USER MANUAL

DSL-2740B

VERSION 2.2

D-Link®

BROADBAND

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Package Contents

- DSL-2740B Wireless ADSL Router
- 3 Detachable Antennas
- Power Adapter
- CD-ROM with Installation Wizard, User Manual, and Special Offers
- One twisted-pair telephone cable used for ADSL connection
- One straight-through Ethernet cable
- One Quick Installation Guide

Note: Using a power supply with a different voltage rating than the one included with the DSL-2740B will cause damage and void the warranty for this product.

System Requirements

- ADSL Internet service
- Computer with:
  - 200MHz Processor
  - 64MB Memory
  - CD-ROM Drive
  - Ethernet Adapter with TCP/IP Protocol Installed
  - Windows XP/20004
  - Internet Explorer v6 or later, FireFox v1.5
- D-Link Click'n Connect Utility
  - Computer with Windows 2000/XP

Introduction

HIGH-SPEED ADSL2/2+ INTERNET CONNECTION
Latest ADSL2/2+ standards provide Internet transmission of up to 24Mbps downstream, 1Mbps upstream.

HIGH-PERFORMANCE WIRELESS
Embedded latest draft 802.11n technology for high-speed wireless connection, complete compatibility with 802.11b/g wireless devices

TOTAL SECURITY & QoS
Firewall protection from Internet attacks, user access control, WPA/WPA2 wireless security and priority queues for smooth VoIP traffic/streaming multimedia

ULTIMATE INTERNET CONNECTION
The DSL-2740B RangeBooster N ADSL2+ router is a versatile, high-performance remote router for home and the small office. With integrated ADSL2/2+ supporting up to 24Mbps download speed, firewall protection, Quality of Service (QoS), draft 802.11n wireless LAN and 4 Ethernet switch ports, this router provides all the functions that a home or small office needs to establish a secure and high-speed remote link to the outside world.

ULTIMATE WIRELESS CONNECTION WITH MAXIMUM SECURITY
Powered by RangeBooster N technology, this router provides wireless speeds that are up to 4 times faster than 802.11g 1. Maximize wireless performance by connecting this router to computers equipped with RangeBooster N wireless interfaces and stay connected from virtually anywhere at home and in the office. The router can also be used with 802.11g and 802.11b wireless networks to enable significantly improved reception. It supports WPA/WPA2 and WEP for flexible user access security and data encryption methods.

FIREWALL PROTECTION & QoS
Security features prevents unauthorized access to the home and office network, be it from the wireless devices or from the Internet. The router provides firewall security using Stateful Packet Inspection (SPI) and hacker attack logging for Denial of Service (DoS) attack protection. SPI inspects the contents of all incoming packet headers before deciding what packets are allowed to pass through. Router access control is provided with packet filtering based on port and source/destination MAC/IP addresses. For Quality of Service (QoS), the router supports multiple priority queues to enable a group of home or office users to experience the benefit of smooth network connection of inbound and outbound data without concern of traffic congestion. This QoS support allows users to enjoy high ADSL transmission for applications such as VoIP and streaming multimedia over the Internet.

*Maximum wireless signal rate derived from IEEE standard 802.11g and draft 802.11n specifications. 802.11n speeds obtainable when operating among RangeBooster N products. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.

Features

- **Faster Wireless Networking** - The DSL-2740B provides up to 270Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio.

- **Compatible with 802.11b and 802.11g Devices** - The DSL-2740B is still fully compatible with the IEEE 802.11b and g standards, so it can connect with existing 802.11b and g PCI, USB and Cardbus adapters.

- **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 DSL-2740B 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.

- **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.

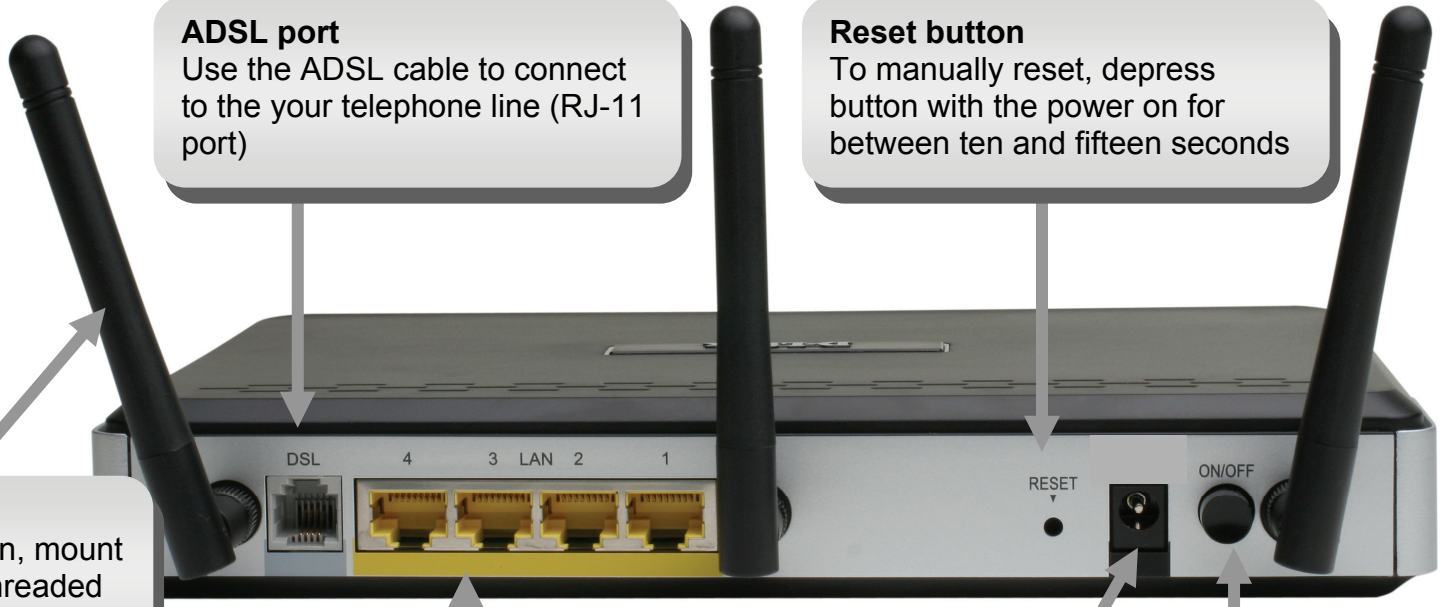
- **High Performance** - Very high rates of data transfer are possible with the Router. Up to 24Mbps downstream bit rate using the G.dmt standard. (For ADSL2+)

- **Full Network Management** - The DSL-2740B incorporates SNMP (Simple Network Management Protocol) support for web-based management and text-based network management via Telnet connection.

- **Easy Installation** - The DSL-2740B 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.

*Maximum wireless signal rate derived from IEEE standard 802.11g and draft 802.11n specifications. 802.11n speeds obtainable when operating among RangeBooster N products. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.

Hardware Overview
Connections



ADSL port
Use the ADSL cable to connect to the your telephone line (RJ-11 port)

Reset button
To manually reset, depress button with the power on for between ten and fifteen seconds

Antenna
For wireless operation, mount the antenna on the threaded antenna post.

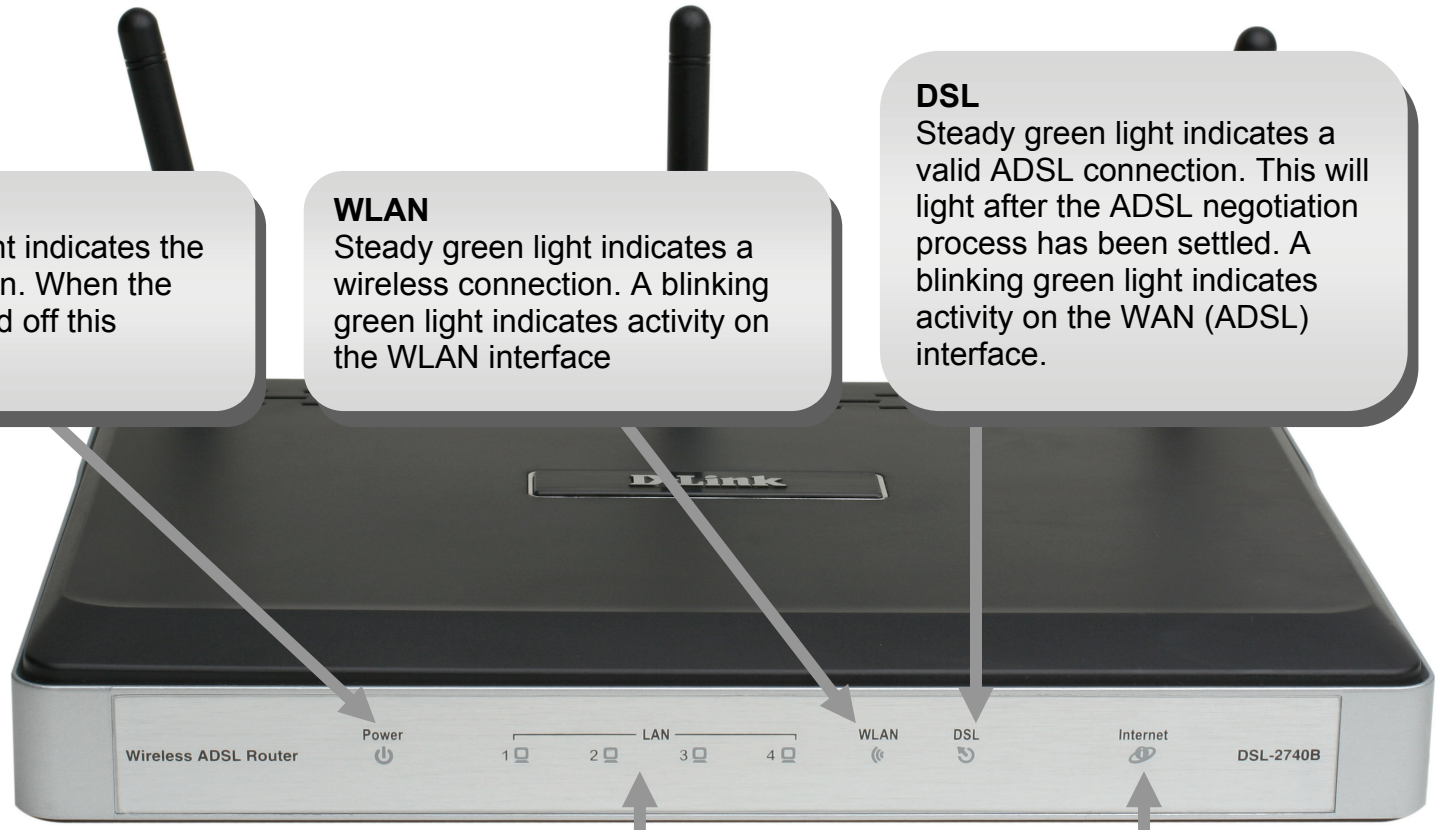
Ethernet ports
Use the Ethernet ports to connect the Router to your Ethernet LAN or Ethernet devices

Power insert
Use the adapter shipped with the Router to connect to power source

Power button
Push in to power-on the Router. Push again to power-off the Router

Hardware Overview

LEDs



Power
Steady green light indicates the unit is powered on. When the device is powered off this remains dark.

WLAN
Steady green light indicates a wireless connection. A blinking green light indicates activity on the WLAN interface

DSL
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.

LAN
A solid green light indicates a valid link on startup. These lights blink when there is activity currently passing through the Ethernet port.

Internet
Steady green light indicates a successful Internet connection. Steady red light indicates failed Internet connection. Dark if no WAN protocol is configured.

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-2740B 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, and Windows XP.

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.

802.11 Wireless LAN Configuration

All the 802.11 wireless LAN settings may be configured on a single page using the web-based manager. For basic wireless communication you need to decide what channel to use and what SSID to assign. These two settings must be the same for any wireless workstations or other wireless access point that communicate with the DSL-2740B through the wireless interface.

Security for wireless communication can be accomplished in a number of ways. The DSL-2740B supports WPA (Wi-Fi Protected Access), WPA2, and mixed WPA/WPA2. Wireless access can also be controlled by selecting MAC addresses that are allowed to associate with the device. Please read the section on Wireless Configuration.

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. It is commonly in the form˜ user@isp.co.uk. 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/PPoA (PPPoE LLC, PPPoA LLC or PPPoA VC-Mux)
- Bridge Mode (1483 Bridged IP LLC or 1483 Bridged IP VC Mux)
- IPoA/MER (Static IP Address) (Bridged IP LLC, 1483 Bridged IP VC Mux, 1483 Routed IP LLC, 1483 Routed IP VC-Mux or IPoA)
- MER (Dynamic IP Address) (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 (ADSL2+ Multi-Mode) used for the Router automatically detects all types of ADSL, ADSL2, and ADSL2+ modulation. However, if you are instructed to specify the modulation type used for the Router, you may choose among the numerous options available on the Modulation Type drop-down menu on the ADSL Configuration window (Advanced > ADSL)

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-2740B

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-2740B
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-2740B
This is the subnet mask used by the DSL-2740B, 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-2740B to this Ethernet port using an Ethernet cable. You can also use the Ethernet ports on the DSL-2740B to connect to other computer or Ethernet devices.

DHCP Client status

Your DSL-2740B ADSL 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-2740B 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 your 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-2740B Wireless ADSL Router.

Wireless Installation Considerations

DSL-2740B lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the D-Link router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.

2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.

3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.

4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.

5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

Device Installation

The DSL-2740B Wireless ADSL Router maintains three separate interfaces, an Ethernet LAN, a wireless LAN and an ADSL Internet (WAN) connection. Carefully consider the Router's location suitable for connectivity for your Ethernet and wireless devices. You must have a functioning broadband connection via a bridge device such as a Cable or ADSL modem in order to use the Router's WAN function.

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, direct sunlight 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, desktop, or other stable platform. If possible, 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. Push down the Power button, and 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 Ethernet Link/Act 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 this 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. Press and hold the reset button while the device is powered off.
2. Turn on the power.
3. Wait for 10~15 seconds and then release the reset button.

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

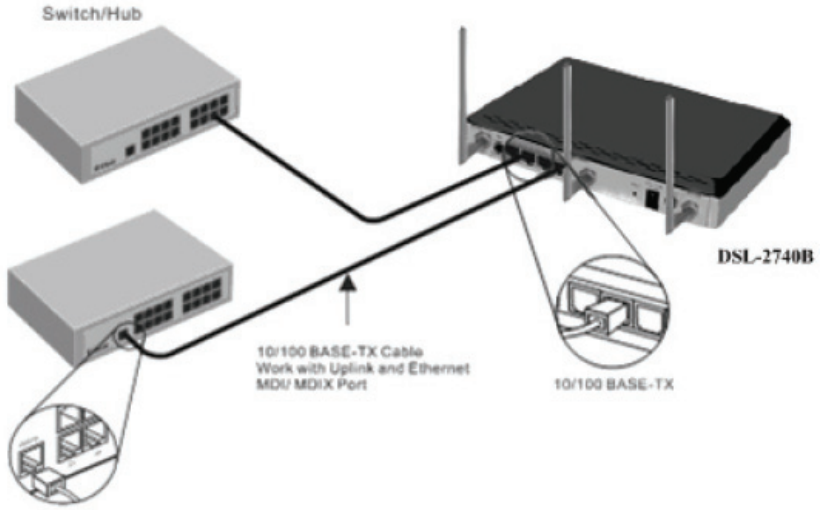
Use the ADSL cable included with the Router to connect it to a telephone wall socket or receptacle. Plug one end of the cable into the ADSL port (RJ-11 receptacle) on the rear panel of the Router and insert the other end into the RJ-11 wall socket. If you are using a low pass filter device, follow the 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.

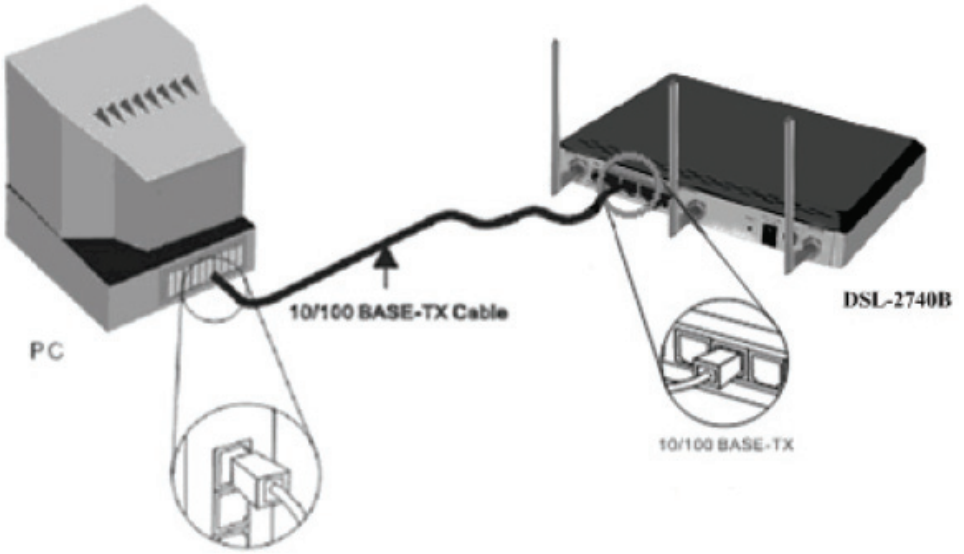
Hub or Switch to Router Connection

Connect the Router to an uplink port (MDI-II) on an Ethernet hub or switch with a straight-through cable as shown in this diagram. 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 as shown in this diagram.



Configuration

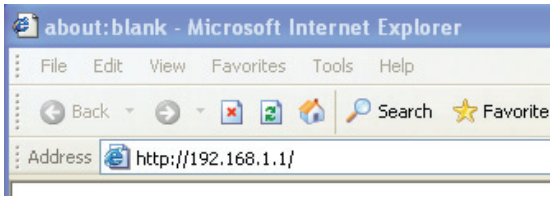
This section will show you how to configure your new D-Link wireless router using the web-based configuration utility.

Web-based Configuration Utility

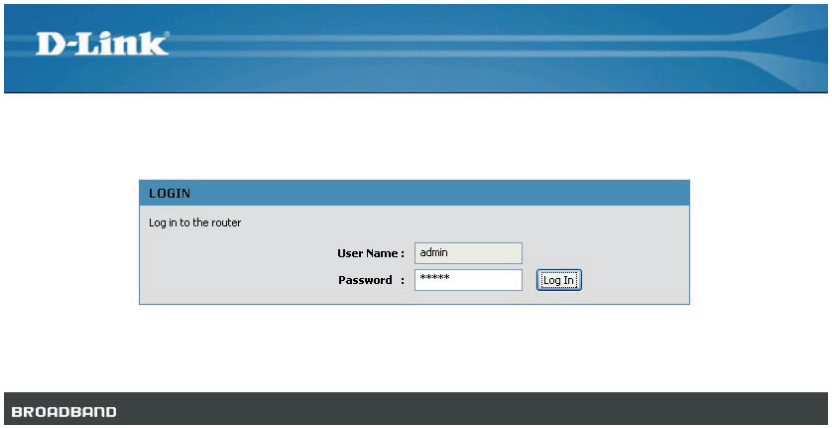
Connect to the Router

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.



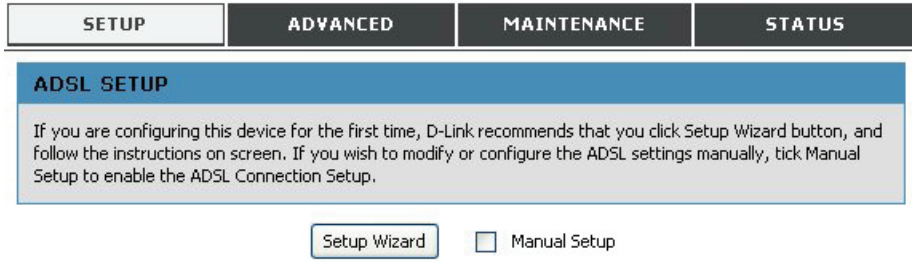
SETUP

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.

WIZARD

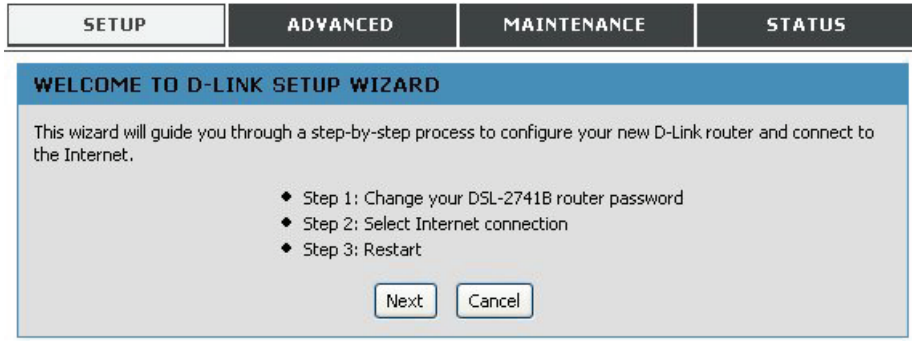
ADSL SETUP

Click on the **Setup Wizard** button to launch the **Setup Wizard.**



WELCOME TO D-LINK SETUP WIZARD

There are three steps to configuring your router. Click on the **Next** to continue.



