To our customers,

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

April 1st, 2010
Renesas Electronics Corporation

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

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

M16C/80 Series

Clearing RAM

1.0 Abstract

This program initializes memory by using a block constant setup instruction (SSTR).

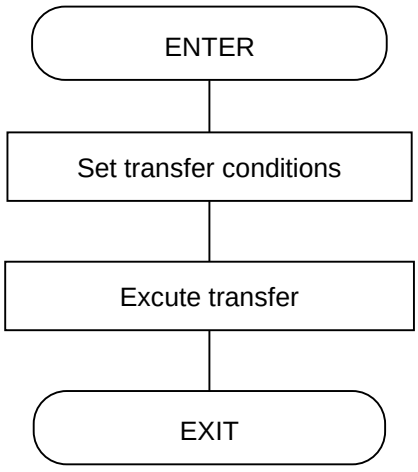
2.0 Introduction

This program stores 0s in memory in units of words by using a block constant setup instruction (SSTR).
The program sets the transfer data (0H) in R0, the number of transfers performed (half the number ofbytes of the area to be initialized) in R3, and the start address at destination in A1 before executing theSSTR instruction.

Subroutine name : —	ROM capacity : 11byte
Interrupt during execution:Accepted	Number of stacks used : None

Register/memory	Input	Output	Usage condition
R0	-	"0000_{16}"	Transfer data
R1	-	-	Unused
R2	-	-	Unused
R3	-	"0000_{16}"	Number of transfers performed
A0	-	-	Unused
A1	-	Last address at destination	Destination address
Specified area	-	Transfer data	←
Usage precautions	Memory is initialized in units of words.		

3.0 Flowchart



4.0 Programming Code

```
;*****************************************************************
; *
;       M16C Program Collection
;       CPU : M16C/80 series
; *
;*****************************************************************
VramTOP     .EQU    0000400H                ; Declares start address of RAM
VramEND     .EQU    0002C00H                ; Declares end address of RAM
VromTOP     .EQU    0FE0000H                ; Declares start address of ROM
;;
;=================================================================================
;     Title: Clearing RAM
;     Outline: Clears RAM using block constant setup instruction
;     Input:      ----------------------------->          Output:
;     R0( )                                       R0(Transfer data)
;     R1( )                                       R1(Unused)
;     R2( )                                       R2(Unused)
;     R3( )                                       R3(Indeterminate)
;     A0( )                                       A0(Unused)
;     A1( )                                       A1(Indeterminate)
;     Stack amount used: None
;     Notes:
;=================================================================================
                .SECTION        PROGRAM,CODE
                .ORG            VromTOP                 ; ROM area
    MOV.W       #0,R0                                   ; Sets transfer data
    MOV.W       #((VramEND+1)- VramTOP)/2,R3            ; Sets number of transfers performed
    MOV.L       #VramTOP,A1                             ; Sets destination address
    SSTR.W                                              ; Executes clearing of RAM
;                                                       ;
                .END ;
```

5.0 Reference

MCU Technical Information Homepage

http://www.infomicom.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
(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.infomicom.maec.co.jp/indexe.htm)

User's Manual

M16C/80 group
(Use the latest version on the Homepage: http://www.infomicom.maec.co.jp/indexe.htm)

RENESAS
Renesas Technology Corp.

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