

USER MANUAL

DSL-2680

VERSION 1.0



D-Link[®]

BROADBAND

FCC Notices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning:

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment. The equipment must not be co-located or operating in conjunction with any other antenna or transmitter

Table of Contents

Overview	1	Setup Wizard Step 2: Select Internet Connection Type	15
Package Contents	1	Setup Wizard Step 2: Internet Connection Type, Country and ISP.....	16
System Requirements	1	Setup Wizard Step 3: Finish	16
Features	2	Setup Wizard Step 2: Internet Connection Type - Other Connection Types	17
Hardware Overview	3	Setup Wizard Step 2: Internet Connection Type - PPPoE/PPPoA.....	18
Rear Panel - Connections.....	3	Setup Wizard Step 3: Finish	18
Front Panel - LED Indicators	4	Setup Wizard Step 2: Internet Connection Type - Dynamic IP Address.....	19
Right Side Panel - WPS Button	5	Setup Wizard Step 3: Finish	19
Installation	6	Setup Wizard Step 2: Internet Connection Type - Static IP Address.....	20
Before You Begin	6	Setup Wizard Step 3: Finish	20
Installation Notes	6	Setup Wizard Step 2: Internet Connection Type - Bridge Mode	21
Information you will need from your ADSL service provider.....	8	Setup Wizard Step 3: Finish	21
Information you will need about your Router	9	ADSL Setup - Manual Configuration.....	22
Information you will need about your LAN or computer.....	9	Manual ADSL Setup - PPPoE/PPPoA	23
Device Installation	10	Manual ADSL Setup - Dynamic IP Address	24
Power on Router.....	10	Manual ADSL Setup - Static IP Address	25
Factory Reset Button	10	Manual ADSL Setup - Bridge Mode	26
Network Connections	11	Configure VPI and VCI	27
ATM Traffic Shaping.....	28	Wireless Setup	29
Setup	12		
Web-based Configuration Utility	12		
Configure the Router	13		
ADSL Setup - Setup Wizard	14		
Setup Wizard Step 1: Change Password	15		

Wireless Network Setup Wizard	30	Firmware Update	56
Add Wireless Clients with WPS	33	Diagnostics	57
WPS – Push Button method 1	33	System Log	58
WPS – Push Button method 2	34	Status	59
WPS – Pin Code method	36	Device Info.....	60
Getting the PIN number from the WPS		Connected Clients	61
Wireless Client	37	Statistics	62
Manual Wireless Network Setup.....	38	Help	63
Manually Set Up Wireless Network Security -		Technical Specifications	64
WPA.....	39		
Manually Set Up Wireless Network Security -			
WEP.....	40		
LAN Setup	41		
DHCP Server Configuration.....	42		
Advanced Setup	43		
Port Forwarding	44		
DNS Setup.....	45		
VLAN	46		
Firewall & DMZ.....	47		
Advanced ADSL.....	48		
Advanced Wireless.....	49		
Wi-Fi Protected Setup	50		
Wireless MAC Filter.....	51		
Advanced LAN.....	52		
Maintenance.....	53		
Password.....	54		
Save/Restore Settings.....	55		

Overview

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.

Package Contents

- DSL-2680 Wireless ADSL 2+ Ethernet Router
- Power Adapter
- CD-ROM with User Manual
- One twisted-pair telephone cable used for ADSL connection
- One straight-through Ethernet cable
- Quick Installation Guide



If any of the above items are missing, please contact your reseller.

Note: Using a power supply with a different voltage than the one included with the Router will cause damage and void the warranty for this product.

System Requirements

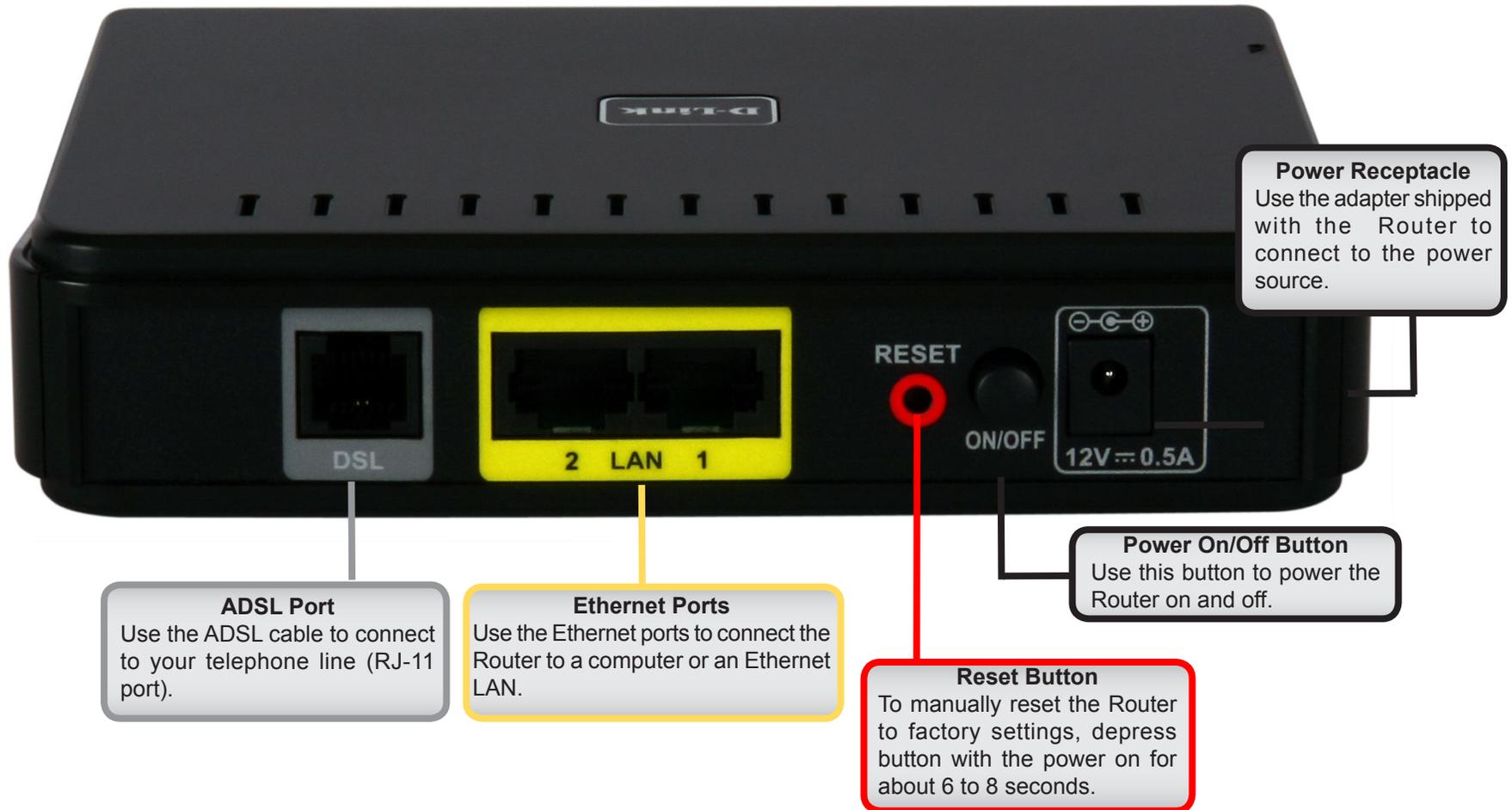
- ADSL Internet service
- Computer with:
 - 200MHz Processor or faster
 - 64MB Memory or bigger
 - CD or DVD-ROM Drive
 - Ethernet Adapter with TCP/IP Protocol Installed
 - Internet Explorer v6.0 or later, Mozilla Firefox v1.0 or later, Safari 2.0 or later, Google Chrome 1.0 or later
 - Windows, Macintosh, or Linux-based operating system, with an installed Ethernet adapter

Features

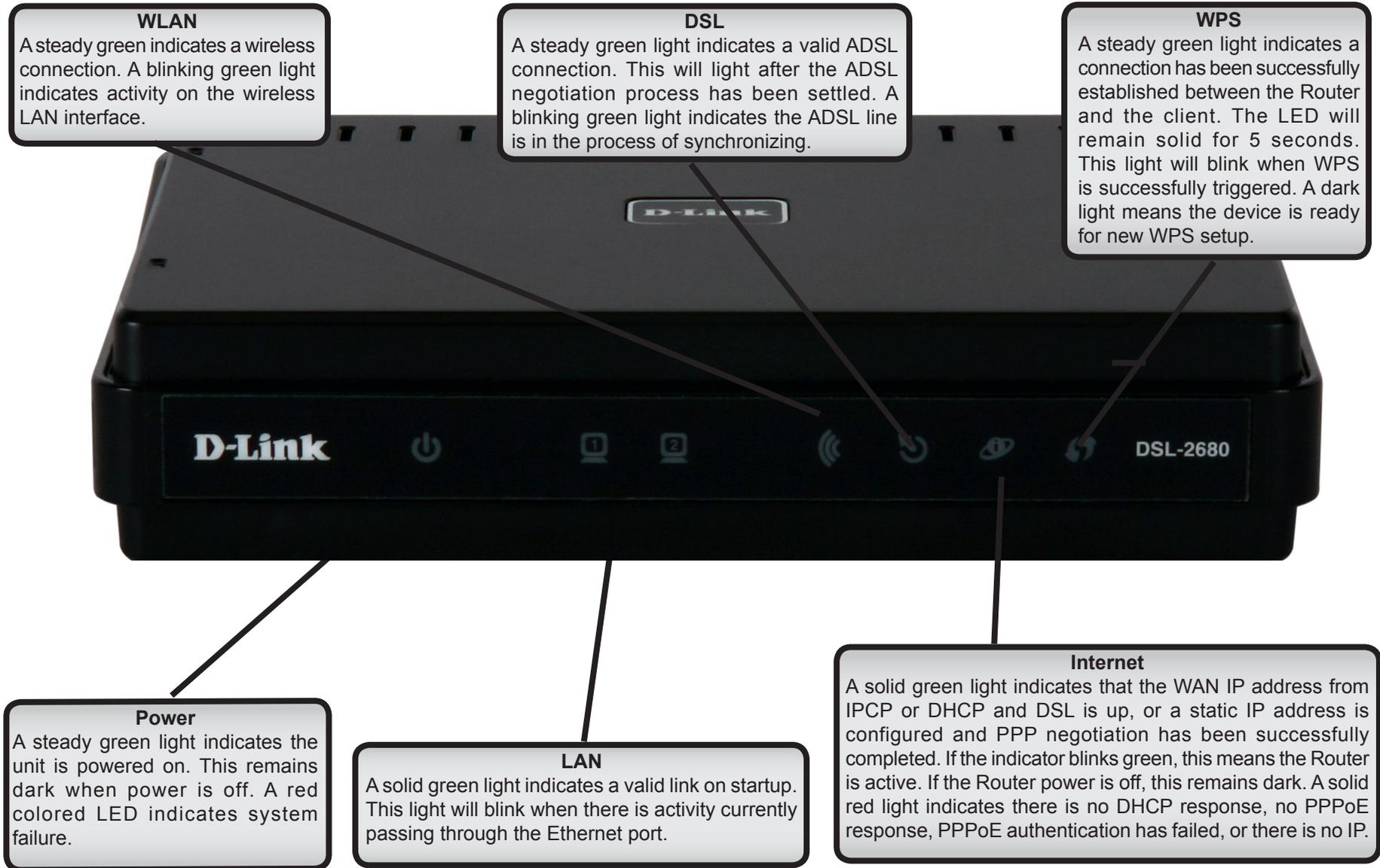
- **PPP (Point-to-Point Protocol) Security** – The Router supports PAP (Password Authentication Protocol) and CHAP (Challenge Handshake Authentication Protocol) for PPP connections. The Router also supports MSCHAP.
- **DHCP Support** – Dynamic Host Configuration Protocol automatically and dynamically assigns all LAN IP settings to each host on your network. This eliminates the need to reconfigure every host whenever changes in network topology occur.
- **Network Address Translation (NAT)** – For small office environments, the Router allows multiple users on the LAN to access the Internet concurrently through a single Internet account. This provides Internet access to everyone in the office for the price of a single user. NAT improves network security in effect by hiding the private network behind one global and visible IP address. NAT address mapping can also be used to link two IP domains via a LAN-to-LAN connection.
- **TCP/IP (Transfer Control Protocol/Internet Protocol)** – The Router supports TCP/IP protocol, the language used for the Internet. It is compatible with access servers manufactured by major vendors.
- **Default Routing** – This allows you to choose a default path for incoming data packets for which the destination address is unknown. This is particularly useful when/if the Router functions as the sole connection to the Internet.
- **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.
- **Easy Installation** – The Router uses a Web-based graphical user interface program for convenient management access and easy set up. Any common Web browser software can be used to manage the Router.

