Vigor2200USB Initial Setup
Top Troubleshooting Tips

When you first set up your Vigor2200USB, everything should go smoothly if you follow the instructions, but if you have problems, here are the most common things to check :
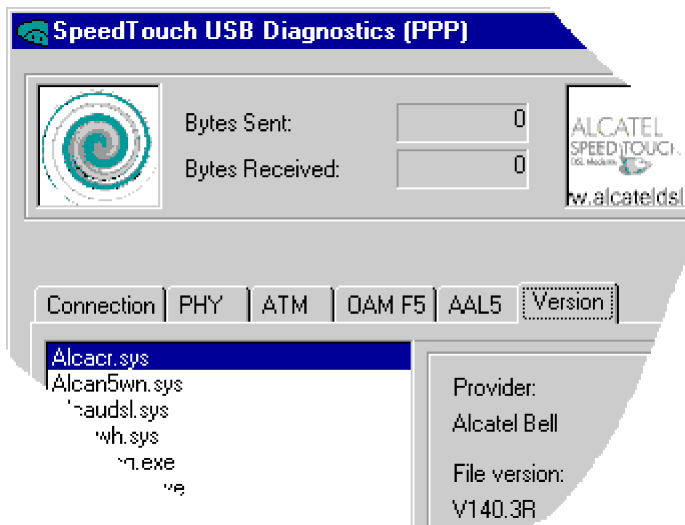
1. Is your PC connected to the router via a suitable Ethernet (RJ45) cable ? Does the appropriate ethernet switch LED (1/2/3/4) light up (green = 100mb/s, Amber = 10mb/s). If no light comes on, check the cable - a 'straight' (as opposed to crossover) cable is normally used to connect a PC to the router. The uplink switch for P1 should not be selected if connecting to a PC (it is used when connecting to a regular port on another hub/router).

2. Check that you have uploaded the modem firmware using the supplied utility "DSL Modem F/W Installer". That utility copies your **modem's** firmware from the PC into the router. You must run that utility from a PC which has the USB modem drivers already installed. Remember that the Vigor2200USB only supports certain USB ADSL modems - check that yours is supported (see web site).
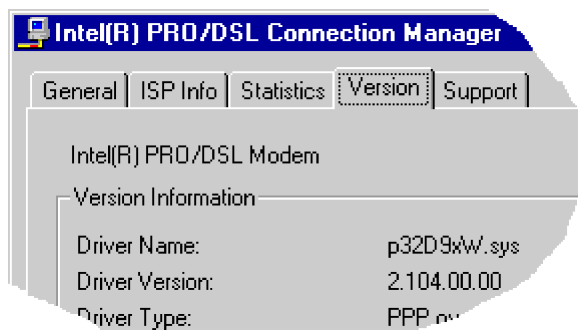

    If the utility reports 'cannot analyse USB modem' then it was unable to detect the modem's installation on that PC. This means that either the modem or the modem's drivers are not properly installed, that the modem driver's version is not supported or recognised by the DSL f/w program.

    Ensure that the USB ADSL modem and its drivers (e.g. Alcatel Speedtouch, Fujitsu FDX-310 etc.) is correctly installed and runs correctly on that PC. The *USB Modem Firmware Installer* reads your ADSL settings and modem firmware from your PC's hard disk and writes it into the router's permanent memory (so this should be just a one time process). Remember that the Vigor2200USB does not support all ADSL modems - check that your particular model is supported by the router. Also, if the modem manufacturer brings out new drivers, they may not be automatically supported by the router utility if they have changed too much.
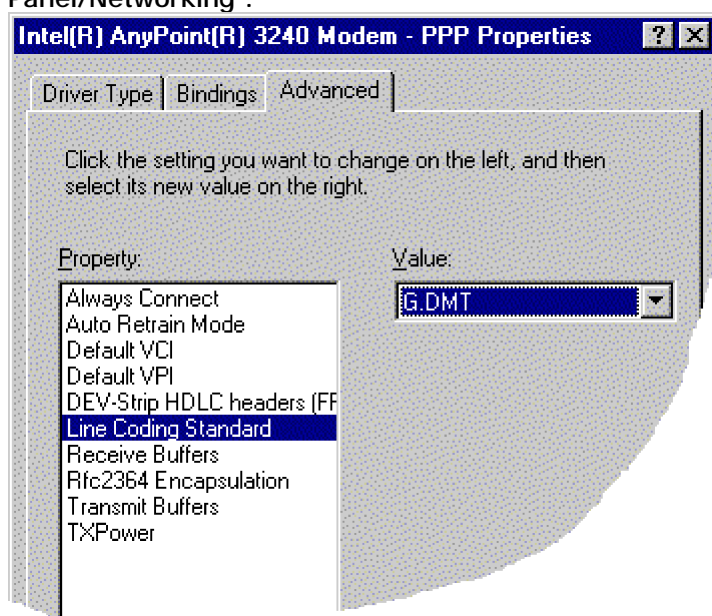
    You can check which version of modem drivers you have installed on your PC by looking at the version tab in the modem's utility. This varies with each model :

Intel(R) PRO/DSL Connection Manager

General | ISP Info | Statistics | Version | Support |

Intel(R) PRO/DSL Modem

Version Information
Driver Name: p32D9xW.sys
Driver Version: 2.104.00.00
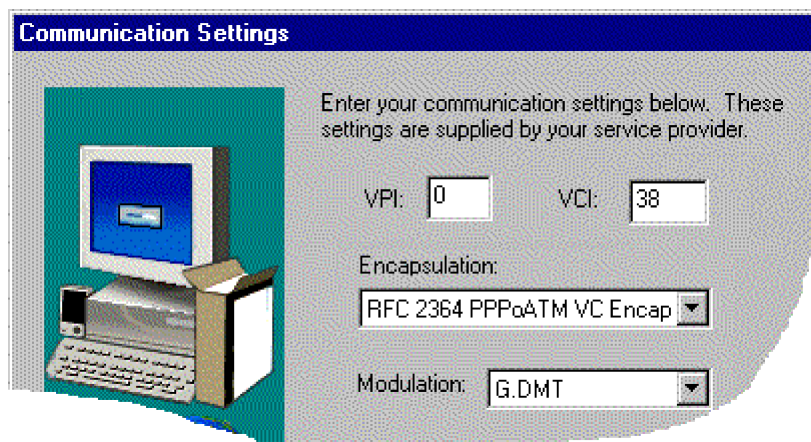Driver Type: PPP n...

