

Vigor 2100 Series Router Quick Start Guide

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Safety Instruction	s 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 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 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 technology, all routers will be regularly upgraded. Please consult the DrayTek web site for more information on newest firmware, tools and documents.
	nun://www.dravtek.com

http://www.draytek.com

European Community Declarations

Manufacturer:DrayTek Corp.Address:No. 26, Fu Shing Road, HuKou County, HsinChu Industrial Park, Hsin-Chu, Taiwan 303Product:Vigor2100 series Routers

DrayTek Corp. declares that Vigor2100 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 *Vigor2100V/2100VG/2100G* 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 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.

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1. Introduction

Equipped with VoIP phone ports, Vigor2100 broadband series router is an Internet access solution for your LAN. It provides you shared web surfing and countless value-added features, such as Firewall, Security, VoIP, and 802.11g Wireless LAN (up to 54Mbps for Vigor2100VG and Vigor2100G only). These are all in a reliable one-box solution.

Vigor2100V and Vigor2100VG have a "Line" port on the rear panel for connecting to a PSTN (regular analogue) line. The Loop Through option can be used to set an alternate telephone number for your contact on the PSTN, which the Vigor2100V and Vigor2100VG will dial instead of the SIP account if you lose ADSL access or power to the Vigor2100V and Vigor2100VG. Hence, the PSTN line can act as a lifeline (backup mechanism) for VoIP calls. The lifeline mechanism is activated automatically but can also be manually configured.

Characteristics

- Easy Internet-sharing of your broadband connection.
- > Robust firewall to help protect your network from external attacks.
- Making regular phone calls over your broadband connection by simply plugging in your phone.
- > QoS-assured VoIP facilities to deliver superior quality.
- > Automatic failover for your Public Switched Telephone Network (PSTN) during power cuts.
- ▶ 802.11g Compliant Wireless LAN access with security features.

1.1 Panel Explanation

1.1.1 Front and Rear View for Vigor2100V

vall	li	_					LAN		
Firev	C E-mail	WAN	VolP.	ACT	F	P2	РЗ	P4	
\wedge	\wedge	\wedge	ň	\wedge	\wedge	\wedge	\wedge	\wedge	

LED	Status	Explanation			
Firewall	on	The firewall function is active.			
Firewan	blinking	When encountering DoS attacks.			
E-mail	blinking	When detecting one or more user-defined E-mails existing on mail server.			
	orange	A normal 10Mbps connection is through its corresponding port.			
WAN	green	A normal 100Mbps connection is through its corresponding port.			
	blinking	Ethernet packets are transmitting.			
		Solid light when the handset of phone is picked up (off hooked).			
VoIP	green	Blinking per 2 seconds when phone is connected through VoIP.			
	orange	Solid light when phone call is via PSTN life line.			
ACT (Activity)	on	The router is powered on and running properly.			
	orange	A normal 10Mbps connection is through its corresponding port.			
LAN(1,2,3,4)	green	A normal 100Mbps connection is through its corresponding port.			
	blinking	Ethernet packets are transmitting.			



Interface	Description
PWR	Connect the included power adapter to the power outlet.
Line	Connect to the analog phone line for PSTN life line.
Phone	Connect to the analog phone for VoIP communication.
WAN	Connect the Cable/ADSL modem to access the Internet.
P1 - P4	Connect to the local network 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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.

	E-mail WAN	0 VvoiP AcT P 2 P 3 LAN			
LED	Status	Explanation			
WLAN	on	The Wireless LAN function is active.			
	blinking	Data packets are transmitted over Wireless LAN.			
E-mail	blinking	When detecting one or more user-defined e-mails existing on mail server.			
	orange	A normal 10Mbps connection is through its corresponding port.			
WAN	green	A normal 100Mbps connection is through its corresponding port.			
	blinking	Ethernet packets are transmitting.			
VoIP	green	Solid light when the handset of phone is picked up (off hooked). Blinking per 2 seconds when phone is connected through VoIP.			
	orange	Solid light when phone call is via PSTN life line.			
ACT (Activity)	on	The router is powered on and running properly.			
	orange	A normal 10Mbps connection is through its corresponding port.			
LAN(1,2,3,4)	green	A normal 100Mbps connection is through its corresponding port.			
	blinking	Ethernet packets are transmitting.			

