

# Moxa RS485/wi-fi modem installation

## How to install a Moxa RS485/wi-fi modem on a Powersoft amplifiers system

Several customers have showed interest in the possibility of remote controlling Powersoft amplifiers using a wireless connection.

If optional KAESOP board is installed on K/K-Light/i Series amplifiers it can be accomplished using a standard Ethernet Wi-Fi router.

If KAESOP board is not installed it's necessary to use a RS485/wi-fi modem. This tutorial will help with the configuration of the one that we found more reliable and worldwide available, the Moxa NPort W2250 Plus. For details please visit the link: [http://www.moxa.com/Product/NPort\\_W22502150\\_plus.htm](http://www.moxa.com/Product/NPort_W22502150_plus.htm).

### Installation

Connect an Ethernet cable between a computer and the Moxa modem, please note that both cross-over and straight cable will work.

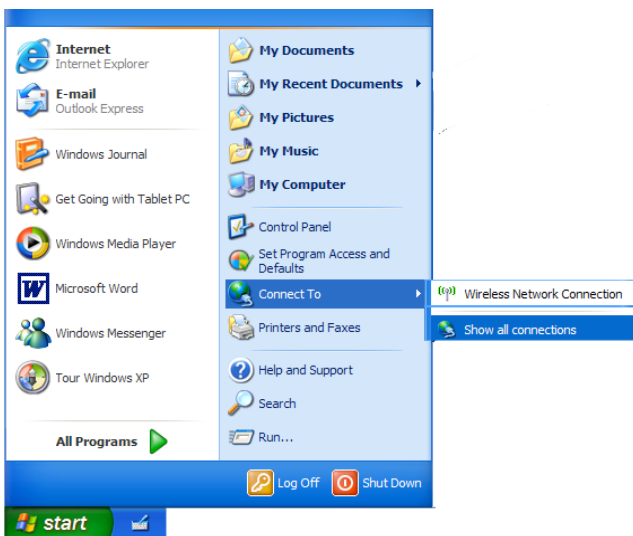
Connect the power supply of the Moxa modem to the mains, there is no power switch, it will automatically switch on.

Please check the label on the bottom of the Moxa modem, it should have printed "192.168.126.254" as "WLAN Default IP", in that case set your computer LAN address to 192.168.126.1.

If the label reports a different IP address use the following scheme:

"WLAN Default IP" address = ABC.DEF.GHL.254  
 Computer LAN Address = ABC.DEF.GHL.1

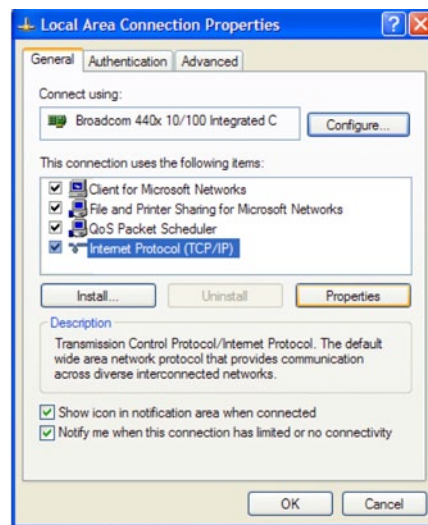
Follow these steps to change your computer LAN Address: In the Start menu select "Connect to" or "Settings", then "Show all connections" or "Network connections" (depending on system configuration).



Double-click on "local area connection".

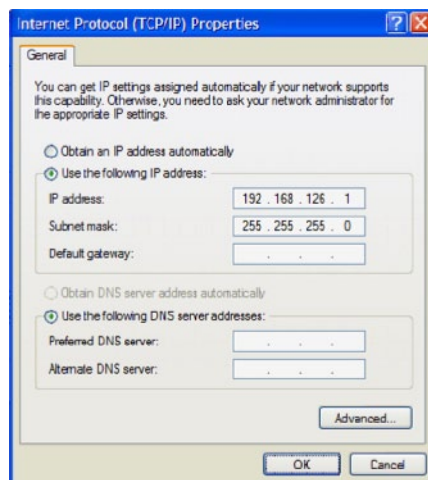


Select "Internet Protocol (TCP/IP)", then "Properties".

