600S UPDATE

Start with the 600S receiver unplugged from power & connect computer to 600S cable on Port A or Port B

Note: Port A & Port B are direct connect to the GPS board. Unlike the P300 the 600S has it's own port for RTK so if you have an RTK unit you can still update through either port and not switch the configuration first

Items you will need

1. Download from http://ravenhelp.com/Product-Support/Guidance-and-Steering/GPS-Receivers.aspx click on Software Updates & then click 600S.
2. USB to serial adapter.

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GPS RECEIVER UPDATE RECOMMENDATIONS
DOES THE LAPTOP HAVE A SERIAL PORT?

KNOW YOUR COM PORTS

You will need to know which COM port your computer is using for the receiver connection in order to update using WinLoad. Use the instructions below to determine which COM port is being used
.

If your laptop computer has a serial port, you can connect it to the receiver using a straight-through serial cable. However, most newer laptops do not have a serial port for connecting with a receiver. For these computers, a USB-to- Serial adapter will be needed. Raven offers a supported adapter. Part number (524-0002-063).

HAVE ADEQUATE POWER

It is always recommended to have constant 12 volts to the receiver. If the receiver is running off of machine voltage, always have the machine running when applying the update. Any issues with voltage that occur during the update can cause the receiver to fail, after which it will need to be sent in for repair.
Some GPS engine updates can take 30 minutes or longer, so having a power supply for laptops is recommended over using just the internal batteries.

If your battery isn't outputting a full 12 volts you may not notice unless you measure it. The receiver will power up even if the voltage is under 10 volts. You will not only have issues with updating but also the functionality of the receiver. Differential issues would occur.
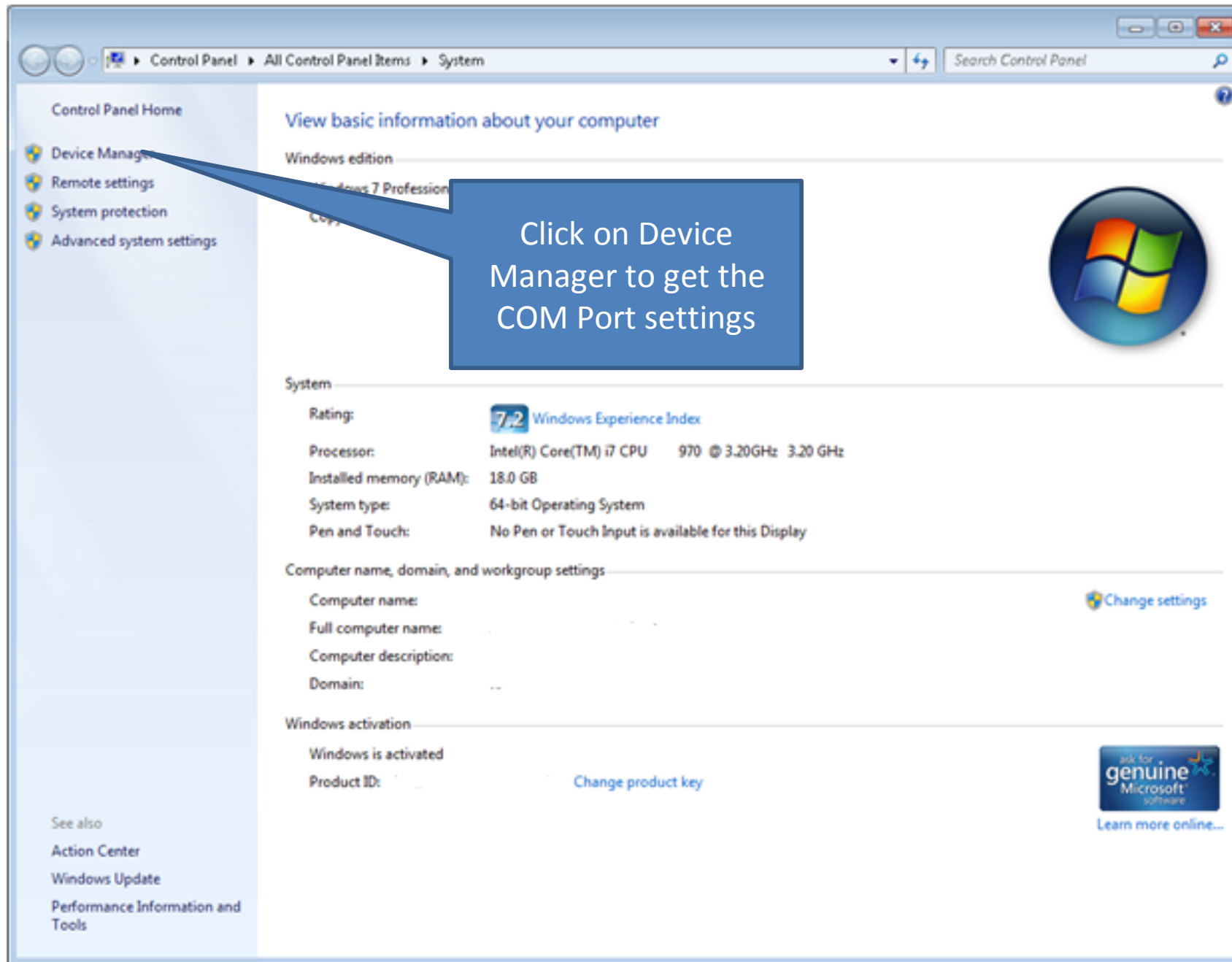
Your computer COM Setup

