USER MANUAL

DSL-2740R

VERSION 1.0

D-Link®

BROADBAND

FCC

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 must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

Table of Contents

Package Contents

- DSL-2740R Wireless N ADSL2+ Modem Router
- Power Adapter
- CD-ROM with User Manual
- One twisted-pair telephone cable used for ADSL connection
- One straight-through Ethernet cable
- One Quick Installation Guide

Warning: The Router must be used with the power adapter included with the device.

System Requirements

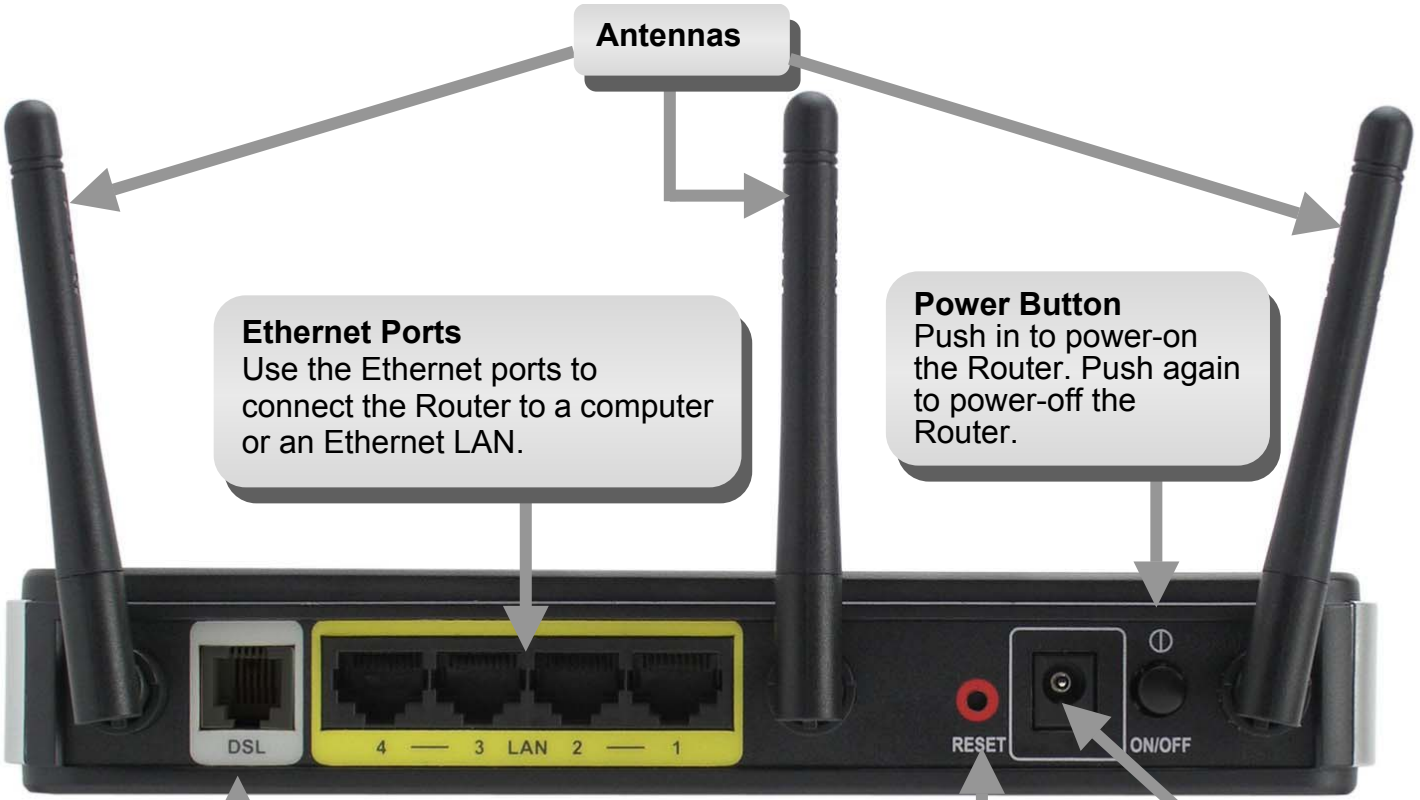
- ADSL Internet service
- Computer with:
  - 200MHz Processor
  - 64MB Memory
  - CD-ROM Drive
  - Ethernet Adapter with TCP/IP Protocol Installed
  - Internet Explorer v6 or later, FireFox v1.5, or Safari 1.3 or above
  - Windows 2000/XP/Vista
- D-Link Click'n Connect Utility

Features

- **PPP (Point-to-Point Protocol) Security –** The Router supports PAP (Password Authentication Protocol) and CHAP (Challenge Handshake Authentication Protocol) for PPP connections. The Router also supports MSCHAP.
- **DHCP Support –** Dynamic Host Configuration Protocol automatically and dynamically assigns all LAN IP settings to each host on your network. This eliminates the need to reconfigure every host whenever changes in network topology occur.
- **Network Address Translation (NAT) –** For small office environments, the Router allows multiple users on the LAN to access the Internet concurrently through a single Internet account. This provides Internet access to everyone in the office for the price of a single user. NAT improves network security in effect by hiding the private network behind one global and visible IP address. NAT address mapping can also be used to link two IP domains via a LAN-to-LAN connection.
- **TCP/IP (Transfer Control Protocol/Internet Protocol) –** The Router supports TCP/IP protocol, the language used for the Internet. It is compatible with access servers manufactured by major vendors.
- **RIP-1/RIP-2 –** The Router supports both RIP-1 and RIP-2 exchanges with other routers. Using both versions lets the Router to communicate with all RIP enabled devices.
- **Static Routing –** This allows you to select a data path to a particular network destination that will remain in the routing table and never “age out”. If you wish to define a specific route that will always be used for data traffic from your LAN to a specific destination within your LAN (for example to another router or a server) or outside your network (to an ISP defined default gateway for instance).
- **Default Routing –** This allows you to choose a default path for incoming data packets for which the destination address is unknown. This is particularly useful when/if the Router functions as the sole connection to the Internet.
- **ATM (Asynchronous Transfer Mode) –** The Router supports Bridged Ethernet over ATM (RFC1483), IP over ATM (RFC1577), and PPP over ATM (RFC 2364).
- **Precise ATM Traffic Shaping –** Traffic shaping is a method of controlling the flow rate of ATM data cells. This function helps to establish the Quality of Service for ATM data transfer.
- **High Performance –** Very high rates of data transfer are possible with the Router. Up to 8 Mbps downstream bit rate using the G.dmt standard.
- **Full Network Management –** The Router incorporates SNMP (Simple Network Management Protocol) support for web-based management and text-based network management via an RS-232 or Telnet connection.
- **Telnet Connection –** The Telnet enables a network manager to access the Router’s management software remotely.
- **Easy Installation –** The Router uses a web-based graphical user interface program for convenient management access and easy set up. Any common web browser software can be used to manage the Router.

Hardware Overview

Connections



Hardware Overview

LEDs

LED	Description
Power	A steady green light indicates the unit is powered on. When the device is powered off this remains dark. Lights steady green during power on self-test (POST). Once the connection status has been settled, the light will light steady green. If the indicator lights steady red after the POST, the system has failed and the device should be rebooted.
LAN	A solid green light indicates a valid link on startup. This light will blink when there is activity currently passing through the Ethernet port.
WLAN	A solid green light indicates a valid link on startup. This light will blink when there is activity currently passing through the Wireless LAN.
DSL	A steady green light indicates a valid ADSL connection. This will light after the ADSL negotiation process has been settled. A blinking green light indicates activity on the WAN (ADSL) interface.

Internet	A solid green light indicates the WAN IP address from IPCP or DHCP and DSL is up or a static IP address is configured and PPP negotiation has been successfully completed. If the indicator blinks green, this means the Router is active. If the Router power is off, this remains dark. A solid red light indicates there is no DHCP response, no PPPoE response, PPPoE authentication has failed, and/or there is no IP.

Installation

This section will walk you through the installation process. Placement of the Router is very important. Do not place the Router in an enclosed area such as a closet, cabinet, or in the attic or garage.

Before You Begin

Please read and make sure you understand all the prerequisites for proper installation of your new Router. Have all the necessary information and equipment on hand before beginning the installation.

Installation Notes

In order to establish a connection to the Internet it will be necessary to provide information to the Router that will be stored in its memory. For some users, only their account information (Username and Password) is required. For others, various parameters that control and define the Internet connection will be required. You can print out the two pages below and use the tables to list this information. This way you have a hard copy of all the information needed to setup the Router. If it is necessary to reconfigure the device, all the necessary information can be easily accessed. Be sure to keep this information safe and private.

Low Pass Filters
Since ADSL and telephone services share the same copper wiring to carry their respective signals, a filtering mechanism may be necessary to avoid mutual interference. A low pass filter device can be installed for each telephone that shares the line with the ADSL line. These filters are easy to install passive devices that connect to the ADSL device and/or telephone using standard telephone cable. Ask your service provider for more information about the use of low pass filters with your installation.

Operating Systems
The DSL-2740R uses an HTML-based web interface for setup and management. The Web configuration manager may be accessed using any operating system capable of running web browser software, including Windows 98 SE, Windows ME, Windows 2000, Windows XP, and Windows Vista.

Web Browser
Any common Web browser can be used to configure the Router using the Web configuration management software. The program is designed to work best with more recently released browsers such as Opera, Microsoft Internet Explorer® version 6.0, Netscape Navigator® version 6.2.3, or later versions. The Web browser must have JavaScript enabled. JavaScript is enabled by default on many browsers. Make sure JavaScript has not been disabled by other software (such as virus protection or web user security packages) that may be running on your computer.

Ethernet Port (NIC Adapter)
Any computer that uses the Router must be able to connect to it through the Ethernet port on the Router. This connection is an Ethernet connection and therefore requires that your computer be equipped with an Ethernet port as well. Most notebook computers are now sold with an Ethernet port already installed. Likewise, most fully assembled desktop computers come with an Ethernet NIC adapter as standard equipment. If your computer does not have an Ethernet port, you must install an Ethernet NIC adapter before you can use the Router. If you must install an adapter, follow the installation instructions that come with the Ethernet NIC adapter.

Additional Software
It may be necessary to install software on your computer that enables the computer to access the Internet. Additional software must be installed if you are using the device a simple bridge. For a bridged connection, the information needed to make and maintain the Internet connection is stored on another computer or gateway device, not in the Router itself.

If your ADSL service is delivered through a PPPoE or PPPoA connection, the information needed to establish and maintain the Internet connection can be stored in the Router. In this case, it is not necessary to install software on your computer. It may however be necessary to change some settings in the device, including account information used to identify and verify the connection.

All connections to the Internet require a unique global IP address. For bridged connections, the global IP settings must reside in a TCP/IP enabled device on the LAN side of the bridge, such as a PC, a server, a gateway device such as a router or similar firewall hardware. The IP address can be assigned in a number of ways. Your network service provider will give you instructions about any additional connection software or NIC configuration that may be required.

Information you will need from your ADSL service provider

Username
This is the Username used to log on to your ADSL service provider's network. Your ADSL service provider uses this to identify your account.

Password
This is the Password used, in conjunction with the Username above, to log on to your ADSL service provider's network. This is used to verify the identity of your account.

WAN Setting / Connection Type
These settings describe the method your ADSL service provider uses to transport data between the Internet and your computer. Most users will use the default settings. You may need to specify one of the following WAN Setting and Connection Type configurations (Connection Type settings listed in parenthesis):

- PPPoE/PPPoA (PPPoE LLC, PPPoE VC-Mux, PPPoA LLC, or PPPoA VC-Mux)
- Dynamic IP Address (1483 Bridged IP LLC or 1483 Bridged IP VC-Mux)
- Static IP Address (1483 Bridged IP LLC, 1483 Bridged IP VC Mux, 1483 Routed IP LLC, 1483 Routed IP VC-Mux)
- Bridge Mode (1483 Bridged IP LLC or 1483 Bridged IP VC Mux)

Modulation Type
ADSL uses various standardized modulation techniques to transmit data over the allotted signal frequencies. Some users may need to change the type of modulation used for their service. The default DSL modulation (Autosense) used for the Router automatically detects all types of ADSL, ADSL2, and ADSL2+ modulation.

Security Protocol
This is the method your ADSL service provider will use to verify your Username and Password when you log on to their network. Your Router supports the PAP and CHAP protocols.

VPI
Most users will not be required to change this setting. The Virtual Path Identifier (VPI) is used in conjunction with the Virtual Channel Identifier (VCI) to identify the data path between your ADSL service provider's network and your computer. If you are setting up the Router for multiple virtual connections, you will need to configure the VPI and VCI as instructed by your ADSL service provider for the additional connections. This setting can be changed in the WAN Settings window of the web management interface.

VCI
Most users will not be required to change this setting. The Virtual Channel Identifier (VCI) used in conjunction with the VPI to identify the data path between your ADSL service provider's network and your computer. If you are setting up the Router for multiple virtual connections, you will need to configure the VPI and VCI as instructed by your ADSL service provider for the additional connections. This setting can be changed in the WAN Settings window of the web management interface.

Information you will need about DSL-2740R

Username
This is the Username needed access the Router's management interface. When you attempt to connect to the device through a web browser you will be prompted to enter this Username. The default Username for the Router is "admin." The user cannot change this.

Password
This is the Password you will be prompted to enter when you access the Router's management interface. The default Password is "admin." The user may change this.

LAN IP addresses for the DSL-2740R
This is the IP address you will enter into the Address field of your web browser to access the Router's configuration graphical user interface (GUI) using a web browser. The default IP address is 192.168.1.1. This may be changed to suit any IP address scheme the user desires. This address will be the base IP address used for DHCP service on the LAN when DHCP is enabled.

LAN Subnet Mask for the DSL-2740R
This is the subnet mask used by the DSL-2740R, and will be used throughout your LAN. The default subnet mask is 255.255.255.0. This can be changed later.

Information you will need about your LAN or computer:

Ethernet NIC
If your computer has an Ethernet NIC, you can connect the DSL-2740R to this Ethernet port using an Ethernet cable. You can also use the Ethernet ports on the DSL-2740R to connect to other computer or Ethernet devices.

DHCP Client status
Your Router is configured, by default, to be a DHCP server. This means that it can assign an IP address, subnet mask, and a default gateway address to computers on your LAN. The default range of IP addresses the DSL-2740R will assign are from 192.168.1.2 to 192.168.1.254. Your computer (or computers) needs to be configured to obtain an IP address automatically (that is, they need to be configured as DHCP clients.)

It is recommended that you collect and record this information here, or in some other secure place, in case you have to re-configure your ADSL connection in the future.

Once you have the above information, you are ready to setup and configure your DSL-2740R.

Device Installation

The DSL-2740R connects two separate physical interfaces, an ADSL (WAN) and an Ethernet (LAN) interface. Place the Router in a location where it can be connected to the various devices as well as to a power source. The Router should not be located where it will be exposed to moisture or excessive heat. Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard. As with any electrical appliance, observe common sense safety procedures.

The Router can be placed on a shelf or desktop, ideally you should be able to see the LED indicators on the front if you need to view them for troubleshooting.

Power on Router

The Router must be used with the power adapter included with the device.

1. Insert the AC Power Adapter cord into the power receptacle located on the rear panel of the Router and plug the adapter into a suitable nearby power source.
2. Depress the Power button into the on position. You should see the Power LED indicator light up and remain lit.
3. If the Ethernet port is connected to a working device, check the LAN LED indicators to make sure the connection is valid. The Router will attempt to establish the ADSL connection. If the ADSL line is connected and the Router is properly configured, the DSL LED should light up after several seconds. If this is the first time installing the device, some settings may need to be changed before the Router can establish a connection.

Factory Reset Button

The Router may be reset to the original factory default settings by using a ballpoint or paperclip to gently push down the reset button in the following sequence:

1. Ensure the Router is powered on.
2. Press and hold the reset button on the back of the device for approximately 5 to 8 seconds.
3. This process should take around 1 to 2 minutes.

Remember that this will wipe out any settings stored in flash memory including user account information and LAN IP settings. The device settings will be restored to the factory default IP address **192.168.1.1** and the subnet mask is **255.255.255.0**, the default management Username is “admin” and the default Password is “admin.”

Network Connections

Connect ADSL Line

Use the ADSL cable included with the Router to connect it to a telephone wall socket or receptacle. Plug one end of the cable into the ADSL port (RJ-11 receptacle) on the rear panel of the Router and insert the other end into the RJ-11 wall socket. If you are using a low pass filter device, follow the instructions included with the device or given to you by your service provider. The ADSL connection represents the WAN interface, the connection to the Internet. It is the physical link to the service provider's network backbone and ultimately to the Internet.

Connect Router to Ethernet

The Router may be connected to a single computer or Ethernet device through the 10BASE-TX Ethernet port on the rear panel. Any connection to an Ethernet concentrating device such as a switch or hub must operate at a speed of 10/100 Mbps only. When connecting the Router to any Ethernet device that is capable of operating at speeds higher than 10Mbps, be sure that the device has auto-negotiation (NWay) enabled for the connecting port. Use standard twisted-pair cable with RJ-45 connectors. The RJ-45 port on the Router is a crossed port (MDI-X). Follow standard Ethernet guidelines when deciding what type of cable to use to make this connection. When connecting the Router directly to a PC or server use a normal straight-through cable. You should use a crossed cable when connecting the Router to a normal (MDI-X) port on a switch or hub. Use a normal straight-through cable when connecting it to an uplink (MDI-II) port on a hub or switch. The rules governing Ethernet cable lengths apply to the LAN to Router connection. Be sure that the cable connecting the LAN to the Router does not exceed 100 meters.

Hub or Switch to Router Connection

Connect the Router to an uplink port (MDI-II) on an Ethernet hub or switch with a straight-through cable. If you wish to reserve the uplink port on the switch or hub for another device, connect to any on the other MDI-X ports (1x, 2x, etc.) with a crossed cable.

Computer to Router Connection

You can connect the Router directly to a 10/100BASE-TX Ethernet adapter card (NIC) installed on a PC using the Ethernet cable provided.

Setup

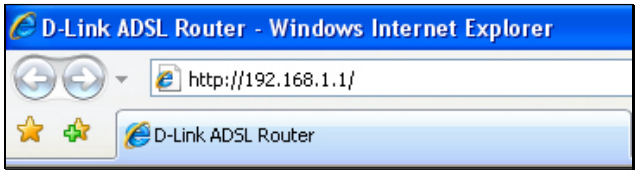
This section will show you how to set up and configure your new D-Link Router using the Web-based configuration utility.

Web-based Configuration Utility

Connect to the Router

To configure the WAN connection used by the Router it is first necessary to communicate with the Router through its management interface, which is HTML-based and can be accessed using a web browser. The easiest way to make sure your computer has the correct IP settings is to configure it to use the DHCP server in the Router. The next section describes how to change the IP configuration for a computer running a Windows operating system to be a DHCP client.

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (**192.168.1.1**).



