Dray Tek

Vigor2800 Series
ADSL2/2+ Security Router
Quick Start Guide

Version: 2.2

Date: 2006/2/24

Copyright Information

Copyright Declarations

Trademarks

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- Windows, Windows 95, 98, Me, NT, 2000, XP and Explorer are trademarks of Microsoft Corp.
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Safety Instructions and Approval

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 be 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.
- Do not stack the routers.
- 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.
- Do not deploy the cable for LAN connection outdoor to prevent electronic shock hazards.
- 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 two (2) 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 tore-store 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 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.

Be a Registered Owner

Web registration is preferred. You can register your Vigor router via http://www.draytek.com. 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 corporation, 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

European Community Declarations

Manufacturer: DrayTek Corp.
Address: No. 26, Fu Shing Road, HuKou County, HsinChu Industrial Park, Hsin-Chu, Taiwan 303
Product: Vigor2800 Series Routers

DrayTek Corp. declares that Vigor2800 series of routers are in compliance with the following essential requirements and other relevant provisions of R&TTE Directive 1999/5/EEC.

The product conforms to the requirements of Electro-Magnetic Compatibility (EMC) Directive 89/336/EEC by complying with the requirements set forth in EN55022/Class B and EN55024/Class B.

The product conforms to the requirements of Low Voltage (LVD) Directive 73/23/EEC by complying with the requirements set forth in EN60950.

The *Vigor2800 Series* are designed for the WLAN 2.4GHz network throughput EC region, Switzerland, and the restrictions of France.

Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the use is encouraged to try to correct the interference by one of the following measures:

● Reorient or relocate the receiving antenna.

● Increase the separation between the equipment and receiver.

● Connect the equipment into an outlet on a circuit different form that to which the receiver is connected.

● Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device may accept any interference received, including interference that may cause undesired operation.

Taiwanese BSMI (Bureau of Standards, Metrology and Inspection) A Warning:

Warning: This device might cause interference of radio frequency under the environment of dwelling. In such condition, the users might be asked to adopt some proper strategies.

Please visit www.draytek.com/contact_us/WEEE.php.

Table of Contents

1. Introduction

Targeting requirement for residential, SOHO (Small Office and Home Office) and business users, the Vigor2800 series is ADSL2/2+ enabled integrated access devices. With downstream speed up to 12Mbps (ADSL2) or 24Mbps (ADSL2+), the Vigor2800 series provide exceptional bandwidth for Internet access.

To secure your network, the Vigor2800 series provides an advanced firewall with advanced features, such as NAT with multi VPN pass-through, Stateful Packet Inspection (SPI) to offer network reliability by detecting and prohibiting malicious penetrating packets, user-configurable web filtering for parental control against network abuse etc.
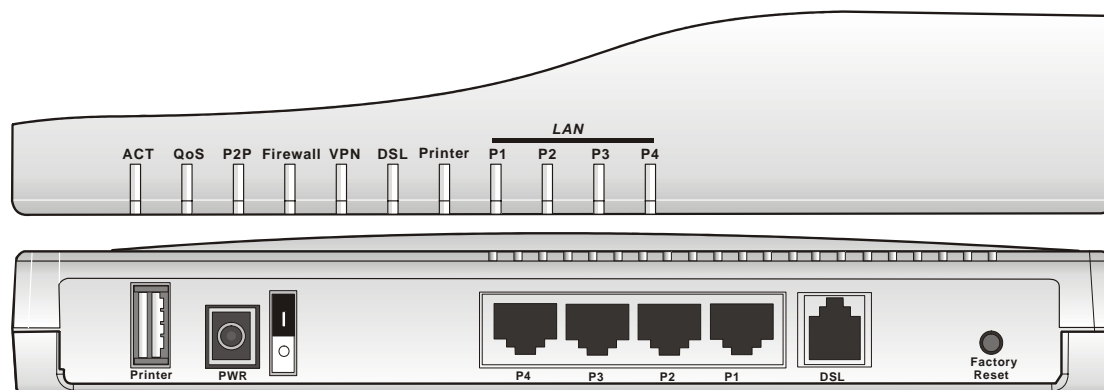
Vigor2800 G series is embedded with an 802.11g compliant wireless module which provides wireless LAN access with data rate as much as 108Mbps, SuperG. As for data privacy of wireless network, the Vigor2800 series can encode all transmissions data with standard WEP and industrial strength WPA2 (IEEE 802.11i) encryption. Additional features include Wireless Client List and MAC Address Control for maintaining control over user's authorization in your network, and Hidden SSID for being invisible to outside intruders scanning.

Characteristics

➢ Easy Internet-sharing of your broadband connection

➢ Robust firewall to help protect your network from external attacks

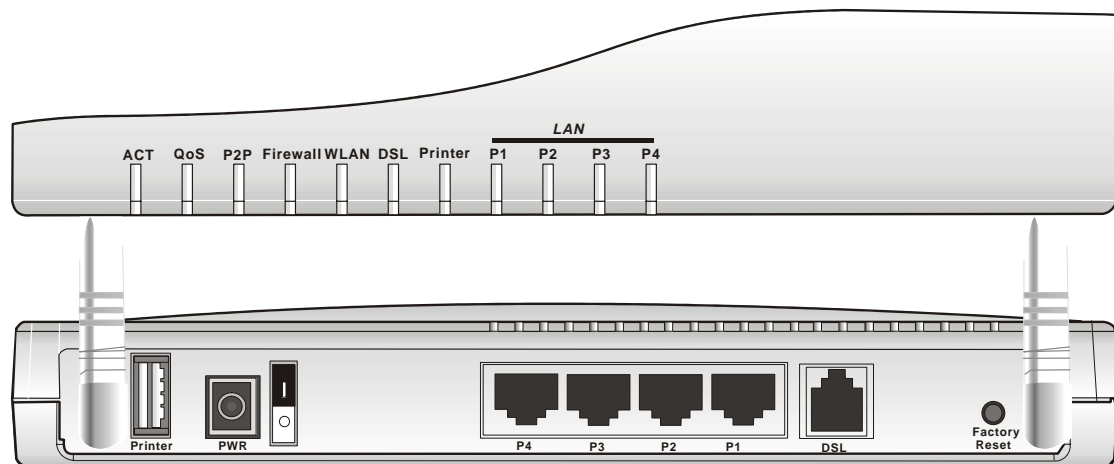# 1.1 LED Indicators and Connectors

1.1.1 For Vigor2800

LED Explanation

LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
QoS	On	The QoS function is active.
	Off	The QoS function is inactive.
P2P	On	The P2P function is active.
	Blinking	Starts to prohibit P2P data.
VPN	On	The VPN tunnel is launched.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

