



Vigor 2900 Series Router Quick Start Guide

Version: 2.1

Date: 2006/2/6

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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.
- 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 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 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: Vigor2900 Series Routers

DrayTek Corp. declares that Vigor2900 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 **Vigor2900G/2900Gi/2900VG/2900VGi** is 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 user 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 may accept any interference received, including interference that may cause undesired operation.

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1. Introduction

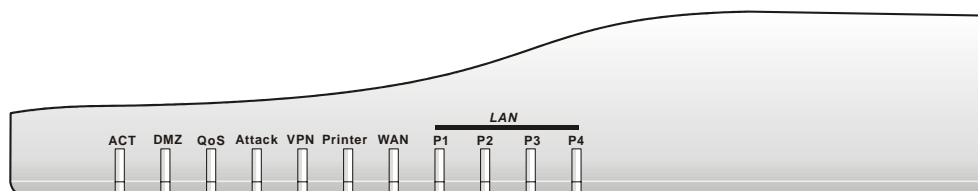
The Vigor2900 series router, an Internet access solution for your LAN, provides you shared web surfing and countless value-added features, such as Firewall / Security, VPN, USB interface printer server support, and 802.11g Wireless LAN (up to 54Mbps for Vigor2900G/Gi/VG/VGi only). These are all in a reliable one-box solution.

Characteristics

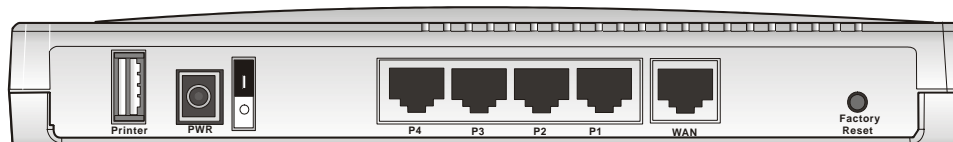
- Easy Internet-sharing of your broadband connection
- Robust firewall to help protect your network from external attacks
- Comprehensive VPN facilities provide deployment of linked branch offices and teleworkers

1.1 Panel Explanation

1.1.1 Front and Rear View for Vigor2900

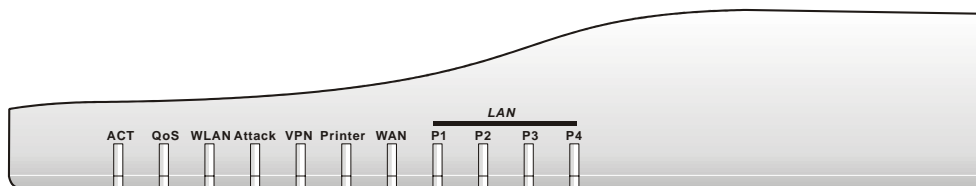


LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
DMZ	On	DMZ Host is specified in certain site.
QoS	On	The QoS function is active.
Attack	On	DoS Defense function is active.
	Blinking	An attack is detected.
VPN	On	The VPN tunnel is launched.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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.

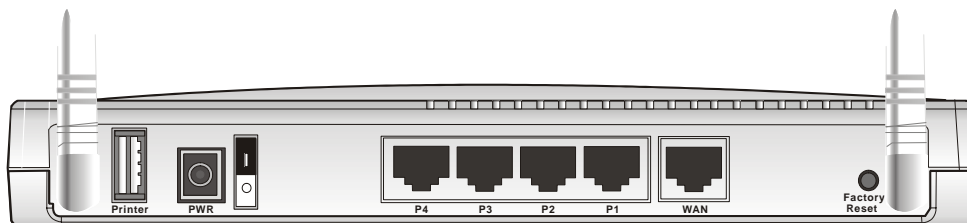


Interface	Description
Printer	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press 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 Front and Rear View for Vigor2900G

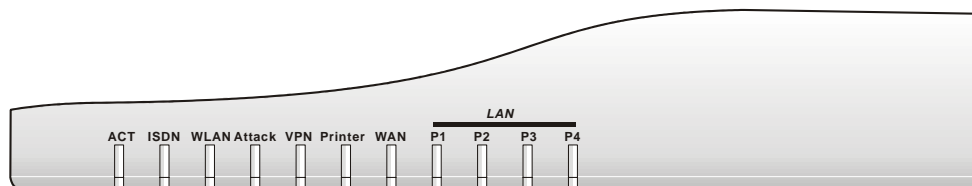


LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
QoS	On	The QoS function is active.
WLAN	On	The wireless LAN function is enabled.
	Blinking	Ethernet packets are transmitting over wireless LAN.
Attack	On	DoS Defense function is active.
	Blinking	An attack is detected.
VPN	On	The VPN tunnel is launched.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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.

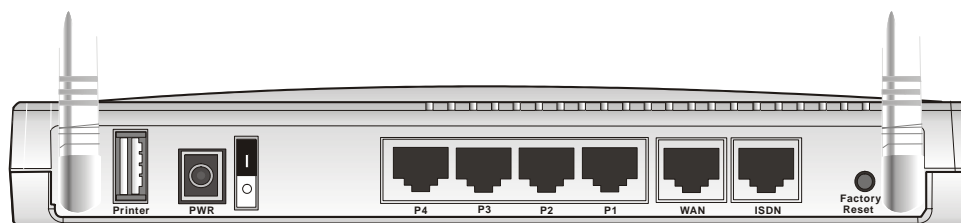


Interface	Description
Printer	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
Factory Reset	Restore the default settings. Usage: Turn on the router (ACT LED is blinking). Press 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 Front and Rear View for Vigor2900Gi

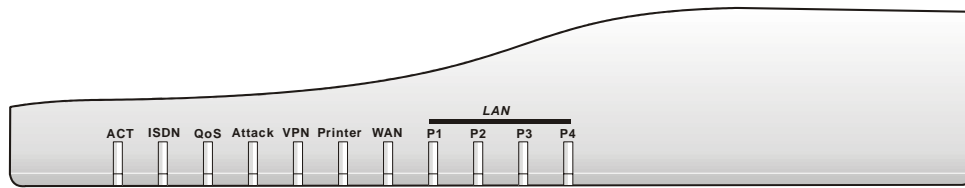


LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
ISDN	On	The ISDN network is correctly setup.
	Blinking	A successful remote connection on the ISDN BRI B1/B2 channel.
WLAN	On	The wireless LAN function is enabled.
	Blinking	Ethernet packets are transmitting over wireless LAN.
Attack	On	DoS Defense function is active.
	Blinking	An attack is detected.
VPN	On	The VPN tunnel is launched.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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.