Type **"admin**" for the User Name and "**admin**" in the Password field. If you get a Page Cannot be Displayed error, please refer to the Troubleshooting section for assistance.

Setup Wizard

This chapter is concerned with using your computer to configure the WAN connection. The following chapter describes the various windows used to configure and monitor the Router including how to change IP settings and DHCP server setup.

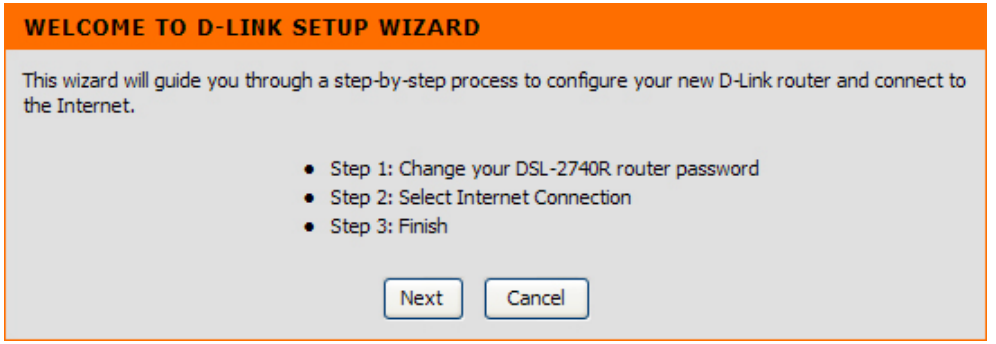
SETUP WIZARD

Click the **Setup Wizard** button in the middle of the top of the window of the Router's opening page to launch a series of setup windows.

SETUP WIZARD – OPENING WINDOW

The first window of the Setup Wizard lists the basic steps in the process. These steps are as follows:

1. Change the Router password.
2. Configure the connection to the Internet.
3. Save the new configuration settings and reboot the system.



SETUP WIZARD – CHANGE YOUR ROUTER PASSWORD

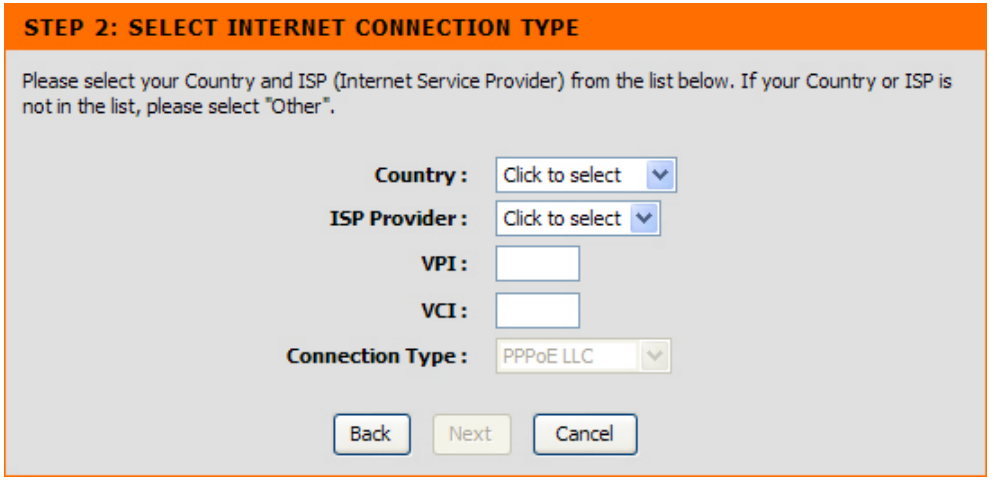
This window of the Setup Wizard is used to change the Router password. D-Link recommends to help secure your network, the user change the Current Password from the factory default “admin.” The New Password should be between 1 and 15 alphanumeric characters. Once you have filled out the fields in this window, including re-typing the new password in the Confirm Password field, click the **Next** button to continue.

If you do not want to change the password, click the **Skip** button to proceed to the next step.

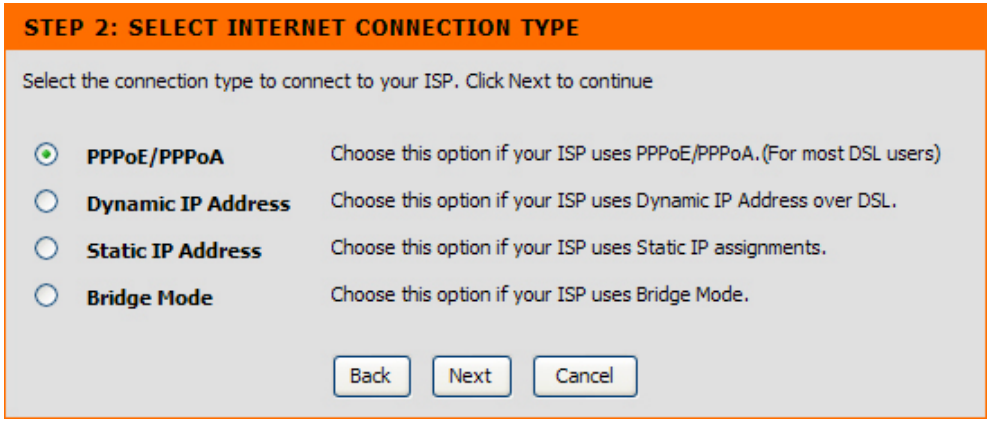
SETUP WIZARD – SELECT THE INTERNET CONNECTION TYPE
Now use the drop-down menus to select the Country, ISP Provider, and Connection Type used for the Internet connection, and enter VPI and VCI values if applicable. Your ISP has given this information to you—any information that is not required for your provider will automatically be grayed out in this window and subsequent Setup Wizard windows.

The Connection Type options are *1483 Bridged IP LLC*, *1483 Bridged IP VC-Mux, 1483 Routed IP LLC*, *1483 Routed IP VC-Mux*, *PPPoE LLC*, *PPPoE VC-Mux*, *PPPoA LLC*, and *PPPoA VC-Mux*.

Click the **Next** button when you are finished to proceed to the next Setup Wizard window.



SETUP WIZARD – SELECT THE INTERNET CONNECTION TYPE
If the following Setup Wizard window appears, please select the connection type used by your ISP and then click the **Next** button. Most users, however, will be sent directly to a Setup Wizard window for their specific Internet connection type based on the information entered in the previous Setup Wizard window.

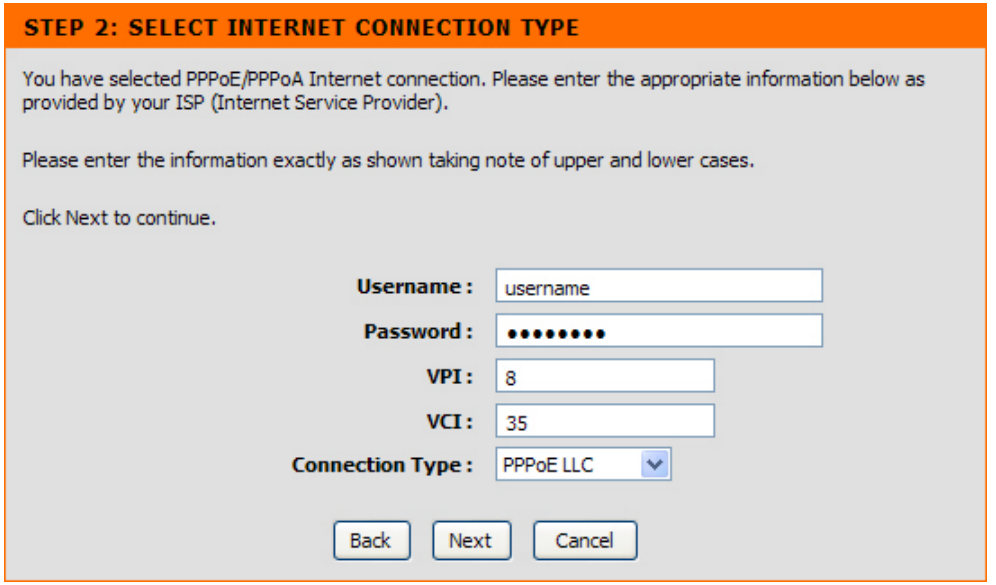


SETUP WIZARD – PPPOE/PPPOA CONFIGURATION

Type in the User Name and Password used to identify and verify your account to the ISP. If you are instructed to change the VPI or VCI number, type in the correct setting in the available entry fields. Most users will not need to change these settings. The Internet connection cannot function if these values are incorrect.

Some users may have to adjust the Connection Type from the drop-down menu at the bottom of this Setup Wizard window. The available connection and encapsulation types are *PPPoE LLC*, *PPPoE VC-Mux*, *PPPoA LLC*, and *PPPoA VC-Mux*.

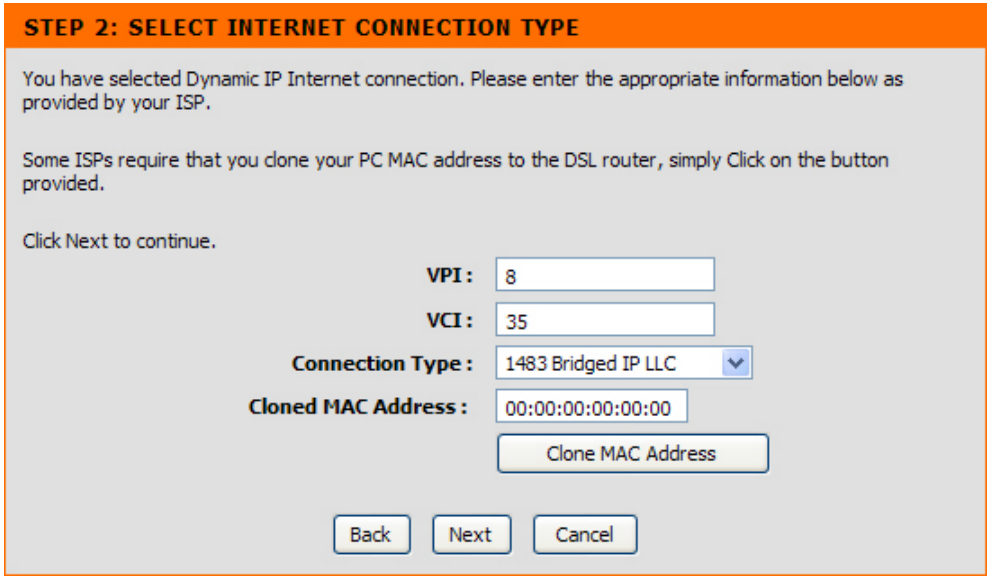
Click **Next** to go to the last Setup Wizard window.



SETUP WIZARD – DYNAMIC IP CONFIGURATION

If you are instructed to change the VPI or VCI numbers, type in the correct setting in the available entry fields. The Internet connection cannot function if these values are incorrect. Select the specific Connection Type from the drop-down menu. The available connection and encapsulation types are *1483 Bridged IPLLC* and *1483 Bridged IP VC-Mux*. You may want to copy the MAC address of your Ethernet adapter to the Router. Some ISPs record the unique MAC address of your computer's Ethernet adapter when you first access their network. This can prevent the Router (which has a different MAC address) from being allowed access to the ISPs network (and the Internet). To clone the MAC address of your computer's Ethernet adapter, click the **Clone MAC Address** button. This will copy the information to a file used by the Router to present to the ISP's server used for DHCP.

Click **Next** to go to the last Setup Wizard window.

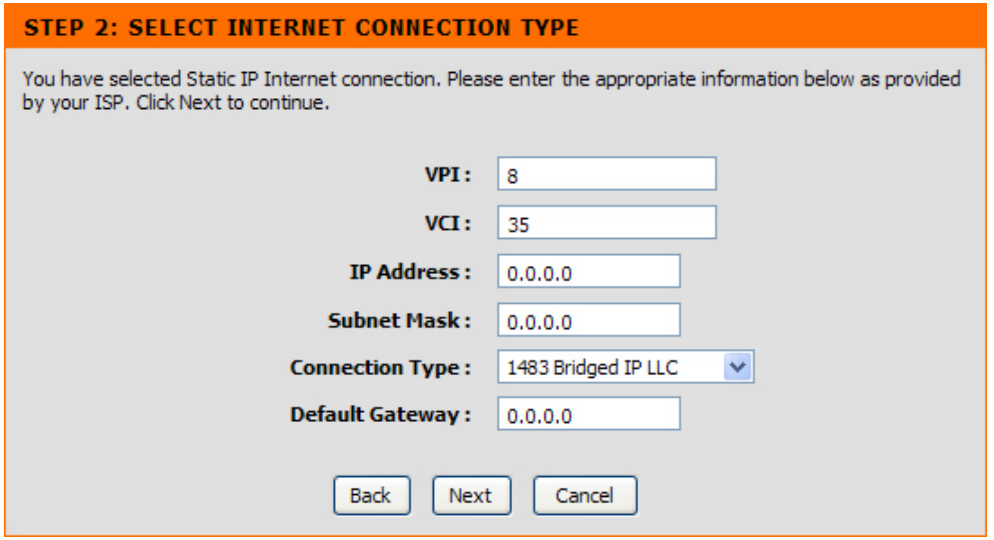


SETUP WIZARD – STATIC IP CONFIGURATION

Enter values for VPI, VCI, IP Address, Subnet Mask, Default Gateway IP address, Preferred DNS Server IP address, and Alternate DNS Server IP address as instructed by your ISP. The Internet connection cannot function if these values are incorrect.

Select the specific Connection Type from the drop-down menu. The available connection and encapsulation types are *1483 Bridged IP LLC*, *1483 Bridged IP VC-Mux*, *1483 Routed IP LLC*, and *1483 Routed IP VC-Mux*.

Click **Next** to go to the last Setup Wizard window.

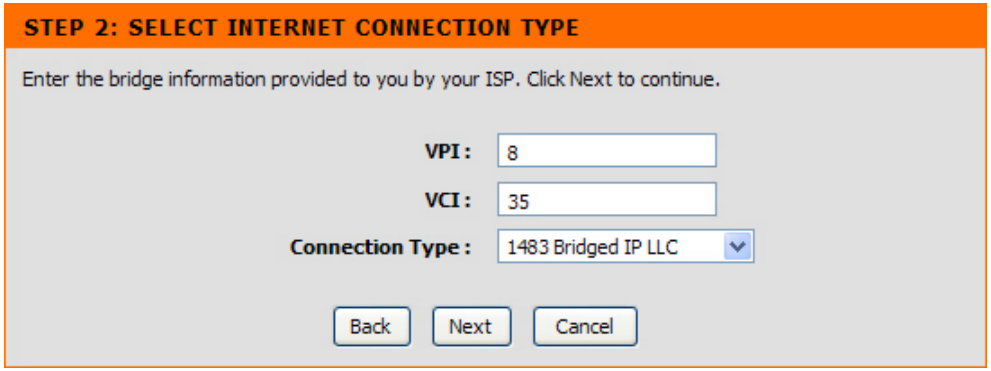


SETUP WIZARD – BRIDGE MODE CONFIGURATION

If you are instructed to change the VPI or VCI numbers, type in the correct setting in the available entry fields. The Internet connection cannot function if these values are incorrect.

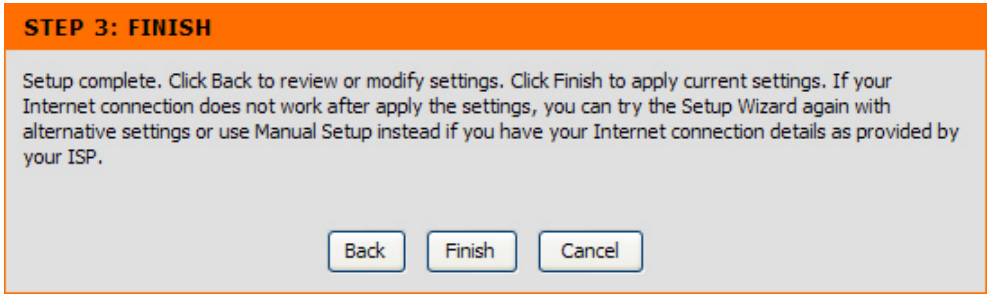
Select the specific Connection Type from the drop-down menu. The available connection and encapsulation types are *1483 Bridged IP LLC* and *1483 Bridged IP VC-Mux*.

Click **Next** to go to the last Setup Wizard window.



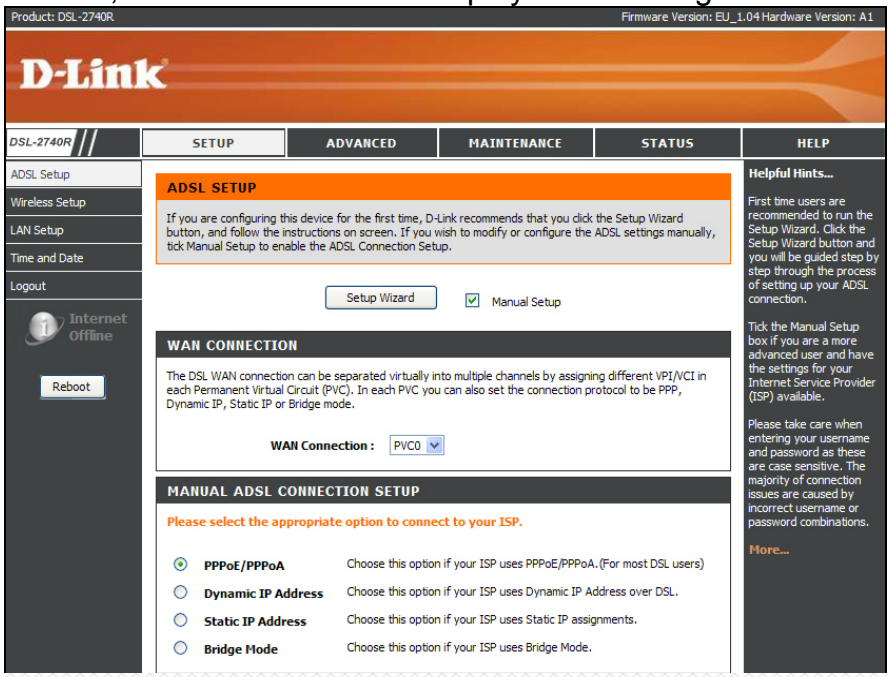
SETUP WIZARD – FINISH

Finally you can confirm that the setup process is completed. If you are satisfied that you have entered all the necessary information correctly, click the **Finish** button to save the new configuration. If you need to change settings from a previous window, click the **Back** button.



