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# Vigor2600 plus Series introduction

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	<i>Vigor2600plus</i>	<i>Vigor2600i</i>	<i>Vigor2600G</i>	<i>Vigor2600Gi</i>
<b>ADSL Routers</b>	*	*	*	*
<b>Annex A / Annex B</b>	* / *	* / *	* / *	* / *
<b>ISDN Backup</b>	—	*	—	*
<b>Wireless AP</b>	—	—	*	*

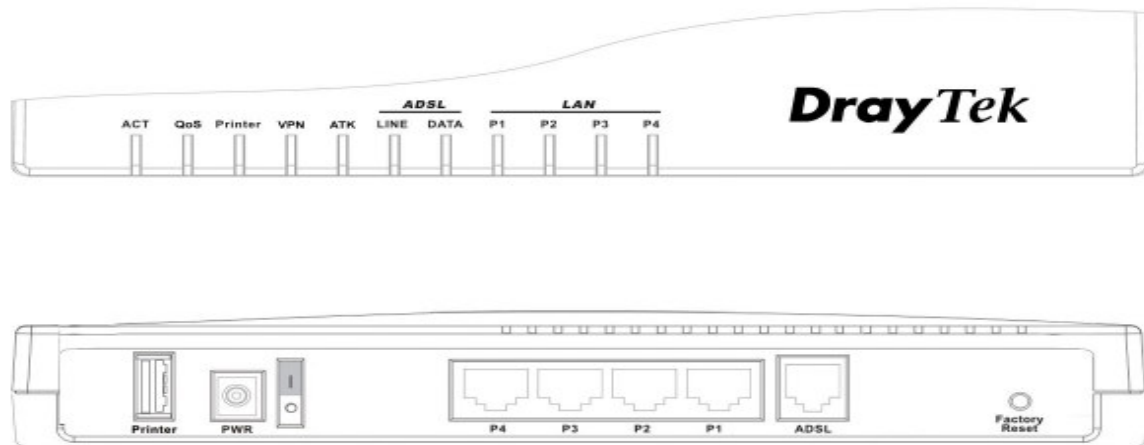
The Vigor2600 plus series is an Internet access solution for your LAN which not only provides shared web surfing but countless other value-added features such as Firewall / Security, VPN, multimedia support, USB interface printer server, and 54Mbps 802.11g Wireless LAN and all in a reliable one-box solution.

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## LED Indicators and Back Panels

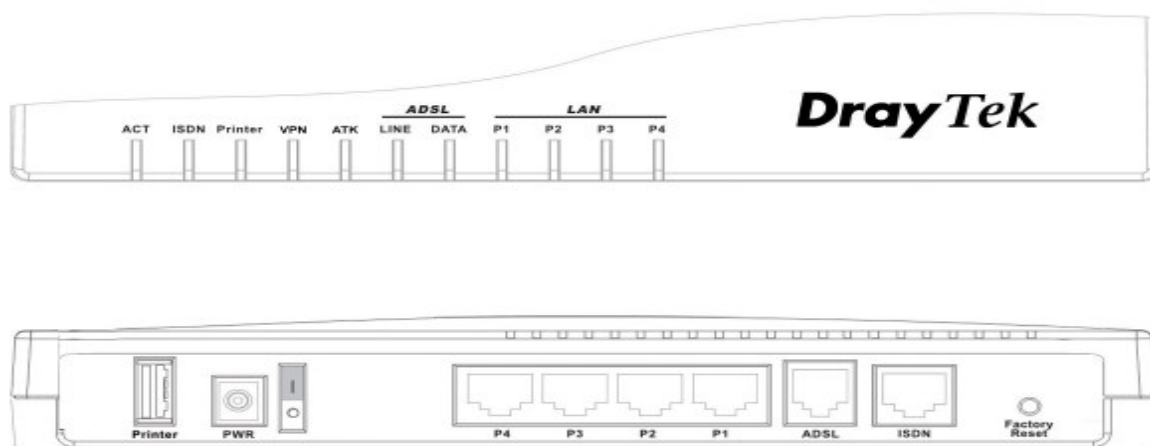
Each of the Vigor2600 plus series router has different front and rear panels. Before you begin to install, please take a moment to become more familiar with the LED indicators and rear panels. The following sections describe the models individually.

## Vigor2600plus



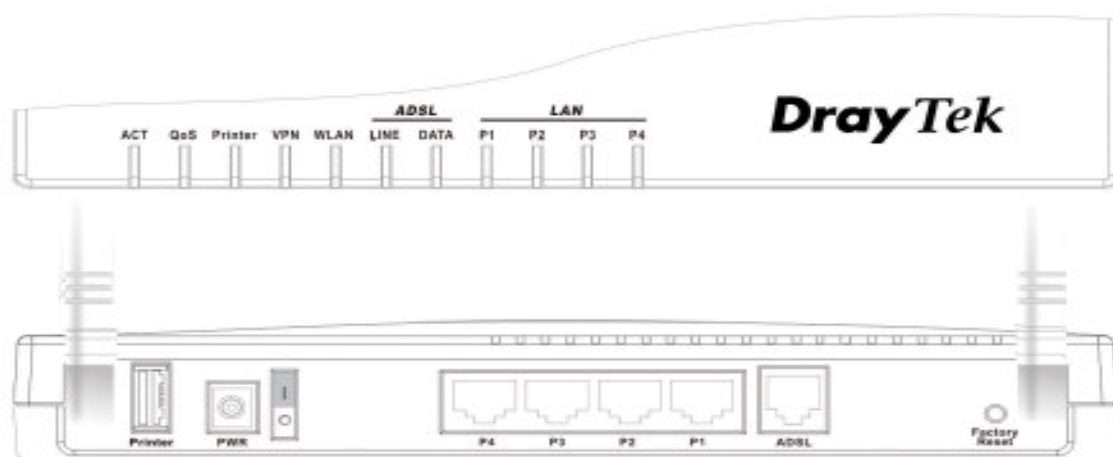
LED Indicators		Descriptions
ACT (Activity)		Blink when power is supplied to the router and the router is running normally.
QoS		ON when the QoS function is active.
Printer		ON when the USB interface printer is ready
VPN		ON when the VPN is active.
ATK		Blinking when the router suffers from the Dos(Denial of Service) attacks.
ADSL	LINE	ON when the ADSL network is show time.
	DATA	Blinking indicates the DSL protocols start hankshaking. The light will remain still when data transmission is available.
LAN	P1, P2, P3, P4	These indicators are dual-colour LEDs: - OFF indicates that no device is connected to the LAN port. - Yellow means the port is connected to a 10Mbps device. - Green indicates to connected device is 100Mbps. - BLINKING indicates that Ethernet packets are passing through the port.

Back Panels	Descriptions
Printer	USB socket to connect a printer with USB interface.
PWR	Only the power adapter comes with the package can be connected to the PWR.
P1, P2, P3, P4	These switch ports should be connected to your local PCs.
ADSL	To connect to the ADSL-enabled telephone line.
Factory Reset	The restore default settings : While the router is running (ACT LED blinking), press the button and hold for more than five seconds. The ACT LED begins to blink rapidly, then release the button. The router will restart with the factory default configuration.



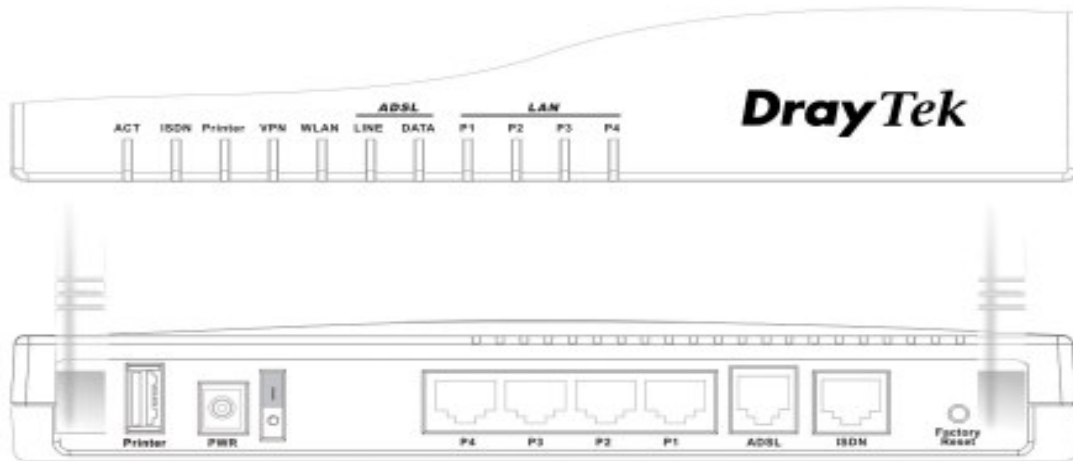
LED Indicators		Descriptions
<b>ACT</b> (Activity)		Blink when power is supplied to the router and the router is running normally.
<b>ISDN</b>		ON when the ISDN network is correctly setup. BLINKING when there is a successful remote connection on the ISDN BRI B1 / B2 channel. Note: for some NT-I boxes, the ISDN LED light will go OFF when the ISDN line has been idle a while. When the router is dialling or answering a call it will go ON again
<b>Printer</b>		ON when the USB interface printer is ready
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<b>ADSL</b>	To connect to the ADSL-enabled telephone line.
<b>ISDN</b>	Connected to an external NT1(or NT1+) box provided by your ISDN service provider.
<b>Factory Reset</b>	The restore default settings : While the router is running (ACT LED blinking), press the button and hold for more than five seconds. The ACT LED begins to blink rapidly, then release the button. The router will restart with the factory default configuration.



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<b>Printer</b>		ON when the USB interface printer is ready
<b>VPN</b>		ON when the VPN is active.
<b>WLAN</b>		ON when the wireless LAN is ready.
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<b>Printer</b>	USB socket to connect a printer with USB interface.
<b>PWR</b>	Only the power adapter comes with the package can be connected to the PWR.
<b>V1, V2</b>	To connect analog phone.
<b>P1, P2, P3, P4</b>	These switch ports should be connected to your local PCs.
<b>ADSL</b>	To connect to the ADSL-enabled telephone line.
<b>Factory Reset</b>	The restore default settings : While the router is running (ACT LED blinking), press the button and hold for more than five seconds. The ACT LED begins to blink rapidly, then release the button. The router will restart with the factory default configuration.



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## **Safety Instructions**

- . Read the installation guide thoroughly before you set up the router.
- . The router is a complicated electronic unit that may be repaired only by authorized and qualified personnel. Do not try to open or repair the router yourself.
- . Do not place the router in a damp or humid place, e.g. a bathroom.
- . The router should be used in a sheltered area, within a temperature range of +5 to +40 Celsius.
- . Do not expose the router to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.
- . Keep the package out of reach of children.
- . When you want to dispose of the router, please follow local regulations on conservation of the environment.

## **Warranty**

We warrant to the original end user (purchaser) that the router will be free from any defects in workmanship or materials for a period of three (3) years from the date of purchase from the dealer. Please keep your purchase receipt in a safe place as it serves as proof of date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, we will, at our discretion, repair or replace the defective products or components, without charge for either parts or labor, to whatever extent we deem necessary to restore the product to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be offered solely at our discretion. This warranty will not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. The warranty does not cover the bundled or licensed software of other vendors. Defects which do not significantly

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affect the usability of the product will not be covered by the warranty. We reserve the right to revise the manual and online documentation and to make changes from time to time in the contents hereof without obligation to notify any person of such revision or changes.

