Using CodeWarrior V4.5 ASM with Adapt9S12DP512 and Serial Monitor

This document assumes that CodeWarrior has already been installed. It also assumes that the user has all the necessary hardware on hand, and just needs assistance in getting started using CodeWarrior.
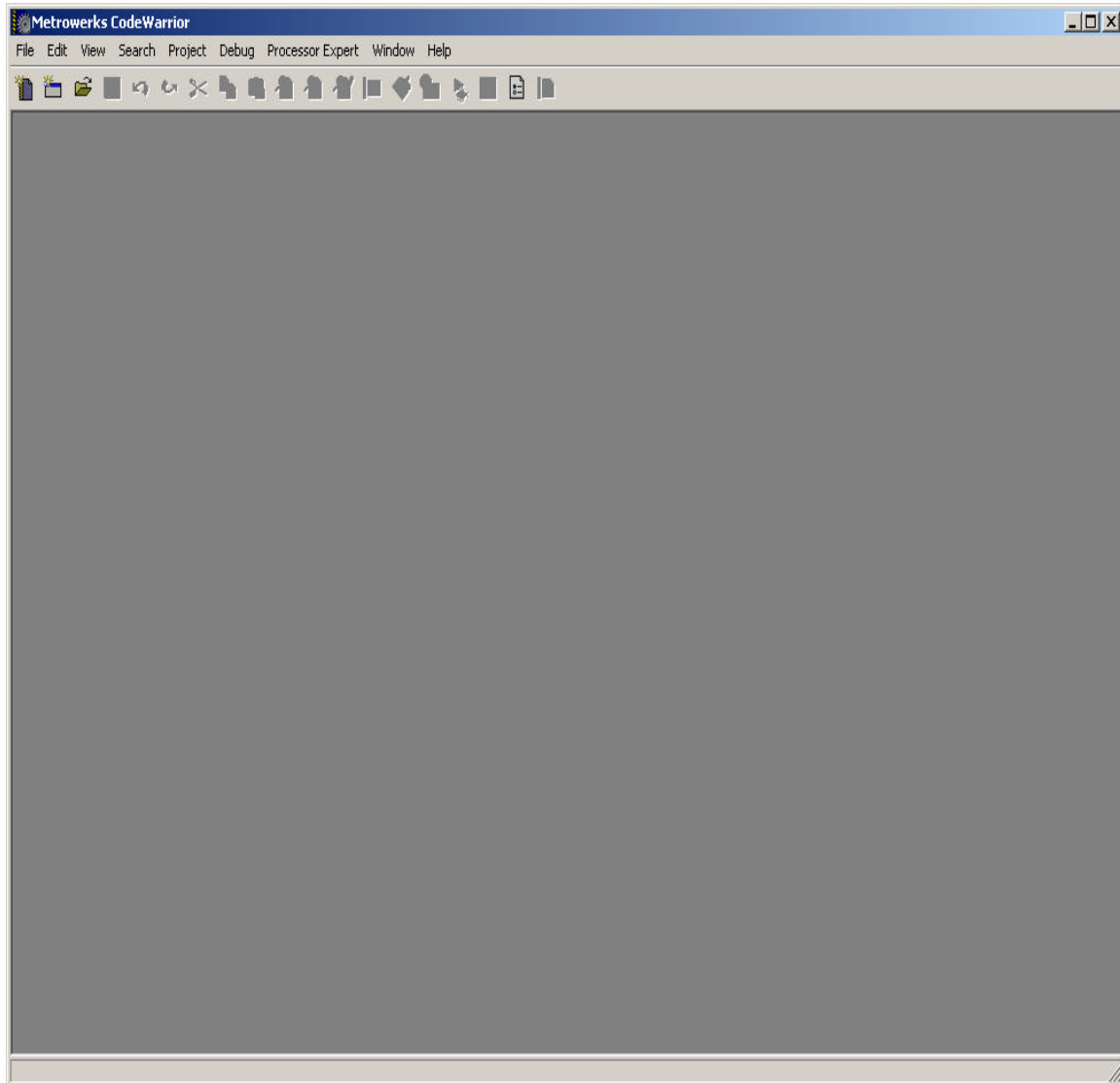
Download and install CodeWarrior from Freescale's site.
http://www.freescale.com/webapp/sps/site/homepage.jsp?nodeId=012726
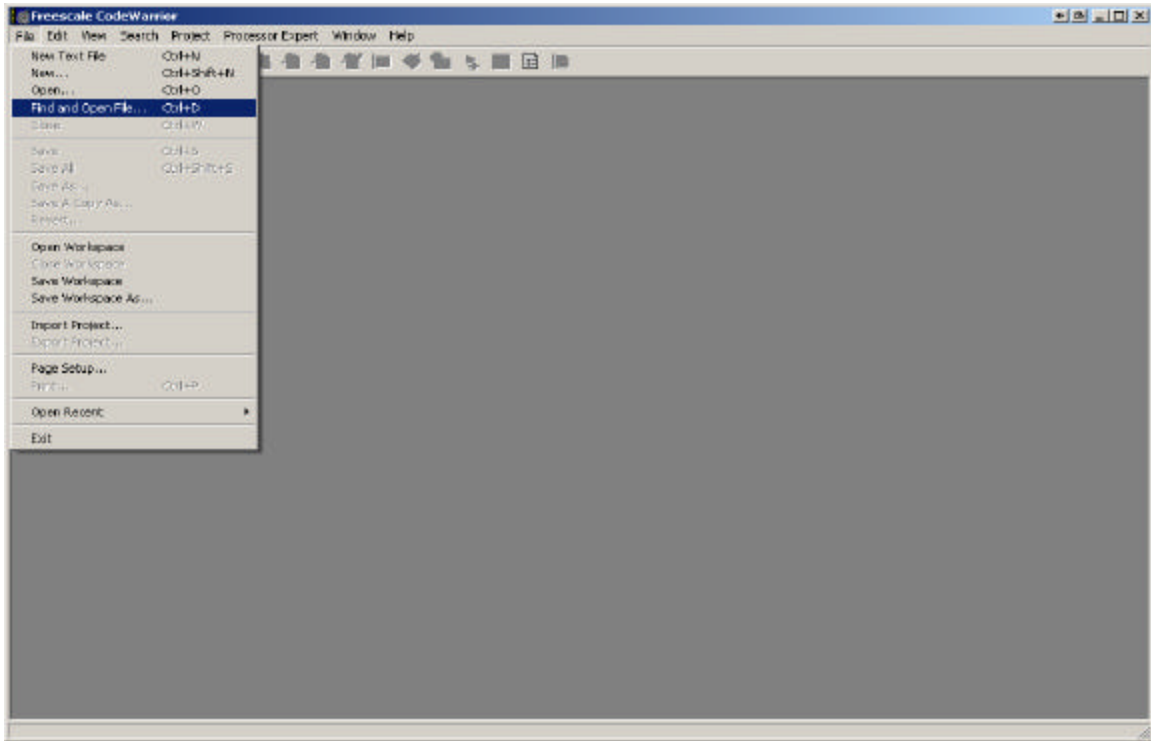
Getting Started:

Click on the CodeWarrior IDE icon CodeWarrior IDE.lnk to get started. Notice that the IDE is greyed out to indicate a blank working space.
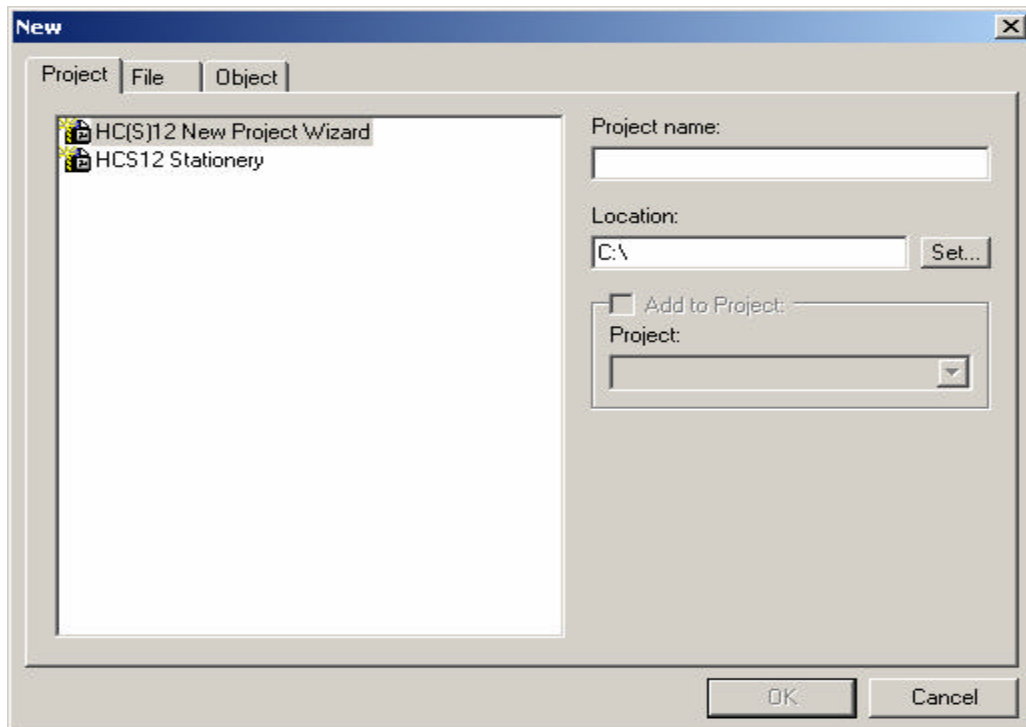
New Project:

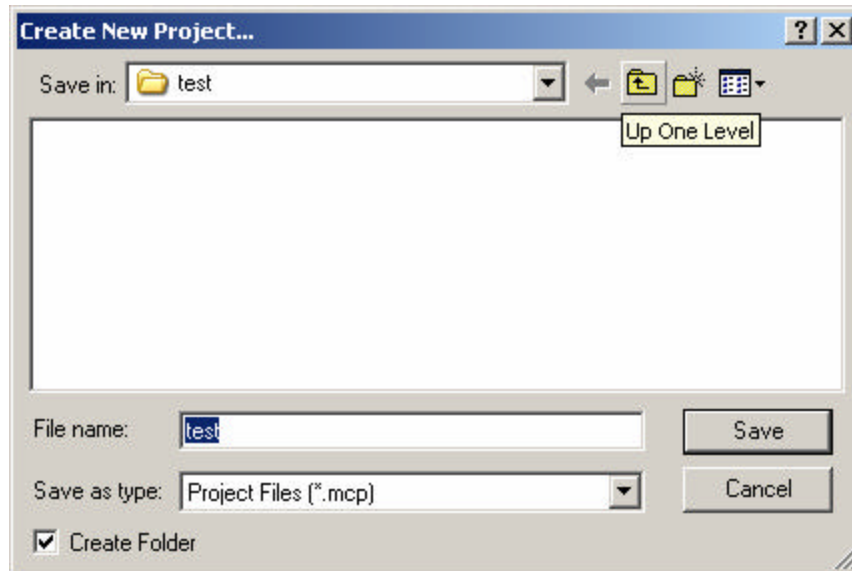Let's create a new project by clicking on File menu. File-New as shown below.