ADSL Setup

To access the **ADSL Setup** window, simply login to the Router or click either **ADSL Setup** in the **Setup** directory or **Setup** on the tool bar at the top of the Web manager window. The **Manual Setup** check box is selected by default. If not, tick the check box to display the following window:

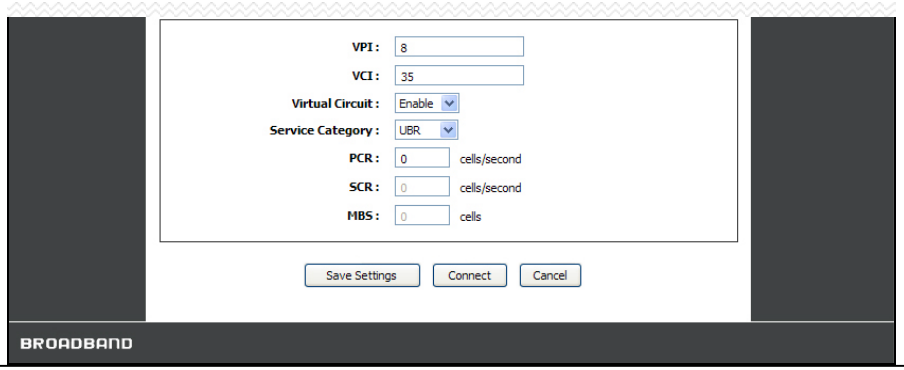


To configure the Router's basic configuration settings without running the Setup Wizard, you can access the windows used to configure ADSL Setup, LAN Setup, and Time and Date settings directly from the **Setup** directory.

To access the **ADSL Setup** windows for Manual ADSL Connection Setup for PPPoE/PPPoA, Dynamic IP Address, Static IP Address, and Bridge Mode, click on the **ADSL Setup** link button on the left side of the first window that appears when you successfully access the web manager.

The section at the bottom of the window is the universal settings for the ADSL Setup. If you are instructed to change the VPI or VCI values, type in the values assigned for your account. Virtual Circuit and Service Category drop-down list are set at their default values for now. These can be used later if you are configuring multiple virtual circuits for your ADSL service. Enter the PCR, SCR and MBS values if you are instructed by your ISP.

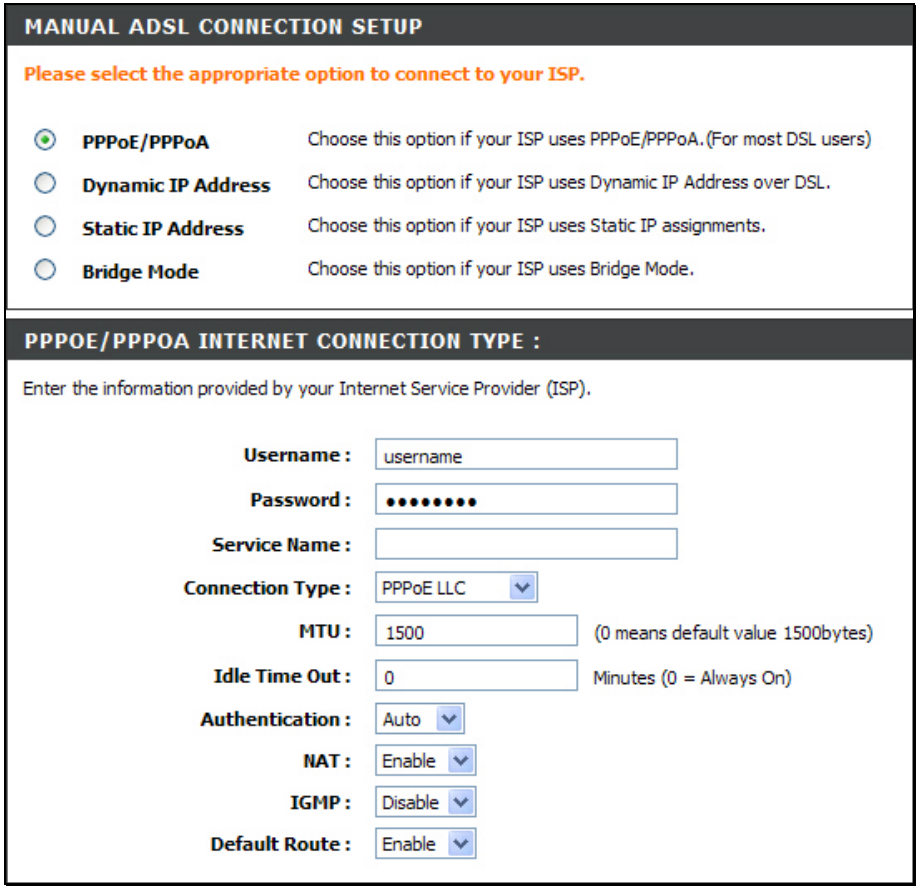
Click the PPPoE/PPPoA radio button to access the first Manual ADSL Connection Setup window:



PPPoE/PPPoA

To configure a PPPoE or PPPoA type WAN connection, follow these steps:

1. Type the Username and Password used for your ADSL account. A typical User Name will be in the form “user1234@isp.co.uk.” The Password may be assigned to you by your ISP or you may have selected it when you set up the account with your ISP. The Service Name field is used for the name of your Internet Service Provider. This is optional.
2. Choose the Connection Type from the drop-down menu. This defines both the connection protocol and encapsulation method used for your ADSL service. The available options are *PPPoE LLC*, *PPPoE VC-Mux, PPPoA LLC* and *PPPoA VC-Mux.* If you have not been provided specific information for the Connection Type setting, leave the default setting.
3. Leave the MTU value at the default setting unless you have specific reasons to change this.
4. Some users will want to set an Idle Time Out. This is an age-out value, in minutes, before the Router times out.
5. Choose the correct Authentication type from the drop-down list. Most users will want to leave the setting on *Auto*. *PAP* and *CHAP* are the other two options. The *Auto* setting will automatically detect the correct type of authentication.
6. **NAT** should remain *Enable*. If you disable NAT, you will not be able to use more than one computer for Internet connections. If you are using multiple virtual connections, NAT functions system-wide, therefore if it is disabled, NAT will be disabled on all connections.
7. **IGMP** is set to *Disable* by default. Select *Enable* to allow IGMP packets to go through the WAN interface in both directions.
8. Leave the **Default Route** enabled if you want to use the Router as

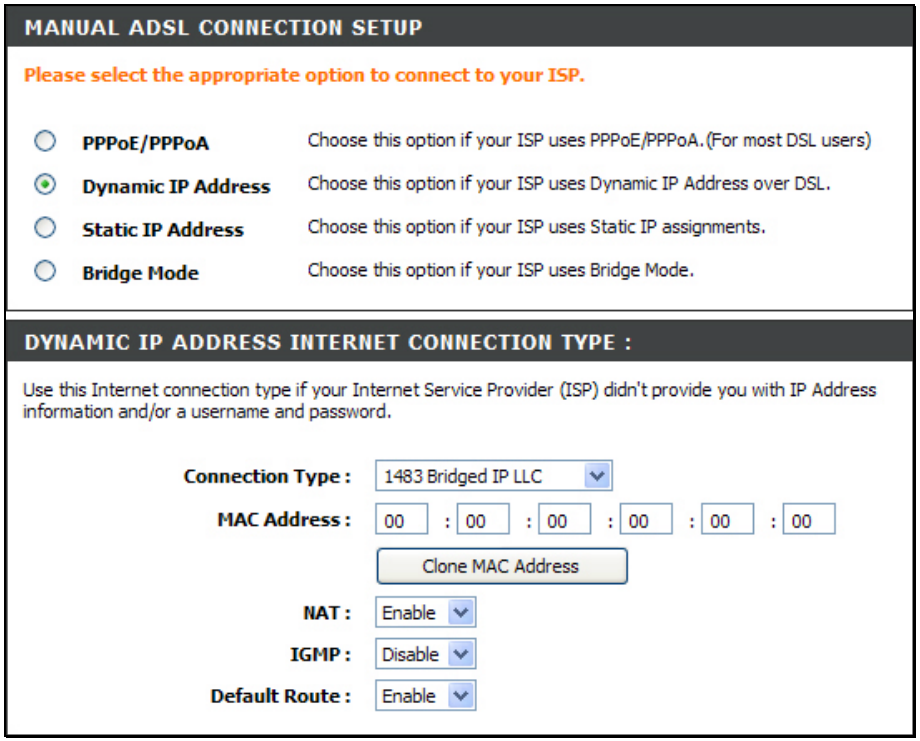


the default route to the Internet for your LAN. Whenever a computer on the LAN attempts to access the Internet, the Router becomes the Internet gateway to the computer. If you have an alternative route for Internet traffic you may disable this without effecting the Router's connection.

9. When you are satisfied that all the WAN settings are configured correctly, click the **Save Settings** button to save the changes.
10. Click the **Connect** button at the bottom of this window to establish the WAN connection.

Dynamic IP Address

A Dynamic IP Address connection configures the Router to automatically obtain its global IP address from a DHCP server on the ISP's network. The service provider assigns a global IP address from a pool of addresses available to the service provider. Typically the IP address assigned has a long lease time, so it will likely be the same address each time the Router requests an IP address.



To configure a Dynamic IP Address WAN connection, follow these steps:

1. Choose the Connection Type from the drop-down menu. This defines both the connection protocol and encapsulation method used for your ADSL service. The available options are *1483 Bridged IP LLC* and *1483 Bridged IP VC-Mux.* If you have not been provided specific information for the Connection Type setting, leave the default setting.
2. Some ISPs record the unique MAC Address of your computer's Ethernet adapter when you first access their network. This can prevent the Router (which has a different MAC address) from being allowed access to the ISPs network (and the Internet). To clone the MAC address of your computer's Ethernet adapter, click the **Clone MAC Address** button.
3. **NAT** should remain *Enable*. If you disable NAT, you will not be able to use more than one computer for Internet connections. If you are using multiple virtual connections, NAT functions system-wide, therefore if it is disabled, NAT will be disabled on all connections.
4. **IGMP** is set to *Disable* by default. Select *Enable* to allow IGMP packets to go through the WAN interface in both directions.
5. Leave the **Default Route** enabled if you want to use the Router as the default route to the Internet for your LAN. Whenever a computer on the LAN attempts to access the Internet, the Router becomes the Internet gateway to the computer. If you have an

effecting the Router's connection.

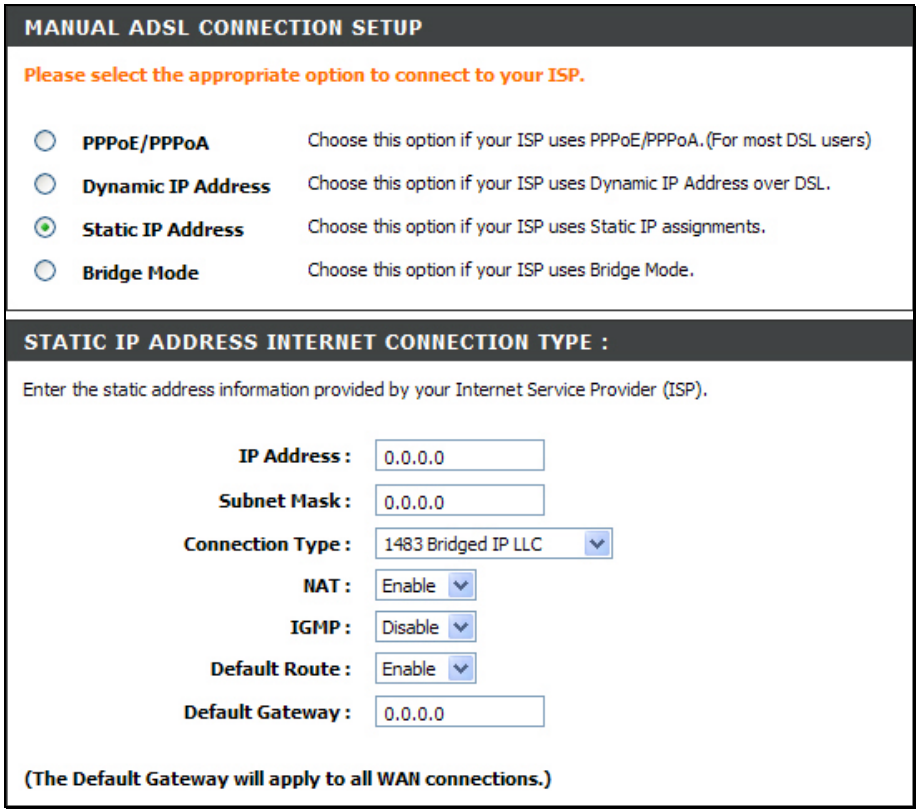
6. When you are satisfied that all the WAN settings are configured correctly, click the **Save Settings** button to save the changes.
7. Click the **Connect** button at the bottom of this window to establish the WAN connection.

Static IP Address

When the Router is configured to use Static IP Address assignment for the WAN connection, you must manually assign a global IP Address, Subnet Mask, and Default Gateway IP address used for the WAN connection.

To configure a Static IP Address WAN connection, follow these steps:

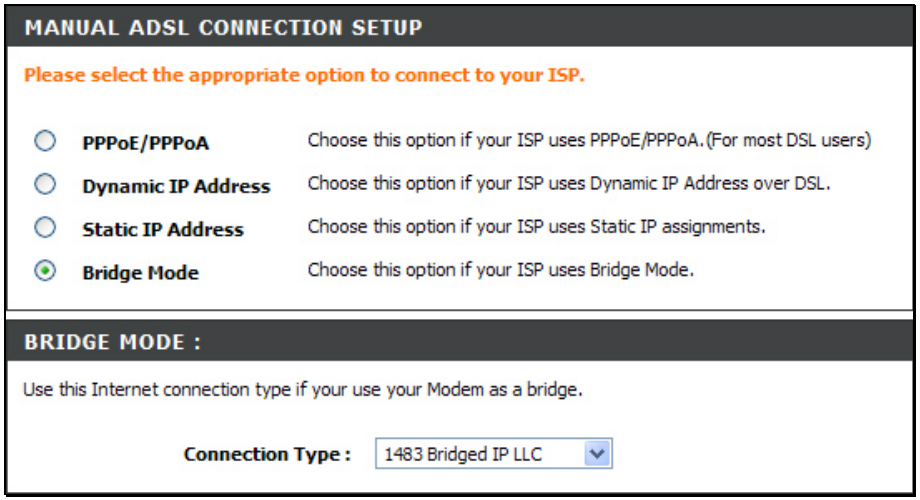
1. Change the IP Address, Subnet Mask, and Default Gateway as instructed by your ISP. These are the global IP settings for the WAN interface. This is the “visible” IP address of your account. Your ISP should have provided these IP settings to you.
2. Choose the Connection Type from the drop-down menu. This defines both the connection protocol and encapsulation method used for your ADSL service. The available options are *1483 Bridged IP LLC*, *1483 Bridged IP VC-Mux*, *1483 Routed IP LLC*, and *1483 Routed IP VC-Mux.* If you have not been provided specific information for this setting, leave the default setting.
3. NAT should remain *Enable*. If you disable NAT, you will not be able to use more than one computer for Internet connections. If you are using multiple virtual connections, NAT functions system-wide, therefore if it is disabled, NAT will be disabled on all connections.
4. IGMP is set to *Disable* by default. Select *Enable* to allow IGMP packets to go through the WAN interface in both directions.
5. Leave the Default Route enabled if you want to use the Router as the default route to the Internet for your LAN. Whenever a computer on the LAN attempts to access the Internet, the Router becomes the Internet gateway to the computer. If you have an alternative route for Internet traffic you may disable this without effecting the Router’s connection.



6. When you are satisfied that all the WAN settings are configured correctly, click the **Save Settings** button to save the changes.
7. Click the **Connect** button at the bottom of this window to establish the WAN connection.

Bridge Mode

For Bridged connections it will be necessary for most users to install additional software on any computer that will use the Router for Internet access. The additional software is used for the purpose of identifying and verifying your account, and then granting Internet access to the computer requesting the connection. The connection software requires the user to enter the User Name and Password for the ISP account. This information is stored on the computer, not in the Router.



To configure a Bridge Mode WAN connection, follow these steps:

1. Choose the Connection Type from the drop-down menu. This defines both the connection protocol and encapsulation method used for your ADSL service. The available options are *1483 Bridged IP LLC* and *1483 Bridged IP VC-Mux*. If you have not been provided specific information for this setting, leave the default setting.
2. When you are satisfied that all the WAN settings are configured correctly, click the **Save Settings** button to save the changes.
3. Click the **Connect** button at the bottom of this window to connect to your ISP.

Wireless Setup

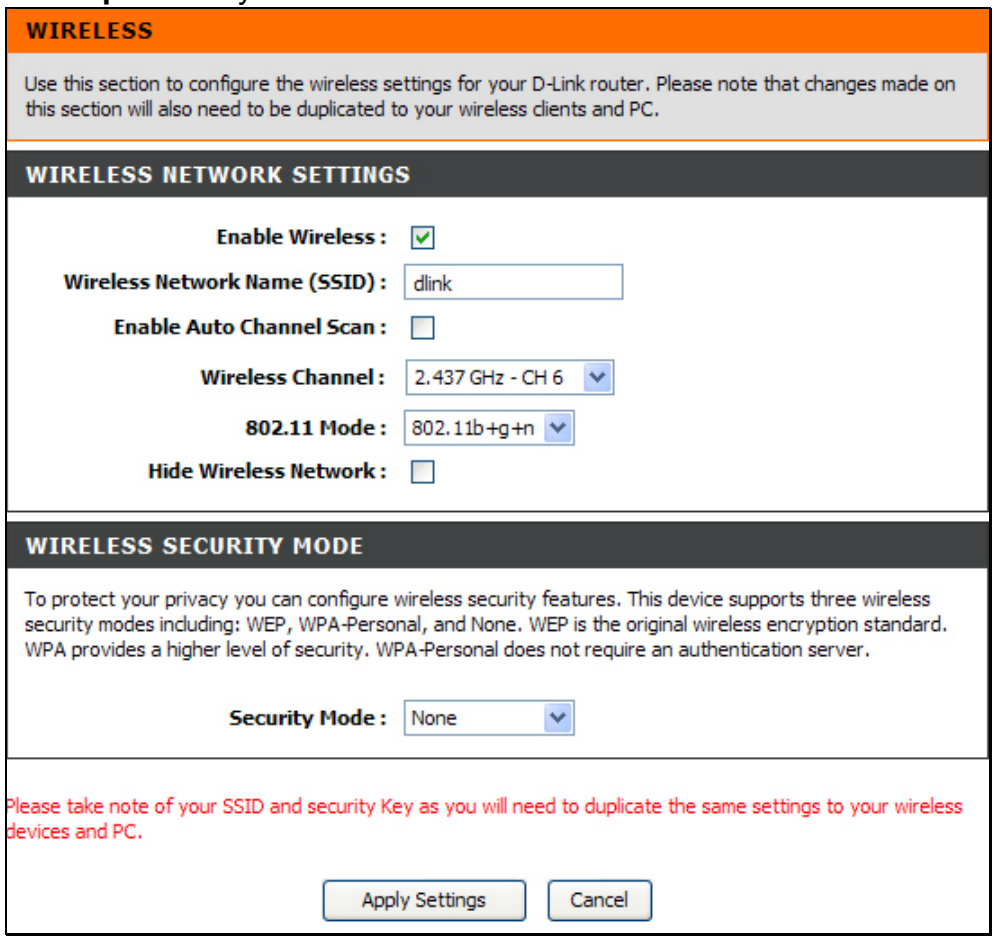
To access the **Wireless Setup** window, click the **Wireless Setup** button in the **Setup** directory.