2. Right Click on My Computer

3. Click on Properties
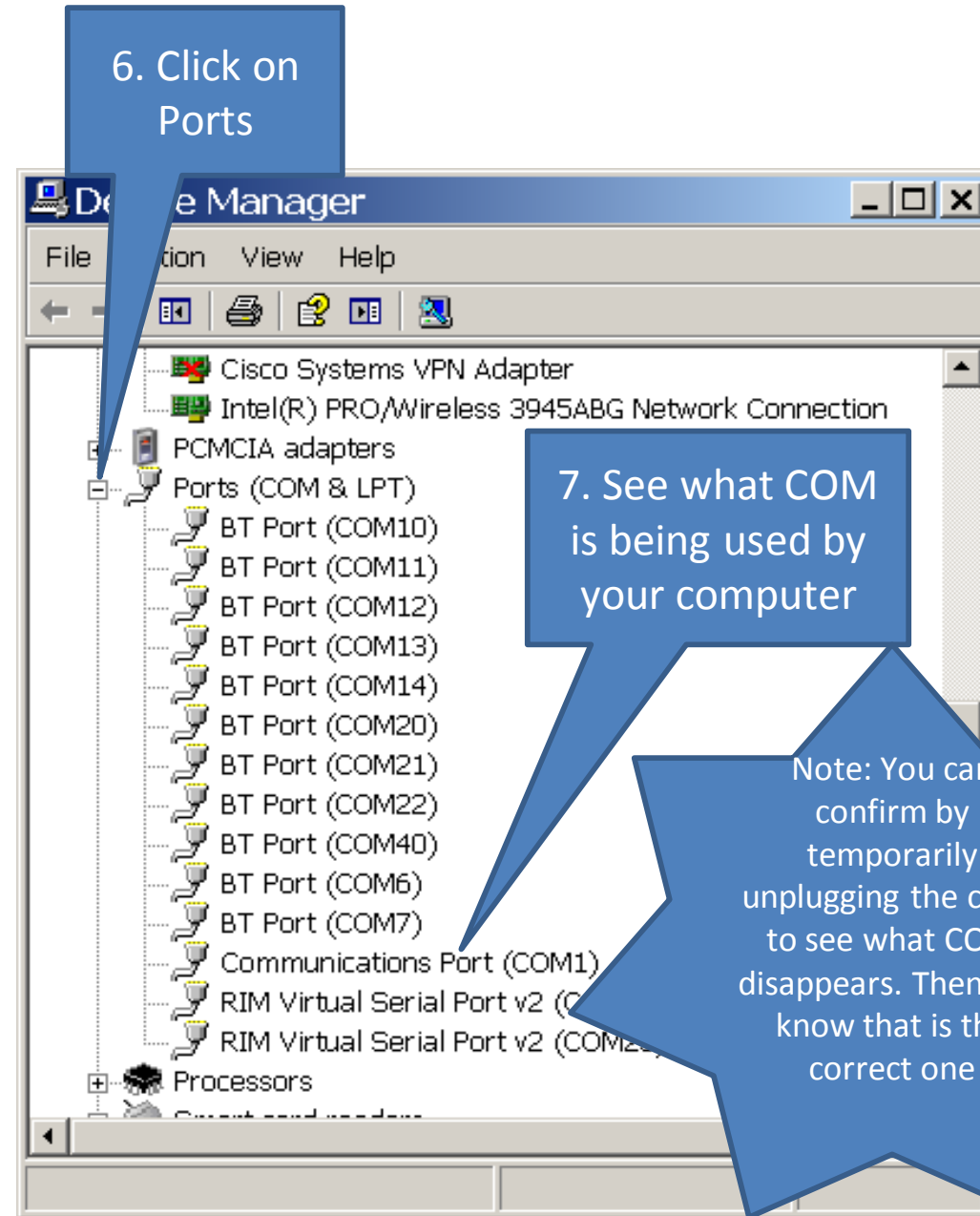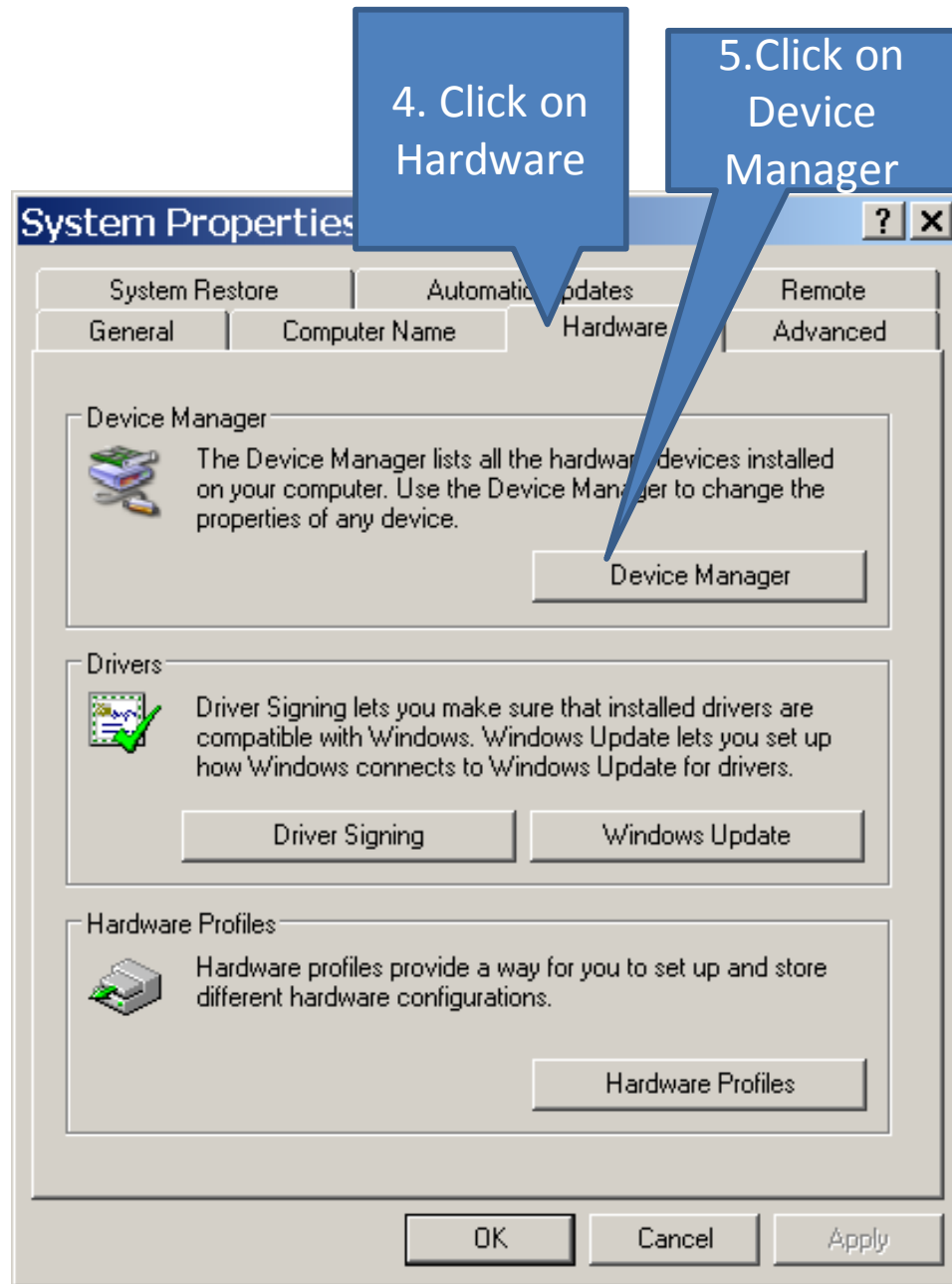
1. Click on Start

Installation:

1. Unzip the "RavenLoader_3.622_2.05.0013_1.22.010" file.
2. Connect the COM port on your PC to Port B of the Phoenix 300 using the supplied cable. (115-0171-272). If you do not have a COM (9-pin serial) port on your pc, you will need to get a USB to Serial adaptor.
3. Set the baud rate to 19,200 on the Port B configuration screen on the receiver.
4. In the folder you extracted, run the Ravenloader.exe Program.
5. Click on "File" and then "New".
6. Click on "COM Port" in the top toolbar and then "settings".
7. Set the COM Port number to match the port number you are using on your PC. If you are using a USB to Serial adaptor, you may have to verify which COM port is assigned to the adaptor. Here's how to verify the COM port if needed:
   1. Right click on "My Computer"
   2. Left click on "Properties"
   3. Choose the "Hardware" tab.
   4. Select "Device Manager".
   5. Click on the plus (+) sign next to "Ports (COM &LPT)" Here you will see what the COM port number is.
8. Click the "OK" button.
9. Click the "Detect Receiver Type" button.
10. If updating the Raven front panel software, click the "Update Front Panel" button. This will update both the Raven software and Novatel software.

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Windows 7 or Windows Vista screenshot

Click on Device Manager to get the COM Port settings

COM Port Setup

4. Click on Hardware

5. Click on Device Manager

6. Click on Ports

7. See what COM is being used by your computer

Note: You can confirm by temporarily unplugging the cable to see what COM disappears. Then you know that is the correct one

System Properties

| System Restore | Automatic Updates | Remote |
| General | Computer Name | Hardware | Advanced |

Device Manager

The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.

