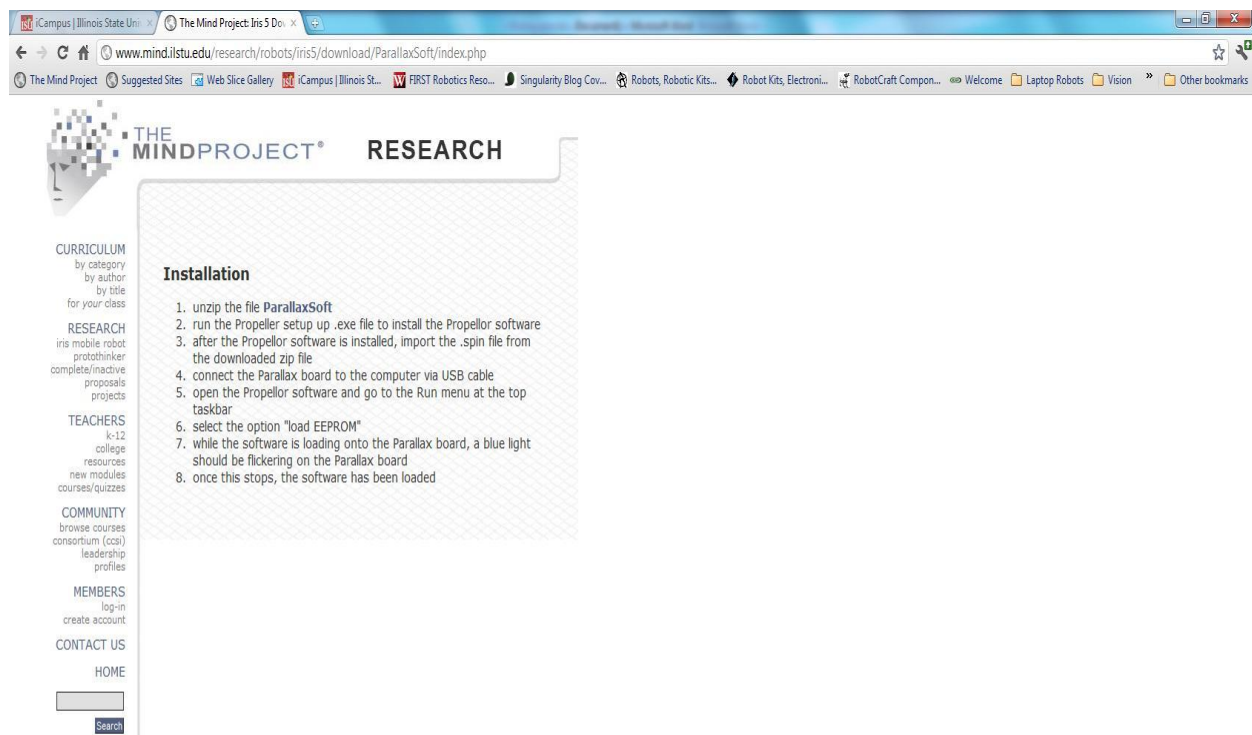


# Parallax Software Installation Instructions

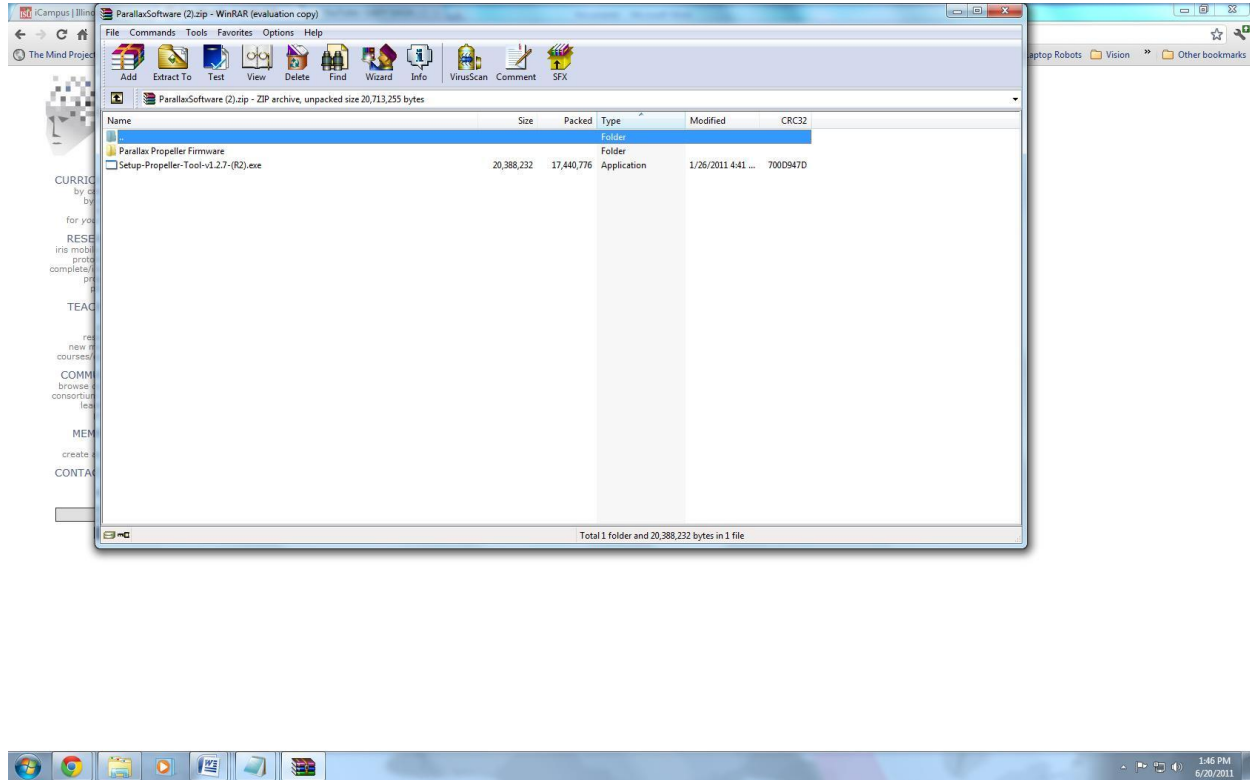
This page is dedicated to installing the necessary software on the Parallax controller. These instructions require some familiarity with the extraction of files.

