

Form 55683 USB PC Interface Driver Mod.

Version 1.1

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Modifying the Device Driver to Improve PC Interface Communications

The following discussion applies to the device driver associated with Westerbeke Communication's cable part number 55684. This 3rd party device driver turns a computer's USB port into a **virtual com port (VCP)**.

Background

With the release of the latest FTDI driver the Westerbeke USB Communication cable #55684 has trouble downloading the fault /warning log. After the VCP driver has been installed one must manually change the driver's latency timer from 16ms to 8ms.

Introduction

The purpose of this application note is to provide users of the Westerbeke USB Communication Cable #55684 with a simple procedure for modifying the device driver to work properly with the Westerbeke USB cable using **Windows 7, Vista, and XP**.

Installing VCP Driver

Following the instructions provided in the device driver Readme file to do the initial install of the virtual com port driver.

Modifying the Device Driver's Latency Timer Setting

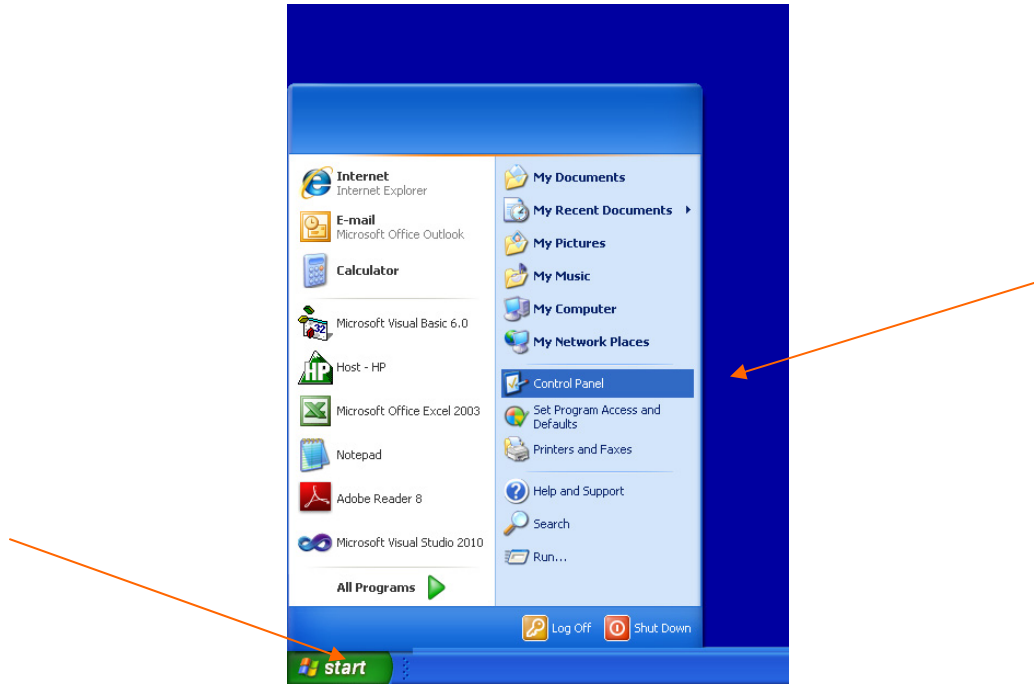
This modification has to be done manually by going to the device manager. Follow the following steps are required to make the modification.

- 1) Go to the device Manager.
- 2) Expand "Ports (COM & LPT)".
- 3) Select "USB Serial Port"
- 4) Select the "Port Settings" tab.
- 5) Select "Advanced" button.
- 6) Change Latency Timer from 16ms to 8ms and OK the change.

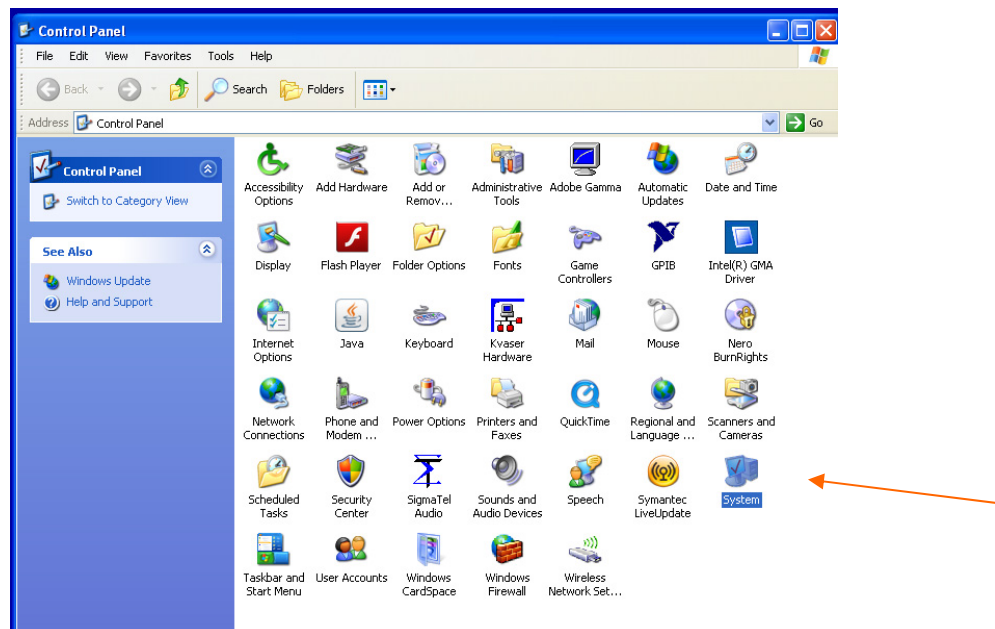
The following illustrates the Windows you would see when using Windows XP, Vista and Windows 7.

For Windows XP:

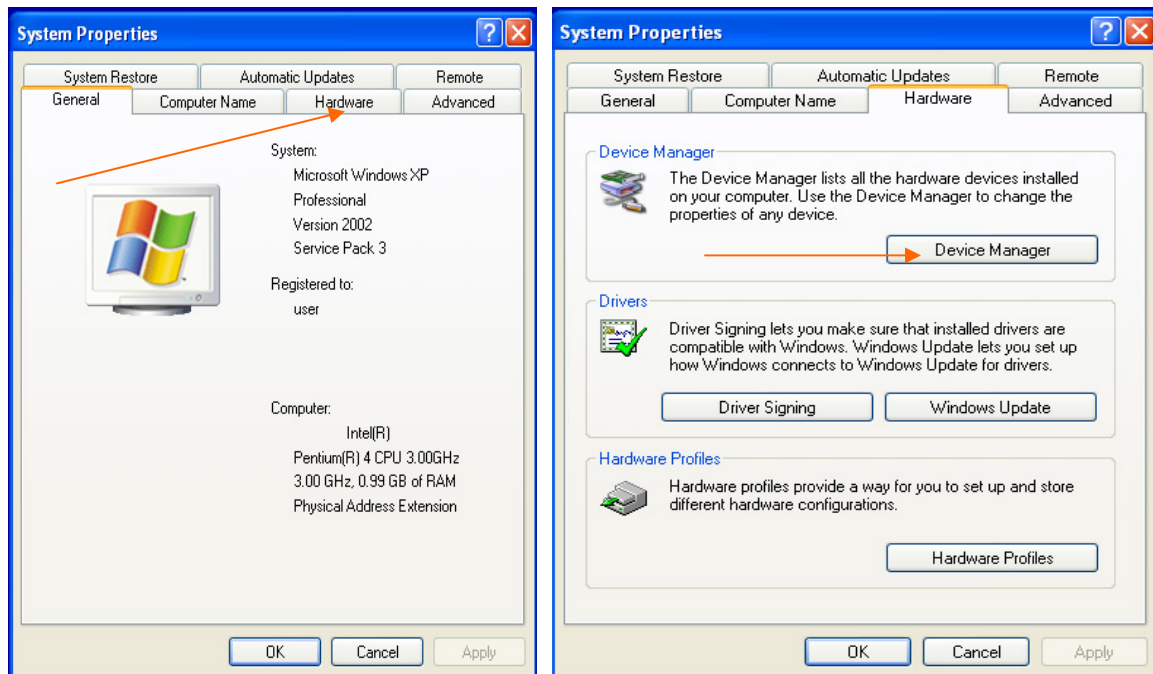
Click on the **START** button on the lower left corner of your computer screen, and then click on **Control Panel**, which is located on the right side of the panel that pops up.