**European Community**

Hereby, we declare that the router is in compliance with the essential requirements and other relevant provisions of R&TTE Directive 99/5/EC.

**Be A Registered Owner**

Web registration is preferred. You can register your Vigor router via <http://www.draytek.com.tw> . Alternatively, fill in the registration card and mail it to the address found on the reverse side of the card.

**Firmware & Tools Updates**

Due to the continuous evolution of DrayTek ADSL & Router technology, all routers will be regularly upgraded. Please consult the DrayTek web site for more information on newest firmware, tools and documents.  
<http://www.draytek.com.tw>

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# Vigor2600 plus Series Quick Start Guide

## Aim of this chapter

Quickly connect your router to the Internet

## Delivery check

Check your router package for the following items :

The Router

1 printed Quick Start Guide with warranty/ registration card

1 CD includes detailed User Manual in electronic form, released firmware and utilities

1 AC power supply adapter (black)

1 Ethernet LAN cable (blue) for connection to a computer or hub

1 ADSL line cable (RJ-11 to RJ-45 for Switzerland and the Netherlands only)  
(RJ-11 to RJ-11 for other Annex A countries)  
(RJ-45 to RJ-45 for Annex B countries)

1 ISDN line cable (RJ-45, black) for Vigor2600i and Gi only

2 external antennas for V2600G and V2600Gi only.

Please read page 9,10

## Identify your variant

Your router package should contain all these items. If any item is missing or damaged, contact your dealer or our Customer Service Department immediately.

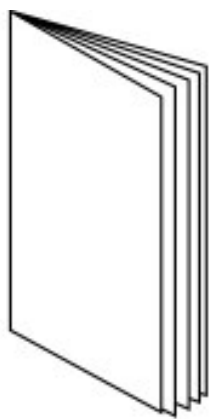
The Vigor2600 plus series all contain Annex A/Annex B models, please check if the package is suitable for your use by checking the information from bottom of Vigor2600 plus series router.

Annex A : is for connecting to an analog POTS line

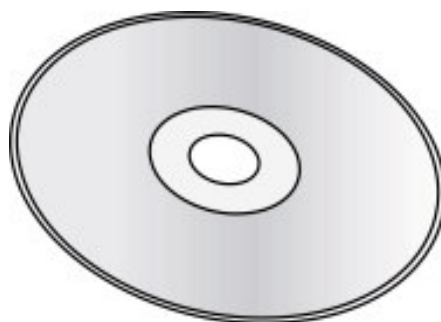
Annex B : is for connecting to a digital ISDN line



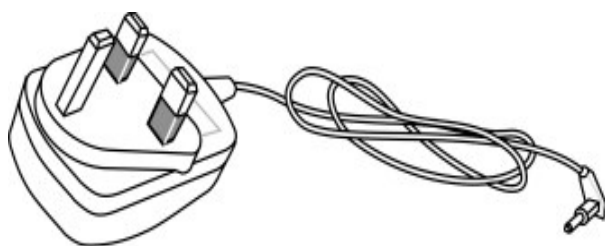




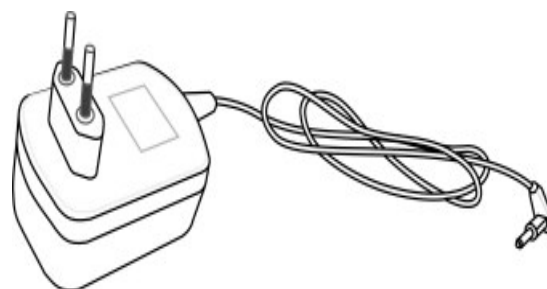
**Manual**



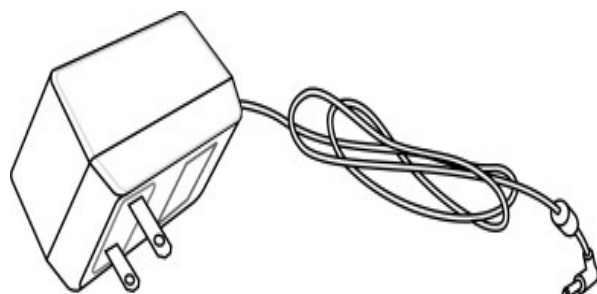
**CD**



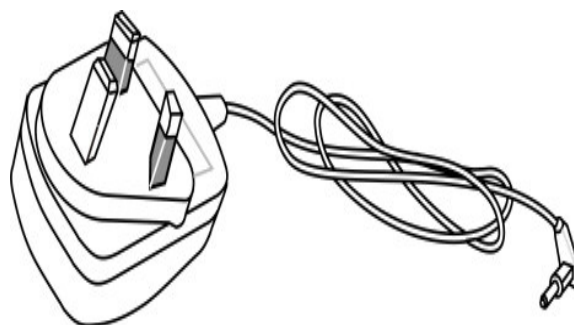
**UK-type power adapter**



**EU-type power adapter**



**USA/Taiwan-type power adapter**



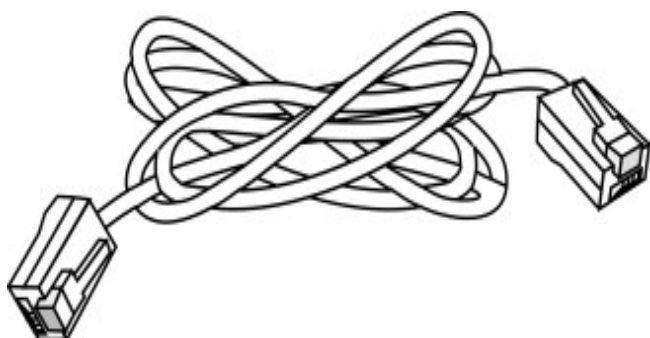
**AU/NZ-type power adapter**



**RJ-11 to RJ-11(Annex A)**



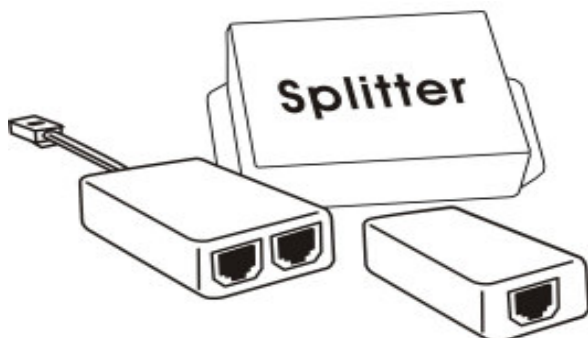
**RJ-11 to RJ-45(Annex B)  
Dutch/Swiss User**



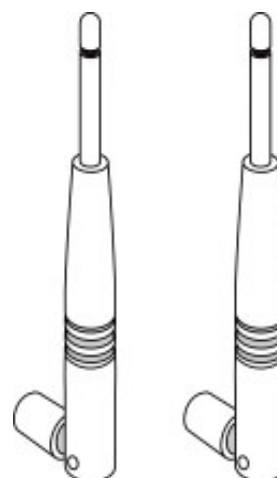
**RJ-45(Enternet)**



**RJ-45 to RJ-45  
(Annex B,ISDN)**



**Filter/Splitter(Optional)**



**Antennas for G/Gi only**

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**Needed from  
ISP**

***DSL line***

Depending on the variant Vigor2600 plus series you purchased, the following DSL service must be available at your local premisses:

***For Annex A*** : ADSL service must be enabled on your POTS telephone line.

***For Annex B*** : ADSL service must be enabled on your ISDN telephone line.

***DSL Parameters***

The following DSL parameters are required from your ISP :

1. The VPI/VCI of the virtual channel to use on the DSL line
2. Protocol : PPPoE, PPPoA or MPoA (RFC1483/2684)
3. Encapsulation Method : LLC/SNAP or VCMUX
4. Modulation Method : T1.413, G.lite, G.DMT  
(Vgior2600 plus series provides ***Multimode*** which can automatically detect)

### Example:

VPI/VCI = 0/33

Protocol = PPPoA

Encapsulation Method = VCMUX

Modulation Method = G.DMT

### Username/Password

Only for PPPoE/PPPoA mode users

### Fixed IP Address/ Subnet Mask/ Gateway IP Address

Some ISP will use DHCP method to provide IP address for MPoA mode users, then users do not need to know the fixed IP address.

If you do not know these information in detail, please contact your ISP to get these informations.

### Needed on your side

#### Local networking

To use the Ethernet port(s) you need at least:

One PC with an Ethernet Card installed.

One ethernet cat-5 UTP cable.

To use the Wireless LAN you need at least:

One PC with a Wireless LAN adaptor installed.

#### TCP/IP protocol suite

For TCP/IP, your PC can either be set to a static IP, or to get an IP automatically (from a DHCP server).

The default gateway IP address of the router is 192.168.1.1. If static IP is chosen, set your PCs IP address to 192.168.1.x , where x is any number in the range 2-254 inclusive.

