USER MANUAL DIR-604 Wireless N 150 Router

VERSION 1.0



Wireless N 150 Access Point/Router

D-Link®

Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Trademarks

D-Link and the D-Link logo are trademarks or registered trademarks of D-Link Corporation or its subsidiaries in the United States or other countries. All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2010 by D-Link Systems, Inc.

All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from D-Link Systems, Inc.

Table of Contents

Prefacei	Manual Co
Manual Revisionsi	3G Inter
Trademarksi	Internet Co
	Mode)
Product Overview1	Manual Co
Package Contents	Static IP
System Requirements2	Dynamic
Features3	PPPoE (
Hardware Overview4	PPTP (L
Connections4	L2TP (U
Top View5	Russia F
Switching Between WAN Mode/3G Router	Russia F
Mode6	Wireless S
Installation7	Manual V
Before you Begin7	Network S
Wireless Installation Considerations8	DHCP S
Network Diagram9	DHCP R
WAN Connection9	Virtual Ser
Network Diagram10	Port Forwa
3G Connection10	Application
Connect to Cable/DSL/Satellite Modem11	QoS Engin
Connect to a 3G Internet Service	Network Fi
Connect to Another Router14	Website Fi
Connect to Another Houter14	Firewall Se
Configuration16	Firewall
Web-based Configuration Utility16	Advanced
Internet Connection Setup Wizard (3G Mode). 17	Wi-Fi Prote

Manual Configuration (3G Mode)	20
3G Internet Connection	
Internet Connection Setup Wizard (WAN	
Mode)	2
Manual Configuration (WAN Mode)	
Static IP Address	
Dynamic IP Address (DHCP)	
PPPoE (Username/Password)	
PPTP (Username/Password)	
L2TP (Username/Password)	
Russia PPTP (Dual Access)	
Russia PPPoE (Dual Access)	
Wireless Settings	
Manual Wireless Network Setup	
Network Settings	
DHCP Server Settings	
DHCP Reservation	
Virtual Server	4
Port Forwarding	49
Application Rules	50
QoS Engine	5
Network Filters	52
Website Filters	5
Firewall Settings	54
Firewall Rules	5
Advanced Wireless Settings	5
Wi-Fi Protected Setup	

Advanced Network Settings59	Using Windows Vista®	81
UPnP59	Configure WPA/WPA2	82
Internet Ping Block59	Connect Using WCN 2.0	84
Internet Port Speed59	Using Windows® XP	85
Multicast Streams59	Configure WPA-PSK	86
Administrator Settings60		0.0
Change Password60	Troubleshooting	88
Remote Management60	Wireless Basics	92
Time Settings61	What is Wireless?	
E-mail Settings62	Tips	
System Settings63	Wireless Modes	
Update Firmware64		
DDNS65	Networking Basics	
System Check66	Check your IP address	
Schedules67	Statically Assign an IP address	98
Device Information68	Technical Specifications	90
Logs69		
Statistics70		
Internet Sessions71		
Wireless72		
Support73		
Wireless Security74		
What is WPA?74		
Wireless Connection Setup Wizard75		
Add Wireless Device with WPS Wizard78		
Configure WPA-Personal (PSK)79		
Configure WPA-Enterprise (RADIUS)80		
Connect to a Wireless Network81		

Package Contents



Note: Using a power supply with a different voltage rating than the one included with the DIR-604 will cause damage and void the warranty for this product.

System Requirements

Network Requirements	An Ethernet-based Cable or DSL modem IEEE 802.11n/g wireless clients 10/100 Ethernet
Web-based Configuration Utility Requirements	Computer with the following: Windows®, Macintosh, or Linux-based operating system An installed Ethernet adapter Browser Requirements: Internet Explorer 6.0 or higher Mozilla 1.7.12 or higher Firefox 1.5 or higher Safari 1.0 or higher (with Java 1.3.1 or higher) Flock 0.7.14 or higher Opera 6.0 or higher Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.

Features

- Faster Wireless Networking The DIR-604 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.
- Compatible with 802.11g Devices The DIR-604 is still fully compatible with the IEEE 802.11g standard, so it can connect with existing 802.11g PCI, USB, and Cardbus adapters.
- Advanced Firewall Features The Web-based user interface displays a number of advanced network management features including:
 - Content Filtering Easily applied content filtering based on MAC Address, URL, and/or Domain Name.
 - Filter Scheduling These filters can be scheduled to be active on certain days or for a duration of hours or minutes.
 - Secure Multiple/Concurrent Sessions The DIR-604 can pass through VPN sessions. It supports multiple and concurrent IPSec and PPTP sessions, so users behind the DIR-604 can securely access corporate networks.
- **User-friendly Setup Wizard** Through its easy-to-use Web-based user interface, the DIR-604 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 Final 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

Ethernet Port

In Router mode, the Ethernet port is used to connect to your WAN connection. In AP mode, the Ethernet port is used to connect to your switch/ router. In Client mode, the Ethernet port is used to connect your computer to a wireless network.

Power Receptor

Receptor for the supplied power adapter.



WPS Button

Press the WPS button for 1 second to initiate the WPS process. The LED indicator on the top of the device will flash blue while a WPS connection is being established. The button will light blue for 300 seconds if a successful WPS connection has been made.

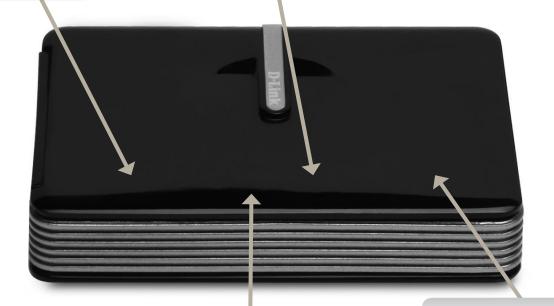
Hardware Overview Top View

Power LED

Lights orange during bootup. Lights green when router has booted up. A solid green light indicates a proper connection to the power supply. If the LED blinks orange the system has failed.

Ethernet LED

A solid green light indicates that a link has been established. This LED blinks during data transmission.



WLAN LED

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

WPS Button

Press the WPS button for 1 second to initiate the WPS process. The button will flash blue while a WPS connection is being established. The button will light blue for 300 seconds if a successful WPS connection has been made.

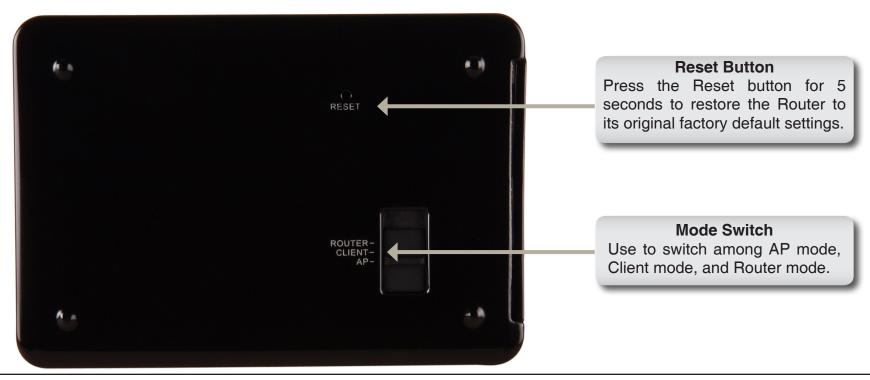
Hardware Overview Switching Among AP, Client, and Router Mode

The DIR-604 features a hardware switch located on the bottom of the device that enables users to switch among Router mode, Client mode, and AP mode.

When the DIR-604 is operating in AP mode, the device acts as a basic access point without any routing functionality.

When the DIR-604 is operating in Client mode, the PC that is connected to the device will use it as a wireless network interface in order that it can connect to a wireless router or access point.

When the DIR-604 is operating in Router mode, WAN connectivity is achieved via the DIR-604's Ethernet port. In this mode LAN clients need to access the DIR-604 via the DIR-604's wireless connection.



Installation Considerations

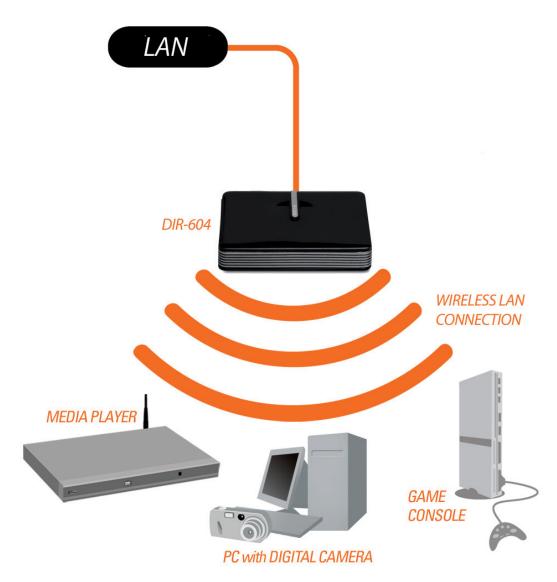
This section will walk you through the installation process. Placement of the Router is very important. Do not place the Router in an enclosed area such as a closet, cabinet, or in the attic or garage. The D-Link wireless Router lets you access your network using a wireless connection from virtually 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 (0.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
- **3**. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
- **4**. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
- **5**. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

Connection - AP Mode

To use the DIR-604 in AP Mode, follow the steps below:

- 1. Ensure you have a broadband Internet connector, such as a cable or DSL client line that connects the Internet to your home or office.
- 2. Connect the cable properly or install the modem.
- Connect the cable or modem with the broadband router.
- 4. Connect the DIR-604's Ethernet port to your LAN.
- 5. Move the switch to wireless AP Mode.
- 6. Connect your PC or notebook to the DIR-604 using the PC or notebook's wireless adapter.



Connection - Client Mode

To use the DIR-604 in Client Mode, follow the steps below:

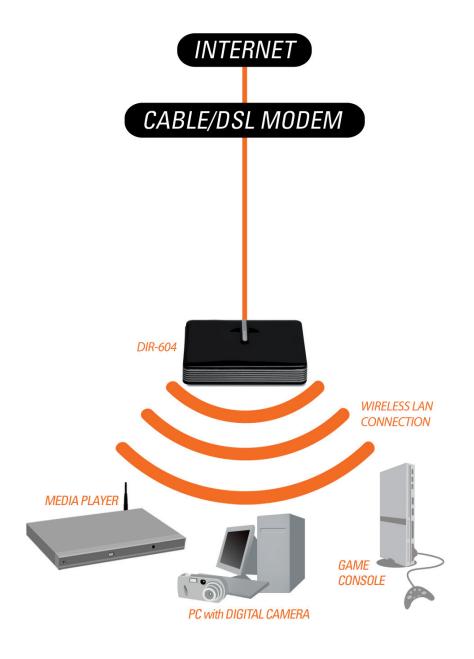
- 1. Ensure you have a broadband Internet connector, such as a cable or DSL client line that connects the Internet to your home or office.
- 2. Connect the cable properly or install the modem.
- Connect the cable or modem with the broadband router.
- 4. Move the switch to Client Mode.
- 5. Connect your PC or notebook to the DIR-604 using the PC or notebook's wireless adapter.