Hardware Overview

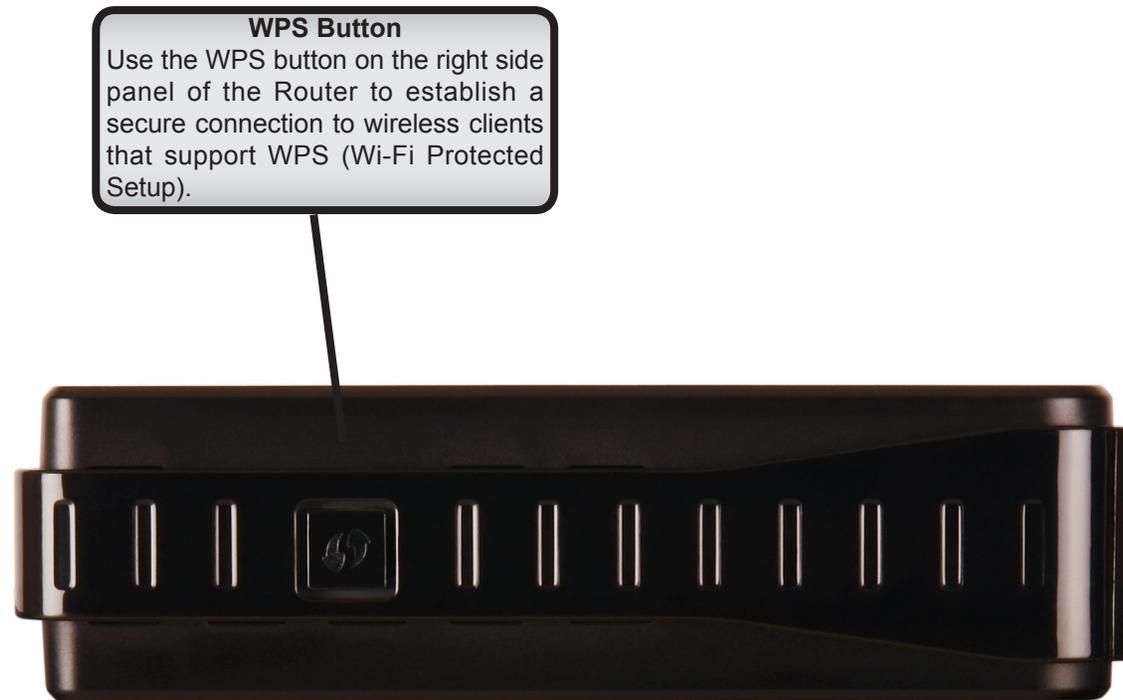
Rear Panel - Connections



Front Panel - LED Indicators



Right Side Panel - WPS Button



Note: For instructions on how to use the WPS button, please see “Wi-Fi Protected Setup” on page 50.

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. Place the Router in a location where it can be easily connected to Ethernet devices, the telephone line, and a power source.

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 set up 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 a standard telephone cable. Ask your service provider for more information about the use of low pass filters with your installation.

Operating Systems

The Router 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 Microsoft Windows 98 SE, Windows ME, Windows 2000, Windows XP, Windows Vista, Windows 7, and Macintosh Mac OS X.

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 Internet Explorer v6.0 or later, Mozilla Firefox v1.0 or later, Safari 2.0 or later, and Google Chrome 1.0 or later. 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. The 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 need to install an adapter, follow the installation instructions that come with the Ethernet NIC adapter.

Additional Software

It may be necessary to install software on your computer that enables the computer to access the Internet. Additional software must be installed if you are using the device as 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.

Wireless LAN

Computers using the wireless network can access the Internet using the embedded wireless access point. Wireless workstations must have an 802.1n, 802.1g, or 802.1b wireless network card installed to use the Router. In addition, the workstation must be configured to operate on the same channel and SSID as the Router. If wireless security is used, the wireless workstations must be properly configured for the security settings used.

Information you will need from your ADSL service provider

Username

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

Password

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

WAN Setting / Connection Type

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

- PPPoE/PPPoA (PPPoE LLC, PPPoE VC-Mux, PPPoA LLC, or PPPoA VC-Mux)
- Bridge Mode (1483 Bridged IP LLC or 1483 Bridged IP VC Mux)
- Static IP Address (1483 Bridged IP LLC, 1483 Bridged IP VC Mux, 1483 Routed IP LLC (IPoA), or 1483 Routed IP VC-Mux)
- 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 (Auto Synch-Up) used for the Router automatically detects all types of ADSL, ADSL2 and ADSL2+ modulation.

Security Protocol

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

VPI

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

VCI

Most users will not be required to change this setting. The Virtual Channel Identifier (VCI) is 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 your Router

Username

This is the Username needed to 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 Router

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 Router

This is the subnet mask used by the Router 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 Router to the Ethernet port using an Ethernet cable. You can also use the Ethernet ports on the Router to connect to other computers or Ethernet devices.

DHCP Client status

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

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

Once you have the above information, you are ready to set up and configure your Router.

Device Installation

The Router maintains three separate physical interfaces, an ADSL, an Ethernet, and a wireless Interface. Place the Router in a location where it can be easily connected to Ethernet devices, the telephone line, and a power source. The Router should not be located where it will be exposed to moisture or excessive heat. Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard. As with any electrical appliance, observe common sense safety procedures.

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

Power on Router

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

1. Connect the Power Adapter to the power receptacle located on the rear panel of the Router and plug the other end of the power adapter to a wall outlet or power strip.
2. Depress the Power button into the on position. You should see the Power LED indicator on the front panel shine bright green to indicate the device is powered on.
3. If the Ethernet port is connected to a working device, check the LAN LED indicator 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 you have installed 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. With the Router powered on (check the Power LED to make sure it lights steady green), press and hold down the reset button using a paper clip or similar object for about 6 to 8 seconds.
2. The Router will restart. Watch the Power LED to verify that it is restarting.
3. When it is powered on again it is ready to be configured. The whole process takes about 30 seconds.
4. 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**."

Note: A factory reset will erase the current configuration settings and reset them to the default settings. After it has restarted, log in to the router's Web-based management interface and use the Setup Wizard to configure the basic settings.

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 the instructions 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 10/100 BASE-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 cabling with RJ-45 connectors. The RJ-45 port on the Router is a crossed port (MDI-X). Follow standard Ethernet guidelines when deciding what type of cable to use to make this connection. When connecting the Router directly to a PC or server use a normal straight-through cable. You should use a crossed cable when connecting the Router to a normal (MDI-X) port on a switch or hub. Use a normal straight-through cable when connecting it to an uplink (MDI-II) port on a hub or switch. The rules governing Ethernet cable lengths apply to the LAN to Router connection. Be sure that the cable connecting the LAN to the Router does not exceed 100 meters.

Hub or Switch to Router Connection

Connect the Router to an uplink port (MDI-II) on an Ethernet hub or switch with a straight-through cable. If you wish to reserve the uplink port on the switch or hub for another device, connect to any of 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 in a PC using the Ethernet cable provided.

Wireless Connection to Router

The Router's embedded 802.11b/g/n wireless access point should be configured to suit the local wireless network. All 802.11b/g/n devices that associate with the Router's wireless access point must have the same SSID and channel. If wireless security is used, the wireless clients must be configured with the correct security information to use the Router. More information on configuring the wireless settings is found later in this manual.

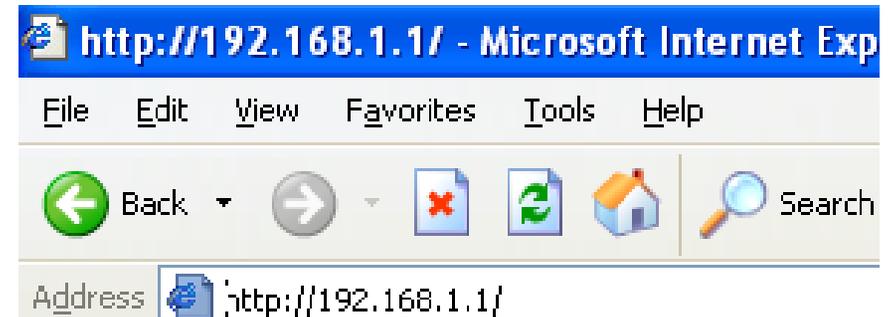
Setup

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

Web-based Configuration Utility

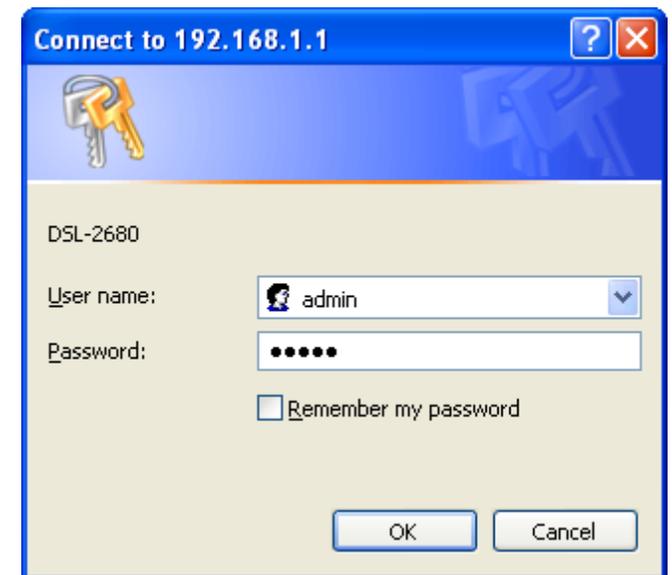
To configure the WAN connection used by the Router it is first necessary to communicate with the Router through its management interface, which is HTML-based and can be accessed using a Web browser. The easiest way to make sure your computer has the correct IP settings is to configure it to use the DHCP 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 v6.0 or later, Mozilla Firefox v1.0 or later, Safari 2.0 or later, or Google Chrome 1.0 or later and enter the IP address of the Router (default is **192.168.1.1**).



The login dialog box will appear:

1. Type **admin** in the User Name field.
2. Enter **admin** in the Password field.
3. Click the **OK** button to log into the Router.



Configure the Router

When you successfully connect to the Web manager, the main ADSL Setup menu is displayed. Use this menu to configure the WAN settings for Internet connection.

All configuration and management of the Router is done using the Web-based management interface pictured in the example. The Setup Wizard is recommended for most users. It allows you to configure the basic settings for the ADSL Internet connection and Ethernet (including DHCP) settings. To launch the Setup Wizard click on the **Setup Wizard** button.

D-Link

DSL-2680 // SETUP ADVANCED MAINTENANCE STATUS HELP

ADSL Setup
Wireless Setup
LAN Setup
Logout

Internet Offline

English

Reboot

ADSL SETUP

If you are configuring this device for the first time, D-Link recommends that you click the Setup Wizard button, and follow the instructions on screen. If you wish to modify or configure the ADSL settings manually, tick Manual Setup to enable the ADSL Connection Setup.

Setup Wizard Manual Setup

MANUAL ADSL CONNECTION SETUP

Please select the appropriate option to connect to your ISP.

- PPPoE/PPPoA** Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users)
- Dynamic IP Address** Choose this option if your ISP uses Dynamic IP Address over DSL.
- Static IP Address** Choose this option if your ISP uses Static IP assignments.
- Bridge Mode** Choose this option if your ISP uses Bridge Mode.

PPPOE/PPPOA INTERNET CONNECTION TYPE :

Enter the information provided by your Internet Service Provider (ISP).

Username :

Password :

Service Name :

Connection Type :

MTU : (0 means default value 1492bytes)

Idle Time Out : Minutes (0 = Always On)

Helpful Hints...

First time users are recommended to run the Setup Wizard. Click the Setup Wizard button and you will be guided step by step through the process of setting up your ADSL connection.

Tick the Manual Setup box if you are a more advanced user and have the settings for your Internet Service Provider (ISP) available.

Please take care when entering your username and password as these are case sensitive. The majority of connection issues are caused by incorrect username or password combinations.

More...

Note: The Setup Wizard is the easiest and quickest way to configure the Internet connection for most users.

