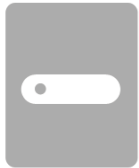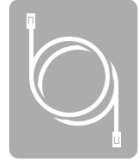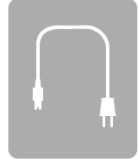# Package Contents

DHP-1320 Wireless N PowerLine Router

Two Detachable Antennas

Ethernet Cable

Power Adapter

CD-ROM with Manual and Setup Wizard

Note: *Using a power supply with a different voltage rating than the one included with the DHP-1320 will cause damage and void the warranty for this product.*

System Requirements

Network Requirements	• An Ethernet-based Cable or DSL modem • IEEE 802.11n or 802.11g wireless clients • 10/100 Ethernet
Web-based Configuration Utility Requirements	**Computer with the following:** • Windows®, Macintosh, or Linux-based operating system • An installed Ethernet adapter **Browser Requirements:** • Internet Explorer 6 or higher • Firefox 3.0 or higher • Safari 3.0 or higher • Chrome 2.0 or higher **Windows® Users:** Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.
CD Installation Wizard Requirements	**Computer with the following:** • Windows® 7/ Vista® / XP with Service Pack 3 • An installed Ethernet adapter • CD-ROM drive

Introduction

TOTAL PERFORMANCE

Combines award winning router features and IEEE 802.11n/g wireless technology to provide the best wireless performance.

TOTAL SECURITY

The most complete set of security features including Active Firewall and WPA/WPA2 to protect your network against outside intruders.

TOTAL COVERAGE

Provides greater wireless signal rates even at farther distances for best-in-class Whole Home Coverage.

ULTIMATE PERFORMANCE

The D-Link Wireless N PowerLine Router (DHP-1320) is a 802.11n compliant device that delivers real world performance of up to 14x faster than an 802.11g wireless connection (also faster than a 100Mbps wired Ethernet connection). Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the DHP-1320 router to a cable or DSL modem and share your high-speed Internet access with everyone on the network. In addition, this Router includes a Quality of Service (QoS) engine that keeps digital phone calls (VoIP) and online gaming smooth and responsive, providing a better Internet experience.

TOTAL NETWORK SECURITY

The Wireless N PowerLine Router supports all of the latest wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA/WPA2 standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices. In addition, this router utilizes dual active firewalls (SPI and NAT) to prevent potential attacks from across the Internet.

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

Features

- **Faster Wireless Networking** - The DHP-1320 provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11n wireless router gives you the freedom of wireless networking at speeds 650% faster than 802.11g.

- **Compatible with 802.11g Devices** - The DHP-1320 is still fully compatible with the IEEE 802.11g standards, so it can connect with existing 802.11g PCI, USB, and Cardbus adapters.

- **Advanced Firewall Features** - The Web-based user interface displays a number of advanced network management features including:

    • **Content Filtering** - Easily applied content filtering based on MAC Address, URL, and/or Domain Name.

    • **Filter Scheduling** - These filters can be scheduled to be active on certain days or for a duration of hours or minutes.

    • **Secure Multiple/Concurrent Sessions** - The DHP-1320 can pass through VPN sessions. It supports multiple and concurrent IPSec and PPTP sessions, so users behind the DHP-1320 can securely access corporate networks.

- **User-friendly Setup Wizard** - Through its easy-to-use Web-based user interface, the DHP-1320 lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

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

Hardware Overview
Connections
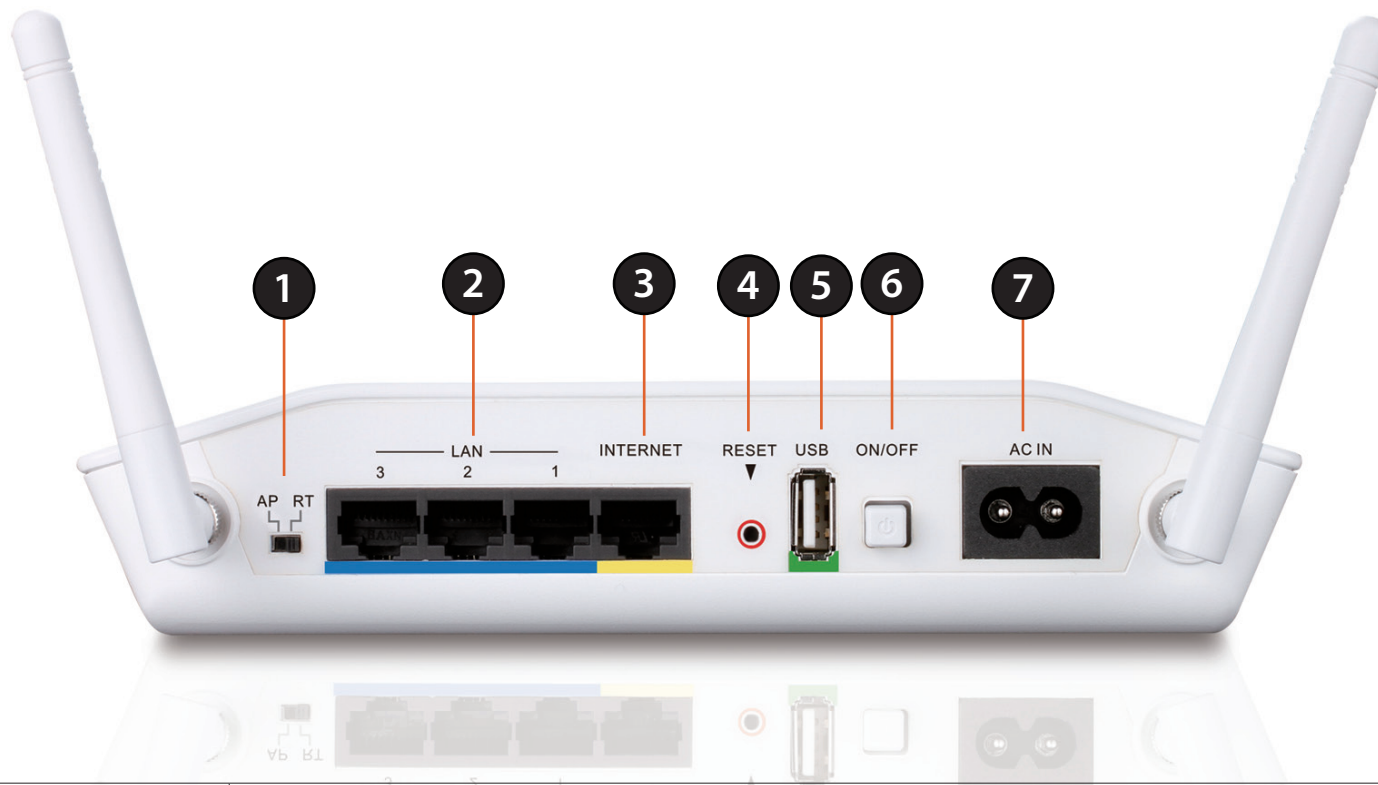
1	AP-Router Switch	Two-way switch used to Select AP or Router Mode.
2	LAN Ports (1-3)	Connect 10/100 Ethernet devices such as computers, switches, and hubs.
3	Internet Port	The auto MDI/MDIX Internet port is the connection for the Ethernet cable to the cable or DSL modem.
4	Reset Button	Pressing the Reset button restores the router to its original factory default settings.
5	USB	USB 1.1/2.0 port for SharePortTM Network and WCN support.
6	Power Button	Use this switch to power on/power off the device.
7	Power Receptor	Receptor for the supplied power cord.