The two essential settings for wireless LAN operation are the Wireless Network Name (SSID) and Wireless Channel. The SSID (Service Set Identifier) is used to identify a group of wireless LAN components. The SSID can be visible (broadcast) or hidden (not broadcast).

Follow the instructions below to change wireless network settings.

1. The Wireless LAN is enabled by default. To disable the wireless interface, click to deselect the **Enable Wireless** check box. If the wireless interface has been disabled, click the **Enable Wireless** check box again to select it.
2. The **Wireless Network Name (SSID)** can be changed to suit your wireless network. Remember that any wireless device using the access point must have the same SSID and use the same channel.
3. If you want the Router to scan the available channel automatically, tick the **Enable Auto Channel Scan** check box.
4. The **Wireless Channel** may be changed to channels that are available in your region. Channels available for wireless LAN communication are subject to regional and national regulation.
5. Select a wireless protocol in the **802.11 Mode** drop-down list.
6. The Hide Wireless Network is not selected by default. To make the wireless network invisible, tick the **Hide Wireless Network** check box.

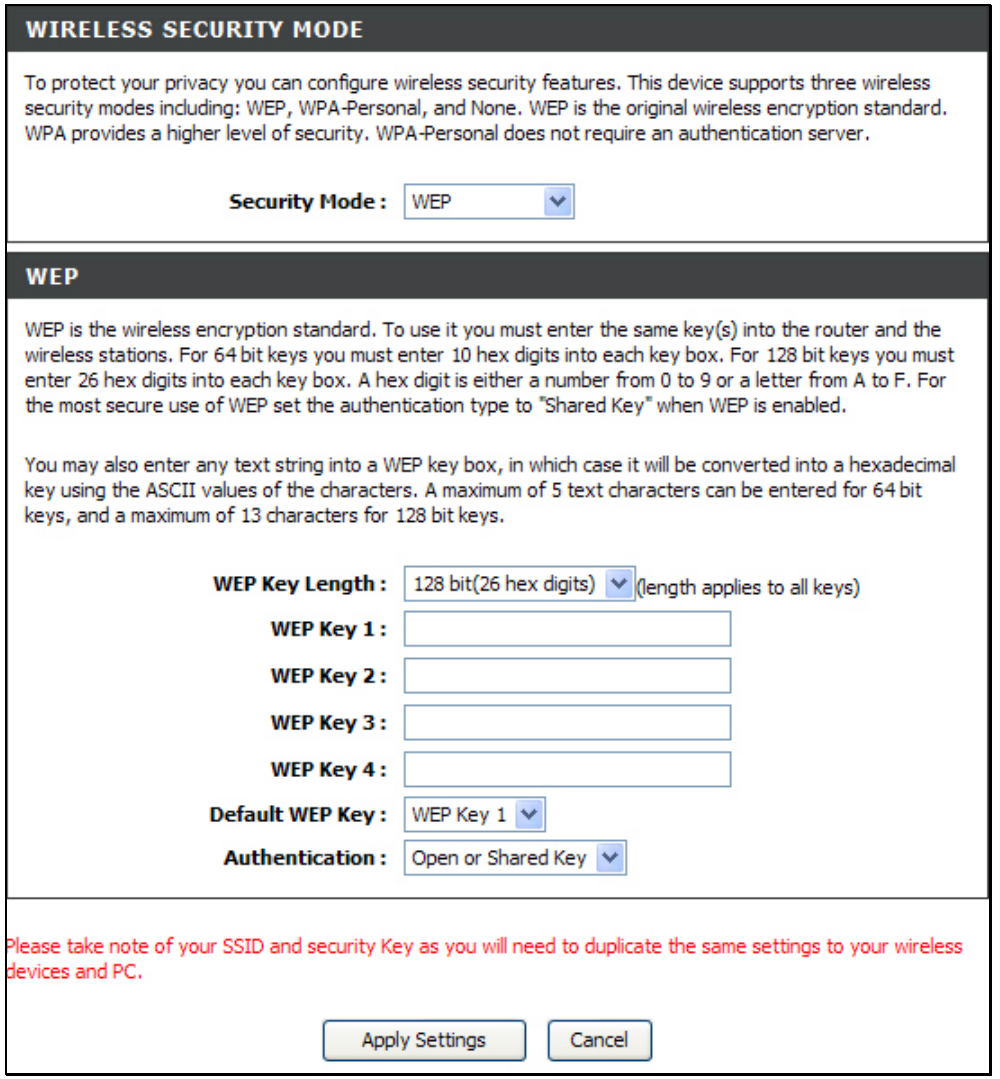
To configure Wireless Security, select **WEP** or **WPA-Personal** in the Security Mode drop-down list.



WEP

WEP (Wireless Encryption Protocol or Wired Equivalent Privacy) encryption can be enabled for security and privacy. WEP encrypts the data portion of each frame transmitted from the wireless adapter using one of the predefined keys. Decryption of the data contained in each packet can only be done if both the receiver and transmitter have the correct key.
By default, authentication is disabled on the access point. To enable **WEP**, select **WEP** in the **Security Mode** drop-down list.

Select the **WEP Key Length** from the drop-down menu. The available key lengths are **128 bit(26 hex digits)** or **64 bit(10 hex digits)** encryption. In the spaces provided, type in **WEP Key 1**, **WEP Key 2**, **WEP Key 3** and **WEP Key 4**. The length of the character string used for the keys depends on the level (Key Length) of encryption selected. Only one key can be active. The active key is selected in the **Default WEP Key** drop-down list.
Click the **Apply Settings** button to save the settings.

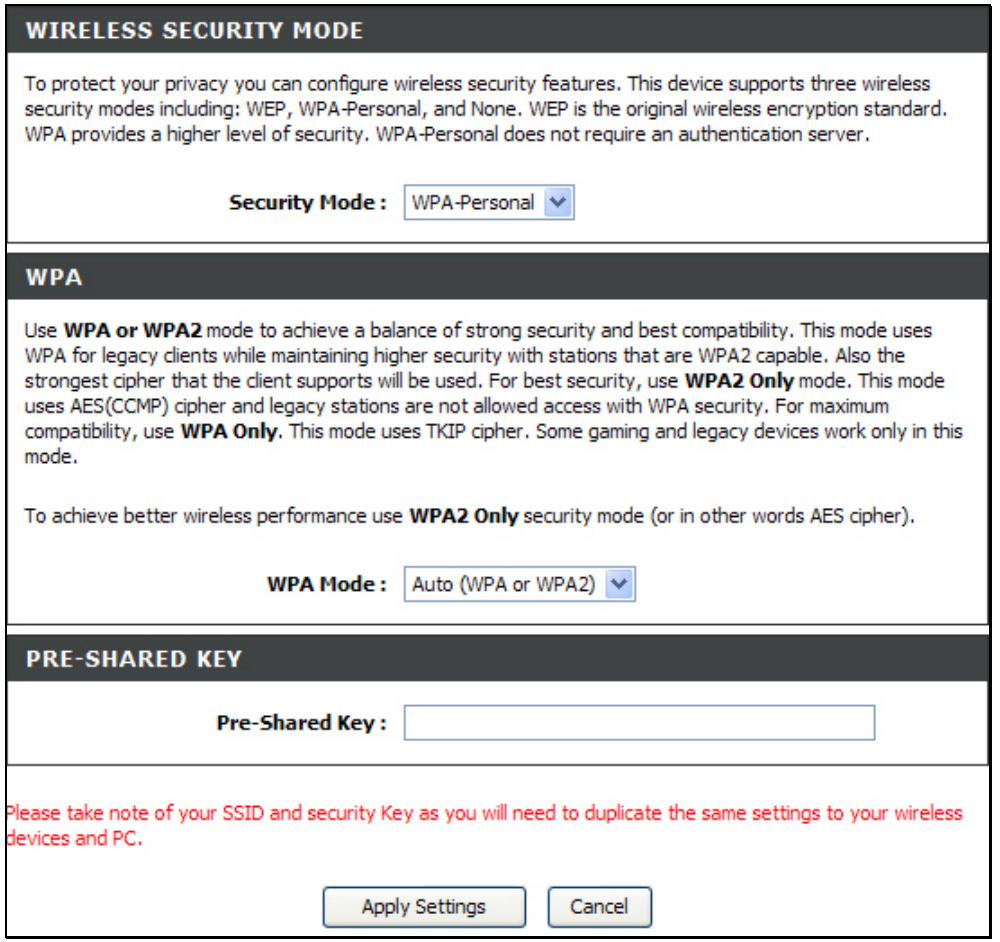


WPA-Personal

WPA uses an encryption method combined with an authentication procedure that requires an acceptance of a pre-configured password. WPA or Wireless Protection Access is an improved standard of wireless security. The T-KD 318 also supports two common encryption types TKIP and AES (explained below).

To configure WPA settings, select **WPA-Personal** in the **Security Mode** drop-down list.
Select **WPA** to use **TKIP** encryption or select **WPA2** to use **AES** encryption in the **WPA Mode** drop-down list. The encryption algorithm **TKIP** (Temporal Key Integrity Protocol) uses per packet key generation (based on WEP), while **AES** (Advanced Encryption Standard) is a block-based encryption method. Both methods require entry of a pre-shared key to allow association. Type a password from 8 to 64 characters long in the **Pre-Shared Key** field.

Click the **Apply Settings** button to save the settings.



LAN Setup

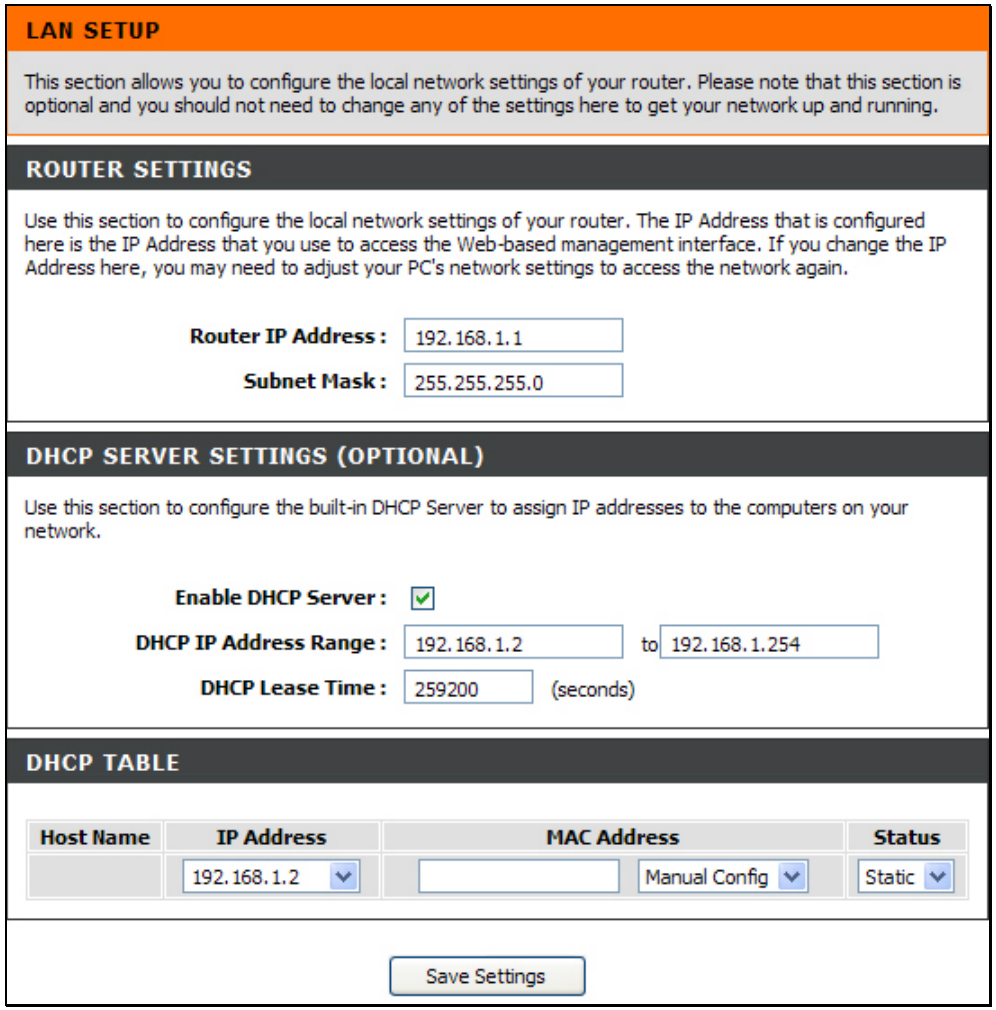
To access the **LAN Setup** window, click the **LAN Setup** button in the **Setup** directory.

You can configure the LAN IP address to suit your preference. Many users will find it convenient to use the default settings together with DHCP service to manage the IP settings for their private network. The IP address of the Router is the base address used for DHCP. In order to use the Router for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the Router. The IP addresses available in the DHCP IP address pool will change automatically if you change the IP address of the Router. See the next section for information on DHCP setup.

To change the LAN Router IP Address or Subnet Mask, type in the desired values in the Router Settings section and click the **Save Settings** button. You will need to enter the new IP address to login again to the Router's web manager.

The DHCP server is enabled by default for the Router's Ethernet LAN interface. DHCP service will supply IP settings to workstations configured to automatically obtain IP settings that are connected to the Router though the Ethernet port. When the Router is used for DHCP it becomes the default gateway for DHCP client connected to it. Keep in mind that if you change the IP address of the Router the range of IP addresses in the pool used for DHCP on the LAN will also be changed. The IP address pool can be up to 253 IP addresses.
There are two options for DHCP service:

- You can use the Router as a DHCP server for your LAN.
- You can disable DHCP service and manually configure IP settings for workstations.



You may also configure DNS settings when using the Router in DHCP mode (**Advanced** > **DNS Setup**). When “Obtain DNS server address automatically“ is clicked under DNS Server Configuration on the **DNS Setup** window, the Router will automatically relay DNS settings to properly configured DHCP clients. To manually enter DNS IP addresses, click the “Use the following DNS server addresses“ radio button and type in a Preferred DNS Server and Alternate DNS Server in the fields provided. The manually configured DNS settings will be supplied to clients that are configured to request them from the Router.

Follow the instructions below according to which of the above DHCP options you want to use. When you have configured DHCP as you want, click the **Apply Settings** button to commit the new settings.

Use the Router for DHCP

To use the built-in DHCP server, tick the **Enable DHCP Server** check box in the DHCP Server Settings (Optional) section if it is not already selected. The IP address pool settings can be adjusted. The DHCP IP Address Range starts with the lowest available IP address (default = 192.168.1.2). If you change the IP address of the Router this will change automatically to be 1 more that the IP address of the Router. The DHCP IP Address Range ends with the highest IP address number in the pool. Type in the DHCP Lease Time in the entry field provided. This is the amount of time in hours that a workstation is allowed to reserve an IP address in the pool if the workstation is disconnected from the network or powered off.

Disable the DHCP Server

To disable DHCP, deselect the **Enable DHCP Server** check box in the DHCP Server Settings (Optional) section and click the **Save Settings** button. Choosing this option will gray out most of the setting options on this window and require that workstations on the local network be configured manually or use another DHCP server to obtain IP settings.

If you configure IP settings manually, make sure to use IP addresses in the subnet of the Router. You will need to use the Router’s IP address as the Default Gateway for the workstation in order to provide Internet access.

Time and Date

To access the **Time and Date** window, click the **Time and Date** button in the **Setup** directory.

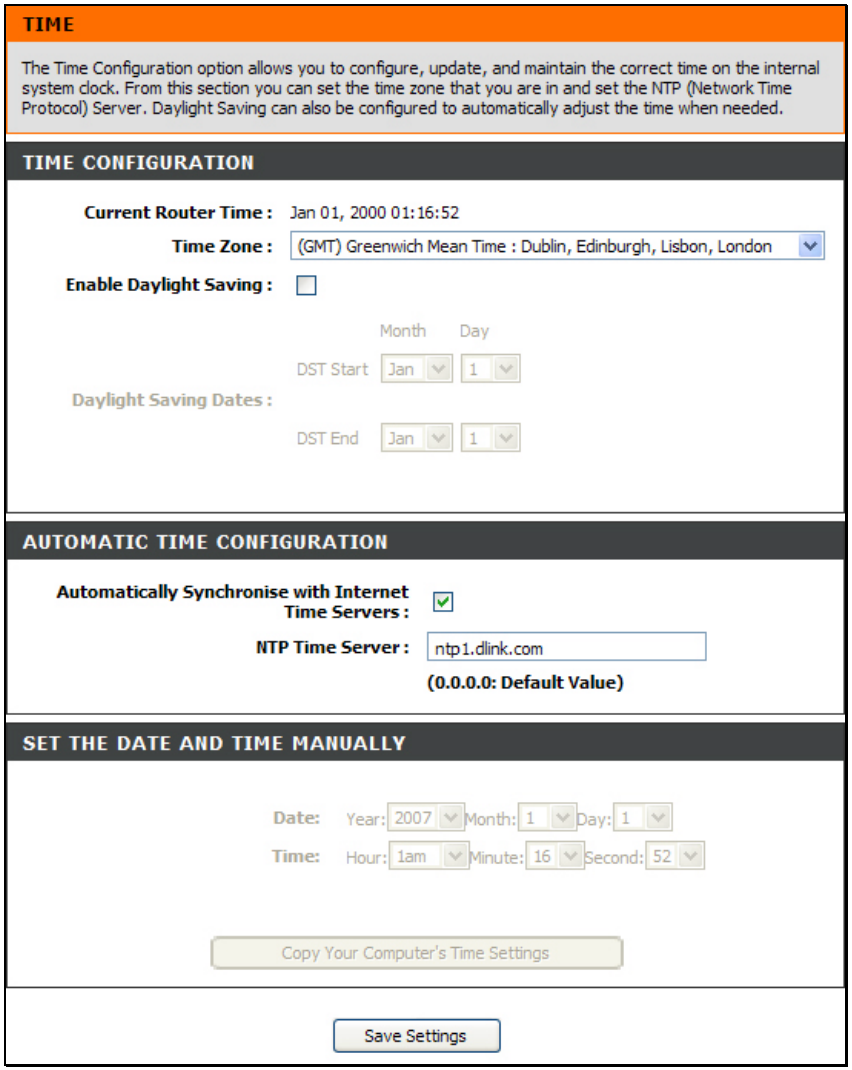
The Router provides a number of options to maintain current date and time including NTP.

To configure system time on the Router, select the method used to maintain time. The options available include Network Time Protocol (default), using your computer's system clock (deselect the Automatically synchronize with Internet time servers check box and then click the **Copy Your Computer's Time Settings** button), or set the time and date manually (deselect the **Automatically synchronize with Internet Time Servers** check box and make the desired changes).

If you opt to use NTP, you must enter the NTP server URL.