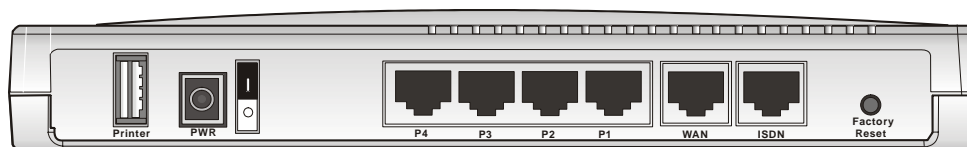


Interface	Description
Printer	Connector for a USB printer.
PWR	Connector for a power adapter.
O/I	Power Switch.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
ISDN	Connector for NT1 (or NT1+) box provided by ISDN service provider.
Factory Reset	Restore the 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 Front and Rear View for Vigor2900i

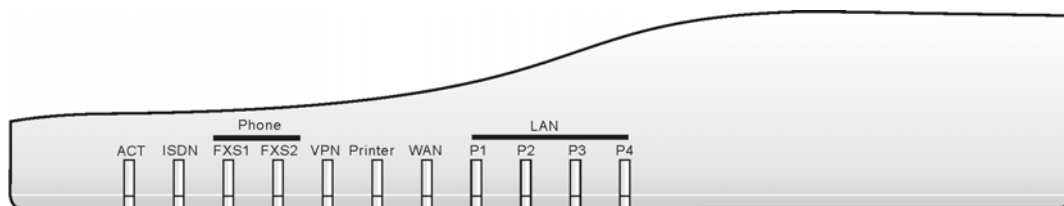


LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
ISDN	On	The ISDN network is correctly setup.
	Blinking	A successful remote connection on the ISDN BRI B1/B2 channel.
QoS	On	The QoS function is active.
Attack	On	DoS Defense function is active.
	Blinking	An attack is detected.
VPN	On	The VPN tunnel is launched.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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.

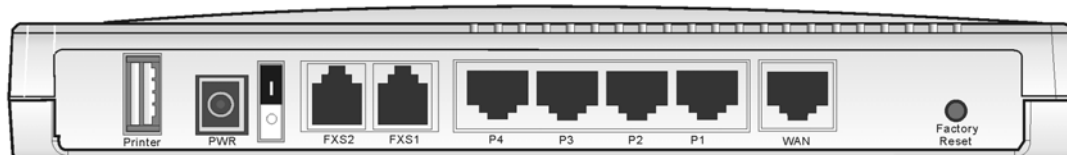


Interface	Description
Printer	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
ISDN	Connect for NT1 (or NT1+) box provided by ISDN service provider.
Factory Reset	Restore the default 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 Front and Rear View for Vigor2900V

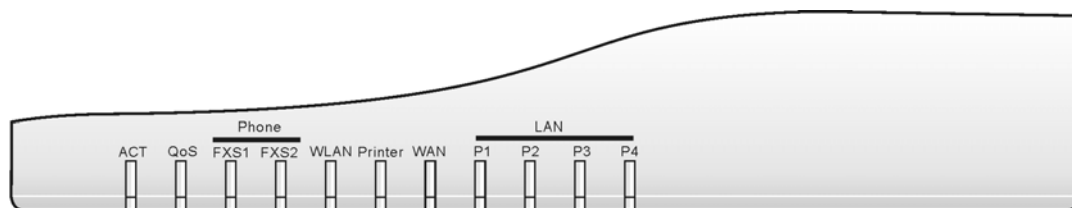


LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
QoS	On	The QoS function is active.
Phone (FXS1, FXS2)	On	The phone is off hook (the handset of phone is hanging).
	Blinking	A phone call is incoming.
VPN	On	The VPN tunnel is launched.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
FXS 2 - 1	Connector of analog phone for VoIP communication.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
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 Front and Rear View for Vigor2900VG

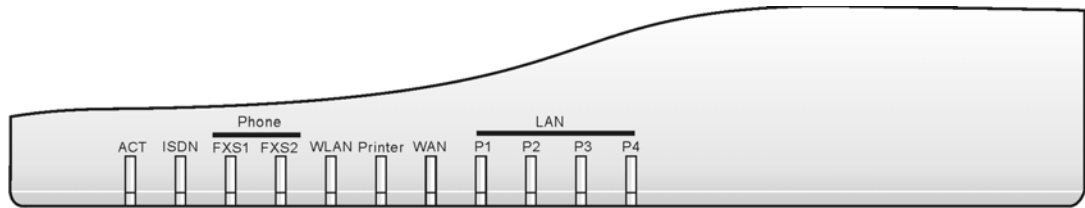


LED	Status	Explanation
ACT(Activit y)	Blinking	The router is powered on and running properly.
QoS	On	The QoS function is active.
Phone (FXS1, FXS2)	On	The phone is off hook (the handset of phone is hanging).
	Blinking	A phone call is incoming.
WLAN	On	The wireless LAN function is enabled.
	Blinking	Ethernet packets are transmitting over wireless LAN.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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.

