



Vigor2800 Series ADSL2/2+ Router Quick Start Guide



Vigor2800 Series Quick Start Guide

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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 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.
- 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.
- 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 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 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>

European Community Declarations

Manufacturer: DrayTek Corp.

Address: No. 26, Fu Shing Road, HuKou County, HsinChu Industrial Park,
Hsin-Chu, Taiwan 303

Product: Vigor2800 Series ADSL2/2+ 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 Vigor2800G/Gi 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 from 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 must accept any interference received, including interference that may cause undesired operation.

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1. Introduction



Highlights

- Easy Internet-sharing of your broadband connection
- Robust firewall to help protect your network from external attacks

For G models:

- Wireless LAN with data rate up to 108Mbps using Super G[®] technology
- Secure connection with advanced WPA2 encryption and authentication

Model comparison chart:

	ADSL2/2+ Router	High Speed Wireless AP	ISDN
Vigor2800Gi	*	*	*
Vigor2800G	*	*	-
Vigor2800i	*	-	*
Vigor2800	*	-	-

1.1 Brief Overview

Targeting requirement for residential, SOHO (Small Office and Home Office) and business users, the Vigor2800 series are ADSL2/2+ enabled integrated access device. With downstream speed up to 12Mbps (ADSL2) or 24Mbps (ADSL2+), the Vigor2800 series provide exceptional bandwidth* for Internet access. (*note: the available bandwidth also depends on the Internet Service Provider)

Embedded with sophistic VPN firewall security features, the Vigor2800 series provide 32 dedicated virtual private data networks tunneling through public Internet. Powered by hardware-based DES/3DES engine, all the information transmitted is well encrypted. Hence Vigor2800 series can against any snooping without performance degraded when VPN is enabled.

The Vigor2800 G models are embedded 802.11g compliant wireless module which provides wireless LAN access with line rate as much as 54Mbps. The Vigor2800 G models feature WPA2 (802.11i), wireless LAN isolation, WDS (Wireless Distribution System), and Universal VLAN™. The Vigor2800 i models provide ISDN backup, which keep your internet access alive even when ADSL internet access fails.

1.2 Specifications

For Vigor2800 G models

Wireless Access Point

- ◆ IEEE802.11b/g compliant
 - 64/128-bit WEP
 - WPA/WPA2(IEEE802.11i)
 - 802.1x authentication with RADIUS client
- ◆ VPN over WLAN
- ◆ Wireless client list
- ◆ Hidden SSID
- ◆ MAC address access control
- ◆ Access point discovery
- ◆ Wireless VLAN*
- ◆ Wireless LAN isolation
- ◆ Wireless client isolation
- ◆ Wireless rate-control*
- ◆ WDS (Wireless Distribution System)

- ◆ Super G™
 - Up to 108 Mbps data rate **
 - Utilizing adaptive radio to automatically identify clear channels
 - Real-time hardware data compression
 - Fast Frames™ and standards-compliant bursting

* *Actual data throughput will vary according to the network conditions and environmental factors, including volume of network traffic, network overhead and building materials.

For Vigor2800 i models

ISDN

- ◆ Euro ISDN compatible
- ◆ Automatic ISDN backup
- ◆ Support 64/128Kbps(multilink-PPP)/BOD (Bandwidth on Demand)
- ◆ Remote Dial-In/LAN-to-LAN connection
- ◆ Remote activation
- ◆ Virtual TA

All models

ADSL Compliant

- ◆ ADSL
 - G.dmt (G.992.1)
 - G.lite (G.992.2)
 - ANSI T1.413 issue2
- ◆ ADSL2
 - G.dmt.bis(G.992.3)
 - G.lite.bis(G.992.4)
- ◆ ADSL2+(G.992.5)
- ◆ Up to 24Mbps downstream and 1Mbps upstream

ATM Protocols

- ◆ Multiple Protocol over AAL5 (RFC 2684)
- ◆ PPP over Ethernet and AAL5 (RFC 2516,2364)
- ◆ Up to 8 PVC
- ◆ PPPoE pass through LAN/WLAN
- ◆ Transparent bridge for MPoA

VPN

- ◆ Up to 32 VPN tunnels
- ◆ Supported protocol: PPTP, IPSec, L2TP, L2TP over IPSec
- ◆ DHCP over IPSec(*)
- ◆ Encryption: AES, MPPE and hardware-based DES/3DES
- ◆ Authentication: MD5, SHA-1
- ◆ IKE authentication: pre-shared key and digital signature(X.509)*
- ◆ LAN-to-LAN, Teleworker-to-LAN

Firewall Facilities

- ◆ IM/P2P blocking
- ◆ Multi-NAT, DMZ host, port-redirect/open port
- ◆ Rule-based packet filtering
- ◆ Stateful packet inspection
- ◆ DoS/DDoS protection
- ◆ IP address anti-spoofing
- ◆ E-mail alert and logging via syslog
- ◆ VPN pass through

QoS

- ◆ Class-based bandwidth guarantee by user-defined traffic categories
- ◆ Support 4 priority levels
- ◆ Support of DiffServ Code Point classifying

Printer Server

- ◆ One USB port connector
- ◆ Built-in LPR printer server
- ◆ Provide LPR printer for Windows 98/SE/ME
- ◆ Compatible with Windows 2000/XP/Server 2003/MAC OS 9/MAC OS X built-in LPR printer driver

Network Features

- ◆ DHCP client/relay/server
- ◆ Dynamic DNS
- ◆ SNTP client
- ◆ Call scheduling
- ◆ RADIUS client
- ◆ DNS cache/proxy
- ◆ UPnP
- ◆ Routing protocol:
 - Static routing
 - RIP V2

