



User Manual

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.

Manual Revisions

Revision	Date	Description
1.0	January 25, 2013	• Initial release for Revision A1

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Package Contents



DIR-505L SharePort Mobile Companion



Ethernet Cable



Wireless Configuration Card



Quick Install Guide

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

System Requirements

Network Requirements	<ul style="list-style-type: none">• An Ethernet-based Internet connection (Router mode)• A wireless-based Internet connection (Hotspot mode)• A wireless router (Repeater mode)• An Ethernet router or switch (AP mode)• IEEE 802.11n or 802.11g wireless clients
Web-based Configuration Utility Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows® 8, 7, Vista®, or XP (SP 2 or higher), Mac OS® X (10.7 or higher)• An installed Ethernet or wireless adapter <p>Browser Requirements:</p> <ul style="list-style-type: none">• Internet Explorer® 7 or higher• Firefox 9 or higher• Safari 5 or higher• Google Chrome 16 or higher <p>Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</p>

Introduction

TOTAL PERFORMANCE

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

TOTAL SECURITY

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

TOTAL COVERAGE

The DIR-505L delivers powerful 802.11n performance and increases the range of your wireless network by extending the range of your wireless coverage of another AP or wireless router.

ULTIMATE PERFORMANCE

The DIR-505L is a 802.11n-compliant device that delivers real world performance. Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the DIR-505L router to a cable or DSL modem and share your high-speed Internet access with everyone on the network. In addition, this Router includes a Quality of Service (QoS) engine that keeps digital phone calls (VoIP) and online gaming smooth and responsive, providing a better Internet experience.

TOTAL NETWORK SECURITY

The DIR-505L supports all of the latest wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA/WPA2 standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices. In addition, this router utilizes dual active firewalls (SPI and NAT) to prevent potential attacks from across the Internet.

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

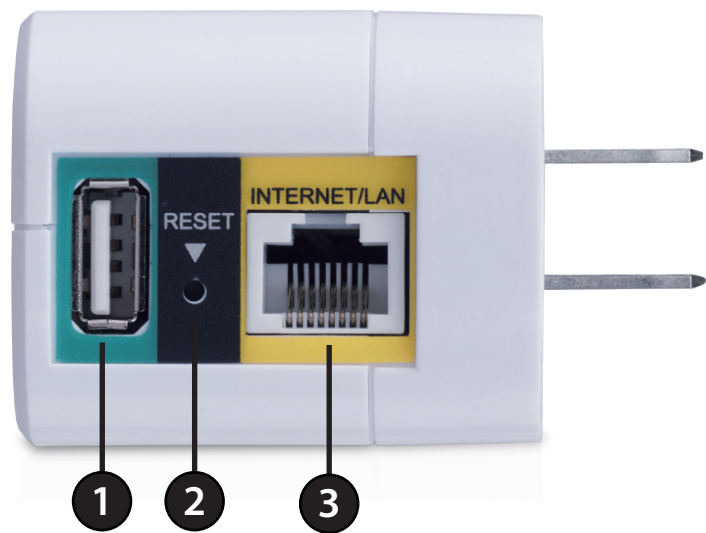
Features

- **Faster Wireless Networking** - The DIR-505L provides up to 150Mbps* 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-505L is still fully compatible with the IEEE 802.11g standards, so it can connect with existing 802.11g, 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-505L can pass through VPN sessions. It supports multiple and concurrent IPSec and PPTP sessions, so users behind the DIR-505L can securely access corporate networks.
- **User-friendly Setup Wizard** - Through its easy-to-use Web-based user interface, the DIR-505L lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

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

Hardware Overview

Connections



1	USB Port	Connect a USB thumb drive/external hard drive using SharePort™ Mobile and SharePort™ Web File Access. Both will allow you to share files with your local network.
2	Reset Button	Press and hold the Reset button for 6 seconds to restore the DIR-505L to its original factory default settings.
3	Ethernet Port	The Ethernet port is used to connect to a broadband modem or to a port supplying an Internet connection (I.E. a hotel) using an Ethernet cable.

Hardware Overview

LEDs



LED Indicator	Color	Status	Description
Power/Status	Green	Solid Green	The device is powered ON and operating properly.
		Blinking Green	The device is processing WPS.
		Off	The device is off.
	Red	Solid Red	During boot up or system is defective.
		Off	The device is off.

Installation

The next few pages will explain the different operational modes you can use.

Operation Modes

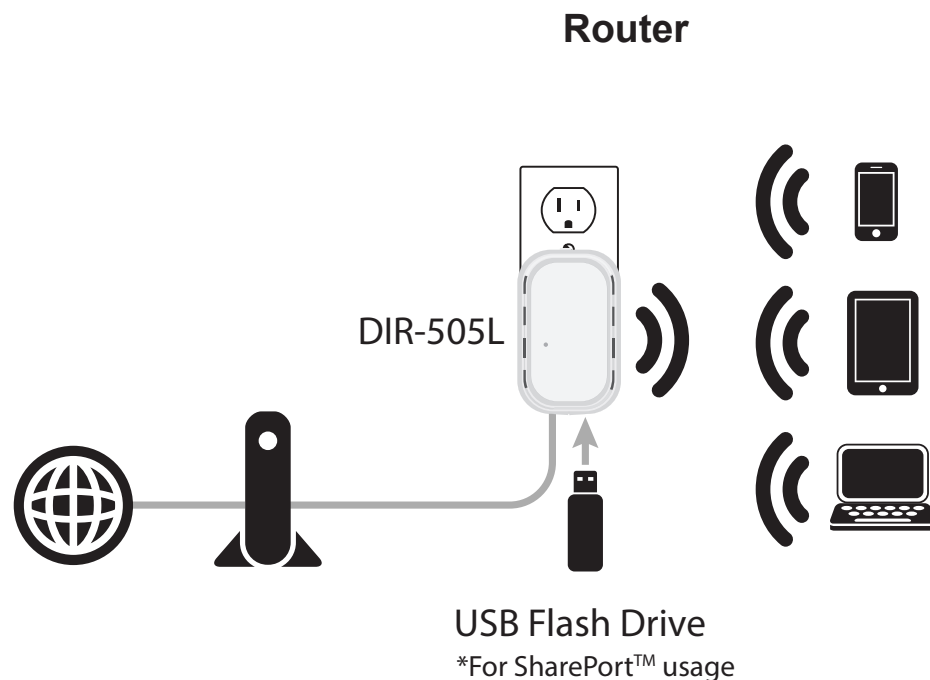
Depending on how you want to use your DIR-505L will determine which mode you use. This section will help you figure out which setting works with your setup.

- Router mode
- Access Point mode
- Repeater mode
- Wi-Fi Hotspot mode
- Charger mode

Router Mode

The DIR-505L connects to your cable modem, DSL modem or other Internet source (using Ethernet) and shares your Internet connection with your devices wirelessly. You can also share files with other computers or devices on your wireless network by using the SharePort™ feature.

Note: Use this mode if your Internet connection requires an Ethernet connection. If the Internet connection is wireless, like in a hotel, refer to **Hotspot Mode**.

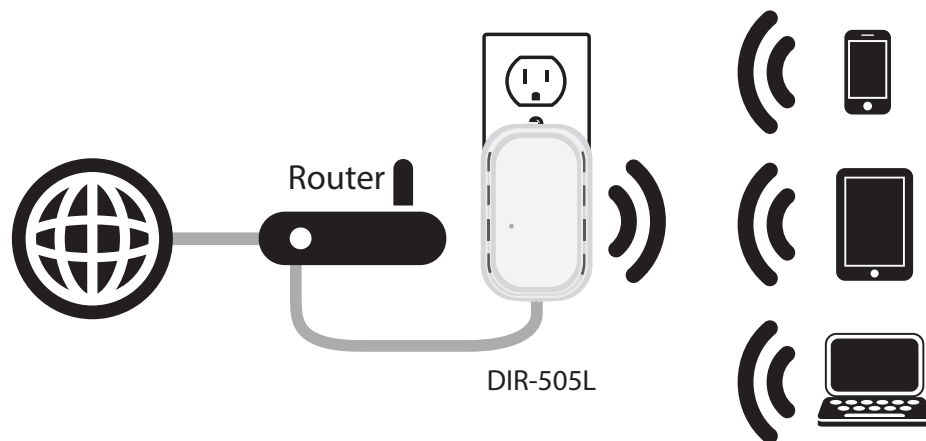


Access Point Mode

The DIR-505L can connect to an existing network and allow wireless devices to connect to the network. Plug the DIR-505L into your network (via switch or router) using an Ethernet cable. Wireless devices can now connect to the DIR-505L and access your network. Note that AP mode does not support sharing files from a USB storage drive or the SharePort Mobile app.

Note: You will need a router to share an Internet connection while the DIR-505L is in Access Point mode. To share the Internet, use Router or Hotspot mode.

Access Point Mode

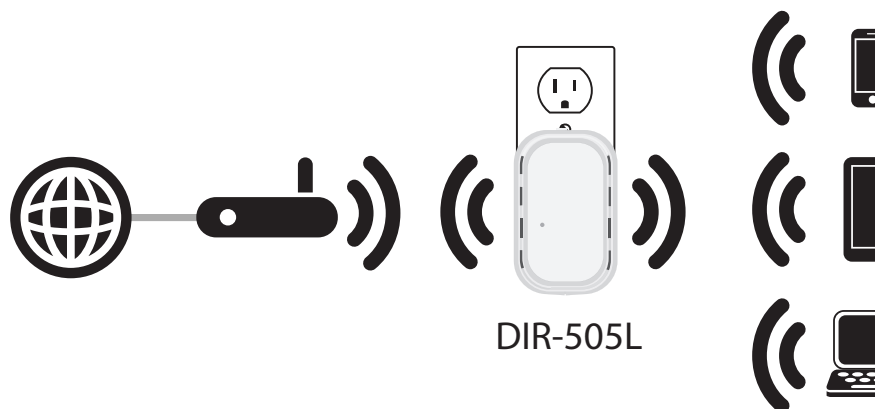


Repeater Mode

In *Repeater* mode, the DIR-505L increases the range of your wireless network by extending the wireless coverage of another AP or wireless router. The APs and wireless router (if used) must be within range of each other. Make sure that all clients, APs, and the wireless router all use the same Wi-Fi Network Name (SSID) and security settings.

Note: You will need a router to share an Internet connection while the DIR-505L is in Repeater mode. To share the Internet, use Router or Hotspot mode.

Repeater Mode

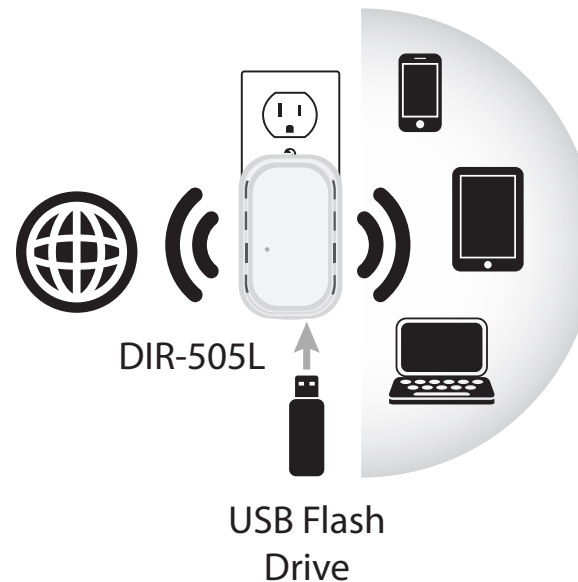


Hotspot Mode

The DIR-505L can connect to an existing wireless network with an Internet connection, such as a hotspot at a hotel. This will allow you to share that single connection to multiple wireless devices. You can also share files with other computers or devices on your wireless network by using the SharePort™ Mobile app or SharePort™ web access.

Note: Use this mode if your Internet connection is wireless. If the Internet connection requires an Ethernet cable, refer to **Router Mode**.

Wi-Fi Hotspot Mode



Note: When configuring the DIR-505L in Hotspot mode, the default IP address to access the Web UI is **192.168.100.1**.

Wireless Installation Considerations

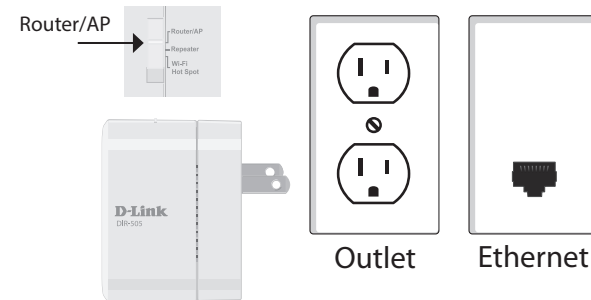
The D-Link wireless router lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through,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

1. Keep the number of walls and ceilings between the D-Link router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

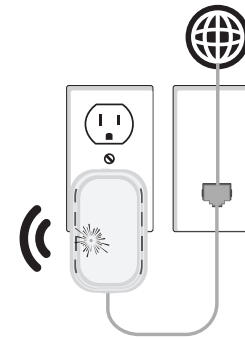
Manual Setup

Router/Access Point Mode

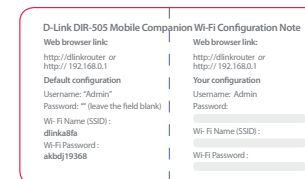
1. Find an outlet close to an Internet-enabled device. Then, move the switch to “**Router/AP Mode**” and plug the DIR-505L into a wall outlet. Verify that the power LED has turned green.



2. Connect one end of an Ethernet cable into the Ethernet port of the Internet-enabled device (such as a modem or Ethernet port in a hotel) and then plug the other end of this cable into the Ethernet port of the DIR-505L.



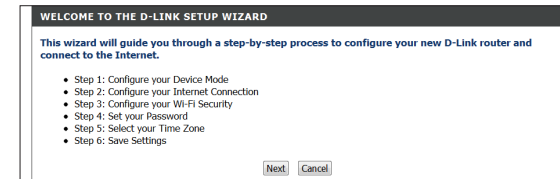
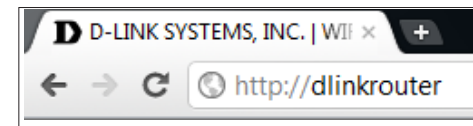
3. From your laptop or mobile device go to your Wireless Utility to display the available wireless networks and select the Wi-Fi name that is displayed on your companion card (ex: **dlink-a8fa**). Then, enter the Wi-Fi password included on your card (**akbdj1936**).



4. Open a web browser. First-time users will automatically be directed to the wizard. Please follow the on-screen instructions to complete the setup.

Type **http://dlinkrouter** (or **http://192.168.0.1**) in the address bar if the wizard does not appear. Once the setup is complete then proceed to the next step.

*If you are using a Mac or tablet, type **http://dlinkrouter.local** in the address bar.

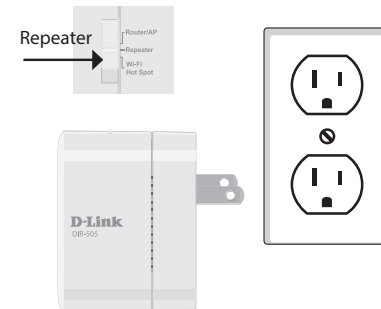


5. From your laptop or mobile device, go to your wireless utility to display the available wireless networks and select the network that you created for internet access.

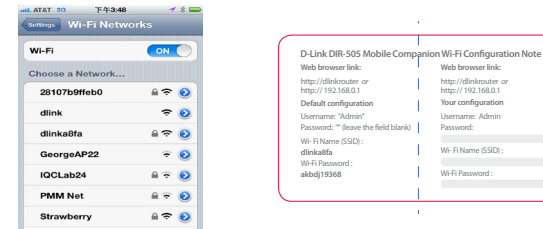


Repeater Mode

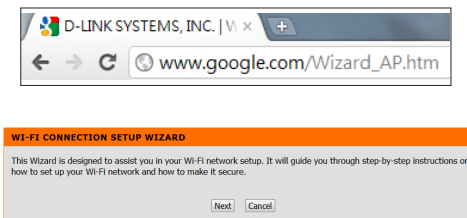
1. Move the switch to "**Repeater Mode**," then plug the DIR-505L into a wall outlet and verify that the power LED has turned green.



2. From your laptop or mobile device go to your Wireless Utility to display the available wireless networks and select the network found on your companion card (ex: **dlink-a8fa**). Then, enter the Wi-Fi password included in your card (**akbdj1936**).

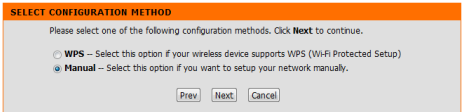


3. Open a web browser. First-time users will automatically be directed to the wizard. Please follow the on-screen instructions to complete the setup.



If the wizard does not appear, type **http://dlinkrouter.local** in the address bar. Click **Launch Wireless Setup Wizard** to continue.

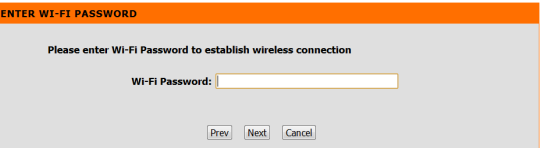
4. Select the configuration method and click **Next**.
For *Manual Configuration*, select the Wi-Fi network you would like the DIR-505L to connect to wirelessly.



SELECT WI-FI NETWORK					
ID	Wi-Fi Network Name	Wi-Fi Security Mode	Channel	Signal(%)	Select
1	irvine2	WPA/WPA2-PSK(auto)	6	94	<input type="radio"/>
2	LoudFish	WPA/WPA2-PSK(auto)	11	94	<input type="radio"/>
3	dlink_DHP-1565	WPA/WPA2-PSK(auto)	11	94	<input checked="" type="radio"/>
4	dlink_guest	WPA/WPA2-PSK(auto)	11	94	<input type="radio"/>
5	LoudFish-guest	None	11	94	<input type="radio"/>
6	Express Network	WPA/WPA2-PSK(auto)	1	88	<input type="radio"/>
7	NETGEAR	WPA-PSK	11	50	<input type="radio"/>

Rescan Connect Cancel

5. Enter the Wi-Fi Password and click **Next**.
Once the second screen appears, you have successfully completed the setup. Please click **Save** and write down the SSID and password on your companion card for future reference.

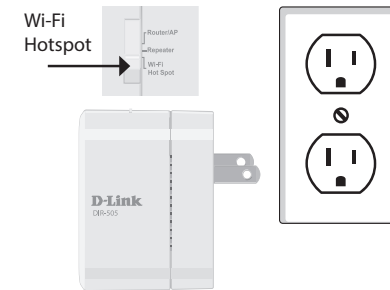


6. From your laptop or mobile device go to your wireless utility to display the available wireless networks and select the network that you previously connected to in *Step 5* for internet access.

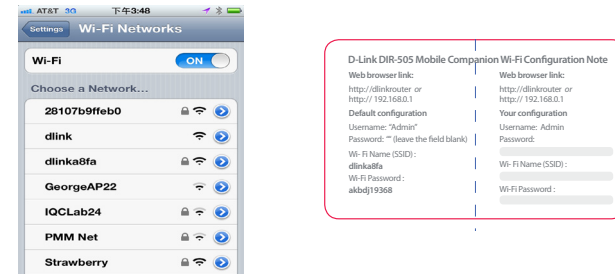


Wi-Fi Hotspot Mode

1. Move the switch to **"Wi-Fi Hotspot"**. Then, plug the DIR-505L into a wall outlet and verify that the power LED has turned green.

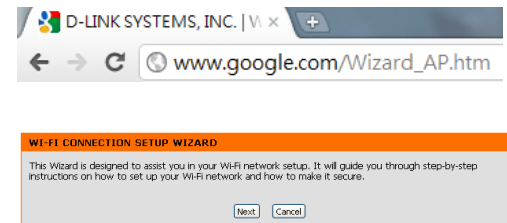


2. From your laptop or mobile device go to your Wireless Utility to display the available wireless networks and select the network that is displayed on your companion card (ex: **dlink-a8fa**). Then, enter the Wi-Fi password included in your card (**akbdj1936**).



3. Open a web browser. First-time users will automatically be directed to the wizard. Please follow the on-screen instructions to complete the setup.

If the wizard does not appear, type **http://dlinkrouter** or **192.168.100.1** in the address bar. Click **Launch Wireless Setup Wizard** to continue.



4. Select the Wi-Fi Hotspot you would like to connect to and then click **Connect** to continue. Then, enter the Wi-Fi password and click **Next** to continue.
5. If you do not wish to use the same Wi-Fi network name and would like to create your own name and password, uncheck the box. Then, enter your own Wi-Fi network name & password in the boxes. When the second screen appears, you have successfully completed the setup. Click **Save** and write down the SSID & password in your companion card for future reference.
6. From your laptop or mobile device go to your wireless utility to display the available wireless networks and select the network that you created in *Step 5*.

SELECT WI-FI HOTSPOT

ID	Wi-Fi Network Name	Wi-Fi Security Mode	Channel	Signal(%)	Select
1	albert	WPA2-PSK	6	94	<input type="radio"/>
2	dlink825	WPA/WPA2-PSK(auto)	11	94	<input type="radio"/>
3	NETGEAR	WPA-PSK	11	75	<input type="radio"/>
4	Express Network	WPA/WPA2-PSK(auto)	1	5	<input type="radio"/>
5	ATT720	WPA/WPA2-PSK(auto)	1	1	<input type="radio"/>

ENTER WI-FI PASSWORD

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

PLEASE ENTER THE SETTINGS FOR THE EXTENDER NETWORK

☐ Use the same Wi-Fi Network Name for the Extended Network

Give your Extended Wi-Fi network a name.

Extended Wi-Fi Network Name (SSID): (Using up to 32 characters)

Give your Extended Wi-Fi network a password.

Wi-Fi Password: (Between 8 and 63 characters)

SETUP COMPLETE!

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name (SSID) : dlink825

Wi-Fi Password : dlink123456

Extended Wi-Fi Network Name (SSID) : dlink_DIR-505

Wi-Fi Password : dlink1234

The Setup Wizard has completed. Click the Save button to save your settings and reboot the device.



Quick Router Setup for Mobile Device

1. Scan the bar code to download "*QRS Mobile*" from the app store to your iPhone or iPad.



iOs



Android

2. From your mobile device, click **Settings**. Then, click **Wi-Fi**.



Settings

3. Select the network that is displayed on your companion card (ex: **dlinka8f**). Then, enter the Wi-Fi password included in your card (ex: **akbdj1936**).



4. Once it is connected, click on the **QRS Mobile** icon.



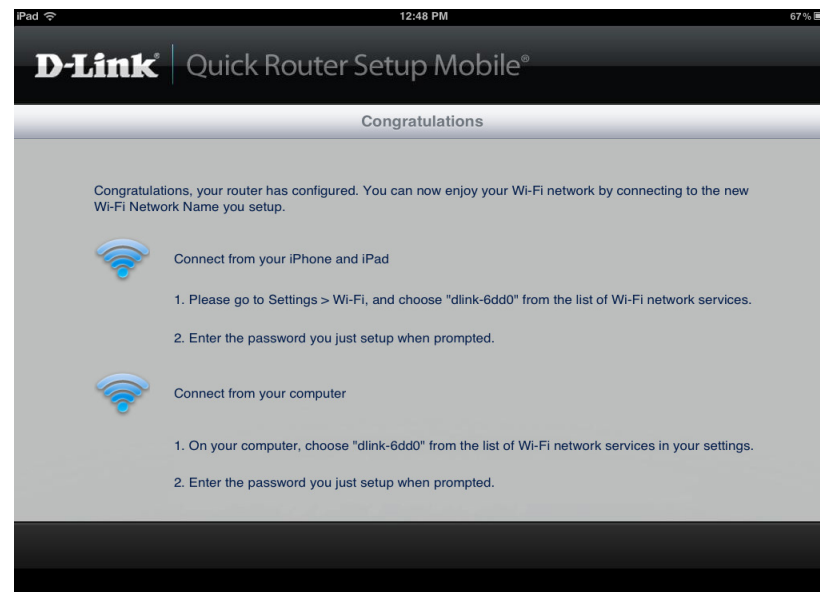
5. Click **Start** to continue.



6. Follow the instructions and click **Next** to continue.

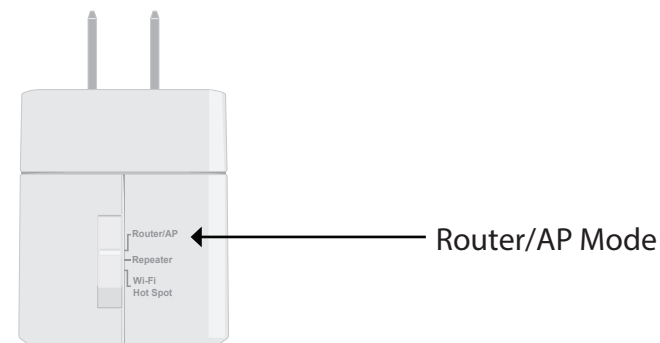


7. Once the setup is complete the following screen will show up. Then, select your new Wi-Fi name and enter the password you just created from your laptop or mobile device.



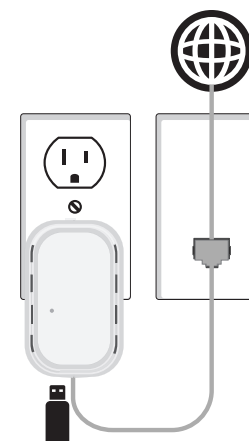
SharePort Mobile App

1. Move the switch to **"Router/AP Mode"** or **"Wi-Fi Hotspot Mode"**.



2. Insert your USB thumb drive to DIR-505L first and then plug the DIR-505L into wall outlet.

Note: Please refer to page 56 for **Storage** setup information before you proceed to the next step below.



3. Scan the bar code to download the *SharePort Mobile* app from the app store to your iPhone or iPad.



iOs

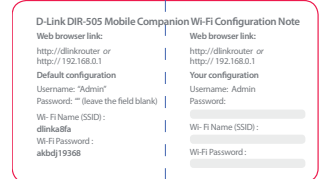
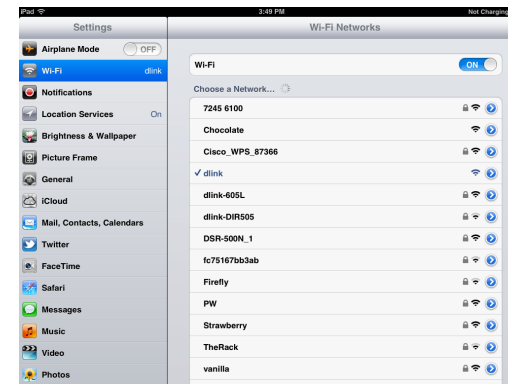


Android

4. From your iOS mobile device, click **Settings**.



5. Click **Wi-Fi** and select the network (SSID) that you assigned during initial setup. Then, enter your Wi-Fi password.



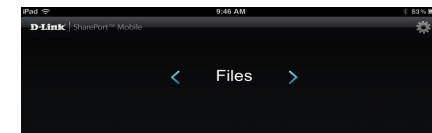
6. Once connected click on the **SharePort Mobile** icon.



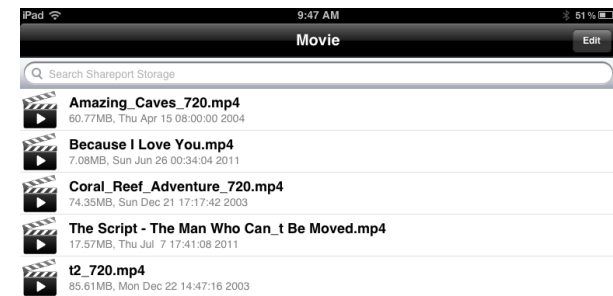
7. The following screen will pop up.



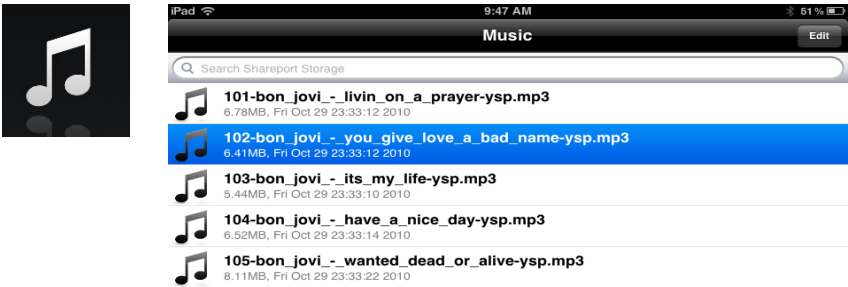
8. Click on the **Settings** icon located on the right top corner of the screen. Then, click **Edit** to enter your user name and password. Once you finish, click **Done** to continue. By default, the user name is “**admin**” and the password is blank.