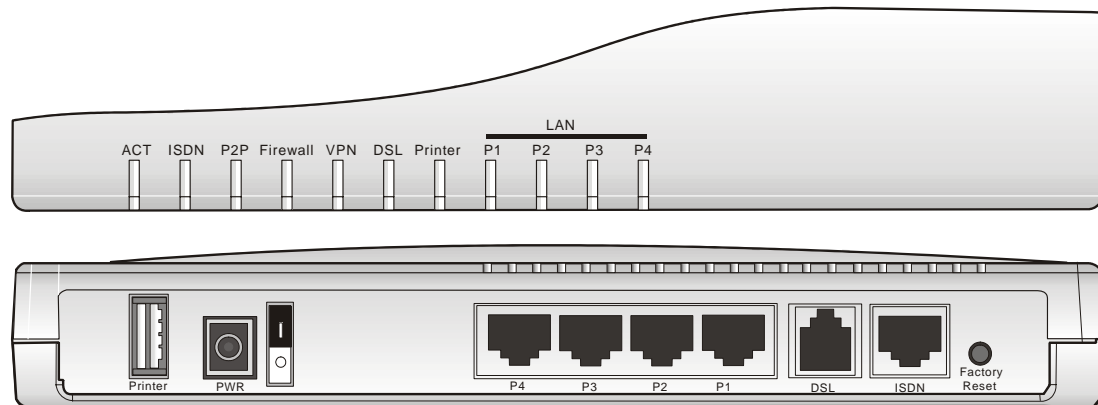| Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with 12-15VDC.
ON/OFF	Power Switch.
LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.1.2 For Vigor2800G

LED Explanation

LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
QoS	On	The QoS function is active.
	Off	The QoS function is inactive.
P2P	On	The P2P function is active.
	Blinking	Starts to prohibit P2P data.
Firewall	On	The DoS function is enabled.
	Blinking	When encountered DoS attacks.
WLAN	On	Wireless access point is ready.
	Blinking	Wireless traffic goes through.
	Off	Wireless access point is turned off.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

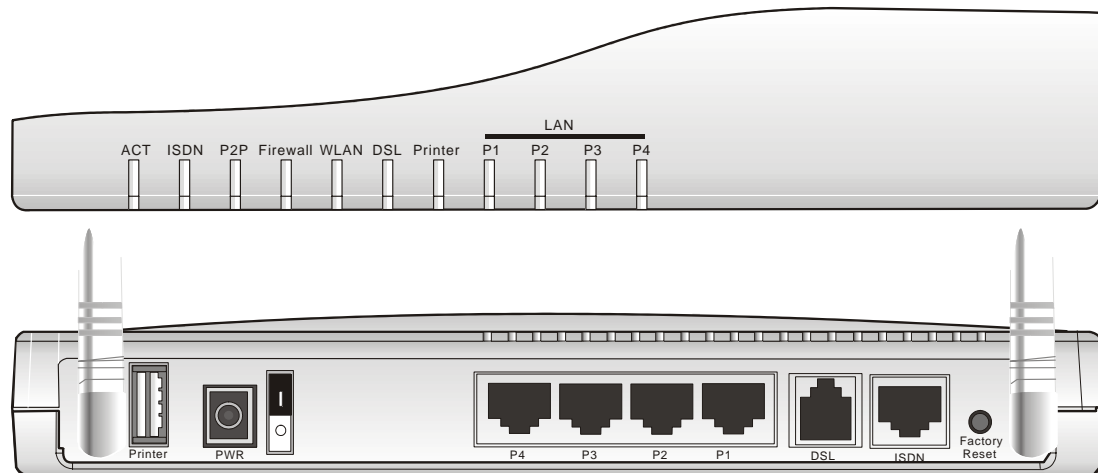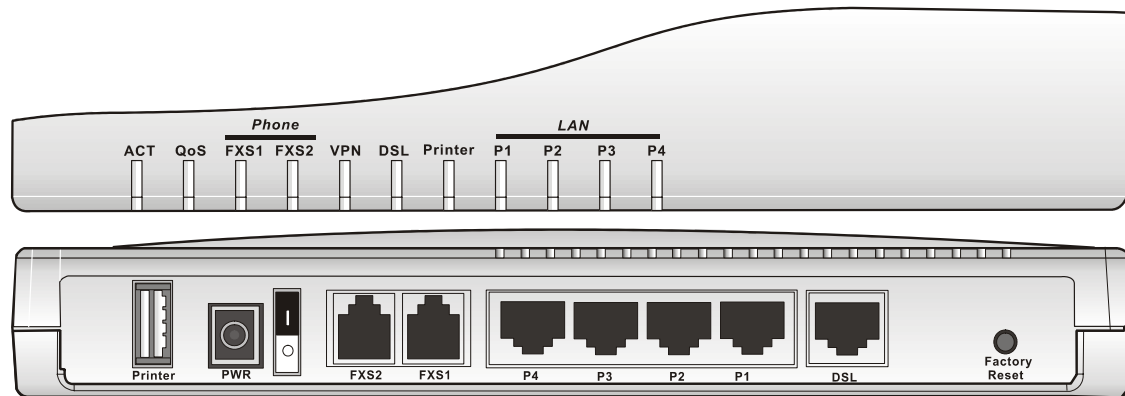| Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with 12-15VDC.
ON/OFF	Power Switch.
LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.1.3 For Vigor2800i

LAN

ACT ISDN P2P Firewall VPN DSL Printer P1 P2 P3 P4

Printer PWR P4 P3 P2 P1 DSL ISDN Factory Reset

LED Explanation

LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
ISDN	On	The ISDN network is correctly setup.
	Blinking	A successful connection on the ISDN BRI B1/B2 channel.
P2P	On	The P2P function is active.
	Blinking	Starts to prohibit P2P data.
VPN	On	The VPN tunnel is launched.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

