Virtual COM (VCOM 4.1) Master Setup Guide for BF430

Please carefully follow this guide to successfully install the virtual COM software for Windows XP, Vista, 7, 8 and 10 32/64-bit.
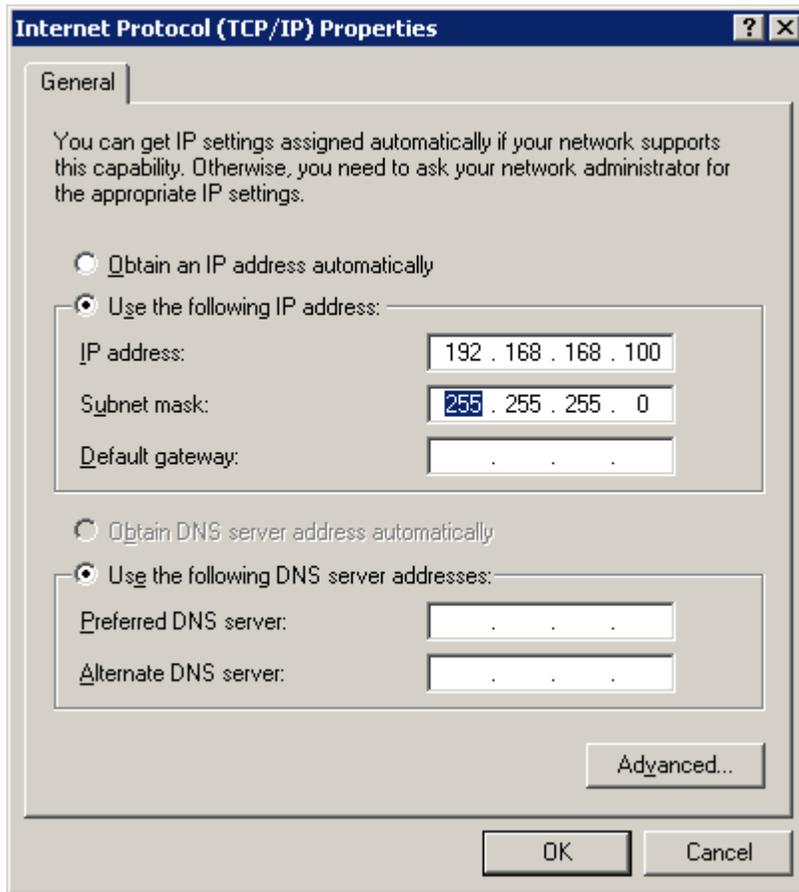
Assigning a static IP address

In order to be able to communicate with the BF430 you need to assign a static IP address to the network connection to which you connect the BF430.

Connect the BF430 via a standard cross-over Ethernet cable. Turn on the power supply to the BF430. In Windows go to Start -> Control Panel -> Network Connections and click on the network at which you connected the BF430, often this is called Local Area Connection, but can very depending on if you have multiple networks connected. Right-click on the icon, scroll down and highlight Internet Protocol (TCP/IP), right-click and click Properties.
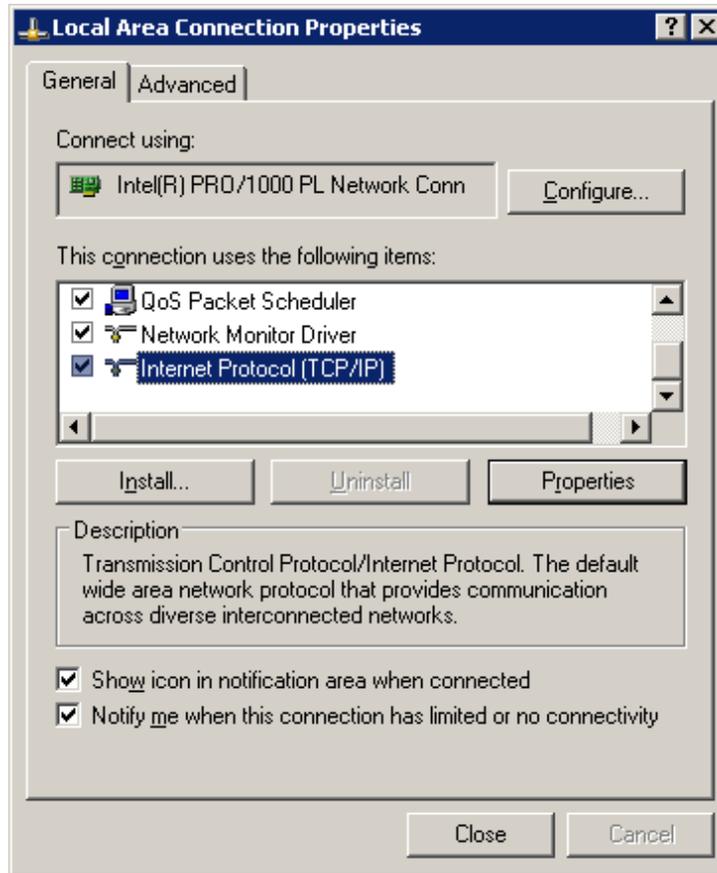
The default IP of the BF430 is 192.168.168.125 so you need to assign a static IP to your connection in the 192.168.168.1 to 192.168.254 range except the IP 192.168.168.125 which is the BF430.

Assign a static IP as following example and click OK:

Internet Protocol (TCP/IP) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically

● Use the following IP address:

IP address:	192 . 168 . 168 . 100
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	. . .

○ Obtain DNS server address automatically

● Use the following DNS server addresses:

| Preferred DNS server: | . . . |
| Alternate DNS server: | . . . |

Advanced...

