Add Wireless This Wizard helps you add wireless devices to the wireless network.

Station:

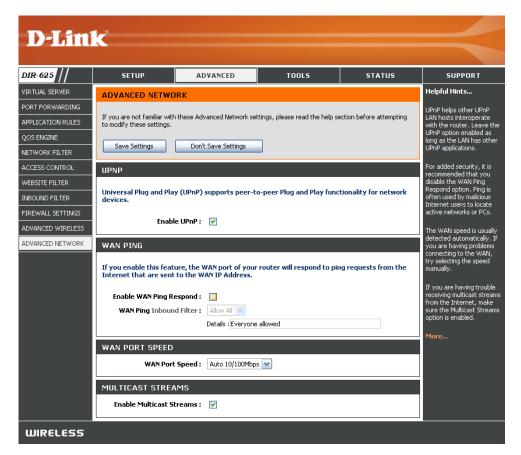
The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports Wi-Fi Protected Setup and has a configuration button, you can add it to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

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

Add Wireless Start the wizard. Device Wizard:

Advanced Network Settings

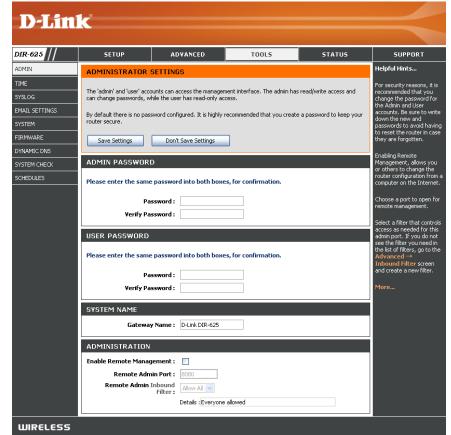
- **UPnP Settings:** To use the Universal Plug and Play (UPnP[™]) feature click on **Enabled**. UPNP provides compatibility with networking equipment, software and peripherals.
- Internet Ping: Unchecking the box will not allow the DIR-625 to respond to pings. Blocking the Ping may provide some extra security from hackers. Check the box to allow the Internet port to be "pinged".
- Internet Port You may set the port speed of the Internet port Speed: to 10Mbps, 100Mbps, or auto. Some older cable or DSL modems may require you to set the port speed to 10Mbps.
 - Multicast Check the box to allow multicast traffic to pass streams: through the router from the Internet.



Administrator Settings

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

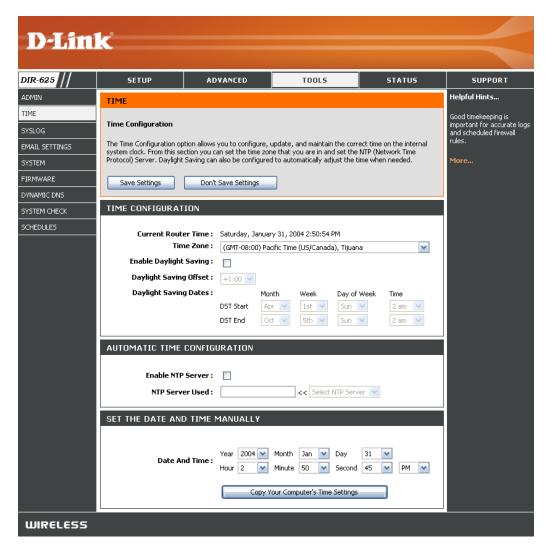
- Admin Password: Enter a new password for the Administrator Login Name. The administrator can make changes to the settings.
- User Password: Enter the new password for the User login. If you login as the User, you can only see the settings, but cannot change them.
- Gateway Name: Enter a name for the DIR-625 router.
 - Remote Remote management allows the DIR-625 to be configured Management: from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.
- Remote Admin The port number used to access the DIR-625.
 - Port: Example: http://x.x.x.x8080 whereas x.x.x.x is the Internet IP address of the DIR-625 and 8080 is the port used for the Web Management interface.
- Inbound Filter: This section will list any rules that are created. You may click the **Edit** icon to change the settings or enable/disable the rule, or click the **Delete** icon to remove the rule.