Router Management

- ◆ Web-based user interface (HTTP/HTTPS)
- ◆ Quick Start Wizard
- ◆ CLI (Command Line Interface, Telnet/SSH*)
- ◆ Administration access control
- ◆ Configuration backup/restore
- ◆ Built-in diagnostic function
- ◆ Firmware upgrade via TFTP/FTP
- ◆ Syslog
- ◆ SNMP management MIB-II

Content Filtering

- ◆ URL blocking
- ◆ Java Applet, Cookies, Active X, compressed, executable, multimedia
- ◆ Time schedule control

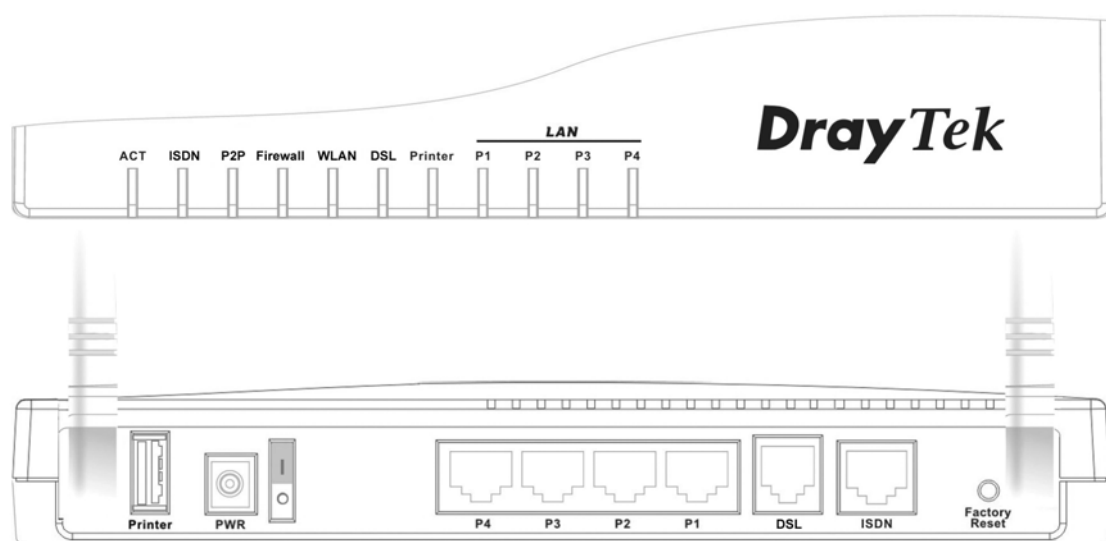
Power Consumption

- ◆ 15Watt Max.

*future release

1.3 Front Panel LEDs and Rear Panel Interfaces

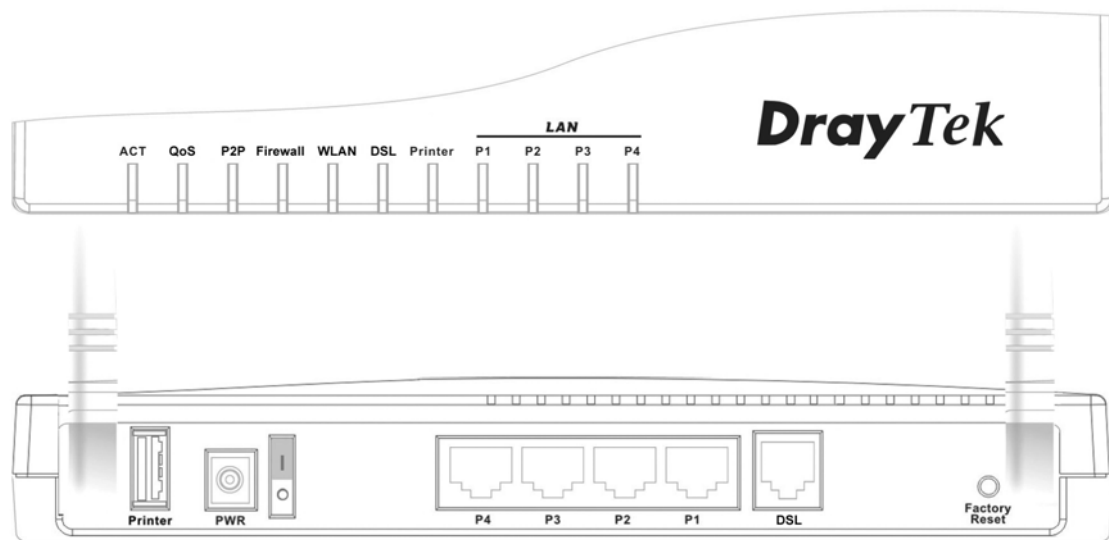
1.3.1 Vigor2800Gi



LED	Status	Explanation
ACT (Activity)	blinking	The router is powered on and running properly.
ISDN	on	The ISDN network is correctly setup.
	blinking	A successful remote connection on the ISDN BRI B1/B2 channel.
P2P	on	The P2P function is active
	blinking	When starting to prohibit P2P data
Firewall	on	The DoS function is enabled.
	blinking	When encountered DoS attacks.
WLAN	on	The wireless LAN function is enabled.
	blinking	Ethernet packets are transmitting over wireless LAN.
DSL	on	The ADSL,ADSL2/2+ line is showtime.
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.