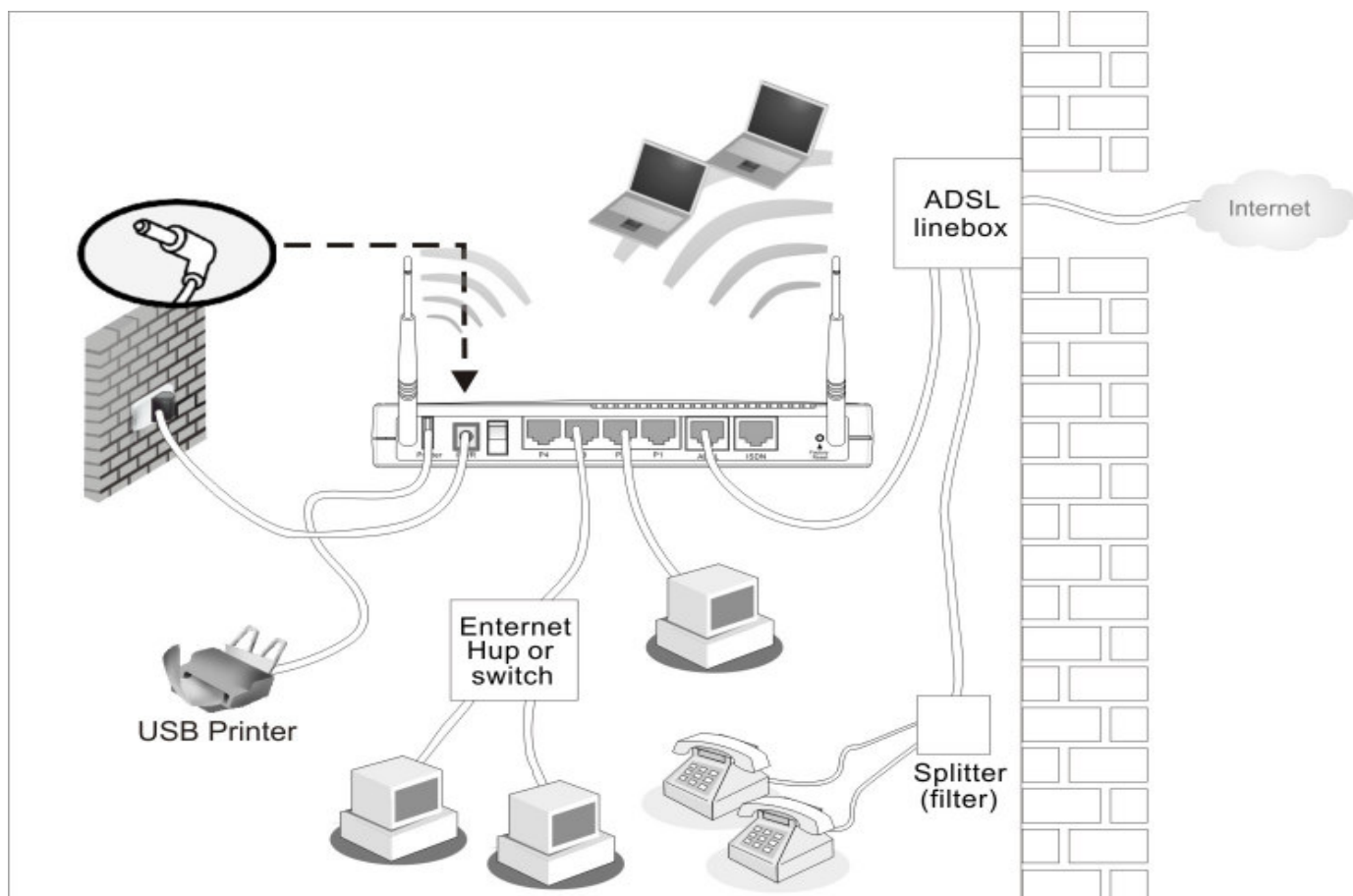
## The wire installation

Connect the blue Ethernet cable between Vigor 2600 plus series ports P1/P2/P3/P4 and any wired PCs.

Connect ADSL port to your ADSL-enabled telephone line. Remember that a Line Filter should be used for any telephones or fax machines also connected to the ADSL telephone line.

Connect AC Power adaptor to Power socket.

Ethernet port (between router and PC), DSL port, USB Printer and Power port as below:



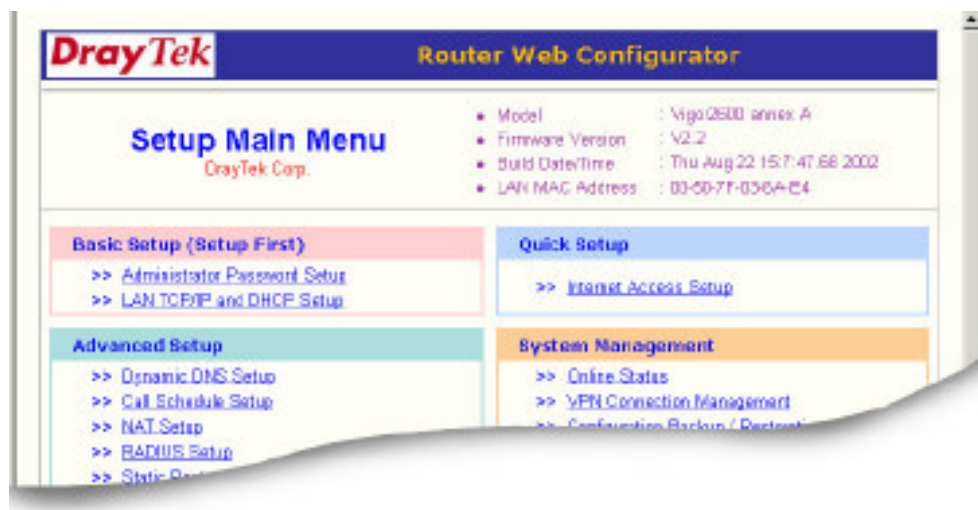
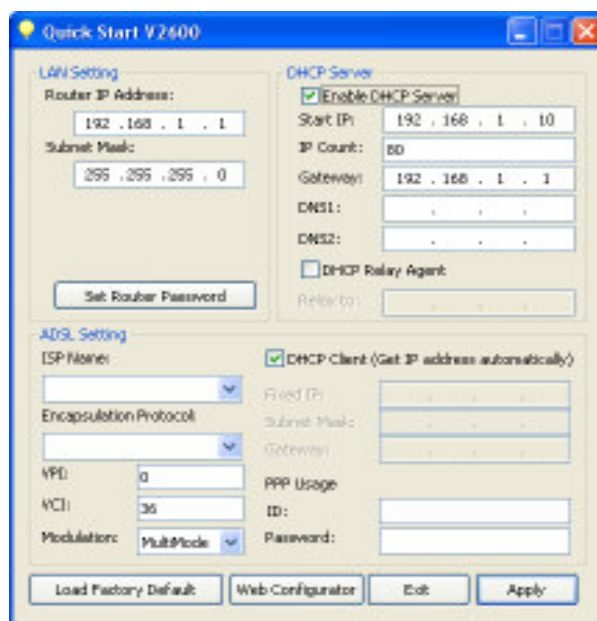
**Install ‘ Router Tools ‘** This tool which provides “Smart StartWizard” Firmware Upgrade Program and TFTP client is in the attached CD. It supports Windows, Mac OS 8/9 and Mac OS X. Moreover, it provides “Syslog Tool” for Windows system. For Vigor2600Gi/i models, there is virtual TA program for the usage of ISDN AP.

**Turn on your router** Once all previous steps are completed, turn on your router. After Power is on, the ACT LED will blink and corresponding LAN port LED will light.

If the LEDs do not light normally, please refer to section A, “Trouble Shooting” for further information.

**Connect to router** If the PC is set to obtain IP address automatically (recommended), you can use Windows winipcfg.exe or ipconfig.exe to check if it has obtained an IP address from the router. If not, please reboot PC and ensure that it has obtained an IP address from the router.

Then you can use “Quick Start Wizard” to configure router or connect to router via Web browser directly and use the Router web configurator.



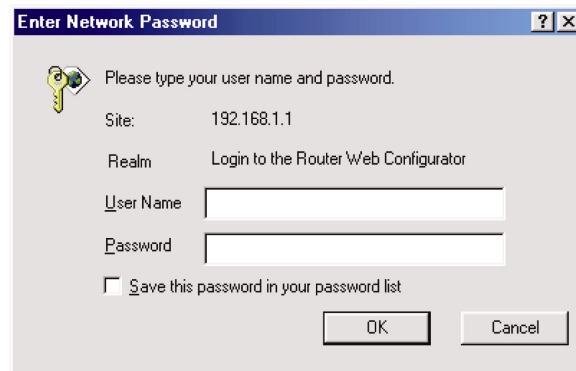
# Using the Router Web Configurator

## Connect to router

Start the web browser on a PC which is connected to the Vigor 2600 plus series router, and type `http://192.168.1.1` into the address box of your browser.

## Password

The following window will open. The factory default User name and password are null. Press **OK** to continue.



The dialog box titled "Enter Network Password" has a close button (X) and a help button (?). It contains a key icon and the text "Please type your user name and password." Below this, it shows "Site: 192.168.1.1" and "Realm: Login to the Router Web Configurator". There are input fields for "User Name" and "Password". At the bottom, there is a checkbox labeled "Save this password in your password list" and two buttons: "OK" and "Cancel".

## Enter Router Menu

The router main menu is now displayed:  
(Example: Vigor2600plus)



The screenshot shows the "DrayTek Router Web Configurator" main menu. At the top, it says "Setup Main Menu" and "DrayTek Corp.". On the right, there is a status section with the following information:

- Model: Vigor2600 plus series annex A
- Firmware Version: v2.5\_qos1
- Build Date/Time: Wed Oct 29 16:9:12.97 2003
- LAN MAC Address: 00-90-7F-22-35-6E

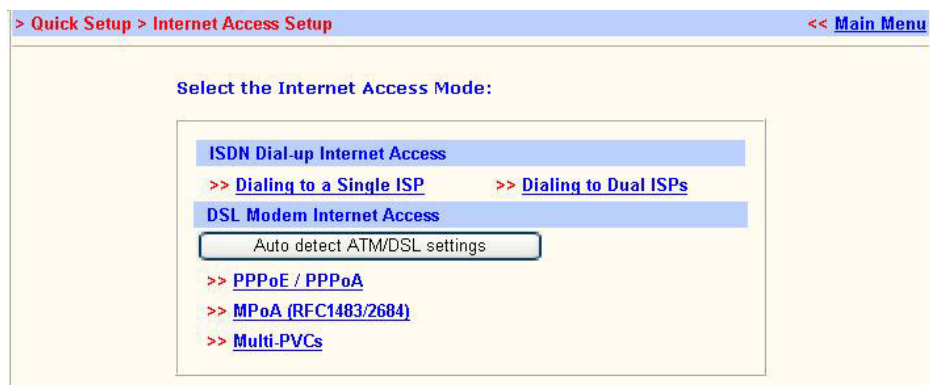
The main menu is divided into four sections:

- Basic Setup (Setup First)**:>> Administrator Password Setup, >> LAN TCP/IP and DHCP Setup, >> Wireless LAN Setup
- Advanced Setup**:>> Dynamic DNS Setup, >> Call Schedule Setup, >> NAT Setup, >> RADIUS Setup, >> Static Route Setup, >> IP Filter/Firewall Setup, >> VPN and Remote Access Setup, >> UPnP Service Setup, >> VLAN/Rate Control
- Quick Setup**:>> Internet Access Setup
- System Management**:>> Online Status, >> VPN Connection Management, >> Configuration Backup / Restoration, >> Syslog Setup, >> Time Setup, >> Management Setup, >> Diagnostic Tools, >> Reboot System, >> Firmware Upgrade (TFTP Server)

At the bottom, it says "Copyright (c) 2002, DrayTek Corp. All Rights Reserved."

## Set DSL Parameters

Click on **Internet Access Setup** in the right-hand menu.



The screenshot shows the "Internet Access Setup" screen. At the top, there is a breadcrumb trail: "> Quick Setup > Internet Access Setup" and a link "<< Main Menu". The main heading is "Select the Internet Access Mode:". Below this, there are two main categories:

- ISDN Dial-up Internet Access**:>> Dialing to a Single ISP, >> Dialing to Dual ISPs
- DSL Modem Internet Access**:>> Auto detect ATM/DSL settings, >> PPPoE / PPPoA, >> MPoA (RFC1483/2684), >> Multi-PVCs



## Auto detect ATM/DSL Setting

Use this function to automatically detect ATM/DSL setting. Click the **Auto detect ATM/DSL settings** button, and follow the instructions until it asks whether you have a fixed IP or not.

- If your ISP has allocated you a fixed IP address, click to OK button.
- If your ISP has not allocated you a fixed IP address, click the **Cancel** button.  
This will not cancel the setup process.

Select your country from the list and click **OK** to start the ATM/DSL parameter detection. If your country is not in the list, it may take a longer time to detect.



It should now have detected the ATM/DSL settings, similar to the following example of a PPoA connection:



You can set/edit these manually when adding your ISP account details. Type in the ISP name as well as the Username/Password provided by them. Also, you probably want to tick the "Always On" box as there's no reason to disconnect the router when you're not using the Internet. Ignore the fixed IP settings as an ISP will send them to you each time you login anyway.