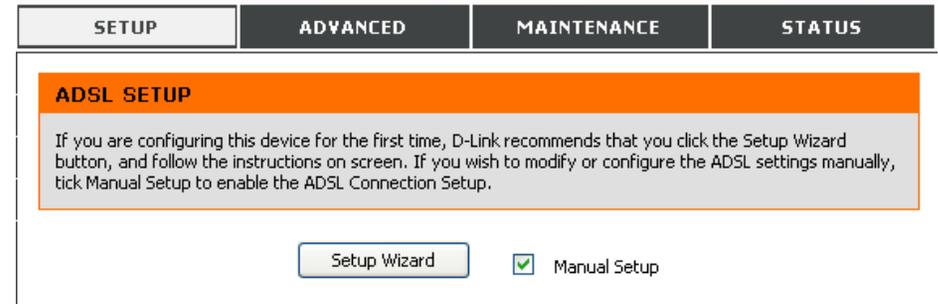
ADSL Setup - Setup Wizard

The quickest way for most users to establish the Internet connection is to use the Setup Wizard accessed from the **ADSL Setup** menu. Alternatively the WAN connection can be set up manually by selecting the **Manual Setup** option and using the **ADSL Setup** menu to configure the device (described in **ADSL Setup – Manual Configuration** below).

Go to the **Setup** directory to view the **ADSL Setup** menu.

To use the Setup Wizard, click the **Setup Wizard** button in the first browser menu and follow the instructions in the menus that appear.

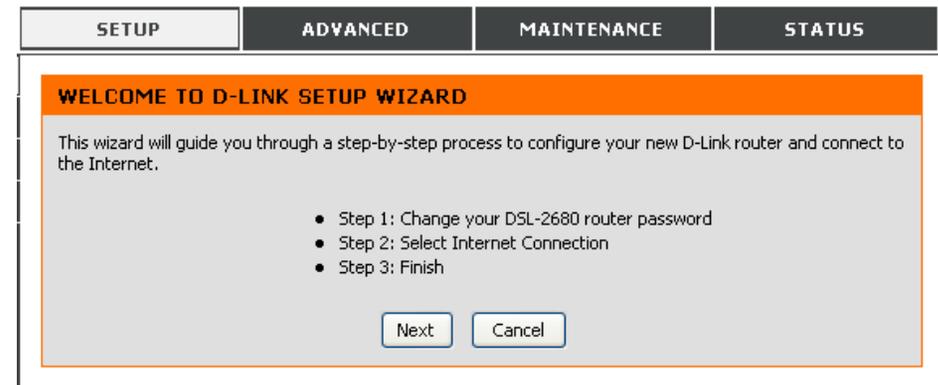
The initial menu summarizes the setup process. Click the **Next** button to proceed. You may stop using the Setup Wizard at any time by clicking the **Cancel** button. If you exit the wizard you will return to the **ADSL Setup** menu without saving any of the settings changed during the process



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

1. Change the Router's login password.
2. Configure the Internet connection
3. Finish.

Click **Next** to continue configuring the Router.



Setup Wizard Step 1: Change Password

The password used for management access of the Router can be changed now if desired. If you prefer to keep the existing password, click on the **Skip** button to go to the next step without changing the password. Change the password and click **Next** to set the new password and continue or click **Skip** to keep the existing password.

SETUP	ADVANCED	MAINTENANCE	STATUS
STEP 1: CHANGE YOUR PASSWORD			
<p>The factory default password of this router is 'admin'. To help secure your network, D-Link recommends that you should choose a new password between 1 and 15 characters. If you do not wish to choose a new password now, just click Skip to continue. Click Next to proceed to next step.</p>			
<p>Current Password : <input type="text"/></p>			
<p>New Password : <input type="text"/></p>			
<p>Confirm Password : <input type="text"/></p>			
<p><input type="button" value="Back"/> <input type="button" value="Next"/> <input type="button" value="Skip"/> <input type="button" value="Cancel"/></p>			

Setup Wizard Step 2: Select Internet Connection Type

The new menu that appears is used to select the Internet connection type. Choose your **Country** from the pull-down menu. If you see your country listed, follow the instructions beginning on the next page. If you do not see your country listed, choose *Others* and click **Next**, skip ahead to **Setup Wizard Step 2: Internet Connection – Other Connection Types**.

SETUP	ADVANCED	MAINTENANCE	STATUS
STEP 2: SELECT INTERNET CONNECTION TYPE			
<p>Please select your Country and ISP (Internet Service Provider) from the list below. If your Country or ISP is not in the list, please select "Other".</p>			
<p>Country : <input type="text" value="Click to select"/></p>			
<p>ISP Provider : <input type="text" value="Click to select"/></p>			
<p>VPI : <input type="text"/></p>			
<p>VCI : <input type="text"/></p>			
<p>Connection Type : <input type="text" value="PPPoE LLC"/></p>			
<p><input type="button" value="Back"/> <input type="button" value="Next"/> <input type="button" value="Cancel"/></p>			

Setup Wizard Step 2: Internet Connection Type, Country and ISP

If your country appears listed in the **Country** menu options, select it and wait a few seconds for the menu display to adjust. When the menu options reappear, there will be options available to choose in the **ISP Provider** pull-down menu. Find your ISP in the list, again the menu will be inoperable for a few seconds while it adjusts. Some users will be required to select the **Connection Type** as well. If necessary, choose the Connection Type and click the **Next** button and continue to configure the connection as instructed by your ISP. If you are configuring a Bridged connection, the Wizard will go to the Finish menu.

Many users will use a form of PPP connection. PPP connections require a **Username** and **Password** to establish the Internet connection.

STEP 2: SELECT INTERNET CONNECTION TYPE

Please select your Country and ISP (Internet Service Provider) from the list below. If your Country or ISP is not in the list, please select "Other".

Country :

ISP Provider :

VPI :

VCI :

Connection Type :

STEP 2: SELECT INTERNET CONNECTION TYPE

Please enter your Username and Password as provided by your ISP (Internet Service Provider). Please enter the information exactly as shown taking note of upper and lower cases. Click Next to continue.

Username :

Password :

Confirm Password :

Setup Wizard Step 3: Finish

After configuring the connection as instructed by your ISP, the Router will need to be restarted.

Click the **Finish** button to save the configuration and restart the Router.

STEP 3: FINISH

Setup complete. Click Back to review or modify settings. Click Finish to apply current settings. If your Internet connection does not work after apply the settings, you can try the Setup Wizard again with alternative settings or use Manual Setup instead if you have your Internet connection details as provided by your ISP.

Setup Wizard Step 2: Internet Connection Type - Other Connection Types

ADSL clients whose country is not listed as an option in the Country menu should choose *Others*. Click the **Next** button and proceed to configure the Router as instructed by your ISP.

Choosing the *Others* option will disable the VPI/VCI and Connection Type menus. Click **Next** to choose the type of connection used for your account.

STEP 2: SELECT INTERNET CONNECTION TYPE

Please select your Country and ISP (Internet Service Provider) from the list below. If your Country or ISP is not in the list, please select "Other".

Country :

ISP Provider :

VPI :

VCI :

Connection Type :

Select the connection type used by your ISP and click the **Next** button.

STEP 2: SELECT INTERNET CONNECTION TYPE

Select the connection type to connect to your ISP. Click Next to continue

PPPoE/PPPoA Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users)

Dynamic IP Address Choose this option if your ISP uses Dynamic IP Address over DSL.

Static IP Address Choose this option if your ISP uses Static IP assignments.

Bridge Mode Choose this option if your ISP uses Bridge Mode.

Setup Wizard Step 2: Internet Connection Type - PPPoE/PPPoA

Type in the **Username** and **Password** used to identify and verify your account to the ISP.

If you are instructed to change the **VPI** or **VCI** number, type in the correct setting in the available entry fields. Most users will not need to change these settings. The Internet connection cannot function if these values are incorrect.

Some users may have to adjust the **Connection Type** from the drop-down menu.

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

STEP 2: SELECT INTERNET CONNECTION TYPE

You have selected PPPoE/PPPoA Internet connection. Please enter the appropriate information below as provided by your ISP (Internet Service Provider).

Please enter the information exactly as shown taking note of upper and lower cases.

Click Next to continue.

Username :

Password :

VPI :

VCI :

Connection Type : ▼

Setup Wizard Step 3: Finish

Click the **Finish** button to save the configuration and restart the Router.

STEP 3: FINISH

Setup complete. Click Back to review or modify settings. Click Finish to apply current settings. If your Internet connection does not work after apply the settings, you can try the Setup Wizard again with alternative settings or use Manual Setup instead if you have your Internet connection details as provided by your ISP.

Setup Wizard Step 2: Internet Connection Type - Dynamic IP Address

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

Select the specific **Connection Type** from the drop-down menu. You may want to copy the MAC address of your Ethernet adapter to the Router. Some ISPs record the unique MAC address of your computer's Ethernet adapter when you first access their network. This can prevent the Router (which has a different MAC address) from being allowed access to the ISPs network (and the Internet). To clone the MAC address of your computer's Ethernet adapter, type in the MAC address in the **Cloned MAC Address** field and click the **Clone MAC Address** button. This will copy the information to a file used by the Router to present to the ISP's server used for DHCP.

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

STEP 2: SELECT INTERNET CONNECTION TYPE

You have selected Dynamic IP Internet connection. Please enter the appropriate information below as provided by your ISP.

Some ISPs require that you clone your PC MAC address to the DSL router, simply Click on the button provided.

Click Next to continue.

VPI :	<input type="text" value="8"/>
VCI :	<input type="text" value="35"/>
Connection Type :	<input type="text" value="1483 Bridged IP LLC"/> ▾
Cloned MAC Address :	<input type="text" value="00:00:00:00:00:00"/>
	<input type="button" value="Clone MAC Address"/>

Setup Wizard Step 3: Finish

Click the **Finish** button to save the configuration and restart the Router.

STEP 3: FINISH

Setup complete. Click Back to review or modify settings. Click Finish to apply current settings. If your Internet connection does not work after apply the settings, you can try the Setup Wizard again with alternative settings or use Manual Setup instead if you have your Internet connection details as provided by your ISP.

Setup Wizard Step 2: Internet Connection Type - Static IP Address

Change the **IP Address**, **Subnet Mask**, and **Default Gateway** as instructed by your ISP. Select the specific **Connection Type** from the drop-down menu.

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

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

STEP 2: SELECT INTERNET CONNECTION TYPE

You have selected Static IP Internet connection. Please enter the appropriate information below as provided by your ISP. Click Next to continue.

VPI :

VCI :

IP Address :

Subnet Mask :

Connection Type : ▾

Default Gateway :

Setup Wizard Step 3: Finish

Click the **Finish** button to save the configuration and restart the Router.

STEP 3: FINISH

Setup complete. Click Back to review or modify settings. Click Finish to apply current settings. If your Internet connection does not work after apply the settings, you can try the Setup Wizard again with alternative settings or use Manual Setup instead if you have your Internet connection details as provided by your ISP.

Setup Wizard Step 2: Internet Connection Type - Bridge Mode

Select the specific **Connection Type** from the drop-down menu.

If you are instructed to change the **VPI** or **VCI** numbers, type in the correct setting in the available entry fields—in this example no changes are needed so this setting is grayed out. Most users will not need to change these settings. The Internet connection cannot function if these values are incorrect.

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

STEP 2: SELECT INTERNET CONNECTION TYPE

Enter the bridge information provided to you by your ISP. Click Next to continue.

VPI :

VCI :

Connection Type :

Setup Wizard Step 3: Finish

Click the **Finish** button to save the configuration and restart the Router.

STEP 3: FINISH

Setup complete. Click Back to review or modify settings. Click Finish to apply current settings. If your Internet connection does not work after apply the settings, you can try the Setup Wizard again with alternative settings or use Manual Setup instead if you have your Internet connection details as provided by your ISP.

ADSL Setup - Manual Configuration

To configure the Router's basic configuration settings without running the Setup Wizard, you can access the menus used to configure ADSL Setup, Wireless Setup, and LAN Setup settings directly from the **Setup** directory. To access the **ADSL Setup** menus for PPPoE/PPPoA, Dynamic IP Address, Static IP Address and Bridge Mode connections, click on the **ADSL Setup** link button on the left side of the first menu that appears when you successfully access the Web manager.

Choose the ADSL connection type used for your service listed under the heading Manual ADSL Connection Setup, the menu changes according to the type of connection to be configured. Configure the settings for the chosen Internet Connection Type. Follow the instructions presented below for the type of connection used for your ADSL service. The default Internet connection type is PPPoE/PPPoA.

D-Link

DSL-2680 // SETUP ADVANCED MAINTENANCE STATUS HELP

ADSL Setup
Wireless Setup
LAN Setup
Logout

Internet Offline

English

Reboot

ADSL SETUP

If you are configuring this device for the first time, D-Link recommends that you click the Setup Wizard button, and follow the instructions on screen. If you wish to modify or configure the ADSL settings manually, tick Manual Setup to enable the ADSL Connection Setup.

Setup Wizard Manual Setup

MANUAL ADSL CONNECTION SETUP

Please select the appropriate option to connect to your ISP.

PPPoE/PPPoA Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users)

Dynamic IP Address Choose this option if your ISP uses Dynamic IP Address over DSL.

