

USING HYPERTERMINAL

Most Spectracom products have an RS-232 Com port to configure selectable parameters and retrieve operational status and performance logs. Connect the Spectracom RS-232 Com (Setup) port to a computer using a one to one pinned DB9 serial cable. This cable has a DB9 male on one end and a DB9 female on the other end. Do not try to use a null modem cable with gender changers to get the “correct” pin configuration. A null modem cable reverses transmit and receive lines and therefore will not work in this application. To allow communication the computer must be running a terminal emulation program such as HyperTerminal.

HyperTerminal is included with Windows 95/98/NT/ME/2000/XP computers. To start a HyperTerminal session left click on the START button and follow the path of Programs\Accessories\Communications\HyperTerminal as shown in Figure 1.

NOTE:

The sample screen snapshots are from a Windows 2000 computer.
Screens may vary slightly on other versions of Windows.

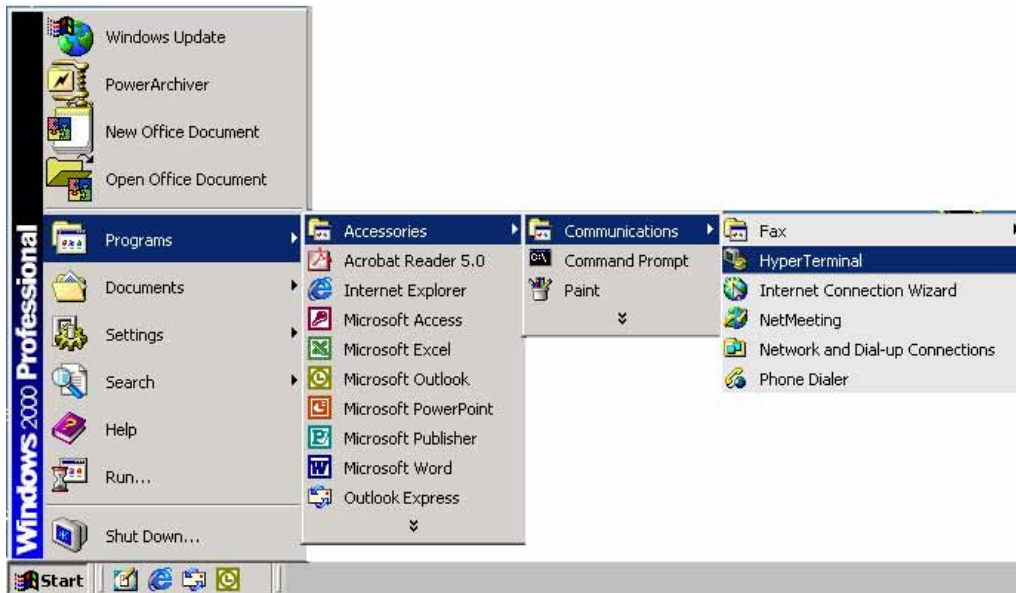


FIGURE 1. Starting HyperTerminal

Double click on HyperTerminal. You will then be prompted to name the HyperTerminal session and select an icon. Figure 2 shows an example session named Spectracom.

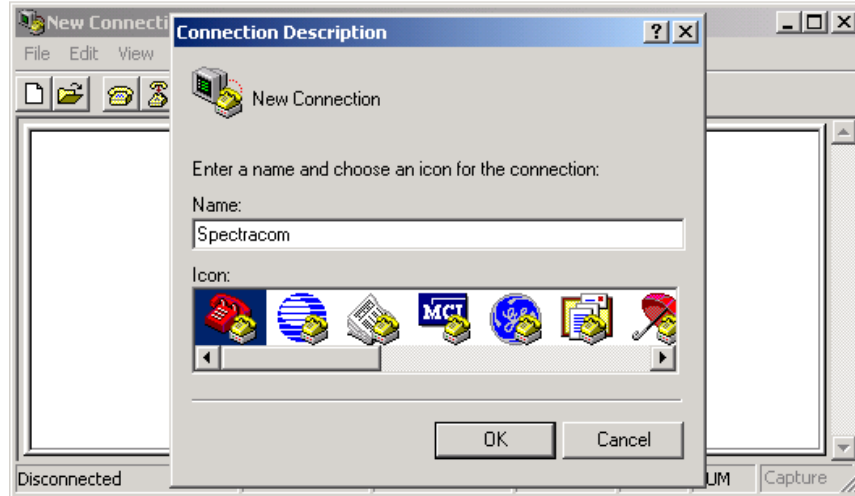


FIGURE 2. New Connection Screen

On the Connect To screen skip past the Country/region, Area code and Phone number configuration selections. In the Connect using box select the desired RS-232 port, COM 1 or COM 2 as shown in Figure 3. Click on the OK box to continue.



FIGURE 3. Connect To Screen

Next you will be prompted to enter the port properties. Select 9600 baud, 8 data bits, no parity, 1 stop bit and XON/XOFF flow control as shown in Figure 4. Click on the OK box to continue.