The Router also allows you to set the time zone you are in by using the **Time Zone** drop-down menu. In addition, you can configure Daylight Saving by ticking the **Enable Daylight Saving** check box and then using the drop-down menus to configure the desired Daylight Saving starting and ending dates.

When you are finished, click the **Save Settings** button to set the system time and date information.



Advanced

This chapter include the more advanced features used for network management and security.

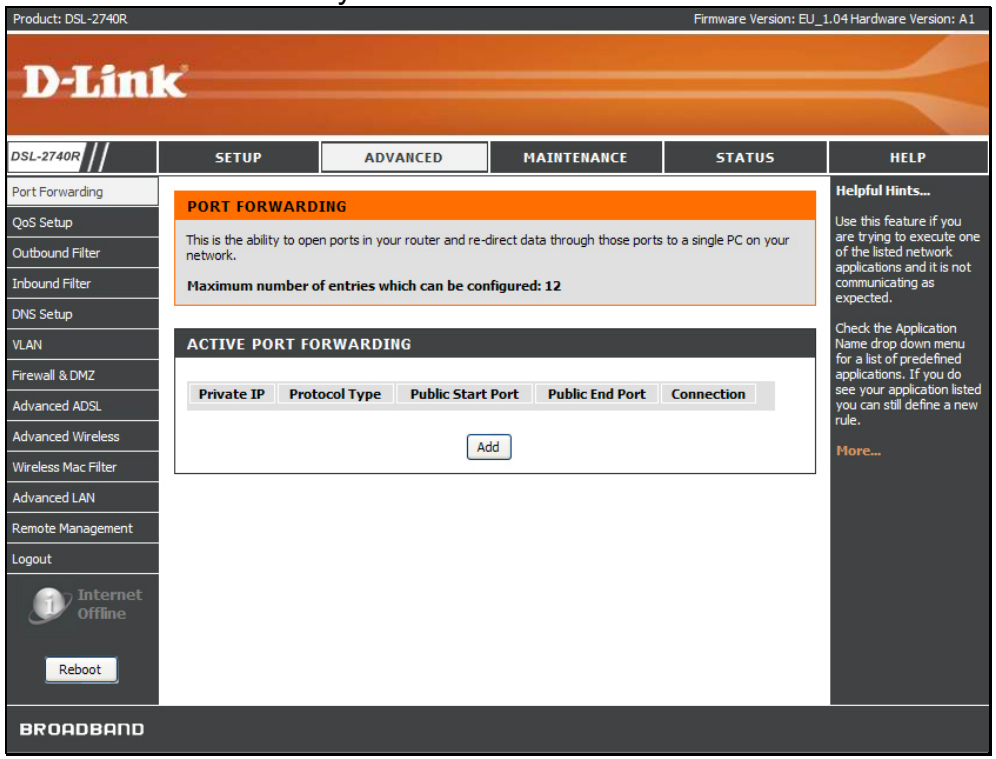
Port Forwarding

To access the **Port Forwarding** window, click the **Port Forwarding** button in the **Advanced** directory.

Port Forwarding is used to allow Internet users access to LAN services.

Click **Add** to enter a new entry. Enter an IP address in the Private IP field, select a Protocol Type from the drop-down menu, enter a range of ports in the Public Start Port and Public End Port fields, and then click the **Apply** button. Finally, click the **Reboot** button on the left panel to let your changes take effect.

To remove a port forwarding entry in the table, click the corresponding button. To modify an entry, click the corresponding button, make the desired changes, and then click the **Apply** button.



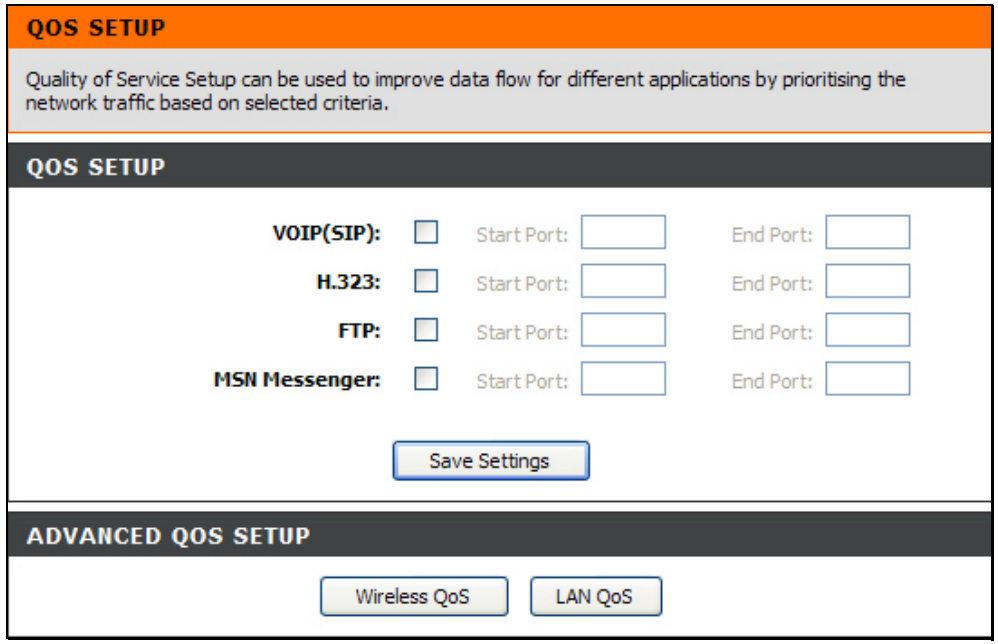
QoS Setup

To access the **QoS Setup** window, click the **QoS Setup** button in the **Advanced** directory.

QoS or Quality of Service allows your Router to help prioritize the data packet flow in your Router and network. This is very important for time sensitive applications such as VoIP where it may help prevent dropped calls. Large amounts of non-critical data can be scaled so as not to affect these prioritized sensitive real-time programs.

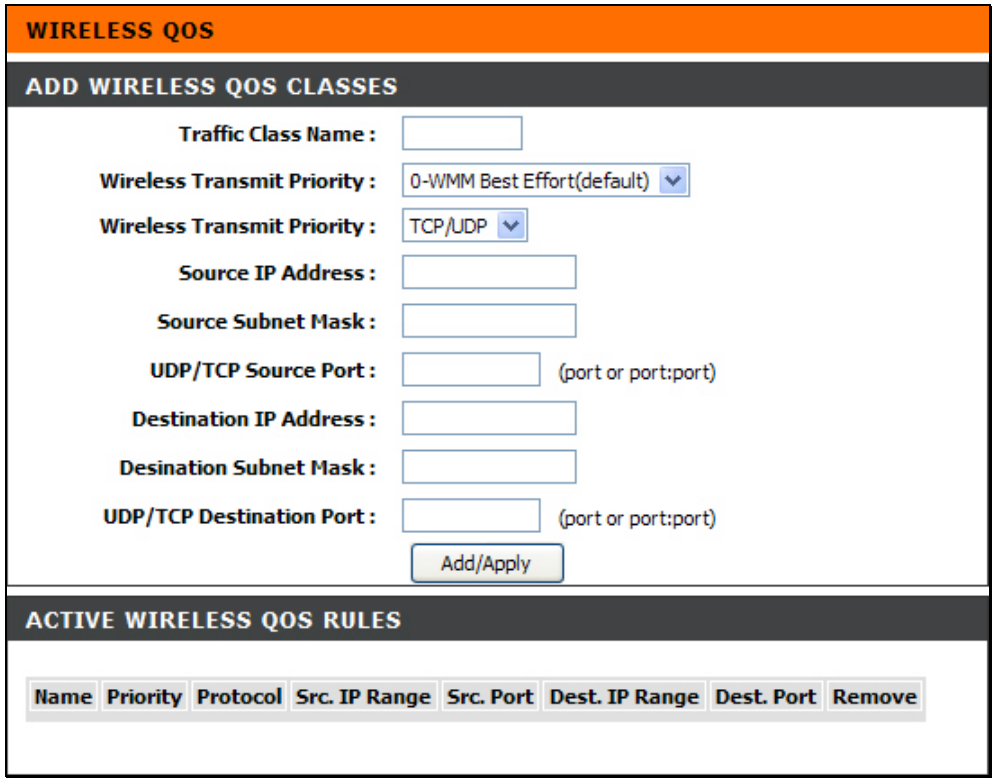
Click the **Wireless QoS** to configure QoS on Wireless LAN.

Click the **LAN QoS** to configure QoS on LAN.



Wireless QoS

This page allows you to configure the Wireless QoS.
Enter the Traffic Class Name, select the transmit priority and protocol, enter the source and destination IP Address, subnet mask and port.
Click the **Add/Apply** button to save this rule.

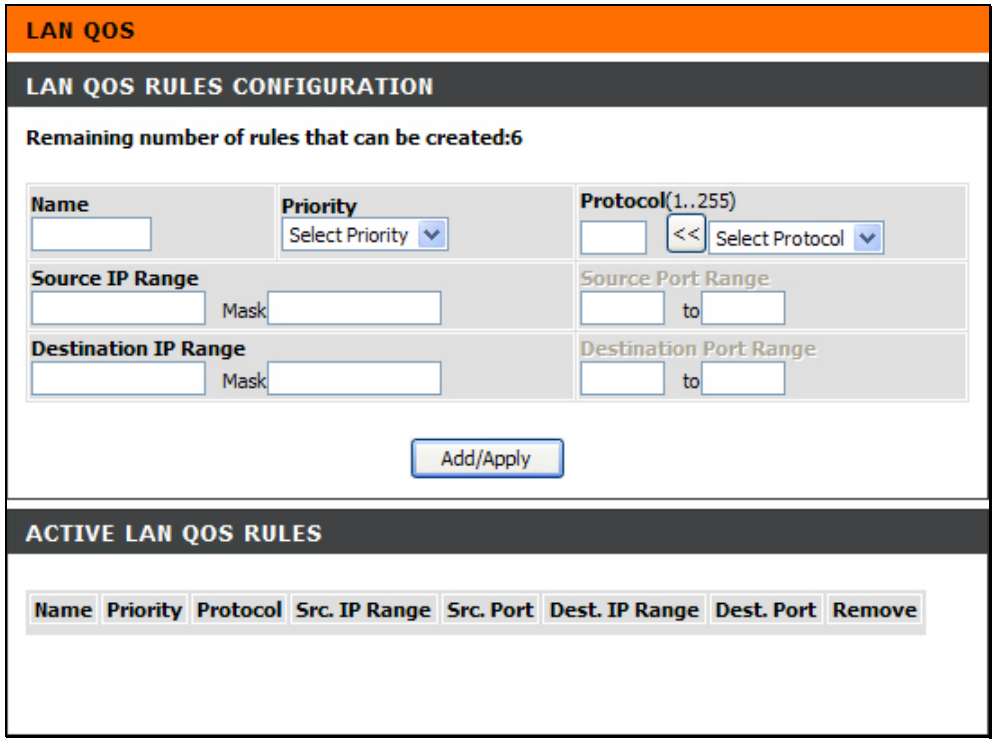


LAN QoS

This page helps you to set the priorities of LAN.

Enter a name of the rule, select the Priority, Protocol and enter the Source and Destination IP Address range and their subnet mask.

Click the **Add/Apply** button to save this rule.



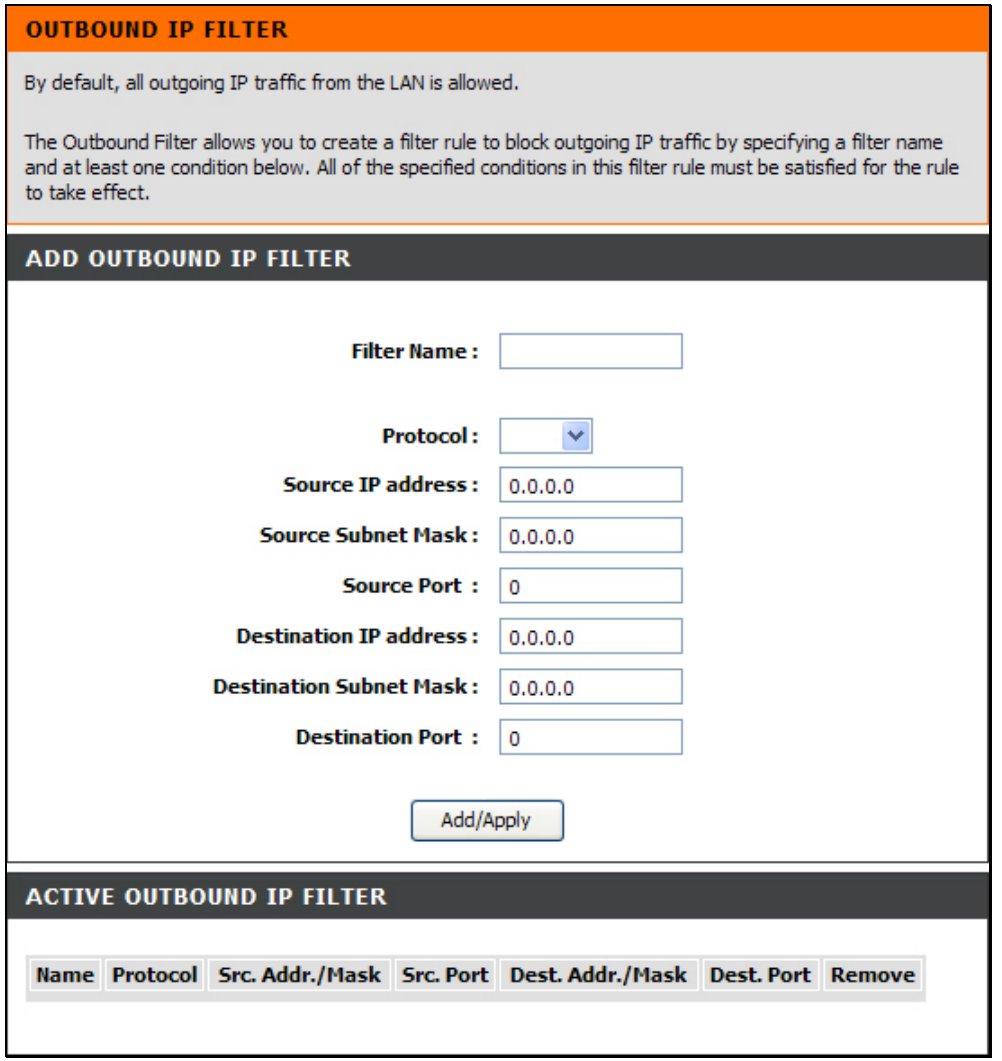
Outbound Filter

To access the **Outbound FIlter** window, click the **Outbound Filter** button in the **Advanced** directory.

The Outbound Filter allows you to create a filter rule to block outgoing IP traffic by specifying a filter name and at least one condition on this window. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Filters are used to allow or deny LAN or WAN users from accessing the Internet or your internal network.

Click the **Add/Apply** button and then click the **Reboot** button on the left panel to let your changes take effect.

Filters Parameter	Description
Name	Enter a name for the new filter.
Protocol	Select the transport protocol (*TCP*, *UDP, or ICMP*) that will be used for the filter rule.
Source IP Address & Source Subnet Mask	For an Outbound Filter, this is the IP address or IP addresses and their associated subnets on your LAN for which you are creating the filter rule. For an Inbound Filter, this is the IP address or IP addresses and their associated subnets for which you are creating the filter rule.
Source Port	The Source Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.
Destination IP Address & Destination Subnet Mask	Where the Destination IP address and subnet mask resides also depends on if you are configuring an Inbound or Outbound filter rule.
Destination Port	The Destination Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.



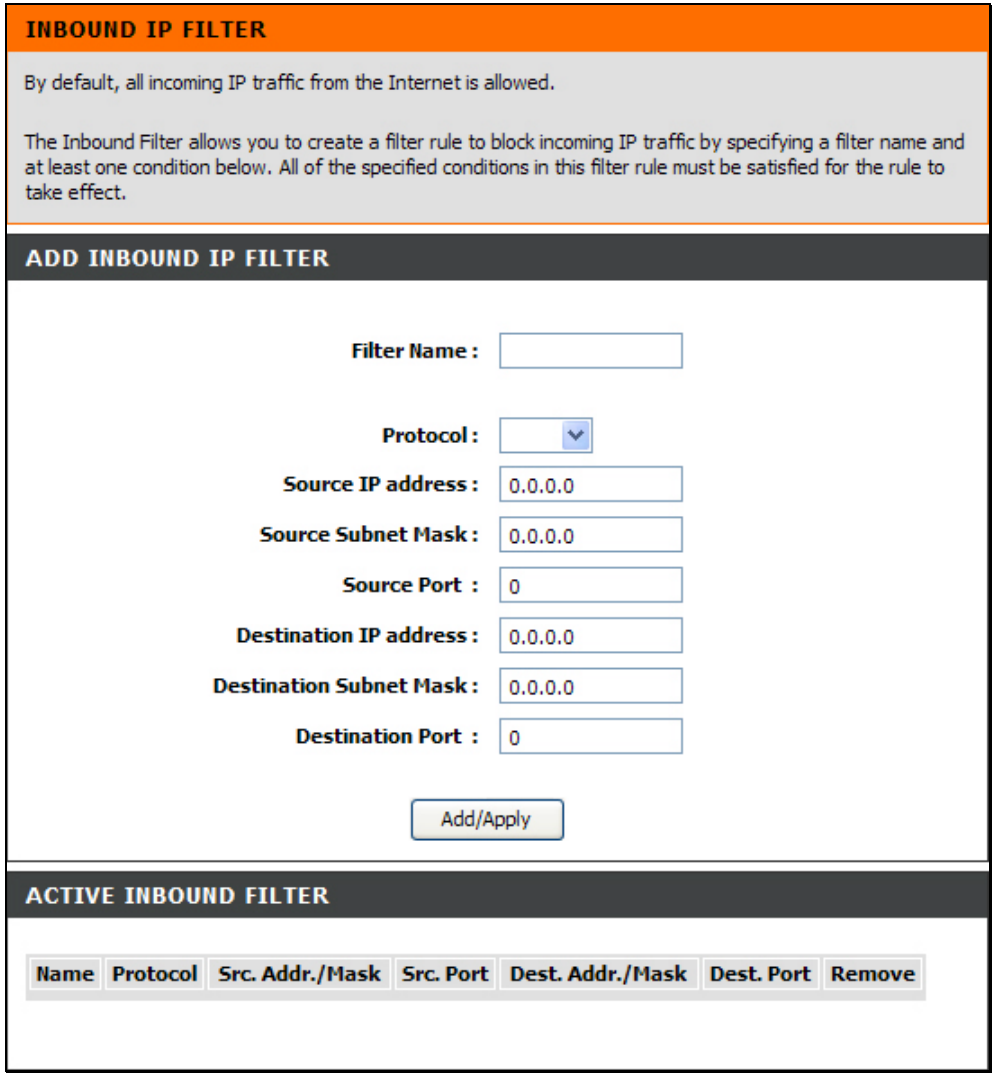
Inbound Filter

To access the **Inbound Filter** window, click the **Inbound Filter** button in the **Advanced** directory.