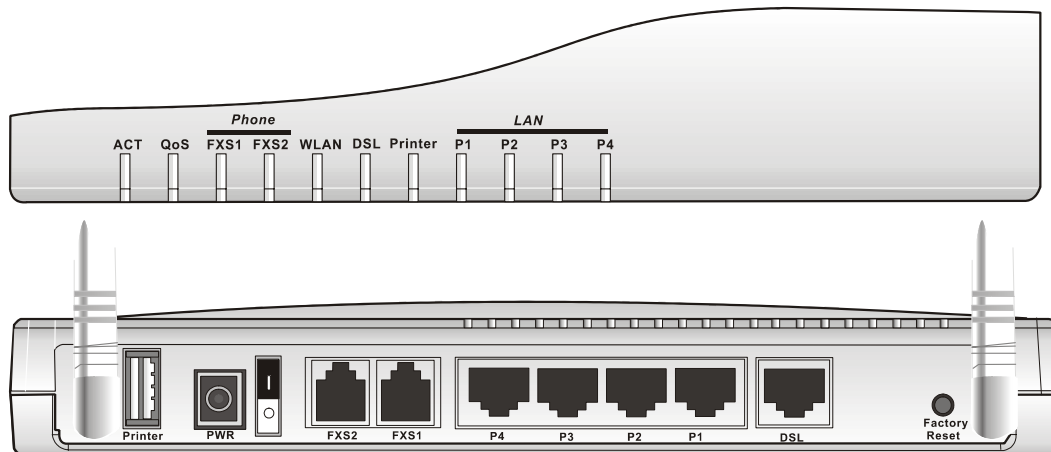| Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with 12-15VDC.
ON/OFF	Power Switch.
LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
ISDN	Connecter for NT1 (or NT1+) box provided by ISDN service provider.
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.1.4 For Vigor2800Gi

LED Explanation

LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
ISDN	On	The ISDN network is correctly setup.
	Blinking	A successful connection on the ISDN BRI B1/B2 channel.
P2P	On	The P2P function is active.
	Blinking	Starts to prohibit P2P data.
Firewall	On	The DoS function is enabled.
	Blinking	When encountered DoS attacks.
WLAN	On	Wireless access point is ready.
	Blinking	Wireless traffic goes through.
	Off	Wireless access point is turned off.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

| Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with 12-15VDC.
ON/OFF	Power Switch.
LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
ISDN	Connecter for NT1 (or NT1+) box provided by ISDN service provider.
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.1.5 For Vigor2800V

LED Explanation

LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
QoS	On	The QoS function is active.
	Off	The QoS function is inactive.
FXS1/FXS2	On	The phone is off hook (the handset of phone is hanging).
	Blinking	A phone call is incoming.
VPN	On	The VPN tunnel is launched.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

| Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with 12-15VDC.
ON/OFF	Power Switch.
FXS2 & FXS1	Connecters for telephone set and analog phone with VoIP communication.
LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.1.6 For Vigor2800VG

LED Explanation

| LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
QoS	On	The QoS function is active.
	Off	The QoS function is inactive.
FXS1/FXS2	On	The phone is off hook (the handset of phone is hanging).
	Blinking	A phone call is incoming.
WLAN	On	Wireless access point is ready.
	Blinking	Wireless traffic goes through.
	Off	Wireless access point is turned off.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

| Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with12-15VDC.
ON/OFF	Power Switch.
FXS2 & FXS1	Connecters for telephone set and the analog phone with VoIP communication.
LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.1.7 For Vigor2800VGi
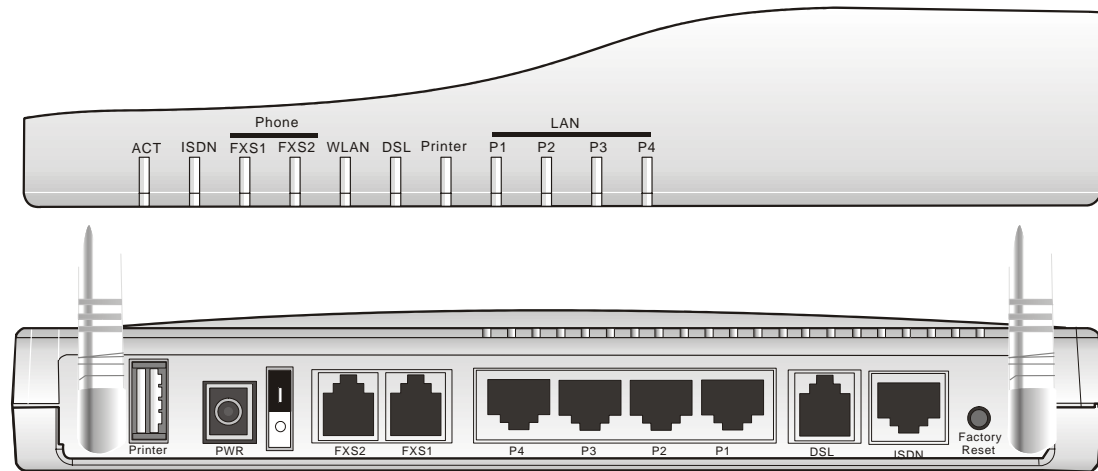
LED Explanation

LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
	On	The router is powered on.
ISDN	On	The ISDN network is correctly setup.
	Blinking	A successful connection on the ISDN BRI B1/B2 channel.
FXS1/FXS2	On	The phone is off hook (the handset of phone is hanging).
	Blinking	A phone call is incoming.
WLAN	On	Wireless access point is ready.
	Blinking	Wireless traffic goes through.
	Off	Wireless access point is turned off.
DSL	On	The ADSL, ADSL2/2+ line is connected.
Printer	On	The USB interface printer is ready.
LAN (P1, P2, P3, P4)	Orange	A normal 10Mbps connection is through its corresponding port.
	Green	A normal 100Mbps connection is through its corresponding port.
	Blinking	Ethernet packets are transmitting.