[Device Manager]

Drivers

Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.

[Driver Signing]   [Windows Update]

Hardware Profiles

Hardware profiles provide a way for you to set up and store different hardware configurations.

[Hardware Profiles]

[OK]   [Cancel]   [Apply]

Device Manager

File   Action   View   Help

- Cisco Systems VPN Adapter
- Intel(R) PRO/Wireless 3945ABG Network Connection
- PCMCIA adapters
- Ports (COM & LPT)
  - BT Port (COM10)
  - BT Port (COM11)
  - BT Port (COM12)
  - BT Port (COM13)
  - BT Port (COM14)
  - BT Port (COM20)
  - BT Port (COM21)
  - BT Port (COM22)
  - BT Port (COM40)
  - BT Port (COM6)
  - BT Port (COM7)
  - Communications Port (COM1)
  - RIM Virtual Serial Port v2 (C
  - RIM Virtual Serial Port v2 (COM2
- Processors

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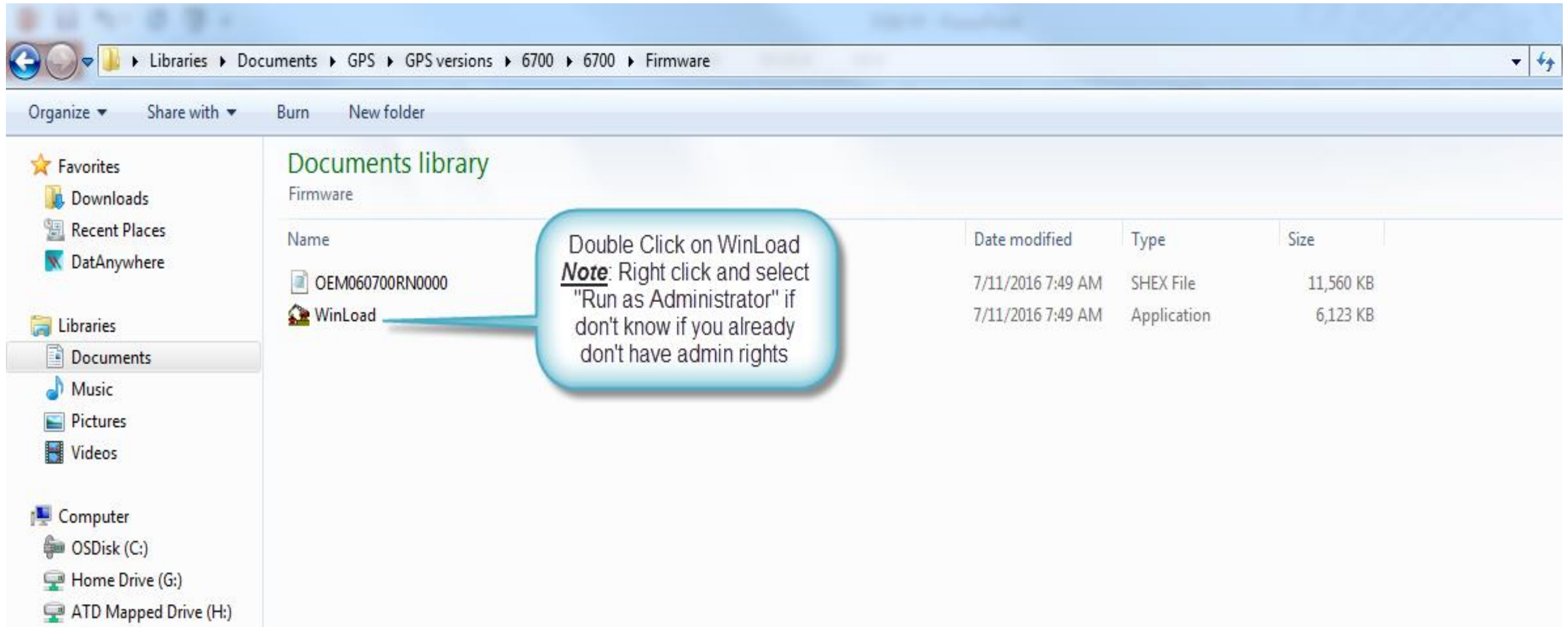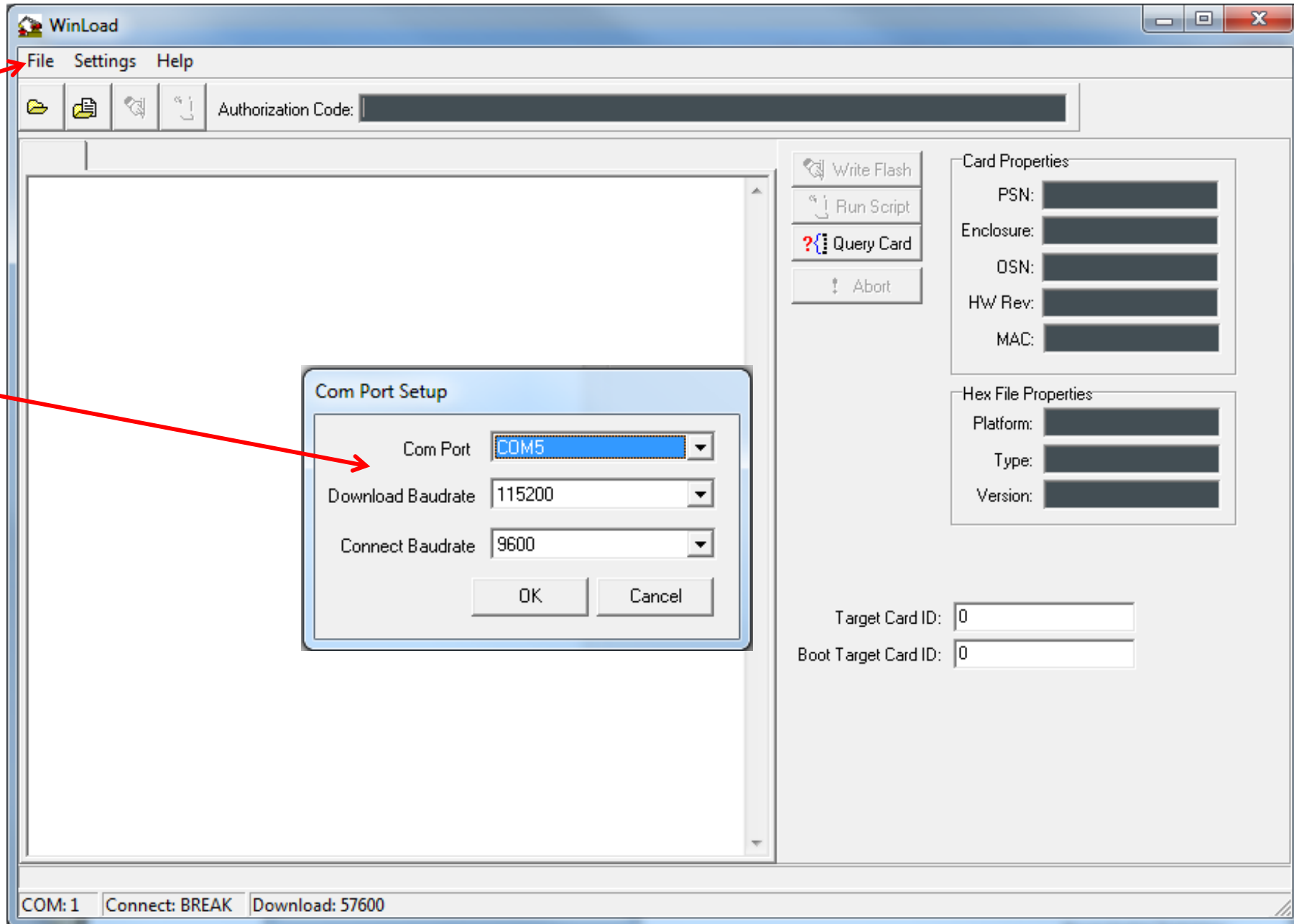
600S GPS UPDATE