Hardware Overview
WPS Button
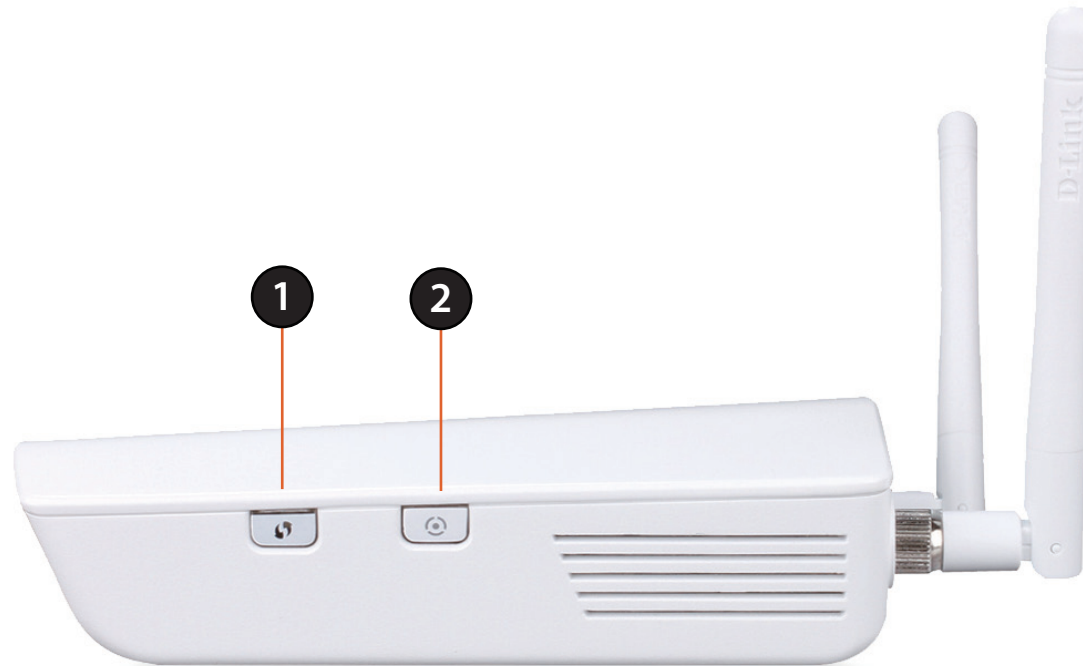
1	**WPS Button**	Press the WPS button for one second to initiate the WPS process. The button will flash blue while a WPS connection is being established. The button will light solid blue for 5 seconds when the device has successfully been added to the network.
2	**ENY Button**	Push this button to establish a secure PowerLine network with other PowerLine AV devices.

Hardware Overview
LEDs
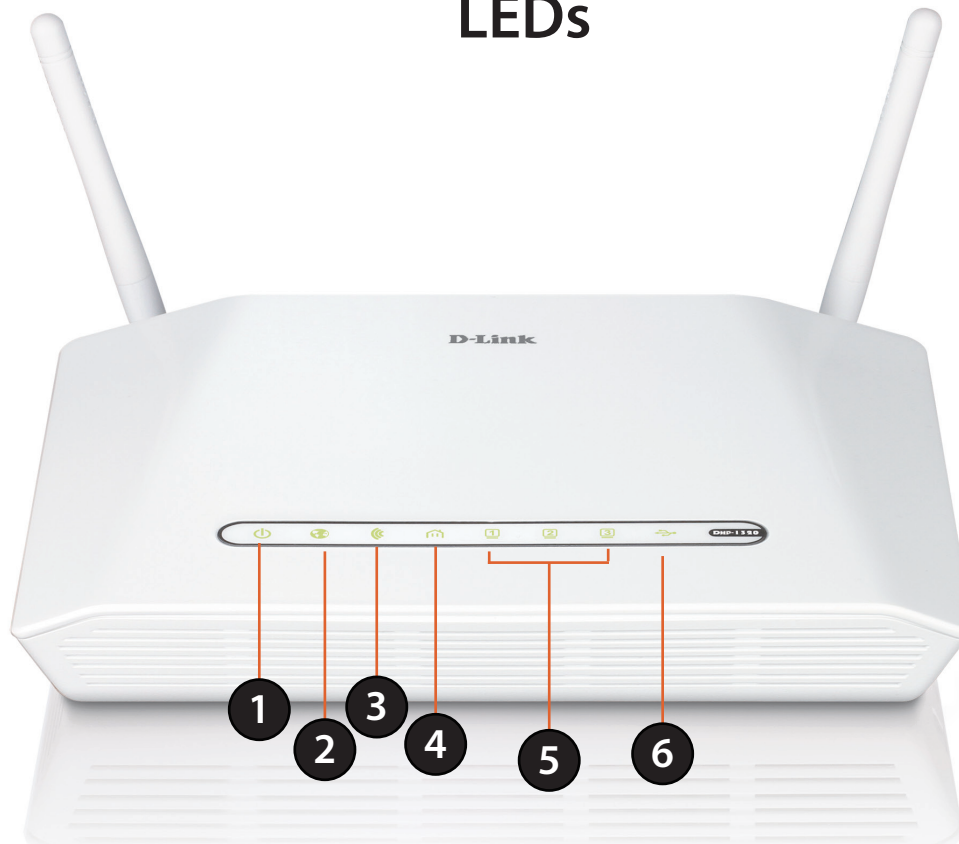
1	**Power LED**	A solid green light indicates a proper connection to the power supply. This LED will light orange during a factory reset or reboot. A slow blinking orange LED indicates that the Router has crashed during bootup.
2	**Internet LED**	A solid green light indicates that the internet connection has successfully completed. This LED blinks green during data transmission. A solid orange light indicates that the physical link is up, but the ISP service is down.
3	**WLAN LED**	A solid light indicates that the 2.4GHz wireless segment is ready. This LED blinks during wireless data transmission.
4	**PowerLine AV LEDs**	A solid light indicates that a powerLine connection is established. The LED will blink quickly when data is transmitted to or from another PowerLine unit.
5	**LAN LEDs (1-3)**	A solid light indicates a connection to an Ethernet-enabled computer on ports 1-3. This LED blinks during data transmission.
6	**USB LED**	A solid light indicated that the USB device is ready. This LED blinks during data transmission.

Installation

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

Before you Begin

- Please configure the router with the computer that was last connected directly to your modem.

- You can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet port on the router, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet).

- If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoet, Broadjump, or Enternet 300 from your computer or you will not be able to connect to the Internet.

- When running the Setup Wizard from the D-Link CD, make sure the computer you are running the CD from is connected to the Internet and online or the wizard will not work. If you have disconnected any hardware, re-connect your computer back to the modem and make sure you are online.

Wireless Installation Considerations

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

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

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

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

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

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

Hardware Installation - For Router Mode

Start Here

Windows users can use the **Quick Router Setup Wizard** (from the CD) to configure their router. If you do not want to use the wizard, lost your CD, or are running Mac or Linux, you will need to use the manual setup procedure below.

Quick Router Setup Wizard

For the Wizard to work, the computer must be connected to the Internet and be online. If you have disconnected any hardware, please re-connect your computer back into the modem and make sure you are online.

Insert the CD into your drive on a computer that is online and click **Install Router** to start the Quick Router Setup Wizard. Follow the onscreen instructions to install and configure your router.

Network Diagram

PC

Wireless N PowerLine
Router (DHP-1320)
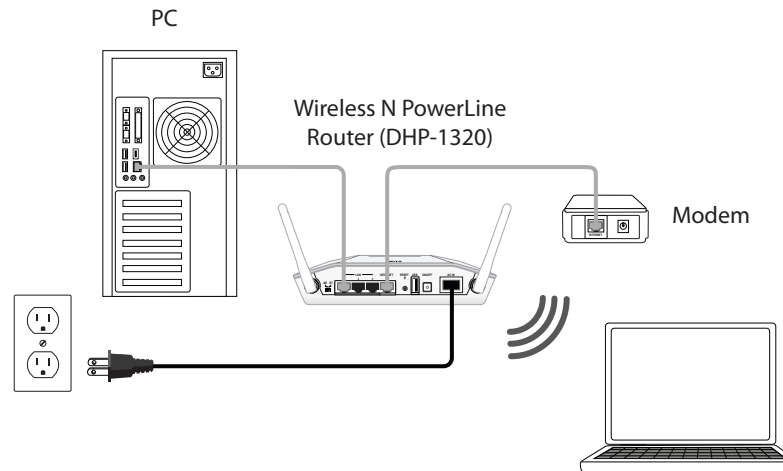
Modem

Connect to Cable/DSL/Satellite Modem

If you are connecting the router to a cable/DSL/satellite modem, please follow the steps below:

1. Place the router in an open and central location. Do not plug the power adapter into the router.

2. Unplug the modem's power adapter.

3. Unplug the Ethernet cable (that connects your computer to your modem) from your computer and place it into the Internet port on the router.

4. Plug an Ethernet cable into one of the three LAN ports on the router. Plug the other end into the Ethernet port on your computer.

5. Plug the power adapter back to the modem. Wait for the modem to boot (about 30 seconds).

6. Plug the power cord to the router and connect to an outlet.

7. Turn on the DHP-1320 Router by pushing the power button located on the back of this unit. Then, wait about 30 seconds for the router to boot.

8. Open a web browser, enter http://192.168.0.1 (or http://dlinkrouter) and then press **Enter.** When the login window appears, set the user name to **Admin** and leave the password box blank. Click **Log In** to continue the setup and use the wizard. Please refer to the page **22** for detailed installation information and advanced features.

Connect to Another Router

If you are connecting the D-Link router to another router to use as a wireless access point and/or switch, you will have to do the following before connecting the router to your network:

     • Disable UPnP™

     • Disable DHCP

     • Change the LAN IP address to an available address on your network. The LAN ports on the router cannot accept a DHCP address
        from your other router.