Note: Make sure the Parallax controller's USB cord is hooked up to the computer being used and the Parallax controller.

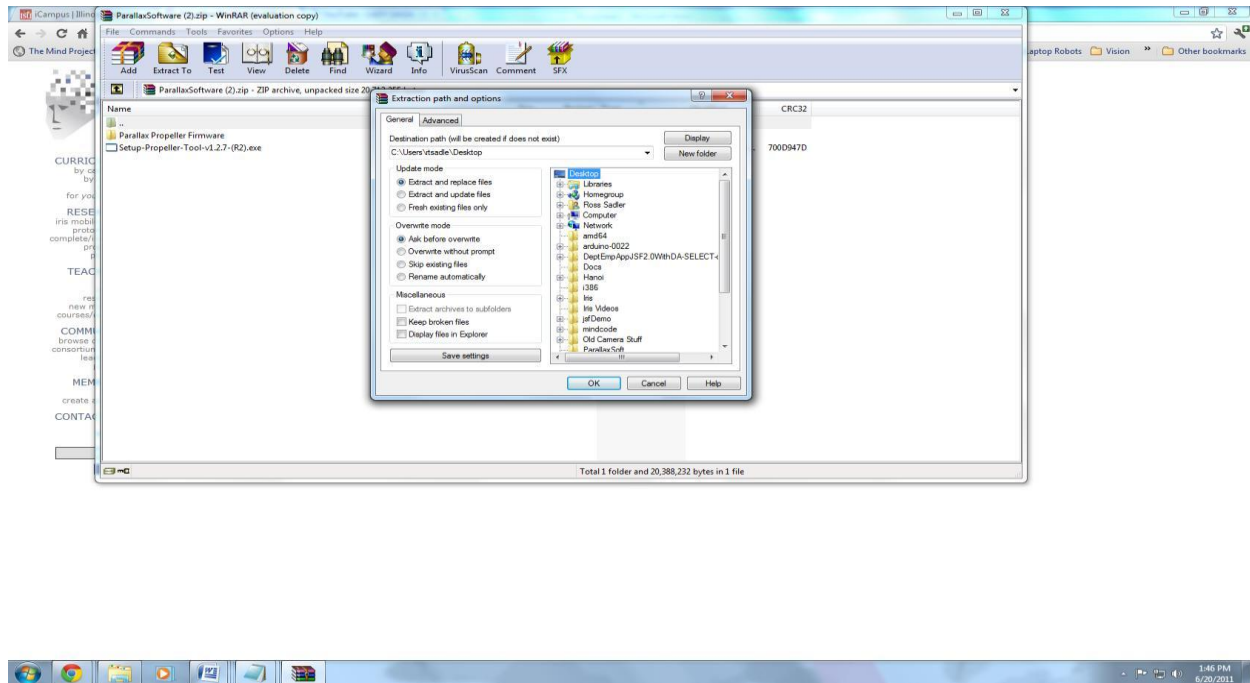
1. Click on the link "ParallaxSoft" and begin the download of the files needed for the Parallax controller.