A screenshot of a web-based configuration page titled '> Quick Setup > Internet Access Setup'. The page has a navigation bar with '<< Main Menu' and '<< Back'. The main content is divided into several sections: 'PPPoE / PPPoA Client Mode' with 'Enable' and 'Disable' radio buttons; 'DSL Modem Settings' with fields for 'Multi-PVC channel' (Channel 1), 'VPI' (0), 'VCI' (33), 'Encapsulating Type' (LLC/SNAP), 'Protocol' (PPPoA), and 'Modulation' (T1.413); 'PPPoE Pass-through' with checkboxes for 'For Wired LAN' and 'For Wireless LAN'; 'ISDN Dial Backup Setup' with a 'Dial Backup Mode' dropdown set to 'None'; and 'ISP Access Setup' with fields for 'ISP Name' (MyISP), 'Username' (234@draytek.com.tw), 'Password' (masked), 'PPP Authentication' (PAP or CHAP), 'Always On' checkbox (checked), 'Idle Timeout' (-1 second(s)), 'IP Address From ISP' (WAN IP Alias), 'Fixed IP' radio buttons (Yes/No), and 'Fixed IP Address' field. There is also a section for 'MAC Address' with a note '\* : Required for some ISPs' and options for 'Default MAC Address' (selected) or 'Specify a MAC Address' (with a field showing 00:50:7F:05:3A:E3). At the bottom is an 'OK' button.

Click the OK button to save changes, and go to Page 18 to **Surfing Internet**.



## Enable Multi-PVC

The Vigor2600 plus series provides up to 8 ADSL communication profiles (called Permanent Virtual Circuits).

Click the **Multi-PVCs** menu option to enable one of the ADSL communication profiles.

Channel	Enable	VPI	VCI	QoS Type	Protocol	Encapsulation
1.	<input checked="" type="checkbox"/>	0	33	UBR	PPPoA	LLC/SNAP
2.	<input checked="" type="checkbox"/>	0	34	UBR	MPoA	1483 Bridged IP LLC
3.	<input type="checkbox"/>	0	35	UBR	PPPoA	VC MUX
4.	<input type="checkbox"/>	0	36	UBR	PPPoA	VC MUX
5.	<input type="checkbox"/>	0	37	UBR	PPPoA	VC MUX
6.	<input type="checkbox"/>	0	38	UBR	PPPoA	VC MUX
7.	<input type="checkbox"/>	0	39	UBR	PPPoA	VC MUX
8.	<input type="checkbox"/>	0	40	UBR	PPPoA	VC MUX

Cancel OK

Place a tick in the Enable column of one of the channels to make the channel active, and enter the ADSL parameters according to the information provided by your ISP. Please select QoS type of **UBR** if your ISP only supports one PVC channel on your ADSL line.

To continue entering settings according to the parameters provided by your ISP, return to the Internet Access Setup, and select PPoE / PPoA or MPoA (RFC1483/2684).

## For PPPoE/PPPoA Users

Select the **Multi-PVC channel** matching the enabled channel number on the Multi-PVCs page.

Enter the username, password and DSL parameters given by your ISP.

To connect to Internet all the time, check **Always On**.

DrayTek Router Web Configurator

> Quick Setup > Internet Access Setup << Main Menu

PPPoE / PPPoA Client Mode << Back

PPPoE/PPPoA Client ☒ Enable ☐ Disable

**DSL Modem Settings**

Multi-PVC channel: Channel 1

VPI: 0

VCI: 33

Encapsulating Type: VC MUX

Protocol: PPPoA

Modulation: G.DMT

**ISP Access Setup**

ISP Name:

Username: T0177921

Password:

PPP Authentication: PAP Only

☒ Always On

Idle Timeout: -1 second(s)

IP Address From ISP: WAN IP Alias

Fixed IP: ☐ Yes ☒ No (Dynamic IP)

Fixed IP Address:

\* : Required for some ISPs

☒ Default MAC Address

☐ Specify a MAC Address

MAC Address: 00 : 50 : 7F : 00 : 00 : 01

**Scheduler (1-15)**

OK

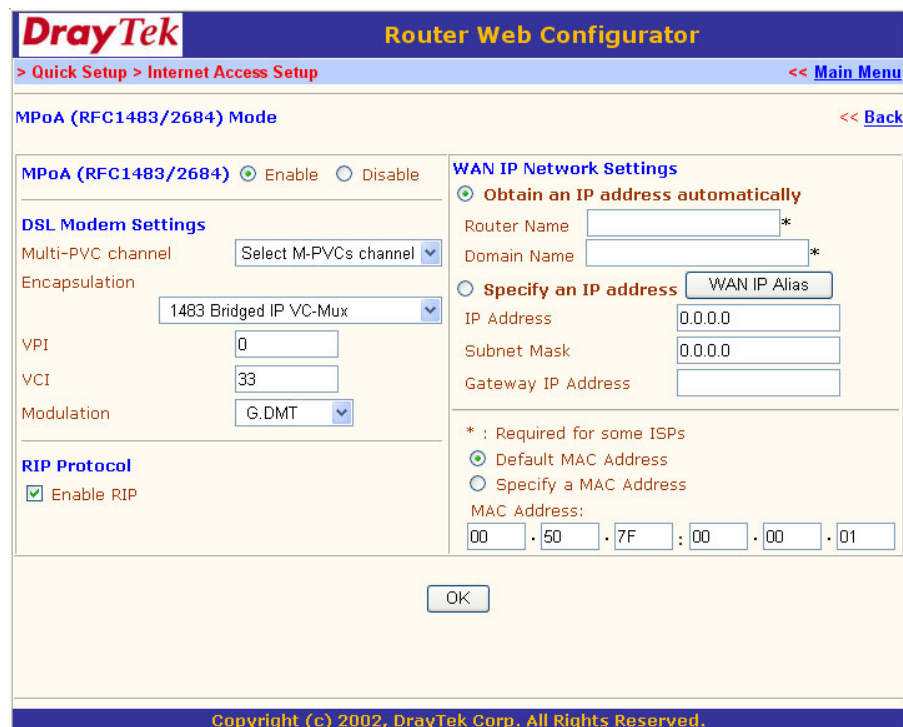
Copyright (c) 2002, DrayTek Corp. All Rights Reserved.

Click the OK button to save changes.

## For MPoA (RFC 1483/2684) Users

Select the **Multi-PVC channel** matching the enabled channel number on the Multi-PVCs page.

Enter the WAN IP address allocated by your ISP, or click **Obtain an IP address automatically** according to the information provided by your ISP.



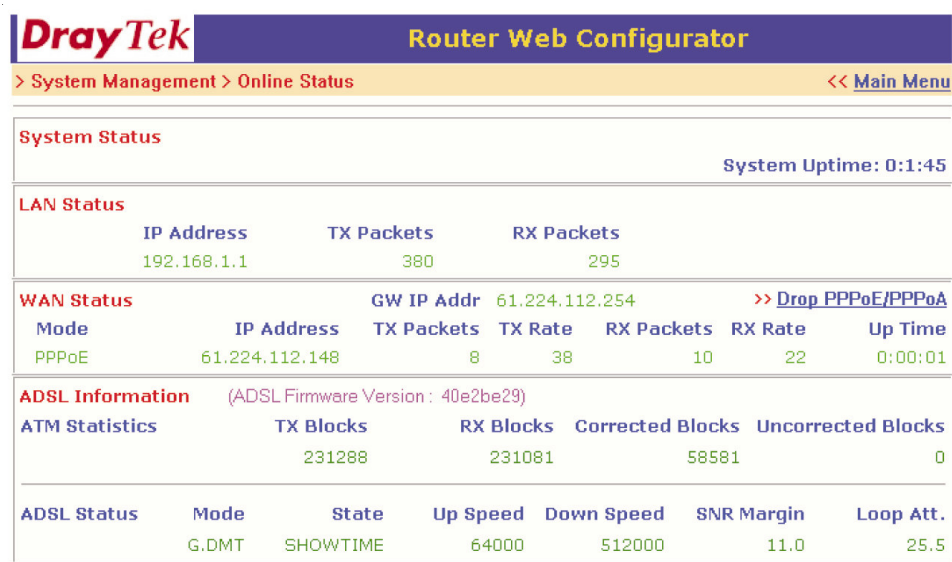
The screenshot shows the DrayTek Router Web Configurator interface. The breadcrumb trail is > Quick Setup > Internet Access Setup. The page title is MPoA (RFC1483/2684) Mode. There are two main sections: DSL Modem Settings and WAN IP Network Settings. In the DSL Modem Settings, MPoA (RFC1483/2684) is enabled, Multi-PVC channel is set to 'Select M-PVCs channel', Encapsulation is '1483 Bridged IP VC-Mux', VPI is '0', VCI is '33', and Modulation is 'G.DMT'. The RIP Protocol section has 'Enable RIP' checked. In the WAN IP Network Settings, 'Obtain an IP address automatically' is selected. Fields for Router Name, Domain Name, IP Address (0.0.0.0), Subnet Mask (0.0.0.0), and Gateway IP Address are present. A 'WAN IP Alias' button is also shown. At the bottom, there is an 'OK' button and a copyright notice: Copyright (c) 2002, DrayTek Corp. All Rights Reserved.

Click the OK button to save changes.

## Surfing Internet

You should be able to surf the Internet now from all PCs connected to the Vigor 2600 plus series.

You can also monitor the connection condition via the router **Online Status** option from the main Menu (example: Vigor2600G).



The screenshot shows the DrayTek Router Web Configurator interface for the Online Status page. The breadcrumb trail is > System Management > Online Status. The page displays various system and network status information.

System Status							
							System Uptime: 0:1:45
LAN Status							
IP Address	TX Packets		RX Packets				
192.168.1.1	380		295				
WAN Status							
Mode	IP Address	TX Packets	TX Rate	RX Packets	RX Rate	Up Time	
PPPoE	61.224.112.148	8	38	10	22	0:00:01	>> Drop PPPoE/PPPoA
ADSL Information (ADSL Firmware Version : 40e2be29)							
ATM Statistics		TX Blocks	RX Blocks	Corrected Blocks	Uncorrected Blocks		
		231288	231081	58581	0		
ADSL Status							
Mode	State	Up Speed	Down Speed	SNR Margin	Loop Att.		
G.DMT	SHOWTIME	64000	512000	11.0	25.5		

---

# Wireless LAN settings

## Wireless LAN Interface

The Vigor2600G and Vigor2600Gi are equipped with a wireless LAN interface compliant with the 54Mbps IEEE 802.11g protocol. The features of wireless LAN capability enable high mobility of several simultaneous users accessing all LAN facilities just like on a wired LAN as well as Internet and WAN access.



## Default Wireless LAN Settings

As supplied, the Vigor2600G/Gi wireless LAN is enabled, but without any security. The factory default settings of the Vigor2600G/Gi are:

Wireless LAN:	enabled
Frequency Domain:	Europe
channel:	6
SSID:	default
WEP encryption:	disabled
MAC access control:	disabled

This can be convenient for initially establishing the link with wireless workstations - but **DrayTek strongly recommends that you enable the built-in security** as soon as practical.

