Build and Run a Project with CodeWarrior

Preliminary: Create a directory for your CodeWarrior projects. (HIGHLY recommend H:\ or USB flash.)

This file must be available and used for all projects that will use the hardware development boards. An example assembly program file named main.asm should be provided. Put that in the directory also.

1. Start>Programs>Freescale CodeWarrior>>CodeWarrior Development Studio for S12(X) V5.0>>CodeWarrior IDE
   1. Choose Create New Project (on Start Menu popup) OR File>>Create New Project.
2. Under Choose Derivative you would like to use: Expand HC12 and Automotive Family. Click on MC68HC912B32. Under Choose your default connection: Click on P&E Multilink/Cyclone Pro.   
   - Next.
3. For this first project, check only relocatable assembly. Allow the name of the project to default to project. CodeWarrior will create a directory with this name and create all project files in the directory. Set the path for your CodeWarrior projects. Next.
4. Select additional files to add to the project. For this example, bring both the ECET-HC12BRD4.prm file and the prewritten main.asm file into the project. Finish.
5. The system warns that the default main.asm file generated by CodeWarrior has been overwritten by the added main.asm file. You can close the warning window.
6. If you expand the Sources, Project Settings and Linker Files listings under the Files tab of the project browser, you will see the files you added under Sources. You will also see a file named Project.prm under the Linker Files listing. Project.prm is a default linker parameter file generated by CodeWarrior. Right click the file and remove it from the project.
7. Click-and-drag ECET-HC12BRD4.prm from Sources to Linker Files. This file contains specific settings needed for the hardware you will use.
8. Moving the .prm file to the Linker Files listing is only a matter of visual organization. The project will assemble and build with the file anywhere in the tree. The key is that the file has been added to the project.
9. Note the red check marks next to the files. These mean that these files have not been included in the build. Assembly source files have not been assembled to object files, and the Linker parameter file has not been read to create the application.
10. Click on the Make icon, the fourth icon of five at the top of the project tab. Or click on the Project menu and select Make. Or press F7. Any of these actions will cause the project to be assembled and built.
11. You may see a warning that says, "Ignoring prm file ..." When you removed the Project.prm file from the project, you only removed the project's link to the file. This extraneous .prm file can be deleted or left where it is.
12. If there are no other warnings or errors, the application is now ready to be downloaded to the hardware development board. Click the Debug icon, the right icon with what looks like a green arrow. Or click on the Project menu and select Debug. Or press F5.
13. You may see a windows security alert that says, "Your network administrator can unblock this program for you. Name: HIWAVE.EXEn. You can check the "don't show this message again" box and click OK. The HIWAVE.EXE program does not need to communicate to the network outside of your workstation.
14. In the Connection Manager window, ensure these are the settings:
15. In Connection port and Interface Type section:
    1. lnterface: USB HCS08/HCS12/CFVl Multilink - USB Port   
       Port: USBl : USB-ML-12 Rev C (PE5011713) \*this may list USB2 or USB3
    2. In BDM Communications Speed section:  
       Check the radio button and enter: Use 10-DELAY-CNT = 15
    3. In Cyclone Pro Power Control section:  
       Uncheck Provide power to target
16. Click the Connect(Reset) button.
    1. You may see a loader warning that says, "The debugger is going to mass erase the non volatile memory (eeprom and flash) of the current device, then program the application." If that happens:  
       Click the Abort button.  
       Click OK on the HI-WAVE "failed to load" warning.  
       On the True-Time Simulator & Real-Time Debugger window, click on the File menu, andselect Configuration ...  
       Click the Load tab, and uncheck the box beside "Automatically erase and program into FLASH and EEPROM". The development board does not utilize the chip onboard memory, and the debugger will hang if allowed to attempt this. Click OK
    2. Now you have two ways to download the application.
       1. Close the debugger window and start the debug from the IDE again. OR
       2. Click on File in the debugger window, select "Load Application ..." and browse to the project.abs file in the bin directory of the project.
17. To run the application, click on the Start/Continue icon, the green arrow. Or press F5. Or click on Run and select Start/Continue.