Connection - Router Mode

To use the DIR-604 in Router Mode, follow the steps below:

- 1. Ensure you have a broadband Internet connector, such as a cable or DSL client line that connects the Internet to your home or office.
- 2. Connect the cable properly or install the modem.
- 3. Connect the cable or modem with the broadband router.
- 4. Move the switch to Router Mode.
- 5. If you want to link with a computer on the Internet, please install a wireless dongle on your computer.
- 6. Install the driver on your computer.



Connect to Cable/DSL/Satellite Modem

If your Internet connection is provided using a cable/DSL/satellite modem, carry out the following procedure before connecting the router to a cable/DSL/satellite modem:

- Move the **AP Mode/Client Mode/Router Mode** switch on the DIR-604 so that it is in the **Client Mode** position.
- Configure the wireless settings on the DIR-604 in Client Mode (see "Wireless Connection" on page 17 for more information).
- After configuring the wireless settings, move the AP Mode/Client Mode/Router Mode switch so that it is in the Router Mode position.

To connect 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 Ethernet port on the Router.
- 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 50 seconds for the router to boot.
- 7. Turn on your computer.
- 8. Use the wireless connection on your computer to connect to the Router, using the wireless settings you configured

previously.

9. Verify the link lights on the Router. The power light, Internet light, and the Wireless LAN light should be lit. If not, make sure your computer, modem, and router are powered on and verify the cable connections are correct.

10. Skip to "Configuration" on page 15 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:

- Move the AP Mode/Client Mode/Router Mode switch on the DIR-604 so that it is in the AP Mode position.
- Disable UPnP[™]
- Disable DHCP
- Change the LAN IP address to an available address on your network. The Ethernet port 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 Ethernet 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 into the Ethernet port of the router and connect it to your other router.
- 8. 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.

Configuration

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

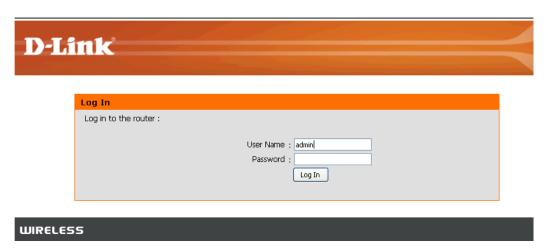
Web-based Configuration Utility for AP Mode

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



Type **Admin** in the **User Name** field and then enter your password. Leave the password blank by default.

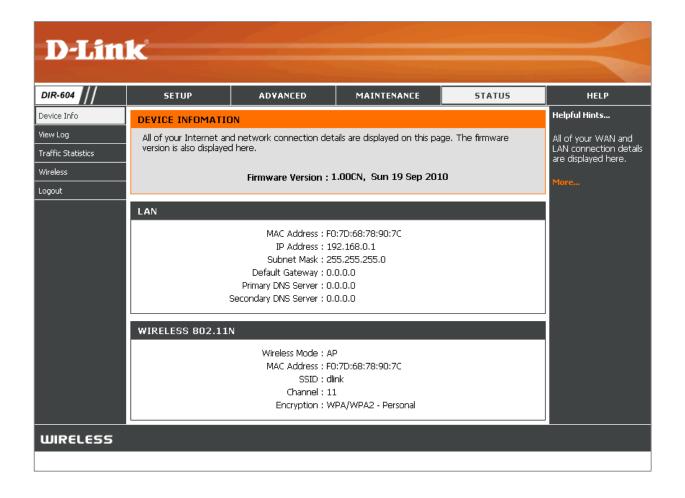
Click the **Login** button to log in to the Router.



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

AP Mode Opening Page

Once logged into the Web interface of the Router in AP Mode, the **Device Information** page will appear. This displays the SSID, Channel, and Encryption status. To make changes to your wireless network, click **Setup** to access the **Wireless Connection** page.



Wireless Connection

If you want to configure the wireless settings on your Router using the wizard, click **Wireless Connection Setup Wizard** and refer to "Wireless Connection Setup Wizard" on page 81.

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



Manual Wireless Network Setup

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

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

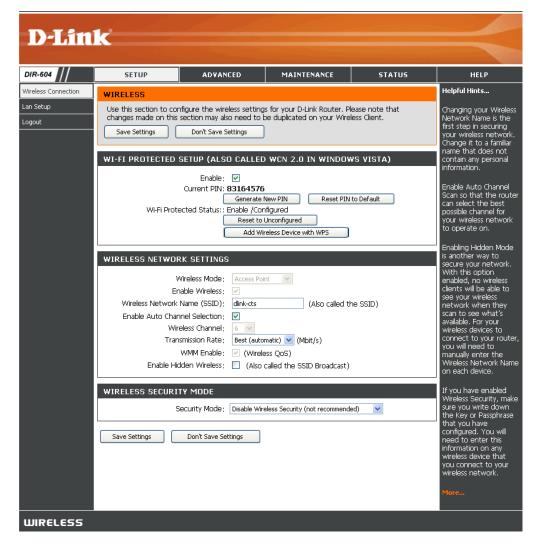
Enable Auto The **Auto Channel Scan** setting can be selected **Channel** to allow the DIR-604 to choose the channel with **Selection**: the least amount of interference.

Wireless Indicates the channel setting for the DIR-604.

Channel: 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 grayed out.

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

WMM Enable: WMM (Wi-Fi Multimedia) is QoS for your wireless network. Tick this box to improve the quality of video and voice applications for your wireless clients. This feature is not available in 802.11n configurations.



Enable Hidden Enabling Hidden Mode is another way to secure your network. With this option enabled, no wireless clients will **Wireless**: be able to see your wireless network when they perform a scan to see what's available. In order for your wireless devices to connect to your Router, you will need to manually enter the Wireless Network Name on each device.

Security
Mode:

Refer to Section 4 - Wireless Security for more information regarding wireless security.

Mode:

LAN Setup

This section will allow you to change the internal network settings of the Router and to configure the DHCP settings.

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

If you change the IP address, once you click **Save Settings**, 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 **255.255.2**.

Default Gateway: Enter the default gateway IP address.

Primary DNS Server: Enter the primary DNS server IP address.

Secondary DNS Enter the secondary DNS server IP address.

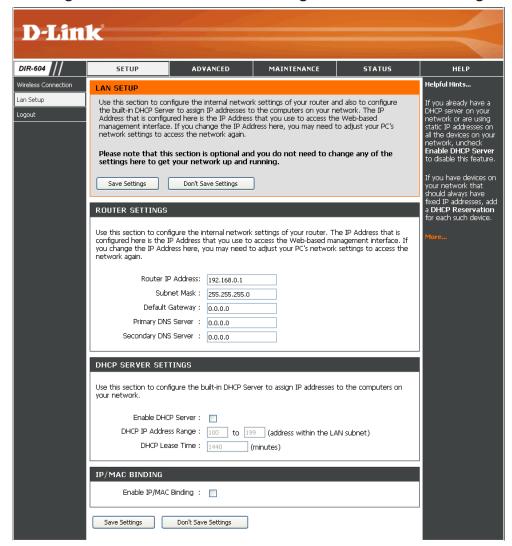
Server:

Enable Tick this check box to enable the DHCP server **DHCP Server**: on your Router. De-select to disable this function.

DHCP IP Address Enter the starting and ending IP addresses for

Range: the DHCP server's IP assignment.

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



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

Enable IP/

MAC Binding: Tick to enable IP/MAC binding.

Advanced Wireless Settings

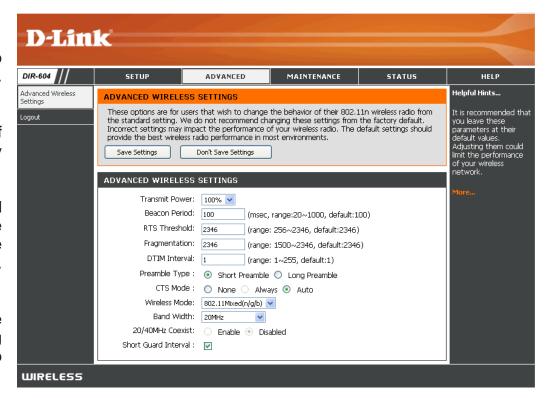
Transmit Power: Set the transmit power of the antennas.

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

RTS This value should remain at its default setting of Threshold: 2432. If inconsistent data flow is a problem, only a minor modification should be made.

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



Preamble Select Short Preamble or Long Preamble.

Type: The preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) for communication between the wireless router and the roaming wireless network adapters. Note: High network traffic areas should use the **Short Preamble** type.

CTS Mode: Select None, Always, or Auto.

Wireless Use the drop-down menu to selec the wireless modes you want to enable on the router. The available options are 802.11n Mode: only, 802.11 Mixed (g/b), and 802.11 Mixed (n/g/b).

Short Guard Tick this check box to reduce the guard interval time therefore increasing the data capacity. However, it is less reliable and **Interval:** may create higher data loss.

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.

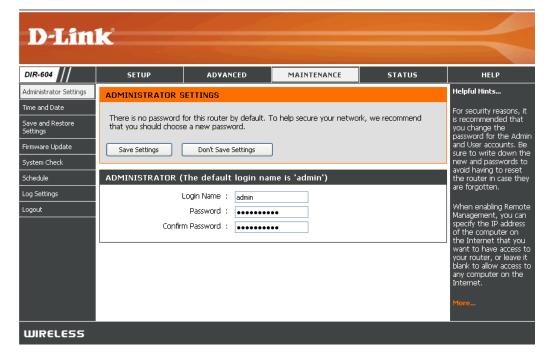
Login Name: Enter the login name. The default is admin.

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

changes to the settings.

Confirm Retype the new password for the Administrator

Password: Login Name.



Time and Date

The Time and Date 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.

Enable Tick the check box to enable Daylight Saving Daylight Time.

Saving:

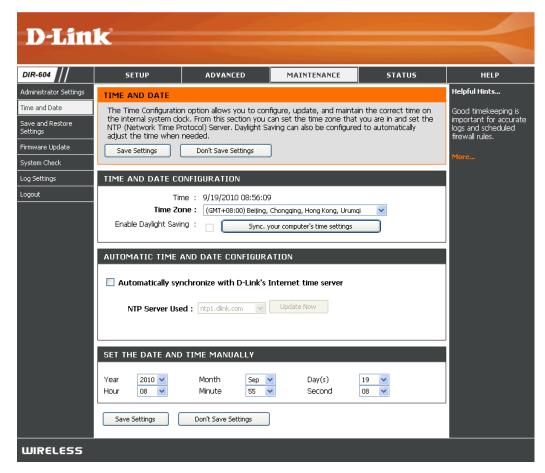
Sync your Click this button to set the device's time the computer's time same to local PC. settings:

Automatically Tick the check box to enable the device to synchronize automatically synchronize with a D-Link NTP with D-I ink's Server. NTP stands for Network Time Protocol. Internet time NTP synchronizes computer clock times in a server: network of computers. This will only connect to a server on the Internet, not a local server.

NTP Select one of the D-Link NTP Servers from Server Used: the drop-down menu. The DIR-604 will then synchronize its clock to be the same time as the D-Link Internet

> time server. Click the Update Now button to synchronize with the D-Link Internet time server immediatley.

Set the Time To manually input the time, use the drop-down and Date menus to enter the values in these fields for the Manually: Year, Month, Day, Hour, Minute, and Second.