To connect to another router, please follow the steps below:

1. Plug the power into the router and use the power switch to power up the router. Connect one of your computers to the router (LAN port) using an Ethernet cable. Make sure your IP address on the computer is 192.168.0.xxx (where xxx is between 2 and 254). Please see the **Networking Basics** section for more information. If you need to change the settings, write down your existing settings before making any changes. In most cases, your computer should be set to receive an IP address automatically in which case you will not have to do anything to your computer.

2. Open a web browser and enter **http://192.168.0.1** and press **Enter**. When the login window appears, set the user name to **Admin** and leave the password box empty. Click **Log In** to continue.

3. Click on **Advanced** and then click **Advanced Network**. Uncheck the **Enable UPnP** checkbox. Click **Save Settings** to continue.

4. Click **Setup** and then click **Network Settings**. Uncheck the **Enable DHCP Server** checkbox. Click **Save Settings** to continue.

5. Under Router Settings, enter an available IP address and the subnet mask of your network. Click **Save Settings** to save your settings. Use this new IP address to access the configuration utility of the router in the future. Close the browser and change your computer's IP settings back to the original values as in Step 1.

6. Disconnect the Ethernet cable from the router and reconnect your computer to your network.

7. Connect an Ethernet cable in one of the **LAN** ports of the router and connect it to your other router. Do not plug anything into the Internet (WAN) port of the D-Link router.

8. You may now use the other 2 LAN ports to connect other Ethernet devices and computers. To configure your wireless network, open a web browser and enter the IP address you assigned to the router. Refer to the **Configuration** and **Wireless Security** sections for more information on setting up your wireless network.

Hardware Installation - For Access Point Mode
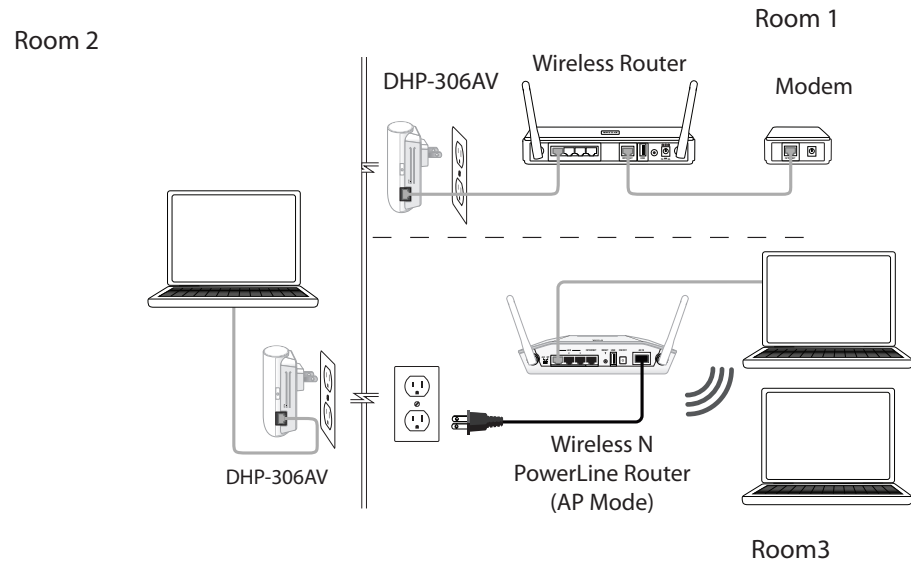
Step 1
Move the switch on the back of the DHP-1320 to "AP". Connect the supplied power cord into the power receptor located on the back of the DHP-1320 and plug into a power outlet as illustrated in **Room 3.**

Note: Power source is confirmed when the green LED Power Indicator on the PowerLine devices is illuminated.

Step 2
Turn on the DHP-1320 by pushing the power button located on the back of this unit. Connect one end of the included Ethernet cable to the Ethernet port on the DHP-1320 and attach the other end of the Ethernet cable to the PC as illustrated in **Room 3.**

Note: Connection to an Ethernet-enabled device is confirmed when the green LED Ethernet indicator on the PowerLine device is illuminated.

Step 3
Open a web browser, enter http://192.168.0.1 and press **Enter.** When the login window appears, set the user name to **Admin** and leave the password box blank. Click **Log In** to continue the setup. Please refer to the user to page **108** for more detailed installation information and advanced features.

Note: To secure the PowerLine Network from unauthorize users, please refer to the **PowerLine Network Security** *section.*

PowerLine Installation Considerations

Plan the location of your PowerLine devices:

1. Connect the PowerLine devices to electrial outlets that are not controlled by a wall switch in order to avoid accidentally turning off the power to the device.

2. Do not connect the Wireless N PowerLine Router to an extension cord, surge protector, or power strip. This might prevent the device from working correctly or it may reduce the network performance.

3. Avoid using the Wireless N PowerLine Router in an electrical outlet that is located near an appliance that uses a lot of power, such as a washer, dryer or refrigerator. This may prevent the adapter from working correctly, or may negatively impact the network perfomance.

4. Verify that your PowerLine devices are electrically rated to operate with the power available in your location.

5. To help prevent against electrical shock, be sure to plug the power cables into properly grounded electrical outlets.

PowerLine Security

It is strongly recommended to encrypt your PowerLine network. By encrypting the data that is sent via your PowerLine adapters, you will prevent nearby hackers with a Powerline adapter to connect to your network and steal your information.

To encrypt your PowerLine network, follow the steps below:

PowerLine Network-Quick Setup

Encryption Button Usage

The ENY Button is used to add a PowerLine AV device to a PowerLine network. You can allow the DHP-1320 to join a network by pressing the ENY Button to toggle it to the Broadcast state or Join state.

The ENY Button has 3 different trigger states:

Broadcast state- Enables the DHP-1320 to provide information for another PowerLine AV device to join its PowerLine network (works even if it is the only device existing within the network group). The first PowerLine device will use this state when the ENY Button is pressed.

Join State - This allows an ungrouped PowerLine AV device to join an existing PowerLine network. PowerLine devices added after the first device will be in the Join State when the ENY Button is pressed.

Ungroup State - Hold down the ENY Button for more than 10 seconds to detach the device from its network group.

Configuring a PowerLine Network
Connecting two PowerLine AV devices for the first time

To initially connect the DHP-1320 AV to another PowerLine AV device and create a network:

1. Plug the DHP-1320 into a power outlet. Press the ENY button for 1 to 3 seconds. The PowerLine AV LED 🏠 should start to blink.

2. Plug the other PowerLine device (e.g. the DHP-W306AV) into a power outlet. Press the ENY button on this PowerLine device for 1 to 3 seconds.

3. Wait for both devices to reboot (all LEDs will turn off and on). When the PowerLine AV LEDs on both devices are steadily lit, the two devices will be networked together.

Room A

Room B

DHP-1320

DHP-W306AV

DHP-W306AV

Room C
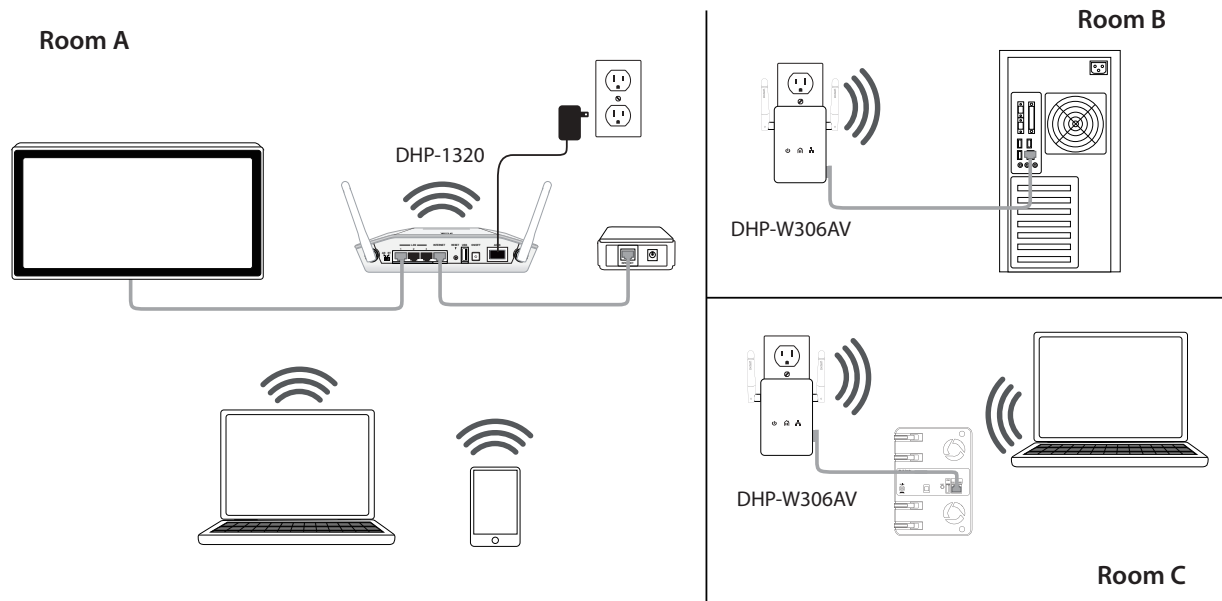
Connecting a PowerLine AV device to an existing PowerLine network

To add a DHP-1320 if you already have an existing network with 2 more PowerLine devices:

1. Press the ENY button on the DHP-1320 for more than 10 seconds to make sure it is not connected to any other PowerLine network.