## Wireless LAN Settings

From the Router Web Configurators Main Menu, select **Wireless LAN Setup**.



The Frequency Domain is set as Europe and the MAC address will show as above.

## General Settings

Click **General Settings** to configure the Service Set Identifier (SSID) and wireless channel.

The screenshot shows a web-based configuration interface for a wireless LAN. At the top, a breadcrumb trail reads: > Basic Setup > Wireless LAN Setup > General Settings. A link for << Main Menu is in the top right. The main heading is 'General Setting ( IEEE 802.11 )' with a << Back link. The settings are as follows:

- ☒ Enable Wireless LAN
- Mode : Mixed(11b+11g) (dropdown menu)
- Scheduler (1-15): Four empty input boxes for scheduling.
- SSID : Draytek (text input field)
- Channel : Channel 1, 2412MHz (dropdown menu)
- ☐ Hide SSID

Below the settings, there are two explanatory lines:

- SSID :** wireless LAN Service Set ID.
- Hide SSID :** the scanning tool can't read the SSID when sniffing radio.

**Mode:** In Mixed(11b+11g) mode, the radio can support both IEEE802.11b and IEEE802.11g protocols simultaneously. In 11g-only mode, the radio only supports IEEE802.11g protocol. In 11b-only mode, the radio only supports IEEE802.11b protocol.

**Scheduler:** Used to set the wireless LAN to work at some time interval only. You may choose up to 4 schedules from the 15 schedules which are defined under **Advanced Setup >> Call Schedule Setup**. Please refer to the detailed manual on the attached CD. The default setting is always working.

**SSID (Service Set Identification):** This is used to name the wireless LAN, and must have the same value as the SSID setting in client PC/notebook wireless card(s). SSID can be any text numbers and various special characters. The default SSID is "default".

**Channel:** Select a wireless channel for Vigor2600G/Gi. The default channel is 6.

**Hide SSID:** Check to hide the SSID from wireless **sniffers**, and so make it harder for unauthorised clients to join your wireless LAN.

**Security Settings** Click **Security Settings** to configure the security options.

**Security Settings** << [Back](#)

Mode : None

Set up [RADIUS Server](#) if 802.1x is enabled.

**WPA:**

Pre-Shared Key(PSK)

Type 32 ASCII character or 64 Hexadecimal digits leading by "0x", for example "ab1234..." or "0x982acf313..."

**WEP:**

Encryption Mode: 64-Bit

Use	WEP Key
<input type="radio"/> Key 1	<input type="text"/>
<input type="radio"/> Key 2	<input type="text"/>
<input type="radio"/> Key 3	<input type="text"/>
<input type="radio"/> Key 4	<input type="text"/>

#### Mode:

To improve the security and privacy of your wireless data packets one of the following encryption feature can be used.

- **Disable:** Thurn off the encryption mechanism.
- **WEP Only:** Accepts only WEP clients and the encryption key should be entered in WEP Key.
- **WEP/802.1x Only:** Accepts only WEP clients and the encryption key is got dynamically through 802.1x.
- **WEP or WPA/PSK:** Accepts WEP and WPA clients simultaneously and the encryption key should be entered in WEP Key and PSK respectively.
- **WEP/802.1x or WPA/802.1x:** Accepts WEP and WPA clients simultaneously and the encryption key is got dynamically through 802.1x.
- **WPA/PSK Only:** Accepts only WPA clients and the encryption key should be entered in PSK.
- **WPA/802.1x Only:** Accepts only WPA clients and the encryption key is got dynamically through 802.1x.

**NOTE:** You should also set RADIUS Server if **WEP/802.1x or WPA/802.1x** , **WEP/802.1x Only** or **WPA/802.1x Only** mode is selected.

#### WPA Encryption:

The WPA encrypts each frame transmitted from the radio using the pre-shared key (PSK) entered from this panel or a key got dynamically through 802.1x.

**Pre-Shared Key (PSK):** Either 32 ASCII characters or 64 Hexadecimal digits leading by 0x can be entered. For example "0123456789ABCD...." or "0x321253abcde.....".

### WEP Encryption:

- **Disable:** Turns off the WEP encryption mechanism.
- **WEP 64 Bit:** For 64bits WEP key, either 5 ASCII characters or 10 hexadecimal digitals leading by **0x** can be entered. For example **ABCDE** or **0x4142434445**.
- **WEP 128 Bit:** For 128bits 13 ASCII characters or 26 hexadecimal digits leading by **0x** can be entered. For example, **ABCDEFGHIJKLM** or **0x4142434445464748494A4B4C4D**.

128 bits WEP is most secure, but has more encryption/decryption overhead. Note that all wireless devices must support the same WEP encryption bit size and have the same key.

Four keys can be entered here, but only one key can be selected at a time. The keys can be entered in ASCII or Hexadecimal.

Click the circle under **Use** next to the key you wish to use.

**OK:** To save the WEP settings.

### Access Control of Wireless LAN Interface

For additional security, **Access Control** allows restricting the network access to a list of pre-determined network clients.

Each Ethernet interface card has a unique serial number called a MAC address. With this feature enabled, only those network clients whose MAC addresses are listed here will be allowed to access the wireless LAN.

The screenshot displays the DrayTek Router Web Configurator interface. The top navigation bar includes the DrayTek logo, the title "Router Web Configurator", and a breadcrumb trail: "> Basic Setup > Wireless LAN Setup > Access Control". A link for "<< Main Menu" is also present. The main content area is titled "Access Control" and features a checkbox labeled "Enable Access Control". Below this is a table with two columns: "Index" and "MAC Address". The table is currently empty. Under the table, there is a "MAC Address:" label followed by six input fields for entering a MAC address in hexadecimal format (e.g., 00:00:00:00:00:00). Below these fields are four buttons: "Add", "Remove", "Edit", and "Cancel". A "Note:" section states: "Add or remove the wireless user's MAC address to accept or deny the access to the network." At the bottom of the form are "Clear All" and "OK" buttons. The footer of the page reads "Copyright (c) 2002, DrayTek Corp. All Rights Reserved."



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**Enable Access Control:** Tick the **Enable Access Control** box to turn the MAC Address access control feature on.

**MAC Address:** To type the specific MAC Address which could be added on, removed from or edited from the access list above.

**ADD:** To add a MAC address on the list.

**Remove:** To remove the selected MAC address on the list.

**Edit:** To edit the selected MAC address on the list.

**Cancel:** To cancel the MAC address access control setup.

**Clean All:** To clean all of configured MAC address on the list.

**OK:** To save the access control list.

---

# Trouble Shooting for “Can not get on to the Internet”

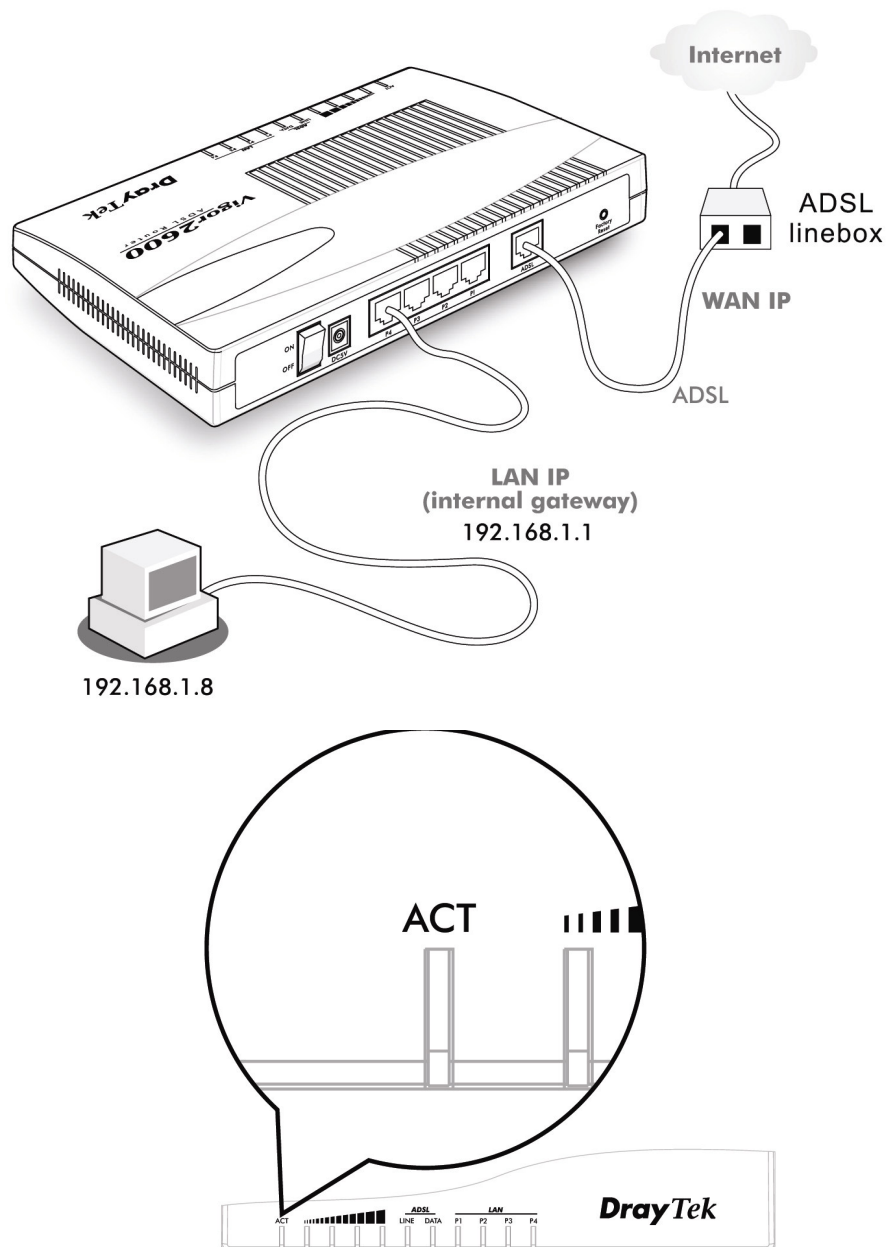
## What to check

This section will guide you through:

- 1) Check that the power and LAN and telephone cables are connected correctly.
- 2) Check that the LAN from your PC to the router is working.
- 3) Check the ADSL settings (e.g. VPI, VCI, modulation etc...).
- 4) Refer to your ISP technical support.
- 5) Refer to your Vigor dealer technical support.

## Check that the hardware is OK?

Check that the power and LAN line are connected correctly. After power is on, the **ACT LED** will blink once a second, and the correspondent **LAN LED** will light. Check that the ADSL line is connected to the telephone socket - but not through a line filter.