3. For the supported Globespan chipset based modems (e.g. Intel, Westell, Fujitsu) the DSL Modem firmware utility (V2.3 with router firmware 2.2 and later) is able to create a line synchronisation file for your line. This may be necessary if the line parameters are unrecognisable by the router and is not normally necessary - try the default (and simpler) method firstly. The utility will guide you through the process. There are three methods available :

   ¡ Default - The f/w installer will use it's default sync. file. Try this method first.
   ¡ Create - By monitoring your modem whilst you connect/disconnect it to the PC and ADSL line as instructed, the utility will build a line synchronisation file.
   ¡ Load - You can use a line synchronisation file that you, or someone else, has created previously.

If you use the 'create' method, then the utility will ask you to disconnect the line and modem from the PC and then reconnect each, as instructed on-screen. It is important that before you start that process, you ensure that the modem is set to *G.DMT* mode rather than multimode. For Intel/Westell modems, this is normally selected from the modem's properties in Control Panel/Networking :

Intel(R) AnyPoint(R) 3240 Modem - PPP Properties   ? X

Driver Type | Bindings | Advanced |

Click the setting you want to change on the left, and then select its new value on the right.

Property: Value:
Always Connect   G.DMT
Auto Retrain Mode
Default VCI
Default VPI
DEV-Strip HDLC headers (FF
Line Coding Standard
Receive Buffers
Rfc2364 Encapsulation
Transmit Buffers
TXPower

For Fujitsu FDX-310 modems, the modulation is set from the Fujitsu configuration utility :

The above settings are only relevant during the sync. file creation process, not during normal router usage or once the router is installed and working normally.

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4. Once your modem is selected in the DSL Modem F/w Installer utility, your router should be found in the list box below :
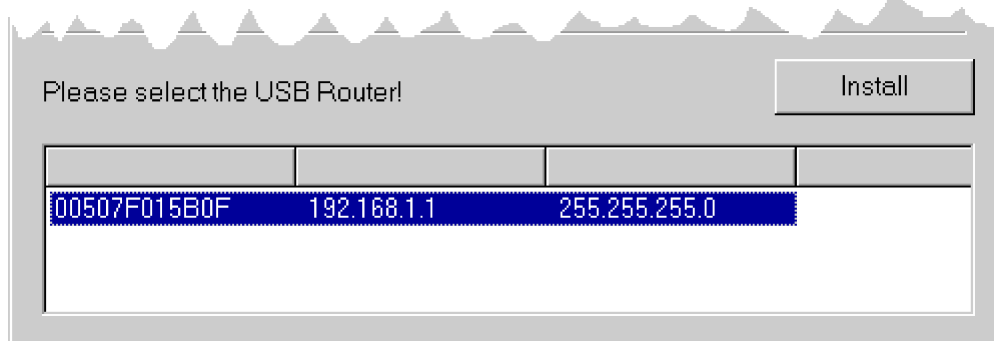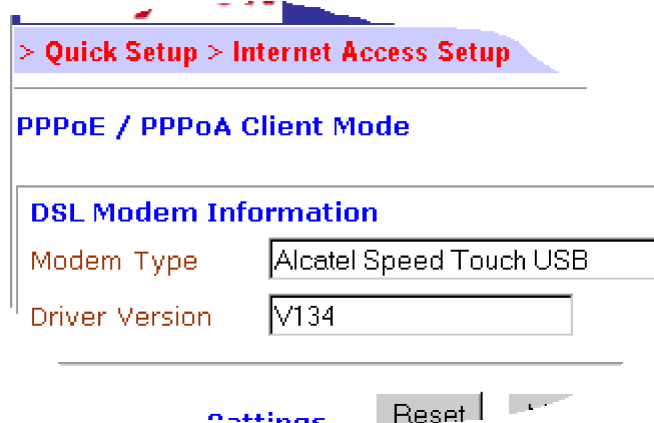

If the router does not appear in the box above then the utility was unable to see the router. If the utility reports *Unable to start TFTP server* then there may be some firewall software running, or TCP/IP is not talking to your network card correctly. Temporarily disable any such firewall or anti-virus software, then try the program again. If one PC is unable to run the utility correctly, try another PC (you will need to temporarily install the USB modem and its drivers on that PC, but you do not need the ADSL line connected).

Windows XP has a built-in firewall, normally enabled by default. This can interfere with the firmware utility, so you may need to temporarily disable it. Do that from the Network Connections menu, under the properties for your LAN connection :

Another possible cause of the above message is that your PC does not have an IP address (check with ipconfig.exe or winipcfg.exe) or that its IP address is in a different subnet from the router's default subnet (192.168.1.X, where the router is 192.168.1.1). The sending (uploading) PC and the router must be in the same subnet for the utility to work - check that you can ping the router.

5. When the USB modem's firmware is successfully installed in the router, its version number will be shown in the ISP setup screen on the router as shown below. If a version number is not shown, then the modem firmware has not been installed in the router correctly, and you need to run the *DSL Modem Firmware utility* again.