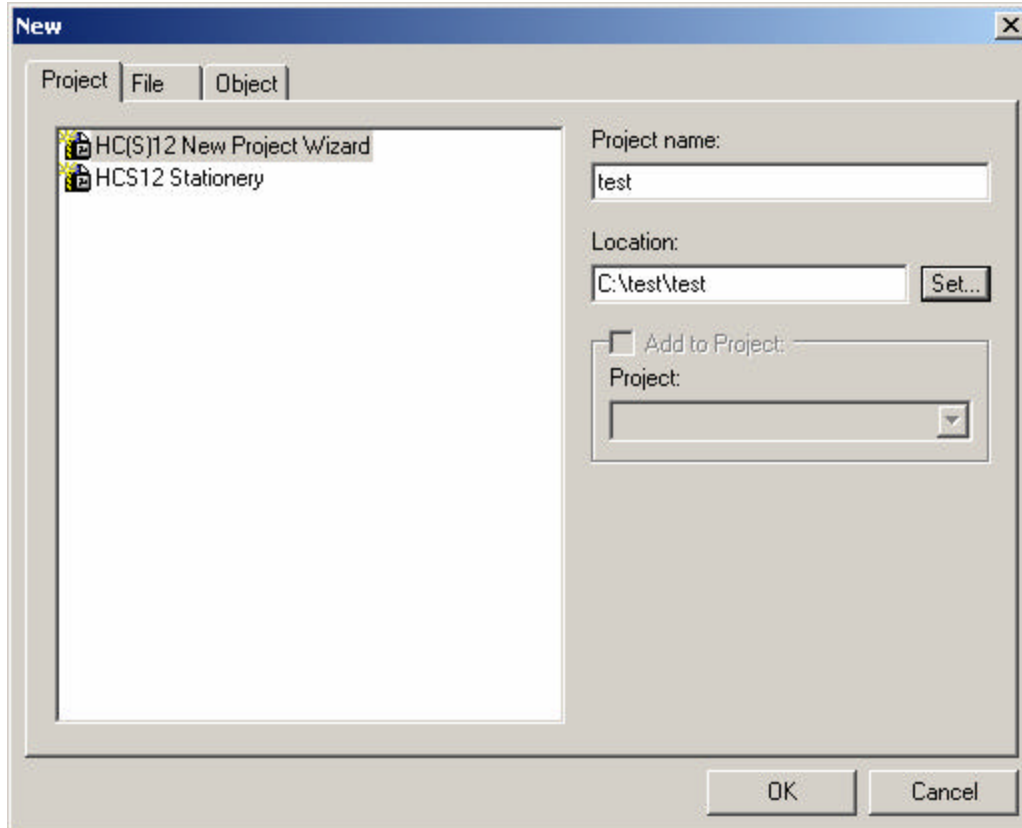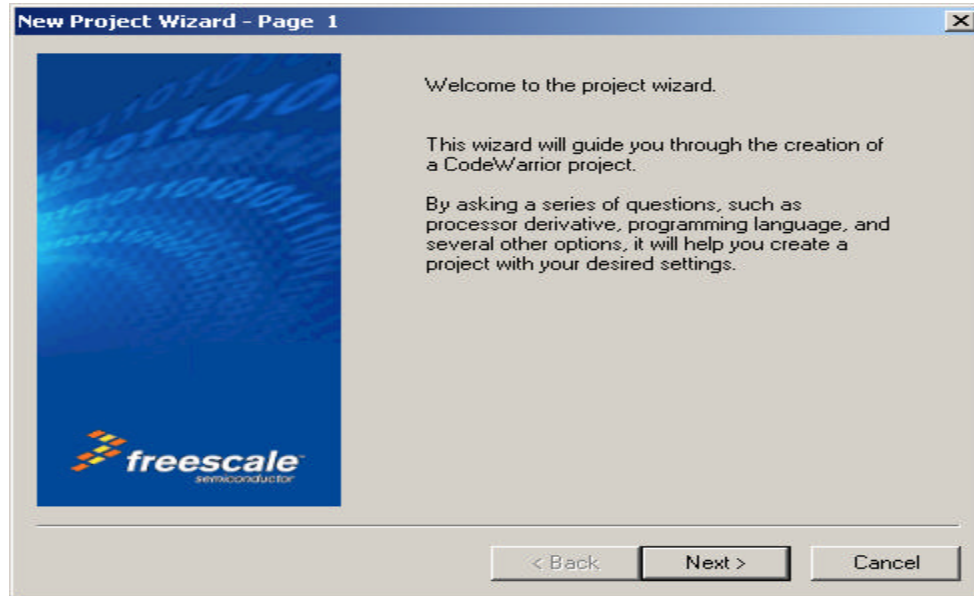On the project tab select HC(S)12 New Project Wizard.

Project Name:

Type a project name called *Test*. Press on the Set… button to create a Test
subfolder to save the test.mcp file.

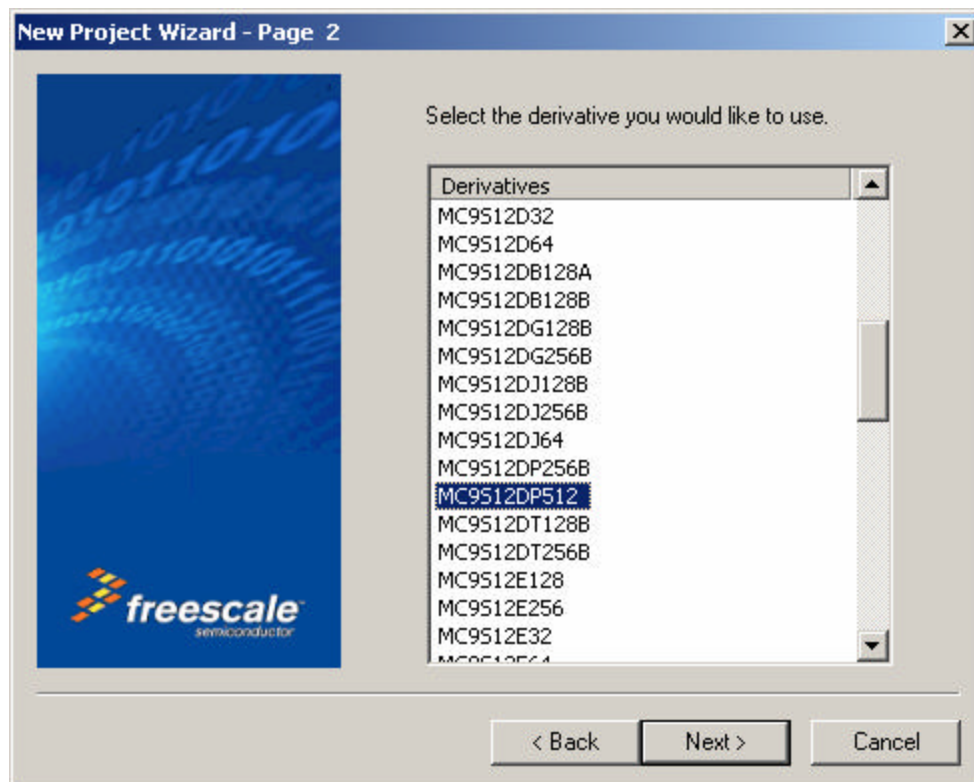As can be seen below the setup for the folders are set. Press OK to continue.

**New Project Wizard – Page 1** press Next to continue

Selecting the MCU:

Scroll up or down to locate the MCU of interest. In this example the Adapt9S12DP512 is used. Select the MCU type as MC9S12DP512 then press Next button to continue.
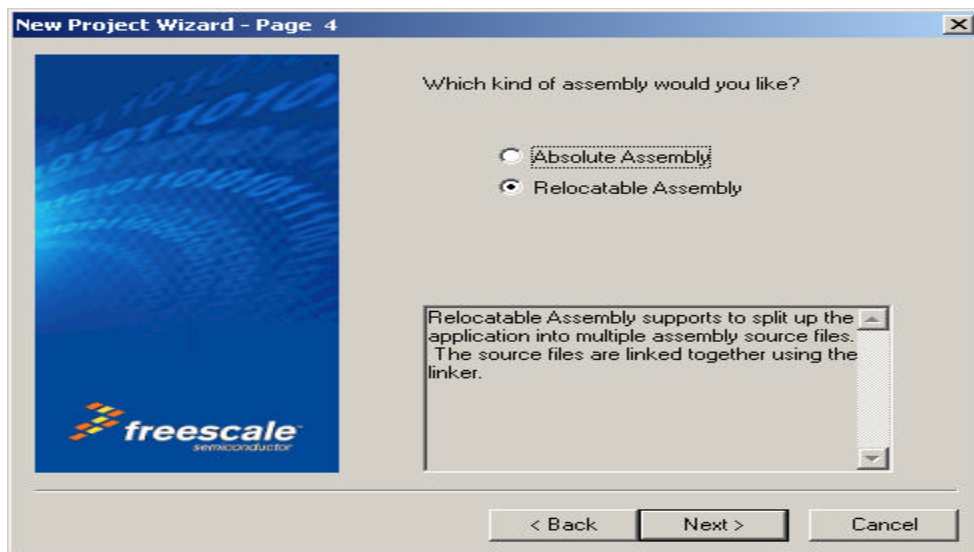
In this example the Assembly box is selected as shown. One may select C or C++ according the user's programming preference. Press Next button to continue.
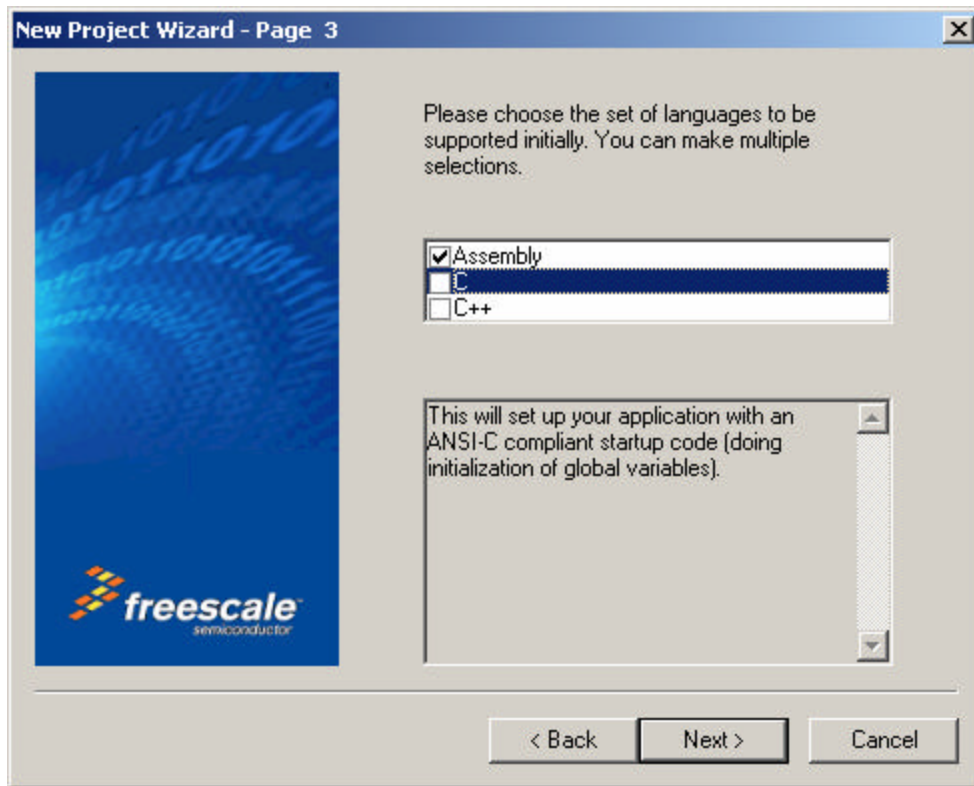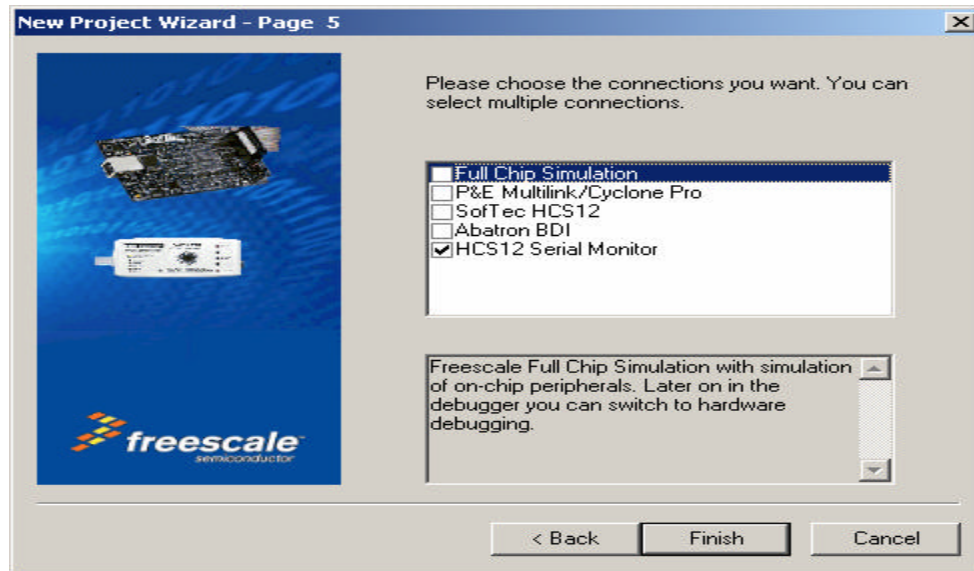

Absolute or Relocatable:

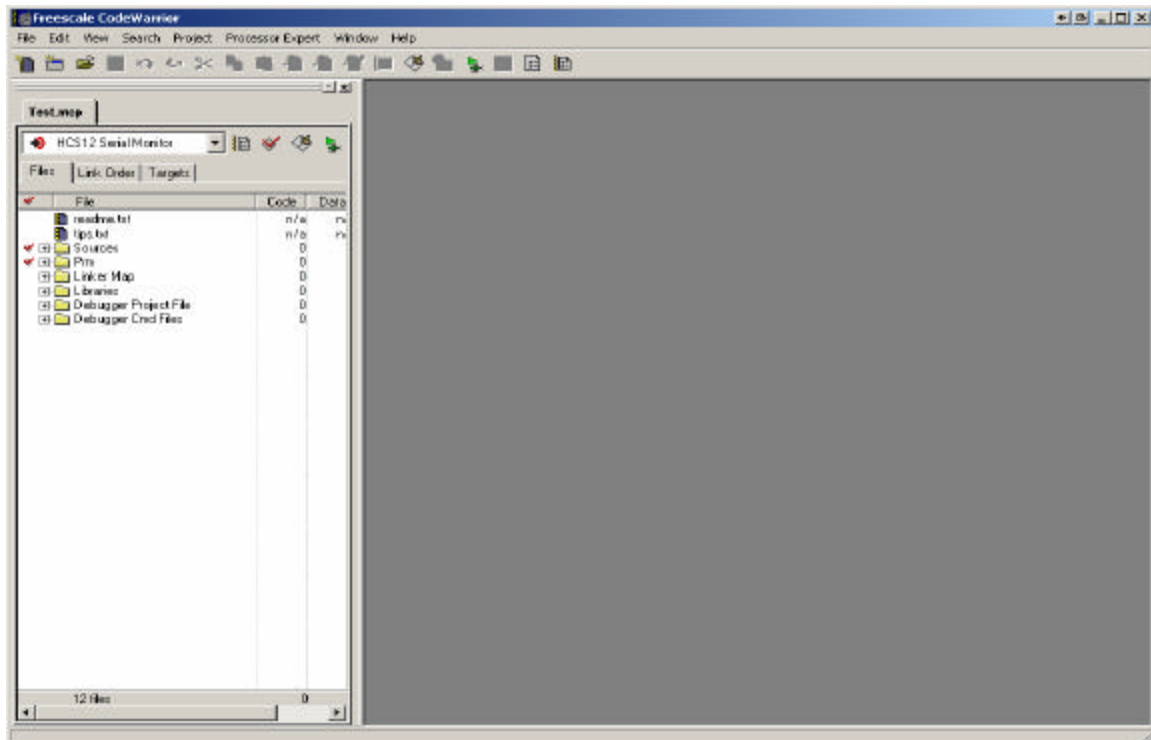In this example the Relocatable assembly is selected as shown. Press Next to continue.