Connector Explanation

Interface	Description
Printer	Connecter for a USB printer.
PWR	Connecter for a power adapter with12-15VDC.
ON/OFF	Power Switch.
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LAN P4 – P1	Connecters for local networked devices.
DSL	Connecter for accessing Internet with the ADSL,ADSL2/2+ line
ISDN	Connecter for NT1 (or NT1+) box provided by ISDN service provider.
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press the hole and keep for more than 5 seconds. When you see the ACT LED begins to blink rapidly than usual, release the button. Then the router will restart with the factory default configuration.

1.2 Package Content

❶ **Quick Start Guide**

❷ **CD**
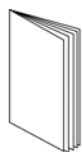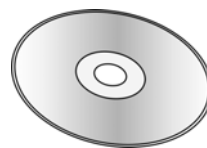
❸ **Antenna for *G* models**
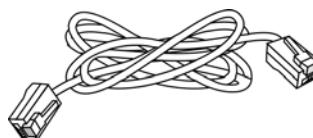
❹ **RJ-45 Cable (Ethernet)**

❺ **RJ-45 to RJ-45 Cable for *i* models**

❻ The type of the cable depends on the country that the router will be installed:

Or

RJ-11 to RJ-45 Cable

RJ-11 to RJ-11 Cable

❼ The type of the power adapter depends on the country that the router will be installed:
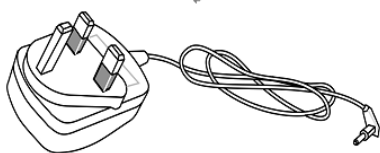
UK-type power adapter
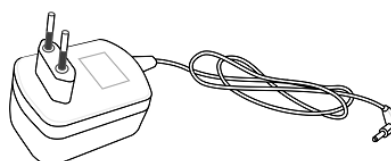
EU-type power adapter
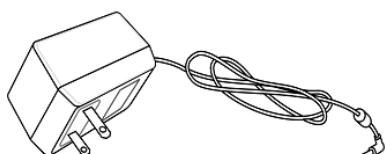
USA/Taiwan-type power adapter
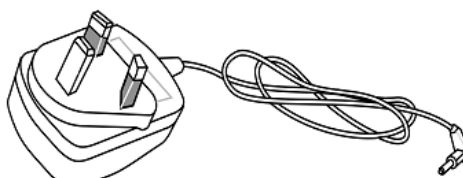
AU/NZ-type power adapter

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2. Installing Your Vigor Router

This section will guide you to install the router through hardware connection and configure the router's settings through web browser.

2.1 Hardware Installation

Before starting to configure the router, you have to connect your devices correctly.

1. Connect the DSL interface to the external ADSL splitter with an ADSL line cable.

2. Connect one port of 4-port switch to your computer with a RJ-45 cable. This device allows you to connect 4 PCs directly.

3. Connect one end of the power cord to the power port of this device. Connect the other end to the wall outlet of electricity.

4. Connect the telephone sets with phone lines (for using VoIP function). For the user of the model without VoIP ports, skip this step.

5. Connect the ISDN NT1/1+ box with ISDN cable. This connection is available for Europe only.

6. Power on the router.

7. Check the **ACT** LED to assure network connections.

(For the detailed information of LED status, please refer to section 1.1.)
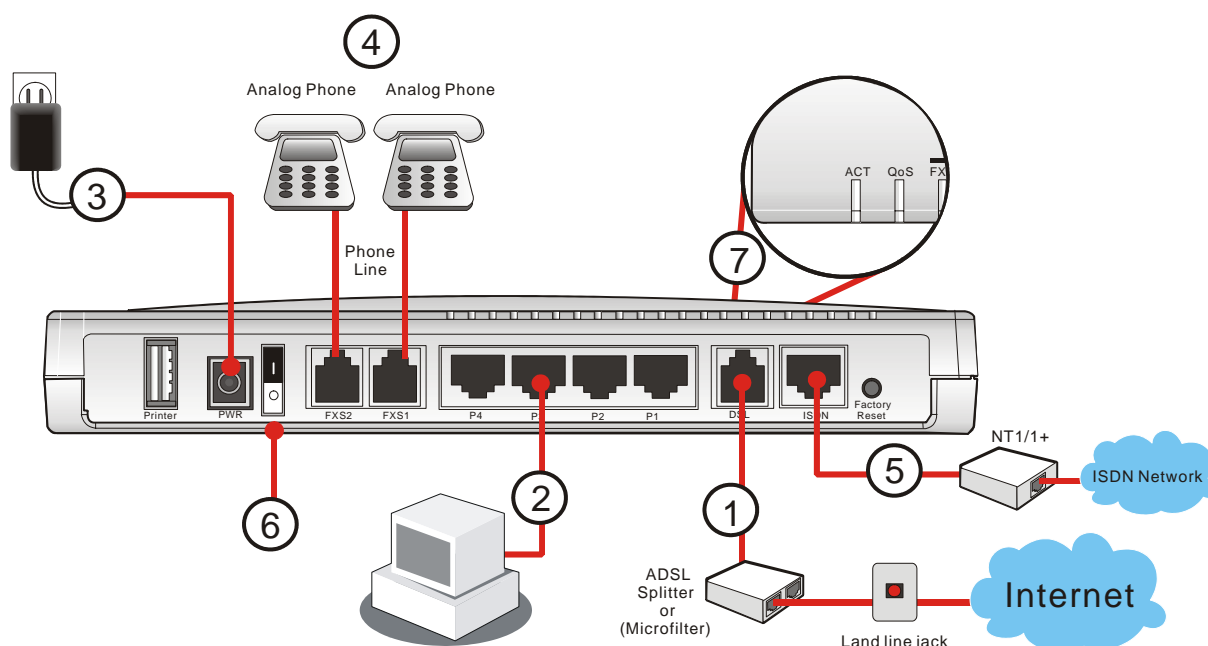
Caution: Each of the FXS ports can be connected to an analog phone only. Do not connect the FXS ports to the telephone wall jack. This connection might damage your router.

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3. Configuring Web Pages

3.1 Basic Configuration

The **Quick Start Wizard** is designed for you to easily set up your router for Internet access. You can directly access the **Quick Start Wizard** via Web Configurator.