Time Settings

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

- Time Zone: Select the Time Zone from the drop-down menu.
- **Daylight Saving:** To select Daylight Saving time manually, select enabled or disabled, and enter a start date and an end date for daylight saving time.
 - Enable NTP NTP is short for Network Time Protocol. NTP Server: synchronizes computer clock times in a network of computers. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.
- NTP Server Used: Enter the NTP server or select one from the drop-down menu.
 - Manual: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click Set Time. You can also click Copy Your Computer's Time Settings.

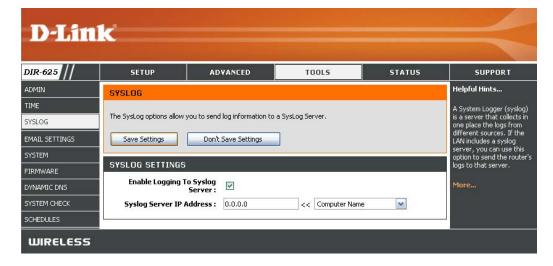


SysLog

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

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

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



Email Settings

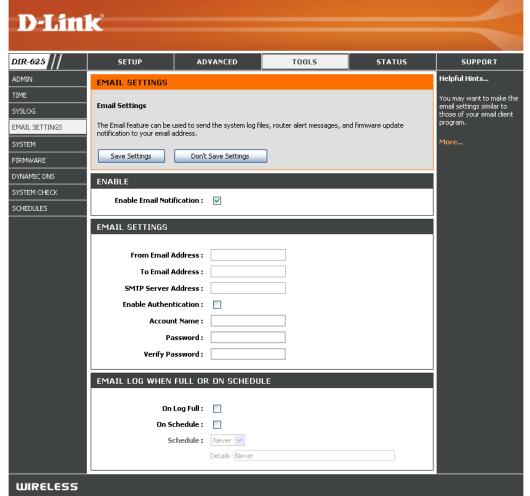
The Email feature can be used to send the system log files, router alert messages, and firmware update notification to your email address.

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

- **From Email** This email address will appear as the sender **Address:** when you receive a log file or firmware upgrade notification via email.
- To Email Address: Enter the email address where you want the email sent.
 - **SMTP Server** Enter the SMTP server address for sending email. **Address:** If your SMTP server requires authentication, select this option.

Enable	Check	this	box	if	your	SMTP	server	requires
Authentication:	authen	ticati	ion.					

- Account Name: Enter your account for sending email.
 - Password: Enter the password associated with the account. Re-type the password associated with the account.
 - **On Log Full:** When this option is selected, logs will be sent via email when the log is full.
 - **On Schedule:** Selecting this option will send the logs via email according to schedule.



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

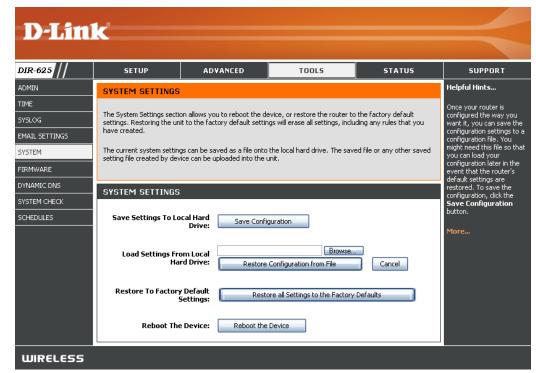
System Settings

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

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

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

Reboot Device: Click to reboot the router.



Update Firmware

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

- Firmware Click on Check Online Now for Latest Firmware Upgrade: Version to find out if there is an updated firmware; if so, download the new firmware to your hard drive.
- Browse: After you have downloaded the new firmware, click Browse to locate the firmware update on your hard drive. Click Upload to complete the firmware upgrade.
- Notifications Check Automatically Check Online for Latest Options: Firmware Version to have the router check automatically to see if there is a new firmware upgrade.