Interface	Description
Printer	Connect to the USB printer.
PWR	Connect the included power adapter to the power outlet.
P1, P2, P3, P4	Connect to the local networked devices.
DSL	Connect the ADSL,ADSL2/2+ line to access the Internet.
ISDN	Connect to the 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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.

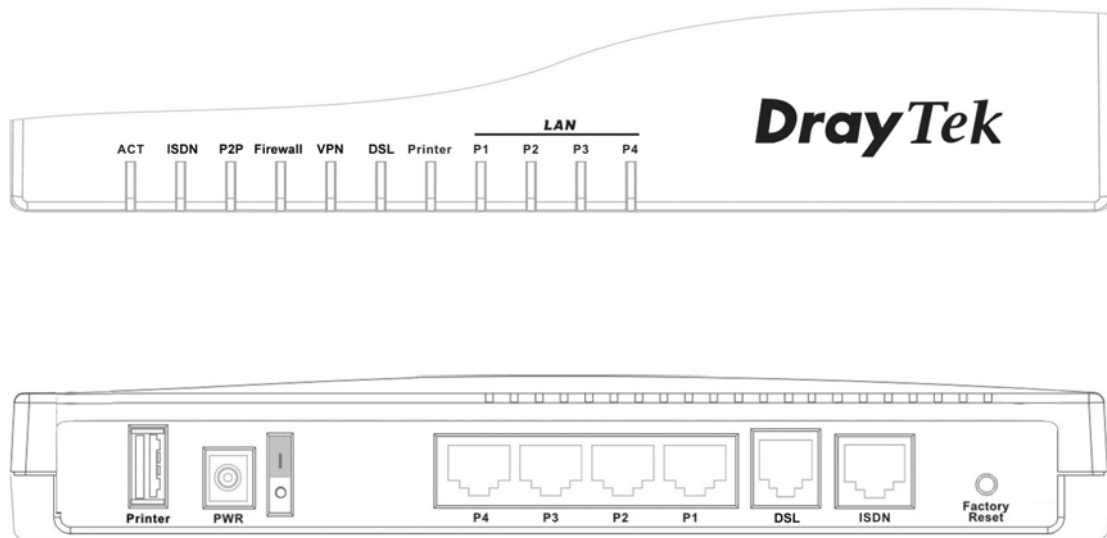
1.3.2 Vigor2800G



LED	Status	Explanation
ACT (Activity)	blinking	The router is powered on and running properly.
QoS	on	The QoS function is active.
P2P	on	The P2P function is active
	blinking	When starting to prohibit P2P data
Firewall	on	The DoS function is enabled.
	blinking	When encountered DoS attacks.
WLAN	on	The Wireless LAN function is enabled.
	blinking	Ethernet packets are transmitting over wireless LAN.
DSL	on	The ADSL,ADSL2/2+ line is showtime.
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.

Interface	Description
Printer	Connect to the USB printer.
PWR	Connect the included power adapter to the power outlet.
P1, P2, P3, P4	Connect to the local networked devices.
DSL	Connect the ADSL,ADSL2/2+ line to access the Internet.
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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.

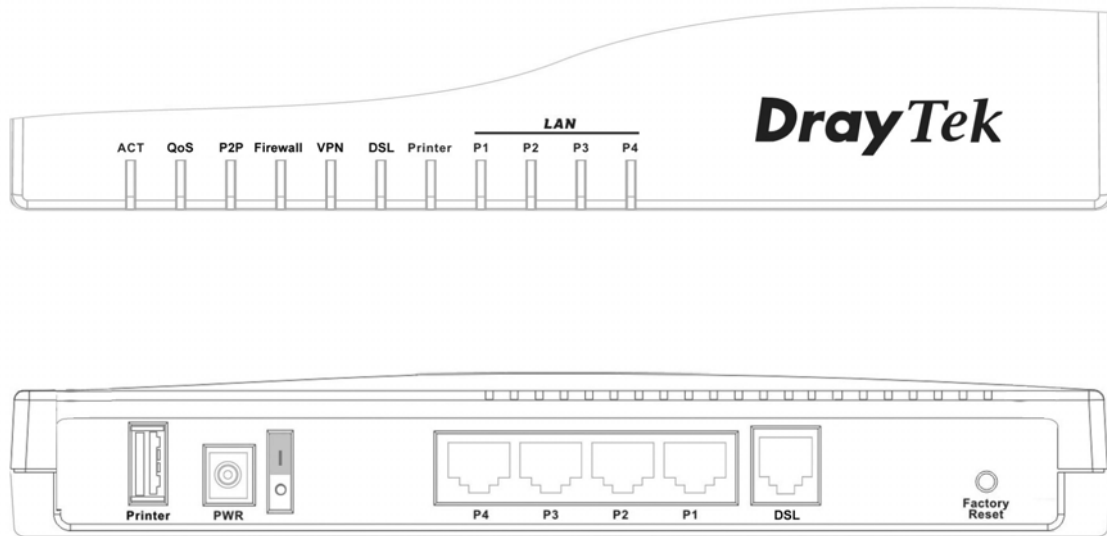
1.3.3 Vigor2800i



LED	Status	Explanation
ACT (Activity)	blinking	The router is powered on and running properly.
ISDN	on	The ISDN network is correctly setup.
	blinking	A successful remote connection on the ISDN BRI B1/B2 channel.
P2P	on	The P2P function is active
	blinking	When starting to prohibit P2P data
Firewall	on	The DoS function is enabled.
	blinking	When encountered DoS attacks.
VPN	on	The VPN tunnel is launched.
DSL	on	The ADSL,ADSL2/2+ line is showtime.
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.