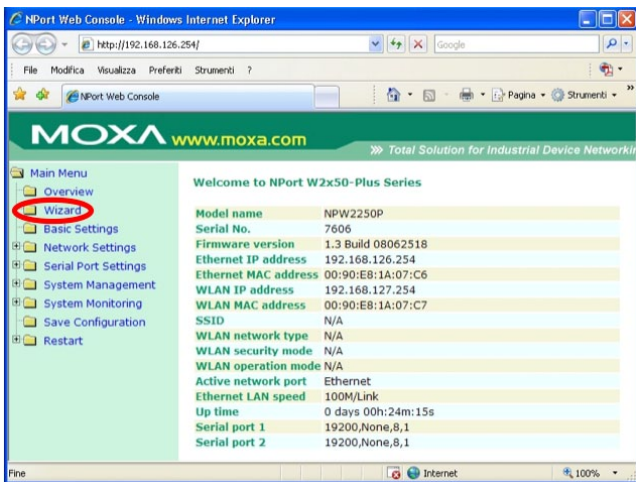


Set "Use the following IP address" and insert it like mentioned before on this page. Subnet mask should be 255.255.255.0, and Default gateway left blank.

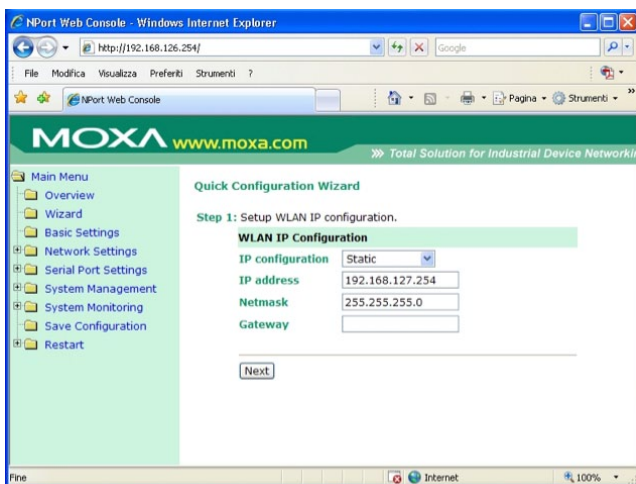
The computer will automatically switch to "Use the following DNS server address", leave this field blank.



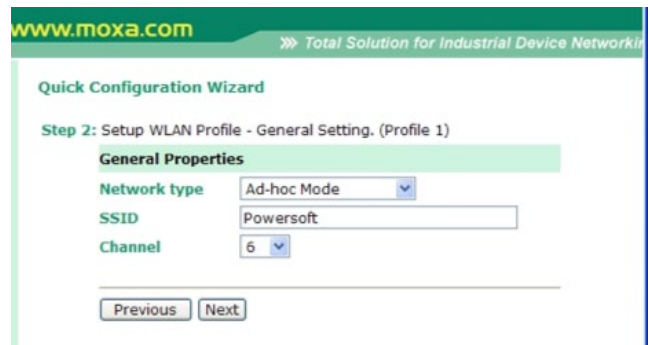
Open your computer browser (Internet Explorer or similar) and go to the address <http://192.168.126.254> or the address printed on the bottom of the Moxa driver as "WLAN Default IP", and press "Wizard" from the Main menu on the left.



Leave the Static address on 192.168.127.254 and the netmask to 255.255.255.0 and press Next.



Select "Ad-hoc mode" Network type and insert a name in the SSID field (as "Powersoft"), if necessary, because the system will be operated in an environment with other wi-fi transmitters or if there are wi-fi channels disturbed it is possible to select the transmission wi-fi channel between the 13 available, please note that the system will not change the transmission itself in a frequency-hopping mode but will stay on the selected transmission channel, press Next.



In Authentication field leave Open system, in the Encryption field select Disable, press Next.