Static IP Address Choose this option if your ISP uses Static IP assignments.

Bridge Mode Choose this option if your ISP uses Bridge Mode.

PPPoE/PPPoA INTERNET CONNECTION TYPE :

Enter the information provided by your Internet Service Provider (ISP).

Username :

Password :

Service Name :

Connection Type :

MTU : (0 means default value 1492bytes)

Idle Time Out : Minutes (0 = Always On)

Authentication :

NAT :

IGMP :

Default Route :

VPI :

VCI :

Virtual Circuit :

Service Category :

Helpful Hints...

First time users are recommended to run the Setup Wizard. Click the Setup Wizard button and you will be guided step by step through the process of setting up your ADSL connection.

Tick the Manual Setup box if you are a more advanced user and have the settings for your Internet Service Provider (ISP) available.

Please take care when entering your username and password as these are case sensitive. The majority of connection issues are caused by incorrect username or password combinations.

More...

Note: Most users DO NOT need to change configuration settings for the Virtual Circuit at the bottom of this menu. Normally these settings are changed only for special circumstances and applications. Do not change these unless your ISP has given specific instructions to do so. For information about these configuration settings, go to "Configure VPI and VCI" on page 27.

Manual ADSL Setup - PPPoE/PPPoA

Follow the instructions below to configure the Router to use a PPPoE or PPPoA for the Internet connection. Most users will only need to change some or all of the settings listed under **WAN Connection Setting** and **PPPoE/PPPoA**.

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

1. Under the **PPPoE/PPPoA** heading, type the **Username** and **Password** used for your ADSL account. A typical Username will be in the form user1234@isp.co.uk. The Password may be assigned to you by your ISP or you may have selected it when you set up the account with your ISP.
2. Choose the **Connection Type** from the pull-down menu located under the User Name and Password entry fields. This defines both the connection protocol and encapsulation method used for your ADSL service. The available options are *PPPoA VC-Mux*, *PPPoA LLC*, *PPPoE VC-Mux* and *PPPoE LLC*. If you have not been provided specific information for the Connection Type setting, leave the default setting.
3. Leave the **MTU** value at the default setting (default = 1450) unless you have specific reasons to change this.
4. For time-based accounts, type an **Idle Time Out** in minutes. Accounts that are not time-based will want to choose the default connection setting 0=Always ON.
5. The default setting Auto for Authentication will work for most users. If instructed to change by your ISP, this can be changed to specify the authentication method used, select *PAP* or *CHAP* as instructed.
6. **NAT** (Network Address Translation) should remain Enable. If you disable NAT, you will not be able to use more than one computer for Internet connections.
7. Most users should leave the **IGMP** setting as *Enable*. IGMP is used to manage multicasts (such as audio or video streaming). Some network managers might prefer to disable this function to prevent certain types of DoS attacks. To disable IGMP select *Disable*. This will block all IP multicast traffic through the Router.
8. Leave the **Default Route** enabled if you want to use the Router as the default route to the Internet for your LAN. Whenever a computer on the LAN attempts to access the Internet, the Router becomes the Internet gateway to the computer. If you have an alternative route for Internet traffic you may disable this without effecting the Router's connection.
9. Click the **Save Settings** button at the bottom of the menu to apply and save the new ADSL configuration.

PPPOE/PPPOA INTERNET CONNECTION TYPE :

Enter the information provided by your Internet Service Provider (ISP).

Username :

Password :

Service Name :

Connection Type : PPPoE LLC

MTU : (0 means default value 1492bytes)

Idle Time Out : Minutes (0 = Always On)

Authentication : Auto

NAT : Enable

IGMP : Disable

Default Route : Enable

Note: Use the **Connect** button at the bottom of the menu to reestablish the PPP connection if it is not connected automatically when the router is restarted. Press **Disconnect** to terminate the Internet connection.

Manual ADSL Setup - Dynamic IP Address

Follow the instructions below to configure the Router to use a Dynamic IP Address for the Internet connection.

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

1. Choose the **Connection Type** from the pull-down menu. This defines both the connection type and encapsulation method used for your ADSL service. The available options are *1483 Bridged IP LLC* and *1483 Bridged IP VC Mux*. If you have not been provided specific information for the Connection Type setting, leave the default setting.
2. Some ISPs record the unique MAC address of your computer's Ethernet adapter when you first access their network. This can prevent the Router (which has a different MAC address) from being allowed access to the ISPs network (and the Internet). To clone the MAC address of your computer's Ethernet adapter, type in the MAC address in the **MAC Address** field and click the **Clone MAC Address** button.
3. **NAT** should remain *Enable*. If you disable NAT, you will not be able to use more than one computer for Internet connections. NAT is enabled and disabled system-wide, therefore if you are using multiple virtual connections, NAT will be disabled on all connections.
4. Most users should leave the **IGMP** setting as *Enable*. IGMP is used to manage multicasts (such as audio or video streaming). Some network managers might prefer to disable this function to prevent certain types of DoS attacks. To disable IGMP select *Disable*. This will block all IP multicast traffic through the router.
5. Leave the **Default Route** enabled if you want to use the Router as the default route to the Internet for your LAN. Whenever a computer on the LAN attempts to access the Internet, the Router becomes the Internet gateway to the computer. If you have an alternative route for Internet traffic you may disable this without effecting the Router's connection.

DYNAMIC IP ADDRESS INTERNET CONNECTION TYPE :

Use this Internet connection type if your Internet Service Provider (ISP) didn't provide you with IP Address information and/or a username and password.

Connection Type : 1483 Bridged IP LLC ▾

MAC Address : 00 : 00 : 00 : 00 : 00 : 00

Clone MAC Address

NAT : Enable ▾

IGMP : Disable ▾

Default Route : Enable ▾

Manual ADSL Setup - Static IP Address

Follow the instructions below to configure the Router to use a Static IP Address for the Internet connection.

To configure a Static IP type connection for the WAN, follow these steps:

1. Choose the **Connection Type** from the pull-down menu. This defines both the connection type and encapsulation method used for your ADSL service. The available options are *1483 Bridged IP LLC*, *1483 Bridged IP VC-Mux*, *1483 Routed IP LLC*, and *1483 Routed IP VC-Mux*. If you have not been provided specific information for the Connection Type setting, leave the default setting.
2. Change the **IP Address**, **Subnet Mask**, and **Default Gateway** address as instructed by your ISP. These are the global IP settings for the WAN interface. This is the “visible” IP address of your account.
3. **NAT** should remain *Enable*. If you disable NAT, you will not be able to use more than one computer for Internet connections. NAT is enabled and disabled system-wide, therefore if you are using multiple virtual connections, NAT will be disabled on all connections.
4. Most users should leave the **IGMP** setting as *Enable*. IGMP is used to manage multicasts (such as audio or video streaming). Some network managers might prefer to disable this function to prevent certain types of DoS attacks. To disable IGMP select *Disable*. This will block all IP multicast traffic through the router.
5. Leave the **Default Route** enabled if you want to use the Router as the default route to the Internet for your LAN. Whenever a computer on the LAN attempts to access the Internet, the Router becomes the Internet gateway to the computer. If you have an alternative route for Internet traffic you may disable this without effecting the Router’s connection.

STATIC IP ADDRESS INTERNET CONNECTION TYPE :

Enter the static address information provided by your Internet Service Provider (ISP).

IP Address :	<input type="text" value="0.0.0.0"/>
Subnet Mask :	<input type="text" value="0.0.0.0"/>
Connection Type :	<input type="text" value="1483 Bridged IP LLC"/>
NAT :	<input type="text" value="Enable"/>
IGMP :	<input type="text" value="Disable"/>
Default Route :	<input type="text" value="Enable"/>
Default Gateway :	<input type="text" value="0.0.0.0"/>

Manual ADSL Setup - Bridge Mode

Follow the instructions below to configure the Router to use Bridge Mode for the Internet connection.

To configure a Bridge Mode connection, choose the **Connection Type** from the pull-down menu. This defines both the connection type and encapsulation method used for your ADSL service. The available options are *1483 Bridged IP LLC* or *1483 Bridged IP VC-Mux*. If you have not been provided specific information for the Connection Type setting, leave the default setting.

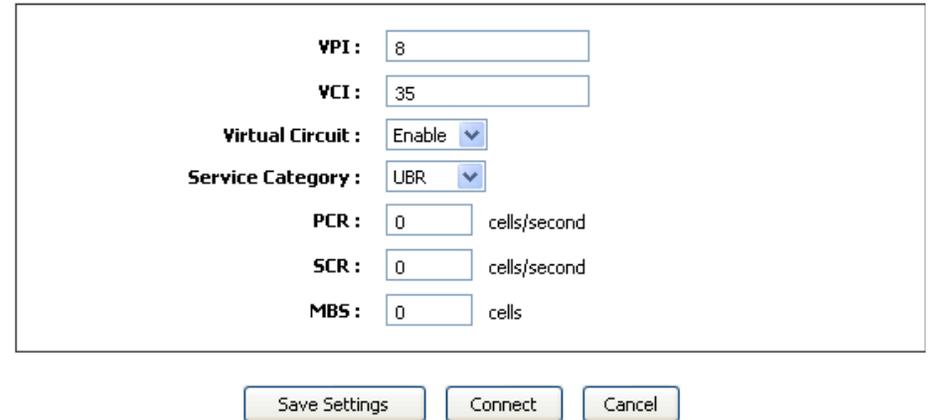
BRIDGE MODE :	
Use this Internet connection type if you use your Modem as a bridge.	
Connection Type :	<input type="text" value="1483 Bridged IP LLC"/>
	<ul style="list-style-type: none">1483 Bridged IP LLC1483 Bridged IP VC-Mux

Configure VPI and VCI

Follow the instructions below to configure the virtual connection.

To configure the virtual connection, follow these steps:

1. Enter the values for the **VPI** and **VCI** given to you by your service provider.
2. Select *Enable* from the **Virtual Circuit** pull-down menu to make the connection active. If you prefer to leave the connection inactive leave this as *Disable*, and activate it when it is needed.
3. Choose the type of connection used for the virtual connection and configure the settings according to the instructions of your service provider.
4. Click the **Save Settings** button to save the configuration. If you want to establish the connection now, click the **Connect** button.



The screenshot shows a configuration window with the following fields and controls:

- VPI:** Text input field containing the value 8.
- VCI:** Text input field containing the value 35.
- Virtual Circuit:** A dropdown menu currently set to "Enable".
- Service Category:** A dropdown menu currently set to "UBR".
- PCR:** Text input field containing 0, followed by the text "cells/second".
- SCR:** Text input field containing 0, followed by the text "cells/second".
- MBS:** Text input field containing 0, followed by the text "cells".

At the bottom of the window are three buttons: "Save Settings", "Connect", and "Cancel".

VPI - The Virtual Path Identifier is used with the VCI to define a dedicated circuit on the ATM network portion of the connection to the Internet and WAN. Most users will not need to change this setting.

VCI - The Virtual Channel Identifier is used with the VPI to define a dedicated circuit on the ATM network portion of the connection to the Internet and WAN. Most users will not need to change this setting.

Virtual Circuit - Use this to enable or disable the PVC you are currently configuring. By default, the PVC0 is set to *Enable*.

ATM Traffic Shaping

Settings used for ATM traffic shaping are located beneath the VPI/VCI configuration menu. These settings allow the user to adjust ATM Quality of Service (QoS) or traffic parameters to suit specific traffic requirements. For applications or circumstances where packet loss or packet delay is a concern, ATM QoS can be adjusted to minimize problems. For most accounts, it will not be necessary to change these settings. Altering QoS settings can adversely affect performance of some commonly used Internet applications.

If you plan to change QoS or traffic parameters, contact your ISP or network services provider for information on what types of adjustment are available or possible for your account. Your ISP may not support the class of service you want to use.

To adjust ATM QoS parameters, select one of the Service Categories listed here and type in the PCR value in the entry field below. For the VBR service category, an additional parameter (SCR) must also be defined.

UBR – Unspecified Bit Rate, this is the default category used for general-purpose Internet traffic where normal levels of packet loss and delay are acceptable. For some applications or for multiple connection accounts, it may be desirable to specify the PCR.

CBR – Constant Bit Rate, usually used in circumstances where very low packet loss and very low Cell Delay Variable (CDV) are desirable.

VBR-rt – Real-time Variable Bit Rate. This models bursty traffic with specified peak and sustainable rates. Please note that when VBR-rt is specified, both PCR and SCR are required (by ATM standards).

VBR-nrt – Non-real-time Variable Bit Rate, usually used when network traffic is characterized by bursts of packets at variable intervals, and some moderate packet loss and delay is acceptable. This category is typically used for audio and video applications such as teleconferencing. The network must support QoS Class 2 to use VBR-nrt.