Serial Monitor:

The Adapt9S12DP512 is pre-programmed with a modified version of Freescale's Serial Monitor. Checkmark the **HCS12 Serial Monitor** then click the **Finish** button to continue.

Setup Complete:

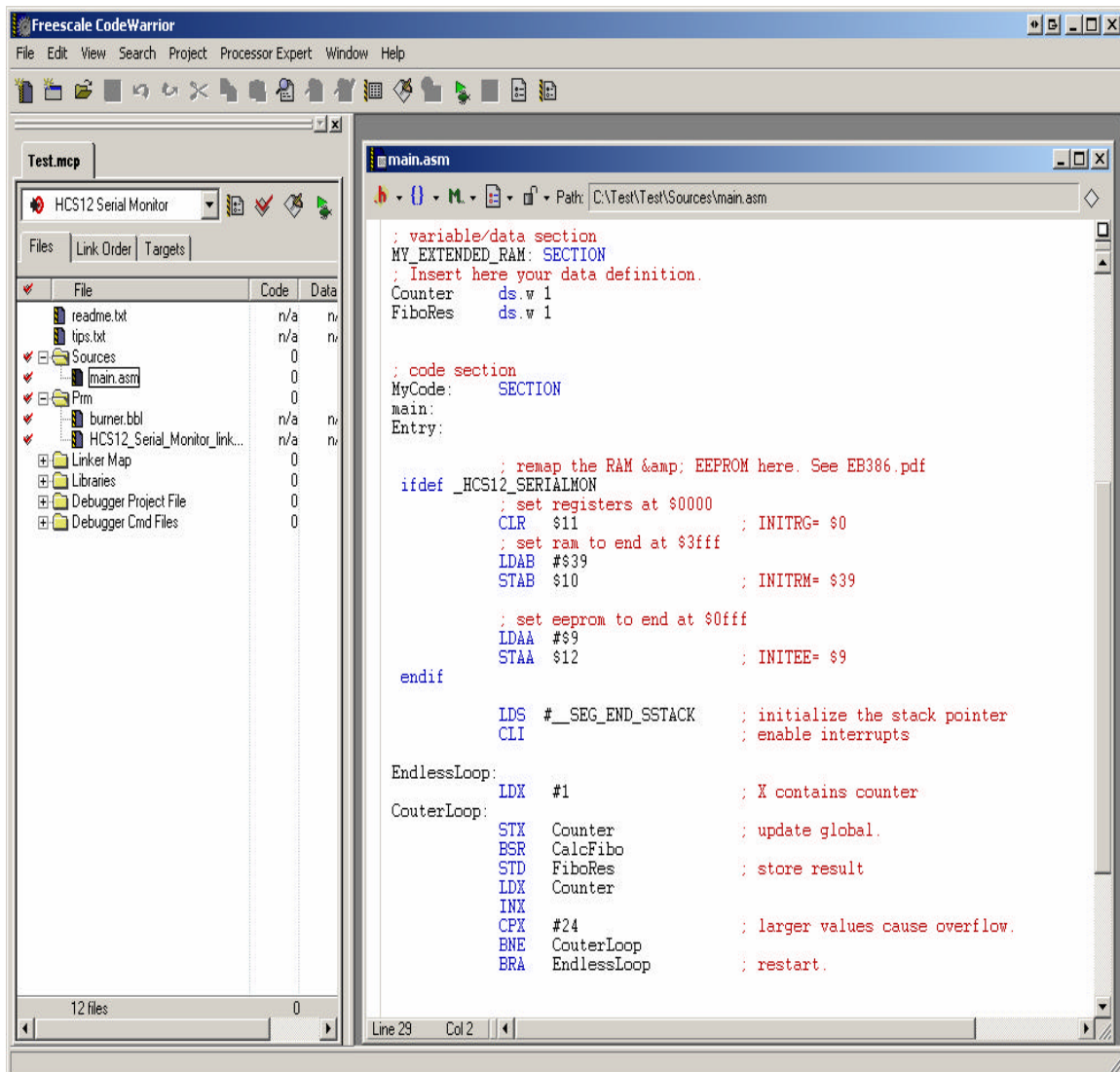Below is the IDE after the setup is completed.

Files Tab:

Note that a new window pane is added. It contains the Files, Link Order and Targets tabs.

Files tab contain 6 subfolders called **Sources**, **Prm**, **Linker Map**, **Libraries**, **Debugger Project File** and **Debugger Cmd Files**.

By clicking on the + icon, the contents of these subfolders are revealed. The Sources folder contains the working files. By default, CW creates a file called main.asm. The Prm folder contains programming parameters. Please note that this document will only go through the important aspects of the IDE. Refer to other available documents for understanding how to use CW.

Double click on main.asm to view its contents.