STEP 1: CHANGE YOUR DSL-2740B PASSWORD

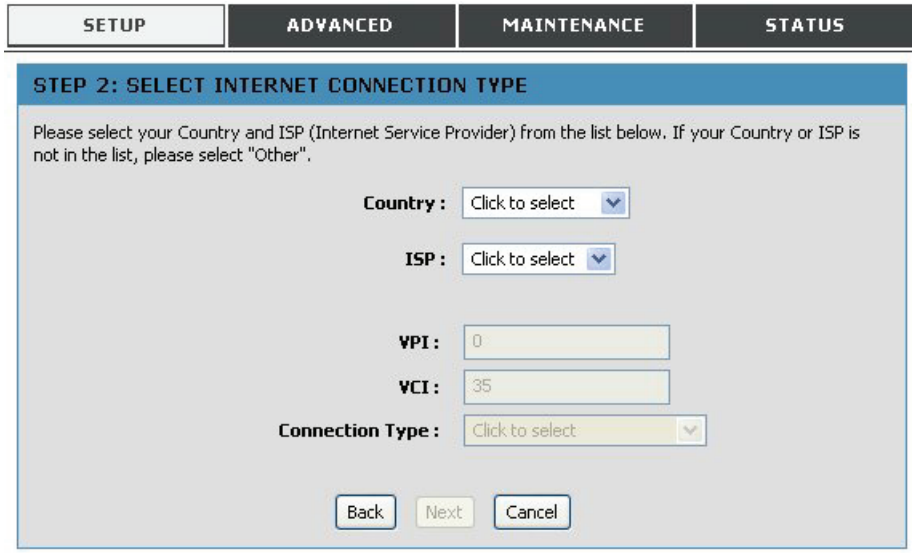
The default password is "**admin**", in order to secure your network, please modify the password. Note: Confirm Password must be same as "**New Password**". Of course, you can click on the **Skip** to ignore the step.

STEP 2: SELECT INTERNET CONNECTION TYPE

Please select your **Country** and **ISP**, the VPI and VCI information Will display Automatically. Of course, you can modify the information.

If, you can not find the country and ISP in the list below; you can select "**Others**", and then input the "**VPI**" and "**VCI**" and Connection Type.

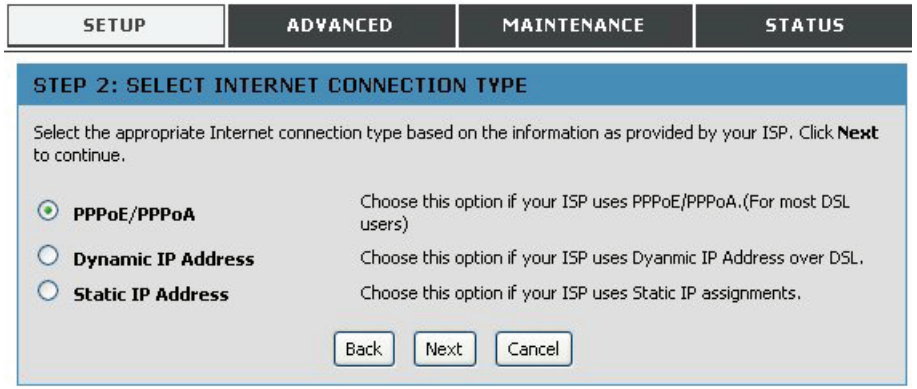
Click on the **Next** button to go to the next **Setup Wizard** window.



STEP 2: SELECT INTERNET CONNECTION TYPE

Select the appropriate Internet connection type based on the information provided to you by your ISP.

Click on the **Next** button to go to the next **Setup Wizard** window.



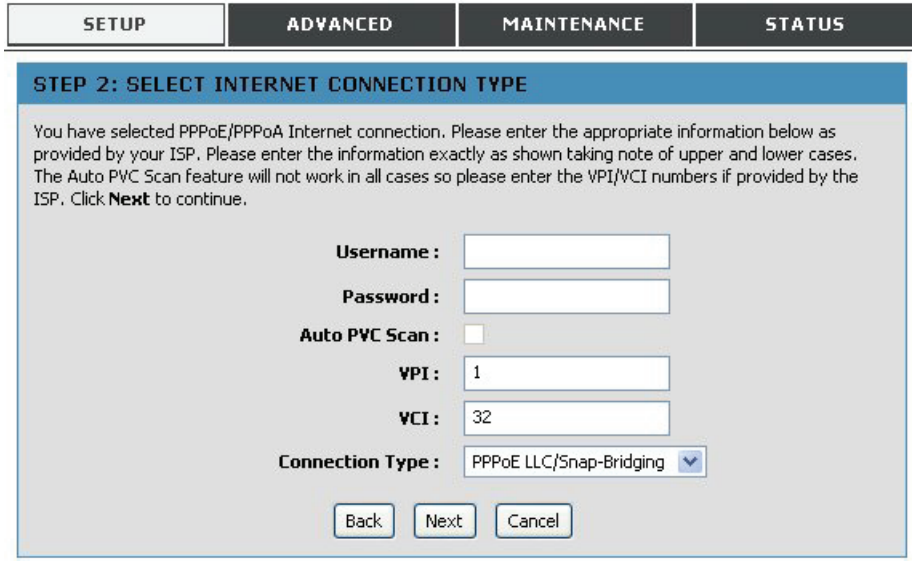
Using the Setup Wizard - For PPPoE/PPPoA connection

Type in the **Username** and **Password** (and PPPoE Service Name, if required by your ISP).

Select the specific **Authentication Method** from the drop-down menu (PAP or CHAP). Or user default AUTO to allow Router to negotiate with PPP server automatically.

The **Auto PVC Scan** feature will not work in all cases so please enter the VPI/VCI numbers if provided by the ISP.

Click on the **Next** button to go to the next **Setup Wizard** window.

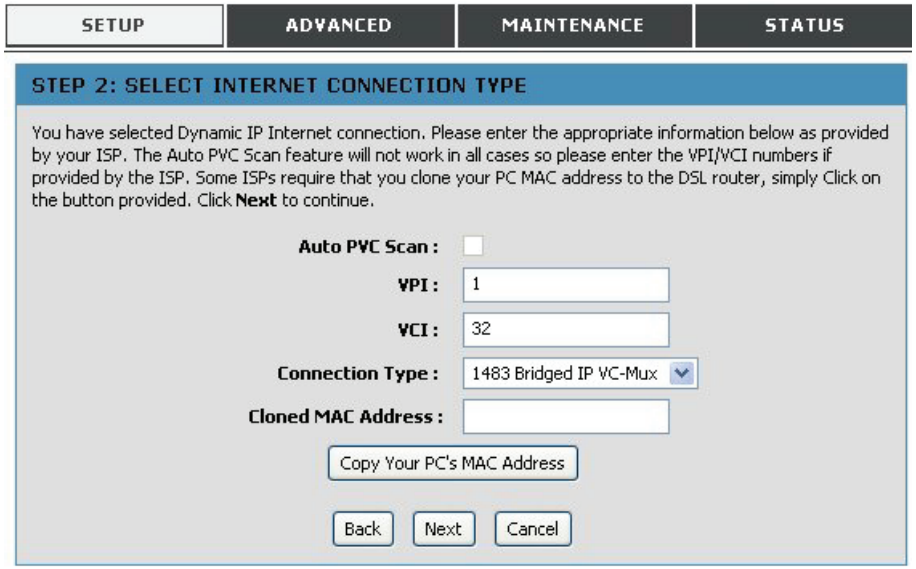


Using the Setup Wizard - For Dynamic IP Address connection

Please enter the appropriate information below as provided by your ISP. The **Auto PVC Scan** feature will not work in all cases so please enter the **VPI/VCI** numbers if provided by the ISP.

Maybe, you have to input your **PC MAC** address if ISP requires, and you can click on the button to copy it.

Click on the **Next button** to go to the next **Setup Wizard** window.

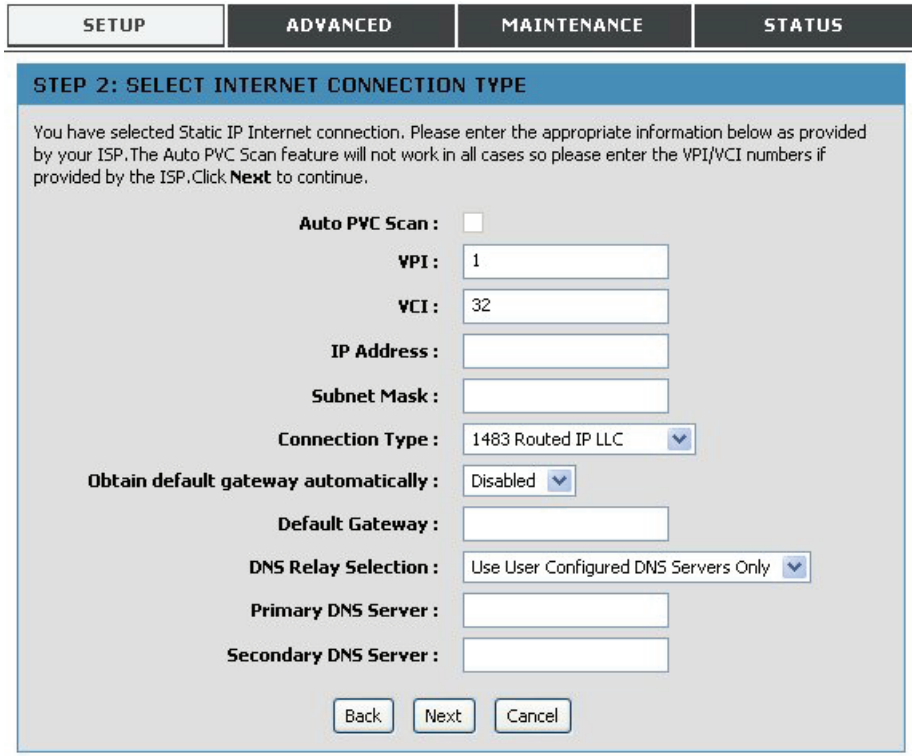


Using the Setup Wizard - For Static IP Address connection

Please enter the appropriate information below as provided by your ISP. The **Auto PVC Scan** feature will not work in all cases so please enter the **VPI/VCI** numbers if provided by the ISP.

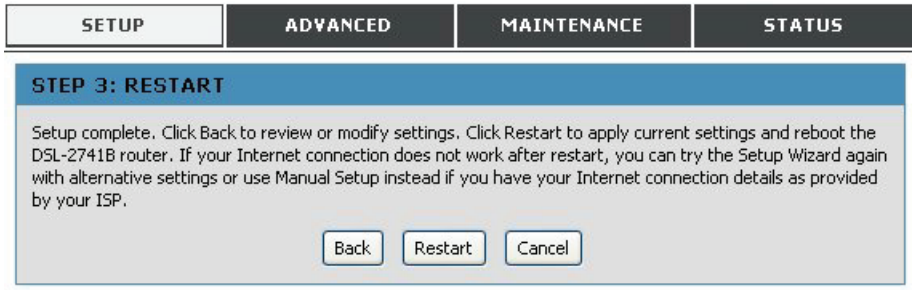
Please input the correct **IP address**, **Subnet Mask**, **Default Gateway** and **DNS information**. Note: Should you select to leave default Gateway and DNS information blank, they should be automatically generated.

Click on the **Next button** to go to the next **Setup Wizard** window.



STEP 3: RESTART

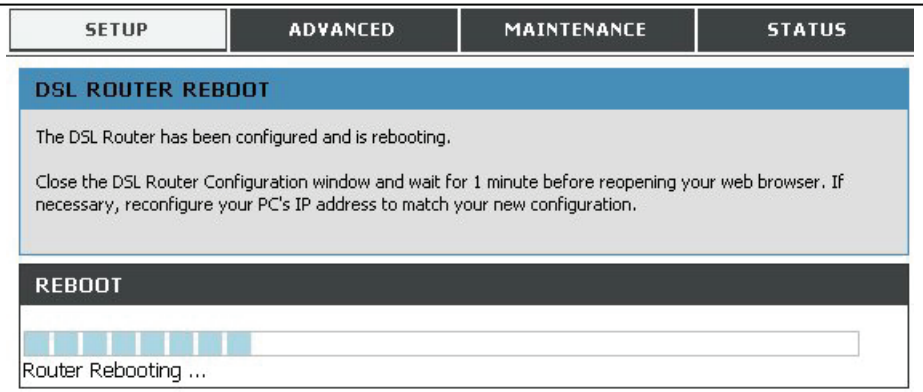
Click **Back** to review or modify settings. Click on **Restart** to apply current settings and reboot the DSL-2740B router. If your Internet connection does not work after the router restarts, you can try the **Setup Wizard** again with alternative settings or use Manual Setup instead provided you have your Internet connection details as provided to you by your ISP.



DSL ROUTER REBOOT

Please ensure you do not turn the Router off while it is rebooting. After the Router has successfully rebooted, you can again configure the Router as desired. You can also test the WAN connection by accessing the Internet with your browser.

Close the DSL Router Configuration window and wait for 1 minute before reopening your web browser. If necessary, please reconfigure your computer's IP address to match your new configuration.



ADSL SETUP

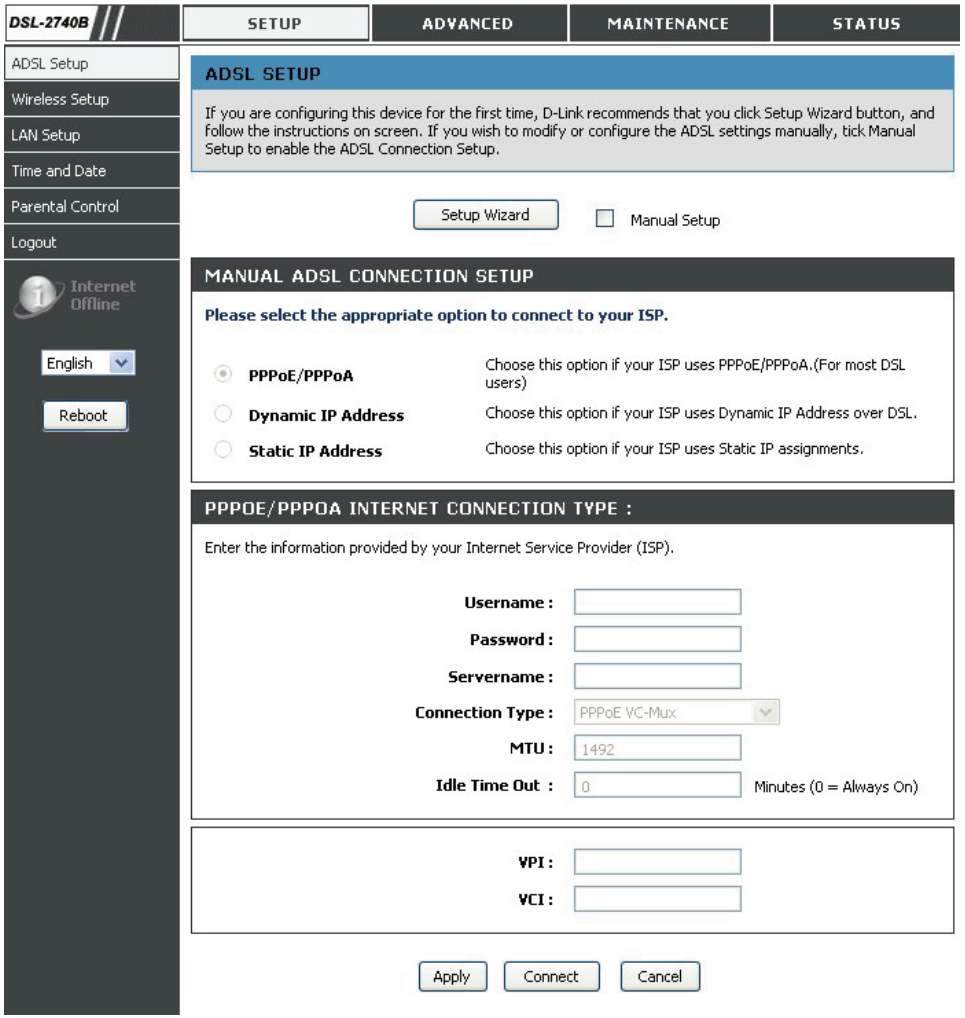
To access the **ADSL SETUP** (WAN) settings window, click on the **ADSL Setup** button in the **SETUP** directory and select the **Manual Setup** to configure the MANUAL ADSL interface in this page:

ADSL SETUP

Check the **Manual Setup** item and configure the below messages as in **WIZARD**.

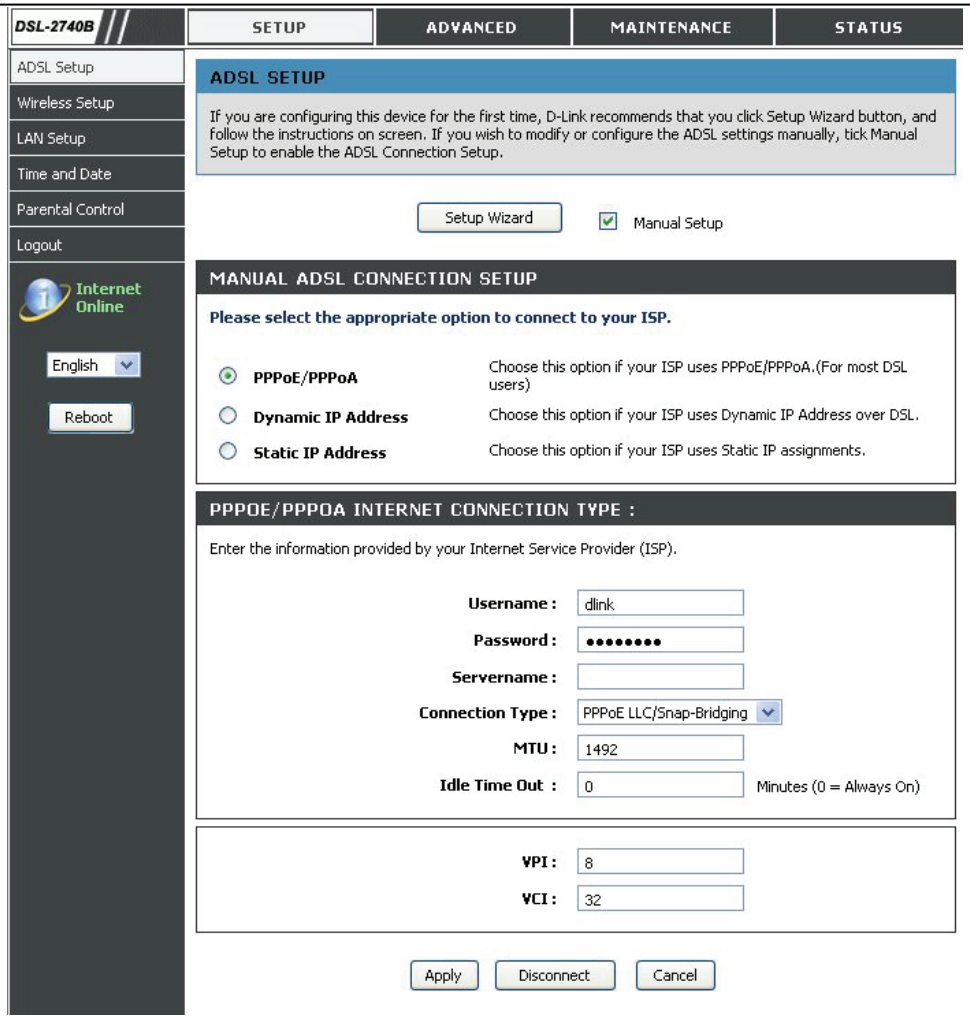
Click on the **Apply** button to apply and save your settings.

Click on the **Connect button** to connect the router to the Internet with the WAN interface.



When the router is connected to the Internet, the **Internet Online** graphical icon will be alit in colour. If it is in dark and you are having problems browsing web pages, then there may be a problem with your internet settings and you will need to revert to step 2.

Click on the **Disconnect button** to disconnect the router to the Internet and the icon will be dark.



WIRELESS

Use this section to configure the wireless settings for your D-Link router. Please note that changes made in this section will also need to be duplicated onto your wireless clients and PC.

To access the **WIRELESS** (WLAN) settings window, click on the **Wireless Setup** button in the **SETUP** directory.

WIRELESS NETWORK SETTINGS

Click on the **Enable Wireless** box to allow the router to operate in the wireless environment.

The **SSID** identifies members of the Service Set. Accept the default name or change it to something else. If the default SSID is changed, all other devices on the wireless network must also use the same SSID.

Enable Auto Channel Scan so that the router can select the best possible channel for your wireless network to operate on.