> Quick Setup > Internet Access Setup
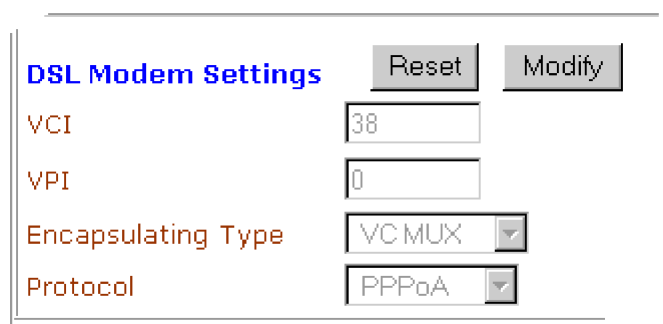
PPPoE / PPPoA Client Mode

DSL Modem Information

Modem Type	Alcatel Speed Touch USB
Driver Version	V134

Reset

6. In the Router's ISP setup screen, the ADSL properties should be set as follows. They are normally set automatically when the DSL modem's fimware is uploaded so you shouldn't need to set them manually, but if they do vary, you **must** set them as shown below.
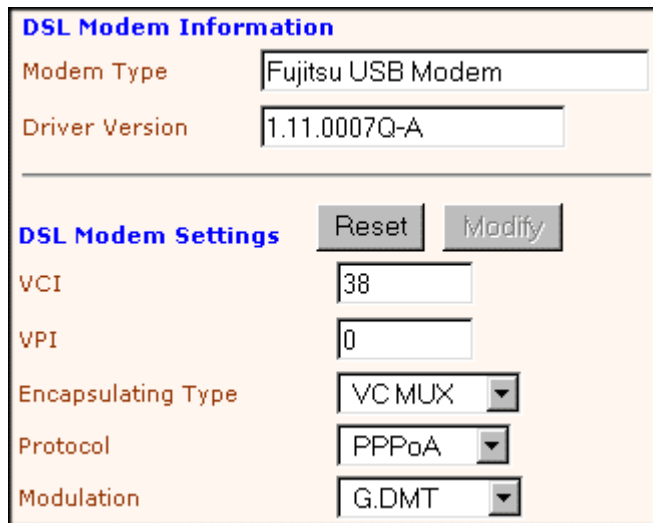
For the Speedtouch USB they should be :

DSL Modem Settings   Reset   Modify

VCI	38
VPI	0
Encapsulating Type	VC MUX
Protocol	PPPoA

For Globespan chipset based modems (including Fujitsu, Intel & Westell), ensure that you are using the short grey USB cable supplied with the router and check that the modem settings are set like this :

DSL Modem Information

Modem Type	Fujitsu USB Modem
Driver Version	1.11.0007Q-A

DSL Modem Settings [Reset] [Modify]
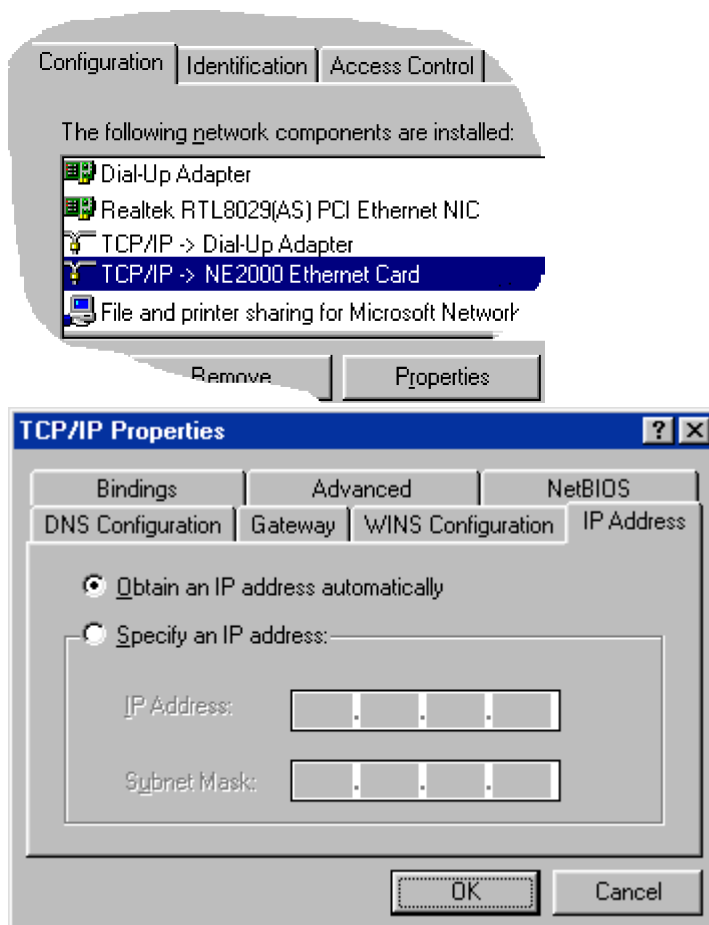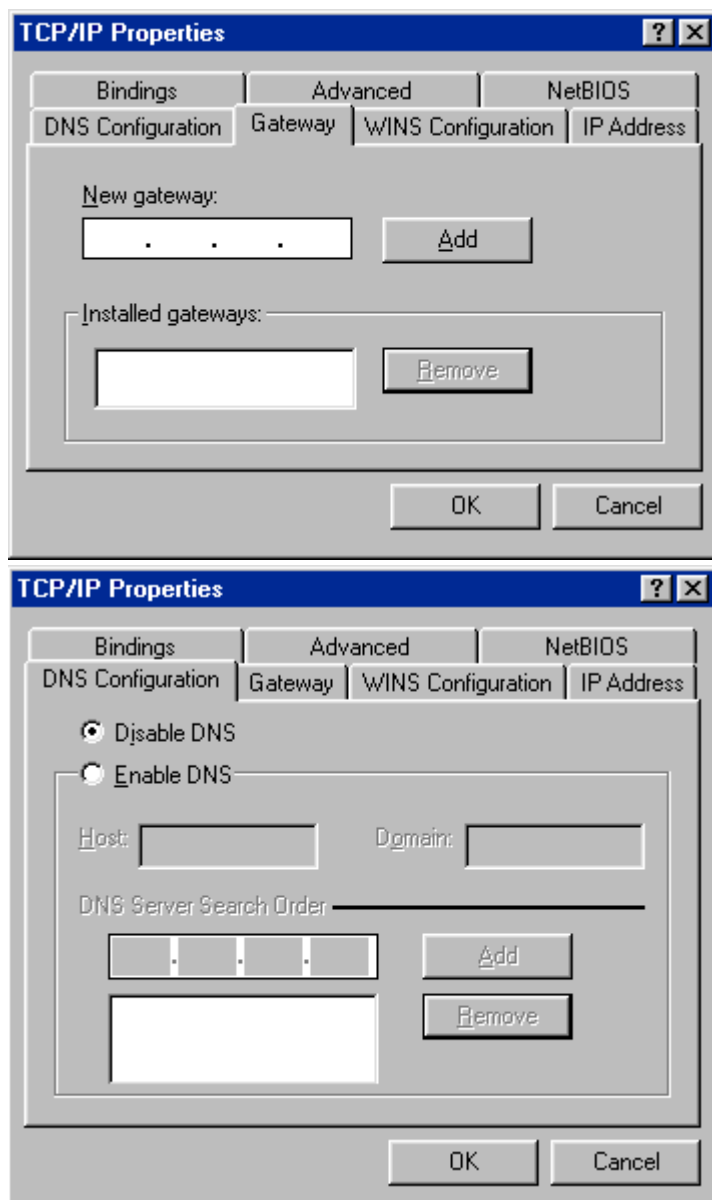
|	
VCI	38
VPI	0
Encapsulating Type	VC MUX
Protocol	PPPoA
Modulation	G.DMT