Unzip the Update zip file into a folder on your computer that you downloaded from ravenhelp.com. The results should look like: Note: filename may differ from what is shown
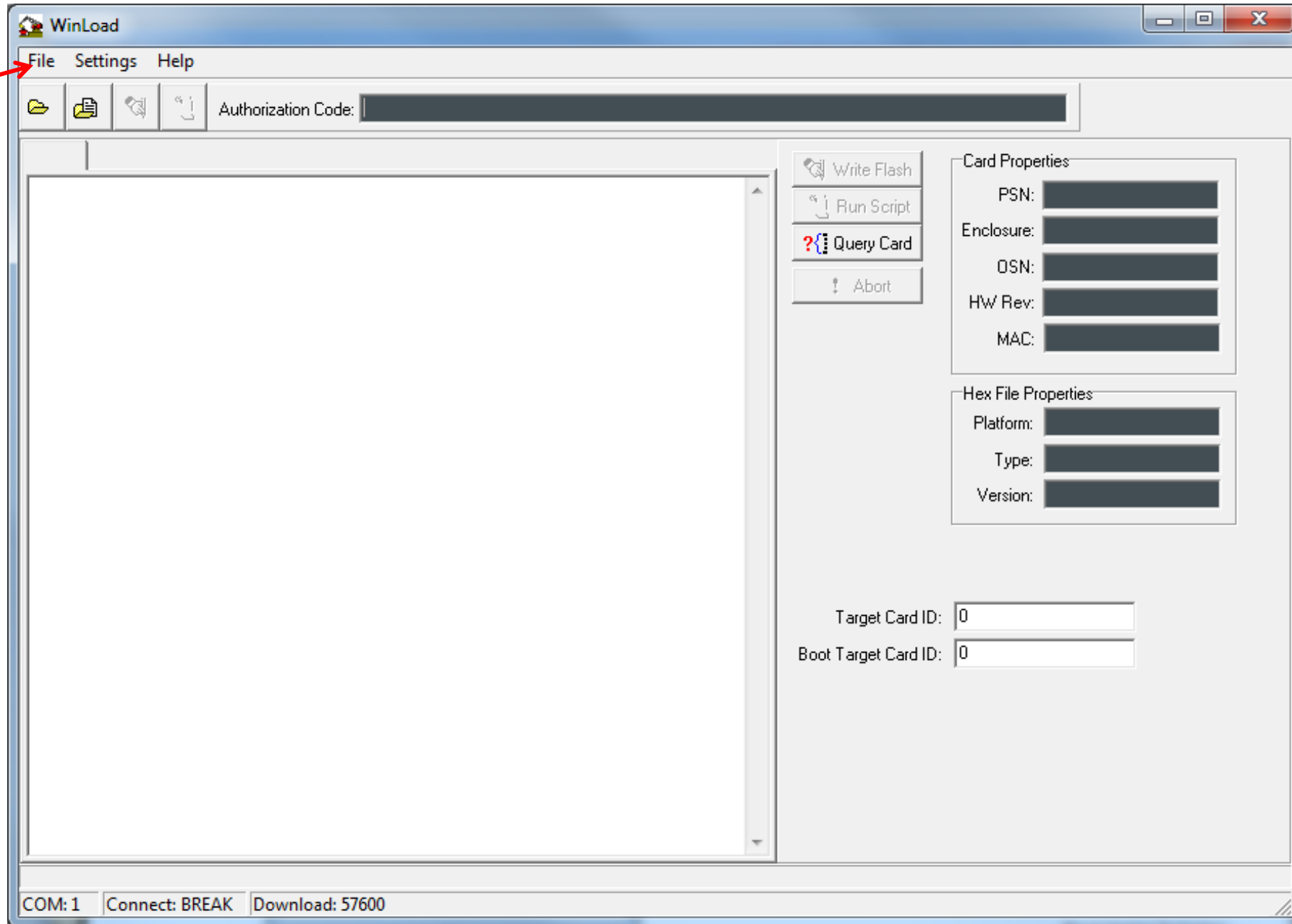
600S GPS UPDATE

1.) Select "Settings" then "COM Settings"

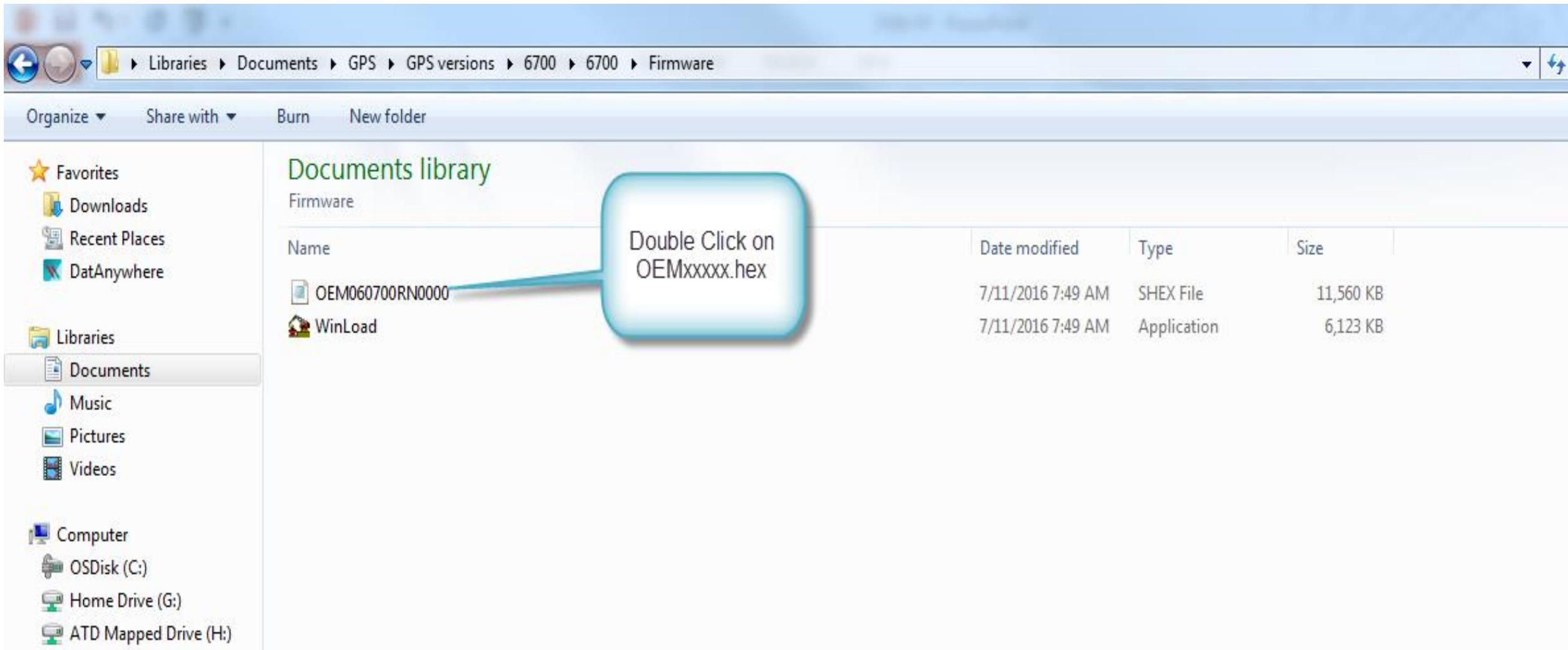2.) Configure the settings to match what you see here (except your Com Port may be different.