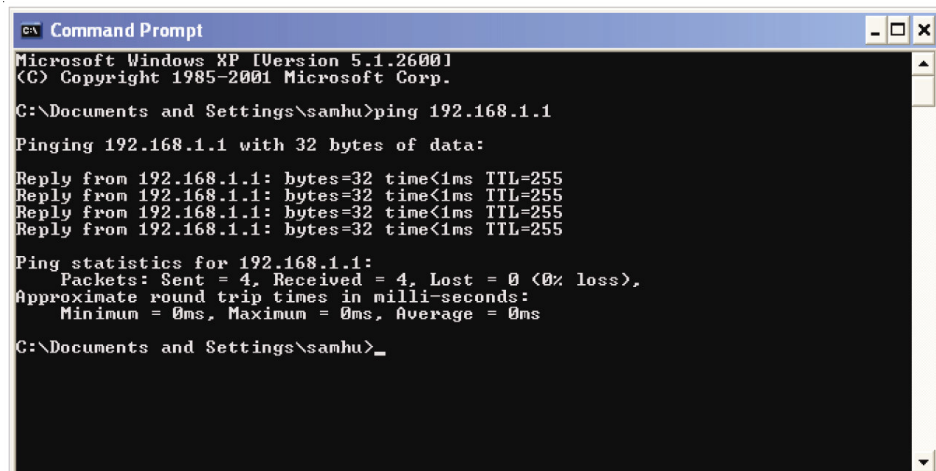


**Can you ping the router from your PC?**

The default gateway IP of the Router is 192.168.1.1.  
Please check that you can ping the Router correctly.

### *For Windows*

- 1 Open the Command Prompt window (from the start menu, select Run...)
- 2 Enter **command** if you are using Windows 95, 98 or ME; or **cmd** if you are running Windows NT, 2000, or XP.
- 3 Type **ping 192.168.1.1** and press [Enter]



```

C:\Command Prompt
Microsoft Windows XP [Version 5.1.2600.1
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\samhu>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

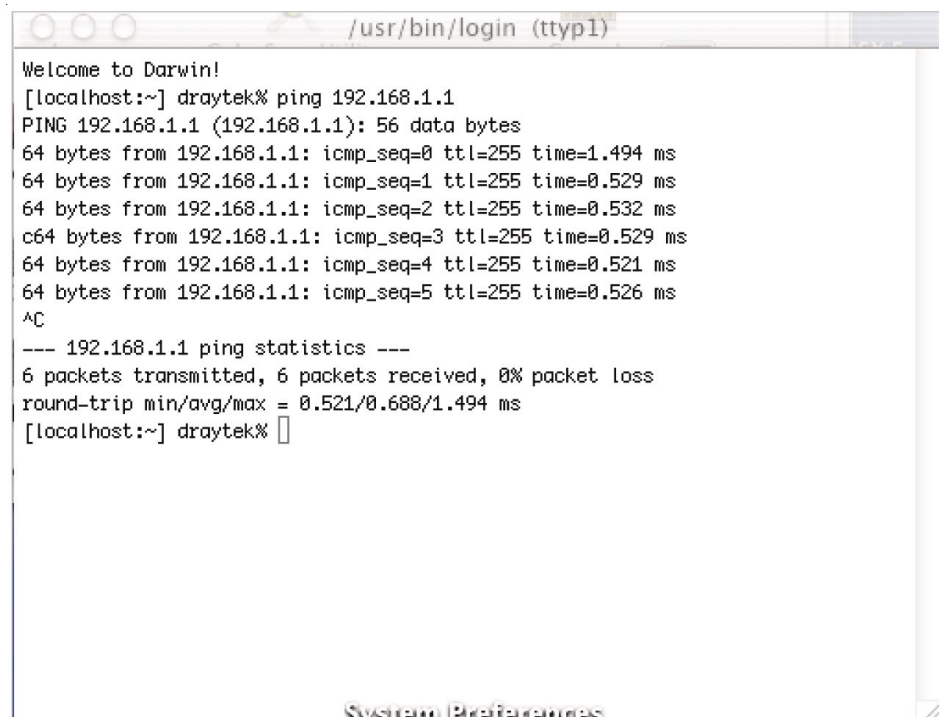
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\samhu>_

```

### *For Mac(Terminal)*



```

/usr/bin/login (tty1)

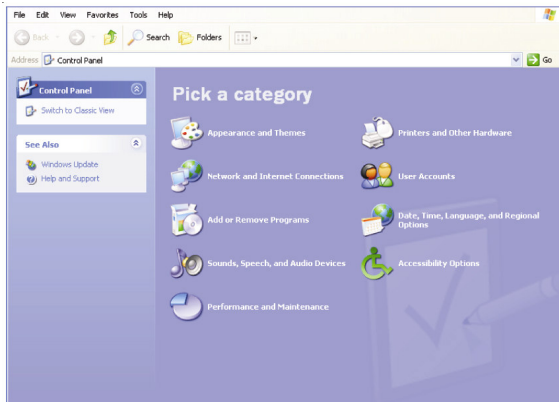
Welcome to Darwin!
[localhost:~] draytek% ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=1.494 ms
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=0.529 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=0.532 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=0.529 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=255 time=0.521 ms
64 bytes from 192.168.1.1: icmp_seq=5 ttl=255 time=0.526 ms
^C
--- 192.168.1.1 ping statistics ---
6 packets transmitted, 6 packets received, 0% packet loss
round-trip min/avg/max = 0.521/0.688/1.494 ms
[localhost:~] draytek% 

```

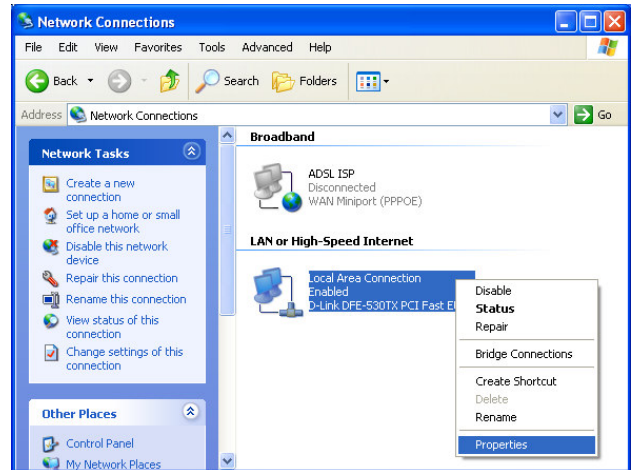
The important thing is that the computer receives a reply from 192.168.1.1. If not, please check the IP address of your PC. We suggest you set **get IP automatically**.

## For Windows XP user

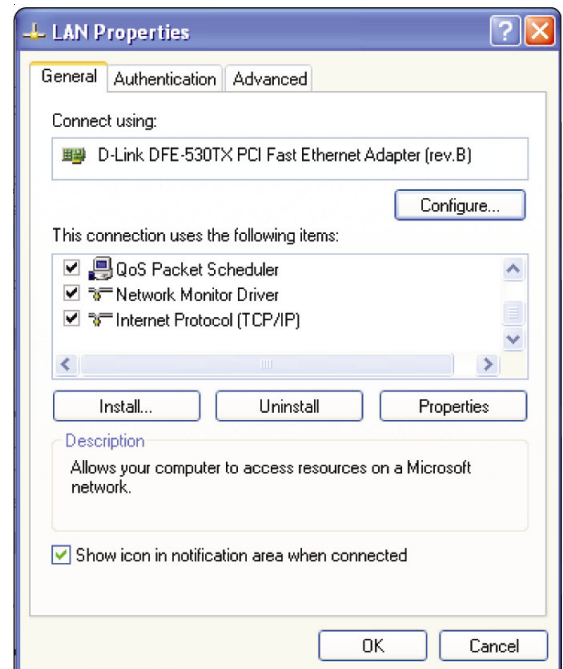
1. Enter **Control Panel** and double click **Network Connections**.



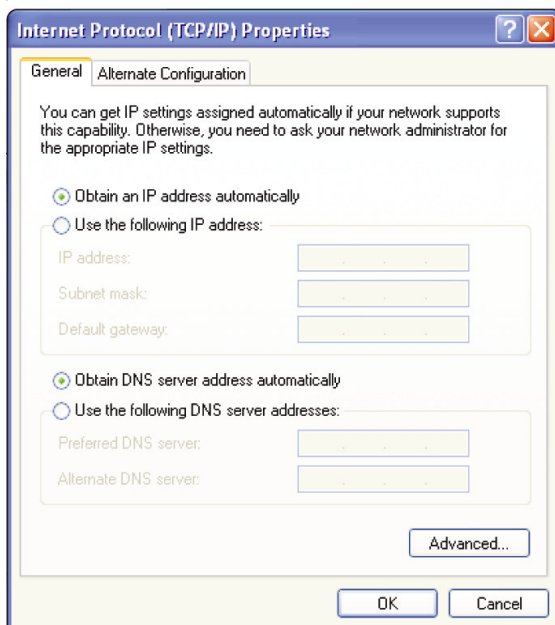
2. Right click LAN icon and choose **Properties**.



3. Choose **TCP/IP** and press **Properties**.

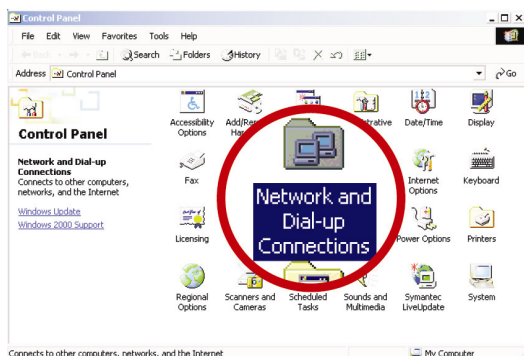


4. Select **Obtain an IP address automatically**.

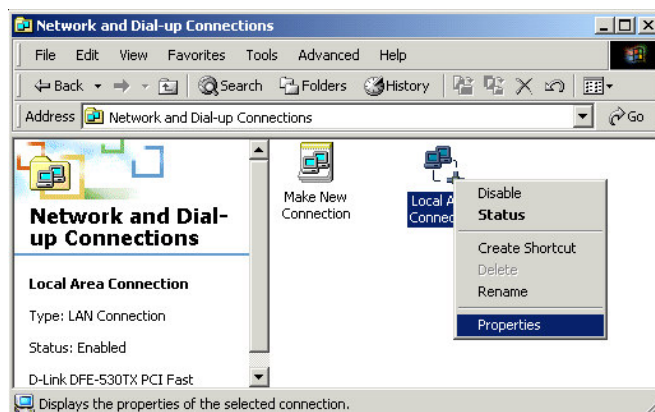


## *For Windows 2000 user*

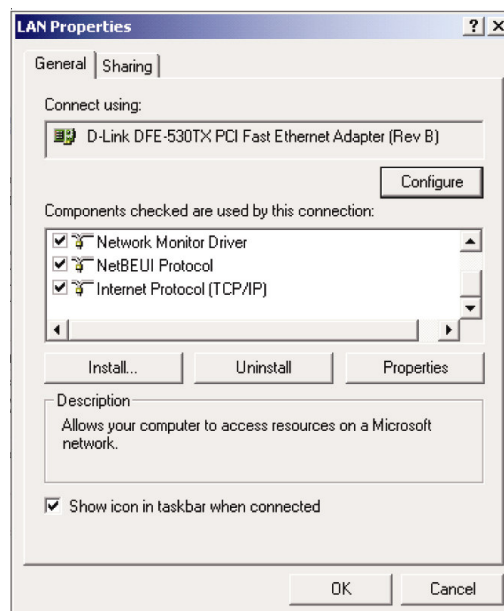
1. Enter **Control Panel** and double click **Network and Dial-up Connections**.