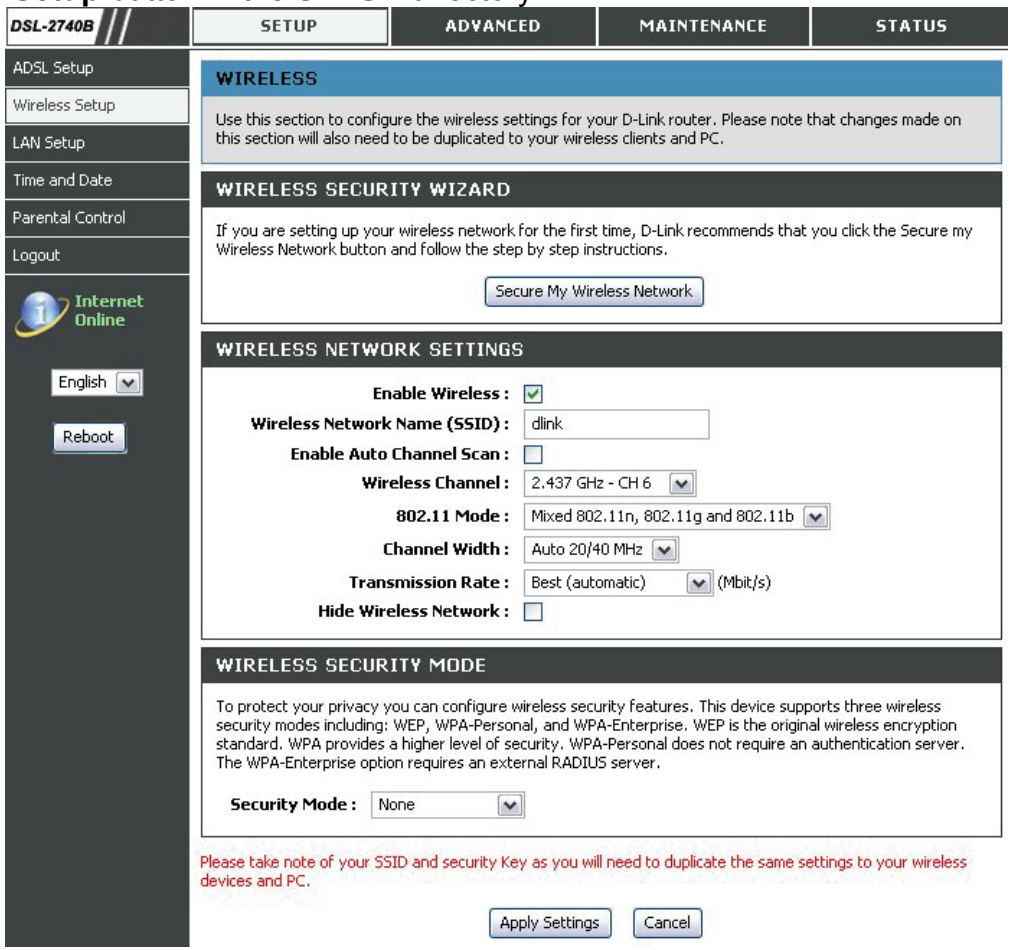
The **Wireless Channel** can let you select the channel of your access point. Channel availability is different for different countries due to their regulation.

Select **802.11 Mode** to operate in b/g/n mode. Or select specified mode to use.

Channel Width, Maximum rate for **20 MHz** is 130 Mbps. Maximum rate for **40 MHz** is 270 Mbps.

Transmission Rate, suggest keeping the Best (automatic) selection.

Click on the **Hide Wireless Network** box to allow the router to stop broadcasting its SSID.



WIRELESS SECURITY WIZARD

Click on the **Security My Wireless Network** button to enter the **SECURE MY WIRELESS NETWORK** window.

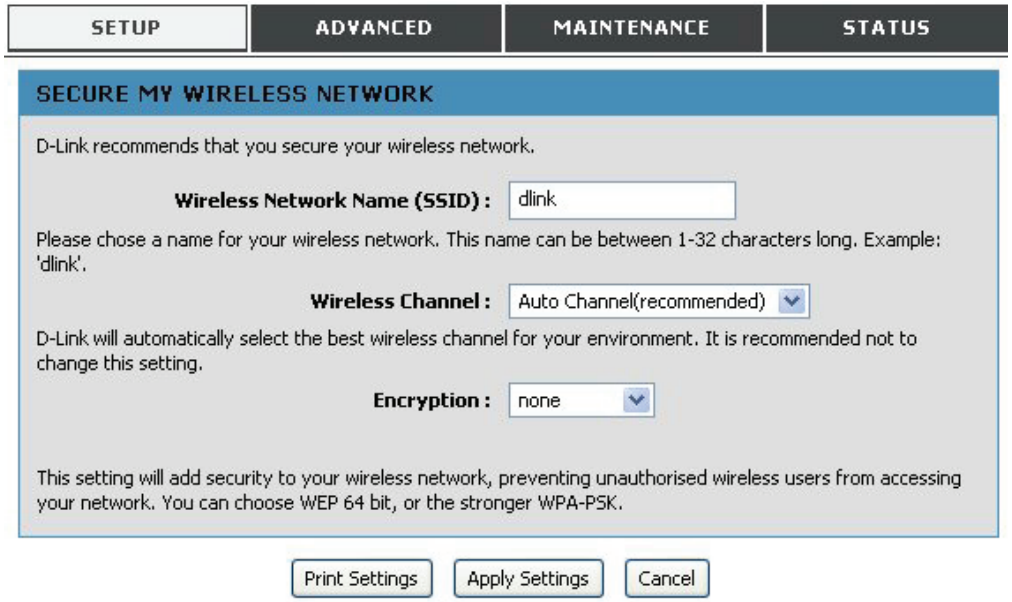
SECURE MY WIRELESS NETWORK

Input the **SSID**.

Select the **Wireless Channel**.

Select the **Encryption** type. **WPA-PSK** is more secure than **WEP 64 bit**.

Click on the **Apply Settings button** to apply the settings



WIRELESS SECURITY MODE - WEP

WEP (Wireless Encryption Protocol) 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. The router offers 64 or 128 bit encryption with four keys available.

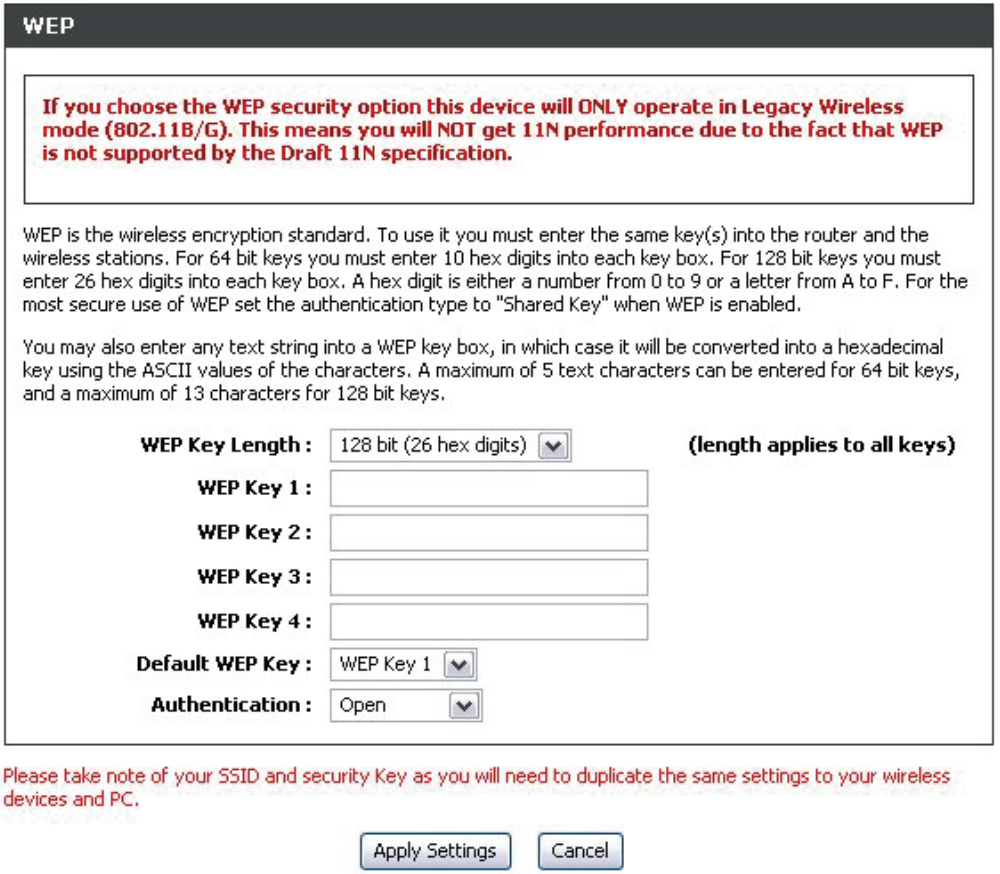
Select **WEP Key Length** from the drop-down menu. (**128 bit** is stronger than **64 bit**)

Specify the encryption key from the **Current Network Key** drop-down menu.

Enter the key into the **WEP Key** field 1~4. (Key length is outlined at the bottom of the window.)

Select **Authentication** type from the drop-down menu. (**Shared** is better than **Open**)

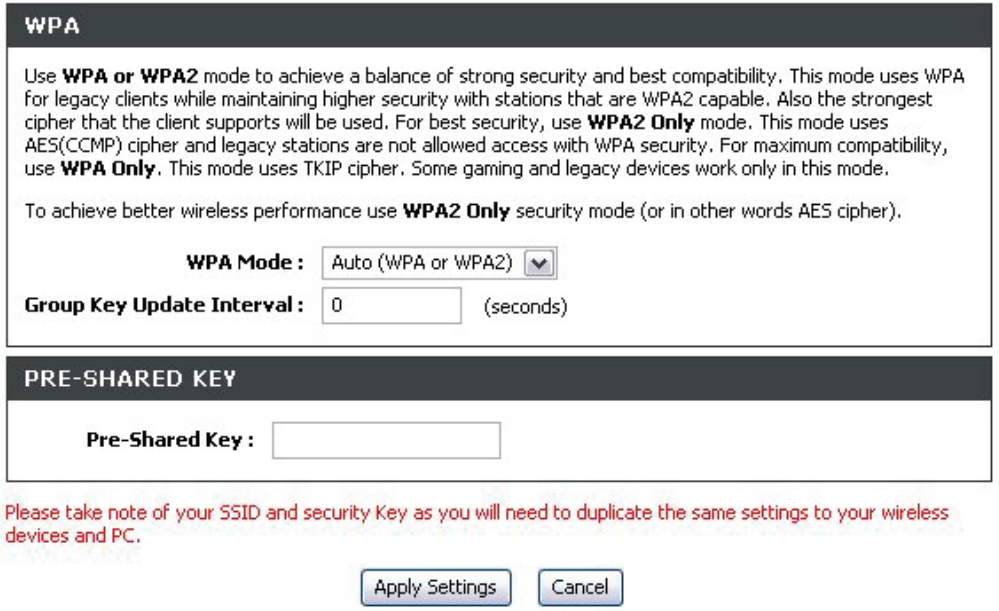
Click on the **Apply Settings** button to apply settings.



WIRELESS SECURITY MODE – WPA-Personal

WPA-PSK

WPA-PSK configuration is similar to WEP. The key length is between 8 to 63 ASCII codes.



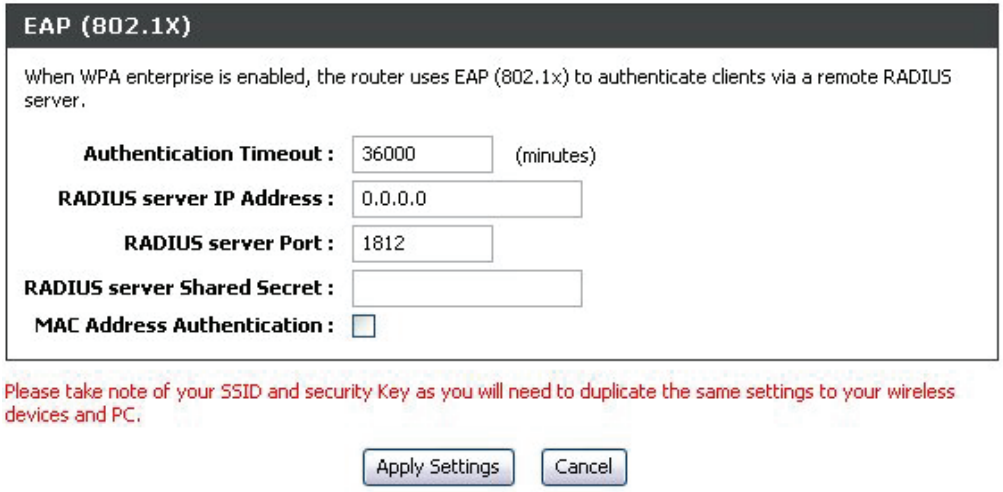
WIRELESS SECURITY MODE – WPA-Enterprise

802.1x

Some network-security experts now recommend that wireless networks use 802.1X security measures to overcome some weaknesses in standard WEP applications. A RADIUS server is used to authenticate all potential users. .

Enter your RADIUS server data: **IP Address, Port, and Key**.

Click on the **Save Settings** button to apply settings.



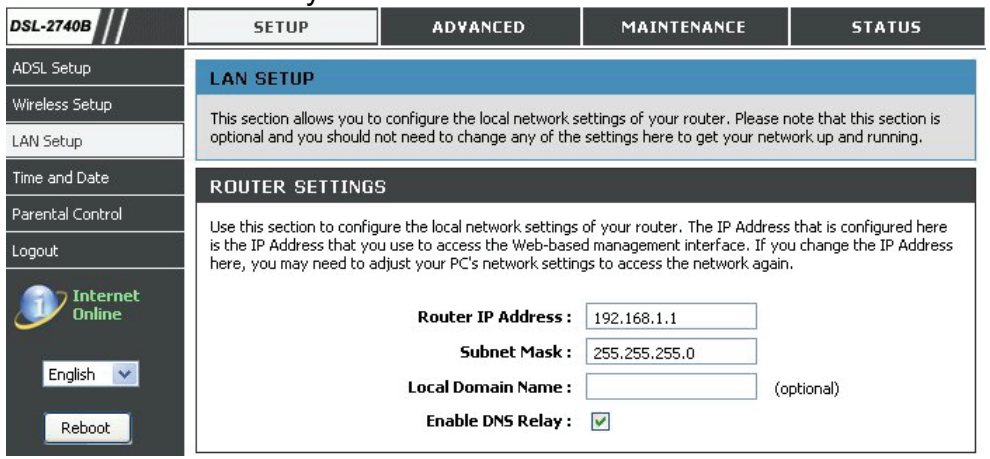
LAN SETUP

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.

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

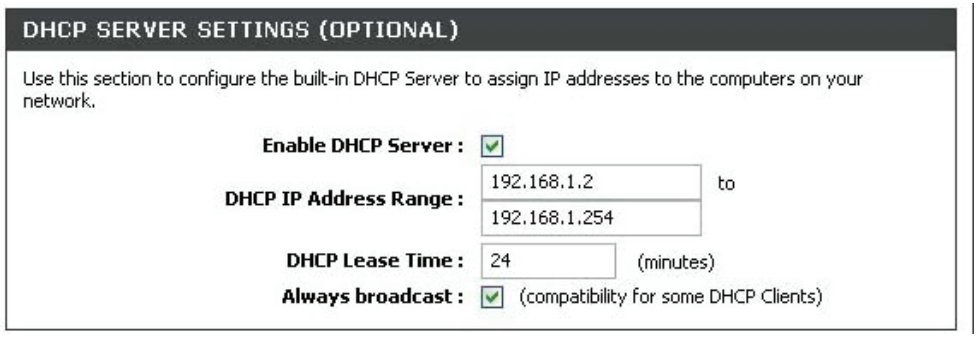
ROUTER SETTINGS

To change the **Router IP Address** or **Subnet Mask**, type in the desired values.



DHCP SERVER SETTINGS (OPTIONAL)

The **Enable DHCP Server** is selected 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.



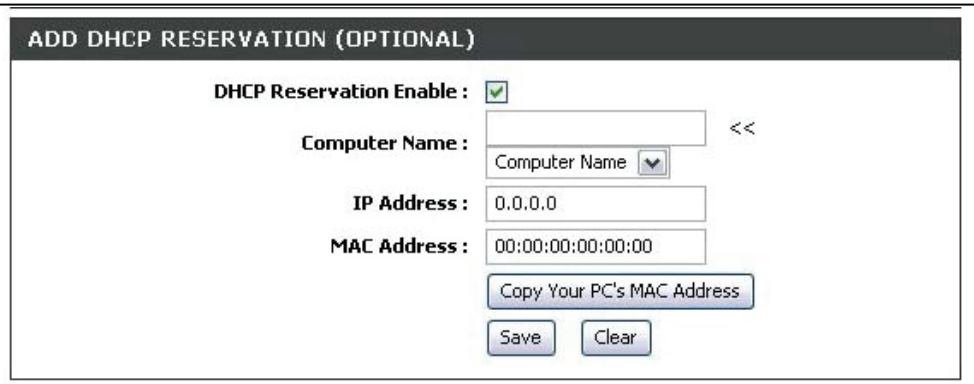
ADD DHCP RESERVATION (OPTIONAL)

Select the **DHCP Reservation Enable** can let you reserve the **IP Address** for the designate PC with the configured **MAC Address**.

The **Computer Name** can help you recognize the PC with the **MAC Address**, such as “Father’s Laptop”.

Clicking on the **Copy Your PC’s MAC Address** button will help you get the Mac address from the PC you are using now browsing this web page.

Click on the **Save button** to save the settings

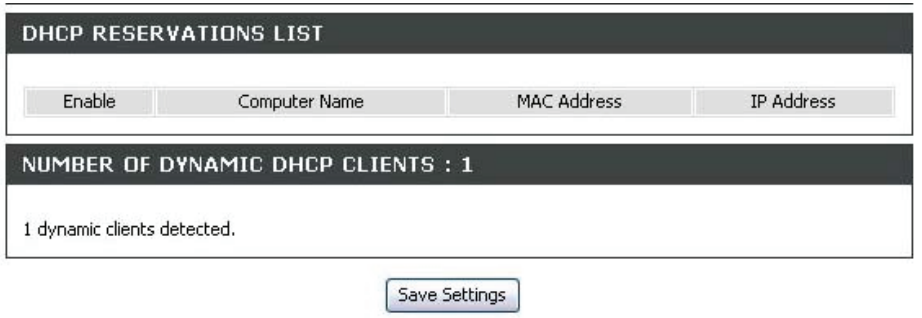


DHCP RESERVATIONS LIST

After saved the DHCP reservation, the **DHCP RESERVATIONS LIST** will list the configuration.

The **NUMBER OF DYNAMIC DHCP CLIENTS** shows how many DHCP clients (PC or Laptop) connected to the router currently.

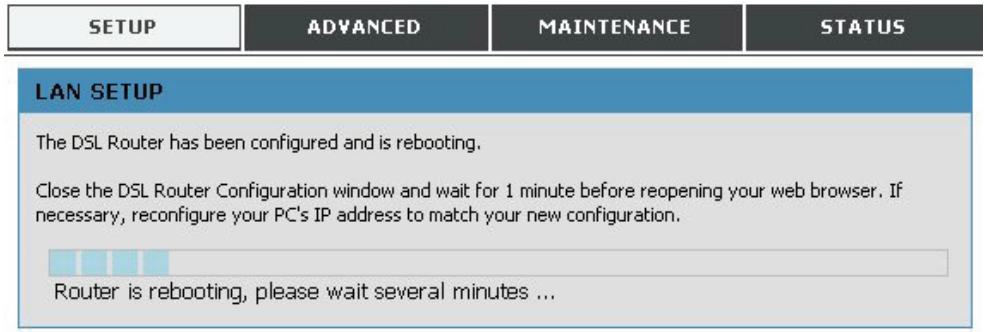
Click on the **Save Settings** button. You will be asked to reboot by a pop-up window. Click on the **OK** to reboot the router.



LAN SETUP

Do not turn the Router off while it is rebooting.

You might need to re-configure your PC NIC settings to enter the Router’s web manager after reboot.



TIME

The **TIME** configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to automatically adjust the time when needed.

To access the **TIME** setting window, click on the **Time and Date** button in the **SETUP** directory

TIME

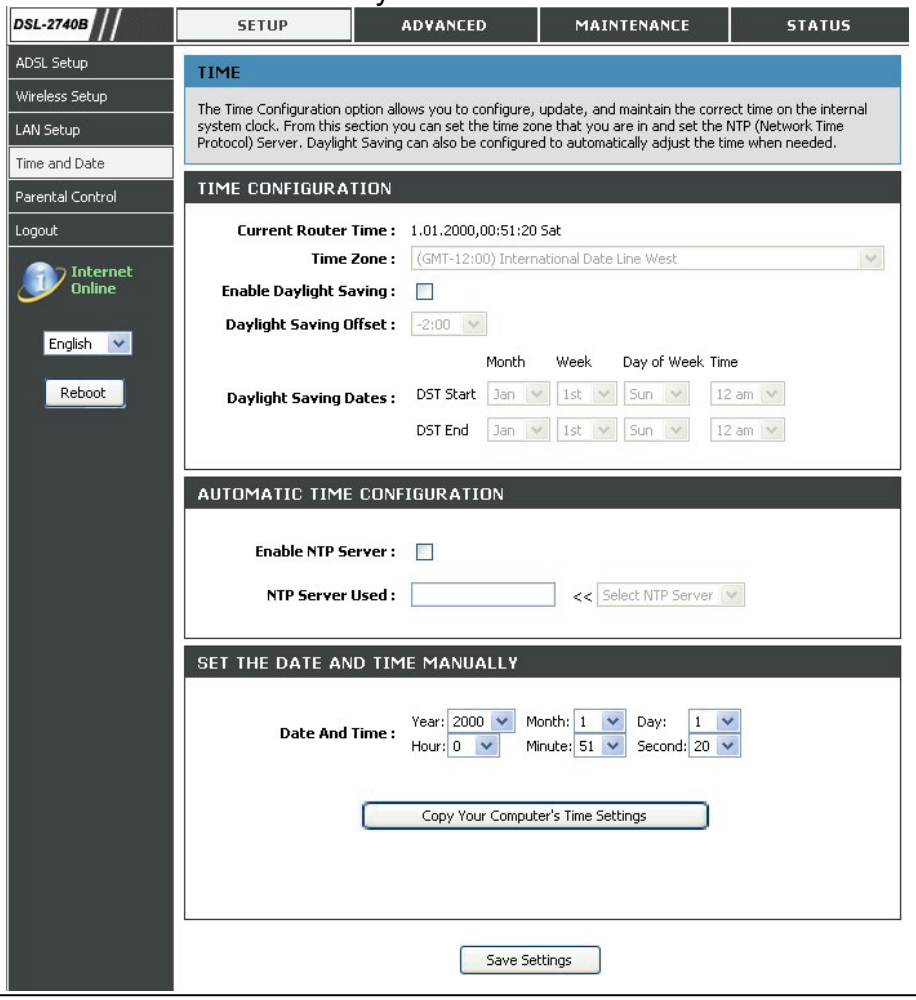
Check the **Enable NTP Server**.