Depending on which **Service Category** is selected, it will be necessary to change one or more of the following parameters:

PCR - Peak Cell Rate – The PCR is inversely related to the time interval between ATM cells. It is specified for all three service categories (UBR, CBR and VBR) in Kbps.

SCR - Sustainable Cell Rate – The SCR is defined for the VBR service category. This is the rate that can be sustained for “bursty”, on-off traffic sources. It is a function of Maximum Burst Size (**MBS**) and the time interval (between cells).

Wireless Setup

The Router's basic wireless and wireless network security settings are configured in the **Wireless Settings** configuration menu. To access this menu, click on the **Wireless Setup** link in the left panel of the **Setup** menu directory. It is the first page that appears when you successfully access the Web manager.

The **Wireless Settings** menu presents three options for configuration. Choose from one of the three following configuration procedures:

1. Launch the **Wireless Network Setup Wizard** to configure the Network Name (SSID) and WPA wireless network security. Click the **Wireless Network Setup Wizard** button to begin. This option is recommended for most users.

Note: *The Wireless Network Setup Wizard uses WPA wireless network security. If you wish to configure WEP wireless network security, use Manual Wireless Network Setup.*

2. Use the **WPS (Wi-Fi Protected Setup) Wizard** to add individual wireless clients. Click the **Add Wireless Device with WPS** button to use begin configuration with WPS.

Note: *Wireless clients added to using this method must support WPS.*

3. Configure the SSID, channel and wireless network security settings manually. Click the **Manual Wireless Network Setup** button to go to the general wireless network settings menu.

WIRELESS SETTINGS

The following Web-based wizards are designed to assist you in your wireless network setup and wireless device connection.

WIRELESS NETWORK SETUP WIZARD

This wizard is designed to assist you in your wireless network setup. It will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.

Wireless Network Setup Wizard

Note: Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the D-Link Router.

ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD

This wizard is designed to assist you in connecting your wireless device to your wireless router. It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button below to begin.

Add Wireless Device with WPS

MANUAL WIRELESS NETWORK SETUP

If your wireless network is already set up with Wi-Fi Protected Setup, manual configuration of the wireless network will destroy the existing wireless network. If you would like to configure the wireless settings of your new D-Link Systems Router manually, then click on the Manual Wireless Network Setup button below.

Manual Wireless Network Setup

Wireless Network Setup Wizard

Click on the **Wireless Network Setup Wizard** button in the **Wireless Settings** menu to begin configuration of basic wireless network settings and WPA wireless network security.

In the first Wireless Setup Wizard menu, enter the name used for the wireless network in the **Network Name (SSID)** entry field. The **SSID** or Service Set Identifier is the name used for the wireless network or a part of the wireless network. Wireless clients must use this SSID in order to access the wireless network and use the Router.

To configure WPA wireless network security, the Wizard menu offers two options. The easiest and recommended method will configure WPA network key automatically. To automatically configure WPA network security, choose the option **Automatically assign a network key** and click on the **Next** button to complete the wireless configuration. The new **Pre-Shared Key** and WPA wireless security settings are displayed in the **Setup Complete!** menu. For later reference, be sure to print this menu; or copy the new automatically created Pre-Shared Key and paste it into a document to be saved. Click on the **Save** button to save the new wireless settings. The automatically created pre-shared key is randomly generated.

Note: For future reference, print out the **Setup Complete!** wizard menu that lists the **SSI, Security Mode, Cipher Type, and most importantly, the Pre-Shared Key.**

To manually enter the WPA network key, click the **Manually assign a network key** option and click on the **Next** button. (See the description beginning on the next page.)

STEP 1: WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

Give your network a name, using up to 32 characters.

Network Name (SSID) :

Automatically assign a network key (Recommended)
To prevent outsiders from accessing your network, the router will automatically assign a security to your network.

Manually assign a network key
Use this options if you prefer to create our own key.

Note: All D-Link wireless adapters currently support WPA.

SETUP COMPLETE!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) : D-Link

Security Mode 2 : Auto (WPA or WPA2) - Personal

Cipher Type : TKIP and AES

Pre-Shared Key :
633920853e674a88e5670937358093782ad92c4219c080eb1daba089ebd2831e

To configure a WPA network security key manually using the **Wireless Network Setup Wizard**, first enter the name used for the wireless network in the **Network Name (SSID)** entry field, then choose the **Manually assign a network key** option and click on the **Next** button

In the new menu, type the **Wireless Security Password** used for wireless network access in the space provided. WPA password or network pre-shared key must be a character string of 8 to 64 alphanumeric characters (alphanumeric characters are standard keyboard characters A-Z, a-z and 0-9); or enter exactly 64 hexadecimal characters (hexadecimal characters are numbers 0-9 and alphabet letters A-F and are not case specific). Click the **Next** button to go to the final wizard menu

Note: Choose a password that is easy to remember but difficult for others to guess.

STEP 1: WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

Give your network a name, using up to 32 characters.

Network Name (SSID) :

- Automatically assign a network key (Recommended)
To prevent outsiders from accessing your network, the router will automatically assign a security to your network.
- Manually assign a network key
Use this options if you prefer to create our own key.

Note: All D-Link wireless adapters currently support WPA.

STEP 2: SET YOUR WIRELESS SECURITY PASSWORD

You have selected your security level - you will need to set a wireless security password.

The WPA (Wi-Fi Protected Access) key must meet one of following guidelines:

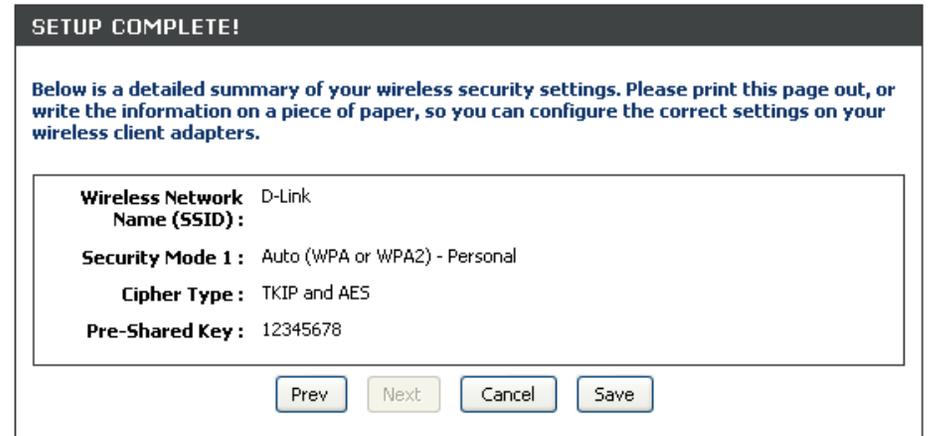
- Between 8 and 64 characters (A longer WPA key is more secure than a short one)
- Exactly 64 characters using 0-9 and A-F

Wireless Security Password :

Note: You will need to enter the same password as keys in this step into your wireless clients in order to enable proper wireless communication.

The new **Pre-Shared Key** and WPA wireless security settings are displayed in the **Setup Complete!** menu. For later reference, be sure to print this menu; or copy the new Pre-Shared Key and paste it into a document to be saved. Click the **Save** button to save the new wireless settings.

Note: For future reference, print out the **Setup Complete!** wizard menu that lists the **SSI, Security Mode, Cipher Type, and most importantly, the Pre-Shared Key.**



SETUP COMPLETE!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) :	D-Link
Security Mode 1 :	Auto (WPA or WPA2) - Personal
Cipher Type :	TKIP and AES
Pre-Shared Key :	12345678

Prev Next Cancel Save

Add Wireless Clients with WPS

The Router supports WPS (Wi-Fi Protected Setup). WPS is a standard for easy and secure establishment of a wireless network. With WPS you can setup and protect your wireless network in just a few easy steps.

Note: *To use WPS with the Router, you need to have wireless clients that support WPS. If you have one or more Wireless Clients without WPS support, it is advised to secure your network manually using the Setup Wizard.*

The Router supports two ways to activate and establish a WPS connection:

- Push Button method
- Pin Code technology

WPS – Push Button method 1

The WPS Push Button technology requires a (virtual) button on your Wireless Client to establish a connection between the Router and your Wireless Client. Some Wireless Clients work with a real button to activate the WPS Push Button technology; some Wireless Clients use a software-based virtual button.

Follow the steps below to activate and establish a WPS connection with the Push Button technology:

1. Press the WPS Button at the right side of the Router, the button will blink green.
2. Press the WPS Button at your wireless client. This can be a hardware button or a virtual button in the software of your wireless client.

The Router will activate WPA security over your wireless network and accepts the wireless connection of your Wireless Client.

Note: *The Router will keep the WPS authentication active for up to 120 seconds or until the connection is established. During this process, the WPS button will blink green. If there is no connection in these 120 seconds, the button stops blinking and the WPS authentication process is stopped.*

3. If the authentication of the wireless client succeeds, the WPS button on the router will stop blinking and go dark. Test the wireless client to make sure it is now connected to the Router. Repeat this procedure to add more WPS wireless clients. A successful WPS connection means the wireless client is able to use the router and the wireless network is secured with WPA encryption.

Note: *The WPA Key generated by the Router is random.*

WPS – Push Button method 2

The WPS Push Button technology requires a (virtual) button on your Wireless Client to establish a connection between the Router and your Wireless Client. Some Wireless Clients work with a real button to activate the WPS Push Button technology; some Wireless Clients use a software-based virtual button.

Follow the steps below to activate and establish a WPS connection with the Push Button technology:

1. Click on the **Add Wireless Device with WPS** button in the **Wireless Settings** menu to launch the **WPS (Wi-Fi Protected Setup) Wizard**. Choose the **Auto** option and click on the **Next** button.

STEP 1: SELECT CONFIGURATION METHOD FOR YOUR WIRELESS NETWORK

Please select one of following configuration methods and click next to continue.

Auto Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)

Manual Select this option will display the current wireless settings for you to configure the wireless device manually

Note: Click the Manual option to go to the manual configuration menu for wireless settings.

2. Choose the **PBC** option and click **Connect**.

STEP 2: CONNECT YOUR WIRELESS DEVICE

There are two ways to add wireless device to your wireless network:

- PIN (Personal Identification Number)
- PBC (Push Button Configuration)

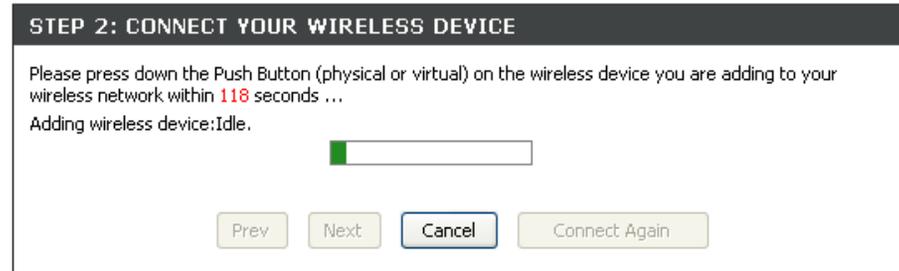
PIN:

please enter the PIN from your wireless device and click the below 'Connect' Button

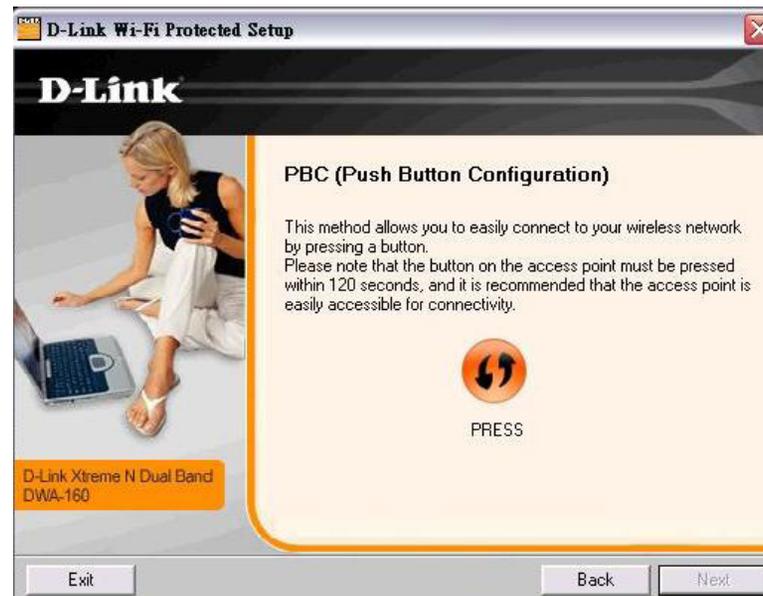
PBC

please press the push button on your wireless device and click the below 'Connect' Button within 120 seconds

3. You are now prompted to connect to the client using WPS. You have 120 seconds to establish the link.



4. Press the WPS button (or virtual button) on your wireless client. This can be a hardware button or a virtual button in the WPS software of your wireless client (see example below).