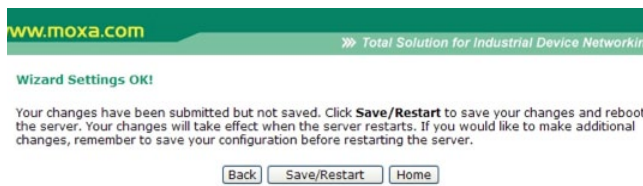
In the Application field select Device control, in the Mode field select RealCOM, press Next



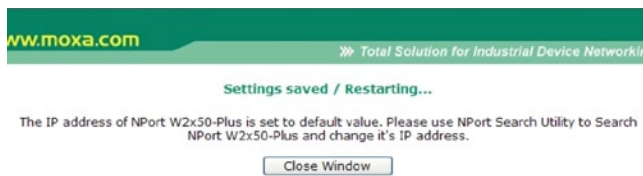
In the field Baud rate select 19,200, Data bits at 8, Stop bits at 1, Parity None, Flow control None, Interface RS-485 2-wire, press Finish



Press Save/Restart and wait for a double beep from the Moxa device (a double beep means that the device is rebooting), if you do not hear it please manually plug off and then back in the power supply.



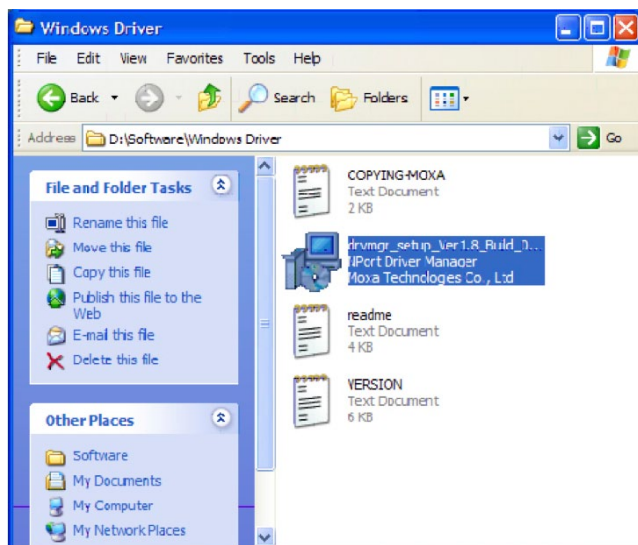
Press Close Window. The first part of the installation process is finished.



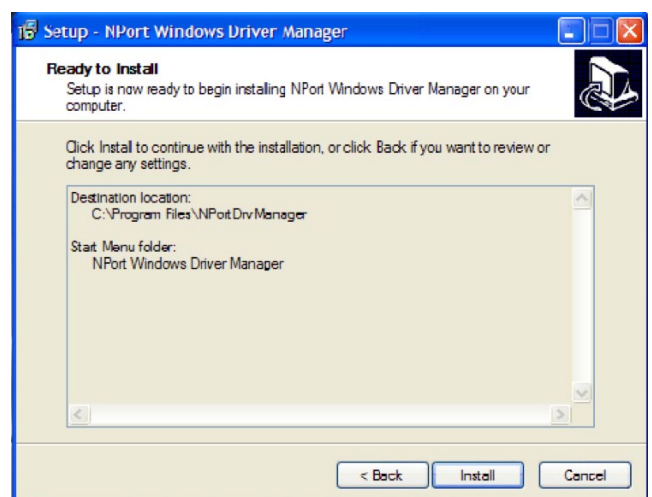
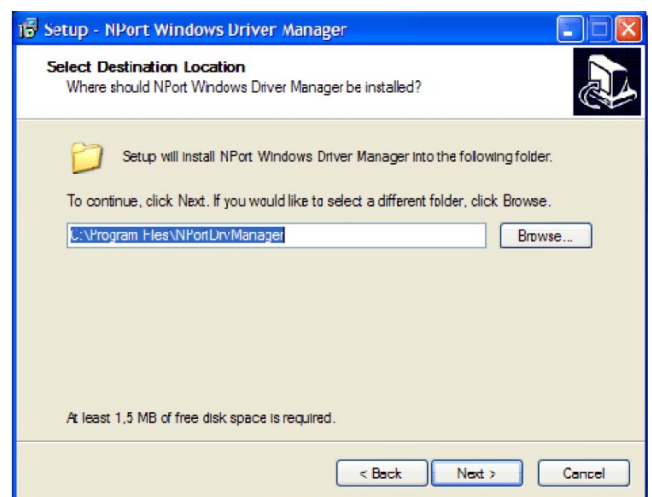
Switch off the Moxa modem by disconnecting the power supply and remove the Ethernet cable between the computer and the Moxa modem. After that switch back on the Moxa modem, that will double beep again.

