

Vigor2900 Initial Setup

Top Setup Tips

Welcome to the Vigor2900 top setup tips. These notes supplement your full manual, distilling the most important information. When you first set up your Vigor2900, everything should go smoothly if you follow the instructions, but if you have problems, here is your checklist!

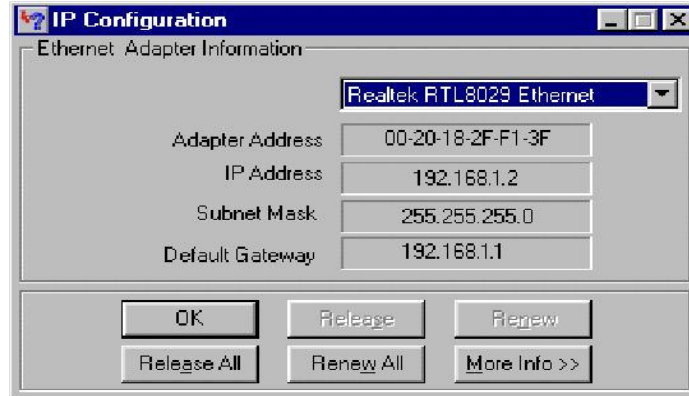
There are two parts to this guide, Part1 covers getting your PCs talking to the router. Part2 covers getting the router talking to your ISP and the Internet. The latest version of this document will be available from www.draytek.co.uk/support where you will also find other documentation and downloads for your router.

Part1-PCs/LAN communicating with Router

1. Your PC should be 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). The Vigor2900's Ethernet ports are auto-sensing to speed and cable configuration, so crossover/straight or uplink/normal connections will all be automatically adjusted for.

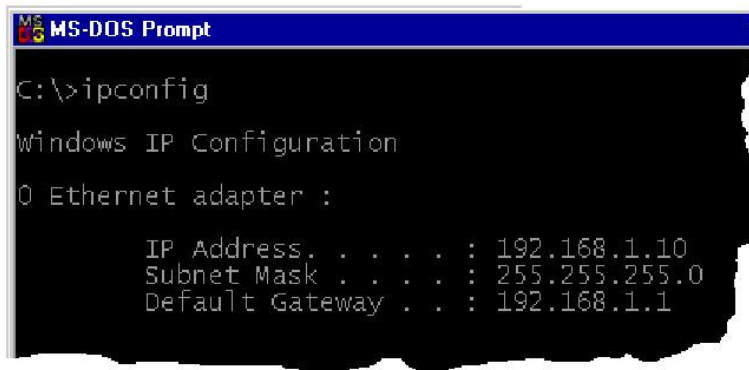
2. Every device on your network must have a unique IP address. The router's DHCP server facility will automatically allocate these to your client PCs, assuming that they are set to obtain their details automatically. The router's own IP address by default is 192.168.1.1 and all local PCs must have an IP address within the same 'subnet' – for example 192.168.1.20 or 192.168.1.66. Only the last octet (and 8 bit binary number, represented in decimal –i.e. the number after the final dot) will vary – this is known as a class C subnet.

3. 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.



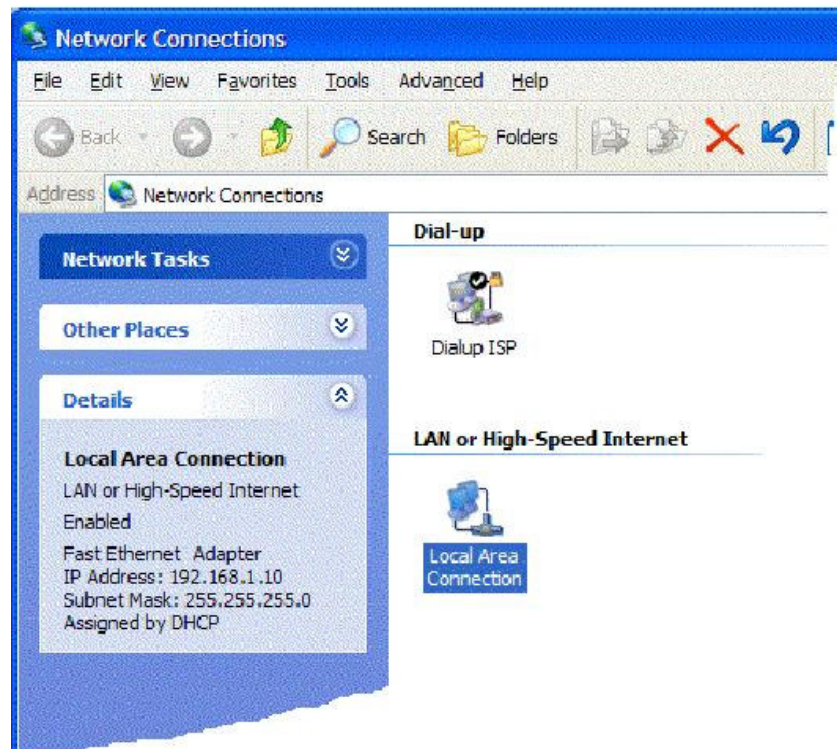
In the above example, the PC has been given an IP address of 192.168.1.2 and has been told that the default gateway (router) is at 192.168.1.1. Ensure that your network card is selected in the top pulldown box (not 'PPP Adaptor'). If you click 'Release', the details should be cleared 'Renew' should get them back.