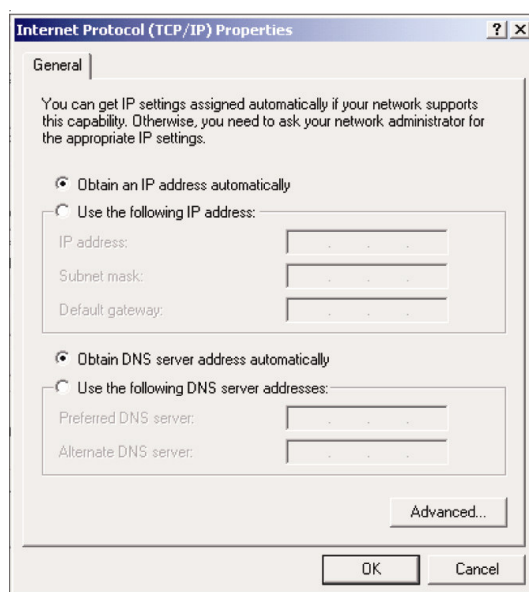
2. Right click **Local Area Connection** and choose **Properties**.



3. Choose **TCP/IP** and press **Properties**.

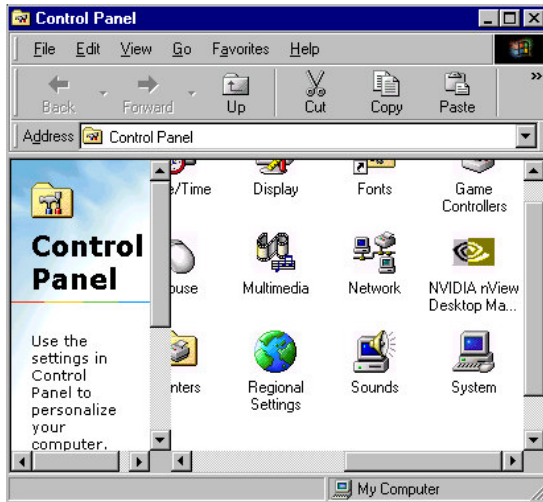


4. Select **Obtain an IP address automatically**.

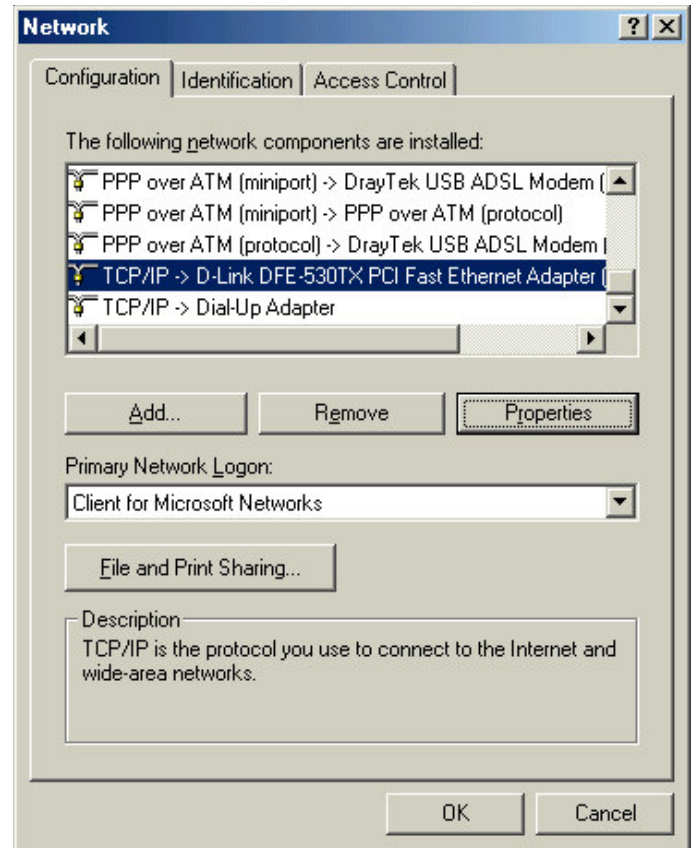


## *For Windows 98/Me user*

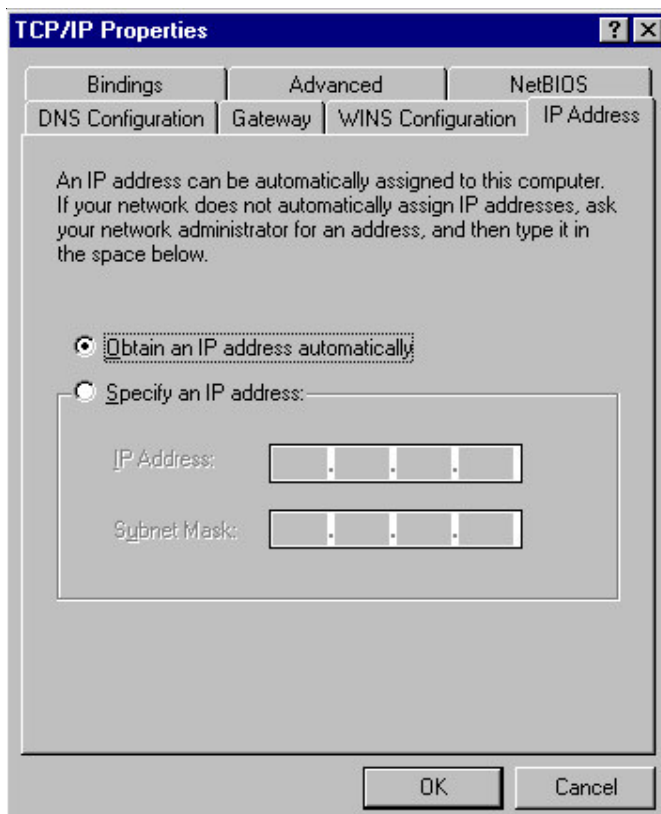
1. Enter **Control Panel** and double click **Network**.



2. Choose **TCP/IP of LAN device** and press **Properties**.

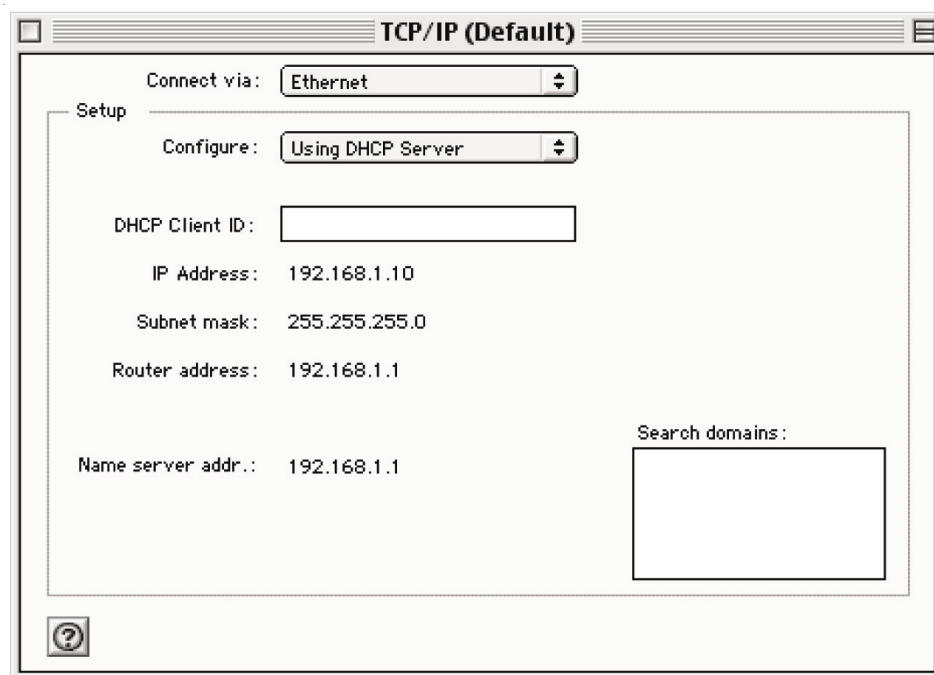


3. Choose **Obtain an IP address automatically**.



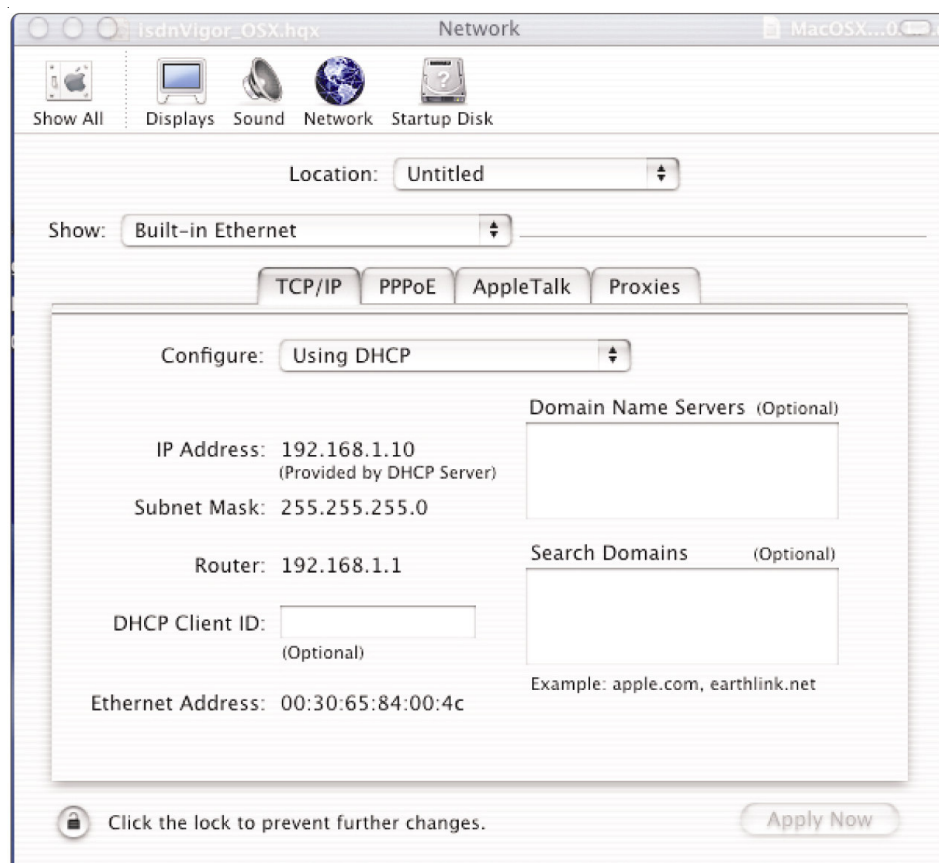
## *For Mac OS9.x user*

Control Panel >> TCP/IP



## *For Mac OSX user*

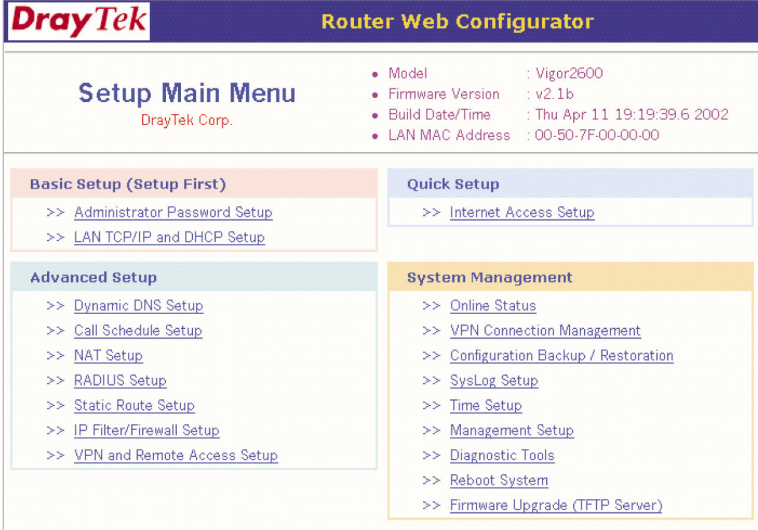
System Preferences >> Network





Are DSL and ISP settings OK?