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

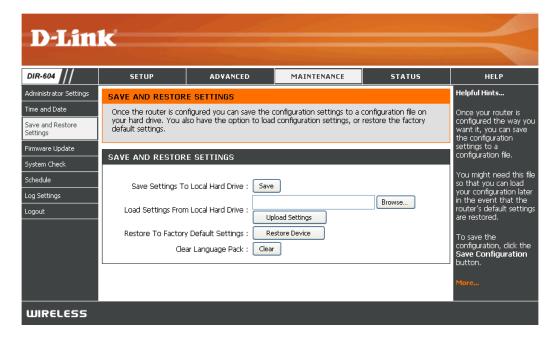
Save and Restore Settings

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

Restore to Click the Restore Device button to restore Factory all configuration settings back to the settings **Default** that were in effect at the time the Router was **Settings:** 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.

Clear Click the Clear button to restore the device back Language to the English interface version and remove Pack: other languages installed for the system web pages.



Firmware Update

You can upgrade the firmware of the Router here. Please check the D-Link support site for firmware updates at http://support.dlink.com or simply click the **Check Now** button located in the Firmware Information section. You can download firmware upgrades to your hard drive from the D-Link support site. 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.

Current Displays the current firmware version. **Firmware Version:**

Current Displays the current firmware date.

Firmware Date:

Check Online Click the Check Now button, or the "Click here Now for Latest to check for an upgrade on our support site."

Firmware hyperlink at the top of the page, to see what the Version: latest firmware for the Router is.

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

Language This function allows the user to transfer the Pack language of the GUI from English to their own Upgrade: language by upgrading the language pack. Click the Browse control to locate the desired language pack on your hard drive. Click Upload to complete the language pack upgrade.

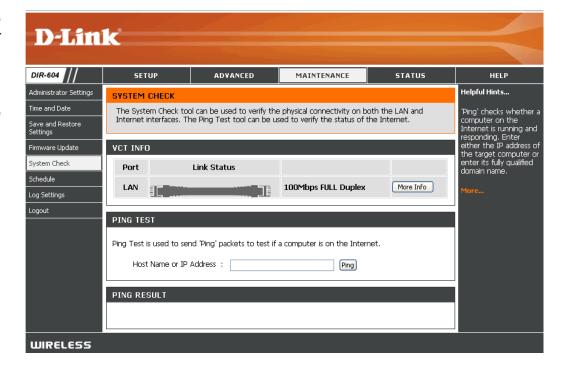


System Check

The System Check feature allows you to verify the physical connectivity on both the LAN and Internet interface.

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



Log Settings

The Router keeps a running log of events and activities occurring on the device. You can define what types of events you want to view and the level of the events to view. The 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.

Save Log File Click the Save button to save the log file to to Local Hard your local hard drive.

Drive:

Enable Tick this check box to send the Router logs to Logging to a SysLog Server.

Syslog Server:

Syslog Server The address of the SysLog server that will be IP Address: 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).

Log Type: Tick the desired type(s) of logs that should be

displayed: System, Firewall & Security, and

Router Status.

Log Level: Tick the desired level(s) of importance:

Critical, Warning, and Information.

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

email sent.

Email Subject: Enter a subject description for your e-mail.

Sender Email This e-mail address will appear as the sender

Address: when you receive a log file or firmware

upgrade notification via e-mail.



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

User Name: Enter your account user name for sending e-mail.

Password: Enter the password associated with the account.

Confirm Re-type the password associated with the account and click the **Send Mail Now** button. **Password:**

Click the Save Settings button when you have finished the log settings configuration.

Device Information

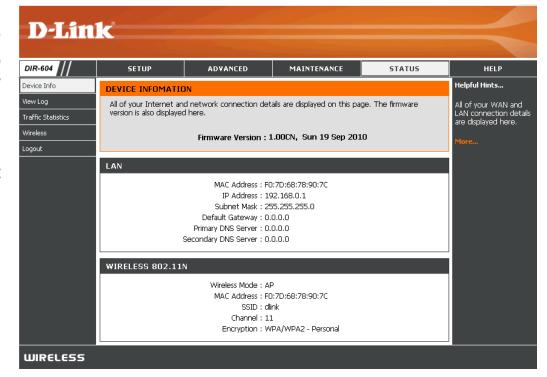
This page displays the current information for the DIR-604. It will display the LAN and Wireless information, in addition to the firmware version and date the firmware was last updated.

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

If your Internet connection is set up for PPPoE, PPTP, or L2TP, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the Internet connection and use **Connect** to establish the Internet connection. See the following for more information.

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

Wireless Displays the wireless mode, MAC address and 802.11n: your wireless settings such as SSID, Channel, and Encryption status.



View Log

The Router automatically logs (records) events of possible interest in its internal memory. If there is not enough internal memory for all events, logs of older events are deleted but logs of the latest events are retained. The View Log 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 on the Log Settings page. The 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 (see the Log Settings page).

First Page: Click this button to view the first page of the

log file.

Last Page: Click this button to view the last page of the

log file.

Previous: Click this button to view the previous page of

the log file.

Next: Click this button to view the next page of the

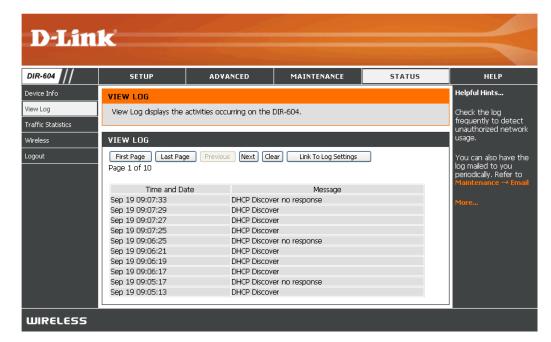
log file.

Clear: Clears all of the log contents.

Link to Log The user can click the button to "link to log

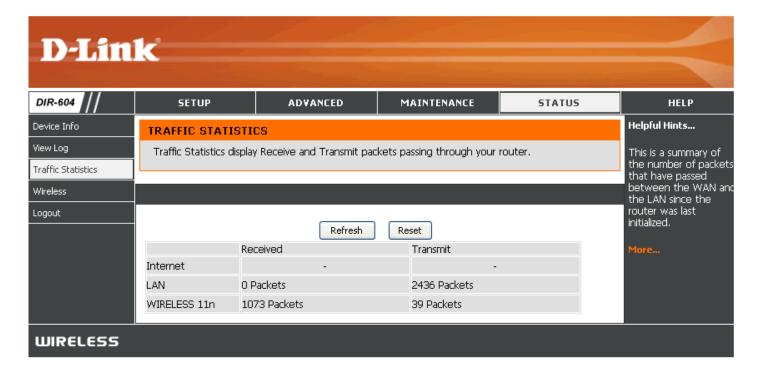
Settings: settings" and save the logs to a local hard drive

or to a Syslog server.



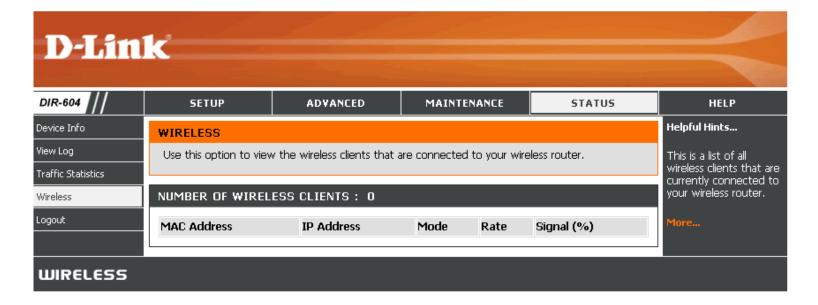
Traffic Statistics

The page displays the Traffic Statistics. Here you can view the amount of packets that pass through the DIR-604 on the Internet, LAN, and Wireless connections. The traffic counter will reset if the device is rebooted. Alternatively, you can click either the **Reset** button or the **Refesh** button.



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.



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 for Client Mode

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



Type **Admin** in the **User Name** field and then enter your password. Leave the password blank by default.

Click the **Login** button to log in to the Router.



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

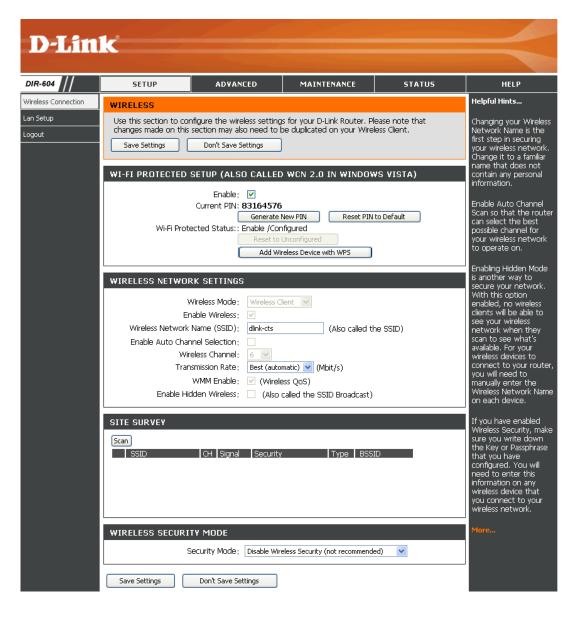
Client Mode Opening Page

Once logged into the Web interface of the Router in Client Mode, the **Device Information** page will appear. This displays the MAC Address, Channel, and Encryption status. To make changes to your wireless network, click **Setup** to access the **Wireless** page.



Use the **Wireless** page to make changes to your wireless configuration.

Wireless



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 for Router Mode

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



Type **Admin** in the **User Name** field and then enter your password. Leave the password blank by default.

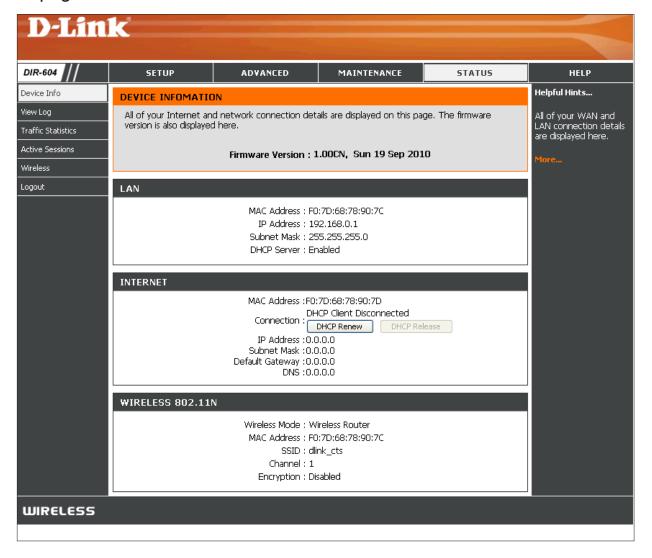
Click the **Login** button to log in to the Router.