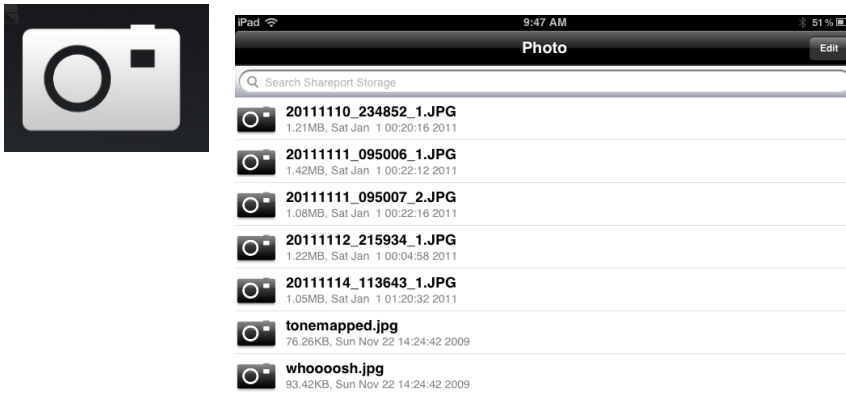
9. For the *Movie* section, click the **movie icon** to play your movie from your USB flash drive.



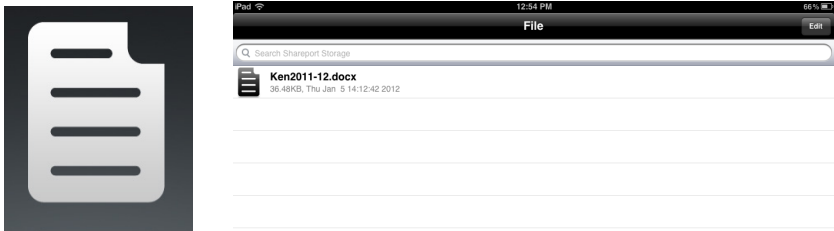
10. For the *Music* section, click the **music icon** to play your music from your USB flash drive.



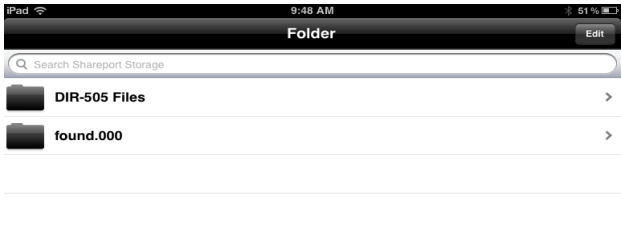
11. For the *Photo* section, click the **photo icon** to open your photo from your USB flash drive.



12. For the *Files* section, click on the **files icon** to open your file from your USB flash drive.



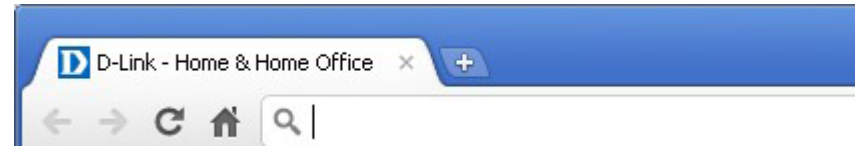
13. For the *Folder* section, click on the **folder icon** to open a file from your USB flash drive.



Router Mode Quick Setup Wizard

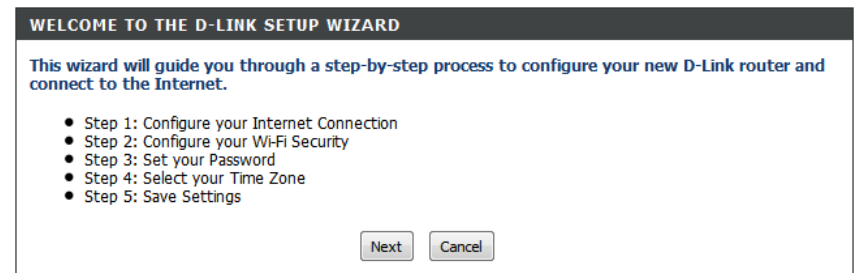
If this is your first time installing the router, open your web browser. You will automatically be directed to the *Wizard Setup Screen*.

If you have already configured your settings and you would like to access the configuration utility, please refer to page 30.



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

Click **Next** to continue.



Please wait while your router detects your internet connection type. If the router detects your Internet connection you may need to enter your ISP information, such as user name and password.

Create a wireless security passphrase or key (between 8-63 characters). Your wireless clients will need to have this passphrase or key entered to be able to connect to your wireless network.

Click **Next** to continue.

In order to secure your router, please enter a new password. Check the **Enable Graphical Authentication** box to enable CAPTCHA authentication for added security. Click **Next** to continue.

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

STEP 1: CONFIGURE YOUR INTERNET CONNECTION

Router is detecting your Internet connection type, please wait ...

STEP 2: CONFIGURE YOUR WI-FI SECURITY

Give your Wi-Fi network a name.

Wi-Fi Network Name (SSID) :
 (Using up to 32 characters)

Give your Wi-Fi network a password.

Wi-Fi Password :
 (Between 8 and 63 characters)

STEP 3: SET YOUR PASSWORD

By default, your new D-Link Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below, and enabling CAPTCHA Graphical Authentication provides added security protection to prevent unauthorized online users and hacker software from accessing your network settings.

Password :

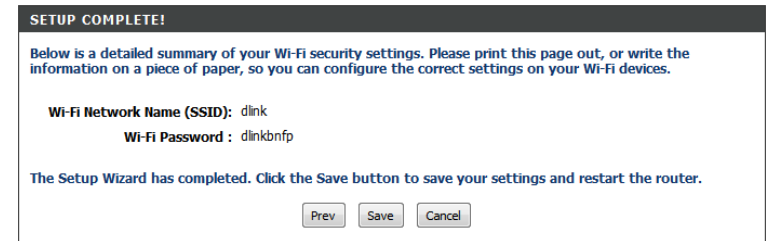
Verify Password :

Enable Graphical Authentication : ☐

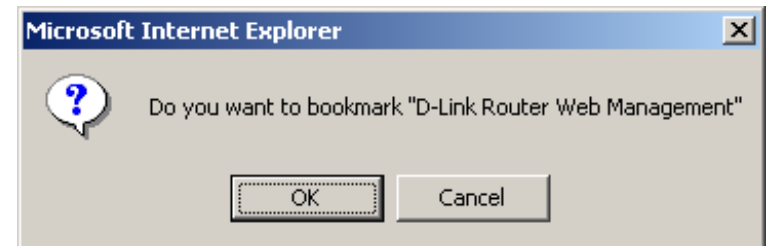
STEP 4: SELECT YOUR TIME ZONE

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

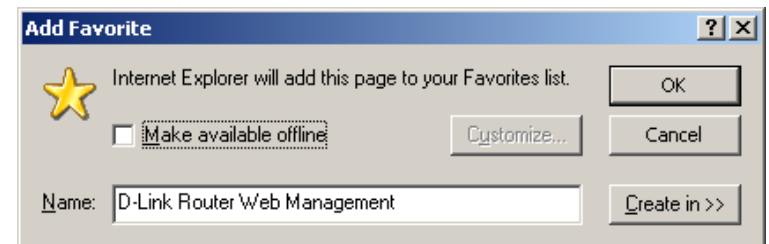
The *Setup Complete* window will display your wireless settings. Click **Save** to continue.



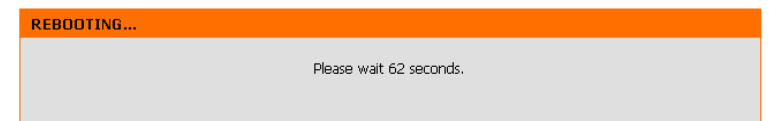
If you want to create a bookmark to the router, click **OK**. Click **Cancel** if you do not want to create a bookmark.



If you clicked **Yes**, a window may appear (depending on what web browser you are using) to create a bookmark.



The router will now reboot. Please allow a minute or two. Click the **Continue** button once it is active.



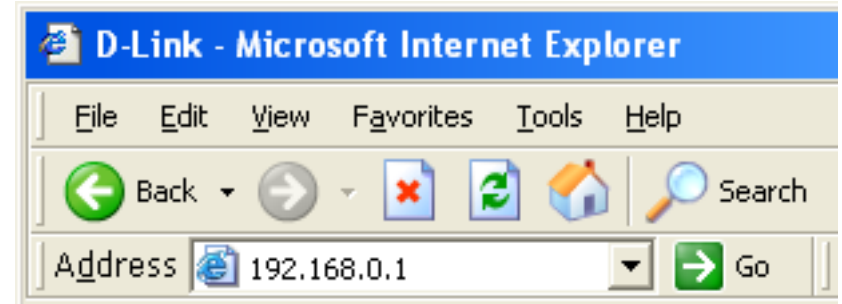
Web-based Configuration Utility

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

Windows and Mac users may also connect by typing **http://dlinkrouter** or **http://dlinkrouter.local** in the address bar.

Note: The IP address is **192.168.100.1** when the DIR-505L is in Hotspot Mode.

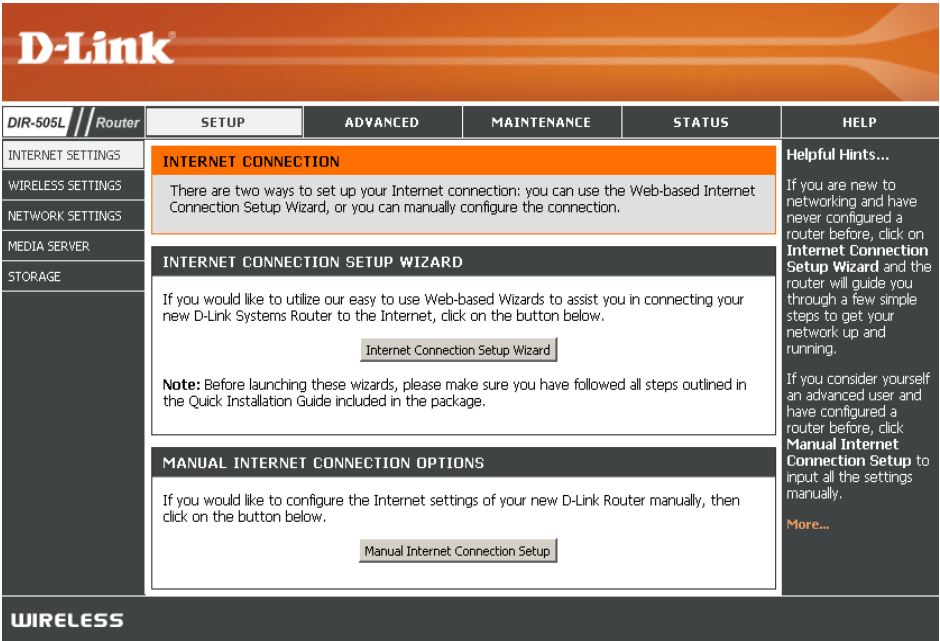
Select **Admin** from the drop-down menu. Leave the password blank by default.

A screenshot of the D-Link router's login page. The page has an orange header with the word "LOGIN" in white. Below the header, the text "Log in to the router:" is displayed. There are two input fields: "User Name" with a dropdown menu showing "Admin" and "Password" which is currently empty. A "Log In" button is located at the bottom right of the form.

Internet Connection Setup

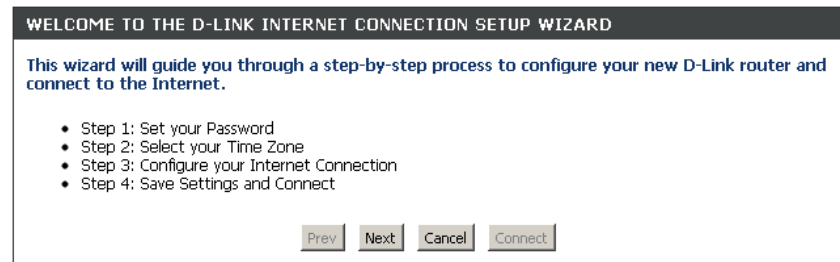
Click **Manual Internet Connection Setup** to configure your connection manually and continue to page 36.

If you want to configure your router to connect to the Internet using the wizard, click **Internet Connection Setup Wizard**. You will be directed to the *Quick Setup Wizard*.



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

Click **Next** to continue.



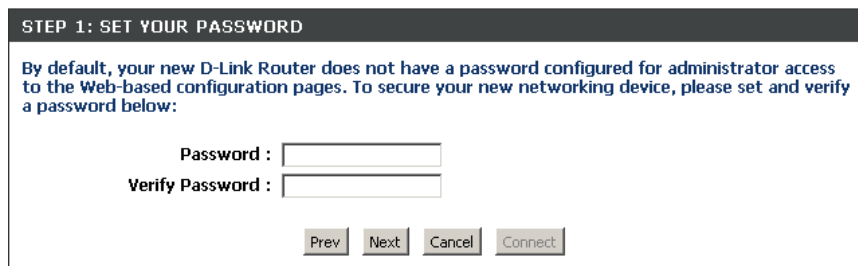
WELCOME TO THE D-LINK INTERNET CONNECTION SETUP WIZARD

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

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

Prev Next Cancel Connect

In order to secure your router, please enter a new password. Click **Next** to continue.



STEP 1: SET YOUR PASSWORD

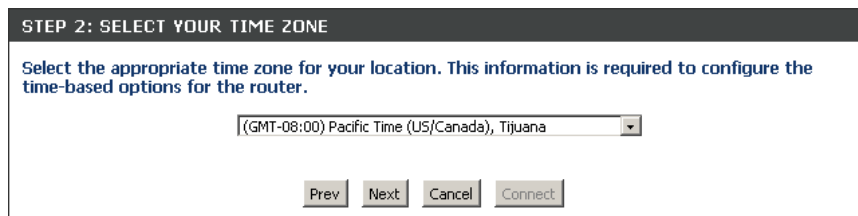
By default, your new D-Link Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below:

Password :

Verify Password :

Prev Next Cancel Connect

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



STEP 2: SELECT YOUR TIME ZONE

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

(GMT-08:00) Pacific Time (US/Canada), Tijuana

Prev Next Cancel Connect

Select your Internet connection type and click **Next** to continue.

Verify that you are connected to the D-Link Router with the PC that was originally connected to your broadband connection. Then click the **Clone Your PC's MAC address** button to copy your computer's MAC (Media Access Control) address.

Click **Next** to continue.

Your setup is complete. Click **Connect** to save your settings and reboot your router.

STEP 3: CONFIGURE YOUR INTERNET CONNECTION

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

Adelphia Power Link

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

☒ DHCP Connection (Dynamic IP Address)

Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.

☐ Username / Password Connection (PPPoE)

Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.

☐ Username / Password Connection (PPTP)

PPTP client.

☐ Username / Password Connection (L2TP)

L2TP client.

☐ Static IP Address Connection

Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.

PrevNextCancelConnect

DHCP CONNECTION (DYNAMIC IP ADDRESS)

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

MAC Address : 00:00:00:00:00:00 (optional)

Clone Your PC's MAC address

Host Name :

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

PrevNextCancelConnect

SETUP COMPLETE!

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

PrevNextCancelConnect

If the router detected or you selected **PPPoE**, enter your PPPoE user name, password and verify password, then click **Next** to continue.

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

INTERNET CONNECTION TYPE

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

My Internet Connection is : PPPoE (Username / Password)

PPPOE INTERNET CONNECTION TYPE :

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

Address Mode : ☒ Dynamic IP ☐ Static IP

IP Address :

Username :

Password :

Verify Password :

Service Name : (optional)

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server : (optional)

Secondary DNS Server : (optional)

MTU : (bytes) MTU default = 1492

MAC Address :

If the router detected or you selected **PPTP**, enter your PPTP user name, password, and other information supplied by your ISP. Click **Next** to continue.

INTERNET CONNECTION TYPE

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).

Address Mode : ☐ Dynamic IP ☒ Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

PPTP Server IP Address :

Username :

Password :

Verify Password :

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1492

MAC Address :

If the router detected or you selected **L2TP**, enter your L2TP user name, password and other information supplied by your ISP. Click **Next** to continue.

INTERNET CONNECTION TYPE

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

My Internet Connection is : L2TP (Username / Password)

L2TP INTERNET CONNECTION TYPE :

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

Address Mode : ☐ Dynamic IP ☒ Static IP

L2TP IP Address : 0.0.0.0

L2TP Subnet Mask : 255.255.255.0

L2TP Gateway IP Address : 0.0.0.0

L2TP Server IP Address : 0.0.0.0

Username :

Password :

Verify Password :

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time : 5 (minutes, 0=infinite)

Primary DNS Server : 0.0.0.0

Secondary DNS Server : 0.0.0.0

MTU : 1400 (bytes) MTU default = 1492

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

Clone Your PC's MAC address

If the router detected or you selected **Static**, enter the IP and DNS settings supplied by your ISP. Click **Next** to continue.

INTERNET CONNECTION TYPE

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

My Internet Connection is : Static IP

STATIC IP ADDRESS INTERNET CONNECTION TYPE :

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

IP Address : 0.0.0.0

Subnet Mask : 255.255.255.0

Default Gateway : 0.0.0.0

Primary DNS Server : 0.0.0.0

Secondary DNS Server : 0.0.0.0

MTU : 1500 (bytes) MTU default = 1500

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

Clone Your PC's MAC address

Manual Internet Setup

Dynamic (Cable)

My Internet Connection: Select **Dynamic IP (DHCP)** to obtain IP address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for cable modem services.

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

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

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

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

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

INTERNET CONNECTION TYPE

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

My Internet Connection is : Dynamic IP (DHCP)

DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE :

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

Host Name :

Use Unicasting : ☒ (compatibility for some DHCP Servers)

Primary DNS Server : 0.0.0.0

Secondary DNS Server : 0.0.0.0

MTU : 1500 (bytes) MTU default = 1500

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

Clone Your PC's MAC address

Internet Setup

PPPoE

Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a user name and password. This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

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

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

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

User Name: Enter your PPPoE user name.

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

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

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

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

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

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

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

INTERNET CONNECTION TYPE

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

My Internet Connection is : PPPoE (Username / Password)

PPPOE INTERNET CONNECTION TYPE :

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

Address Mode : ☒ Dynamic IP ☐ Static IP

IP Address :

Username :

Password :

Verify Password :

Service Name : (optional)

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server : (optional)

Secondary DNS Server : (optional)

MTU : (bytes) MTU default = 1492

MAC Address :

PPTP

Choose PPTP (Point-to-Point-Tunneling Protocol) if your ISP uses a PPTP connection. Your ISP will provide you with a user name and password. This option is typically used for DSL services.

My Internet Connection: Select **PPTP (User name/Password)** from the drop-down menu.

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

PPTP IP

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

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

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

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

INTERNET CONNECTION TYPE

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).

Address Mode : ☐ Dynamic IP ☒ 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 : 0.0.0.0

Username :

Password :

Verify Password :

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time : 5 (minutes, 0=infinite)

Primary DNS Server : 0.0.0.0

Secondary DNS Server : 0.0.0.0

MTU : 1400 (bytes) MTU default = 1492

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

Clone Your PC's MAC address

User name: Enter your PPTP user name.

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

Reconnect

Mode: Select either **Always on**, **On demand**, or **Manual**.

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

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

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

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

L2TP

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

My Internet Connection: Select **L2TP (User name/Password)** from the drop-down menu.

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

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

L2TP Subnet

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

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

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

User name: Enter your L2TP user name.

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

Reconnect

Mode: Select either **Always on**, **On demand**, or **Manual**.

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

INTERNET CONNECTION TYPE

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

My Internet Connection is : L2TP (Username / Password)

L2TP INTERNET CONNECTION TYPE :

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

Address Mode : ☐ Dynamic IP ☒ Static IP

L2TP IP Address : 0.0.0.0

L2TP Subnet Mask : 255.255.255.0

L2TP Gateway IP Address : 0.0.0.0

L2TP Server IP Address : 0.0.0.0

Username :

Password :

Verify Password :

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time : 5 (minutes, 0=infinite)

Primary DNS Server : 0.0.0.0

Secondary DNS Server : 0.0.0.0

MTU : 1400 (bytes) MTU default = 1492

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

Clone Your PC's MAC address

DNS Servers: Enter the Primary and Secondary DNS Server addresses (Static L2TP only).

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

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

Static

My Internet Connection: Select **Dynamic IP (DHCP)** to obtain IP address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for cable modem services.

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

Subnet

Mask: Enter the Subnet Mask assigned by your ISP.

Default

Gateway: Enter the Gateway assigned by your ISP.

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

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

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

INTERNET CONNECTION TYPE

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

My Internet Connection is :

STATIC IP ADDRESS INTERNET CONNECTION TYPE :

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

IP Address :

Subnet Mask :

Default Gateway :

Primary DNS Server :

Secondary DNS Server :

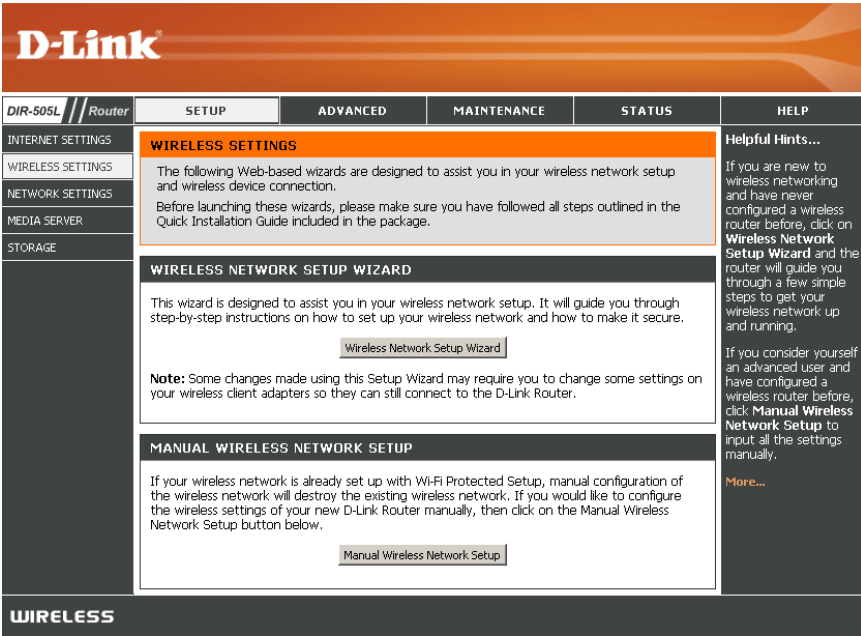
MTU : (bytes) MTU default = 1500

MAC Address :

Internet Settings

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

If you want to manually configure the wireless settings on your router click **Manual Wireless Network Setup** and refer to page 45.



Wireless Network Setup Wizard

To run the security wizard, click on **Setup** at the top, then click **Wireless Settings** on the left, and then click **Wireless Network Setup Wizard**.

Type your desired wireless network name (SSID).

Automatically: Select this option to automatically generate the router's network key and click **Next**.

Manually: Select this option to manually enter your network key and click **Next**.

If you selected **Automatically**, the summary window will display your settings. Write down the security key and enter this on your wireless clients. Click **Save** to save your settings.

WIRELESS NETWORK SETUP WIZARD

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

Wireless Network Setup Wizard

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

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

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

Network Name (SSID): DIR505

☒ Automatically assign a network key (Recommended)

To prevent outsiders from accessing your network, the router will automatically assign a security to your network.

☐ Manually assign a network key

Use this options if you prefer to create our own key.

☐ Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-Link wireless client adapters support WPA)

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

Prev

Next

Cancel

Save

SETUP COMPLETE!

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

Network Name (SSID): DIR505

WEP Key Length : 128 bit

Default WEP Key to Use : 1

Authentication : Both

WEP Key : 44A8C62AD0635678E1673C6988

Prev

Save

Cancel

Select **Manually** to manually enter your network key and click **Next**.

Enter your Wireless Security password and click **Next** to continue.

If you selected **Manually**, the following screen will appear once the setup is complete.

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

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

Network Name (SSID):

☐ Automatically assign a network key (Recommended)

To prevent outsiders from accessing your network, the router will automatically assign a security to your network.

☒ Manually assign a network key

Use this options if you prefer to create our own key.

☒ Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-Link wireless client adapters support WPA)

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

STEP 2: SET YOUR WIRELESS SECURITY PASSWORD

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

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

- Between 8 and 63 characters (A longer WPA key is more secure than a short one)

Wireless Security Password :

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

SETUP COMPLETE!

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

Network Name (SSID): DIR505

Security Mode : Auto (WPA or WPA2) - Personal

Cipher Type TKIP and AES

Pre-Shared Key : 12345678

Manual Configuration

Wireless Settings

Router Mode

Wireless Network Name: When you are browsing for available wireless networks, this is the name that will appear in the list (unless *Visibility Status* is set to **Invisible**, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the default network name.

802.11 Mode: Select one of the following:

802.11b Only - Select if you are only using 802.11b wireless clients.

802.11g Only - Select if you are only using 802.11g wireless clients.

802.11n Only - Select if you are only using 802.11n wireless clients.

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

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

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

The screenshot shows the D-Link DIR-505L Router Web Interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various settings categories: INTERNET SETTINGS, WIRELESS SETTINGS (highlighted), NETWORK SETTINGS, MEDIA SERVER, and STORAGE. The main content area is titled 'WIRELESS' and contains a sub-section 'WIRELESS NETWORK SETTINGS'. This section includes fields for 'Wireless Network Name' (set to 'Link-5A2C'), 'Wireless Band' (2.4GHz), '802.11 Mode' (Mixed 802.11n, 802.11g and 802.11b), 'Enable Auto Channel Scan' (checked), 'Wireless Channel' (2.437 GHz - CH 6), 'Channel Width' (Auto 20/40 MHz), and 'Visibility Status' (radio buttons for Visible and Invisible, with Visible selected). Below this is a 'WIRELESS SECURITY MODE' section with a 'Security Mode' dropdown set to 'None'. A 'Helpful Hints...' sidebar on the right provides additional information about changing the network name and the effects of the Visibility Status setting.

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DIR-505L to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DIR-505L. 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.

Channel Width: Select the Channel Width:

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

20MHz - Select if you are not using any 802.11n wireless clients.

Visibility Status: Check the box if you do not want the SSID of your wireless network to be broadcasted by the DIR-505L. If checked, the SSID of the DIR-505L will not be seen by *Site Survey* utilities so your wireless clients will have to know the SSID of your DIR-505L in order to connect to it.

Security Mode: Refer to page 50 for more information regarding the wireless security.

Access Point Mode

Note: To change between **Router Mode** and **Access Point Mode**, set the switch on the DIR-505L to the **Router/AP** setting. Then access the Web UI and click on **Setup** at the top, then click on **Internet Settings** on the left. Select **Router** or **Access Point** from the Wireless Mode drop-down list, then click **Save Settings**. The DIR-505L will then reboot in the mode you selected.

Wireless Network Name: When you are browsing for available wireless networks, this is the name that will appear in the list (unless *Visibility Status* is set to **Invisible**, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the default network name.

- 802.11 Mode:** Select one of the following:
- 802.11b Only** - Select if you are only using 802.11b wireless clients.
 - 802.11g Only** - Select if you are only using 802.11g wireless clients.
 - 802.11n Only** - Select if you are only using 802.11n wireless clients.
 - Mixed 802.11g and 802.11b** - Select if you are using a mix of 802.11g and 11b wireless clients.
 - Mixed 802.11n and 802.11g** - Select if you are using a mix of 802.11n and 11g wireless clients.
 - Mixed 802.11n, 802.11g and 802.11b** - Select if you are using a mix of 802.11n, 11g, and 11b wireless clients.

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DIR-505L to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DIR-505L. 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.

DIR-505 // Router	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
INTERNET SETTINGS	WIRELESS				Helpful Hints... Changing your Wireless Network Name is the first step in securing your wireless network. Change it to a familiar name that does not contain any personal information. Enable Auto Channel Scan so that the router can select the best possible channel for your wireless network to operate on. Visibility Status is another way to secure your network. With invisible option enabled, no wireless clients will be able to see your wireless network when they perform scan to see what's available. In order for your wireless devices to connect to your AP, you will need to manually enter the Wireless Network Name on each device.
WIRELESS SETTINGS	Use this section to configure the wireless settings for your D-Link Router. Please note that changes made on this section may also need to be duplicated on your Wireless Client. <div>Save Settings Don't Save Settings</div>				
NETWORK SETTINGS	WIRELESS NETWORK SETTINGS				
MEDIA SERVER	<div>Enable Wireless : <input checked="" type="checkbox"/> Always <div>Add New</div></div> <div>Wireless Mode : Access Point</div> <div>Wireless Network Name : dlink505505 (Also called the SSID)</div> <div>Wireless Band : 2.4GHz</div> <div>802.11 Mode : Mixed 802.11n, 802.11g and 802.11b</div> <div>Enable Auto Channel Scan : <input checked="" type="checkbox"/></div> <div>Wireless Channel : 2.437 GHz - CH 6 (Domain:United States)</div> <div>Channel Width : Auto 20/40 MHz</div> <div>Visibility Status : <input checked="" type="radio"/> Visible <input type="radio"/> Invisible</div>				
STORAGE	WIRELESS SECURITY MODE				
	Security Mode : WPA-Personal				

Channel Width: Select the Channel Width:

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

20MHz - Select if you are not using any 802.11n wireless clients.