Interface	Description
Printer	Connect to the USB printer.
PWR	Connect the included power adapter to the power outlet.
P1, P2, P3, P4	Connect to the local networked devices.
DSL	Connect the ADSL,ADSL2/2+ line to access the Internet.
ISDN	Connect to the 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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.

1.3.4 Vigor2800



LED	Status	Explanation
ACT (Activity)	blinking	The router is powered on and running properly.
QoS	on	The QoS function is active.
P2P	on	The P2P function is active
	blinking	When starting to prohibit P2P data
Firewall	on	The DoS function is enabled.
	blinking	When encountered DoS attacks.
VPN	on	The VPN function is active.
DSL	on	The ADSL,ADSL2/2+ line is showtime.
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.

Interface	Description
Printer	Connect to the USB printer.
PWR	Connect the included power adapter to the power outlet.
P1, P2, P3, P4	Connect to the local networked devices.
DSL	Connect the ADSL,ADSL2/2+ line to access the Internet.
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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.

1.4 Package Contains



Quick Start Guide



CD



UK-type power adapter



EU-type power adapter



USA/Taiwan-type power adapter



AU/NZ-type power adapter



RJ-45 Cable (Ethernet)



**RJ-45 to RJ-45 (ISDN) for
Vigor2800 i models**



RJ-11 to RJ-45 (Annex B)

or



**RJ-11 Cable (Annex A / B)
RJ-11 Cable (PSTN line)**



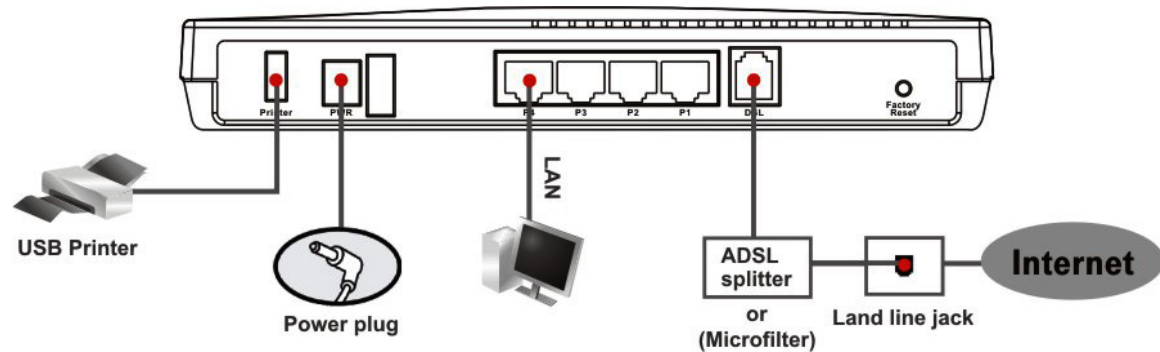
Antennas for V2800 G models

2. Quick Install Your Vigor2800 Series Router

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.
3. For G models, connect detachable antennas to the router.
4. Connect the attached power adapter to the power port.
5. Check the ACT and WAN, LAN LEDs to assure network connections.
(Regarding the detailed LED status explanation, please refer to section 1.3)



2.2 Configure Your Router via Quick Start Wizard

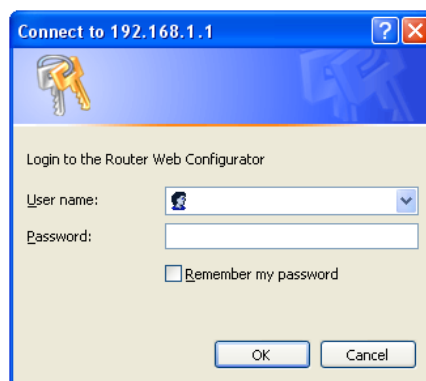
Introduction


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

Configure Your Router via Quick Start Wizard

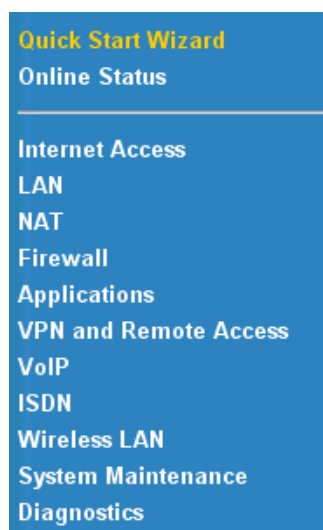
- Step 1.** First make sure your PC connects to router correctly. You may either simply set up your PC to dynamic get IP from router or set up the IP address of PC to be the same subnet as **the default IP address of Vigor router 192.168.1.1**. If you don't know how, please refer to Trouble Shooting.

Then open the web browser on the PC. Type **http://192.168.1.1**. If your link is successful, a pop-up window will open to ask for username and password. Leave the default null value and press **OK** to continue.



 If you fail to access to the web configuration, please refer to "Trouble Shooting" guide.

- Step 2.** The **Main Menu** will pop out after completing previous step.



Step 3. Now Quick Start Wizard is switched on. Enter login password. Then click **Next** to continue.

1. Enter login password

Please enter an alpha-numeric string as your **Password** (Max 23 characters).

New Password

Confirm Password

Step 4 Select the appropriate Internet access type according to the information from your ISP. Or Clicking “Auto detect” button also offers the related DSL parameters automatically.