The Inbound Filter allows you to create a filter rule to allow incoming IP traffic by specifying a filter name and at least one condition on this window. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. By default, all incoming IP traffic from the Internet is blocked when the firewall is enabled.

Click the **Add/Apply** button and then click the **Reboot** button on the left panel to let your changes take effect.

Filters Parameter	Description
Name	Enter a name for the new filter.
Protocol	Select the transport protocol (*TCP*, *UDP, or ICMP*) that will be used for the filter rule.
Source IP Address & Source Subnet Mask	For an Outbound Filter, this is the IP address or IP addresses and their associated subnets on your LAN for which you are creating the filter rule. For an Inbound Filter, this is the IP address or IP addresses and their associated subnets for which you are creating the filter rule.
Source Port	The Source Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.
Destination IP Address & Destination Subnet Mask	Where the Destination IP address and subnet mask resides also depends on if you are configuring an Inbound or Outbound filter rule.
Destination Port	The Destination Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.



DNS Setup

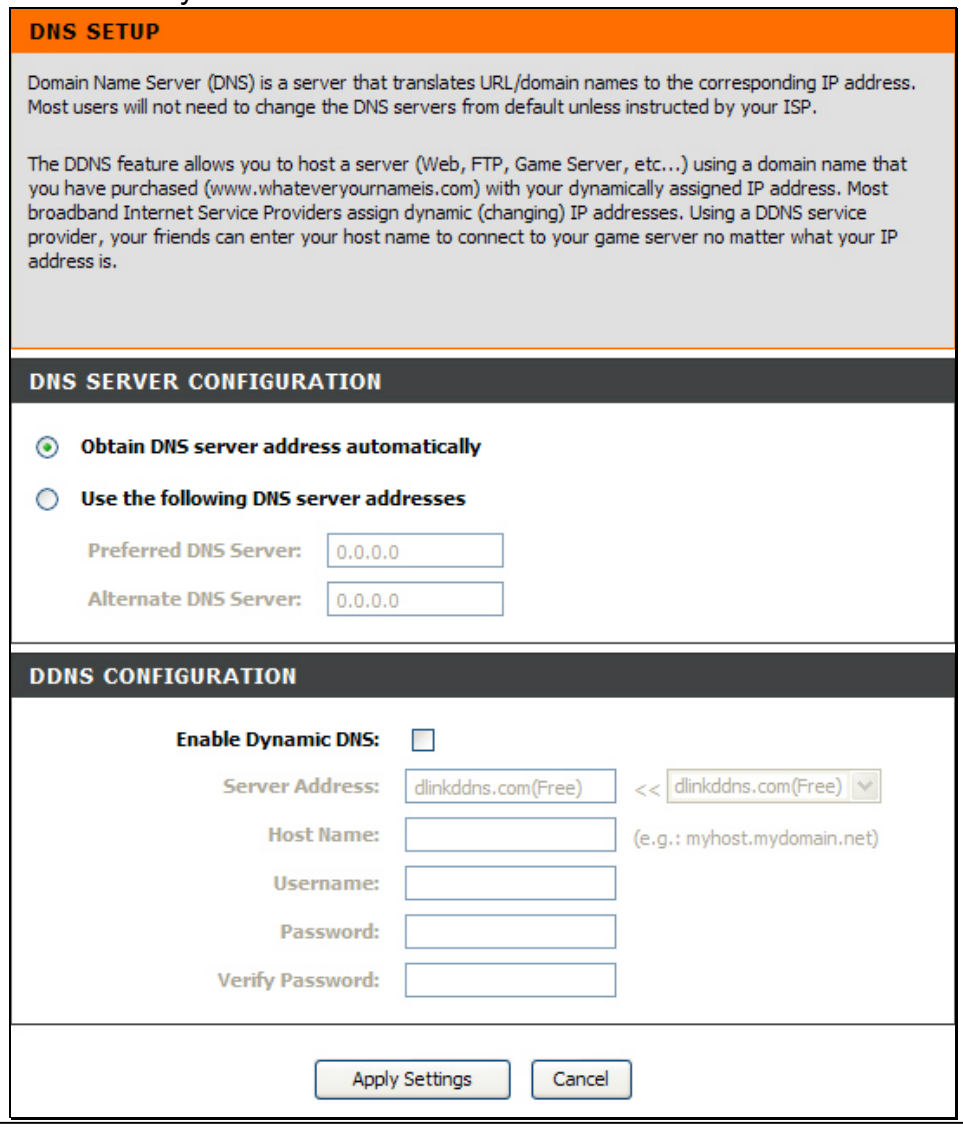
To access the **DNS Setup** window, click the **DNS Setup** button in the **Advanced** directory.

The Router can be configured to relay DNS settings from your ISP or another available service to workstations on your LAN. When using DNS relay, the Router will accept DNS requests from hosts on the LAN and forward them to the ISP's, or alternative DNS servers. DNS relay can use auto discovery or the DNS IP address can be manually entered by the user. Alternatively, you may also disable the DNS relay and configure hosts on your LAN to use DNS servers directly. Most users who are using the Router for DHCP service on the LAN and are using DNS servers on the ISP's network, will leave DNS relay enabled (either auto discovery or user configured).

If you have not been given specific DNS server IP addresses or if the Router is not pre-configured with DNS server information, select the "Obtain DNS server address automatically" option. Auto discovery DNS instructs the Router to automatically obtain the DNS IP address from the ISP through DHCP. If your WAN connection uses a Static IP address, auto discovery for DNS cannot be used.

If you have DNS IP addresses provided by your ISP, click the "Use the following DNS server addresses" radio button and enter these IP addresses in the available entry fields for the Preferred DNS Server and the Alternative DNS Server. When you have configured the DNS settings as desired, click the **Apply Settings** button and then click the **Reboot** button on the left panel to let your changes take effect.

The Router supports DDNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL



in the form hostname.dyndns.org, Many ISPs assign public IP addresses using DHCP, this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.

Tick the Enable Dynamic DNS check box, enter the required DDNS information, click the **Apply Settings** button, and then click the **Reboot** button on the left panel to let your changes take effect to set this information in the Router.

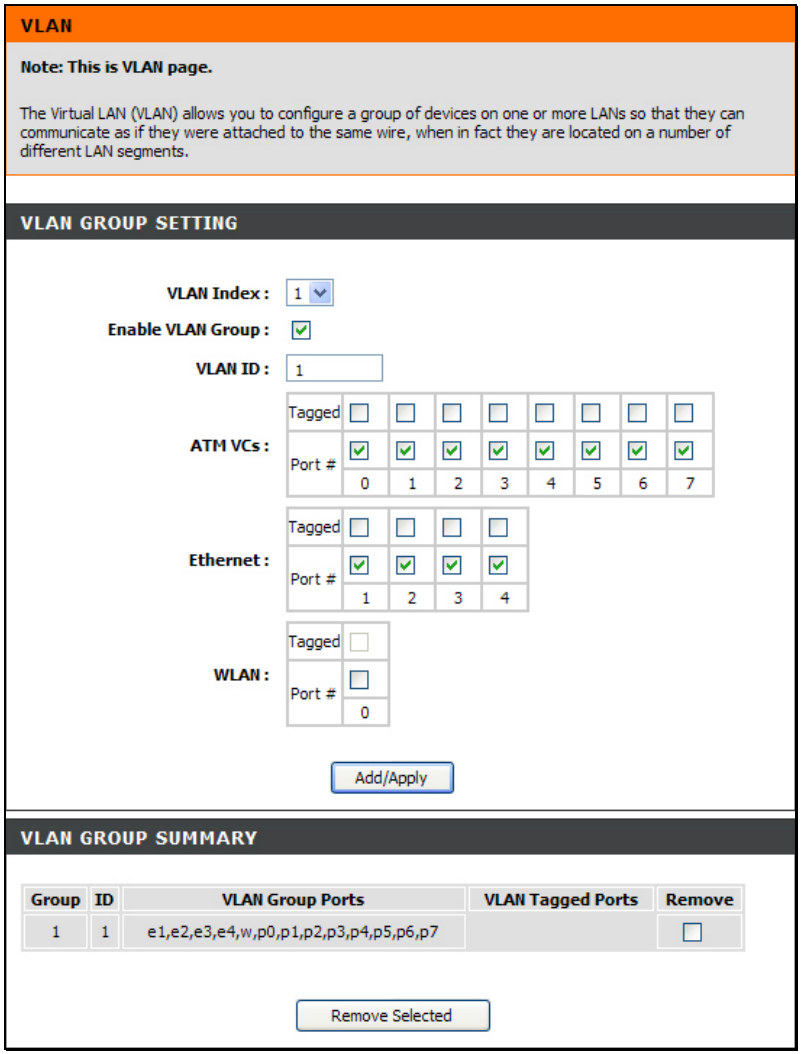
Note

DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server.

VLAN

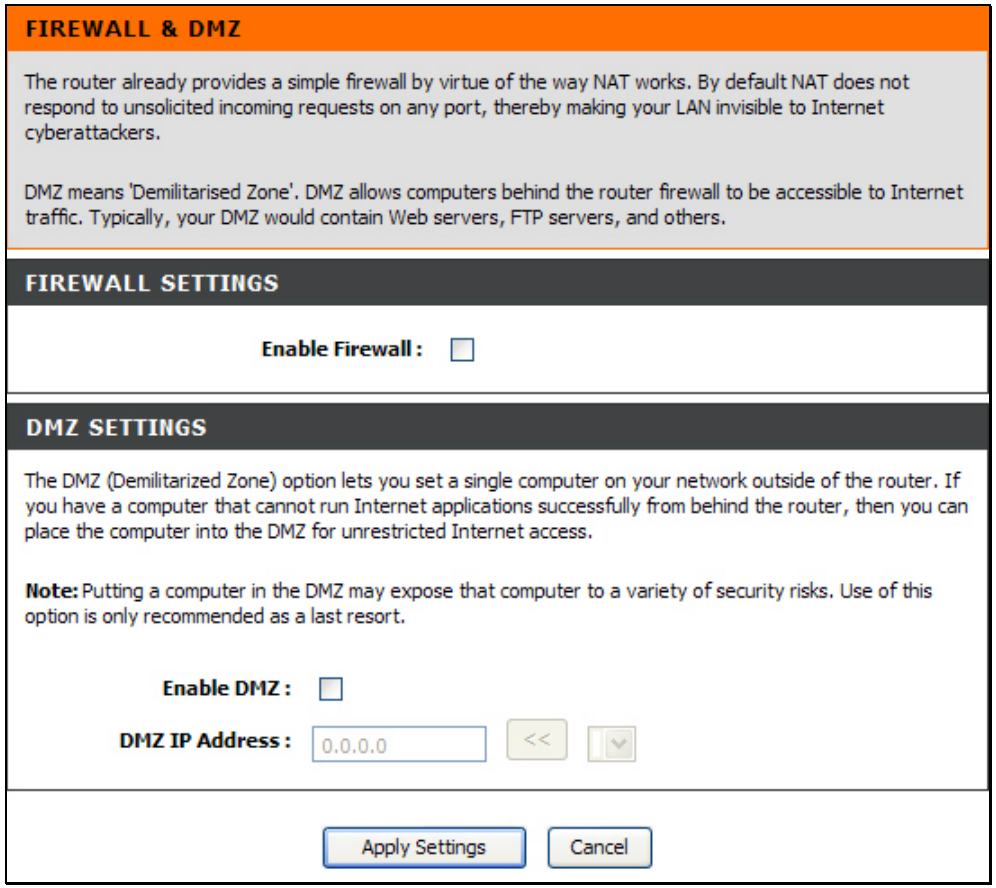
To access the **VLAN** window, click the **VLAN** button in the **Advanced** directory.

The Virtual LAN (VLAN) can group the devices even if they are not in the same LAN segment.
Select a number in the **VLAN Index** drop-down list, tick the **Enable VLAN Group** check box, and tick the Port number and the corresponding tagged check boxes.
Click the **Add/Apply** button to create the VLAN group.



Firewall & DMZ

To access the **Firewall & DMZ** window, click the **Firewall & DMZ** button in the **Advanced** directory.



Firewalls may conflict with certain interactive applications such as video conferencing or playing Internet video games. For these applications, a firewall bypass can be set up using a DMZ IP address. The DMZ IP address is a “visible” address and does not benefit from the full protection of the firewall function. Therefore it is advisable that other security precautions be enabled to protect the other computers and devices on the LAN. It may be wise to use isolate the device with the DMZ IP address from the rest of the LAN.

If you want to use video conferencing, for example, and still use a firewall, you can use the DMZ IP address function. In this case, you must have a PC or server through which video conferencing will take place. The IP address of this PC or server will then be the DMZ IP address. You can designate the server’s IP address as the DMZ by going to the DMZ Settings section and typing in the IP address in the IP Address field provided and then enabling its status by ticking the Enable DMZ checkbox, clicking **Apply Settings**, and then clicking the **Reboot** button on the left panel to let your changes take effect.

For the system that uses the DMZ IP address, you may want to manually assign an IP address to it and adjust your DHCP server addresses so that the DMZ IP address is not included in the DHCP server range. This way you avoid possible IP address problems if you reboot the DMZ system.

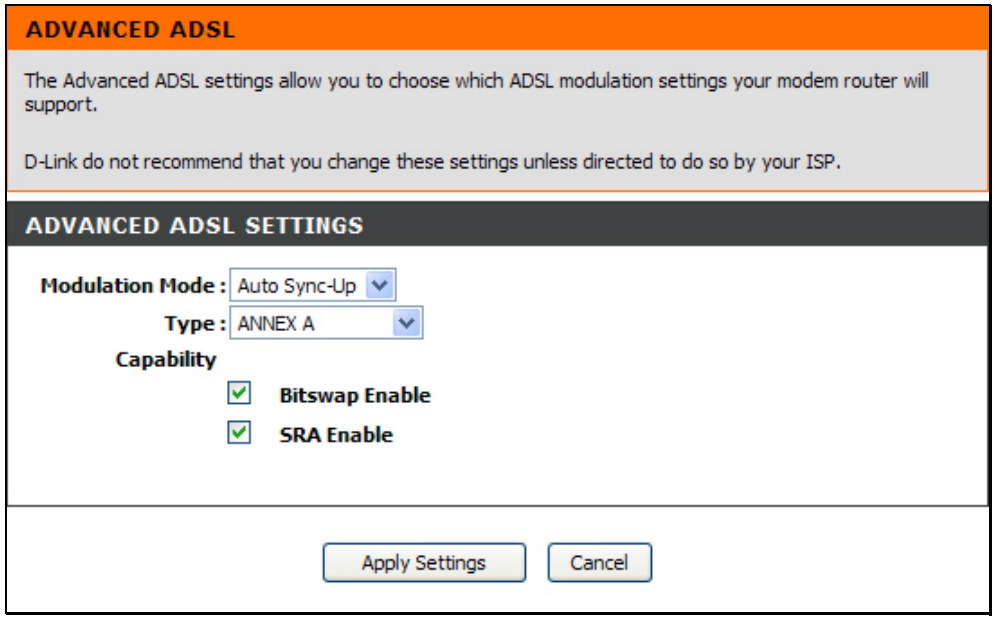
The Firewall Settings section allows the Router to enforce specific predefined policies intended to protect against certain common types of attacks. Tick the **Enable Firewall** check box, and click the **Apply Settings** button to active the function.

Advanced ADSL

To access the **Advanced ADSL** window, click the **Advanced ADSL** button in the **Advanced** directory.

This window allows the user to set the configuration for ADSL protocols. For most ADSL accounts the default settings *Auto Sync-Up* will work. This configuration works with all ADSL implementations. If you have been given instructions to change the Modulation method used, select the desired option from the **Modulation Mode** and **Type** drop-down menu, and click the **Apply Settings** button. Click the **Reboot** button on the left panel to let your changes take effect.

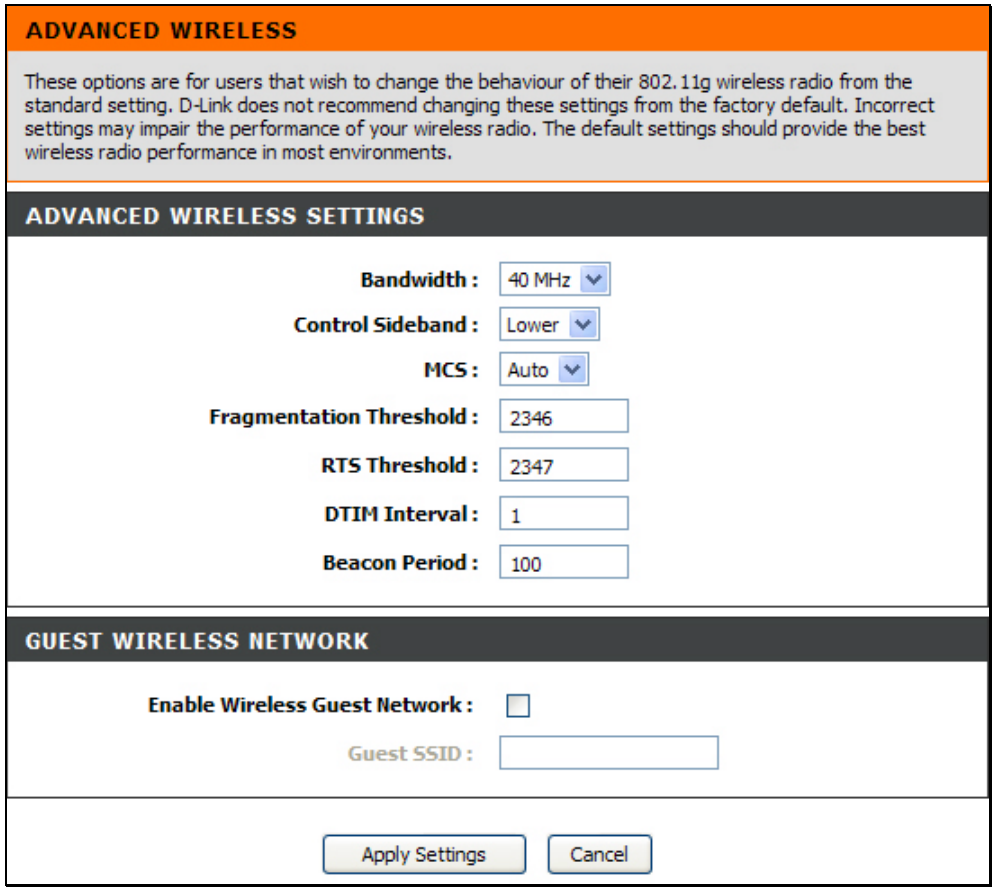
Leave the Capability setting at the bottom of the window unchanged unless otherwise instructed by your ISP. Both Bitswap Enable and Seemless Rate Adaption (SRA) Enable deal with tests that determine the line condition between your Router and the ISP's Central office.



Advanced Wireless

To access the **Advanced Wireless** window, click the **Advanced Wireless** button in the **Advanced** directory.

In this page, you can configure more advanced settings of 802.11g wireless radio. However, it is recommended to remain as default unless your ISP requests to change it.