2. Press the ENY button of any device already in your PowerLine network (e.g. the DHP-306AV) for 1 to 3 seconds. The ENY LED should start to blink.

3. Press the ENY button on the DHP-1320 for 1 to 3 seconds. The PowerLine AV LED 🏠 should start to blink.

4. Wait for the DHP-1320 to reboot (all LEDs will tun off and on). When the PowerLine AV LED 🏠 on all devices are steadily lit, the DHP-1320 will be connected to the existing network.

Room A

Room B

DHP-1320

DHP-306AV

Room C

DHP-W306AV
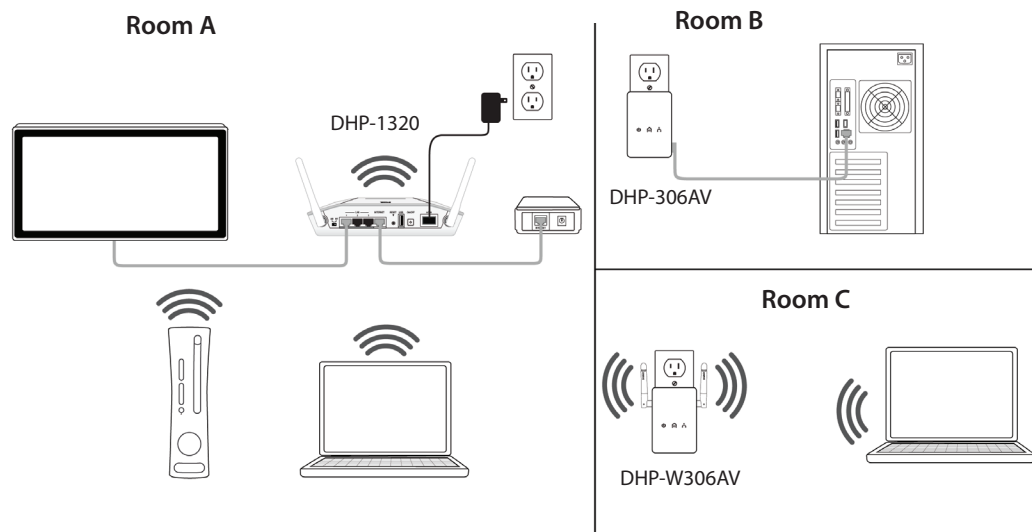
Getting Started

The DHP-1320 includes a Quick Router Setup Wizard CD. Follow the simple steps below to run the Setup Wizard to guide you quickly through the installation process.

Insert the **Quick Router Setup Wizard CD** in the CD-ROM drive. The step-by-step instructions that follow are shown in Windows® XP. The steps and screens are similar for the other Windows operating systems.

If the CD Autorun function does not automatically start on your computer, go to **Start** > **Run**. In the run box type "**D:\autorun.exe**" (where **D:** represents the drive letter of your CD-ROM drive).

When the autorun screen appears, click **Install.**

Note: *It is recommended to write down the SSID and Security Key, followed by the login password on the provided CD holder.*

Configuration (Router Mode)

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

Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.0.1).

Select **Admin** in the User Name field. Leave the password blank by default.

If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.
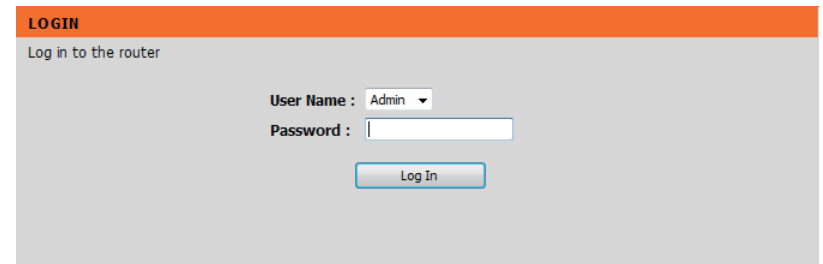
Setup

Internet

This section allows you to configure your Router's Internet settings.

Internet Connection Setup Wizard: The Internet Connection Setup Wizard provides a quick method for configuring your Internet settings. To start the Internet Connection Setup Wizard, click the **Internet Connection Setup Wizard** button. Refer to "Internet Connection Setup Wizard" on page 22 for more information on how to use the Internet Connection Setup Wizard.

Manual Internet Connection Option: Click the **Manual Internet Connection Setup** button if you want to enter your Internet settings without running the Internet Connection Setup Wizard. Refer to "Manual Internet Connection Setup" on page 28 for more information on how to configure your Internet settings manually.

Internet Connection Setup Wizard

Click the **Internet Connection Setup Wizard** button to start the Internet Connection Setup Wizard.

The following window appears, summarizing the steps required to complete the Internet Connection Setup Wizard:

Click **Next** to continue.

WELCOME TO THE D-LINK SETUP WIZARD

This wizard will guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

- Step 1: Set your Password
- Step 2: Select your Time Zone
- Step 3: Configure your Internet Connection
- Step 4: Save Settings and Connect

[Prev] [Next] [Cancel] [Connect]

Create a new password and then click **Next** to continue.

STEP 1: SET YOUR PASSWORD

By default, your new D-Link Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below:

Password :

Verify Password :

[Prev] [Next] [Cancel] [Connect]

Select your time zone from the drop-down menu and then click **Next** to continue.

STEP 2: SELECT YOUR TIME ZONE

Select the appropriate time zone for your location. This information is required to configure the time-based options for the router.

(GMT-08:00) Pacific Time (US & Canada); Tijuana

[Prev] [Next] [Cancel] [Connect]

Select the type of Internet connection you use and then click **Next** to continue.

If you selected **DHCP Connection (Dynamic IP Address)**, you may need to enter the MAC address of the computer that was last connected directly to your modem. If you are currently using that computer, click **Clone Your PC's MAC Address** and then click **Next** to continue.

The Host Name is optional but may be required by some ISPs. The default host name is the device name of the router and may be changed.

If you selected **PPPoE**, enter your PPPoE username and password.

If your ISP requires you to enter a PPPoE service name, enter the service name in the **Service Name** field.

Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses.

Click **Next** to continue.

Note: Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

If you selected **PPTP**, enter your PPTP username and password.

Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and PPTP server addresses.

Click **Next** to continue.

If you selected **L2TP**, enter your L2TP username and password.

Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and L2TP server addresses.

Click **Next** to continue.

SET USERNAME AND PASSWORD CONNECTION (L2TP)

To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need L2TP IP adress. If you do not have this information, please contact your ISP.

Address Mode : ◉ Dynamic IP ○ Static IP

L2TP IP Address : 0.0.0.0

L2TP Subnet Mask : 0.0.0.0

L2TP Gateway IP Address : 0.0.0.0

L2TP Server IP Address (may be same as gateway) :

User Name :

Password :

Verify Password :

Prev   Next   Cancel   Connect

If you selected **Static**, enter your network settings supplied by your Internet provider.

Click **Next** to continue.

SET STATIC IP ADDRESS CONNECTION

To set up this connection you will need to have a complete list of IP information provided by your Internet Service Provider. If you have a Static IP connection and do not have this information, please contact your ISP.

IP Address : 0.0.0.0

Subnet Mask : 0.0.0.0

Gateway Address : 0.0.0.0

Primary DNS Address : 0.0.0.0

Secondary DNS Address : 0.0.0.0

Prev   Next   Cancel   Connect

Click **Connect** to save your settings.

SETUP COMPLETE!

The Internet Connection Setup Wizard has completed. Click the Connect button to save your settings.

[Prev] [Next] [Cancel] [Connect]
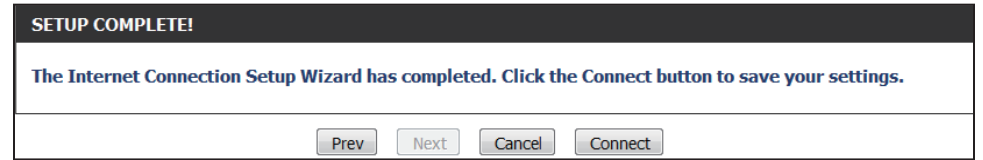
The following window appears to indicate that the settings are being saved. When the Router has finished saving all the changes, the **Setup> Internet** window will open.

Close your browser window and reopen it to test your Internet connection. It may take a few tries to initially connect to the Internet.

SAVING

The settings are being saved and are taking effect.

