

Option 76 – Installation instructions

Addendum to 910/910R User’s Manual

(replaces instructions on p. 4-4 in the User’s Manual)

I. Background

The Ethernet option – option 76 – for the GPS-controlled Frequency Standard 910 or 910R, delivered as from January 2020, has a different set-up procedure compared to the original description in the User Manual. Please read the below instructions to properly configure the Ethernet option.

II. Software installation

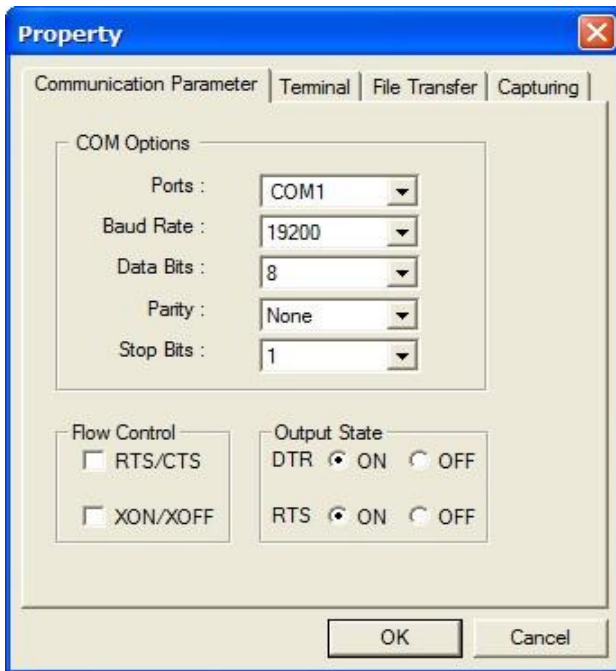
Download the programs **PComm Terminal Emulator program** and **NPort Administrator** from the accompanying disk, to a dedicated folder on your local PC, and run the install programs.

III. Configuration part 1

1. Connect the Frequency standard’s serial port to your computer’s male RS-232 serial port using a **cross-over** cable.
2. Check that the switch on the Frequency Standard’s rear panel is set to “RS232”
3. Open **PComm Terminal Emulator program**.
4. When the **PComm Terminal Emulator** window opens, first click on the **Port Manager** menu item and select **Open**, or simply click on the **Open** icon.



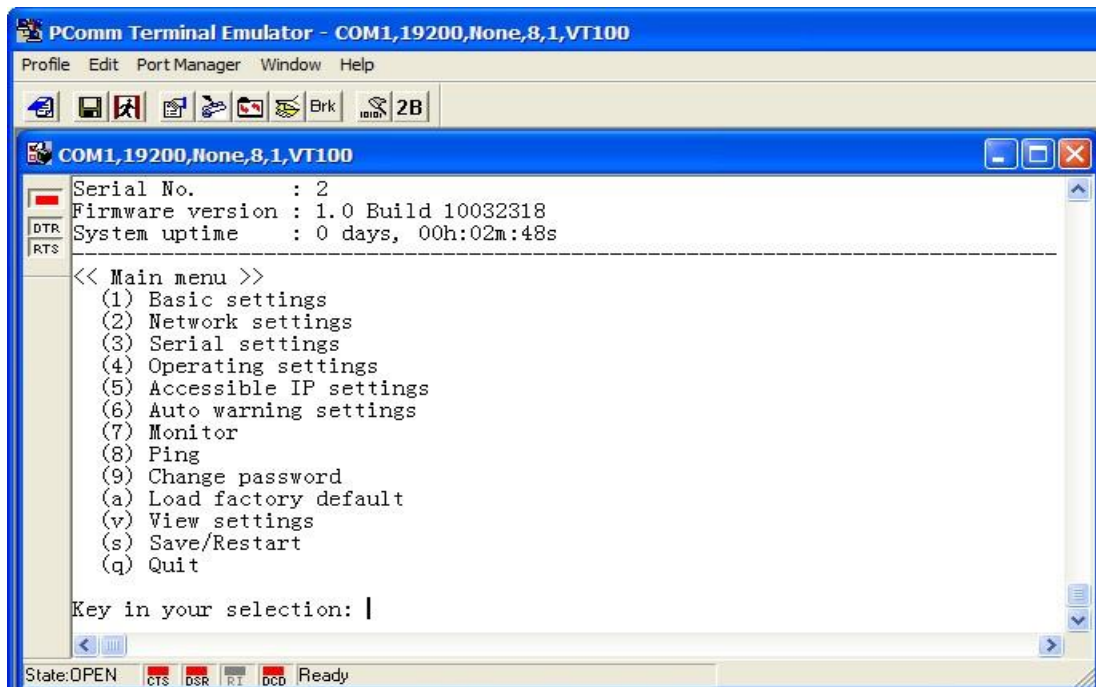
5. The **Property** window opens automatically. From the **Communication Parameter** page, select the appropriate COM port for the connection. COM1 in this example, a baud rate of 19200, 8 Data Bits, No Parity, and 1 Stop Bit.



6. From Property window's Terminal page, select ANSI or VT100 for Terminal Type and then click OK.
7. Press the “`” key continuously and then change the switch on the Frequency Standard's rear panel to “Ethernet”. The Ethernet module (option 76) will automatically switch from data mode to console mode as it receives a continuous string of `` characters. *Note that the “`” key may be positioned on different physical keys depending on the local keyboard layout.*