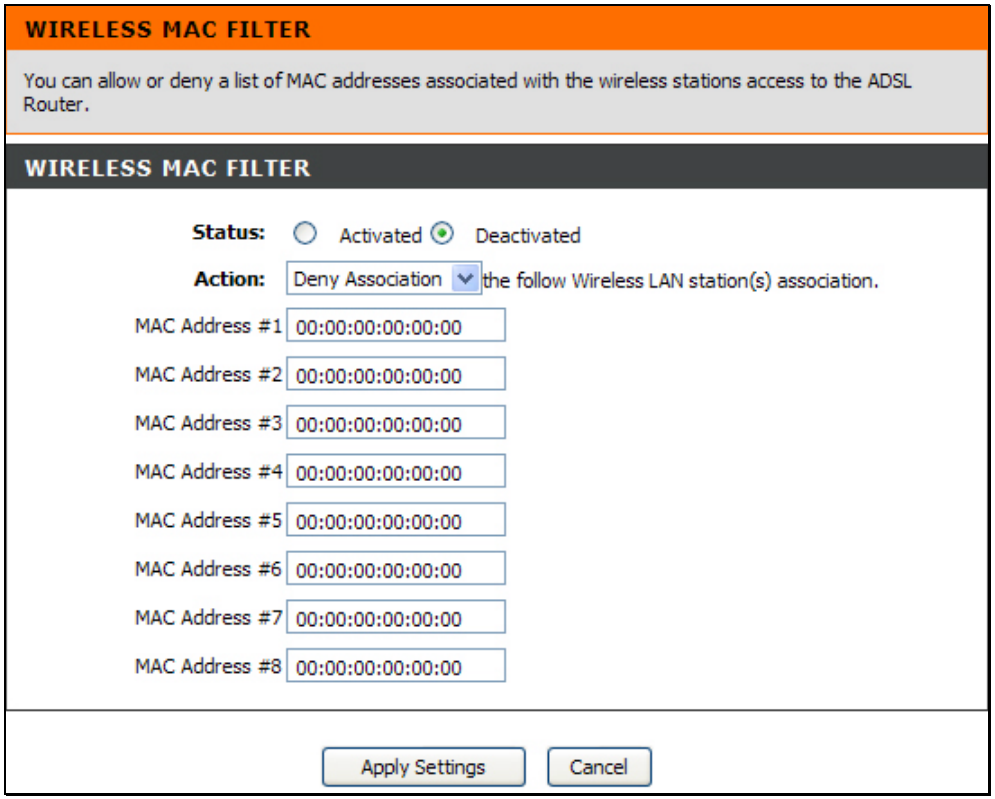
Wireless Mac Filter

To access the **Wireless Mac Filter** window, click the **Wireless Mac Filter** button in the **Advanced** directory.

This page can help you to allow or deny certain MAC addresses that associated with the wireless stations' access to pass through or block out.

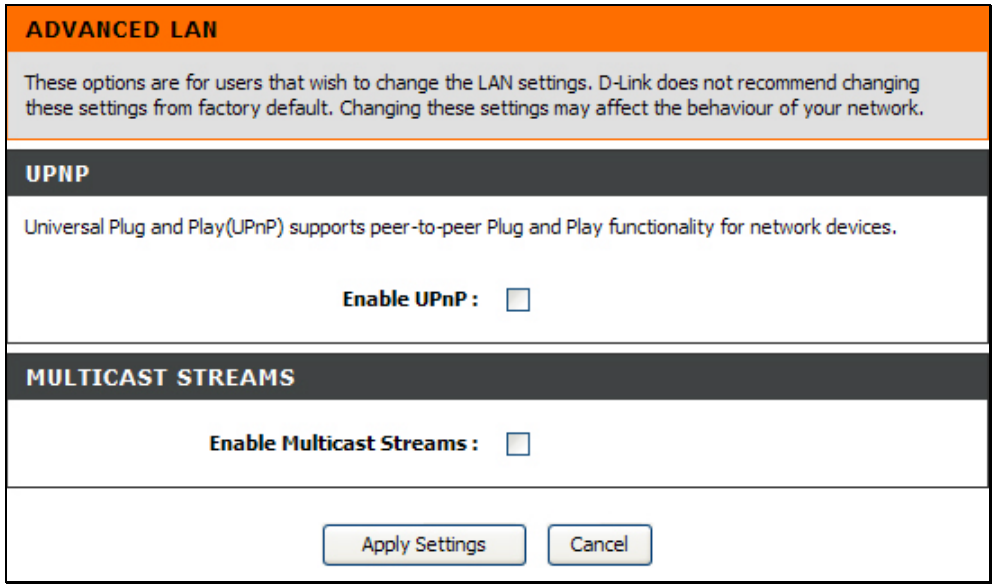
Click the **Activated** radio button to enable the function, select **Deny Association** or **Allow Association** in the **Action** drop-down list, and enter the MAC Address of the Wireless LAN station. Click the **Apply Settings** button to enable the function.

Click **Deactivated**, and the **Apply Settings** button to disable the function.



Advanced LAN

To access the **Advanced LAN** window, click the **Advanced LAN** button in the **Advanced** directory.



UPnP supports zero-configuration networking and automatic discovery for many types of networked devices. When enabled, it allows other devices that support UPnP to dynamically join a network, obtain an IP address, convey its capabilities, and learn about the presence and capabilities of other devices. DHCP and DNS service can also be used if available on the network. UPnP also allows supported devices to leave a network automatically without adverse effects to the device or other devices on the network. UPnP is a protocol supported by diverse networking media including Ethernet, Firewire, phone line, and power line networking.

To enable UPnP for any available connection, tick the Enable UPnP check box, select the connection or connections on which you will enable UPnP listed under Available Connections and click the **Apply Settings** button. Click the **Reboot** button on the left panel to let your changes take effect.

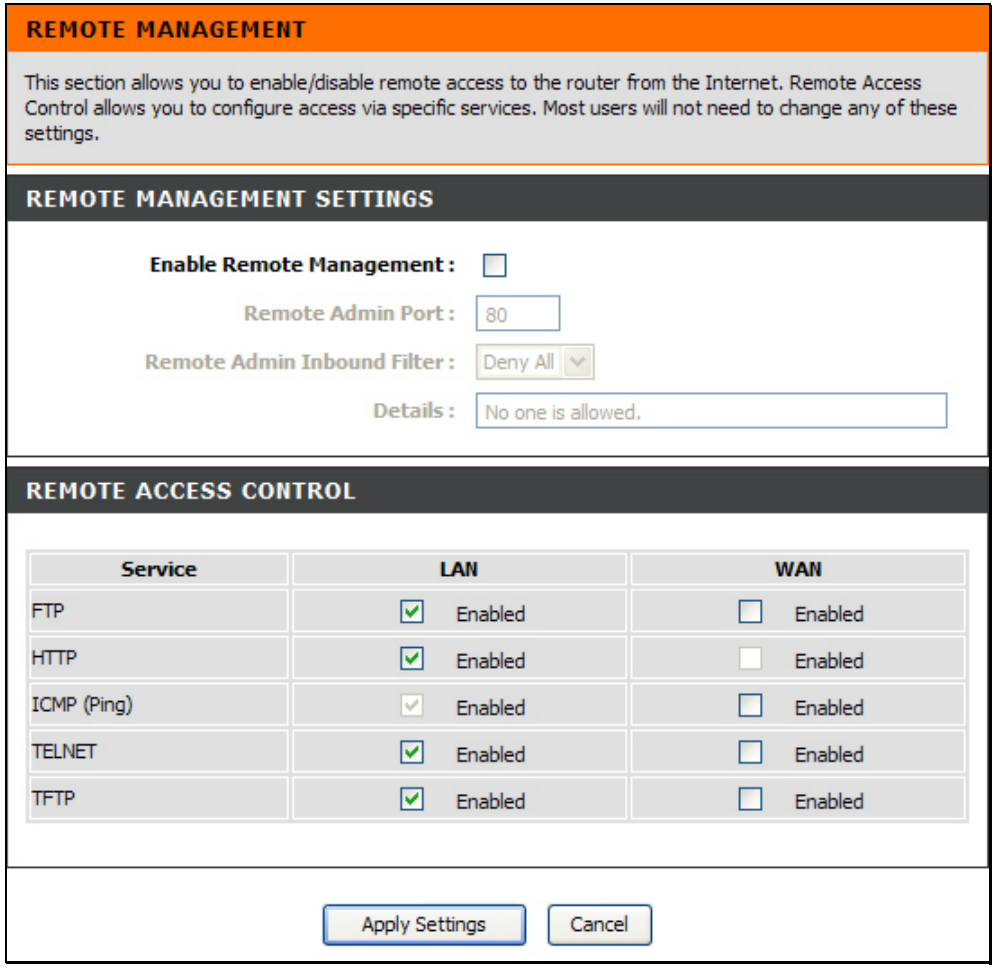
When “Enable Multicast Streams (IGMP)” is ticked, Multicast packets are allowed to pass in both directions on the WAN interface. Most users will want to leave this on. Click **Apply Settings**.

Remote Management

To access the **Remote Management** window, click the **Remote Management** button in the **Advanced** directory.

The Router allows remote Web and Telnet management in the top section of the window. Tick the **Enable Remote Management** check box, enter a remote admin port number, select the method of Inbound filter in the **Remote Admin Inbound Filter**, enter optional identifying information in the **Details** field if desired, and click the **Apply Settings** button.

Use the Access Control section in the middle of the window to restrict a service from being accessed via the WAN interface. Click the **Apply Settings** button and then click the **Reboot** button on the left panel to let your changes take effect.



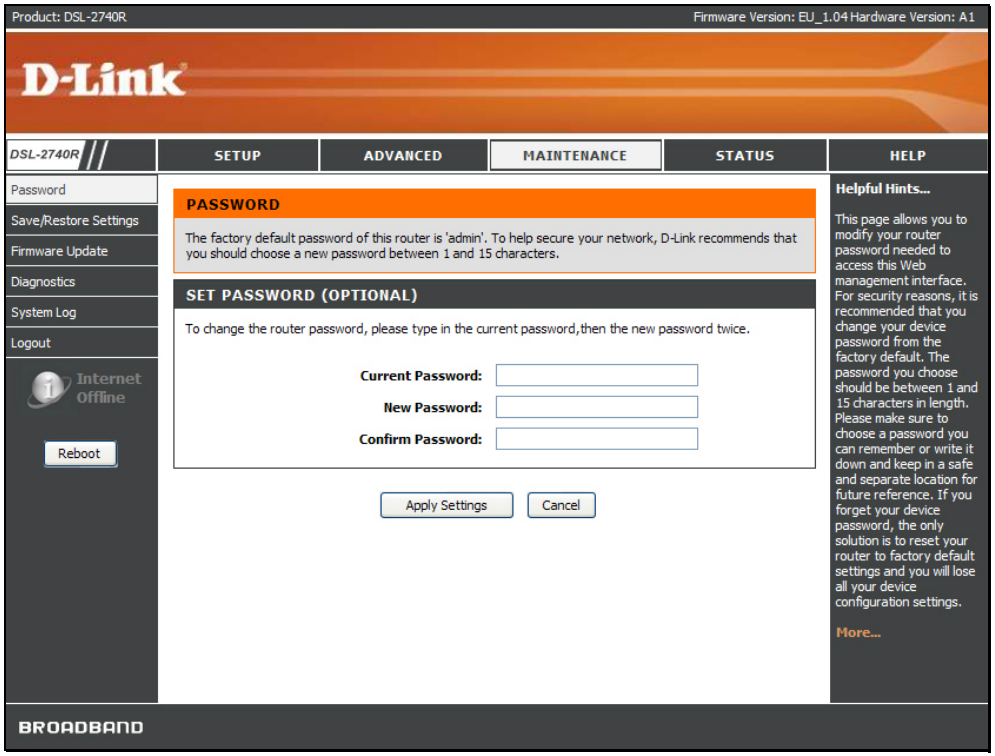
Maintenance

The **Maintenance** directory features an array of options designed to help you get the most out of your Router.

Password

To access the **Password** window, click the **Settings** button in the **Maintenance** directory.

To change the Administrator's password, type the Current Password in the first field, the New Password in the second field, and enter the password again in the Confirm Password field to be certain you have typed it correctly. Click the **Apply Settings** button and then click the **Reboot** button on the left panel to let your changes take effect. The system User Name remains "admin," this cannot be changed using the Web manager interface.



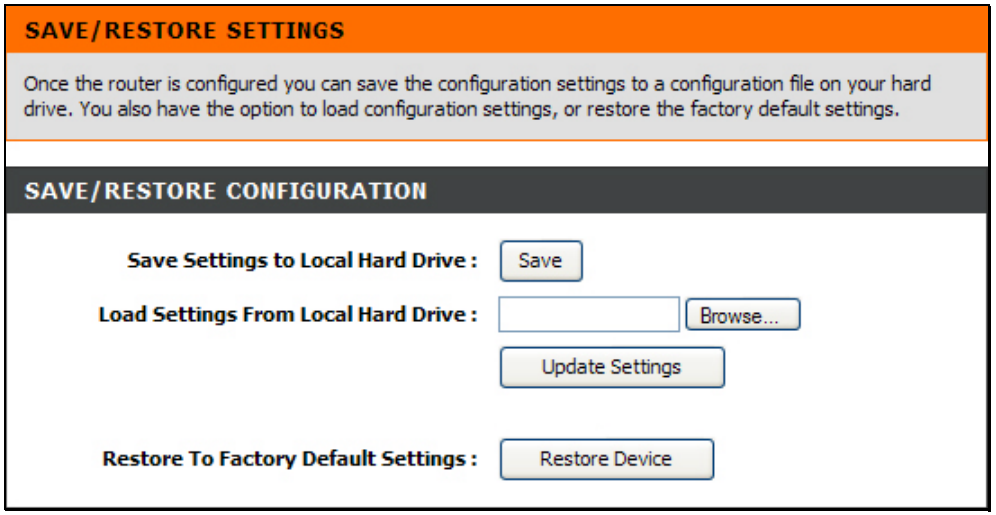
Save/Restore Settings

To access the **Save/Restore Settings** window, click the **Save/Restore Settings** button in the **Maintenance** directory.

Once you have configured the Router to your satisfaction, it is a good idea to back up the configuration file to your computer. To save the current configuration settings to your computer, click the **Save** button. You will be prompted to select a location on your computer to put the file. The file type is bin and may be named anything you wish.

To load a previously saved configuration file, click the **Browse** button and locate the file on your computer. Click the **Upload Settings** button to load the settings from your local hard drive. Confirm that you want to load the file when prompted. The Router will reboot and begin operating with the configuration settings that have just been loaded.

To reset the Router to its factory default settings, click the **Restore Device** button. You will be prompted to confirm your decision to reset the Router. The Router will reboot with the factory default settings including IP settings (192.168.1.1) and Administrator password (admin).



Firmware Update

To access the **Firmware Update** window, click the **Firmware Update** button in the **Maintenance** directory.

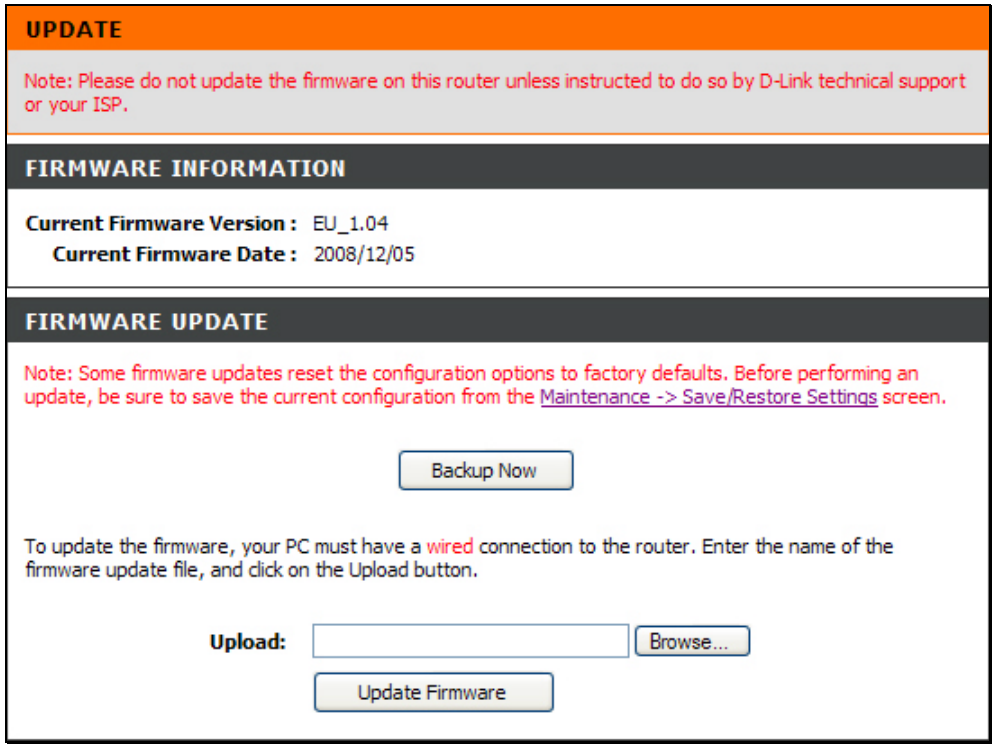
Use this window to load the latest firmware for the device. Note that the device configuration settings may return to the factory default settings, so make sure you save the configuration settings with the **Save/Restore Settings** window described on the previous page.

To upgrade firmware, type in the name and path of the file or click on the **Browse** button to search for the file. Click the **Update Firmware** button to begin copying the file. The file will load and restart the Router automatically.

To save your current configuration file to your computer, click the **Backup Now** button. A **File Download** dialog box will open. Click the **Save** button and then designate the location for the configuration file in the **Save As** window that immediately opens. The default location is your desktop.

Note

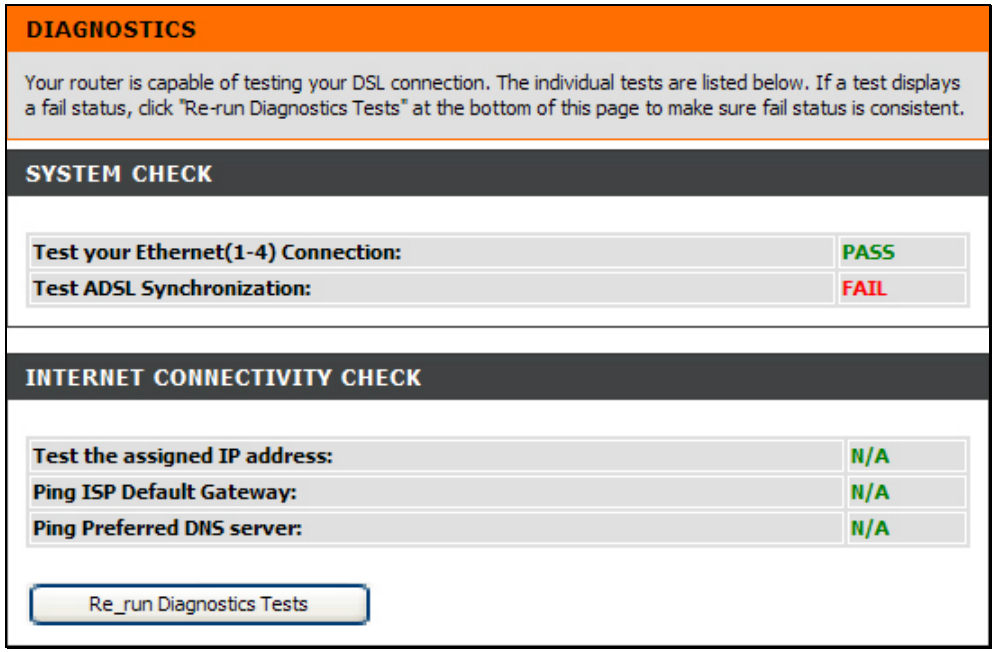
Performing a Firmware Upgrade can sometimes change the configuration settings. Be sure to backup the Router's configuration settings before upgrading the firmware.