1.) Click on "File" and then "File Open"

WinLoad

File   Settings   Help

Authorization Code:

Write Flash
Run Script
Query Card
Abort

Card Properties
PSN:
Enclosure:
OSN:
HW Rev:
MAC:

Hex File Properties
Platform:
Type:
Version:

Target Card ID: 0
Boot Target Card ID: 0

COM: 1   Connect: BREAK   Download: 57600

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Note: filename may differ from what is shown below Note: .hex or .shex.

600S GPS UPDATE

You should now see the file information within the WinLoad Program

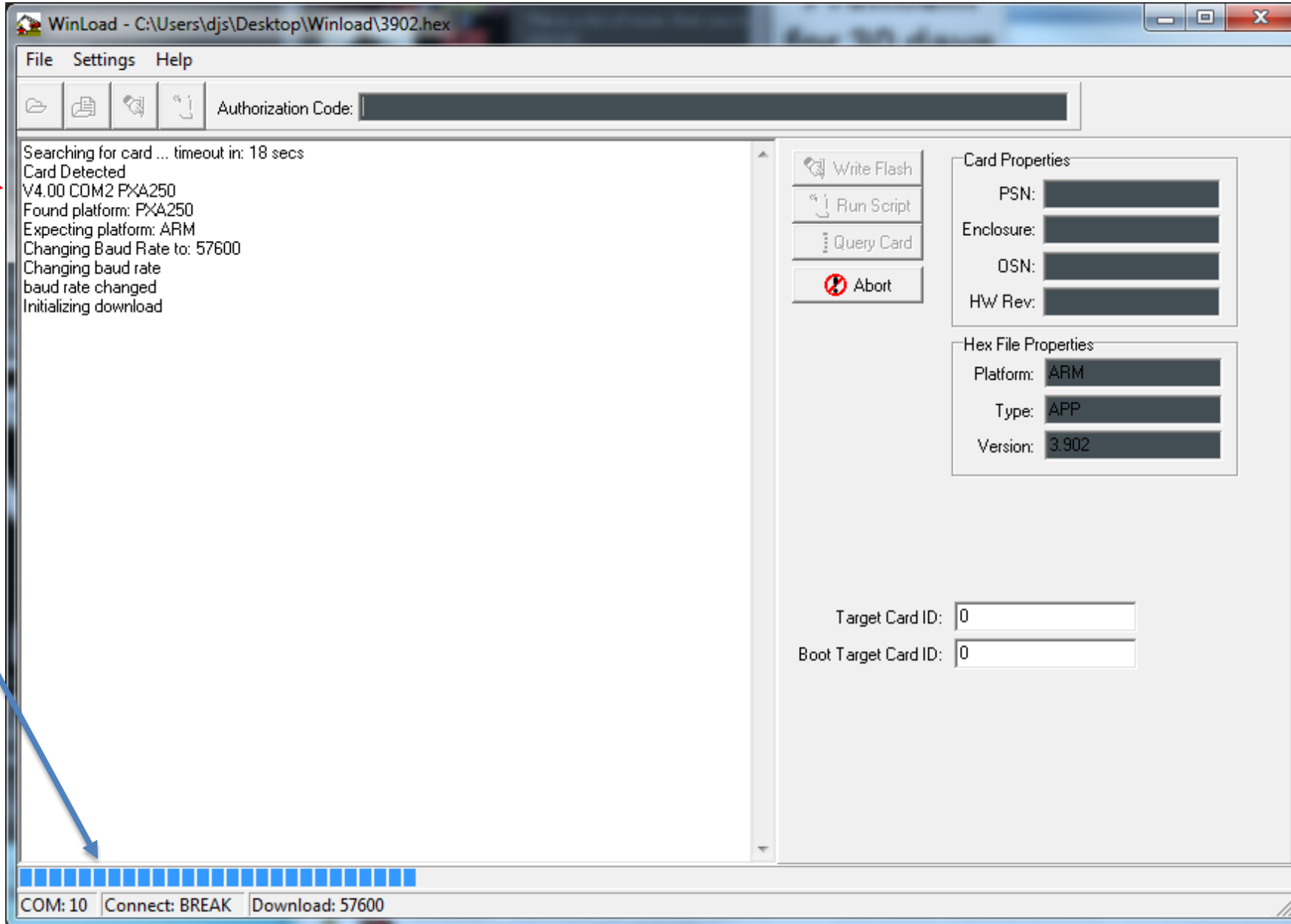Now click on the "Write Flash" button, wait a few seconds proceed to the next step.

Plug power to the receiver
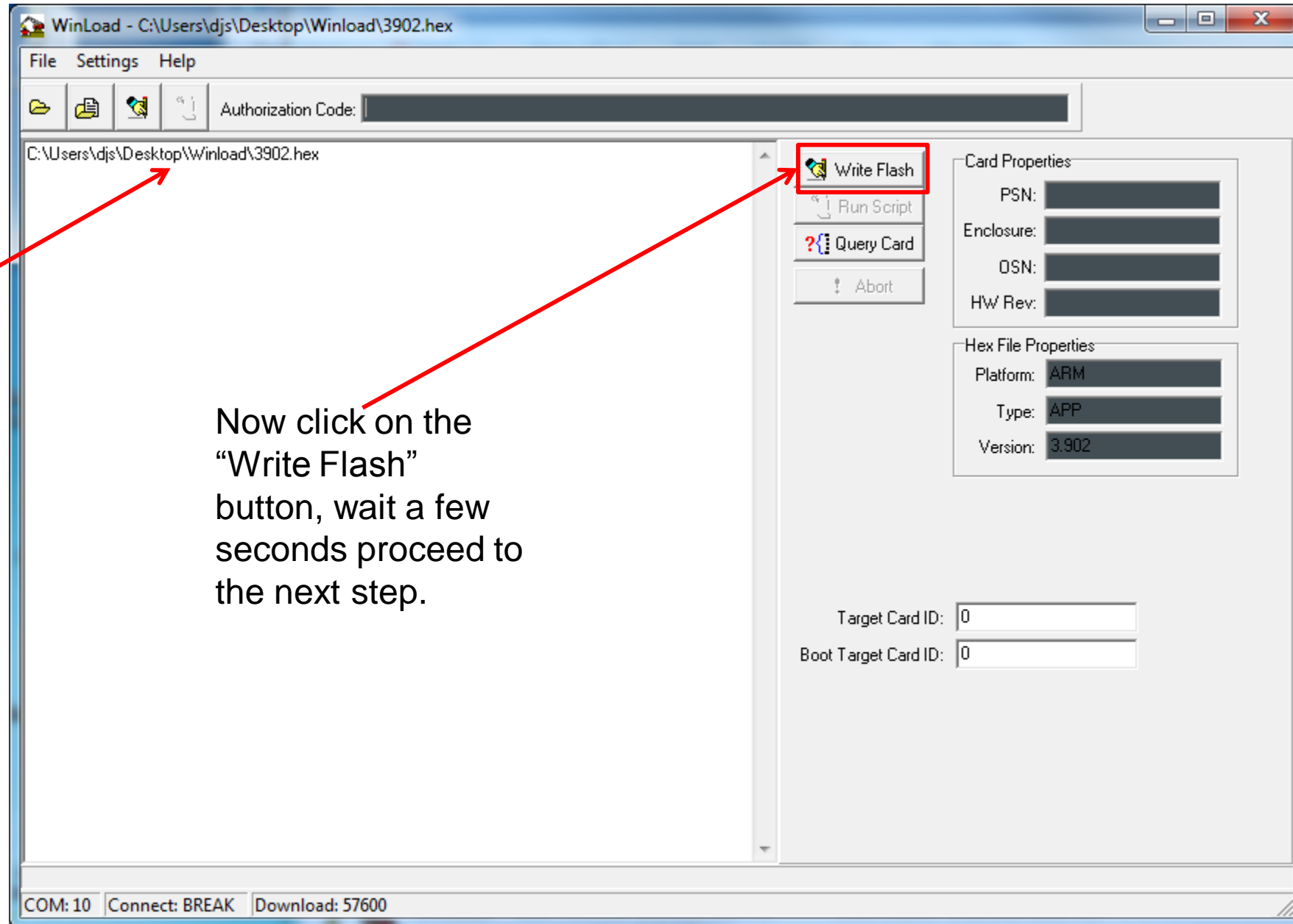
600S GPS UPDATE