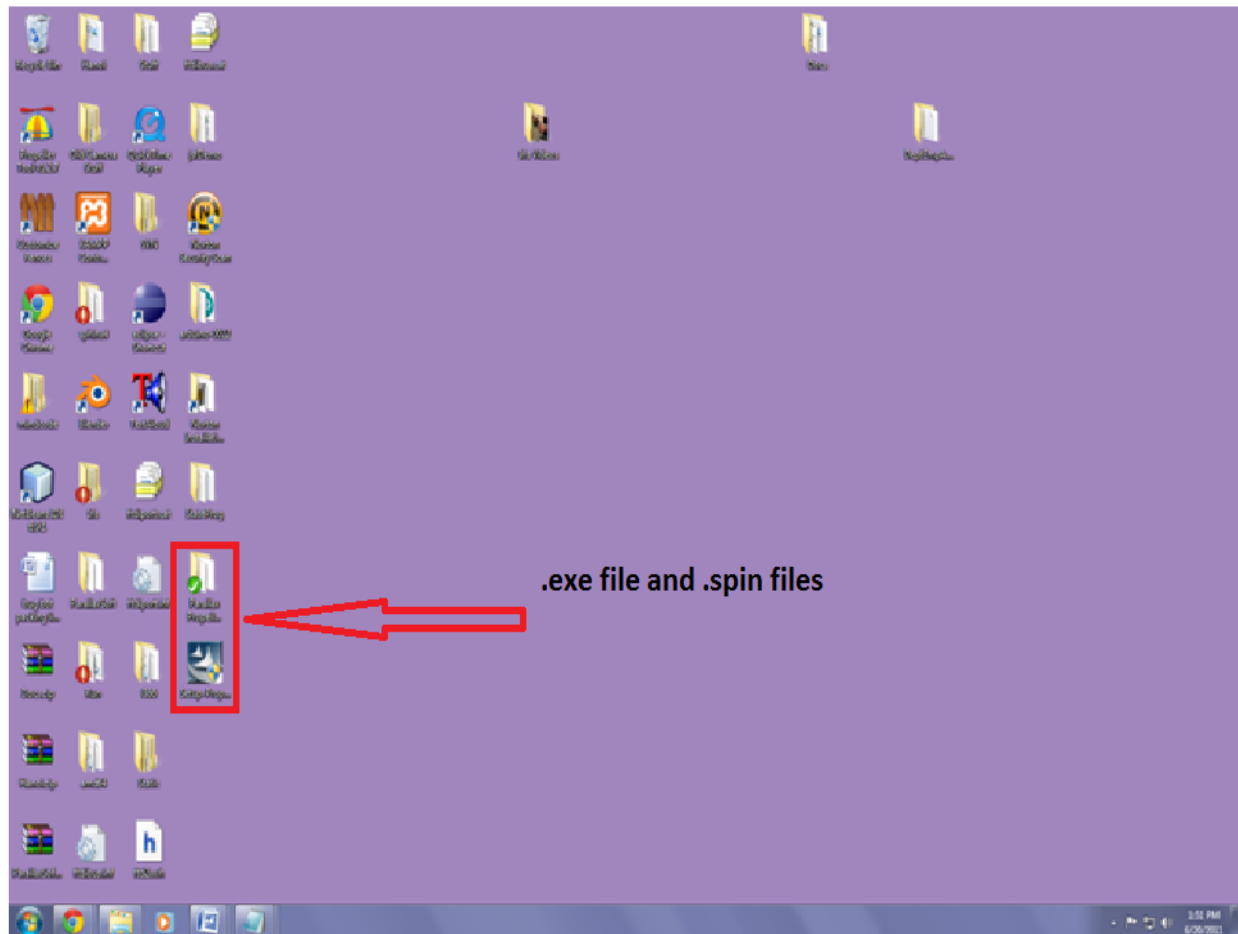
2. Once the download is completed, the files inside the .zip file downloaded will need to be extracted. This can be done by right clicking on the ParallaxSoft.zip file and then clicking “Extract To”. Be sure to extract to a location that can be easily found. For instance, the Desktop would be a good location. This process is similar in both Windows 7 and Windows XP.