1. Make sure your PC connects to the router correctly.

   Notice: You may either simply set up your computer to get IP dynamically from the router or set up the IP address of the computer to be the same subnet as **the default IP address of Vigor router 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of the guide.

2. Open a web browser on your PC and type **http://192.168.1.1.** A pop-up window will open to ask for username and password. Do not type any word on the window and click **OK** for next screen.
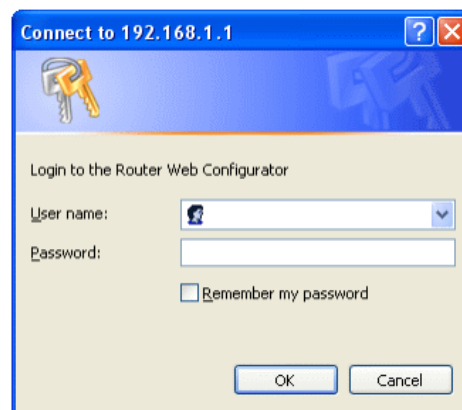
   Notice: If you fail to access to the web configuration, please go to "Trouble Shooting" for detecting and solving your problem.

3. Now, the **Main Screen** will pop up. Click **Quick Start Wizard**.
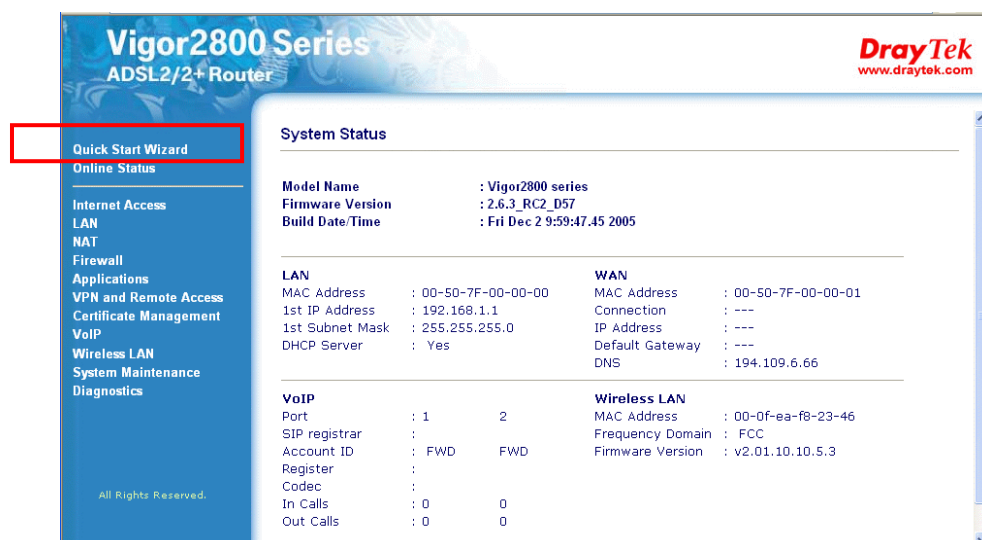
4. Enter the login password on the field of **New Password** and retype it on the field of **Retype New Password**. Then click **Next** to continue.

5. On the next page as shown below, please select the appropriate Internet access type according to the information from your ISP or click **Auto detect** button to detect the related DSL parameters automatically. Then click **Next** for next step.

PPPoE or **PPPoA:** if you click PPPoE or PPPoA as the protocol, please manually enter the Username/Password provided by your ISP. Check **Always On** means Internet access is always on regardless of Internet usage. Then click **Next**. Besides, the protocol set here can be reviewed in the section of **DSL Modem Settings – Encapsulation** on the web page of **Internet Access – PPPoE/PPPoA**.

1483 Bridged: if you click 1483 Bridged, you will get the following page. Please type in all the information originally provided by your ISP. Then click **Next** for next step. Besides, the protocol set here can be reviewed in the section of **DSL Modem Settings – Encapsulation** on the web page of **Internet Access – MPoA (1483/2684)**.

1483 Routed IP: if you click 1483 Routed IP, you will get the following page. Please type in all the information originally provided by your ISP. Then click **Next** for next step. Besides, the protocol set here can be reviewed in the section of **DSL Modem Settings – Encapsulation** on the web page of **Internet Access – MPoA (1483/2684)**.

6. Now you can see the following screen. It indicates that the setup is complete. Different types of connection modes will have different summary. Click **Finish** and then restart the router. Afterward, you will enjoy surfing on the Internet.

3.2 Wireless LAN Settings

> For the user of Vigor2800/2800V, please skip this section.

For operating Vigor2800G/VG Series well, it is necessary for you to set the wireless LAN settings for using wireless function. Please read the following section carefully for configuring the settings for this router.

(The default value of Frequency Domain was set by factory depends on the reselling region.)

3.2.1 Basic Wireless LAN Concept

In an Infrastructure Mode of wireless network, Vigor wireless router plays a role as an **Access Point (AP)** connecting to lots of wireless clients or Stations (STA). All the STAs will share the same Internet connection with other wired hosts via Vigor wireless router.
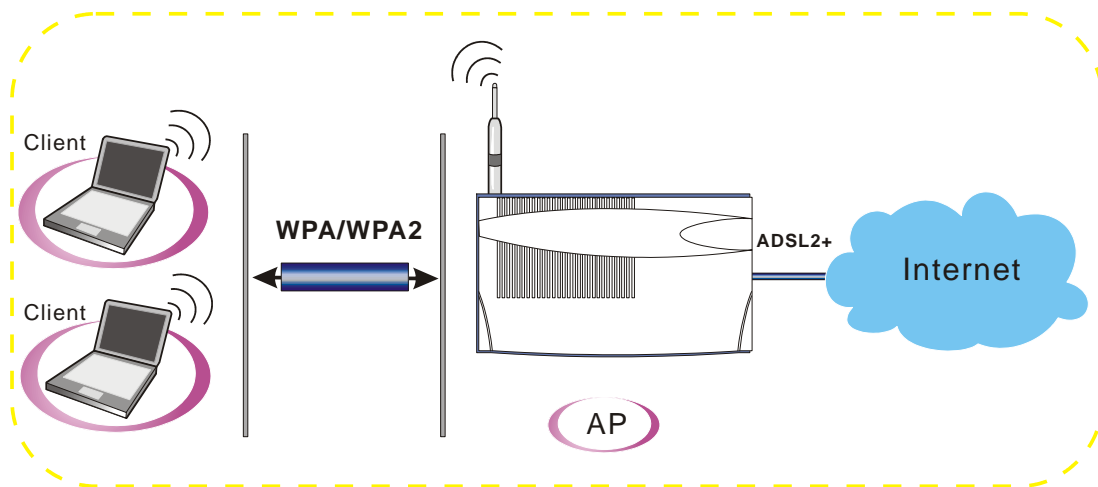
3.2.2 General Settings