7. Check that your PC's TCP/IP settings are correct. We recommend that you make us of the router's DHCP facility which is enabled by default. From Control Panel/Network, check your TCP/IP Properties are like this :

Configuration | Identification | Access Control

The following network components are installed:

- Dial-Up Adapter
- Realtek RTL8029(AS) PCI Ethernet NIC
- TCP/IP -> Dial-Up Adapter
- TCP/IP -> NE2000 Ethernet Card
- File and printer sharing for Microsoft Network

[Remove] [Properties]

TCP/IP Properties

Bindings | Advanced | NetBIOS
DNS Configuration | Gateway | WINS Configuration | IP Address

⦿ Obtain an IP address automatically

○ Specify an IP address:

IP Address: [. . .]

Subnet Mask: [. . .]

[OK] [Cancel]

If you choose **not** to use DHCP (i.e. your PC is **not** set to obtain an IP address automatically) then you must ensure that you gave the PC an IP address in the same subnet as the router (Router default is 192.168.1.1 so you PC could be 192.168.1.2 etc.) and that you have manually set both the Default gateway and the DNS Server Address to the router's IP address (192.168.1.1).
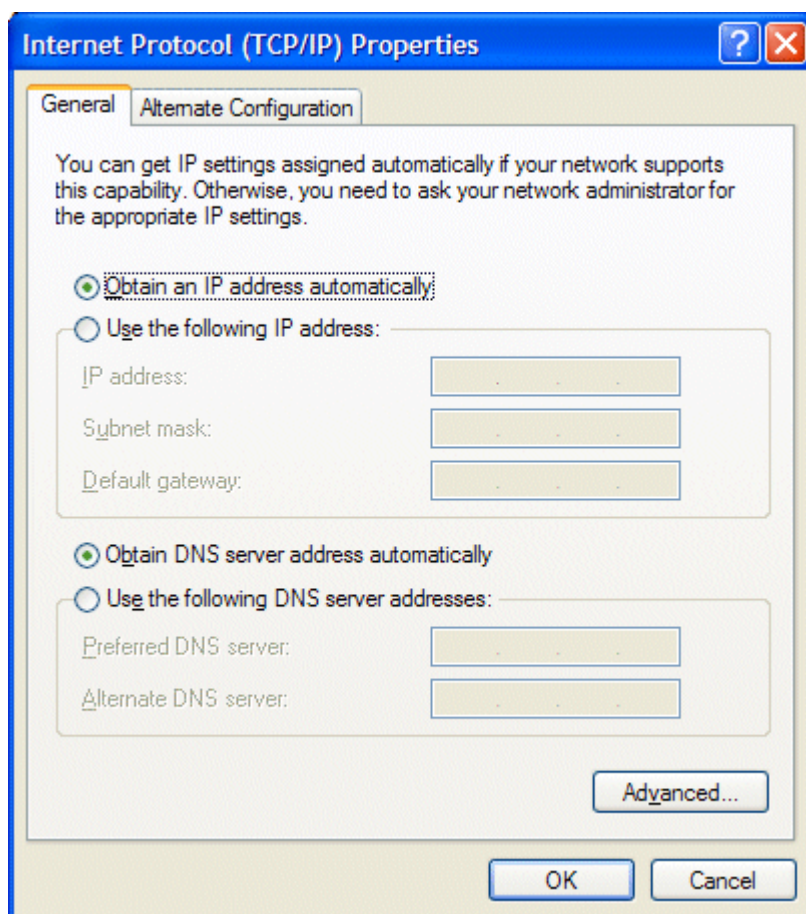
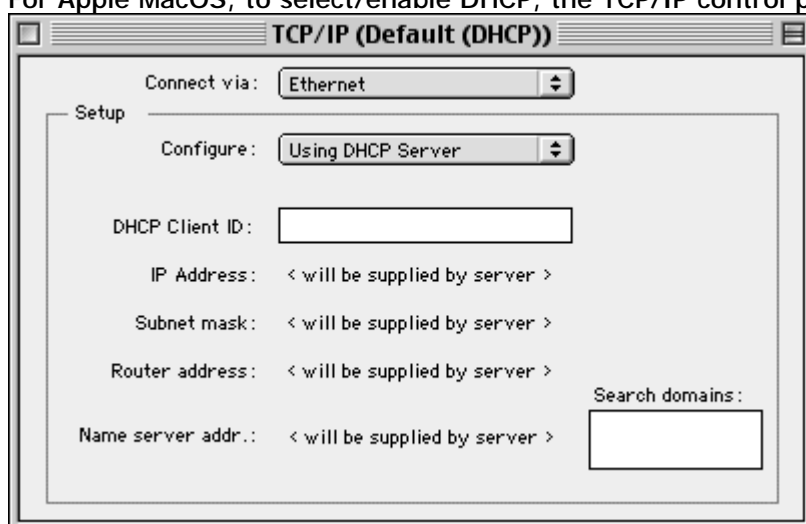8. **In WindowsXP, the Network connections properties are accessed like this :**
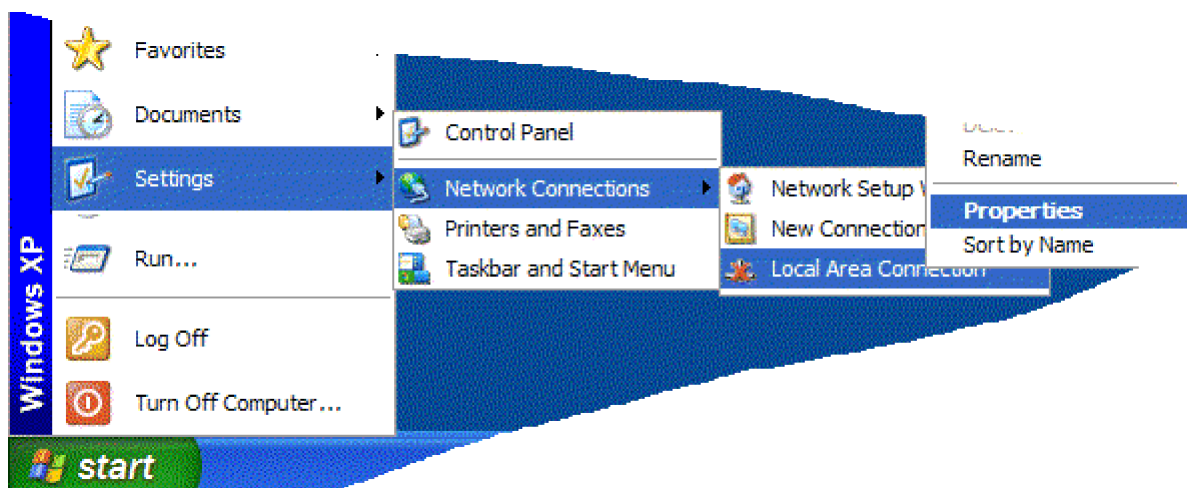
Check your network card's TCP/IP properties :
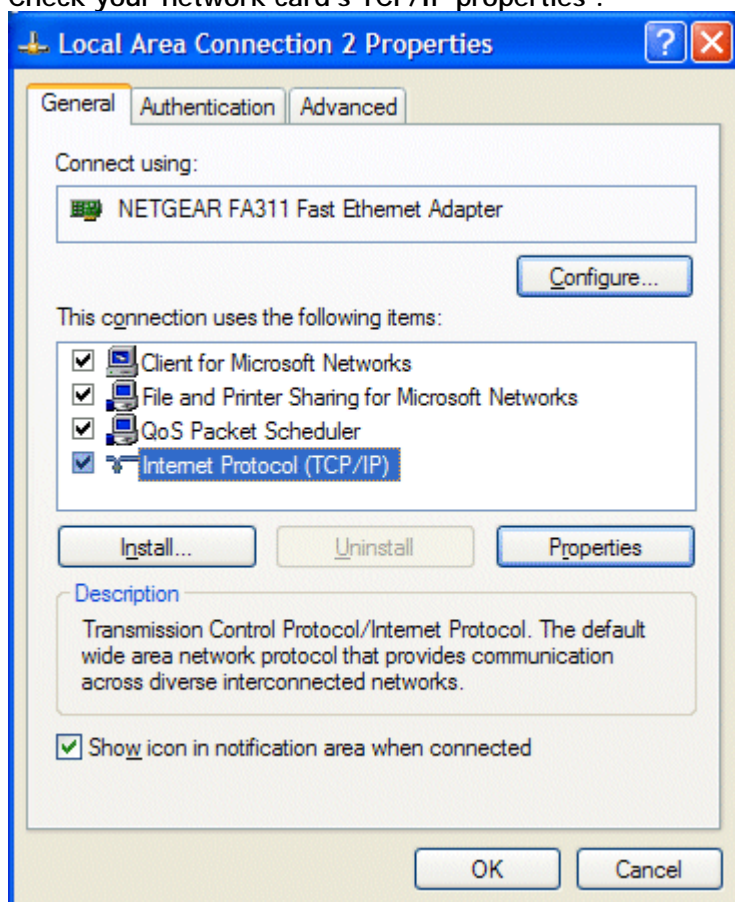
To let the PC be a DHCP client (so that it obtain's IP address and router/DNS details automatically from the router) ensure that the options are set as below :

9. For Apple MacOS, to select/enable DHCP, the TCP/IP control panel should be set like this :


Once the addresses have been allocated by the router, they will appear in the screen above.