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

Router Mode Opening Page

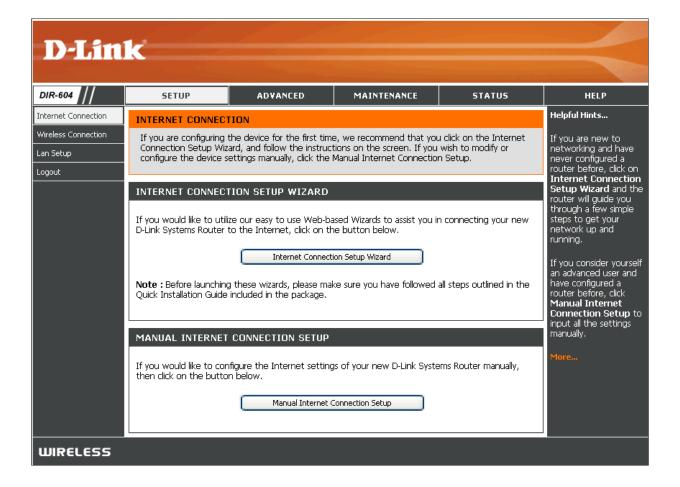
Once logged into the Web interface of the Router in Router Mode, the **Device Information** page will appear. This displays the LAN's MAC Address, IP Address, Subnet Mask, and DHCP Server status. This page also displays additional Internet and Wireless 802.11n information. To make changes to your wireless network, click **Setup** to access the **Wireless Connection** page.



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 Connection Setup** and skip to "Manual Internet Configuration" on page 42.



Click **Next** to continue.

This wizard will guide you through a step-by-step process to configure your new D-Link router and connect to the Internet. Step 1: Set your Password Step 2: Select your Time Zone Step 3: Select Wan Connection Mode Step 4: Save Settings and Connect Next Cancel

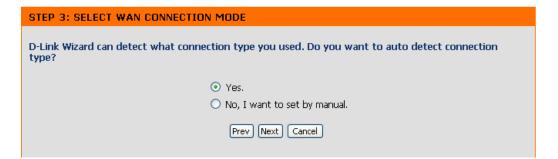
Create a new password and then click **Next** to continue.



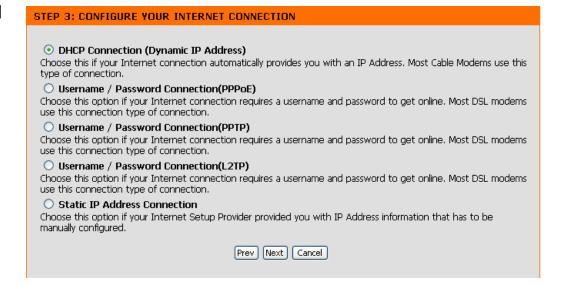
Select your time zone and desired NTP server from the drop-down menus and then click **Next** to continue.



To have the Setup Wizard automatically detect the WAN connection type, select "Yes" and then click **Next**.To manually choose your WAN Connection Mode, select "No, I want to set by manual" and then click **Next** to continue.



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



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

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

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: 00 - 00 - 00 - 00 - 00 (optional) Copy Your PC's MAC Address Host Name: DIR-604 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 IP" 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 (DHCP) ○ Static IP		
IP Address: 0.0.0.0		
User Name :		
Password :		
Confirm 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.		
Prev Next Cancel		

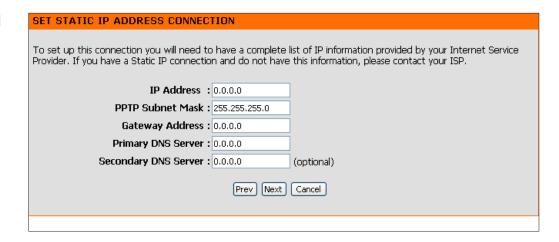
If you selected PPTP, enter your PPTP username and password. Click **Next** to continue.

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 (DHCP) ○ Static IP		
PPTP IP Address: 0.0.0.0		
PPTP Subnet Mask: 255.255.255.0		
PPTP Gateway IP Address: 0.0.0.0		
PPTP Server IP Address (may be same as gateway) :		
User Name:		
Password :		
Confirm Password:		
Prev Next Cancel		

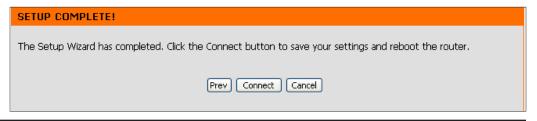
If you selected L2TP, enter your L2TP username and password. Click **Next** to continue.



If you selected Static, enter your network settings supplied by your Internet provider. Click **Next** to continue.



The Setup is now complete. Click the **Connect** to save your settings. Please allow 1-2 minutes to connect.



Manual Internet Configuration (Dynamic IP)

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.

My Internet Select Dynamic IP (DHCP) to obtain IP address information Connection automatically from your ISP. Select this option if your ISP is: does not give you any IP numbers to use.

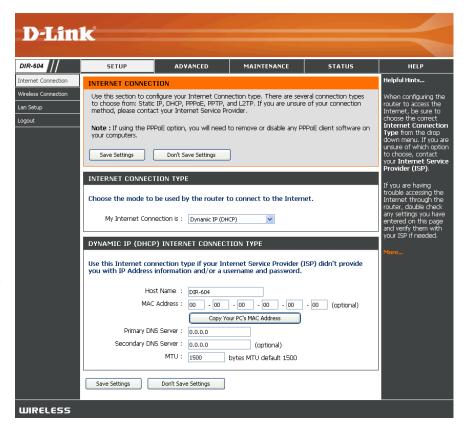
Host Name: The host name is optional but may be required by some ISPs. Leave blank if you are not sure.

MAC The default MAC address is set to the Internet port's physical Address: 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 Copy Your PC's MAC Address button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Primary DNS Enter the primary DNS server IP address assigned by your **Server**: ISP. This address is usually obtained automatically from your ISP. Leave at 0.0.0.0 if you did not specifically receive an address from your ISP.

Secondary Enter the secondary DNS server IP address assigned by DNS Server: your ISP. This address is usually obtained automatically from your ISP. Leave at 0.0.0.0 if you did not specifically receive an address from your ISP.

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



Click the **Save Settings** button when you have finished configuring the Internet connection.

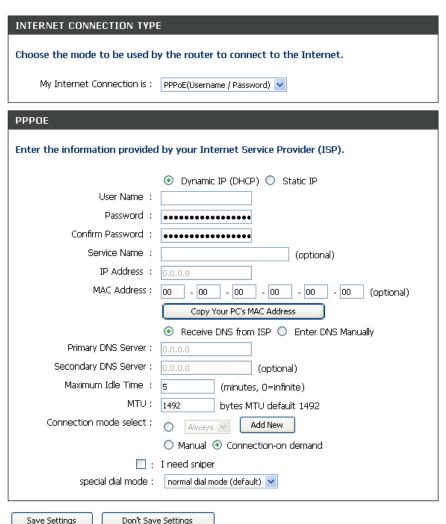
Manual Internet Configuration (PPPoE)

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 Select PPPoE (Username/Password) to obtain IP address **Connection** information automatically from your ISP. Select this option is: if your ISP does not give you any IP numbers to use. Address Select Static IP if your ISP assigned you the IP address, Mode: subnet mask, gateway, and DNS server addresses. In most cases, users will select Dynamic IP (DHCP). User Name: Enter your PPPoE user name. Password: Enter your PPPoE password. **Confirm** Retype the PPPoE password entered above. Password: **Service** Enter the ISP service name (optional). Name: IP Address: Enter the IP address (Static PPPoE only). MAC The default MAC address is set to the Internet port's physical

MAC The default MAC address is set to the Internet port's physical Address: 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 Copy Your PC's MAC Address button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Primary DNS Enter the primary DNS server address (Static PPPoE only). **Server:**



Secondary DNS Enter the secondary DNS server address (Static PPPoE only). **Server**:

Maximum Idle Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, select Time: either Always or Manual for the Connection mode select setting below.

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

Connection Select either **Always**, **Manual**, or **Connection On-Demand**. Click the **Add New** button to create a new connection. **Mode Select**:

I need sniper: Tick the check box to indicate you want to use the sniper feature.

Special Dial Select normal dial mode (default) or special dial mode 1, special mode 2, special mode 3, special mode 4, special Mode: mode 5, or special mode 6.

Click the **Save Settings** button when you have finished configuring the Internet connection.

Manual Internet Configuration (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.

My Internet Select PPTP (Username/Password) to obtain IP Address Connection is: information automatically from your ISP.

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

cases, users will select Dynamic IP (DHCP).

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

PPTP Subnet Enter the subnet mask (Static PPTP only).

Mask:

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

Primary DNS Enter the primary DNS server address (Static PPTP only). Server:

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 **Copy Your PC's MAC Address** button to replace the Internet port's MAC

address with the MAC address of your Ethernet card.

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

User Name: Enter your PPTP user name.

INTERNET CONNECTION TYP		
Choose the mode to be used by the router to connect to the Internet.		
My Internet Connection is :	PPTP(Username / Password)	
PPTP INTERNET CONNECTION TYPE :		
Enter the information provided by your Internet Service Provider (ISP).		
	Dynamic IP (DHCP) Static IP	
PPTP IP Address :	0.0.0.0	
PPTP Subnet Mask :	255,255,255.0	
PPTP Gateway IP Address :		
Primary DNS Server :	0.0.0.0	
MAC Address :	00 - 00 - 00 - 00 - 00 (optional)	
	Copy Your PC's MAC Address	
PPTP Server IP Address :	0.0.0.0	
User Name :		
Password :	•••••	
Confirm Password :	•••••	
Maximum Idle Time :	5 (minutes, 0=infinite)	
MTU:	1400 bytes	
Connection mode select :	Always Add New	
○ Manual ⊙ Connection-on demand		
Save Settings Don't Sav	e Settings	

Password: Enter your PPTP password.

Confirm Retype the PPTP password entered above.

Password:

Maximum Idle Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, select Time: either Always or Manual for the Connection mode select setting below.

MTU: Maximum Transmission Unit. You may need to change the MTU for optimal performance with your specific ISP. The default is 1400.

Connection Select either **Always**, **Manual**, or **Connection On-Demand**. Click the **Add New** button to create a new connection. **Mode Select**:

Click the **Save Settings** button when you have finished configuring the Internet connection.

Manual Internet Configuration (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.

My Internet Select L2TP (Username/Password) to obtain IP Address Connection is: information automatically from your ISP.

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

L2TP IP Enter the IP address (Static L2TP only).

Address:

L2TP Subnet Enter the subnet mask (Static L2TP only).

Mask:

L2TP Gateway Enter the gateway IP address provided by your ISP.

IP Address:

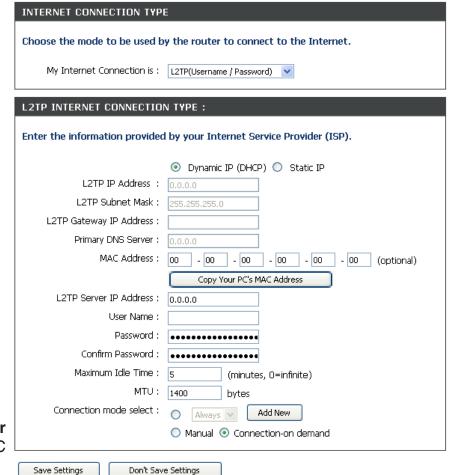
Primary DNS Enter the primary DNS server Address (Static L2TP only).

Server:

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 Copy Your PC's MAC Address button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

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

User Name: Enter your L2TP user name.



Password: Enter your L2TP password.

Confirm Retype the L2TP password entered above.

Password:

Maximum Idle Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, select Time: either Always or Manual for the Connection mode select setting below.

MTU: Maximum Transmission Unit. You may need to change the MTU for optimal performance with your specific ISP. The default is 1400.

