



Vigor 120
ADSL2/2+ Modem
Quick Start Guide

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Safety Instructions and Approval

Safety Instructions

- Read the installation guide thoroughly before you set up the modem.
- The modem is a complicated electronic unit that may be repaired only be authorized and qualified personnel. Do not try to open or repair the modem yourself.
- Do not place the modem in a damp or humid place, e.g. a bathroom.
- Do not stack the modems.
- The modem should be used in a sheltered area, within a temperature range of +5 to +40 Celsius.
- Do not expose the modem 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 modem, please follow local regulations on conservation of the environment.

Warranty

We warrant to the original end user (purchaser) that the modem will be free from any defects in workmanship or materials for a period of one (1) year 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 modem 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

All modems 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: Vigor120

DrayTek Corp. declares that Vigor120 is 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 2004/108/EC 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 2006/95/EC by complying with the requirements set forth in EN60950-1.



This product is designed for the DSL network throughout the EC region and Switzerland..

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1. Introduction

Targeting requirement for residential users, Vigor120 is an ADSL2/2+ enabled integrated access device. With downstream speed up to 12Mbps (ADSL2) or 24Mbps (ADSL2+), Vigor120 provides exceptional bandwidth for Internet access.



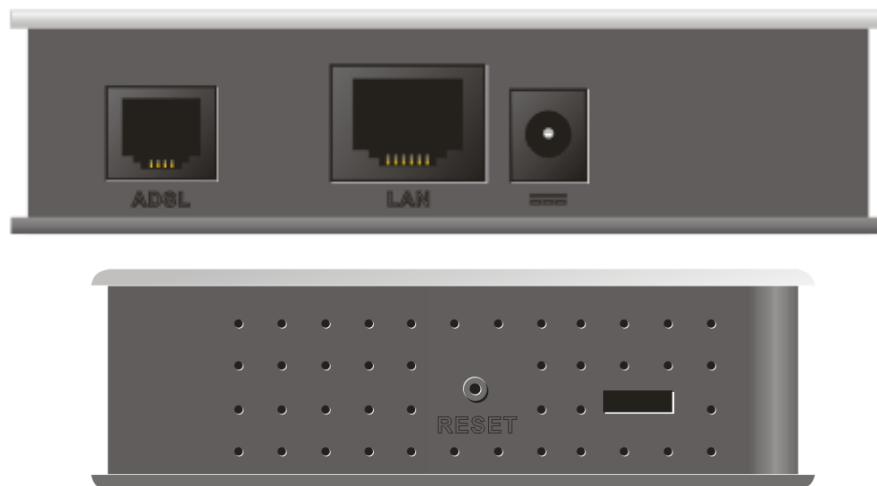
The available bandwidth depends on the Internet Service Provider.


To secure your network, the Vigor120 provides an advanced firewall with advanced features, such as NAT with multi VPN pass-through, Stateful Packet Inspection (SPI) to offer network reliability by detecting and prohibiting malicious penetrating packets or DoS attacks, user-configurable web filtering for parental control against network abuse etc.

1.1 Panel Explanation



LED	Status	Explanation
Power	On	The modem is powered on.
	Off	The modem is powered off.
ACT	Off	The system is not ready or is failed.
	Blinking	The system is ready and can work normally.
LAN	On	A normal connection is through its corresponding port.
	Off	LAN is disconnected.
	Blinking	Data is transmitting (sending/receiving).
DSL	On	DSL connection synchronized.
	Blinking	DSL connection is synchronizing.
INTERNET	On	Internet connection is established.
	Off	Internet connection is not established.
	Blinking	Data is transmitting (sending/receiving).

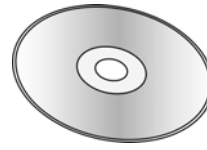


Interface	Description
ADSL	Connector for accessing the Internet through ADSL 2+.
LAN	Connector for local networked devices.
	Connector for a power adapter.
RESET	Restore the default settings. Usage: Turn on the router. Press the button and keep for more than 10 seconds. Then the router will restart with the factory default configuration.