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

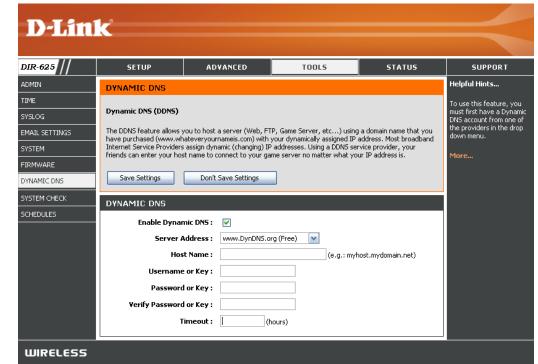


DDNS

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

- **DDNS:** Dynamic Domain Name System is a method of keeping a domain name linked to a changing IP Address. Check the box to enable DDNS.
- Server Address: Choose your DDNS provider from the drop down menu.
 - Host Name: Enter the Host Name that you registered with your DDNS service provider.
- Username or Key: Enter the Username for your DDNS account.
- Password or Key: Enter the Password for your DDNS account.

Timeout: Enter a time (in hours).



System Check

- **Ping Test:** The Ping Test is used to send Ping packets to test if a computer is on the Internet. Enter the IP Address that you wish to Ping, and click **Ping**.
- **Ping Results:** The results of your ping attempts will be displayed here.

D-Lin					
DIR-625	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
ADMIN	PING TEST				Helpful Hints
TIME					"Ping" checks whether a
SYSLOG	Ping Test sends "ping" pa	ckets to test a computer on the	e Internet.		computer on the Internet is running and responding.
EMAIL SETTINGS					Enter either the IP address of the target computer or
SYSTEM	PING TEST				enter its fully qualified domain name.
FIRMWARE	Host Name or IP /	Address :	Ping St	0P	More
DYNAMIC DNS	PING RESULT				100 000
SYSTEM CHECK		address above and click 'Ping'			-
SCHEDULES		and clothing			
WIRELESS					
Bintees 3					

Schedules

- Name: Enter a name for your new schedule.
- **Days:** Select a day, a range of days, or All Week to include every day.
- Time: Check All Day 24hrs or enter a start and end time for your schedule.
- Save: Click Save to save your schedule. You must click Save Settings at the top for your schedules to go into effect.
- Schedule RulesThe list of schedules will be listed here. Click the
List:List:Edit icon to make changes or click the
icon to remove the schedule.

D-Lin	k				\prec
DIR-625	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
ADMIN TIME SYSLOG EMAIL SETTINGS SYSTEM FIRMWARE DYNAMIC DNS SYSTEM CHECK SCHEDULES	ADD SCHEDULE All Da	Name :	Select Day(s)		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.
	Name	Day(s)	Time Frame		More
WIRELESS					

Device Information

This page displays the current information for the DIR-625. 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 Computers: Displays computers and devices that are connected to the router via Ethernet and that are receiving an IP address assigned by the router (DHCP).

IGMP Multicast Displays the Multicast Group IP Address. **Memberships:**



Log

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

- What to View: You can select the types of messages that you want to display from the log. Firewall & Security, System, and Router Status messages can be selected.
- View Levels: There are three levels of message importance: Informational, Warning, and Critical. Select the levels that you want displayed in the log.
 - Apply Log Will filter the log results so that only the selected **Settings:** options appear.
 - **Refresh:** Updates the log details on the screen so it displays any recent activity.