Debug:

Connect a serial cable between *COM 1* of the PC and the Adapt9S12DP512 board. Make sure the Run/Load switch is in Load mode. Power up the board and the PWR (Green) LED comes ON. If the board is already powered up, press the RESET button.
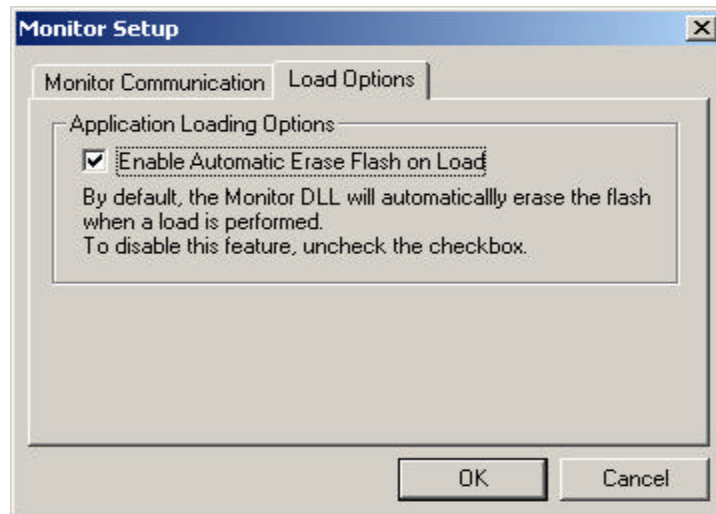
Select the Project Menu. Project/Debug as shown below.
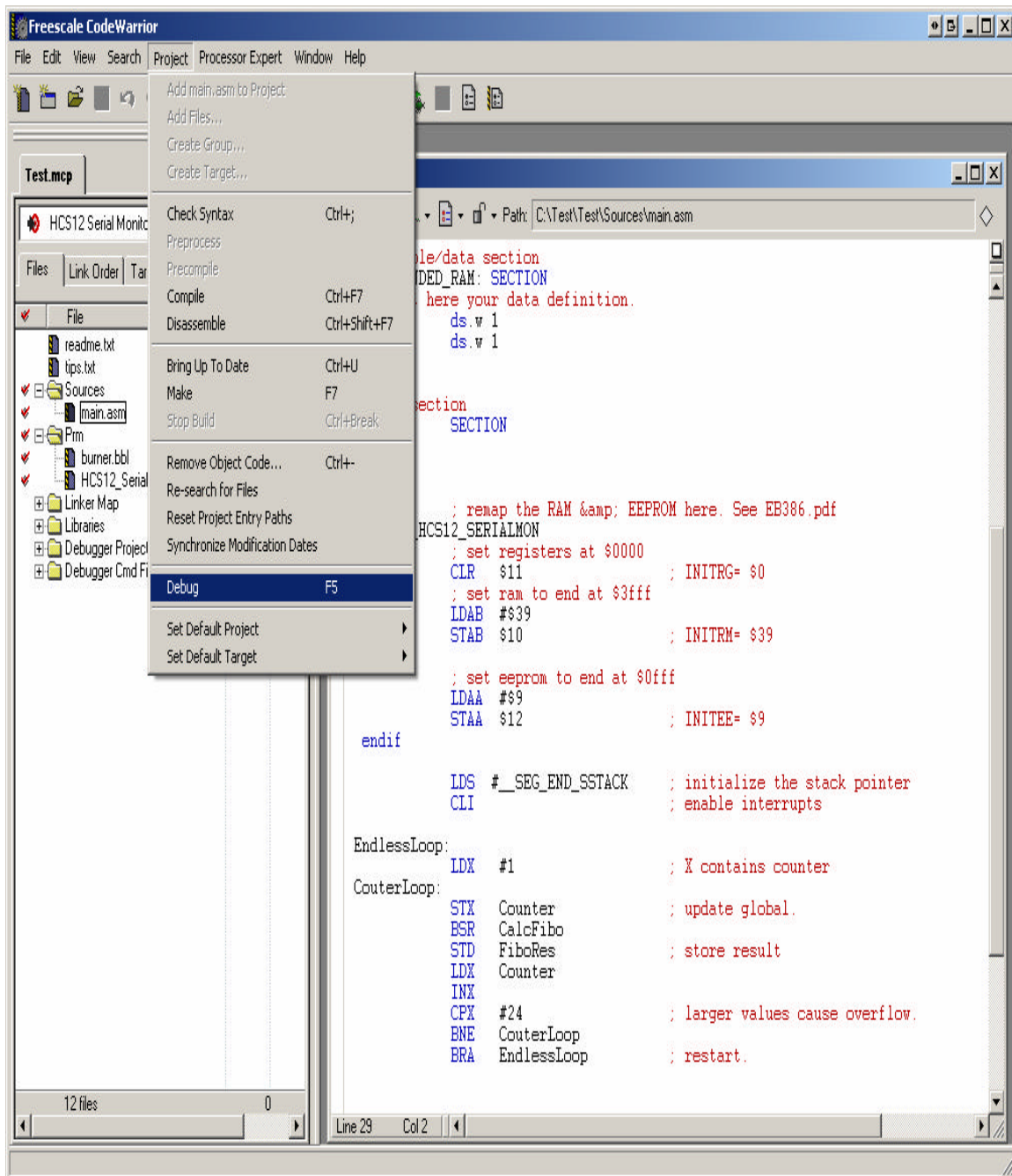
CW will immediately launch the Debugger, displaying the Monitor Setup screen, as shown.
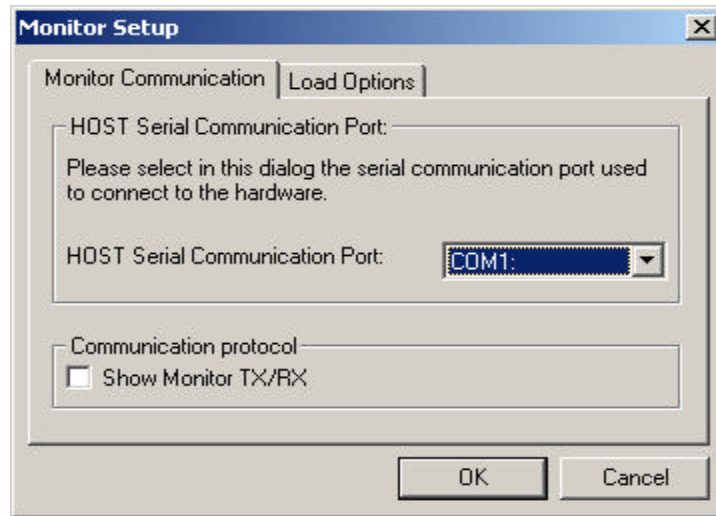
COM1 is selected for Host Serial Port. Click the Load Options tab and check **Enable Automatic Erase Flash on Load** as shown.
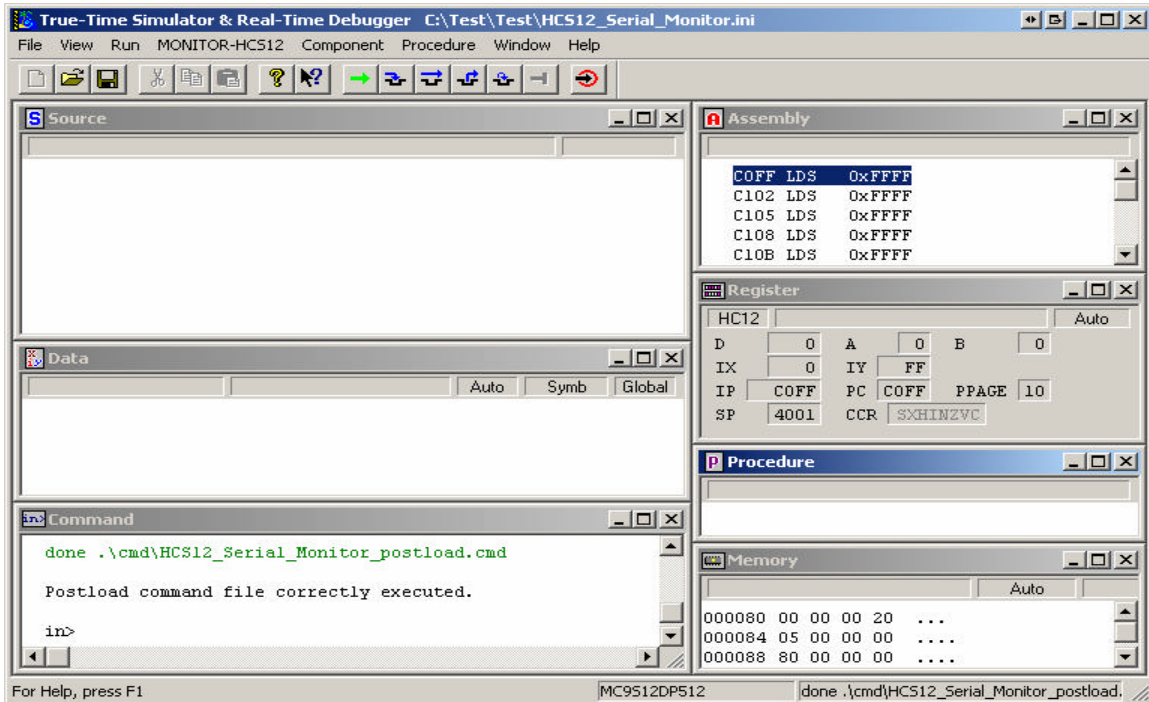