Select specific time server to use from the **NTP Server Used** drop-down menu.

Select your operating time zone from the **Time Zone** drop-down menu.

Check the **Enable Daylight Saving** if needed and then select the proper **Daylight Saving Offset** drop-down menu. **Configure the Daylight Saving Dates** from start date to end.

Click on the **Save Settings** button to apply your settings.



PARENTAL CONTROL

The **PARENT CONTROL** provides two useful tools for restricting Internet access. **Block Websites** allows you to quickly create a list of all web sites that you wish to stop users from accessing. **Time Restrictions** allows you to control when clients or PCs connected to Router are allowed to access the Internet.

To access the **PARENT CONTROL** setting window, click on the **Parent Control** button in the **SETUP** directory

BLOCKED WEBSITES SCHEDULING

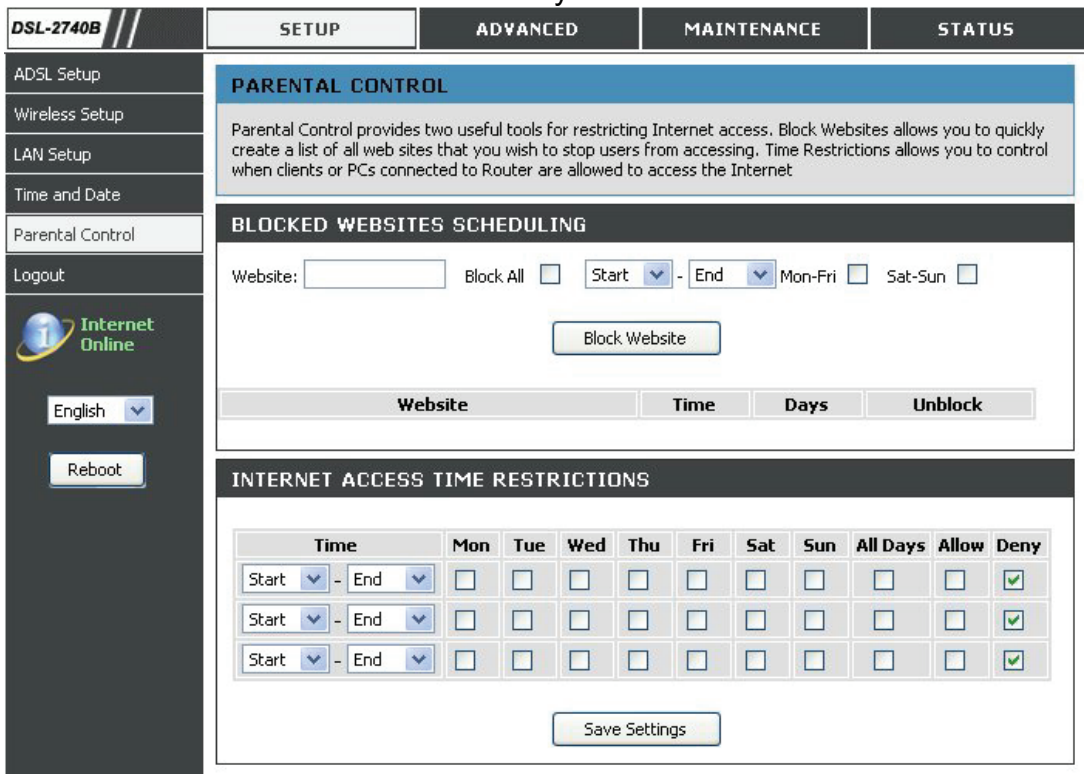
Type the **Website** and select the corresponding time and days. Click on the **Block Website** button to add to your blocked websites scheduling configuration.

Check the **Unblock field** in the tail of the row, and then click on the **Unblock Website** button. The checked items will be deleted from the table.

INTERNET ACCESS TIME RESTRICTIONS

Select days and time frame to allow/deny this rule.

Click on the **Save Settings** button to apply settings.



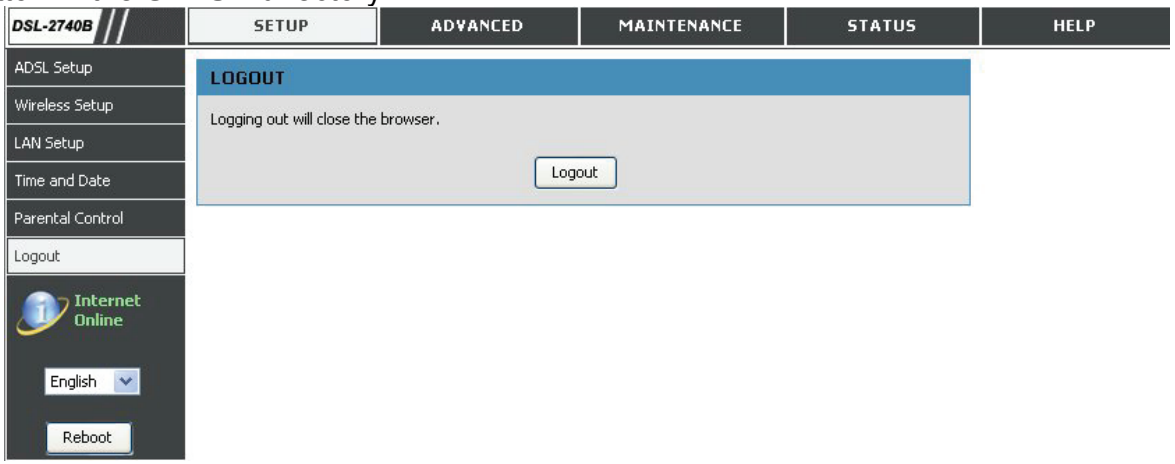
LOGOUT

The **LOGOUT** page enables you you to logout of your router configuration and close the browser.

To access the **LOGOUT** setting window, click on the **Logout** button in the **SETUP** directory

LOGOUT

Click on the **Logout** button to logout of the router configuration settings and close the browser.



ADVANCED

This chapter include the more advanced features used for network management and security as well as administrative tools to manage the router, view status and other information used to examine performance and for troubleshooting.

PORT FORWARDING

Use the **PORT FORWARDING** window to open ports in your router and re-direct data through those ports to a single PC on your network (WAN-to-LAN traffic). The Port Forwarding function allows remote users to access services on your LAN such as FTP for file transfers or SMTP and POP3 for e-mail. The DSL-2740B will accept remote requests for these services at your Global IP Address, using the specified TCP or UDP protocol and port number, and then redirect these requests to the server on your LAN with the LAN IP address you specify. Remember that the specified Private IP Address must be within the useable range of the subnet occupied by the Router.

To access the **PORT FORWARDING** settings window, click on the **Port Forwarding** button in the **ADVANCED** directory

PORT FORWARDING RULES CONFIGURATION

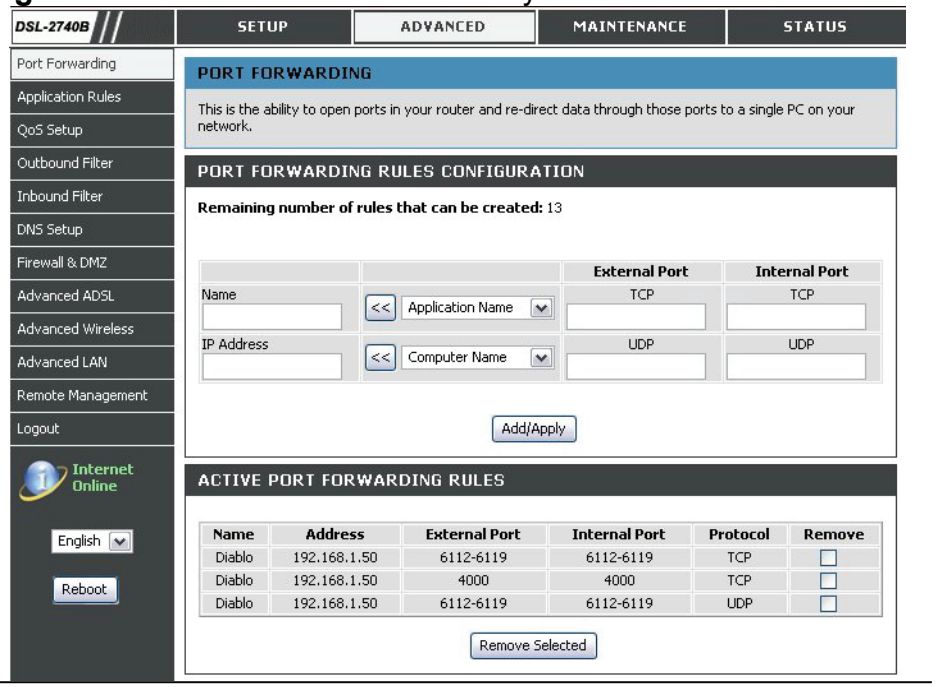
Select a name from the **Application Name** drop-down menu for a pre-configured application or type a name in the **Name** input box to define your own application.

Select a name from the **Computer Name** drop-down menu or type an IP address in the **IP address** input box to appoint the PC to receive the forwarded packets.

The **External Port** shows the ports opened for remote users in the WAN side of the router. The **TCP/UDP** means the protocol type of the opened ports.

The **Internal Port** shows the ports opened in the PC with the appointed **IP Address**. The **TCP/UDP** means the protocol type of the opened ports.

Click on the **Add/Apply** button to apply settings.



APPLICATION RULES

Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Application rules dynamically open up the **Firewall** ports when an application on the LAN initiates a TCP/UDP connection to a remote party using the **Trigger** ports. The router allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the **Firewall** ports. A maximum of 16 entries can be configured.

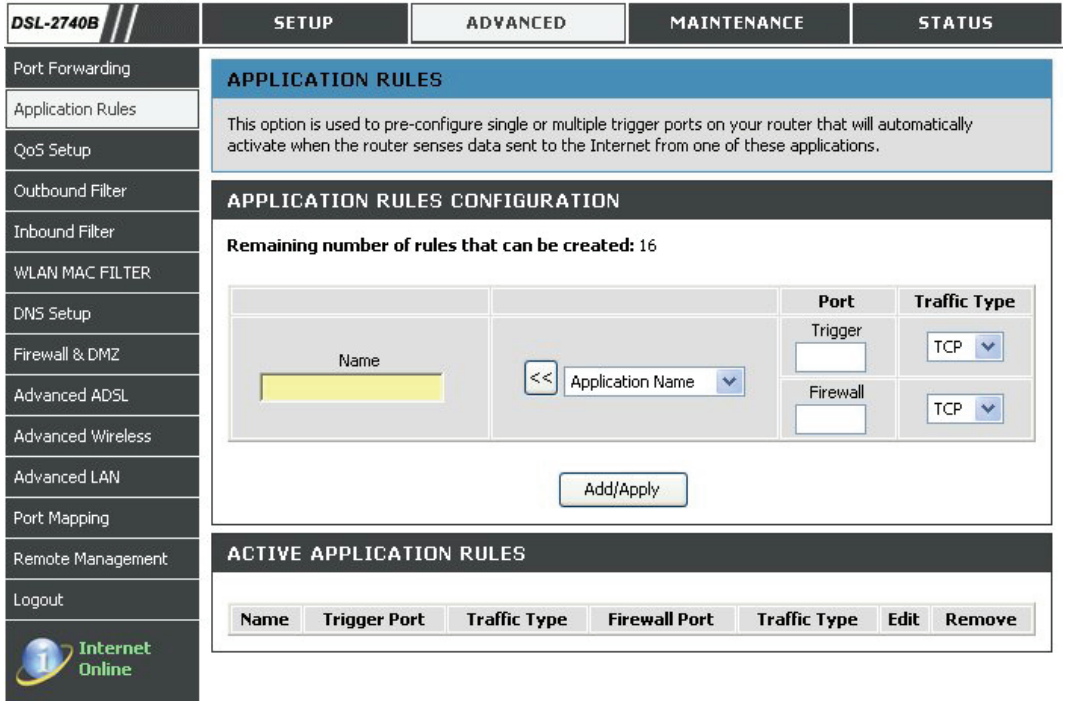
To access the **APPLICATION RULES** setting window, click on the **Application Rules** button in the **ADVANCED** directory.

APPLICATION RULES CONFIGURATION

Select a name from the drop-down menu for pre-configured application or type a name in the **Name** input box to define your own rules.

Enter your **Trigger** and **Firewall** port(s), and select the **Traffic Type**.

Click on the **Add/Apply** button to apply settings.



QoS SETUP

QoS or Quality of service allows your Router to help prioritise 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 prioritised sensitive real-time programs. D-Link has pre-setup some often used rules for the QoS. VoIP and H.323 are often used for Internet calls.

To access the **QoS SETUP** setting window, click on the **QoS Setup** button in the **ADVANCED** directory.

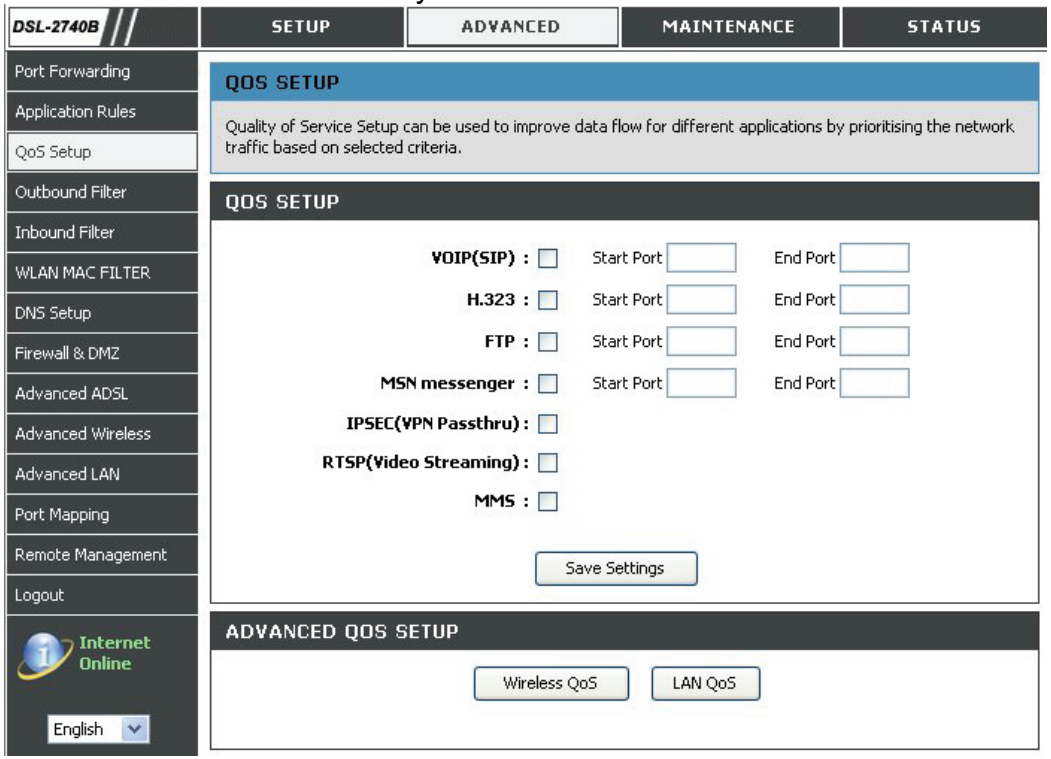
QoS SETUP

Check the service type and configure the port range if need.

Click on the **Save Settings** button to apply settings

ADVANCED QoS SETUP

Click on the **Wireless QoS** button to enter the **WIRELESS QoS RULES CONFIGURATION** window.



WIRELESS QOS RULES CONFIGURATION

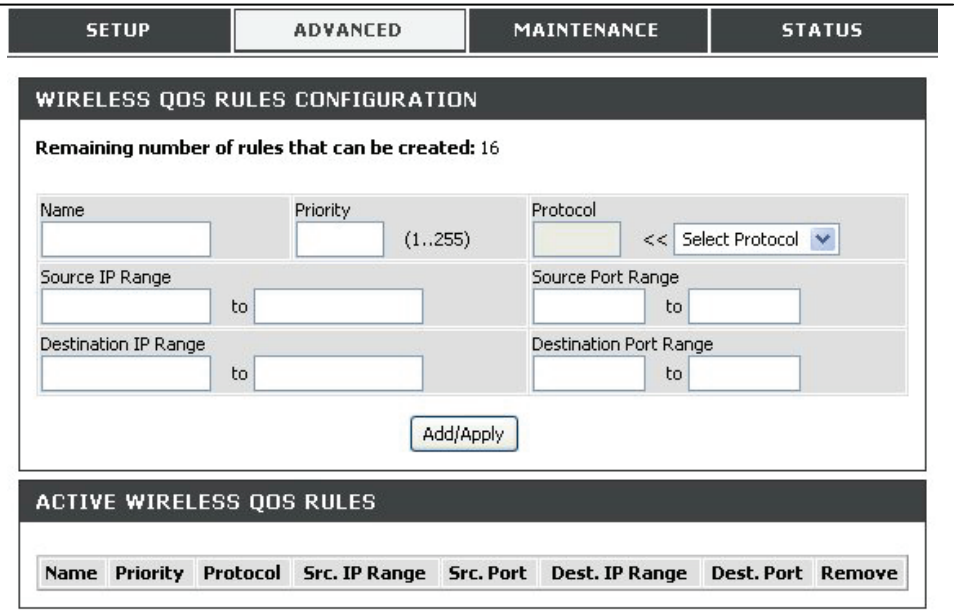
Enter the **Name** and **Priority** (1~255) of the rule.

Specify traffic classification rules. The classification can be defined in the following parameters: **Protocol**, **Source/Destination IP Range**, **and Source/Destination Port Range**.

Click on the **Add/Apply** button to add and apply this rule.

ACTIVE WIRELESS QoS RULES

Check the **Remove** items and click on the **Remove Selected** button to delete settings.



OUTBOUND IP FILTER

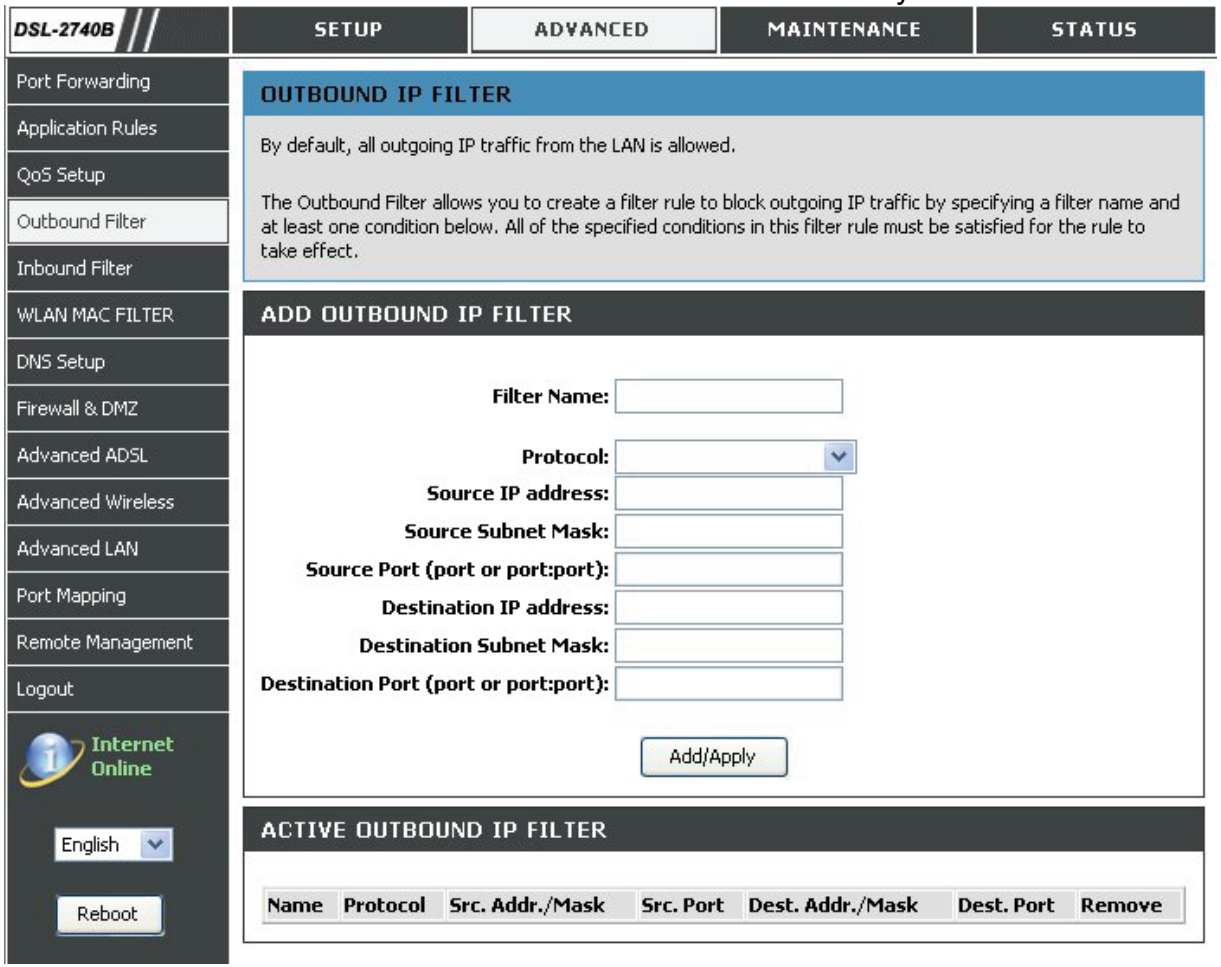
By default, all outgoing IP traffic from the LAN is allowed. The Outbound Filter allows you to create a filter rule to block outgoing IP traffic by specifying a filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

To access the **OUTBOUND IP FILTER** setting window, click on the **Outbound Filter** button in the **ADVANCED** directory.