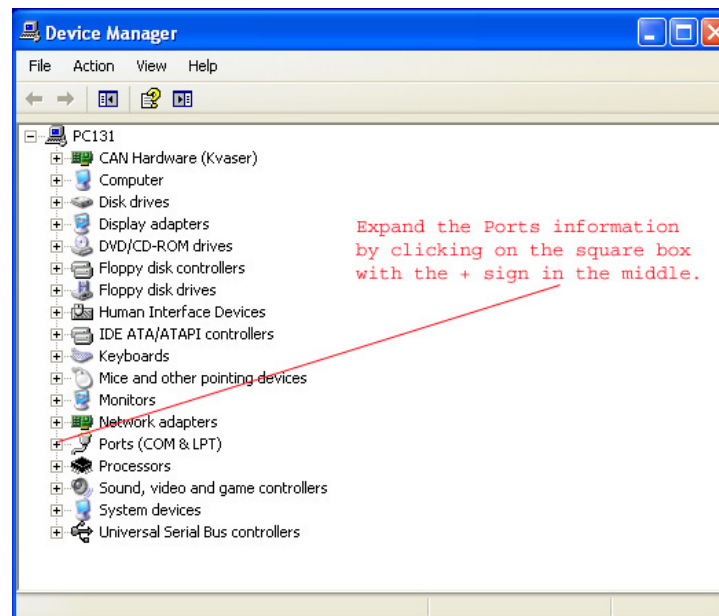
Once the Control Panel opens look for the **SYSTEM** icon and double click on it.



Once the System Properties window opens, click on the **Hardware** tab, and then click on the **Device Manager** button.

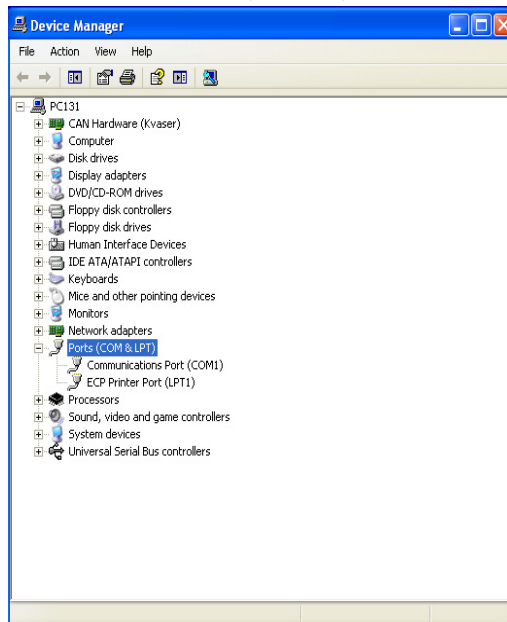


Once the **Device Manager** window opens, expand the **Ports (Com & LPT)** information by clicking on the square box with the (+) sign in the middle. **(Note: Do not have the communications cable plugged in at this time.)**

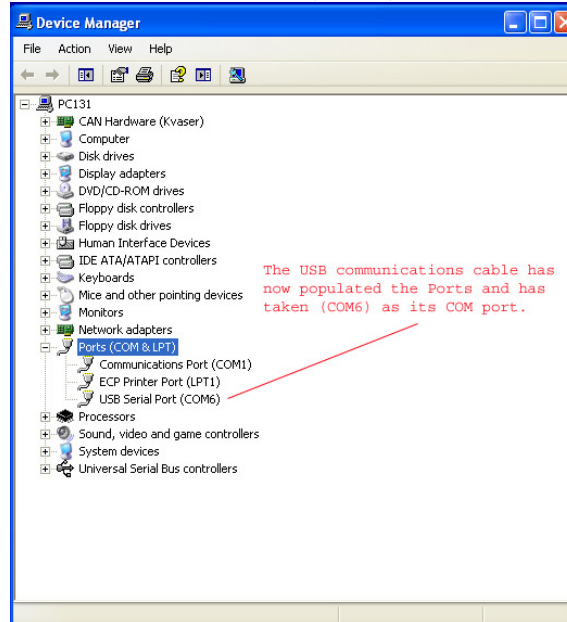


Once the Ports information is expanded, you will be able to see devices that have taken a Port number. Now plug in the communication cable, and wait for it to populate a Port. The images below demonstrate a typical setup.

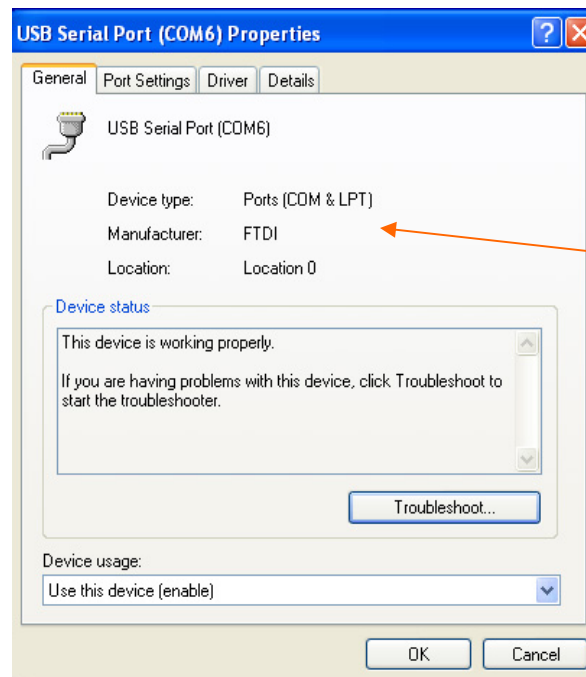
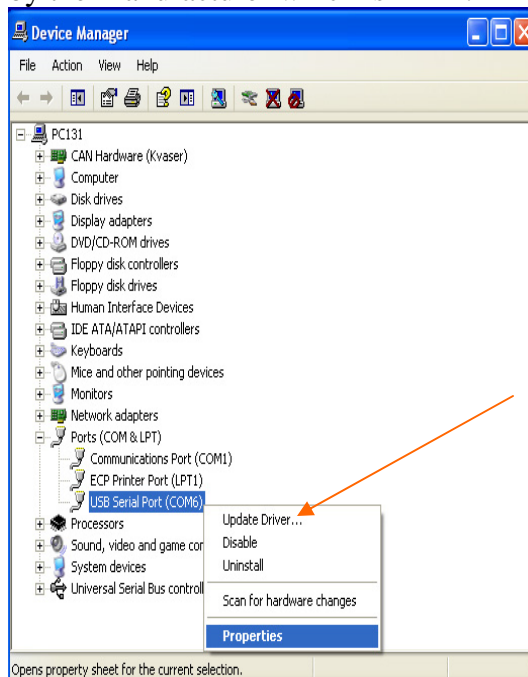
(Before)