Please wait ...
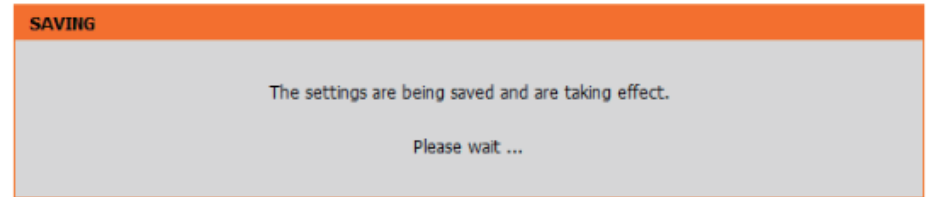
Manual Internet Connection Setup

Internet Connection Type: Use the My Internet Connection is drop-down menu to select the mode that the router should use to connect to the Internet.

Advanced DNS Service: Advanced Domain Name System (DNS) Services enhances your Internet performance by getting you the information and web pages you are looking for faster and more reliably. In addition, it improves your overall Internet experience by correcting many common typo mistakes automatically, taking you where you intended to go and saving you valuable time.

Disclaimer: D-Link makes no warranty as to the availability, reliability, fuctionality and operation of the Advanced DNS service or its features.

WAN

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP. If you are unsure of your connection method, please contact your Internet Service Provider.

Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

[Save Settings] [Don't Save Settings]

INTERNET CONNECTION TYPE

Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is :   Dynamic IP (DHCP) ▼

ADVANCED DNS SERVICE

Advanced DNS is a free security option that provides Anti-Phishing to protect your Internet connection from fraud and navigation improvements such as auto-correction of common URL typos.

Enable Advanced DNS Service :   ☐

Manual Internet Connection Setup
Static IP

Select **Static IP** from the drop-down menu if all the Internet port's IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.

IP Address: Enter the IP address assigned by your ISP.

Subnet Mask: Enter the Subnet Mask assigned by your ISP.

Default Gateway: Enter the Gateway assigned by your ISP.

DNS Servers: The DNS server information will be supplied by your ISP (Internet Service Provider).

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Click the **Save Settings** button to save any changes made.

INTERNET CONNECTION TYPE

Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is : Static IP

ADVANCED DNS SERVICE

Advanced DNS is a free security option that provides Anti-Phishing to protect your Internet connection from fraud and navigation improvements such as auto-correction of common URL typos.

Enable Advanced DNS Service : ☐

STATIC IP ADDRESS INTERNET CONNECTION TYPE :

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

IP Address : 0.0.0.0
Subnet Mask : 0.0.0.0
Default Gateway : 0.0.0.0
Primary DNS Server : 0.0.0.0
Secondary DNS Server : 0.0.0.0
MTU : 1500 (bytes)MTU default = 1500
MAC Address : 00:11:22:07:27:18

Clone Your PC's MAC Address

Manual Internet Connection Setup
Dynamic IP (DHCP)

Select **Dynamic IP (DHCP)** from the drop-down menu to obtain IP Address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for cable modem services such as Comcast and Cox.

Host Name: The Host Name is optional but may be required by some ISPs. Leave blank if you are not sure.

Primary/ Secondary DNS Server: Enter the Primary and Secondary DNS server IP addresses assigned by your ISP. These addresses are usually obtained automatically from your ISP. Enter the value 0.0.0.0 if you did not specifically receive these from your ISP.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Click the **Save Settings** button to save any changes made.

Manual Internet Connection Setup
PPPoE (Username/Password)

Select **PPPoE (Username/Password)** from the drop-down menu if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

Address Mode: Select Static IP if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select Dynamic.

IP Address: Enter the IP address (Static PPPoE only).

User Name: Enter your PPPoE user name.

Password: Enter your PPPoE password and then retype the password in the next box.

Service Name: Enter the ISP Service Name (optional).

Reconnect Mode: Use the radio buttons to specify the reconnect mode. The user can specify a custom schedule or specify the **On Demand**, or **Manual** option.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

DNS Servers: Enter the Primary and Secondary DNS Server Addresses (Static PPPoE only).

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the Clone Your PC's MAC Address button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Click the **Save Settings** button to save any changes made.

Manual Internet Connection Setup
PPTP

Select **PPTP (Point-to-Point Tunneling Protocol)** from the drop-down menu if your ISP uses a PPTP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

Address Mode: Select **Static IP** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic IP**.

PPTP IP Address: Enter the IP address (Static PPTP only).

PPTP Subnet Mask: Enter the Primary and Secondary DNS Server Addresses (Static PPTP only).

PPTP Gateway IP Address: Enter the Gateway IP Address provided by your ISP.

PPTP Server IP Address: Enter the Server IP provided by your ISP (optional).

Username: Enter your PPTP username.

Password: Enter your PPTP password and then retype the password in the next box.

Reconnect Mode: Use the radio buttons to specify the reconnect mode. The user can specify a custom schedule or specify the **On Demand**, or **Manual** option.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

DNS Servers: The DNS server information will be supplied by your ISP (Internet Service Provider).

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1454 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Click the **Save Settings** button to save any changes made.

Manual Internet Connection Setup
L2TP

Choose **L2TP** (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

Address Mode: Select Static if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select Dynamic.

L2TP IP Address: Enter the L2TP IP address supplied by your ISP (Static only).

L2TP Subnet Mask: Enter the Subnet Mask supplied by your ISP (Static only).

L2TP Gateway IP Address: Enter the Gateway IP Address provided by your ISP.

L2TP Server IP Address: Enter the Server IP provided by your ISP (optional).

Username: Enter your L2TP username.

Password: Enter your L2TP password and then retype the password in the next box.

Reconnect Mode: Use the radio buttons to specify the reconnect mode. The user can specify a custom schedule or specify the **On Demand**, or **Manual** option.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

Primary DNS Server: Enter the Primary DNS server IP address assigned by your ISP. These address is usually obtained automatically from your ISP. Enter the value 0.0.0.0 if you did not specifically receive these from your ISP.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1454 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Wireless Settings

If you want to configure the wireless settings on your router using the wizard, click **Wireless Connection Setup Wizard** and refer to "Wireless Connection Setup Wizard" on page 103.

Click **Add Wireless Device with WPS** if you want to add a wireless device using Wi-Fi Protected Setup (WPS) and refer to "Add Wireless Device with WPS Wizard" on page 106.

If you want to manually configure the wireless settings on your router click **Manual Wireless Connection Setup** and refer to the next page.

DHP-1320 // RT	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT

INTERNET
WIRELESS SETTINGS
NETWORK SETTINGS
USB SETTINGS
PLC SETTINGS

WIRELESS SETTINGS

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

Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

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 Connection 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 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 Corporation Router manually, then click on the Manual Wireless Network Setup button below.

[Manual Wireless Connection Setup]

Helpful Hints...

If you are new to wireless networking and have never configured a wireless router before, click on **Wireless Connection Setup Wizard** and the router will guide you through a few simple steps to get your wireless network up and running.

If you consider yourself an advanced user and have configured a wireless router before, click **Manual Wireless Connection Setup** to input all the settings manually.

More...

Manual Wireless Settings
802.11n/b/g (2.4GHz)

Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.

Schedule: Select the time frame that you would like your wireless network enabled. The schedule may be set to Always. Any schedule you create will be available in the drop-down menu. Click **New Schedule** to create a new schedule.

Wireless Network Name: The Service Set Identifier (SSID) is the name of your wireless network. Create a name using up to 32 characters. The SSID is case-sensitive.

802.11 Mode: Select one of the following:
802.11g Only - Select if all of your wireless clients are 802.11g.
802.11n Only - Select only if all of your wireless clients are 802.11n.
802.11b Only - Select if all of your wireless clients are 802.11b.
Mixed 802.11n and 802.11g - Select if you are using a mix of 802.11n and 802.11g wireless clients.
Mixed 802.11g and 802.11b - Select if you are using a mix of 802.11g and 802.11b wireless clients.
Mixed 802.11n, 802.11g and 802.11b - Select 802.11n, 802.11g and 802.11b

Enable Auto Channel Selection: The **Auto Channel Selection** setting can be selected to allow the DHP-1320 to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DHP-1320. By default the channel is set to 1. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable **Auto Channel Selection**, this option will be greyed out.

Channel Width: Select the Channel Width:

Auto 20/40 - Select if you are using both 802.11n and non-802.11n wireless devices.

20MHz - Select if you are not using any 802.11n wireless clients. This is the default setting.

Wireless Security Mode: Refer to "Wireless Security" on page 136 for more information regarding wireless security.

Click the **Save Settings** button to save any changes made.

Network Settings

This section will allow you to change the local network settings of the router and to configure the DHCP settings.

Router Settings: Use this section to configure the Router's local network settings.