Connection Select either **Always**, **Manual**, or **Connection On-Demand**. Click the **Add New** button to create a new connection. **Mode Select**:

Click the **Save Settings** button when you have finished configuring the Internet connection.

Manual Internet Configuration (Static IP)

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.

My Internet Select Static IP if you want to manually enter information **Connection is:** provided by your ISP.

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

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

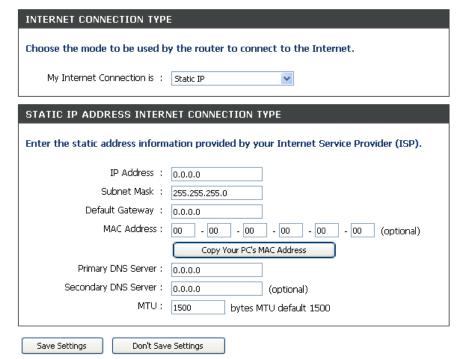
Default Enter the gateway IP address provided by your ISP. **Gateway:**

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 **Copy Your** PC's MAC Address button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Primary DNS Enter the primary DNS server address provided by your ISP. Server:

Secondary Enter the secondary DNS server address provided by your DNS Server: ISP.

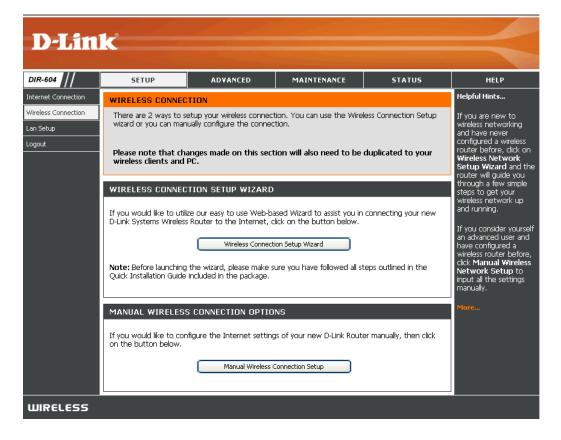
MTU: Maximum Transmission Unit. You may need to change the MTU for optimal performance with your specific ISP. The default is 1500.



Wireless Connections

If you want to configure the wireless settings on your Router using the wizard, click **Wireless Connection Setup Wizard** and refer to "Wireless Connection Setup Wizard" on page 81.

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



Manual Wireless Network Setup

Enable Tick the check box to enable the wireless **Wireless:** function. If you do not want to use wireless, deselect the check box to disable all the wireless functions.

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

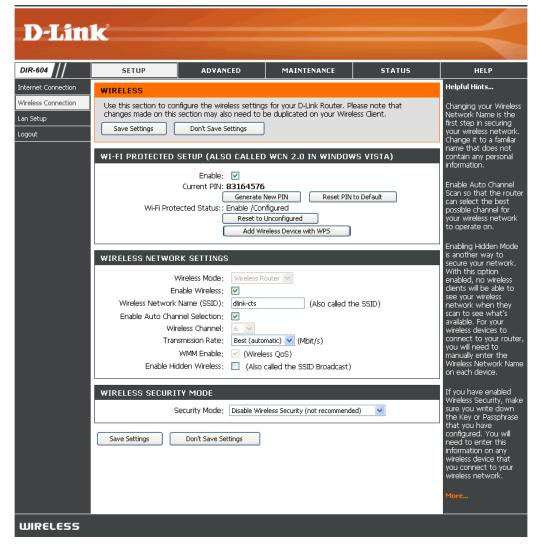
Enable Auto The Auto Channel Scan setting can be selected Channel to allow the DIR-604 to choose the channel with Selection: the least amount of interference.

Wireless Indicates the channel setting for the DIR-604.

Channel: 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 grayed out.

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

WMM Enable: WMM (Wi-Fi Multimedia) is QoS for your wireless network. Check this box to improve the quality of video and voice applications for your wireless clients. This feature is not available in 802.11n configurations.



Enable Hidden Enabling Hidden Mode is another way to secure your network. With this option enabled, no wireless clients will **Wireless:** be able to see your wireless network when they perform a scan to see what's available. In order for your wireless devices to connect to your Router, you will need to manually enter the Wireless Network Name on each device.

Security

Mode: Refer to Section 4 - Wireless Security for more information regarding wireless security.

LAN Setup

This section will allow you to change the internal network settings of the Router and to configure the DHCP settings.

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

If you change the IP address, once you click **Save Settings**, 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 primary DNS server IP address.

Name:

Enable DNS Relay: Enter the secondary DNS server IP address.

Enable Tick this check box to enable the DHCP server on your Router. De-select **DHCP Server**: to disable this function.

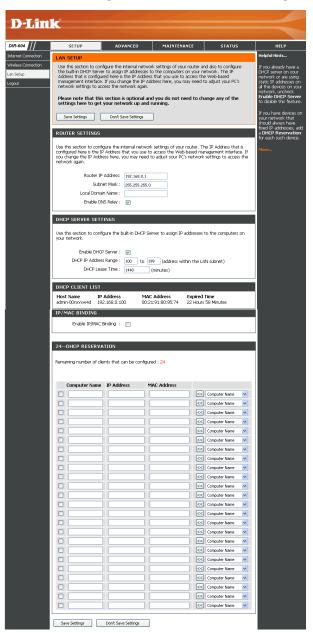
DHCP IP Address Enter the starting and ending IP addresses for the DHCP server's IP Range: assignment.

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

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

DHCP Client List: Displays a list of the DHCP reservations that have been configured on the Router. See the DHCP Reservation section on the next page for more info.

Enable IP/MAC Tick to enable IP/MAC binding. **Binding:**



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.

Configure the parameters, as described below, to create a new DHCP Reservation.

Note: This IP address must be within the DHCP IP address range.

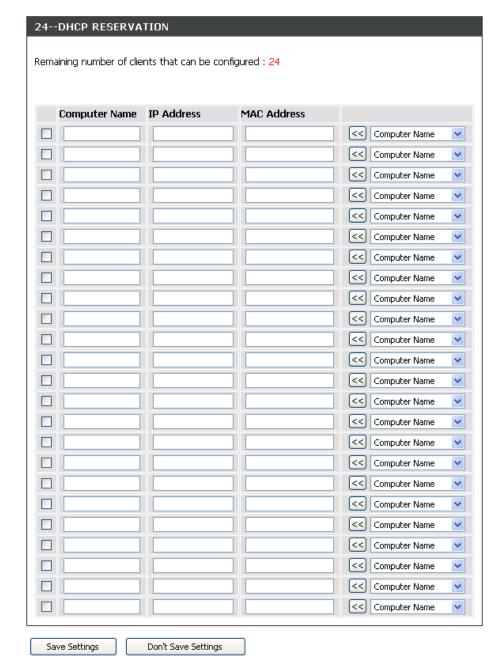
Computer Enter the computer name or select a computer name Name: from the drop-down menu on the right-hand side and click <<

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.

When you have finished configuring the above settings, tick the check boxes next to the DHCP Reservation entries you want to add to the DHCP Reservations List and click the **Save Settings** button at the top or bottom of the window to save your entries and activate your reservations.



Advanced Port Forwarding Rules

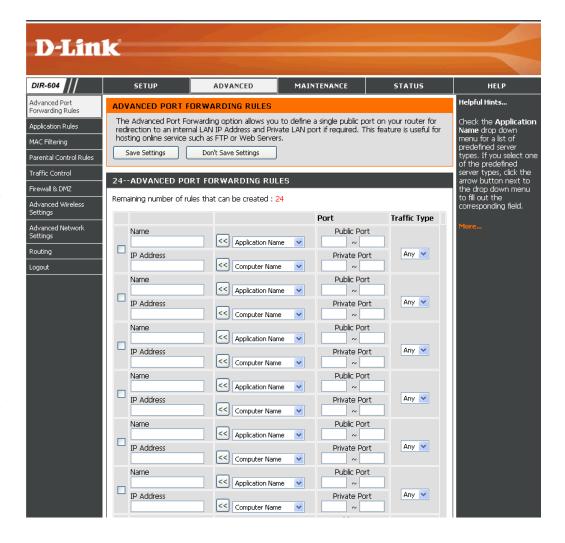
Port Forwarding is a feature that allows you to open a single port or a range of ports and redirect the data received through those ports to a single PC on your network. When you are finished on this page, go to the Schedule page (**Maintenance** > **Schedule**) and create a schedule for when the port forwarding rule will be enabled.

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

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

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

Traffic Type: Use the drop-down menu to select whether **TCP**, **UDP**, or **Any** type of traffic is used for the port forwarding rule.



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-604. 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, UDP, or Any, and then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

The DIR-604 provides some predefined applications in the table on the bottom of the Web page. Select the application you want to use and enable it. When you are finished on this page, go to the Schedule page (**Maintenance** > **Schedule**) and create a schedule for when the application rule will be enabled.

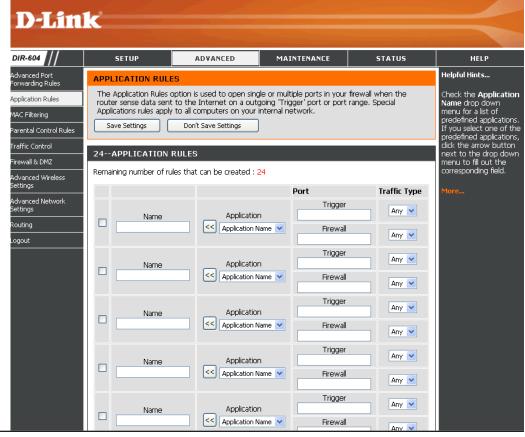
Name: Enter a name for the rule. You may select a pre-defined application from the drop-down menu and click <<.

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 Any).

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

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



MAC Filtering

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 Router.

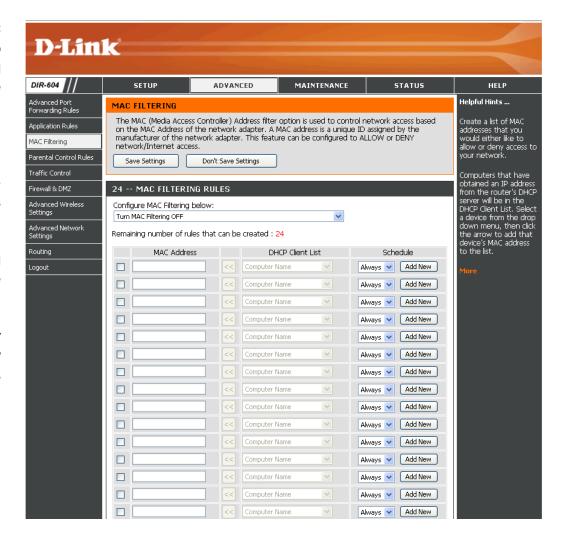
Configure Select Turn MAC Filtering Off, Turn MAC MAC Filtering ON and ALLOW computers listed to Filtering: access the network, or Turn MAC Filtering ON and DENY computers listed to acces the network from the drop-down menu.

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

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

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

Schedule: Select a schedule for when the Network Filter will be enabled. The user can click the **Add New** button to bring up the Schedule page. This is used to configure a new schedule.