If you do not have the winipcfg utility, you can try **ipconfig.exe** from the MS-DOS command prompt.

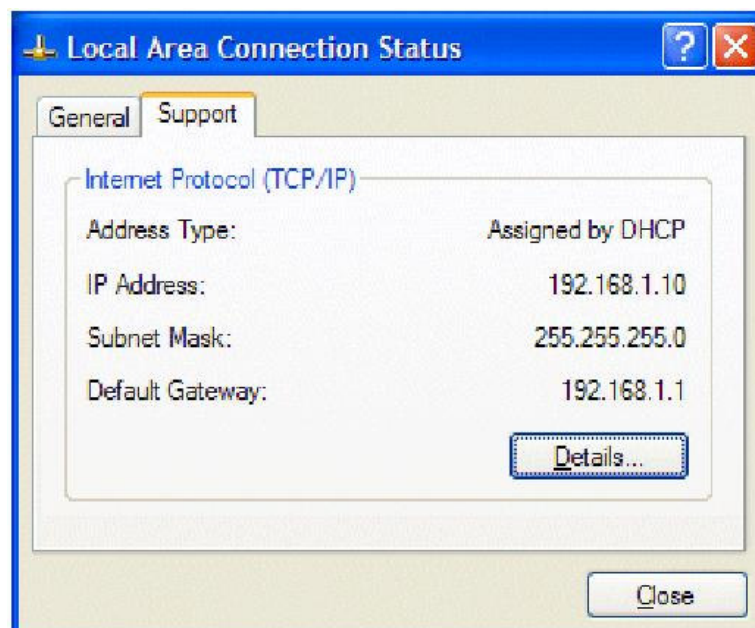


Winipcfg is not supplied as standard with Windows 2000.

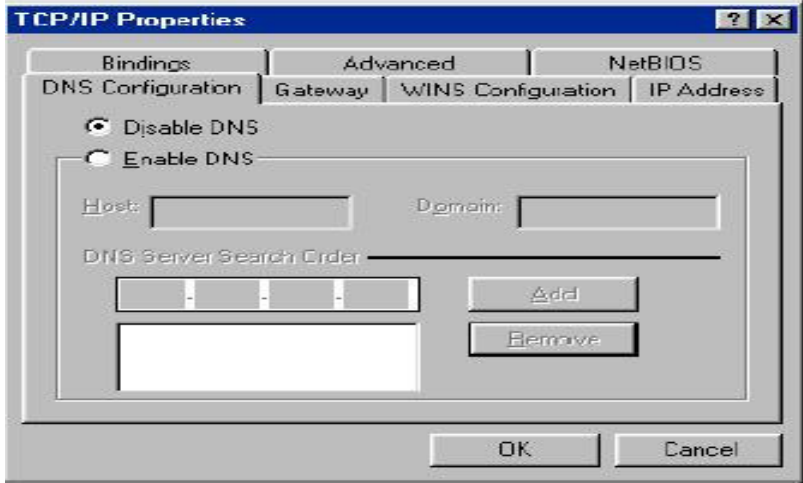
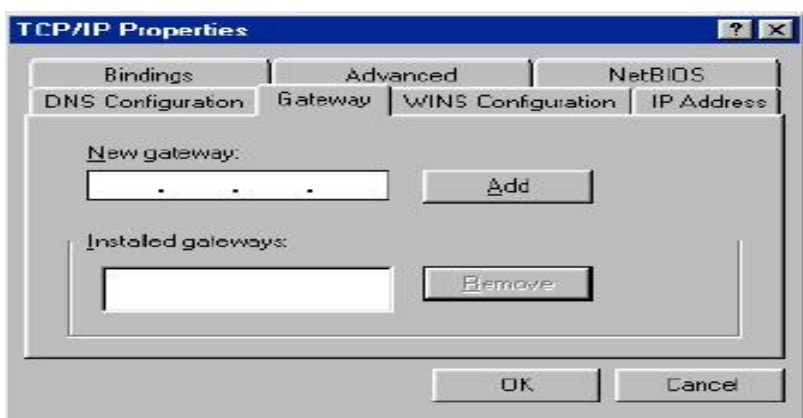
4. In **Windows XP**, you can check your PC's current IP address by opening Network Connections; if you select the LAN connection, the settings will appear on the left of the screen—like the example below. Here we can see that the Network connection is enabled and that the PC has obtained an IP address of 192.168.1.10.