ADD OUTBOUND IP FILTER

Enter the **Filter name** and at least one of the following criteria: **Protocol**, **Source/Destination IP Address** and **Subnet Mask**, and **Source/Destination Port**.

Click on the **Add/Apply** button to add and apply settings.



INBOUND IP FILTER

By default, all incoming IP traffic that does not originate from the internal network is blocked when the firewall is enabled. Normal outgoing Internet requests created by web browsing, email and other software you run will work as usual as the requests originate from inside your internal network. 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 below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

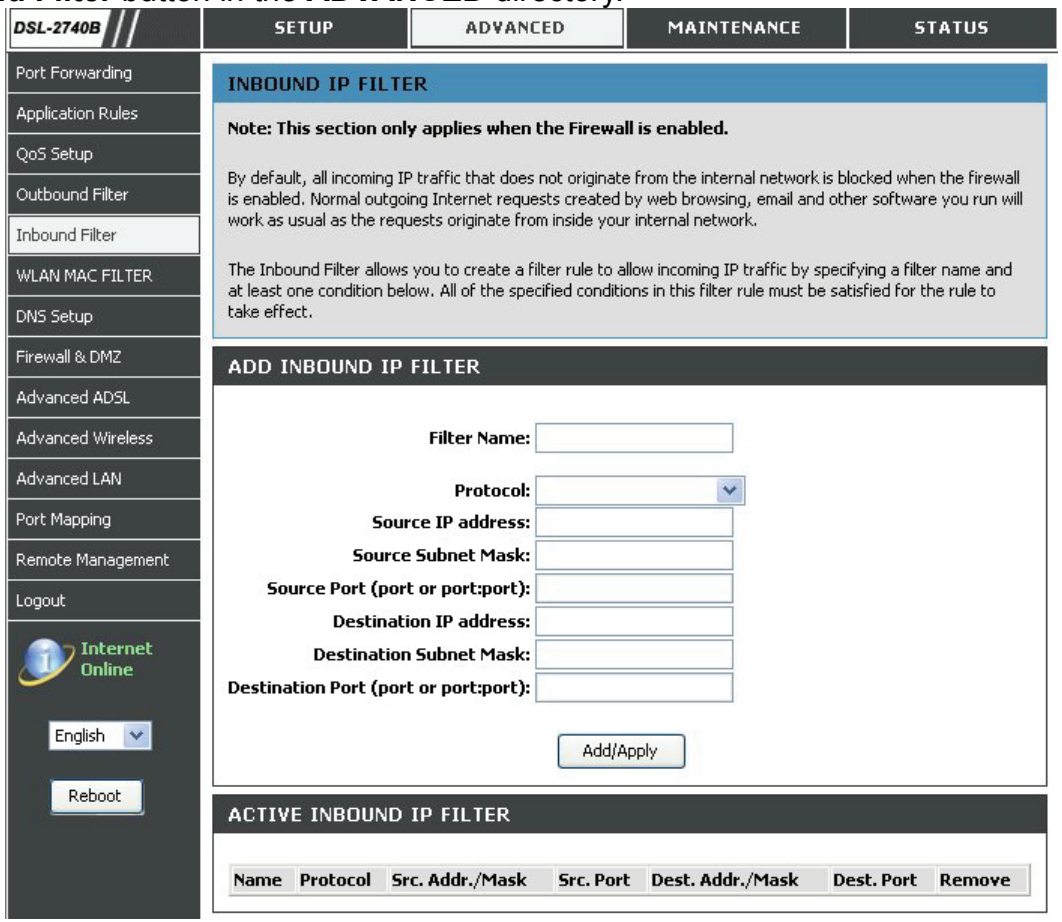
To access the **INBOUND IP FILTER** setting window, click on the **Inbound Filter** button in the **ADVANCED** directory.

ADD INBOUND IP FILTER

Enter the **Filter name** and at least one of the following criteria: **Protocol**, **Source/Destination IP Address** and **Subnet Mask**, and **Source/Destination Port**.

Click on the **Add/Apply** button to add and apply settings.

Note: This section only applies when the Firewall is enabled.



WLAN MAC FILTER

This page adds a Mac address filter to deny or allow special WLAN devices connected to the router.

To access the **WLAN MAC FILTER** setting window, click on the **WLAN MAC Filter** button in the **ADVANCED** directory.

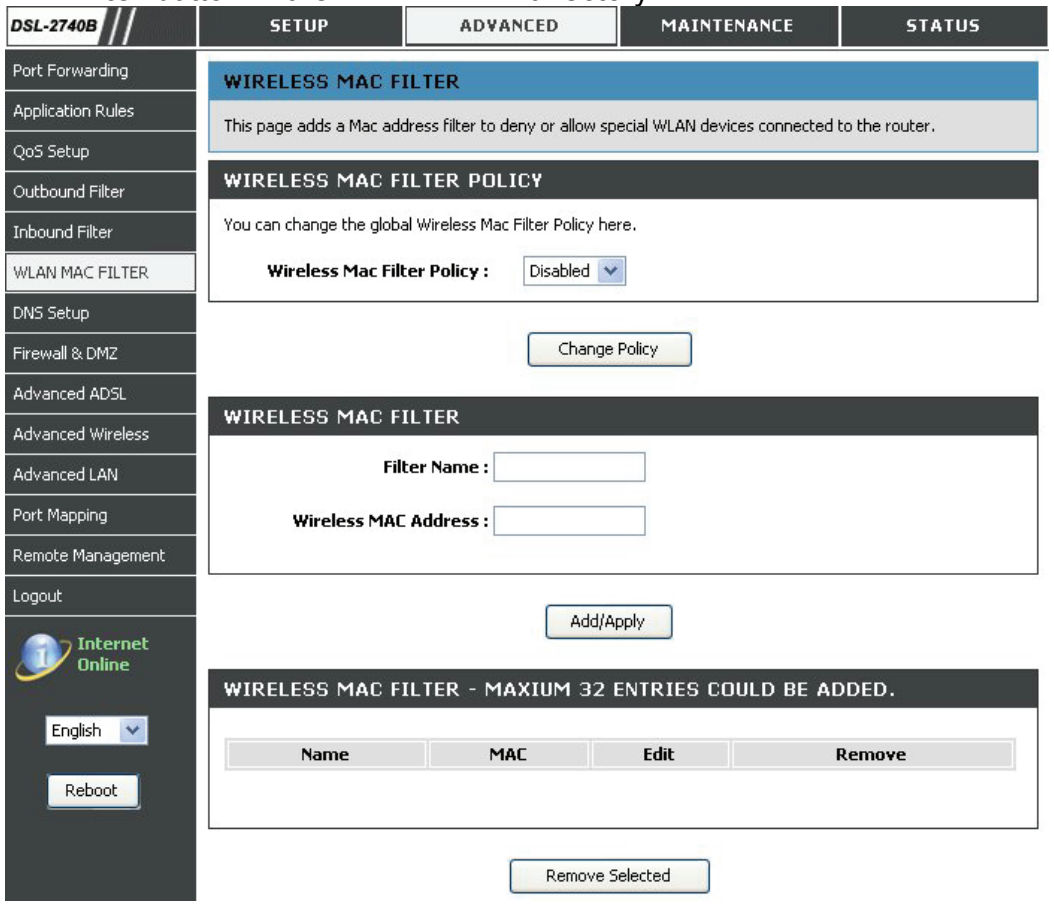
ADD INBOUND IP FILTER

Select the **Wireless Mac Filter Policy** as disable to **Disable** this filter

Select the **Wireless Mac Filter Policy** as **Deny All** to filter out all wireless MAC address besides the MAC addresses in the Wireless Mac Filter lists.

Select the **Wireless Mac Filter Policy** as **Allow All** to filter out all wireless MAC address in the Wireless Mac Filter lists.

Enter the **Filter name** and the **Wireless MAC Address**. Click on the **Add/Apply** button to add in the wireless MAC filter list.



DNS SETUP

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, should check **Obtain DNS server address automatically** box.

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 on a hyperlinked URL in the form hostname.dyndns.org, Many ISPs assign public IP addresses using DHCP, and 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 service providers (DyndDNS.org or TZO).

To access the **DNS SETUP** setting window, click on the **DNS Setup** button in the **ADVANCED** directory.

DNS SERVER CONFIGURATION

If you are using the Router for DHCP service on the LAN and are using DNS servers on the ISP's network, check **Obtain DNS server address automatically** box.

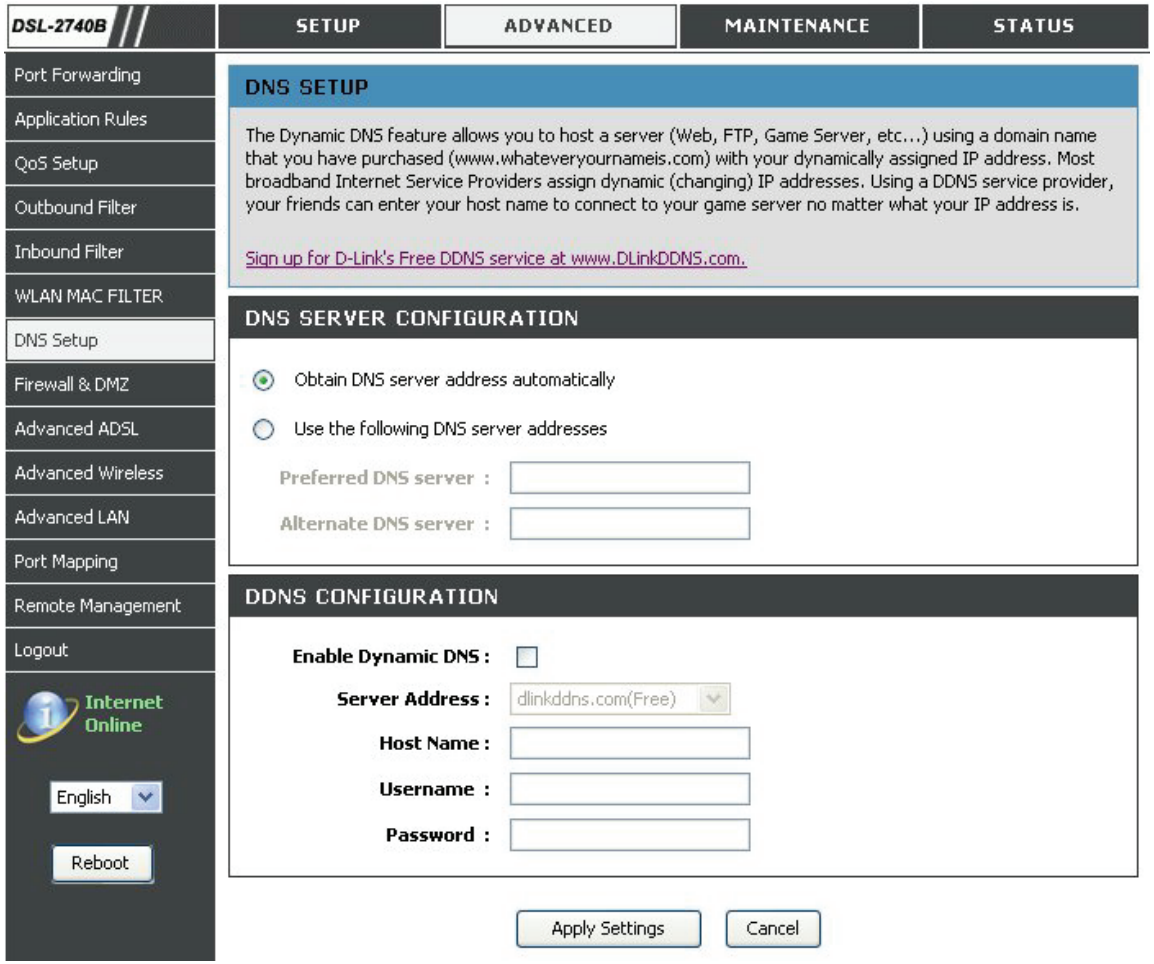
If you have DNS IP addresses provided by your ISP, enter these IP addresses in the available entry fields for the **Primary DNS Server** and the **Secondary DNS Server**.

DDNS CONFIGURATION

Check the **Enable Dynamic DNS box.**

Select DDNS Service provider from the **Server Address** drop-down menu and enter your account data.

After configure the DNS settings as desired, click on the **Apply Settings** button to apply settings.



Server Address: Select one of the DDNS registration organizations form those listed in the pull-down menu. Available servers include DynDns.org and TZO.

Host Name: Enter the Host Name that you registered with your DDNS service provider.

Username or Key: Enter the Username for your DDNS account.

Password or Key: Enter the Password for your DDNS account.

FIREWALL & DMZ

The **Firewall & DMZ** window allows the Router to enforce specific predefined policies intended to protect against certain common types of attacks. There are two general types of protection (DoS, Port Scan) that can be enabled on the Router, as well as filtering for specific packet types sometimes used by hackers.

Since some applications are not compatible with NAT, the Router supports use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and will therefore be visible to agents on the Internet with the right type of software. Keep in mind that any client PC in the DMZ will be exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through the DMZ.

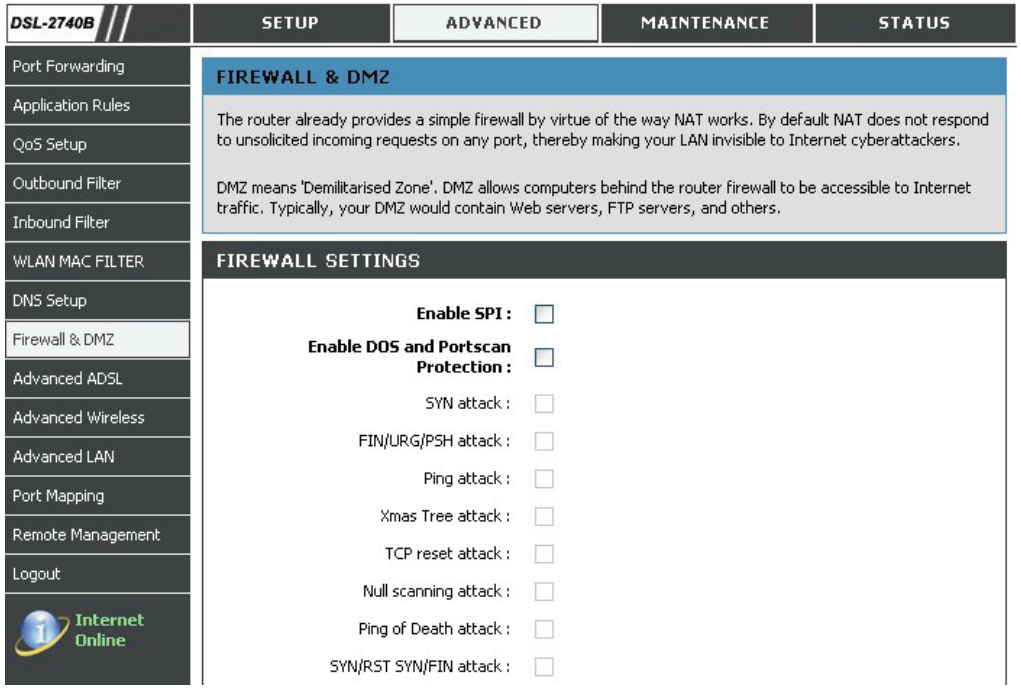
To access the **FIREWALL & DMZ** setting window, click on the **Firewall & DMZ** button under the **ADVANCED** tab.

FIREWALL SETTINGS

SPI: SPI (Stateful Packet Inspection) is a firewall feature that checks the state of network connections. Only legitimate packets are allowed to pass through.

DoS and Port Scan Protection: A DoS (denial-of-service) attack is characterized by an explicit attempt by attackers to prevent legitimate users of a service from using that service. Examples include: attempts to "flood" a network, thereby preventing legitimate network traffic, attempts to disrupt connections between two machines, thereby preventing access to a service, attempts to prevent a particular individual from accessing a service, or, attempts to disrupt service to a specific system or person.

Port scan protection is designed to block attempts to discover vulnerable ports or services that might be exploited in an attack from the WAN.



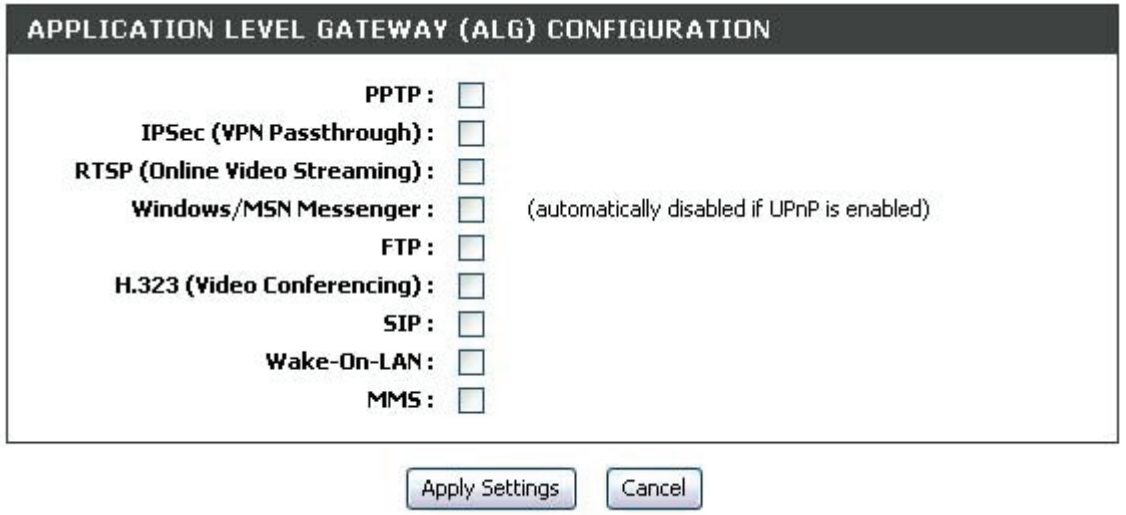
DMZ SETTING

Check the **Enable DMZ box** and type the IP Address of the server or device on your LAN in the **DMZ Host IP Address** box.

APPLICATION LEVEL GATEWAY (ALG) CONFIGURATION

Check the relevant ALG options as required.

Click on the **Apply Settings** button to apply settings**.**



ADVANCED ADSL

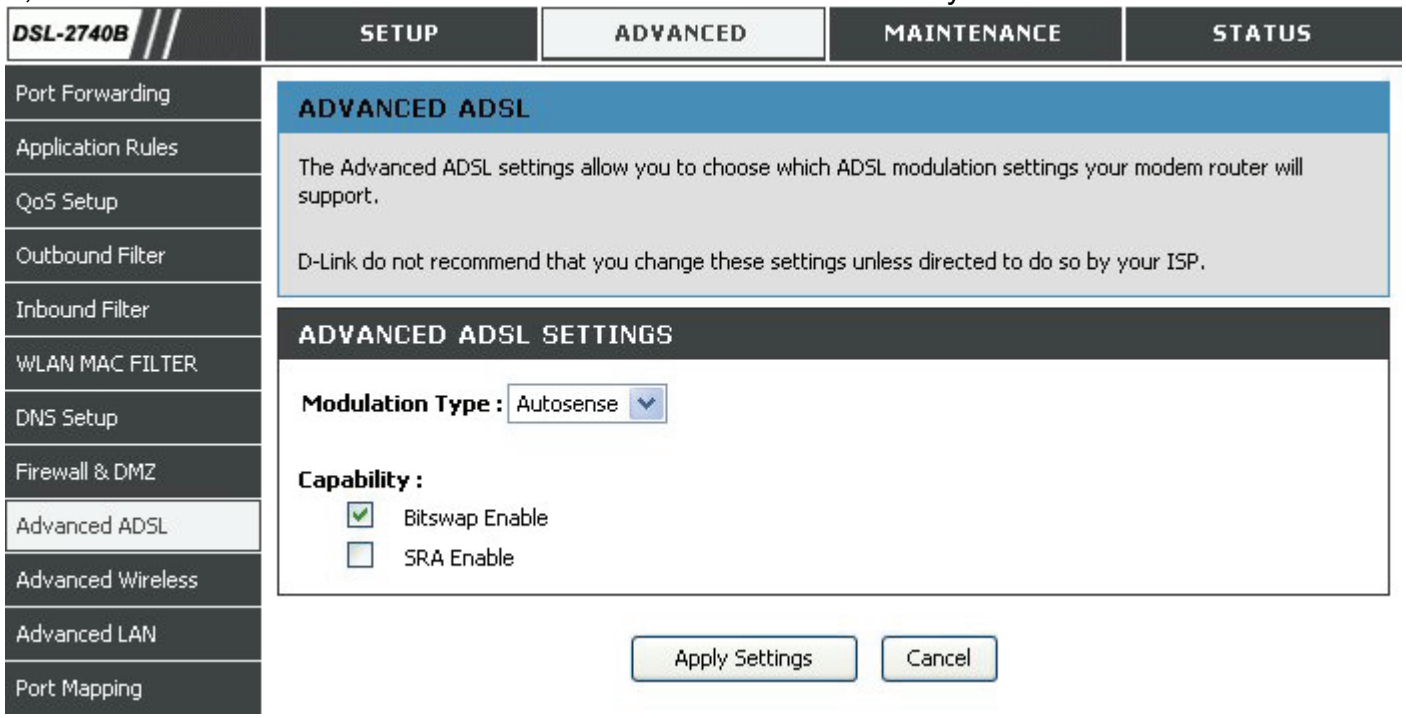
The **ADVANCED ADSL** settings allow you to choose which ADSL modulation settings your modem router will support. D-Link does not recommend changing these settings unless directed to do so by your ISP.