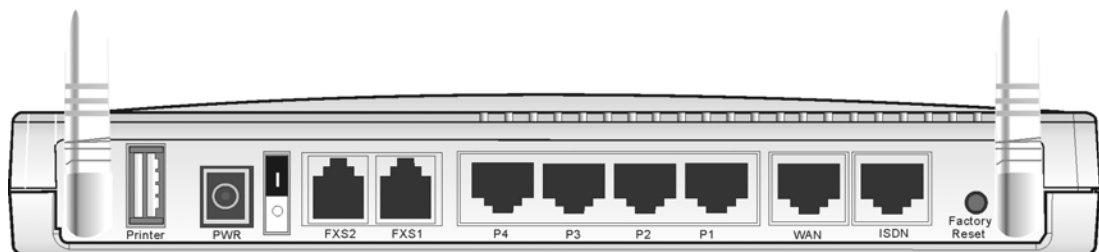


Interface	Description
Printer	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
FXS 2 - 1	Connector of analog phone for VoIP communication.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
Factory Reset	Restore the default settings. 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 Front and Rear View for Vigor2900VGi

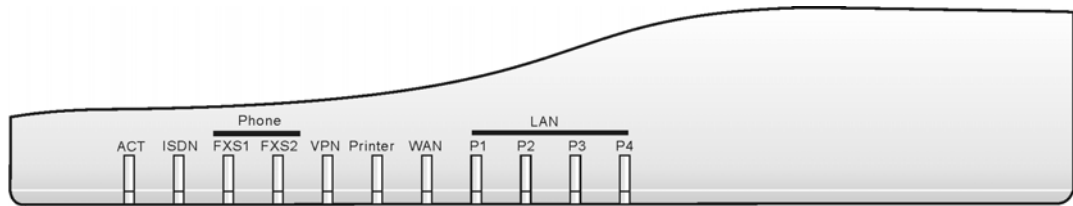


LED	Status	Explanation
ACT (Activity)	Blinking	The router is powered on and running properly.
ISDN	On	The ISDN network is correctly setup.
	Blinking	A successful remote connection on the ISDN BRI B1/B2 channel.
Phone (FXS1, FXS2)	On	The phone is off hook (the handset of phone is hanging).
	Blinking	A phone call is incoming.
WLAN	On	The wireless LAN function is enabled.
	Blinking	Ethernet packets are transmitting over wireless LAN.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
FXS 2 - 1	Connector of analog phone for VoIP communication.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
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.

1.1.8 Front and Rear View for Vigor2900Vi



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.
Phone (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.
Printer	On	The USB interface printer is ready.
WAN	Orange	A normal 10Mbps WAN link is ready.
	Green	A normal 100Mbps WAN link is ready.
	Blinking	Ethernet packets are transmitting.
LAN (1, 2, 3, 4)	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.

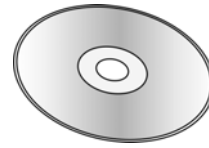


Interface	Description
Printer	Connector for a USB printer.
PWR	Connector for a power adapter.
0/1	Power Switch.
FXS 2 - 1	Connector of analog phone for VoIP communication.
P1 – P4	Connector for local networked devices.
WAN	Connector for remote networked devices.
Factory Reset	Restore the default settings. 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.

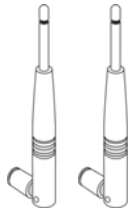
1.2 Package Content



① Quick Start Guide



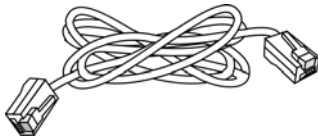
② CD



③ Antenna for G models

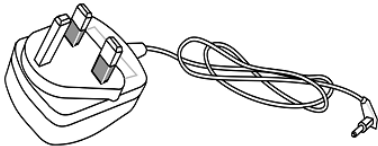


④ RJ-45 Cable (Ethernet)

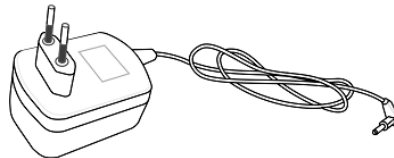


⑤ RJ-45 8P4C Cable (for ISDN)

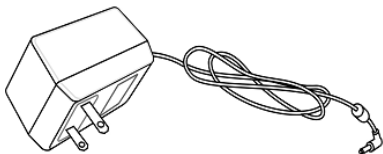
⑥ The type of the power adapter depends on the country that the router will be installed:



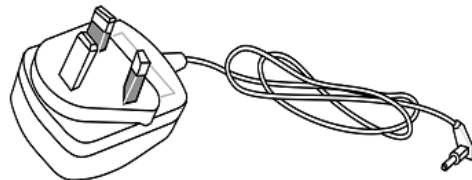
UK-type power adapter



EU-type power adapter



USA/Taiwan-type power adapter



AU/NZ-type power adapter

2. Installing Your Vigor2900 Series Router

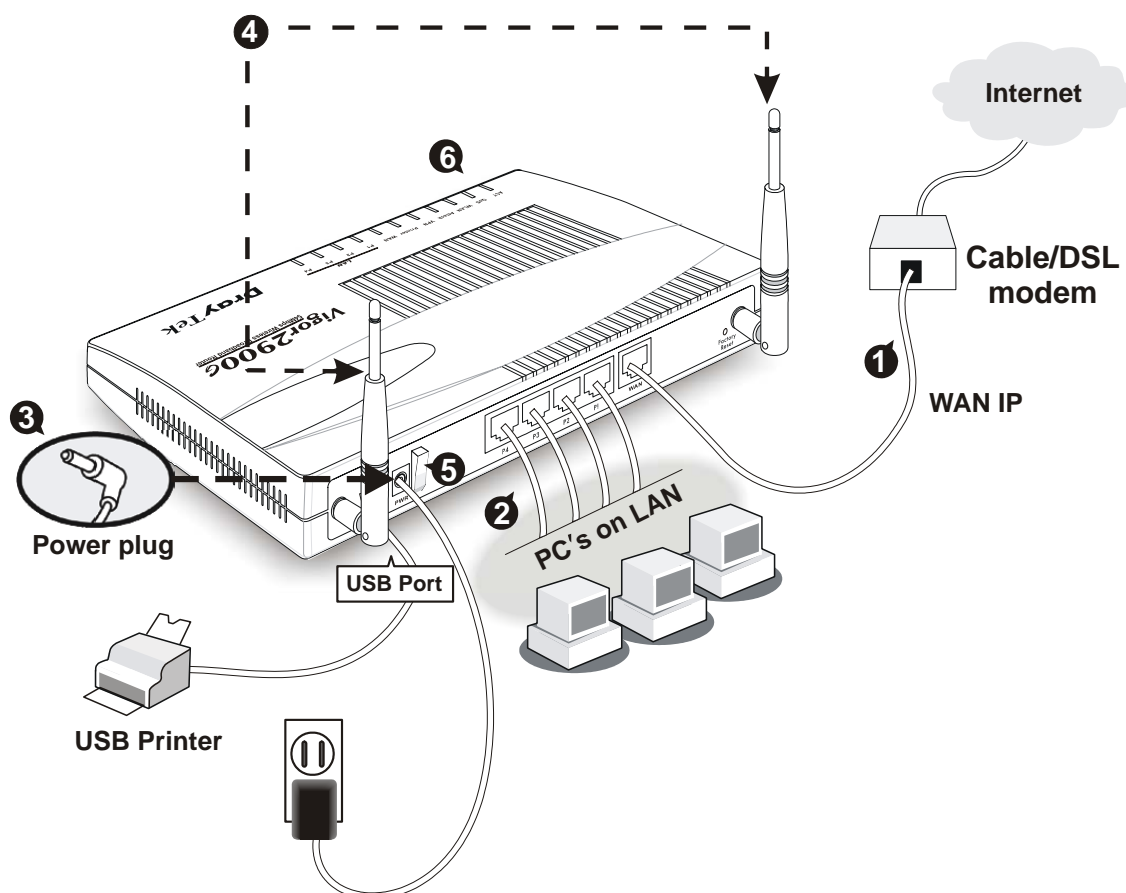
This section will guide you to install the router through hardware connection and configure the router's settings through web browser.