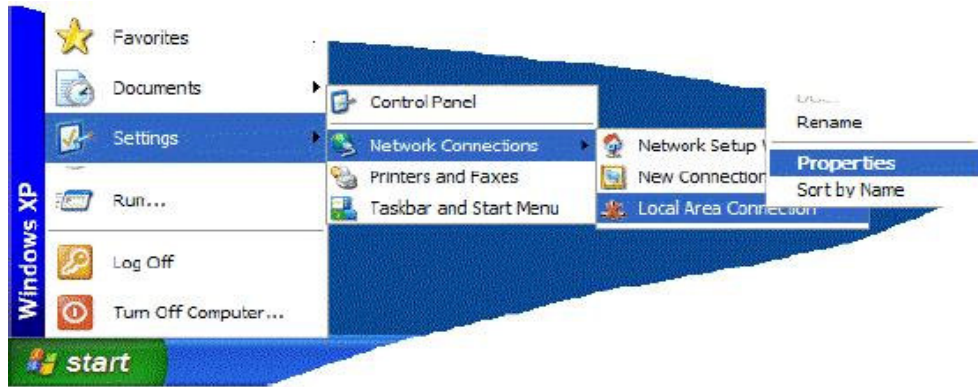
You can obtain the same information by right-clicking on the Network Connection's icon in the system tray and selecting 'Status'.



5. If your PC is not getting an IP address (as described in previous sections), you need to check that your PC's TCP/IP settings are correct. As mentioned earlier, we recommend that you make use of the router's DHCP facility which is enabled by default. From Windows98/Me Control Panel/Network, check your TCP/IP Properties are like this:

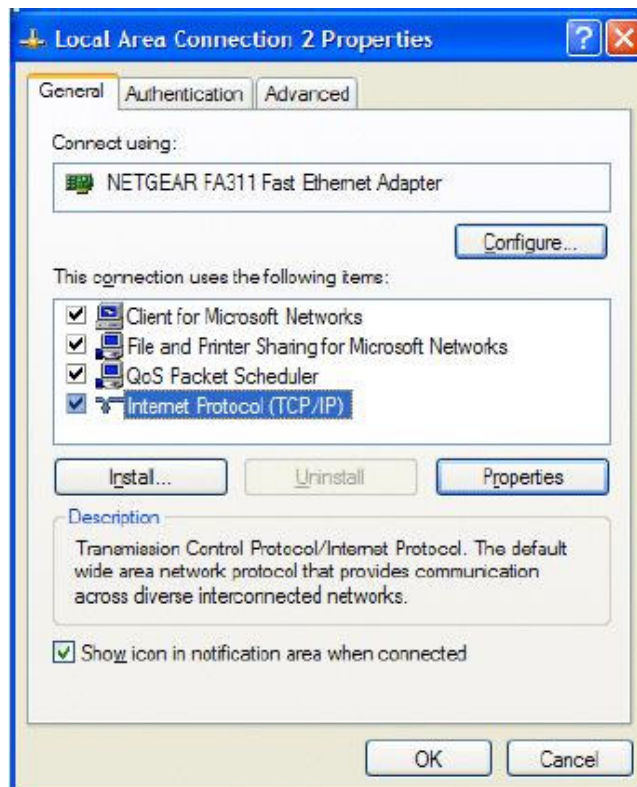


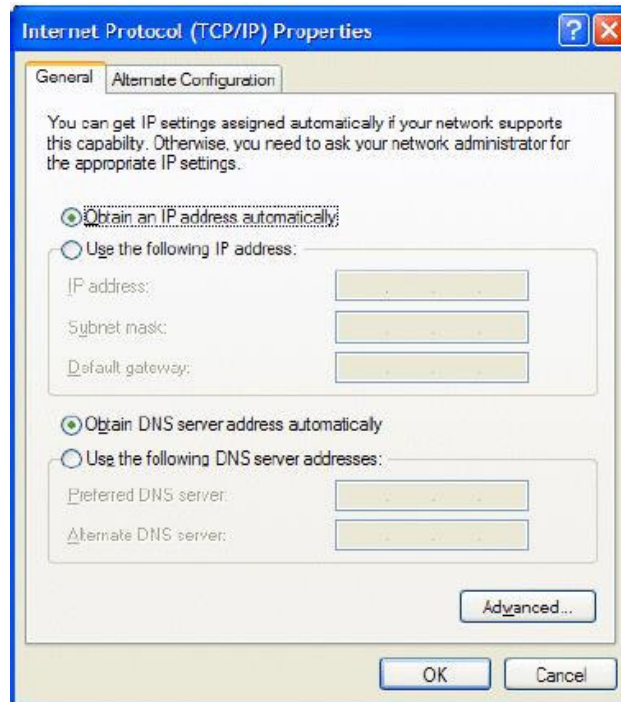
6. For **Windows XP**, the LAN/Network card setup is very similar to Windows98/Me, but the screens look a little different. Once your network card (Ethernet 10/100BaseT) is installed, it may be automatically set up correctly by default. You can check the settings from your PC's 'Network Connections' menu.



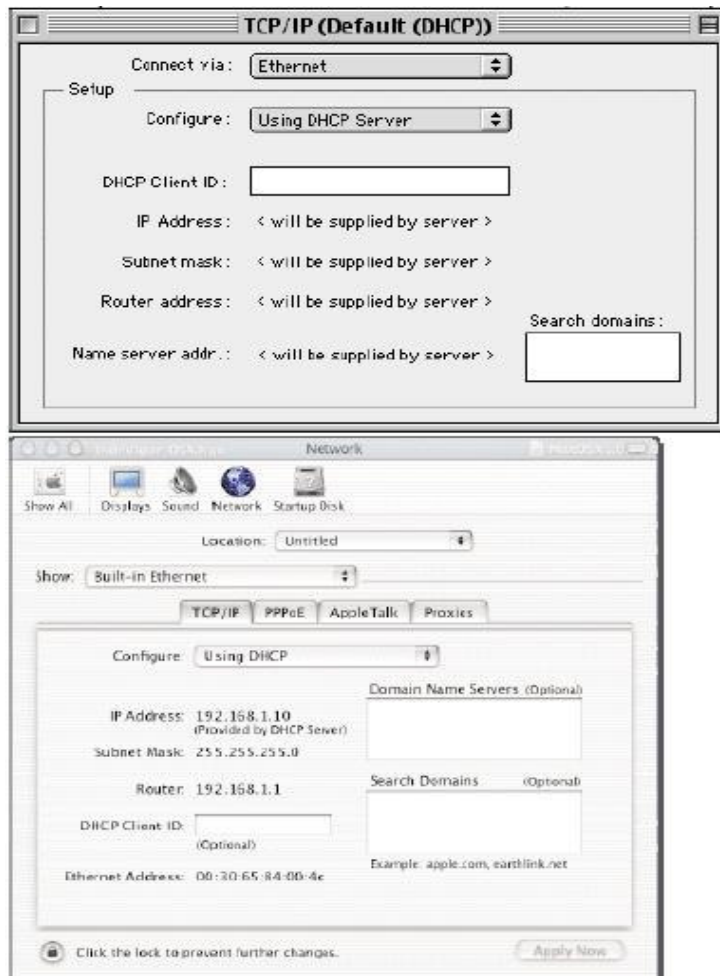
Select the TCP/IP protocol as shown below and click on 'properties' and then check that.

