



**SAR Technology Inc.**

<http://sarotechnology.ca>

[sarotechnology@telus.net](mailto:sarotechnology@telus.net)



## 'Incident Commander Pro' Radio-Based Automatic Tracking System

### How to Make "In Use" COM Ports Available for GPS Tracking



When you connect a GPS USB cable, or a GPS-radio serial-to-USB cable, to the computer's USB port for 'Incident Commander Pro' GPS tracking, Windows assigns a COM Port number to the device. If you use a different USB Port the next time you plug it in, or if you're also using a USB printer, they might get assigned a different COM Port number each time you use them. When a new port number is assigned, Windows doesn't always clear the old port number so that it will still show as "in use".

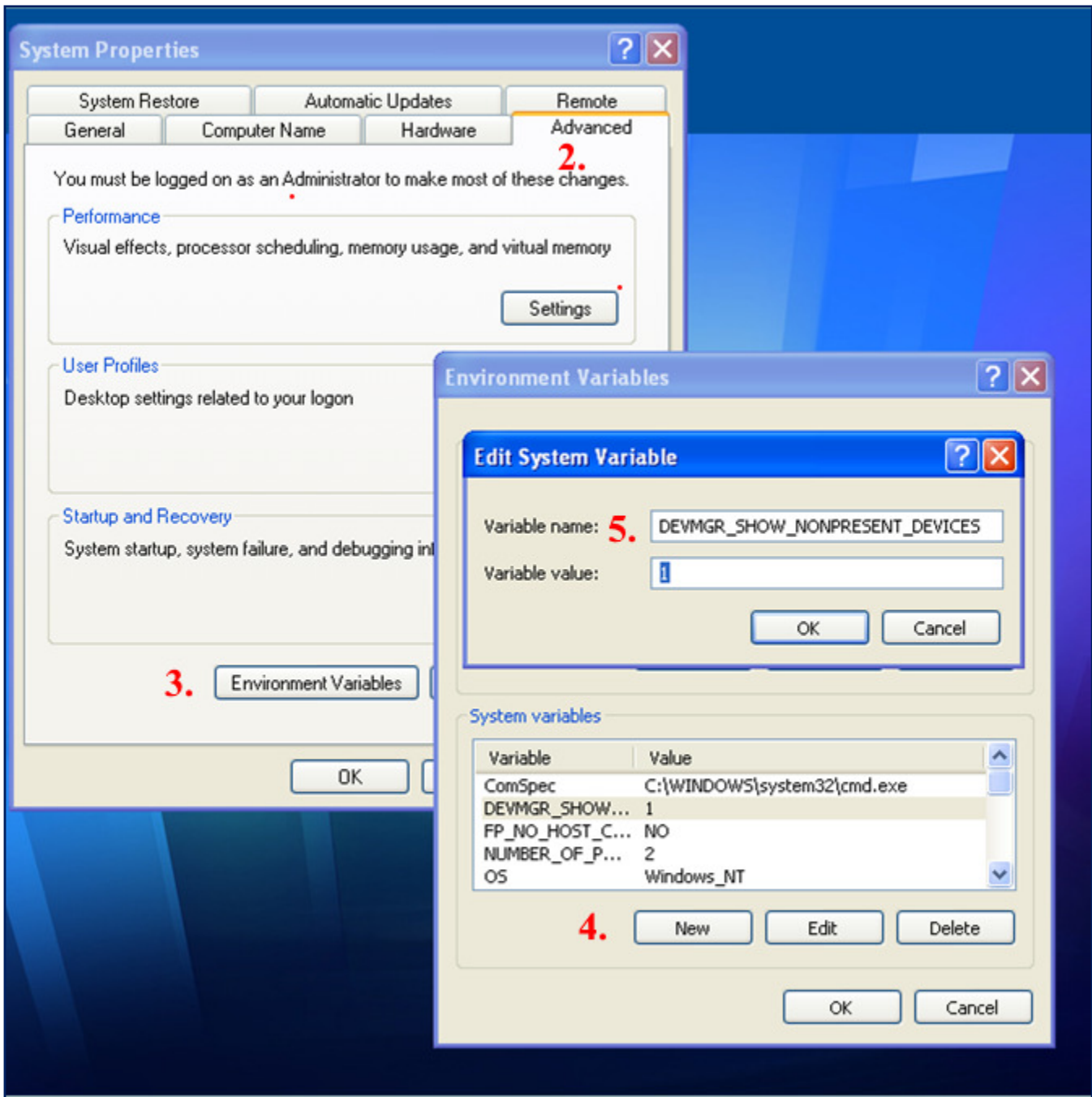


Incident Commander Pro' GPS tracking prefers to use low COM port numbers (e.g. 1 to 5) so you may eventually run out of available ports. Clearing the "in use" ports that aren't really being used is a bit cumbersome, so here's a step-by-step procedure to follow:

Window's Device Manager will show you a list of ports that are currently being used, but will not show ports that are assigned but *not* currently being used ("in use"). The first step is to make these "in use" ports visible on the list. (The **red numbers** on the picture match the numbers in the list below.)