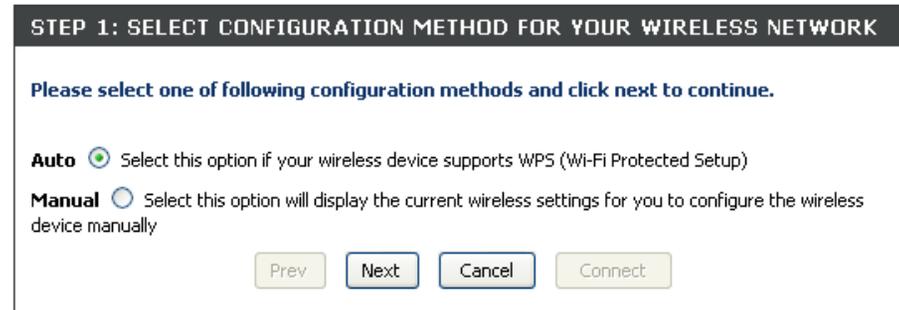
5. A successful WPS connection means the wireless client is able to use the Router and the wireless network is secured with WPA encryption. Test the wireless client to make sure it is now connected to the Router. Repeat this procedure to add more WPS wireless clients.

Note: The WPA Key generated by the Router is random.

WPS – Pin Code method

Follow the steps below to use the PIN Code method to establish a WPS connection to a WPS wireless client.

1. Click on the **Add Wireless Device with WPS** button in the **Wireless Settings** menu to launch the **WPS (Wi-Fi Protected Setup) Wizard**. Choose the **Auto** option and click on the **Next** button.



STEP 1: SELECT CONFIGURATION METHOD FOR YOUR WIRELESS NETWORK

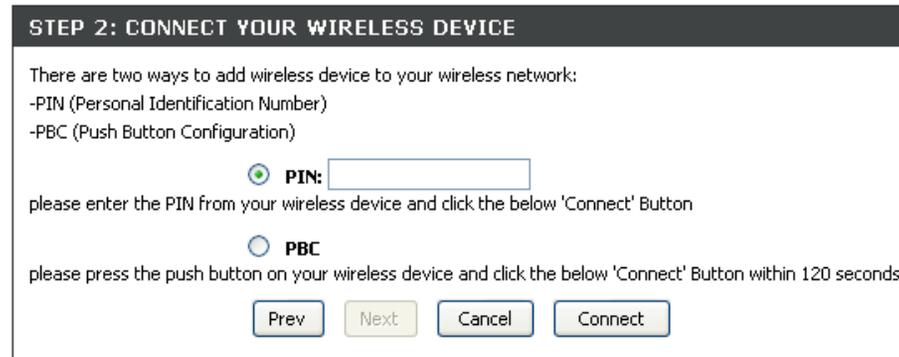
Please select one of following configuration methods and click next to continue.

Auto Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)

Manual Select this option will display the current wireless settings for you to configure the wireless device manually

Prev Next Cancel Connect

2. In the next menu it is necessary to enter a PIN code that is generated by the wireless client. If the client has a software utility such as a Setup Wizard, this is used to generate the PIN code for the device. (See the example on the next page).



STEP 2: CONNECT YOUR WIRELESS DEVICE

There are two ways to add wireless device to your wireless network:

- PIN (Personal Identification Number)
- PBC (Push Button Configuration)

PIN:

please enter the PIN from your wireless device and click the below 'Connect' Button

PBC

please press the push button on your wireless device and click the below 'Connect' Button within 120 seconds

Prev Next Cancel Connect

3. Choose the **PIN** option and enter the PIN code obtained from the wireless client (see example below) in the space provided and click **Connect**.
4. The Router will activate WPA security on your wireless network and accept the connection of your wireless client with the PIN code just entered.

Getting the PIN number from the WPS Wireless Client

For example, the D-Link client Wi-Fi Protected Setup Wizard includes an option to use the PIN code method. The generated PIN number appears in a menu screen like those pictured here:



Wireless Client Software (D-Link Wi-Fi Protected Setup)



Router WPS Wizard

Manual Wireless Network Setup

Enable Wireless – Left-click on this box to enable Wireless Network function for the Router. A tick in the check box indicates the wireless network is enabled. To disable wireless function, left-click on the box to remove the tick.

Wireless Network Name (SSID) - The **Wireless Network Name** or **SSID** can be changed to suit your wireless network. Remember that any wireless device must have the same SSID and use the same channel in order to use the router. The SSID can be a continuous character string (i.e. no spaces) of up to 16 characters in length.

Enable Auto Channel Scan – Enable this to allow the access point to automatically detect the channel used for local 802.11 wireless operation. This can be used if there are other wireless access points within range operating on the wireless network.

Wireless Channel – The Wireless Channel may be changed to channels that are available in your region. Channels available for wireless LAN communication are subject to regional and national regulation. Remember that any wireless device must have the same SSID and use the same channel in order to use the Router.

802.11 Mode – The default setting is simultaneous 802.11b, 802.11g, and 802.11n compatible operation. The access point can be forced to operate as an 802.11b only, 802.11g only, or 802.11n access point if preferred. Additional options are 802.11b plus 802.11g or 802.11g plus 802.11n.

Hide Wireless Network – When enabled, this stops broadcasts from the access point of the SSID (Wireless Network Name) for roaming wireless stations. This is disabled by default.

Wireless Security Mode – Choose the wireless encryption method used for the wireless network. See the description on the next page for the type of security selected.

WIRELESS

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

WIRELESS NETWORK SETTINGS

Enable Wireless :
Wireless Network Name (SSID) :
Enable Auto Channel Scan :
Wireless Channel :
802.11 Mode :
Hide Wireless Network :

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA-Personal, and None. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server.

Security Mode :

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

Apply Settings

Cancel

Manually Set Up Wireless Network Security - WPA

Wi-Fi Protected Access (WPA) was designed to provide improved data encryption, perceived as weak in WEP, and to provide user authentication, largely nonexistent in WEP. There are two versions of WPA, both are supported by the access point. WPA-Personal encryption uses a pre-shared key for authentication and requires periodic re-authentication from associating wireless stations

To configure WPA settings:

1. Select the **Security Mode** to use WPA-Personal.
2. The WPA Mode can be set to *WPA2 Only* for WPA Version 2 operation (this excludes use of wireless clients that do not support WPA2), or set to *WPA Only* for operation with clients that do not support WPA2. The default setting *Auto (WPA or WPA2)* accepts clients using either version.
3. The **Group Key Update Interval** specifies the interval of time in seconds when a new group key is generated. This is the key used to encrypt wireless frames. The Group Key is changed according to the interval set here in order to prevent attempts to decrypt data in wireless frames.
4. Enter the **Pre-Shared Key**. The Pre-Shared Key acts as a password for wireless clients to gain entry to the network. The Pre-Shared Key is static. It is used to generate the group key (which is changes according to the schedule set with the Group Key Update Interval) that is in turn used for encryption.
5. Click **Apply Settings** to use the new WPA security settings and restart the access point.

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA-Personal, and None. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server.

Security Mode :

WPA

Use **WPA or WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode :

Group Key Update Interval : (seconds)

PRE-SHARED KEY

Pre-Shared Key :

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

Manually Set Up Wireless Network Security - WEP

Wireless Encryption Protocol (WEP) encryption can be enabled for basic 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-bit, or 128-bit encryption with four keys available.

To configure WEP settings:

1. Select a **WEP Key Length** encryption level from the drop-down menu, and enter the proper-length hexadecimal key in the available entry fields. Up to 4 keys can be configured for use.
2. Choose the **Default WEP Key** from those just entered, used as the active key.
3. Select an **Authentication** type, from the drop-down menu: Open or Shared Key or Shared Key.
4. Click **Apply Settings** to use the new WEP settings and restart the access point.

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA-Personal, and None. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server.

Security Mode : WEP ▼

WEP

WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.

You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.

WEP Key Length : 128 bit(26 hex digits) ▼ (length applies to all keys)

WEP Key 1 :

WEP Key 2 :

WEP Key 3 :

WEP Key 4 :

Default WEP Key : WEP Key 1 ▼

Authentication : Open or Shared Key ▼

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

Apply Settings

Cancel

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. See the next section for information on DHCP setup.

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

To change the LAN **IP Address** or **Subnet Mask**, type in the desired values and click the **Save Settings** button. Your Web browser should automatically be redirected to the new IP address. You will be asked to login again to the Router's Web manager.

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

There are two options for DHCP service:

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

LAN SETUP

This section allows you to configure the local network settings of your router. Please note that this section is optional and you should not need to change any of the settings here to get your network up and running.

ROUTER SETTINGS

Use this section to configure the local network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

Router IP Address :

Subnet Mask :

DHCP SERVER SETTINGS (OPTIONAL)

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable DHCP Server :

DHCP IP Address Range : to

DHCP Lease Time : (seconds)

DHCP TABLE

Host Name	IP Address	MAC Address		Status
	192.168.1.2 <input type="button" value="v"/>	<input type="text"/>	Manual Config <input type="button" value="v"/>	Static <input type="button" value="v"/>

DHCP Server Configuration

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

Use the Router for DHCP

To use the built-in DHCP server, click to select the **Enable DHCP Server** option if it is not already selected. The IP address pool settings can be adjusted beginning with the first address in the **DHCP IP Address Range**.

The second IP address entered is the highest IP address number in the pool. Type in the **DHCP Lease Time** in the entry field provided. This is the amount of time in seconds that a workstation is allowed to reserve an IP address in the pool if the workstation is disconnected from the network or powered off.

If you opt to disable DHCP service, all IP devices connected to the Router will require manual IP settings configuration or another DHCP server.

Static IP Address Assignment

The router supports static IP address assignment for the LAN. This means that an IP address is manually configured for a specified MAC address that does not age out. Static IP addresses may be assigned to hosts on the LAN that have already received IP settings and are listed in the DHCP Table. Alternatively the administrator can manually enter a MAC address in the entry field provided. Type the MAC address using the standard format 00:00:00:00:00:00 and selecting an IP address within the subnet from the **IP Address** pull-down menu. Click the **Save Settings** button to create the static IP assignment

DHCP SERVER SETTINGS (OPTIONAL)

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable DHCP Server :

DHCP IP Address Range : to

DHCP Lease Time : (seconds)

DHCP TABLE

Host Name	IP Address	MAC Address	Status
	192.168.1.2 ▼	<input type="text" value=""/> Manual Config ▼	Static ▼

Advanced Setup

The **Advanced** directory tab offers the following configuration menus: **Port Forwarding**, **DNS Setup**, **VLAN**, **Firewall & DMZ**, **Advanced ADSL**, **Advanced Wireless**, **Wi-Fi Protected Setup**, **Wireless MAC Filter**, and **Advanced LAN**. Click the corresponding link in the left panel of the window. **Port Forwarding** is the first menu listed and the first to appear when accessing the **Advanced** directory.

The screenshot displays the D-Link DSL-2680 web interface. At the top, the D-Link logo is visible. Below it, a navigation bar includes tabs for **DSL-2680**, **SETUP**, **ADVANCED** (selected), **MAINTENANCE**, **STATUS**, and **HELP**. The left sidebar contains a list of configuration options: **Port Forwarding** (selected), **DNS Setup**, **VLAN**, **Firewall & DMZ**, **Advanced ADSL**, **Advanced Wireless**, **Wi-Fi Protected Setup**, **Wireless Mac Filter**, **Advanced LAN**, and **Logout**. Below the sidebar, there is an **Internet Offline** indicator, a language dropdown menu set to **English**, and a **Reboot** button. The main content area is titled **PORT FORWARDING** and contains the following text: "This is the ability to open ports in your router and re-direct data through those ports to a single PC on your network." Below this, it states: "Maximum number of entries which can be configured: 12". A section titled **ACTIVE PORT FORWARDING** features a table with columns: **Private IP**, **Protocol Type**, **Public Start Port**, **Public End Port**, and **Connection**. An **Add** button is positioned below the table. On the right side, a **Helpful Hints...** section provides instructions: "Use this feature if you are trying to execute one of the listed network applications and it is not communicating as expected." and "Check the Application Name drop down menu for a list of predefined applications. If you do see your application listed you can still define a new rule." A **More...** link is also present.

Port Forwarding

The **Port Forwarding** menu allows configuration for remote users access to various services outside of their LAN through a public IP address, such as FTP (File Transfer Protocol) or HTTPS (Secure Web). After configuring the Router for these features, the Router will redirect these external services to an appropriate server on the users LAN.

