To our customers,

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

April 1st, 2010
Renesas Electronics Corporation

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

2. 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 of bytes of the area to be initialized) in R3, and the start address at destination in A1 before executing the SSTR instruction.

<table>
<thead>
<tr>
<th>Subroutine name</th>
<th>ROM capacity : 11 bytes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interrupt during execution : Accepted</td>
<td>Number of stacks used : None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Register/memory</th>
<th>Input</th>
<th>Output</th>
<th>Usage condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0</td>
<td>-</td>
<td>0000_{16}</td>
<td>Transfer data</td>
</tr>
<tr>
<td>R1</td>
<td>-</td>
<td>-</td>
<td>Unused</td>
</tr>
<tr>
<td>R2</td>
<td>-</td>
<td>-</td>
<td>Unused</td>
</tr>
<tr>
<td>R3</td>
<td>-</td>
<td>0000_{16}</td>
<td>Number of transfers performed</td>
</tr>
<tr>
<td>A0</td>
<td>-</td>
<td>-</td>
<td>Unused</td>
</tr>
<tr>
<td>A1</td>
<td>-</td>
<td>Last address at destination</td>
<td>Destination address</td>
</tr>
<tr>
<td>Specified area</td>
<td>-</td>
<td>Transfer data</td>
<td>←</td>
</tr>
</tbody>
</table>

Usage precautions
Memory is initialized in units of words.
3. Flowchart

- ENTER

  Set transfer conditions

- Execute transfer

  EXIT
4. The example of a reference program

;***************************************************************************
; * M16C General-purpose Programs *
; CPU : M16C *
; *
;***************************************************************************
VramTOP .EQU 000400H ; Declares start address of RAM
VramEND .EQU 002C00H ; Declares end address of RAM
VromTOP .EQU 0F0000H ; Declares start address of ROM

;==============================================================================
; Title : Clearing RAM
; Outline : Clears RAM using block constant setup instruction
; Input : ------------------------------> Output:
; R0 ( ) R0 (Transfer data)
; R1L ( ) R1L (Unused)
; R1H ( ) R1H (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.W #VramTOP,A1 ; Sets destination address
SSTR.W ; Executes clearing of RAM

.END ;
5. Reference

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

6. Web-site and contact for support

Renesas Web-site
   http://www.renesas.com

Contact for Renesas technical support
   Mail to : support_api@renesas.com
## REVISION HISTORY

<table>
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<tr>
<th>Rev.</th>
<th>Date</th>
<th>Description</th>
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<tr>
<td>1.00</td>
<td>Jul 08, 2002</td>
<td>First edition issued</td>
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Page Summary
Keep safety first in your circuit designs!

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