

USER MANUAL

DIR-615

VERSION 2.2



D-Link[®]

WIRELESS

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Package Contents

- D-Link DIR-615 Wireless N Router
- 2 Detachable Antennas
- Power Adapter
- CAT5 Ethernet Cable
- CD-ROM with Installation Wizard, User Manual, and Special Offers



Note: Using a power supply with a different voltage rating than the one included with the DIR-615 will cause damage and void the warranty for this product.

System Requirements

- Ethernet-based Cable or DSL Modem
- Computers with Windows®, Macintosh®, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer Version 6.0, Mozilla 1.7.12 (5.0), or Firefox 1.5 and above (for configuration)
- Installation Wizard requires Windows® XP with Service Pack 2

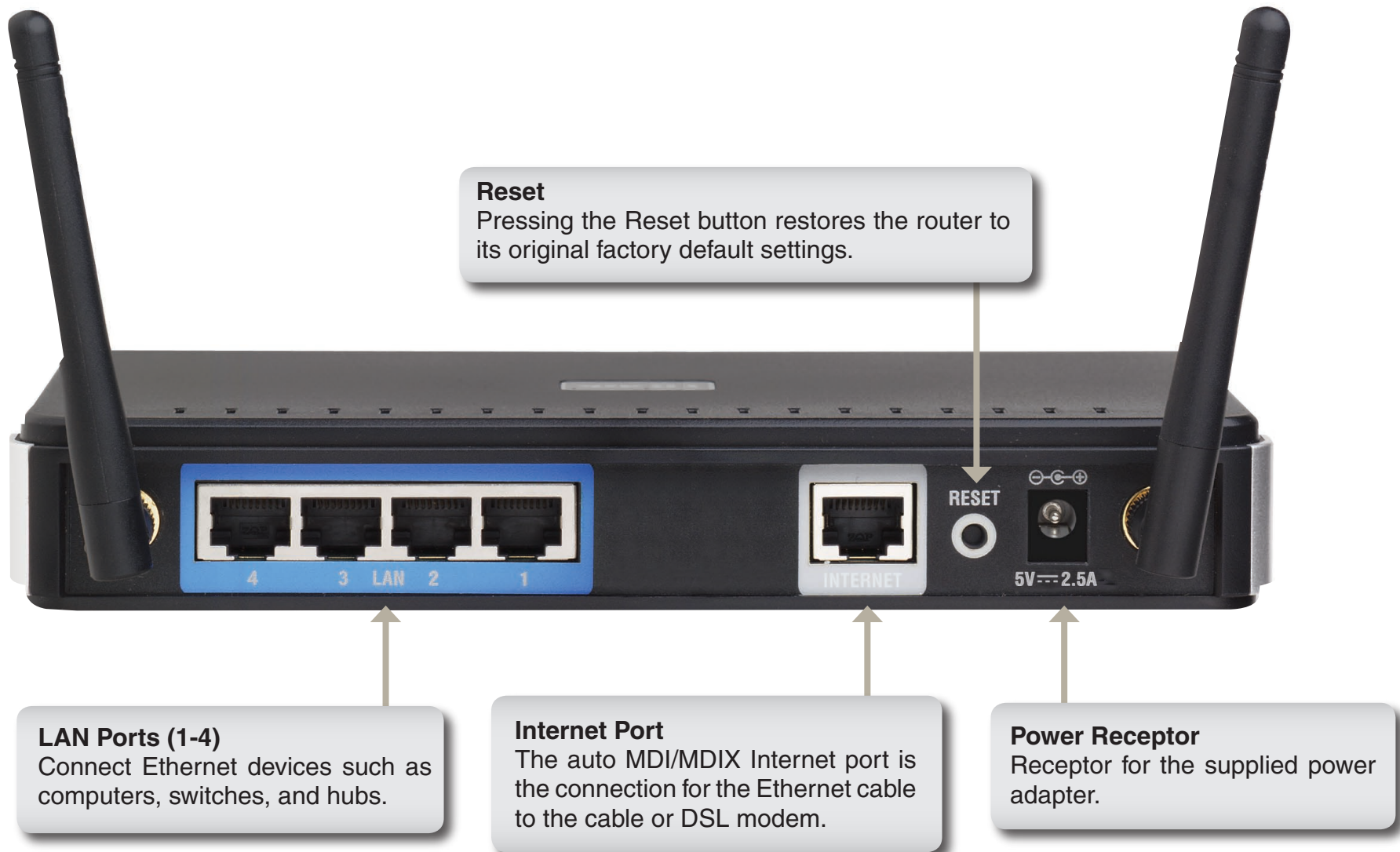
Features

- **Faster Wireless Networking** - The DIR-615 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 802.11b and 802.11g Devices** - The DIR-615 is still fully compatible with the IEEE 802.11b standard, so it can connect with existing 802.11b 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 DIR-615 can pass through VPN sessions. It supports multiple and concurrent IPsec and PPTP sessions, so users behind the DIR-615 can securely access corporate networks.
- **User-friendly Setup Wizard** - Through its easy-to-use Web-based user interface, the DIR-615 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 Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

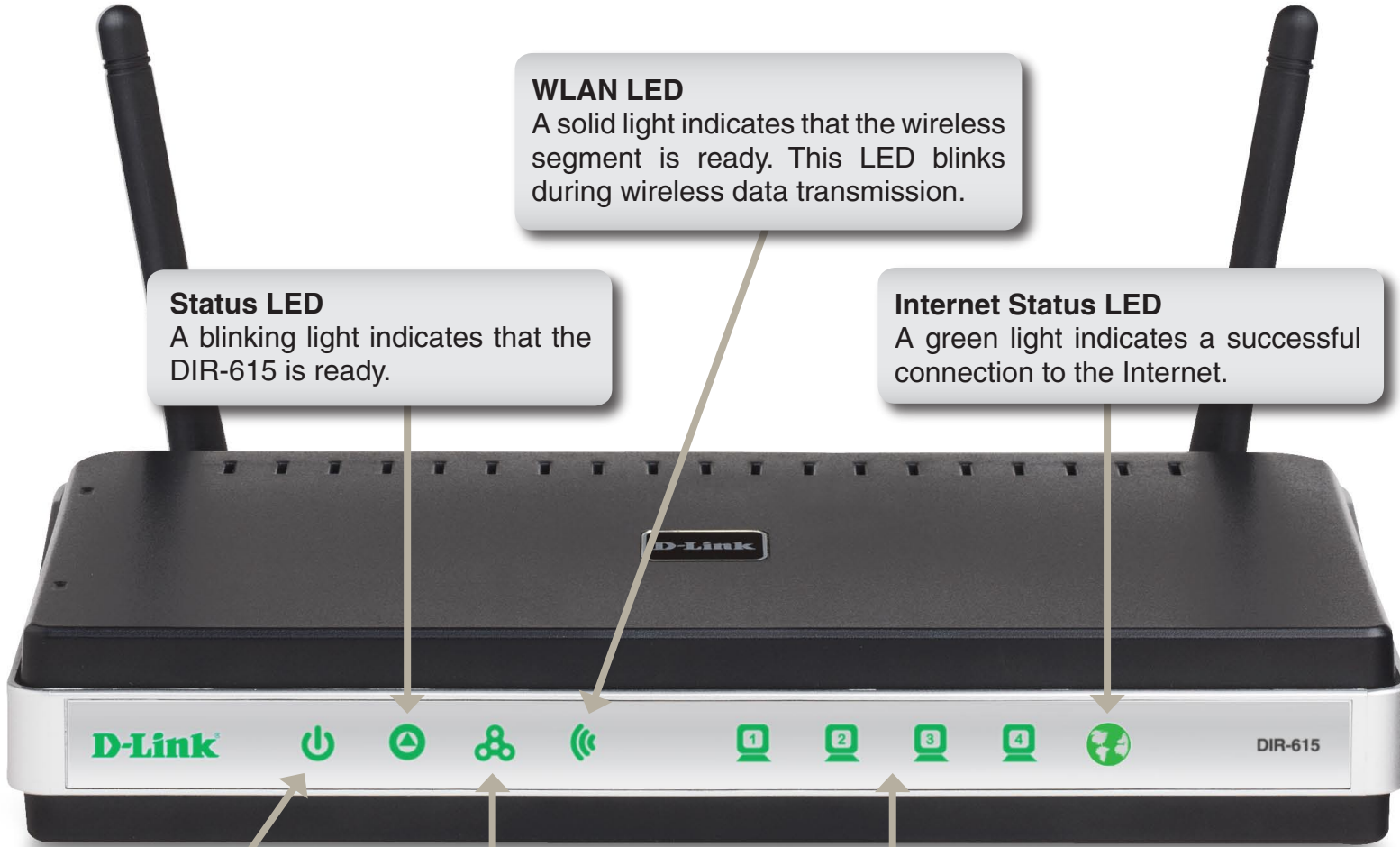
Hardware Overview

Connections



Hardware Overview

LEDs



Status LED
A blinking light indicates that the DIR-615 is ready.

WLAN LED
A solid light indicates that the wireless segment is ready. This LED blinks during wireless data transmission.

Internet Status LED
A green light indicates a successful connection to the Internet.

Power LED
A solid light indicates a proper connection to the power supply.

Internet LED
A solid light indicates connection on the Internet port. This LED blinks during data transmission.

Local Network LEDs
A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4. 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. Also, 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.

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 is not in use.

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. Turn the power off on your modem. If there is no on/off switch, then unplug the modem's power adapter. Shut down your computer.
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 four LAN ports on the router. Plug the other end into the Ethernet port on your computer.
5. Turn on or plug in your modem. Wait for the modem to boot (about 30 seconds).
6. Plug the power adapter to the router and connect to an outlet or power strip. Wait about 30 seconds for the router to boot.
7. Turn on your computer.
8. Verify the link lights on the router. The power light, Internet light, and the LAN light (the port that your computer is plugged into) should be lit. If not, make sure your computer, modem, and router are powered on and verify the cable connections are correct.
9. Skip to page 14 to configure your router.

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. 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 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 port of the D-Link router.
8. You may now use the other 3 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.

Getting Started

The DIR-615 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:\DIR615.exe"** (where **D:** represents the drive letter of your CD-ROM drive).

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



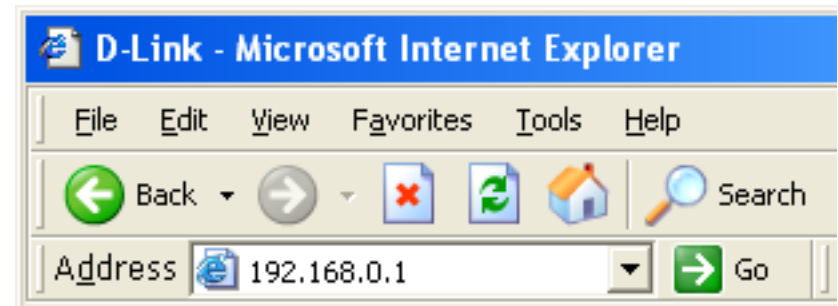
Note: It is recommended to write down the login password on the provided CD holder.

Configuration

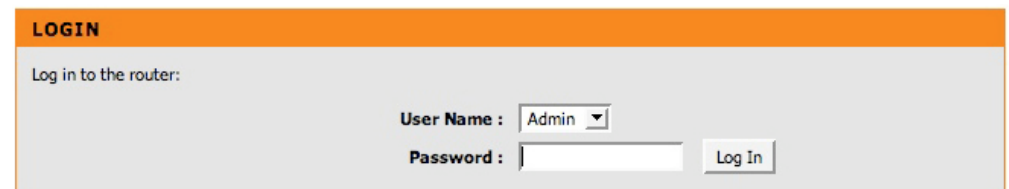
This section will show you how to configure your new D-Link wireless router using the web-based configuration utility.

Web-based Configuration Utility

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** from the drop-down menu and then enter your password. Leave the password blank by default.

A screenshot of the "LOGIN" page for the router configuration utility. The page has an orange header with the word "LOGIN" in white. Below the header, it says "Log in to the router:". There are two input fields: "User Name" with a dropdown menu showing "Admin" and "Password" with an empty text box. A "Log In" button is located to the right of the password field.

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

Internet Connection Setup Wizard

Once logged into the web interface of the router, the **Setup > Internet** page will appear. Click the **Internet Connection Setup Wizard** button to quickly configure your router using the setup wizard.

If you want to enter your settings without running the wizard, click **Manual Internet Configuration Wizard** and skip to page 20.