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

PORT FORWARDING

This is the ability to open ports in your router and re-direct data through those ports to a single PC on your network.

Maximum number of entries which can be configured: 12

ACTIVE PORT FORWARDING

Private IP	Protocol Type	Public Start Port	Public End Port	Connection
------------	---------------	-------------------	-----------------	------------

Add

ADD PORT FORWARDING

Private IP :

Protocol Type :

Public Start Port :

Public End Port :

Connection :

Apply

Cancel

DNS Setup

Use the **DNS Setup** menu to configure standard DNS server IP settings or to configure and enable DDNS for the Router.

DNS Server

Choose to “Obtain DNS server address automatically” from the ISP or enter DNS IP address information manually. The **Preferred DNS Server** address is required, the **Alternate DNS Server** address is used for a back up DNS server.

DDNS

Dynamic DNS allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specific host from various locations on the Internet. With this function enabled, remote access to a host will be allowed by clicking a URL hyperlink in the following form: dlinkddns.com Because many ISPs assign public IP addresses using DHCP, it can be difficult to locate a specific host on the LAN using the standard DNS. For example, if you are running a public web server or VPN server on your LAN, DDNS ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be set up with one of the supported DDNS servers.

To implement Dynamic DNS, first select the **Enable Dynamic DNS** option and choose the **Server Address** from the list in the pull-down menu. Enter the **Host Name** of the LAN to be accessed, and the **Username** and **Password** for the DDNS account. Click the **Apply Settings** button to save changes made.

DNS SETUP

Domain Name Server (DNS) is a server that translates URL/domain names to the corresponding IP address. Most users will not need to change the DNS servers from default unless instructed by your ISP.

The DDNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your game server no matter what your IP address is.

DNS SERVER CONFIGURATION

- Obtain DNS server address automatically**
- Use the following DNS server addresses**

Preferred DNS Server:

Alternate DNS Server:

DDNS CONFIGURATION

Enable Dynamic DNS:

Server Address: <<

Host Name: (e.g.: myhost.mydomain.net)

Username:

Password:

Verify Password:

Apply Settings

Cancel

VLAN

Use the **VLAN** menu to create VLAN groups for the wireless and Ethernet LANs.

VLAN Group Setting

Use the **VLAN** menu to choose a number for the VLAN group. To make sure additional VLAN groups use unique index numbers, the menu will automatically select a new index number for configuration after applying the VLAN group settings.

Click to select the member ports of each VLAN group for the two **Ethernet** ports and **WLAN** interface and the **ATM VCs** port for each VLAN. Any port may be specified as **Tagged**.

Packets that are tagged (are carrying the 802.1Q VID information) can be transmitted from one 802.1Q compliant network device to another with the VLAN information intact. This allows 802.1Q VLANs to span network devices (and indeed, the entire network, if all network devices are 802.1Q compliant).

Select the **Tagged** option to enable tagging for the port. Ports with tagging enabled will put the VID number, priority and other VLAN information into the header of all packets that flow into and out of it. If a packet has previously been tagged, the port will not alter the packet, thus keeping the VLAN information intact. Other 802.1Q compliant devices on the network to make packet-for-warding decisions can then use the VLAN information in the tag.

VLAN Group is enabled by default. VLAN Groups can be disabled without changing the previously configured VLAN arrangement. To disable VLAN Groups, click the **Enable VLAN Group** check box to remove the tick.

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

VLAN

Note: This is VLAN page.

The Virtual LAN (VLAN) allows you to configure a group of devices on one or more LANs so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments.

VLAN GROUP SETTING

VLAN Index : 1

Enable VLAN Group :

VLAN ID : 1

ATM VCs :

Tagged

Port # 0

Ethernet :

Tagged

Port # 1 2

WLAN :

Tagged

Port # 0

VLAN GROUP SUMMARY

Group	ID	VLAN Group Ports	VLAN Tagged Ports	Remove
1	1	e2,e1,w,p0,p1,p2,p3,p4,p5,p6,p7		<input type="checkbox"/>
2	2	p1		<input type="checkbox"/>

Firewall & DMZ

Use the **Firewall & DMZ** menu to enable or disable basic firewall protection from Denial of Service and other attacks from the WAN.

Firewall Settings

Enable the Firewall to block Denial of Service attacks, flood pings, port scans and other common exploitative attacks that might come from the Internet. This is enabled by default. To disable it, click the Enable Firewall box to remove the check mark and click the **Apply Settings** button.

DMZ Settings

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

For example, if you want to use video conferencing and still use a firewall, you can place the server in the DMZ. The IP address of this server will then be the DMZ IP address. You can designate the server’s IP address as the DMZ by typing in the IP address in the **DMZ IP Address** space provided and then enabling its status by selecting the **Enable DMZ** option. Click the **Apply Settings** button at the bottom of the window when you are finished.

FIREWALL & DMZ

The router already provides a simple firewall by virtue of the way NAT works. By default NAT does not respond to unsolicited incoming requests on any port, thereby making your LAN invisible to Internet cyberattackers.

DMZ means 'Demilitarised Zone'. DMZ allows computers behind the router firewall to be accessible to Internet traffic. Typically, your DMZ would contain Web servers, FTP servers, and others.

FIREWALL SETTINGS

Enable Firewall :

DMZ SETTINGS

The DMZ (Demilitarized Zone) option lets you set a single computer on your network outside of the router. If you have a computer that cannot run Internet applications successfully from behind the router, then you can place the computer into the DMZ for unrestricted Internet access.

Note: Putting a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.

Enable DMZ :

DMZ IP Address : << ▾

Apply Settings Cancel

Advanced ADSL

ADSL modulation is configured in the **Advanced ADSL** menu. The default setting automatically detects the appropriate modulation for the connection, therefore it should not be necessary to change this setting for the Router to function.

Modulation types supported by the Router include: *ADSL2*, *ADSL2+*, *G.DMT T1.143* and *G.lite*. If the **Modulation Mode** is changed from the default *Auto Sync-Up*, the mode used must be supported by the ISP in order for the ADSL signal to function. Likewise for changing the ANNEX type, if the **Type** used is not supported by the ISP in your region, the ADSL signal will not function.

The **Bitswap** and **SRA** (Seamless Rate Adaptation) features can be enabled here. If your ADSL modulation is ADSL2 or ADSL2+, these features will only be useful if supported by the ISP. If you opt to use either of these, some experimentation might be advisable to test ADSL synchronization and signal performance for improvement or degradation.

ADVANCED ADSL

The Advanced ADSL settings allow you to choose which ADSL modulation settings your modem router will support.

D-Link do not recommend that you change these settings unless directed to do so by your ISP.

ADVANCED ADSL SETTINGS

Modulation Mode : Auto Sync-Up ▾

Type : ANNEX A ▾

Capability

Bitswap Enable

SRA Enable

Advanced Wireless

Advanced Wireless settings are used to tweak various wireless transmission parameters and to enable an additional SSID or Guest SSID.

Transmit Power

Allows the user to adjust the transmit power of the router. A high transmit power allows a greater area range of accessibility to the router. When multiple overlapping access points are present, it may be desirable to reduce transmission power.

Bandwidth

Select the desired bandwidth. Toggle between *Up to 65Mbps* and *Up to 135Mbps*.

MCS

Select the MCS, between *0* and *15*, or use *Auto*.

Fragmentation Threshold

The fragmentation threshold will determine if packets are to be fragmented. Packets over the 2346 byte limit will be fragmented before transmission. *2346* is the default setting.

RTS Threshold

The RTS (Request to Send) Threshold controls the size of data packets issued to a RTS packet. A lower level will send packets more frequently which may consume a great amount of the available bandwidth. A high threshold will allow the router to recover from interference or collisions which is more prevalent in a network with high traffic or high electromagnetic interference. The default setting is *2347*.

DTIM Interval

DTIM (Delivery Traffic Indication Message) Interval is a countdown informing clients of the next menu for listening to broadcast and multicast messages. The default setting is *1*.

Beacon Period

Beacons are emitted from the router in order to synchronize the wireless network. You may set the Beacon Interval range between 20 and 1000 microseconds per beacon sent. The default is *100*.

Click the **Apply Settings** button to save and apply the advanced wireless configuration settings.

ADVANCED WIRELESS

These options are for users that wish to change their wireless settings from the standard defaults. 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.

ADVANCED WIRELESS SETTINGS

Transmit Power :	High
Bandwidth :	Up to 65Mbps
MCS :	Auto
Fragmentation Threshold :	2346
RTS Threshold :	2347
DTIM Interval :	1
Beacon Period :	100

Wi-Fi Protected Setup

Use the **Wi-Fi Protected Setup** (WPS) menu to enable or disable WPS, lock the current settings, remove the current WPS settings, reset the PIN to the default value or generate a new PIN code. To add a WPS wireless client, click the Add Wireless Device with WPS button and follow the procedure as described in Add Wireless Clients with WPS.

Enable

Left-click on this box to enable WPS, a check mark indicates WPS is enabled. Click to remove the check mark to disable WPS.

Lock Wireless Security Settings

Left-click on this box to lock the current wireless security settings.

Current PIN

This is the PIN used by WPS supporting clients to establish the WPS connection. This is done either by using the wireless client to generate the PIN, then entering the client generated PIN into the access point (the router). This first method is generally the preferred method since many WPS enabled wireless clients do not include the ability to enter a PIN generated by another system. Alternatively, the access point (the router) is used to generate the PIN and this is entered into the WPS enabled wireless client.

The router's PIN used to establish WPS connections to other WPS enabled wireless devices.

Reset PIN to Default

Click on this button to reset the router's PIN to the factory default setting.

Generate New PIN

Click on this button to generate a new PIN for the router.

Add Wireless Device with WPS

Click on this button to go to the **WPS (Wi-Fi Protected Setup) Wizard** menu.

WI-FI PROTECTED SETUP

Wi-Fi Protected Setup is used to easily add devices to a network using a PIN or button press. Devices must support Wi-Fi Protected Setup in order to be configured by this method.

If the PIN changes, the new PIN will be used in following Wi-Fi Protected Setup process. Clicking on "Cancel" button will not reset the PIN.

However, if the new PIN is not saved, it will get lost when the device reboots or loses power.

WI-FI PROTECTED SETUP

Enable :

Lock Wireless Security Settings :

[Reset to Unconfigured](#)

PIN SETTINGS

Current PIN : 81694068

[Reset PIN to Default](#)
[Generate New PIN](#)

ADD WIRELESS STATION

[Add Wireless Device with WPS](#)

[Save Settings](#) [Cancel](#)

Wireless MAC Filter

Use the **Wireless MAC Filter** menu to designate MAC addresses that are denied access or allowed access to the wireless LAN through the device.

Up to eight MAC addresses can be listed with the MAC Filter. It is important to understand that when the MAC filter is activated there are two options for the rule or **Action** used for the listed MAC addresses. When the **Status** is **Activated**, the administrator must choose one of the following:

- *Allow Association* to the listed MAC addresses (and deny all other MAC addresses to associate).
- *Deny Association* to the listed MAC addresses (and allow association to others not on the list).

To use Wireless MAC Filters,

1. Select the **Activated** option for **Status**.
2. Choose the **Action** to either *Allow Association* or *Deny Association* of the listed MAC addresses.
3. Type the MAC addresses effected by the chosen Action in the standard MAC address format.
4. Click on the **Apply Settings** button.

When activated the filter rule becomes effective immediately. The MAC filter rule can be deactivated by selecting the **Deactivated** option for Status. Deactivating MAC filters will not change any MAC addresses entered on the list.

WIRELESS MAC FILTER

You can allow or deny a list of MAC addresses associated with the wireless stations access to the ADSL Router.

WIRELESS MAC FILTER

Status: Activated Deactivated

Action: Allow Association the follow Wireless LAN station(s) association.

MAC Address #1

MAC Address #2

MAC Address #3

MAC Address #4

MAC Address #5

MAC Address #6

MAC Address #7

MAC Address #8

Advanced LAN

Use the **Advanced LAN** menu to enable or disable UPnP and multicast streaming.

UPnP or Universal Plug and Play is disabled by default. This network protocol is used to simplify networking and is supported on many types of networking devices. Devices that support UPnP advertise their services and capabilities to other UPnP enabled devices to facilitate network applications such as streaming audio or video. To use UPnP, tick the **Enable UPnP** check box.

Multicast streaming support is enabled by default to allow streaming of audio and video and other multicast applications to pass through the Router. To disable multicast streams, click the **Enable Multicast Streams** check box to remove the tick. Keep in mind that Internet radio and similar multicast services will not function if the Enable Multicast Streams option is not ticked.