OK   Cancel

To check if you have successfully created a connection to the BF430 you can open a web browser and enter 192.168.168.125 in the address bar. This should bring up a password window:

The user name and password are both: admin

After entering the user name and password you should now be able to see the main configuration window of the BF430 as shown below. If you are getting a 'Not found' error page it means that the BF430 has not been connected correctly to your computer or that the static IP address has not been correctly assigned. In that case check your cable and IP setup.
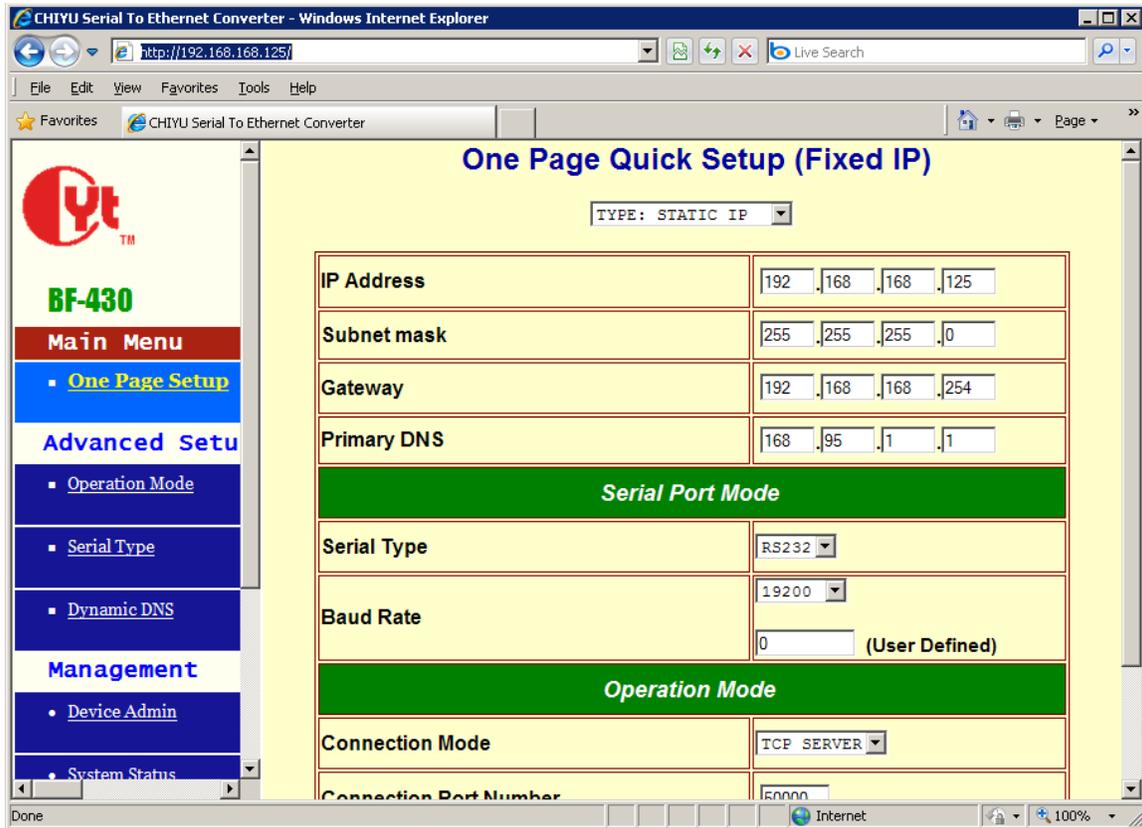
Creating a virtual COM port

In order to create a COM port you need to install the virtual COM software.

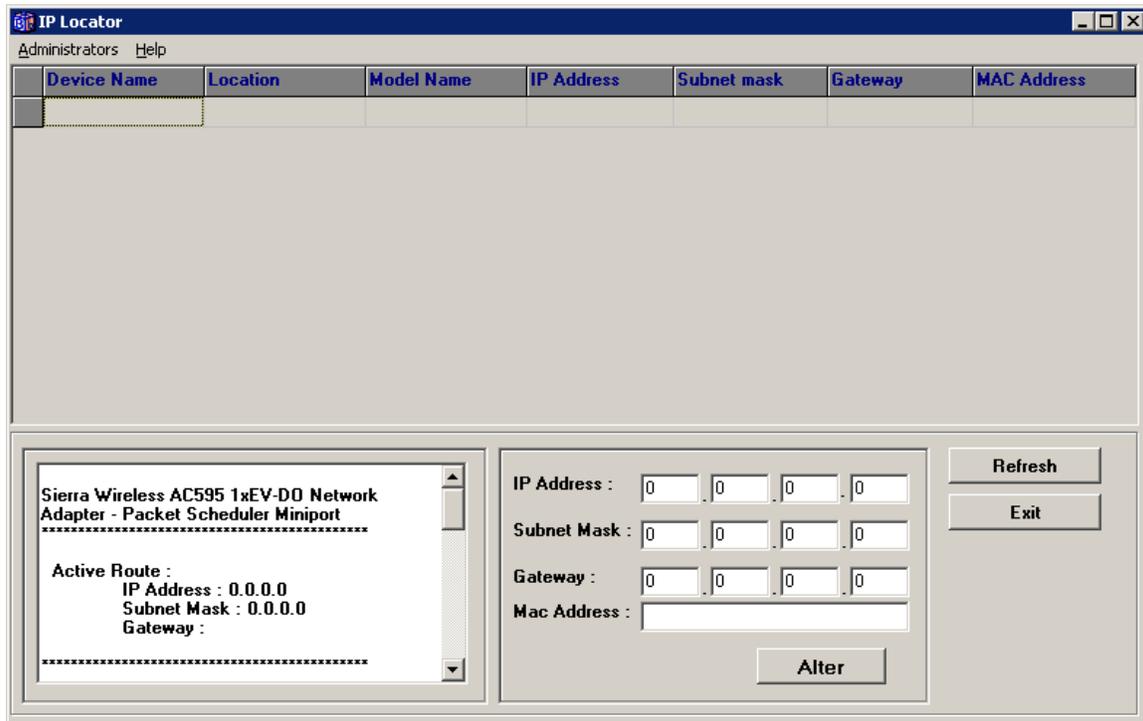Double-click the file:

VCOM Setup.exe

which can be downloaded from www.usconverters.com. The file is located in the software folder. Reboot your computer after the installation has finished.