Visibility Status: Check the box if you do not want the SSID of your wireless network to be broadcasted by the DIR-505L. If checked, the SSID of the DIR-505L will not be seen by *Site Survey* utilities so your wireless clients will have to know the SSID of your DIR-505L in order to connect to it.

Security Mode: Refer to page 49 for more information regarding the wireless security.

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-505L offers the following types of security:

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

What is WPA

WPA (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.

Configure WPA/WPA2 Personal

It is recommended to enable encryption on your wireless DIR-505L before your wireless network adapters. Please establish wireless connectivity before enabling encryption.

1. Log in to the web-based configuration by opening a web browser and entering the IP address of the router (**192.168.0.1**). Click on **Setup**, then click **Wireless Settings** on the left side, and click on **Manual Wireless Network Setup**.
2. Next to *Security Mode*, select **WPA-Personal**.
3. Next to *WPA Mode*, select **WPA only**, **WPA2 only** or **Auto (WPA or WPA2)**.
4. Next to *Cipher Type*, select **TKIP**, **AES** or **TKIP and AES**.
5. Next to *Pre-Shared Key*, enter a key. The key is entered as a passphrase in ASCII format at both ends of the wireless connection. The passphrase must be between 8-63 characters.
6. Click **Save Settings** at the top of the window to save your changes. 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 DIR-505L.

WIRELESS SECURITY MODE	
Security Mode :	WPA-Personal ▼
WPA	
Use WPA or WPA2 mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use WPA2 Only mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use WPA Only . This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.	
To achieve better wireless performance use WPA2 Only security mode (or in other words AES cipher).	
WPA Mode :	WPA2 Only ▼
Cipher Type :	AES ▼
PRE-SHARED KEY	
Enter an 8 to 63 character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase.	
Pre-Shared Key :	<input type="text"/>

Configure WPA Enterprise

It is recommended to enable encryption on your wireless DIR-505L before your wireless network adapters. Please establish wireless connectivity before enabling encryption.

1. Log in to the web-based configuration by opening a web browser and entering the IP address of the router (**192.168.0.1**). Click **Setup**, then click **Wireless Settings** on the left side, and click on **Manual Wireless Network Setup**.
2. Next to *Security Mode*, select **WPA-Enterprise**.
3. Next to *WPA Mode* select **Auto (WPA or WPA2)**.
4. Next to *Cipher Mode*, select **TKIP**, **AES**, or **Auto**.
5. Next to *RADIUS Server IP Address*, enter the IP address of your RADIUS server.
6. Next to *RADIUS Server Port*, enter the port you are using with your RADIUS server. **1812** is the default port.
7. Next to *Shared Secret*, enter the security key.
8. Click **Save Settings** to save your settings.

WIRELESS SECURITY MODE

Security Mode : WPA-Enterprise

WPA

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

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

WPA Mode : Auto (WPA or WPA2)

Cipher Type : TKIP and AES

EAP (802.1X)

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

RADIUS Server IP Address : 0.0.0.0

RADIUS Server Port : 1812

RADIUS Server Shared Secret :

Advanced

Optional backup RADIUS server :

Second RADIUS Server IP Address : 0.0.0.0

Second RADIUS Server Port : 1812

Second RADIUS Server Shared Secret :

Network Settings

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

Router Settings

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

If you change the IP address, once you click **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**.

Device Name: Enter a name for the router.

Local Domain: Enter the domain name (Optional).

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

The screenshot displays the D-Link DIR-505L Router Web-based Management Interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various settings categories: INTERNET SETTINGS, WIRELESS SETTINGS, NETWORK SETTINGS (selected), MEDIA SERVER, and STORAGE. The main content area is titled 'NETWORK SETTINGS' and contains several sections:

- ROUTER SETTINGS:** This section allows configuration of the internal network settings. It includes fields for Router IP Address (192.168.0.1), Subnet Mask (255.255.255.0), Device Name (Dlinkrouter), Local Domain Name (optional), and a checkbox for Enable DNS Relay (checked).
- DHCP SERVER SETTINGS:** This section allows configuration of the built-in DHCP Server. It includes a checkbox for Enable DHCP Server (checked), a DHCP IP Address Range (192.168.0.100 to 192.168.0.199), and a DHCP Lease Time (1440 minutes).
- ADD DHCP RESERVATION:** This section allows adding a new DHCP reservation. It includes fields for Computer Name, IP Address, and MAC Address, along with a checkbox for Enable and a button to Clone Your PC's MAC address.
- DHCP RESERVATIONS LIST:** This section displays a table of existing DHCP reservations.
- NUMBER OF DYNAMIC DHCP CLIENTS:** This section displays a table of dynamic DHCP clients.

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

DHCP Reservation

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

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

Enable: Check this box to enable the reservation.

Computer Name: Enter the computer name or select from the drop-down menu and click <<.

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

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

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

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

DHCP Reservations List

DHCP Reservations List: Displays any reservation entries. Displays the host name (name of your computer or device), MAC address and IP address.

Enable: Check to enable the reservation.

Edit: Click the **edit icon** to make changes to the reservation entry.

Delete: Click to remove the reservation from the list.

DHCP SERVER SETTINGS

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

Enable DHCP Server : ☒

DHCP IP Address Range : to

DHCP Lease Time : (minutes)

ADD DHCP RESERVATION

Enable : ☐

Computer Name : <<

IP Address :

MAC Address :

DHCP RESERVATIONS LIST

Enable	Computer Name	MAC Address	IP Address		

NUMBER OF DYNAMIC DHCP CLIENTS:

Hardware Address	Assigned IP	Hostname	Expires		
00:0d:56:5b:2c:83	192.168.0.100	GRAPHICSTESTPC	Sun Jan 2 00:00:27 2011	Revoke	Reserve

Media Server

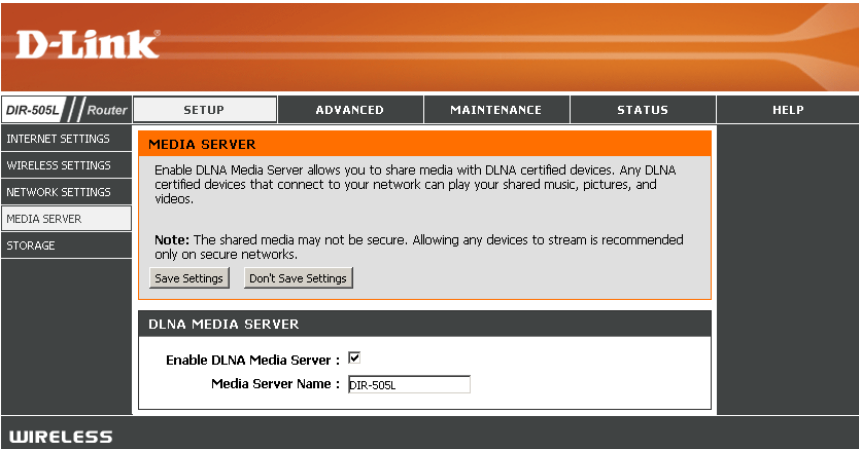
This feature allows you to share music, pictures, and videos with any devices connected to your network.

Enable Media

Server: Check this box to enable the *media server* feature.

Media Server

Name: Enter the media server's name.



Storage

This page will allow you to access files from a USB external hard drive or thumb drive that is plugged into the router from your local network or from the Internet using either a web browser or the SharePort™ app for your smartphone or tablet. You can create users to be allowed to access these files.

Enable SharePort Check to enable sharing files on your USB storage device
Web Access: that is plugged into your router.

HTTP Access Port: Enter a port (**8181** is default). You will have to enter this port in the URL when connecting to the shared files. For example: (**http://192.168.0.1:8181**).

HTTPS Access Enter a port (**4433** is default). You will have to enter this port in the URL when connecting to the shared files. For example: (**https://192.168.0.1:4433**).

Allow Remote Check to enable HTTPS (secure) access to your router's
Access: storage. You will have to type **HTTPS** in the URL.

User Name: To create a new user, enter a user name.

Password: Enter a password for this account.

Verify Password: Re-enter the password. Click **Add/Edit** to create the user.

User List: Displays the accounts. The Admin and Guest accounts are built-in to the router.

Number of
Devices: Displays the USB device plugged into the router.

The screenshot shows the D-Link DIR-505L Router web interface. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various settings categories: INTERNET SETTINGS, WIRELESS SETTINGS, NETWORK SETTINGS, MEDIA SERVER, and STORAGE (which is currently selected).

The main content area is titled "STORAGE" and contains the following sections:

- SharePort Web Access:** This section allows enabling file sharing. The "Enable SharePort Web Access" checkbox is checked. Below it, the "HTTP Access Port" is set to 8181 and the "HTTPS Access Port" is set to 4433. The "Allow Remote Access" checkbox is unchecked. There are "Save Settings" and "Don't Save Settings" buttons.
- 10 -- USER CREATION:** This section provides fields for creating a new user, including "User Name", "Password", and "Verify Password". There are "Add/Edit" and "Delete" buttons.
- USER LIST:** This section displays a table of existing users. The table has columns for No., User Name, Access Path, and Permission. There are icons for "Modify" and "Delete" for each user.
- NUMBER OF DEVICES : 1:** This section shows a table with the details of the connected USB device.
- SHAREPORT WEB ACCESS LINK:** This section provides a link to access the shared files remotely.

The "USER LIST" table is as follows:

No.	User Name	Access Path	Permission
1	admin	/	Read/Write
2	guest	None	Read Only

The "NUMBER OF DEVICES : 1" table is as follows:

Device	Total Space	Free Space
usb_A1	1.9GB	1.8GB

The "SHAREPORT WEB ACCESS LINK" section shows the URL: <http://192.168.0.1:8181>.

Advanced Virtual Server

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

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

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

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

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

D-Link

DIR-505L // Router

SETUP ADVANCED MAINTENANCE STATUS HELP

VIRTUAL SERVER

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

Save Settings Don't Save Settings

8--VIRTUAL SERVERS LIST

	Name	IP Address	Port	Traffic Type
<input type="checkbox"/>	<< Application Name	<< Computer Name	Public Private	Protocol TCP
<input type="checkbox"/>	<< Application Name	<< Computer Name	Public Private	Protocol TCP
<input type="checkbox"/>	<< Application Name	<< Computer Name	Public Private	Protocol TCP

Helpful Hints...

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

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

[More...](#)

Application Rules

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). *Special Applications* makes some of these applications work with the DIR-505L. If you need to run applications that require multiple connections, specify the port normally associated with an application in the “*Trigger Port*” field, select the protocol type as **TCP** or **UDP**, then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

The DIR-505L provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

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

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

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 trigger port (**TCP**, **UDP**, or **Both**).

The screenshot shows the D-Link DIR-505L web interface. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options: VIRTUAL SERVER, APPLICATION RULES (selected), MAC ADDRESS FILTER, WEBSITE FILTER, FIREWALL SETTINGS, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, UPNP SETTINGS, GUEST ZONE, and DMZ. The main content area is titled "APPLICATION RULES" and contains a description: "This option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a 'trigger' port or port range. Special Applications rules apply to all computers on your internal network." Below this description are two buttons: "Save Settings" and "Don't Save Settings".

Below the description is a table titled "8 -- APPLICATION RULES" with three columns: Name, Application, and Port. The table has three rows, each with a checkbox in the Name column. The Application column contains a dropdown menu with "<<" and "Application Name" options. The Port column has two sub-columns: Trigger and Firewall. The Trigger column has a port number field (0) and a Traffic Type dropdown menu (TCP). The Firewall column has a port number field (0) and a Traffic Type dropdown menu (TCP).

On the right side of the interface, there is a "Helpful Hints..." section with the following text: "Use this feature if you are trying to execute one of the listed network applications and it is not communicating as expected. Check the Application Name drop down menu for a list of predefined applications. If you select one of the predefined applications, click the arrow button next to the drop down menu to fill out the corresponding field." Below this text is a "More..." link.

MAC Address Filter

The *MAC Address Filter* section can be used to filter network access by machines based on the unique MAC addresses of their network adapter(s). It is most useful to prevent unauthorized wireless devices from connecting to your network. A MAC address is a unique ID assigned by the manufacturer of the network adapter.

Configure MAC Filtering: When **Turn MAC Filtering OFF** is selected, MAC addresses are not used to control network access. When **Turn MAC Filtering ON and ALLOW computers listed to access the network** is selected, only computers with MAC addresses listed in the *MAC Address List* are granted network access. When **Turn MAC Filtering ON and DENY computers listed to access the network** is selected, any computer with a MAC address listed in the *MAC Address List* is refused access to the network.

The screenshot shows the D-Link DIR-505L Router web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration sections: VIRTUAL SERVER, APPLICATION RULES, MAC ADDRESS FILTER (selected), WEBSITE FILTER, FIREWALL SETTINGS, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, UPNP SETTINGS, GUEST ZONE, and DMZ. The main content area is titled 'MAC ADDRESS FILTER' and contains the following information:

The MAC (Media Access Controller) Address filter option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.

Buttons: Save Settings, Don't Save Settings

WIRELESS ACCESS SETTINGS

Configure MAC Filtering below:
 Turn MAC Filtering OFF (selected)

MAC Address		Wireless Client List	
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear
00:00:00:00:00:00	<<	MAC Address	Clear

WIRELESS

Helpful Hints...
 Create a list of MAC address that you would either like to allow or deny access to your network.
 Select a MAC address from the drop down menu, then click the arrow to add that MAC address to the list.
 Click the **Clear** button to remove the MAC address from the MAC Filtering list.

Website Filters

Website Filters are used to allow you to set up a list of websites that can be viewed by multiple users through the network. To use this feature select to **Allow** or **Deny**, enter the domain or website and click **Save Settings**. You must also select **Apply Web Filter** under the *Access Control* section.

Configure Website Filter Below: Select either **DENY** computers access to **ONLY** these sites or **ALLOW** computers access to **ONLY** these sites.

Website URL/ Domain: Enter the keywords or URLs that you want to allow or block. Click **Save Settings**.

The screenshot shows the D-Link DIR-505L Router configuration interface. The top navigation bar includes tabs for SETUP, ADVANCED (selected), MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options: VIRTUAL SERVER, APPLICATION RULES, MAC ADDRESS FILTER, WEBSITE FILTER (selected), FIREWALL SETTINGS, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, UPNP SETTINGS, GUEST ZONE, and DMZ. The main content area is titled 'WEBSITE FILTER' and contains the following elements:

- A description: "The Website Filter option allows you to set up a list of Web sites you would like to allow or deny through your network. To use this feature, you must also select the 'Apply Web Filter' checkbox in the Access Control section." Below this are 'Save Settings' and 'Don't Save Settings' buttons.
- A section titled '8 -- WEBSITE FILTERING RULES' with the instruction 'Configure Website Filter below:'. It features a dropdown menu currently set to 'DENY computers access to ONLY these sites' and a 'Clear the list below...' button.
- A table for entering website URLs/domains. The header is 'Website URL/Domain'. The table has four rows, each with two input fields for the URL and domain.

On the right side of the interface, there is a 'Helpful Hints...' section with text explaining the purpose of the filter and a 'More...' link.

Firewall Settings

A firewall protects your network from the outside world. The DIR-505L 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.

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 Anti-Spoof Checking: Enable this feature to protect your network from certain kinds of “spoofing” attacks.

D-Link						
DIR-505L // Router		SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
VIRTUAL SERVER APPLICATION RULES MAC ADDRESS FILTER WEBSITE FILTER FIREWALL SETTINGS ADVANCED WIRELESS WIFI-PI PROTECTED SETUP UPNP SETTINGS GUEST ZONE DMZ		<div>FIREWALL SETTINGS</div> <p>The Firewall Settings allow you to set a single computer on your network outside of the router.</p> <p> <input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/> </p> <div>FIREWALL SETTINGS</div> <p>Enable SPI : <input checked="" type="checkbox"/></p> <div>ANTI-SPOOF CHECKING</div> <p>Enable anti-spoof checking : <input type="checkbox"/></p>				

Advanced Wireless

Transmit

Power: Set the transmit power of the antennas.

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

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

IGMP

Snooping: Check to enable this feature.

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

HT20/40 You may choose to **Enable** or **Disable** this feature. **Coexistence:** Enabling this feature allows two "channels" or paths on which data can travel to be combined to increase performance in some environments.

D-Link

DIR-505L Router

SETUP ADVANCED MAINTENANCE STATUS HELP

ADVANCED WIRELESS

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

Save Settings Don't Save Settings

ADVANCED WIRELESS SETTINGS

Transmit Power : 100%

WMM Enable : ☒

Short GI : ☒

IGMP Snooping : ☒

WLAN Partition : ☐

HT20/40 Coexistence : ☒ Enable ☐ Disable

Helpful Hints...

Advanced Wireless: It is recommended that you leave these options at their default values. Adjusting them could negatively impact the performance of your wireless network. The options on this page should be changed by advanced users or if you are instructed to by one of our support personnel, as they can negatively affect the performance of your Access Point if configured improperly.

Transmit Power: You can lower the output power of the DIR-505L by selecting lower percentage Transmit Power values from the drop down. Your choices are: 100%, 75%, 50%, and 25%.

WIRELESS

Wi-Fi Protected Setup (WPS)

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

Enable: Enable the *Wi-Fi Protected Setup* feature.

Note: If this option is unchecked, the WPS button on the side of the router will be disabled.

Disable WPS-PIN Method : Locking the *WPS-PIN Method* prevents the settings from being changed by any external registrar using its PIN. Devices can still be added to the wireless network using the *Wi-Fi Protected Setup Push Button Configuration (WPS-PBC)*. It is still possible to change wireless networks settings with *Manual Wireless Network Setup* or *Wireless Network Setu Wizard*.

PIN Settings: A PIN is a unique number that can be used to add the router to an existing network or to create a new network. Only the Administrator (“admin” account) can change or reset the PIN.

Current PIN: Shows the current PIN.

Reset PIN to

Default: Restore the default PIN of the router.

Generate New PIN: Create a random number that is a valid PIN. This becomes the router’s PIN. You can then copy this PIN to the user interface of the wireless client.

The screenshot shows the D-Link DIR-505L Router web interface. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options: VIRTUAL SERVER, APPLICATION RULES, MAC ADDRESS FILTER, WEBSITE FILTER, FIREWALL SETTINGS, ADVANCED WIRELESS, WI-FI PROTECTED SETUP (selected), UPNP SETTINGS, GUEST ZONE, and DMZ. The main content area is titled "WI-FI PROTECTED SETUP" and contains the following sections:

- WI-FI PROTECTED SETUP:** A descriptive text block explaining the WPS process and its benefits, followed by "Save Settings" and "Don't Save Settings" buttons.
- WI-FI PROTECTED SETUP:** A section with two checkboxes: "Enable : ☒" and "Disable WPS-PIN Method : ☒". Below these is a "Reset to Unconfigured" button.
- PIN SETTINGS:** A section showing the "Current PIN: 22862006". It includes "Reset PIN to Default" and "Generate New PIN" buttons.
- ADD WIRELESS STATION:** A section with an "Add Wireless Device With WPS" button.

On the right side of the interface, there is a "Helpful Hints..." section with additional information and a "More..." link.

Add Wireless

Station: This Wizard helps you add wireless devices to the wireless network.

The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports *Wi-Fi Protected Setup* and has a configuration button, you can add it to the network by pressing the configuration button on the device and then the on the router within 120 seconds. The status LED on the router will flash three times if the device has been successfully added to the network.

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

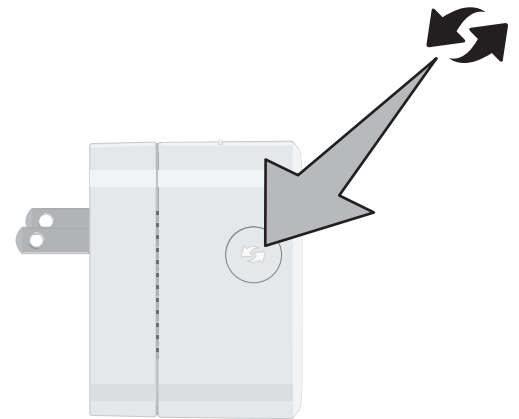
Add Wireless Device with

WPS: Click to start the wizard.

WPS Button

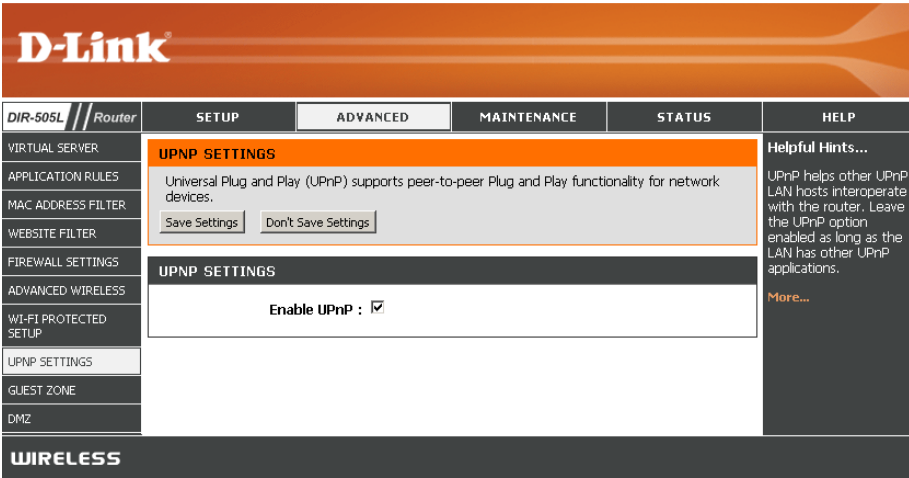
You can also simply press the **WPS** button on the side of the router, and then press the **WPS** button on your wireless client to automatically connect without logging into the router.

Refer to page 141 for more information.



UPnP Settings

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



Guest Zone

The *Guest Zone* feature will allow you to create temporary zones that can be used by guests to access the Internet. These zones will be separate from your main wireless network.

Enable Guest

Zone: Check to enable the *Guest Zone* feature.

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

Wireless Network Name: Enter a wireless network name (SSID) that is different from your main wireless network.

Enable Routing Between Zones: Check to allow network connectivity between the different zones created.

Security Mode: Select the type of security or encryption you would like to enable for the *Guest Zone*.

The screenshot shows the D-Link router's web interface. The top navigation bar includes 'D-Link', 'DIR-505L // Router', and tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists various configuration sections: 'VIRTUAL SERVER', 'APPLICATION RULES', 'MAC ADDRESS FILTER', 'WEBSITE FILTER', 'FIREWALL SETTINGS', 'ADVANCED WIRELESS', 'WI-FI PROTECTED SETUP', 'UPNP SETTINGS', 'GUEST ZONE', and 'DMZ'. The 'GUEST ZONE' section is highlighted in orange. The main content area is titled 'GUEST ZONE' and contains the following settings:

- Enable Guest Zone:** ☒ Always [Add New Schedule](#)
- Wireless Band:** 2.4GHz Band
- Wireless Network Name:** dlink_guest (Also called the SSID)
- Enable Routing Between Zones:** ☐
- Security Mode:** None

On the right side, there is a 'Helpful Hints...' section with instructions on how to use the guest zone settings and a 'More...' link.

DMZ

This feature allows you to set a single computer from your network to be exposed outside of the router and get unrestricted Internet access. If you choose to expose a computer, you can enable *DMZ*. *DMZ* is short for *Demilitarized Zone*. This option will expose the chosen computer completely to the outside world.

Enable DMZ: Check the box to enable *DMZ*.

DMZ IP Address: Enter the *DMZ* IP address.

The screenshot shows the D-Link DIR-505L Router configuration interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options, with DMZ highlighted. The main content area is titled 'DMZ SETTINGS' and contains the following text:

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

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

Below the text are two buttons: 'Save Settings' and 'Don't Save Settings'.

The 'DMZ HOST' section shows 'Enable DMZ' checked and 'DMZ IP Address' set to '0.0.0.0'. A dropdown menu next to the IP address shows 'GRAPHICSTESTPC'.

On the right side, under 'Helpful Hints...', there is a note about enabling DMZ as a last resort and a link to 'More...'. The bottom of the page has a 'WIRELESS' tab.

Maintenance Admin

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.

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

Enable Graphical Authentication: Enables a challenge-response test to require users to type letters or numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.

Enable HTTPS Server: Check to enable *HTTPS* to connect to the router securely. This means to connect to the router, you must enter "**https:**" instead of "**http:**" (for example) **https://192.168.0.1**.

Enable Remote Management: Remote management allows the DIR-505L to be configured from the Internet by a web browser. A user name/password is still required to access the *Web Management Interface*.

Remote Admin The port number used to access the DIR-505L is used in the URL.

Port: Example: **http://x.x.x.x:8080** whereas **x.x.x.x** is the Internet IP address of the DIR-505L and **8080** is the port used for the *Web Management Interface*.

If you have enabled **HTTPS Server**, you must enter **https://** as part of the URL to access the router remotely.

D-Link

DIR-505L // Router

SETUP ADVANCED **MAINTENANCE** STATUS HELP

ADMINISTRATOR SETTINGS

The 'admin' account can access the management interface. The admin has read/write access and can change passwords.
By default there is no password configured. It is highly recommended that you create a password to keep your router secure.

Save Settings Don't Save Settings

ADMIN PASSWORD

Please enter the same password into both boxes, for confirmation.

Password :

Verify Password :

ADMINISTRATION

Enable Graphical Authentication : ☐

Enable HTTPS Server : ☐

Enable Remote Management : ☐

Remote Admin Port : 8080

WIRELESS

Helpful Hints...

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

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

Choose a port to open for remote management.

[More...](#)

Time

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

Current Router

Time: Displays the current date and time of the router.

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

Enable To select *Daylight-Saving Time* manually, select **enabled**

Daylight-Saving: or **disabled**, and enter a start date and an end date for daylight-saving time.

Enable NTP Server: *NTP* is short for *Network Time Protocol*. A NTP server will synch the time and date with your router. This will only connect to a server on the Internet, not a local server. Check the box to enable this feature.

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

Set the Date and Time Manually: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute and Second and then click **Set Time**.

You can also click **Copy Your Computer's Time Settings** to synch the date and time with the computer you are currently on.

The screenshot shows the D-Link router's web interface. The top navigation bar includes 'DIR-505L // Router', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists 'ADMIN', 'TIME', 'SYSTEM', 'FIRMWARE', 'DYNAMIC DNS', 'SYSTEM CHECK', and 'SCHEDULES'. The main content area is titled 'TIME' and contains the following sections:

- TIME**: A summary box stating: 'The Time Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to automatically adjust the time when needed.' It includes 'Save Settings' and 'Don't Save Settings' buttons.
- TIME CONFIGURATION**:
 - Current Router Time**: Jan/01/2011 00:08:55
 - Time Zone**: [(GMT-08:00) Pacific Time (US/Canada), Tijuana]
 - Enable Daylight Saving**: ☐
 - Daylight Saving Offset**: [+1:00]
 - Daylight Saving Dates**:

DST start	Month	Week	Day of Week	Time
Mar	3rd	Sun	1 AM	
Nov	2nd	Sun	1 AM	
- AUTOMATIC TIME CONFIGURATION**:
 - Enable NTP Server**: ☐
 - NTP Server Used**: [] << [Select NTP Server]
- SET THE DATE AND TIME MANUALLY**:
 - Date And Time**:

Year	2011	Month	Jan	Day	01
Hour	00	Minute	00	Second	00
 - Copy Your Computer's Time Settings** button

The right sidebar contains 'Helpful Hints...' with text about timekeeping and a 'More...' link.

System

This section allows you to manage the router's configuration settings, reboot the router, and restore the router to the factory default settings. Restoring the unit to the factory default settings will erase all settings, including any rules that you've created.

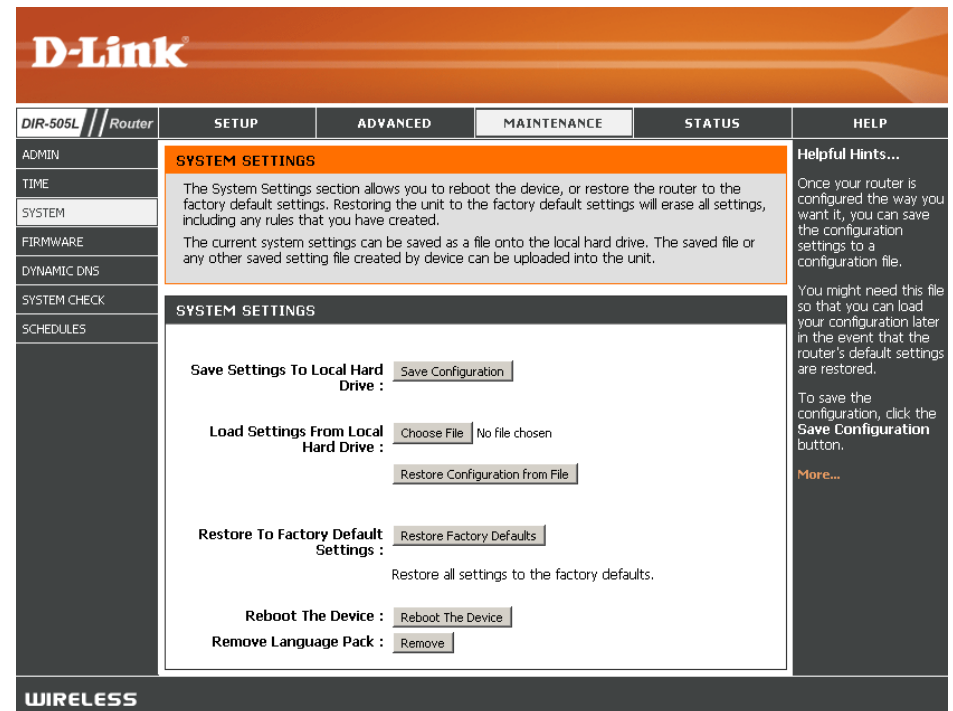
Save Settings to Local Hard Drive: Use this option to save the current router configuration settings to a file on the hard disk of the computer you are using. First, click the **Save** button. A file dialog will appear, allowing you to select a location and file name for the settings.