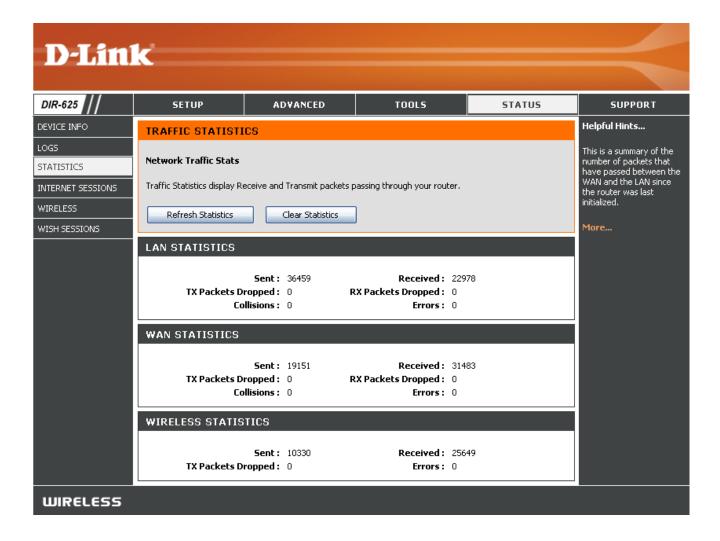
Clear: Clears all of the log contents.

- **Email Now:** This option will send a copy of the router log to the email address configured in the Tools > Email screen.
- Save Log: This option will save the router to a log file on your computer.

Product Page: DIR-62	25			Hardware Version: C1	Firmware Version: 3.0
DIR-625	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
DEVICE INFO				511105	Helpful Hints
LOGS	LUGS				Check the log
STATISTICS	System Logs				frequently to detect unauthorized network
INTERNET SESSIONS			n define what types of ev also has external syslog se		usage.
WIRELESS			etwork that is running a s		You can also have the log mailed to you
WISH SESSIONS	LOG OPTIONS				periodically. Refer to Tools → EMail.
	LOG OPTIONS				
	What t	o View : 📃 Firewall 8	Security 🔲 System [Router Status	More
	View	Levels : 🔲 Critical		Informational	
		Apply Log Se	ettings Now		
	LOG DETAILS				
	R	efresh Clear	Email Now Save Log		
	[INFO] Thu Mar 01 13: [INFO] Thu Mar 01 13:	35:51 2007 Log viewed b 33:49 2007 Blocked incor	y IP address 192.152.81. mina TCP connection real	216 Jest from	
	67.129.235.161:1363	to 67.130.140.145:1433 33:46 2007 Previous mes			
	[INFO] Thu Mar 01 13: 67.129.235.161:2097	32:43 2007 Blocked incor to 67.130.140.145:5900	ning TCP connection requ	lest from	
	[INFO] Thu Mar 01 13:		sage repeated 1 time ming TCP connection requ	uest from	
	[INFO] Thu Mar 01 13:	to 67.130.140.145:135 32:25 2007 Previous mes			
	84.112.37.99 to 67.13	0.140.145	ming ICMP packet (ICMP t	ype 8) from	
	[INFO] Thu Mar 01 13:		juration to non-volatile me		
	192.168.0.100 change	d to: Allowed, Web Sites	le 1 started; Internet acc - Restricted, Logged, Por ess for IP address 192.168	ts - Restricted	
	Allowed, Web Sites - N	lone Blocked, Ports - Non			
	access will be restricted	d according to these polici			
	200.92.202.36 to 67.1	.30.140.145 09:13 2007 Previous mes		,pe ey nom	
			iguration authentication b	y IP address	
		04:12 2007 Administrator	logout	-	

Stats

The screen below displays the Traffic Statistics. Here you can view the amount of packets that pass through the DIR-625 on both the Internet and the LAN ports. The traffic counter will reset if the device is rebooted.



Internet Sessions

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

- Local: The IP address and, where appropriate, port number of the local application.
- NAT: The port number of the LAN-side application as viewed by the WAN-side application.
- Internet: The IP address and, where appropriate, port number of the application on the Internet.
- **Protocol:** The communications protocol used for the conversation.
 - State: State for sessions that use the TCP protocol:

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

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

EST: Established -- the connection is passing data.