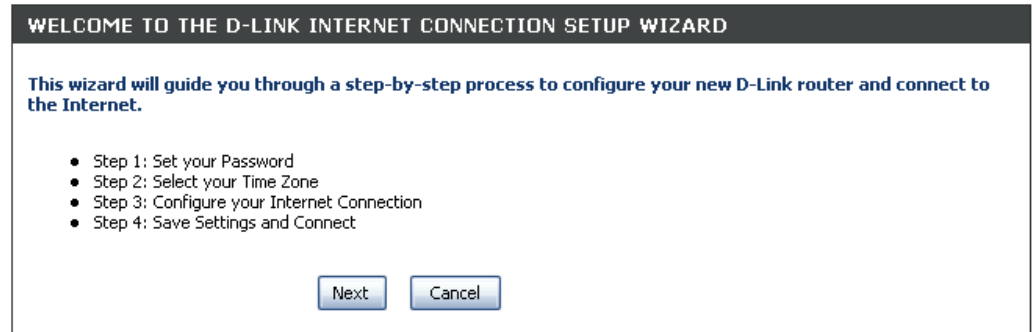
The screenshot displays the D-Link DIR-615 web interface. At the top, the D-Link logo is visible. Below it, a navigation bar includes tabs for **DIR-615**, **SETUP**, **ADVANCED**, **TOOLS**, **STATUS**, and **SUPPORT**. The **SETUP** tab is active, and the **INTERNET** sub-tab is selected. The main content area is titled **INTERNET CONNECTION** and contains the following sections:

- INTERNET CONNECTION SETUP WIZARD**: A section with a blue button labeled "Internet Connection Setup Wizard". Below the button is a **Note**: "Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package."
- MANUAL INTERNET CONNECTION OPTIONS**: A section with a blue button labeled "Manual Internet Connection Setup".

On the right side of the page, there is a **Helpful Hints...** section. It provides instructions for new users: "If you are new to networking and have never configured a router before, click on **Internet Connection Setup Wizard** and the router will guide you through a few simple steps to get your network up and running." It also provides instructions for advanced users: "If you consider yourself an advanced user and have configured a router before, click **Manual Internet Connection Setup** to input all the settings manually." A **More...** link is also present.

At the bottom of the interface, there is a **WIRELESS** section.

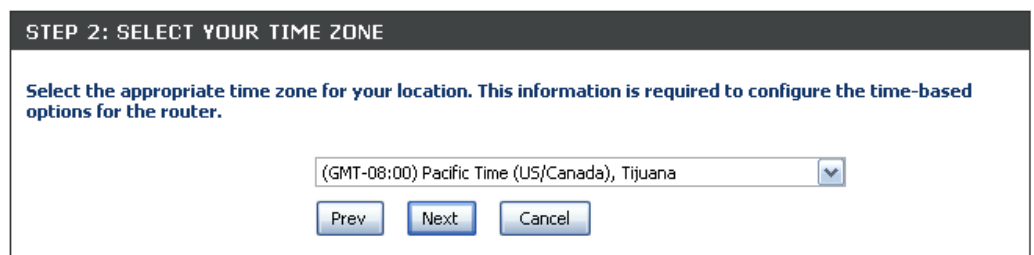
Click **Next** to continue.



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



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



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

STEP 3: CONFIGURE YOUR INTERNET CONNECTION

Your Internet Connection could not be detected, please select your Internet Service Provider (ISP) from the list below. If your ISP is not listed; select the "Not Listed or Don't Know" option to manually configure your connection.

Not Listed or Don't Know

If your Internet Service Provider was not listed or you don't know who it is, please select the Internet connection type below:

- DHCP Connection (Dynamic IP Address)**
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
- Username / Password Connection (PPPoE)**
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.
- Username / Password Connection (PPTP)**
PPTP client.
- Username / Password Connection (L2TP)**
L2TP client.
- Static IP Address Connection**
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
- BigPond**
BigPond Cable (Australia)

If you selected Dynamic, 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.

DHCP CONNECTION (DYNAMIC IP ADDRESS)

To set up this connection, please make sure that you are connected to the D-Link Router with the PC that was originally connected to your broadband connection. If you are, then click the Clone MAC button to copy your computer's MAC Address to the D-Link Router.

MAC Address : (optional)

Host Name :

Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP.

If you selected PPPoE, enter your PPPoE username and password. Click **Next** to continue.

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

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

SET USERNAME AND PASSWORD CONNECTION (PPPOE)

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

Address Mode : Dynamic IP Static IP

IP Address :

User Name :

Password :

Verify Password :

Service Name : (optional)

Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.

If you selected PPTP, enter your PPTP username and password. Click **Next** to continue.

SET USERNAME AND PASSWORD CONNECTION (PPTP)

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

Address Mode : Dynamic IP Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

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

User Name :

Password :

Verify Password :

If you selected L2TP, enter your L2TP username and password. 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 address. If you do not have this information, please contact your ISP.

Address Mode : Dynamic IP Static IP

L2TP IP Address :

L2TP Subnet Mask :

L2TP Gateway IP Address :

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

User Name :

Password :

Verify Password :

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 :

Subnet Mask :

Gateway Address :

Primary DNS Address :

Secondary DNS Address :

Click **Connect** to save your settings. Once the router is finished rebooting, click **Continue**. Please allow 1-2 minutes to connect.

SETUP COMPLETE!

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

Internet Setup

Manual Configuration

If you opt to set up your Internet connection manually, you will be redirected to a WAN page that allows you to select your Internet type and enter the correct configuration parameters.

Select your Internet connection type using the “**My Internet Connection is**” drop-down menu.

Click the **Save Settings** button when you have configured the connection.

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET WIRELESS SETTINGS NETWORK SETTINGS

WAN

Internet Connection

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. 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)

DYNAMIC IP (DHCP) 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.

Host Name :

Use Unicasting : (compatibility for some DHCP Servers)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

Clone Your PC's MAC Address

WIRELESS

Helpful Hints...

When configuring the router to access the Internet, be sure to choose the correct **Internet Connection Type** from the drop down menu. If you are unsure of which option to choose, contact your **Internet Service Provider (ISP)**.

If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.

More...

Dynamic IP Address (DHCP)

My Internet Connection: Select **Dynamic IP (DHCP)** 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.

Host Name: The Host Name is optional but may be required by some ISPs.

Use UnICASTing: Check the box if you are having problems obtaining an IP address from your ISP.

DNS Addresses: Enter the Primary DNS server IP address assigned by 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.

DYNAMIC IP (DHCP) 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.

Host Name :

Use UnICASTing : (compatibility for some DHCP Servers)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

PPPoE (DSL)

Choose PPPoE (Point to Point Protocol over Ethernet) 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.

My Internet Connection: Select **PPPoE (Username/Password)** from the drop-down menu.

Address Mode: Select **Static** 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).

Reconnection Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

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 Addresses: 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.

PPPOE INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

IP Address :

Username :

Password :

Verify Password :

Service Name : (optional)

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1492

MAC Address :

PPTP

Choose PPTP (Point-to-Point-Tunneling Protocol) 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** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

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: Enter the Gateway IP Address provided by your ISP.

PPTP Server IP: 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: Select either **Always-on**, **On-Demand**, or **Manual**.

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. 1400 is the default MTU.

PPTP INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

PPTP Server IP Address :

Username :

Password :

Verify Password :

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1452

MAC Address :

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.

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: Enter the Gateway IP Address provided by your ISP.

L2TP Server IP: 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: Select either **Always-on**, **On-Demand**, or **Manual**.

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 L2TP only).

PPTP INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

PPTP Server IP Address :

Username :

Password :

Verify Password :

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1452

MAC Address :

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1464 is the default MTU.

Clone 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.

Static IP Address

Select Static IP Address 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.

STATIC IP ADDRESS INTERNET CONNECTION TYPE :

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

| | |
|---|--|
| IP Address : | <input style="width: 100%;" type="text" value="0.0.0.0"/> |
| Subnet Mask : | <input style="width: 100%;" type="text" value="255.255.255.0"/> |
| Default Gateway : | <input style="width: 100%;" type="text" value="0.0.0.0"/> |
| Primary DNS Server : | <input style="width: 100%;" type="text" value="0.0.0.0"/> |
| Secondary DNS Server : | <input style="width: 100%;" type="text" value="0.0.0.0"/> |
| MTU : | <input style="width: 50%;" type="text" value="1500"/> (bytes) MTU default = 1500 |
| MAC Address : | <input style="width: 100%;" type="text" value="00:00:00:00:00:00"/> |
| <input style="background-color: #000080; color: white; border: 1px solid #000080; padding: 5px 20px;" type="button" value="Clone Your PC's MAC Address"/> | |

Big Pond

BigPond Server: Enter the IP address of the login server.

BigPond Username: Enter your BigPond username.

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

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'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.

BIG POND INTERNET CONNECTION TYPE :

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

BigPond Server :

BigPond User Id :

BigPond Password :

Verify Password :

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

Wireless Settings

If you want to configure your wireless settings through the setup wizard, click **Wireless Network Setup Wizard** and skip to page 73. If you would like to enter your settings manually continue to the next page. The **Add Wireless Device Wizard** is used to allow a wireless client to connect using WiFi Protected Setup.

D-Link

DIR-615 //

SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET

WIRELESS SETTINGS

NETWORK 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.

ADD WIRELESS DEVICE 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 Wizard

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.

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

Helpful Hints...

If you already have a wireless network setup with Wi-Fi Protected Setup, click on **Add Wireless Device Wizard** to add new device to your wireless network.

If you are new to wireless networking and have never configured a wireless router before, click on **Wireless Network 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 Network Setup** to input all the settings manually.

More...

WIRELESS

Manual Configuration

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.

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

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DIR-615 to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DIR-615. By default the channel is set to 6. 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 Scan**, this option will be greyed out.

802.11 Mode: Select one of the following:
802.11g Only - Select if all of your wireless clients are 802.11g.
Mixed 802.11g and 802.11b - Select if you are using both 802.11b and 802.11g wireless clients.

802.11b Only - Select if all of your wireless clients are 802.11b.

802.11n Only - Select only if all of your wireless clients are 802.11n.

Mixed 802.11n, 802.11b, and 802.11g - Select if you are using a mix of 802.11n, 11g, and 11b wireless clients.

Channel Width: Select the Channel Width:

Auto 20/40 - This is the default setting. 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.

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DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET
WIRELESS SETTINGS
NETWORK SETTINGS

WIRELESS

Wireless Network Settings

Use this section to configure the wireless settings for your D-Link Router. Please note that changes made on this section may also need to be duplicated on your Wireless Client.

Save Settings Don't Save Settings

WIRELESS NETWORK SETTINGS

Enable Wireless:

Wireless Network Name: dlink (Also called the SSID)

Enable Auto Channel Scan:

Wireless Channel: 2.437 GHz - CH 6

802.11 Mode: Mixed 802.11g, 802.11g and 802.11b

Channel Width: Auto 20/40 MHz

Transmission Rate: Best (automatic) (Mbit/s)

Visibility Status: Visible Invisible

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 WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode: None

Helpful Hints...

Changing your Wireless Network Name is the first step in securing your wireless network. Change it to a familiar name that does not contain any personal information.

If you are not utilizing Super G with Dynamic Turbo for its speed improvements, enable Auto Channel Scan so that the router can select the best possible channel for your wireless network to operate on.

Enabling Hidden Mode is another way to secure your network. With this option enabled, no wireless clients will be able to see your wireless network when they scan to see what's available. For your wireless devices to connect to your router, you will need to manually enter the Wireless Network Name on each device.

If you have enabled Wireless Security, make sure you write down the WEP Key or Passphrase that you have configured. You will need to enter this information on any wireless device that you connect to your wireless network.

[More...](#)

WIRELESS

Transmission Rate: Select the transmit rate. It is strongly suggested to select **Best (Auto)** for best performance.

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcast by the DIR-615. If Invisible is selected, the SSID of the DIR-615 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DIR-615 in order to connect to it.

Wireless Security: Refer to page 70 for more information regarding wireless security.

Network Settings

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

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.

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

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.

The screenshot displays the D-Link DIR-615 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The main content area is divided into several sections:

- NETWORK SETTINGS:** Contains instructions for configuring internal network settings and a built-in DHCP server. It includes buttons for "Save Settings" and "Don't Save Settings".
- ROUTER SETTINGS:** Contains instructions for configuring the router's internal network settings. It includes input fields for Router IP Address (192.168.0.1), Subnet Mask (255.255.255.0), and Local Domain Name (optional). The "Enable DNS Relay" checkbox is checked.
- DHCP SERVER SETTINGS:** Contains instructions for configuring the built-in DHCP server. It includes checkboxes for "Enable DHCP Server" (checked), "Always broadcast" (checked), and input fields for "DHCP IP Address Range" (192.168.0.100 to 192.168.0.199) and "DHCP Lease Time" (1440 minutes).
- ADD DHCP RESERVATION:** Contains an "Enable" checkbox (checked), a "Computer Name" dropdown menu, and input fields for "IP Address" (0.0.0.0) and "MAC Address" (00:00:00:00:00:00). It includes a "Copy Your PC's MAC Address" button and "Save" and "Clear" buttons.
- DHCP RESERVATIONS LIST:** A table showing the current DHCP reservations. It has columns for "Enable", "Computer Name", "MAC Address", and "IP Address".
- NUMBER OF DYNAMIC DHCP CLIENTS : 1:** A table showing the current dynamic DHCP clients. It has columns for "Computer Name", "IP Address", "MAC Address", and "Expire Time".