The update will now begin

Once done it will show this bar **which** stays all the way to the right & the text shows "Done"&"Reset"

WinLoad - C:\Users\djs\Desktop\Winload\3902.hex

File   Settings   Help

Authorization Code:

Searching for card ... timeout in: 18 secs
Card Detected
V4.00 COM2 PXA250
Found platform: PXA250
Expecting platform: ARM
Changing Baud Rate to: 57600
Changing baud rate
baud rate changed
Initializing download

Write Flash
Run Script
Query Card
Abort

Card Properties
PSN:
Enclosure:
OSN:
HW Rev:

Hex File Properties
Platform: ARM
Type: APP
Version: 3.902

Target Card ID: 0
Boot Target Card ID: 0

COM: 10   Connect: BREAK   Download: 57600

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Reset Power to the unit.
Open RFPSim program from your download then follow the procedure to do a FRESET

It is always good idea to enter the FRESET command into the GPS receiver so that the NVRAM table is synchronized to the memory mapping of this new firmware. Failure to perform this step could result in erratic performance, including the possibility that selected configurations will not be saved.
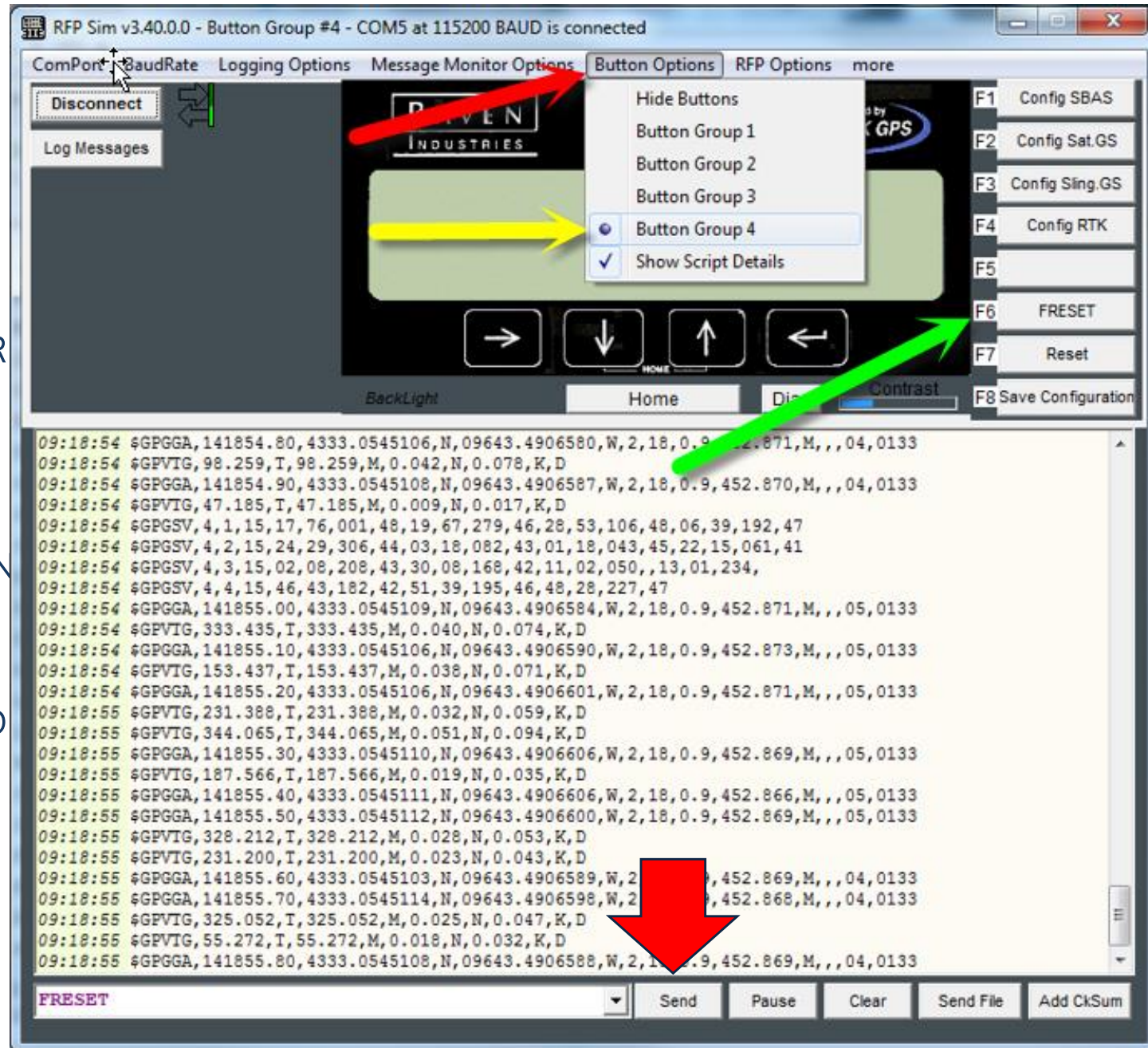
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FRESET with RFPSim