Parental Control Rules

Parental Control Rules are used to allow you to set up a list of allowed Websites that can be used by multiple users through the network. To use this feature, select to allow or deny computer access to the specified sites, enter the domain or Website, and then click **Add New** and configure a schedule on the Schedule page. Finally, tick the desired corresponding parental control rule check box and then click **Save Settings**.

Configure Select Turn Parental Control OFF, Turn Parental Parental Control ON and Deny computers Control Below: access to only these sites, or Turn Parental Control ON and Allow computers access to only these sites.

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

Schedule: Use the drop-down menu to select the schedule for the network filter rule. Click the **Add New** button to bring up the Schedule page. This is used to configure a new schedule.



Traffic Control

Traffic Control is used to equally distribute download bandwidth to LAN/wireless clients. This can be done automatically or manually. To use this feature, enable traffic control and then choose to automatically or manually distribute bandwith. Next, click **New Scheduler** and configure a schedule on the Schedule page. Finally, if you have chosen the manual option, tick the desired corresponding traffic control rule check box and then click **Save Settings**.

Enable Traffic Tick the Enable Traffic Control check box to **Control**: enable the traffic control feature.

Automatic Tick the Automatic Distribute Bandwidth check Distribute box to automatically equally share bandwith Bandwidth: among LAN and wireless clients.

Key in Enter the desired bandwith in kbps.

bandwidth manually:

IP Range: Manually configure beginning and ending IP address ranges for traffic control rules. To activate, tick the corresponding check box for

each desired traffic control rule.

Mode: Select Guaranteed minimum bandwidth or

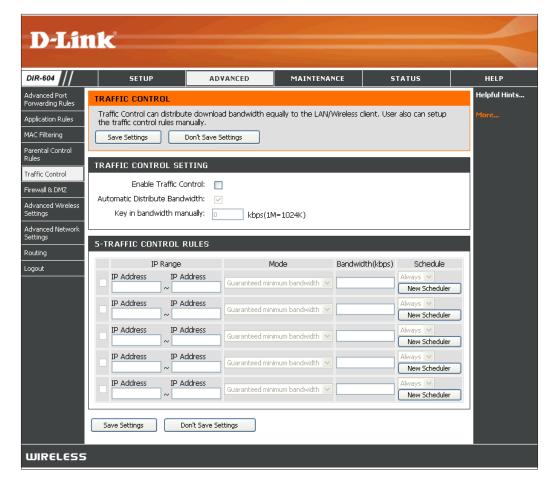
Restricted maximum bandwidth.

Bandwidth Enter the bandwith for the specific traffic control

(kbps): rule.

Schedule: Use the drop-down menu to select the schedule

for the traffic control rule. Click the **New Scheduler** button to bring up the Schedule page. This is used to configure a new schedule.



Firewall & DMZ

A firewall protects your network from the outside world. The D-Link DIR-604 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 completely expose the chosen computer to the outside world.

Enable Tick to enable the Router's built-in anti-spoofing Anti-Spoof feature.

checking:

GIIGGKIIIG

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.

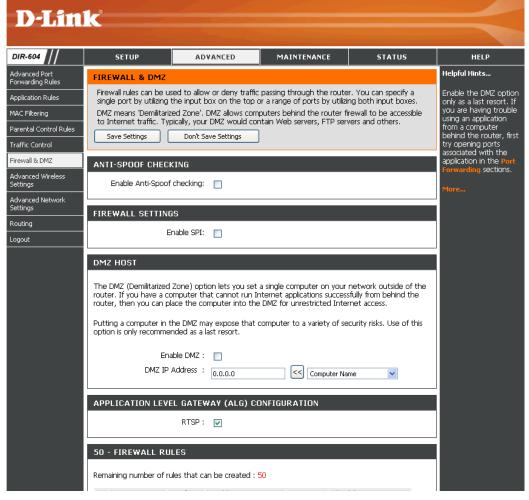
Enable DMZ: Tick this check box to enable DMZ.

IP Address: LAN that you want to have unrestricted Internet communication in this field. Use the drop-down menu to specify a host that currently has a DHCP lease from the DIR-604. If this computer has obtained its IP address automatically using DHCP, be sure to make a static reservation on the LAN Setup page (Setup > LAN Setup) in the DHCP Reservation section so that the IP address of the DMZ machine does not change.

RSTP: Tick to enable application level gateway (ALG) configuration of RTSP.

Firewall Rules: Use this section to create rules that deny or allow traffic from passing through the device.

See the following page for information on how to create firewall rules.



Firewall Rules

To create a firewall rule, configure the parameters described below:

Name: Enter a name for the firewall rule.

Action: Use the drop-down menu to specify if the Router should **Allow** or **Deny** traffic matching the firewall rule.

Interface: Use the drop-down menus to select the **Source** and **Dest** (ination) interfaces for the firewall rule. You also may opt to choose either **LAN** or **WAN** for each pair of interfaces.

IP Address: Use these fields next to each Interface drop-down menu to specify the IP address ranges for the Source/Destination interfaces.

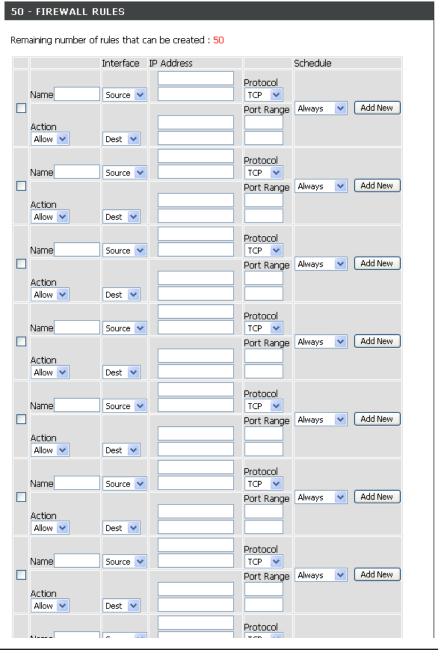
The first host in the IP address range should be entered in the top field and the last host in the IP address range should be entered in the field beneath for both the Source/Destination interfaces.

Protocol: Use the drop-down menu to select the protocol that will be used for the firewall rule (**TCP**, **UDP**, **ICMP**, or **All**).

Port Range: Enter the range of ports that the firewall rule will apply to.

The first port in the port range should be entered in the top field and the last host in the port range should be entered in the field beneath.

Schedule: Use the drop-down menu to select the schedule for the firewall rule. Click the **Add New** button to bring up the Schedule page to configure the new schedule.



Advanced Wireless Settings

Transmit Set the transmit power of the antennas. **Power:**

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

RTS This value should remain at its default setting of Threshold: 2432. If inconsistent data flow is a problem, only a minor modification should be made.

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



Preamble Select **Short** or **Long Preamble**. The preamble defines the length of the CRC block (Cyclic Redundancy Check is a common **Type:** technique for detecting data transmission errors) for communication between the wireless router and the roaming wireless network adapters. Note: High network traffic areas should use the **Short Preamble** type.

CTS Mode: Select None to disable this feature. Select Always to force the Router to require each wireless device on the network to perform an RTS/CTS handshake before they are allowed to transmit data. Select Auto to allow the Router to decide when RTS/CTS handshakes are necessary

Wireless Use the drop-down menu to select the wireless modes you want to enable on the Router. The available options are 802.11n Mode: only, 802.11 Mixed (g/b), and 802.11 Mixed (n/g/b).

Bandwidth: Use the drop-down menu to select 20MHz or 20/40MHz (Auto).

20/40Mhz Select to enable or disable 20MHz and 40MHz co-existing in the same wireless network. This is useful when 20MHz Coexist: and 40MHz devices exist in the same wireless coverage area. Enable this feature to properly allocate channels without interference in such a scenario.

Short Guard Tick this check box to reduce the guard interval time therefore increasing the data capacity. However, this is less reliable **Interval**: and may create higher data loss.

Click the **Save Settings** button when you have finished the advanced wireless configuration.

Advanced Network Settings

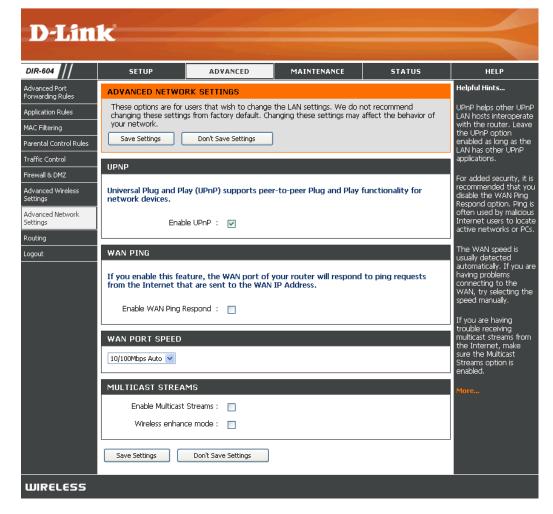
Enable UPnP: To use the Universal Plug and Play (UPnP[™]) feature, tick the Enable UPNP box. UPNP provides compatibility with networking equipment, software, and peripherals.

Enable WAN De-selecting this check box will not allow the **Ping Respond:** DIR-604 to respond to pings. Blocking the Ping may provide some extra security from hackers. Tick the check box to allow the Internet port to be "pinged".

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

Enable Tick the **Enable Multicast Streams** check Multicast box to allow multicast traffic to pass through Streams: the Router from the Internet.

Wireless Tick the Wireless Enhance Mode check box **Enhance** to enable the Router to forward all multicast Mode: streams from the Internet to the wireless station using a unicast stream. This feature helps improve the quality of multimedia applications for wireless users.



Routing

The routing feature allows users to define fixed routes to defined destinations.

Interface: Select the interface which the IP packet must

use to transit out of the Router when this route is used. Each route has a check box next to it. Tick the check box of the route you wish to

enable.

Destination: Enter the IP address of the host or network

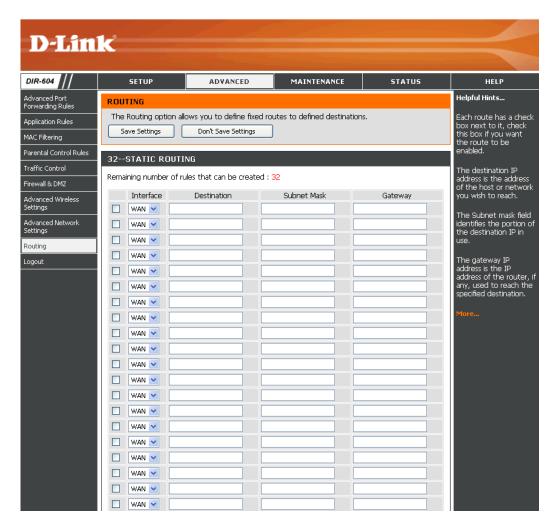
you wish to access.

Subnet Mask: This field identifies the portion of the destination

IP address in use.

Gateway: The gateway is the IP address of the router, if

any, used to reach the specified destination.



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.

Login Name: Enter the login name. The default is admin.

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

changes to the settings.

Confirm Retype the new password for the Administrator

Password: Login Name.

Enable Tick this check box to enable graphical **Graphical** authentication. The device supports this function

Authentication: to prevent phishing.

Enable Remote management allows the DIR-604 to be Remote configured from the Internet by a Web browser.