8. Start configuring the IP address under **Network Settings**.

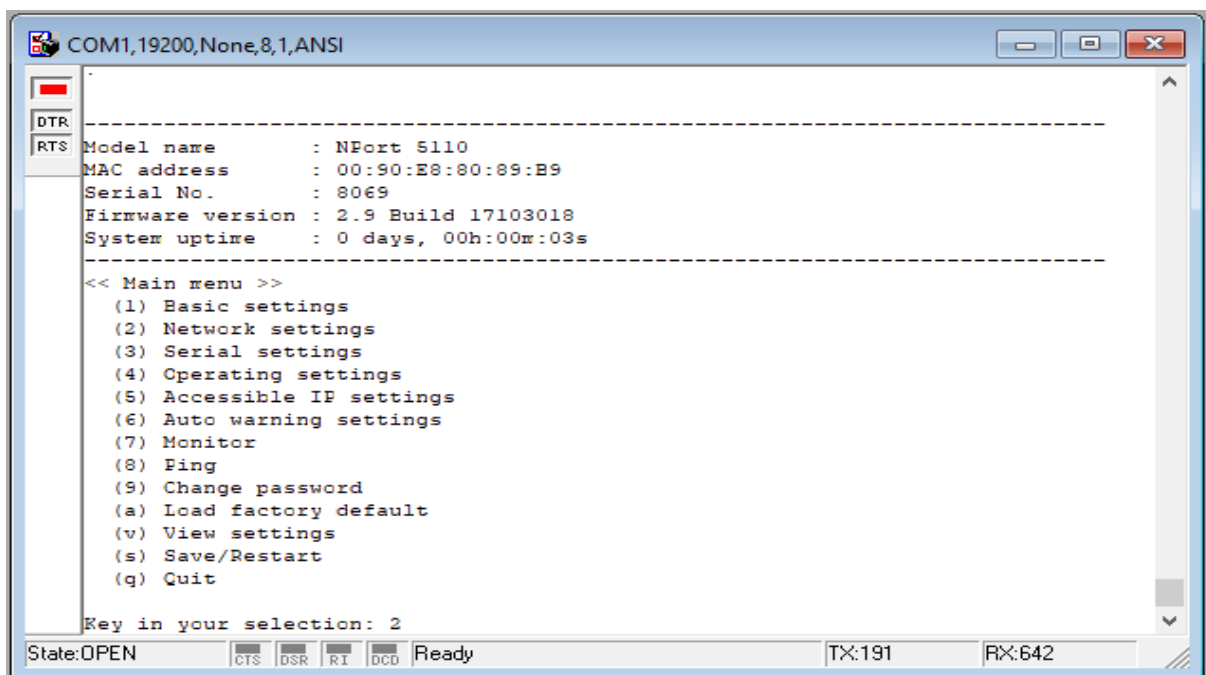


Example settings configuration:

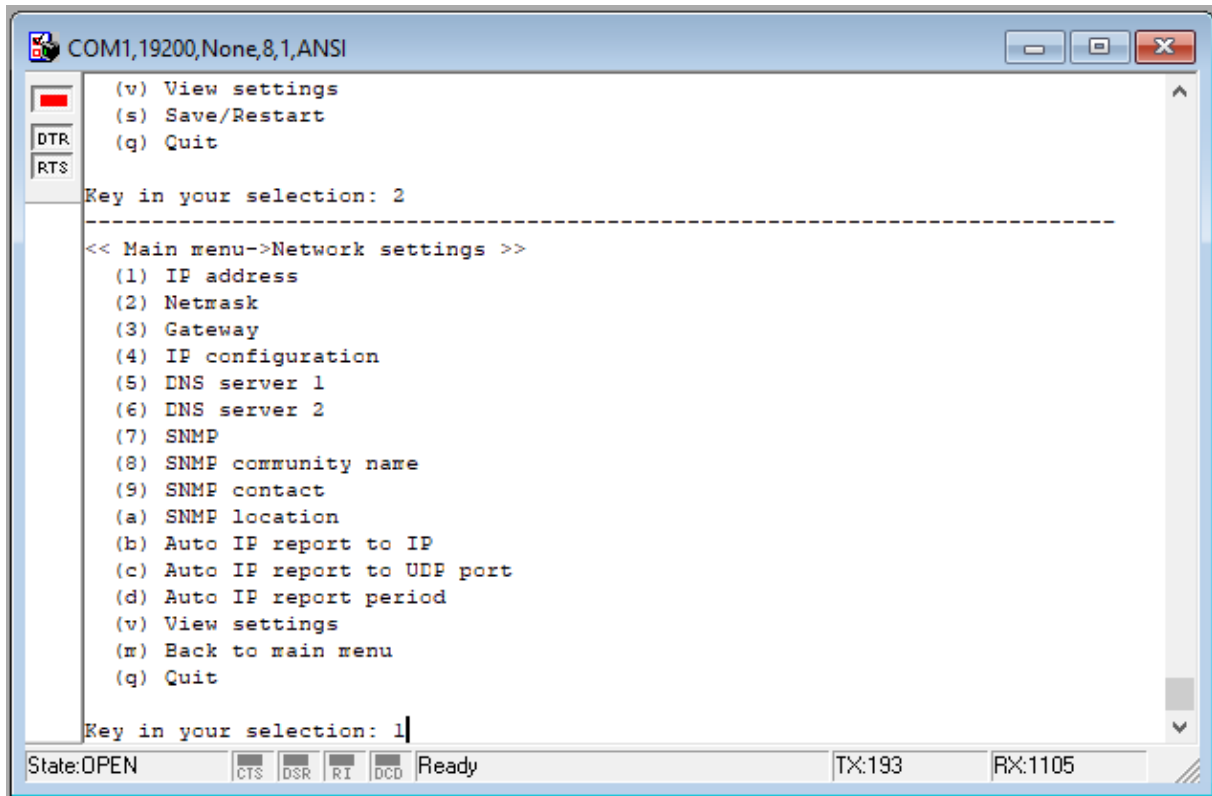
- **IP:** 192.168.0.254
- **Gateway:** 192.168.0.1
- **Mask:** 255.255.255.0

a) IP settings:

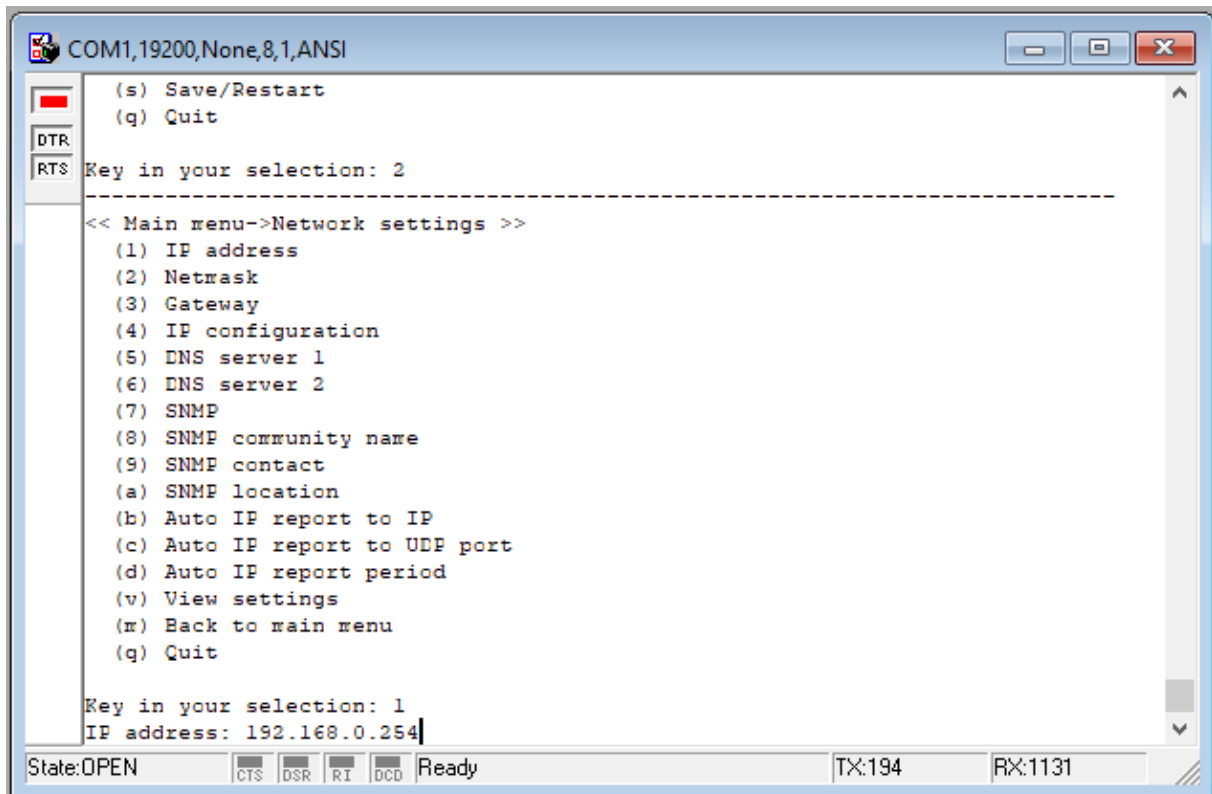
Press "2" on the keyboard and then "enter"