3. Extract all of the files to a location on the computer that can be easily found. In this example, the files are all extracted to the Desktop for ease of access.

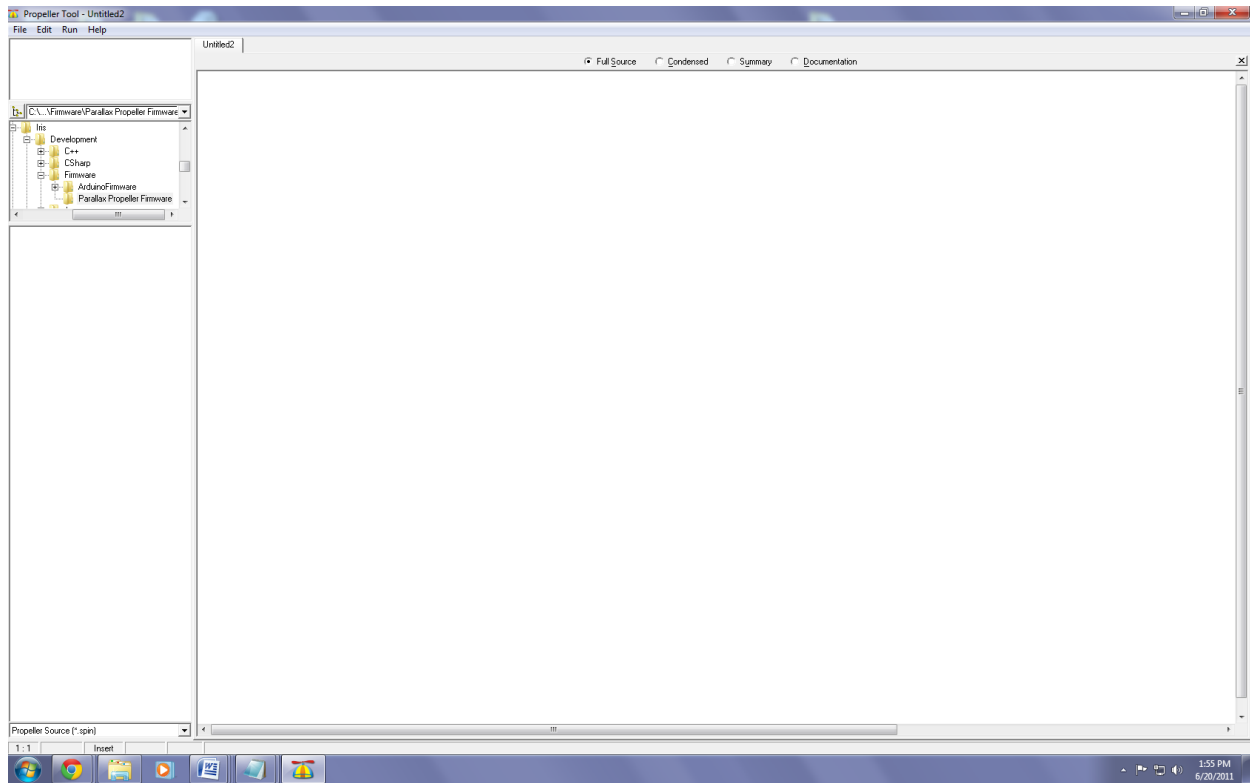


4. Once all the files are extracted, double click on the .exe file.+