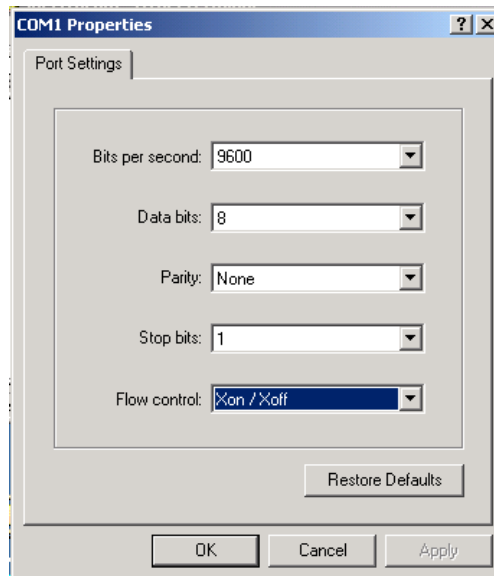


FIGURE 4. Port Properties

The HyperTerminal Session is now ready for use. Enter the GPS Signal Status command **GSS<enter>**, to view the satellites currently tracked by the GPS receiver. Figure 5 shows a typical response from a Model 8195A GPS Disciplined Oscillator.

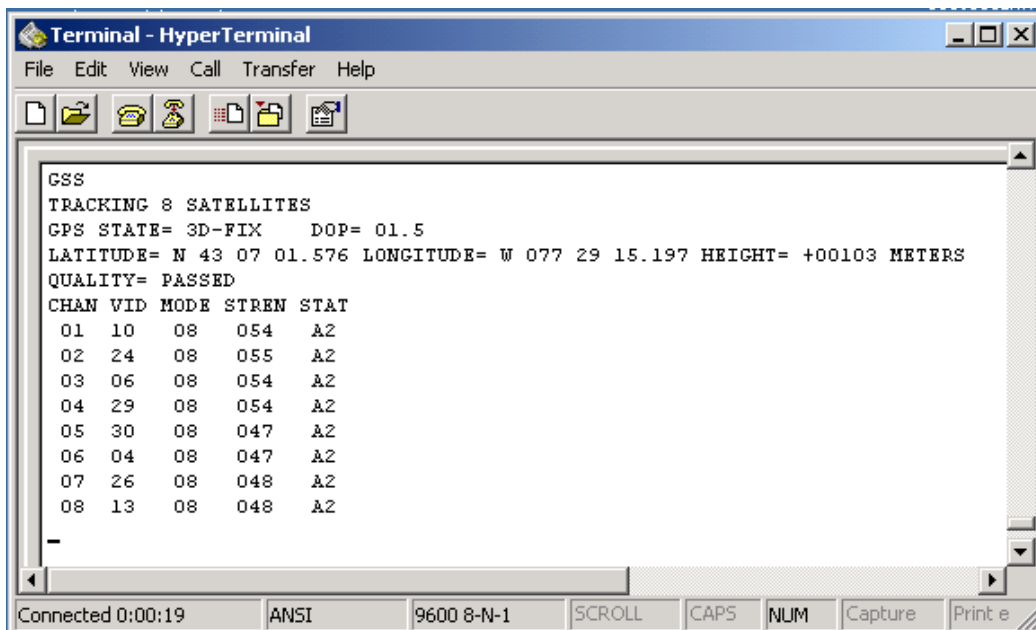


FIGURE 5. Typical Configuration Response

When exiting HyperTerminal you will be given the option to save the session. Select yes to save for future use.

If there was no response from the GPS receiver try the following:

1. Refresh the HyperTerminal port settings by clicking on CALL of the menu bar then select Disconnect. To enable HyperTerminal click on CALL again and this time select Call or Connect.
2. Verify that a one to one pinned DB9 serial cable is used. The cable should have a DB9 male on end and a DB9 female on the other. Do not use a cable having gender changers to get the "correct" connector combination. These cables are typically null modem cables and are not pinned one to one as required and will have DB9 males on both ends of the cable.

The RS-232 cable requires a minimum 3 wires; RXD (pin 2), TXD (pin 3) and Ground (pin 5).

3. Verify the serial port is operational. Simply shorting the RXD and TXD lines together on the cable end that plugs into the receiver can do this. Using a small flat bladed screwdriver short pin 2 to pin 3 while typing characters on the keyboard. If the port is working you will see whatever you type.

NOTE:

This test will verify the operation of the computer serial port and the RS-232 cable. However a null modem cable will also pass this test. Refer to Step 2 above for additional information on cables.

4. The serial port on the GPS receiver could be locked up due to a port contention problem. To unlock the port send the "&" symbol (Shift 7). The port will then unlock and send a block of data.
5. Verify the HyperTerminal session is set for 9600 baud, 8 data and no parity. This appears as 9600 8-N-1 in the Status Bar found at the bottom of the screen. If the Status Bar is not visible click on View from the Menu bar and check the Status Bar option.

If the settings are not correct change them by editing the Properties screen. First, Disconnect the HyperTerminal session by clicking on CALL in the Menu Bar and then select Disconnect. Then select FILE then Properties to bring up the Terminal Properties screen. Click on the Configure button and edit the terminal settings as required.

To enable the HyperTerminal session with the updated selections click on CALL from the menu bar then select Call (or Connect, version dependent).