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

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

Reboot The Device: Click to reboot the router.

Remove Language Pack: If you previously installed a language pack and want to revert all the menus on the router interface back to the default language settings, click the **Clear** button.



Firmware

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

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

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

Upload: Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the access point.

Language Pack

You can change the language of the web UI by uploading available language packs.

After you have downloaded the new language pack, click **Browse** to locate the language pack file on your hard drive. Click **Upload** to complete the language pack upgrade.

The screenshot shows the D-Link DIR-505L Router web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options: ADMIN, TIME, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'FIRMWARE' and contains the following information:

- FIRMWARE AND LANGUAGE PACK INFORMATION**
 - Current Firmware Version : 1.01 Date : 2012/10/04
 - Current Language Pack Version : No Language pack
 - Check Online Now for Latest Firmware and Language pack Version :
- FIRMWARE UPGRADE**
 - Note:** Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the [Maintenance](#) -> [System](#) screen.
 - To upgrade the firmware, your PC must have a wired connection to the access point. Enter the name of the firmware upgrade file, and click on the Upload button.
 - Upload : No file chosen
- LANGUAGE PACK UPGRADE**
 - Upload : No file chosen

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

Dynamic DNS

The *DDNS* feature allows you to host a server (Web, FTP, Game Server, etc.) using a domain name that you have purchased (i.e., *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 *Dynamic Domain Name System* is a method of keeping **Dynamic DNS:** a domain name linked to a changing IP address. Check the box to enable DDNS.

Server Select your DDNS provider from the drop-down menu
Address: or enter the DDNS server address.

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

User name or

Key: Enter the user name or key for your DDNS account.

Password or

Key: Enter the password or key for your DDNS account.

Timeout: Enter a timeout time (in hours).

Status: Displays the current connection status.

D-Link

DIR-505L // Router

SETUP ADVANCED MAINTENANCE STATUS HELP

DYNAMIC DNS

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

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

Save Settings Don't Save Settings

DYNAMIC DNS

Enable Dynamic DNS : ☒

Server Address : << Select Dynamic DNS Server

Host Name :

Username or Key :

Password or Key :

Verify Password or Key :

Timeout : (hours)

Status : Disconnected

WIRELESS

Helpful Hints...

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

[More...](#)

System Settings

This page allows you to reboot the device or restore the router to the factory settings.

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

Load Settings from Local Hard Drive: Use this option to load previously saved router configuration settings. Use the **Choose File** to find any previously save files of configuration settings. Then, click the **Restore Configuration from File** button to transfer those settings to the Router.

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

Clear Language Pack: Click to remove all non-default language packs from the router.

D-Link

DIR-505L // Router

SETUP ADVANCED MAINTENANCE STATUS HELP

SYSTEM SETTINGS

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

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

SYSTEM SETTINGS

Save Settings To Local Hard Drive : [Save Configuration](#)

Load Settings From Local Hard Drive : [Choose File](#) No file chosen
[Restore Configuration from File](#)

Restore To Factory Default Settings : [Restore Factory Defaults](#)
 Restore all settings to the factory defaults.

Reboot The Device : [Reboot The Device](#)

Remove Language Pack : [Remove](#)

Helpful Hints...

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

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

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

[More...](#)

WIRELESS

Schedules

This page allows you to create a schedule to manage schedule rules for firewalls and parental control features.

Name: Enter a name for your new schedule.

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

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

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

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

D-Link

DIR-505L Router

SETUP ADVANCED MAINTENANCE STATUS HELP

SCHEDULES

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

ADD SCHEDULE RULE

Name :

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

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

All Day - 24 hrs : ☐

Time format : 24-hour

Start Time : 00 : 00 AM (hour:minute)

End Time : 00 : 00 AM (hour:minute)

Save Clear

SCHEDULE RULES LIST

Name	Day(s)	Time Frame

WIRELESS

Helpful Hints...

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

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

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

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

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

[More...](#)

Status Device Info

This page displays the current information for the DIR-505L. It will display the LAN, WAN (Internet), and Wireless information. If your Internet connection is set up for a *Dynamic IP address* then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

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

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

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

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

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

LAN Computer: Displays the LAN client info which connects to the router.

D-Link

DIR-505L // Router

SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFORMATION

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

General

Time : Jan/01/2011 00:12:38
System Up Time : 0 Day, 00:12:55
Firmware Version : 1.01, Thu, 04 Oct 2012

WAN

Connection Type : DHCP client
Cable Status : Disconnected
Network Status : Disconnected
[DHCP Renew](#) [DHCP Release](#)
Connection Up Time : N/A
MAC Address : c8:be:19:66:5a:2d
IP Address : 0.0.0.0
Subnet Mask : 0.0.0.0
Default Gateway : 0.0.0.0
Primary DNS Server : 0.0.0.0
Secondary DNS Server : 0.0.0.0

LAN

MAC Address : c8:be:19:66:5a:2c
IP Address : 192.168.0.1
Subnet Mask : 255.255.255.0
DHCP Server : Enabled

WIRELESS LAN

Wireless Radio : Enable
Wireless Mode : Mixed 802.11n, 802.11g and 802.11b
Channel Width : Auto 20/40 MHz
Channel : 1
W-Fi Protected Setup : Enable / Configured

SSID List

Network Name (SSID)	Guest	MAC Address	Security Mode
dirk-5a2c	No	c8:be:19:66:5a:2c	WPA/WPA2 - Personal

LAN COMPUTERS

IP Address	Name (If Any)	MAC
192.168.0.90		cc:b2:55:cc:8b:ba
192.168.0.100		cc:b2:55:cc:8b:ba
192.168.0.100	GRAPHICSTESTPC	00:0d:56:56:2c:83

WIRELESS

Logs

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

Log Type: Use the radio buttons to select the types of messages that you want to display from the log. **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice** messages can be selected.

Log Details: Use this section to view and manage the router's log entries.

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

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

Previous: Click this button to view the previous page of the router logs.

Next: Click this button to view the next page of the router logs.

Clear: Clears all of the log contents.

The screenshot shows the D-Link DIR-505L Router web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various router functions: DEVICE INFO, LOGS, STATISTICS, INTERNET SESSIONS, and WIRELESS. The main content area is titled 'LOGS' and contains a description: 'Use this option to view the device logs. You can define what types of events you want to view and the event levels to view.' Below this is the 'LOG OPTIONS' section, which allows users to select log types using checkboxes: System Activity (checked), Debug Information, Attacks (checked), Dropped Packets, and Notice (checked). An 'Apply Log Settings Now' button is present. The 'LOG DETAILS' section shows a list of log entries with columns for Time and Message. Navigation buttons for 'First Page', 'Last Page', 'Previous', 'Next', 'Save Log', 'Refresh', and 'Clear' are provided. A 'Helpful Hints...' sidebar on the right suggests checking the log frequently to detect unauthorized network usage.

Time	Message
Jan 1 00:00:35	Listening for NAT-PMP traffic on port 5351
Jan 1 00:00:35	HTTP listening on port 65530
Jan 1 00:00:35	SNet version started
Jan 1 00:00:28	Static host name "shareport.local" successfully established.
Jan 1 00:00:28	Service "D-Link HINAP Service" (/var/etc/avahi/services/dhinap.service) successfully established.
Jan 1 00:00:28	Service "D-Link DIR-505L Configuration Utility" (/var/etc/avahi/services/http.service) successfully established.
Jan 1 00:00:28	Service "D-Link SharePort Web Access" (/var/etc/avahi/services/webaccess.service) successfully established.
Jan 1 00:00:27	Server startup complete. Host name is dlinkrouter.local. Local service cookie is 1550285295.
Jan 1 00:00:27	UDHCPD sending OFFER of 192.168.0.100
Jan 1 00:00:26	Registering new address record for 192.168.0.1 on br0. IPv4.

Statistics

The screen below displays the *Traffic Statistics*. Here you can view the amount of packets that pass through the DIR-505L on both the WAN, LAN ports and both the 802.11n/g (2.4GHz) and 802.11n/a (5GHz) wireless bands. The traffic counter will reset if the device is rebooted.

Refresh Click the **Refresh Statistics** button to refresh the **Statistics:** router's traffic statistics.

Clear Statistics: Click the **Clear Statistics** button to reset the router's traffic statistics.

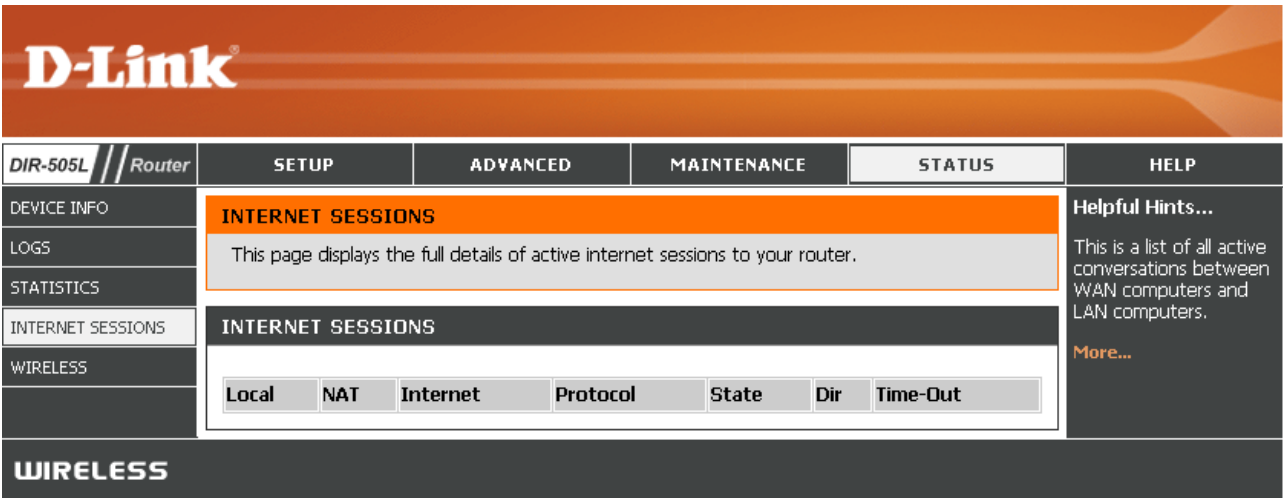
The screenshot shows the D-Link DIR-505L Router web interface. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options: DEVICE INFO, LOGS, STATISTICS (selected), INTERNET SESSIONS, and WIRELESS. The main content area is titled 'TRAFFIC STATISTICS' and contains three sections: LAN STATISTICS, WAN STATISTICS, and WIRELESS STATISTICS. Each section displays a table of statistics. The LAN and Wireless sections show 'Sent' and 'Received' packet counts, while the WAN section shows zero counts. All sections also report zero dropped packets, collisions, and errors. A 'Helpful Hints...' section on the right provides additional information about the statistics.

Section	Sent	Received	TX Packets Dropped	RX Packets Dropped	Collisions	Errors
LAN STATISTICS	10031	5995	0	0	0	0
WAN STATISTICS	0	0	0	0	0	0
WIRELESS STATISTICS	10899	5995	0	0	0	0

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

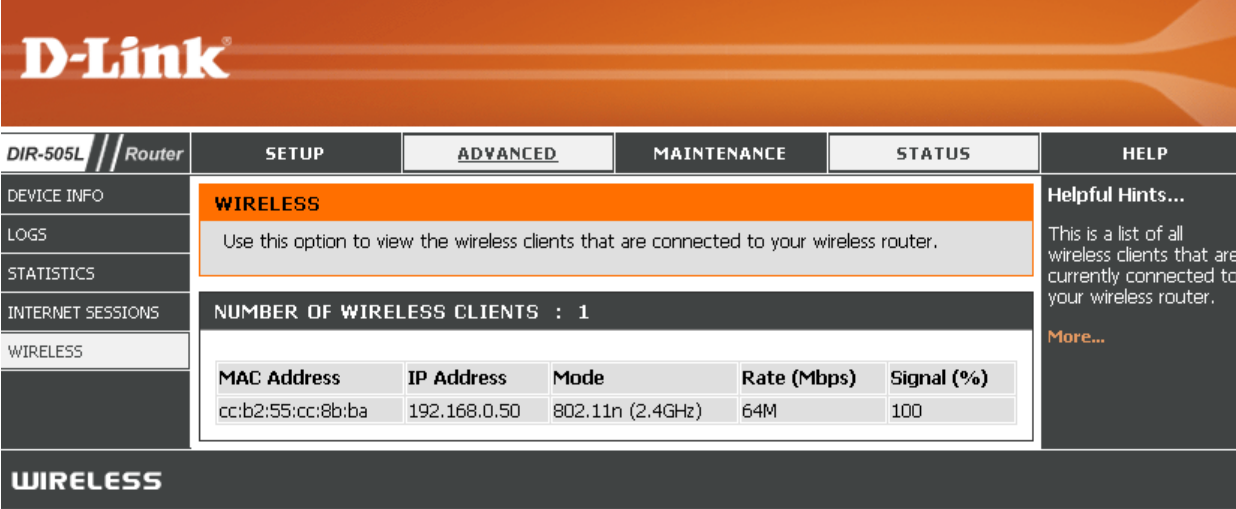
Internet Sessions

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



Wireless

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



The screenshot shows the D-Link DIR-505L Router configuration interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options: DEVICE INFO, LOGS, STATISTICS, INTERNET SESSIONS, and WIRELESS. The main content area is titled 'WIRELESS' and contains a description of the wireless clients table. Below the description, it states 'NUMBER OF WIRELESS CLIENTS : 1'. A table lists the details of the connected client, including MAC Address, IP Address, Mode, Rate (Mbps), and Signal (%).

MAC Address	IP Address	Mode	Rate (Mbps)	Signal (%)
cc:b2:55:cc:8b:ba	192.168.0.50	802.11n (2.4GHz)	64M	100

Helpful Hints... This is a list of all wireless clients that are currently connected to your wireless router. [More...](#)

Help

DIR-505L

Router

MENU

SETUP

ADVANCED

MAINTENANCE

STATUS

SUPPORT MENU

- Setup
- Advanced
- Maintenance
- Status

SETUP HELP

- Internet Connection
- Internet Settings
- Wireless Settings
- Network Settings
- Media Server
- Storage

ADVANCED HELP

- Virtual Server
- Application Rules
- MAC Address Filter
- Website Filter
- Firewall Settings
- Advanced Wireless
- Wi-Fi Protected Setup
- UPnP Settings
- Guest Zone
- DMZ

MAINTENANCE HELP

- Admin
- Time
- System
- Firmware
- Dynamic DNS
- System Check
- Schedules

STATUS HELP

- Device Info
- Logs
- Statistics
- Internet Sessions
- Wireless

Helpful Hints...

Click on the links for more informations of each section in the GUI.

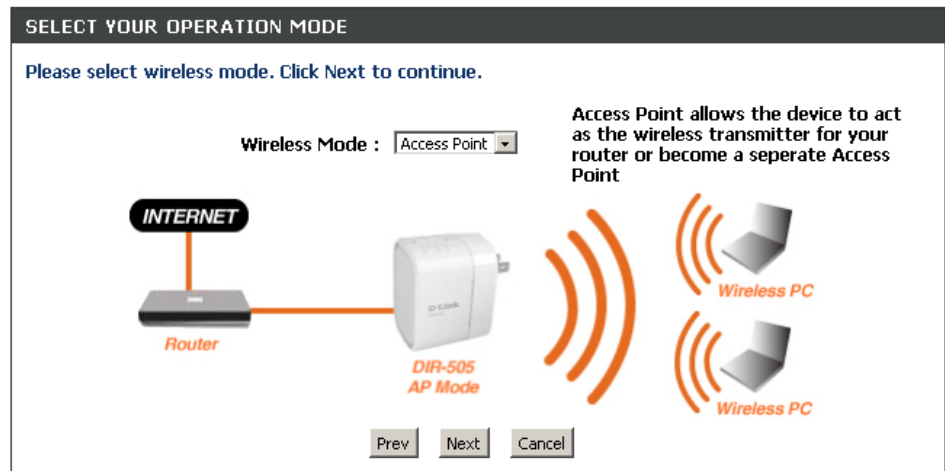
WIRELESS

Access Point Mode Quick Setup Wizard

Click **Next** to begin the *Quick Setup Wizard*.

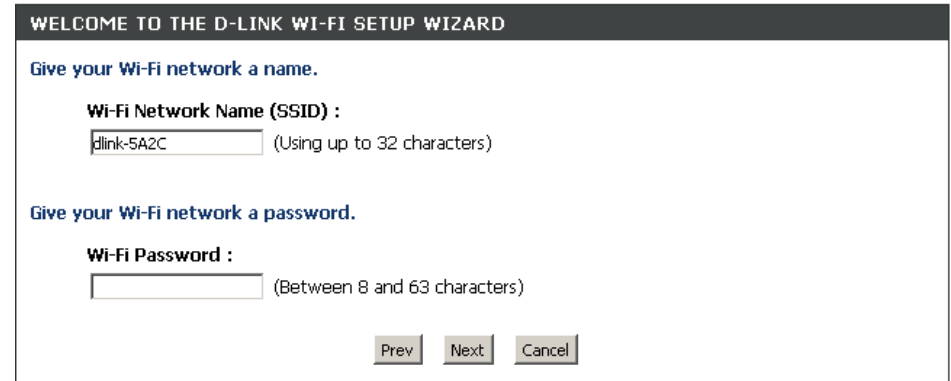


Select **Access Point** from the drop-down menu and click **Next** to continue.



Note: If the wizard does not open you can set the DIR-505L to **Access Point Mode** by clicking **Setup** at the top, then clicking **Internet Settings** on the left. Next, click the **Manual Setup** button. Select **Access Point** in the Wireless Mode drop-down menu. Click **Save Settings** to save your changes and reboot the DIR-505L.

Give your Wi-Fi network a name in the box. You may use up to 32 characters. Then, enter a Wi-Fi Password and click **Next**.



WELCOME TO THE D-LINK WI-FI SETUP WIZARD

Give your Wi-Fi network a name.

Wi-Fi Network Name (SSID) :
 (Using up to 32 characters)

Give your Wi-Fi network a password.

Wi-Fi Password :
 (Between 8 and 63 characters)

When this screen appears, the setup is complete. Write down your *Wi-Fi Security Settings* information for future reference. Click the **Save** button to save your settings.



SETUP COMPLETE!

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name (SSID) : dlink-6dd0
Wi-Fi Password : 1234567890

The Setup Wizard has completed. Click the Save button to save your settings and reboot the device.

Setup

Wireless Setup

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

Wireless Mode: Select one of the following:

- 802.11g Only** - Select if all of your wireless clients are 802.11g.
- 802.11n Only** - Select only if all of your wireless clients are 802.11n.
- Mixed 802.11n and 802.11g** - Select if you are using a mix of 802.11n and 11g wireless clients.

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DIR-505L to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DIR-505L. By default the channel is set to **6**. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable **Auto Channel Scan**, this option will be greyed out.

Channel Width: Select the *Channel Width*:

- Auto 20/40** - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.
- 20MHz** - Select if you are not using any 802.11n wireless clients.
- 40MHz** - Select if using only 802.11n wireless clients.

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcasted by the DIR-505L. If **Invisible** is selected, the SSID of the DIR-505L will not be seen by *Site Survey* utilities so your wireless clients will have to know the SSID of your DIR-505L.

D-Link

DIR-505L // AP SETUP ADVANCED MAINTENANCE STATUS HELP

SETUP WIZARD WIRELESS SETUP LAN SETUP

WIRELESS

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

Save Settings Don't Save Settings

WIRELESS NETWORK SETTINGS

Wireless Network Name : dlink-5A2C (Also called the SSID)

Wireless Band : 2.4GHz

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

Enable Auto Channel Scan : ☒

Wireless Channel : 2.437 GHz - CH 6

Channel Width : Auto 20/40 MHz

Visibility Status : ☒ Visible ☐ Invisible

WIRELESS SECURITY MODE

Security Mode : WPA-Personal

WPA

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

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

WPA Mode : Auto (WPA or WPA2)

Cipher Type : TKIP and AES

PRE-SHARED KEY

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

Pre-Shared Key :

WIRELESS

Helpful Hints...

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

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

Visibility Status is another way to secure your network. With invisible option enabled no wireless clients will be able to see your wireless network when they perform scan to see what's available. In order for your wireless devices to connect to your AP, you will need to manually enter the Wireless Network Name on each device.

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

LAN Setup

Operation Mode: Select **Access Point** from the drop-down menu.

Device Name: Allows you to configure the device more easily when your network is using TCP/IP protocol. Enter a name for your device.

My LAN Connection is: Select from the drop-down menu the *Operation Mode* you would like to use.

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

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

Gateway

Address: Enter the Gateway assigned by your ISP.

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

The screenshot shows the D-Link DIR-505L AP web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar shows a menu with options: SETUP WIZARD, WIRELESS SETUP, and LAN SETUP (which is currently selected). The main content area is titled 'NETWORK SETTINGS' and contains the following sections:

- NETWORK SETTINGS:** A text box explaining that this section is for configuring internal network settings. It includes a 'Save Settings' button and a 'Don't Save Settings' button.
- OPERATION MODE SETTING:** A dropdown menu labeled 'Operation Mode' with 'Access Point' selected.
- DEVICE NAME:** A text box explaining that the device name allows for easier configuration using TCP/IP. It includes a 'Device Name' field with 'dlinkrouter' entered.
- LAN IPV4 CONNECTION TYPE:** A dropdown menu labeled 'My LAN Connection is' with 'Dynamic IP (DHCP)' selected.
- DYNAMIC IP(DHCP) LAN CONNECTION TYPE:** A section for entering IPv4 address information, including fields for IP Address (192.168.0.1), Subnet Mask (255.255.255.0), Gateway Address (0.0.0.0), Primary DNS Server (0.0.0.0), and Secondary DNS Server (0.0.0.0).

On the right side of the interface, there is a 'Helpful Hints...' section with additional information about the Device Name and LAN Settings.

Advanced MAC Address Filter

The *MAC address filter* section can be used to filter network access by machines based on the unique MAC addresses of their network adapter(s). It is most useful to prevent unauthorized wireless devices from connecting to your network. A MAC address is a unique ID assigned by the manufacturer of the network adapter.

Configure MAC Filtering When you **Turn MAC Filtering OFF** is selected, MAC addresses are not used to control network access. When **below: Turn MAC Filtering ON and ALLOW computers listed to access the network** is selected, only computers with MAC addresses listed in the *MAC Address List* are granted network access. When **Turn MAC Filtering ON and DENY computers listed to access the network** is selected, any computer with a MAC address listed in the *MAC Address List* is refused access to the network.

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

MAC ADDRESS FILTER

MAC ADDRESS FILTER

The MAC (Media Access Controller) Address filter option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.

Save Settings Don't Save Settings

WIRELESS ACCESS SETTINGS

Configure MAC Filtering below:
Turn MAC Filtering OFF

MAC Address	Wireless Client List	
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear
00:00:00:00:00:00	<< MAC Address	Clear

WIRELESS

Helpful Hints...

Create a list of MAC address that you would either like to allow or deny access to your network.

Select a MAC address from the drop down menu, then click the arrow to add that MAC address to the list.

Click the **Clear** button to remove the MAC address from the MAC Filtering list.

Advanced Wireless

Transmit

Power: Set the transmit power of the antennas.

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

Enable:

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

IGMP

Snooping: Check to enable this feature.

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

HT20/40 You may choose to **Enable** or **Disable** this feature. Enabling **Coexistence:** this feature allows two "channels" or paths on which data can travel to be combined to increase performance in some environments.

The screenshot shows the D-Link DIR-505L AP web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration sections: MAC ADDRESS FILTER, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, and USER LIMIT. The main content area is titled 'ADVANCED WIRELESS' and contains a warning message about changing default settings. Below this, the 'ADVANCED WIRELESS SETTINGS' section includes options for Transmit Power (set to 100%), WMM Enable (checked), Short GI (checked), IGMP Snooping (checked), WLAN Partition (unchecked), and HT20/40 Coexistence (radio buttons for Enable and Disable). A 'Save Settings' button is located at the bottom of the settings section. On the right side, a 'Helpful Hints...' section provides additional information about the 'Advanced Wireless' settings and the 'Transmit Power' option.

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

MAC ADDRESS FILTER

ADVANCED WIRELESS

WI-FI PROTECTED SETUP

USER LIMIT

ADVANCED WIRELESS

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

Save Settings Don't Save Settings

ADVANCED WIRELESS SETTINGS

Transmit Power : 100%

WMM Enable : ☒

Short GI : ☒

IGMP Snooping : ☒

WLAN Partition : ☐

HT20/40 Coexistence : ☒ Enable ☐ Disable

WIRELESS

Helpful Hints...

Advanced Wireless:
It is recommended that you leave these options at their default values. Adjusting them could negatively impact the performance of your wireless network. The options on this page should be changed by advanced users or if you are instructed to by one of our support personnel, as they can negatively affect the performance of your Access Point if configured improperly.

Transmit Power:
You can lower the output power of the DIR-505L by selecting lower percentage Transmit Power values from the drop down. Your choices are: 100%, 75%, 50%, and 25%.

Wi-Fi Protected Setup (WPS)

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

Enable: Enable the *Wi-Fi Protected Setup* feature.

Note: *If this option is unchecked, the WPS button on the side of the router will be disabled.*

Disable WPS-PIN Method: Locking the *WPS-PIN Method* prevents the settings from being changed by any external registrar using its PIN. Devices can still be added to the wireless network using the *Wi-Fi Protected Setup Push Button Configuration (WPS-PBC)*. It is still possible to change wireless networks settings with *Manual Wireless Network Setup* or *Wireless Network Setup Wizard*.

PIN Settings: A PIN is a unique number that can be used to add the router to an existing network or to create a new network. Only the Administrator (“admin” account) can change or reset the PIN.

Current PIN: Shows the current PIN.

Reset PIN to

Default: Restore the default PIN of the router.

Generate New PIN: Create a random number that is a valid PIN. This becomes the router’s PIN. You can then copy this PIN to the user interface of the wireless client.

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

MAC ADDRESS FILTER

ADVANCED WIRELESS

WI-FI PROTECTED SETUP

USER LIMIT

WI-FI PROTECTED SETUP

Wi-Fi Protected Setup is used to easily add devices to a network using a PIN or button press. Devices must support Wi-Fi Protected Setup in order to be configured by this method. If the PIN changes, the new PIN will be used in following Wi-Fi Protected Setup process. Clicking on "Don't Save Settings" button will not reset the PIN. However, if the new PIN is not saved, it will get lost when the device reboots or loses power.

Save Settings Don't Save Settings

WI-FI PROTECTED SETUP

Enable : ☒

Disable WPS-PIN Method : ☒

Reset to Unconfigured

PIN SETTINGS

Current PIN: 22862006

Reset PIN to Default Generate New PIN

ADD WIRELESS STATION

Add Wireless Device With WPS

WIRELESS

Helpful Hints...

Enable if other wireless devices you wish to include in the local network support Wi-Fi Protected Setup.

Click **Add Wireless Device With WPS** to use Wi-Fi Protected Setup to add wireless devices to the wireless network.

Add Wireless Devices with This wizard helps you add wireless devices to the wireless network.

WPS: The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports *Wi-Fi Protected Setup* and has a configuration button, you can add it to the network by pressing the configuration button on the device and then the on the router within 120 seconds. The status LED on the router will flash three times if the device has been successfully added to the network.

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

User Limit

This sections allows you to set a limit on the number of wireless clients to control wireless traffic.

Enable User

Limit: Check the box to enable user limit.

User Limit Enter a number (**1-32**) to regulate the user limit and (**1-32**): wireless traffic.

