To our customers,

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

April 1st, 2010
Renesas Electronics Corporation

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M16C/60 Series and M16C/20 Series
General-purpose Program for Special Page Subroutine

1. Abstract

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

2. 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 F000H. The area in which control can branch to a subroutine is from address F0000H to address FFFFFH.

The special page vector tables are located in an area ranging from address FFE00H to address FFFDBH. The special page number at address FFE00H is 255 and that at address FFFDAH 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. The example of a reference program

;****************************************************************************
; M16C General-purpose Programs *
; CPU : M16C *
; ****************************************************************************
VromTOP .EQU 0F0000H ; 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
;****************************************************************************=

.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

;(Here is your program.)

LABEL_1:
;(Here is your program.)
RTS

LABEL_2:
;(Here is your program.)
RTS

LABEL_238:
;(Here is your program.)
RTS

; 

.SECTION SPECIAL, ROMDATA
.ORG 0FFE00H ; 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
;
4. Reference

SOFTWARE MANUAL
M16C/60 M16C/20 Series SOFTWARE MANUAL
(Acquire the most current version from Renesas web-site)

5. Web-site and contact for support

Renesas Web-site
http://www.renesas.com
Contact for Renesas technical support
Mail to : support_apl@renesas.com
**REVISION HISTORY**

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<th>Date</th>
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