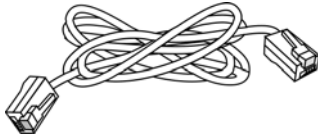
1.2 Package Content



1 Quick Start Guide



2 CD

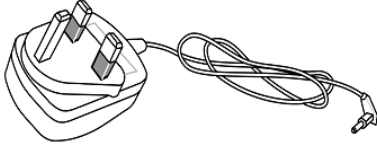


3 RJ-45 Cable (Ethernet)

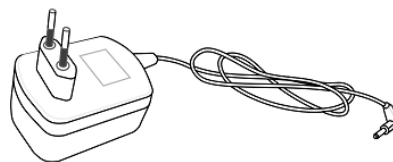


4 RJ-11 to RJ-11 Cable

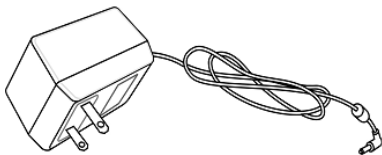
- 5** The type of the power adapter depends on the country that the modem will be installed:



UK-type power adapter



EU-type power adapter



USA/Taiwan-type power adapter

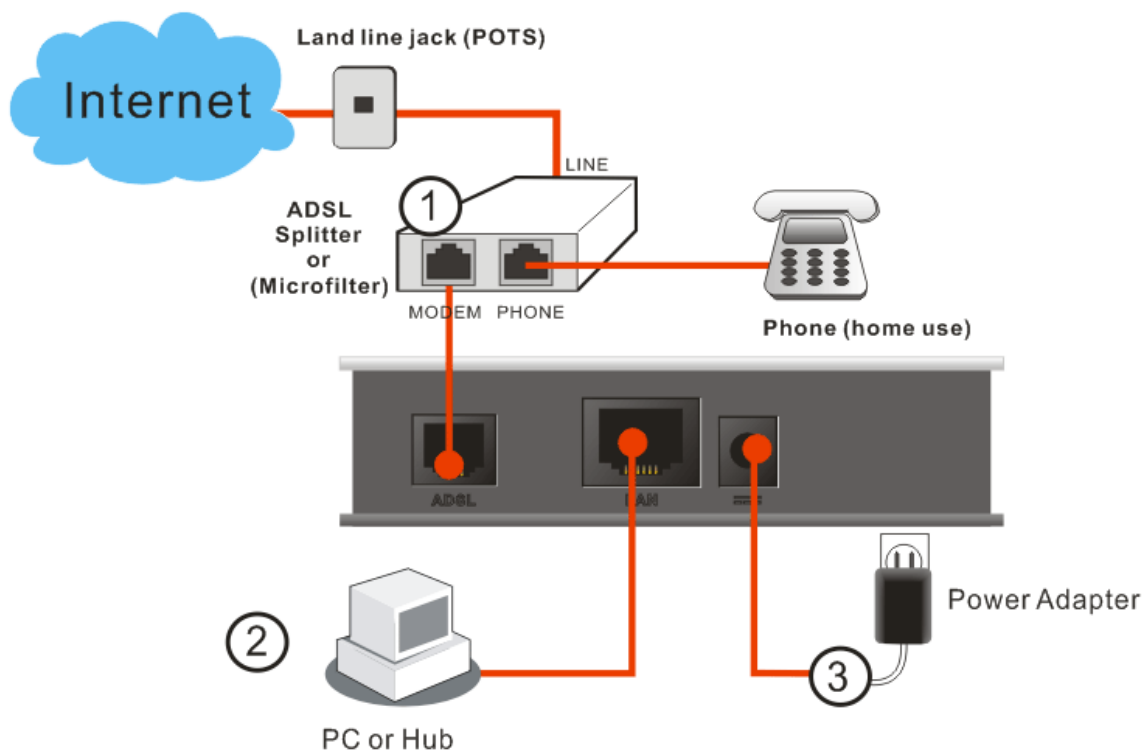
2. Installing Your Modem

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

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

1. Connect the DSL interface to the MODEM port of external ADSL splitter with an ADSL line cable.
2. Connect the LAN port to your computer with a RJ-45 cable.
3. Connect one end of the power adapter to the Power port of this device. Connect the other end to the wall outlet of electricity.
4. Power on the modem.
5. Check the **POWER**, **ACT**, **LAN**, **DSL** and **INTERNET** LEDs to assure network connections.