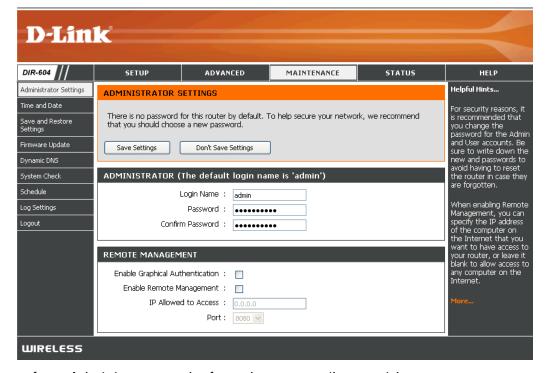
Management: A username and password is still required to access the Web Management interface. In

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.

IP Allowed to Enter the IP address of the computer on the Internet that you want to have access to the Router. If left blank, any computer Access: on the Internet can access the Router.

Port: The port number used to access the DIR-604. Example: http://x.x.x.x:8080 whereas x.x.x.x is the Internet IP address of the DIR-604 and 8080 is the port used for the Web Management interface.



Time and Date

The Time and Date 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.

Enable Tick the check box to enable Daylight Saving Daylight Time.

Saving:

Sync your Click this button to set the device's time the computer's time same to local PC.
settings:

Automatically Check the box to enable the device to synchronize automatically synchronize with a D-Link NTP with D-Link's Server. NTP stands for Network Time Protocol. Internet time NTP synchronizes computer clock times in a server: network of computers. This will only connect to a server on the Internet, not a local server.

NTP Select one of the D-Link NTP Servers from Server Used: the drop-down menu. The DIR-604 will then synchronize its clock to be the same time as the D-Link Internet

time server. Click the **Update Now** button to synchronize with the D-Link Internet time server immediatley.

immediatley.

Set the Time To manually input the time, use the drop-down and Date menus to enter the values in these fields for the Manually: Year, Month, Day, Hour, Minute, and Second.



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

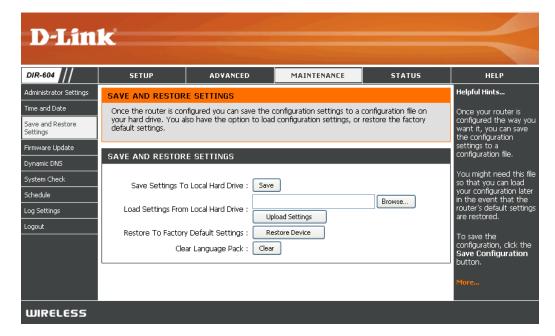
Save and Restore Settings

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

Restore to Click the Restore Device button to restore Factory all configuration settings back to the settings **Default** that were in effect at the time the Router was **Settings:** 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.

Clear Click the Clear button to restore the device back Language to the English interface version and remove Pack: other languages installed for the system web pages.



Firmware Update

You can upgrade the firmware of the Router here. Please check the D-Link support site for firmware updates at http://support.dlink.com or simply click the **Check Now** button located in the Firmware Information section. You can download firmware upgrades to your hard drive from the D-Link support site. 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.

Current Displays the current firmware version. **Firmware Version**:

Current Displays the current firmware date.

Firmware Date:

Check Online Click the Check Now button, or the "Click here Now for Latest to check for an upgrade on our support site."

Firmware hyperlink at the top of the page, to see what the Version: latest firmware for the Router is.

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

Language This function allows the user to transfer the Pack language of the GUI from English to their own Upgrade: language by upgrading the language pack. Click the Browse control to locate the desired language pack on your hard drive. Click Upload to complete the language pack upgrade.



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

Enable 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

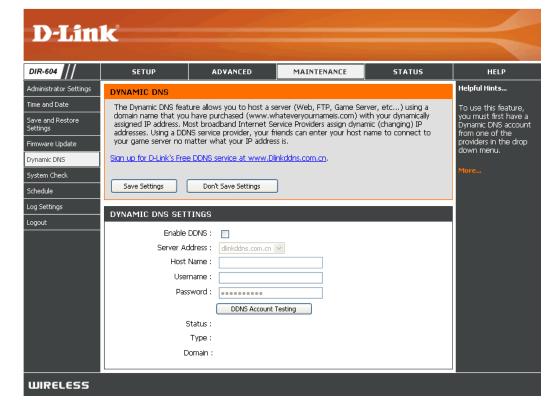
your DDNS service provider.

Username: Enter the User Name for your DDNS account.

Password: Enter the Password for your DDNS account.

DDNS Account This is to test if the DDNS account is valid for

Testing: use.



System Check

The System Check feature allows you to verify the physical connectivity on both the LAN and Internet interface.

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 Result: The results of your ping attempts will be

displayed here.



Schedule

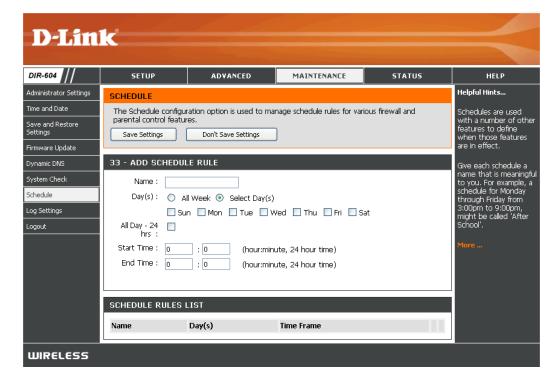
The Schedule page allows you to manage schedule rules for various firewall and parental control features.

Name: Enter a name for your new schedule.

Day(s): Select a day, a range of days, or All Week to include every day.

Time: Check All Day - 24 hrs or use the Start Time and End Time fields to specify the start and end time for your schedule.

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



Log Settings

The Router keeps a running log of events and activities occurring on the device. You can define what types of events you want to view and the level of the events to view. The 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.

Save Log File Click the Save button to save the log file to to Local Hard your local hard drive.

Drive:

Enable Tick this check box to send the Router logs to Logging to a SysLog Server.

Syslog Server:

Syslog Server The address of the SysLog server that will be **IP Address**: 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).

Log Type: Tick the desired type(s) of logs that should be

displayed: System, Firewall & Security, and

Router Status.

Log Level: Tick the desired level(s) of importance:

Critical, Warning, and Information.

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

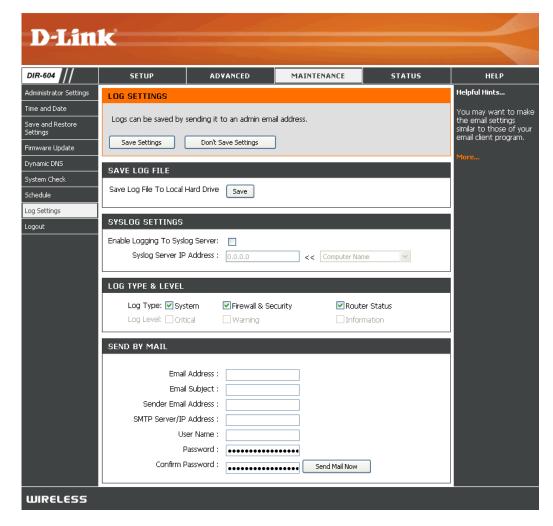
email sent.

Email Subject: Enter a subject description for your e-mail.

Sender Email This e-mail address will appear as the sender

Address: when you receive a log file or firmware

upgrade notification via e-mail.



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

User Name: Enter your account user name for sending e-mail.

Password: Enter the password associated with the account.

Confirm Re-type the password associated with the account and click the **Send Mail Now** button. **Password:**

Click the **Save Settings** button when you have finished the log settings configuration.

Device Information

This page displays the current information for the DIR-604. It will display the LAN, Internet (WAN), and Wireless information, in addition to the firmware version and date the firmware was last updated.

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

If your Internet connection is set up for PPPoE, PPTP, or L2TP, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the Internet connection and use **Connect** to establish the Internet connection.

See the following for more information.

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

Internet: Displays the MAC address and the public IP settings for the Router.

Wireless Displays the wireless mode, MAC address and 802.11n: your wireless settings such as SSID, Channel, and Encryption status.



View Log

The Router automatically logs (records) events of possible interest in its internal memory. If there is not enough internal memory for all events, logs of older events are deleted but logs of the latest events are retained. The View Log 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 on the Log Settings page. The 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 (see the Log Settings page).

First Page: Click this button to view the first page of the

log file.

Last Page: Click this button to view the last page of the

log file.

Previous: Click this button to view the previous page of

the log file.

Next: Click this button to view the next page of the

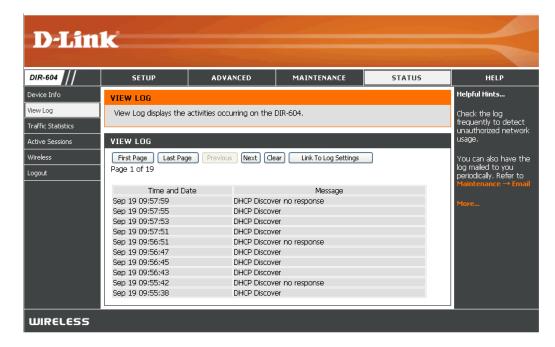
log file.

Clear: Clears all of the log contents.

Link to Log The user can click the button to "link to log

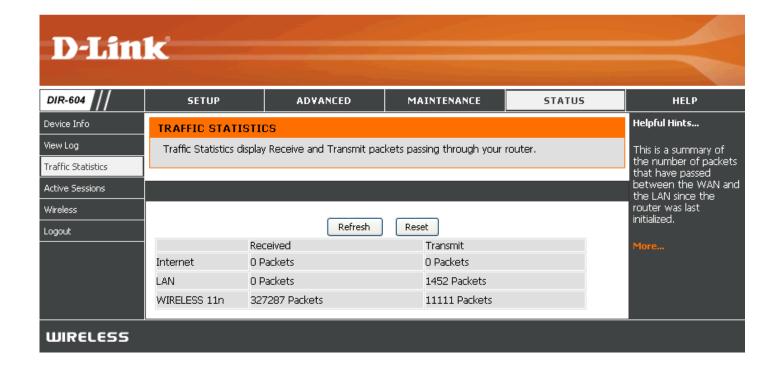
Settings: settings" and save the logs to a local hard drive

or to a Syslog server.



Traffic Statistics

The page displays the Traffic Statistics. Here you can view the amount of packets that pass through the DIR-604 on the Internet, LAN, and Wireless connections. The traffic counter will reset if the device is rebooted. Alternatively, you can click either the **Reset** button or the **Refesh** button.



Active Sessions

The Active 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.

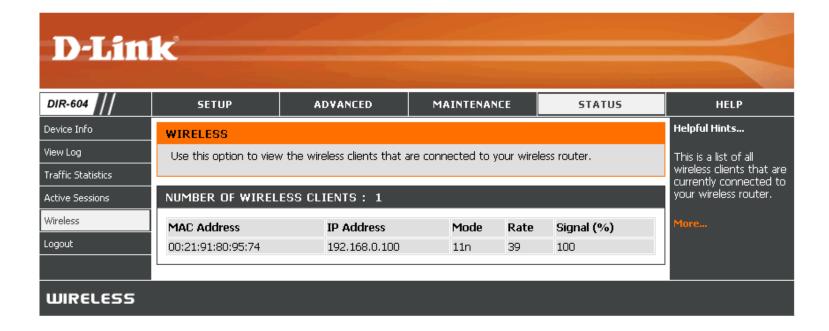
NAPT Session: Displays information about the NAPT sessions on the Router, including the number of TCP sessions, the number of UDP sessions, and the combined number of TCP and UDP NAPT sessions.