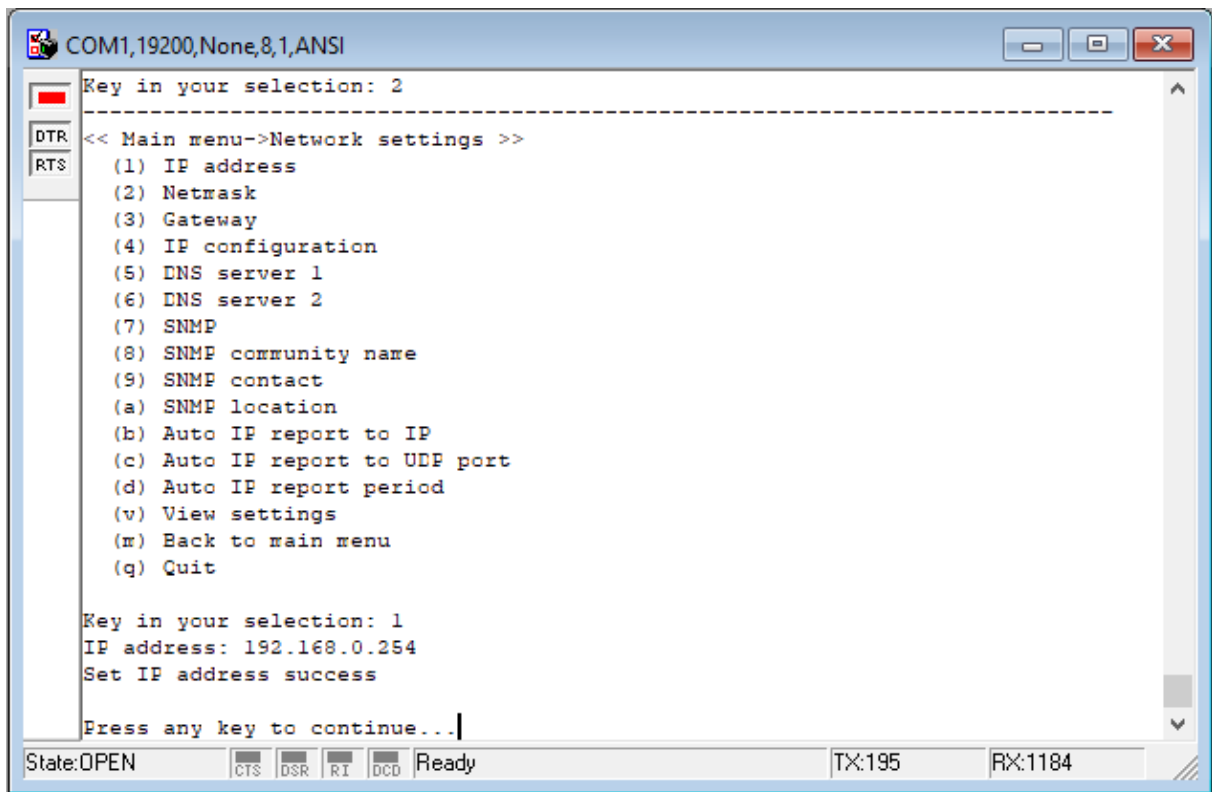
Press "1" on the keyboard and then "enter"



Enter the appropriate IP and then press "enter".

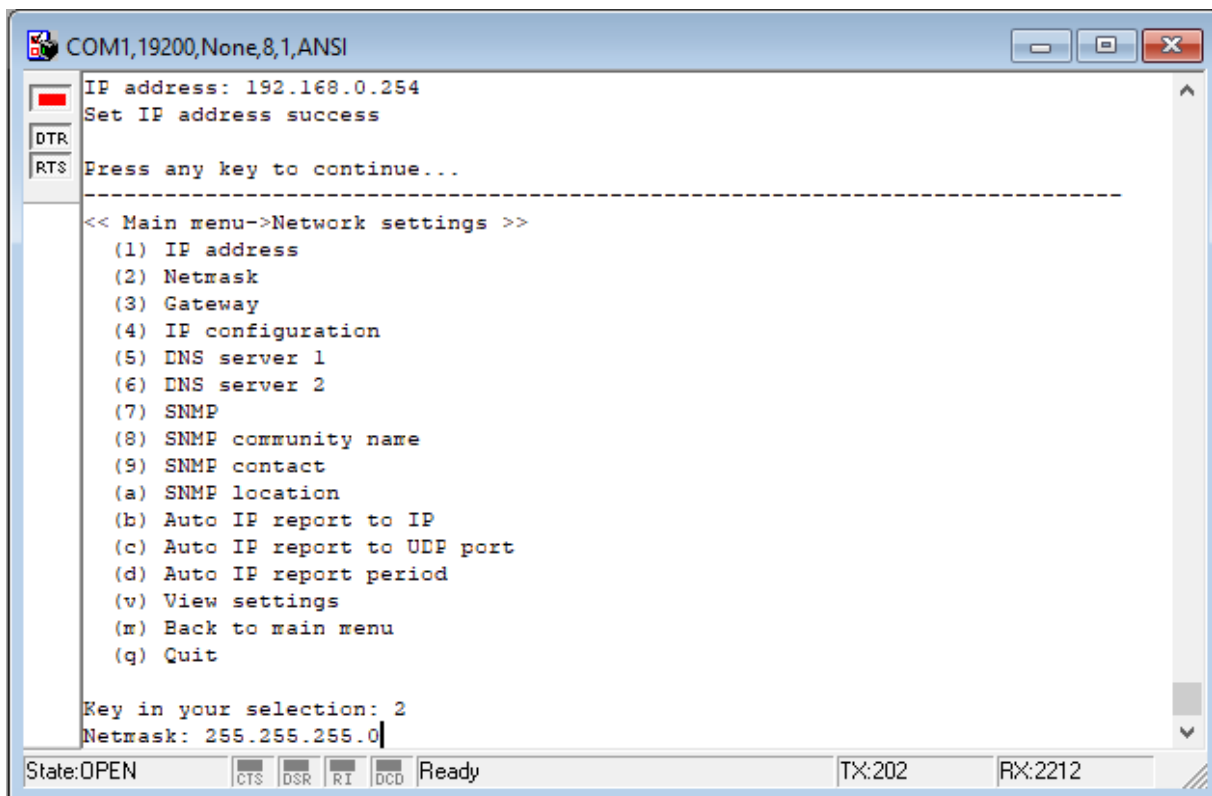


Go back to the previous menu by clicking "enter"