Making sure that your BF430 is powered up and correctly connected to your computer, start the VCOM software by double-clicking VCOM.EXE.
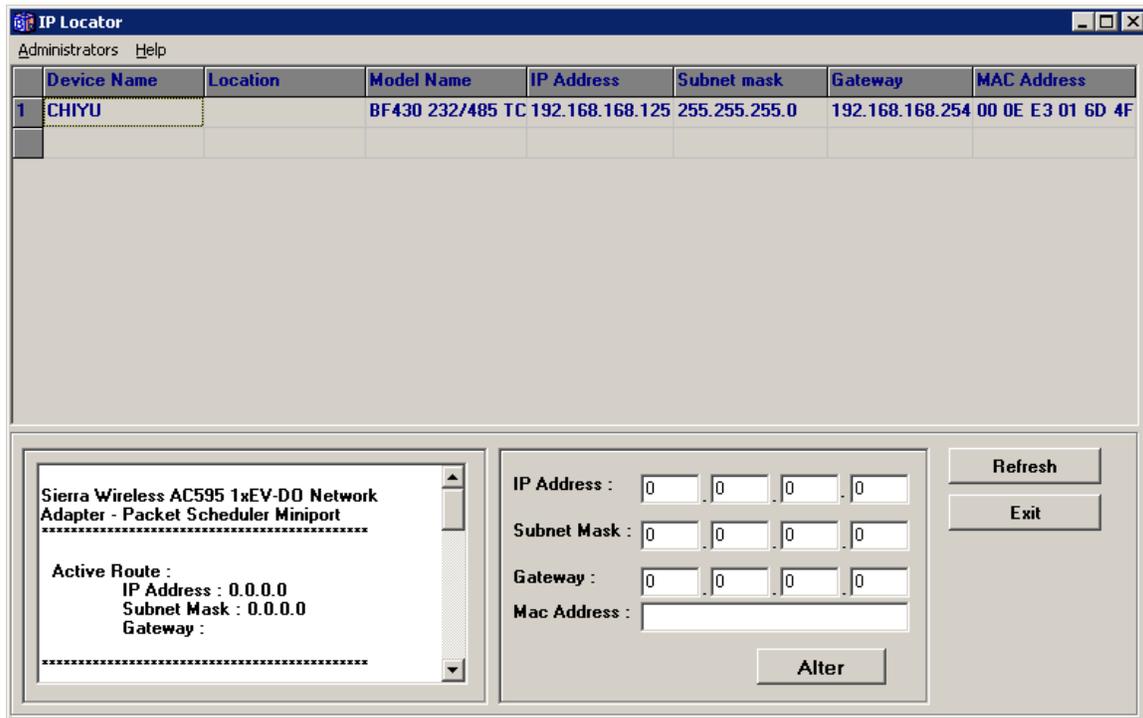
You should now see the VCOM main screen:
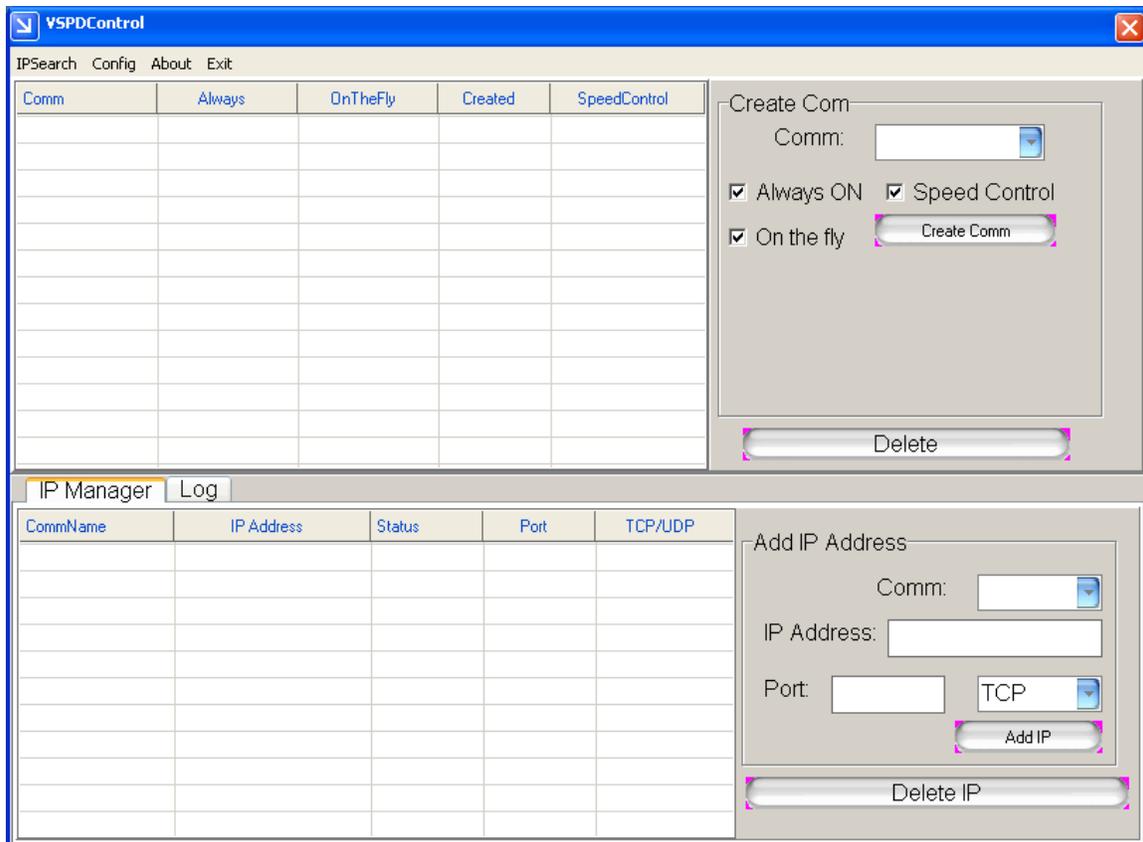
To search for the BF430 you can click the IPsearch link at the top menu bar which brings up the search screen:

IP Locator

Administrators Help

Device Name	Location	Model Name	IP Address	Subnet mask	Gateway	MAC Address

Sierra Wireless AC595 1xEV-DO Network
Adapter - Packet Scheduler Miniport
****

Active Route :
        IP Address : 0.0.0.0
        Subnet Mask : 0.0.0.0
        Gateway :

****

IP Address :   0 . 0 . 0 . 0
Subnet Mask : 0 . 0 . 0 . 0
Gateway :   0 . 0 . 0 . 0
Mac Address :

Refresh
Exit
Alter

Click the Refresh button and the BF430 should be found if it has been connected correctly:

IP Locator

Administrators Help

	Device Name	Location	Model Name	IP Address	Subnet mask	Gateway	MAC Address
1	CHIYU		BF430 232/485 TC	192.168.168.125	255.255.255.0	192.168.168.254	00 0E E3 01 6D 4F

Sierra Wireless AC595 1xEV-DO Network
Adapter - Packet Scheduler Miniport
****

Active Route :
        IP Address : 0.0.0.0
        Subnet Mask : 0.0.0.0
        Gateway :