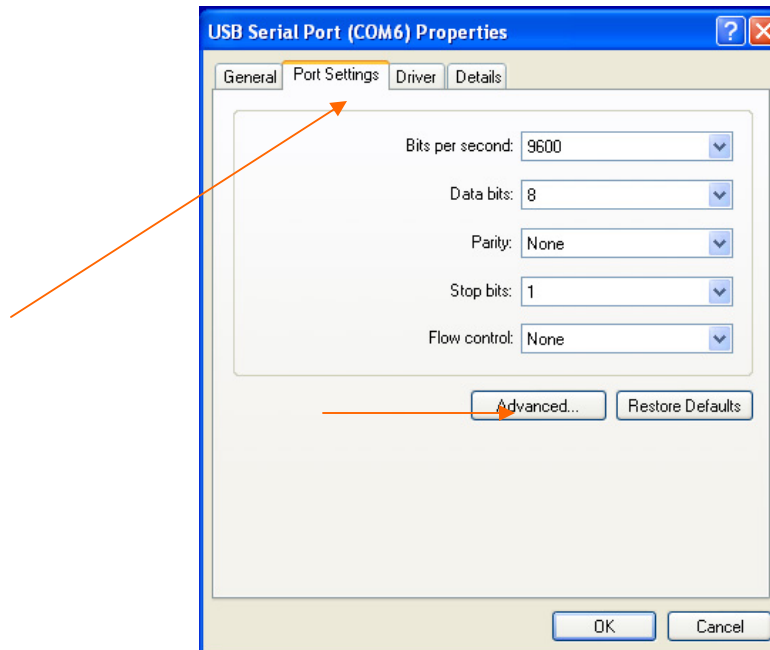
(After)



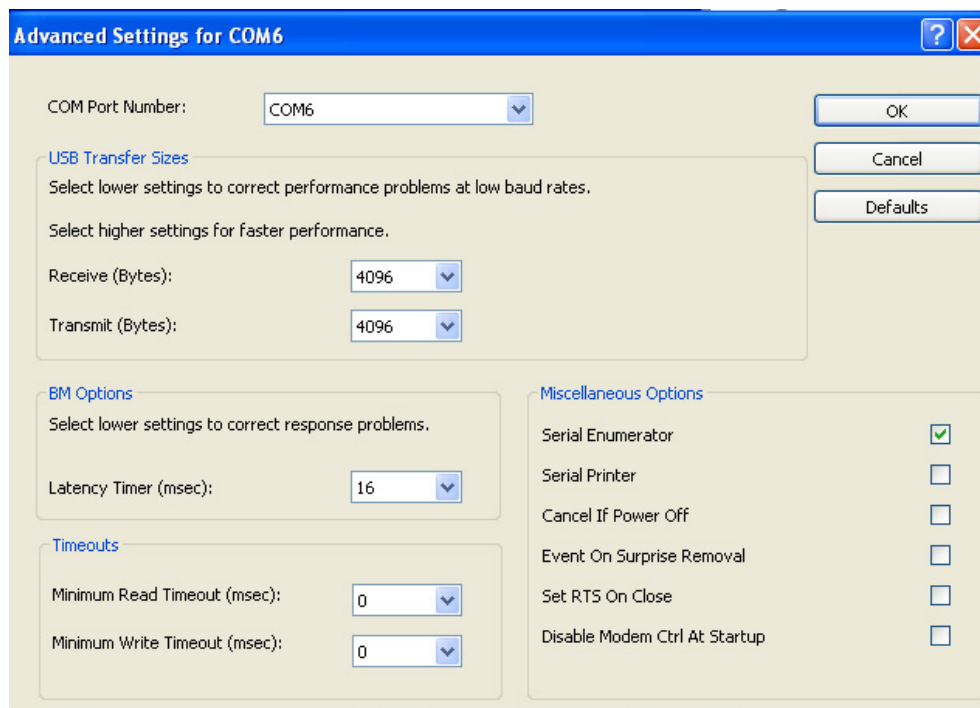
The communication cable has taken COM6 as displayed in the image above labeled (After). After the properties window opens, right-click on the USB Serial Port (COM6) item, and then click on **Properties**. You can verify that you have selected the right device by the Manufacturer which is FTDI.



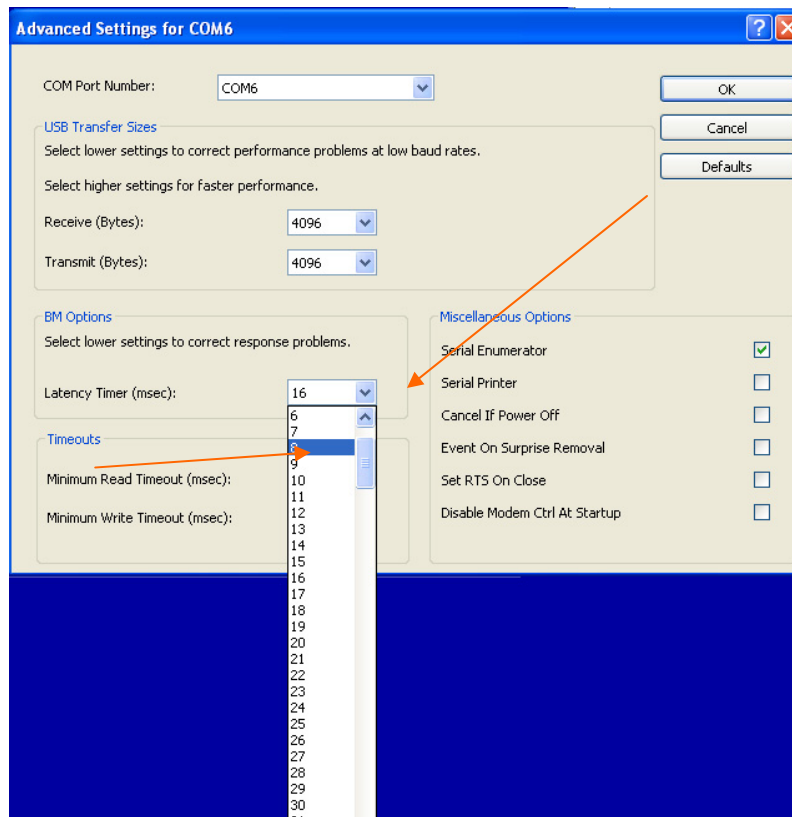
Click on **Port Settings**; then click on the **Advanced** button.



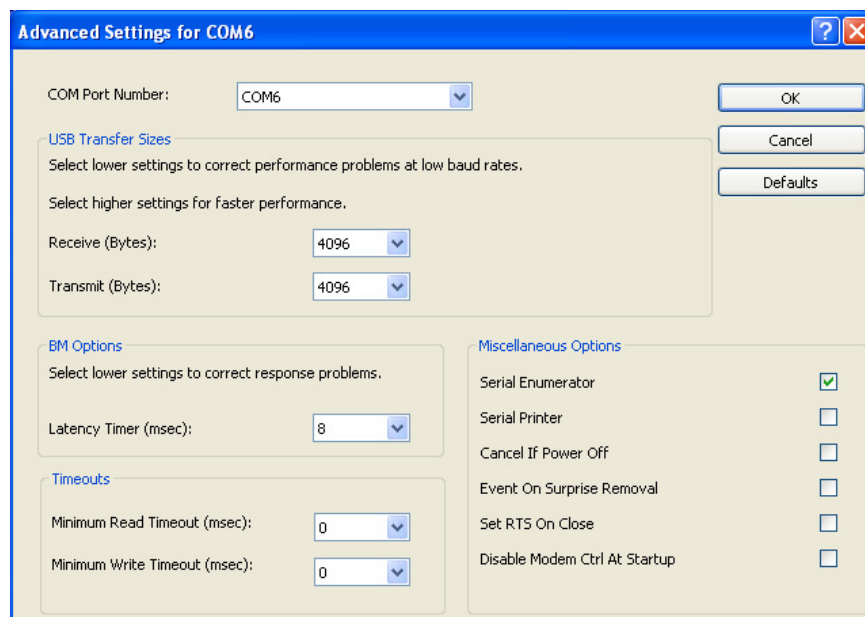
Once the Advanced Settings window opens, it should look similar to the image below.



Now under **BM Options**, you need to change the value of the Latency Timer from 16 msec to 8 msec. This is done by clicking on the checkbox to the right of the window to expand the values, and then select the 8 from the list.



When you are done, the Advance Settings for the COM port should look like the image below, with your unique COM Port number.