Helpful Hints...
If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck **Enable DHCP Server** to disable this feature.
If you have devices on your network that should always have fixed IP addresses, add a **DHCP Reservation** for each such device.
[More...](#)

DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DIR-615 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 DIR-615. 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 SERVER SETTINGS

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 : (minutes)

Always broadcast : (compatibility for some DHCP Clients)

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

Always Broadcast: Enable this function to ensure compatibility with some DHCP clients.

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 or select from the drop-down menu and click <<.

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.

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

Revoke: Click **Revoke** to cancel the lease for a specific LAN device and free an entry in the lease table. Do this only if the device no longer needs the leased IP address, because, for example, it has been removed from the network.

ADD DHCP RESERVATION

Enable :

Computer Name : << Computer Name ▼

IP Address :

MAC Address :

DHCP RESERVATIONS LIST

| Enable | Computer Name | MAC Address | IP Address | | |
|--------|---------------|-------------|------------|--|--|
| | | | | | |

NUMBER OF DYNAMIC DHCP CLIENTS : 1

| Computer Name | IP Address | MAC Address | Expire Time | | |
|---------------|---------------|-------------------|---------------------|------------------------|-------------------------|
| prescott | 192.168.0.156 | 00:11:09:2a:94:11 | 23 Hours 18 Minutes | Revoke | Reserve |

Note: The Revoke option will not disconnect a PC with a current network session from the network; you would need to use MAC Address Filter to do that. Revoke will only free up a DHCP Address for the very next requester. If the previous owner is still available, those two devices may both receive an IP Address Conflict error, or the second device may still not receive an IP Address; in that case, you may still need to extend the “DHCP IP Address Range” to address the issue, it is located in the DHCP Server section.

Reserve: The Reserve option converts this dynamic IP allocation into a DHCP Reservation and adds the corresponding entry to the DHCP Reservations List.

Virtual Server

The DIR-615 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 DIR-615 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DIR-615 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 DIR-615 redirects the external service request to the appropriate server within the LAN network.

The DIR-615 is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

Each virtual service that is created will be listed at the bottom of the screen in the Virtual Servers List. There are pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

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DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

VIRTUAL SERVER

The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Save Settings Don't Save Settings

24 -- VIRTUAL SERVERS LIST

| | Name | Application Name | Port | Traffic Type | Schedule |
|--------------------------|-----------------------|------------------|--------------|---------------|-----------------------------|
| <input type="checkbox"/> | IP Address 0.0.0.0 | Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name | Application Name | Public 0 | Both | Schedule Always |
| <input type="checkbox"/> | IP Address 0.0.0.0 | Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name | Application Name | Public 0 | Both | Schedule Always |
| <input type="checkbox"/> | IP Address 0.0.0.0 | Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name | Application Name | Public 0 | Both | Schedule Always |
| <input type="checkbox"/> | IP Address 0.0.0.0 | Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name | Application Name | Public 0 | Both | Schedule Always |
| <input type="checkbox"/> | IP Address 0.0.0.0 | Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |

Helpful Hints...

Check the **Application Name** drop down menu for a list of predefined server types. If you select one of the predefined server types, click the arrow button next to the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the computer at which you would like to open the specified port.

Select a schedule for when the virtual server will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools → Schedules** screen and create a new schedule.

Select a filter that restricts the Internet hosts that can access this virtual server to hosts that you trust. If you do not see the filter you need in the list of filters, go to the **Advanced → Inbound Filter** screen and create a new filter.

More...

For a list of ports for common applications, please visit http://support.dlink.com/faq/view.asp?prod_id=1191.

This will allow you to open a single port. If you would like to open a range of ports, refer to page 38.

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), your computer will be listed in the “Computer Name” drop-down menu. Select your computer and click <<.

Private Port/ Public Port: Enter the port that you want to open next to Private Port and Public Port. The private and public 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.

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

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.

Schedule: The schedule of time when 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.

| 24 -- VIRTUAL SERVERS LIST | | | | | |
|----------------------------|------------------------------|---------------------|--------------|---------------|-----------------------------|
| | | | Port | Traffic Type | |
| <input type="checkbox"/> | Name <input type="text"/> | << Application Name | Public 0 | Both | Schedule Always |
| | IP Address 0.0.0.0 | << Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name <input type="text"/> | << Application Name | Public 0 | Both | Schedule Always |
| | IP Address 0.0.0.0 | << Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name <input type="text"/> | << Application Name | Public 0 | Both | Schedule Always |
| | IP Address 0.0.0.0 | << Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |
| <input type="checkbox"/> | Name <input type="text"/> | << Application Name | Public 0 | Both | Schedule Always |
| | IP Address 0.0.0.0 | << Computer Name | Private 0 | Protocol 0 | Inbound Filter Allow All |

Port Forwarding

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

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), your computer will be listed in the “Computer Name” drop-down menu. Select your computer and click <<.

TCP/UDP: Enter the TCP and/or UDP port or ports that you want to open. You can enter a single port or a range of ports. Separate ports with a common.

Example: 24,1009,3000-4000

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.

Schedule: The schedule of time when 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.

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DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

PORT FORWARDING

This option is used to open multiple ports or a range of ports in your router and redirect data through those ports to a single PC on your network. This feature allows you to enter ports in various formats including, Port Ranges (100-150), Individual Ports (80, 68, 888), or Mixed (1020-5000, 689).

Save Settings Don't Save Settings

24 -- PORT FORWARDING RULES

| | Name | IP Address | Application Name | Computer Name | Ports to Open | Schedule | Inbound Filter |
|--------------------------|------|------------|---------------------|------------------|---------------|----------|----------------|
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | TCP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | UDP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | TCP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | UDP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | TCP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | UDP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | TCP | Always | Allow All |
| <input type="checkbox"/> | | 0.0.0.0 | << Application Name | << Computer Name | UDP | Always | Allow All |

Helpful Hints...

Check the **Application Name** drop down menu for a list of predefined applications. If you select one of the predefined applications, click the arrow button next to the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the LAN computer to which you would like to open the specified port.

Select a schedule for when the rule will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools → Schedules** screen and create a new schedule.

You can enter ports in various formats:

- Range (50-100)
- Individual (80, 68, 888)
- Mixed (1020-5000, 689)

[More...](#)

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 DIR-615. 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.

The DIR-615 provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

Name: Enter a name for the rule. You may select a pre-defined application from the 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 Both).

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, UDP, or Both).

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.

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DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

APPLICATION RULES

This option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a "trigger" port or port range. Special Applications rules apply to all computers on your internal network.

Save Settings Don't Save Settings

24 -- APPLICATION RULES

| | Name | Application | Port | Traffic Type | Schedule |
|--------------------------|------|---------------------|----------|--------------|----------|
| <input type="checkbox"/> | | << Application Name | Trigger | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Firewall | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Trigger | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Firewall | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Trigger | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Firewall | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Trigger | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Firewall | TCP | Always |
| <input type="checkbox"/> | | << Application Name | Trigger | TCP | Always |

Helpful Hints...

Use this feature if you are trying to execute one of the listed network applications and it is not communicating as expected.

Check the **Application Name** drop down menu for a list of predefined applications. If you select one of the predefined applications, click the arrow button next to the drop down menu to fill out the corresponding field.

Select a schedule for when the service will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools → Schedules** screen and create a new schedule.

More...

Network Filters

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, allow MAC addresses listed below, or deny MAC addresses listed below 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: Select a DHCP client from the drop-down menu and click << to copy that MAC Address.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes 'DIR-615', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is selected, and the 'MAC ADDRESS FILTER' sub-tab is active. The main content area is titled 'MAC ADDRESS FILTER' and contains the following text: 'The MAC (Media Access Controller) Address filter option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'.

Below the main content area is a section titled '24 -- MAC FILTERING RULES'. It contains a dropdown menu for 'Configure MAC Filtering below:' with the option 'Turn MAC Filtering OFF' selected. Below this is a table with two columns: 'MAC Address' and 'DHCP Client List'. The table has five rows, each with an empty text input field for the MAC address, a '<<' button, a dropdown menu for the DHCP client list (all showing 'Computer Name'), and a 'Clear' button.

On the right side of the interface, there is a 'Helpful Hints...' section. It contains the following text: 'Create a list of MAC addresses that you would either like to allow or deny access to your network. Computers that have obtained an IP address from the router's DHCP server will be in the DHCP Client List. Select a device from the drop down menu, then click the arrow to add that device's MAC address to the list. Click the Clear button to remove the MAC address from the MAC Filtering list. More...'

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**.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The main content area is titled "ACCESS CONTROL" and contains the following text: "The Access Control option allows you to control access in and out of your network. Use this feature as Access Controls to only grant access to approved sites, limit web access based on time or dates, and/or block internet access for applications like P2P utilities or games." Below this text are two buttons: "Save Settings" and "Don't Save Settings". Further down, there is a section titled "ACCESS CONTROL" with the text "Enable Access Control : ". Below this is an "Add Policy" button. At the bottom of the main content area is a section titled "POLICY TABLE". On the right side, there is a "Helpful Hints..." sidebar with the following text: "Check **Enable Access Control** if you want to enforce rules that limit Internet access from specific LAN computers. Click **Add Policy** to start the processes of creating a rule. You can cancel the process at any time. When you are finished creating a rule it will be added to the **Policy Table** below."

Access Control Wizard

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

The screenshot shows the "STEP 1: CHOOSE POLICY NAME" screen of the Access Control Wizard. The instruction "Choose a unique name for your policy." is displayed. Below the instruction is a text input field labeled "Policy Name" with the text "Example 1" entered. At the bottom of the screen are four buttons: "Prev", "Next", "Save", and "Cancel".

Access Control Wizard (continued)

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

STEP 1: CHOOSE POLICY NAME

Choose a unique name for your policy.

Policy Name :

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

STEP 2: SELECT SCHEDULE

Choose a schedule to apply to this policy.

Details :

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.

STEP 3: SELECT MACHINE



Select the machine to which this policy applies.

Specify a machine with its IP or MAC address, or select "Other Machines" for machines that do not have a policy.

Address Type : IP MAC Other Machines

IP Address : <<

Machine Address : <<

| Machine | | |
|---------------|---|---|
| 192.168.0.100 |  |  |

Access Control Wizard (continued)

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

STEP 4: SELECT FILTERING METHOD

Select the method for filtering.

Method : Log Web Access Only Block All Access Block Some Access

Apply Web Filter :

Apply Advanced Port Filters :

Prev Next Save Cancel

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.

STEP 5: PORT FILTER

Add Port Filters Rules.

Specify rules to prohibit access to specific IP addresses and ports.

| Enable | Name | Dest IP Start | Dest IP End | Protocol | Dest Port Start | Dest Port End |
|--------------------------|------|---------------|-----------------|----------|-----------------|---------------|
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |
| <input type="checkbox"/> | | 0.0.0.0 | 255.255.255.255 | Any | 0 | 65535 |

Prev Next Save Cancel

To enable web logging, click Enable.

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

STEP 6: CONFIGURE WEB ACCESS LOGGING

Web Access Logging : Disabled Enabled

Prev Next Save Cancel

Website Filters

Website Filters are used to allow LAN computers from accessing specific web sites by the URL or domain. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the listed word, the site will be accessible. To use this feature, enter the text string to be blocked and click **Save Settings**. The text to be blocked will appear in the list. To delete the text, click **Clear the List Below**.

Website URL/ Domain: Enter the keywords or URLs that you want to allow. Any URL with the keyword in it will be allowed.

The screenshot displays the D-Link DIR-615 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options, with WEBSITE FILTER selected. The main content area is titled 'WEBSITE FILTER' and contains the following text: 'The Web Filter option allows you to set up a list of allowed Web sites that can be used by multiple users. When Web Filter is enabled, all Web sites not listed on this page will be blocked. To use this feature, you must also select the "Apply Web Filter" checkbox in the Access Control section.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. A section titled '40 -- WEBSITE FILTERING RULES' contains a 'Clear the list below...' button and a table with the header 'Website URL/Domain'. The table has two columns and six rows, all of which are currently empty. On the right side of the interface, there is a 'Helpful Hints...' section with instructions: 'Create a list of Web sites to which you would like to allow access from the devices on your network.' and 'Use with Advanced → Access Control.' followed by a 'More...' link.

Inbound Filters

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.

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

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

Save: Click the **Save** button to apply your settings. You must click Save Settings at the top to save the settings.

Inbound Filter Rules List: This section will list any rules that are created. You may click the **Edit** icon to change the settings or enable/disable the rule, or click the **Delete** icon to remove the rule.

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

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 for limiting access to a server on your network to a system or group of systems. Filter rules can be used with Virtual Server, Port Forwarding, or Remote Administration features.