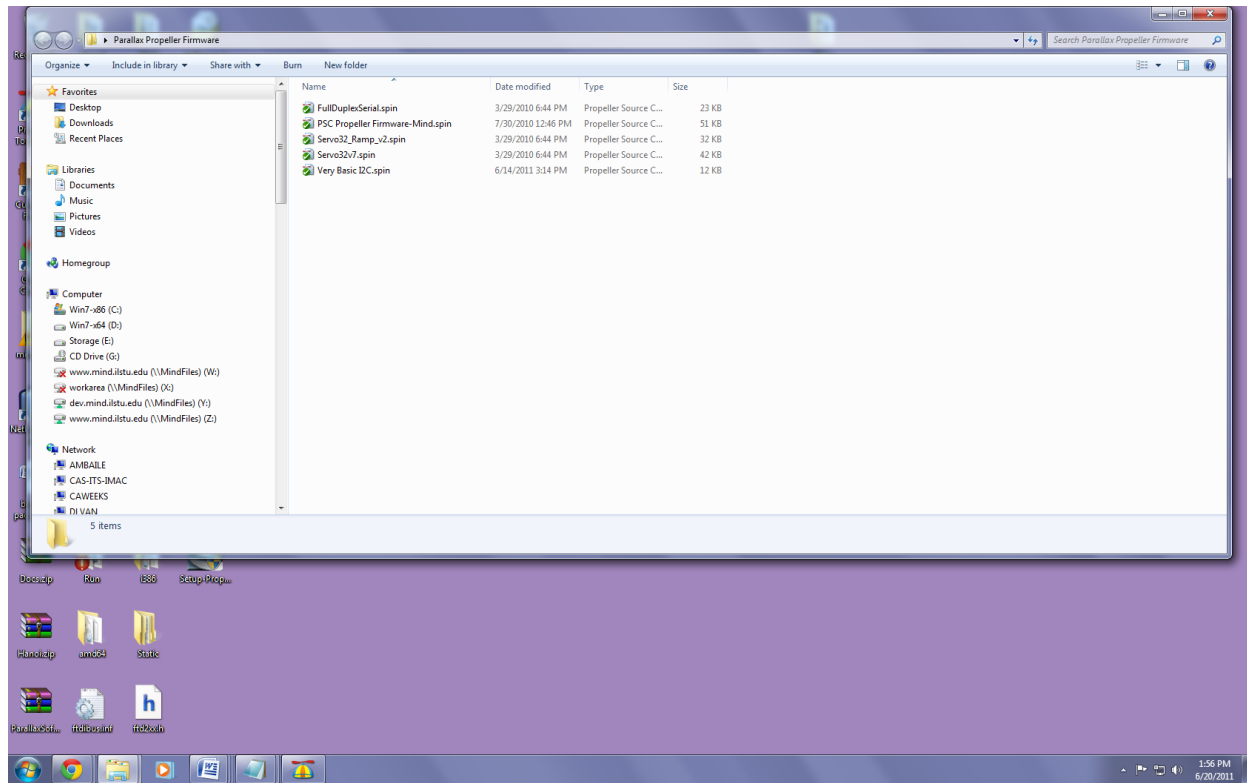


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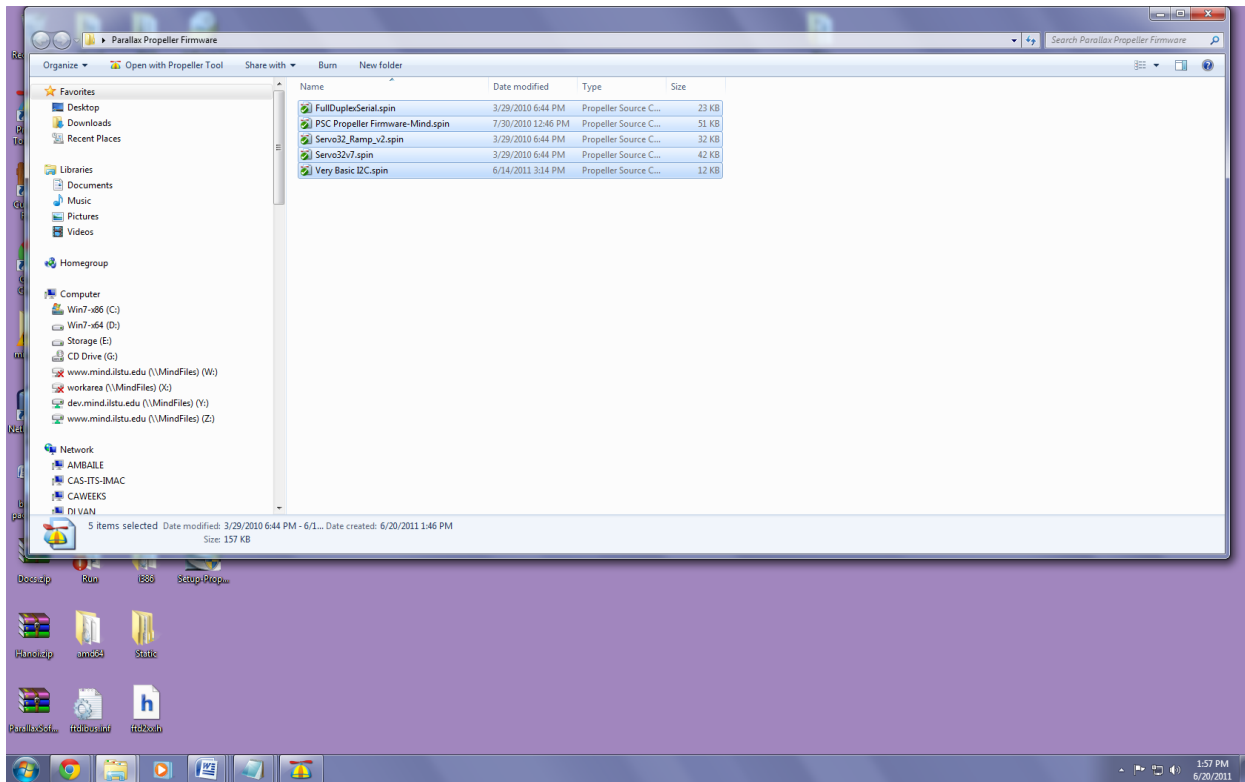
6. Once installation of the Propeller tool is completed, run the program. The main screen for the program looks something like this:



- Now open the folder Parallax Propeller firmware from the location where it was extracted to earlier.

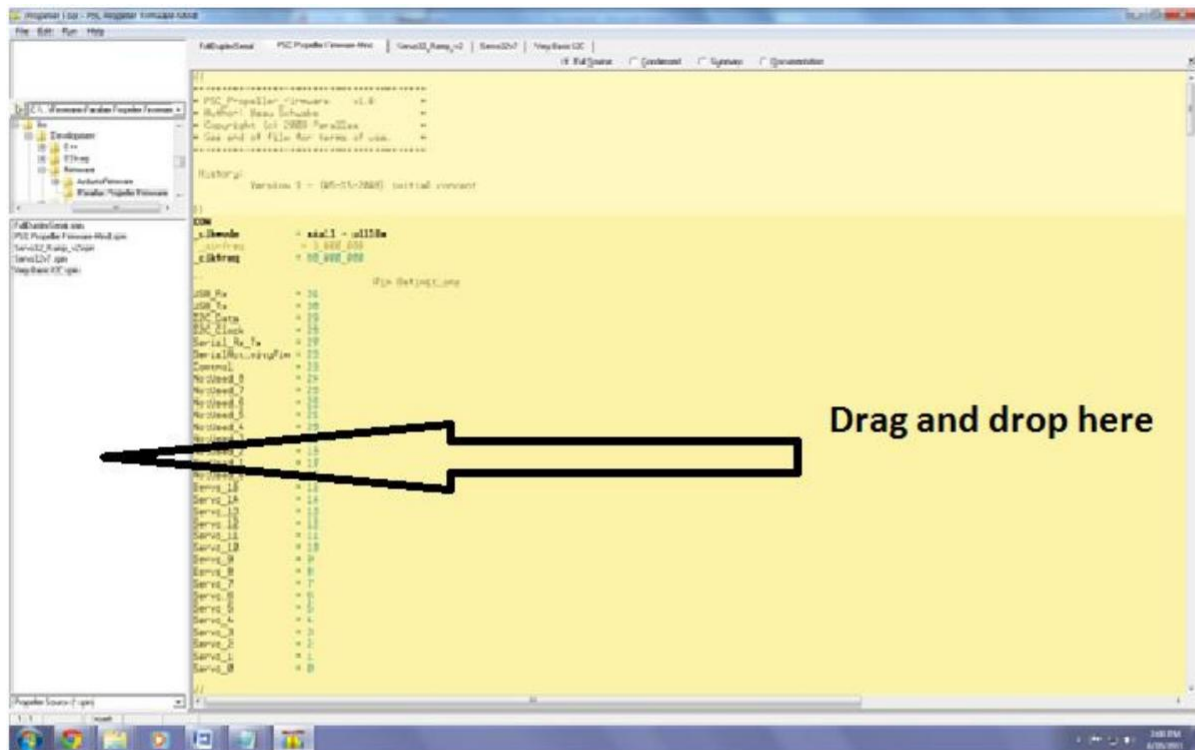


8. Highlight all of the files in the folder.

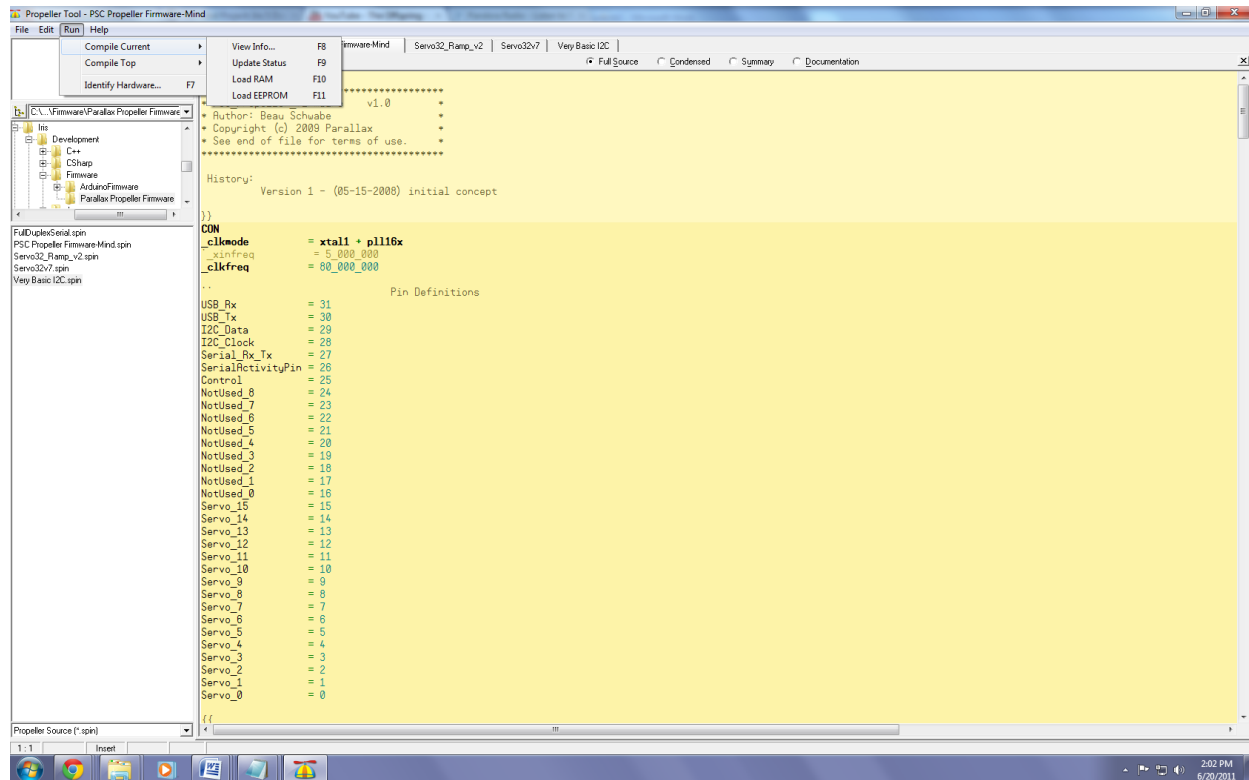




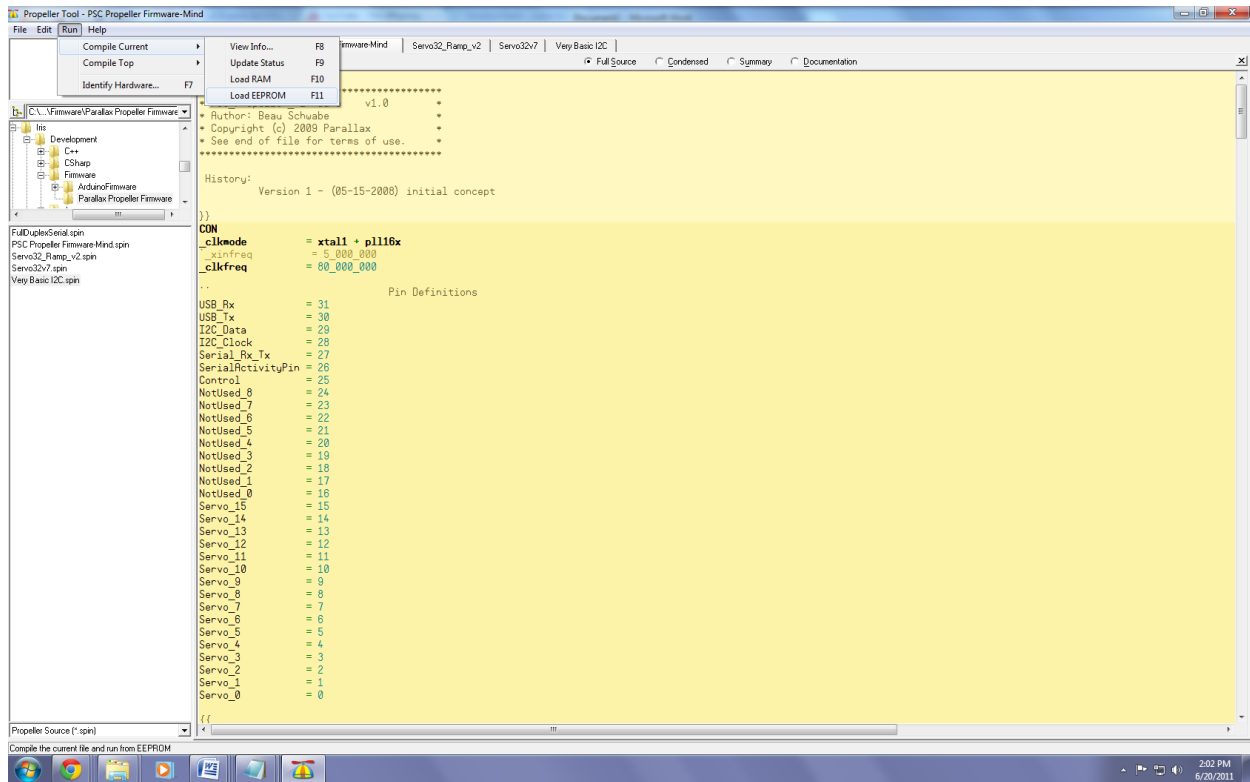
9. Drag and drop all of the highlighted files into the Propeller program.



10. Select the file “PSC Propeller Firmware-Mind.spin” and double click it. Now, go to Run up in the task bar. Select “Compile Current”.



## 11. Select "Load EEPROM".



The screenshot shows the Propeller Tool IDE interface. The main window displays the source code for a file named "PSC Propeller Firmware-Mind". The code is written in C++ and includes several sections:

- Headers:** Includes "FuDuplexSerial.h", "PSC Propeller Firmware-Mind.h", "Servo32\_Ramp\_v2.h", "Servo32v7.h", and "Very Basic I2C.h".
- Version Information:** A comment block stating "PSC\_Propeller\_firmware v1.0", "Author: Beau Schwabe", "Copyright (c) 2008 Parallax", and "See end of file for terms of use."
- History:** A comment indicating "Version 1 - (05-15-2008) initial concept".
- Pin Definitions:** A list of pins and their functions, such as "USB\_Rx = 31", "USB\_Tx = 30", "I2C\_Data = 29", "I2C\_Clock = 28", "Serial\_Rx\_Tx = 27", "SerialActivityPin = 26", "Control = 25", "NotUsed\_8 = 24", "NotUsed\_7 = 23", "NotUsed\_6 = 22", "NotUsed\_5 = 21", "NotUsed\_4 = 20", "NotUsed\_3 = 19", "NotUsed\_2 = 18", "NotUsed\_1 = 17", "NotUsed\_0 = 16", "Servo\_15 = 15", "Servo\_14 = 14", "Servo\_13 = 13", "Servo\_12 = 12", "Servo\_11 = 11", "Servo\_10 = 10", "Servo\_9 = 9", "Servo\_8 = 8", "Servo\_7 = 7", "Servo\_6 = 6", "Servo\_5 = 5", "Servo\_4 = 4", "Servo\_3 = 3", "Servo\_2 = 2", "Servo\_1 = 1", and "Servo\_0 = 0".
- Servo Motor Configurations:** A series of "servo\_write" calls for each servo motor, specifying pulse widths and frequencies.

A "Propeller Communication" dialog box is overlaid on the code, displaying "Loading RAM" with five progress indicators (four filled circles and one empty circle).

The bottom status bar indicates "Compiled" and "Move cursor to see source information". The system clock in the bottom right corner shows "2:03 PM 8/20/2011".