1. Open RfpSim program
2. Connect serial connection
3. Select matching baud rate using the appropriate COM port. Port A – 19,200 or (115,200 if connected to Viper 4, E-Pro II, or connected with SmarTrax 7.4.56 or newer) & Port B – 115,200
4. Press the Connect button in upper left corner. <u>Confirm data is streaming</u>
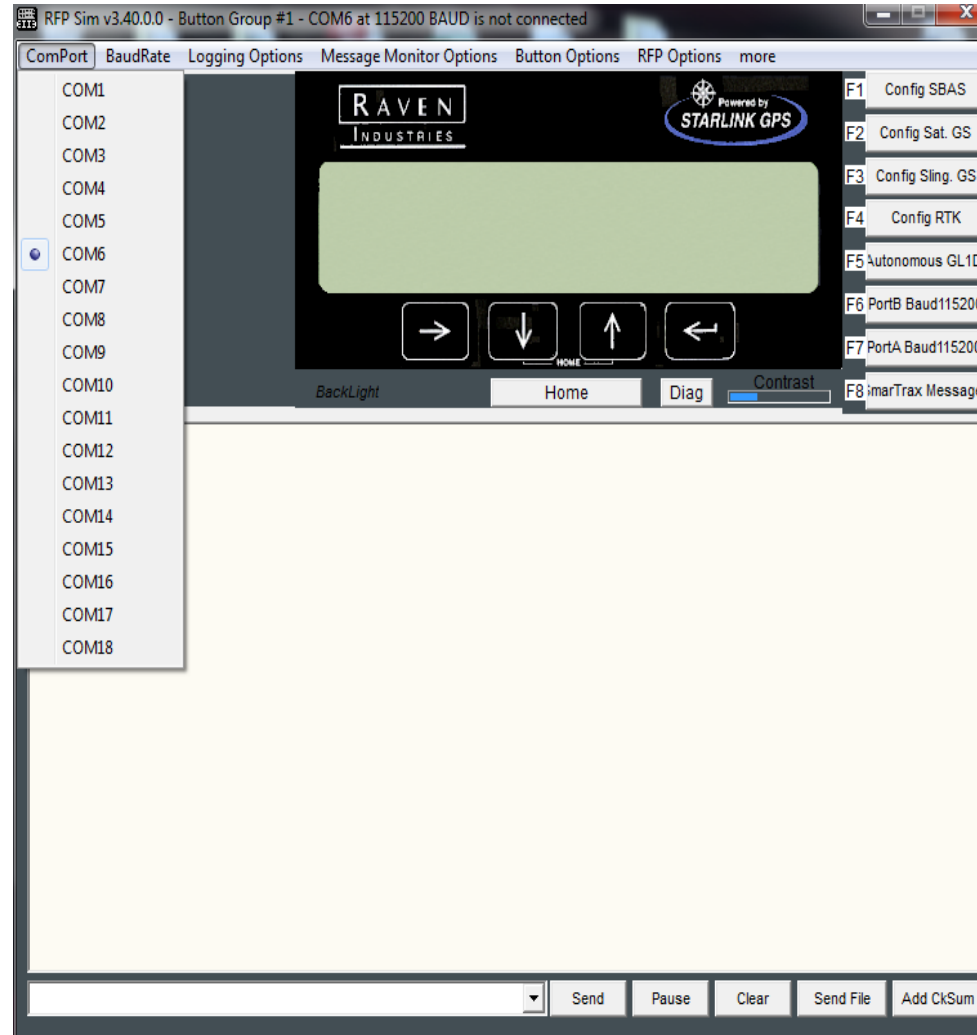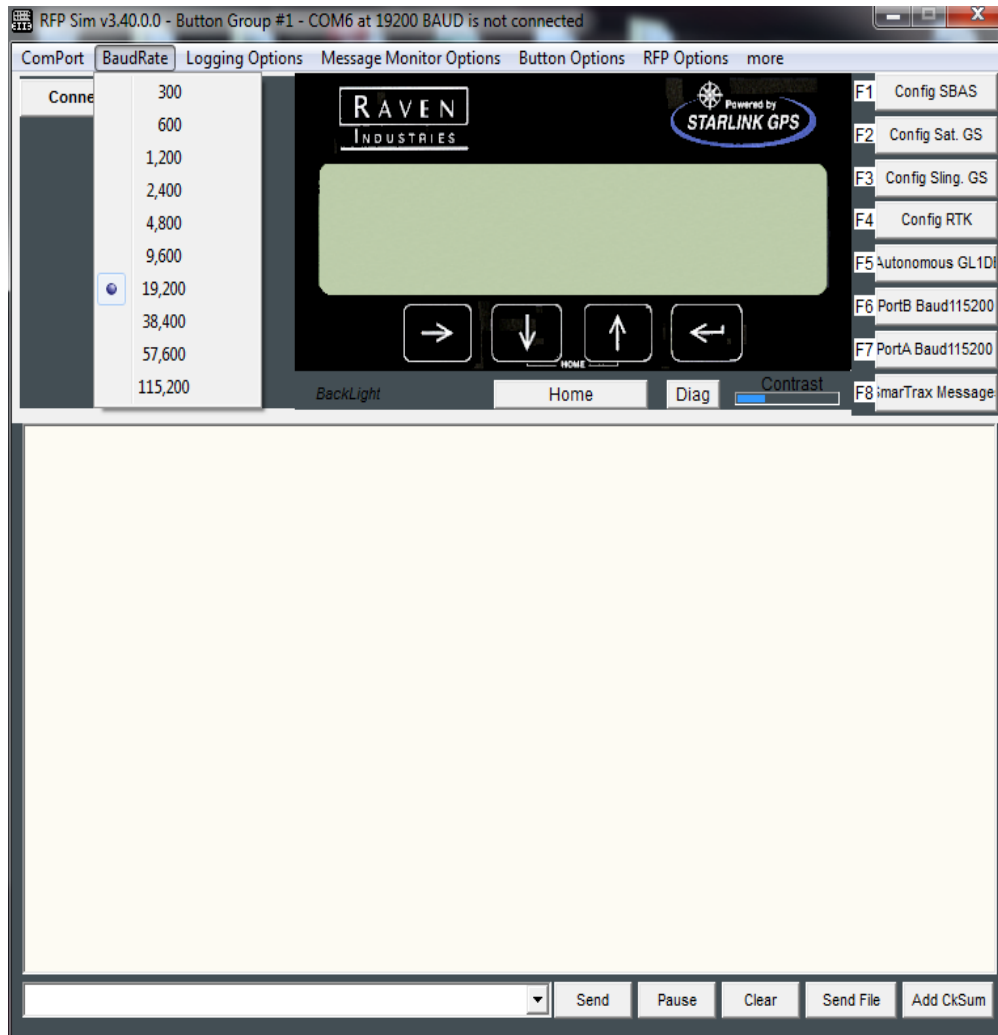
FRESET WITH RFPSIM

