" upon occurrence of an LVI interrupt. Interrupts are masked by setting the mask flag to "1" (interrupts will no longer occur).

[Workaround]

There is no workaround. This issue has been corrected in products with control code E and later.

No. 5 Internal ROM area is overwritten during program execution

[Description]

Data in the internal ROM area may be overwritten if the Source window or Assemble window is open during program execution. As a result, an unexpected fail-safe break (such as Write Protect Break or Non Map Break) may occur.

[Workaround]

There is no workaround. This issue has been corrected in products with control code E and later.

No. 6 Support of μ PD78F0711 and μ PD78F0712

[Description]

The μ PD78F0711 and μ PD78F0712 are now supported.

For the system configuration, refer to the **QB-780714 In-Circuit Emulator User's Manual** (document number: U17366EJ5V0UM).

No. 7 Restriction on accessing registers for A/D function

[Description]

Data may not be transferred correctly when read or write is performed for the following special function registers (SFR).

- P2: Port register
- ADCR: A/D conversion result register
- ADM: A/D converter mode register
- ADS: Analog input channel specification register
- PFM: Power fail compare mode register
- PFT: Power fail compare threshold value register

[Workaround]

There is no workaround. This issue has been corrected in products with control code F and later.

4. Document Corrections

None

5. Cautions

No. 1 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.