DHCP Server Settings: Use this section to configure the DHP-1320's built-in DHCP server settings.

Add DHCP Reservation: Use this section to create a new DHCP reservation or manage existing DHCP reservations.

DHCP Reservations List: Displays information about the devices that have a DHCP reservation from the DHP-1320. The information includes the *Host Name, IP Address, MAC Address*, and *Expiration Time*.

Number of Dynamic DHCP Clients: Displays information about the devices that have a dynamic DHCP lease from the DHP-1320. The information includes the *Host Name, IP Address, MAC Address*, and *Lease Expiration Time*.

Network Settings
Router Settings

Router IP Address: Enter the IP address of the router. The default IP address is 192.168.0.1.

If you change the IP address, once you click **Apply**, you will need to enter the new IP address in your browser to get back into the configuration utility.

Default Subnet Mask: Enter the Subnet Mask. The default subnet mask is 255.255.255.0.

Device Name: Enter a Host Name to identify the DHP-1320.

Local Domain: Enter the Domain name (Optional).

Enable DNS Relay: Uncheck the box to transfer the DNS server information from your ISP to your computers. If checked, your computers will use the router for a DNS server.

Click the **Save Settings** button to save any changes made.

ROUTER SETTINGS

Use this section to configure the internal 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 : 192.168.0.1
Subnet Mask : 255.255.255.0
Device Name : dlinkrouter
Local Domain Name :
Enable DNS Relay : ☑

Network Settings
DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DHP-1320 has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DHP-1320. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

Enable DHCP Server: Check this box to enable the DHCP server on your router. Uncheck to disable this function.

DHCP IP Address Range: Enter the starting and ending IP addresses for the DHCP server's IP assignment.

Note: If you statically (manually) assign IP addresses to your computers or devices, make sure the IP addresses are outside of this range or you may have an IP conflict.

DHCP Lease Time: The length of time for the IP address lease. Enter the Lease time in minutes.

Learn NetBIOS WAN: If NetBIOS advertisement is switched on, switching this setting on causes WINS information to be learned from the WAN side, if available. Turn this setting off to configure manually.

NetBIOS scope: This is an advance setting and is normally left blank. This allows the configuration of NetBIOS domain name under which network hosts operate. This setting has no effect if the " Learn NetBIOS information form WAN is activated.

When you have finished configuring the new DHCP Server Settings, click the **Save Settings** button at the top or bottom of the window.

Network Settings
DHCP Reservation

If you want a computer or device to always have the same IP address assigned, you can create a DHCP reservation. The router will assign the IP address only to that computer or device.

Note: This IP address must be within the DHCP IP Address Range.

Enable: Check this box to enable the reservation.

Computer Name: Enter the computer name. Alternatively, select a computer that currently has a DHCP lease from the drop down menu and click **<<** to automatically populate the **Computer Name**, **IP Address**, and **MAC Address** fields.

IP Address: Enter the IP address you want to assign to the computer or device. This IP Address must be within the DHCP IP Address Range.

MAC Address: Enter the MAC address of the computer or device.

Copy Your PC's MAC Address: If you want to assign an IP address to the computer you are currently on, click this button to populate the fields.

Save: Click **Save** to save your entry. You must click **Save Settings** at the top to activate your reservations.

Dynamic DHCP Clients: In this section you can see what LAN devices are currently leasing IP addresses.

When you have finished configuring the new DHCP Reservation, click the **Save Settings** button at the top or bottom of the window to activate your reservations.

USB Settings

In this section you may configure your USB port. You can select several configurations to choose from such as Share Port and WCN Configuration.

PLC Settings (Router Mode)

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

Network Name: You can set the name of your network and to make it either public or private. Make sure the Network Name of all of the devices within your PowerLine network is the same.

Public Network Name: Select this option if you would like to make your powerline network public with the default Network Name of "HomePlugAV". Since this is a commonly used Network Name, it is less secure than a private Network Name.

Private Network Name: Select this option if you wish to make your powerline network more secure by using a private Network Name. Type the name of your private PowerLine network in the field.

Scan: Scan for new PowerLine devices.

Add Memeber: This section lets you add new PowerLine AV devices to your PowerLine network. To add a new device, give it a Device Name and enter its Password, then click Add. When you add a device it is given the current Network Name.

Device Name: Type a name you wish to use to identify a specific PowerLine AV device. For example, "Jack's room".

Password: The Password is used to verify that you are authorized to perform changes on a device. You can find the Password printed on the back of your device.

Network Name

- ● Public, Network Name is HomePlugAV
- ○ Private, Network Name is [   ]

Add Member

Device Name	MAC Address	Link Rate(Mbps)

Scan

Manual Add Member

Device Name [   ]

Password [   ][   ][   ][   ]   Add

Member List: This section provides information on the PowerLine AV devices in your PowerLine network, or any devices that were previously connected but it are currently disconnected.

Link Rate: Displays the device's current data rate in Mbps.

Status: This field shows the status of the device. If the field displays the word Connect, then the device is connected to your PowerLine network. If the field displays the word Disconnect, then the device has been added to the network but it is not ready. Please check its password and make sure the device is
powered on.

Qos Settings: You can configure your PowerLine AV devices to give priority to powerline network traffic accordingly. Enter the name, MAC Address, and priority level.

Mac Address: You can find the MAC address printed on the back of your device.

Advanced

Virtual Server

The DHP-1320 can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DHP-1320 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DHP-1320 are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling Virtual Server. Depending on the requested service, the DHP-1320 redirects the external service request to the appropriate server within the LAN network.

The DHP-1320 is also capable of port-redirection, meaning that incoming traffic to a particular port may be redirected to a different port on the server computer.

For a list of ports for common applications, please visit **http://support.dlink.com/faq**.

The Virtual Server window allows you to open a single port. If you would like to open a range of ports, refer to the next page.

Enable Checkbox: Check the box on the left side to enable the Virtual Server rule.

Name: Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), you computer will be listed in the **Computer Name** drop-down menu. Select your computer and click <<.

Public Port/ Private Port: Enter the port that you want to open next to Public Port and Private Port. The public and private ports are usually the same. The public port is the port seen from the Internet side, and the private port is the port being used by the application on the computer within your local network.

Traffic Type: Select **TCP**, **UDP**, **Both or other** from the **Protocol** drop-down menu.

Schedule Drop-Down Menu: Use the drop-down menu to schedule the time that the Virtual Server Rule will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in the **Tools** > **Schedules** section.

Inbound Filter: Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced > Inbound Filter** page.

Click the **Save Settings** button to save any changes made.

Port Forwarding

This will allow you to open a single port or a range of ports.

Enable Checkbox: Tick the checkbox on the left side to enable the Port Forwarding rule.

Name: Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), you computer will be listed in the **Computer Name** drop-down menu. Select your computer and click <<.

TCP Port/ UDP Port: Enter the port that you want to open next to TCP Port and UDP Port.

Schedule: Use the drop-down menu to schedule the time that the Port Forwarding rule will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in the **Tools** > **Schedules** section.

Inbound Filter: Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced > Inbound Filter** page.

Click the **Save Settings** button to save any changes made.

Application Rules

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the DHP-1320. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

Enable Checkbox: Check the box on the left side to enable the Application Rule.

Name: Enter a name for the rule. You may select a pre-defined application from the **Application** drop-down menu and click <<.

Trigger: This is the port used to trigger the application. It can be either a single port or a range of ports.

Traffic Type: Select the protocol of the trigger port (TCP, UDP, or Any).

Firewall: This is the port number on the Internet side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.

Traffic Type: Select the protocol of the firewall port (TCP or UDP).

Schedule: The schedule of time when the Application Rule will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in the **Tools** > **Schedules** section.

Click the **Save Settings** button to save any changes made.

QoS Engine

The QoS Engine option helps improve your network gaming performance by prioritizing applications. By default the QoS Engine settings are disabled and application priority is not classified automatically.

Enable Traffic Shapping: This option is disabled by default. Enable this option for better performance and experience with online games and other interactive applications, such as VoIP.

Automatic Uplink Speed: This option is enabled by default when the QoS Engine option is enabled. This option will allow your router to automatically determine the uplink speed of your Internet connection.

Measured Uplink Speed: This displays the detected uplink speed.

Manual Uplink Speed: The speed at which data can be transferred from the router to your ISP. This is determined by your ISP. ISP's often define speed as a download/upload pair. For example, 1.5Mbits/284Kbits. Using this example, you would enter 284. Alternatively you can test your uplink speed with a service such as www.dslreports.com.

Click the **Save Settings** button to save any changes made.

Network Filter

Use MAC (Media Access Control) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the network. You can either manually add a MAC address or select the MAC address from the list of clients that are currently connected to the Broadband Router.

Configure MAC Filtering: Select **Turn MAC Filtering OFF**, **Turn MAC Filtering ON and ALLOW computers listed to access the network**, or **Turn MAC Filtering ON and DENY computers listed to access the network** from the drop-down menu.