1. CLICK ON BUTTON OPTIONS

2. SELECT BUTTON GROUP 4

3. CLICK FRESET

4. CLICK SEND

5. REBOOT THE RECEIVER IF IT DOESN'T BUT IT SHOULD REBOOT

NOTE: AFTER FRESET THE 600S DEFAULTS TO 9600 BAUD. THE CONFIGURATION ON THE NEXT PAGE IS REQUIRED TO SET THE RECEIVER BACK UP TO THE CORRECT BAUD RATES AND CONFIGURATIONS
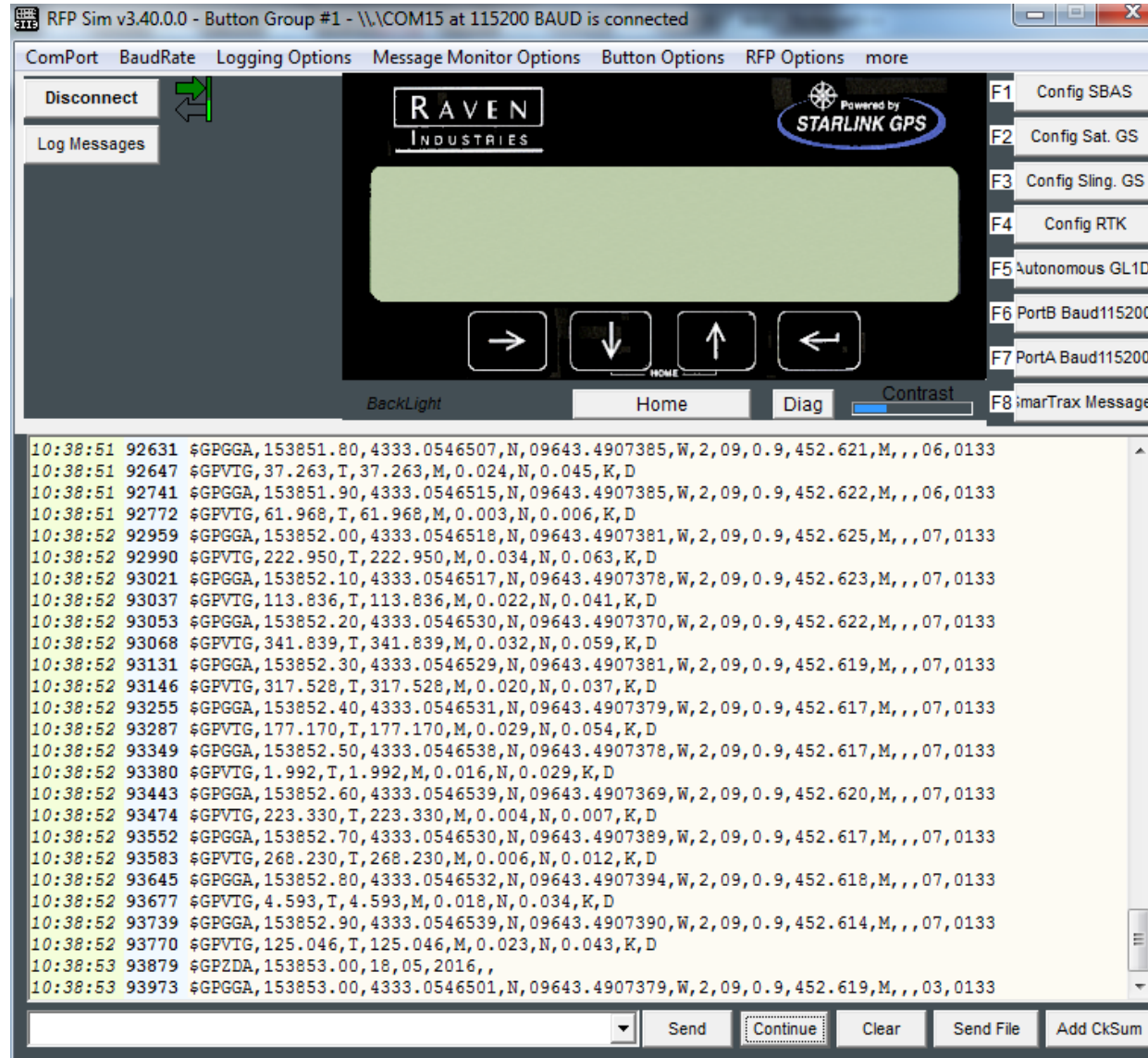
1. CLICK BUTTON OPTIONS

2. SELECT BUTTON GROUP 1

3. SELECT THE CONFIGURATION TO THE RIGHT

NOTE: ONLY SELECT THE CONFIG YOUR RECEIVER IS UNLOCKED FOR. IT WILL NOT FUNCTION WITH ANYTHING ELSE. THESE KEYS WILL SET UP THE CORRECT BAUD & CONFIGURATION. NO OTHER KEYS SHOULD BE SELECTED.
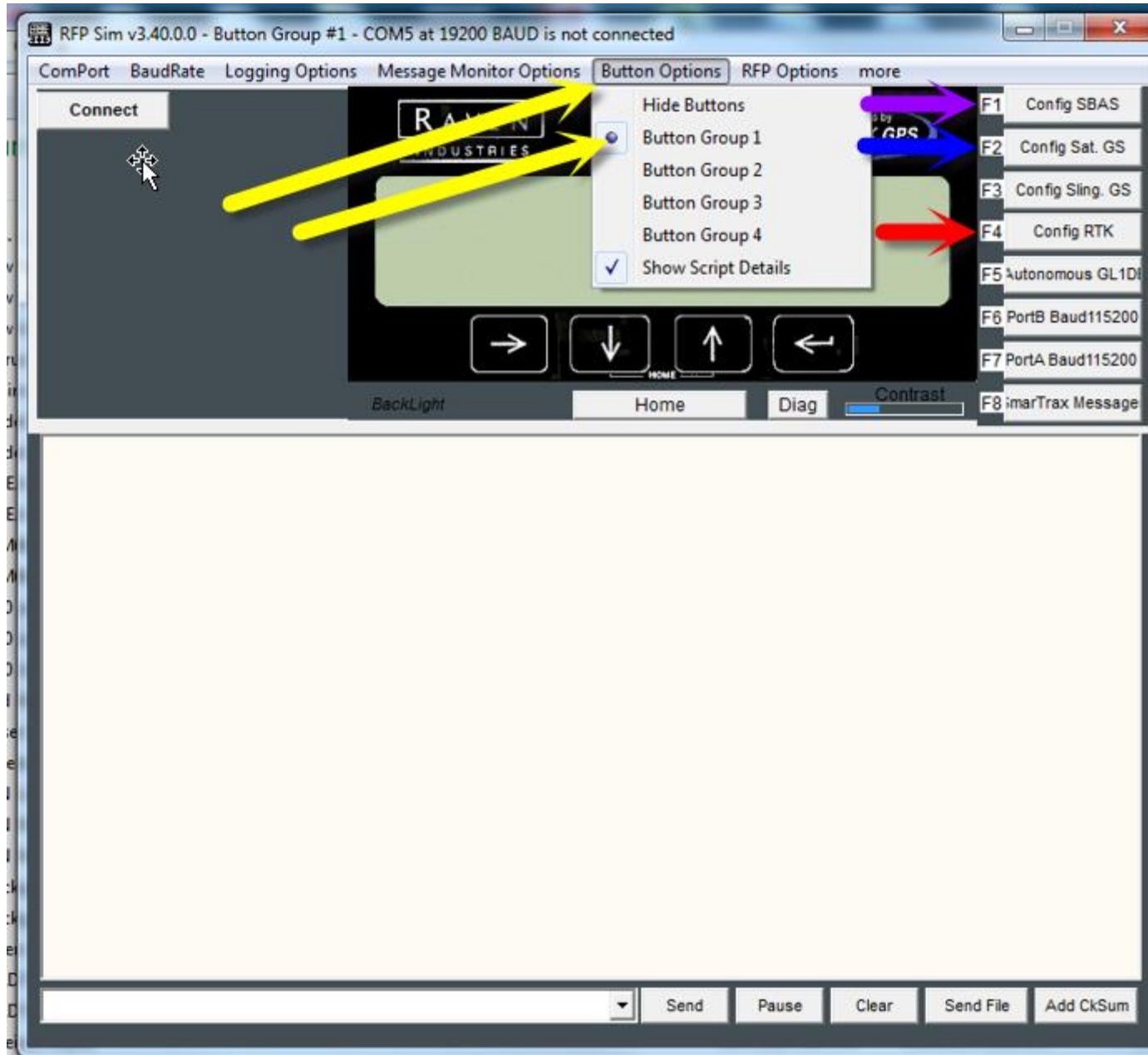
FRESET with RFPSim

1. Power Cycle the receiver
2. Allow the system to populate GPS information. You are done!