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Getting Started with the DEMO9S08RG60 Demo Board

The following steps provide a basic procedure to run the DEMO9S08RG60 demo board. Please refer to the demo board user manual (DEMO9S08RG60man.pdf) in the Documentation folder of the demo board CD for more detailed information.

1. Unpack the demo board.
2. Set jumper: PWR_SEL jumper installed in position PWR. (Power supplied to PWR Jack)
3. Connect a 5 volt dc to 12 volt dc power supply (9V typical) to the PWR Jack.

Stop3 Demo

1. This is the default demo program. It runs at reset/power-up if neither SW1 or SW2 is held low. Turn on the power supply. (If power is already applied, press and release the reset switch.)
2. Observe LED1. LED1 will quickly flash twice a second. For more detail, refer to the stop3 demo in the demo board user manual.
3. Press either pushbutton (SW1 or SW2) and observe the corresponding LED. If any switch is held low for at least 0.5 second, the corresponding LED will light and remain lit for about 3 seconds after the switch is released.
4. Turn off the power supply.

Paced Loop Demo

1. Hold SW2 low while turning on the power supply. (If power is already applied, press the reset switch and SW2 simultaneously. Release the reset switch and then release SW2.)
2. Observe LEDs 1 and 2 toggling at different rates. For more detail, refer to the paced loop demo in the demo board user manual.
3. Turn off the power supply.

Serial Monitor Demo

The following procedure shows how to load code into the demo board using the serial monitor program that resides in the MC9S08RG60's FLASH memory.

1. Before running this demo, please install CodeWarrior for HCS08 Release 3.0 on your PC. Also, please copy the DEMO9S08RG60demo.zip file from the demo board CD to your PC and extract the files into a working folder. The DEMO9S08RG60demo.zip file can be found on the demo board CD in the Documentation directory.

2. Connect a straight-through DB-9 serial cable between COM1 on the PC and the SCI1 connector (DB9 connector) on the demo board. If you are using a different PC COM port, you will need to adjust the settings within the CodeWarrior IDE.
3. Navigate to the working folder and double click the DEMO9S08RG60demo.mcp project. The CodeWarrior IDE will launch.
4. Hold SW1 low while turning the power supply ON. Then release SW1. (If power is already applied, press the reset switch and SW1 simultaneously. Release the reset switch and then release SW1.)
5. Double click on the DEMO.ASM file in the Sources folder in the project window.
6. Select Debug from the Project menu, or press F5, or click the green arrow on the CodeWarrior toolbar. The True-Time Simulator & Real-Time Debugger initiates serial communications with the demo board. The demo code is erased and re-programmed in the MC9S08RG60's FLASH memory. The serial monitor code is not erased. (If the debugger is launched when the board is not powered, you will see a series of error notifications. Cancel and close these messages; close the debugger window; and go back to step 4.)
7. Hold SW2 down. While holding SW2 low, select Start/Continue from the Run menu or click the green arrow icon. The paced loop demo will be running. (Release SW2.)
8. Turn the power supply off.
9. Close the debugger window.
10. Hold SW2 low while turning the power ON. Then release SW2. (If power is already applied, press the reset switch and SW2 simultaneously. Release the reset switch and then release SW2.)
11. Return to the Metrowerks CodeWarrior IDE window if it is not the active window.
12. Scroll down to the bottom of the DEMO.ASM window and change

    ```
    include "PACED_LOOP.ASM" to
    include "PACED_LOOP2.ASM"
    ```

    This will modify the behavior of the paced loop demo without affecting the stop3 or ATC/timer demos.
13. Select Make from the Project menu.
14. Select Debug from the Project menu, or press F5, or click the green arrow on the CodeWarrior toolbar. The True-Time Simulator & Real-Time Debugger will re-load the project with the changed software.
15. Hold SW2 low. While holding SW2 low, select Start/Continue from the Run menu or click the green arrow icon. (Release SW2.) The new paced loop demo will be running. This demo continually sequences LEDs 1 and 2 in one-second steps.
16. Disconnect the serial cable from the demo board.
17. Power down the board.
18. Repeat the stop3 and paced loop demos mentioned above if you would like to verify that the demo code was loaded properly.

The serial monitor can be used for much more than just programming new code without requiring a special debug pod. Many debug operations (memory modify, breakpoints, real-time bug traces, etc.) can also be run over the serial cable while in this mode. Refer to application note AN2140 for more information on the serial monitor.