1. On the **Wireless LAN** group, select **General Settings**. The following page will be shown.

2. Check the box **Enable Wireless LAN** to enable the wireless function.

3. Select an appropriate wireless mode.

Mixed (11b+11g+SuperG)	The router can connect to IEEE802.11b (2.4MHz), IEEE802.11g (5MHz) and SuperG stations simultaneously. This is default settings. Choose this mode if you have no idea to change the mode.
Mixed (11b+11g)	The router can connect to IEEE802.11b and IEEE802.11g stations simultaneously. This is default settings. Choose this mode if you have no idea to change the mode.
SuperG only	The router can connect to SuperG stations only.
11g-only	The router can connect to IEE802.11g stations only.
11b-only	The router can connect to IEE802.11b stations only.

4. Type in the name of the **SSID** and **Channel**. The default name for SSID is **default**. We suggest you change it to a particular name for your necessity.

SSID (service set identifier)	It is used to name the wireless LAN for this router, and it must have the same content in client PC/notebook wireless card(s). SSID can be any text numbers or various special characters.
Channel	It is a wireless channel for the router. The default channel is 6. You can change it to an appropriate one if the selected channel is under serious interference. Or you can select Auto to allow the system sensing available channel automatically.

3.2.3 Security Settings

1. On the **Wireless LAN** group, select **Security Settings.**

Wireless LAN >> Security Settings

Security Settings

| Mode : | WEP Only |

Set up **RADIUS Server** if 802.1x is enabled.

WPA:

Type: ⦿ Mixed(WPA+WPA2)   ○ WPA2 Only

Pre-Shared Key(PSK)   [*************]

Type 8~63 ASCII character or 64 Hexadecimal digits leading by "0x", for example "cfgs01a2..." or "0x655abcd....".

WEP:

Encryption Mode: 64-Bit

Use	WEP Key
⦿ Key 1 :	[*************]
○ Key 2 :	[*************]
○ Key 3 :	[*************]
○ Key 4 :	[*************]

For 64 bit WEP key
Type 5 ASCII character or 10 Hexadecimal digits leading by "0x", for example "AB312" or "0x4142333132".

For 128 bit WEP key
Type 13 ASCII character or 26 Hexadecimal digits leading by "0x", for example "0123456789abc" or "0x30313233343536373839414243".

[OK]   [Cancel]

2. Select an appropriate encryption mode to improve the security and privacy of your wireless data packets.

Mode :   WEP Only

Disable
WEP Only
WEP/802.1x Only
WEP or WPA/PSK
WEP/802.1x or WPA/802.1x
WPA/PSK Only
WPA/802.1x Only

Disable	Turn off the encryption mechanism. For the security of your router, please select any one of the encryption mode here.
WEP Only	Accepts only WEP clients and the encryption key should be entered in WEP Key.
WEP/802.1x Only	Accept WEP clients with 802.1x authentication. Since the key will be auto-negotiated during authentication, the field of key setting below will be not available for input.
WEP or WPA/PSK	Accepts WEP and WPA clients with legal key accordingly. Remember to select WPA type to define either Mixed or WPA2 only in the field below.

WEP/802.1x or WPA/802.1x	Accept WEP or WPA clients with 802.1x authentication. Remember to select WPA type to define either Mixed or WPA2 only in the field below. Since the key will be auto-negotiated during authentication, the field of key setting below will be not available for input.
WPA/PSK Only	Accepts WPA clients and the encryption key should be entered in PSK. Remember to select WPA type to define either Mixed or WPA2 only in the field below.
WPA/802.1x Only	Accept WPA clients with 802.1x authentication. Remember to select WPA type to define either Mixed or WPA2 only in the field below. Since the key will be auto-negotiated during authentication, the field of key setting below will be not available for input.

3. For **WPA** encryption, type in 8~63 ASCII characters or 64 Hexadecimal digits leading by 0x, for example "0123456789ABCD...." or "0x321253abcde....." on the field of **Pre-Shared Key (PSK)**. WPA encrypts each frame transmitted from the radio using the Pre-Shared Key (PSK) which entered from this panel.

4. As to **WEP** encryption, select 64-bit or 128-bit as the encryption mode. For 64bits WEP key, type in 5 ASCII characters or 10 hexadecimal digitals leading by 0x, for example, ABCDE or 0x4142434445. And for 128bits WEP key, type in 13 ASCII characters or 26 hexadecimal digits leading by 0x, for example, ABCDEFGHIJKLM or 0x4142434445464748494A4B4C4D. Only one WEP key can be selected and allows user to type in the characters.

5. Click **OK** to save settings.

Be aware that for the communication, all wireless devices must support the same encryption bit length and share the same key. If WEP mode is selected, only one of four preset keys can be selected at one time.

4. Trouble Shooting

This section will guide you to solve abnormal situations if you cannot access into the Internet after installing the router and finishing the web configuration. Please follow sections below to check your basic installation status stage by stage.
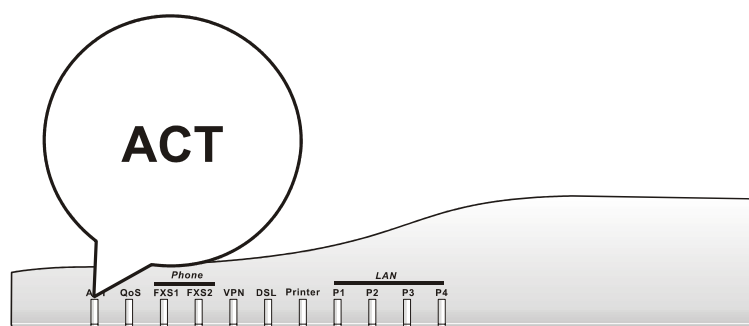
➢ Checking if the hardware status is OK or not.