1.1.2 Front and Rear View for Vigor2100VG



Interface	Description	
PWR	Connect the included power adapter to the power outlet.	
Line	Connect to the analog phone line for PSTN life line.	
Phone	Connect to the analog phone for VoIP communication.	
WAN	Connect the Cable/ADSL modem to access the Internet.	
P1 - P4	Connect to the local network 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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.	

	WLAN E-mail	Frewall AcT P2 LAN P3 LAN		
LED	Status	Explanation		
WLAN	on	The Wireless LAN function is active.		
VV LAIN	blinking	Data packets are transmitted over Wireless LAN.		
E-mail	blinking	When detecting one or more user-defined e-mails existing on mail server.		
	orange	A normal 10Mbps connection is through its corresponding port.		
WAN	green	A normal 100Mbps connection is through its corresponding port.		
	blinking	Ethernet packets are transmitting.		
T : 11	on	The firewall function is active.		
Firewall	blinking	When encountering DoS attacks.		
ACT (Activity)	on	The router is powered on and running properly.		
	orange	A normal 10Mbps connection is through its corresponding port.		
LAN(1,2,3,4)	green	A normal 100Mbps connection is through its corresponding port.		
	blinking	Ethernet packets are transmitting.		

1.1.3 Front and Rear View for Vigor2100G



Interface	Description			
PWR	Connect the included power adapter to the power outlet.			
WAN	Connect the Cable/ADSL modem to access the Internet.			
P1 - P4	Connect to the local network 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 the ACT LED begins to blink rapidly, release the button. Then the router will restart with the factory default configuration.			

1.2 Package Content





OQuick Start Guide





BAntenna for G models

4 RJ-45 Cable (Ethernet)



SRJ-11 Cable (for V / VG)



EU-type power adapter



AU/NZ-type power adapter

UK-type power adapter

USA/Taiwan-type power adapter

2. Installing Your Vigor2100 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 Vigor2100 series.
- 5. For Vigor2100VG/V, connect Phone port to a conventional analog telephone, either corded or wireless (DECT), with a RJ-11 cable.
- 6. For Vigor2100VG/V, connect Line port to land line jack with a RJ-11 cable.
- 7. Power on the router.
- 8. Check the ACT and WAN, LAN LEDs to assure network connections.

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

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.

Connect to 192.1	58.1.1 🛛 🛛 🔀
	Gen
Login to the Router W	'eb Configurator
User name:	2
Password:	
	Remember my password
	OK Cancel

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

-		Fevortes 😁 🝰 -			
0dress 💽 https://1902.1685.1.1/		Annual Contractor			🚽 🛃 Go 👘 Units 🎽 🤻
Coogle +	😸 🏹 Search 🔹	参 居 Papups okay 参 Ch	nd: • 🔍 Autolink • 🗐	• Minem (* State	~
Vigor2	100 Serie	95			Dray Tek
wick Start Wizard	System Status				
nternet Access AN IAT	Model Name Firmware Versio Build Date Time		0 series 3 11:7:11.78 2005		
isrewall ipplications iolP Vireless LAN iystem Maintenance ilagnostics	LAN MAC Address IP Address Subnet Mask DHCP Server	00-50-7F-28-F3-19 150-168.1.1 255.255.255.0 : Yes	WAN MAC Address Connection IP Address Default Gateway DNS	00-90-7F-28-F3-1A Static IP 172.16.3 (30) 172.16.3 (1) 172.16.3 (1)	
	VolP Channel SIP registrar Account ID Register Codec In Calls	1 pO No	Wireless LAN MAC Address Frequency Domain Firmware Version	00-e0-4c-81-85-d9 Europe v1.46.01.24.5.3	
	Out Calls	0			

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.