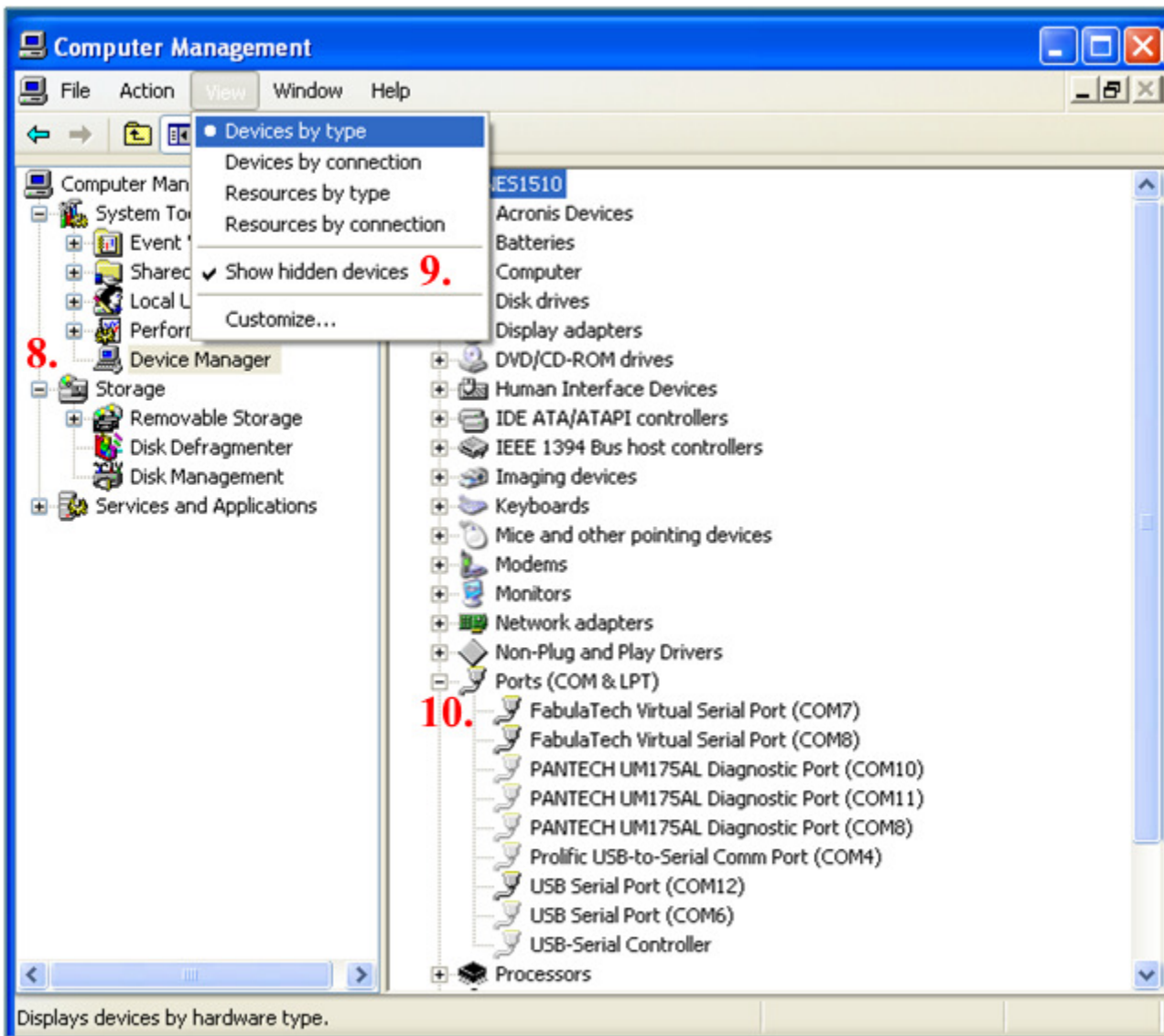
1. Go to the Start button or Desktop, right-click on My Computer and select **Properties**.
2. In the System Properties dialog box, select the **Advanced** tab.
3. Click the **Environment Variables** button.
4. In the Environment Variables dialog box, locate the System Variables panel and click **New**.