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

ADVANCED ADSL SETTINGS

The **Modulation Type** drop-down menu allows the user to select the configuration for ADSL protocols. For most ADSL accounts the default settings (**Auto sense)** will work. This configuration works with all ADSL implementations. Do not change any settings unless you have been instructed.

To make ADSL settings, select the desired items and click on the **Apply Settings** button to apply the settings.

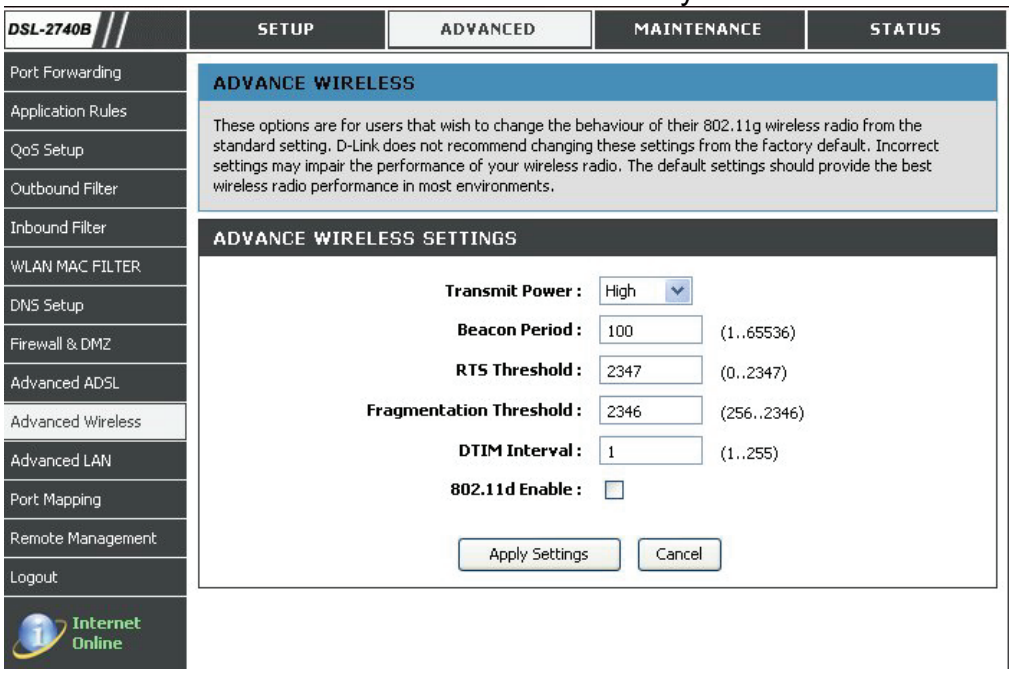


ADVANCED WIRELESS

These options are for users that wish to change the behavior of their 802.11g wireless radio from the standard setting. D-Link does not recommend changing these settings from the factory default. Incorrect settings may impair the performance of your wireless radio. The default settings should provide the best wireless radio performance in most environments.

To access the **ADVANCE WIRELESS** setting window, click on the **Advanced Wireless** button in the **ADVANCED** directory.

ADVANCE WIRELESS SETTINGS



Transmit Power: 3-levels of transmit power are available: High, Medium and Low.

Beacon Period: This value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the router to synchronize the wireless network. The value is **1~65535** milliseconds.

RTS Threshold: If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. The router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. The range is **1~2347** bytes.

Fragmentation Threshold: Maximum frame size. Frame larger than the threshold are fragmented into multiple packets and transmitted. The range is **256~2346** bytes.

DTIM Interval: Interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast message. The range is **1~255** milliseconds,

802.11d Enable: Enable/Disable 802.1d

ADVANCED LAN

The **ADVANCED LAN** options are for users that wish to change the LAN settings. D-Link does not recommend changing these settings from factory default. Changing these settings may affect the behavior of your network.

UPnP is used for much popular Audio Visual software. It allows the auto discovery of your device on the network. If you feel that UPnP is a security concern we provide you with the option to disable it here. Block ICMP Ping should be enabled so that the router does not respond to malicious Internet requests. Multicast streams are used by advance network functions like IPTV and distributed by your ISP.

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

UPNP

Check the **Enable UPnP** box to enable the UPnP function.

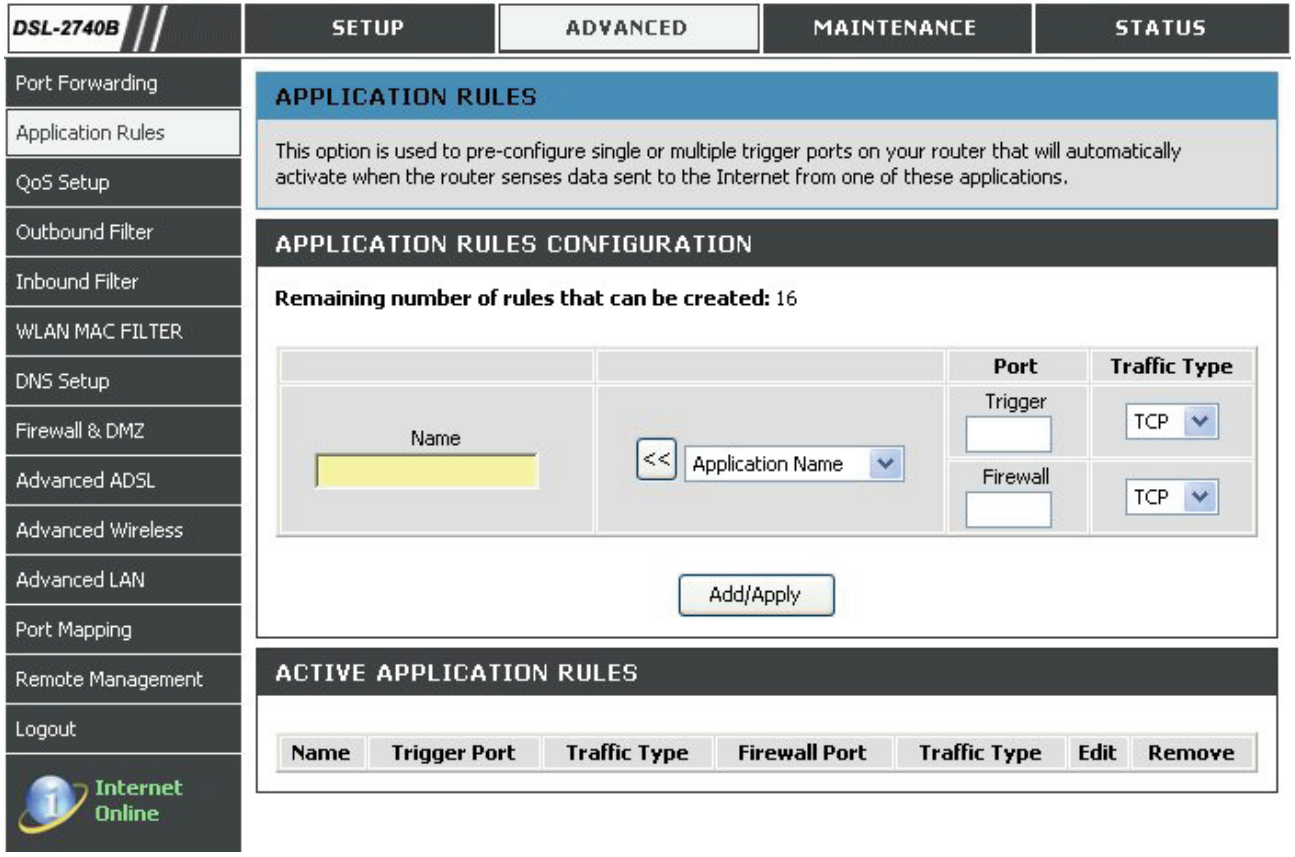
BLOCK ICMP PING

Check the **Enable WAN Ping Respond** box and select **Allow all** or **Deny all** respond or block the ICMP Ping from WAN side.

MULTICAST STREAMS

Check the **Enable Multicast Streams** box to allow the multicast packets received from WAN to LAN.

Click on the **Apply Settings** button to apply settings.



PORT MAPPING

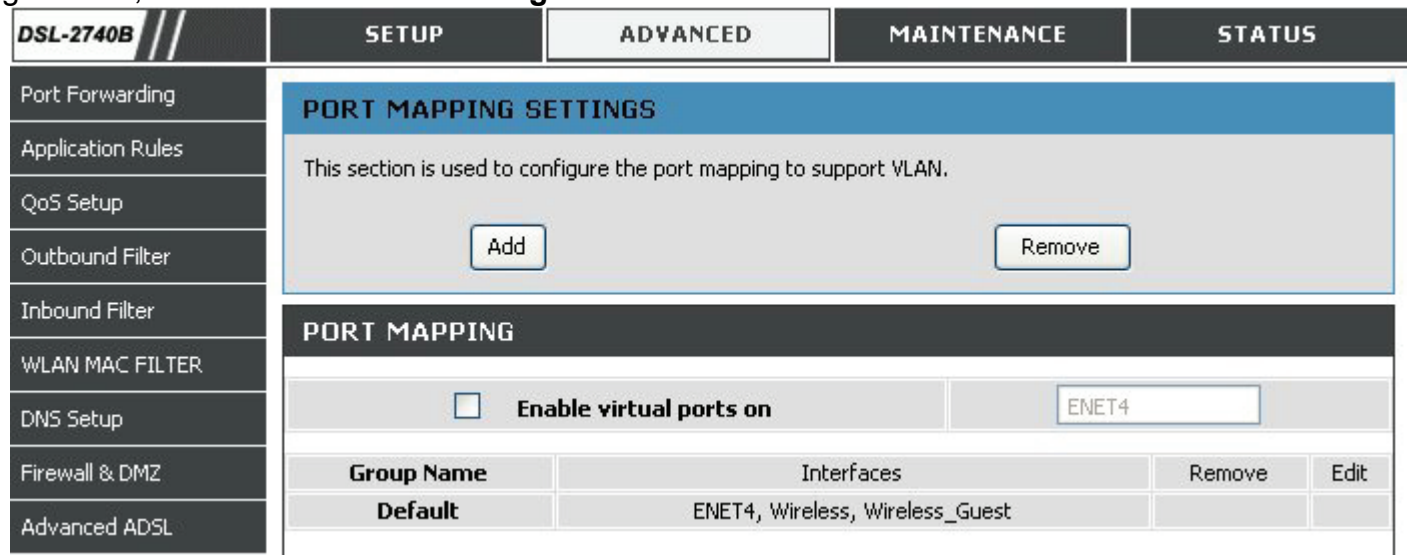
Port Mapping supports multiple ports to PVC and bridging groups. Each group will perform as an independent network. To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button.
The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.

To access the **REMOTE MANAGEMENT** setting window, click on the **Remote Management** button under the **ADVANCED** tab.

PORT MAPPING SETTINGS

Check the **Enable virtual ports on** box to enable the port mapping.

Click on the **Add** button to add port mapping rule.



REMOTE MANAGEMENT

This section allows you to enable/disable remote access to the router from the Internet. Remote access control allows you to configure access via specific services. Most users will not need to change any of these settings.

To access the **REMOTE MANAGEMENT** setting window, click on the **Remote Management** button under the **ADVANCED** tab.

REMOTE MANAGEMENT SETTINGS

Check the **Enable Remote Management** box to enable the remote management.

Input the **Remote Admin Port** listened by the web UI for the remote PC to browse.

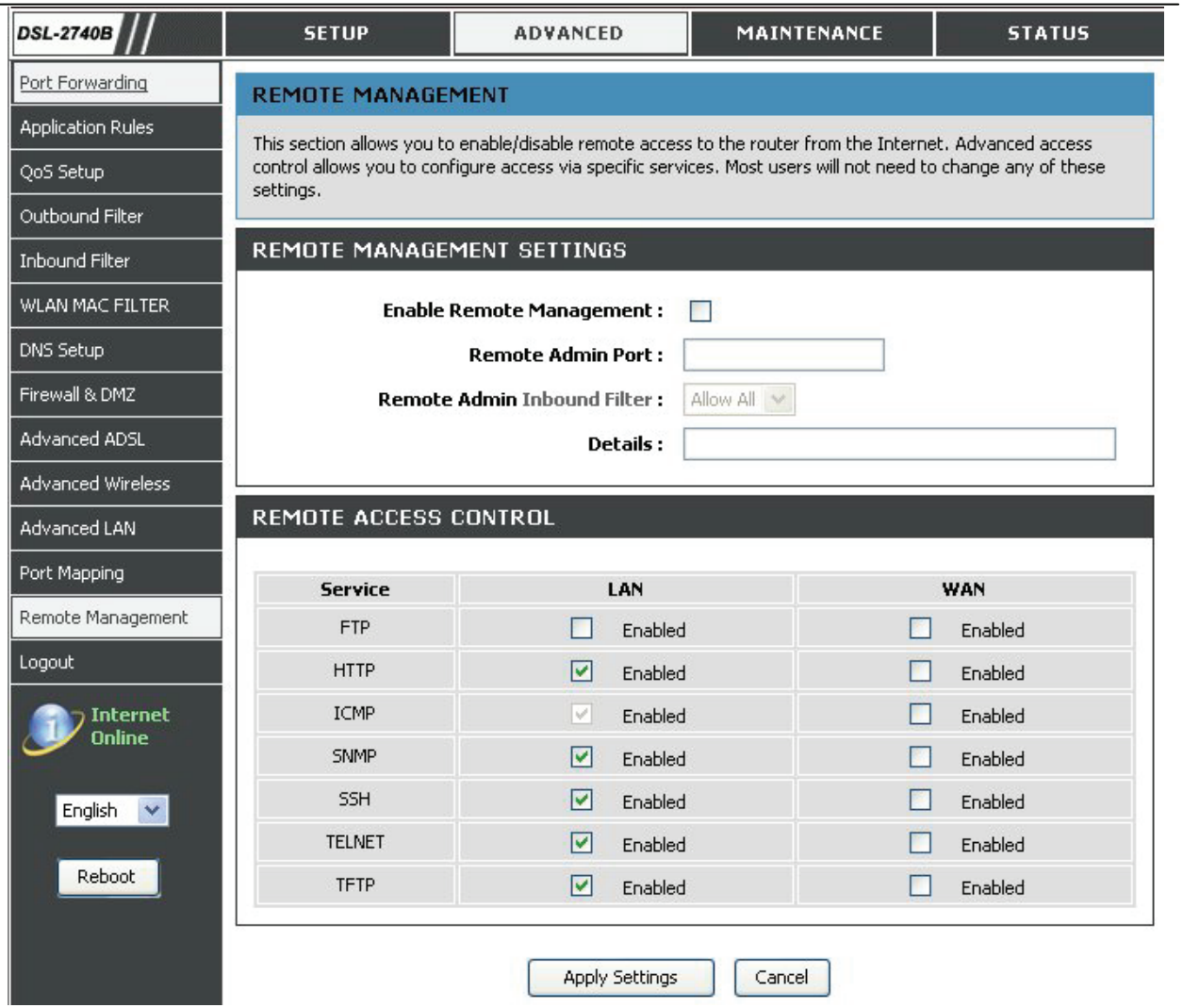
Select the **Remote Admin Inbound Filter** to filter the remote PCs who want to use remote management.

REMOTE ACCESS CONTROL

Select the management services which you want to enable/disable on your LAN/WAN interface.

Click on the **Apply Setting** button to apply settings.

Notice If you disable HTTP service, you'll not be able to access the router's configuration window permanently.



MAINTENANCE

Click on the **MAINTENANCE** tab to reveal the window buttons for various functions located in this directory. The SET **PASSWORD** window is the first item in the **MAINTENANCE** directory.

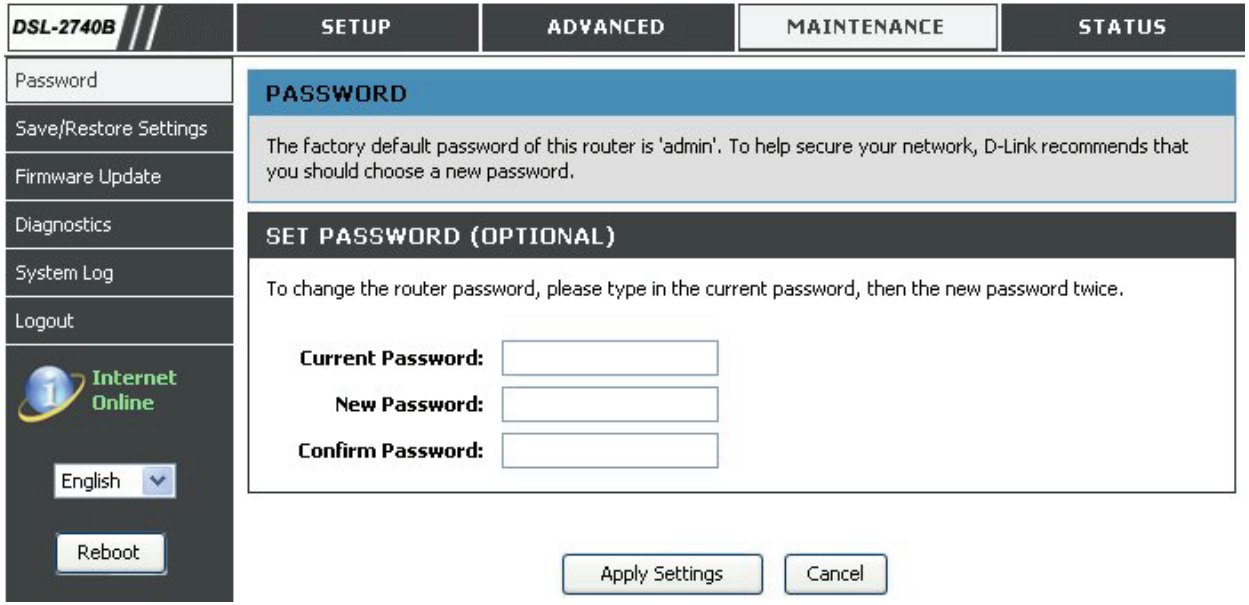
PASSWORD

The factory default password of this router is 'admin'. To help secure your network, D-Link recommends that you should choose a new password. Please make sure to choose a password you can remember or write it down and keep in a safe and separate location for future reference. If you forget your device password, the only solution is to reset your router to factory default settings and you will loose all your device configuration settings.

To access the **PASSWORD** setting window, click on the **Password** button under the **MAINTENANCE** tab.

SET PASSWORD (OPTIONAL)

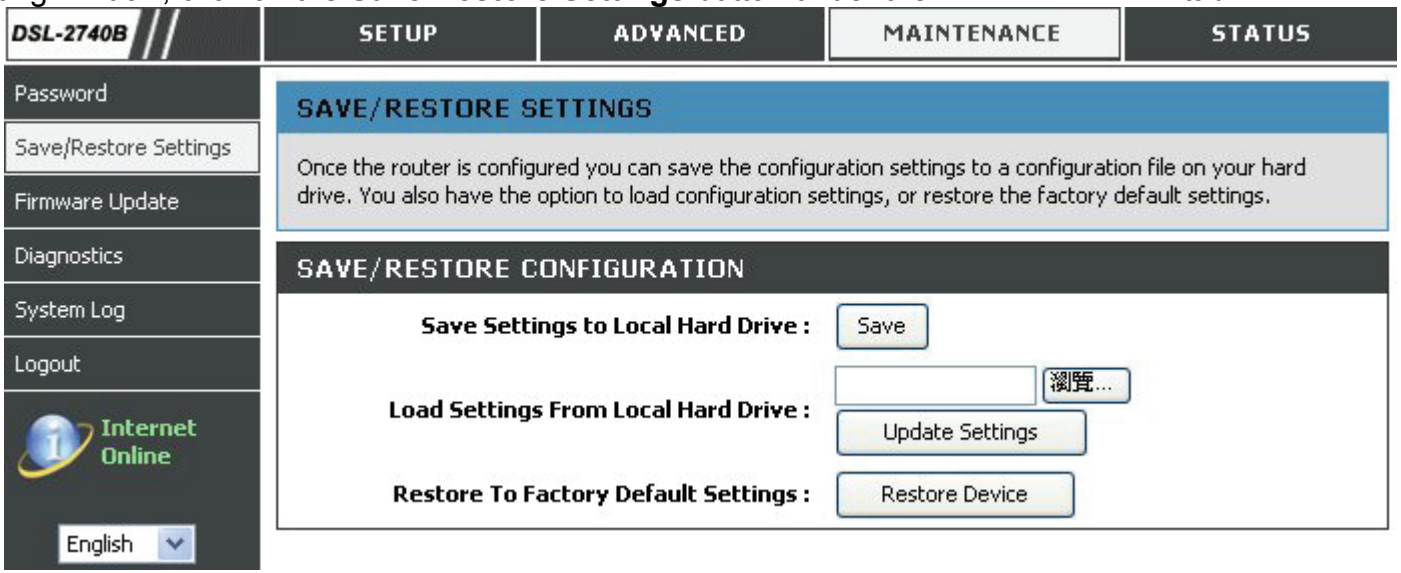
To change password, enter the old/new password. Click on the **Apply Settings** button to apply settings.



