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April 1st, 2010
Renesas Electronics Corporation

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R8C/Tiny Series

General-purpose Program for Clearing RAM

1. Abstract

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

2. Introduction

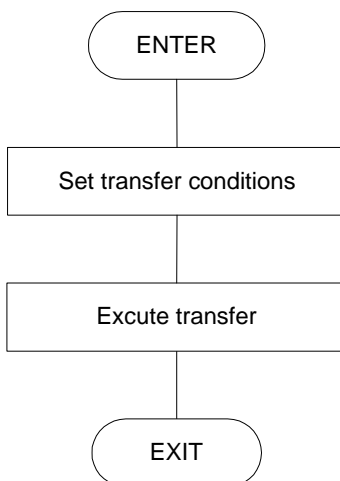
This program stores 0s in memory in units of words by using a block constant setup instruction (SSTR).

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.

Subroutine name : -	ROM capacity : 11 bytes
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. Flowchart



4. The example of a reference program

```

*****
;
;
; M16C Program Collection No. 1
; CPU : R8C/Tiny
;
;
*****
VramTOP .EQU 000400H ; USER PROGRAM RAM START ADDRESS
VramEND .EQU 0006FFH ; USER PROGRAM RAM END ADDRESS
VromTOP .EQU 00D000H ; 12Kbyte Flash version
=====
; 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

R8C/Tiny 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_apl@renesas.com

REVISION HISTORY

Rev.	Date	Description	
		Page	Summary
1.00	Dec 24, 2003	-	First edition issued

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