Picture 3



5. In the New System Variable dialog box, type **DEVMGR\_SHOW\_NONPRESENT\_DEVICES** in the Variable Name text box and type **1** in the Variable Value text box.
6. Click OK twice.
7. To view the non-present devices, go to the Start button or Desktop, right-click My Computer, and select **Manage**
8. Click **Device Manager**.
9. Pull down the View menu, and select **Show Hidden Devices**.

Picture 2



**10.** Click on the + sign in front of **Ports (COM & LPT)**. The list will now show all the assigned ports, whether they are connected or not.

Now you can delete ports from the list that are not needed. If you see the same device listed on several different ports, you can remove the extra ones. As you can see in Picture 2 above, “USB Serial Port” (for a USB Computer Timing Interface) is assign to both COM12 and COM6. Since the highest port number is the last one assigned, COM6 should be deleted.

11. From the Device Manager screen shown above, right-click on the COM port you want to remove and select **Uninstall**.

12. Repeat as necessary to remove other unwanted devices from the list.

**NOTE:** *If you accidentally remove the wrong device, you will need to reinstall the driver before you can use it again.*

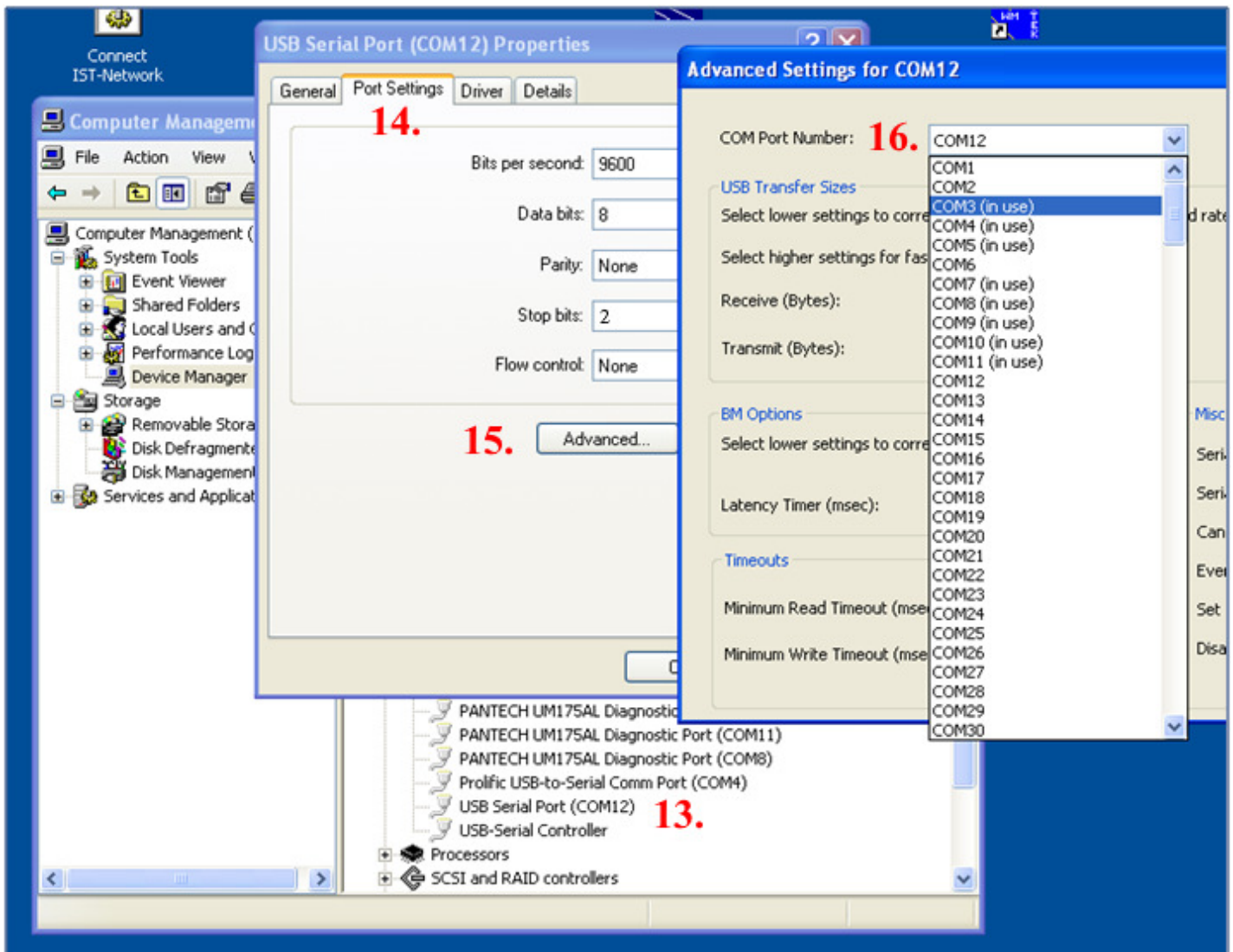
Once you have removed the duplicate port assignments, you can reassign a low port to a number (e.g. between 1 and 5) for the Serial to USB cable to so send the GPS-Device or GPS-radio data to ‘Incident Commander Pro’ GPS tracking.