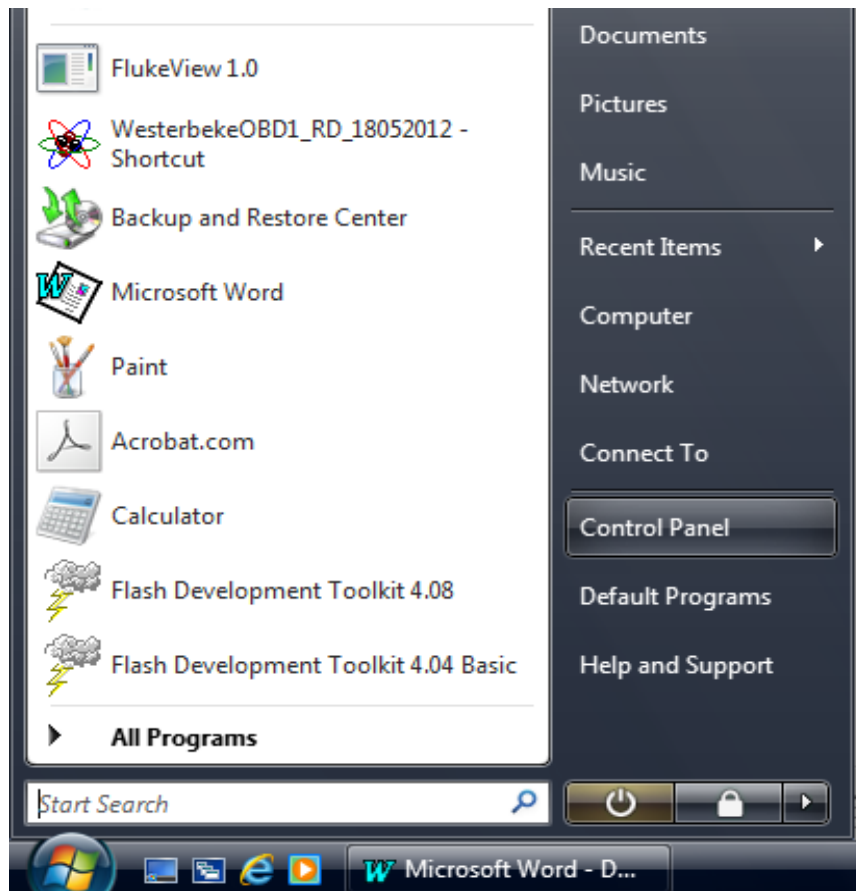


At this time you should note the COM port number that the communications cable has taken, because you will need to enter this number in the PC interface when you start up communications with the ECU. This number will need to be entered into the Interface every time that you re-open the interface.

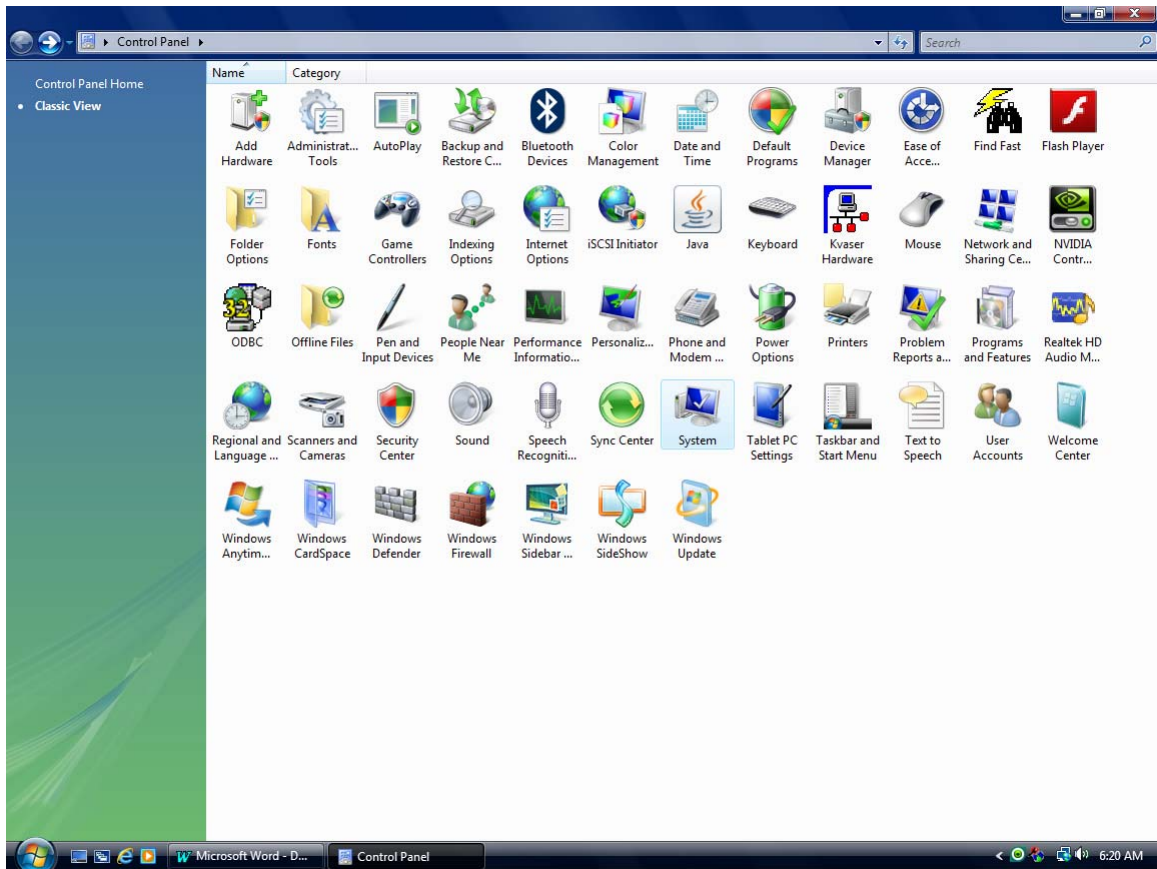
You can remove and re-insert the cable and the cable will continue to take the same COM port number every time. However, if you were to try to use another cable it would be treated as a separate new device and would have to be re-configured to the new Latency Timer value of 8.

For Windows Vista:

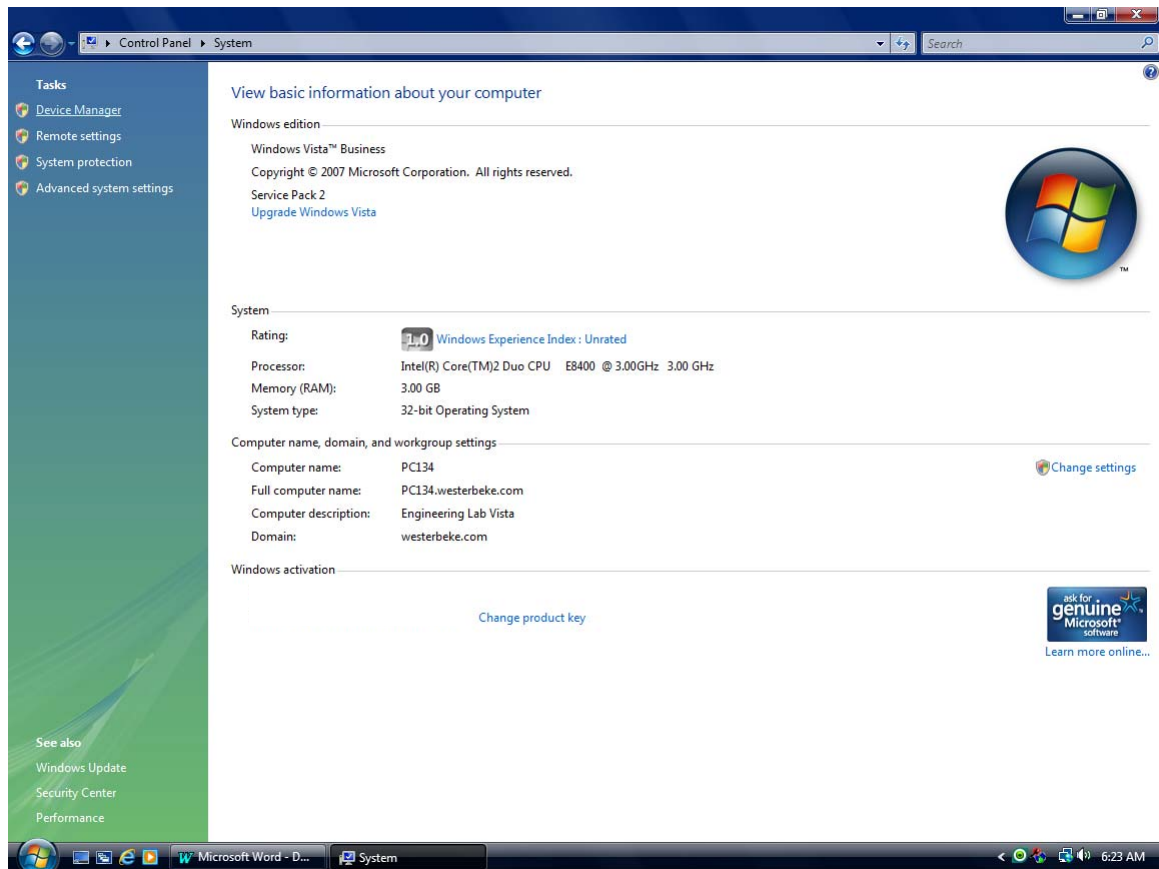
Click on the **START** button on the lower left corner of your computer screen, and then click on **Control Panel**, which is located on the right side of the panel that pops up.