****

IP Address :   0 . 0 . 0 . 0
Subnet Mask : 0 . 0 . 0 . 0
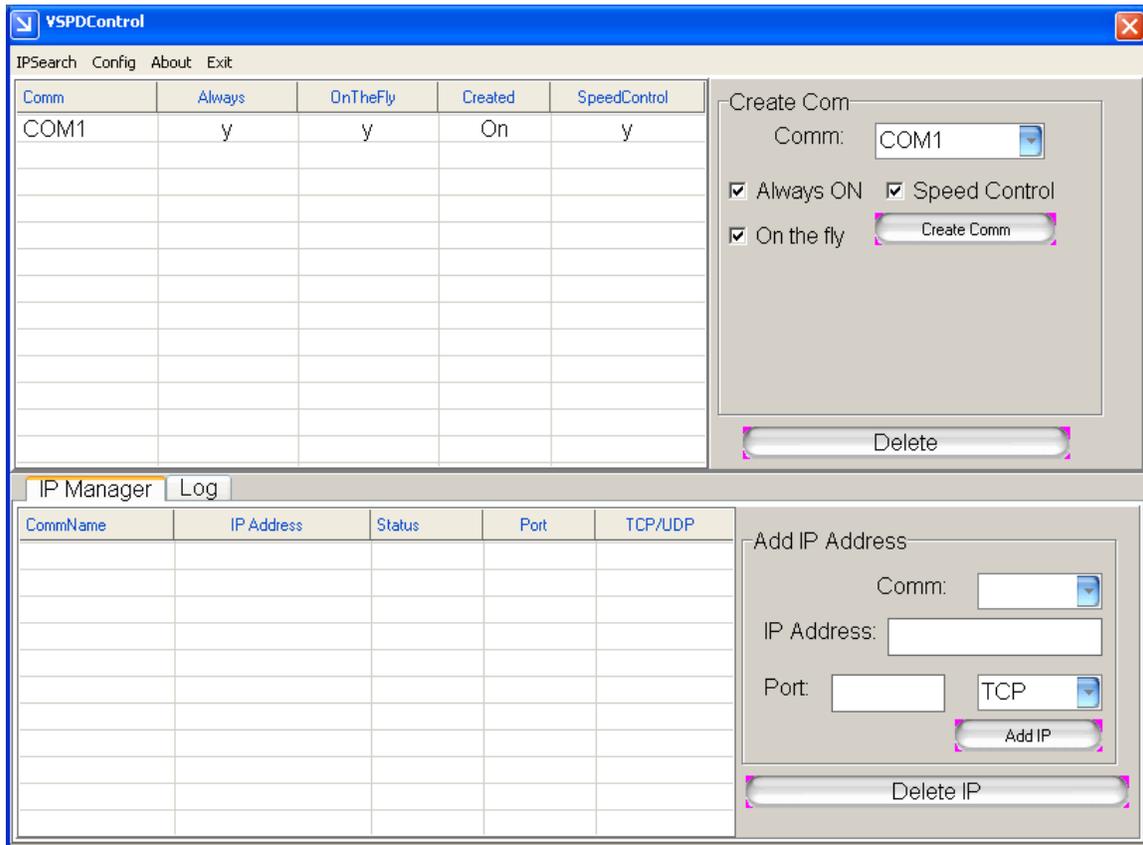Gateway :   0 . 0 . 0 . 0
Mac Address :

Refresh
Exit
Alter

If the IP Search tool cannot find the BF430 please see Known Issues.