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



3. Configuring Web Pages

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

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



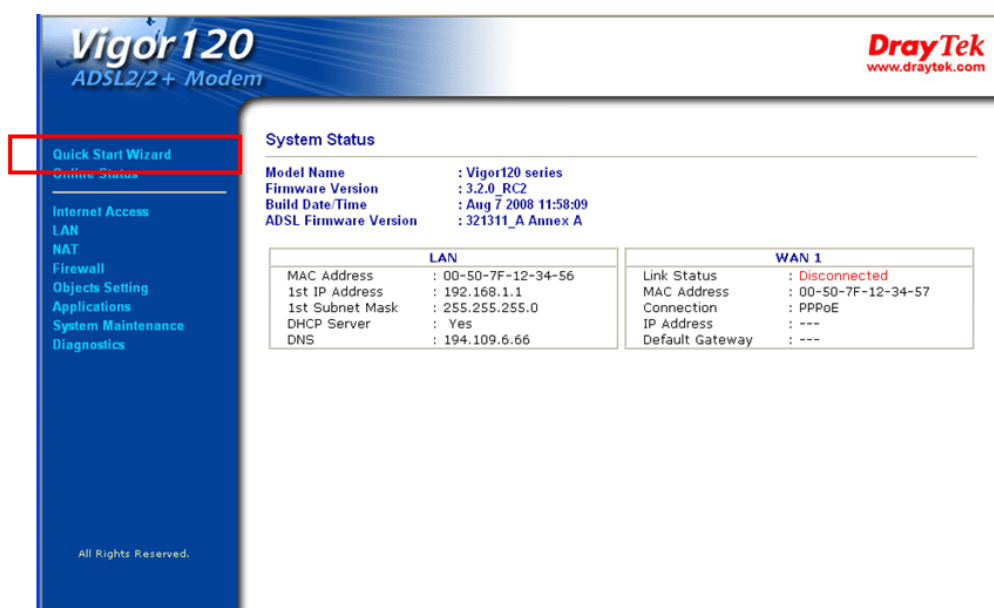
Notice: You may either simply set up your computer to get IP dynamically from the modem or set up the IP address of the computer to be the same subnet as **the default IP address of Vigor modem 192.168.1.1**. For the detailed information, please refer to the later section - Trouble Shooting of the guide.

2. Open a web browser on your PC and type **http://192.168.1.1**. A pop-up window will open to ask for username and password. Do not type any word on the window and click **OK** for next screen.



Notice: If you fail to access to the web configuration, please go to “Trouble Shooting” for detecting and solving your problem.

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



4. Enter the login password on the field of **New Password** and retype it on the field of **Confirm Password**. Then click **Next** to continue.

Quick Start Wizard

Enter login password

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

New Password	<input type="text"/>
Confirm Password	<input type="text"/>

< Back Next > Finish Cancel

5. On the next page as shown below, please select the appropriate Internet access type according to the information from your ISP. Then click **Next** for next step.

Quick Start Wizard

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		
Second DNS	<input type="text"/>	

< Back Next > Finish Cancel

PPPoE or PPPoA: if you click PPPoE or PPPoA as the protocol, please manually enter the Username/Password provided by your ISP. Then click **Next**.

Quick Start Wizard

Set PPPoE / PPPoA

User Name	<input type="text" value="84005755@hinet.net"/>
Password	<input type="password" value="••••••••"/>
Confirm Password	<input type="password" value="••••••••"/>

1483 Bridged: if you click 1483 Bridged, you will get the following page. Please type in all the information originally provided by your ISP. Then click **Next** for next step.