2.1 Hardware Installation

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

1. Connect this device to a router with an Ethernet 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 detachable antennas to the router for Vigor2900 Series.
5. Power on the router.
6. Check the **ACT** and **WAN, LAN** LEDs to assure network connections.

(For the detailed information of LED status, please refer to section 1.1.)



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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.

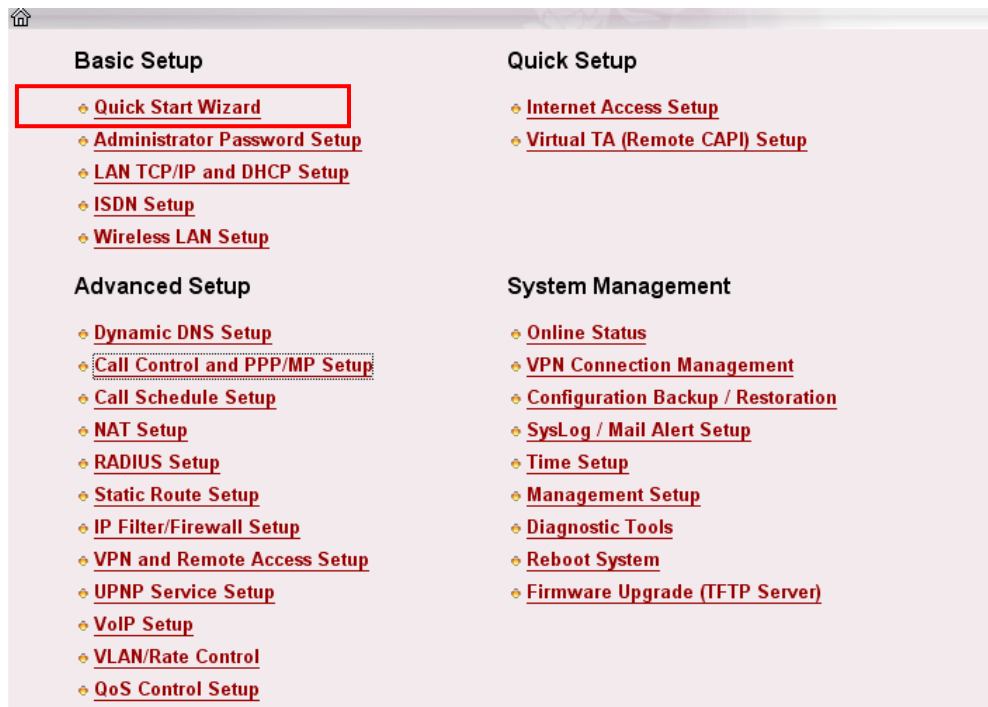


Notice: You may either simply set up your computer to get IP dynamically from the router or set up the IP address of the computer to be the same subnet as **the default IP address of Vigor router 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of the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



3. Now, the **Main Screen** will pop up. Click **Quick Start Wizard**.

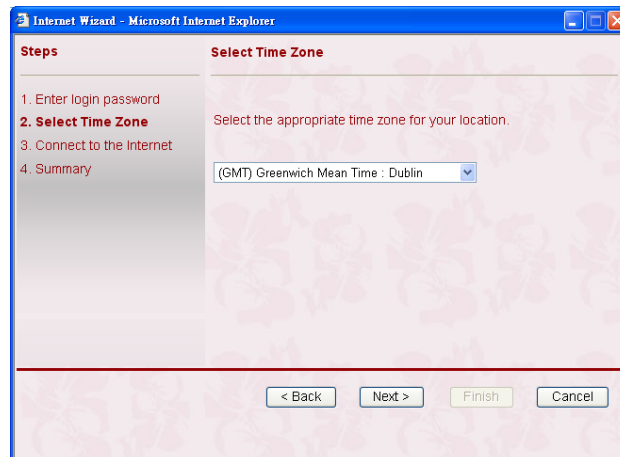


Notice: Some of the settings might not appear as above, because the home page will change slightly according to the features that your router has.

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.

The screenshot shows a web browser window titled 'Internet Wizard - Microsoft Internet Explorer'. The 'Steps' panel on the left lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet, and 4. Summary. The main content area is titled 'Enter login password' and contains the text: 'There is no default password. For security, please choose a set of number or character (maximum 23 characters) as your password and enter it into the Password box.' Below this text are two input fields: 'New Password' and 'Retype New Password'. At the bottom of the form are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

5. Select the appropriate time zone for your location. Then click **Next** to continue.



6. On the next page as shown below, please select the appropriate Internet access type according to the information from your ISP. For example, you should select PPPoE mode if the ISP provides you PPPoE interface. Then click **Next** for next step.