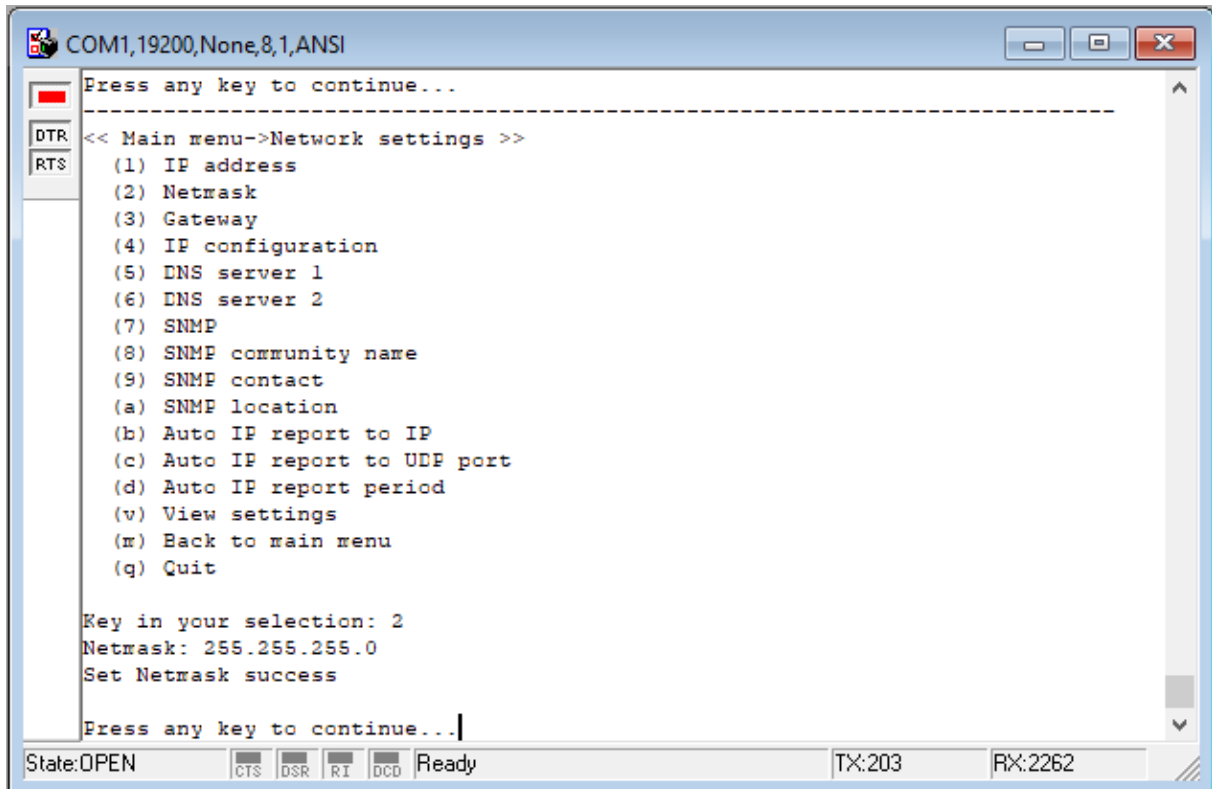


b) Netmask settings:

Press "2" on the keyboard and then "enter". Enter the appropriate Netmask and then press "enter".



Then to return to the previous menu press "enter" again



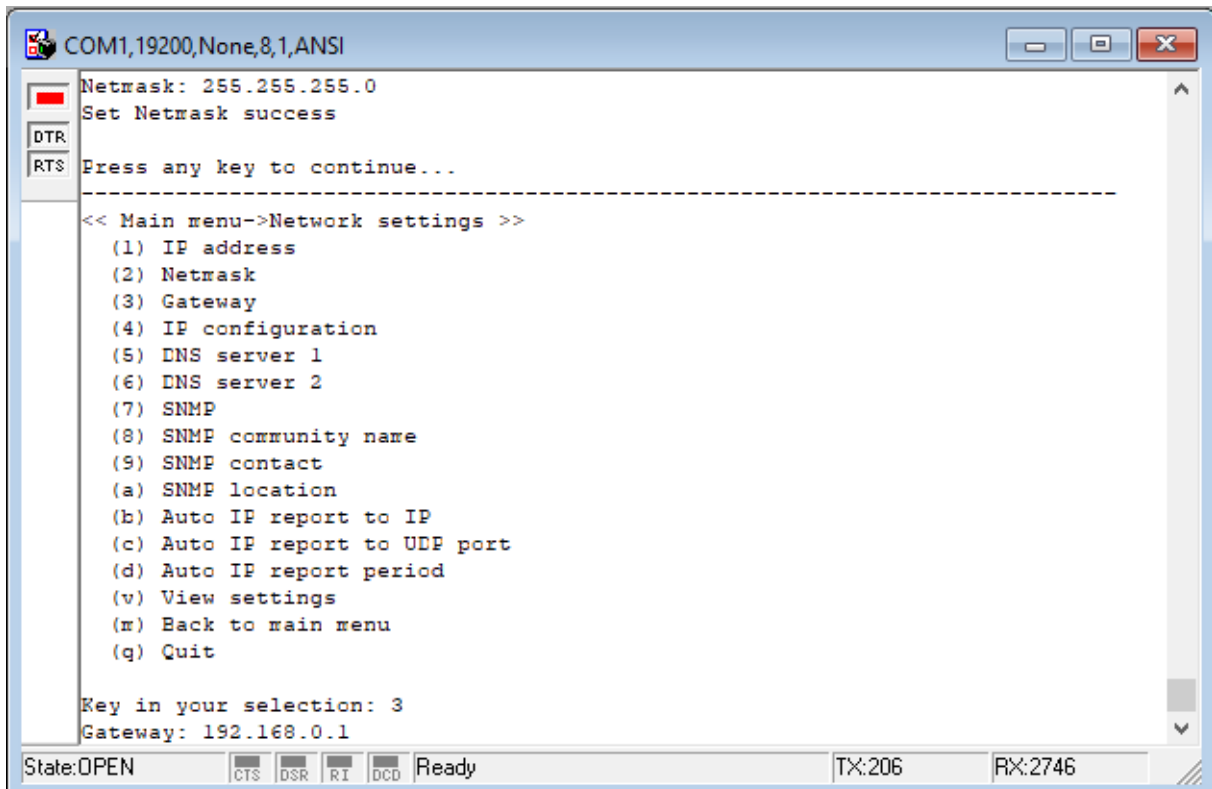
```
COM1,19200,None,8,1,ANSI
Press any key to continue...
-----
<< Main menu->Network settings >>
(1) IP address
(2) Netmask
(3) Gateway
(4) IP configuration
(5) DNS server 1
(6) DNS server 2
(7) SNMP
(8) SNMP community name
(9) SNMP contact
(a) SNMP location
(b) Auto IP report to IP
(c) Auto IP report to UDP port
(d) Auto IP report period
(v) View settings
(m) Back to main menu
(q) Quit

Key in your selection: 2
Netmask: 255.255.255.0
Set Netmask success

Press any key to continue...
State:OPEN CTS DSR RI DCD Ready TX:203 RX:2262
```

c) Gateway settings:

Press "3" on the keyboard and then "enter". Enter the appropriate Gateway, and then click "enter" again.

