

# DEMO908LB8 Quick Start Guide

## Introduction and Default Settings

This kit contains everything you need to get started minus the +9 VDC power supply. This guide will walk you through how to connect the board to your PC, run the pre-programmed LED test, install the correct version of CodeWarrior Development Studio, and load an ATD (analog-to-digital) test program. Source code for DEMO908LB8\_LED (LED test) and DEMO908LB8\_ATD (ATD test) are provided on the Axiom CD in the “Examples” folder.

Figure 1 shows the default settings for the DEMO908LB8 demo board. Please refer to the DEMO908LB8 User’s Guide on the Axiom CD for information on other configurations. Black blocks indicate the “on” or “installed” position of jumpers. Please check these settings before continuing.

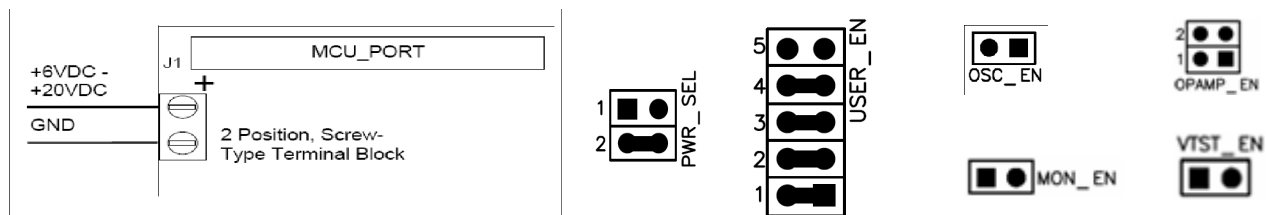


Figure 1. DEMO908LB8 Default Settings

### Connect the DEMO908LB8 to your computer and apply power

1. Connect the 9-pin serial cable provided to the COM1 port of the DEMO board. Connect the other end to a COM port on your host PC.
2. There are two ways to apply power to the demo board: via the power terminal block or the J1 MCU\_PORT. Refer to the DEMO908LB8 User’s Guide about using the MCU\_PORT. Otherwise, connect the +9 VDC supply to the screw-type terminal block. Please review the diagram above for wire placement. Apply power to the board. The +5V LED should turn on. If the LED is not on, please check the PWR\_SEL jumpers and the placement of the +9 VDC power supply wires.

**Please Note: +9 VDC supply must be used for proper MON08 monitor operation.**

## Run the DEMO908LB8\_LED program

The DEMO908LB8 is shipped with the DEMO908LB8\_LED stored in on-chip FLASH memory. You may view the source code for this program by accessing the “DEMO908LB8\_LED.zip” file on the Axiom CD (located in the “Examples” folder).

1. Press SW1 and LED1 will turn on. Release SW1 and LED1 will turn off.
2. Press SW2 and LED2 will turn on. Release SW2 and LED2 will turn off.

## Install CodeWarrior Development Studio Version 3.1 for HC(S)08

If you do not have version 3.1 of CodeWarrior for HC(S)08 Special Edition installed on your computer, please refer to the provided “CodeWarrior Development Studio for Motorola” CD for HC(S)08 Special Edition Version 3.1 and the included CodeWarrior Quick Start. **Important:** You must register and obtain a license key to use CodeWarrior. You must also obtain another special edition license key, which will allow you to experience all the features of the CodeWarrior debugger (see install, register, and license key instructions in the CodeWarrior Quick Start).

After CodeWarrior has been installed properly, please install the CW08 V3.1 USB service pack. This can be found on the CodeWarrior service pack CD, which is present in the box.

## Use the MON08 Monitor to install DEMO908LB8\_ATD program

The MON08 Monitor allows a user to program the MCU FLASH and debug application via serial connection.

1. On the Axiom CD (examples folder), copy and open the “DEMO908LB8\_ATD.zip” file to your PC, and extract the files into a working folder on your desktop. **Note:** Be sure to extract, and *not* just copy, the files.
2. Open CodeWarrior HC(S)08 v3.1 and open the “DEMO908LB8\_ATD.mcp” project file.
3. Open “DEMO908LB8\_ATD.c” in the source folder by double clicking on “DEMO908LB8\_ATD.c”.
4. Please change the jumpers on the board to ensure proper communication between the PC and DEMO908LB8 board. See [Figure 2](#) for proper jumper connections.



Figure 2. MON08 Debug Setting for Serial Connection

5. If you have not already done so, connect serial cable and apply power to the board.
6. Click on “Debug” under Project in the menu bar or press the “F5” key. The True-Time Simulator & Real-Time Debugger interface window will appear. Please follow the instructions on the screen to complete the FLASH programming process.

7. If the “Attempting to contact target and pass security...” window appears, please make sure the following options are configured correctly:
  - **Target Hardware Type:** Class 3
  - **Serial Port:** 1 (depends on the PC COM port)
  - **Baud:** 9600 Baud
  - **Target MCU Security bytes:** Check the “IGNORE security failure and enter monitor mode” checkbox
8. Click the “Contact target with these settings...” button and follow the instructions on the screen. When the “Erase and Program Flash?” window appears, click the “Yes” button.
9. Cycle the power and click “OK” in the “Power Cycle Dialog” window. Please follow the remaining instructions on the screen to complete the FLASH programming process.
10. The “CPROG08SZ Programmer” window should close after the MCU FLASH is programmed. You are now ready to run the DEMO908LB8\_ATD code. Click on the green arrow in the toolbar at the top of the screen to run the program. After you click this button, a message in the command window (bottom right-hand side) should say “RUNNING”.
11. Install “USER\_EN” jumper 5 to enable the RV1 dial.
12. Turn the RV1 dial (sometimes referred as a pot); according to the position of the RV1, LED1 and LED2 will be turned on and off.

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## Troubleshooting

### Code will not run after reset

- Make sure the “MON\_EN” and “VTST\_EN” jumpers are removed and press reset.
- Reinstall the jumpers to the default position. Refer to [Figure 1](#).

### Unable to program the part using MON08 Monitor

- Make sure the jumpers are in the debug position. Refer to [Figure 2](#).
- Make sure the COM port matches the serial port in “Attempting to contact target and pass security...” window.
- Make sure the supply voltage connected to the terminal power block is +9 VDC.
- Disconnect “USER\_EN” jumper 5 and try again. Install “USER\_EN” jumper 5 as soon as the program is running to use the RV1 dial.

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