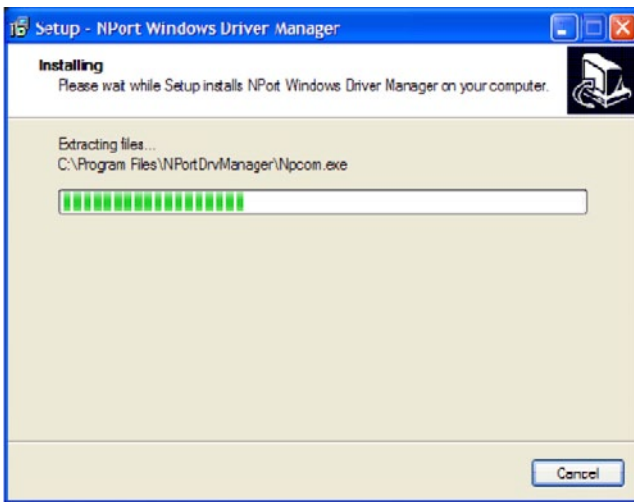
Please note that the Moxa modem will choose if working under local wired Ethernet control or wirelessly by detecting if the Ethernet cable is connected, so if it remains connected the modem will not transmit in wi-fi mode!

Insert in your computer the CD with Moxa software and drivers contained in the Moxa package, navigate to \\Software\Windows Driver\ and launch the "drvnmng\_setup\_Ver1.8\_Build080552115\_WHQL" or similar updated file.

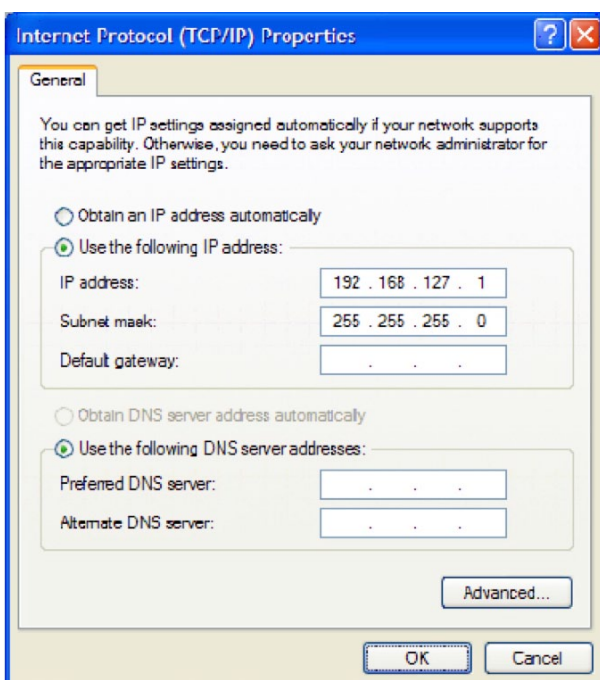


Follow the software installer procedure as showed in the screenshots down here





Following the procedure shown at the beginning of this document, change the computer IP address to 192.168.127.1 with subnet mask 255.255.255.0 as shown in the window down here.



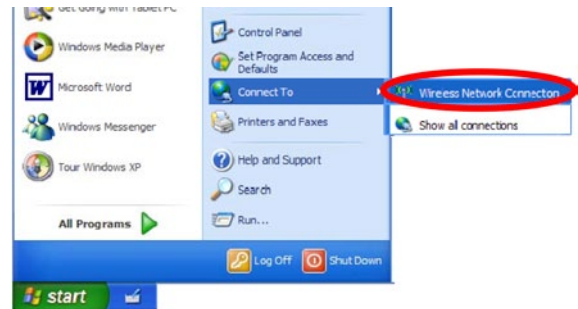
Search for wireless network called Powersoft (if that's the chosen name), please note that could be necessary to wait some minutes before the computer will discover this new network.

If the computer cannot find the new network go to Start menu and depending on your system configuration:

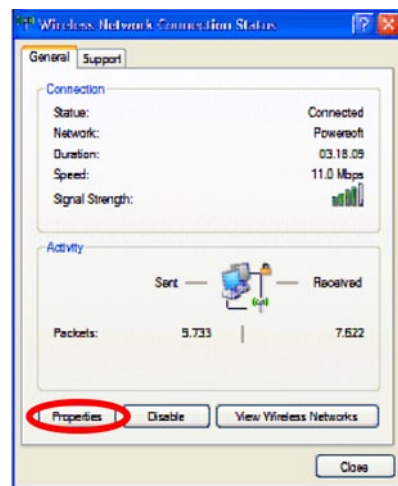
Select "Connect to" or "Settings".