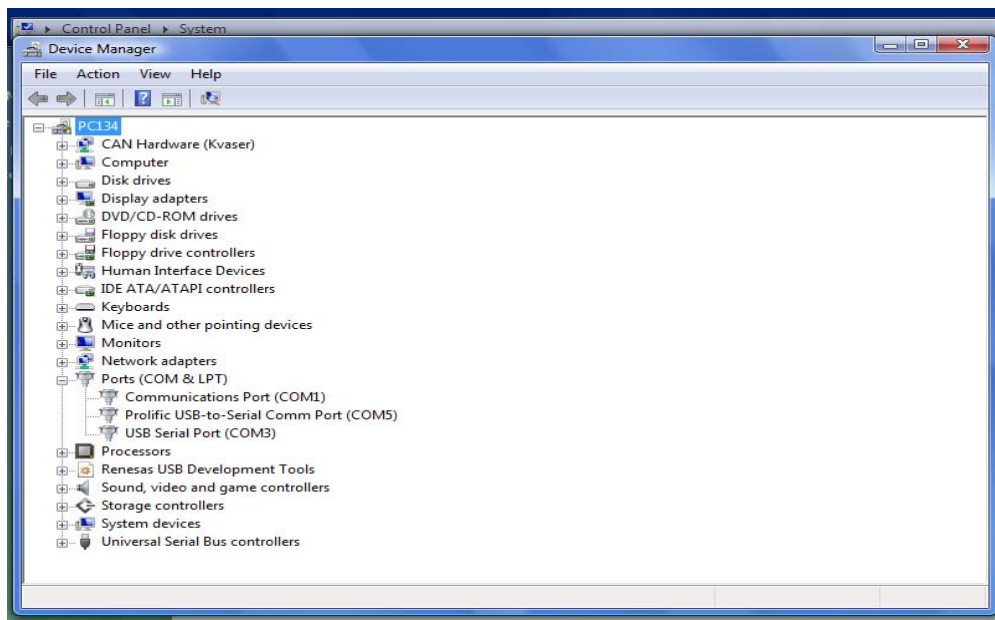
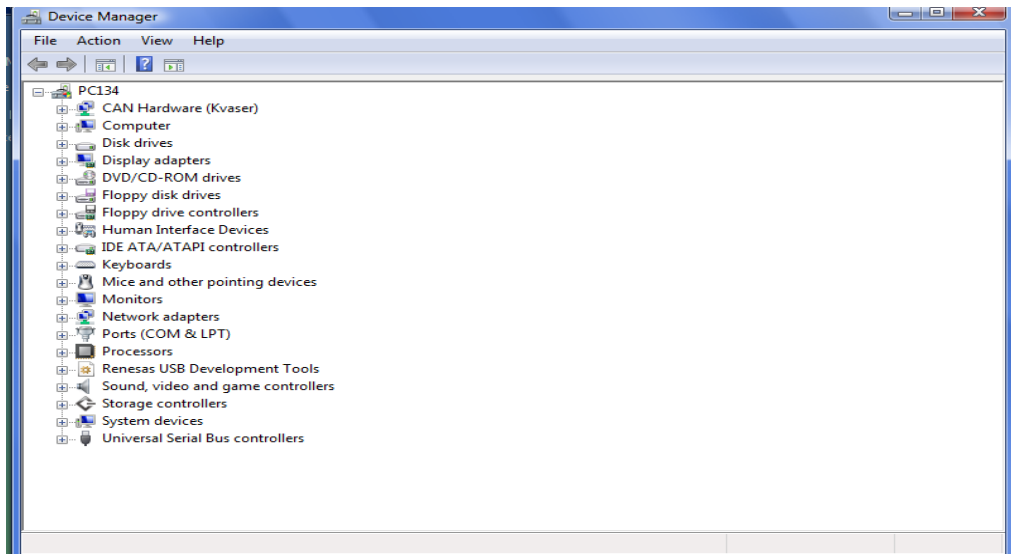
In the control panel double click on the System icon.



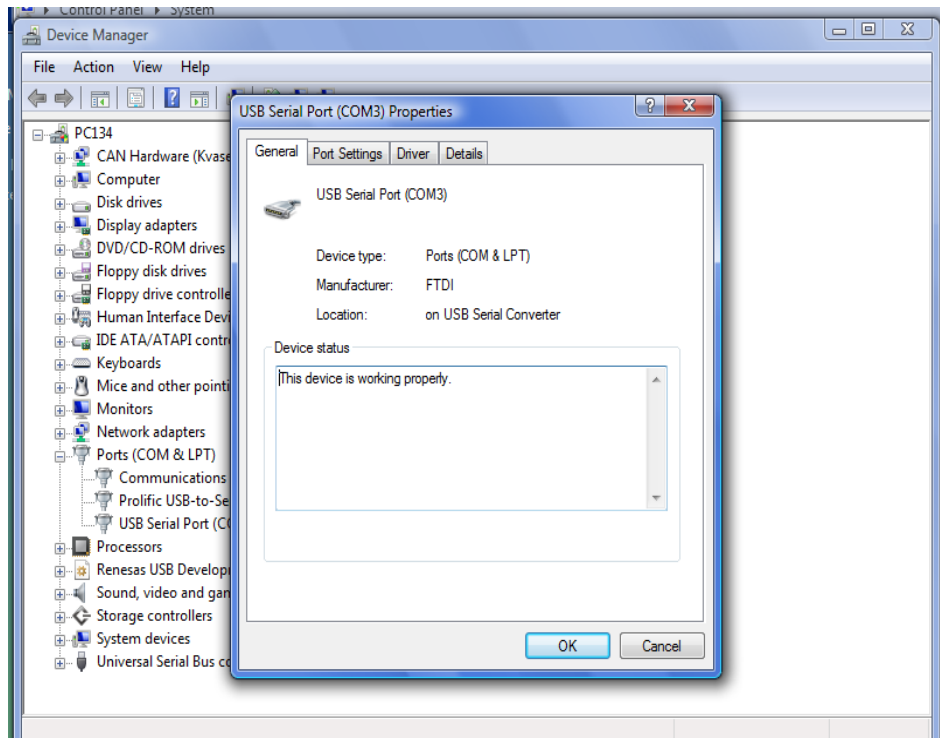
In the System panel select the Device Manager.