Click the **Apply Settings** button to save and apply the advanced LAN configuration.

ADVANCED LAN

These 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 behaviour of your network.

UPNP

Universal Plug and Play(UPnP) supports peer-to-peer Plug and Play functionality for network devices.

Enable UPnP :

MULTICAST STREAMS

Enable Multicast Streams :

Maintenance

Use the menus in the **Maintenance** directory to perform routine maintenance functions such as saving configuration settings to hard disk, upgrading device firmware, viewing system logs, and performing device diagnostic tests.

The screenshot displays the D-Link DSL-2680 web interface. At the top, the D-Link logo is visible. Below it, a navigation bar includes tabs for DSL-2680, SETUP, ADVANCED, MAINTENANCE (which is selected), STATUS, and HELP. The left sidebar contains a menu with options: Password, Save/Restore Settings, Firmware Update, Diagnostics, System Log, Logout, Internet Offline (with a status icon), English (language dropdown), and Reboot. The main content area is titled 'PASSWORD' and contains the following text: 'The factory default password of this router is 'admin'. To help secure your network, D-Link recommends that you should choose a new password between 1 and 15 characters.' Below this is a section titled 'SET PASSWORD (OPTIONAL)' with the instruction: 'To change the router password, please type in the current password, then the new password twice.' This section includes three input fields labeled 'Current Password:', 'New Password:', and 'Confirm Password:'. At the bottom of this section are two buttons: 'Apply Settings' and 'Cancel'. On the right side of the interface, there is a 'Helpful Hints...' section with text explaining the password requirements and a 'More...' link.

Password

Typically one of the first things the administrator is likely to change is the device password used to access the management software. The administrator's user name, admin, cannot be changed. The default password can be changed with the **Password** menu.

Change the password and click the **Apply Settings** button to establish the new password.

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 between 1 and 15 characters.

SET PASSWORD (OPTIONAL)

To change the router password, please type in the current password, then the new password twice.

Current Password:

New Password:

Confirm Password:

Save/Restore Settings

It is a good idea to store a back up copy of the configuration settings file on the hard drive of the system used to administer the Router. Use this menu to save a settings file, load a settings file or restore the device to factory default settings.

To save the current configuration settings to your computer, click the **Save/Restore Settings** button in the **Maintenance** directory to display the **System Settings** menu. Click 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.

To load a previously saved configuration file, click the **Browse** button and locate the file on your computer. Click the **Update Settings** button to **Load Settings From Local Hard Drive**. Confirm that you want to load the file when prompted and the process is completed 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 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 address (**192.168.1.1**) with DHCP enabled and default administrator password (**admin**)

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.

SAVE/RESTORE CONFIGURATION

Save Settings to Local Hard Drive :	<input type="button" value="Save"/>
Load Settings From Local Hard Drive :	<input type="text"/> <input type="button" value="Browse..."/>
	<input type="button" value="Update Settings"/>
Restore To Factory Default Settings :	<input type="button" value="Restore Device"/>

Firmware Update

Use this menu to load the latest firmware for the device. Note that the device configuration settings may return to the factory default settings, so make sure you save the configuration settings with the **Save/Restore Settings** menu described above or click the **Backup Now** button to go through the same procedure.

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

UPDATE

Note: Please do not update the firmware on this router unless instructed to do so by D-Link technical support or your ISP.

FIRMWARE INFORMATION

Current Firmware Version : EU_1.00

Current Firmware Date : 2010/06/23

FIRMWARE UPDATE

Note: Some firmware updates reset the configuration options to factory defaults. Before performing an update, be sure to save the current configuration from the [Maintenance -> Save/Restore Settings](#) screen.

Backup Now

To update the firmware, your PC must have a **wired** connection to the router. Enter the name of the firmware update file, and click on the Upload button.

Upload:

Browse...

Update Firmware

Diagnostics

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

Click the **Re_run Diagnostics Tests** button to view the connectivity status of the WAN connection.

DIAGNOSTICS

Your router is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Re-run Diagnostics Tests" at the bottom of this page to make sure fail status is consistent.

SYSTEM CHECK

Test your Ethernet(1-2) Connection:	PASS
Test ADSL Synchronization:	FAIL

INTERNET CONNECTIVITY CHECK

Test the assigned IP address:	N/A
Ping ISP Default Gateway:	N/A
Ping Preferred DNS server:	N/A

Re_run Diagnostics Tests

System Log

Use the System Log to view a log of events that occur on the Router.

SYSTEM LOG

The system Log allows you to view the logs that have been created.

SYSTEM LOG

Date/Time	Message
01/01/2000 01:23:03	No DNS server available
01/01/2000 01:23:03	adjTimeTask fail: wrong domain name
01/01/2000 01:23:03	adjTimeTask fail: no server available
01/01/2000 01:23:03	adjtime task pause 60 seconds
01/01/2000 01:23:03	No DNS server available
01/01/2000 01:23:03	adjTimeTask fail: wrong domain name
01/01/2000 01:23:03	adjTimeTask fail: no server available
01/01/2000 01:23:03	adjtime task pause 60 seconds
01/01/2000 01:23:03	No DNS server available
01/01/2000 01:23:03	adjTimeTask fail: wrong domain name
01/01/2000 01:23:03	adjTimeTask fail: no server available
01/01/2000 01:23:03	adjtime task pause 1 day
01/01/2000 01:24:03	No DNS server available
01/01/2000 01:24:03	adjTimeTask fail: wrong domain name
01/01/2000 01:24:03	adjTimeTask fail: no server available
01/01/2000 01:24:03	adjtime task pause 60 seconds
01/01/2000 01:24:03	No DNS server available
01/01/2000 01:24:03	adjTimeTask fail: wrong domain name
01/01/2000 01:24:03	adjTimeTask fail: no server available
01/01/2000 01:24:03	adjtime task pause 60 seconds
01/01/2000 01:24:03	No DNS server available
01/01/2000 01:24:03	adjTimeTask fail: wrong domain name
01/01/2000 01:24:03	adjTimeTask fail: no server available
01/01/2000 01:24:03	adjtime task pause 1 day

Status

Use these read-only menus to view system information and monitor performance.

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DSL-2680 //

SETUP ADVANCED MAINTENANCE **STATUS** HELP

Device Info
Connected Clients
Statistics
Logout

Internet Offline

English ▾

Reboot

DEVICE INFO

The Device Status page allows you to check the status of your Internet connection, Wireless LAN and LAN.

GENERAL

Time: 01.01.2000, 01:07:17, Sat
Firmware Version: EU_1.00

INTERNET STATUS

ADSL Modulation: Error
Cable Status: ADSL Link Down
Virtual Circuit: PVC-0 ▾
Connection Type: PPPoE/PPPoA
Network Status: Not Connected
Connection Up Time: N/A
Downstream Line Rate: 0 kbps
Upstream Line Rate: 0 kbps

DHCP Renew DHCP Release

MAC Address: N/A
IP Address: N/A
Subnet Mask: N/A
Default Gateway: N/A
Preferred DNS Server: N/A
Alternate DNS Server: N/A

Helpful Hints...

This page shows displays a summary overview of your router status, including device software version, summary of your Internet configuration including wireless and Ethernet status.

[More...](#)

Device Info

Use this menu to quickly view basic current information about the Internet status, WLAN, and LAN interfaces, as well as device information including Firmware Version and MAC Address.

DEVICE INFO

The Device Status page allows you to check the status of your Internet connection, Wireless LAN and LAN.

GENERAL

Time 01.01.2000, 01:07:17, Sat
Firmware Version : EU_1.00

INTERNET STATUS

ADSL Modulation : Error
Cable Status : ADSL Link Down
Virtual Circuit : PVC-0
Connection Type : PPPoE/PPPoA
Network Status : Not Connected
Connection Up Time : N/A
Downstream Line Rate : 0 kbps
Upstream Line Rate : 0 kbps

DHCP Renew

DHCP Release

MAC Address : N/A
IP Address : N/A
Subnet Mask : N/A
Default Gateway : N/A
Perferred DNS Server : N/A
Alternate DNS Server : N/A

WIRELESS LAN

Wireless Radio : ON
MAC Address : 1c:af:f7:7c:a7:be
Network Name (SSID) : D-Link
Channel : Channel-6
Security Type : None

LAN

MAC Address : 1c:af:f7:7c:a7:be
IP Address : 192.168.1.1
Subnet Mask : 255.255.255.0
DHCP Server : ON

Connected Clients

The Connected LAN Clients list displays active DHCP clients (when DHCP mode is enabled) and currently associated wireless clients.

CONNECTED CLIENTS

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

CONNECTED DHCP LAN CLIENTS

Hostname	MAC Address	IP Address	Expires In
----------	-------------	------------	------------

Statistics

Use this menu to monitor traffic on the Ethernet LAN, Wireless LAN, or ADSL interface. This menu also displays information on the ADSL signal status.

STATISTICS

This information reflects the current status of your router.

WAN STATISTICS

Service	VPI/VCI	Protocol	Received			Transmitted		
			Pkts	Errs	Drops	Pkts	Errs	Drops
-	8/35	PPPoE	0	0	0	0	0	0
-	0/65	RFC 1483	0	0	0	0	0	0

LAN STATISTICS

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
Ethernet	188046	818	0	0	860339	956	0	0
Wireless	40873894	328107	64343	64343	106452	6752	0	0

ADSL STATISTICS

Mode:	Error	
Type:	ANNEX_A	
Status:	Down	
	Downstream	Upstream
Rate (Kbps):	0 kbps	0 kbps
SNR Margin (dB):	N/A	N/A
Attenuation (dB):	N/A	N/A
Output Power (dBm):	N/A	N/A
Super Frames:	0	0
RS Correctable Errors:	0	0
RS Uncorrectable Errors:	0	0
HEC Errors:	0	0
Total Cells:	0	0
Data Cells:	0	0
Bit Errors:	0	0

Help

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

Product: DSL-2680
Firmware Version: EU_1.00 Hardware Version: A1

D-Link

DSL-2680 //

SETUP

ADVANCED

MAINTENANCE

STATUS

HELP

Menu

Setup

Advanced

Maintenance

Status

 Internet Offline

HELP MENU

- [Setup](#)
- [Advanced](#)
- [Maintenance](#)
- [Status](#)

SETUP HELP

- [ADSL Setup](#)
- [Wireless Setup](#)
- [LAN Setup](#)

ADVANCED HELP

- [Port Forwarding](#)
- [DNS Setup](#)
- [Firewall & DMZ](#)
- [Advanced Wireless](#)
- [Wi-Fi Protected Setup](#)

MAINTENANCE HELP

- [Password](#)
- [Save/Restore Settings](#)
- [Firmware Update](#)
- [Diagnostics](#)
- [System Log](#)

STATUS HELP

- [Device Info](#)
- [Connected Clients](#)
- [Statistics](#)

Technical Specifications

ADSL Standards

- Full-rate ANSI T1.413 Issue 2
- ITU G.992.1 (G.dmt)
- ITU G.992.2 (G.lite)
- ITU G.994.1 (G.hs)

ADSL2 Standards

- ITU G.992.3 (G.dmt.bis)

ADSL2+ Standards

- ITU G.992.5

Protocols

- IEEE 802.1d Spanning Tree
- TCP/UDP
- ARP
- RARP
- ICMP
- RFC 1334 PAP
- RFC 1577 Classical IP over ATM
- RFC 1661 Point to Point Protocol
- RFC 1994 CHAP
- RFC 2131 DHCP Client/DHCP Server
- RFC 2364 PPP over ATM
- RFC 2516 PPP over Ethernet
- RFC 1483/2684 Multiprotocol Encapsulation over ATM Adaptation Layer 5 (AAL5)

DC Power

- Input: 100-120V 0.5A,50-60Hz
- Output: 12V 0.5A

Data Transfer Rates

- G.dmt full rate downstream: up to 8 Mbps/upstream: up to 1 Mbps
- G.lite: ADSL downstream: up to 1.5 Mbps/upstream: up to 512 Kbps
- G.dmt.bis full rate downstream: up to 12 Mbps/upstream: up to 1 Mbps
- ADSL2+ full rate downstream: up to 24 Mbps/upstream: up to 1 Mbps

Wireless Transfer Rates

- IEEE 802.11b: 11, 5.5, 2, 1 Mbps
- IEEE 802.11g: 6,9, 12, 18, 24, 36, 48, and 54 Mbps
- IEEE 802.11n: 20MHz - 6.5, 13, 19.5, 26, 39, 52, 58.5 & 65 40MHz - 13.5, 27, 40.5, 54, 81, 108, 121.5 & 135

Media Interface

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

Default Settings

- IP Address: 192.168.1.1
- Netmask: 255.255.255.0
- User Name: admin
- Password: admin
- DHCP Server: enabled