Click OK to continue. If the serial cable is not connected, or if the wrong COM port was selected, the error below will appear. Check the serial cable or select the correct COM port. Then click Retry.
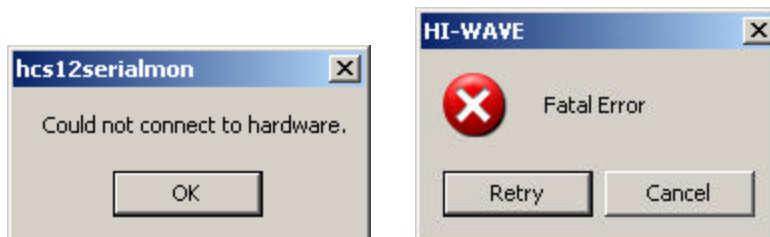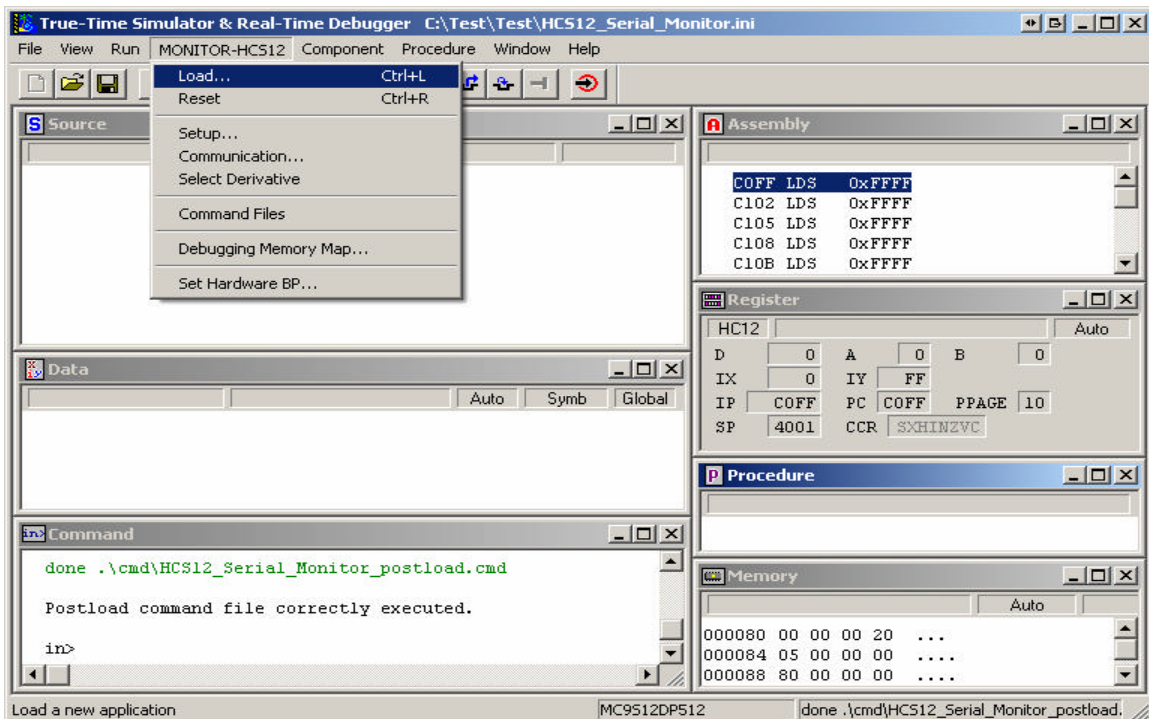
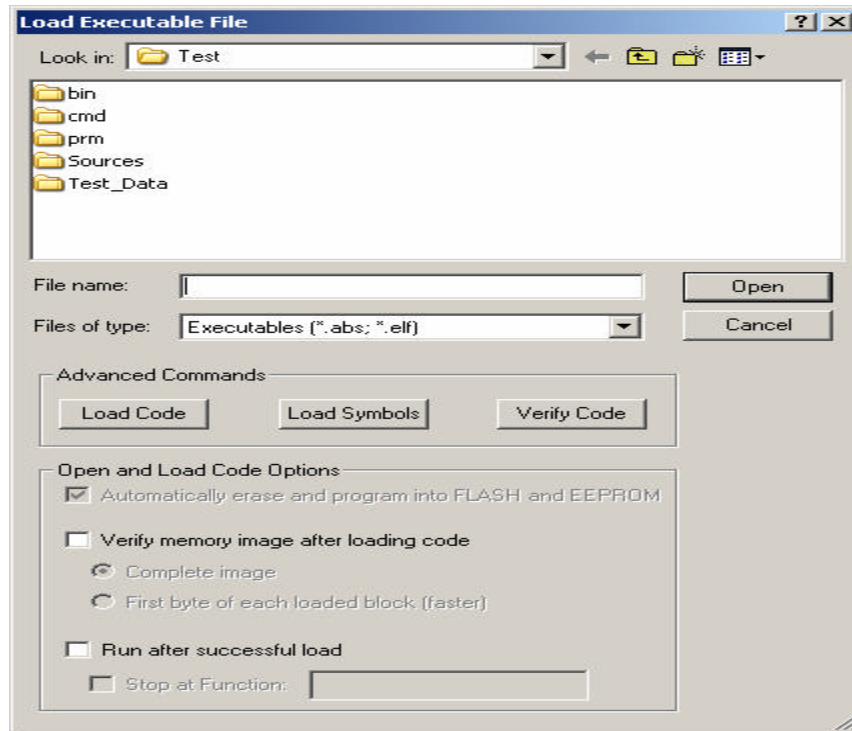**True Time Simulator and Real_Time Debugger:**

