
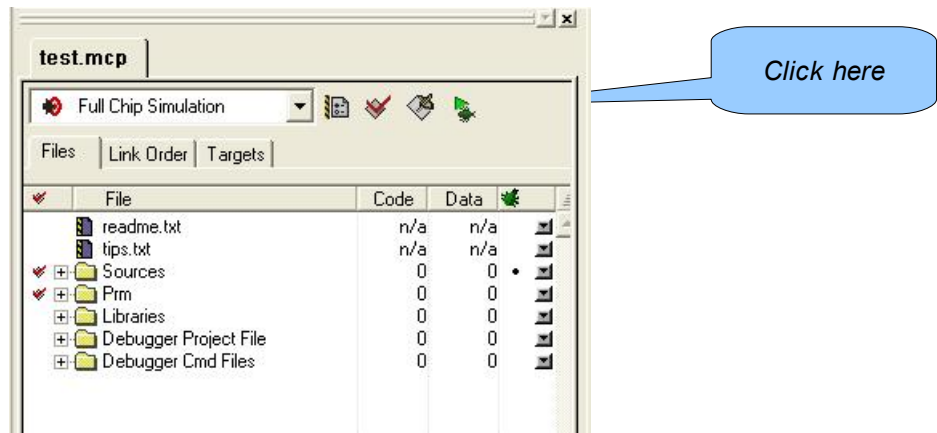
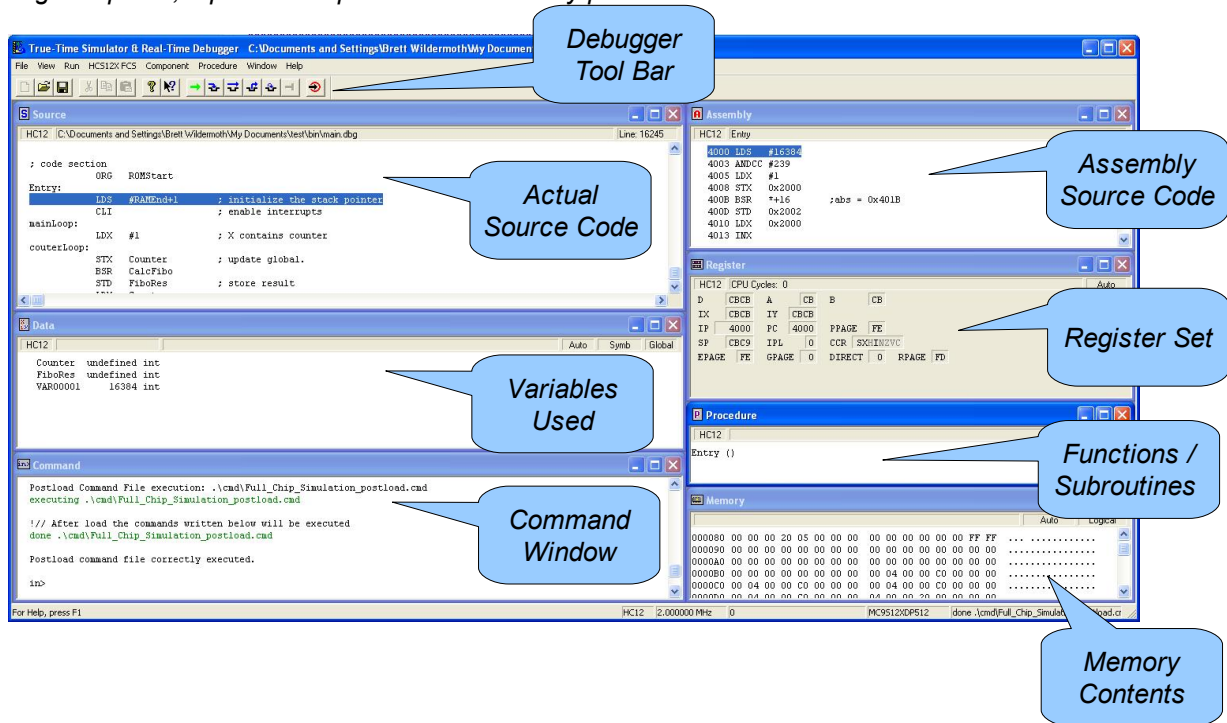


Using the Debugger inside Code Warrior

Once you have confirmed that your assembly code is error free. The next step is uploading the code on to the Adapt9S12X (HS12) microcontroller. Your assembly program is uploaded using the Full Chip simulator (debugger). Starting the debugger can be done by clicking on the debugger icon ().