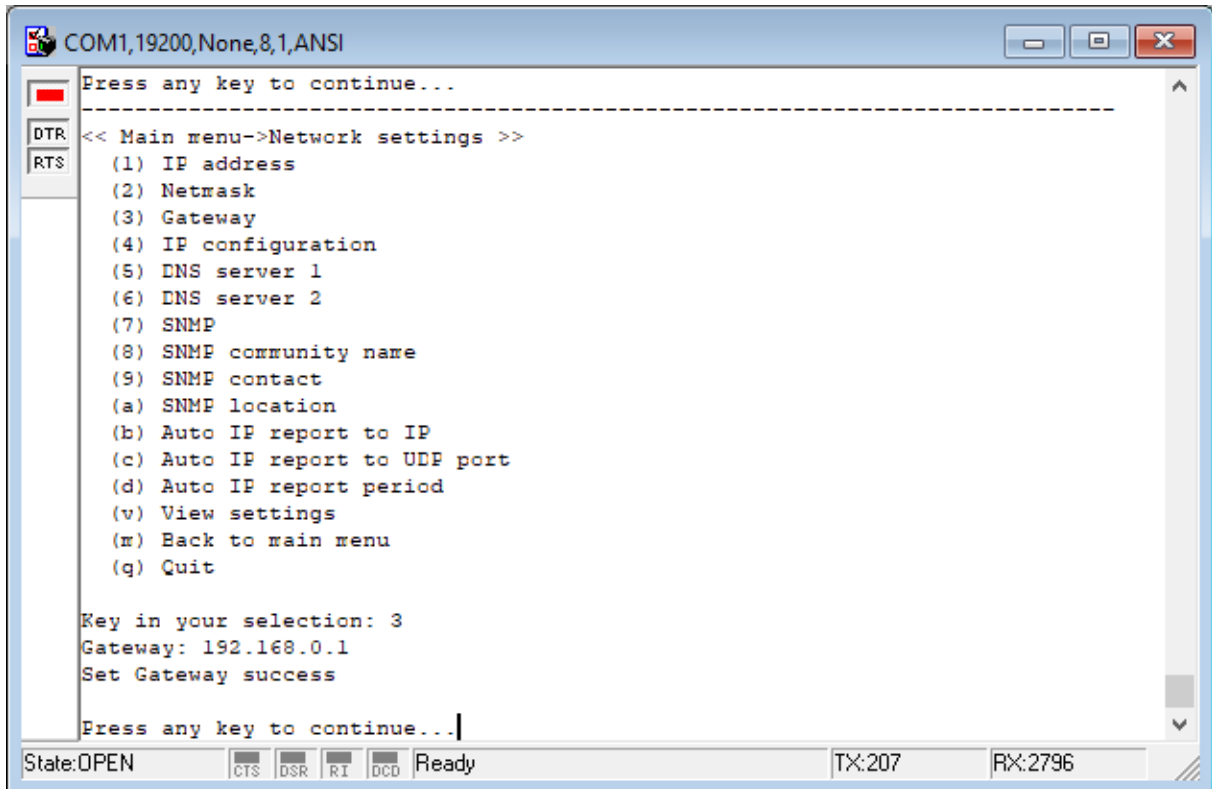


```
COM1,19200,None,8,1,ANSI
Netmask: 255.255.255.0
Set Netmask success
Press any key to continue...
-----
<< Main menu->Network settings >>
(1) IP address
(2) Netmask
(3) Gateway
(4) IP configuration
(5) DNS server 1
(6) DNS server 2
(7) SNMP
(8) SNMP community name
(9) SNMP contact
(a) SNMP location
(b) Auto IP report to IP
(c) Auto IP report to UDP port
(d) Auto IP report period
(v) View settings
(m) Back to main menu
(q) Quit

Key in your selection: 3
Gateway: 192.168.0.1

Press any key to continue...
State:OPEN CTS DSR RI DCD Ready TX:206 RX:2746
```

Press "enter" to return to the previous menu



The screenshot shows a terminal window titled "COM1,19200,None,8,1,ANSI". The main text area contains the following content:

```
Press any key to continue...
-----
<< Main menu->Network settings >>
(1) IP address
(2) Netmask
(3) Gateway
(4) IP configuration
(5) DNS server 1
(6) DNS server 2
(7) SNMP
(8) SNMP community name
(9) SNMP contact
(a) SNMP location
(b) Auto IP report to IP
(c) Auto IP report to UDP port
(d) Auto IP report period
(v) View settings
(m) Back to main menu
(q) Quit

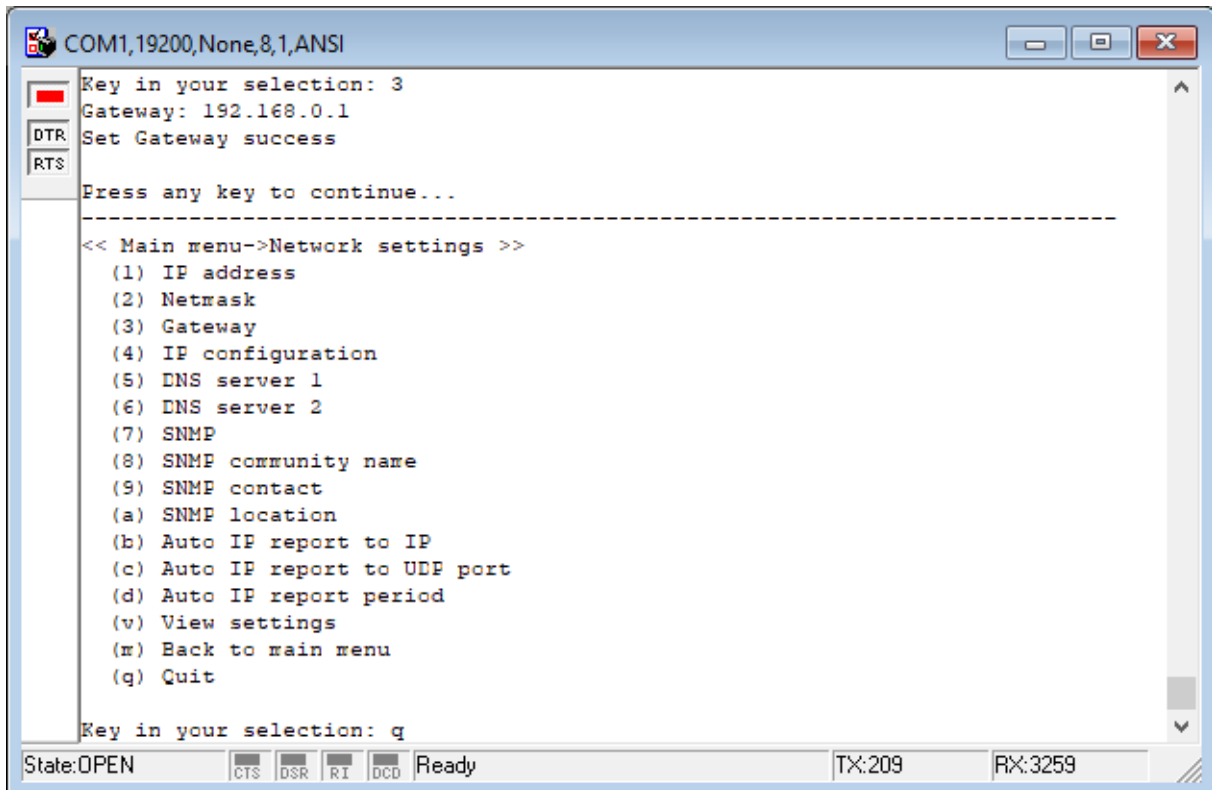
Key in your selection: 3
Gateway: 192.168.0.1
Set Gateway success

Press any key to continue... |
```