PPPoE: if you click PPPoE as the protocol, please manually enter the Username/Password provided by your ISP. Check the **Always On** means Internet access is always on regardless of Internet usage. Then click **Next**.

The screenshot shows the 'Internet Wizard - Microsoft Internet Explorer' window. The 'Steps' pane on the left lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet (highlighted), and 4. Summary. The main pane is titled 'Connect to the Internet' and contains the instruction: 'Enter the user name and password provided by your ISP.' Below this are three input fields: 'User Name', 'Password', and 'Retype Password', which are grouped by a red rectangle. Underneath is the 'Connection Type' section with two radio buttons: 'Always On' and 'Dial On Demand' (which is selected). An 'Idle Timeout' field is set to '180'. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'.

PPTP: if you click PPTP, you will get the following page. Please type in all the information originally provided by your ISP. Then click **Next** for next step.

The screenshot shows the 'Internet Wizard - Microsoft Internet Explorer' window. The 'Steps' pane on the left lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet (highlighted), and 4. Summary. The main pane is titled 'Connect to the Internet' and contains the instruction: 'Enter the user name, password, WAN IP configurations and PPTP server IP provided by your ISP.' Below this are three input fields: 'User Name', 'Password', and 'Retype Password', grouped by a red rectangle. Underneath is the 'WAN IP Configurations' section with two radio buttons: 'Obtain an IP address automatically' (selected) and 'Specify an IP address'. Below these are input fields for 'IP Address' (172, 16, 3, 131), 'Subnet Mask' (255, 255, 255, 0), and 'PPTP Server IP' (four empty fields), all grouped by a red rectangle. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'.

L2TP: if you click L2TP, you will get the following page. Please type in all the information originally provided by your ISP. Then click **Next** for next step.

The screenshot shows the 'Internet Wizard - Microsoft Internet Explorer' window. The 'Steps' pane on the left lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet (highlighted), and 4. Summary. The main pane is titled 'Connect to the Internet' and contains the instruction: 'Enter the user name, password, WAN IP configurations and L2TP server IP provided by your ISP.' Below this are three input fields: 'User Name', 'Password', and 'Retype Password', grouped by a red rectangle. Underneath is the 'WAN IP Configurations' section with two radio buttons: 'Obtain an IP address automatically' (selected) and 'Specify an IP address'. Below these are input fields for 'IP Address' (four empty fields), 'Subnet Mask' (four empty fields), and 'L2TP Server IP' (four empty fields), all grouped by a red rectangle. At the bottom are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'.

Static IP: if you click Static IP, you will get the following page. Please type in the IP address information originally provided by your ISP. Then click **Next** for next step.

The screenshot shows the 'Internet Wizard - Microsoft Internet Explorer' window. On the left, the 'Steps' pane lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet (highlighted), and 4. Summary. Under '3. Connect to the Internet', the '- Static IP' option is selected. The main area, titled 'Connect to the Internet', contains the instruction: 'Enter the Static IP configuration provided by your ISP.' Below this, there are input fields for:

- WAN IP: 172, 16, 3, 150
- Subnet Mask: 255, 255, 255, 0
- Gateway: 172, 16, 3, 1
- Primary DNS: (empty)
- Secondary DNS: (empty) (optional)

 A red rectangle highlights the WAN IP, Subnet Mask, and Gateway fields. At the bottom, there are buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

DHCP: if you click DHCP, you will get the following page. Simply click **Next** to continue.

The screenshot shows the 'Internet Wizard - Microsoft Internet Explorer' window. On the left, the 'Steps' pane lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet (highlighted), and 4. Summary. Under '3. Connect to the Internet', the '- DHCP' option is selected. The main area, titled 'Connect to the Internet', contains the instruction: 'If your ISP require you to enter a specific host name or specific MAC address, please enter it in. The **Clone MAC Address** button is used to copy the MAC address of your Ethernet adapter to the Vigor2900.' Below this, there are input fields for:

- Host Name: (empty) (optional)
- MAC: 00, 50, 7F, 21, A0, 3F (optional)

 There is a 'Clone MAC Address' button below the MAC field. At the bottom, there are buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

- 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.

The screenshot shows the 'Internet Wizard - Microsoft Internet Explorer' window. On the left, the 'Steps' pane lists: 1. Enter login password, 2. Select Time Zone, 3. Connect to the Internet, and 4. Summary (highlighted). The main area, titled 'Summary', contains the instruction: 'Please find your settings :'. Below this, it shows:

- Internet Access : DHCP
- Time Zone : (GMT) Greenwich Mean Time : Dublin

 At the bottom, there is a note: 'Click **Back** to modify changes if necessary. Otherwise, click **Finish** to save the current settings and restart the Vigor2900.' Below the note are buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

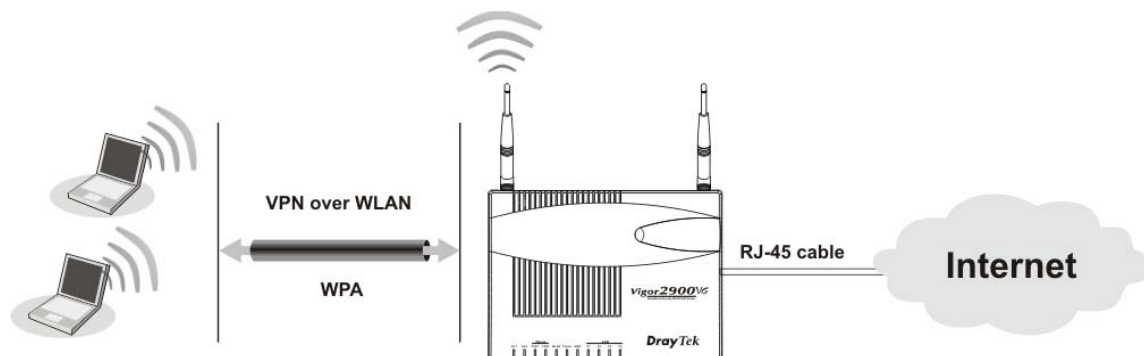
3.2 Wireless LAN Settings

For operating Vigor2900 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 **Basic Setup** group, select **Wireless LAN**. The following page will be shown.