Select "Show all connections" or "Network connections".

Select Wireless Network Connection.

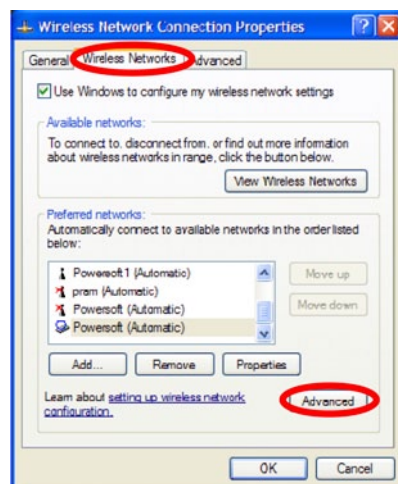


Select Properties.

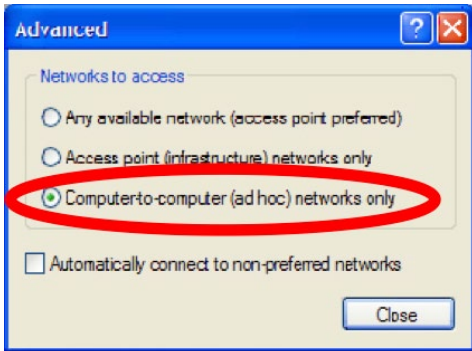


Select Wireless Network.

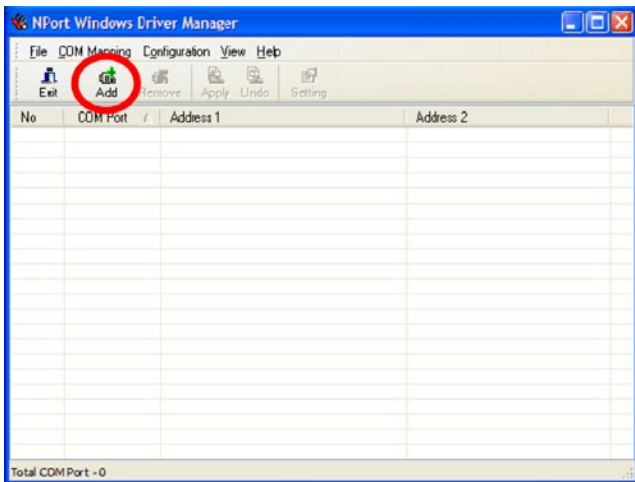
Select Advanced.



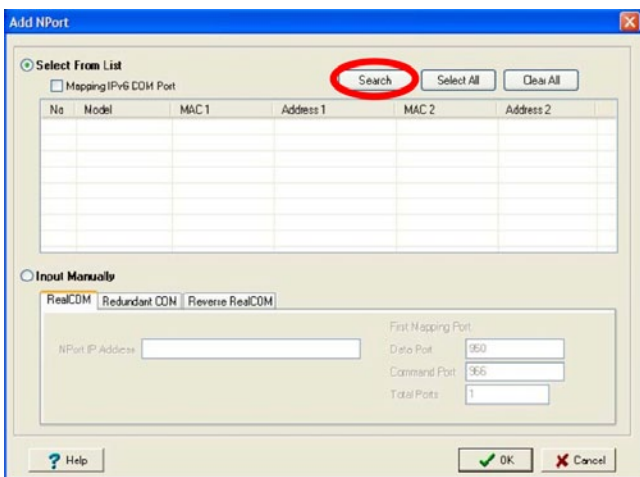
Select "Computer to computer (ad hoc) networks only", at this point the wireless network should be visible.