2. Connect to Internet

VPI	<input type="text" value="0"/>	<input type="button" value="Auto detect"/>
VCI	<input type="text" value="33"/>	
Protocol / Encapsulation	<div>PPPoE LLC/SNAP PPPoE LLC/SNAP PPPoE VC MUX PPPoA LLC/SNAP PPPoA VC MUX 1483 Bridged IP LLC 1483 Routed IP LLC 1483 Bridged IP VC-Mux 1483 Routed IP VC-Mux (IPoA) 1483 Bridged IP (IPoE)</div>	
Fixed IP		
IP Address		
Subnet Mask		
Default Gateway		
Primary DNS	<input type="text"/>	
Second DNS	<input type="text"/>	

Step 5 If PPPoE/PPPoA is selected, please manually enter the Username/Password provided by your ISP service provider. Checking the **Always On** means Internet access is always on regardless of Internet usage.

3. Set PPPoE / PPPoA

ISP Name	<input type="text"/>
User Name	<input type="text"/>
Password	<input type="password"/>
Confirm Password	<input type="password"/>
<input type="checkbox"/> Always On	
Idle Timeout	<input type="text" value="180"/> Seconds

Step 6 Review the summary of settings.

4. Please confirm your settings:

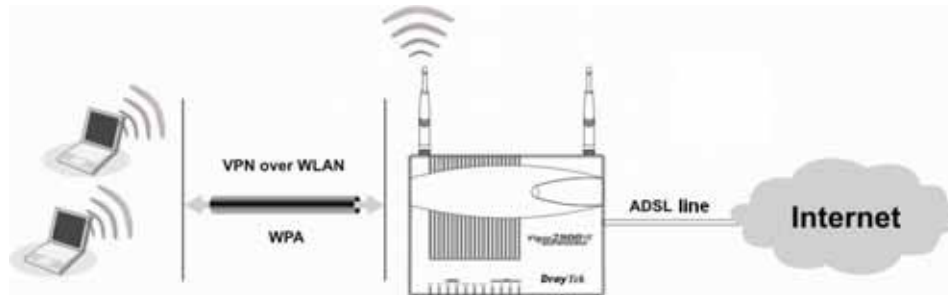
VPI	: 0
VCI	: 33
Protocol / Encapsulation	: PPPoE / LLC
Fixed IP	: No
Primary DNS	:
Secondary DNS	:
Always On	: Yes



On the bottom of Web Configurator window, you can find messages showing the system interaction with you.

- **“Ready”** indicates the system is ready for you to input settings.
- **“Settings Saved”** means your settings are saved once you click “Finish” or “OK” button.

3. Wireless LAN Settings(for G models)



Select from the menu of the **Wireless LAN**:

Wireless LAN >> **General Settings**
 Security
 Access Control
 WDS Settings
 Access Point Discovery
 Station List

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

Wireless Distribution System

Wireless Distribution System(WDS) is an advanced technology to link 2 LANs or 2 WLANs through air, if router is set in **Bridge Mode**, or to extend a Wireless LAN coverage area, if router is set in **Repeater Mode**

Example Application 1



Example Application 2



3.1 General Settings

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

General Setting (IEEE 802.11)

☒ Enable Wireless LAN

Mode : Mixed(11b+11g) ▼

Scheduler (1-15) , , ,

SSID : default

Channel : Channel 6, 2437MHz ▼

☐ Hide SSID

☐ Long Preamble

SSID :wireless LAN Service Set ID.
Hide SSID :the scanning tool can't read the SSID when sniffing radio.
Channel :select the frequency channel of wireless LAN.
Long Preamble:enable this only when meeting connectivity problems for some old 802.11b devices; otherwise, it reduces the performance.

1. Enable Wireless LAN:

Check the box to enable wireless function.

2. Mode:

Select an appropriate wireless mode.

Mixed (11b+11g+SuperG) The radio can support both IEEE802.11b, IEEE802.11g and Super G protocols simultaneously.

Mixed (11b+11g) The radio can support both IEEE802.11b and IEEE802.11g protocols simultaneously.

Super G only The radio only supports Super G protocol.

11g-only The radio only supports IEEE802.11g protocol.

11b-only The radio only supports IEEE802.11b protocol.

3. Scheduler:

Set the wireless LAN to work at some time interval only. Choose up to 4 out of 15 schedules as defined in **Applications > Call Schedule Setup**.

4. SSID and Channel:

The default SSID is "default". We suggest you change it to a particular name.

SSID(service set identifier) It is used to name the wireless LAN, and must have the same content in client PC/notebook wireless card(s). SSID can be any text numbers or various special characters.

Channel A wireless channel for the router. The default channel is 6. You can change it to more appropriate one if the selected channel is under serious interference.

5. Hide SSID:

Check it to be invisible against other's malicious scanning.

3.2 Security

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

Security Settings

Mode : Disable

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 "cfigs01a2..." or "0x655abcd....".

WEP:

Encryption Mode: 64-Bit

Use

☒ 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".

1. Mode:

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

Disable	Turn 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. The authentication will be 802.1x and the encryption key will be automatically negotiated. Please set RADIUS server.
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 only WEP or WPA clients. The authentication will be 802.1x and the encryption key will be automatically negotiated. Please set RADIUS server.
WPA/PSK Only	Accepts only WPA clients and the encryption key should be entered in PSK.

WPA/802.1x Only

Accepts only WPA clients. The authentication will be 802.1x and the encryption key will be automatically negotiated. Please set RADIUS server.

2. WPA:

If you select WPA in **Mode**, then select the Type of WPA here.

Type

Select from Mixed(WPA+WPA2) or WPA2 only.