2. On **Detailed Settings** group, click **General Settings** to open the following page.

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.

Cancel OK

3. Check the box **Enable Wireless LAN** to enable the wireless function.
4. Select an appropriate wireless 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.
11g-only	The router can connect to IEEE802.11g stations.
11b-only	The router can connect to IEEE802.11b stations.
5. 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.

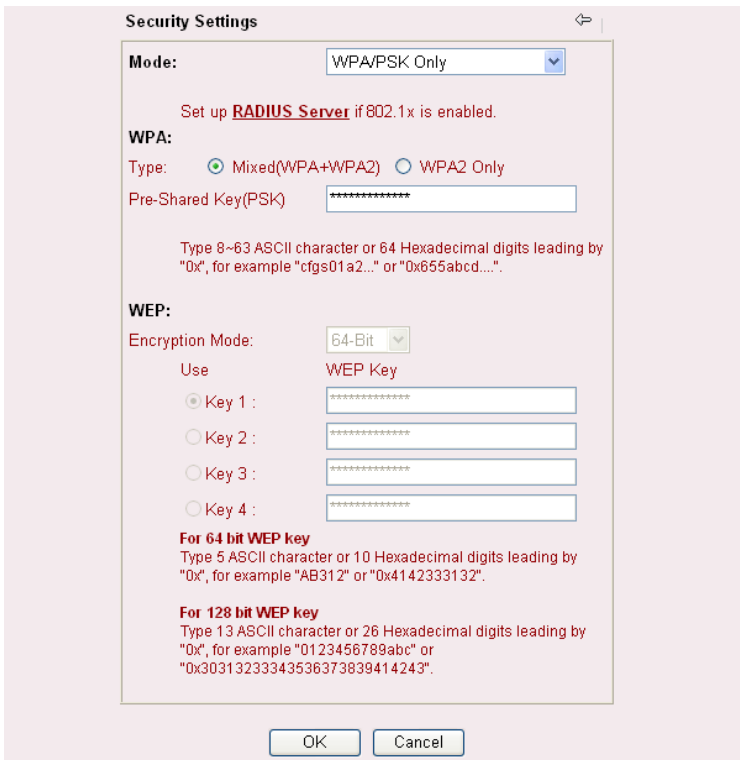
3.2.3 Security Settings

1. On the **Basic Setup** group, select **Wireless LAN Settings**.



The screenshot shows the 'Wireless LAN Setup' page. At the top, there is a breadcrumb trail: 'Basic Setup > Wireless LAN Setup'. Below this, there is a section titled 'Wireless LAN Information' with a back arrow icon. It contains three fields: 'MAC Address : 00-0c-20-02-b9-0b', 'Frequency Domain : Europe', and 'Firmware Version : v2.01.10.10.5.2'. Below this is a 'Detailed Settings' section with four expandable options: 'General Settings', 'Security Settings' (which is highlighted with a red diamond), 'Access Control', and 'Station List'.

2. On **Detailed Settings** group, click **Security Settings** to open the following page.



The screenshot shows the 'Security Settings' dialog box. It has a title bar 'Security Settings' and a back arrow icon. The 'Mode:' dropdown is set to 'WPA/PSK Only'. Below it, a note says 'Set up **RADIUS Server** if 802.1x is enabled.' The 'WPA:' section has a 'Type:' with two radio buttons: 'Mixed(WPA+WPA2)' (selected) and 'WPA2 Only'. Below this is a 'Pre-Shared Key(PSK)' field with a masked password. A note below the field says 'Type 8~63 ASCII character or 64 Hexadecimal digits leading by "0x", for example "cfgs01a2..." or "0x655abcd..."'. The 'WEP:' section has an 'Encryption Mode:' dropdown set to '64-Bit'. Below it is a 'Use' section with a 'WEP Key' label and four radio buttons for 'Key 1', 'Key 2', 'Key 3', and 'Key 4', each with a masked password field. Below these are instructions for 'For 64 bit WEP key' (Type 5 ASCII character or 10 Hexadecimal digits leading by "0x", for example "AB312" or "0x4142333132".) and 'For 128 bit WEP key' (Type 13 ASCII character or 26 Hexadecimal digits leading by "0x", for example "0123456789abc" or "0x30313233343536373839414243".). At the bottom are 'OK' and 'Cancel' buttons.

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

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	Accepts only WEP clients and the encryption key is obtained 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 obtained 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 obtained dynamically through 802.1x.



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

4. 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 or a key got dynamically through 802.1x.
5. 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. There are four sets of WEP Keys that you can type. Select any one of them as the WEP key.



Note: 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.

6. Click **OK** to save settings.

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.

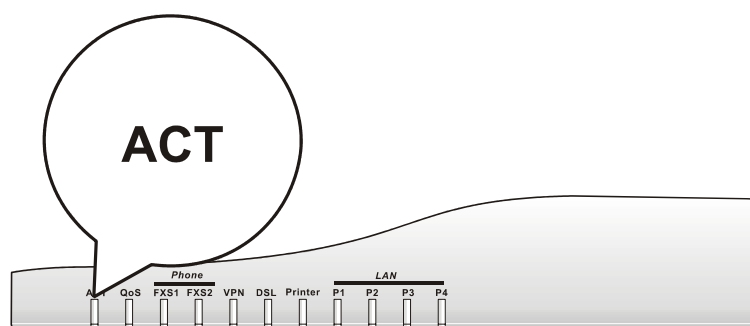
- Checking if the hardware status is OK or not.
- Checking if the network connection settings on your computer are OK or not.
- Pinging the router from your computer.
- Checking if the ISP settings are OK or not.
- Backing to factory default setting if necessary.

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 still failed, please do the steps listed below to make sure the network connection settings is OK.

For Windows

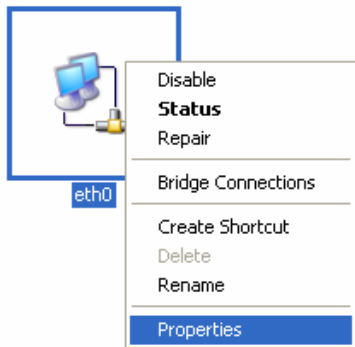


Note: The example is based on Windows XP. As to the examples for other operation systems, please refer to the similar steps or find support notes in www.draytek.com.