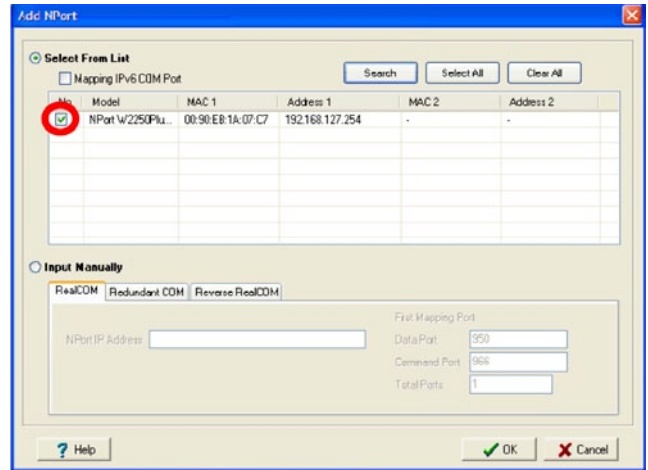
Once the network is visible it is necessary to join it. Launch the NPort Windows Driver Manager software previously installed on the computer and select the icon "ADD+".



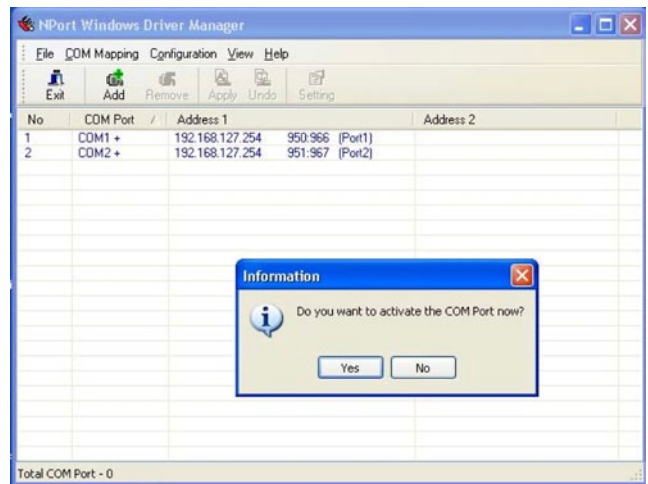
Press the Search command in the windows that will pop up.



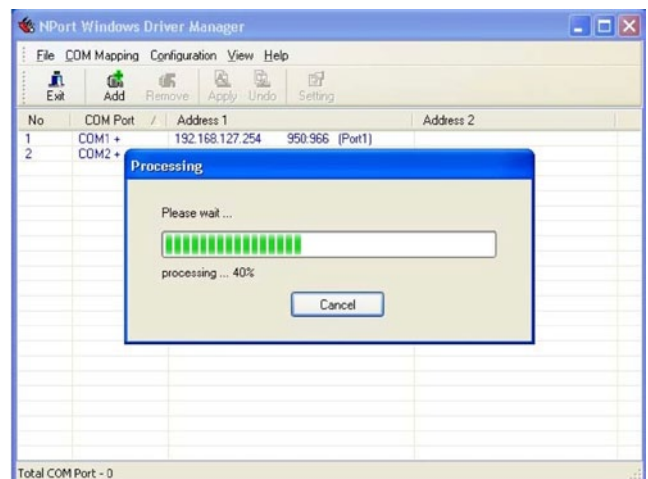
Select the NPort driver that will pop-up, if it does not appear you will need to reboot the modem, then press OK as showed in the following screen.



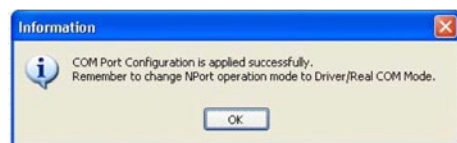
Press YES when the following popup will show.



Wait the processing time...

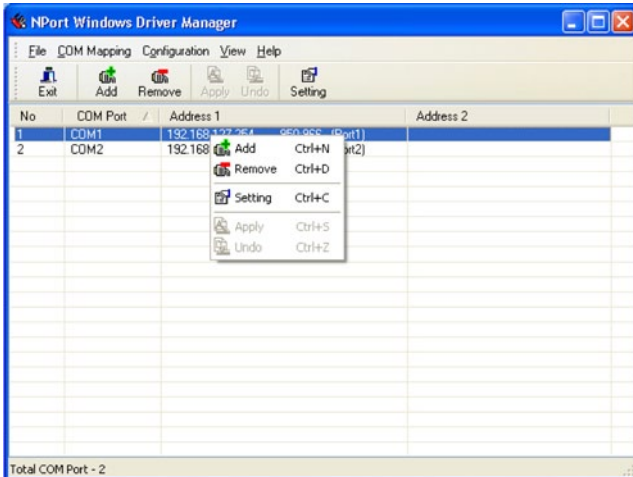


... and press OK.