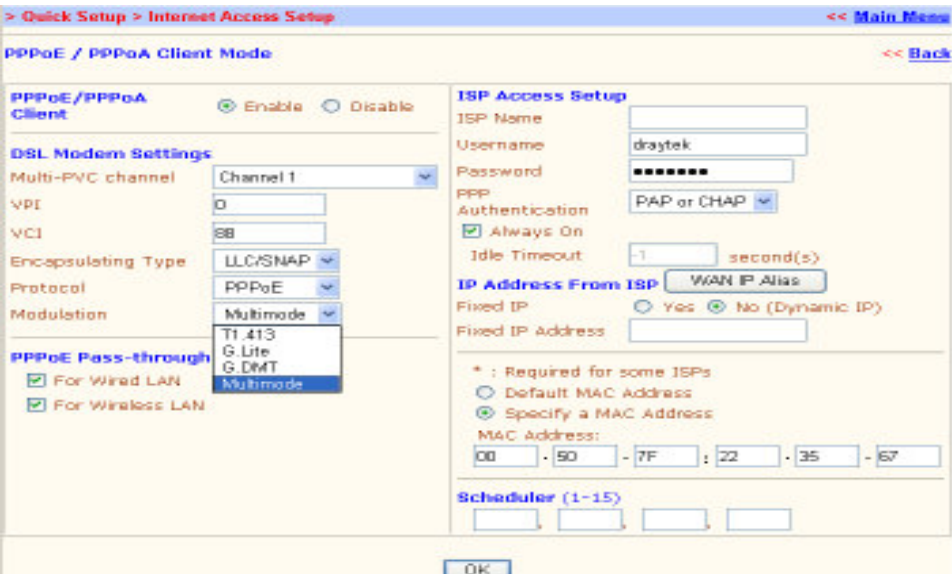
Connect to the router Web Configurator. (Example: Vigor2600)



The image shows the 'Setup Main Menu' of a DrayTek Router Web Configurator. At the top, it displays the router's model (Vigor2600), firmware version (v2.1b), build date/time (Thu Apr 11 19:19:39.6 2002), and LAN MAC address (00-50-7F-00-00-00). The menu is divided into four sections: Basic Setup (Setup First), Quick Setup, Advanced Setup, and System Management. Basic Setup includes Administrator Password Setup and LAN TCP/IP and DHCP Setup. Quick Setup includes Internet Access Setup. Advanced Setup includes Dynamic DNS Setup, Call Schedule Setup, NAT Setup, RADIUS Setup, Static Route Setup, IP Filter/Firewall Setup, and VPN and Remote Access Setup. System Management includes Online Status, VPN Connection Management, Configuration Backup / Restoration, SysLog Setup, Time Setup, Management Setup, Diagnostic Tools, Reboot System, and Firmware Upgrade (TFTP Server).

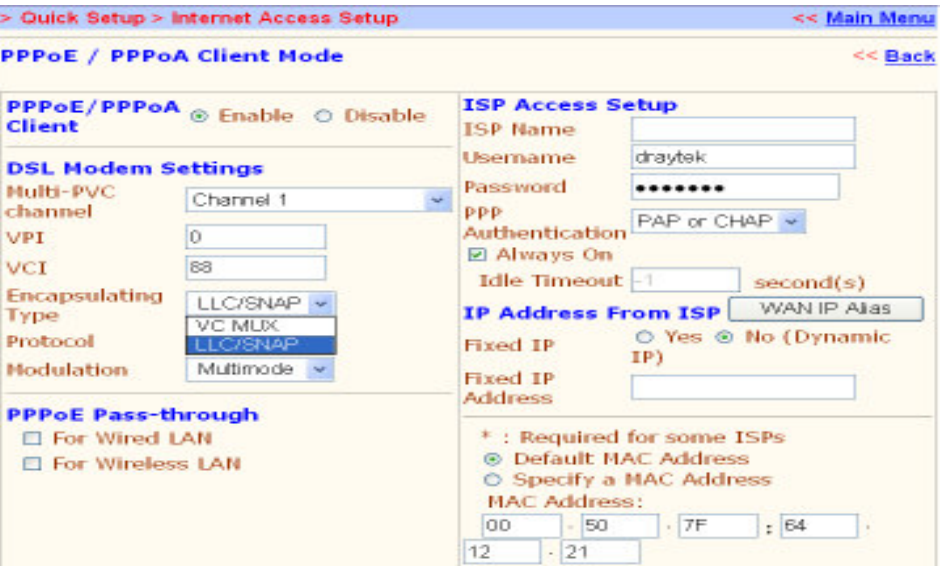
Check if the DSL setting are correct. (For MPoA users, please refer to the MPoA explanation on page 18 )

>> VPI/VCI/Modulation mode: T1.413, G.Lite, G.DMT, Multimode



The image shows the 'Internet Access Setup' screen for PPPoE / PPPoA Client Mode. The 'DSL Modem Settings' section is expanded, showing 'Channel 1' selected for Multi-PVC channel, VPI set to 0, VCI set to 88, Encapsulating Type set to LLC/SNAP, Protocol set to PPPoE, and Modulation set to Multimode. The 'PPPoE Pass-through' section has checkboxes for 'For Wired LAN' and 'For Wireless LAN', both of which are checked. The 'ISP Access Setup' section includes fields for ISP Name (draytek), Username (draytek), Password (\*\*\*\*\*), and Authentication (PAP or CHAP). The 'Always On' checkbox is checked, and the 'Idle Timeout' is set to -1 second(s). The 'IP Address From ISP' section has a 'WAN IP Alias' button and radio buttons for 'Fixed IP' (Yes) and 'No (Dynamic IP)'. The 'Fixed IP Address' field is empty. The 'MAC Address' section has a 'Default MAC Address' radio button selected, and the 'Specify a MAC Address' radio button is unselected. The 'MAC Address' field is set to 00-50-7F-22-35-67. The 'Scheduler (1-15)' section has a table with 15 rows and 4 columns, all of which are empty. The 'OK' button is at the bottom right.

>>Encapsulation mode: VCMUX or LLC/SNAP



The image shows the 'Internet Access Setup' screen for PPPoE / PPPoA Client Mode, similar to the previous one, but with the 'Encapsulation mode' set to VCMUX. The 'DSL Modem Settings' section is expanded, showing 'Channel 1' selected for Multi-PVC channel, VPI set to 0, VCI set to 88, Encapsulating Type set to VCMUX, Protocol set to PPPoE, and Modulation set to Multimode. The 'PPPoE Pass-through' section has checkboxes for 'For Wired LAN' and 'For Wireless LAN', both of which are checked. The 'ISP Access Setup' section includes fields for ISP Name (draytek), Username (draytek), Password (\*\*\*\*\*), and Authentication (PAP or CHAP). The 'Always On' checkbox is checked, and the 'Idle Timeout' is set to -1 second(s). The 'IP Address From ISP' section has a 'WAN IP Alias' button and radio buttons for 'Fixed IP' (Yes) and 'No (Dynamic IP)'. The 'Fixed IP Address' field is empty. The 'MAC Address' section has a 'Default MAC Address' radio button selected, and the 'Specify a MAC Address' radio button is unselected. The 'MAC Address' field is set to 00-50-7F-12-21-64. The 'Scheduler (1-15)' section has a table with 15 rows and 4 columns, all of which are empty. The 'OK' button is at the bottom right.

For PPPoE/PPPoA users, please check that the user name and password are correct, as provided by your ISP.

The screenshot shows the 'Quick Setup > Internet Access Setup' window for 'PPPoE / PPPoA Client Mode'. It includes sections for enabling the client, DSL Modem Settings (Channel 1, VPI 0, VCI 88, LLC/SNAP, PPPoE, Multimode), PPPoE Pass-through options, and ISP Access Setup (ISP Name, Username 'draytek', Password, PAP or CHAP authentication, Always On checked, Idle Timeout -1 second(s), IP Address From ISP set to WAN IP Alias, Fixed IP set to No (Dynamic IP)). A MAC Address field is also present with a default value of 00:50:7F:64:12:21.

For MPoA (RFC1483/2684) mode users, please check that the WAN IP /Gateway / Subnet mask is set correctly, or that your ISP requires using DHCP client to obtain IP address automatically.

The screenshot shows the 'Quick Setup > Internet Access Setup' window for 'MPoA (RFC1483/2684) Mode'. It includes sections for enabling the mode, DSL Modem Settings (Channel 2, VPI 0, VCI 88, 1483 Bridged IP LLC, Multimode), WAN IP Network Settings (Obtain an IP address automatically checked, Router Name, Domain Name, Specify an IP address option, IP Address 0.0.0.0, Subnet Mask 0.0.0.0, Gateway IP Address), and RIP Protocol (Enable RIP unchecked). A MAC Address field is also present with a default value of 00:50:7F:22:36:67.

## Check DSL Status

Check the DSL status via Router Web Configurators Online Status monitor.  
(Example: Vigor2600G)

DrayTek		Router Web Configurator				
> System Management > Online Status					<< <a href="#">Main Menu</a>	
System Status						
						System Uptime: 0:1:45
LAN Status						
	IP Address	TX Packets		RX Packets		
	192.168.1.1	380		295		
WAN Status						
		GW IP Addr	61.224.112.254		>> <a href="#">Drop PPPoE/PPPoA</a>	
Mode	IP Address	TX Packets	TX Rate	RX Packets	RX Rate	Up Time
PPPoE	61.224.112.148	8	38	10	22	0:00:01
ADSL Information (ADSL Firmware Version : 40e2be29)						
ATM Statistics		TX Blocks	RX Blocks	Corrected Blocks	Uncorrected Blocks	
		231288	231081	58581	0	
ADSL Status						
	Mode	State	Up Speed	Down Speed	SNR Margin	Loop Att.
	G.DMT	SHOWTIME	64000	512000	11.0	25.5

ADSL status is shown on the bottom line in green. If this line is similar to the above example, then the DSL layer is operating, and the problem is at a higher level, such as incorrect login details.

## Report to ISP and dealer technical support

If the router settings are correct, and the router still does not connect, please contact your ISP technical support representative to help you for configuration.

If the router does not work correctly, please contact your dealer for help. For any further questions, please e-mail [support@draytek.com.tw](mailto:support@draytek.com.tw).