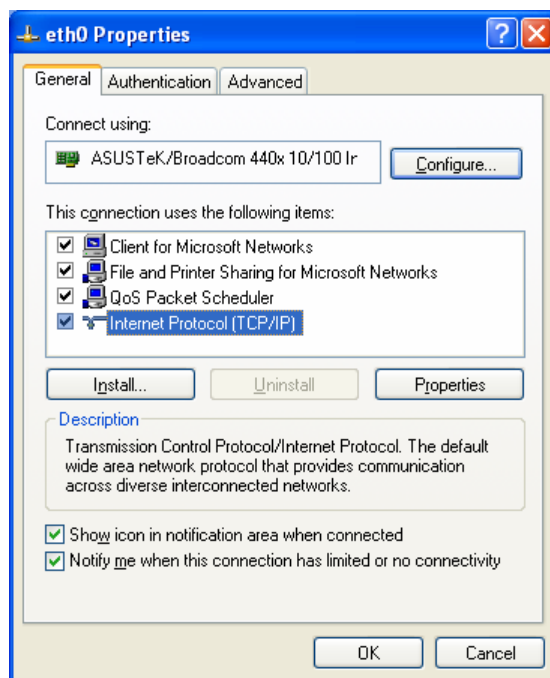
1. Go to **Control Panel** and then double-click on **Network Connections**.



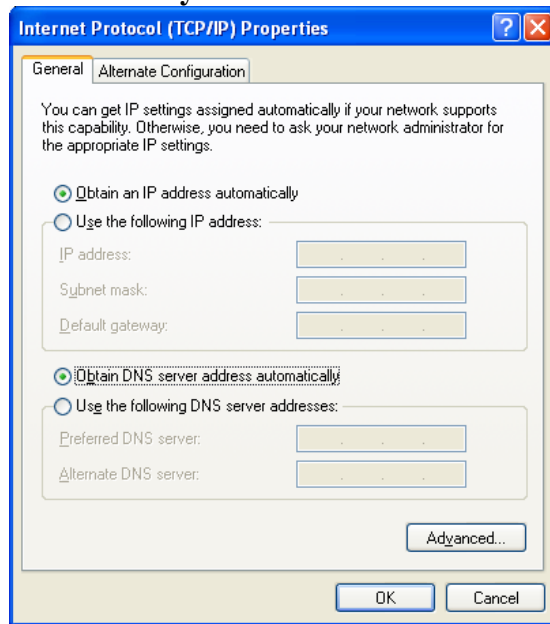
2. Right-click on **Local Area Connection** and click on **Properties**.



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

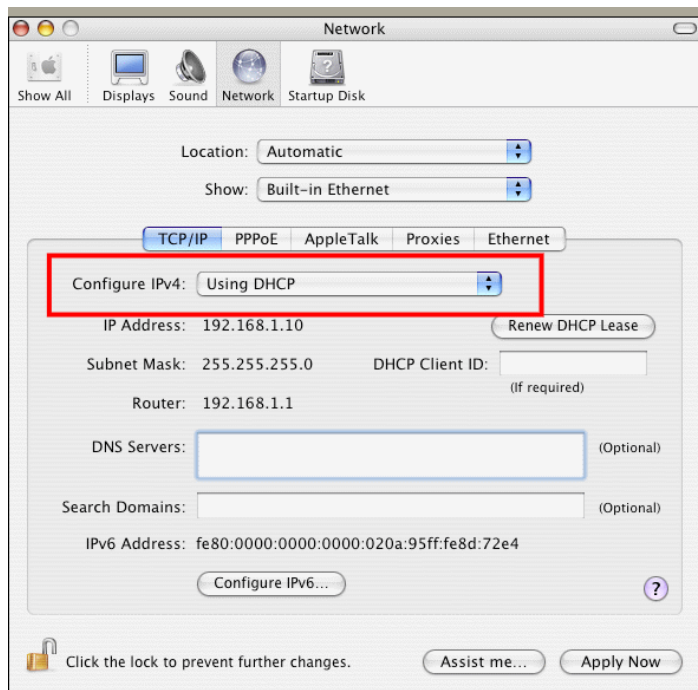


4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



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.



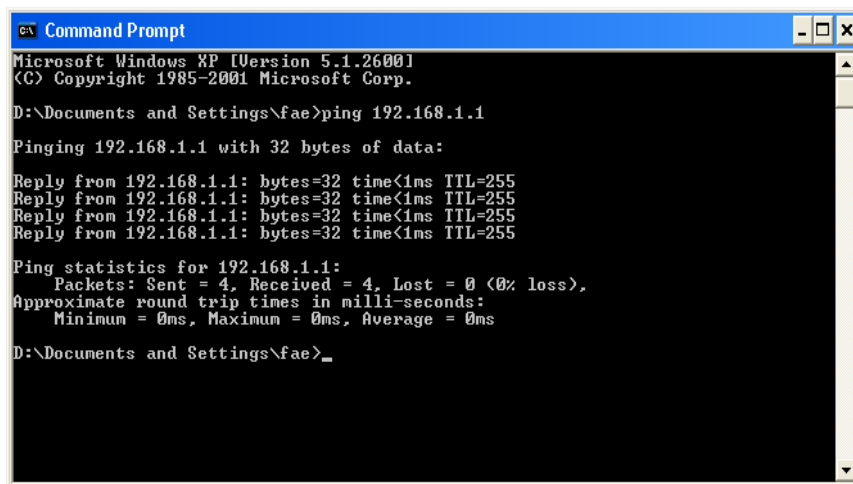
4.3 Pinging the Router from Your Computer

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.



```

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>_