At the bottom of the window, there is a status bar with the following information: State: OPEN, CTS, DSR, RI, DCD, Ready, TX:207, RX:2796.

d) Saving configurations:

Press "q" to return to the main menu and then click "enter"



The screenshot shows the same terminal window as above, but with the following content:

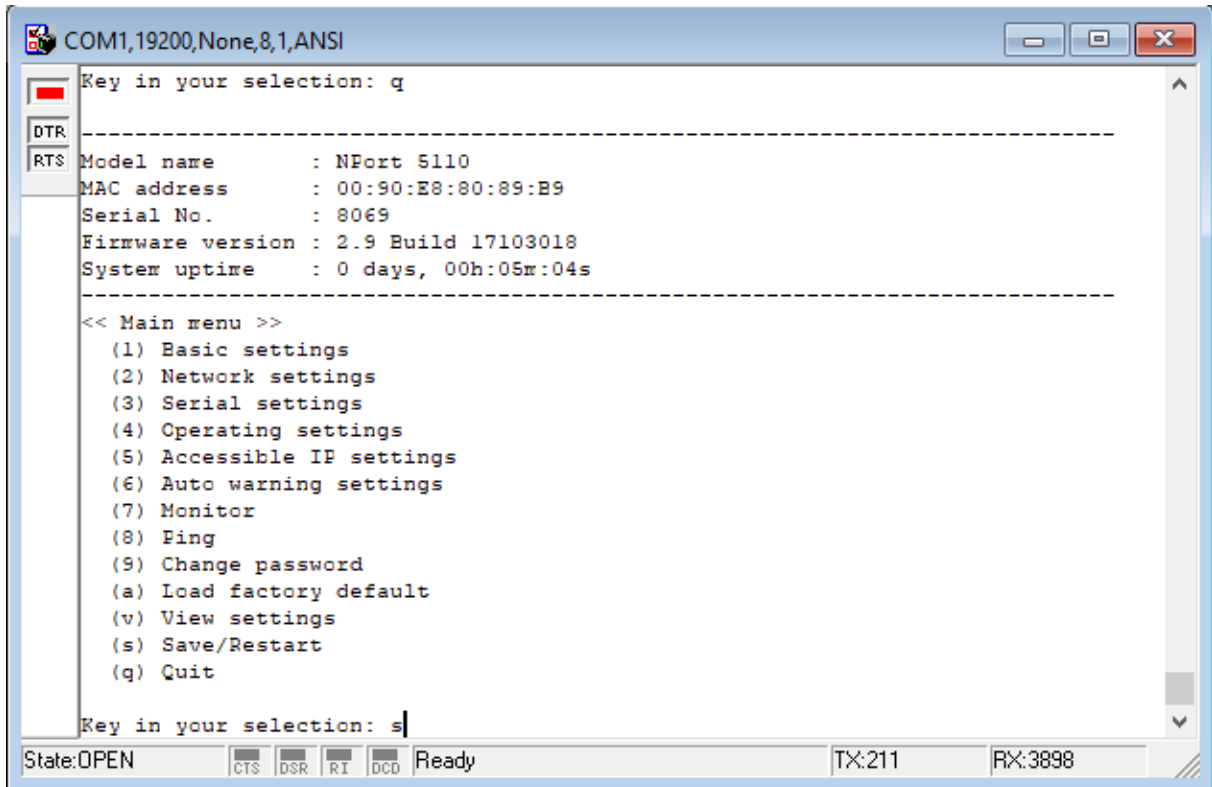
```
Key in your selection: 3
Gateway: 192.168.0.1
Set Gateway success

Press any key to continue...
-----
<< Main menu->Network settings >>
(1) IP address
(2) Netmask
(3) Gateway
(4) IP configuration
(5) DNS server 1
(6) DNS server 2
(7) SNMP
(8) SNMP community name
(9) SNMP contact
(a) SNMP location
(b) Auto IP report to IP
(c) Auto IP report to UDP port
(d) Auto IP report period
(v) View settings
(m) Back to main menu
(q) Quit

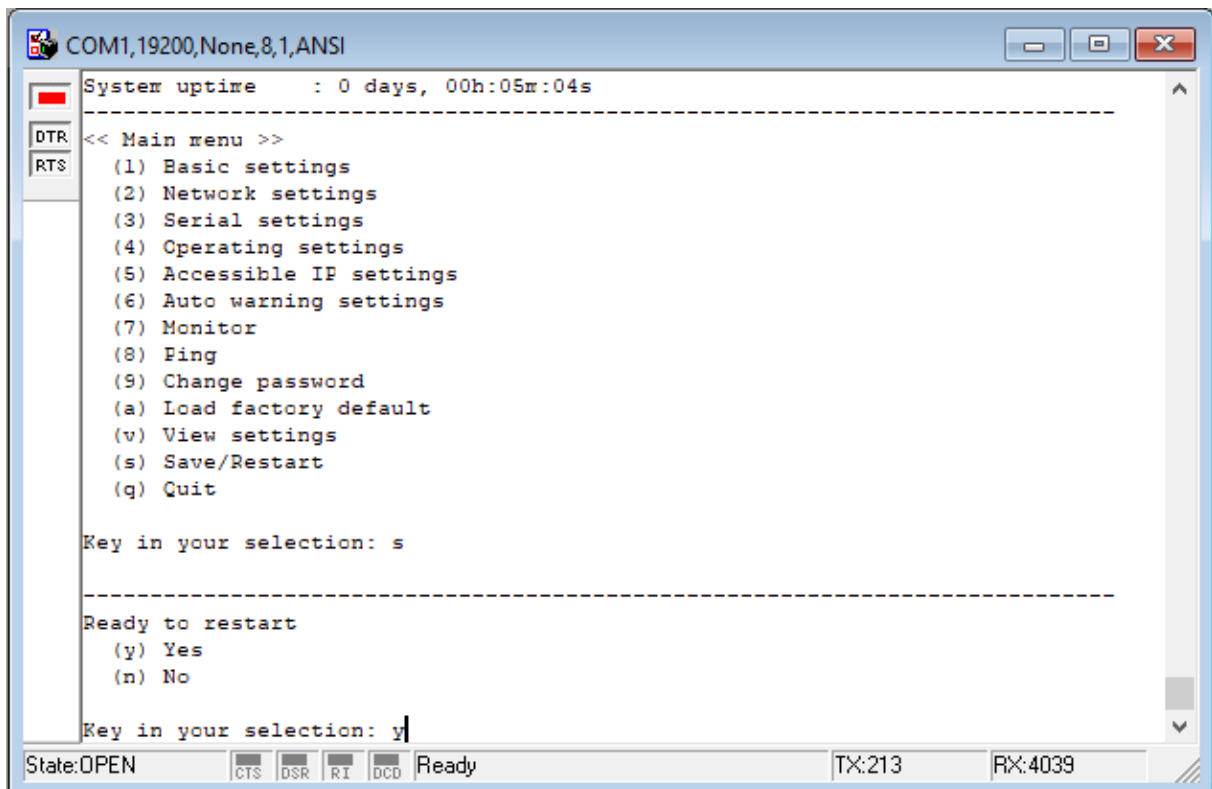
Key in your selection: q
```