NAPT (Active) Displays the IP address of the local application Session: and the TCP/UDP packets being sent by the source IP address for each NAPT active Session.



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.



Help



Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-604 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)

- WPA2-PSK(Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

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:

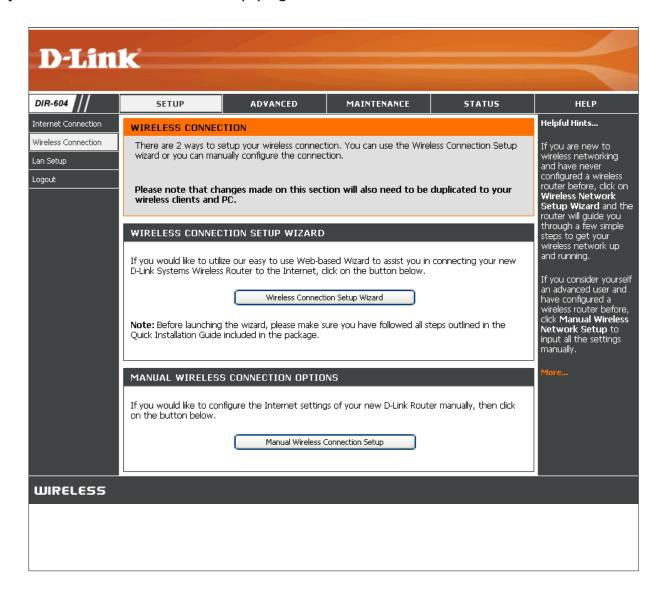
- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead 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.

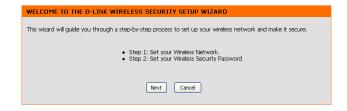
Wireless Connection Setup Wizard

To run the security wizard, browse to the Setup page and then click the Wireless Connection Setup Wizard button.



Click **Next** to allow the setup wizard to guide you through a step-by-step process to set up your wireless network and make it secure.





WIRELESS

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.

If you would like the Router to automatically assign a network key to your network, click the **Automatically assign a network key (Recommended)** radio button.

Alternativley, click the **Manually assign a network key** radio button to create your own network key.

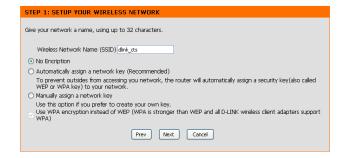
Click **Next** to continue.

The following window appears if you selected the option to manually create your own network key.

Type a password that you would like to use for wireless security in the **Wireless Security Password** field.

Click Next to continue.





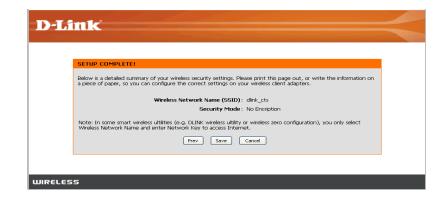
WIRELESS

The following window appears to indicate that the Wireless Connection Setup Wizard is complete.

If you selected the option that automatically generated a network key, the automatically generated key will display next to the **Pre-Shared Key** field.

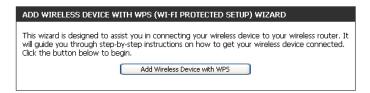
If you manually specified a network key, the **Wireless Security Password** that you specified will display next to the **Pre-Shared Key** field.

Click Save to finish the Security Wizard.



Add Wireless Device with WPS Wizard

From the **Setup** > **Wireless Settings** screen, click **Add Wireless Device with WPS**.



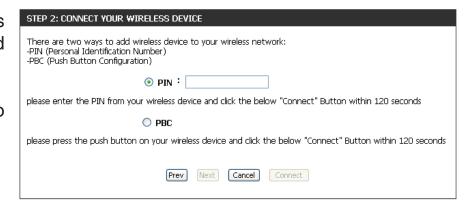
Select **Auto** to add a wireless client using WPS (Wi-Fi Protected Setup). Once you select **Auto** and click **Connect**, you will have a 120 second time limit to apply the settings to your wireless client(s) and successfully establish a connection.

If you select **Manual**, a settings summary screen will appear. Write down the security key and enter this on your wireless clients.

STEP 1: SELECT CONFIGURATION METHOD FOR YOUR WIRELESS NETWORK		
Please select one of following	g configuration methods and click next to continue.	
Auto Select this option if your wireless device supports WPS (Wi-Fi Protected Setup) Manual Select this option will display the current wireless settings for you to configure the wireless		
device manually	Prev Next Cancel Connect	

PIN: Select this option to use PIN method. In order to use this method you must know the wireless client's 8 digit PIN and click **Connect**.

PBC: Select this option to use PBC (Push Button) method to add a wireless client. Click **Connect**.



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 and then click the **Manual Wireless Network Setup** button.
- 2. Select **Enable WPA/WPA2 Wireless Security (enhanced)** from the *Security Mode* drop-down menu.
- 3. Select **Auto(TKIP/AES)**, **TKIP**, or **AES** from the *Cipher Type* drop-down menu. If you have wireless clients that use both types, use **TKIP/AES**.

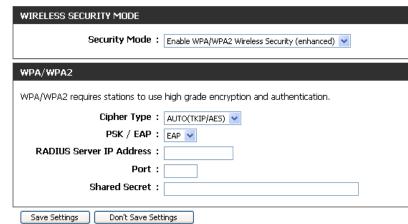


- 4. Select **PSK** from the *PSK / EAP* drop-down menu.
- 5. Enter a key (passphrase) in the *Network Key* field. The key is entered as a pass-phrase in either ASCII or HEX format. If using ASCII format the pass-phrase must be between 8-63 characters. If using HEX format the pass-phrase must be 64 characters. The ASCII or HEX pass-phrase must be the same at both ends of the wireless connection.
- 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 WPA-PSK on your adapter and enter the same passphrase as you did on the router.

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 and then click the **Manual Wireless Network Setup** button.
- 2. Select **Enable WPA/WPA2 Wireless Security (Enhanced)** from the *Security Mode* drop-down menu.
- 3. Select **Auto(TKIP/AES)**, **TKIP**, or **AES** from the *Cipher Type* drop-down menu. If you have wireless clients that use both types, use **TKIP/AES**.
- 4. Select **EAP** from the *PSK / EAP* drop-down menu.
- 5. Enter the IP Address of your RADIUS server in the RADIUS Server IP Address field.
- 6. Enter the port you are using with your RADIUS server in the *Port* field.
- 7. Enter the security key in the *Shared Secret* field.
- 8. 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-Enterprise (RADIUS) on your adapter and enter the same passphrase as you did on the router.



Connect to a Wireless Network Using Windows Vista®

Windows Vista® users may use the built-in wireless utility. 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 Vista® 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 **Connect to a network**.



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.



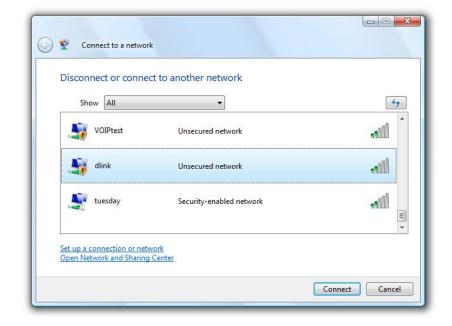
Configure WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) 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 security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.

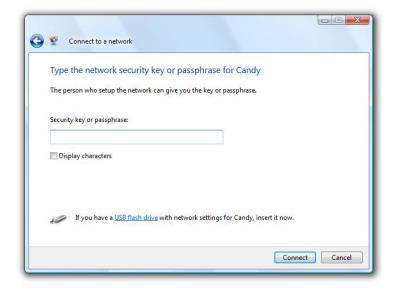


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. Enter the same security key or passphrase 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 security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



Connect Using WCN 2.0

The Router supports Wi-Fi protection, referred to as WCN 2.0 in Windows Vista®. The following instructions for setting this up depends on whether you are using Windows Vista® to configure the router or third party software.

When you first set up the Router, Wi-Fi protection is disabled and unconfigured. To enjoy the benefits of Wi-Fi protection, the router must be both enabled and configured. There are three basic methods to accomplish this: use Windows Vista's built-in support for WCN 2.0, use software provided by a third party, or manually configure.

If you are running Windows Vista[®], log into the router and click the **Enable** checkbox in the **Advanced** > **Wi-Fi Protected Setup** window. Use the Current PIN that is displayed in the **PIN Settings** section of **Advanced** > **Wi-Fi Protected Setup** window or choose to click the **Generate New PIN** button or **Reset PIN to Default** button.



If you are using third party software to set up Wi-Fi Protection, carefully follow the directions. When you are finished, proceed to the next section to set up the newly-configured router.

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

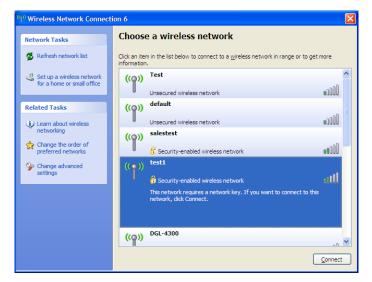
Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.

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.





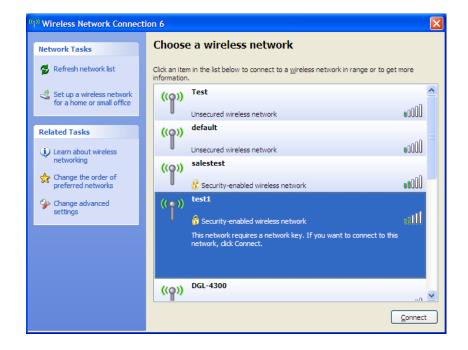


Configure WPA-PSK

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.

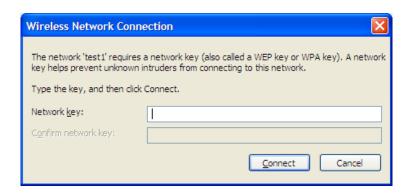
- 1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select View Available Wireless Networks.
- **2.** Highlight the wireless network (SSID) you would like to connect to and click **Connect**.





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-604. 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.
Ping statistics for 66.94.234.13:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
     Minimum = Oms, Maximum = Oms, Average =
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 =
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>Internet and then click Manual Internet Connection Setup.
- 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 as become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

Home

- Gives everyone at home broadband access
- Surf the Web, check 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 you 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-604 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 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**. (Windows Vista® users type **cmd** in the **Start Search** box.)

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.

```
Microsoft Windows XP [Uersion 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\_
```

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 Vista® - Click on Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.

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 network adapter and select Properties.

Step 3

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

Step 4

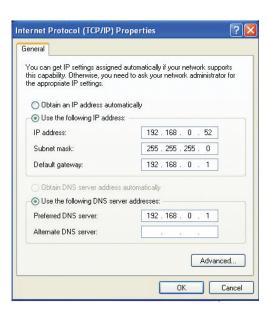
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

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.



以下警語適用台灣地

經型式認證合格之低功率射頻電機,非經許可,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。前項合法通信,指依電信法規定作業之無線電通信。 低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Federal Communication Commission Interference Statement

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.

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.

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

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.