¥

Broadband Router Max dragband router Code Start Wirzed Calles Status Steps Inter login password Inter login password Select Time Zone There is no default password, For security, please choose a set of number or character (maximum 23 characters) as your password, Solect Time Zone There is no default password box. Prevent Applicasees VolP Virietiss LAN Spece Mainfornance Diagnostics Select Time Zone There is no default password box. Very Password New Password box. New Password box. Very Password New Password box.	File Edit View Favorites T	ioolis Help			A *
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State State Backet Status Indexet Status Index Extense Ak Mathematic Accesses Ak Mathematic Accesses Ak Mathematic Accesses Ak Mathematic Accesses	Google -	💌 💢 Search 🔹 🥩 📑 Popups	akay 🍟 Check - 🔍 Autolink - 🗐 Autol 19	msni* •	× *
A Back Status I. Enter login password S. Select Time Zone S. Connect to the Internet New Password box. New Password New Password New Password New Password New Password New Password Cancel A Back Net S Prich Cancel	Vigor21 Broadbar	00 Series	3		Dray Tek
An and enter if character (maximum 23 character) as your password and enter if into the Password box. 2. Select Time Zone 3. Connect to the internet 4. Summary New Password New Password Retype N		Steps	Enter login password		
All Rights Reviewed. New Password	AN IAT	2. Select Time Zone 3. Connect to the Internet	number or character (maximum 23 characters) a		
All Rights Reviewed.	Applications /olP	4. Summary	New Password	1	
All Rights Researced.	ystem Maintenance			1	
All Rights Researced.					
All Rights Researced.					-
Photos Banda			<back next=""> Finish</back>	Cancel	
Status: Ready	Status: Ready				

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

DrayTek Viger2100V - Micro	soft Internet Explorer			🖉 🗗 🔀
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3 Back + 🔘 - 📓 🔮	👔 🙆 🔎 Search 👷 Favorites ≬	🛛 🝰 🖬 · 🗾		
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Vigor21 Broadban	00 Series	See.		Dray Tek
Onick Store Winned Online Status	Steps	Select Time Zone		
Internet Access LAN NAT	Enter login password Select Time Zone S. Connect to the internet	Select the appropriate time zone for your location		
Firewall Applications	4. Summary	(GMT+08.00) Taipei		
VolP Wireless LAN System Maintenance Diagnostics				
All Rights Received. Statius: Ready		<back next=""> Frim</back>	Cancel	
Darw .				g Internet

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.

DrayTek Viger2100V - Mic	rosoft Internet Explorer			E 🗗 🔀
File Edit View Favorites	Tools Help			2
3 Back + 3 - 1	🗈 🏠 🔎 Search 👷 Fevorites 🎸	9 🙆 • 😓 📾 • 🔁		
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Vigor21 Broadba	00 Series	yer 1		Dray Tek
Guick Start Wizard	Steps	Connect to the Internet		
Internet Access LAN NAT Firewall	1. Enter login password 2. Select Time Zone 3. Connect to the Internet 4. Summary	Belect one of the following Internet Access type J ISP. If you are not sure which one you should th contact your ISP to get these information in detai	oose, please	
Applications VolP		PPP0E		
Wireless LAN		O PPTP		
System Maintenance Diagnostics		O Static P		
		O DHCP		
		<back frien<="" nexts="" td=""><td>Cancel</td><td>4</td></back>	Cancel	4
		< Date	Carter	
Status: Ready				
Done Done				🔮 Internet

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**.

DrayTek Viger2100V - Mi	icrosoft Internet Explorer			💶 🗗 🔛
File Edit View Favorites				27
G Back * 🔘 * 🖹	🗟 🟠 🔎 Search 👷 Favorites 🧧	9 🙆 · 🍃 🖬 · 🗾		
Address a http://192.168.1.1/			ビ 🔂 60 🛛 U	nka 🎽 🍖 •
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Vigor2	100 Series	yest .		ry Tek aytak.com
Guick Start Wizard Online Status	Steps	Connect to the Internet		
Leternut Access LAN NAT	1. Enter login password 2. Select Time Zone 3. Connect to the internet	Enter the user name and password provided by y	our ISP.	
Firewall Applications VoIP Wireless LAN	- PPPoE 4. Summary	Password		
System Maintenance Diagnostics		Connection Type C Atways On		
		Dial On Demand Idle Timeout 160		
		<back next=""> Finan</back>	Cancel	
Status: Ready				
Done			💣 Internet	<i>0</i> .

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.