Pre-Shared Key(PSK)

Either 8~63 ASCII characters or 64 Hexadecimal digits leading by 0x can be entered. For example "0123456789ABCD...." or "0x321253abcde.....".

3. WEP:

64-Bit

Either 5 ASCII characters or 10 hexadecimal digitals leading by 0x can be entered. For example, ABCDE or 0x4142434445.

128-Bit

Either 13 ASCII characters or 26 hexadecimal digits leading by 0x can be entered. For example, ABCDEFGHIJKLM or 0x4142434445464748494A4B4C4D.



To communicate, all wireless devices must support the same encryption bit size and have the same key. If WEP, only one key out of four preset keys can be selected at one time.

3.3 WDS Settings

Click **WDS Settings** to configure the WDS functions.

WDS Settings

Mode: <input type="button" value="Disable"/>	Repeater Enable <input type="checkbox"/> Peer MAC Address <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> <input type="checkbox"/> <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>
Security: <input checked="" type="radio"/> Disable <input type="radio"/> WEP <input type="radio"/> Pre-shared Key	Bridge Enable <input type="checkbox"/> Peer MAC Address <input type="checkbox"/> <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> <input type="checkbox"/> <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> <input type="checkbox"/> <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> <input type="checkbox"/> <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> <input type="checkbox"/> <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>
WEP: <input type="checkbox"/> Use the same WEP key set in Security Settings . Encryption Mode : <input type="button" value="64-bit"/> Key index : <input type="button" value="1"/> The key index is fixed if the security mode is not "WEP Only". Key : <input type="text"/> The key format is the same as the one used in Security Settings .	Note : Disable unused links to get better performance.
Pre-shared Key: Type : <input checked="" type="radio"/> TKIP <input type="radio"/> CCMP Key : <input type="text"/> Type 8~63 ASCII characters or 64 hexadecimal digits leading by "0x", for example "cfigs01a2..." or "0x655abcd....".	Access from local WLAN clients: <input checked="" type="radio"/> Enable <input type="radio"/> Disable
	Status: <input type="checkbox"/> Send "Hello" message to peers. <input type="button" value="Link Status"/> Note : The function is valid only when the peer is also a Vigor router.

Mode:

<i>Disable</i>	Turn off the WDS function.
<i>Bridge</i>	<p>To set this router as in Bridge Mode, which links its LAN/WLAN to either peer Bridge Mode router's LAN/WLAN or peer Repeater Mode router.</p> <p>Set peer MAC address at the right column accordingly.</p>
<i>Repeater</i>	<p>To set this router as in Repeater Mode, which forwards packets sending from peer router.</p> <p>Set peer MAC address at the right column accordingly.</p>

1. Security

Select an appropriate encryption to improve the security and privacy of your WDS data packets.

<i>Disable</i>	No encryption will be applied.
<i>WEP</i>	Choose from using the same current WEP key which has been set in Security Settings or setting a new key.
<i>Pre-shared key</i>	Set a pre-shared key in TKIP or (AES-)CCMP encryption. Type 8~63 ASCII characters or 64 hexadecimal digits leading by "0x", for example "cfigs01a2..." or "0x655abcd....".

2. Access from local WLAN clients

Tick to prohibit access from local WLAN clients.

3. Status

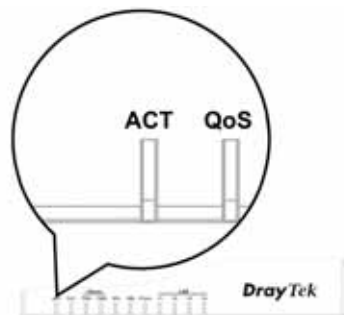
Send a message to test the link.

4. Trouble Shooting

This section will guide you to solve abnormal situations. Please follow the below steps to check your basic installation.

Step 1. Is the Hardware Status OK?

1. Check the power line and WLAN/LAN cable connections. Refer to the Quick Start Guide “2.1 Hardware Installation” section for details.
2. Turn on the router, check if the **ACT LED** blink once per second and the correspondent **LAN LED** is bright.



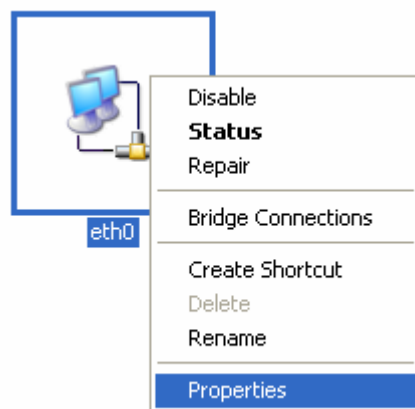
Step 2. Are the Network Connection Settings on Your PC OK?

The following example is based on Windows XP case. Regarding to the examples of other OSs, please refer to the similar steps or find support notes in www.draytek.com.