The screenshot shows the D-Link DIR-505L configuration interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists configuration options: MAC ADDRESS FILTER, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, and USER LIMIT. The main content area is titled 'USER LIMIT SETTINGS' and contains the following text: 'Please Apply the settings to limit how many wireless stations connecting to AP.' Below this are two buttons: 'Save Settings' and 'Don't Save Settings'. A second 'USER LIMIT SETTINGS' section contains the 'Enable User Limit' checkbox (which is unchecked) and the 'User Limit(1 - 32)' field, which has the value '5' entered. A 'Helpful Hints...' section on the right explains that the user limit can be set to control the number of wireless clients and that exceeding this limit may cause performance degradation. The bottom of the page features a 'WIRELESS' section header.

Maintenance Admin

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

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

Enable Enables a challenge-response test to require users to type **Graphical** letters or numbers from a distorted image displayed on the **Authentication:** screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

ADMIN

SYSTEM

FIRMWARE

TIME

SYSTEM CHECK

SCHEDULES

ADMINISTRATOR SETTINGS

Enter the new password in the "New Password" field and again in the next field to confirm. Click on "Save Settings" to execute the password change. The Password is case-sensitive, and can be made up of any keyboard characters. The new password must be between 0 and 15 characters in length.

Save Settings Don't Save Settings

PASSWORD

Please enter the same password into both boxes, for confirmation.

New Password :

Verify Password :

ADMINISTRATION

Enable Graphical Authentication : ☐

WIRELESS

Helpful Hints...

Passwords:
For security reasons, it is recommended that you change the Password for the Administrator accounts. Be sure to write down the Passwords to avoid having to reset the AP in the event that they are forgotten.

System

This section allows you to manage the Access Point's configuration settings, reboot the AP, and restore the AP to the factory default settings. Restoring the unit to the factory default settings will erase all settings, including any rules that you've created.

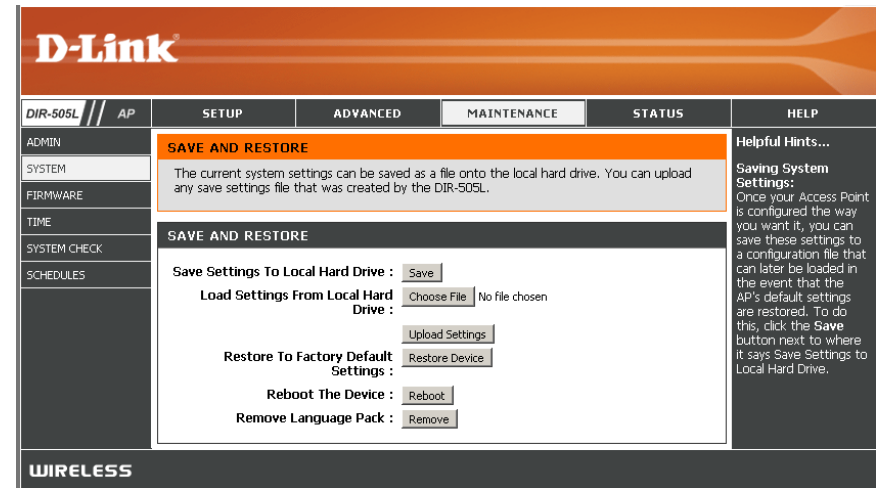
Save Settings To Local Hard Drive: Use this option to save the current router configuration settings to a file on the hard disk of the computer you are using. First, click the **Save** button. A file dialog will appear, allowing you to select a location and file name for the settings.

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

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

Reboot The Device: Click to reboot the router.

Clear Language Pack: If you previously installed a language pack and want to revert all the menus on the router interface back to the default language settings, click the **Clear** button.



Firmware

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

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

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

Upload: Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the access point.

Language Pack

You can change the language of the web UI by uploading available language packs.

After you have downloaded the new language pack, click **Browse** to locate the language pack file on your hard drive. Click **Upload** to complete the language pack upgrade.

The screenshot shows the D-Link DIR-505L web interface. The top navigation bar includes the D-Link logo and tabs for DIR-505L, AP, SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for ADMIN, SYSTEM, FIRMWARE, TIME, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'FIRMWARE' and contains the following sections:

- FIRMWARE:** A message stating 'There may be new firmware for your DIR-505L to improve functionality and performance. Click here to check for an upgrade on our support site.' Below this, it says 'After you have download the new firmware file from our support site, click the Browse button below to find the firmware file on your local hard drive. Click the Upload button to update the firmware on the DIR-505L.' A warning states 'Do not update firmware through wireless network!!'.
- FIRMWARE AND LANGUAGE PACK INFORMATION:** Displays 'Current Firmware Version : 1.01', 'Date : 2012/10/04', 'Current Language Pack Version : No Language pack', and a 'Check Online Now for Latest Firmware and Language pack Version : Check Now' button.
- FIRMWARE UPGRADE:** Includes a note: 'Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the Maintenance -> System screen.' It also states: 'To upgrade the firmware, your PC must have a wired connection to the access point. Enter the name of the firmware upgrade file, and click on the Upload button.' Below this is an 'Upload' section with a 'Choose File' button (labeled 'No file chosen') and an 'Upload' button.
- LANGUAGE PACK UPGRADE:** Similar to the firmware section, it has an 'Upload' section with a 'Choose File' button (labeled 'No file chosen') and an 'Upload' button.

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

Time

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

Current Time: Displays the current date and time of the router.

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

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

Enable NTP Server: *NTP* is short for *Network Time Protocol*. A *NTP* server will synch the time and date with your router. This will only connect to a server on the Internet, not a local server. Check the box to enable this feature.

NTP Server Used: Enter the IP address of a *NTP* server or select one from the drop-down menu.

Set the Date and Time Manually: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute and Second and then click **Save Settings**.

You can also click **Copy Your Computer's Time Settings** to synch the date and time with the computer you are currently on.

The screenshot shows the D-Link DIR-505L AP web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration sections: ADMIN, SYSTEM, FIRMWARE, TIME (selected), SYSTEM CHECK, and SCHEDULES. The main content area is titled 'TIME' and contains the following sections:

- TIME CONFIGURATION:**
 - Current Time : Jan/01/2011 00:51:40
 - Time Zone : [(GMT-08:00) Pacific Time (US/Canada), Tijuana]
 - Enable Daylight Saving : ☐
 - Daylight Saving Offset : [+1:00]
 - Daylight Saving Dates :

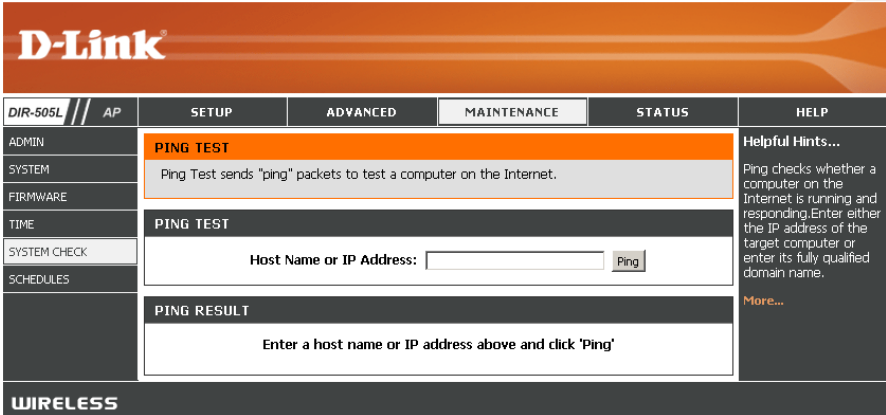
	Month	Week	Day of Week	Time
DST start	Mar	3rd	Sun	1 AM
DST End	Nov	2nd	Sun	1 AM
- AUTOMATIC TIME CONFIGURATION:**
 - Enable NTP Server : ☐
 - NTP Server Used : << [Select NTP Server]
- SET THE DATE AND TIME MANUALLY:**
 - Date And Time : Year [2011] Month [Jan] Day [01]
 - Hour [00] Minute [00] Second [00]
 - [Copy Your Computer's Time Settings]

On the right side of the interface, there is a 'Helpful Hints...' section titled 'System Time Settings' which states: 'This section allows admins to configure, update, and maintain the correct time on the Access Point's internal system clock.'

System Check

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

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



Schedules

Schedules can be created for use with enforcing rules. For example, if you want to restrict web access to Mon-Fri from 3pm to 8pm, you could create a schedule selecting Mon, Tue, Wed, Thu, and Fri and enter a *Start Time* of 3pm and End Time of 8pm.

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

Save: You must click **Save** for your schedules to go into effect.

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

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

ADMIN
SYSTEM
FIRMWARE
TIME
SYSTEM CHECK
SCHEDULES

SCHEDULES

The Schedule configuration option is used to manage schedule rules for wireless Lan control features.

ADD SCHEDULE RULE

Name :

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

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

All Day - 24 hrs : ☐

Time format : 24-hour

Start Time : : AM (hour:minute)

End Time : : AM (hour:minute)

SCHEDULE RULES LIST

Name	Day(s)	Time Frame

Helpful Hints...

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

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

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

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

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

WIRELESS

Status Device Info

This page displays the current information for the DIR-505L. It will display the LAN, WAN (Internet), and Wireless information. If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

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

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

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

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

The screenshot shows the D-Link DIR-505L web interface. The top navigation bar includes links for DIR-505L, AP, SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists navigation options: DEVICE INFO, LOGS, STATISTICS, and WIRELESS. The main content area is titled 'DEVICE INFORMATION' and contains three sections: GENERAL, LAN, and WIRELESS LAN. The GENERAL section shows the Time as Jan/01/2011 00:53:21 and the Firmware Version as 1.01, Thu, 04 Oct 2012. The LAN section shows the MAC Address as c8:be:19:66:5a:2c, Connection as Dynamic IP, IP Address as 169.254.63.18, Subnet Mask as 255.255.0.0, and Gateway Address as 0.0.0.0. The WIRELESS LAN section shows the MAC Address as c8:be:19:66:5a:2c, Network Name (SSID) as dlink-SA2C, Channel as 1, Security Mode as Auto (WPA or WPA2), and Wi-Fi Protected Setup as Enable / Configured. A 'Helpful Hints...' sidebar on the right states that all LAN and Wireless connection details are displayed on this page.

DIR-505L // AP	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
DEVICE INFO	DEVICE INFORMATION				Helpful Hints... All of your LAN and Wireless connection details are displayed here.
LOGS	All of your wireless and network connection details are displayed on this page. The firmware version is also displayed here.				
STATISTICS	GENERAL				
WIRELESS	<p>Time : Jan/01/2011 00:53:21</p> <p>Firmware Version : 1.01, Thu, 04 Oct 2012</p>				
	LAN				
	<p>MAC Address : c8:be:19:66:5a:2c</p> <p>Connection : Dynamic IP</p> <p>IP Address : 169.254.63.18</p> <p>Subnet Mask : 255.255.0.0</p> <p>Gateway Address : 0.0.0.0</p>				
	WIRELESS LAN				
	<p>MAC Address : c8:be:19:66:5a:2c</p> <p>Network Name (SSID) : dlink-SA2C</p> <p>Channel : 1</p> <p>Security Mode : Auto (WPA or WPA2)</p> <p>Wi-Fi Protected Setup : Enable / Configured</p>				

WIRELESS

Logs

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

Log Type: Use the radio buttons to select the types of messages that you want to display from the log. **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice** messages can be selected.

Log Details: Use this section to view and manage the router's log entries.

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

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

Previous: Click this button to view the previous page of the router logs.

Next: Click this button to view the next page of the router logs.

Clear: Clears all of the log contents.

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

LOGS

Use this option to view the device logs. You can define what types of events you want to view and the event levels to view.

LOG OPTIONS

Log Type : ☒ System Activity ☐ Debug Information ☒ Attacks
☐ Dropped Packets ☒ Notice
[Apply Log Settings Now](#)

LOG DETAILS

[First Page](#) [Last Page](#) [Previous](#) [Next](#) [Clear](#) [Save Log](#)

[Refresh](#)

1/6

Time	Message
Jan 1 00:00:19	Registering new address record for 169.254.63.18 on br 0.IPv4.
Jan 1 00:00:19	Registering new address record for 169.254.63.18 on br 0.IPv4.
Jan 1 00:00:14	read /etc/hosts - 1 addresses
Jan 1 00:00:14	using nameserver 168.95.1.1#53
Jan 1 00:00:14	using nameserver 168.95.1.2#53
Jan 1 00:00:14	reading /etc/resolv.conf
Jan 1 00:00:14	compile time options: no-IPv6 GNU-getopt no-ISC-leasf ile no-DBus no-I18N no-TFTP
Jan 1 00:00:14	started, version 2.41 cachesize 150
Jan 1 00:00:13	Service "D-Link HNAP Service" (/var/etc/avahi/services/dhnap.service) successfully established.
Jan 1 00:00:13	Service "D-Link DIR-505L Configuration Utility" (/var/etc/avahi/services/http.service) successfully established.

WIRELESS

Helpful Hints...
Check the log frequently to detect unauthorized network usage.

Statistics

The screen below displays the *Traffic Statistics*. Here you can view the amount of packets that pass through the DIR-505L on both the WAN, LAN ports and both the 802.11n/g (2.4GHz) and 802.11n/a (5GHz) wireless bands. The traffic counter will reset if the device is rebooted.

Refresh Click the **Refresh Statistics** button to refresh the AP's **Statistics:** traffic statistics.

Clear Statistics: Click the **Clear Statistics** button to reset the AP's traffic statistics.

D-Link

DIR-505L // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFO

LOGS

STATISTICS

WIRELESS

TRAFFIC STATISTICS

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

Refresh Statistics Clear Statistics

LAN STATISTICS

Sent : 11530	Received : 8325
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WIRELESS STATISTICS

Sent : 13549	Received : 8325
TX Packets Dropped : 7	RX Packets Dropped : 0
Collisions : 0	Errors : 0

Helpful Hints...

This is a summary of the number of packets that have passed between the Wireless and the LAN since the device was last initialized.

WIRELESS

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.

D-Link

DIR-505L // AP

SETUPADVANCEDMAINTENANCESTATUSHELP

DEVICE INFO

LOGS

STATISTICS

WIRELESS

WIRELESS

The Wireless Client table below displays Wireless clients connected to the AP (Access Point). In Wireless Client mode it displays the connected AP's MAC address and connected Time.

NUMBER OF WIRELESS CLIENTS : 2

Connected Time	MAC Address
00:54:49	cc:b2:55:cc:8b:ba
00:00:30	18:46:17:e2:cf:94

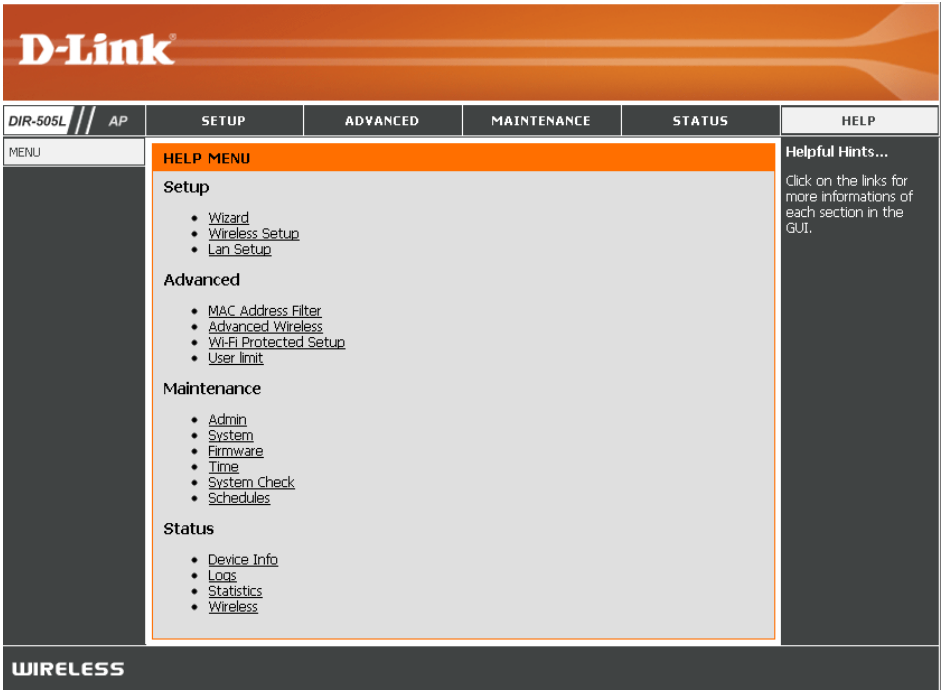
WIRELESS

Helpful Hints...

Wireless
Displays connected client station main parameters, such as Connect Time and station MAC address. In AP Client mode it displays the connected AP's MAC address and connected Time.

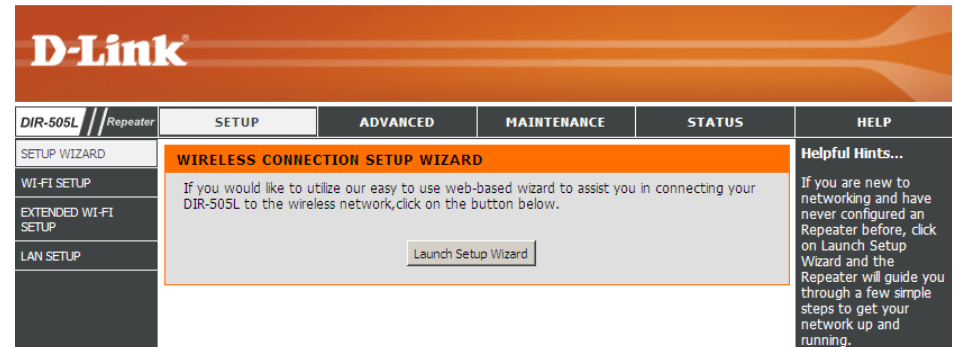
Help

Click the desired hyperlink to get more information about how to use the access point.

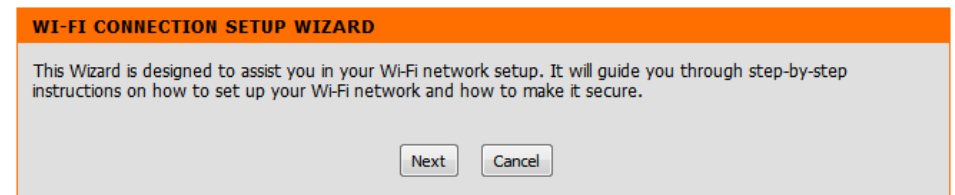


Repeater Mode Quick Setup Wizard

Click **Launch Wireless Setup Wizard** to begin the *Setup Wizard*.

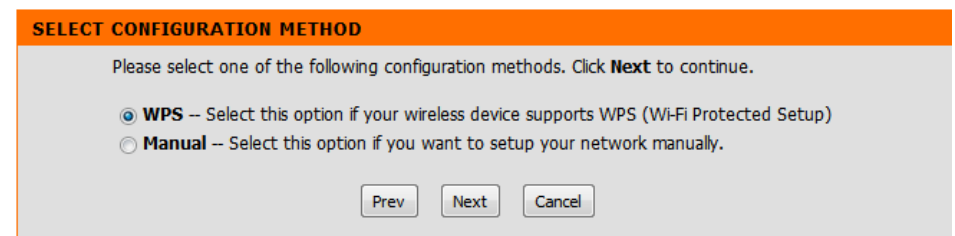


To start the *Setup Wizard* click **Next**.

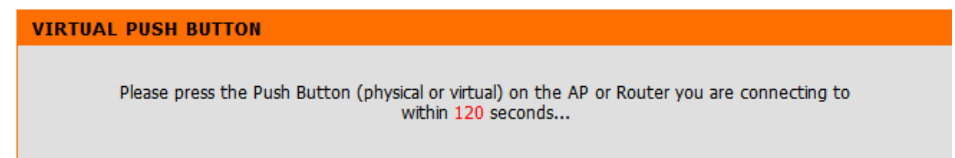


Select **WPS** as the configuration method only if your wireless device supports *Wi-Fi Protected Setup (WPS)*.

Click **Next** to continue.



Press down the **WPS** button on the Wireless device you are adding to your wireless network.



Select **Manual** as the configuration method to set up your network manually.

Click **Next** to continue.

Please wait while your device scans for available Wi-Fi networks.

Select the network you would like your device to connect to and click **Connect** to continue.

SELECT CONFIGURATION METHOD

Please select one of the following configuration methods. Click **Next** to continue.

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

☒ **Manual** -- Select this option if you want to setup your network manually.

Prev

Next

Cancel

SELECT WI-FI NETWORK

Scanning for available Wi-Fi network...

Prev

Next

Cancel

SELECT WI-FI NETWORK

ID	Wi-Fi Network Name	Wi-Fi Security Mode	Channel	Signal(%)	Select
1	dlink	None	1	100	<input type="radio"/>
2	Apple Network c3af3a	None	9	100	<input type="radio"/>
3	m-lounge	WPA/WPA2-PSK(auto)	6	82	<input type="radio"/>
4	00265a493e1e	WPA2-PSK	6	78	<input type="radio"/>
5	telus045	WPA-PSK	6	78	<input type="radio"/>
7	7245 6100	WEP	6	35	<input type="radio"/>
8	vanilla	WEP	6	30	<input type="radio"/>
9	vanilla-2ghz	WEP	6	25	<input type="radio"/>
10	TheRack	WEP	6	17	<input type="radio"/>
11	vanilla	WEP	6	16	<input type="radio"/>
12	dlink1	None	10	15	<input type="radio"/>
13	dlink	None	1	13	<input type="radio"/>
15	dlink1	None	6	11	<input type="radio"/>
16	vlink	WPA/WPA2-PSK(auto)	3	11	<input type="radio"/>
17	vanilla	WEP	6	10	<input type="radio"/>
18	vanilla	WEP	1	9	<input type="radio"/>
19	hackme	WPA/WPA2-PSK(auto)	2	7	<input type="radio"/>
20	DL VAP w1 g	None	1	7	<input type="radio"/>
21	vanilla	WEP	11	6	<input type="radio"/>
22	vanilla	WEP	1	5	<input type="radio"/>
23	dlink1	None	1	5	<input type="radio"/>

Rescan

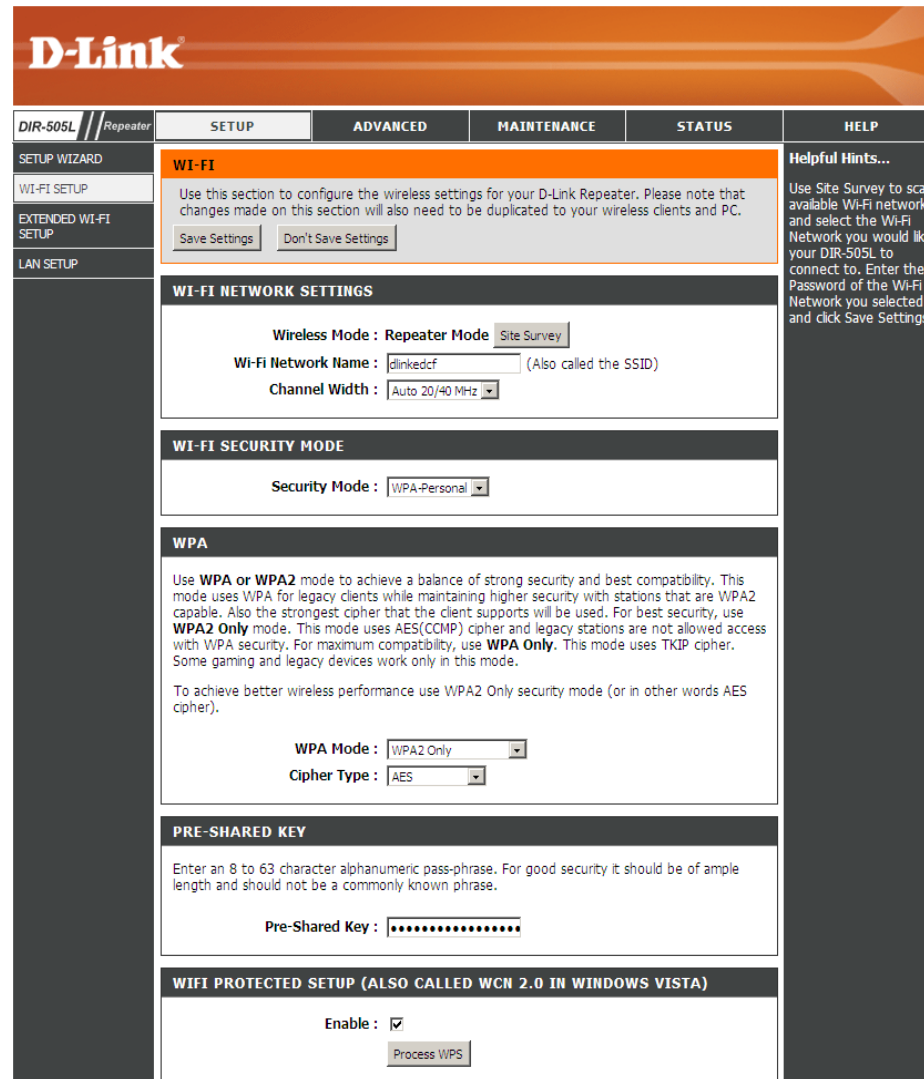
Connect

Cancel

Manual Configuration

Wi-Fi Setup

Use this section to manually configure the Wi-Fi settings for your D-Link Repeater.



D-Link

DIR-505L Repeater

SETUP ADVANCED MAINTENANCE STATUS HELP

SETUP WIZARD

WI-FI SETUP

EXTENDED WI-FI SETUP

LAN SETUP

WI-FI

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

Save Settings Don't Save Settings

WI-FI NETWORK SETTINGS

Wireless Mode : Repeater Mode Site Survey

Wi-Fi Network Name : dlinkdcf (Also called the SSID)

Channel Width : Auto 20/40 MHz

WI-FI SECURITY MODE

Security Mode : WPA-Personal

WPA

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

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

WPA Mode : WPA2 Only

Cipher Type : AES

PRE-SHARED KEY

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

Pre-Shared Key :

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Process WPS

Helpful Hints...

Use Site Survey to scan available Wi-Fi networks and select the Wi-Fi Network you would like your DIR-505L to connect to. Enter the Password of the Wi-Fi Network you selected and click Save Settings.

Repeater Mode

Wireless Mode: *Repeater Mode.*

Site Surveys: Scans for available Wi-Fi networks.

Wi-Fi Network Name: When you are browsing for available wireless networks, this is the name that will appear in the list (unless *Visibility Status* is set to **Invisible**, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the default network name.

Channel Width: Select the appropriate channel width between **20MHz** or **Auto 20/40MHz** from the drop-down menu.

Security Mode: Select **WEP** or **WPA Personal**. Refer to page 88.

Wi-Fi Protected Setup: Click **Enable** to activate the *Wi-Fi Protected Setup (WPS)* feature.

WI-FI NETWORK SETTINGS
Wireless Mode : Repeater Mode Site Survey Wi-Fi Network Name : <input type="text" value="dlinkedcf"/> (Also called the SSID) Channel Width : <input type="text" value="Auto 20/40 MHz"/>
WI-FI SECURITY MODE
Security Mode : <input type="text" value="WPA-Personal"/>
WPA
<p>Use WPA or WPA2 mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use WPA2 Only mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use WPA Only. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.</p> <p>To achieve better wireless performance use WPA2 Only security mode (or in other words AES cipher).</p> <p>WPA Mode : <input type="text" value="WPA2 Only"/></p> <p>Cipher Type : <input type="text" value="AES"/></p>
PRE-SHARED KEY
<p>Enter an 8 to 63 character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase.</p> <p>Pre-Shared Key : <input type="text" value="....."/></p>
WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)
<p>Enable : <input checked="" type="checkbox"/></p> <p>Process WPS</p>

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-505L offers the following types of security:

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

What is WPA?

WPA (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.

Configure WPA/WPA2 Personal

It is recommended to enable encryption on your wireless DIR-505L before your wireless network adapters. Please establish wireless connectivity before enabling encryption.

1. Log in to the web-based configuration by opening a web browser and entering the IP address of the repeater (**192.168.0.50**). Click on **Setup**, then click **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **WPA-Personal**.
3. Next to *WPA Mode*, select **WPA only**, **WPA2 only** or **Auto (WPA or WPA2)**.
4. Next to *Cipher Type*, select **TKIP**, **AES** or **TKIP and AES**.
5. Next to *Pre-Shared Key*, enter a key. The key is entered as a passphrase in ASCII format at both ends of the wireless connection. The passphrase must be between 8-63 characters.
6. Click **Save Settings** at the top of the window to save your changes. If you are configuring the repeater 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 DIR-505L.

WIRELESS SECURITY MODE

Security Mode :

WPA

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

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

WPA Mode :

Cipher Type :

PRE-SHARED KEY

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

Pre-Shared Key :

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Extended Wi-Fi Setup

This page allows you to configure the wireless LAN settings for your router by giving you the opportunity to create a new Wi-Fi Network Name for your local Wi-Fi network or use the same Network Name as the joined Wi-Fi HotSpot for your local Wi-Fi Network.

Wi-Fi Network Name: Displays the device's name.