➢ Checking if the network connection settings on your computer are OK or not.

➢ Pinging the router from your computer.

➢ Checking if the ISP settings are OK or not.

➢ Backing to factory default setting if necessary.

If all above stages are done and the router still cannot run normally, it is the time for you to contact your dealer for advanced help.

4.1 Checking If the Hardware Status Is OK or Not

Follow the steps below to verify the hardware status.

1. Check the power line and WLAN/LAN cable connections.
   Refer to "**2.1 Hardware Installation"** for details.

2. Turn on the router. Make sure the **ACT LED** blink once per second and the correspondent **LAN LED** is bright.

3. If not, it means that there is something wrong with the hardware status. Simply back to **"2.1 Hardware Installation"** to execute the hardware installation again. And then, try again.

4.2 Checking If the Network Connection Settings on Your Computer Is OK or Not

Sometimes the link failure occurs due to the wrong network connection settings. After trying the above section, if the link is stilled failed, please do the steps listed below to make sure the network connection settings is OK.

For Windows

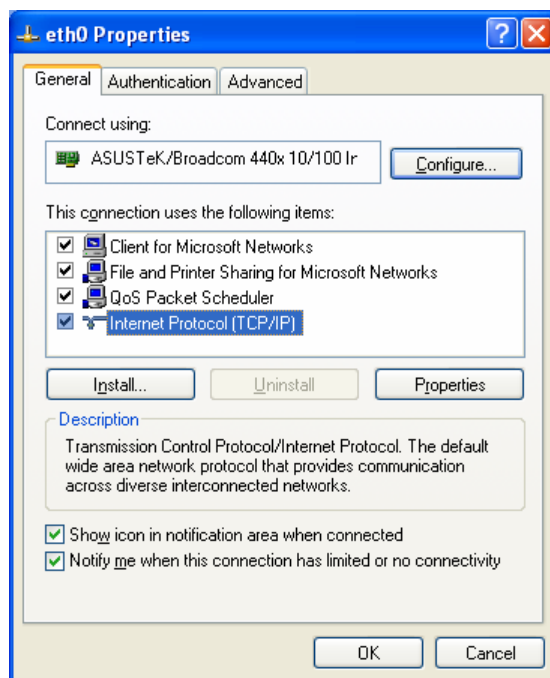1. Go to **Control Panel** and then double-click on **Network Connections.**
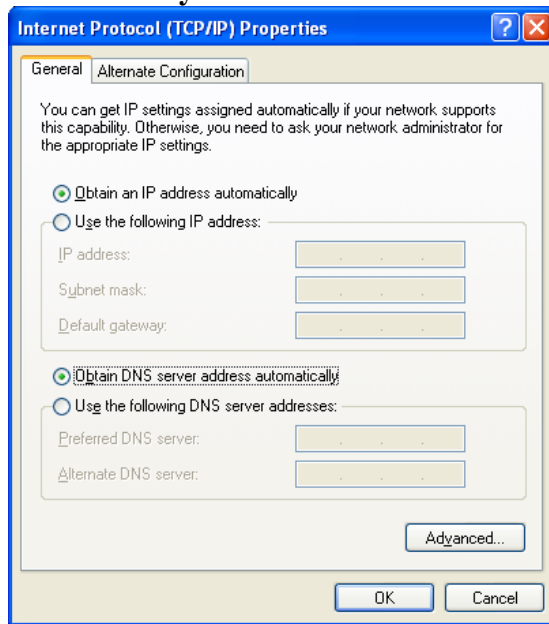
2. Right-click on **Local Area Connection** and click on **Properties**.
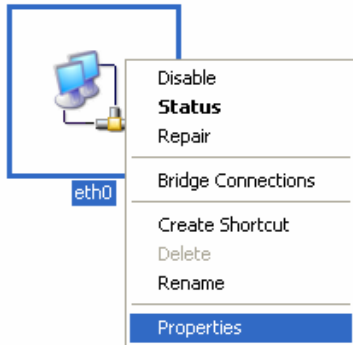
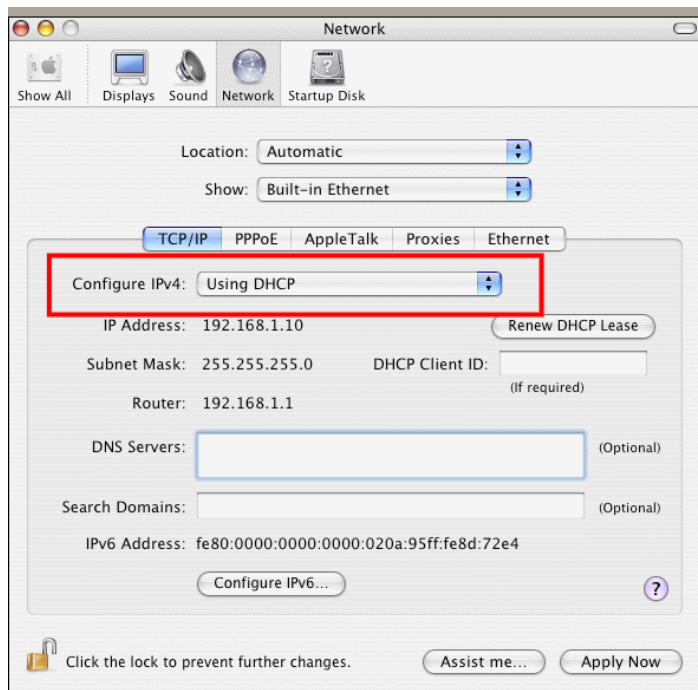3. Select **Internet Protocol (TCP/IP)** and then click **Properties**.