ADD INBOUND FILTER RULE

Name :

Action :

| Source IP Range | Enable | Source IP Start | Source IP End |
|--------------------------|--------------------------|-----------------|-----------------|
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |
| <input type="checkbox"/> | <input type="checkbox"/> | 0.0.0.0 | 255.255.255.255 |

INBOUND FILTER RULES LIST

| Name | Action | Source IP Range |
|------|--------|-----------------|
| | | |

Helpful Hints...

Give each rule a **Name** that is meaningful to you.

Each rule can either **Allow** or **Deny** access from the WAN.

Up to eight ranges of WAN IP addresses can be controlled by each rule. The checkbox by each IP range can be used to disable ranges already defined.

The starting and ending IP addresses are WAN-side address.

Click the **Add** or **Update** button to store a finished rule in the Rules List below.

Click the **Edit** icon in the Rules List to change a rule.

Click the **Delete** icon in the Rules List to permanently remove a rule.

[More...](#)

WIRELESS

Firewall Settings

A firewall protects your network from the outside world. The D-Link DIR-615 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.

Enable SPI: SPI (Stateful Packet Inspection, also known as dynamic packet filtering) 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.

Enable 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.

Note: Placing 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.

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.

The screenshot shows the 'Firewall Settings' page for a D-Link DIR-615 router. The page is divided into several sections:

- Setup:** Includes 'Save Settings' and 'Don't Save Settings' buttons.
- Firewall Settings:** 'Enable SPI' is checked.
- NAT Endpoint Filtering:**
 - UDP Endpoint Filtering: 'Port And Address Restricted' is selected.
 - TCP Endpoint Filtering: 'Port And Address Restricted' is selected.
- Anti-Spoof Checking:** 'Enable anti-spoof checking' is unchecked.
- DMZ Host:** 'Enable DMZ' is unchecked. 'DMZ IP Address' is 0.0.0.0. A 'Computer Name' dropdown is visible.
- Non-UDP/TCP/ICMP LAN Sessions:** 'Enable' is checked.
- Application Level Gateway (ALG) Configuration:**
 - PPTP: checked
 - PPPoE: checked
 - IPSec (VPN): checked
 - RTSP: checked
 - Windows/MSN Messenger: checked (automatically disabled if UPnP is enabled)
 - FTP: checked
 - H.323 (NetMeeting): checked
 - SIP: checked
 - Wake-On-LAN: checked
 - MMS: checked

On the right side, there are 'Helpful Hints...' and 'More...' sections with additional information.

Application Level Gateway (ALG) Configuration

Here you can enable or disable ALG's. Some protocols and applications require special handling of the IP payload to make them work with network address translation (NAT). Each ALG provides special handling for a specific protocol or application. A number of ALGs for common applications are enabled by default.

PPTP: Allows multiple machines on the LAN to connect to their corporate network using PPTP protocol.

IPSec (VPN): Allows multiple VPN clients to connect to their corporate network using IPSec. Some VPN clients support traversal of IPSec through NAT. This ALG may interfere with the operation of such VPN clients. If you are having trouble connecting with your corporate network, try turning this ALG off. Please check with the system administrator of your corporate network whether your VPN client supports NAT traversal.

RTSP: Allows applications that use Real Time Streaming Protocol to receive streaming media from the internet. QuickTime and Real Player are some of the common applications using this protocol.

MSN Messenger: Allows all of the Windows/MSN Messenger functions to work properly through the router.

FTP: Allows FTP clients and servers to transfer data across NAT. Refer to the **Advanced > Virtual Server** page if you want to host an FTP server.

H.323 (Netmeeting): Allows Microsoft NetMeeting clients to communicate across NAT. Note that if you want your buddies to call you, you should also set up a virtual server for NetMeeting. Refer to the **Advanced > Virtual Server** page for information on how to set up a virtual server.

SIP: Allows devices and applications using VoIP (Voice over IP) to communicate across NAT. Some VoIP applications and devices have the ability to discover NAT devices and work around them. This ALG may interfere with the operation of such devices. If you are having trouble making VoIP calls, try turning this ALG off.

Wake-On-LAN: Allows Ethernet network adapters with Wake-On-LAN (WOL) to function.

MMS: Allows Windows Media Player, using MMS protocol, to receive streaming media from the Internet.

Advanced Wireless Settings

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 2342. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation Threshold: The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.

DTIM Interval: (Delivery Traffic Indication Message) 3 is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

802.11d: 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 Function: WMM is QoS for your wireless network. This will improve the quality of video and voice applications for your wireless clients.

Short GI: 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.

The screenshot shows the D-Link DIR-615 Advanced Wireless Settings page. The page is divided into several sections:

- ADVANCED WIRELESS:** A warning message states: "If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings." Below this are two buttons: "Save Settings" and "Don't Save Settings".
- ADVANCED WIRELESS SETTINGS:** A list of configuration options:
 - Transmit Power: High (dropdown menu)
 - Beacon Period: 100 (text input, range 20..1000)
 - RTS Threshold: 2346 (text input, range 0..2347)
 - Fragmentation Threshold: 2346 (text input, range 256..2346)
 - DTIM Interval: 1 (text input, range 1..255)
 - 802.11d Enable:
 - WMM Enable:
 - Aggregation Limit: 8 Kbytes (dropdown menu)
 - TPC Max Gain: 20 (text input, range 0..50)
 - Aggregation Max Size: 64000 (text input, range 2000..65535)
 - Aggregation Num Packets: 32 (text input, range 1..64)
 - Force Short Slot for 11N Clients:
 - Short GI:
 - Extra Wireless Protection:
- Helpful Hints...:** A sidebar on the right containing:
 - Text: "It is recommended that you leave these parameters at their default values. Adjusting them could limit the performance of your wireless network."
 - Text: "Use 802.11d only for countries where it is required."
 - Text: "Enabling WMM can help control latency and jitter when transmitting multimedia content over a wireless connection."
 - Text: "More..."

Wi-Fi Protected Setup

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.

Lock Wireless Security Settings: Locking the wireless security settings prevents the settings from being changed by the Wi-Fi Protected Setup feature of the router. Devices can still be added to the network using Wi-Fi Protected Setup. However, the settings of the network will not change once this option is checked.

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.

Current PIN: Shows the current value of the router’s PIN.

Reset PIN to

Default: Restore the default PIN of the router.

Generate New PIN: 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.

The screenshot shows the D-Link DIR-615 router's web interface. The top navigation bar includes 'DIR-615', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The main content area is titled 'WI-FI PROTECTED SETUP' and contains the following sections:

- WI-FI PROTECTED SETUP:** A section with a description: "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." Below this are two buttons: "Save Settings" and "Don't Save Settings".
- WI-FI PROTECTED SETUP:** A section with two checkboxes: "Enable : ", "Lock Wireless Security Settings : ".
- PIN SETTINGS (ADMINISTRATOR ACCESS ONLY):** A section showing "Current PIN : 24681353" and two buttons: "Reset PIN to Default" and "Generate New PIN".
- ADD WIRELESS STATION (ADMINISTRATOR ACCESS ONLY):** A section with a button: "Add Wireless Device Wizard".

On the right side of the interface, there is a 'Helpful Hints...' section with the following text:

- Enable if other wireless devices you wish to include in the local network support Wi-Fi Protected Setup.
- Only "Admin" account can change security settings.
- Lock Wireless Security Settings after all wireless network devices have been configured.
- Click Add Wireless Device Wizard to use Wi-Fi Protected Setup to add wireless devices to the wireless network.
- More...

Add Wireless Station: 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.

Add Wireless Device Wizard: Click to add a wireless client to your network. Please refer to page 79 for more informa

Advanced Network Settings

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

WAN Ping: Unchecking the box will not allow the DIR-615 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.

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

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

ADVANCED NETWORK

If you are not familiar with these Advanced Network settings, please read the help section before attempting to modify these settings.

Save Settings Don't Save Settings

UPNP

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

Enable UPnP :

WAN PING

If you enable this feature, the WAN port of your router will respond to ping requests from the Internet that are sent to the WAN IP Address.

Enable WAN Ping Respond :

WAN Ping Inbound Filter : Allow All

Details : Allow All

WAN PORT SPEED

WAN Port Speed : Auto 10/100Mbps

MULTICAST STREAMS

Enable Multicast Streams :

WIRELESS

Helpful Hints...

UPnP helps other UPnP LAN hosts interoperate with the router. Leave the UPnP option enabled as long as the LAN has other UPnP applications.

For added security, it is recommended that you disable the WAN Ping Respond option. Ping is often used by malicious Internet users to locate active networks or PCs.

The WAN speed is usually detected automatically. If you are having problems connecting to the WAN, try selecting the speed manually.

If you are having trouble receiving multicast streams from the Internet, make sure the Multicast Streams option is enabled.

[More...](#)

Administrator Settings

This page will allow you to change the Administrator and User passwords. You can also enable Remote Management. There are two accounts that can access the management interface through the web browser. The accounts are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes. Only the admin account has the ability to change both admin and user account passwords.

Admin Password: Enter a new password for the Administrator Login Name. The administrator can make changes to the settings.

User Password: Enter the new password for the User login. If you login as the User, you can only see the settings, but cannot change them.

Gateway Name: Enter a name for the DIR-615 router.

Remote Management: Remote management allows the DIR-615 to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.

Remote Admin Port: The port number used to access the DIR-615. Example: `http://x.x.x.x:8080` whereas x.x.x.x is the Internet IP address of the DIR-615 and 8080 is the port used for the Web Management interface.

Inbound Filter: This section will list any rules that are created. You may click the **Edit** icon to change the settings or enable/disable the rule, or click the **Delete** icon to remove the rule.

The screenshot shows the D-Link DIR-615 web management interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The main content area is titled "ADMINISTRATOR SETTINGS" and contains the following sections:

- ADMINISTRATOR SETTINGS:** A text box explaining that the 'admin' and 'user' accounts can access the management interface. The admin has read/write access and can change passwords, while the user has read-only access. Below this is a note: "By default there is no password configured. It is highly recommended that you create a password to keep your router secure." There are two buttons: "Save Settings" and "Don't Save Settings".
- ADMIN PASSWORD:** A section titled "Please enter the same password into both boxes, for confirmation." It contains two input fields: "Password:" and "Verify Password:".
- USER PASSWORD:** A section titled "Please enter the same password into both boxes, for confirmation." It contains two input fields: "Password:" and "Verify Password:".
- SYSTEM NAME:** A section with a label "Gateway Name:" and an input field containing "D-Link DIR-625".
- ADMINISTRATION:** A section with the following options:
 - Enable Remote Management:** A checkbox that is currently unchecked.
 - Remote Admin Port:** An input field containing "8080".
 - Remote Admin Inbound Filter:** A dropdown menu set to "Allow All".
 - Details:** A text box containing "Everyone allowed".

On the right side of the interface, there is a "Helpful Hints..." section with the following text:

For security reasons, it is recommended that you change the password for the Admin and User accounts. Be sure to write down the new and passwords to avoid having to reset the router in case they are forgotten.

Enabling Remote Management, allows you or others to change the router configuration from a computer on the Internet.

Choose a port to open for remote management.

Select a filter that controls access as needed for this admin port. If you do not see the filter you need in the list of filters, go to the **Advanced** → **Inbound Filter** screen and create a new filter.

More...

Time Settings

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

Time Zone: Select the Time Zone from the drop-down menu.

Daylight Saving: To select Daylight Saving time manually, select enabled or disabled, and enter a start date and an end date for daylight saving time.

Enable NTP Server: NTP is short for Network Time Protocol. NTP synchronizes computer clock times in a network of computers. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.

NTP Server Used: Enter the NTP server or select one from the drop-down menu.

Manual: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click **Set Time**. You can also click **Copy Your Computer's Time Settings**.

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DIR-615 // SETUP ADVANCED **TOOLS** STATUS SUPPORT

ADMIN
TIME
SYSLOG
EMAIL SETTINGS
SYSTEM
FIRMWARE
DYNAMIC DNS
SYSTEM CHECK
SCHEDULES

TIME

Time Configuration

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

Save Settings Don't Save Settings

TIME CONFIGURATION

Current Router Time : Saturday, January 31, 2004 2:50:54 PM
Time Zone : (GMT-08:00) Pacific Time (US/Canada), Tijuana

Enable Daylight Saving :

Daylight Saving Offset : +1:00

Daylight Saving Dates :

| | Month | Week | Day of Week | Time |
|-----------|-------|------|-------------|------|
| DST Start | Apr | 1st | Sun | 2 am |
| DST End | Oct | 5th | Sun | 2 am |

AUTOMATIC TIME CONFIGURATION

Enable NTP Server :

NTP Server Used : << Select NTP Server

SET THE DATE AND TIME MANUALLY

Date And Time :

| | | | | | |
|------|------|--------|-----|--------|----|
| Year | 2004 | Month | Jan | Day | 31 |
| Hour | 2 | Minute | 50 | Second | 45 |
| | | | | | PM |

Copy Your Computer's Time Settings

Helpful Hints...
Good timekeeping is important for accurate logs and scheduled firewall rules.
More...