10. Check that the PC is actually getting the IP details from the router. You can check this from the winipcfg utility. To run this, press the Windows Start button, select 'Run', type **winipcfg** and press OK :
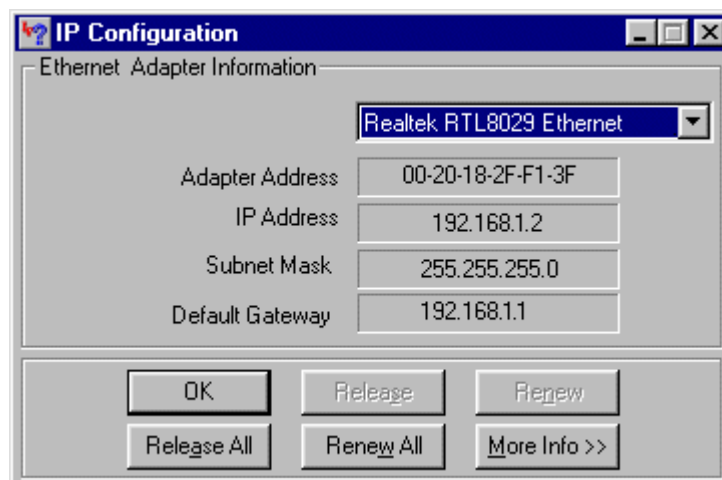
In the above example, the PC has been given an IP address of 192.168.1.2 and has been told that the default gateway (router) is at 192.168.1.1. Ensure that your network card is selected in the top pulldown box (not 'PPP Adaptor'). If you click 'Release', the details should clear and 'Renew' should get them back.

If you do not have the winipcfg utility, you can try **ipconfig**.exe from the MS-DOS command prompt :
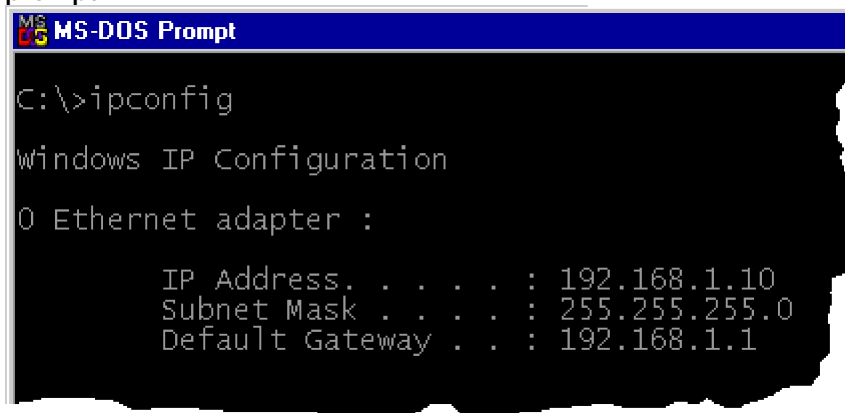
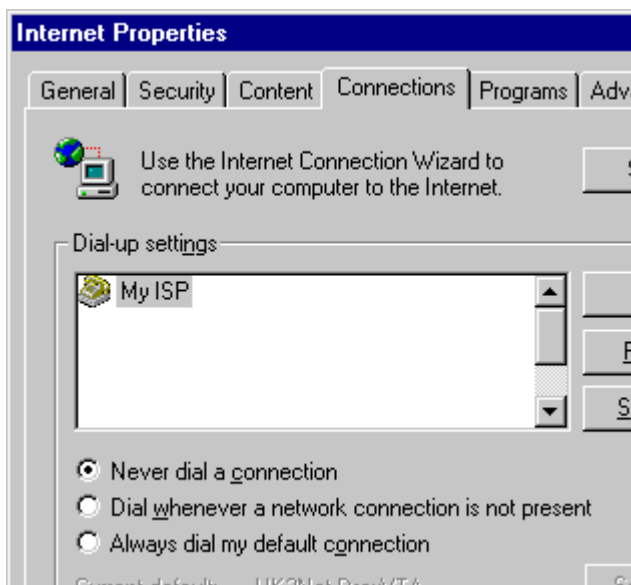Winipcfg is not supplied as standard with Windows 2000, but you can download a Windows2000 version from here.