The status bar at the bottom shows: State: OPEN, CTS, DSR, RI, DCD, Ready, TX:209, RX:3259.

Press "s" and then "enter" to save changes



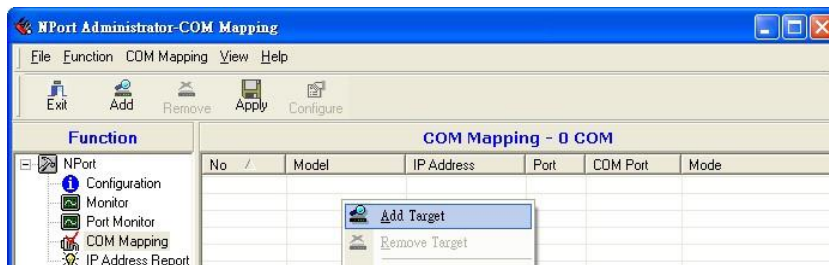
Press "y", then "enter" to confirm saving the changes, and then close the window



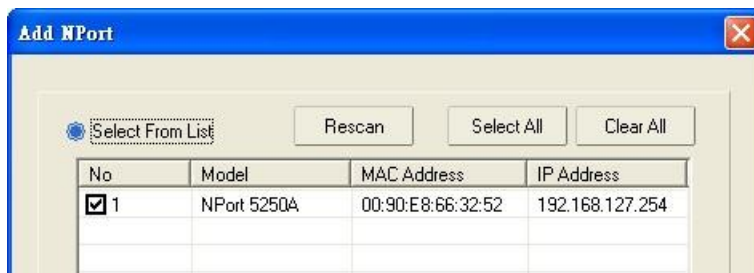
The device has been successfully configured

IV. Configuration part 2 – Creating Virtual Port

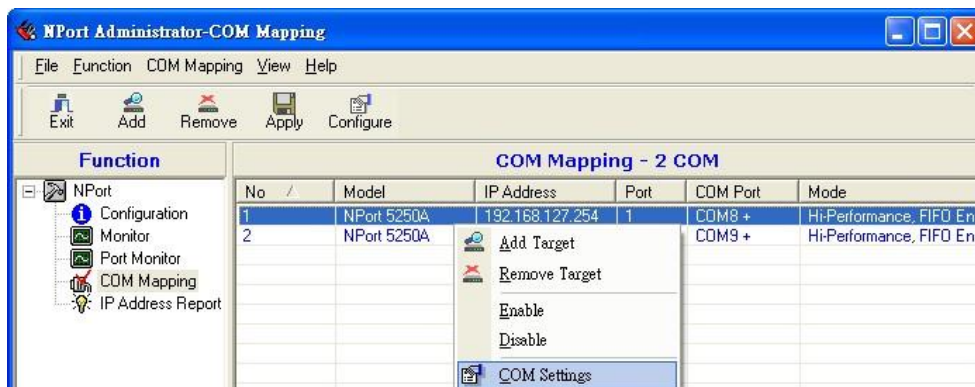
1. Connect an Ethernet cable between your PC and the Frequency Standard
2. Open the **NPort Administrator** program
3. When the **NPort Administrator** program window opens, click on the **COM Mapping** function group and then **Add Target**.



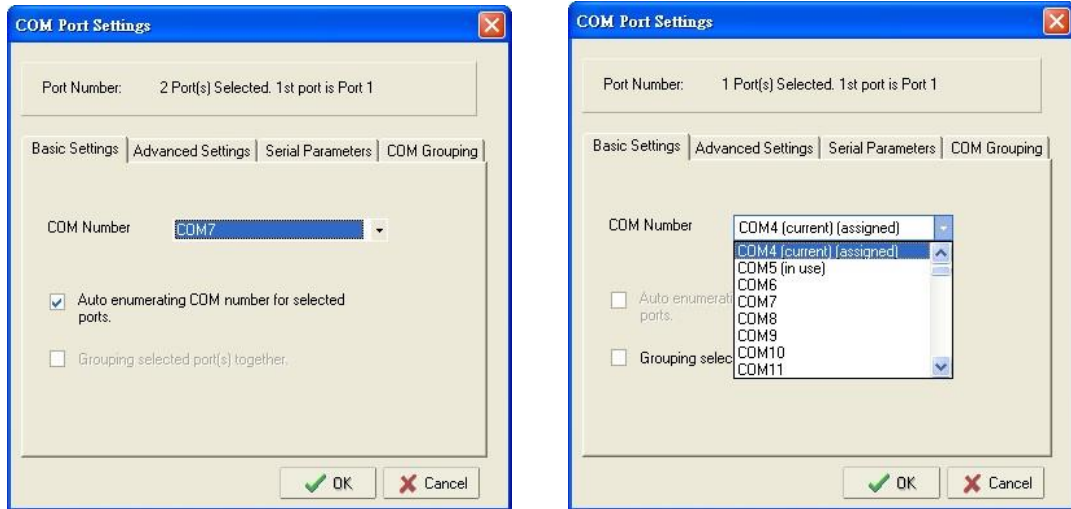
4. You will now see a window with a list of modules. Click **Rescan** option and then select correct module with the same IP that you configured before. Now click **OK**.