**13.** From the Device Manager screen shown above, right-click on the COM port you want to change and select **Properties**.

**14.** In the System Properties dialog box, select the **Port Settings** tab.

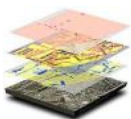
**15.** Click the **Advanced** button.

Picture3



16. Click the down arrow next to the COM Port Number box.

17. You can now select an available COM port between 1 and 5 (or higher). In this example, COM6 is now available. The preferred COM port settings are: **4800** or 9600 Baud (Bits per second), Data Bits: **8**, Parity: **None**, Stop Bits: **2**, Flow Control: **None**.

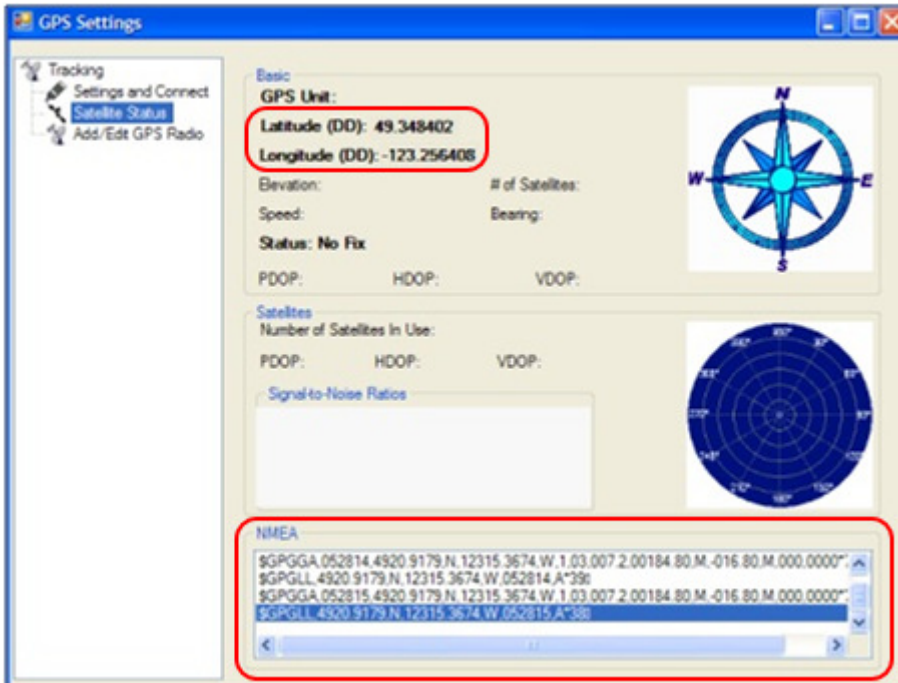


18. In the 'Incident Commander Pro' GIS Module go to **Tracking Tools... GPS Tools... GPS Setup...Settings & Connect COM Port** and enter the same COM port number and Baud Rate as entered in Step 17 above.

19. When the GPS-device or GPS-radio has been cable-connected to the computer USB port and the COM port becomes activated click the '**Connect**' button, followed by *quickly* clicking the GPS-radio to begin data transmission.

20. The **Tracking Tools... GPS Tools... GPS Setup... Satellite Status** screen should then display the streaming raw GPS data in the NMEA GPS Data window, with the Latitude and Longitude values displayed in decimal degrees (DD) above (See Picture 4 below).

Picture 4.



Streaming GPS tracking data displayed in the NMEA GPS Data window and Latitude Longitude locations displayed above in Decimal Degrees (DD).

21. **GPS Tools... Show GPS Location and Direction** should then display these locations on the GIS map.

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