Extended Wi-Fi Network Name (SSID): This gives you the option to select the same Wi-Fi Network Name or to Create a new Wi-Fi Network Name for your local Wi-Fi network.

Channel Width: Select the *Channel Width*:

- Auto 20/40** - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.
- 20MHz** - Select if you are not using any 802.11n wireless clients.
- 40MHz** - Select if using only 802.11n wireless clients.

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcasted by the DIR-505L. If **Invisible** is selected, the SSID of the DIR-505L will not be seen by *Site Survey* utilities so your wireless clients will have to know the SSID of your DIR-505L.

Wi-Fi Protected Setup: Click **Enable** to activate the Wi-Fi Protected Setup (WPS) feature.



D-Link

DIR-505L Repeater

SETUP WIZARD

SETUP ADVANCED MAINTENANCE STATUS HELP

EXTENDED WI-FI

Use this section to configure the wireless LAN settings for your D-Link Router. You can create a new Wi-Fi Network Name (SSID) for your Local Wi-Fi Network (WLAN) or use the same Wi-Fi Network Name (SSID) as the joined Wi-Fi HotSpot for your local Wi-Fi Network (WLAN). Please note that changes made on this section will also need to be duplicated to your wireless clients and PC.

Save Settings Don't Save Settings

EXTENDED WI-FI NETWORK SETTINGS

Wi-Fi Network Name : dlinkdcf

Extended Wi-Fi Network Name (SSID) : ☐ Same as Wi-Fi Network Name ☒ Create a new Wi-Fi Network Name

Channel Width :

Channel Width : Auto 20/40 MHz

Visibility Status : ☒ Visible ☐ Invisible

WI-FI SECURITY MODE

Security Mode : None

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Process WPS

WIRELESS

Helpful Hints...

You can choose to change the Extended Wi-Fi Network Name (SSID) and the Password for the DIR-505L or you can enter the information found in your Wi-Fi Configuration Card. In order for your Wi-Fi devices to connect to your DIR-505L, you will need to manually enter the Wi-Fi Network Name and Password on each device.

LAN Setup

This page will allow you to configure the internal network settings of your Repeater.

Device Name: Enter the *Device Name* of the AP. It recommended to change the *Device Name* if there is more than one D-Link device within the subnet. You can enter the device name of the AP into your web browser to access the instead of IP address for configuration. If you are using the device name to connect, ensure that your PC and your DIR-505L are on the same network.

LAN Connection Type: Select the connector you are using from the drop-down menu.

IP Address: Enter the IP address of the access point. The default IP address is **192.168.0.50**. If you change the IP address, once you click **Apply**, you will need to enter the new IP address in your browser to get back into the configuration utility.

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

Default Gateway: Enter the *Gateway* assigned by your ISP.

The screenshot shows the D-Link DIR-505L Repeater web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists configuration options: SETUP WIZARD, WI-FI SETUP, EXTENDED WI-FI SETUP, and LAN SETUP (which is currently selected). The main content area is titled 'NETWORK SETTINGS' and contains the following sections:

- DEVICE NAME:** A text input field labeled 'Device Name' with the value 'dlinkrouter' entered.
- LAN IPV4 CONNECTION TYPE:** A dropdown menu labeled 'My LAN Connection is' set to 'Dynamic IP (DHCP)'.
- DYNAMIC IP(DHCP) LAN IPV4 CONNECTION TYPE:** A section for entering IPv4 address information with the following fields:
 - IP Address: 192.168.0.1
 - Subnet Mask: 255.255.255.0
 - Gateway Address: 0.0.0.0
 - Primary DNS Server: 0.0.0.0
 - Secondary DNS Server: 0.0.0.0

On the right side of the interface, there is a 'Helpful Hints...' section with additional information about the Device Name and LAN Settings.

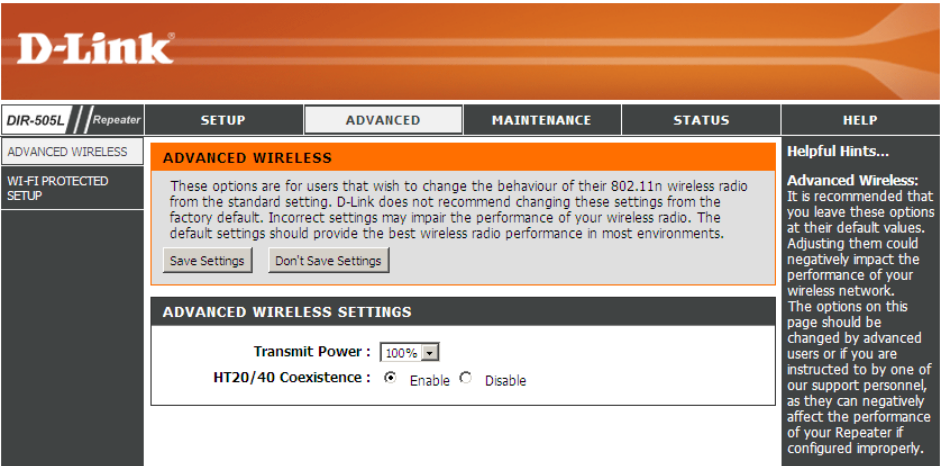
Advanced

Advanced Wireless

Transmit Power: Sets the transmit power of the antennas.

HT 20/40

Coexistence: Check to enable or disable this feature.



Wi-Fi Protected Setup

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

Enable: Check this box to enable the function

Disable WPS-PIN Method: Locking the *WPS-PIN Method* prevents the settings from being changed by any external registrar using its PIN. Devices can still be added to the wireless network using the *Wi-Fi Protected Setup Push Button Configuration (WPS-PBC)*. It is still possible to change wireless networks settings with *Manual Wireless Network Setup* or *Wireless Network Setu Wizard*.

Pin Settings: This feature allows you to Reset your current PIN or to generate a new PIN.

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

Reset PIN to Default: This will allow you to restore the default PIN of your access point.

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

Add Wireless

Station: Press the button to start with the wizard to setup the *WPS*.

The screenshot shows the D-Link DIR-505L Repeater configuration interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar shows the configuration tree with 'ADVANCED WIRELESS' selected, and 'WI-FI PROTECTED SETUP' highlighted. The main content area is titled 'WI-FI PROTECTED SETUP' and contains the following sections:

- WI-FI PROTECTED SETUP:** A text box explaining that WPS is used to easily add devices to a network using a PIN or button press. It states that devices must support WPS and that the PIN will be used in the following WPS process. It also notes that clicking 'Don't Save Settings' will not reset the PIN. However, if the new PIN is not saved, it will get lost when the device reboots or loses power. Below this text are 'Save Settings' and 'Don't Save Settings' buttons.
- WI-FI PROTECTED SETUP:** A section with two checkboxes: 'Enable' (checked) and 'Disable WPS-PIN Method' (checked). Below these is a 'Reset to Unconfigured' button.
- PIN SETTINGS:** A section showing the 'Current PIN' as 22862006. Below this are 'Reset PIN to Default' and 'Generate New PIN' buttons.
- ADD WIRELESS STATION:** A section with an 'Add Wireless Device With WPS' button.

On the right side of the configuration page, there is a 'Helpful Hints...' section. It states: 'Enable if other wireless devices you wish to include in the local network support Wi-Fi Protected Setup. Click Add Wireless Device With WPS to use Wi-Fi Protected Setup to add wireless devices to the wireless network.'

Maintenance Admin

This page will allow you to change the administrator password. The administrator password has read/write access.

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

Confirm Password: Enter the same password that you entered in the previous textbox in order to confirm its accuracy.

Enable Graphical Authentication: Enables a challenge-response test to require users to type letters or numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your router's network settings. Check to enable this feature.

D-Link

DIR-505L // Repeater SETUP ADVANCED **MAINTENANCE** STATUS HELP

ADMIN **ADMINISTRATOR SETTINGS**

Enter the new password in the "New Password" field and again in the next field to confirm. Click on "Save Settings" to execute the password change. The Password is case-sensitive, and can be made up of any keyboard characters. The new password must be between 0 and 15 characters in length.

Save Settings Don't Save Settings

PASSWORD

Please enter the same password into both boxes, for confirmation.

New Password :

Verify Password :

ADMINISTRATION

Enable Graphical Authentication : ☐

WIRELESS

Helpful Hints...

Passwords: For security reasons, is recommended that you change the Password for the Administrator account. Be sure to write down the Passwords to avoid having to reset the Repeater in the event that they are forgotten.

System

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

Upload from Local Hard Drive: Use this option to load previously saved access point configuration settings. Click **Browse** to find a previously saved configuration file. Then, click the **Upload Settings** button to transfer those settings to the repeater.

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

Note: Restoring the factory default settings will not reset the Wi-Fi Protected Status to “Not Configured.”

Reboot the

Device: Click to reboot the repeater.

Remove the

Language Pack: Click to remove any installed language packs.

The screenshot shows the D-Link DIR-505L Repeater web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: ADMIN, SYSTEM, FIRMWARE, and TIME. The main content area is titled 'SAVE AND RESTORE' and contains the following text and buttons:

The current system settings can be saved as a file onto the local hard drive. You can upload any save settings file that was created by the DIR-505L.

SAVE AND RESTORE

Save Settings To Local Hard Drive :

Load Settings From Local Hard Drive :

Restore To Factory Default Settings :

Reboot The Device :

Remove Language Pack :

On the right side, there is a 'Helpful Hints...' section titled 'Saving System Settings' which explains that once the repeater is configured, users can save settings to a file for later use or restore default settings by clicking the 'Save' button next to 'Save Settings to Local Hard Drive'.

Firmware

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

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

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

Upload: Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the access point.

Language Pack

You can change the language of the web UI by uploading available language packs.

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

The screenshot shows the D-Link DIR-505L Repeater web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists ADMIN, SYSTEM, FIRMWARE, and TIME. The main content area is titled 'FIRMWARE' and contains the following sections:

- FIRMWARE:** A message stating: 'There may be new firmware for your DIR-505L to improve functionality and performance. [Click here to check for an upgrade on our support site.](#) After you have download the new firmware file from our support site, click the Browse button below to find the firmware file on your local hard drive. Click the Upload button to update the firmware on the DIR-505L. Do not update firmware through wireless network!!'
- FIRMWARE AND LANGUAGE PACK INFORMATION:** Displays 'Current Firmware Version : 1.01', 'Date : 2012/10/04', and 'Current Language Pack Version : No Language pack'. It includes a 'Check Online Now for Latest Firmware and Language pack Version' button with a 'Check Now' link.
- FIRMWARE UPGRADE:** Contains a note: 'Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the [Maintenance](#) - [System](#) screen'. It also states: 'To upgrade the firmware, your PC must have a wired connection to the Repeater. Enter the name of the firmware upgrade file, and click on the Upload button.' Below this are 'Upload' and 'Browse...' buttons.
- LANGUAGE PACK UPGRADE:** Similar to the firmware section, it includes 'Upload' and 'Browse...' buttons.

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

Time

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

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

Daylight Saving: To select *Daylight-Saving* time manually, click the **Enable Daylight-Saving** check box. Next use the drop-down menu to select a *Daylight-Saving Offset* and then enter a start date and an end date for daylight-saving time.

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

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

Date and Time: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click **Save Settings**. You can also click the **Copy Your Computer's Time Settings** button at the bottom of the screen.

The screenshot shows the D-Link DIR-505L Repeater configuration interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: ADMIN, SYSTEM, FIRMWARE, and TIME (which is currently selected). The main content area is titled 'TIME' and contains the following sections:

- TIME CONFIGURATION:**
 - Current Time: Jan/01/2011 23:54:52
 - Time Zone: (GMT-08:00) Pacific Time (US/Canada), Tijuana (dropdown menu)
 - Enable Daylight Saving: ☐
 - Daylight Saving Offset: +1:00 (dropdown menu)
 - Daylight Saving Dates:

DST start	Month	Week	Day of Week	Time
Mar	3rd	Sun	1 AM	
DST End	Nov	2nd	Sun	1 AM
- AUTOMATIC TIME CONFIGURATION:**
 - Enable NTP Server: ☐
 - NTP Server Used: << Select NTP Server (dropdown menu)
- SET THE DATE AND TIME MANUALLY:**
 - Date And Time:

Year	2011	Month	Jan	Day	01
Hour	00	Minute	00	Second	00
 - Copy Your Computer's Time Settings (button)

At the bottom of the page, there is a 'WIRELESS' section header.

Status

Device Info

This page displays the current information for the DIR-505L. It will display the LAN and wireless LAN information.

General: Displays the access point's time and firmware version.

Wi-Fi Network: Displays the MAC address, wireless setting and the private (local) IP settings for the access point.

Extended Wi-Fi Network: Displays the wireless MAC address and your wireless settings such as SSID and Channel.

The screenshot shows the D-Link DIR-505L Repeater web interface. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for DEVICE INFO, LOGS, and STATISTICS. The main content area is titled 'DEVICE INFORMATION' and contains the following sections:

- GENERAL:**
 - Time : Jan/01/2011 23:55:27
 - Firmware Version : 1.01, Thu, 04 Oct 2012
- WI-FI NETWORK:**
 - Network Status : Connected
 - MAC Address : aa:be:19:66:5a:2c
 - Network Name (SSID) : dlinkdca
 - Security Mode : WPA2 Only
 - Channel Width : Auto 20/40 MHz
 - Channel : 6
- EXTENDED WI-FI NETWORK:**
 - MAC Address : c8:be:19:66:5a:2c
 - Extended Wi-Fi Network Name (SSID) : dlink-5A2C
 - Connection : DHCP
 - IP Address : 192.168.0.137
 - Subnet Mask : 255.255.255.0
 - Gateway Address : 192.168.0.1
 - Primary DNS Server : 192.168.0.1
 - Secondary DNS Server : 0.0.0.0

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

Logs

The DIR-505L keeps a running log of events and activities occurring on the repeater. If the repeater is rebooted, the logs are automatically cleared. You can save the log files under *Log Setting*.

Log Options: There are several types of logs that can be viewed: **System Activity, Debug Information, Attacks, Dropped Packets** and **Notice**.

First Page: This button directs you to the first page of the log.

Last Page: This button directs you to the last page of the log.

Previous Page: This button directs you to the previous page of the log.

Next Page: This button directs you to the next page of the log.

Clear Log: This button clears all current log content.

Log Settings: This button opens a new menu where you can configure the log settings.

Refresh: This button refreshes the log.

The screenshot displays the D-Link DIR-505L Repeater web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar shows options for DEVICE INFO, LOGS, and STATISTICS. The main content area is titled 'LOGS' and contains a description: 'Use this option to view the device logs. You can define what types of events you want to view and the event levels to view.'

Below the description is the 'LOG OPTIONS' section, which allows users to select log types:

- ☒ System Activity
- ☐ Debug Information
- ☐ Dropped Packets
- ☒ Attacks
- ☒ Notice

 An 'Apply Log Settings Now' button is located at the bottom of this section.

The 'LOG DETAILS' section shows a table of log entries. Navigation buttons (First Page, Last Page, Previous, Next, Clear, Save Log) and a Refresh button are provided above the table. The table shows 1/6 pages of results.

Time	Message
Jan 1 23:49:31	Registering new address record for 192.168.0.137 on br 0.IPv4.
Jan 1 23:49:31	Registering new address record for 192.168.0.137 on br 0.IPv4.
Jan 1 23:49:31	New relevant interface br0.IPv4 for mDNS.
Jan 1 23:49:31	Joining mDNS multicast group on interface br0.IPv4 with address 192.168.0.137.
Jan 1 23:49:31	Lease of 192.168.0.137 obtained, lease time 86400
Jan 1 23:49:31	Sending discover...
Jan 1 23:49:31	DHCP client start.
Jan 1 23:49:14	Sending discover...
Jan 1 23:49:12	Sending discover...
Jan 1 23:49:10	Sending discover...

The bottom of the interface features a 'WIRELESS' status bar.

Statistics

The DIR-505L keeps statistics of the traffic that passes through it. You can view the amount of packets that pass through the LAN and wireless portions of the network. The traffic counter will reset if the access point is rebooted.

The screenshot shows the D-Link DIR-505L Repeater web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for DEVICE INFO, LOGS, and STATISTICS. The main content area is titled 'TRAFFIC STATISTICS' and includes a description: 'Traffic Statistics display Receive and Transmit packets passing through your router.' Below this are two buttons: 'Refresh Statistics' and 'Clear Statistics'. The page is divided into three sections: LAN STATISTICS, WIRELESS STATISTICS, and a WIRELESS section at the bottom. Each section contains a table of statistics.

LAN STATISTICS	
Sent : 8012	Received : 113400
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WIRELESS STATISTICS	
Sent : 144405	Received : 8344
TX Packets Dropped : 23	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WIRELESS

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

Wi-Fi Hotspot Quick Setup Wizard

If this is your first time using this device, you will be directed to the *Setup Wizard*. If you have already completed the *Setup Wizard*, please continue to page 123.

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

Click **Next** to continue.

Please wait while your device scans for an available Wi-Fi Network.

LOGIN

Log in to the HotSpot:

User Name : Admin

Password :

Login

WI-FI CONNECTION SETUP WIZARD

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

Next

Cancel

SELECT WI-FI NETWORK

Scanning for available Wi-Fi network...

Prev

Next

Cancel

Select the Network you would like your device to connect to and click **Connect**.

SELECT WI-FI HOTSPOT

ID	Wi-Fi Network Name	Encrypt	Channel	Signal(%)	Select
1	DHP-W306AV	WPA/WPA2-PSK(auto)	8	94	<input type="radio"/>
2	dlink_DHP-1565	WPA/WPA2-PSK(auto)	6	94	<input type="radio"/>
3	LoudFish	WPA/WPA2-PSK(auto)	11	94	<input type="radio"/>
4	LoudFish-guest	None	11	94	<input type="radio"/>
5	irvine2	WPA/WPA2-PSK(auto)	6	82	<input type="radio"/>
6	ATT720	WPA/WPA2-PSK(auto)	1	3	<input type="radio"/>

Rescan
Connect
Cancel

Enter the Wi-Fi password and click **Next** to continue.

ENTER WI-FI PASSWORD

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

Prev
Next
Cancel

Select **Use the same Wi-Fi Network name for the extended Network** and click **Next**.

PLEASE ENTER THE SETTINGS FOR THE EXTENDER NETWORK

☒ Use the same Wi-Fi Network Name for the Extended Network

Wi-Fi Network Name (SSID): DHP-W306AV

Prev
Next
Cancel

Your setup is now complete. Click **Save** to finish.

SETUP COMPLETE!

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name (SSID) : DHP-W306AV

Wi-Fi Password : dlink1234

The Setup Wizard has completed. Click the Save button to save your settings and reboot the device.

Prev
Save
Cancel

To start the wizard, click **Next** to continue.

WI-FI CONNECTION SETUP WIZARD

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

Next

Cancel

Please wait while your device scans for an available Wi-Fi Network.

SELECT WI-FI NETWORK

Scanning for available Wi-Fi network...

Prev

Next

Cancel

Select the Network you would like your device to connect to and click **Connect**.

SELECT WI-FI HOTSPOT

ID	Wi-Fi Network Name	Encrypt	Channel	Signal(%)	Select
1	DHP-W306AV	WPA/WPA2-PSK(auto)	8	94	<input type="radio"/>
2	dlink_DHP-1565	WPA/WPA2-PSK(auto)	6	94	<input type="radio"/>
3	LoudFish	WPA/WPA2-PSK(auto)	11	94	<input type="radio"/>
4	LoudFish-guest	None	11	94	<input type="radio"/>
5	irvine2	WPA/WPA2-PSK(auto)	6	82	<input type="radio"/>
6	ATT720	WPA/WPA2-PSK(auto)	1	3	<input type="radio"/>

Rescan

Connect

Cancel

Enter the Wi-Fi password and click **Next** to continue.

ENTER WI-FI PASSWORD

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

Select **Use the same Wi-Fi Network name for the extended Network** and click **Next**.

PLEASE ENTER THE SETTINGS FOR THE EXTENDER NETWORK

☒ Use the same Wi-Fi Network Name for the Extended Network

Wi-Fi Network Name (SSID): DHP-W306AV

Your setup is now complete. Click **Save** to finish.

Note: To further configure your DIR-505L, go to page 124.

SETUP COMPLETE!

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name (SSID) : DHP-W306AV

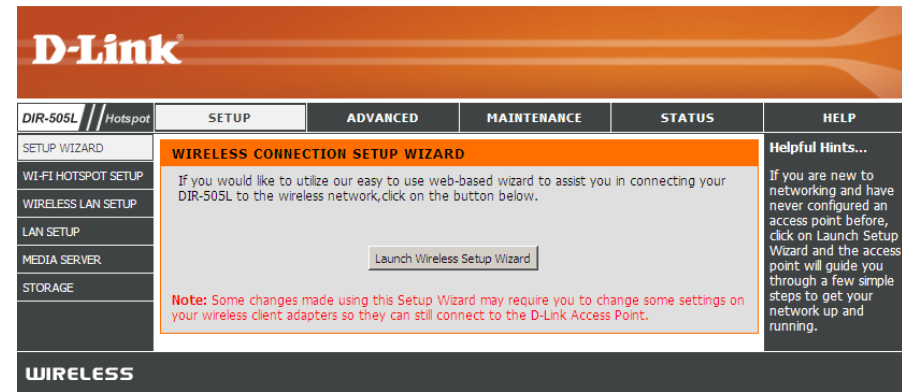
Wi-Fi Password : dlink1234

The Setup Wizard has completed. Click the Save button to save your settings and reboot the device.

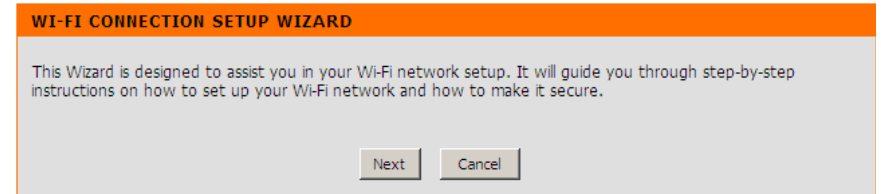
Setup Wizard

If you already configured your DIR-505L during the **Quick Setup Wizard**, skip to page 124. If you previously logged on to the router and you would like to make further configurations, follow the steps below.

Click **Launch Wireless Setup Wizard** to begin the *Setup Wizard*.

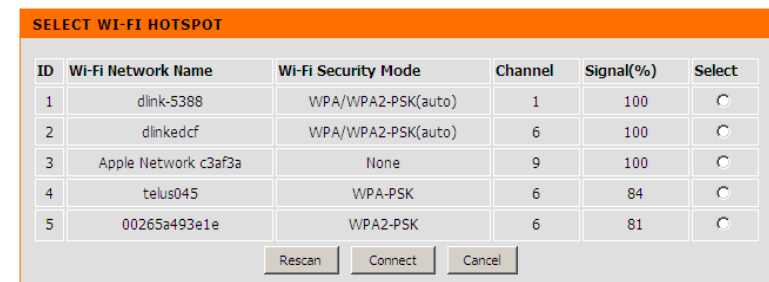


To start the *Setup Wizard* click **Next**.



Select the Network you would like your device to connect to and click **Connect**.

Click **Next** to continue.



Press down the **WPS** button on the Wireless device you are adding to your wireless network.

ENTER WI-FI PASSWORD

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

Prev

Next

Cancel

Select **Use the same Wi-Fi Network name for the extended Network** and click **Next**.

PLEASE ENTER THE SETTINGS FOR THE EXTENDED NETWORK

☒ Use the same Wi-Fi Network Name for the Extended Network

Wi-Fi Network Name (SSID): dlink2

Prev

Next

Cancel

Your setup is now complete. Click **Save** to finish.

SETUP COMPLETE!

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name (SSID) : dlink2

The Setup Wizard has completed. Click the Save button to save your settings and reboot the device.

Prev

Save

Cancel

Setup

Wi-Fi Hotspot Setup

Wireless Mode: Displays the *Wi-Fi Hotspot Mode*.

Wireless Network Name: When you are browsing for available wireless networks, this is the name that will appear in the list (unless *Visibility Status* is set to **Invisible**, see below). This name is also referred to as the SSID.

Channel Width: Select the appropriate channel width between **20MHz** or **Auto 20/40MHz** from the drop-down menu.

Security Mode: Select **WEP** or **WPA Personal**.

Wi-Fi Protected Setup: Select to enable this feature.

Process WPS: Please refer to page 141.

D-Link

DIR-505L // Hotspot

SETUP ADVANCED MAINTENANCE STATUS HELP

SETUP WIZARD

WI-FI HOTSPOT SETUP

WIRELESS LAN SETUP

LAN SETUP

MEDIA SERVER

STORAGE

WI-FI HOTSPOT

Use this section to configure the Wi-Fi HotSpot settings for your D-Link Wi-Fi HotSpot. Please select a Wi-Fi HotSpot to join by click the Site Survey button and enter the password of the Wi-Fi HotSpot Network.

Save Settings Don't Save Settings

WI-FI HOTSPOT NETWORK SETTINGS

Wireless Mode : Wi-Fi HotSpot Mode Site Survey

Wi-Fi HotSpot Network Name : dlink (Also called the SSID)

Channel Width : Auto 20/40 MHz

WI-FI HOTSPOT SECURITY MODE

Security Mode : None

INTERNET SETTINGS

This page is used to configure the parameters for Internet network which connects through the Wi-Fi HotSpot wirelessly. Here you may select the access method of DHCP in My Internet Connection Type.

My Internet Connection is : Dynamic IP (DHCP)

Host Name : DIR-505L

MTU : 1500

Attain DNS Automatically

Set DNS Manually

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

Clone Your PC's MAC address

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Process WPS

WIRELESS

Internet Settings

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

My Internet Connection is: Use the drop-down menu to select *Dynamic IP (DHCP)* to automatically obtain an IP address on the LAN/private network.

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

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

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

Wi-Fi Protected Setup: Select to enable this feature.

Process WPS: Refer to page 141 for more information.

INTERNET SETTINGS

This page is used to configure the parameters for Internet network which connects through the Wi-Fi HotSpot wirelessly. Here you may select the access method of DHCP and PPPoE in My Internet Connection Type.

My Internet Connection is :

Host Name :

MTU :

☒ **Attain DNS Automatically**

☐ **Set DNS Manually**

MAC Address :

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Manual Wireless Settings

Local Wi-Fi Select **Same as Wi-Fi Hotspot Network Name** or **Create Network Name: Extended SSID**.

Channel Width: 20MHz - Select if you are not using any 802.11n wireless clients.

40MHz - Select if you are using 802.11n wireless clients only.

Security Mode: Select from the drop-down menu the type of security mode you would like to use.

WPA Mode: Select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.

Cipher Type: Select **TKIP and AES**, **TKIP** or **AES**.

Pre-Shared Key: Enter a key (passphrase). The key is entered as a passphrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.

Wi-Fi Protected Setup: Select to enable this feature.

LOCAL WIFI NETWORK SETTINGS

Wi-Fi HotSpot Network

Name : QCAAAAAAAAA

Local Wi-Fi Network Name : ☐ Same as Wi-Fi HotSpot Network Name
☒ Create a new Wi-Fi Network Name

dlink-505

Channel Width : Auto 20/40 MHz

LOCAL WIFI SECURITY MODE

Security Mode : WPA-Personal

WPA

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

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

WPA Mode : Auto (WPA or WPA2)

Cipher Type : AES

PRE-SHARED KEY

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

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Current PIN : 69747786

Reset PIN to Default

Generate New PIN

Process WPS

Setup

Wireless LAN Setup

- Wi-Fi Spot Network Name:** Displays the *Wi-Fi Hotspot Network Name*.
- Local Wi-Fi Network Name:** Select **Same as Wi-Fi HotSpot Network Name** or select **Create a new Wi-Fi Network Name**.
- Channel Width:** Select the appropriate channel width between **20MHz** or **Auto 20/40MHz** from the drop-down menu.
- Visibility Status:** This feature allows you to secure your network by giving you the option to make your network invisible to wireless clients. Select **Visible** or **Invisible**.
- Security Mode:** Select **WEP** or **WPA Personal**.
- Enable Wireless:** Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.
- Process WPS:** Please refer to page 141.

D-Link

DIR-505L // Hotspot

SETUP WIZARD

WIRELESS LAN

Use this section to configure the wireless LAN settings for your D-Link Router. You can create a new Wi-Fi Network Name (SSID) for your Local Wi-Fi Network (WLAN) or use the same Wi-Fi Network Name (SSID) as the joined Wi-Fi HotSpot for your local Wi-Fi Network (WLAN). Please note that changes made on this section will also need to be duplicated to your wireless clients and PC.

Save Settings Don't Save Settings

LOCAL WI-FI NETWORK SETTINGS

Wi-Fi HotSpot Network Name : dlink

Local Wi-Fi Network Name : ☐ Same as Wi-Fi HotSpot Network Name ☒ Create a new Wi-Fi Network Name

Channel Width :

Channel Width :

Visibility Status : ☒ Visible ☐ Invisible

LOCAL WI-FI SECURITY MODE

Security Mode :

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Process WPS

WIRELESS

Helpful Hints...

