

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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To all our customers

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The semiconductor operations of Hitachi and Mitsubishi Electric were transferred to Renesas Technology Corporation on April 1st 2003. These operations include microcomputer, logic, analog and discrete devices, and memory chips other than DRAMs (flash memory, SRAMs etc.) Accordingly, although Mitsubishi Electric, Mitsubishi Electric Corporation, Mitsubishi Semiconductors, and other Mitsubishi brand names are mentioned in the document, these names have in fact all been changed to Renesas Technology Corp. Thank you for your understanding. Except for our corporate trademark, logo and corporate statement, no changes whatsoever have been made to the contents of the document, and these changes do not constitute any alteration to the contents of the document itself.

Note : Mitsubishi Electric will continue the business operations of high frequency & optical devices and power devices.

Renesas Technology Corp.  
Customer Support Dept.  
April 1, 2003

## **M16C/80 Series**

### **Special Page Subroutine**

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#### **1.0 Abstract**

This program is an example for using a special subroutine call.

#### **2.0 Introduction**

The program branches to a subroutine at an address that is the address set in one of the special page vector tables (in 2 bytes each) plus FF0000H. The area in which control can branch to a subroutine is from address FF0000H to address FFFFFFFH.

The special page vector tables are located in an area ranging from address FFFE00H to address FFFFDBH. The special page number at address FFFE00H is 255 and that at address FFFFDAH is 18. A label can be used in place of a special page number.

Shown in this program are an example where labels are used for special page numbers 255 and 18 and an example where a special page number (254) is used directly.

### 3.0 Programming Code

```

*****
;
;   M16C Program Collection
;   CPU : M16C/80 series
;
*****
VromTOP      .EQU          0FE0000H          ; Declares start address of ROM
;
;=====
;   Title: Special page subroutine call
;   Outline: Description example of special page subroutine call
;   Input:  ----->                               Output:
;   R0()                                R0()
;   R1()                                R1()
;   R2()                                R2()
;   R3()                                R3()
;   A0()                                A0()
;   A1()                                A1()
;   Stack amount used: 3 bytes
;   Notes:
;=====
;
;           .SECTION      PROGRAM, CODE
;           .ORG          VromTOP; ROM area
MAIN:
JSRS      ¥SUB1          ; Branches to subroutine at LABEL_1
JSRS      #254          ; Branches to subroutine at LABEL_2
JSRS      ¥SUB238       ; Branches to subroutine at LABEL_238
;
;           |
;           |
;           |
;           |
;
LABEL_1:
(Processing)
RTS
LABEL_2:
(Processing)
RTS
LABEL_238:
(Processing)
RTS
;
;           .SECTION      SPECIAL, ROMDATA
;           .ORG          0FFFE00H          ; Special page area
;-----
;Special page
;-----
SUB1:     .WORD          LABEL_1&0FFFFH    ; Special page number 255
         .WORD          LABEL_2&0FFFFH    ; Special page number 254
;
;           .ORG          0FFFDAH
SUB238:  .WORD          LABEL_238&0FFFFH   ; Special page number 18
;
;           .END

```

## **4.0 Reference**

### **MCU Technical Information Homepage**

<http://www.infocom.maec.co.jp/indexe.htm>

(or <http://www.mdece.com/> , <http://www.mitsubishichips.com/products/mcu/index.html> or your local Web Site.)

### **Technical Support**

E-mail: [support@apl.maec.co.jp](mailto:support@apl.maec.co.jp)

(or your local support E-mail address. A private e-mail address should NOT be used.)

### **Data Sheet**

M16C/80 group

(Use the latest version on the Homepage: <http://www.infocom.maec.co.jp/indexe.htm>)

### **User's Manual**

M16C/80 group

(Use the latest version on the Homepage: <http://www.infocom.maec.co.jp/indexe.htm>)

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