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

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

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

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

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

Product Page: DIR-62	5					F	Hardware '	Version: C1	Firmware Version: 3.00
D-Linl	¢								\prec
DIR-625	SETUP		ADVANCED	тооі	.5		ST	ATUS	SUPPORT
DEVICE INFO	INTERNET SESSIO	INTERNET SESSIONS Helpful Hints							
.OGS	This page displays th	ne full d	details of active interne	t sessions to	your ro	uter.			This is a list of all active
STATISTICS									conversations between WAN computers and
INTERNET SESSIONS	Local	NAT	Internet	Protocol	State	Dir	Priority	Time Out	LAN computers.
WIRELESS	192.168.0.1:80	8080	192.152.81.222:1774	TCP	EST	In	196	7800	More
	192.168.0.1:80	8080	192.152.81.222:1773	TCP	EST	In	255	7800	i lor cin
WISH SESSIONS	192.168.0.1:80	8080	192.152.81.222:1772	TCP	CL	In	169	225	
	192.168.0.1:80	8080	192.152.81.222:1771	TCP	CL	In	169	223	
	192.168.0.1:80	8080	192.152.81.222:1770	TCP	CL	In	169	231	
	67.130.140.145:68	68	67.130.140.152:67	UDP	-	Out	137	227	
	192.168.0.1:80	8080	192.152.81.222:1769	TCP	CL	In	169	198	

Dir: The direction of initiation of the conversation:

Out - Initiated from LAN to WAN. **In** - Initiated from WAN to LAN.

- Priority: The preference given to outbound packets of this conversation by the QoS Engine logic. Smaller numbers represent higher priority.
- **Time Out:** The number of seconds of idle time until the router considers the session terminated. The initial value of Time Out depends on the type and state of the connection.

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

Wireless

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

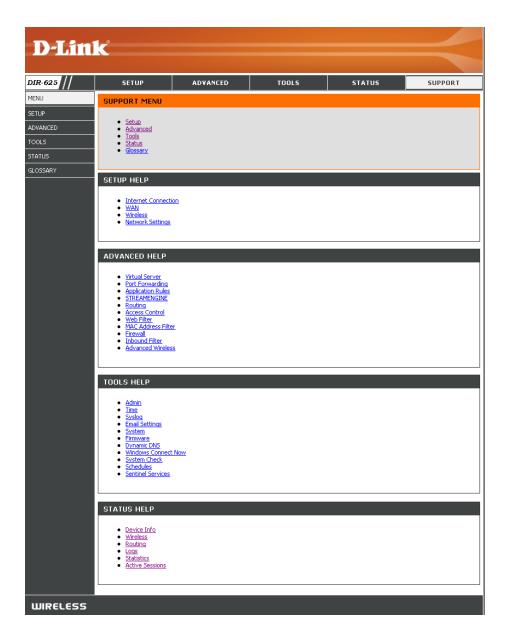
Product Page: DIR-62	:5				Hardware Version: C1 F	Firmware Version: 3.00
D-Lin	ĸ					\prec
DIR-625	SETUP	ADVANCED	тооі	.5	STATUS	SUPPORT
DEVICE INFO	WIRELESS					Helpful Hints
LOGS	Associated Wireless	Client List				This is a list of all
STATISTICS	Associated Wileless					wireless clients that are currently connected to
	Use this option to vie	w the wireless clients that	are connecte	d to your v	vireless router.	your wireless router.
WIRELESS WISH SESSIONS	NUMBER OF WIRE	LESS CLIENTS : 1			÷	More
	MAC Address	IP Address	Mode	Rate	Signal (%)	
	0015E9F98114	192.168.0.111	11g	54	80	
WIRELESS						

WISH Sessions

The WISH Sessions page displays a list of active local wireless sessions when WISH has been enabled.