WIRELESS

SysLog

The Broadband Router keeps a running log of events and activities occurring on the Router. You may send these logs to a SysLog server on your network.

Enable Logging to SysLog Server: Check this box to send the router logs to a SysLog Server.

SysLog Server IP Address: The address of the SysLog server that will be used to send the logs. You may also select your computer from the drop-down menu (only if receiving an IP address from the router via DHCP).

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes 'DIR-615', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists menu items: ADMIN, TIME, SYSLOG (selected), EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'SYSLOG' and contains the following text: 'The SysLog options allow you to send log information to a SysLog Server.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'SYSLOG SETTINGS' section includes:

- Enable Logging To Syslog Server :**
- Syslog Server IP Address :** 0.0.0.0 << Computer Name

 A 'Helpful Hints...' section on the right explains that a System Logger (syslog) is a server that collects logs from different sources and that the LAN includes a syslog server option to send router logs to that server. A 'More...' link is also present.

E-mail Settings

The Email feature can be used to send the system log files, router alert messages, and firmware update notification to your e-mail address.

Enable Email Notification: When this option is enabled, router activity logs are e-mailed to a designated e-mail address.

From Email Address: This e-mail address will appear as the sender when you receive a log file or firmware upgrade notification via e-mail.

To Email Address: Enter the e-mail address where you want the e-mail sent.

SMTP Server Address: Enter the SMTP server address for sending e-mail. If your SMTP server requires authentication, select this option.

Enable Authentication: Check this box if your SMTP server requires authentication.

Account Name: Enter your account for sending e-mail.

Password: Enter the password associated with the account. Re-type the password associated with the account.

On Log Full: When this option is selected, logs will be sent via e-mail when the log is full.

On Schedule: Selecting this option will send the logs via e-mail according to schedule.

Schedule: This option is enabled when On Schedule is selected. You can select a schedule from the list of defined schedules. To create a schedule, go to **Tools > Schedules**.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists various configuration options: ADMIN, TIME, SYSLOG, EMAIL SETTINGS (selected), SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'EMAIL SETTINGS' and contains the following sections:

- EMAIL SETTINGS:** A header section with a description: "The Email feature can be used to send the system log files, router alert messages, and firmware update notification to your email address." Below this are two buttons: "Save Settings" and "Don't Save Settings".
- ENABLE:** A section with the option "Enable Email Notification" checked with a green box.
- EMAIL SETTINGS:** A section with several input fields:
 - From Email Address: [text input]
 - To Email Address: [text input]
 - SMTP Server Address: [text input]
 - Enable Authentication:
 - Account Name: [text input]
 - Password: [text input]
 - Verify Password: [text input]
- EMAIL LOG WHEN FULL OR ON SCHEDULE:** A section with three options:
 - On Log Full:
 - On Schedule:
 - Schedule: [dropdown menu showing "Never"]
 Below the dropdown is a "Details" link and a text input field containing "Never".

The bottom of the page features a "WIRELESS" section header.

System Settings

Save Settings to Local Hard Drive: Use this option to save the current router configuration settings to a file on the hard disk of the computer you are using. First, click the **Save** button. You will then see a file dialog, where you can select a location and file name for the settings.

Load Settings from Local Hard Drive: Use this option to load previously saved router configuration settings. First, use the Browse control to find a previously save file of configuration settings. Then, click the **Load** button to transfer those settings to the router.

Restore to Factory Default Settings: This option will restore all configuration settings back to the settings that were in effect at the time the router was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current router configuration settings, use the **Save** button above.

Reboot Device: Click to reboot the router.

D-Link

DIR-615 // SETUP ADVANCED **TOOLS** STATUS SUPPORT

SYSTEM SETTINGS

The System Settings section allows you to reboot the device, or restore the router to the factory default settings. Restoring the unit to the factory default settings will erase all settings, including any rules that you have created.

The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file created by device can be uploaded into the unit.

SYSTEM SETTINGS

Save To Local Hard Drive:

Load From Local Hard Drive:

Restore To Factory Default:
 Restore all settings to the factory defaults.

Reboot The Device:

Helpful Hints...

Once your router is configured the way you want it, you can save the configuration settings to a configuration file.

You might need this file so that you can load your configuration later in the event that the router's default settings are restored.

To save the configuration, click the **Save Configuration** button.

[More...](#)

WIRELESS

Update Firmware

You can upgrade the firmware of the Router here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on **Browse** to locate the firmware file to be used for the update. Please check the D-Link support site for firmware updates at <http://support.dlink.com>. You can download firmware upgrades to your hard drive from the D-Link support site.

Firmware Upgrade: Click on **Check Online Now for Latest Firmware Version** to find out if there is an updated firmware; if so, download the new firmware to your hard drive.

Browse: After you have downloaded the new firmware, click **Browse** to locate the firmware update on your hard drive. Click **Upload** to complete the firmware upgrade.

Notifications Options: Check **Automatically Check Online for Latest Firmware Version** to have the router check automatically to see if there is a new firmware upgrade.

Check **Email Notification of Newer Firmware Version** to have the router send an e-mail when there is a new firmware available.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options, with FIRMWARE selected. The main content area is titled 'FIRMWARE' and contains the following sections:

- FIRMWARE:** A message stating that the Firmware Upgrade section can be used to update to the latest firmware code to improve functionality and performance. It also offers an option to be notified when new firmware is released, with 'Save Settings' and 'Don't Save Settings' buttons.
- FIRMWARE INFORMATION:** Displays the current firmware version (2.20), current firmware date (2007/05/15), and the latest firmware version (2.20). A link is provided to access firmware online.
- FIRMWARE UPGRADE:** Includes a note that some firmware upgrades reset configuration options to factory defaults. It instructs users to save their current configuration from the Tools -> System screen. Below this, it states that a wired connection to the router is required for the upgrade and provides an 'Upload' button with a 'Browse...' button to select the firmware file.
- FIRMWARE UPGRADE NOTIFICATION OPTIONS:** Contains two checkboxes: 'Automatically Check Online for Latest Firmware Version' (checked) and 'Email Notification of Newer Firmware Version' (unchecked).

The bottom of the interface features a 'WIRELESS' tab.

DDNS

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 in your domain name to connect to your server no matter what your IP address is.

DDNS: Dynamic Domain Name System is a method of keeping a domain name linked to a changing IP Address. Check the box to enable DDNS.

Server Address: Choose your DDNS provider from the drop down menu.

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

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

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

Timeout: Enter a time (in hours).

Status: Displays the current connection status to your DDNS server.

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

DYNAMIC DNS

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.

Sign up for D-Link's Free DDNS service at www.DLinkDDNS.com.

Save Settings Don't Save Settings

DYNAMIC DNS

Enable Dynamic DNS:

Server Address: << Select Dynamic DNS Server

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

Username or Key:

Password or Key:

Verify Password or Key:

Timeout: 576 (hours)

Status: Disconnect

Helpful Hints...
To use this feature, you must first have a Dynamic DNS account from one of the providers in the drop down menu.
More...

WIRELESS

System Check

Ping Test: The Ping Test is used to send Ping packets to test if a computer is on the Internet. Enter the IP Address that you wish to Ping, and click **Ping**.

Ping Results: The results of your ping attempts will be displayed here.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options, with SYSTEM CHECK highlighted. The main content area is titled 'PING TEST' and contains the following text: 'Ping Test sends "ping" packets to test a computer on the Internet.' Below this is a form with a label 'Host Name or IP Address :', an input field, and 'Ping' and 'Stop' buttons. A 'PING RESULT' section below the form contains the instruction: 'Enter a host name or IP address above and click 'Ping''. On the right side, there is a 'Helpful Hints...' section with text explaining the ping function and a 'More...' link. The bottom of the interface features a 'WIRELESS' section.

Schedules

Name: Enter a name for your new schedule.

Days: Select a day, a range of days, or All Week to include every day.

Time: Check **All Day - 24hrs** or enter a start and end time for your schedule.

Save: Click **Save** to save your schedule. You must click Save Settings at the top for your schedules to go into effect.

Schedule Rules The list of schedules will be listed here. Click the **Edit** icon to make changes or click the **Delete** icon to remove the schedule.

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

SCHEDULES

The Schedule configuration option is used to manage schedule rules for various firewall and parental control features.

Save Settings Don't Save Settings

ADD SCHEDULE RULE

Name:

Day(s): All Week Select Day(s)

Sun Mon Tue Wed Thu Fri Sat

All Day - 24 hrs:

Start Time: 0 : 0 AM (hour:minute, 12 hour time)

End Time: 0 : 0 AM (hour:minute, 12 hour time)

Save Clear

SCHEDULE RULES LIST

| Name | Day(s) | Time Frame |
|------|--------|------------|
| | | |

Helpful Hints...

Schedules are used with a number of other features to define when those features are in effect.

Give each schedule a name that is meaningful to you. For example, a schedule for Monday through Friday from 3:00pm to 9:00pm, might be called "After School".

Click **Save** to add a completed schedule to the list below.

Click the **Edit** icon to change an existing schedule.

Click the **Delete** icon to permanently delete a schedule.

More...

WIRELESS

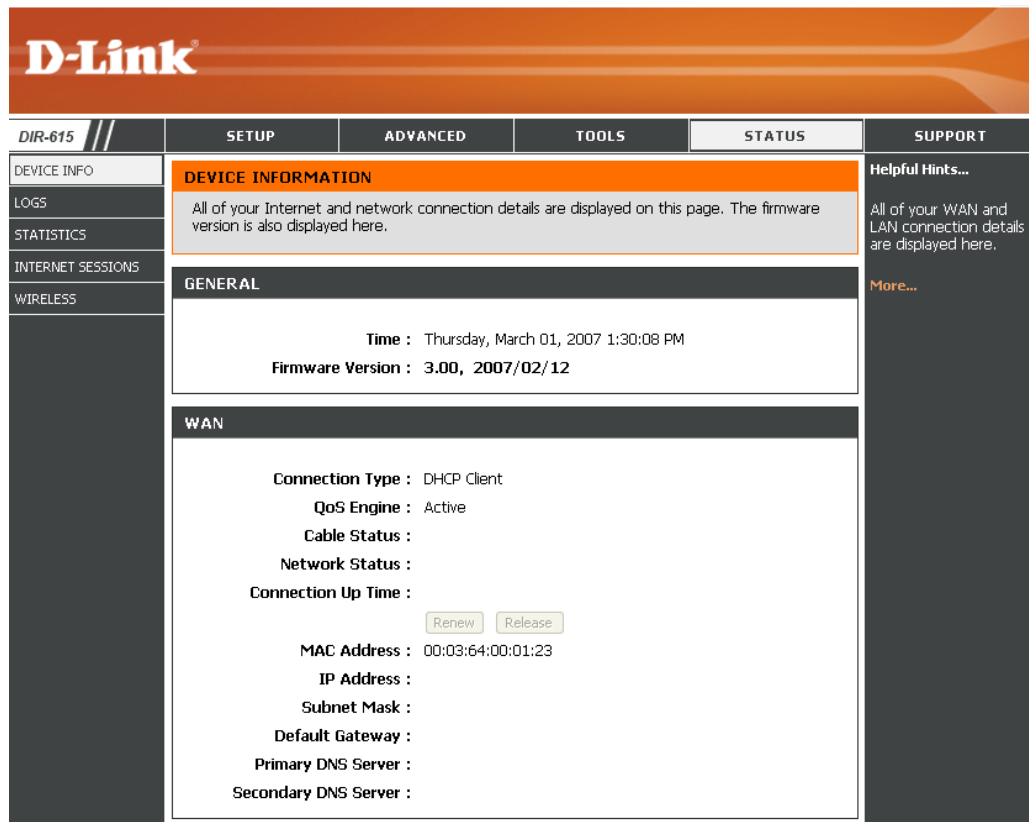
Device Information

This page displays the current information for the DIR-615. It will display the LAN, WAN (Internet), and Wireless information.

If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

If your Internet connection is set up for PPPoE, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection.

See the following page for more information.



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DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

DEVICE INFORMATION

All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here.

Helpful Hints...

All of your WAN and LAN connection details are displayed here.

More...

GENERAL

Time : Thursday, March 01, 2007 1:30:08 PM
Firmware Version : 3.00, 2007/02/12

WAN

Connection Type : DHCP Client
QoS Engine : Active
Cable Status :
Network Status :
Connection Up Time :
Renew Release
MAC Address : 00:03:64:00:01:23
IP Address :
Subnet Mask :
Default Gateway :
Primary DNS Server :
Secondary DNS Server :

General: Displays the router's time and firmware version.

WAN: Displays the MAC address and the public IP settings for the router.

LAN: Displays the MAC address and the private (local) IP settings for the router.

Wireless LAN: Displays the wireless MAC address and your wireless settings such as SSID and Channel.

LAN Computers: Displays computers and devices that are connected to the router via Ethernet and that are receiving an IP address assigned by the router (DHCP).