SAVE/RESTORE SETTINGS

Once the router is configured you can save the configuration settings to a configuration file on your hard drive. You also have the option to load configuration settings, or restore the factory default settings.

To access the **SAVE/RESTORE SETTINGS** setting window, click on the **Save/Restore Settings** button under the **MAINTENANCE** tab.



SAVE/RESTORE CONFIGURATION

Click on the **Save** button to Save Settings to Local Hard Drive. You will be prompted to select a location on your computer to put the file. You may name the configuration file anything you like.

Click on the **Browse** button to browse to the configuration file in the PC and click on the **Update Settings** button to load settings from local hard drive. Confirm that you want to load the file when prompted and the process will complete automatically. 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 on 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

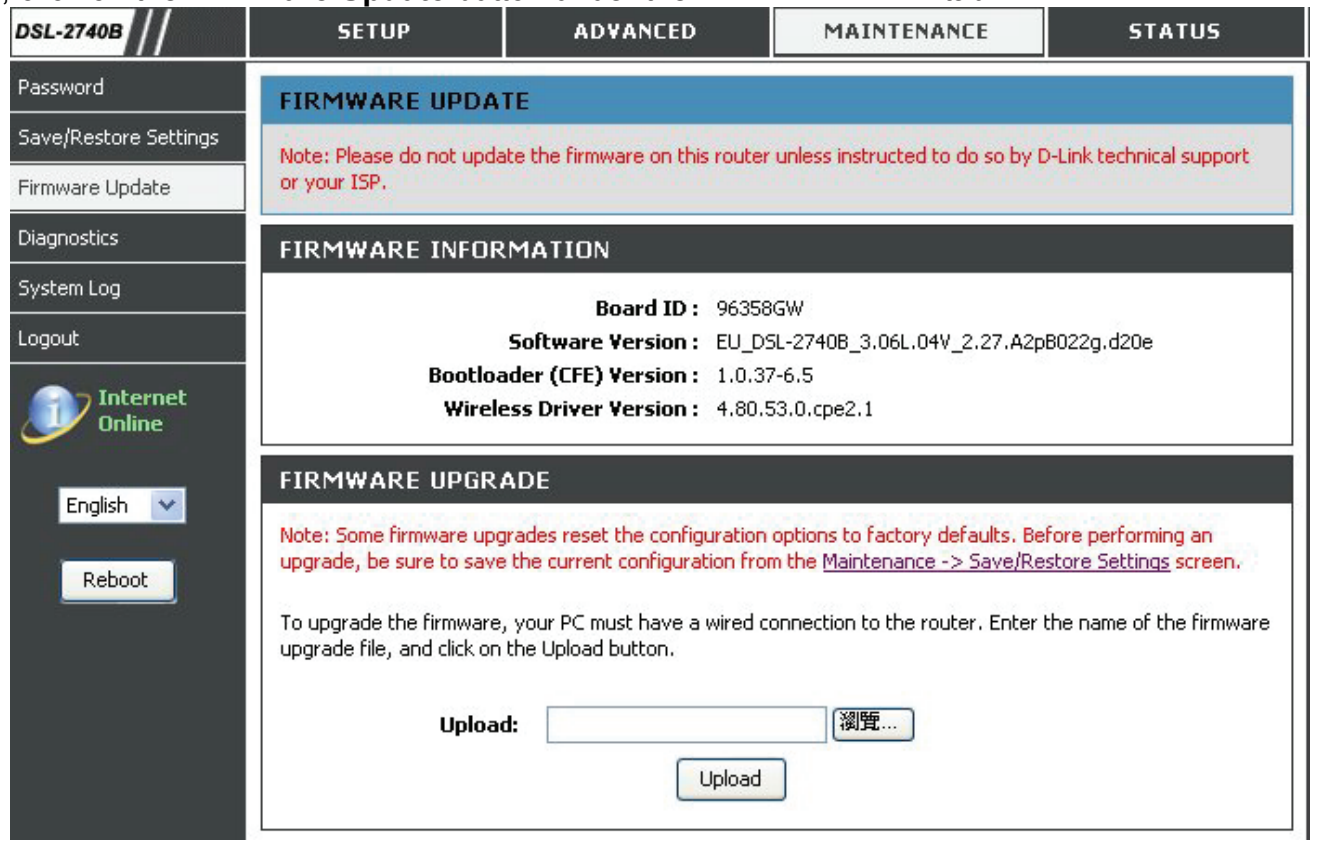
Use the **FIRMWARE UPGRADE** window to load the latest firmware for the device. Note that the device configuration settings may return to the factory default settings, so make sure you first save the configuration settings with the **SAVE/RESTORE SETTINGS** window described above.

To access the **FIRMWARE UPGRADE** setting window, click on the **Firmware Update** button under the **MAINTENANCE** tab.

FIRMWARE UPGRADE

To upgrade firmware, click on the **Browse…** button to search for the file and then click on the **Upload** button to begin copying the file. The Router will load the file and restart automatically.

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



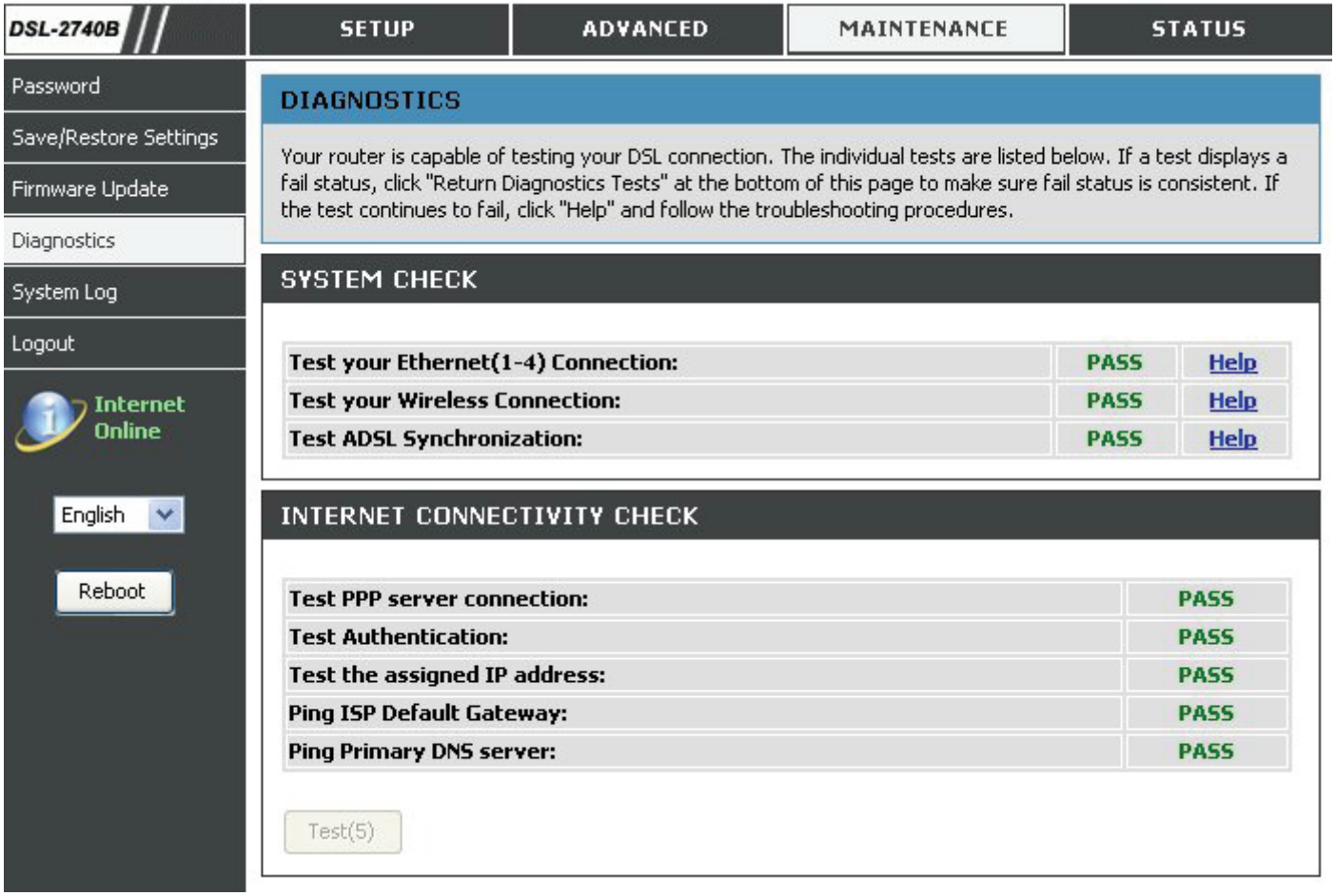
Diagnostics

This page shows the result of your router's self diagnostic and connection test results. The Internet connectivity status will only show **PASS** if you have correctly configured your Internet connection and your router is currently online.

To access the **DIAGNOSTICS** setting window, click on the **Diagnostics** button under the **MAINTENANCE** tab.

INTERNET CONNECTIVITY CHECK
Click on the **Test** button to run the diagnostics again.

Notice: The **Diagnostic Test** 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 test on your system software and hardware connections. Use this window when working with your ISP to troubleshoot problems.



SYSTEM LOG

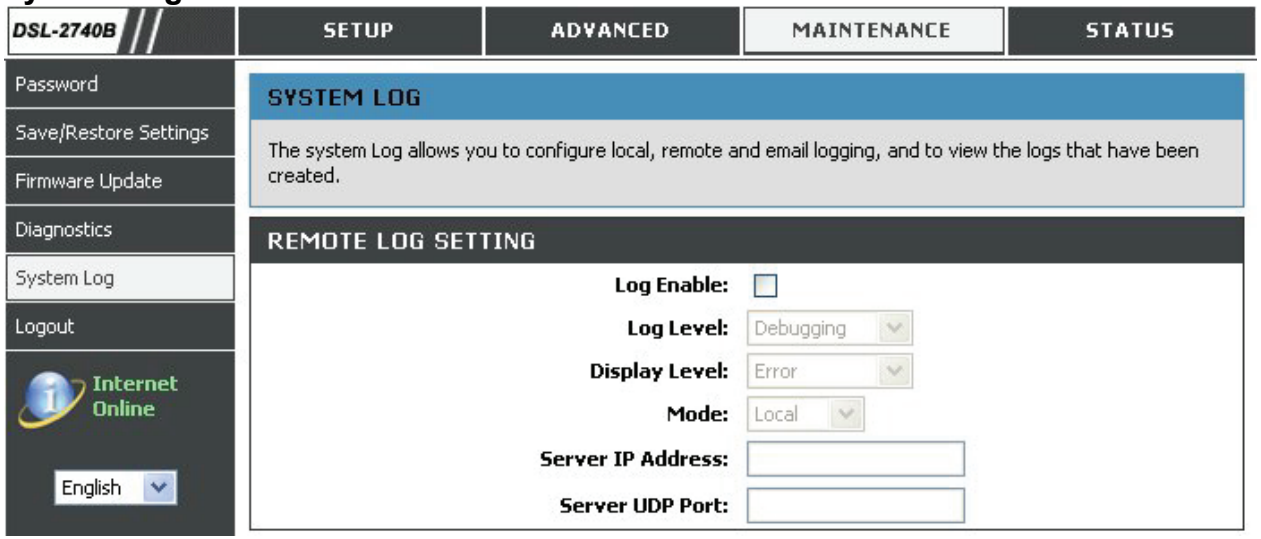
The system log displays chronological event log data. The event log can be read from local host or sent to a System Log server. The available event severity levels are: **Emergency, Alert, Critical, Error, Warning, Notice, Informational and Debugging**.

To access the **SYSTEM LOG** setting window, click on the **System Log** button under the **MAINTENANCE** tab.

REMOTE LOG SETTING

Click on the **Log Enable** check-box and select **Log/Display Level** from the drop- down menu.

Select display mode from the **Mode** drop-down menu; enter the **Server IP Address** and **Server UDP Port** number if **Both/Remote** Mode is selected.



Log Level: All events above or equal to the selected level will be logged.

Display Level: All logged events above or equal to the selected level will be displayed.

Mode: Display mode of system log. Local: Display on local host only Remote: Send log file to remote system log server only

Server IP Address: IP address of the remote system log server

Server UDP Port: UDP port number of the remote system log server

ENABLE EMAIL NOTIFICATION

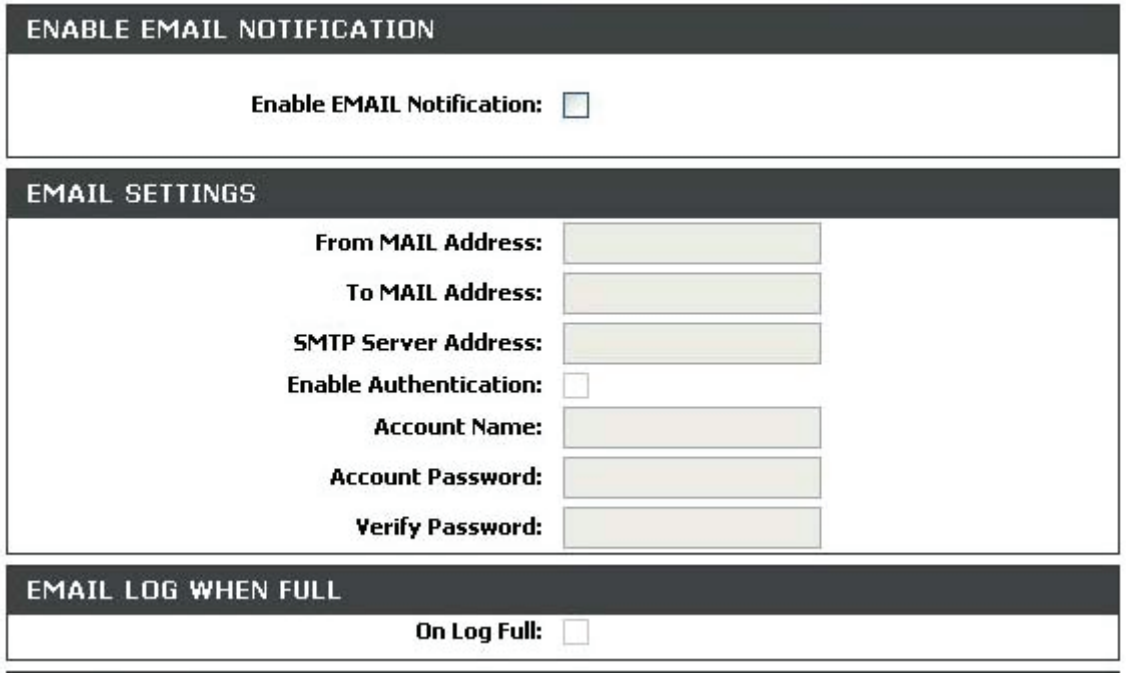
Click on the **Enable EMAIL Notification** check-box to enable the E-mail alarm system log.

EMAIL SETTINGS

Set the E-mail address messages to receive the E-mail alarm system log.

EMAIL LOG WHEN FULL

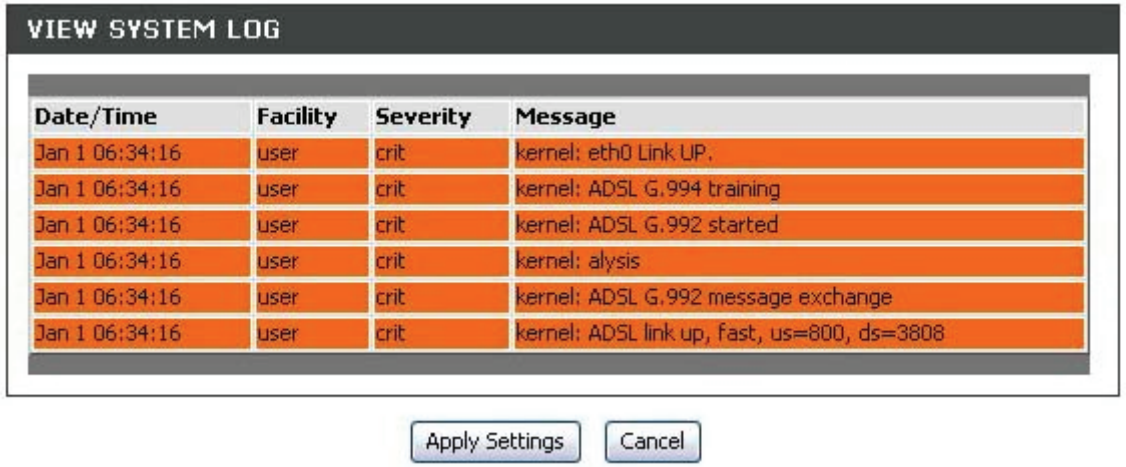
Click on the **On Log Full** check-box to let the system send the E-mail alarm message when the local log is full.



VIEW SYSTEM LOG

The table lists the system log.

Click on the **Apply Settings** button to apply your settings.



STATUS

Click on the **STATUS** tab to reveal the window buttons for various functions located in this directory. The **DEVICE STATUS** window is the first item in the **STATUS** directory. Use these windows to view system information and monitor performance.

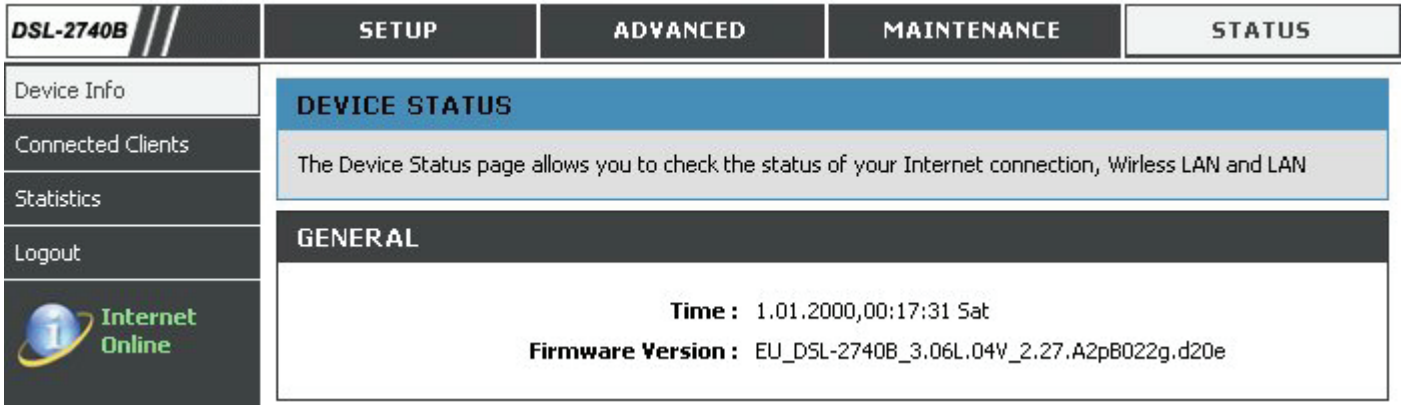
DEVICE STATUS

The **Device Info** page displays a summary overview of your router status, including: Device software version and summary of your Internet configuration (both wireless and Ethernet status).

To access the **DEVICE STATUS LOG** setting window, click on the **Device Info** button in the **STATUS** directory.

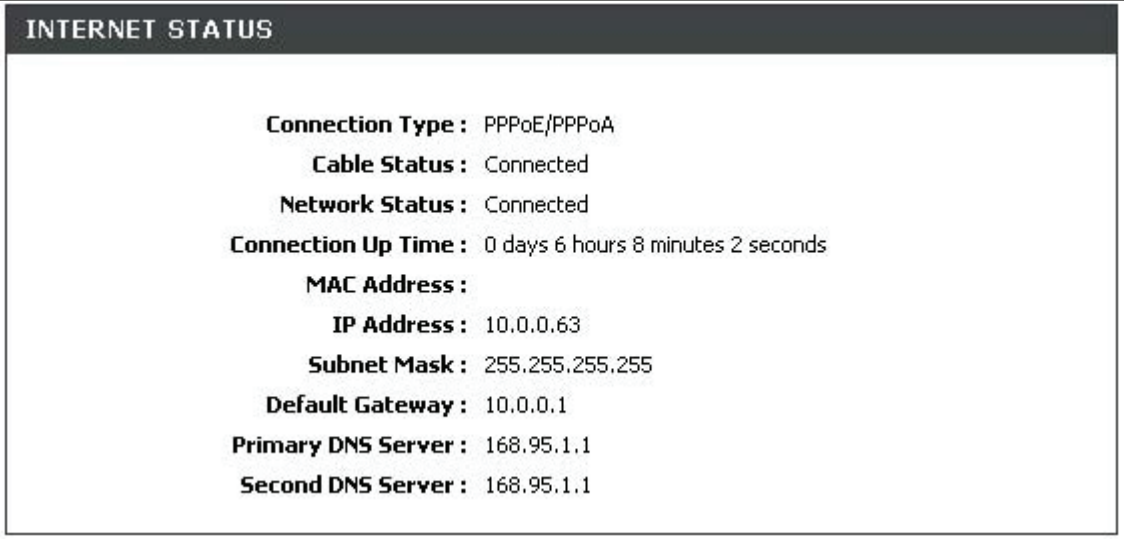
GENERAL

This window displays current system time and the firmware version.