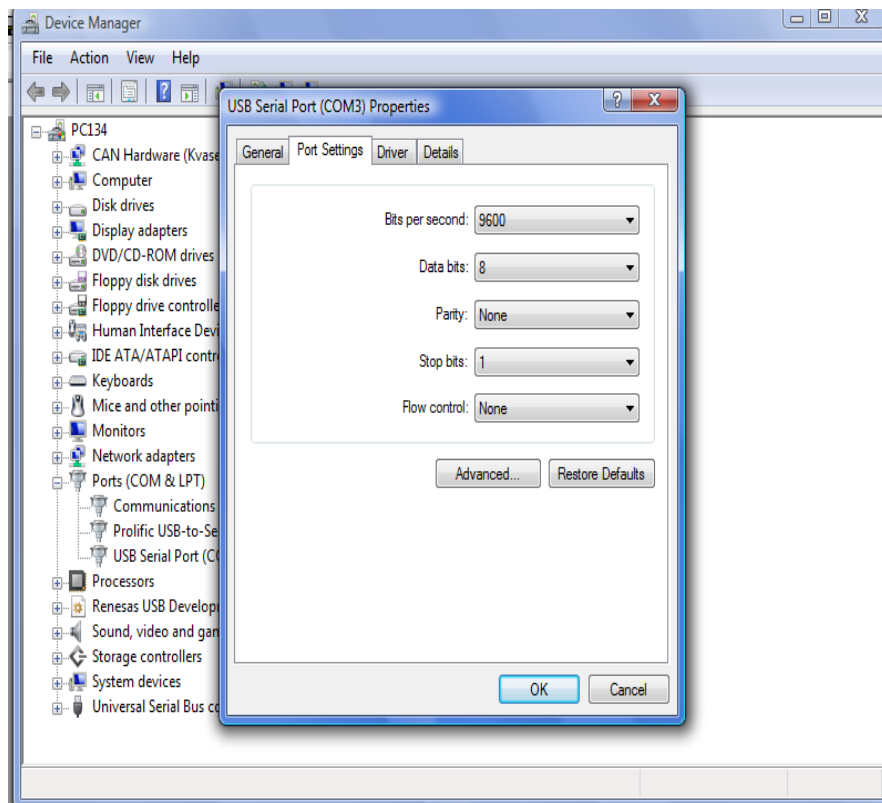
In the device manager expand Ports (COM & LPT).



Double click on “USB Serial Port.”



Go to the “Port Settings” Tab.



Now select the “Advanced” button.

Advanced Settings for COM3

COM Port Number: COM3

OK

Cancel

Defaults

USB Transfer Sizes

Select lower settings to correct performance problems at low baud rates.

Select higher settings for faster performance.

Receive (Bytes): 4096

Transmit (Bytes): 4096

BM Options

Select lower settings to correct response problems.

Latency Timer (msec): 16

Timeouts

Minimum Read Timeout (msec): 0

Minimum Write Timeout (msec): 0

Miscellaneous Options

Serial Enumerator ☒

Serial Printer ☐

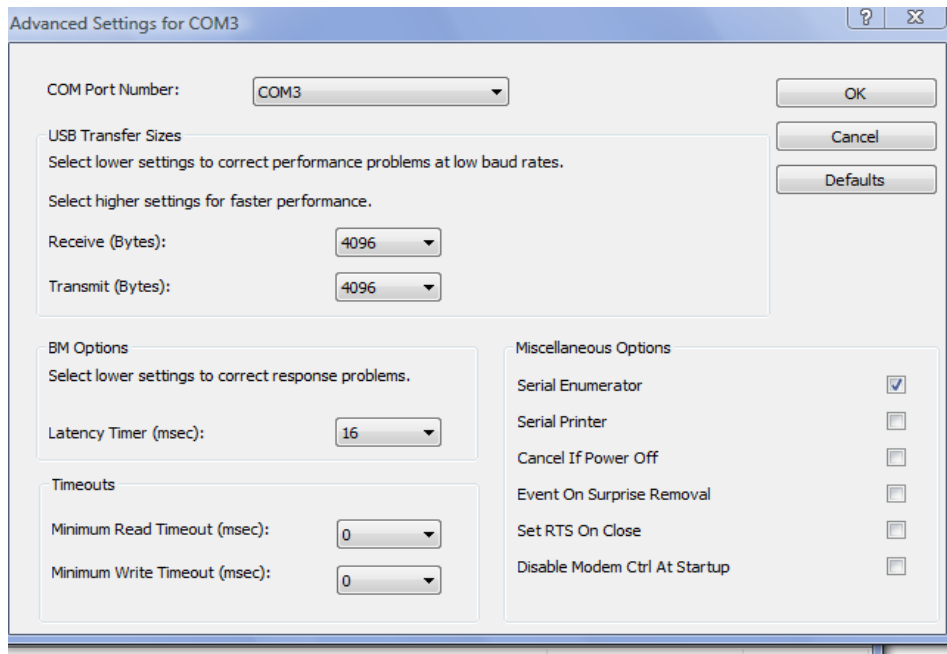
Cancel If Power Off ☐

Event On Surprise Removal ☐

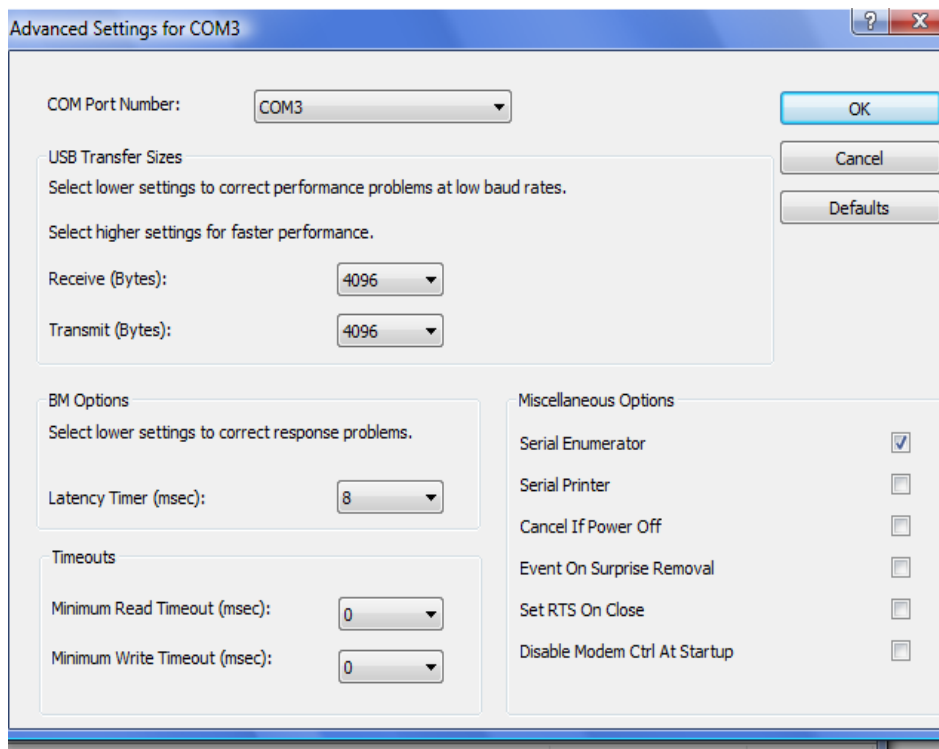
Set RTS On Close ☐

Disable Modem Ctrl At Startup ☐

Now change the latency timer from 16 to 8.

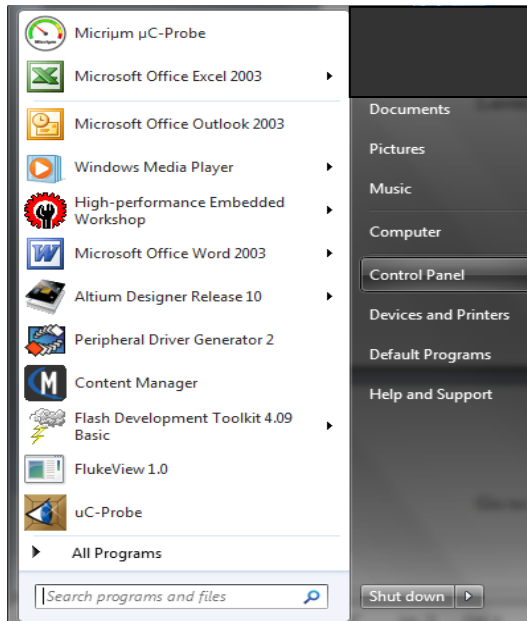


Once the Latency Timer has been changed from 16 to 8 then, accept the changes by selecting OK. This completes the modification of the VCP driver.