MAC Address: Enter the MAC address you would like to filter.

To find the MAC address on a computer, please refer to the *Networking Basics* section in this manual.

DHCP Client List: Select a DHCP client from the **Computer Name** drop down menu and click << to copy that MAC Address.

Click the **Save Settings** button to save any changes made.

Access Control

The Access Control section allows you to control access in and out of your network. Use this feature as Parental Controls to only grant access to approved sites, limit web access based on time or dates, and/or block access from applications like P2P utilities or games.

Add Policy: Check the **Enable Access Control** check box and click the **Add Policy** button to start the **Access Control Wizard**.

Access Control Wizard

Click **Next** to continue with the wizard.

Enter a name for the policy and then click **Next** to continue.

Select a schedule (I.E. Always) from the drop-down menu and then click **Next** to continue.

Enter the following information and then click **Next** to continue.

- **Address Type** - Select IP address, MAC address, or Other Machines.
- **IP Address** - Enter the IP address of the computer you want to apply the rule to.

Select the filtering method and then click **Next** to continue.

Enter the rule:

Enable - Check to enable the rule.
Name - Enter a name for your rule.
Dest IP Start - Enter the starting IP address.
Dest IP End - Enter the ending IP address.
Protocol - Select the protocol.
Dest Port Start - Enter the starting port number.
Dest Port End - Enter the ending port number.

To enable web logging, click **Enable**.

Click **Save** to save the access control rule.

Website Filter

Website Filters are used to allow you to set up a list of Web sites that can be viewed by multiple users through the network. To use this feature select the appropriate Web Filtering option, enter the domain or website, and click **Save Settings**.

Configure Web Filtering: Select **ALLOW computers access to ONLY these sites**, or **DENY computers access to ONLY these sites** from the drop-down menu.

Website URL: Enter the keywords or URLs that you want to allow or block.

Click the **Save Settings** button to save any changes made.

Inbound Filter

The Inbound Filter option is an advanced method of controlling data received from the Internet. With this feature you can configure inbound data filtering rules that control data based on an IP address range. Inbound Filters can be used with Virtual Server, Port Forwarding, or Remote Administration features.

Name: Enter a name for the inbound filter rule.

Action: Select **Allow** or **Deny**.

Enable: Check to enable rule.

Remote IP Start: Enter the starting IP address. Enter 0.0.0.0 if you do not want to specify an IP range.

Remote IP End: Enter the ending IP address. Enter 255.255.255.255 if you do not want to specify and IP range.

Add: Click the **Add** button to apply your settings.

Firewall Settings

A firewall protects your network from the outside world. The DHP-1320 offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

Firewall Settings: Check the **Enable SPI** box to enable the SPI (Stateful Packet Inspection, also known as dynamic packet filtering) feature. Enabling SPI helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

NAT Endpoint Filtering: Select one of the following for TCP and UDP ports:

Endpoint Independent - Any incoming traffic sent to an open port will be forwarded to the application that opened the port. The port will close if idle for 5 minutes.

Address Restricted - Incoming traffic must match the IP address of the outgoing connection.

Address + Port Restriction - Incoming traffic must match the IP address and port of the outgoing connection.

Enable Anti-Spoof Checking: Enable this option to provide protection from certain kinds of "spoofing" attacks.

DMZ Host: If an application has trouble working from behind the router, you can expose one computer to the Internet and run the application on that computer.

Carry out the following to create a DMZ host:

1. Check the **Enable DMZ** box.

2. Specify the IP address of the computer on the LAN that you want to have unrestricted Internet communication in the DMZ IP address field. To specify an existing DHCP client, use the **Computer Name** drop-down to select the computer that you want to make a DMZ host. If selecting a computer that is a DHCP client, be sure to make a static reservation in the **Setup** > **Network Settings** page so that the IP address of the DMZ machine does not change.

3. Click the **Save Settings** button to add the new DMZ host.

IP Address: Specify the IP address of the computer on the LAN that you want to have unrestricted Internet communication. If this computer obtains its IP address automatically using DHCP, be sure to make a static reservation on the **System > Network Settings** page so that the IP address of the DMZ machine does not change.

Routing

The Routing option is an advanced method of customizing specific routes of data through your network.

Routing List: Each Route has a checkbox next to it, check the box of the route you wish to enable.

Name: Specify a name for identification of this route.

Interface: Select the interface which the IP packet must use to transit out of the router when this route is used.

Destination IP: Enter the address of the host or network you wish to access.

Netmask: This field identifies the portion of the destination IP in use.

Gateway: The IP address of the router will be displayed here.

Click the **Save Settings** button to save any changes made.

Advanced Wireless Settings
802.11n/b/g (2.4GHz)

Transmit Power: Set the transmit power of the antennas.

Beacon Period: Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value. 100 is the default setting and is recommended.

RTS Threshold: This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.

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

WLAN Partition: This enables 802.11d operation. 802.11d is a wireless specification developed to allow implementation of wireless networks in countries that cannot use the 802.11 standard. This feature should only be enabled if you are in a country that requires it.

WMM Enable: WMM is QoS for your wireless network. This will improve the quality of video and voice applications for your wireless clients.

Short Guard Interval: Check this box to reduce the guard interval time therefore increasing the data capacity. However, it's less reliable and may create higher data loss.

Click the **Save Settings** button to save any changes made.

Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup (WPS) System is a simplified method for securing your wireless network during the "Initial setup" as well as the "Add New Device" processes. The Wi-Fi Alliance (WFA) has certified it across different products as well as manufactures. The process is just as easy, as depressing a button for the Push-Button Method or correctly entering the 8-digit code for the Pin-Code Method. The time reduction in setup and ease of use are quite beneficial, while the highest wireless Security setting of WPA2 is automatically used.

Enable: Enable the Wi-Fi Protected Setup feature.

PIN Settings: A PIN is a unique number that can be used to add the router to an existing network or to create a new network. The default PIN may be printed on the bottom of the router. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator ("admin" account) can change or reset the PIN.

PIN: Shows the current value of the router's PIN.

Reset PIN to Default: Click this button to restore the default PIN of the router.

Generate New PIN: Click this button to create a random number that is a valid PIN. This becomes the router's PIN. You can then copy this PIN to the user interface of the registrar.

Add Wireless Station: Click the **Add Wireless Device with WPS** button to start Wireless Connection Setup Wizard. This wizard helps you add wireless devices to the wireless network.

The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports Wi-Fi Protected Setup and has a configuration button, you can add it to the network by pressing the configuration button on the device and then the on the router within 60 seconds. The status LED on the router will flash three times if the device has been successfully added to the network.

There are several ways to add a wireless device to your network. A "registrar" controls access to the wireless network. A registrar only allows devices onto the wireless network if you have entered the PIN, or pressed a special Wi-Fi Protected Setup button on the device. The router acts as a registrar for the network, although other devices may act as a registrar as well.

Click the **Save Settings** button to save any changes made.

Advanced Network

Enable UPnP: To use the Universal Plug and Play (UPnP™) feature click on **Enabled**. UPNP provides compatibility with networking equipment, software and peripherals.

Enable WAN Ping Response: Unchecking the box will not allow the DHP-1320 to respond to pings. Blocking the Ping may provide some extra security from hackers. Check the box to allow the Internet port to be "pinged".

WAN Port Speed: You may set the port speed of the Internet port to 10Mbps, 100Mbps, or auto. Some older cable or DSL modems may require you to set the port speed to 10Mbps.

Enable Multicast Streams: Check the **Enable Multicast Streams** box to allow multicast traffic to pass through the router from the Internet.

Click the **Save Settings** button to save any changes made.

IPv6

Use the IPv6 window to configure the mode that the Router will use to access an IPv6 Internet connection.

My IPv6 Connection is: Use the drop-down menu to select the IPv6 Internet Connection mode.

IPv6
Static IPv6

Select **Static IPv6** from the **My IPv6 Connection is** drop-down menu if your Router will use a static IPv6 address to connect to the Internet.

WAN IPv6 Address Settings: Enter the address settings supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Address Autoconfiguration Settings: Use this section to configure the IPv6 autoconfiguration settings.

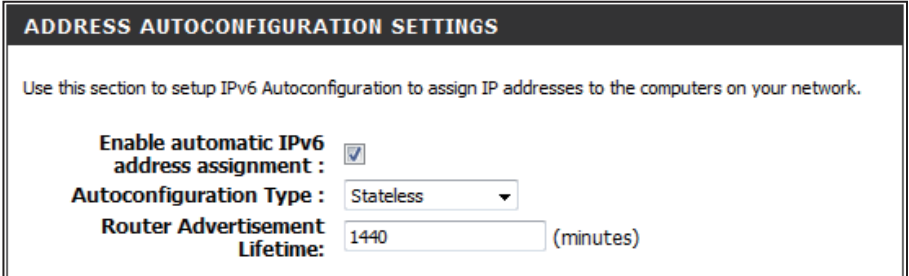Click the **Save Settings** button to save any changes made.