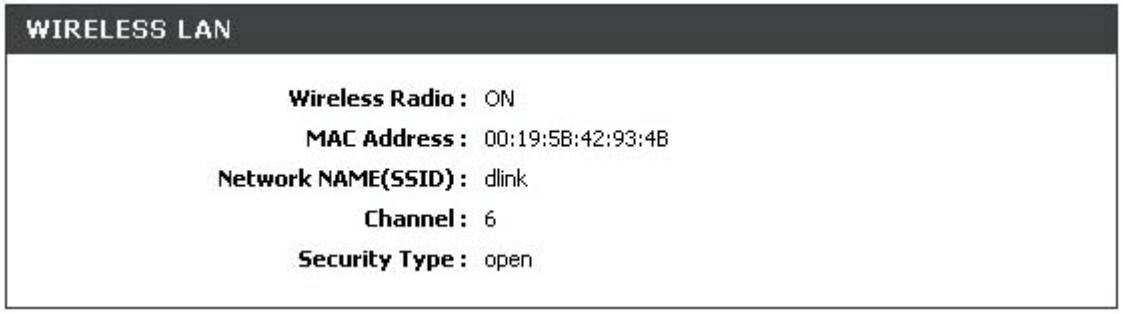
INTERNET STATUS

This window displays WAN information including IP address, Mask, Default Gateway, Primary/Secondary DNS Server.



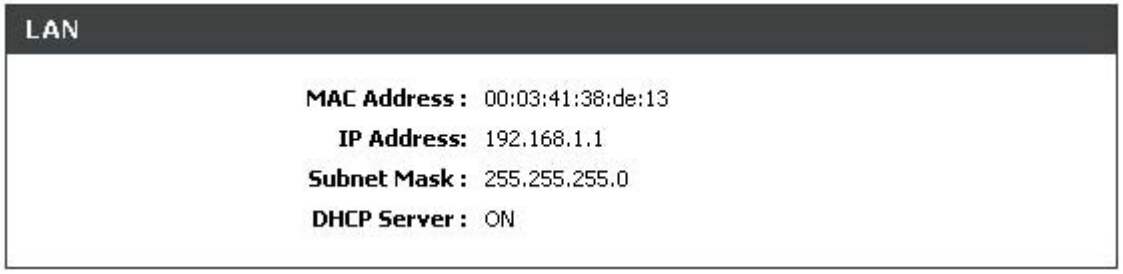
WIRELESS LAN

This window displays authenticated wireless stations and their status.



LAN

This window displays LAN information including IP address, Mask, and DHCP Server.



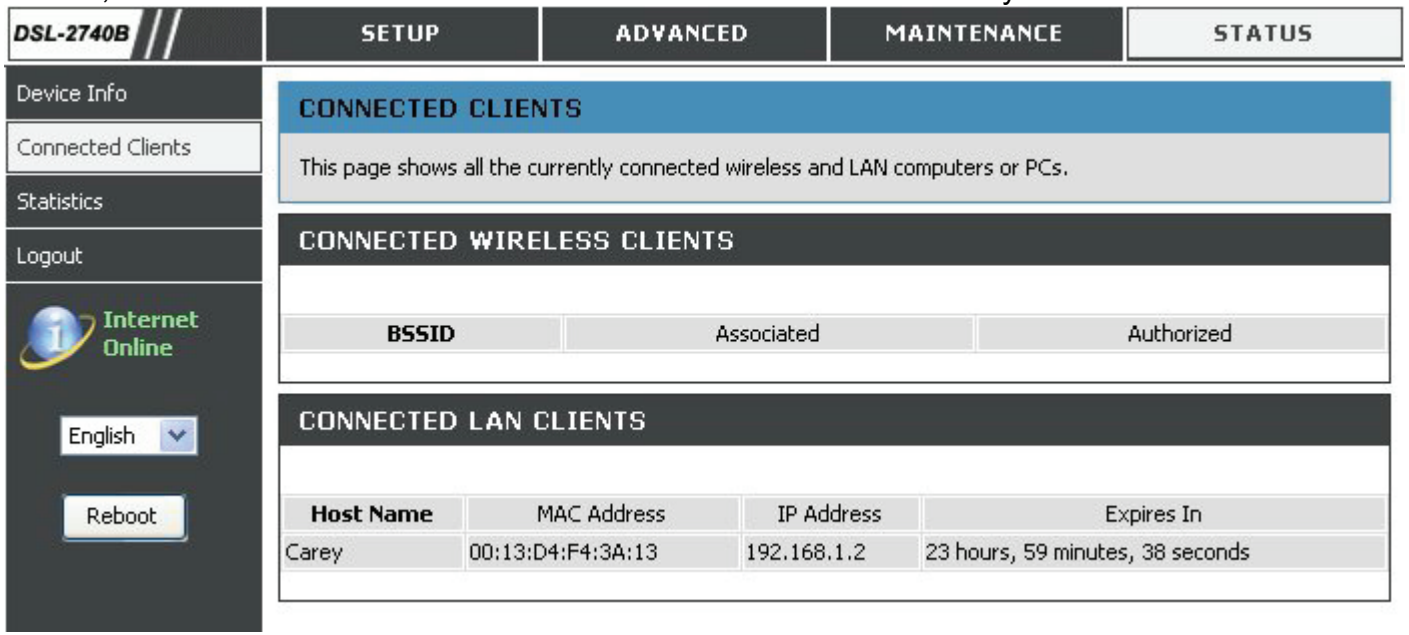
DHCP CLIENTS

This page shows all the currently connected wireless and LAN computers or PCs.

To access the **CONNECTED CLIENTS** setting window, click on the **Connected Clients** button in the **STATUS** directory.

CONNECTED WIRELESS CLIENTS
This window displays authenticated wireless stations and their status.

CONNECTED LAN CLIENTS
This window displays all the client devices which have obtained IP addresses from the router.

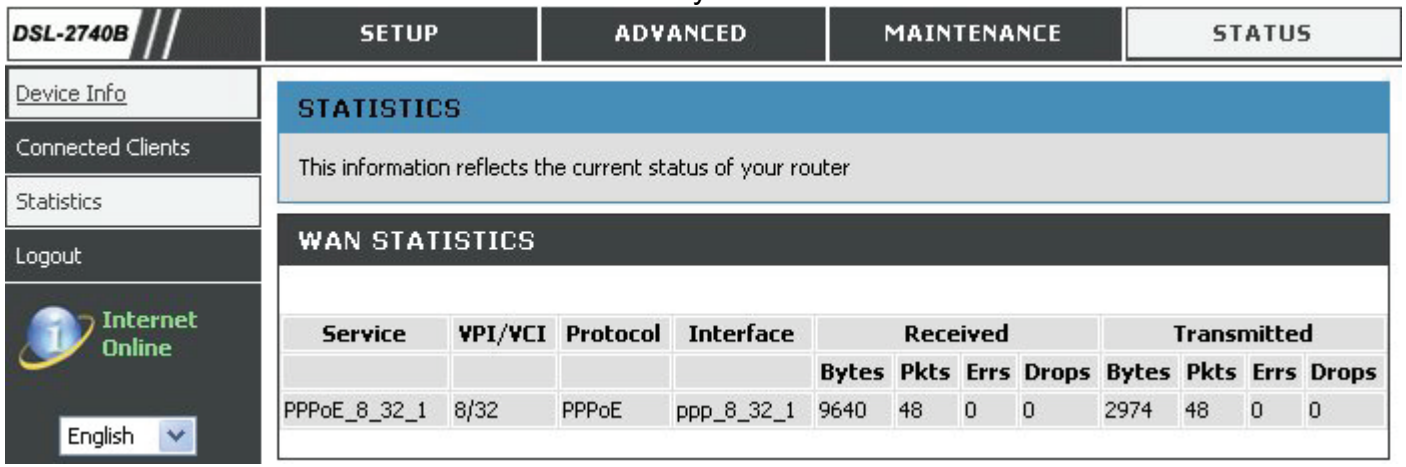


STATISTICS

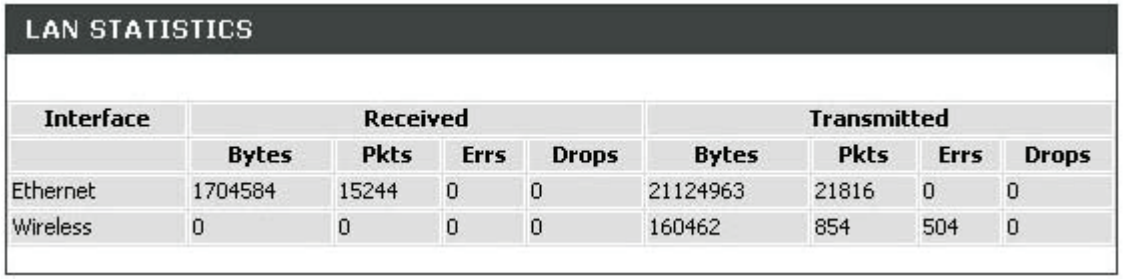
This page displays your router network and data transfer statistics and is helpful for D-Link technicians to assist you in identifying if your router is functioning properly. The information provided is primarily informative and does not affect the function of your router.

To access the **STATISTICS** setting window, click on the **Statistics** button in the **STATUS** directory.

WAN STATUS
This window displays WAN information

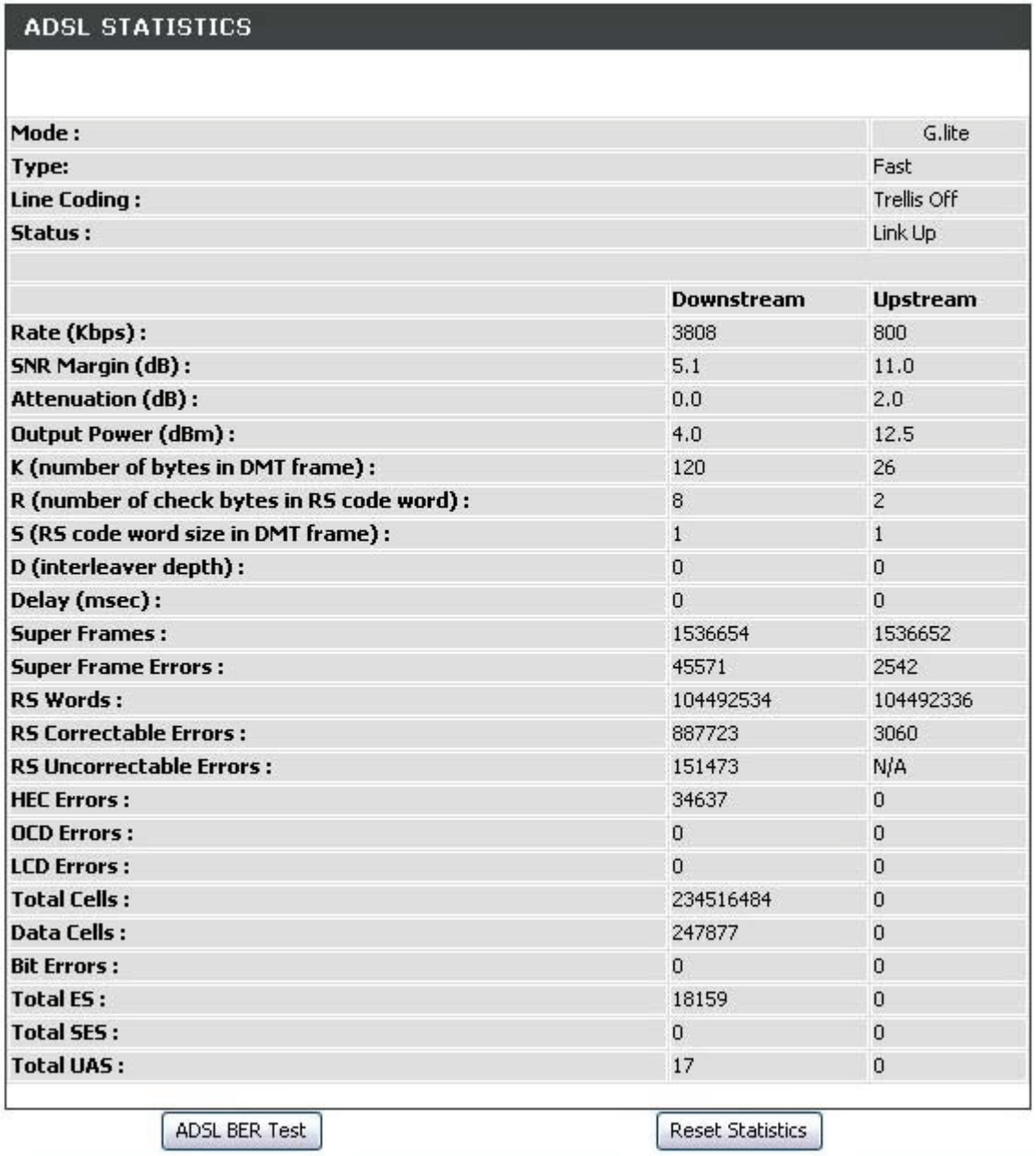


LAN STATISTICS
This window displays LAN information.



ADSL STATISTICS

This window displays ADSL information including Link Rate, SNR, and some Error Counters.



ADSL STATISTICS

Mode :		G.lite
Type:		Fast
Line Coding :		Trellis Off
Status :		Link Up
	Downstream	Upstream
Rate (Kbps) :	3808	800
SNR Margin (dB) :	5.1	11.0
Attenuation (dB) :	0.0	2.0
Output Power (dBm) :	4.0	12.5
K (number of bytes in DMT frame) :	120	26
R (number of check bytes in RS code word) :	8	2
S (RS code word size in DMT frame) :	1	1
D (interleaver depth) :	0	0
Delay (msec) :	0	0
Super Frames :	1536654	1536652
Super Frame Errors :	45571	2542
RS Words :	104492534	104492336
RS Correctable Errors :	887723	3060
RS Uncorrectable Errors :	151473	N/A
HEC Errors :	34637	0
OCD Errors :	0	0
LCD Errors :	0	0
Total Cells :	234516484	0
Data Cells :	247877	0
Bit Errors :	0	0
Total ES :	18159	0
Total SES :	0	0
Total UAS :	17	0

ADSL BER Test Reset Statistics

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DSL-2740B. 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. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (192.168.1.1 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself.
Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Internet Explorer 6.0 or higher
  - Firefox 1.5 or higher

- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.

- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:
  - Go to **Start > Settings > Control Panel**. Double-click on the **Internet Options** Icon. From the **Security** tab, click on the button to restore the settings to their defaults.
  - Click on the **Connection** tab and set the dial-up option to Never Dial a Connection. Click on the LAN Settings button. Make sure nothing is checked. Click on the **OK**.
  - Go to the **Advanced** tab and click on the button to restore these settings to their defaults. Click on the **OK** button three times.
  - Close your web browser (if open) and open it.

- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for the web management.

- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

2. What can I do if I forgot my password?

If you forgot your password, you must reset your router. Unfortunately this process will change all your settings back to the factory defaults.

To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process.

Wait about 30 seconds to access the router. The default IP address is 192.168.1.1. When logging in, type in the default User Name “admin,” and the default Password “admin” then click on the OK button to access the web-based manager.

Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

What is Wireless?
Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

Why D-Link Wireless?
D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

How does wireless work?
Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

Wireless Local Area Network (WLAN)
In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

Wireless Personal Area Network (WPAN)
Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away. Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

Who uses wireless?
Wireless technology as become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

Home
- Gives everyone at home broadband access
- Surf the web, check email, instant message, download multimedia files.
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office
- Stay on top of everything at home as you would at the office
- Remotely access your office network from home
- Share the Internet connection and printer with multiple computers
- No need to dedicate office space

Where is wireless used?
Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

Tips
Here are a few things to keep in mind, when you install a wireless network.

Centralize your router or Access Point
Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

Eliminate Interference
Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

Security
Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA security feature on the router. Refer to product manual for detail information on how to set it up.

Wireless Modes
There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more D-Link wireless network adapters (for example DWA-645 Rangebooster N 650 Draft 801.11n Wireless PCI Adapter or DWA-142 Rangebooster N Draft 802.11n Wireless USB Adapter.).

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to

communicate.

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.

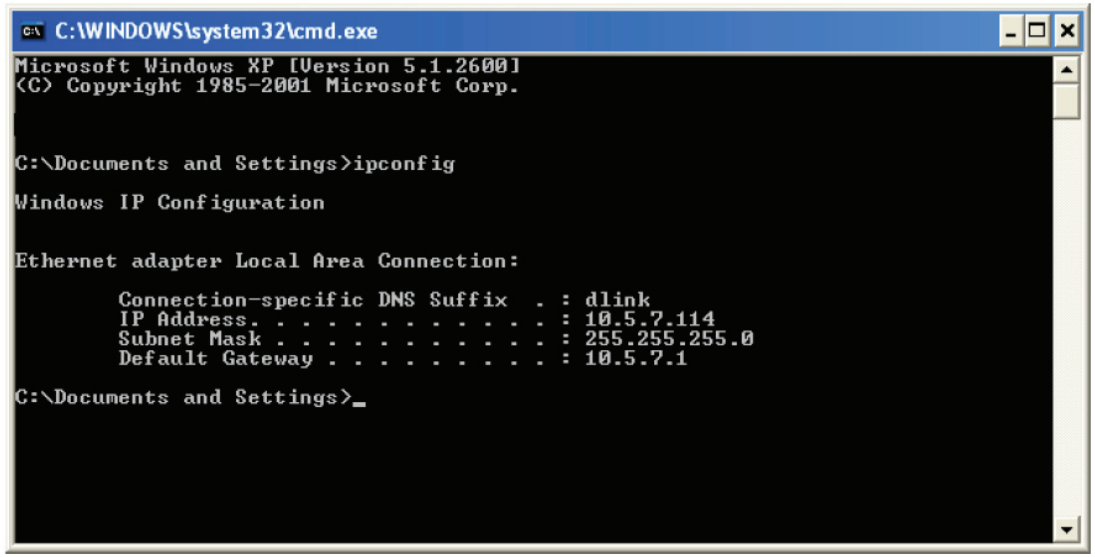
Click on **Start** > **Run**. In the run box type **cmd** and click on the **OK**.

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**.

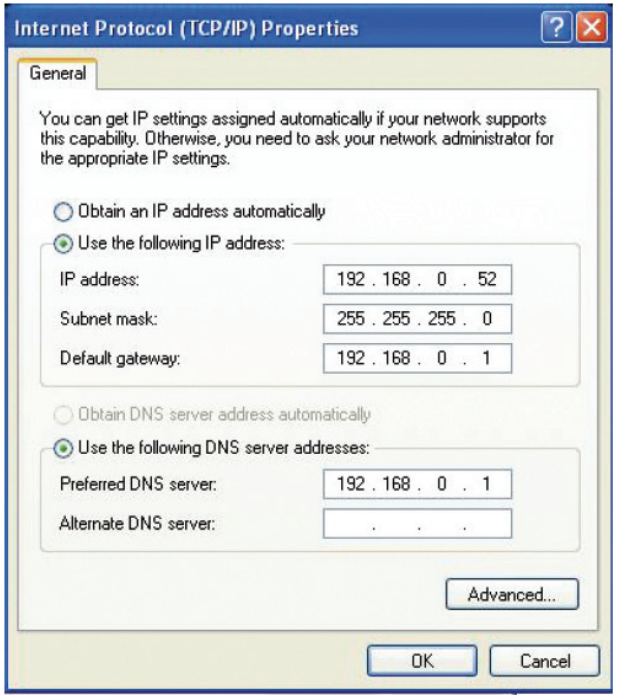
Step 2
Right-click on the **Local Area Connection** which represents your D-Link network adapter and select **Properties**.

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 192.168.0.1, make your IP address 192.168.0.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 (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). 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

- ANSI T1.413 Issue 2
- ITU G.992.1 (G.dmt) AnnexA
- ITU G.992.2 (G.lite) Annex A
- ITU G.994.1 (G.hs)
- ITU G.992.5 Annex A

ADSL2 Standards

- ITU G.992.3 (G.dmt.bis) Annex A
- ITU G.992.4 (G.lite.bis) Annex A

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 12 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: RJ-45 port for 10/100BASE-T Ethernet connection

WIRELESS LAN

- 802.11b/g standards
- 802.11n draft
- Wireless speed: up to 54Mbps (802.11G), 270Mbps (802.11n)
- Frequency range: 2.4 GHz to 2.484G Hz
- Antennas: 3 detachable dipole antennas.
- WEP data encryption
- WPA/WPA2 (Wi-Fi Protected Access) security
- Multiple SSID
- 802.11e Wireless QoS (WMM/WME)
- MAC address-based access control

* Maximum wireless signal rate derived from IEEE Standard 802.11g and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.

Contacting Technical Support

You can find software updates and user documentation on the D-Link websites.

If you require product support, we encourage you to browse our FAQ section on the Web Site before contacting the Support line. We have many FAQ's which we hope will provide you a speedy resolution for your problem.

For Customers within the United Kingdom & Ireland:

D-Link UK & Ireland Technical Support over the Internet:
http://www.dlink.co.uk
ftp://ftp.dlink.co.uk

D-Link UK & Ireland Technical Support over the Telephone:
08456 12 0003 (United Kingdom)
+1890 886 899 (Ireland)
Lines Open
8.00am-10.00pm Mon-Fri
10.00am-7.00pm Sat & Sun

For Customers within Canada:

D-Link Canada Technical Support over the Telephone:
1-800-361-5265 (Canada)
Mon. to Fri. 7:30AM to 9:00PM EST

D-Link Canada Technical Support over the Internet:
http://support.dlink.ca
email: support@dlink.ca