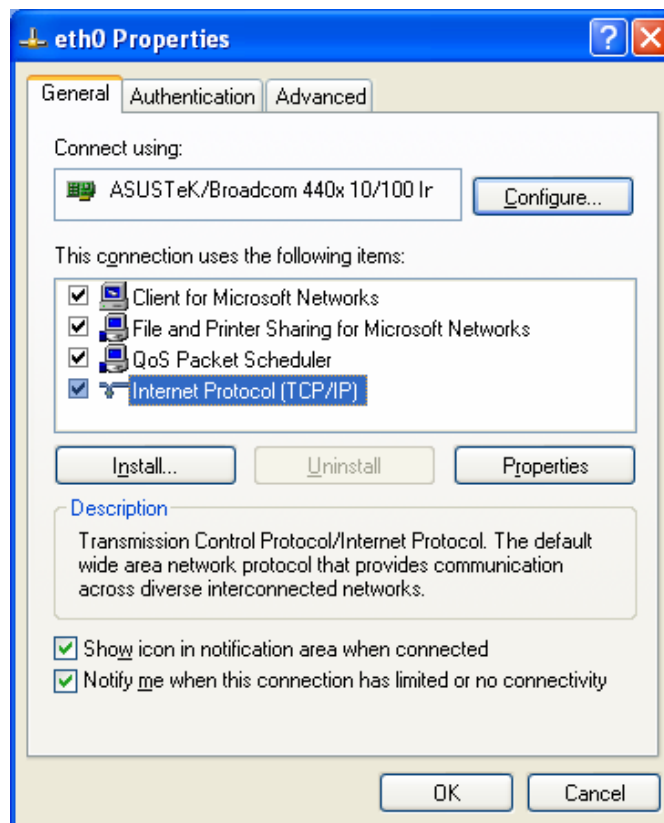
1. Go to **Control Panel** and then double-click on **Network Connections**.



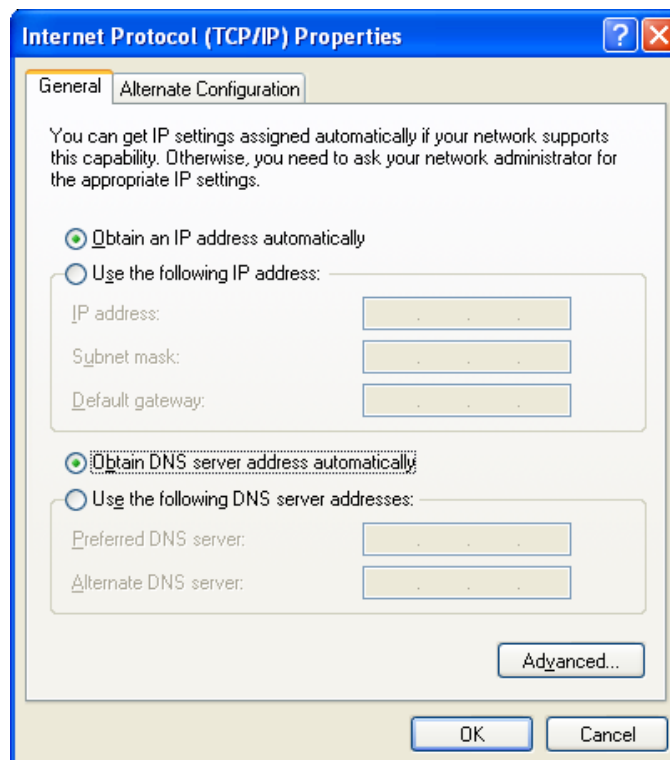
2. Right-click on **Local Area Connection** and click on **Properties**.



3. Select on **Internet Protocol (TCP/IP)** and then click **Properties**.



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

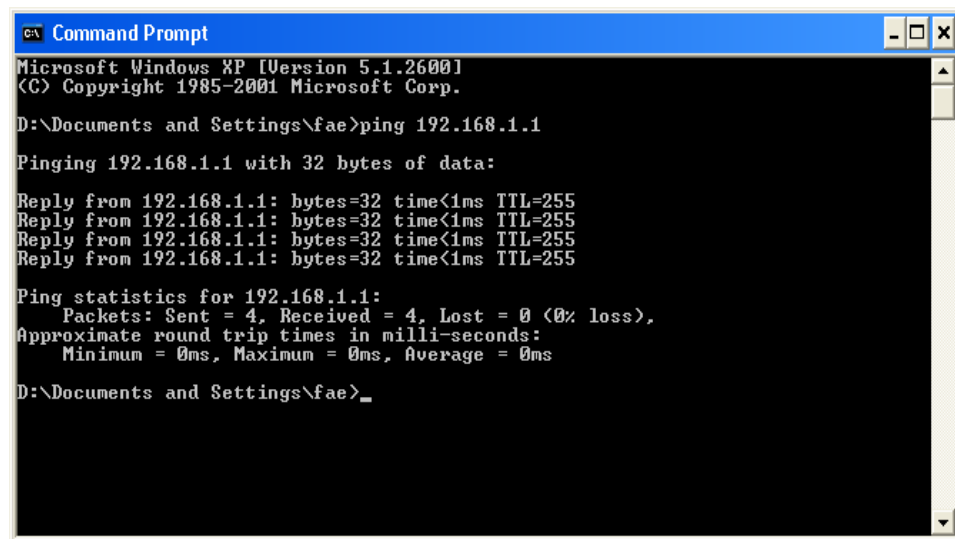


Step 3 Can You Ping the Router from PC?