IGMP Multicast Memberships:

Displays the Multicast Group IP Address.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists menu items: DEVICE INFO, LOGS, STATISTICS, INTERNET SESSIONS, and WIRELESS. The main content area is titled 'DEVICE INFORMATION' and contains the following sections:

- GENERAL:**
 - Time : Thursday, March 01, 2007 1:30:08 PM
 - Firmware Version : 2.00, 2007/02/12
- WAN:**
 - Connection Type : DHCP Client
 - Cable Status :
 - Network Status :
 - Connection Up Time :
 - MAC Address : 00:03:64:00:01:23
 - IP Address :
 - Subnet Mask :
 - Default Gateway :
 - Primary DNS Server :
 - Secondary DNS Server :
- LAN:**
 - MAC Address : 00:03:64:00:01:24
 - IP Address : 192.168.0.1
 - Subnet Mask : 255.255.255.0
 - DHCP Server :
- WIRELESS LAN:**
 - MAC Address : 00:40:F4:FF:E8:1B
 - Network Name (SSID) : dlink
 - Channel : 4
 - Security Mode : Disabled
 - Wi-Fi Protected Setup : Enabled/Not Configured
- LAN COMPUTERS:**

| IP Address | Name (if any) | MAC |
|---------------|---------------|-------------------|
| 192.168.0.100 | PMLab-6 | 00:16:17:44:4a:d9 |
- IGMP MULTICAST MEMBERSHIPS:**
 - Multicast Group Address
 - 224.0.0.252
 - 239.255.255.250

The right sidebar contains 'Helpful Hints...' and 'More...' links.

Log

The router automatically logs (records) events of possible interest in its internal memory. If there isn't enough internal memory for all events, logs of older events are deleted but logs of the latest events are retained. The Logs option allows you to view the router logs. You can define what types of events you want to view and the level of the events to view. This router also has external Syslog Server support so you can send the log files to a computer on your network that is running a Syslog utility.

What to View: You can select the types of messages that you want to display from the log. Firewall & Security, System, and Router Status messages can be selected.

View Levels: There are three levels of message importance: Informational, Warning, and Critical. Select the levels that you want displayed in the log.

Apply Log Settings: Will filter the log results so that only the selected options appear.

Refresh: Updates the log details on the screen so it displays any recent activity.

Clear: Clears all of the log contents.

Email Now: This option will send a copy of the router log to the e-mail address configured in the **Tools > Email Settings** screen.

Save Log: This option will save the router to a log file on your computer.

D-Link

DIR-615

SETUP ADVANCED TOOLS STATUS SUPPORT

DEVICE INFO

LOGS

STATISTICS

INTERNET SESSIONS

WIRELESS

LOGS

System Logs

Use this option to view the router logs. You can define what types of events you want to view and the event levels to view. This router also has external syslog server support so you can send the log files to a computer on your network that is running a syslog utility.

LOG OPTIONS

What to View : Firewall & Security System Router Status

View Levels : Critical Warning Informational

Apply Log Settings Now

LOG DETAILS

Refresh Clear Email Now Save Log

[INFO] Thu Mar 01 13:35:51 2007 Log viewed by IP address 192.152.81.216
 [INFO] Thu Mar 01 13:33:49 2007 Blocked incoming TCP connection request from 67.129.235.161:1363 to 67.130.140.145:1433
 [INFO] Thu Mar 01 13:33:46 2007 Previous message repeated 1 time
 [INFO] Thu Mar 01 13:32:43 2007 Blocked incoming TCP connection request from 67.129.235.161:2097 to 67.130.140.145:5900
 [INFO] Thu Mar 01 13:32:40 2007 Previous message repeated 1 time
 [INFO] Thu Mar 01 13:32:27 2007 Blocked incoming TCP connection request from 67.129.235.161:1701 to 67.130.140.145:135
 [INFO] Thu Mar 01 13:32:25 2007 Previous message repeated 1 time
 [INFO] Thu Mar 01 13:29:13 2007 Blocked incoming ICMP packet (ICMP type 8) from 84.112.37.99 to 67.130.140.145
 [INFO] Thu Mar 01 13:29:11 2007 Previous message repeated 1 time
 [INFO] Thu Mar 01 13:20:16 2007 Stored configuration to non-volatile memory
 [INFO] Thu Mar 01 13:20:12 2007 Policy Example 1 started; Internet access for IP address 192.168.0.100 changed to: Allowed, Web Sites - Restricted, Logged, Ports - Restricted
 [INFO] Thu Mar 01 13:20:12 2007 Internet access for IP address 192.168.0.100 set to: Allowed, Web Sites - None Blocked, Ports - None Blocked
 [INFO] Thu Mar 01 13:20:12 2007 One or more Internet access policies are in effect. Internet access will be restricted according to these policies
 [INFO] Thu Mar 01 13:09:15 2007 Blocked incoming ICMP packet (ICMP type 8) from 200.92.202.36 to 67.130.140.145
 [INFO] Thu Mar 01 13:09:13 2007 Previous message repeated 1 time
 [INFO] Thu Mar 01 13:07:13 2007 Allowed configuration authentication by IP address 192.152.81.216
 [INFO] Thu Mar 01 13:04:12 2007 Administrator logout

Helpful Hints...

Check the log frequently to detect unauthorized network usage.

You can also have the log mailed to you periodically. Refer to [Tools -> EMail](#).

[More...](#)

Stats

The screen below displays the Traffic Statistics. Here you can view the amount of packets that pass through the DIR-615 on both the Internet and the LAN ports. The traffic counter will reset if the device is rebooted.

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

DEVICE INFO
LOGS
STATISTICS
INTERNET SESSIONS
WIRELESS

TRAFFIC STATISTICS

Network Traffic Stats

Traffic Statistics display Receive and Transmit packets passing through your router.

Refresh Statistics Clear Statistics

LAN STATISTICS

| | |
|------------------------|------------------------|
| Sent : 36459 | Received : 22978 |
| TX Packets Dropped : 0 | RX Packets Dropped : 0 |
| Collisions : 0 | Errors : 0 |

WAN STATISTICS

| | |
|------------------------|------------------------|
| Sent : 19151 | Received : 31483 |
| TX Packets Dropped : 0 | RX Packets Dropped : 0 |
| Collisions : 0 | Errors : 0 |

WIRELESS STATISTICS

| | |
|------------------------|------------------|
| Sent : 10330 | Received : 25649 |
| TX Packets Dropped : 0 | Errors : 0 |

Helpful Hints...
This is a summary of the number of packets that have passed between the WAN and the LAN since the router was last initialized.
More...

WIRELESS

Internet Sessions

The Internet Sessions page displays full details of active Internet sessions through your router. An Internet session is a conversation between a program or application on a LAN-side computer and a program or application on a WAN-side computer.

Local: The IP address and, where appropriate, port number of the local application.

NAT: The port number of the LAN-side application as viewed by the WAN-side application.

Internet: The IP address and, where appropriate, port number of the application on the Internet.

The communications protocol used for the conversation.

Protocol:

State: State for sessions that use the TCP protocol:

NO: None -- This entry is used as a placeholder for a future connection that may occur.

SS: SYN Sent -- One of the systems is attempting to start a connection.

EST: Established -- the connection is passing data.

FW: FIN Wait -- The client system has requested that the connection be stopped.

CW: Close Wait -- The server system has requested that the connection be stopped.

TW: Time Wait -- Waiting for a short time while a connection that was in FIN Wait is fully closed.

LA: Last ACK -- Waiting for a short time while a connection that was in Close Wait is fully closed.

CL: Closed -- The connection is no longer active but the session is being tracked in case there are any retransmitted packets still pending.

The direction of initiation of the conversation:

Out - Initiated from LAN to WAN.

In - Initiated from WAN to LAN.

Product Page: DIR-625 Hardware Version: C1 Firmware Version: 3.00

D-Link

DIR-615 // SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET SESSIONS

This page displays the full details of active internet sessions to your router.

| Local | NAT | Internet | Protocol | State | Dir | Priority | Time Out |
|-------------------|------|---------------------|----------|-------|-----|----------|----------|
| 192.168.0.1:80 | 8080 | 192.152.81.222:1774 | TCP | EST | In | 196 | 7800 |
| 192.168.0.1:80 | 8080 | 192.152.81.222:1773 | TCP | EST | In | 255 | 7800 |
| 192.168.0.1:80 | 8080 | 192.152.81.222:1772 | TCP | CL | In | 169 | 225 |
| 192.168.0.1:80 | 8080 | 192.152.81.222:1771 | TCP | CL | In | 169 | 223 |
| 192.168.0.1:80 | 8080 | 192.152.81.222:1770 | TCP | CL | In | 169 | 231 |
| 67.130.140.145:68 | 68 | 67.130.140.152:67 | UDP | - | Out | 137 | 227 |
| 192.168.0.1:80 | 8080 | 192.152.81.222:1769 | TCP | CL | In | 169 | 198 |
| 192.168.0.1:80 | 8080 | 192.152.81.222:1768 | TCP | CL | In | 169 | 174 |

Helpful Hints...
This is a list of all active conversations between WAN computers and LAN computers.
[More...](#)

Dir: The preference given to outbound packets of this conversation by the QoS Engine logic. Smaller numbers represent higher priority.

Priority: The number of seconds of idle time until the router considers the session terminated. The initial value of Time Out depends on the type and state of the connection.

Time Out:

- 300 seconds** - UDP connections.
- 240 seconds** - Reset or closed TCP connections. The connection does not close instantly so that lingering packets can pass or the connection can be re-established.
- 7800 seconds** - Established or closing TCP connections.

Wireless

The wireless client table displays a list of current connected wireless clients. This table also displays the connection time and MAC address of the connected wireless clients.

The screenshot shows the D-Link DIR-615 web interface. The top navigation bar includes 'DIR-615', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'WIRELESS' menu item is selected in the left sidebar. The main content area displays the 'Associated Wireless Client List' with a table of one client. A 'Helpful Hints...' section on the right explains that the list shows currently connected wireless clients.

| D-Link | | | | | | | | | | | | | | |
|-------------------|--|----------|-------|------------|--|-------------|------------|------|------|------------|--------------|---------------|-----|----|
| DIR-615 | SETUP | ADVANCED | TOOLS | STATUS | SUPPORT | | | | | | | | | |
| DEVICE INFO | WIRELESS | | | | Helpful Hints... This is a list of all wireless clients that are currently connected to your wireless router. More... | | | | | | | | | |
| LOGS | Associated Wireless Client List | | | | | | | | | | | | | |
| STATISTICS | Use this option to view the wireless clients that are connected to your wireless router. | | | | | | | | | | | | | |
| INTERNET SESSIONS | NUMBER OF WIRELESS CLIENTS : 1 | | | | | | | | | | | | | |
| WIRELESS | <table border="1"> <thead> <tr> <th>MAC Address</th> <th>IP Address</th> <th>Mode</th> <th>Rate</th> <th>Signal (%)</th> </tr> </thead> <tbody> <tr> <td>0015E9F98114</td> <td>192.168.0.111</td> <td>11g</td> <td>54</td> <td>80</td> </tr> </tbody> </table> | | | | | MAC Address | IP Address | Mode | Rate | Signal (%) | 0015E9F98114 | 192.168.0.111 | 11g | 54 |
| MAC Address | IP Address | Mode | Rate | Signal (%) | | | | | | | | | | |
| 0015E9F98114 | 192.168.0.111 | 11g | 54 | 80 | | | | | | | | | | |
| WIRELESS | | | | | | | | | | | | | | |

Support

D-Link

DIR-615 // **SETUP** **ADVANCED** **TOOLS** **STATUS** **SUPPORT**

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ADVANCED HELP

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STATUS HELP

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WIRELESS

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-615 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WEP (Wired Equivalent Privacy)
- WPA2-PSK(Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

What is WEP?

WEP stands for *Wired Equivalent Privacy*. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. This key must be the exact same key entered on your wireless router or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

Wireless Security Setup Wizard

To run the security wizard, browse to the Setup page and then click the **Launch Wireless Security Setup Wizard**

The screenshot shows the D-Link DIR-615 web interface. At the top is the D-Link logo. Below it is a navigation menu with tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The SETUP tab is selected, and the WIRELESS SETTINGS section is active. The main content area is divided into three sections, each with a button to launch a wizard:

- WIRELESS SETTINGS:** Contains introductory text about web-based wizards and a link to the Quick Installation Guide.
- ADD WIRELESS DEVICE WIZARD:** Explains that this wizard guides users through connecting a wireless device to the router. A button labeled "Add Wireless Device Wizard" is provided.
- WIRELESS NETWORK SETUP WIZARD:** Explains that this wizard guides users through setting up and securing their wireless network. A button labeled "Wireless Network Setup Wizard" is provided. A note below states: "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."
- MANUAL WIRELESS NETWORK SETUP:** Explains that manual configuration will destroy an existing network. A button labeled "Manual Wireless Network Setup" is provided.