Product Page: DIR-62	25				Hardwar	e Version: C1	Firmware Version: 3.00
D-Lin	K						
DIR-625	SETUP	ADVANCED	TOOL	5	9	STATUS	SUPPORT
DEVICE INFO	WISH SESSIONS						Helpful Hints
LOGS		e displays full details of a					This is a list of all active
STATISTICS		enabled. A WISH session sly connected LAN-side c					conversations involving wireless clients in the
INTERNET SESSIONS	connected.						local network.
WIRELESS							More
WISH SESSIONS	WISH SESSIONS						
	Originator	Target	Protocol	State	Priority	Time Out	
	192,168.0,111:137	192.168.0.100:137	UDP	-	BE	95	
	192.168.0.100:49156	192.168.0.111:161	UDP	-	BE	95	
WIRELESS							

Support



Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-625 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WEP (Wired Equivalent Privacy)

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

What is WEP?

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

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

What is WPA?

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

The 2 major improvements over WEP:

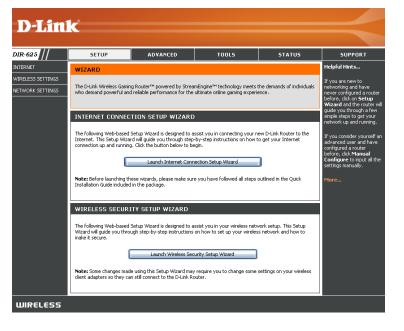
- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead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

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

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

Wireless Security Setup Wizard

To run the security wizard, click on Setup at the top and then click Launch Wireless Security Setup Wizard.





Click Next to continue.

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

STEP 1: NAME YOUR WIRE	LESS NETWORK
	name so it can be easily recognized by wireless clients. For security purposes, it ge the pre-configured network name of [dlink].
Wireless Network Name (SSID) :	dlink
	Prev Next Cancel

Select the level of security for your wireless network:

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

Click Next to continue.

one of the following wireless ne There are three levels of wirele	k from hackers and unauthorized users, it is highly recommended you choose
BEST 🔘	Select this option if your wireless adapters SUPPORT WPA2
BETTER 🔘	Select this option if your wireless adapters SUPPORT WPA
GOOD 🔘	Select this option if your wireless adapters DO NOT SUPPORT WPA
NONE 📀	Select this option if you do not want to activate any security features
For information on which securi documentation. Note: All D-Link wireless adapte	ty features your wireless adapters support, please refer to the adapters' rs currently support WPA.
	Prev Next Cancel

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

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

Click Next to continue.

STEP 3: SET YOUR WIREL	ESS SECURITY PASSWORD
You have selected your security leve	el - you will need to set a wireless security password.
Wireless Security Password :	(8 to 63 characters)
Note: You will need to enter the enable proper wireless commu	same password as keyed in this step into your wireless clients in order to nication.
	Prev Next Cancel

Section 4 - Security

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

Click Save to finish the Security Wizard.

				s. Please print this page out, or write the rect settings on your wireless client adapters.
Wireless Network Name (SSID) :	dlink			
Wep Key Length :	128 bits			
Default WEP Key to Use :	1			
Authentication :	Open			
Wep Key :	41AC3 D	8525 1F8A8 C	087AC B1E	0F D
	Prev	Cancel	Save	

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

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

	your wireless security settings. Please print this page out, or write the so you can configure the correct settings on your wireless client adapters.
Wireless Network Name (SSID) :	dlink
Encryption : Pre-Shared Key :	WPA-PSK/TKIP (also known as WPA Personal) passwordIM2Z

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

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

or write the client adapters.

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

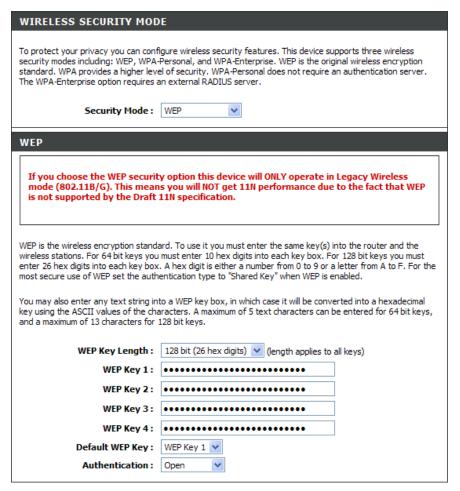
Configure WEP

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

- Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on Setup and then click Wireless Settings on the left side.
- 2. Next to Security Mode, select WEP.
- 3. Next to *WEP Key Length*, select the level of ecryption (64 or 128-bit).