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

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

Visibility Status is another way to secure your network. With invisible option enabled, no wireless clients will be able to see your wireless network when they perform scan to see what's available. In order for your wireless devices to connect to your AP, you will need to manually enter the Wireless Network Name on each device.

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

Manual Wireless Settings

Local Wi-Fi Select **Same as Wi-Fi HotSpot Network Name** or **Create Network Name: Extended SSID**.

Channel Width: 20MHz - Select if you are not using any 802.11n wireless clients.

40MHz - Select if you are using 802.11n wireless clients only.

Security Mode: Select from the drop-down menu the type of security mode you would like to use.

WPA Mode: Select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.

Cipher Type: Select **TKIP and AES**, **TKIP** or **AES**.

Pre-Shared Key: Enter a key (passphrase). The key is entered as a passphrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.

Wi-Fi Protected Setup: Select to enable this feature.

Process WPS: Please refer to page 141.

LOCAL WIFI NETWORK SETTINGS

Wi-Fi HotSpot Network Name : QCAAAAAAAAA

Local Wi-Fi Network Name : ☐ Same as Wi-Fi HotSpot Network Name
☒ Create a new Wi-Fi Network Name

dlink-505

Channel Width : Auto 20/40 MHz

LOCAL WIFI SECURITY MODE

Security Mode : WPA-Personal

WPA

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

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

WPA Mode : Auto (WPA or WPA2)

Cipher Type : AES

PRE-SHARED KEY

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

WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)

Enable : ☒

Current PIN : 69747786

Reset PIN to Default

Generate New PIN

Process WPS

LAN Setup

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

Device Name: Enter the Device Name of the AP. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.

IP Address: Enter the IP address of the access point. The default IP address is **192.168.0.1**. If you change the IP address, once you click **Save**, 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 assigned by your ISP.

Local Domain Name: Enter the local domain Name.

DHCP Server Settings: Configure the built-in DHCP server to assign IP addresses to the computer on your network.

D-Link

DIR-505L // Hotspot

SETUP ADVANCED MAINTENANCE STATUS HELP

SETUP WIZARD

WI-FI HOTSPOT SETUP

WIRELESS LAN SETUP

LAN SETUP

MEDIA SERVER

STORAGE

NETWORK SETTINGS

Use this section to configure the internal network settings of your AP.

Device Name allows you to configure this device more easily when your network using TCP/IP protocol. You can enter the device name of the AP into your web browser to access the instead of IP address for configuration. Recommend to change the device name if there're more than one D-Link devices within the subnet.

Save Settings Don't Save Settings

DEVICE NAME

Device Name allows you to configure this device more easily. You can enter "http://"device name" into your web browser instead of IP address for configuration. (Default: http://dlinkrouter)

Device Name : dlinkrouter

STATIC IP ADDRESS LAN CONNECTION TYPE

Enter the static address Information.

IP Address : 192.168.100.1

Subnet Mask : 255.255.255.0

Local Domain Name :

DHCP SERVER SETTINGS

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

Enable DHCP Server : ☒

DHCP IP Address Range : 192.168.100.100 to 192.168.100.199

DHCP Lease Time : 1440 (minutes)

Helpful Hints...

Device Name: Device Name allows you to configure this device more easily when your network using TCP/IP protocol. You can enter the device name of the AP into your web browser to access the device configuration. Recommend to change the device name if there're more than one D-Link devices within the network.

LAN Settings: Also referred as private settings. LAN settings allow you to configure LAN interface of DIR-505L. LAN IP address is private to your internal network and is not visible to Internet. The factory default setting is Dynamic IP (DHCP).

WIRELESS

Media Server

This feature allows you to share music, pictures, and videos with any devices connected to your network.

Enable Media Server: Check this box to enable the *Media Server* feature.

Computer Name: Enter the *Media Server's* name.

DIR-505L

Hotspot

SETUP

ADVANCED

MAINTENANCE

STATUS

HELP

SETUP WIZARD

WI-FI HOTSPOT SETUP

WIRELESS LAN SETUP

LAN SETUP

MEDIA SERVER

STORAGE

MEDIA SERVER

Enable DLNA Media Server allows you to share media with DLNA certified devices. Any DLNA certified devices that connect to your network can play your shared music, pictures, and videos.

Note: The shared media may not be secure. Allowing any devices to stream is recommended only on secure networks.

Save Settings

Don't Save Settings

DLNA MEDIA SERVER

Enable DLNA Media Server : ☒

Media Server Name :

WIRELESS

Storage

This page will allow you to access files from a USB external hard drive or thumb drive that is plugged into the router from your local network or from the Internet using either a web browser or SharePort™ app for your smartphone or tablet. You can create users to be allowed to access these files.

Enable Shareport Web Access: Check to enable sharing files on your USB storage device that is plugged in your router.

HTTP Access Port: Enter a port (**8181** is default). You will have to enter this port in the URL when connecting to the shared files. For example: (<http://192.168.0.1:8181>).

HTTPS Access Port: Enter a port (**4433** is default). You will have to enter this port in the URL when connecting to the shared files. For example: (<https://192.168.0.1:4433>).

Allow Remote Access: Check to enable access to your router's storage.
Note: You will have to type **HTTPS** in the URL, like in the above example.

User Name: To create a new user, enter a user name.

Password: Enter a password for this account.

Verify Password: Re-enter the password. Click **Add/Edit** to create the user.

User List: Displays the accounts. The *Admin* and *Guest* accounts are built-in to the router.

Number of Devices: Displays the USB device plugged into the router.

The screenshot shows the D-Link DIR-505L Web Management Interface. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various setup options: SETUP WIZARD, WIRELESS LAN SETUP, LAN SETUP, MEDIA SERVER, and STORAGE. The main content area is titled 'STORAGE' and contains the following sections:

- STORAGE:** A brief description of SharePort Web Access and buttons for 'Save Settings' and 'Don't Save Settings'.
- SHAREPORT WEB ACCESS:** A section with checkboxes for 'Enable SharePort Web Access' (checked), 'HTTP Access Port' (8181), 'HTTPS Access Port' (4433), and 'Allow Remote Access' (unchecked).
- 10 -- USER CREATION:** A section for creating new users with fields for 'User Name', 'Password', and 'Verify Password', along with 'Add/Edit' and 'Delete' buttons.
- USER LIST:** A table displaying existing users with columns for 'No.', 'User Name', 'Access Path', and 'Permission'.

No.	User Name	Access Path	Permission
1	admin	/	Read/Write
2	guest	None	Read Only
- NUMBER OF DEVICES : 1:** A section showing the status of connected USB devices.

Device	Total Space	Free Space
usb_A1	1.9GB	1.9GB
- SHAREPORT WEB ACCESS LINK:** A section providing a link to connect to the drive remotely after logging in with a user account: <http://192.168.0.137:8181>.

The bottom of the interface shows a 'WIRELESS' section.

Advanced Wireless

Transmit Power: To set the transmit power of the antennas select from the drop-down menu.

HT 20/40 You may choose to **Enable** or **Disable** this feature.

Coexistence: Enabling this feature allows two “channels” or paths on which data can travel to be combined to increase performance in some environments.

D-Link

DIR-505L // Hotspot

MAC ADDRESS FILTER

ADVANCED WIRELESS

ADVANCED WIRELESS

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

Save Settings Don't Save Settings

ADVANCED WIRELESS SETTINGS

Transmit Power : 100%

HT20/40 Coexistence : ☒ Enable ☐ Disable

Helpful Hints...

Advanced Wireless:
It is recommended that you leave these options at their default values. Adjusting them could negatively impact the performance of your wireless network. The options on this page should be changed by advanced users or if you are instructed to by one of our support personnel, as they can negatively affect the performance of your Access Point if configured improperly.

Transmit Power:
You can lower the output power of the DIR-505L by selecting lower percentage Transmit Power values from the drop down. Your choices are: 100%, 75%, 50%, and 25%.

WIRELESS

Maintenance Admin

This page will allow you to change the Administrator password. The administrator password has read/write access.

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

Confirm Password: Enter the same password that you entered in the previous textbox in order to confirm its accuracy.

Enable Graphical Authentication: Enables a challenge-response test to require users to type letters or numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.

The screenshot shows the D-Link DIR-505L Maintenance Admin interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE (selected), STATUS, and HELP. The left sidebar lists menu items: ADMIN, TIME, SYSTEM, and FIRMWARE. The main content area is titled 'ADMINISTRATOR SETTINGS' and contains instructions for changing the password. It includes fields for 'New Password' and 'Verify Password', with a 'Save Settings' button and a 'Don't Save Settings' button. Below this is the 'ADMINISTRATION' section with a checkbox for 'Enable Graphical Authentication'. A 'Helpful Hints...' sidebar on the right provides additional security advice.

DIR-505L // Hotspot	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADMIN	ADMINISTRATOR SETTINGS Enter the new password in the "New Password" field and again in the next field to confirm. Click on "Save Settings" to execute the password change. The Password is case-sensitive, and can be made up of any keyboard characters. The new password must be between 0 and 15 characters in length. <input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/>				Helpful Hints... Passwords: For security reasons, it is recommended that you change the Password for the Administrator accounts. Be sure to write down the Passwords to avoid having to reset the AP in the event that they are forgotten.
TIME	PASSWORD Please enter the same password into both boxes, for confirmation. New Password : <input type="text"/> Verify Password : <input type="text"/>				
SYSTEM	ADMINISTRATION Enable Graphical Authentication : <input type="checkbox"/>				
FIRMWARE	WIRELESS				

Time

The *Time Configuration* option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in. *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 Daylight Saving: To select *Daylight-Saving* time manually, click the **Enable Daylight Saving** check box. Next use the drop-down menu to select a *Daylight-Saving Offset* and then enter a start date and an end date for daylight-saving time.

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

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

Date and Time: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click **Save Settings**. You can also click the **Copy Your Computer's Time Settings** button at the bottom of the screen.

The screenshot shows the D-Link DIR-505L Hotspot configuration interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: ADMIN, TIME, SYSTEM, and FIRMWARE. The main content area is titled 'TIME' and contains the following sections:

- TIME CONFIGURATION:**
 - Current Time: Jan/01/2011 19:48:52
 - Time Zone: [(GMT-08:00) Pacific Time (US/Canada), Tijuana]
 - Enable Daylight Saving: ☐
 - Daylight Saving Offset: [+1:00]
 - Daylight Saving Dates:

DST start	Month	Week	Day of Week	Time
Mar	3rd	Sun	1 AM	
Nov	2nd	Sun	1 AM	
- AUTOMATIC TIME CONFIGURATION:**
 - Enable NTP Server: ☐
 - NTP Server Used: << [Select NTP Server]
- SET THE DATE AND TIME MANUALLY:**
 - Date And Time:

Year	2011	Month	Jan	Day	01
Hour	00	Minute	00	Second	00
 - [Copy Your Computer's Time Settings]

At the bottom of the page, there is a 'WIRELESS' section header.

System

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

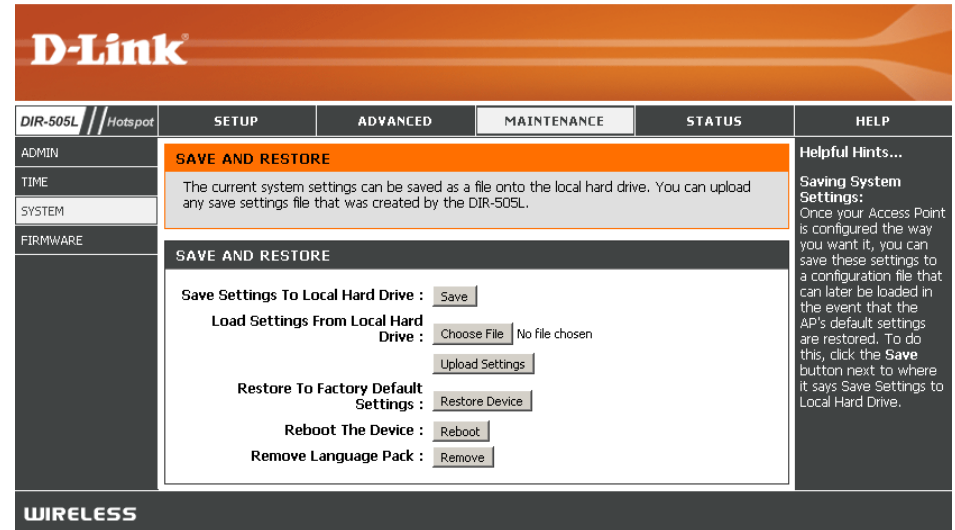
Upload from Local Hard Drive: Use this option to load previously saved access point configuration settings. Click **Browse** to find a previously saved configuration file. Then, click the **Upload Settings** button to transfer those settings to the access point.

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

Note: Restoring the factory default settings will not reset the Wi-Fi Protected Status to "Not Configured."

Reboot the Device: Click to reboot the access point.

Remove Language Pack: Click to remove any installed language packs.



Firmware

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

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

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

Upload: Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the access point.

Language Pack

You can change the language of the web UI by uploading available language packs.

After you have downloaded the new language pack, click **Browse** to locate the language pack file on your hard drive. Click **Upload** to complete the language pack upgrade.

The screenshot shows the D-Link DIR-505L web interface. The top navigation bar includes links for DIR-505L, Hotspot, SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for ADMIN, TIME, SYSTEM, and FIRMWARE. The main content area is titled 'FIRMWARE' and contains the following sections:

- FIRMWARE**: A message stating 'There may be new firmware for your DIR-505L to improve functionality and performance. Click here to check for an upgrade on our support site.' It also includes instructions to click the 'Browse' button to find the firmware file on the local hard drive and click the 'Upload' button to update the firmware. A warning states: 'Do not update firmware through wireless network!!'
- FIRMWARE AND LANGUAGE PACK INFORMATION**: Displays the current firmware version (1.01) and date (2012/10/04), and the current language pack version (No Language pack). It includes a 'Check Now' button to check for the latest firmware and language pack version.
- FIRMWARE UPGRADE**: Contains a note: 'Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the Maintenance -> System screen.' It also states: 'To upgrade the firmware, your PC must have a wired connection to the access point. Enter the name of the firmware upgrade file, and click on the Upload button.' Below this is an 'Upload' section with a 'Choose File' button and a 'No file chosen' status.
- LANGUAGE PACK UPGRADE**: Similar to the firmware upgrade section, it includes an 'Upload' section with a 'Choose File' button and a 'No file chosen' status.

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

Status

Device Info

This page displays the current information for the DIR-505L. It will display the LAN, WAN (Internet), and Wireless information. If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

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

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

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

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

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

The screenshot shows the D-Link DIR-505L Web UI. The top navigation bar includes links for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The main content area is titled 'DEVICE INFORMATION' and contains the following sections:

- GENERAL:**
 - Time : Jan/01/2011 19:50:29
 - Firmware Version : 1.01, Thu, 04 Oct 2012
- WI-FI HOTSPOT:**
 - MAC Address : c8:be:19:66:5a:2d
 - Wi-Fi HotSpot Network Name (SSID) : vanilla
 - Connection : DHCP
 - IP Address : 192.168.1.162
 - Subnet Mask : 255.255.255.0
 - Default Gateway : 192.168.1.1
 - Primary DNS Server : 8.8.8.8
 - Secondary DNS Server : 68.94.157.1
- LAN:**
 - MAC Address : c8:be:19:66:5a:2c
 - IP Address : 192.168.100.1
 - Subnet Mask : 255.255.255.0
 - DHCP Server : Enabled
- WIRELESS LAN:**
 - MAC Address : aa:be:19:66:5a:2d
 - Local Wi-Fi Network Name : dlink-5A2C
 - Local Wi-Fi Security Mode : Auto (WPA or WPA2) - Personal
 - Channel Width : Auto 20/40 MHz
 - Channel : 1
 - Wi-Fi Protected Setup : Enable / Configured

A 'Helpful Hints...' sidebar on the right states: 'All of your LAN and Wireless connection details are displayed here.'

Logs

The DIR-505L keeps a running log of events and activities occurring on the AP. If the AP is rebooted, the logs are automatically cleared. You can save the log files under *Log Setting*.

Log Type: Use the radio buttons to select the types of messages that you want to display from the log. **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice** messages can be selected.

Log Details: Use this section to view and manage the router's log entries.

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

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

Previous: Click this button to view the previous page of the router logs.

Next: Click this button to view the next page of the router logs.

Clear: Clears all of the log contents.

D-Link

DIR-505L // Hotspot

SETUP ADVANCED MAINTENANCE STATUS HELP

LOGS

Use this option to view the device logs. You can define what types of events you want to view and the event levels to view.

LOG OPTIONS

Log Type : ☒ System Activity ☐ Debug Information ☒ Attacks
☐ Dropped Packets ☒ Notice

Apply Log Settings Now

LOG DETAILS

First Page Last Page Previous Next Clear Save Log

Refresh

1/5

Time	Message
Jan 1 19:47:31	using nameserver 8.8.8.8#53
Jan 1 19:47:31	using nameserver 68.94.157.1#53
Jan 1 19:47:31	reading /etc/resolv.conf
Jan 1 19:45:17	Lease of 192.168.1.162 obtained, lease time 86400
Jan 1 19:01:13	ath1: STA 00:1f:3c:3e:a2:75 IEEE 802.11: disassociated
Jan 1 18:59:52	ath1: STA 00:1f:3c:3e:a2:75 IEEE 802.11: associated
Jan 1 16:16:57	UDHCPD sending OFFER of 192.168.100.101
Jan 1 16:16:52	ath1: STA cc:b2:55:cc:8b:ba WPA: pairwise key handshake completed (RSN)
Jan 1 16:16:52	ath1: STA cc:b2:55:cc:8b:ba RADIUS: starting accounting session 4D1E7C4E-00000004
Jan 1 16:16:52	ath1: STA cc:b2:55:cc:8b:ba IEEE 802.11: associated

WIRELESS

Helpful Hints...
Check the log frequently to detect unauthorized network usage.

Statistics

The DIR-505L keeps statistics of the traffic that passes through it. You can view the amount of packets that pass through the LAN and wireless portions of the network.

D-Link

DIR-505L // Hotspot

SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFO

LOGS

STATISTICS

TRAFFIC STATISTICS

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

Refresh Statistics Clear Statistics

LAN STATISTICS

Sent : 150880	Received : 89753
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WIRELESS STATISTICS

Sent : 64567	Received : 277076
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

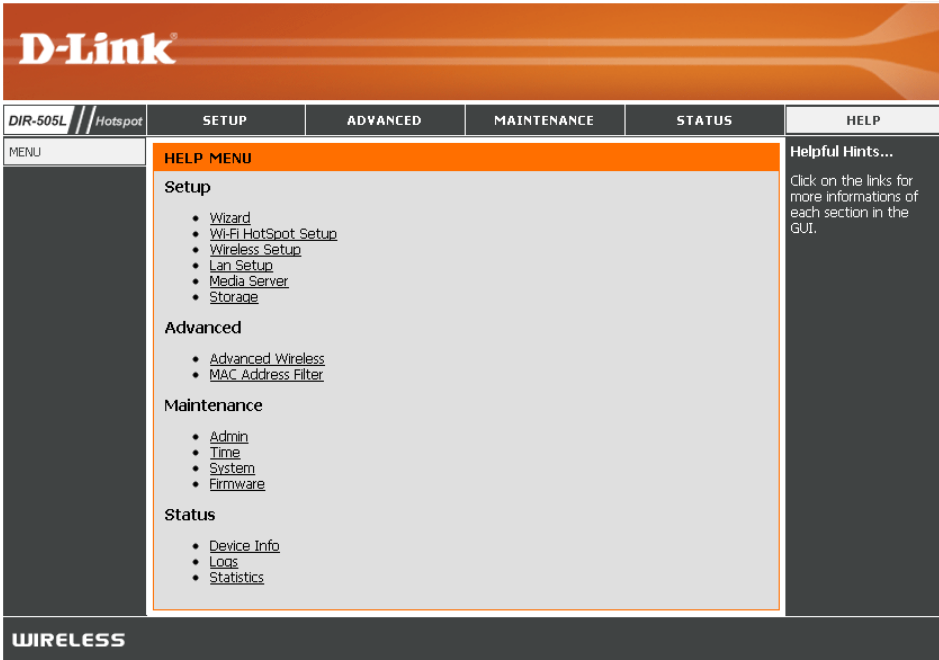
WIRELESS

Helpful Hints...

This is a summary of the number of packets that have passed between the Wireless and the LAN since the device was last initialized.

Help

Click the desired hyperlink to get more information about how to use the router.



Connect a Wireless Client to your Router

WPS Button

The easiest and most secure way to connect your wireless devices to the router is through *WPS (Wi-Fi Protected Setup)*. Most wireless devices such as wireless adapters, media players, Blu-ray DVD players, wireless printers and cameras will have a *WPS* button (or a software utility with *WPS*) that you can press to connect to the DIR-505L router. Please refer to your user manual for the wireless device you want to connect to make sure you understand how to enable *WPS*. Once you know, follow the steps below:

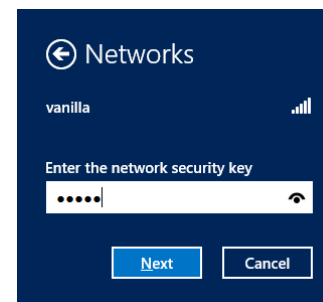
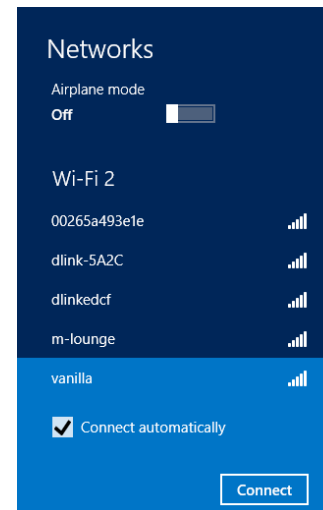
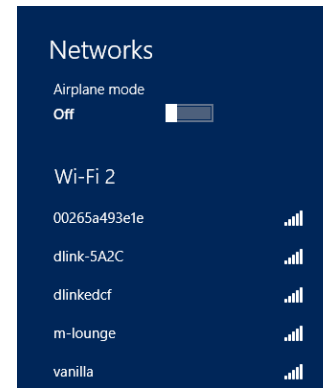
Step 1 - Press the **WPS** button on the DIR-505L for about one second. The *WPS* button will start to blink.

Step 2 - Within two minutes, press the **WPS** button on your wireless client (or launch the software utility and start the *WPS* process).

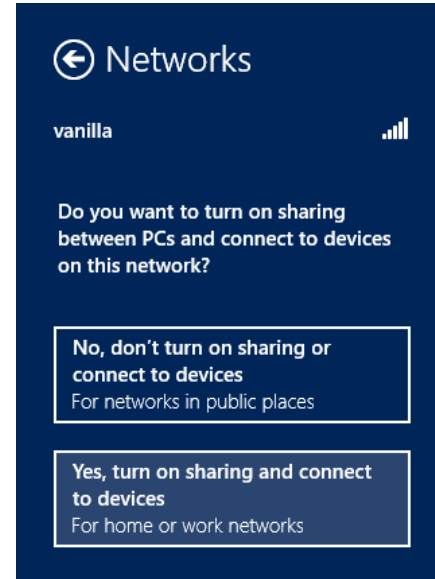
Step 3 - Allow up to one minute to configure. Once the *WPS* light stops blinking, you will be connected and your wireless connection will be secure with WPA2.

Windows® 8

1. Click on the wireless computer icon in your system tray (lower-right corner next to the time).
2. A list of available wireless networks will appear.
3. Click the wireless network (SSID) you want to connect to and then click **Connect**.
4. If the network is secure/encrypted, enter the Wi-Fi password (security key) and click **Next**.



5. Click either to enable or disable file sharing.
6. You will now be connected to your wireless network.



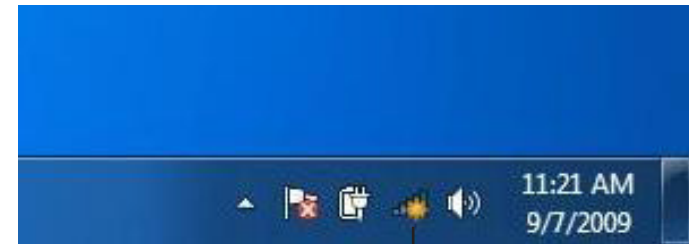
If you get a good signal but cannot access the Internet, confirm the encryption by reviewing the profile or check the TCP/IP settings for your wireless adapter. Refer to the *Networking Basics* section in this manual for more information.

Windows® 7

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. Click on the **“wireless” icon** in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.

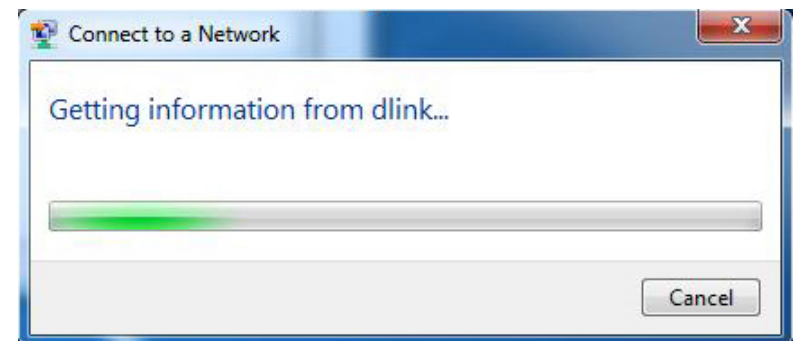


3. Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button.

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

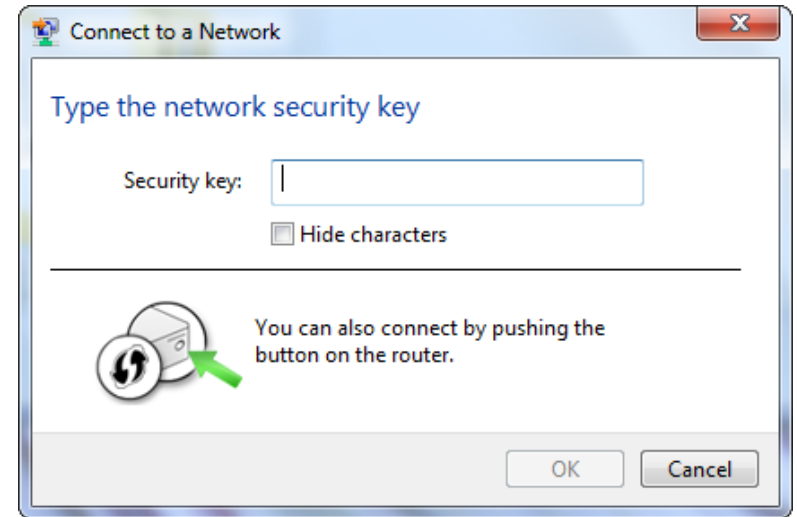


4. The following window appears while your computer tries to connect to the router.



5. Enter the same security key or passphrase that is on your router and click **Connect**. You can also connect by pushing the **WPS** button on the router.

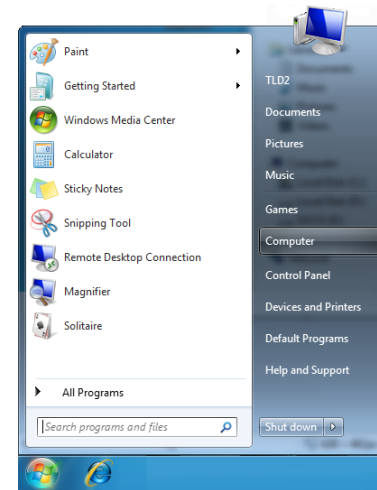
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



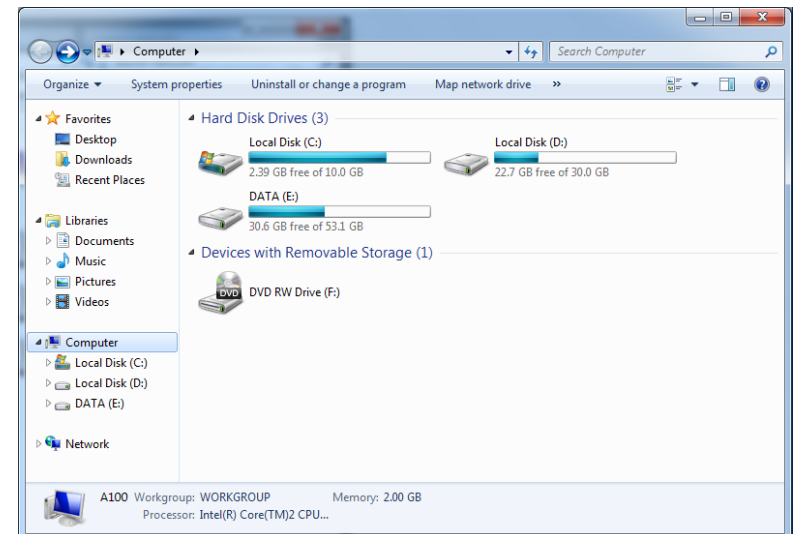
WPS

The *WPS* feature of the DIR-505L can be configured using Windows® 7. Carry out the following steps to use Windows® 7 to configure the *WPS* feature:

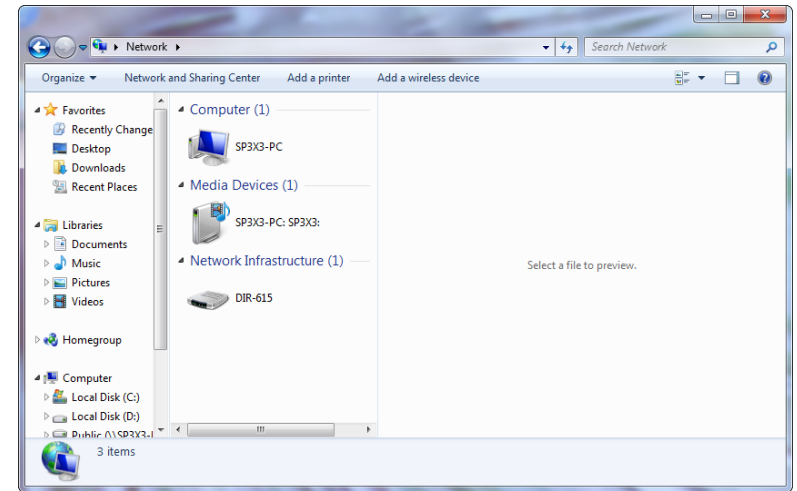
1. Click the **Start** button and select **Computer** from the Start menu.