The default gateway IP address of the router is 192.168.1.1. Please check that if you can 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).
3. Type **ping 192.168.1.1** and press [Enter]



```
C:\ Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

D:\Documents and Settings\fae>ping 192.168.1.1

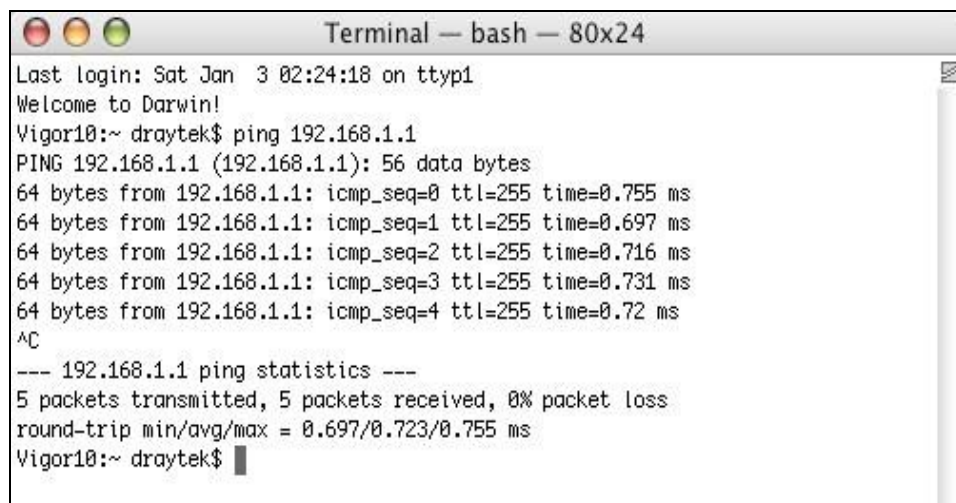
Pinging 192.168.1.1 with 32 bytes of data:

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

D:\Documents and Settings\fae>_
```

◆ For Mac (Terminal)



```
Terminal — bash — 80x24

Last login: Sat Jan  3 02:24:18 on ttty1
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$
```

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 the network connection as get IP automatically. (Please refer to the Step 2)

Step 4 Are the ISP Settings OK?

Click **Internet Access Setup** group and then check whether the ISP settings are set correctly.

◆ For PPPoE/PPPoA Users

1. Check that if the **Enable** option is selected.
2. Verify if all parameters of **DSL Modem Settings** are entered with correct value which given by your ISP.
3. Verify if **Username** and **Password** are entered with correct value which given by your ISP.

Internet Access >> PPPoE / PPPoA

PPPoE / PPPoA Client Mode

PPPoE/PPPoA Client ☒ Enable ☐ Disable

DSL Modem Settings

Multi-PVC channel: Channel 1

VPI: 0

VCI: 33

Encapsulating Type: LLC/SNAP

Protocol: PPPoE

Modulation: Multimode

PPPoE Pass-through

☐ For Wired LAN

☐ For Wireless LAN

ISDN Dial Backup Setup

Dial Backup Mode: None

ISP Access Setup

ISP Name: hinet

Username: 86623721@hinnet.net

Password: *****

PPP Authentication: PAP or CHAP

☐ Always On

Idle Timeout: 180 second(s)

IP Address From ISP

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 27 28 A8

Scheduler(1-15)

[] [] [] [] [] []

◆ For MPoA (RFC1483/2684) Users

1. Check that if the **Enable** option is selected.
2. Verify if all parameters of **DSL Modem Settings** are entered with correct value which given by your ISP.
3. Verify if **IP Address**, **Subnet Mask** and **Gateway** are set correctly, or that your ISP requires using DHCP clients to obtain IP automatically.

Internet Access >> MPoA (RFC1483/2684)

MPoA (RFC1483/2684) Mode

MPoA (RFC1483/2684) ☐ Enable ☒ Disable

DSL Modem Settings

Multi-PVC channel: Select M-PVCs channel

Encapsulation: 1483 Routed IP LLC

VPI: 0

VCI: 33

Modulation: Multimode

ISDN Dial Backup Setup

Dial Backup Mode: None

RIP Protocol

☐ Enable RIP

WAN IP Network Settings

☐ Obtain an IP address automatically

Router Name: [] [] [] [] [] [] *

Domain Name: [] [] [] [] [] [] *

☒ Specify an IP address

IP Address: 0.0.0.0

Subnet Mask: 0.0.0.0

Gateway IP Address: [] [] [] [] [] []

* : Required for some ISPs

☒ Default MAC Address

☐ Specify a MAC Address

MAC Address: 00 50 7F 27 28 A8

DNS Server IP Address

Primary IP Address: [] [] [] [] [] []

Secondary IP Address: [] [] [] [] [] []

Step 5. Back to Factory Default Setting

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

◆ Software Reset

You can also reset router to factory default via Web configurator.

System Maintenance >> Reboot System

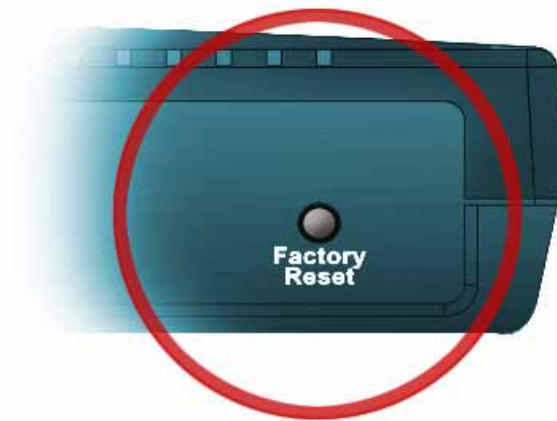
Reboot System

Do You want to reboot your router ?

- ☐ Using current configuration
- ☒ Using factory default configuration

◆ Hardware Reset

While the router is running (ACT LED blinking), press the button and hold for more than 5 seconds. The ACT LED begins to blink rapidly, then release the button. The router will restart with the factory default configuration.



After restore the factory default setting, please repeat Step 1 to Step 4 to reinstall the router. Configure the router according to your recorded settings.

If the router does not work correctly, please contact your dealer for help. For any further questions, please send e-mail to support@draytek.com