Guide to Installing WinAVR on Your Computer
(10/23/2007)

Part A: Installing the USB Drivers

Follow the steps below to install the drivers for USB communication with the Command Module:

1. In the Robots Link page on the wiki, download both Command Module USB Drivers to your computer's desktop (or to a download directory). The file names are CMDriver32.exe and CMDriver64.exe.
2. Double-click on each file to run install them.
3. Click OK when an install confirmation window pops up. The USB drivers are good to go.

Part B: Installing the WinAVR Application Suite

WinAVR (pronounced "whenever") is used to compile C programs that you write ("code") and load it into the Command Module. The **Programmers Notepad** program included in AVR is the easiest way to write, compile and load code into the Command Module. Follow the steps below to install WinAVR:

1. Go to http://winavr.sourceforge.net/download.html and download the latest version of WinAVR (May 25th 2007).
2. Double-click on the "WinAVR-20070525-install.exe" file to start the installation process. Use the default install options (just agree to everything!!).
3. WinAVR shortcuts will be placed in the Start Menu. The one labeled "**Programmers Notepad [WinAVR]**" is the important one.

Part C: Setup Device Settings (COM: port settings)

A bit of background: When the Command Module is plugged into the computer, Windows classifies it as a USB Serial Port. The Command Module user manual suggests that this serial port should be set to appear as "COM9", as the example programs provided are set to communicate with the COM9 port. Being consistent in this way is also important for using project templates for our programs.

Steps for Setting Up the Communication Port (COM9):
(also see the Command_Module_Manual_v6 handout, pp. 8-9)

1. Turn off the Create.
2. Plug the Command Module (CM) into the Create's the cargo bay, tighten the screws.

3. Turn on the Command Module ON (tiny slide switch on the right ride on the top of the CM).
4. Plug one end of the USB cable into your computer, and the other into the Command Module. The green LED next to the CM's USB port should blink on. Your computer should beep and a dialog box should pop to indicate that a new USB device has been detected by Windows.
5. Right Click on "**My Computer**" icon on your desktop and click "**Properties**" to bring up the System Properties.

6. In System Properties, click the "**Hardware**" tab, and then click the "**Device Manager**" button. You should see a window like the one below:
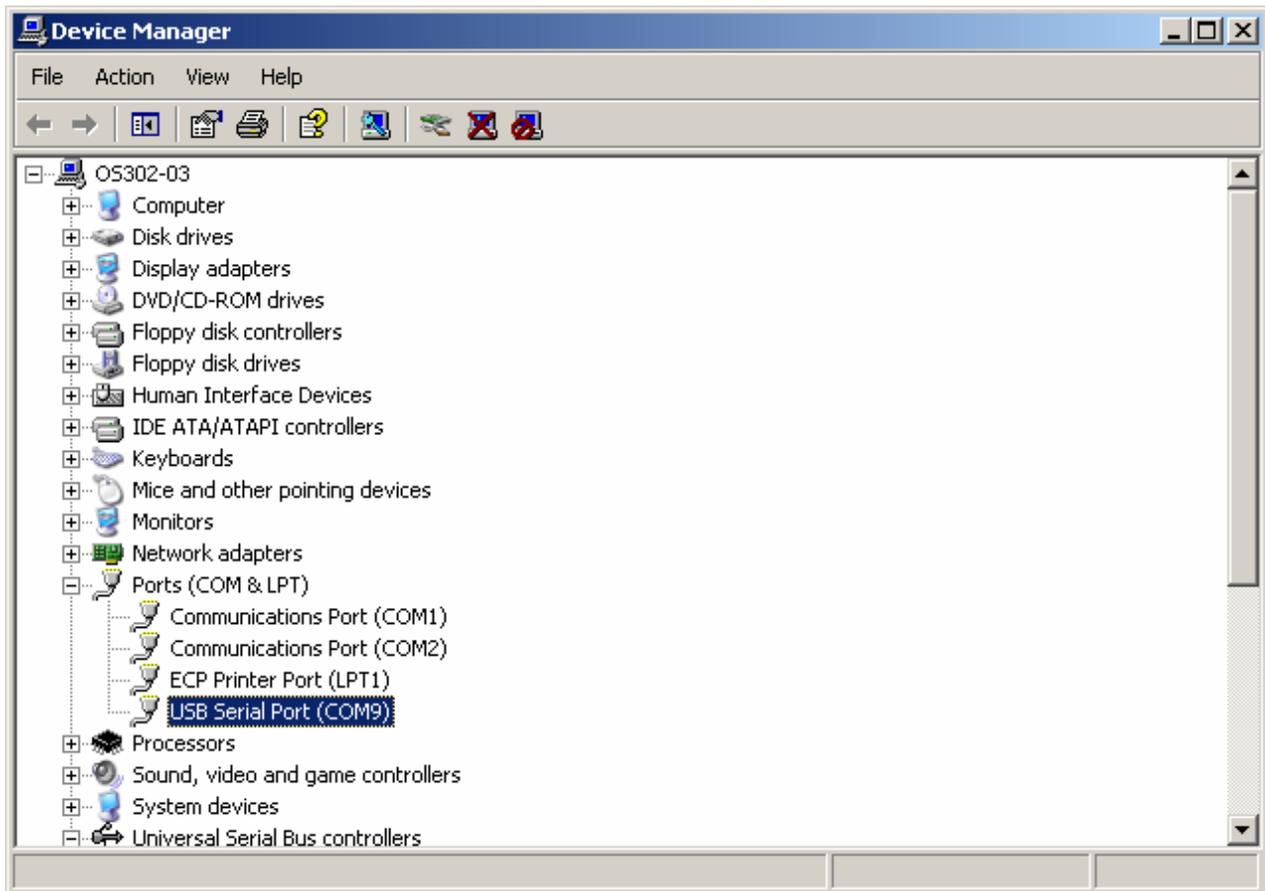
7. Expand the "**Ports (COM and LPT)**" item on the list as shown above, then select the "USB Serial Port" option (note that it may not show COM9).
8. Right Click "**USB Serial Port**", and select "**Properties**".
9. In the Properties Window, Click on the "**Port Settings**" tab, and then click the "**Advanced**" button.
10. At the top of the **Advanced Settings Window**, set the **COM Port Number** to **COM9** (in the drop box). This is the only setting you need to change. Click the **OK** buttons to accept the change.
11. The Create communication port (COM9) is now good to go!