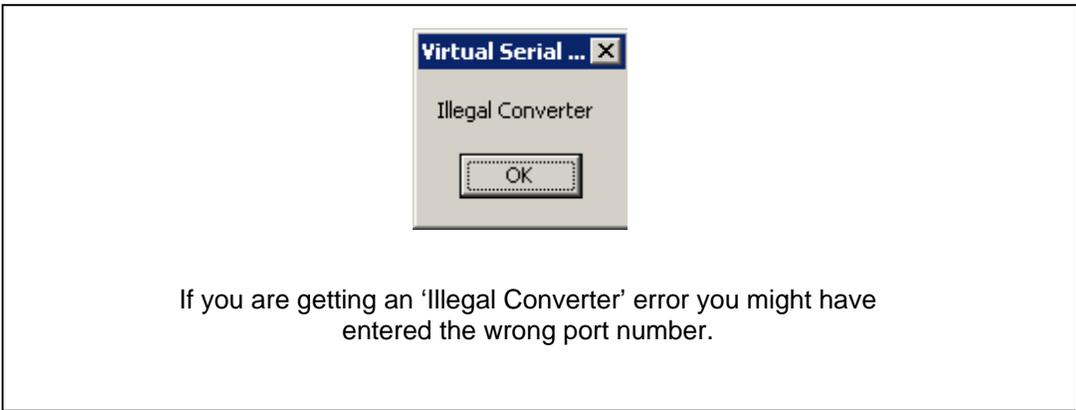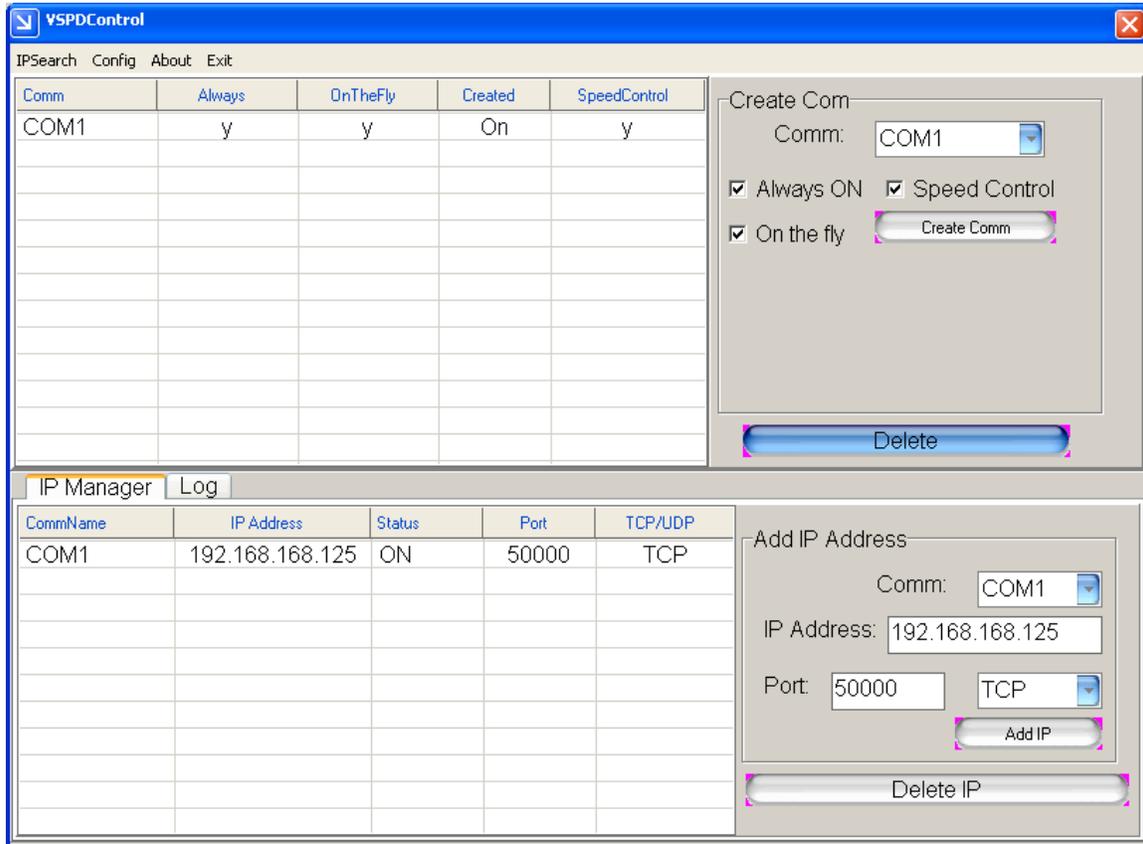Go back to VCOM and chose COM1 (or a different COM port according to your needs) in the upper window:
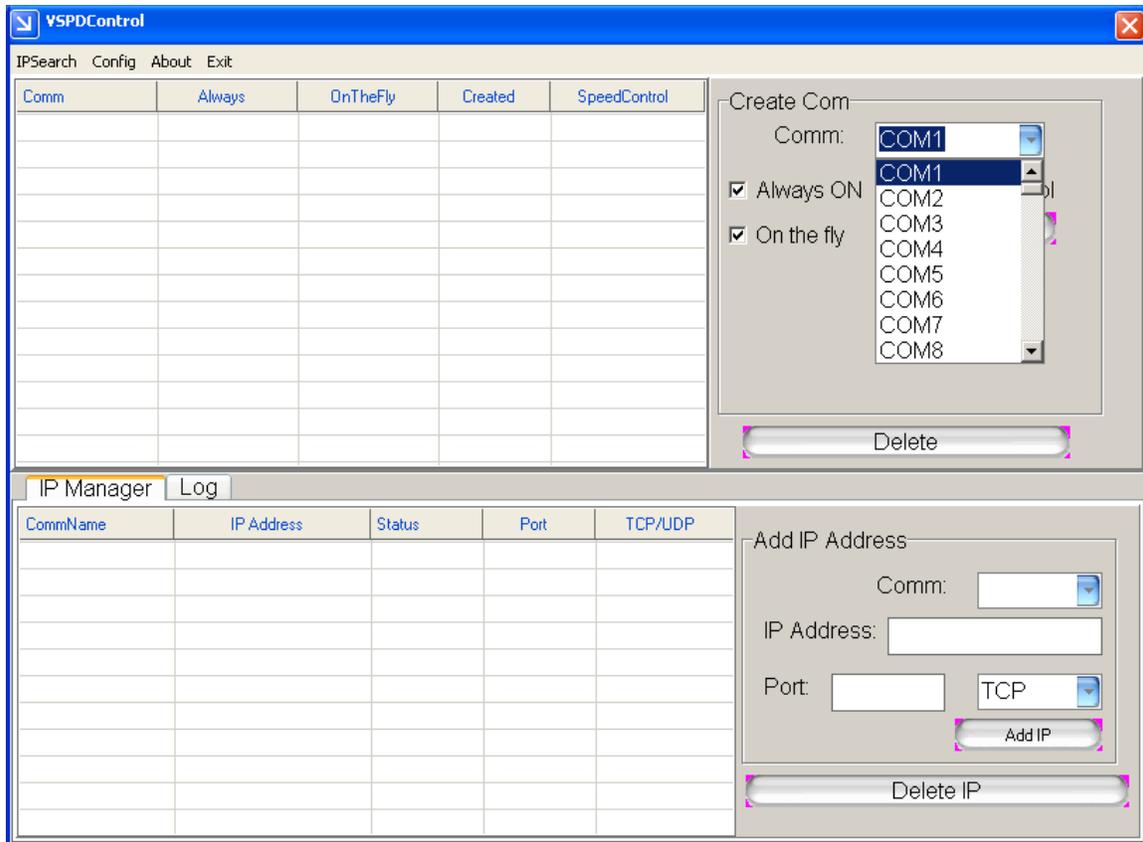
Click the Create COM button. The BF430 should now appear at the first line in the upper window:
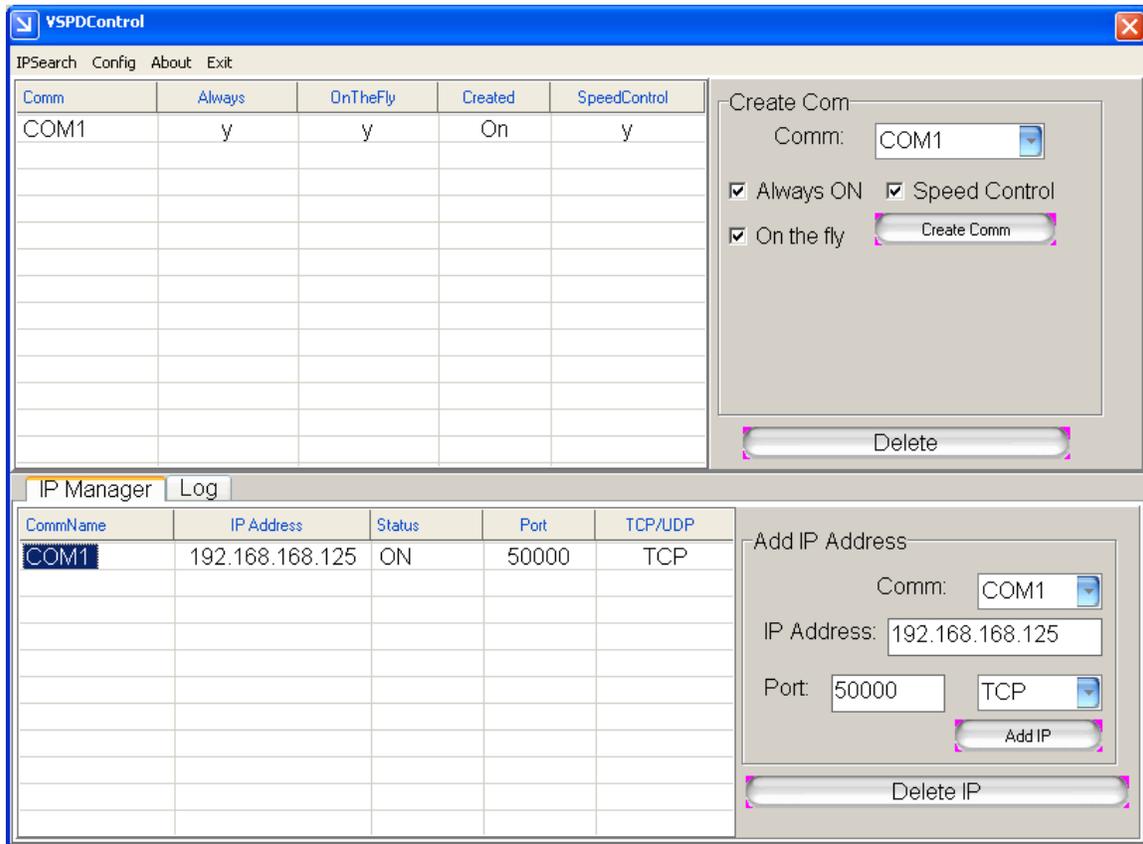
In the lower window you can now chose COM1 and enter the IP address of the BF430:

COM1
IP: 192.168.168.125
Port: 50000
TCP

If you are getting an 'Illegal Converter' error you might have
entered the wrong port number.

To delete a COM port you must first highlight the COM port and click Delete IP:

Explanation of checkbox options:

Always ON: This function is used to keep the connection with the BF-430. If the connection is disconnected VCOM will try to re-connect immediately.

Speed Control: This function is used to simulate transmission speed of the virtual created COM port.

On the fly: This function is used to synchronize the RS-232 parameters of the BF-430 with the virtual created COM port when connection is established.

To check if the COM port has been successfully created go to Windows Device Manager where the COM port should be listed:
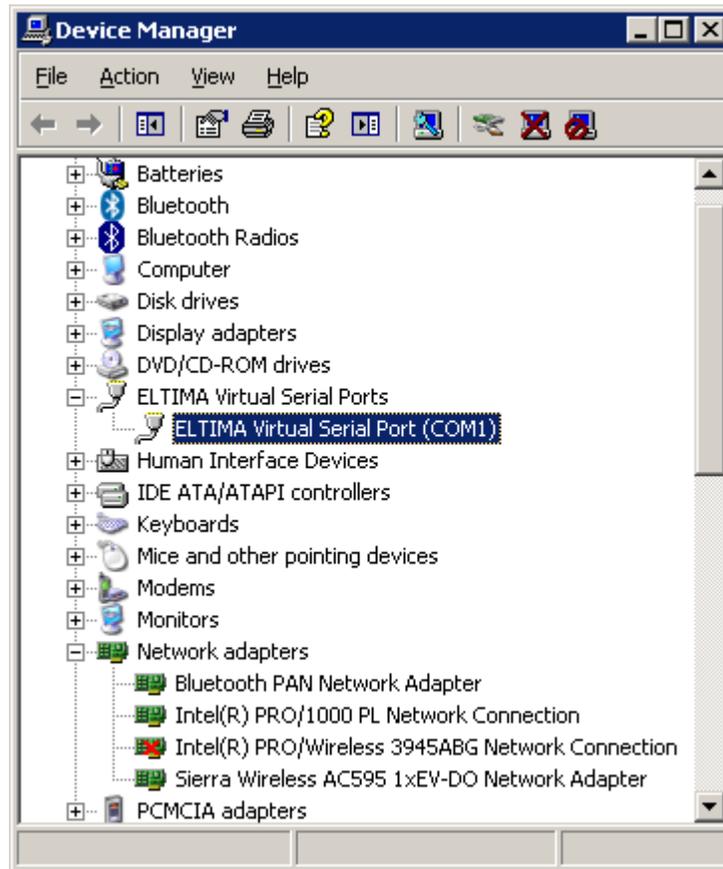
Making a loop-back test

To test if the BF430 is working correctly and the drivers and cabling has been successfully setup you can make a loop-back test. This will verify if you can send and receive data both ways, from LAN to serial and serial to LAN.