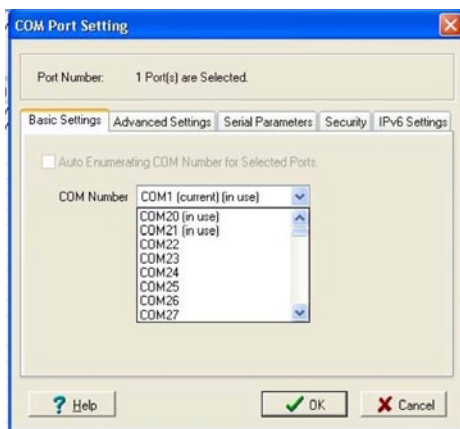


Now select one of the two COM ports and right click on it, remember the one that you're choosing since you will need to connect the amplifier to that (a custom cable needed is showed at the end of this document).

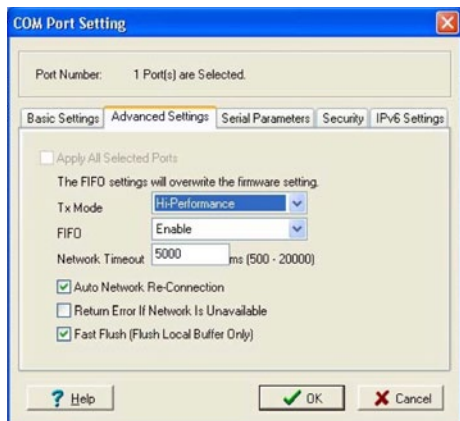
It will appear the pop-up menu showed down here, select settings.



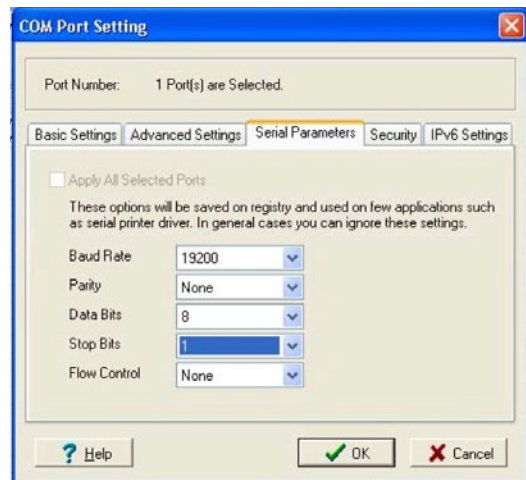
In the "COM Port Settings" window select an unused COM port number under Basic Settings tab.



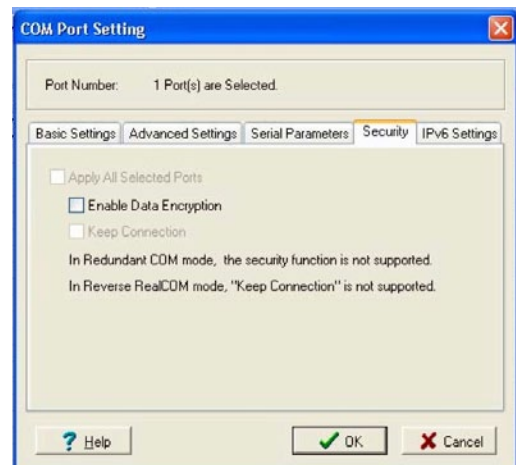
Keep the configuration for the Advanced settings tab as the one shown down here.



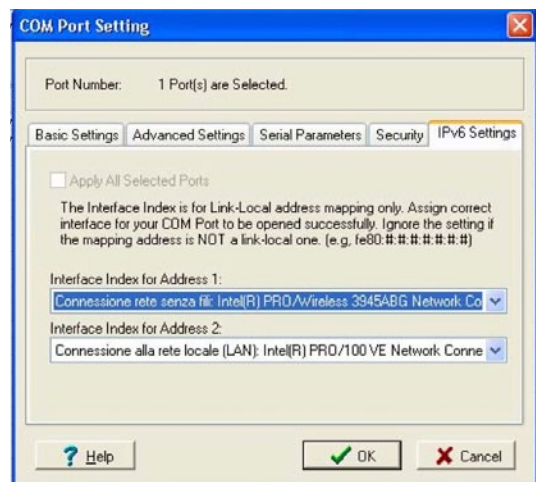
Under Serial parameters tab select 19.200 as Baud rate, Parity None, Data bits 8, Stop bits 1, Flow control None.