Diagnostics

To access the **Diagnostic** window, click the **Diagnostics** button in the **Maintenance** directory.

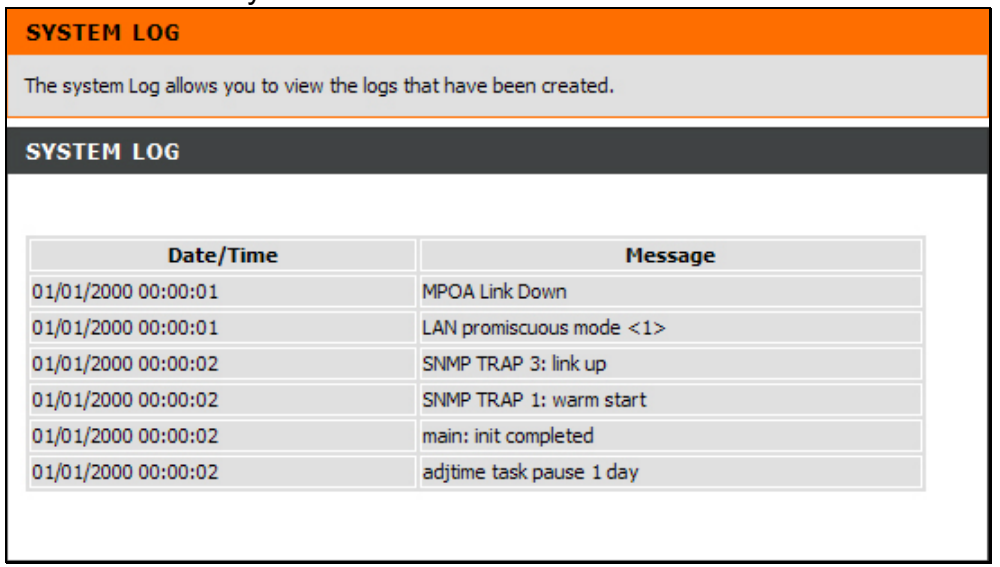
This window is used to test connectivity of the Router. A Ping test may be done through the local or external interface to test connectivity to known IP addresses. The diagnostics feature executes a series of tests of your system software and hardware connections. Use this window when working with your ISP to troubleshoot problems.



System Log

To access the **System Log** window, click the **System Log** button in the **Maintenance** directory.

This window displays the system log information of the Router.



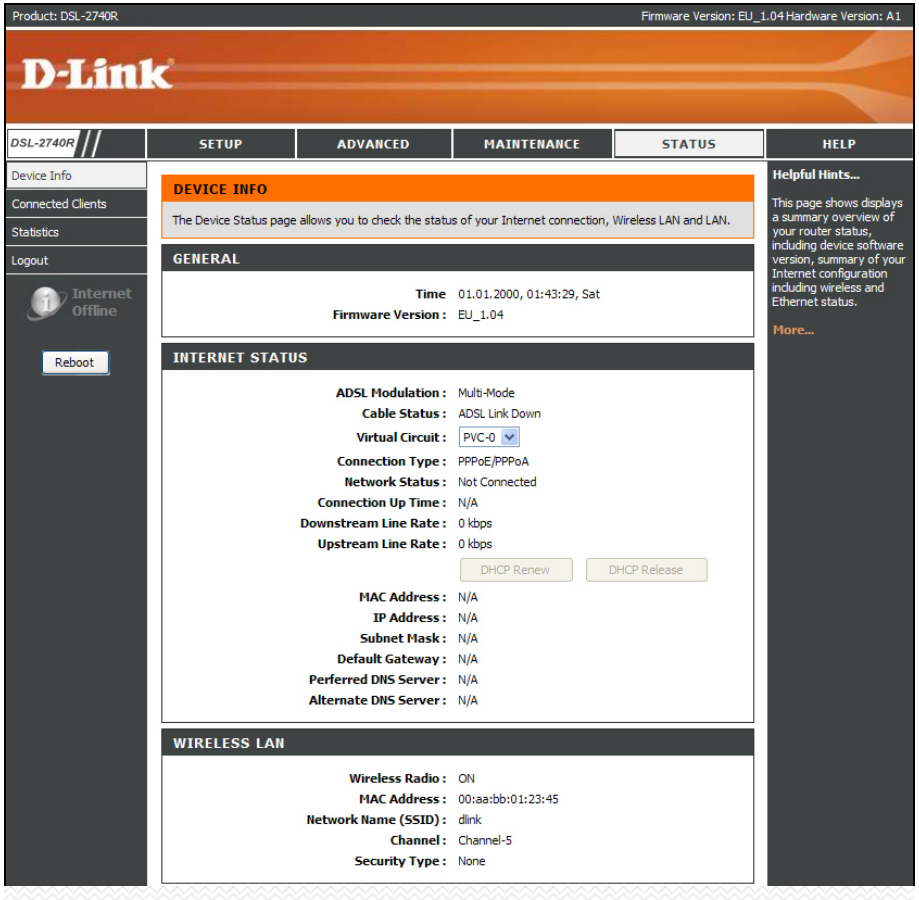
Status

Use the various read-only windows to view system information and monitor performance.

Device Info

To access the **Device Info** window, click the **Device Info** button in the **Status** directory.

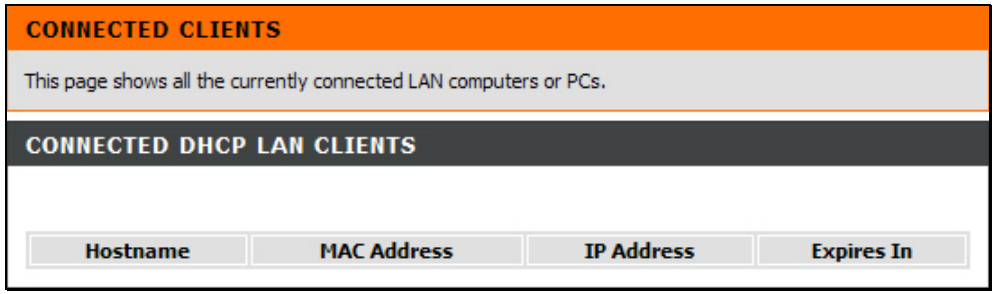
Use this window to quickly view basic current information about the LAN and WAN interfaces and device information including Firmware Version and MAC address.



Connected Clients

To access the **Connected Clients** window, click the **Connected Clients** button in the **Status** directory.

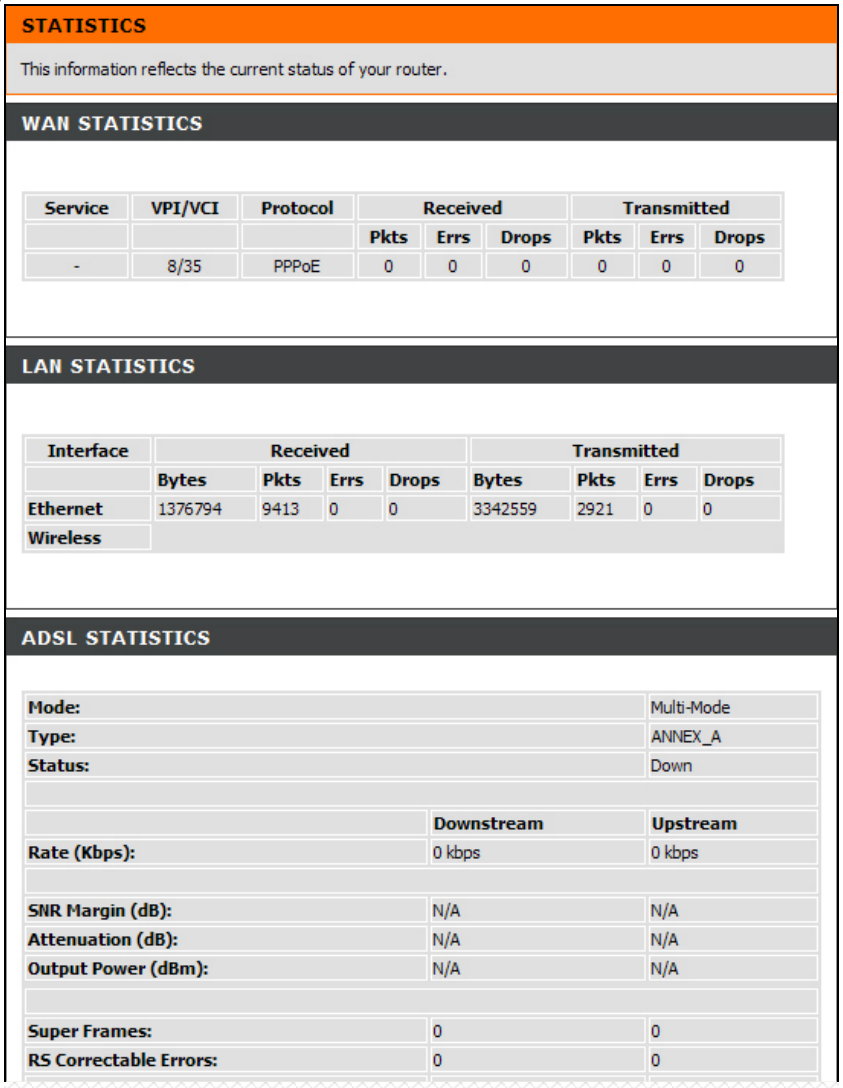
The Connected LAN Clients list displays active DHCP clients when the router is acting as a DHCP server.



Statistics

To access the **Statistics** window, click the **Statistics** button in the **Status** directory.

Use this window to monitor traffic on the Ethernet or ADSL connection.
This window also displays information concerning ADSL status.



STATISTICS

This information reflects the current status of your router.

WAN STATISTICS

Service	VPI/VCI	Protocol	Received			Transmitted		
			Pkts	Errs	Drops	Pkts	Errs	Drops
-	8/35	PPPoE	0	0	0	0	0	0

LAN STATISTICS

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
Ethernet	1376794	9413	0	0	3342559	2921	0	0
Wireless								

ADSL STATISTICS

Mode:		Multi-Mode
Type:		ANNEX_A
Status:		Down
	Downstream	Upstream
Rate (Kbps):	0 kbps	0 kbps
SNR Margin (dB):	N/A	N/A
Attenuation (dB):	N/A	N/A
Output Power (dBm):	N/A	N/A
Super Frames:	0	0
RS Correctable Errors:	0	0

Help

To access the **Help** window, click the **Help** directory.

Troubleshooting

This chapter provides solutions to problems that might occur during the installation and operation of the DSL-2740R. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

1. How do I configure my DSL-2740R Router without the CD-ROM?

- Connect your PC to the Router using an Ethernet cable.
- Open a web browser and enter the address http://192.168.1.1
- The default username is 'admin' and the default password is 'admin'.
- If you have changed the password and cannot remember it, you will need to reset the Router to the factory default setting (see question 2), which will set the password back to 'admin'.

Note: Please refer to the next section "Networking Basics" to check your PC's IP configuration if you can't see the login windows.

2. How do I reset my Router to the factory default settings?

- Ensure the Router is powered on.
- Press and hold the reset button on the back of the device for approximately 5 to 8 seconds.
- This process should take around 1 to 2 minutes.

Note: Resetting the Router to the factory default settings will erase the current configuration settings. To reconfigure your settings, login to the Router as outlined in question 1, then run the Setup Wizard.

3. What can I do if my Router is not working correctly?

There are a few quick steps you can take to try and resolve any issues:

- Follow the directions in Question 2 to reset the Router.
- Check that all the cables are firmly connected at both ends.
- Check the LEDs on the front of the Router. The Power indicator should be on, the Internet indicator should flash, and the DSL and LAN indicators should be on as well.

- Please ensure that the settings in the Web-based configuration manager, e.g. ISP username and password, are the same as the settings that have been provided by your ISP.

4. Why can't I get an Internet connection?

For ADSL ISP users, please contact your ISP to make sure the service has been enabled/connected by your ISP and that your ISP username and password are correct.

5. What can I do if my Router can't be detected by running the installation CD?

- Ensure the Router is powered on.
- Check that all the cables are firmly connected at both ends and all LEDs work correctly.
- Ensure only one network interface card on your PC is activated.
- Click on **Start** -> **Control Panel** -> **Security Center** to disable the firewall.

Note: There is a potential security issue if the firewall is disabled on your PC. Please remember to turn it back on once you have finished the whole installation procedure. This will enable you to be able to surf the Internet without any problem.

Networking Basics
Check Your IP Address

After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

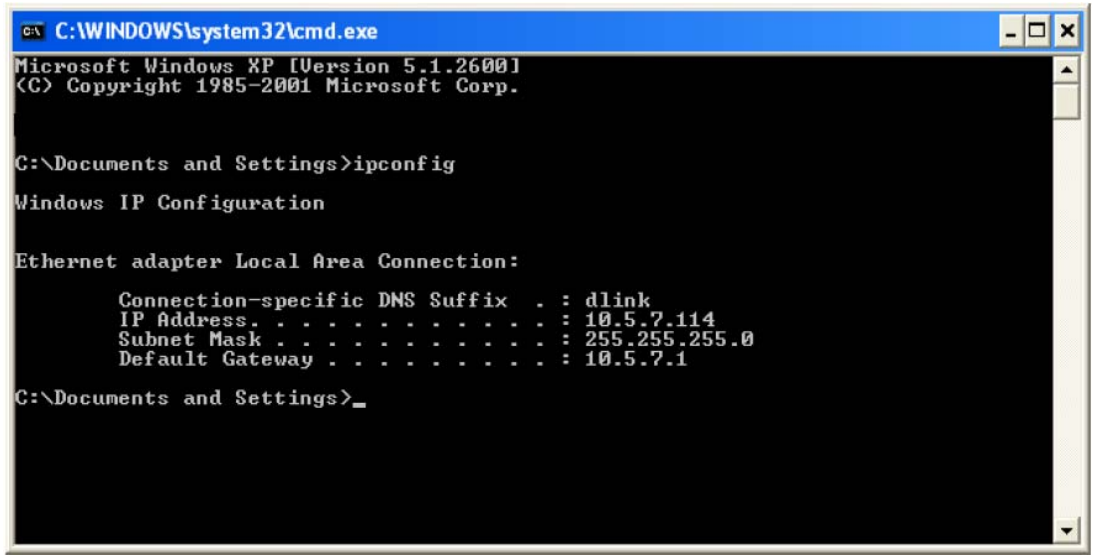
Click on **Start** > **Run**. In the run box type ***cmd*** and click on the **OK**.

At the prompt, type ***ipconfig*** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.



Statically Assign An IP Address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

Step 1
Windows® XP - Click on **Start** > **Control Panel** > **Network Connections**.
Windows® 2000 - From the desktop, right-click on the **My Network Places** > **Properties**.

Step 2
Right-click on the **Local Area Connection** which represents your D-Link network adapter and select **Properties**.

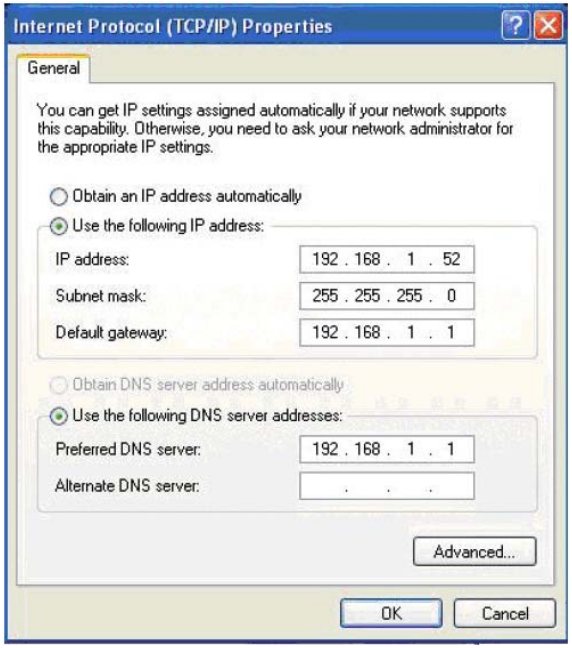
Step 3
Highlight **Internet Protocol (TCP/IP)** and click on the **Properties**.

Step 4
Click on the **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.1.1, make your IP address 192.168.1.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.1.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.1.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5
Click on the **OK** twice to save your settings.



Technical Specifications

ADSL Standards

- Full-rate ANSI T1.413 Issue 2
- ITU G.992.1 (G.dmt) AnnexA/C/I
- ITU G.992.2 (G.lite) Annex A/C
- ITU G.994.1 (G.hs)

ADSL2 Standards

- ITU G.992.3 (G.dmt.bis) Annex A/J/K/L/M
- ITU G.992.4 (G.lite.bis) Annex A

ADSL2+ Standards

- ITU G.992.5 Annex A/L/M

Protocols

- IEEE 802.1d Spanning Tree
- TCP/UDP
- ARP
- RARP
- ICMP
- RFC1058 RIP v1
- RFC1213 SNMP v1 & v2c
- RFC1334 PAP
- RFC1389 RIP v2

RFC1577 Classical IP over ATM

- RFC1483/2684 Multiprotocol Encapsulation over ATM Adaptation Layer 5 (AAL5)
- RFC1661 Point to Point Protocol
- RFC1994 CHAP
- RFC2131 DHCP Client / DHCP Server
- RFC2364 PPP over ATM
- RFC2516 PPP over Ethernet

Data Transfer Rate

- G.dmt full rate downstream: up to 8 Mbps / upstream: up to 1 Mbps
- G.lite: ADSL downstream up to 1.5 Mbps / upstream up to 512 Kbps
- G.dmt.bis full rate downstream: up to 12 Mbps / upstream: up to 1 Mbps
- ADSL full rate downstream: up to 24 Mbps / upstream: up to 1 Mbps

Media Interface

- ADSL interface: RJ-11 connector for connection to 24/26 AWG twisted pair telephone line
- LAN interface: four RJ-45 ports for 10/100BASE-T Ethernet connection