Quick Start Wizard

Connect to Internet

VPI	<input type="text" value="0"/>	<input type="button" value="Auto detect"/>
VCI	<input type="text" value="33"/>	
Protocol / Encapsulation	<input type="text" value="1483 Bridged IP LLC"/>	
Fixed IP	<input type="radio"/> Yes <input checked="" type="radio"/> No(Dynamic IP)	
IP Address	<input type="text"/>	
Subnet Mask	<input type="text"/>	
Default Gateway	<input type="text"/>	
Primary DNS	<input type="text"/>	
Second DNS	<input type="text"/>	

1483 Routed IP: if you click 1483 Routed IP, you will get the following page. Please type in all the information originally provided by your ISP. Then click **Next** for next step.

Quick Start Wizard

Connect to Internet

VPI	<input type="text" value="0"/>	<input type="button" value="Auto detect"/>
VCI	<input type="text" value="34"/>	
Protocol / Encapsulation	<input type="text" value="1483 Routed IP LLC"/>	
Fixed IP	<input type="radio"/> Yes <input checked="" type="radio"/> No(Dynamic IP)	
IP Address	<input type="text" value="0.0.0.0"/>	
Subnet Mask	<input type="text" value="0.0.0.0"/>	
Default Gateway	<input type="text"/>	
Primary DNS	<input type="text"/>	
Second DNS	<input type="text"/>	

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

Quick Start Wizard

Please confirm your settings:

VPI:	0
VCI:	33
Protocol / Encapsulation:	1483 Route LLC
Fixed IP:	No
Primary DNS:	
Secondary DNS:	

4. Trouble Shooting

This section will guide you to solve abnormal situations if you cannot access into the Internet after installing the modem 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 modem 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 modem 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 DSL/LAN cable connections.
Refer to “**2. Installing Your Modem**” for details.
2. Power on the modem. Make sure the **POWER LED**, **ACT LED** and **LAN LED** are bright.
If not, it means that there is something wrong with the hardware status. Simply back to “**2. Installing Your Modem**” 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



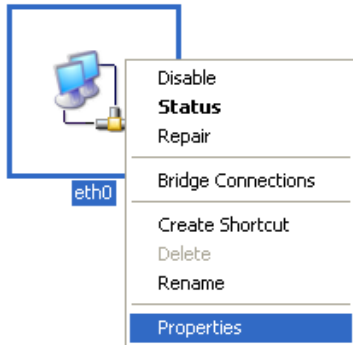
The example is based on Windows XP. As to the examples for other operation systems, please refer to the similar steps or find support notes in www.draytek.com.