11. **In WindowsXP**, you can check your PC's current IP address by opening Network Connections; if you select the LAN connection, the settings will appear on the left of the screen - like in the example below. Here we can see that the Network connection is enabled and that the PC has obtained an IP address of 192.168.1.10 :
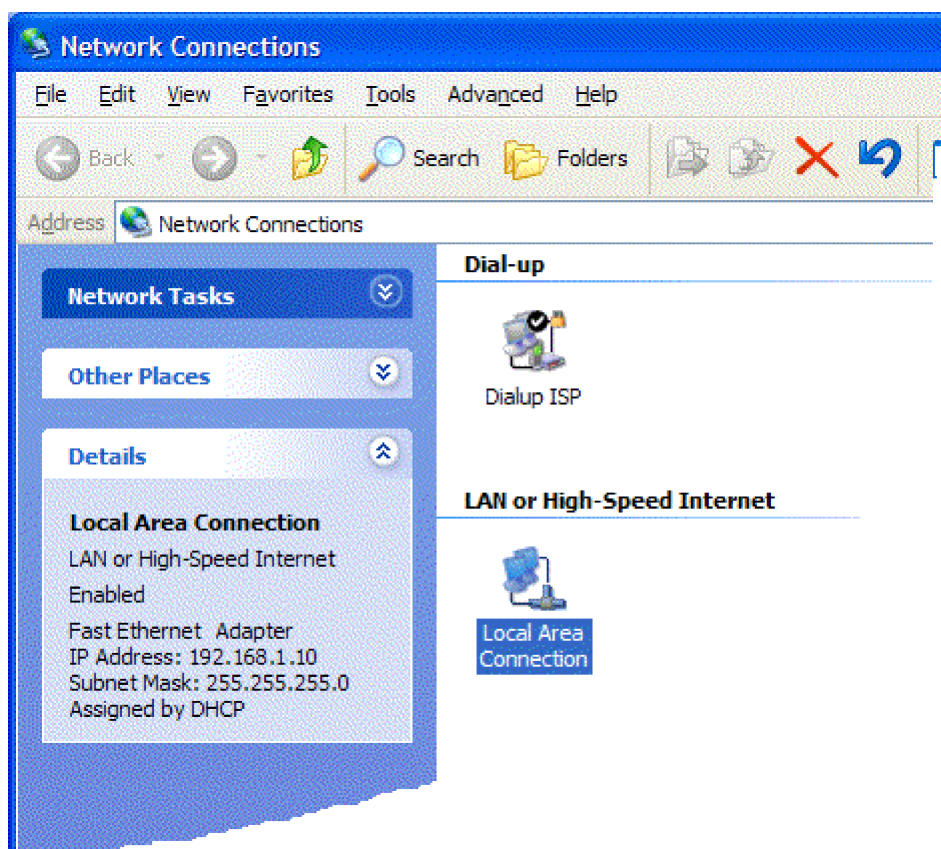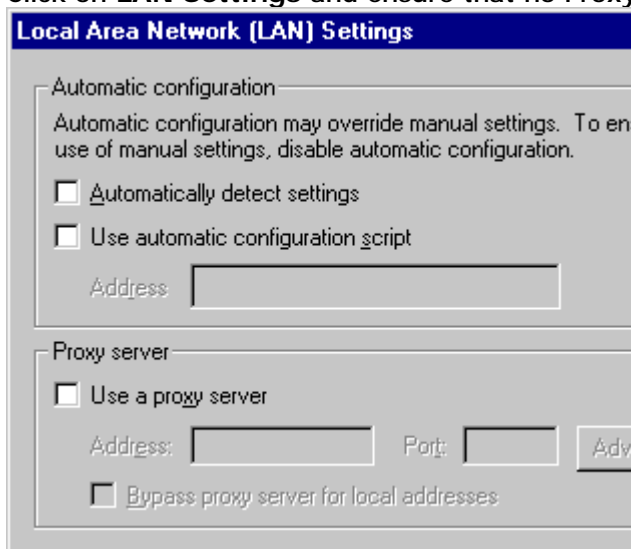
You can obtain the same information by right-clicking on the Network Connection's icon in the system tray and selecting 'Status' :
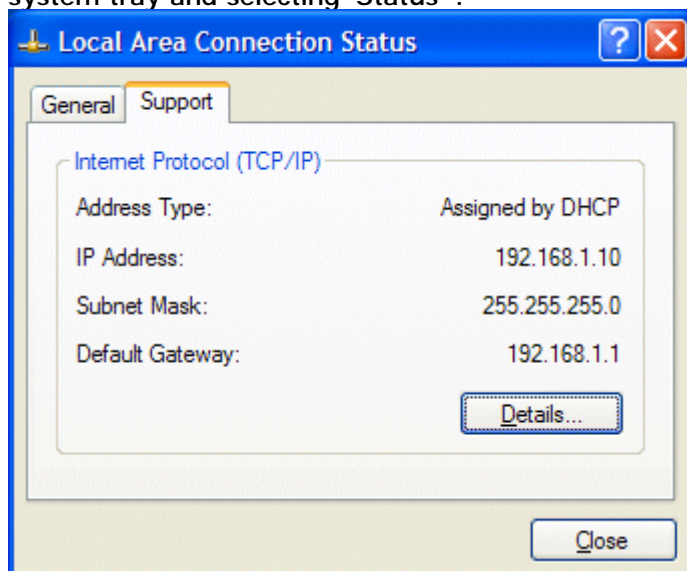
12. If you are not using DHCP (i.e. 'Obtain IP Address Automatically' as shown above) then you must manually give your PCs an IP address. This address must be within the same subnet as the router's own LAN IP address. This means that if the router is 192.168.1.1, then the other PCs must be numbered 192.168.1.nnn where 'nnn' is a number from 2 to 254. Additionally, each PC must have the 'Default Gateway' and 'DNS Server Address' set to the router's IP address. None of this is necessary if you are using DHCP, hence it's recommended to rely on DHCP whenever possible.

13. If you cannot get into the router's web configurator, from Windows Control Panel, check your 'Internet Options'. They should look like this (varies with O/S):

Internet Properties

General | Security | Content | Connections | Programs | Adva

Use the Internet Connection Wizard to connect your computer to the Internet.

Dial-up settings

My ISP

○ Never dial a connection
○ Dial whenever a network connection is not present
○ Always dial my default connection

Click on **LAN Settings** and ensure that no Proxy is set. It should look like this :

Local Area Network (LAN) Settings

Automatic configuration

Automatic configuration may override manual settings. To ens use of manual settings, disable automatic configuration.

☐ Automatically detect settings
☐ Use automatic configuration script

Address

Proxy server

☐ Use a proxy server

Address: Port: Adv

☐ Bypass proxy server for local addresses

14. Can you ping the router from a PC ? From an MS-DOS prompt, enter 'ping 192.168.1.1' - you should get replies with a time in milliseconds (e.g. 12ms).

MS-DOS Prompt

```
Microsoft(R) Windows 98
   (C)Copyright Microsoft Corp 1981-1999.

C:\>ping 192.168.0.254

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=3ms
Reply from 192.168.1.1: bytes=32 time=1ms
Reply from 192.168.1.1: bytes=32 time=1ms
Reply from 192.168.1.1: bytes=32 time=1ms

Ping statistics for 192.168.0.254:
    Packets: Sent = 4, Received = 4, Lost = 0
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum =  3ms, Average =  1ms

C:\>
```

15. If the LINK LED on the router is lit, that indicates that the router is successfully logged into the ISP. You can try another ping, this time to an external (Internet) address, e.g. 194.153.20.225

16. Can you access the Vigor's web configurator via your web browser ? Do this from the

Smartstart Wizard ('Web Browser' option) or just by opening your browser (MSIE, Netscape etc.) and entering http://192.168.1.1 as the address.

17. Can you ping the Internet from the router ? A ping is a small packet sent to a remote location, and echoed back. If you telnet to the router (see main FAQ for details on how to run telnet) then you can try to ping an IP address. If the ping comes back, then that confirms that the router is happily connected to the Internet. Pings will have a trip time, for example 97ms.

```
vigor2200> ip ping 194.153.0.18

Pinging 194.153.0.18 with 64 bytes of Data:

Receive reply from 194.153.0.18, time=29ms
Receive reply from 194.153.0.18, time=32ms
Receive reply from 194.153.0.18, time=29ms
Receive reply from 194.153.0.18, time=33ms
Receive reply from 194.153.0.18, time=31ms

Packets: Sent = 5, Received = 5, Lost = 0 (0% loss)
```

You can also ping from the router to an internal IP address, e.g. ip ping 192.168.1.10. Note that the IP address example given above may not be a real address - you must ping a known/real/active IP address. If the address doesn't exist, or is unreachable, you will not get a ping reply.