13/ess							🕶 🛃 60 🕴 Units 🎽 🖷
Coogle -	💌 🖾 Search 🔹 🥩 📑 Populos d	kay 🏘 Chards • 🔍	Autobrik	• @Add	1.99	msn ^M ·	×
Vigor21 Broadbar	00 Series	year					Dray Tek
laith Shirt Wilcord Indice Status	Steps	Connect to the In	ternet				
nternet Accese AN	1. Enter login password 2. Select Time Zone	Enter the user nan server IP provided			P configu	rations and PPT	Þ
AT In the second	3. Connect to the internet	User Name					
oplications folP	4. Summary	Password					
Vireless LAN System Maintenance		Retype Password WAN IP Configurat					
liagnostics		O Obtain an P i	address	automatica	ily		
		P Address					
		Bubnet Mask PPTP Server IP	255	255	255	. 0	
All Rights Reserved.		< Back		vext >	Einish	Cancel	1

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.

tress a http://192.168.1.1/	🏠 🔎 Search 👷 Favorites	the case we	1080				all e	3 60 Urka * 4
loogle +	💌 🔀 Search 📼 💋 Populas d	toy 🏘 Check -	i Auto	unk - E	Autorit (#		man ¹⁴	
Vigor21(Broadban	00 Series d Router	Connect to the	Intern	et				Dray Tel
line Status	1. Enter login password 2. Select Time Zone	Enter the Static	IP conf	iguration (problided is	y your ISP		
N Trowall oplications iIP ireless LAN	3. Connect to the Internet - Static IP 4. Summary	WAN IP Subnet Mask Gateway	1	+				
stem Maintenance agnostics		Primary DNS Secondary DNS					(optional)	
		< 8a	RK .	Next>		Finish	Cancel	
All Rights Reserved.		< 0a	CK.	NEXIS		-10150	Cancel	

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

DrayTek Vigar2100V - Micro	soft Internet Explorer			🔲 🗗 🔀
File Edit View Favorites To	iols Help			1
3 Back + 3 - 1	🕜 🔎 Search 👷 Favorites 🍕	9 🙆 · 🚑 📾 · 🔁		
Address a http://152.168.1.1/				🔁 60 🕴 Unis 🎽 🆓 •
Google -	💉 💢 Search 🔹 🛷 📑 Popups o	ay 🧳 check - 🔍 Autolick - 🗐 Autol	man ¹	× *
Vigor21(Broadban		yes.		Dray Tek www.draytsk.com
Quick Start Wizard Online Status	Steps	Connect to the Internet		
Internet Access LAN NAT Firewall Applications VoiP Wireless LAN System Maintenance Diagnostics	Enter login password Select Time Zone Connect to the Internet - DHCP Summary	F your ISP require you to enter a specific host name MAC address, please enter it in. The Clone MAC A is used to copy the MAC address of your Ethernet a Mgor 2100V. Host Name (optional) MAC 00 - 50 - 7F - 28 - ((optional) Clone MAC Address	ddress button	
.eli Rights Resamed. Status: Resely		<back finsh<="" nets="" th=""><th>Cancel</th><th></th></back>	Cancel	
Done .				🔮 Internet

7. 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.

DrayTek Vigar2100V - Micro	soft Internet Explorer		
File Edit View Favorites To	ools Help		A1
3 Back + 3 - 📓 🔮	🙆 🔎 Search 👷 Favorites ≬	🖯 🍰 🗟 · 🥁	
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Coogle +	💌 💭 Search 🔹 🥩 📑 Popups	okay 🏘 Check • 🔍 Autolink • 🗇 Autolini # 🛛 📶 •	*
Vigor21	00 Series	year and a second s	Dray Tek www.draytek.com
Quick Stort Witnerd Online Status	Steps	Summary	
Internat Access LAN NAT Firewall Applications VoIP Wireless LAN System Maintenance Diagnostics	1. Enter login password 2. Select Time Zone 3. Connect to the Internet 4. Summary	Please find your settings Internet Access : DHCP Time Zone : (GMT+08:00) Taipel Click Back to modify changes if necessary. Otherwise, click Finish to save the current settings and restart the Vigor2100.	
All Bights Received. Statius: Ready		#Back Noxt> Finish Cancel	
Dans .			🔮 Internet

3.2 Wireless LAN Settings

For operating Vigor2100 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. Select **Wireless LAN**. On **Detailed Settings** group, click **General Settings** to open the following page.

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.				

- 2. Check the box **Enable Wireless LAN** to enable the wireless function.
- 3. 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
11g-only	mode if you have no idea to change the mode. The router can connect to IEE802.11g stations.
11b-only	The router can connect to IEE802.11b stations.

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.