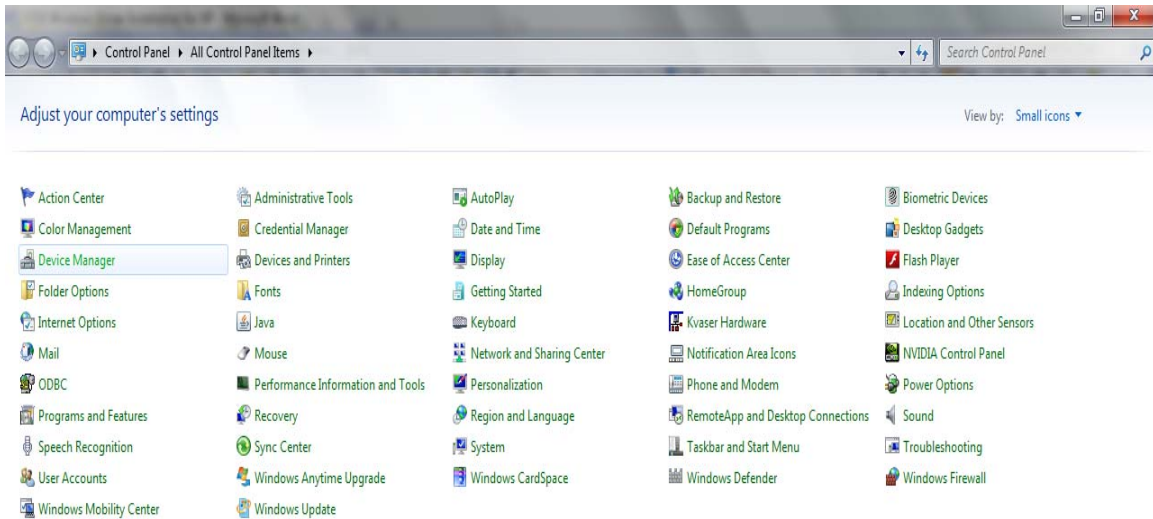


For Windows 7:

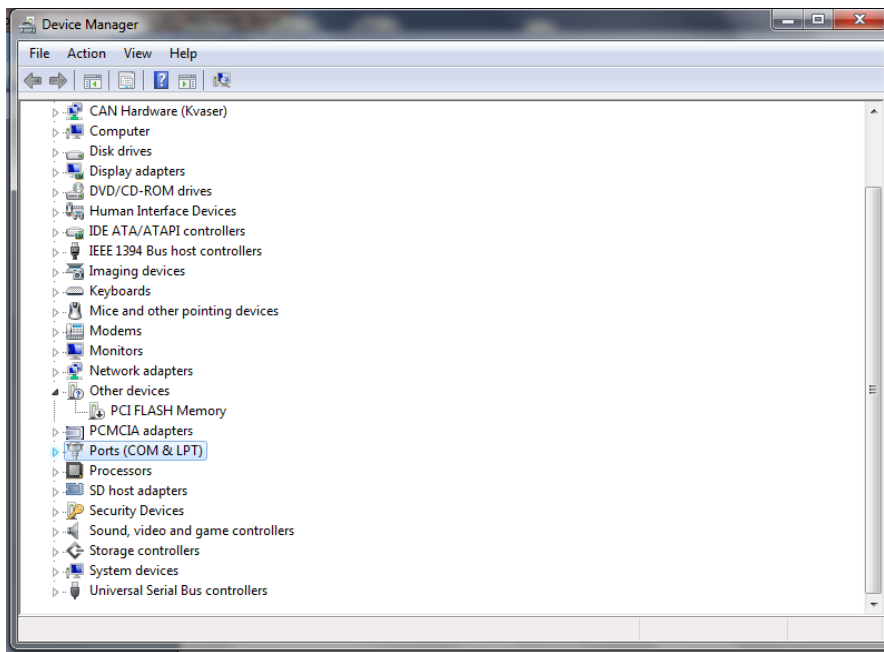
Click on the **START** button on the lower left corner of your computer screen, and then click on **Control Panel**, which is located on the right side of the panel that pops up.



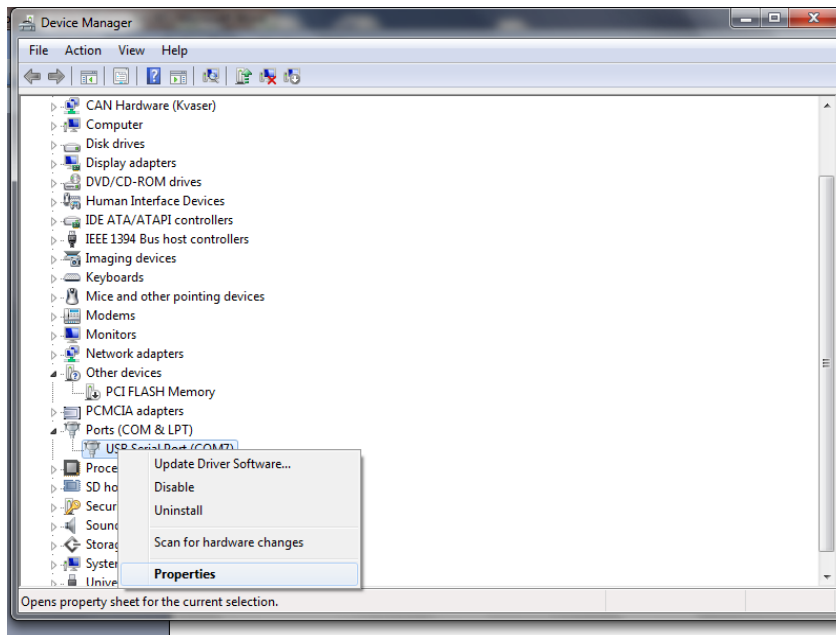
In the control panel select the Device Manager.



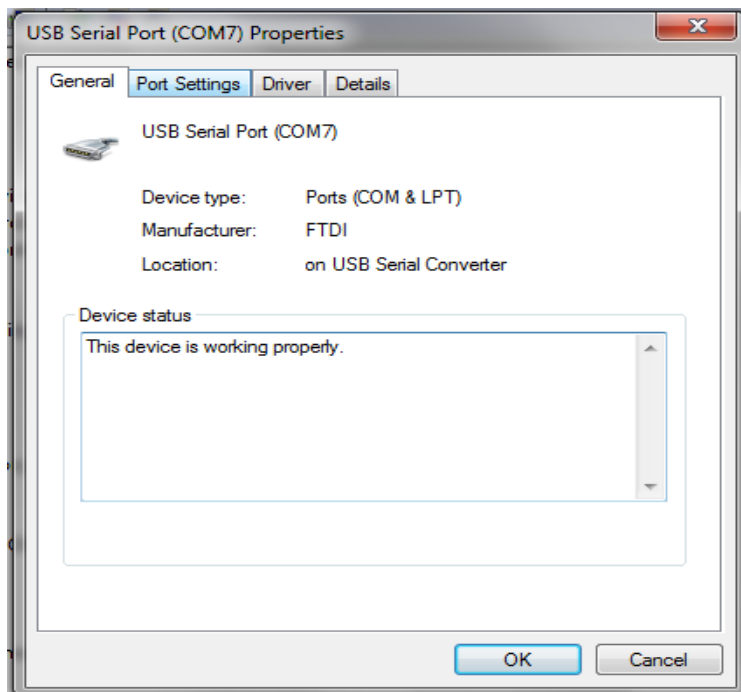
With the cable plugged into your computer's USB port, select the Ports (COM & LPT), then double click the left mouse button to expand.