18. Are both LEDS on the USB modem lit and steady ? They should be once the modem has initialised and synchonised with the line.

19. In the router's *Internet Access Setup*, are you absolutely sure that your username and password are correct ? They should be entered carefully into the fields in Internet Access Setup. The ISP 'name' is for your own reference, so doesn't have to be anything in particular.

ISP Access Setup

ISP Name	BTOpenworld
Username	me@hg20.btclick.co
Password	**********
☑ Always On	
Idle Timeout	-1 second(s)

20. If you cannot get the router's LINK LED on, you can telnet to the router and check the call log (log -c). If it shows a CHAP failure then either your username or password is almost certainly incorrect. The "ISP Name" field is arbitrary so you can put anything you like in there, but the username and password must be correct.

Windows 95/98/2000/ME/XP all have a Telnet program built in. For other Operating systems, you can normally download a freeware Telnet utility. To run regular Telnet under Windows select as follows :
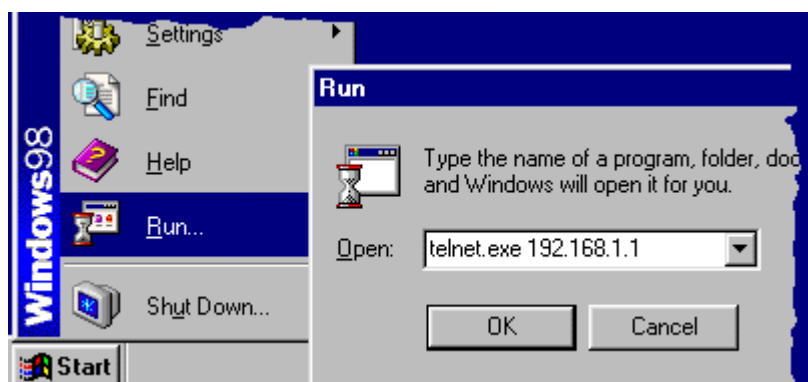
Windows2000 and WindowsXP have a 'DOS' based Telnet program, so you cannot capture text with it. Instead you can use Windows Hyperterminal, and select Port 23 (telnet) connection rather than a modem or COM port:
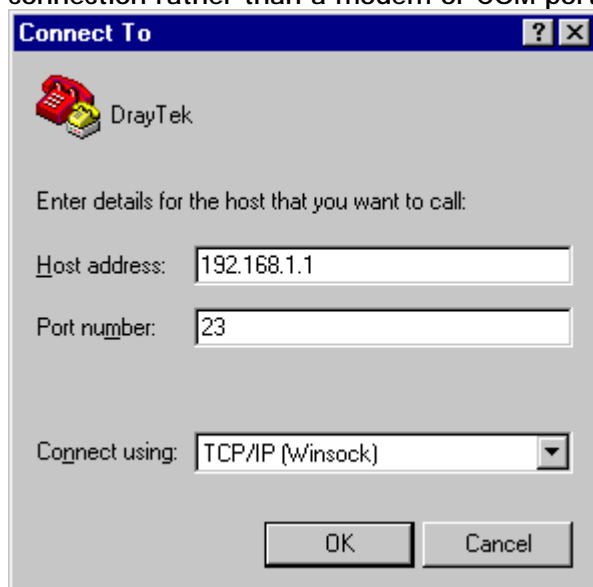
Here is an example telnet log :

```
Vigor2200> log -c

03:10:43.690 >>> Dial-up triggered by user : 192.168.1.10
                 proto=udp, to 222.204.192.12 port=2311
03:10:44.650 PPP Start (PPPoE)
03:10:47.990 CHAP Login OK (PPPoE)
03:10:50.050 IPCP Opening (PPPoE)
             Own IP Address : 206.165.126.38   Peer IP Address : 206.165.161.10
             Primary DNS : 213.120.62.110       Secondary DNS : 213.120.62.112
```

In the above log, the router logged in successfully. If your ISP "idle timeout" is set to always-on (-1) then the *Dial-Up Triggered by….* line will not show. When the LINK light on the router comes on, the router is successfully logged in.

```
Vigor2200> log -c

03:10:43.690 >>> Dial-up triggered by user : 192.168.1.10
                 proto=udp, to 222.204.192.12 port=2311
03:10:44.650 PPP Start (PPPoE)
03:10:47.990 CHAP Login Failed (PPPoE)
```

In the above example log, the login has failed, most probably due to an incorrect username or password.

21. If you need to capture the log text, for example to send it to your support contact for examination, you need to open a Telnet session to the router, as shown above and start a text capture (give it a suitable filename, for example *fred01.txt*. Then enter the appropriate log commands to display the logs, and finally close the text capture, which will leave you with a text file you can email.
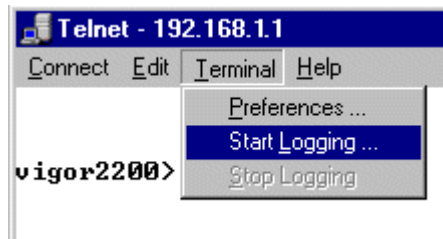
22. You may be asked for full logs (or a WAN log) by your support contact. Firstly, reboot the router (turn it off, then on). Wait approximately 1-2 minutes for the router to attempt to log on to the ISP. After that, open a telnet session and start the text capture as described above and then enter the following commands at the prompt :

```
vigor2600> sys ver
vigor2600> log -c -t
vigor2600> log -wt -t
```

Then close the text capture and email the text file to your support contact, along with a report of the problem etc.

Page last modified 30 Sep 2002