On the right side of the interface, there is a "Helpful Hints..." section with three paragraphs of advice for users with existing networks, new users, and advanced users. A "More..." link is located at the bottom of this section.

Auto: Select to auto generate your wireless security settings. This option can be used when using a wireless adapter that supports Wi-Fi Protected Setup.

Manual: Select this option to run the wireless setup wizard which will guide you to configure your wireless settings. Skip to page 73.

PLEASE SELECT CONFIGURATION METHOD TO SET UP YOUR WIRELESS NETWORK

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

Manual Select this option if you want to setup your network manually

Prev Next Cancel Save

Wireless Wizard - Auto

The router has automatically generated your wireless settings. Please write down and keep this information for your reference. Click **Save**.

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) : DIR-615_c2000000

Security Mode : Auto (WPA or WPA2) - Personal

Cipher Type : TKIP and AES

Pre-Shared Key : 8f4e19459525a5e93a8d45e40a309d873259b353316566636c8062a6997eb6cc

Prev Next Cancel Save

Click **Next** to continue.

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

Select the level of security for your wireless network:

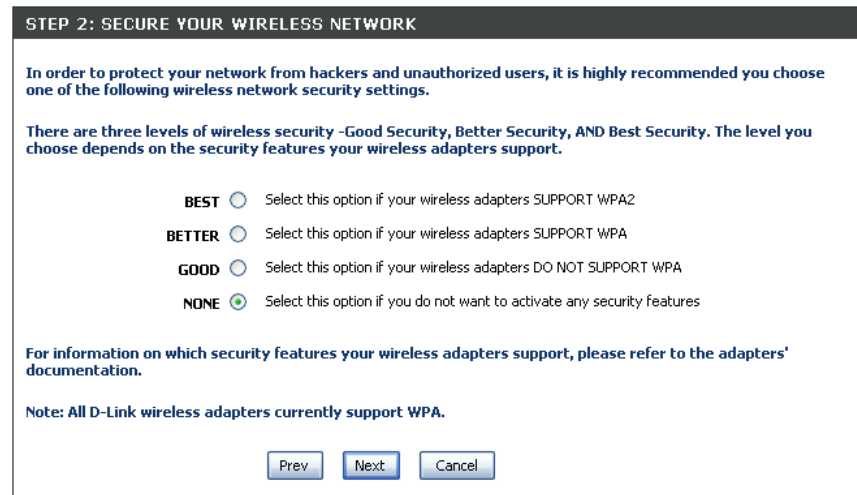
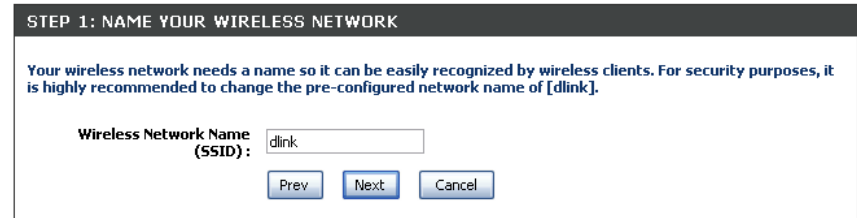
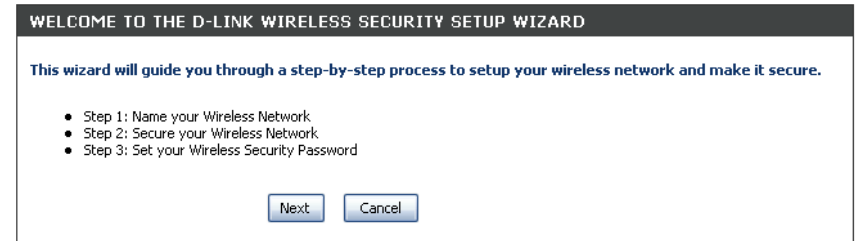
- Best - WPA2 Authentication
- Better - WPA Authentication
- Good - WEP Encryption
- None - No security

Click **Next** to continue.

If you selected Best or Better, enter a password between 8-63 characters.

If you selected Good, enter 13 characters or 26 Hex digits.

Click **Next** to continue.



If you selected Good, the following screen will show you your WEP key to enter on your wireless clients.

Click **Save** to finish the Security Wizard.

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): dlink
Wep Key Length: 128 bits
Default WEP Key to Use: 1
Authentication: Open
Wep Key: 41AC3 DB525 1F8A8 D87AC B1B0F D

If you selected Better, the following screen will show you your Pre-Shared Key to enter on your wireless clients.

Click **Save** to finish the Security Wizard.

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): dlink
Encryption: WPA-PSK/TKIP (also known as WPA Personal)
Pre-Shared Key: password1M2Z

If you selected Best, the following screen will show you your Pre-Shared Key to enter on your wireless clients.

Click **Save** to finish the Security Wizard.

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): dlink
Encryption: WPA2-PSK/AES (also known as WPA2 Personal)
Pre-Shared Key: password

If you selected WPA-Enterprise, the RADIUS information will be displayed. Click **Save** to finish the Security Wizard.

Configure WEP

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **WEP**.
3. Next to *WEP Key Length*, select the level of encryption (64 or 128-bit).
Hex - (recommended) Letters A-F and numbers 0-9 are valid.
4. Next to *WEP Key 1*, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys.
5. Next to *Authentication*, select **Shared Key**.
6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the router.

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 WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode :

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.

If you choose the WEP security option this device will **ONLY** operate in **Legacy Wireless mode (802.11B/G)**. This means you will **NOT** get 11N performance due to the fact that WEP is not supported by Draft 11N specification.

WEP Key Length : (length applies to all keys)

WEP Key 1 :

WEP Key 2 :

WEP Key 3 :

WEP Key 4 :

Default WEP Key :

Authentication :

Configure WPA-Personal (PSK)

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **WPA-Personal**.
3. Next to *WPA Mode*, select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
4. Next to *Cypher Type*, select **TKIP and AES**, **TKIP**, or **AES**. If you have wireless clients that use both types, use **TKIP and AES**.
5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
6. Next to *Pre-Shared Key*, enter a key (passphrase). The key is entered as a pass-phrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.
7. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the router.

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 WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS 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 : ▼

Cipher Type : ▼

Group Key Update Interval : (seconds)

PRE-SHARED KEY

Enter an 8- to 63-character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase.

Pre-Shared Key :

Configure WPA-Enterprise (RADIUS)

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **WPA-Enterprise**.
3. Next to *WPA Mode*, select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
4. Next to *Cypher Type*, select **TKIP and AES**, **TKIP**, or **AES**. If you have wireless clients that use both types, use **TKIP and AES**.
5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
6. Next to *Authentication Timeout*, enter the amount of time before a client is required to re-authenticate (60 minutes is default).
7. Next to *RADIUS Server IP Address* enter the IP Address of your RADIUS server.
8. Next to *RADIUS Server Port*, enter the port you are using with your RADIUS server. 1812 is the default port.
9. Next to *RADIUS Server Shared Secret*, enter the security key.

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 WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS 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)

EAP (802.1X)

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout: (minutes)

RADIUS server IP Address:

RADIUS server Port:

RADIUS server Shared Secret:

MAC Address Authentication:

10. If the *MAC Address Authentication* box is selected then the user will need to connect from the same computer whenever logging into the wireless network.
11. Click **Advanced** to enter settings for a secondary RADIUS Server.
12. Click **Apply Settings** to save your settings.

EAP (802.1X)

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout : (minutes)

RADIUS server IP Address :

RADIUS server Port :

RADIUS server Shared Secret :

MAC Address Authentication :

Optional backup RADIUS server:

Second RADIUS server IP Address :

Second RADIUS server Port :

Second RADIUS server Shared Secret :

Second MAC Address Authentication :

Connect to a Wireless Network

Add Wireless Device Wizard

This feature allows you to add any wireless devices that support Wi-Fi Protected Setup (WPS).

Click **Next**.



Select the method you would like to use for adding a new wireless device onto your wireless network.



PIN: PIN requires you to enter your wireless device's PIN information.

Enter the wireless device's PIN information in the box and click on **Connect**.

STEP 2: CONNECT YOUR WIRELESS DEVICE

Please enter the PIN of your wireless device, then click on the Connect button below.

Wireless Device PIN :

Prev Next Cancel Connect

Push Button: Push button allows you to connect a wireless device onto your wireless network through button press method.

Click on **Connect** button when you are ready.

STEP 2: CONNECT YOUR WIRELESS DEVICE

Please push button on your wireless device, then click on the Connect button below.

Prev Next Cancel Connect

To successfully add a new wireless device, you would have to enter either the PIN information or the button must be pressed within 120 seconds.

STEP 2: CONNECT YOUR WIRELESS DEVICE

Please wait 118 seconds for your wireless device to be connected. If you want to stop the process, click on the Cancel button below.

Adding wireless device: Started.

Prev Next Cancel Wireless Status

Manual: Use this option if you uncertain if your wireless device support WPS, it will display your current wireless settings.

STEP 2: CONNECT YOUR WIRELESS DEVICE

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.

SSID: DIR_9a000000
Security Mode: Auto (WPA or WPA2) - Personal
Cipher Type: TKIP and AES
Pre-shared Key: b4ce49981a226d070017049bd3e1c3cfdb4607f3129a98f367e1413588b00d67

Prev Next Cancel Wireless Status

Using Windows® XP

Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility or Windows® 2000, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows® XP utility as seen below.

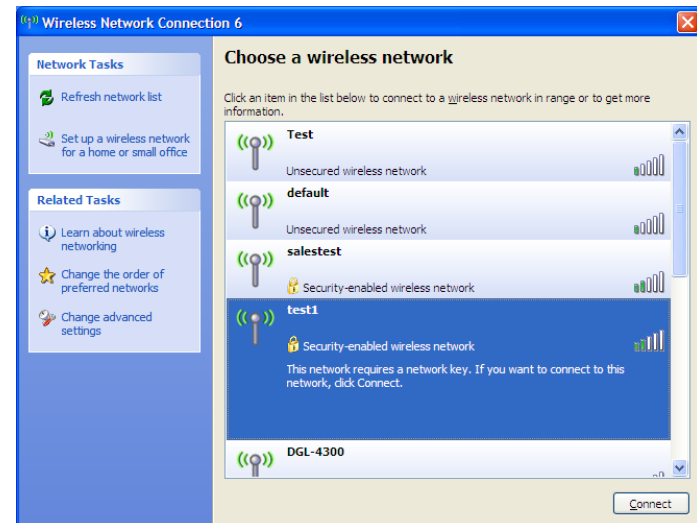
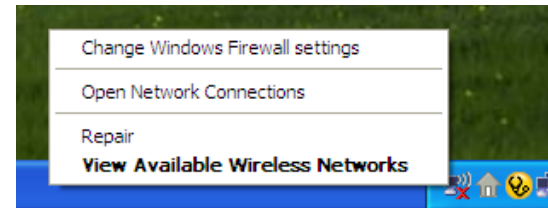
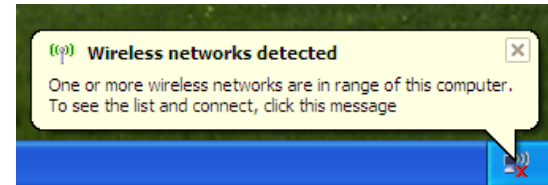
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.

The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

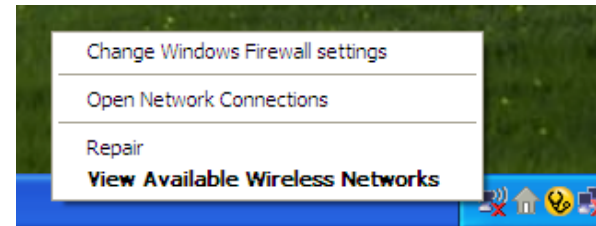
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



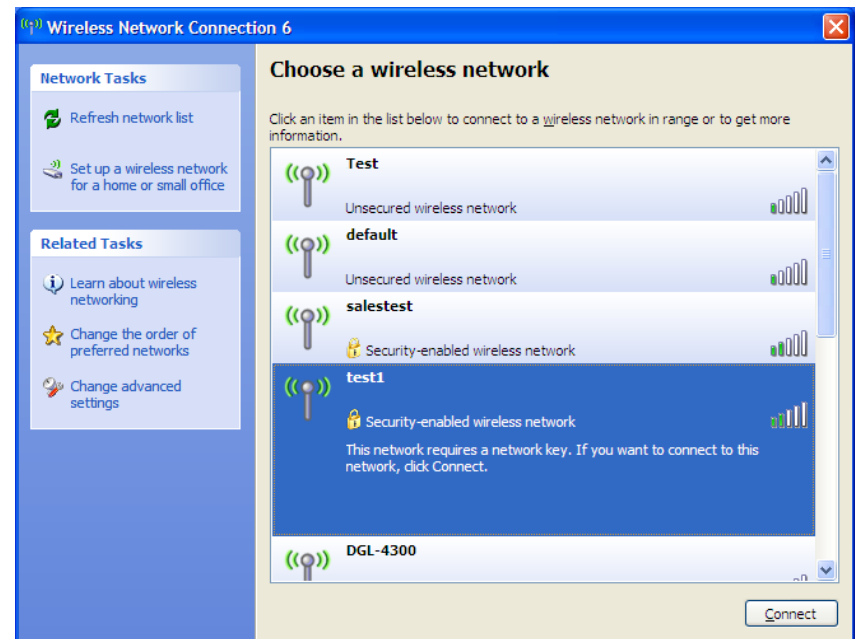
Configure WEP

It is recommended to enable WEP on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.