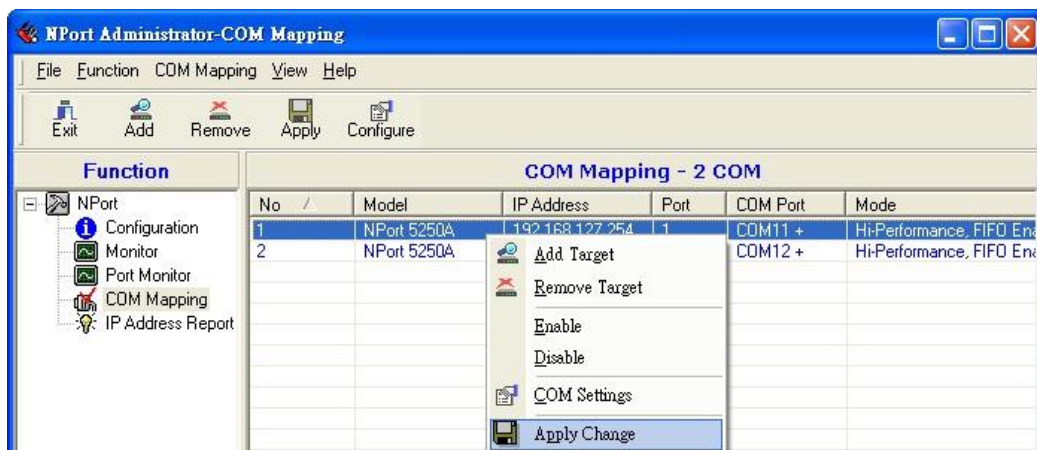
5. Select **COM Settings** to modify COM No.



6. Select **COM number** and then click **OK**.



7. After setting the COM Mapping, remember to select **Apply Change** to save information in the host system registry. The host computer will not have the ability to use the COM port until after **Apply Change** is selected.
8. When the configuration is completed, flip the switch on the rear panel to the Serial position and back to Ethernet, disconnect the serial cable, connect the Ethernet cable between instrument and hub/controller.

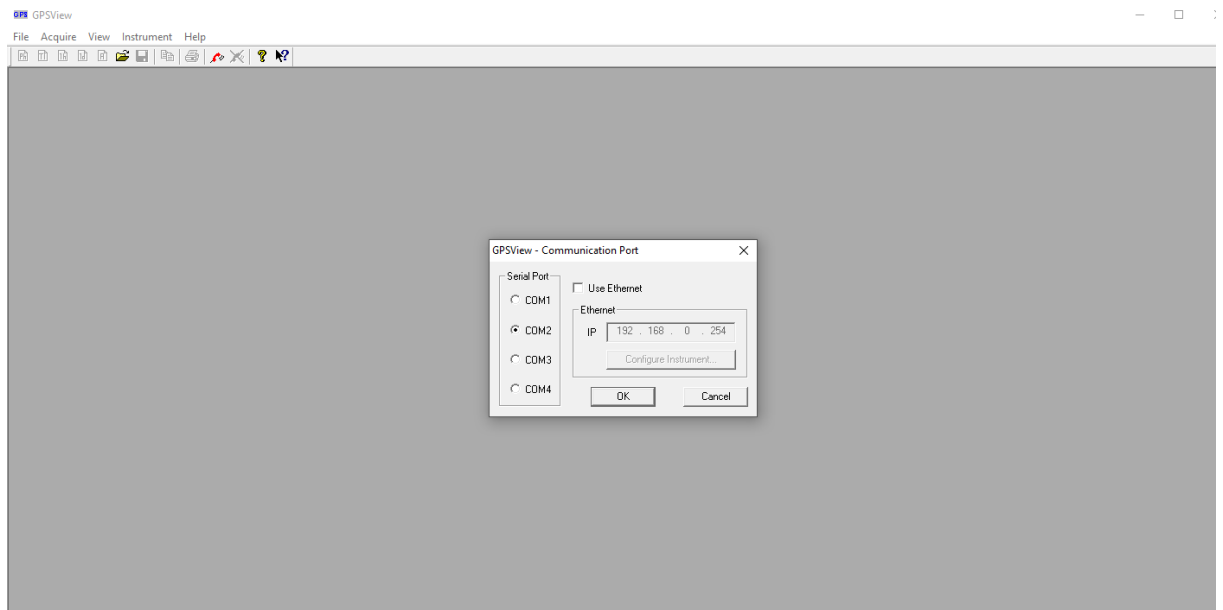


V. Connect to GPSView

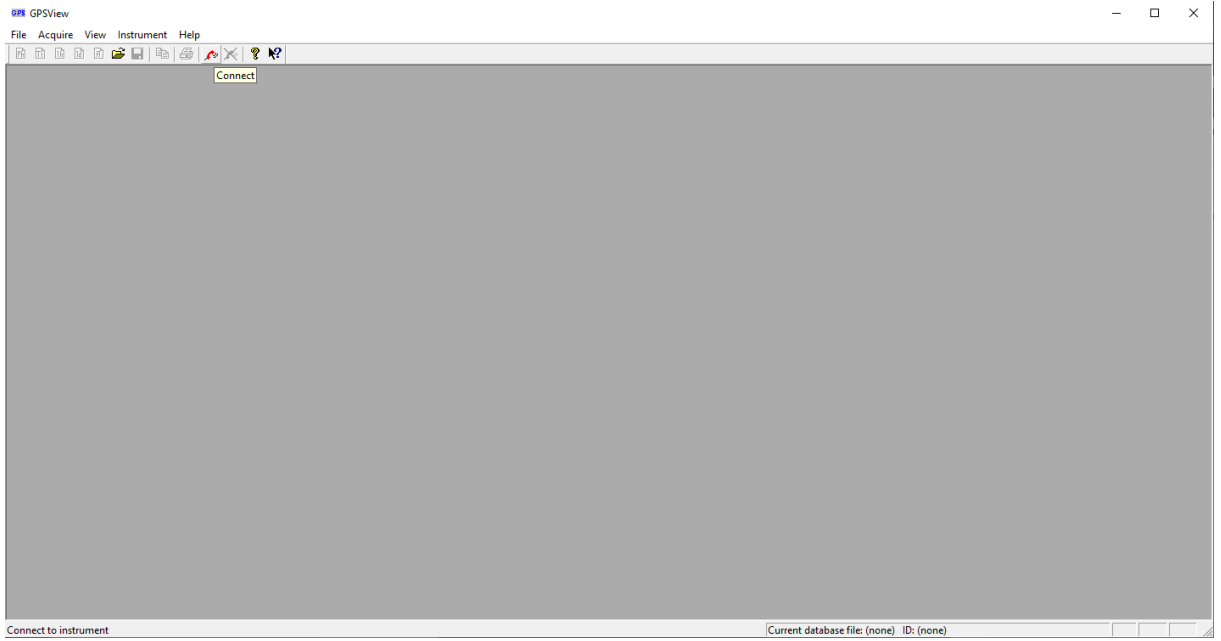
1. Once you have configured the Frequency Standard, and created the virtual port on your computer, you can now easily connect with GPSView, to read data from unit.
2. Open GPSView program, click **Instrument** and then **Communication Port**.



3. When the **Communication Port** window will open, select **COM** number you configured in virtual port before and then click **OK**.



4. Now click **Connect** to connect to the Frequency Standard and read data from instrument



5. Start using **GPSView**