Obtain IP address & DNS Automatically are both selected:





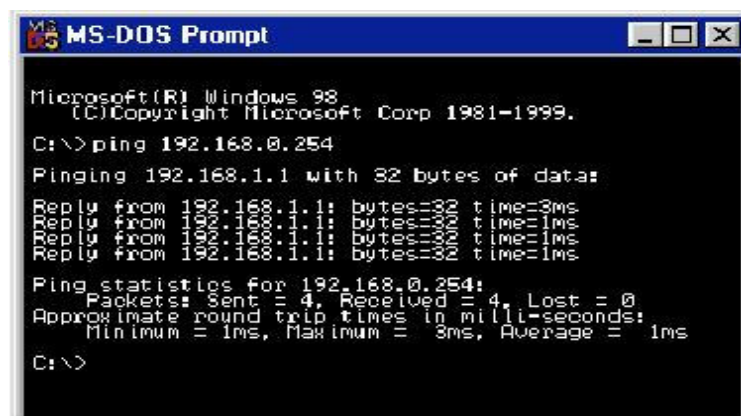
7. For **Apple MacOS**, to select and enable the DHCP client facility on your computer, the TCP/IP control panel should be set like this for MacOS 8/9 and X respectively.



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

8. 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 (192.168.1.1 unless you changed it.) None of this is necessary if you are using DHCP, hence it's recommended to rely on DHCP whenever possible.

9. To confirm the connectivity between your PC and the router, you can use the Windows 'ping' utility. This sends a small packet to the router, which the router sends back, to confirm the connectivity. From an MS-DOS prompt, enter 'ping 19.168.1.1'- you should get replies with a time in milliseconds (e.g. 12ms).

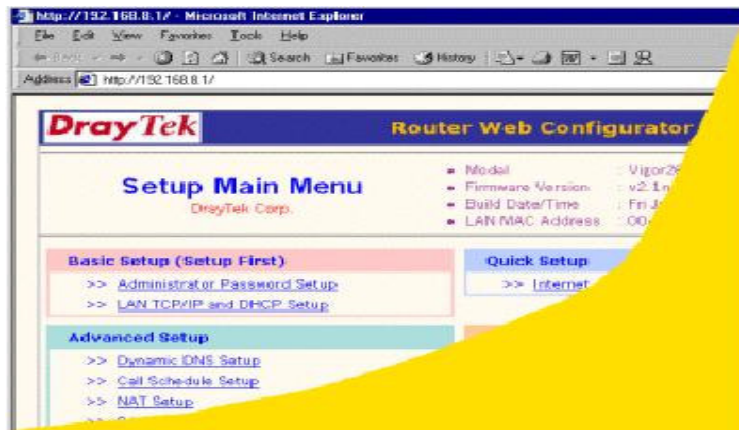


```
MS-DOS Prompt
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.
C:\>ping 192.168.0.254
Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=3ms
Reply from 192.168.1.1: bytes=32 time=1ms
Reply from 192.168.1.1: bytes=32 time=1ms
Reply from 192.168.1.1: bytes=32 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:\>
```

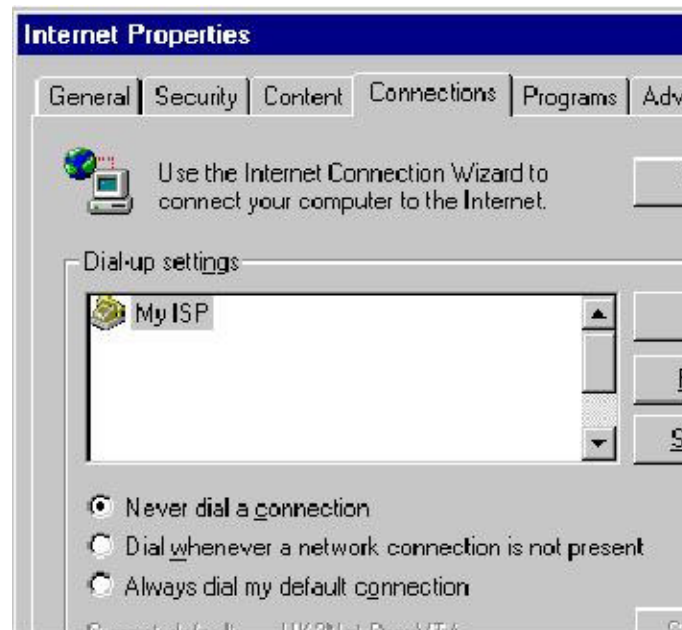
Part2-Router communicating with your ISP & the Internet