Download and start AccessPort from www.usconverters.com. When you start AccessPort the first time you will be welcomed with the window shown below. The upper window is the 'receive' window where you receive data, and the lower window is the 'send' window where you can enter a text string to send.
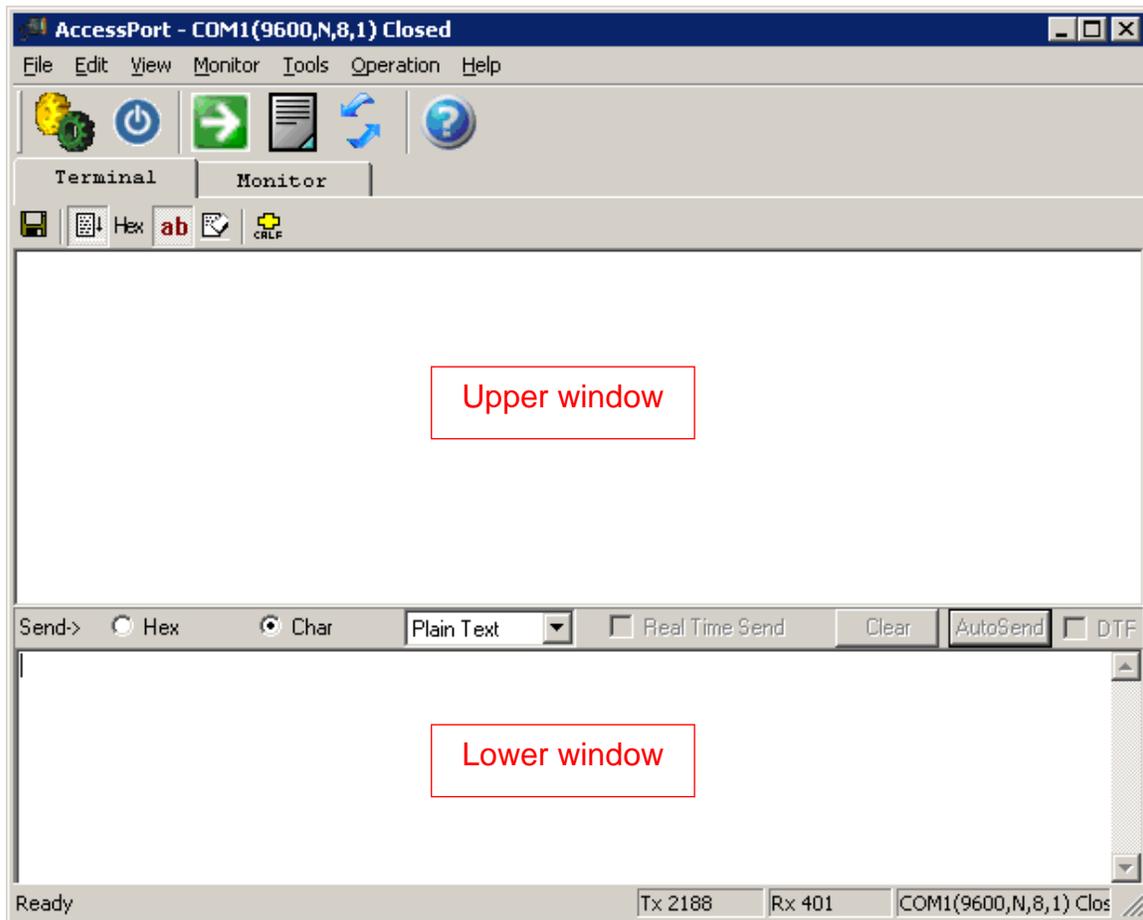
Click Tools -> Configuration in the menu bar, this will open the configuration window. Enter the correct information. In this case we have created COM port 1 so we select COM 1:
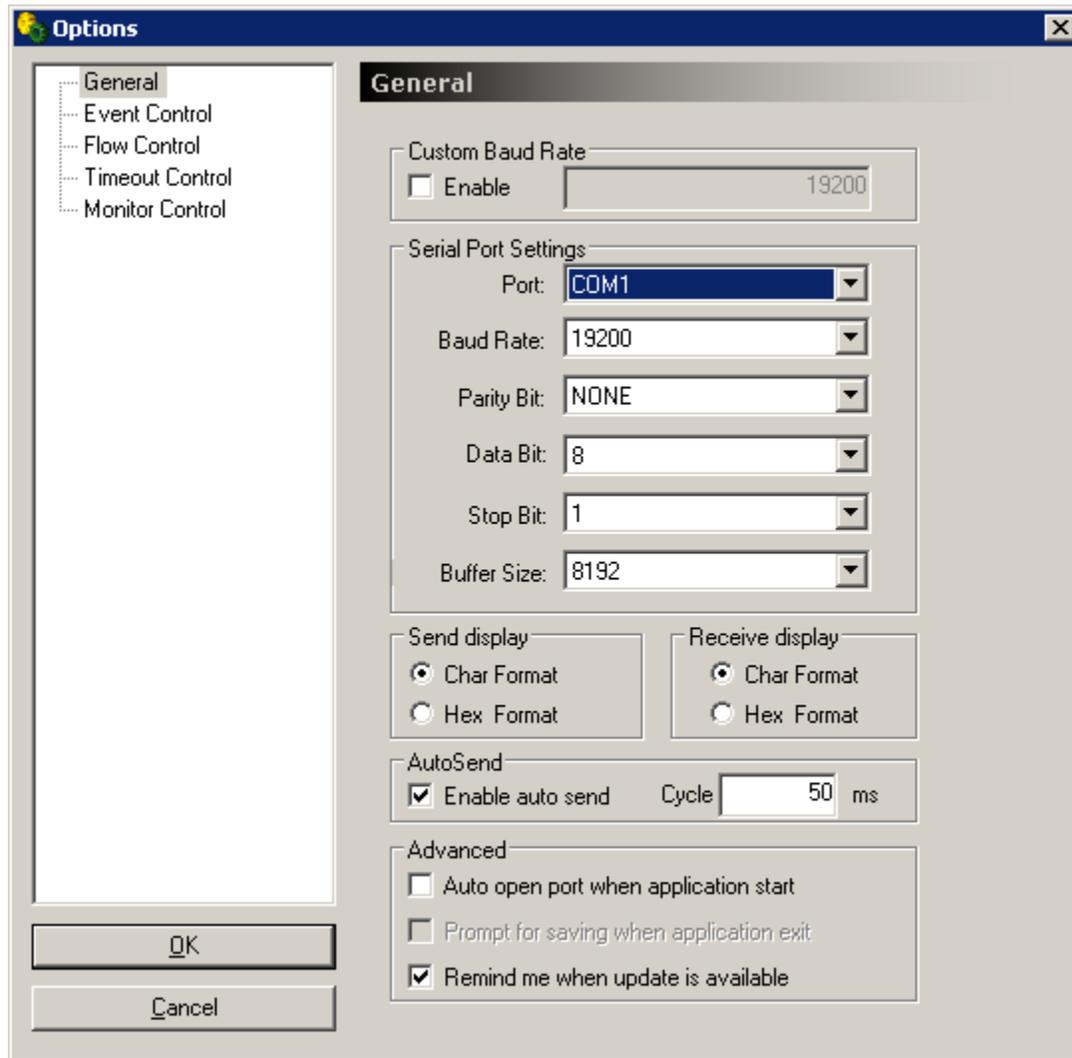

Click OK, this will automatically open the selected COM port if it has been correctly created by the Virtual COM software, and if the BF430 is properly connected to your computer.