IPv6
Static IPv6 - Stateless

To configure the Router to use a Static IPv6 Stateless connection, configure the parameters in the **LAN Address Autoconfiguration Settings** section as described below:

Enable automatic IPV6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the *Stateless* option from the drop-down menu.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

IPv6
Static IPv6 - Stateful

To configure the Router to use a Static IPv6 Stateful connection, configure the parameters in the **LAN Address Autoconfiguration Settings** section as described below:

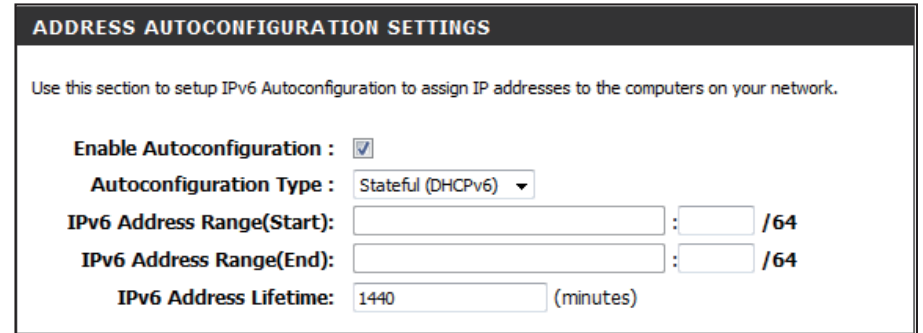**Enable Autoconfiguration:** Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the *Stateful(DHCPv6)* option from the drop-down menu.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

IPv6
Autoconfiguration (Stateless/DHCPv6)

Select **Static IPv6** from the **My IPv6 Connection is** drop-down menu if your Router will use a static IPv6 address to connect to the Internet.

IPv6 DNS Settings: Select Obtain DNS Server address automatically or enter a specific DNS server address.

LAN IPv6 Address Settings: Enter the LAN (local) IPv6 address for the router.

LAN IPv6 Link-Local Address: Displays the Router's LAN Link-Local Address.

Address Autoconfiguration Settings: Use this section to configure the IPv6 autoconfiguration settings.

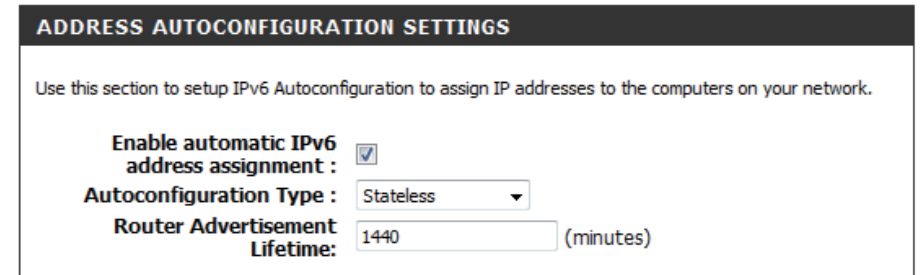Click the **Save Settings** button to save any changes made.

IPv6
Autoconfiguration (Stateless/DHCPv6) - Stateless

To configure the Router to use a Static IPv6 Stateless connection, configure the parameters in the **LAN Address Autoconfiguration Settings** section as described below:

Enable automatic IPv6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the *Stateless* option from the drop-down menu.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment : ☑

Autoconfiguration Type : Stateless

Router Advertisement Lifetime : 1440 (minutes)

IPv6
Autoconfiguration (Stateless/DHCPv6) - Stateful

To configure the Router to use a Static IPv6 Stateful connection, configure the parameters in the **LAN Address Autoconfiguration Settings** section as described below:

Enable automatic IPv6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the *Stateful(DHCPv6)* option from the drop-down menu.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

IPv6
6to4

Select **6to4** from the **My IPv6 Connection is** drop-down menu if your Router will use a 6 to 4 tunnel to connect to the Internet.

Primary DNS Address: Enter the DNS Address supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

Click the **Save Settings** button to save any changes made.

IPv6

6to4 - Stateless

To configure the Router to use an IPv6 to IPv4 tunnel stateless autoconfiguration connection, configure the parameters in the **LAN Address Autoconfiguration Settings** section as described below:

Enable automatic IPv6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the *Stateless* option from the drop-down menu.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

IPv6
6to4 - Stateful

To configure the Router to use an IPv6 to IPv4 tunnel stateful autoconfiguration connection, configure the parameters in the **LAN Address Autoconfiguration Settings** section as described below:
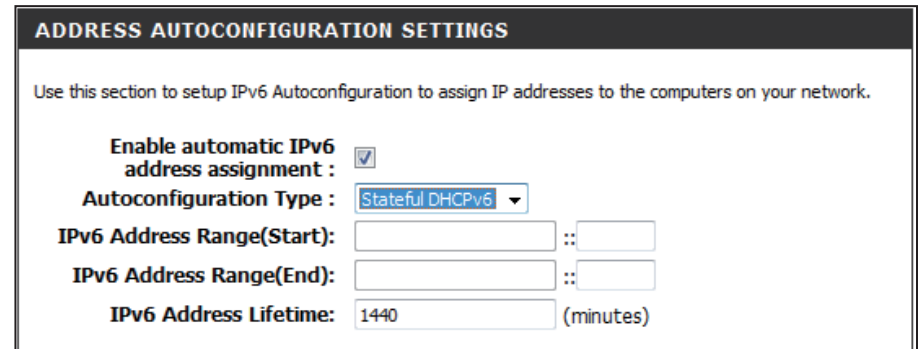
Enable automatic IPv6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the **Stateful** option from the drop-down menu.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment : ☑
Autoconfiguration Type : Stateful DHCPv6 ▾
IPv6 Address Range(Start): ::
IPv6 Address Range(End): ::
IPv6 Address Lifetime: 1440 (minutes)

IPv6
6rd

My IPv6 Connection: Select **6rd** from the drop-down menu.

6rd IPv6 Prefix: Enter the settings supplied by your Internet provider (ISP).

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

IPv6 CONNECTION TYPE

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is : 6rd

6rd SETTINGS :

Enter the IPv6 address information provided by your Internet Service Provider (ISP).

6rd IPv6 Prefix : _____ / 32
IPv4 Address : 0.0.0.0   Mask Length: 0
Assigned IPv6 Prefix : None
Tunnel Link-Local Address : FE80::0000:0000/64
6rd Relay : _____
Primary DNS Address : _____
Secondary DNS Address : _____

LAN IPv6 ADDRESS SETTINGS :

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC's network settings to access the network again.

LAN IPv6 Address : None
LAN IPv6 Link-Local Address : FE80::211:22FF:FE07:2717/64

LAN ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment : ☑
Autoconfiguration Type : Stateless
Router Advertisement Lifetime : 1440 (minutes)

IPv6
6rd (Stateless)

Enable automatic IPv6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the *Stateless* option from the drop-down menu.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

LAN ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment : ☑

Autoconfiguration Type : Stateless ▼

Router Advertisement Lifetime: 1440 (minutes)

IPv6
6rd (Stateful)

Enable automatic IPv6 address assignment: Check to enable the Autoconfiguration feature.

Autoconfiguration Type: Select the **Stateful DCHPv6** option from the drop-down menu.

IPv6 Address Range Start: Enter the start IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Range End: Enter the end IPv6 Address for the DHCPv6 range for your local computers.

IPv6 Address Lifetime: Enter the IPv6 Address Lifetime (in minutes).

Click the **Save Settings** button to save any changes made.

IPv6
IPv6 over IPv4 Tunnel

My IPv6 Connection: Select **IPv6 over IPv4 Tunnel** from the drop-down menu.

IPv6 over IPv4 Tunnel Settings: Enter the IPv6 settings supplied by your Tunnel Broker.

IPv6 DNS Settings: Obtain a DNS server address automatically or enter a specific DNS server address.

Primary/Secondary DNS Address: Enter the primary and secondary DNS server addresses.

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

IPv6

IPv6 over IPv4 Tunnel - Stateless

Enable automatic IPv6 address assignment: Check to enable the IPv6 address assignment feature.

Autoconfiguration Type: Select **Stateless**. Refer to the previous page for Stateful.

Router Advertisement Lifetime: Enter the Router Advertisement Lifetime (in minutes).

LAN ADDRESS AUTOCONFIGURATION SETTINGS

Use this section to setup IPv6 Autoconfiguration to assign IP addresses to the computers on your network.

Enable automatic IPv6 address assignment : ☑

Autoconfiguration Type : Stateless ▼

Router Advertisement Lifetime: 1440 (minutes)