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

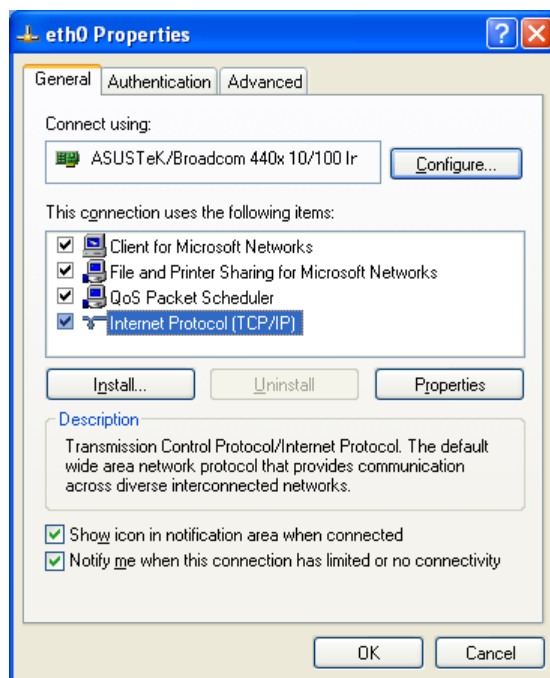


Network Connections

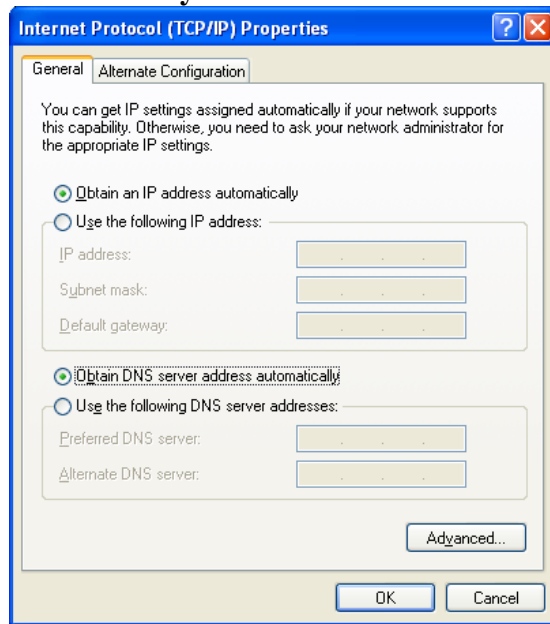
2. Right-click on **Local Area Connection** and click on **Properties**.



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

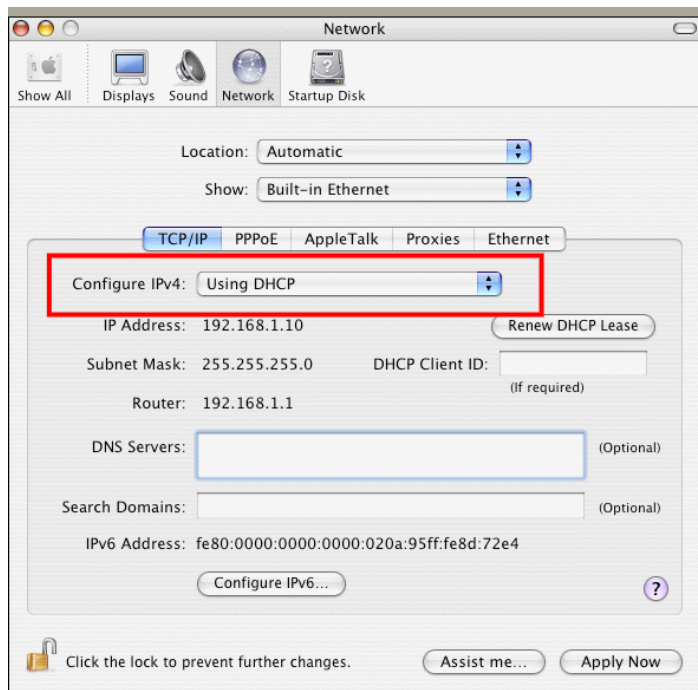


4. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



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.



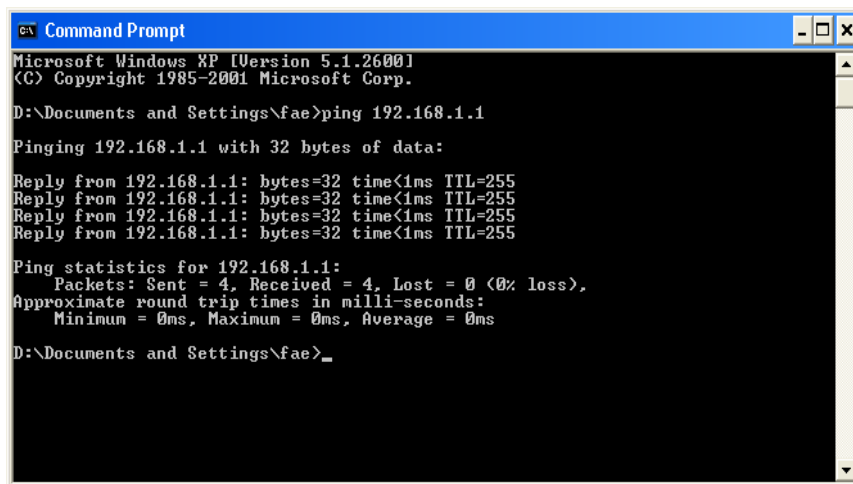
4.3 Pinging the Modem from Your Computer

The default gateway IP address of the modem is 192.168.1.1. For some reason, you might need to use “ping” command to check the link status of the modem. **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 modem 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/Vista). 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=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]. 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** group and then check whether the ISP settings are set correctly.