10. The above checks will confirm that your PC and network are connected to the router correctly, so you should be able to access the router's Web Configurator interface. This is the main method for setting up, controlling and monitoring the router. Load your standard web browser (e.g. MSIE, Netscape etc.) and in the address bar simply enter <http://192.168.1.1> (which is the router's address). You can also get into the Web Configurator interface via the Router Tools "Smartstart" wizard. You will be asked for the router's administrator password (empty by default-you can change it later) and then the main router menu should appear as shown below. This main menu 'front page' also shows the version of firmware

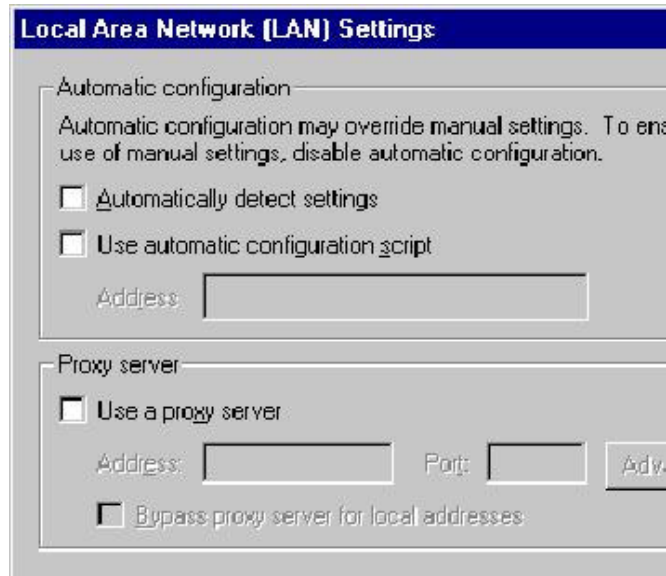
installed in the router at the top.



11. If you cannot get into the router's web configurator or Dial-Up Networking, please try to dial when you try to access the internet, check your 'Internet Options' from Windows Control Panel. They should be set as shown below (varies with O/S). Select 'never dial a connection' to deny the PC using a dialup modem (DUN) connection.



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



If you have a software firewall installed, for example Zonealarm, Norton Firewall etc. or SBS Proxy server, these can sometimes interfere with access to the router.

12. It is very simple to set up the router for standard Internet access. You will need to know your login name and password for your ISP. Go straight to the Internet Access Setup menu on the top right, in the box.



Then on the next menu, select the PPPoE sub-menu.

DSL/Cable Modem Internet Access

>> PPPoE

13. In the PPPoE setup screen, enable the PPPoE client and enter ISP information, such as ISP Name, Username, and Password, as shown below. The ISP name is just for reference, but the username and password must be correct – check these with your ISP if you are not sure what to enter – these are the username and password that you use to log into your ISP.

PPPoE Client Mode

PPPoE Setup

PPPoE Link Enable Disable

ISP Access Setup

ISP Name

Username

Password

Scheduler (1-15)

=> , , ,

PPP/MP Setup

PPP Authentication

Always On

Idle Timeout second(s)

IP Address Assignment Method (IPCP)

Fixed IP Yes No (Dynamic IP)

Fixed IP Address

WAN physical type

Once everything is entered as shown above, that's all what needed for a typical ISP setup.

Click **OK** to save those settings.

14. Once your ISP details are set, if your DSL line cable is connected to the router, you can check that the router is online and has connected to the ISP successfully. From the main menu setup > Online Status, a screen like this will appear:

System Status System Uptime: 0:2:6

LAN Status		Primary DNS	168.95.1.1		Secondary DNS	194.98.0.1	
IP Address	TX Packets	RX Packets					
192.168.1.1	982	826					
WAN Status		GW IP Addr		61.230.192.254			
Mode	IP Address	TX Packets	TX Rate	RX Packets	RX Rate	Up Time	
PPPoE	61.230.202.48	14	5	14	2	0:00:27	