The Simulator will appear as shown once communication between AD9S12DP512 and the PC has been established.
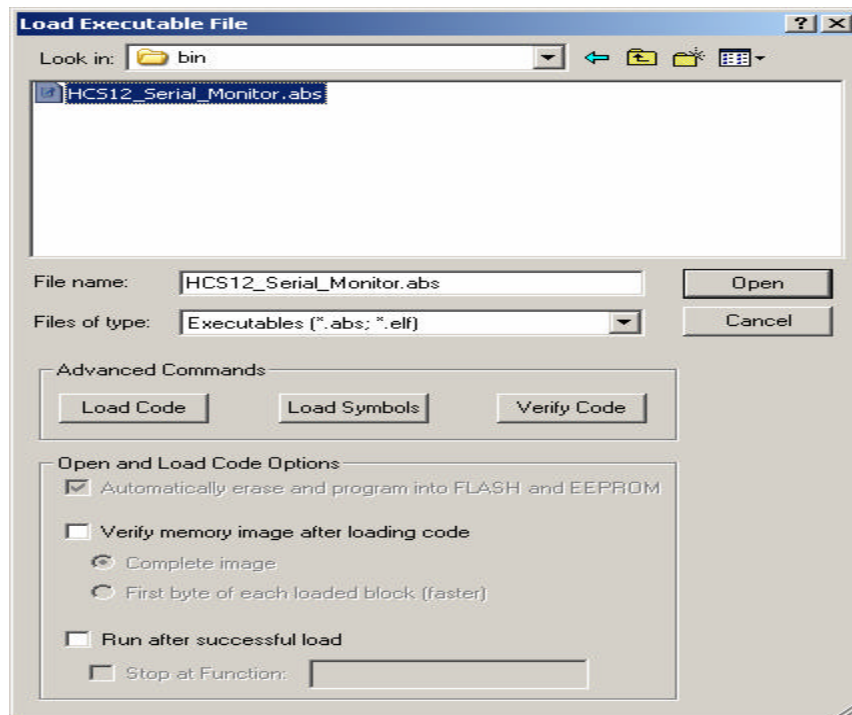

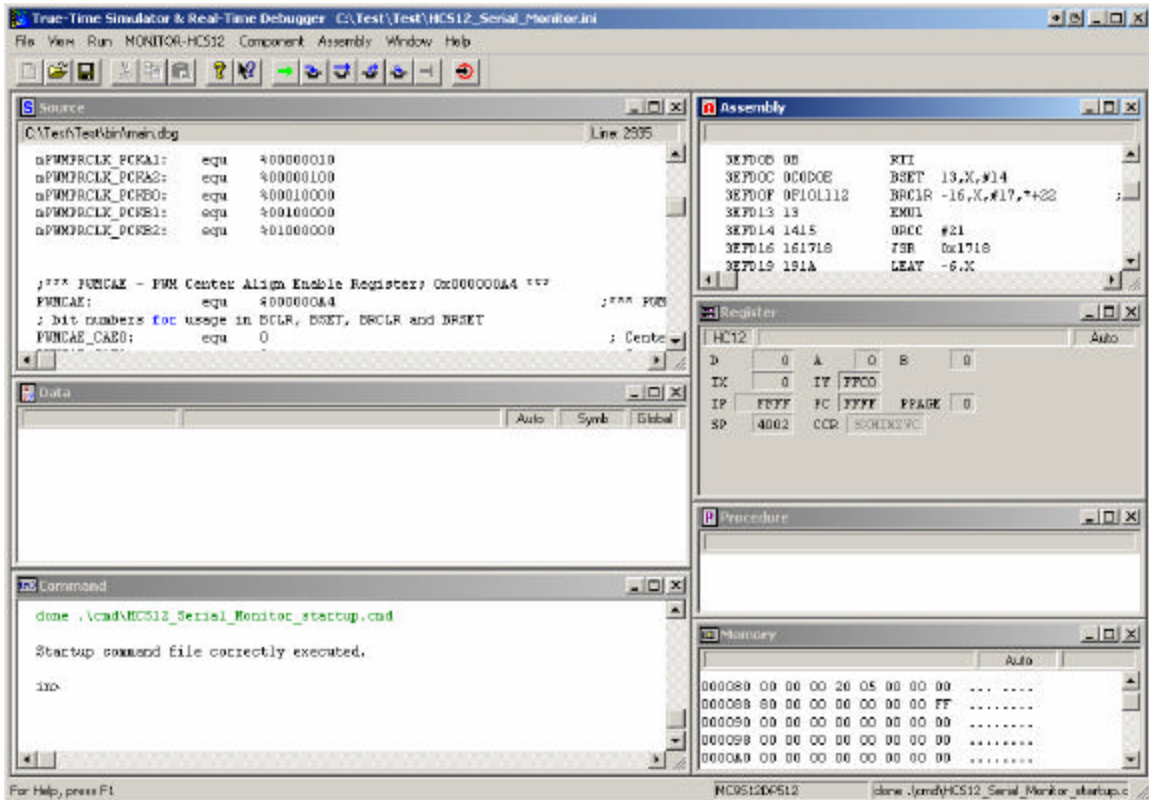To load the S-record, select MONITOR-HS12 then Load, as shown.

Load Executable File explorer window will appear to help locate the file as shown.

Click on the bin subfolders to locate **HCS12_Serial_Monitor.abs** Click on the file to select it. Then click **Open** to continue.

The True Time Simulator will immediately erase and program the FLASH as shown.

This concludes the demonstration. For help with CodeWarrior, be sure to join Freescale's CodeWarrior support forum, at http://forums.freescale.com/