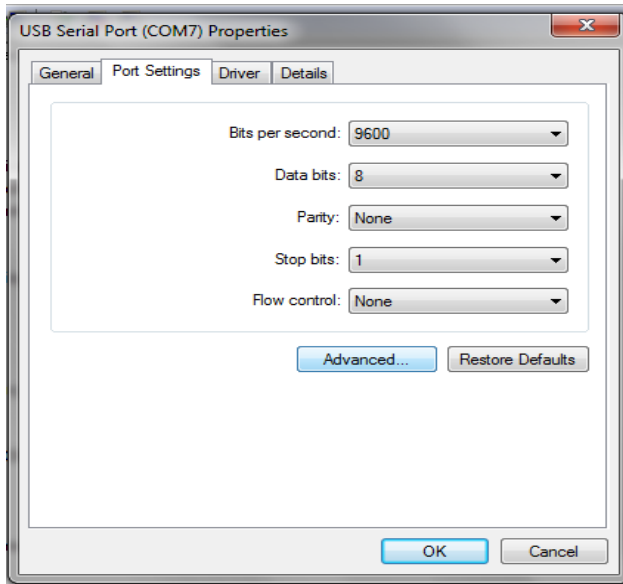
Right click on the “USB Serial Port” and select properties.



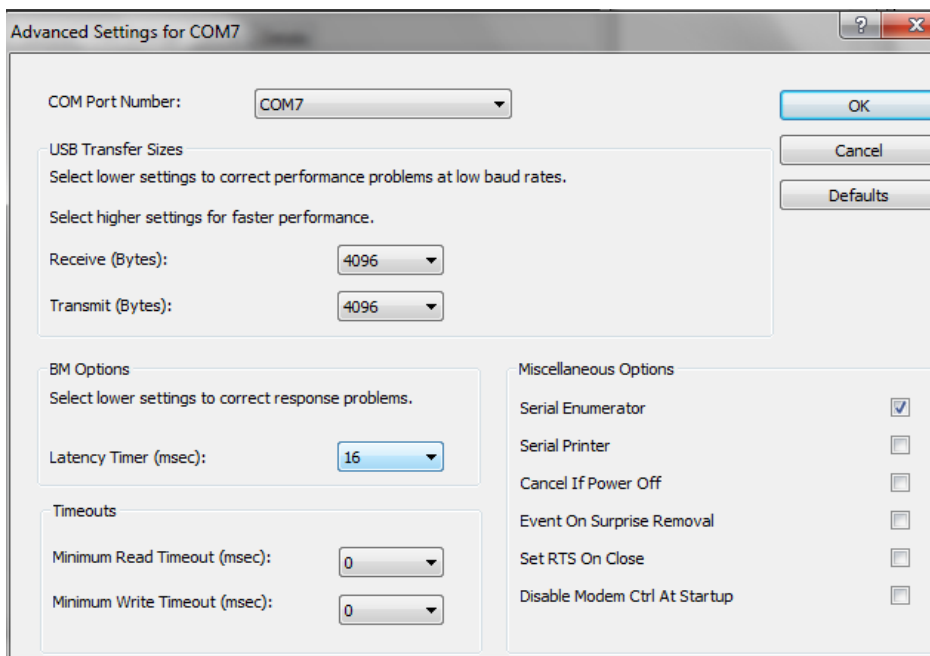
Select the port settings tab from the USB Serial Port Properties box.



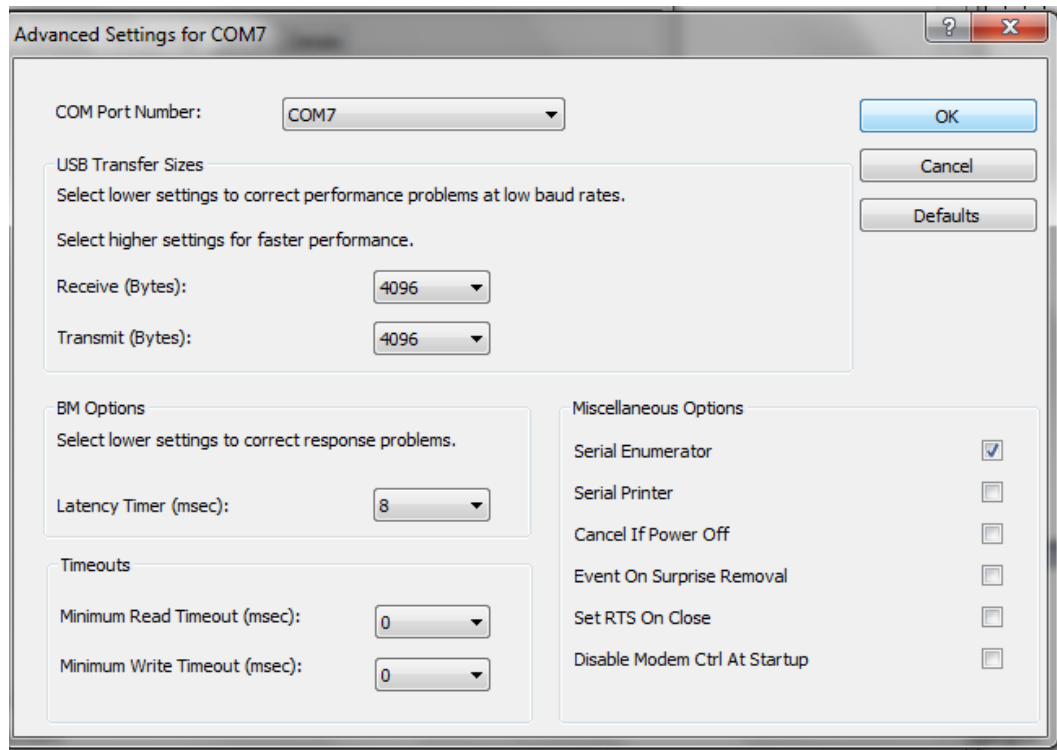
Under the port settings tab select “Advance”.



Now in the Advanced Settings box change the latency timer from 16 to 8.



Once the Latency Timer has been changed from 16 to 8 then, accept the changes by selecting OK.



This completes the update of the Virtual COM port driver using Windows 7.

Using the USB Cable #55684 with the different ECU types

Using the new USB cable is very similar to using the old style cable that had a serial connection. Most likely you were using a USB to Serial adapter to connect to your PC. With this new USB cable the operation still includes, turning off the DC breaker before connecting the cable, then picking the correct Communications (COM) port, then clicking on *Start Communicating...* to start the communications link.

Aligning the connector properly to Pin #1 is a little different than the older cable. The older cable had the wires exposed and you could see the RED wire that would align on top of Pin #1. Now the connector is covered, there is no more RED wire, and you cannot see the wiring. There is now a label on the connector indicating to align the label with the outer edge of the ECU. *If for some reason your label falls off and you cannot tell which way to connect it, simply try it in one direction and if you cannot communicate, flip the connector over in the other direction and try it. Once you are communicating you can add some label of your own to identify the proper direction.*

There is a slight change in operation on the older Low CO products. These products can be identified by the ECU type, which will be the EC10 family of ECU's. They can also be identified by having two Oxygen sensors instead one, and they do not have an *IDLE* mode. With no *IDLE* mode the engine must be running before you can communicate with the ECU.

After connecting the cable to the ECU and turning on the DC power you must depress the START/STOP switch in the Stop or Prime position before trying to start your genset.

Failure to do this step may prevent the genset from starting or may cause the engine to run badly if it does start. So please depress the STOP button after connecting the cable.

If your genset is an OBD1 model (20 -22.5kw) the ECU will be of the EC10 family. This procedure is not necessary because it has an *IDLE* Mode. After connecting the cable and powering up the genset you should be able to start communications and start the genset.

All of the gensets designed for the EC11 ECU will have no issue with the cable connection. This ECU is used on the multiport injection models.

Also all of the Diesel Line of D-Net products can use the cable without any issues.

When in doubt, you cannot go wrong by depressing the STOP button before trying to start your genset.