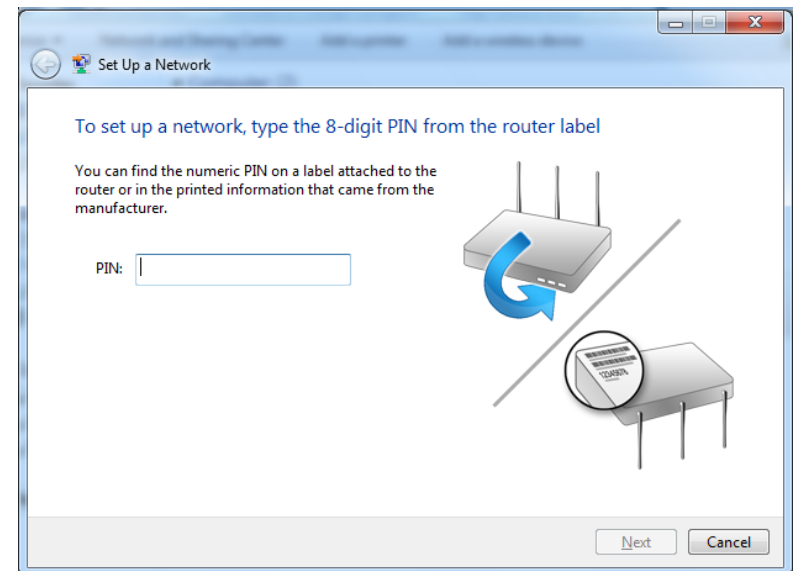
2. Click **Network** on the left side.



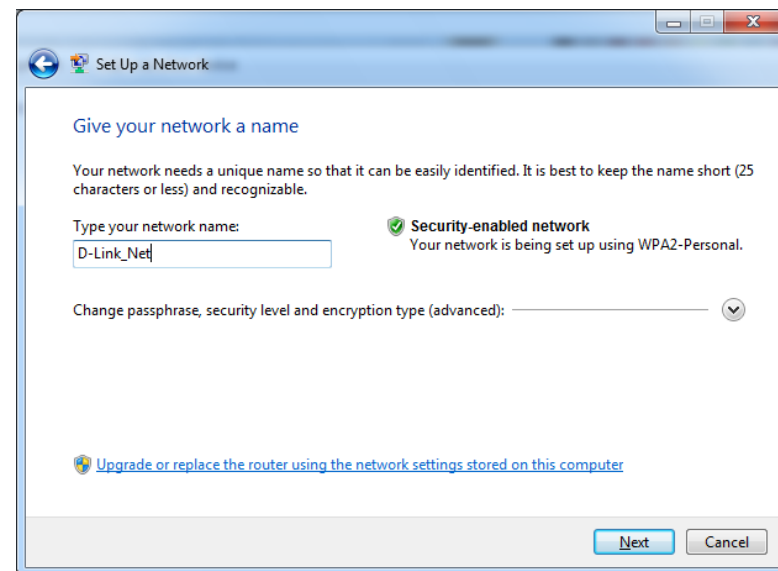
3. Double-click the **DIR-505L**.



4. Input the *WPS PIN* number (displayed in the WPS window on the router's LCD screen or in the **Setup > Wireless Setup** menu in the router's Web UI) and click **Next**.

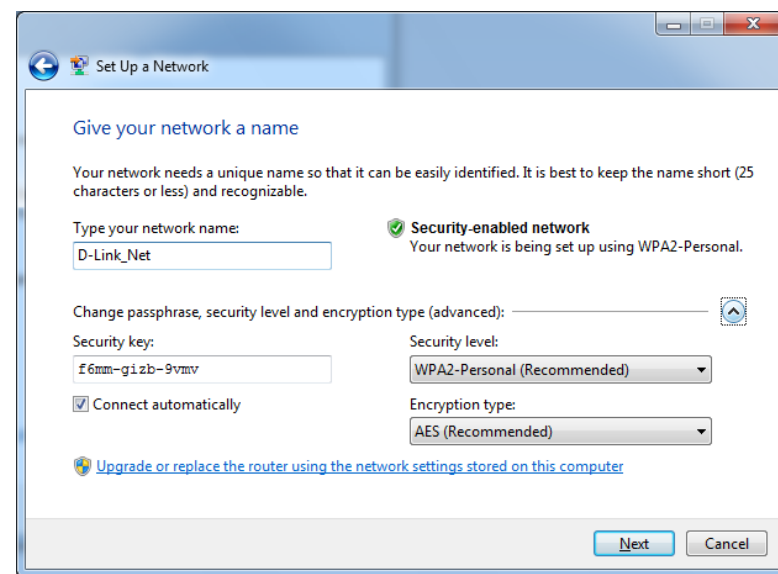


5. Type a name to identify the network.



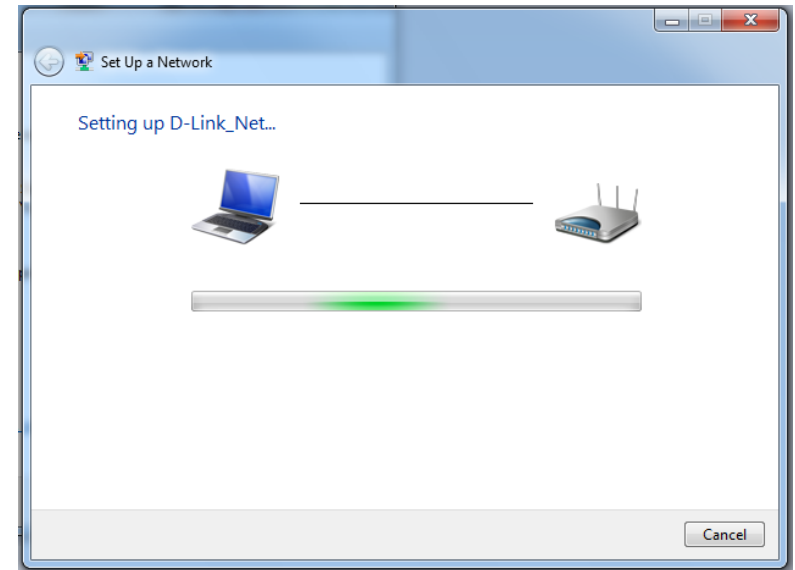
6. To configure advanced settings, click the  icon.

Click **Next** to continue.



7. The following window appears while the router is being configured.

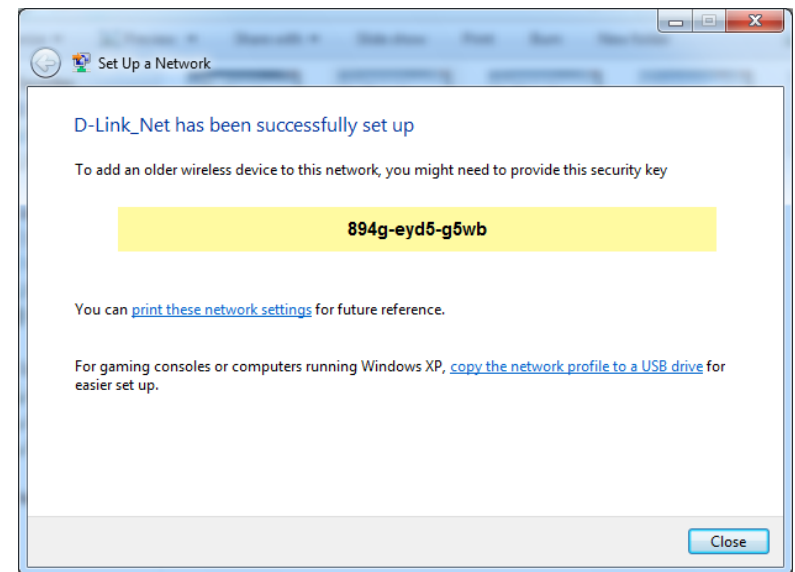
Wait for the configuration to complete.



8. The following window informs you that *WPS* on the router has been setup successfully.

Make a note of the security key as you may need to provide this security key if adding an older wireless device to the network in the future.

9. Click **Close** to complete *WPS setup*.



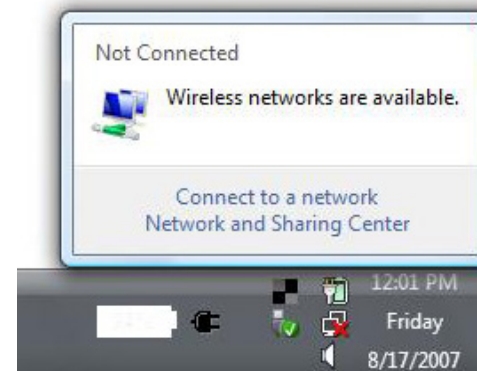
Windows Vista®

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.

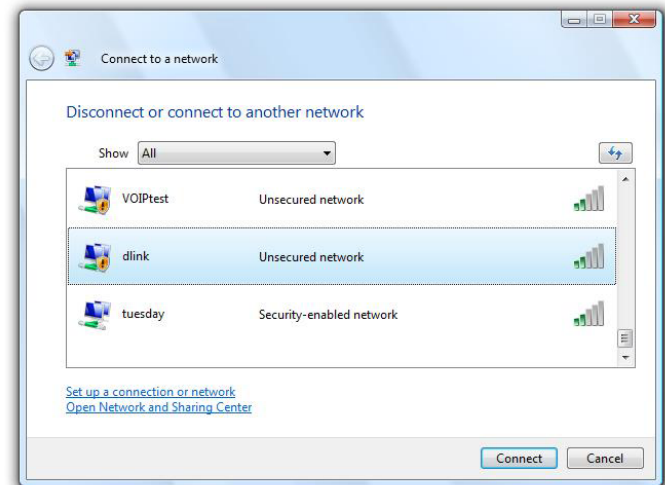
or

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.

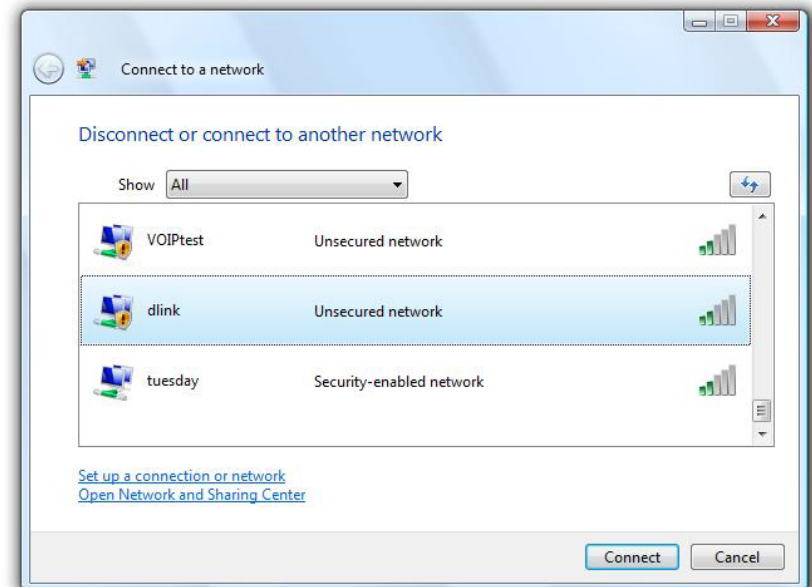
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the *Networking Basics* section in this manual for more information.



WPA/WPA2

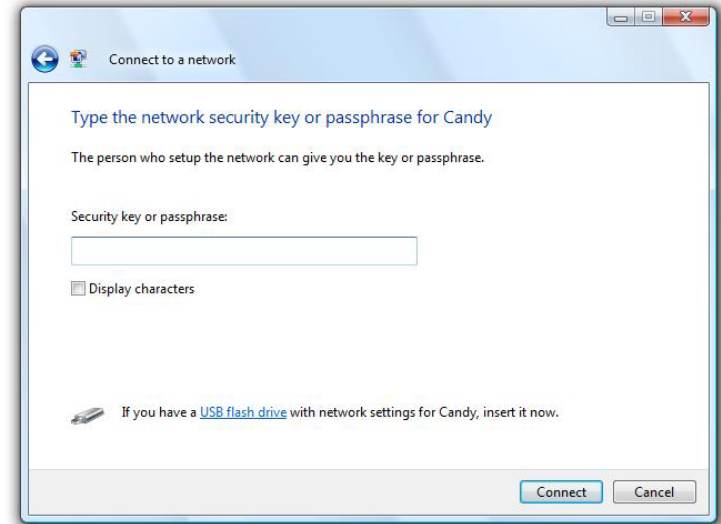
It is recommended to enable wireless security (*WPA/WPA2*) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

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.



WPS/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 **Basic > Wireless** section. Use the current PIN that is displayed on the **Advanced > Wi-Fi Protected Setup** section 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.

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, 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.

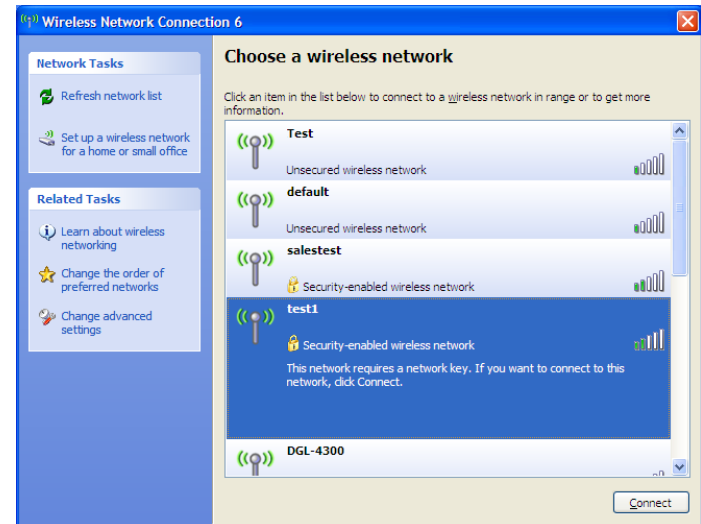
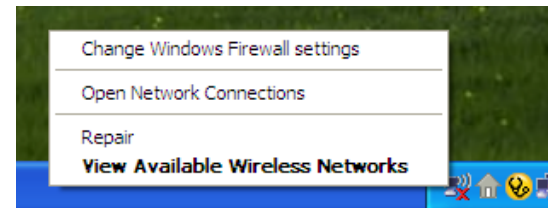
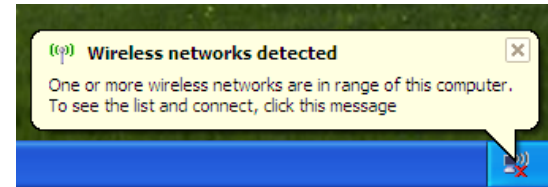
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

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.

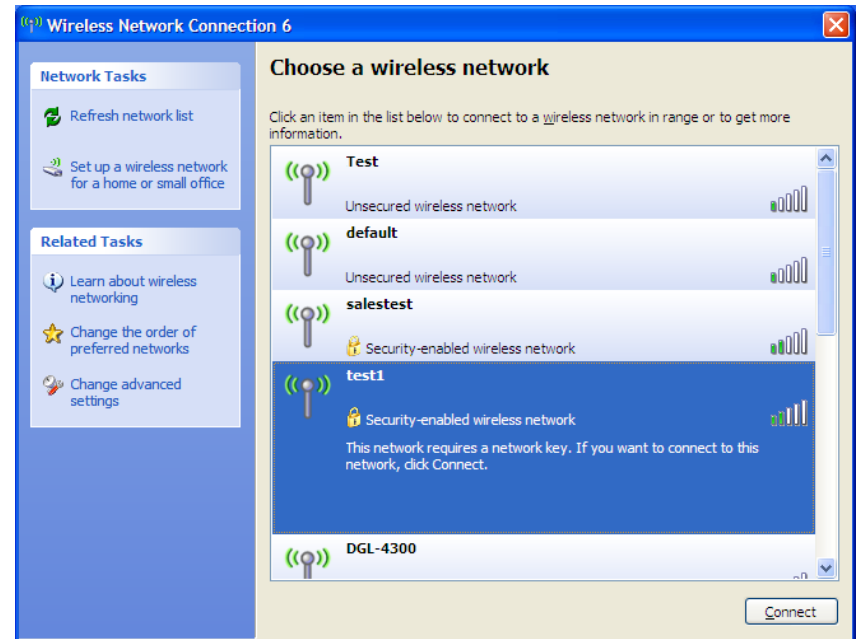
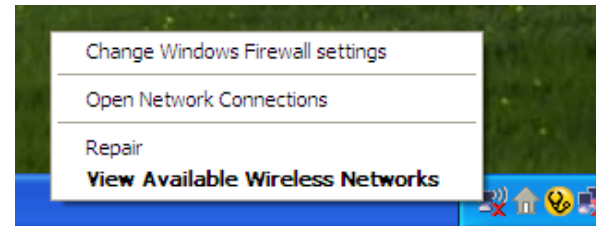
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the *Networking Basics* section in this manual for more information.



WPA/WPA2

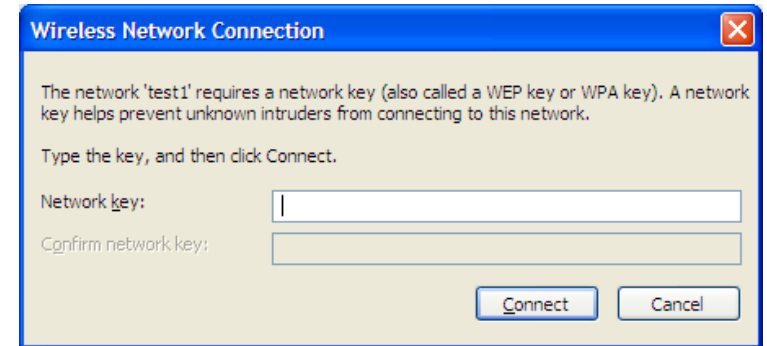
It is recommended to enable WPA on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA key being used.

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-505L. Read the following descriptions if you are having problems. The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.

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

When entering the IP address of the D-Link router (**192.168.0.1** for example), you are not connecting to a website nor do you 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® 7 or higher
 - Firefox 9 or higher
 - Safari 5 or higher
 - Google Chrome 16 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 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 user name 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).

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, XP, Vista®, and 7 users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

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

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

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52
Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 203ms, Average = 132ms
C:\>
```

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, let's 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 user name (**admin**) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on **Setup** and then click **Manual Configure**.
- To change the MTU enter the number in the MTU field and click **Save Settings** to save your settings.
- Test your e-mail. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

Wireless Basics

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

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

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

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

What is Wireless?

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

Why D-Link Wireless?

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

How does wireless work?

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

Wireless Local Area Network (WLAN)

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

Wireless Personal Area Network (WPAN)

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

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

Who uses wireless?

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

Home

- Gives everyone at home broadband access
- Surf the web, check e-mail, instant message, 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.

Networking Basics

Check your IP address

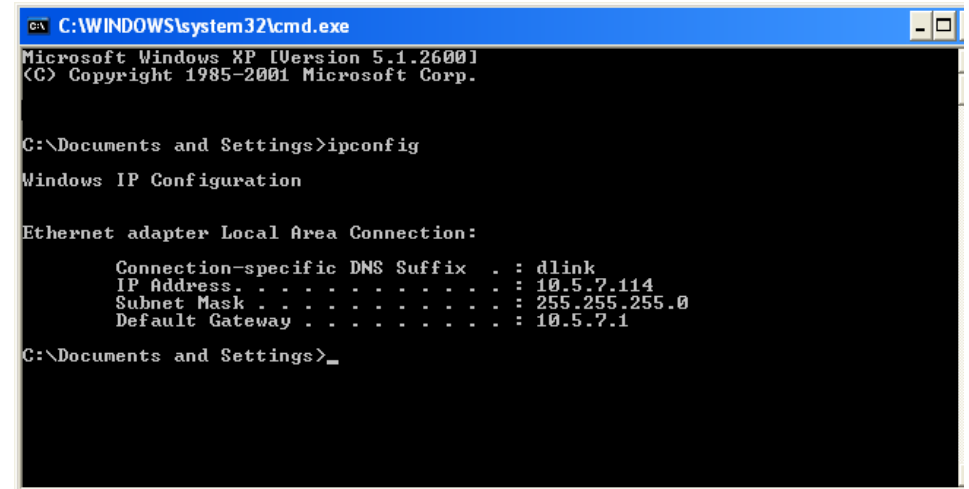
After you install your new D-Link wireless adapter and have established a wireless connection, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e., router) automatically. To verify your IP address, please follow the steps below.

Windows® XP Users

- Click on **Start > Run**. In the run box type **cmd** and click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and the default gateway of your adapter.

Windows® 7/Vista® Users

- Click **Start**, type **cmd** in the search box and then click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and default gateway of your adapter.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600.1
(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>
```

Windows® 8 Users

- Press the **Windows key** and **R** together. Type **cmd** in the box and click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and 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.

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® 7 - Click on **Start > Control Panel > Network and Internet > Network and Sharing Center**.
- 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

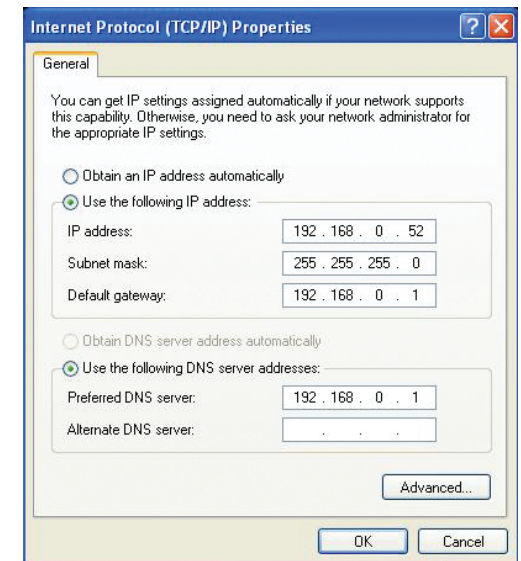
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

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 the Default Gateway the same as the LAN IP address of your router (i.e., **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.



Windows® 8 Users

- Press the **Windows** key and then type **IP**. Click **Settings** on the right side and then click **View Network Connections**.
- Right-click on the adapter which represents your D-Link wireless network adapter.
- Highlight **Internet Protocol Version 4 (TCP /IPv4)** and click **Properties**.
- Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or LAN IP address on your router or network.

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 or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.

Technical Specifications

Standards

- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.3
- IEEE 802.3u

Wireless Modes

- Router Mode
- Repeater Mode
- Wi-Fi Hotspot Mode
- Access Point (AP) Mode

Wireless Frequency Range

- 2.4 GHz to 2.4835 GHz

Antennas

- Internal Antenna

Security

- Wi-Fi Protected Access (WPA/WPA2)
- WPS™ (PBC and PIN)

Advanced Features

- SharePort™ Mobile app for iOS
- Quick Router Setup app for iOS
- VPN pass through
- Guest Zone Support
- UPnP™ Support
- Web File Access Support
- Wi-Fi WMM Quality of Service

Advanced Firewall Features

- Network Address Translation (NAT)
- Stateful Packet Inspection (SPI)
- MAC Address Filtering
- DMZ Support

Device Management

- Web UI

Diagnostic LEDs

- Power/WPS

Operating Temperature

- 32 to 104 °F (0 to 40 °C)

Operating Humidity

- 0% to 90% non-condensing

Certifications

- CE
- Wi-Fi Certified
- FCC
- IC

Dimensions

- 2.68" x 1.65" x 2" (68 x 42 x 51 mm)

Weight

- 0.25 lb (113.4 grams)

Warranty

- 1-Year Limited Warranty

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

2 Frequency Range varies depending on country's regulation

Contacting Technical Support

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

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

- Model number of the product (e.g., DIR-505L)
- Hardware Revision (located on the label on the bottom of the router (e.g., rev A1))
- Serial Number (s/n number located on the label on the bottom of the router).

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

For customers within the United States:

Phone Support:

(877) 453-5465

Internet Support:

<http://support.dlink.com>

For customers within Canada:

Phone Support:

(800) 361-5265

Internet Support:

<http://support.dlink.ca>

GPL Code Statement

This D-Link product includes software code developed by third parties, including software code subject to the GNU General Public License ("GPL") or GNU Lesser General Public License ("LGPL"). As applicable, the terms of the GPL and LGPL, and information on obtaining access to the GPL code and LGPL code used in this product, are available to you at:

<http://tsd.dlink.com.tw/GPL.asp>

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WRITTEN OFFER FOR GPL AND LGPL SOURCE CODE

Where such specific license terms entitle you to the source code of such software, D-Link will provide upon written request via e-mail and/or traditional paper mail the applicable GPL and LGPL source code files via CD-ROM for a nominal cost to cover shipping and media charges as allowed under the GPL and LGPL.

Please direct all inquiries to:
E-mail: GPLCODE@DLink.com
Snail Mail:
Attn: GPLSOURCE REQUEST
D-Link Systems, Inc.
17595 Mt. Herrmann Street
Fountain Valley, CA 92708

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Preamble

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For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps:

(1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

“This License” refers to version 3 of the GNU General Public License.

“Copyright” also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

“The Program” refers to any copyrightable work licensed under this License. Each licensee is addressed as “you”. “Licensees” and “recipients” may be individuals or organizations.

To “modify” a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a “modified version” of the earlier work or a work “based on” the earlier work.

A “covered work” means either the unmodified Program or a work based on the Program.

To “propagate” a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To “convey” a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays “Appropriate Legal Notices” to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The “source code” for a work means the preferred form of the work for making modifications to it. “Object code” means any non-source form of a work.

A “Standard Interface” means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The “System Libraries” of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A “Major Component”, in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The “Corresponding Source” for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work’s System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

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- a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.
- b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.
- c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.
- d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.
- e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

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“Installation Information” for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

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The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

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17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

Warranty

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

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

Limited Warranty:

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

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

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

Limited Software Warranty:

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

Non-Applicability of Warranty:

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

Submitting A Claim (USA):

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

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

to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.

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

Submitting A Claim (Canada):

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

- Customers need to provide their receipt (proof of purchase) even if the product is registered. Without a receipt, no warranty service will be done. The registration is not considered a proof of purchase.
- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-800-361-5265, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.ca/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will

be rejected by D-Link. Products shall be fully insured by the customer and shipped to D-Link Networks, Inc., 2525 Meadowvale Boulevard Mississauga, Ontario, L5N 5S2 Canada. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via Purolator Canada or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in Canada, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

- RMA phone number: 1-800-361-5265 Hours of Operation: Monday-Friday, 9:00AM – 9:00PM EST

What Is Not Covered:

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

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

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

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CE Mark Warning:

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

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are

designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

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.

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.

Operations in the 5.15-5.25GHz / 5.470 ~ 5.725GHz band are restricted to indoor usage only.

IMPORTANT NOTICE:**FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

If this device is going to be operated in 5.15 ~ 5.25GHz frequency range, then it is restricted in indoor environment only. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

ICC Notice:

Operation is subject to the following two conditions:

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

IMPORTANT NOTE:

IC Radiation Exposure Statement:

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

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

- (i) The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems;
- (ii) The maximum antenna gain (2dBi) permitted (for devices in the band 5725-5825 MHz) to comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate, as stated in section A9.2(3).

In addition, users should also be cautioned to take note that high-power radars are allocated as primary users (meaning they have priority) of the bands 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

Règlement d'Industry Canada

Les conditions de fonctionnement sont sujettes à deux conditions:

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

Registration

Register your product online at registration.dlink.com



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

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