4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

For MacOs

1. Double click on the current used MacOs on the desktop.

2. Open the **Application** folder and get into **Network**.

3. On the **Network** screen, select **Using DHCP** from the drop down list of Configure IPv4.
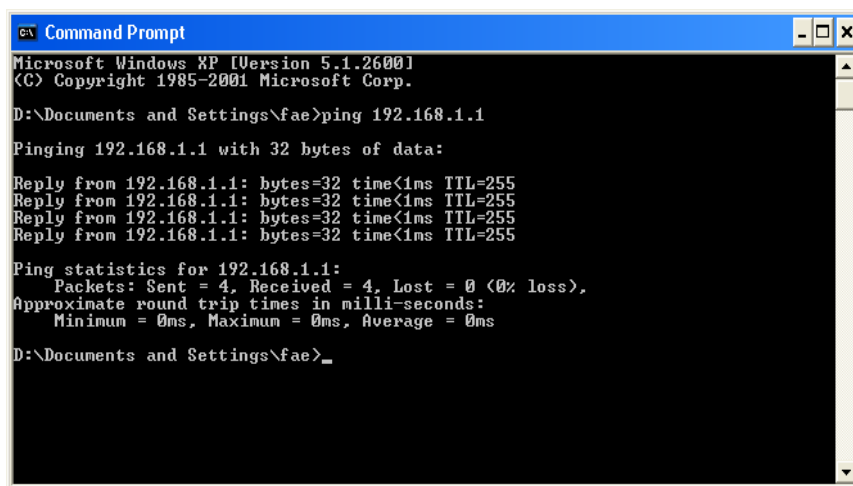
4.3 Pinging the Router from Your Computer

The default gateway IP address of the router is 192.168.1.1. For some reason, you might need to use "ping" command to check the link status of the router. **The most important thing is that the computer will receive a reply from 192.168.1.1.** If not, please check the IP address of your computer. We suggest you setting the network connection as **get IP automatically**. (Please refer to the section 4.2)

Please follow the steps below to ping the router correctly.

For Windows

1. Open the **Command** Prompt window (from **Start menu> Run**).
2. Type **command** (for Windows 95/98/ME) or **cmd** (for Windows NT/ 2000/XP). The DOS command dialog will appear.

3. Type **ping 192.168.1.1** and press [Enter]. It the link is OK, the line of "**Reply from 192.168.1.1:bytes=32 time<1ms TTL=255**" will appear.

4. If the line does not appear, please check the IP address setting of your computer.

For MacOs (Terminal)

1. Double click on the current used MacOs on the desktop.

2. Open the **Application** folder and get into **Utilities**.

3. Double click **Terminal**. The Terminal window will appear.

4. Type **ping 192.168.1.1** and press [Enter]. It the link is OK, the line of **"64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=xxxx ms**" will appear.

```
○ ○ ○                  Terminal — bash — 80x24
Last login: Sat Jan  3 02:24:18 on ttyp1
Welcome to Darwin!
Vigor10:~ 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=0.755 ms
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=0.697 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=0.716 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=0.731 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=255 time=0.72 ms
^C
--- 192.168.1.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.697/0.723/0.755 ms
Vigor10:~ draytek$
```

4.4 Checking If the ISP Settings are OK or Not

Click **Internet Access** group and then check whether the ISP settings are set correctly.
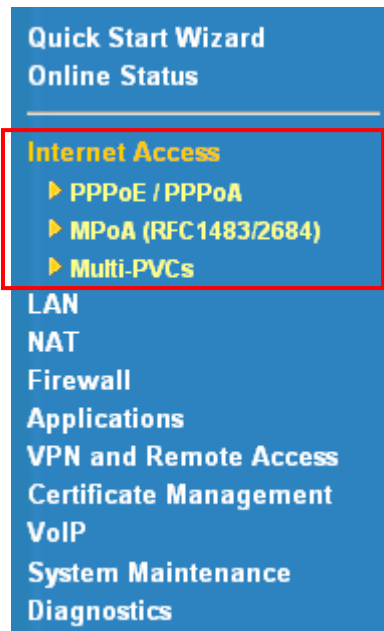
For PPPoE/PPPoA Users

1. Check if the **Enable** option is selected.

2. Check if **Username** and **Password** are entered with correct values that you **got from your ISP**.

For MPoA Users

1. Check if the **Enable** option for Broadband Access is selected.

2. Check if all parameters of **DSL Modem Settings** are entered with correct value that provided by your ISP. Especially, check if the encapsulation is selected properly or not (it should be the same with the setting on **Quick Start Wizard**).

3. Check if **IP Address, Subnet Mask** and **Gateway** are set correctly (must identify with the values from your ISP) if you choose **Specify an IP address**.

4.5 Backing to Factory Default Setting If Necessary

Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the router by software or hardware.

> **Warning:** After pressing **factory default setting**, you will loose all settings you did before. Make sure you have recorded all useful settings before you pressing. The password of factory default is null.

Software Reset

You can reset the router to factory default via Web page.

Go to **System Maintenance** and choose **Reboot System** on the web page. The following screen will appear. Choose **Using factory default configuration** and click **OK**. After few seconds, the router will return all the settings to the factory settings.

System Maintenance >> Reboot System

Reboot System

Do You want to reboot your router ?

◉ Using current configuration
○ Using factory default configuration

[OK]

Hardware Reset

While the router is running (ACT LED blinking), press the **Factory Reset** button and hold for more than 5 seconds. When you see the **ACT** LED blinks rapidly, please release the button. Then, the router will restart with the default configuration.
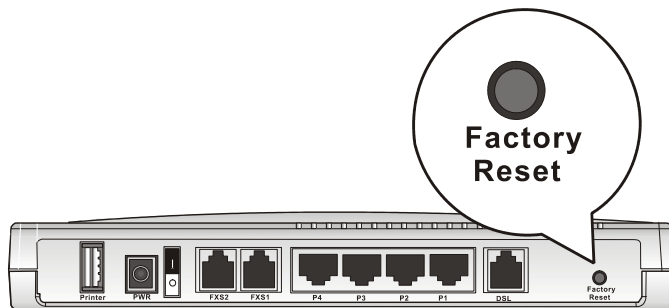
After restore the factory default setting, you can configure the settings for the router again to fit your personal request.

4.6 Contacting Your Dealer

If the router still cannot work correctly after trying many efforts, please contact your dealer for further help right away. For any questions, please feel free to send e-mail to support@draytek.com.