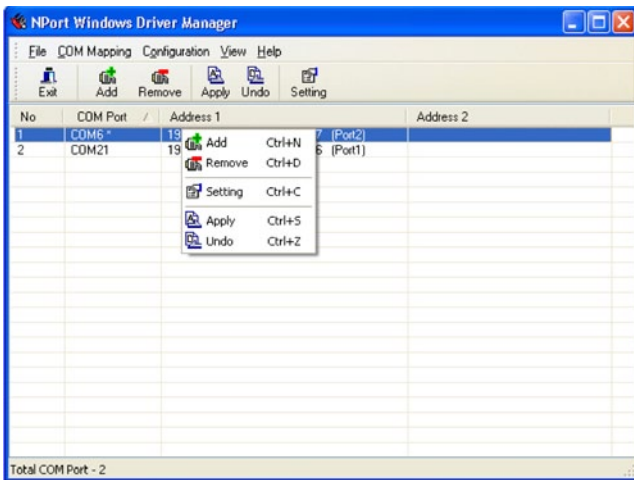
Keep the modem settings for the security settings tab as shown in the next screenshot.



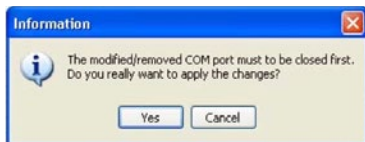
Keep the modem settings for the IPv6 Settings tab as from the following screen shot and press OK.



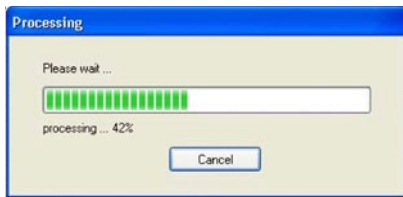
Once the pop-up window is closed, right click on one of the two com ports and select Apply from the menu.



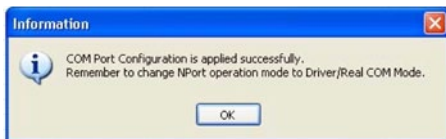
Press Yes on the pop up window.



Wait that the processing takes place...



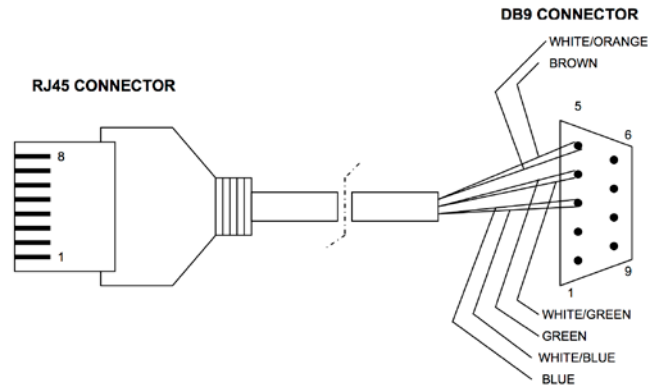
...and then press Ok.



Now connect the amplifier to the Port No 1 or 2, depending on which you selected in the previous page set-up, and select the corresponding COM port on the software.

## DB9 to RJ45

Follow this scheme to build an adapter from Powersoft RS485 port on RJ45 connector and Moxa RS485 port on DB9 pole connector.



For further information about RJ45 adapters please refer to TechNote #01 "RJ45 adapters for RS-485" available on Powersoft website.



Via Enrico Conti, 5  
50018 Scandicci (FI) Italy

Tel: +39 055 735 0230  
Fax: +39 055 735 6235

General inquiries: [info@powersoft.it](mailto:info@powersoft.it)  
Sales: [sales@powersoft.it](mailto:sales@powersoft.it)  
Application & technical support: [support@powersoft.it](mailto:support@powersoft.it)  
Service & maintenance: [service@powersoft.it](mailto:service@powersoft.it)

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