3.2.3 Security Settings

1. Select **Wireless LAN**. On **Detailed Settings** group, click **Security** to open the following page.

Mode:	WEP Only
WPA:	
Encryption Mode:	TKIP
Pre-Shared Key(PSK)	*****
	character or 64 Hexadecimal digits for example "cfgs01a2" or
WEP:	
Encryption Mode:	64-Bit 🐱
Use	WEP Key
⊙ Key 1 :	*****
○ Key 2 :	*****
○ Key 3 :	*****
○ Key 4 :	****
leading by "0x", "0x4142333132". For 128 bit WEP Type 13 ASCII ch	rracter or 10 Hexadecimal digits for example "AB312" or

2. 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.



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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.

- 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 or a key got dynamically through 802.1x.
- 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. 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.
- 5. 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 stilled 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.

🕹 eth0 Properties 🛛 💽 🔀
General Authentication Advanced
Connect using:
B ASUSTeK/Broadcom 440x 10/100 lr
This connection uses the following items:
Elient for Microsoft Networks Elient for Microsoft Networks Gos Packet Scheduler Thernet Protocol (TCP/IP)
Install Uninstall Properties
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
✓ Show icon in notification area when connected ✓ Notify me when this connection has limited or no connectivity
OK Cancel

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

Internet	Protocol (TCP/IP) Pro	perties	<mark>?</mark> ×		
General	Alternate Configuration				
this cap	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
<u>⊙ 0</u>	Obtain an IP address automatically				
-OU;	se the following IP address:				
<u>I</u> P ad	ddress:				
Subr	net mask:				
Defa	ult gateway:				
0	Obtain DNS server address automatically				
-OU:	s <u>e</u> the following DNS server	addresses:			
Prefe	erred DNS server:	· · · · · · · ·			
Alter	nate DNS server:				
		Advance	d		
		ок са	ancel		

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.

) 🖯 🔿		Network		
how All Display	ys Sound Networ	k Startup Disk		
	Location:	Automatic	•	
	Show:	Built–in Ethernet	•	
	TCP/IP PPPo	E AppleTalk	Proxies Etherne	
Configure	IPv4: Using DI	HCP	•	
				DUCD
IP Add	dress: 192.168.	1.10	Kenev	v DHCP Lease
Subnet	Mask: 255.255.	255.0 DHC	P Client ID:	
R	outer: 192.168.	1.1	(If req	uired)
DNS Se	rvers:			(Optional)
Search Don	nains:			(Optional)
IPv6 Ade	dress: fe80:000):0000:0000:020a	95ff:fe8d:72e4	
	Configu	re IPv6		(?)
				<u> </u>
📔 Click the lo	ck to prevent furth	ner changes.	Assist me	Apply Now

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.

\varTheta 🕙 💮 Terminal — bash — 80x24	
Last login: Sat Jan 302:24:18 on ttyp1 Welcome to Darwin!	8
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		PPP/MP Setup		
PPPoE Link	📀 Enable 🔘 Disable	PPP Authentication	PAP or CHAP	
ISP Access Setup		🗹 Always On		
ISP Name	ISP Service	Idle Timeout	-1 second(s)	
Username	draytek	IP Address Assignm Fixed IP	· · ·	
Password	•••••	Fixed IP	◯ Yes ⊙ No (Dynamic IP)	
Scheduler (1-15)				
=> , , ,	,,	WAN physical type		
		Auto negotiation 💌		
-				
OK				

For Static or Dynamic Users

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

Static or Dynamic IP (DHCP Client)			
Access Control	WAN IP Network Settings		
Broadband Access 🛛 🔿 Enable 💿 Disable	O Obtain an IP address automatically		
Keep WAN Connection Enable PING to keep alive PING to the IP 0.0.0.0 PING Interval 0 WAN physical type	Router Name * Domain Name * • Required for some ISPs * • Default MAC Address Specify a MAC Address MAC Address: 00 • 50 • 7F • Specify an IP address • 00 • 01		
Auto negotiation	IP Address 0.0.0.0 Subnet Mask 0.0.0.0 Gateway 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.

PPTP Client Mode			
PPTP Setup PPTP Link Enable Disable PPTP Server 10.0.0.138 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 IP Address Subnet Mask 255.0.0.0		
ОК			

- 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.

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.

Reboot System		
	Do You want to reboot your router ?	
	Osing current configuration	
	O Using factory default configuration	

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.