For PPPoE/PPPoA Users

1. Check if the **Enable** option is selected.
2. Check if **Username** and **Password** are entered with correct values that you **got from your ISP**.

Internet Access >> PPPoE / PPPoA

The image shows a web-based configuration interface for a router. The main title is "PPPoE / PPPoA Client Mode". Below it, there are two main sections. The first section, "PPPoE/PPPoA Client", is highlighted with a red box and contains a radio button for "Enable" which is selected, and a radio button for "Disable". Below this is the "DSL Modem Settings" section with fields for VPI (0), VCI (33), Encapsulating Type (LLC/SNAP), Protocol (PPPoE), and Modulation (Multimode). The second section, "ISP Access Setup", is also highlighted with a red box and contains fields for ISP Name, Username, and Password. Below these are options for PPP Authentication (PAP or CHAP), a checkbox for "Always On", and an Idle Timeout field set to -1 second(s). There is also a section for "IP Address From ISP" with a "WAN IP Alias" button and options for Fixed IP (Yes/No) where "No (Dynamic IP)" is selected. Below this is a section for MAC Address with options for "Default MAC Address" (selected) and "Specify a MAC Address". The MAC Address field is pre-filled with 00.50.7F.12.34.57. At the bottom, there is an "Index(1-15) in Schedule Setup:" field with a dropdown menu and an "OK" button.

For MPoA Users

1. Check if the **Enable** option for MPoA is enabled.

[Internet Access >> MPoA \(RFC1483/2684\)](#)

MPoA (RFC1483/2684) Mode
MPoA (RFC1483/2684) ☒ Enable ☐ Disable

DSL Modem Settings
Multi-PVC channel: Channel 1
Encapsulation: 1483 Routed IP LLC
VPI: 0
VCI: 33
Modulation: Multimode

WAN IP Network Settings
☐ Obtain an IP address automatically
Router Name: *
Domain Name: *
*: Required for some ISPs
☒ Specify an IP address
IP Address: 172.16.3.147
Subnet Mask: 255.255.0.0
Gateway IP Address: 172.16.3.4

RIP Protocol
☐ Enable RIP

Bridge Mode
☐ Enable Bridge Mode

MAC Address
☒ Default MAC Address
☐ Specify a MAC Address
MAC Address: 00 50 7F 12 34 57

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

2. Check if all parameters of **DSL Modem Settings** are entered with correct value that provided by your ISP. Especially, check if the encapsulation is selected properly or not (it should be the same with the setting on **Quick Start Wizard**).
3. Check if **IP Address**, **Subnet Mask** and **Gateway** are set correctly (must identify with the values from your ISP) if you choose **Specify an IP address**.

4.5 Backing to Factory Default Setting If Necessary

Sometimes, a wrong connection can be improved by returning to the default settings. Try to reset the modem 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 modem to factory default via Web page.

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

Reboot System

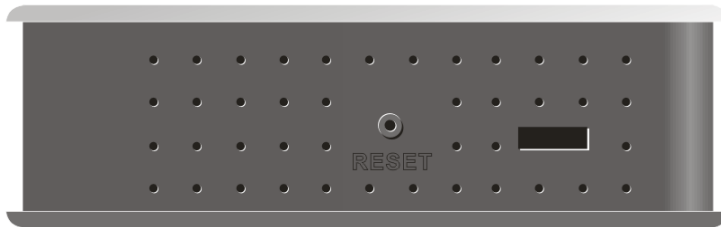
Do you want to reboot your router ?

- ☒ Using current configuration
- ☐ Using factory default configuration

OK

Hardware Reset

While the modem is running, press the **Reset** button and hold for more than 5 seconds. When you see the **ACT** LED blinks rapidly, please release the button. Then, the modem will restart with the default configuration.



After restore the factory default setting, you can configure the settings for the modem again to fit your personal request.

4.6 Contacting Your Dealer

If the modem 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.