```

3. Type **ping 192.168.1.1** and press [Enter]. If the link is OK, the line of “**Reply from 192.168.1.1:bytes=32 time<1ms TTL=25**” 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]. If 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 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$
```

4.4 Checking If the ISP Settings are OK or Not

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

For PPPoE 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**.

PPPoE Client Mode

PPPoE Setup
PPPoE Link ☒ Enable ☐ Disable

ISP Access Setup
ISP Name
Username
Password
Scheduler (1-15)
=> , , ,

PPP/MP Setup
PPP Authentication
☐ Always On
Idle Timeout second(s)
IP Address Assignment Method (IPCP)
Fixed IP ☐ Yes ☒ No (Dynamic IP)
Fixed IP Address
WAN IP Alias

WAN physical type
Auto negotiation

For Static or Dynamic Users

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

Quick Setup > Internet Access Setup

Static or Dynamic IP (DHCP Client)

Access Control
Broadband Access ☒ Enable ☐ Disable

Keep WAN Connection
☐ Enable PING to keep alive
PING to the IP: 0.0.0.0
PING Interval: 0 minute(s)

WAN physical type
Auto negotiation

RIP Protocol
☐ Enable RIP

BPA Setup (For Australia Only)
☐ BPA Enable
Login Server: not select
User Name:
Password:

WAN IP Network Settings
☒ Obtain an IP address automatically
Router Name:
Domain Name:
* : Required for some ISPs
☒ Default MAC Address
☐ Specify a MAC Address
MAC Address: 00 : 50 : 7F : 24 : 16 : 7D
☐ Specify an IP address WAN IP Alias
IP Address: 172.16.3.30
Subnet Mask: 255.255.255.0
Gateway IP Address: 172.16.3.1

DNS Server IP Address
Primary IP Address: 168.95.1.1
Secondary IP Address:

OK

2. Check if **WAN IP Network Settings** is set appropriately.
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.

For PPTP Users

1. Check if the **Enable** option for **PPTP Link** is selected.

Quick Setup > Internet Access Setup

PPTP Client Mode

PPTP Setup
PPTP Link ☐ Enable ☒ Disable
PPTP Server: 0.0.0.0

ISP Access Setup
ISP Name:
Username:
Password:
Scheduler (1-15)
=> , , ,

PPP Setup
PPP Authentication: PAP or CHAP
☒ Always On
Idle Timeout: -1 second(s)
IP Address Assignment Method (IPCP)
Fixed IP ☐ Yes ☒ No (Dynamic IP)
Fixed IP Address:
LAN2/WAN IP Network Settings
☒ Obtain an IP address automatically
☐ Specify an IP address
IP Address:
Subnet Mask:

WAN physical type
Auto negotiation

OK

2. Check if **PPTP Server**, **Username**, and **Password** are set correctly (must identify with the values from your ISP).

3. Check if **LAN2/WAN IP Network Settings** are set properly. If you select Specify an IP address, you have to type in the values of **IP Address** and **Subnet Mask** manually. Be sure the values that you type identify with the values from your ISP.

For L2TP Users

1. Check if the **Enable** option for **L2TP Link** is selected.

2. Check if **L2TP Server**, **Username**, and **Password** are set correctly (must identify with the values from your ISP).
3. Check if **LAN2/WAN IP Network Settings** are set properly. If you select **Specify an IP address**, you have to type in the values of **IP Address**, **Subnet Mask** and **Gateway IP Address** manually. Be sure the values that you type identify with the values from your ISP.

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.

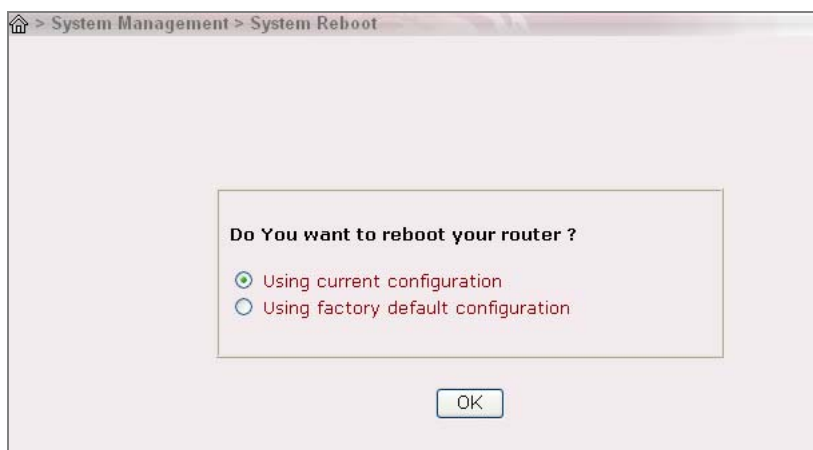


Warning: After pressing **factory default setting**, you will loose all settings you did before. Make sure you have recorded all useful settings before you pressing. The password of factory default is null.

Software Reset

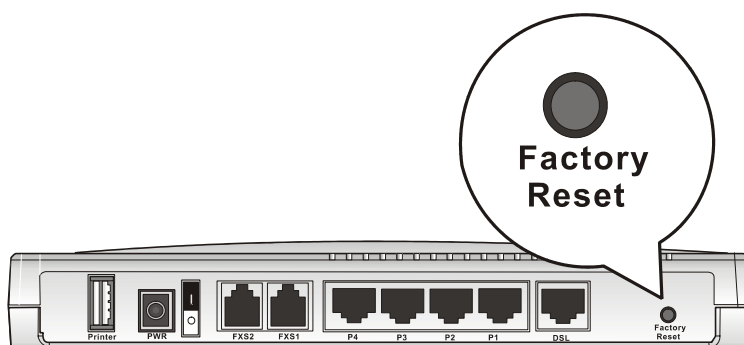
You can reset the router to factory default via Web page.

Go to **System Management** 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.



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.

Below shows the complete product list of Vigor2900 Series routers for your reference:

Model Chart

	Broadband Router	Wireless AP	ISDN Backup	VoIP
Vigor2900	✓	-	-	-
Vigor2900G	✓	✓	-	-
Vigor2900Gi	✓	✓	✓	-
Vigor2900i	✓	-	✓	-
Vigor2900V	✓	-	-	✓
Vigor2900VG	✓	✓	-	✓
Vigor2900VGi	✓	✓	✓	✓
Vigor2900Vi	✓	-	✓	✓