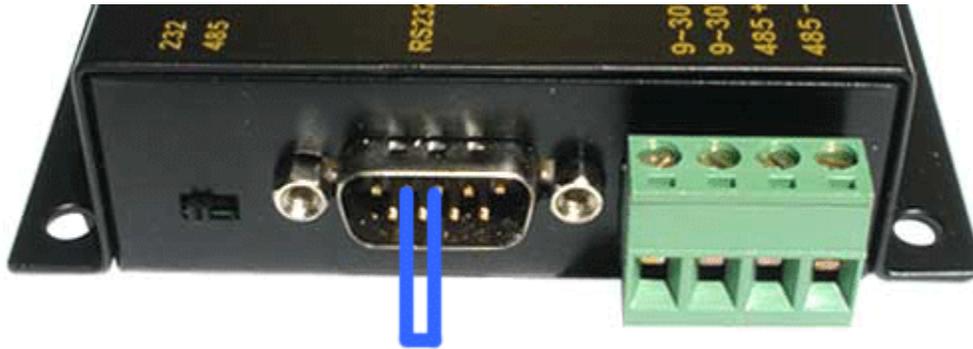Enter a text string in the lower window and click the AutoSend button:
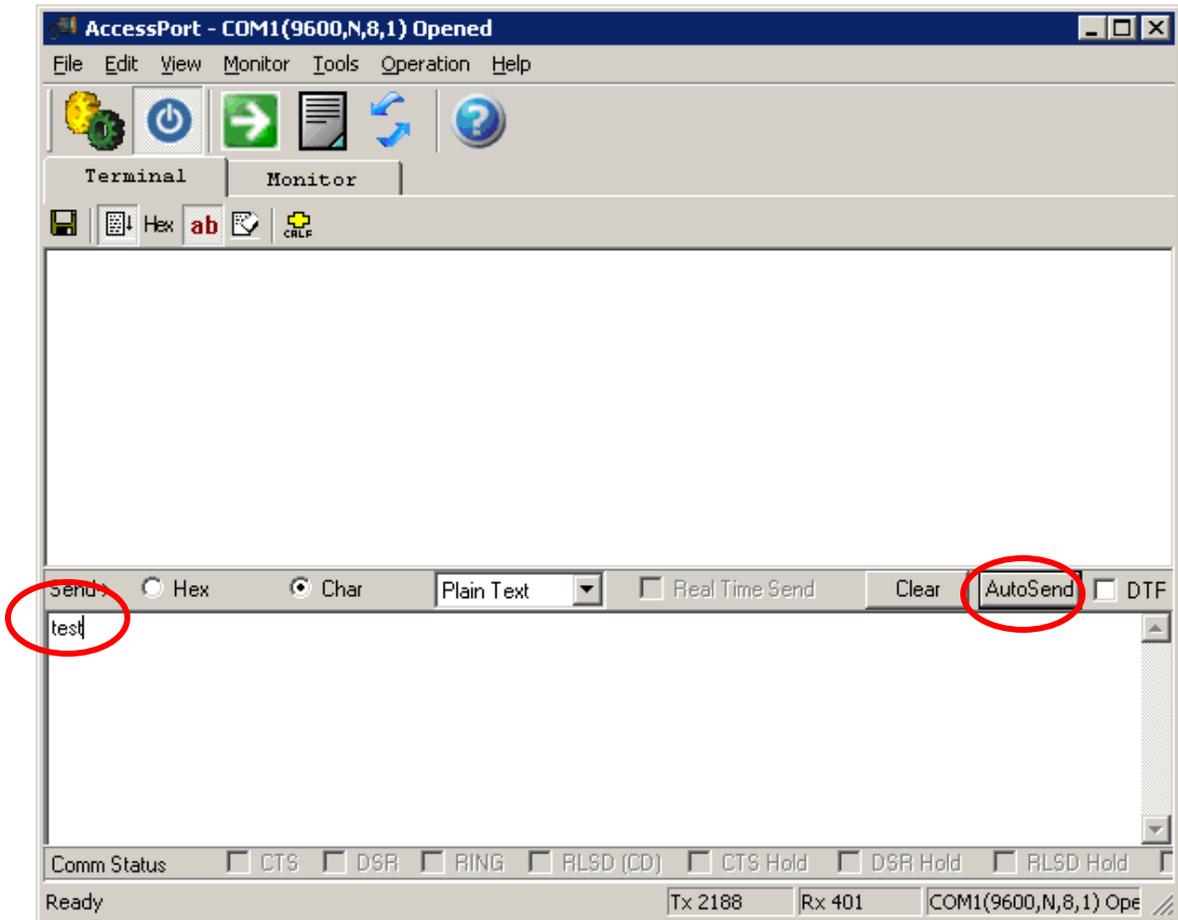
AccessPort will now start sending the text string to the COM port, the 'Link' and 'Trans' LED lights on the BF430 should now start flashing.

To confirm that the BF430 can send and receive data you now need to connect the TX pin to the RX pin (pin 3 to pin 2) at the DB9 connector on the BF430. The easiest and safest way to do this is by making a loop-back plug from a female DB9 connector or terminal header such as pictured below:
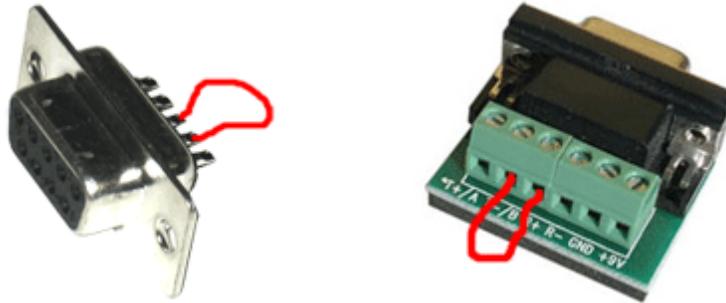
If you do not have any of these available you can manually make a connection from pin 2 to pin 3 at the BF430's DB9 connector by carefully using a piece of wire or even a paper clip to short the pins. Be careful not to short any other pins since this might damage the adapter.

With the TX and RX pins looped you will now receive the text string in the receive window:

You have now successfully performed a loop-back test and verified that the converter can transmit and send data and that it is correctly connected and setup.

Known Issues

Problem: VCOM version 4.0.0.0 IP Search tool cannot find the BF430 server.

Observed: Windows 7 32-bit

Solution: Use VCOM version 2.5.8

Problem: cannot login to BF430's admin panel via Firefox browser:

404 Not Found => File or CGI manage.cgi/ routine not found!

OK
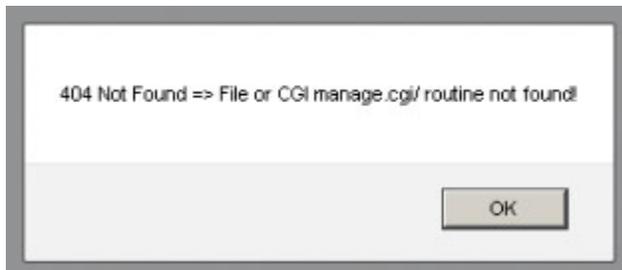
Observed: Windows XP / 7

Solution: Use Internet Explorer browser

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