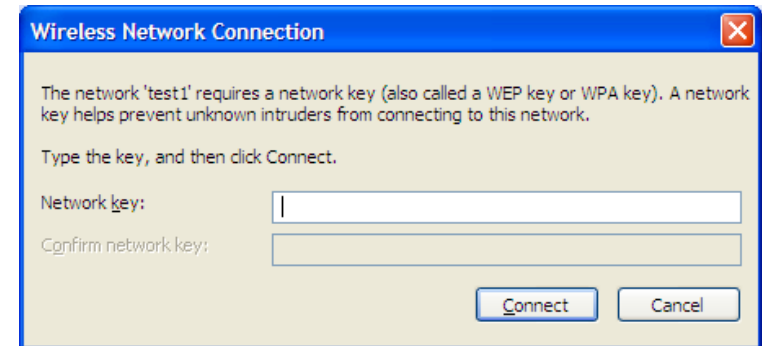


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the same WEP key that is on your router and click **Connect**.

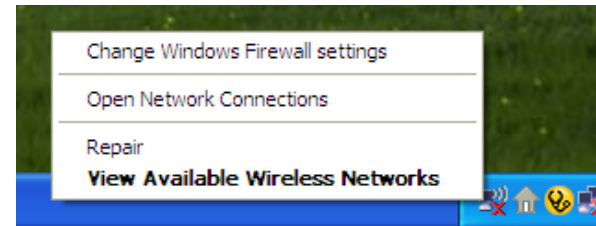
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WEP settings are correct. The WEP key must be exactly the same as on the wireless router.



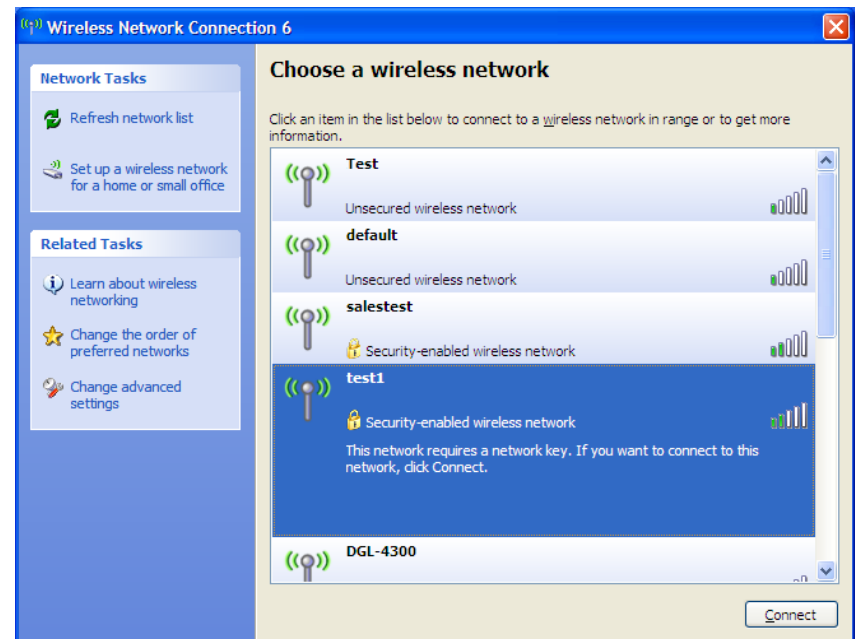
Configure WPA-PSK

It is recommended to enable WEP on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.

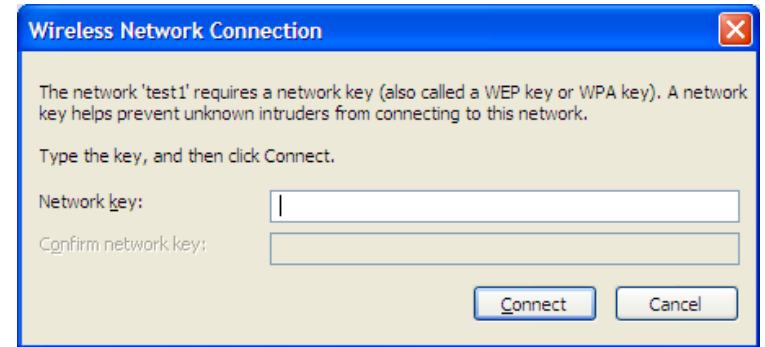


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless router.



Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-615. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screen shots on your computer will look similar to the following examples.)

1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (192.168.0.1 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
 - Internet Explorer 6.0 or higher
 - Netscape 8 or higher
 - Mozilla 1.7.12 (5.0) or higher
 - Opera 8.5 or higher
 - Safari 1.2 or higher (with Java 1.3.1 or higher)
 - Camino 0.8.4 or higher
 - Firefox 1.5 or higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any Internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:
 - Go to **Start > Settings > Control Panel**. Double-click the **Internet Options** Icon. From the **Security** tab, click the button to restore the settings to their defaults.
 - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
 - Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.
 - Close your web browser (if open) and open it.
- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your the web management.
- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

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

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

To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait about 30 seconds to access the router. The default IP address is 192.168.0.1. When logging in, the username is **admin** and leave the password box empty.

3. Why can't I connect to certain sites or send and receive e-mails when connecting through my router?

If you are having a problem sending or receiving e-mail, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

Note: AOL DSL+ users must use MTU of 1400.

To find the proper MTU Size, you'll have to do a special ping of the destination you're trying to go to. A destination could be another computer, or a URL.

- Click on **Start** and then click **Run**.
- Windows® 95, 98, and Me users type in **command** (Windows® NT, 2000, and XP users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

ping [url] [-f] [-l] [MTU value]

Example: **ping yahoo.com -f -l 1472**

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 203ms, Average = 132ms

C:\>
```

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, lets say that 1452 was the proper value, the actual MTU size would be 1480, which is the optimum for the network we're working with (1452+28=1480).

Once you find your MTU, you can now configure your router with the proper MTU size.

To change the MTU rate on your router follow the steps below:

- Open your browser, enter the IP address of your router (192.168.0.1) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on **Setup** and then click **Manual Configure**.
- To change the MTU enter the number in the MTU field and click **Save Settings** to save your settings.
- Test your e-mail. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

Wireless Basics

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

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

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

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

What is Wireless?

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

Why D-Link Wireless?

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

How does wireless work?

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

Wireless Local Area Network (WLAN)

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

Wireless Personal Area Network (WPAN)

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

Who uses wireless?

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

Home

- Gives everyone at home broadband access
- Surf the web, check e-mail, instant message, and etc
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office

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

Where is wireless used?

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

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

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

Tips

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

Centralize your router or Access Point

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

Eliminate Interference

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

Security

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

Wireless Modes

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DIR-615 wireless network Cardbus adapters.

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

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

Networking Basics

Check your IP address

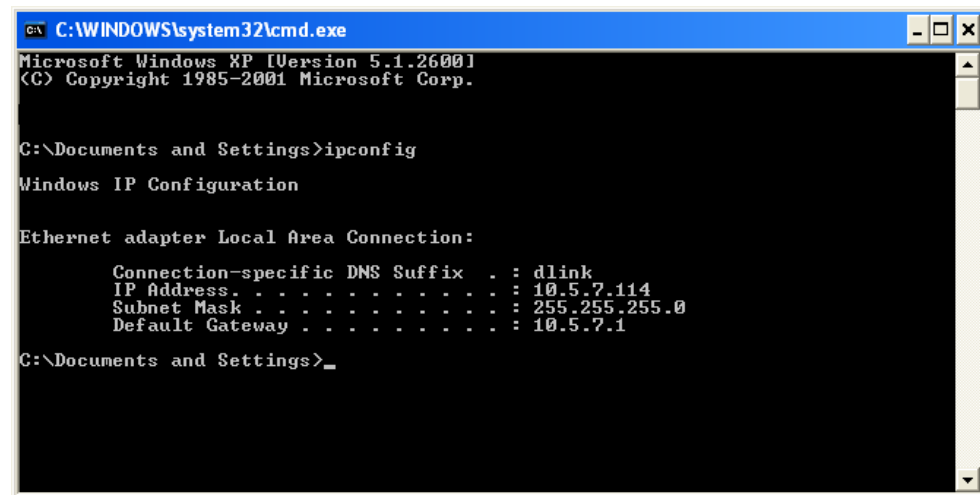
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

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

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

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

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



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address . . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and Settings>_
```

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

Statically Assign an IP address

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

Step 1

Windows® XP - Click on **Start > Control Panel > Network Connections**.

Windows® 2000 - From the desktop, right-click **My Network Places > Properties**.

Step 2

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

Step 3

Highlight **Internet Protocol (TCP/IP)** and click **Properties**.

Step 4

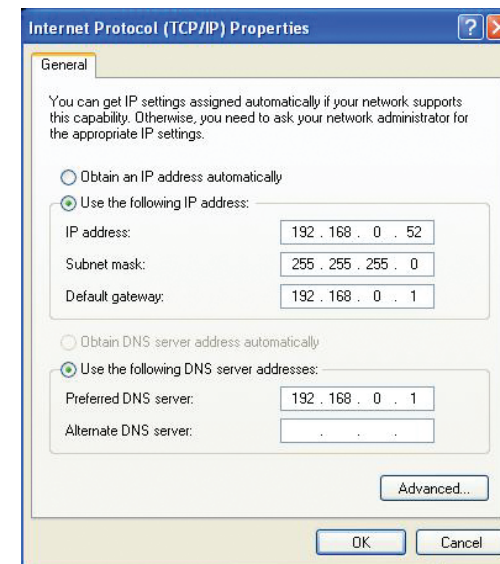
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5

Click **OK** twice to save your settings.



Technical Specifications

Standards

- IEEE 802.11n (draft)
- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.3
- IEEE 802.3u

Security

- WPA-Personal
- WPA2-Personal
- WPA-Enterprise
- WPA2-Enterprise
- 64/128-bit WEP

Wireless Signal Rates*

- 108Mbps
- 54Mbps
- 36Mbps
- 18Mbps
- 11Mbps
- 6Mbps
- 2Mbps
- 48Mbps
- 24Mbps
- 12Mbps
- 9Mbps
- 5.5Mbps
- 1Mbps

MSC (0-15)

- 130Mbps (270)
- 104Mbps (216)
- 66Mbps (135)
- 52Mbps (108)
- 26Mbps (54)
- 12Mbps (27)
- 117Mbps (243)
- 78Mbps (162)
- 58.5Mbps (121.5)
- 39Mbps (81)
- 19.5Mbps (40.5)
- 6.5Mbps (13.5)

Frequency Range

2.4GHz to 2.483GHz

Transmitter Output Power

15dBm \pm 2dB

External Antenna Type

Two (2) detachable reverse SMA Antennas

LEDs

- Power
- Internet
- Status
- WLAN
- LAN (10/100)

Operating Temperature

32°F to 104°F (0°C to 40°C)

Humidity

95% maximum (non-condensing)

Safety & Emissions

- FCC
- CE

Dimensions

- L = 7.6 inches
- W = 4.6 inches
- H = 1.2inches

Warranty

1 Year

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

Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DIR-615)
- Hardware Revision (located on the label on the bottom of the router (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the router).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support:

(877) 453-5465

Internet Support:

<http://support.dlink.com>

For customers within Canada:

Phone Support:

(800) 361-5265

Internet Support:

<http://support.dlink.com>

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty:

D-Link warrants that the hardware portion of the D-Link product described below (“Hardware”) will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below (“Warranty Period”), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty:

D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Software Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty:

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link’s products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold “As-Is” without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim:

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered:

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

Disclaimer of Other Warranties:

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability:

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law:

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

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CE Mark Warning:

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement:

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

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

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

FCC Caution:

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

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.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

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

We declare that the product is limited in CH1~CH11 by specified firmware controlled in the USA.

IC statement

Operation is subject to the following two conditions:

- 1) This device may not cause interference and
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

This device has been designed to operate with an antenna having a maximum gain of 2dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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

Règlement d'Industry Canada

Les conditions de fonctionnement sont sujettes à deux conditions:

- 1) Ce périphérique ne doit pas causer d'interférence et.
- 2) Ce périphérique doit accepter toute interférence, y compris les interférences pouvant perturber le bon fonctionnement de ce périphérique.

The Class [B] digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

Cet appareil numérique de la class [B] respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 2.2
July 19, 2007

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