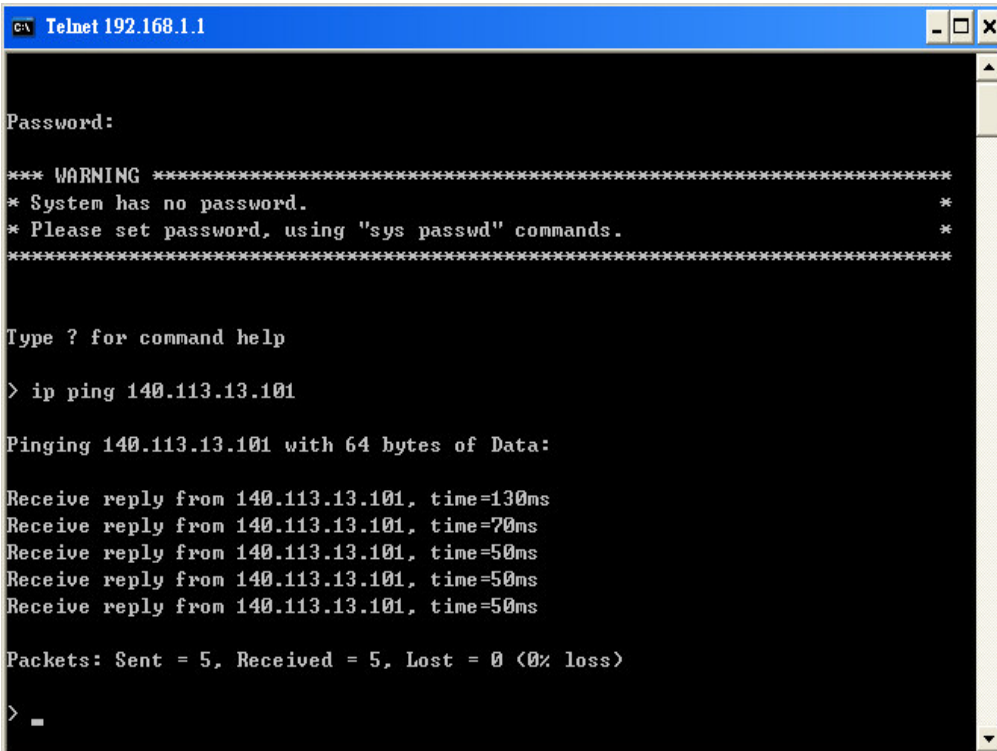
>> [Drop PPPoE or PPTP](#)

Don't be overwhelmed by all of this information; it's quite easy to follow and there are only a couple of pieces of information which are needed to confirm correct operation.

Once the router is in Showtime state, it will automatically log into your ISP. This is indicated by the **WAN Status** section. The mode should be shown as PPPoE and the IP address which the router has assumed from your ISP will be shown under **IP Address**. In our example, that is 61.230.202.48. Depending on your service option with your ISP, that will change each time you log in (dynamic address) or it will always be the same (static address). This is generally known as your **public** (or WAN facing) IP address.

In summary, if you have a public IP address shown, the router is set up and logged into your ISP correctly. You should now be able to surf the internet! Try entering a web address into your browser (for example www.draytek.com.tw).

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15. If you are unable to browse the web still, check if you can ping the Internet from the router (see earlier for an explanation of pings). If you telnet to the router (see main FAQ for details on how to run telnet) then you can try to ping an external IP address (i.e. one elsewhere on the internet). If the ping comes back, then that confirms that the router is happily connected to the Internet and can send/receive data. Pings will have a trip time, for example 97ms.



```

C:\> Telnet 192.168.1.1

Password:

*** WARNING ****
* System has no password.
* Please set password, using "sys passwd" commands.
****

Type ? for command help

> ip ping 140.113.13.101

Pinging 140.113.13.101 with 64 bytes of Data:

Receive reply from 140.113.13.101, time=130ms
Receive reply from 140.113.13.101, time=70ms
Receive reply from 140.113.13.101, time=50ms
Receive reply from 140.113.13.101, time=50ms
Receive reply from 140.113.13.101, time=50ms

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.

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16. If you cannot get the router logged into the ISP, 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 Port23 (telnet) connection rather than a modem or COM port:



Here is an example log:

```
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.

```
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.

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17. 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 *Edward01.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.



-
18. 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, **or** if your problem relates to a specific operational problem, wait until that problem has occurred in order that the logs will show it. To actually output and capture (save the log to a file for emailing), open a telnet session and start the text capture as described above and then enter the following commands at the prompt.

```
>sys ver
>adsl status
>log -c -t
>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.

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