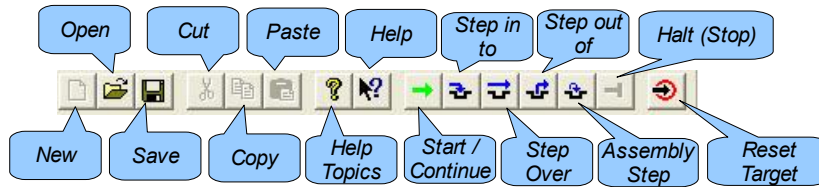
When you start the debugger, another window will open. This is the “True-Time Simulator and Real-time Debugger”. This window consists of seven panels; a source panel, a data panel, a command panel, an assembly panel, a register panel, a procedure panel and a memory panel.



The source panel shows your assembly code as it appeared in the editor panel of Code Warrior. The data panel show the variables used in your assembly code and there current value. The command panel shows the commands sent to the simulator. The assembly panel shows your assembly code in a form similar to how the

microcontroller sees it. The register panel shows all the registers of the HS12 and their current value. The procedure panel lists all the functions or subroutines contained inside your assembly code. Finally, the memory panel shows the contents of the entire memory of the simulator.

The debugger tool bar contains some of the most commonly used functions inside the debugger. Using the tool bar it is possible to open or save a debugging session, and run your assembly program either completely, an instruction at a time, or a subroutine at a time.



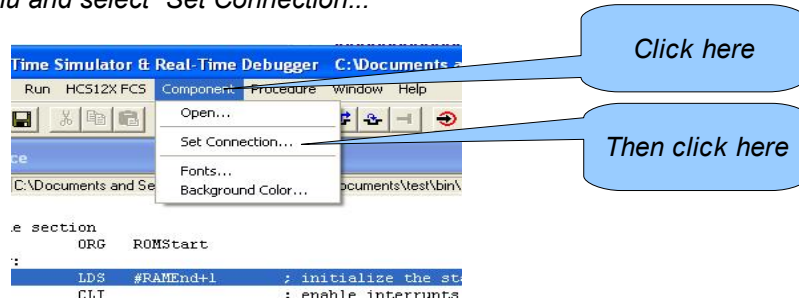
Even though the simulator (debugger) is a powerful tool for finding bugs in our assembly source code. We are primarily using the debugger to upload our code to the Adapt9s12X microcontroller.

Setting up the debugger to talk to the Adapt9S12X

In order to upload our code to the Adapt9S12X microcontroller, we need to set up the debugger to talk to the serial monitor on the Adapt9S12X. This is achieved by following these few steps.

Step 1: Selecting the connection

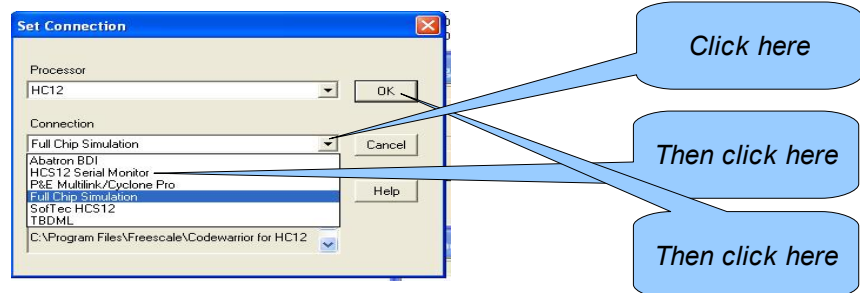
Firstly click on the “Component” menu and select “Set Connection...”



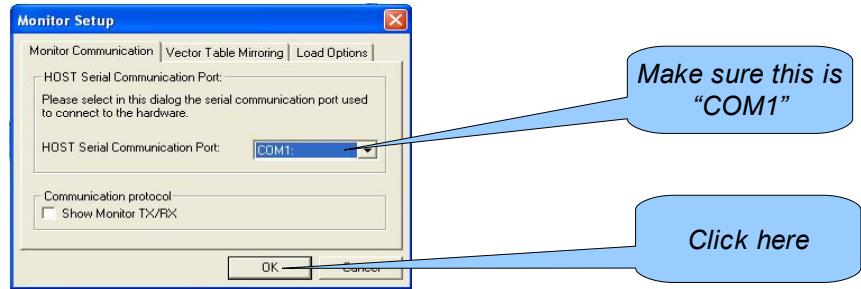
Once you have completed this step a dialog box will appear on the screen.

Step 2: Choosing the HS12 Serial Monitor

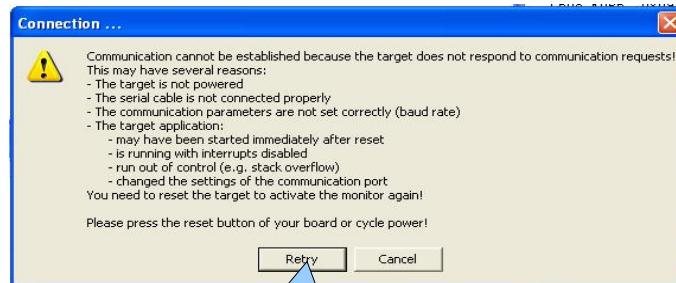
Inside the dialog box choose the “HCS12 Serial Monitor” option from the connection drop down menu (second drop down menu). Then click “OK”.



CW-07-003: Using the Debugger inside Code Warrior



If the following screen appears. Then make sure that the switch on Adapt9S12X is switched to the "LOAD" position and then press the "Retry" button.



Click here after confirming the switch on the Adapt9S12X is in the "LOAD" position.

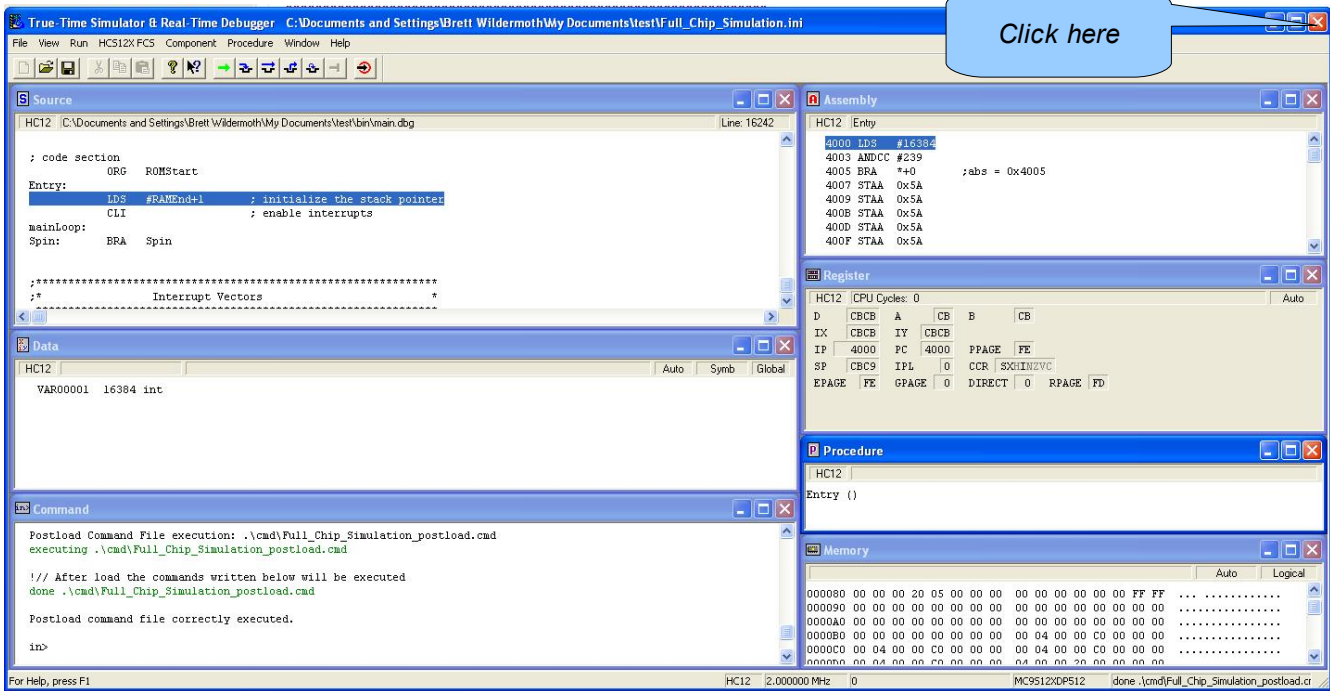
Move switch to the "LOAD" position

Then press the reset button (on top)

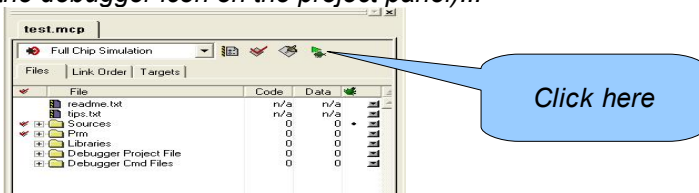


Step 3: Restarting the Debugger

Once you have completed the previous step, restart the debugger by closing the debugger window and clicking the debugger icon once more.



Then restart the debugger again (click the debugger icon on the project panel)...



When the debugger restarts it will automatically erase and upload your code into the Flash memory of the Adapt9S12X microcontroller.

These steps must only be done once for each new Code Warrior project you create.

To run your code you need only to flick the switch on the Adapt9S12X to the "RUN" position and press the reset button. Your assembly program is now running.