Hex - (recommended) Letters A-F and numbers 0-9 are valid.

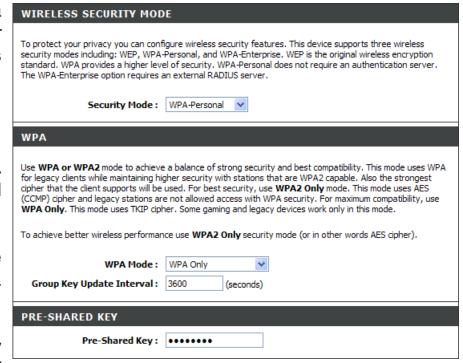
- 4. Next to *WEP Key 1*, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys.
- 5. Next to Authentication, select Shared Key.
- 6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the router.



Configure WPA-Personal (PSK)

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

- Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on Setup and then click Wireless Settings on the left side.
- 2. Next to Security Mode, select WPA-Personal.
- 3. Next to *WPA Mode*, select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
- 4. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
- 5. Next to *Pre-Shared Key*, enter a key (passphrase). The key is entered as a pass-phrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.



6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the router.

Configure WPA-Enterprise (RADIUS)

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

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

8. Next to *RADIUS Server Shared Secret*, enter the security key.

WIRELESS SECURITY MOD	WIRELESS SECURITY MODE	
To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.		
Security Mode : WPA-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 :	WPA Only	
Group Key Update Interval :	3600 (seconds)	
EAP (802.1X)		
When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.		
Authentication Timeout :	60 (minutes)	
RADIUS server IP Address :	0.0.0.0	
RADIUS server Port :	1812	
RADIUS server Shared Secret :	radius_shared	
MAC Address Authentication :		
Advanced >>		

Section 4 - Security

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

EAP (802.1X)		
When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.		
Authentication Timeout :	60 (minutes)	
RADIUS server IP Address :	0.0.0.0	
RADIUS server Port :	1812	
RADIUS server Shared Secret :	radius_shared	
MAC Address Authentication :		
<< Advanced		
Optional backup RADIUS server:		
Second RADIUS server IP Address :	0.0.0.0	
Second RADIUS server Port :	1812	
Second RADIUS server Shared Secret :	radius_shared	
Second MAC Address Authentication :		

Connect to a Wireless Network Using Windows® XP

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

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

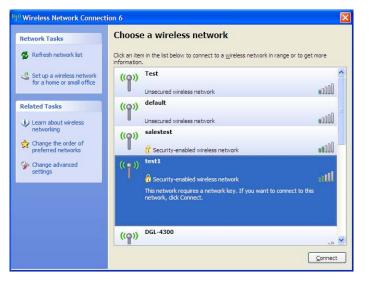
or

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

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

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





Configure WEP

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

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

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



^{ep)} Wireless Network Connection 6		
Network Tasks	Choose a wireless network	
💋 Refresh network list	Click an item in the list below to connect to a wireless network in range or to get more information.	14
Set up a wireless network for a home or small office	((p)) Test Unsecured wireless network	nî
Related Tasks Learn about wireless networking Change the order of preferred networks Change the order of preferred networks Change advanced settings 	((Q)) default	
	Unsecured wireless network	
	(()) test1 Security-enabled wireless network	
	This network requires a network key. If you want to connect to this network, dick Connect.	
	((၀ူ)) DGL-4300	_n ¥
	Con	iect

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

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

Wireless Network Connection		
The network 'test1' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.		
Type the key, and then click Connect.		
Network <u>k</u> ey:	1	
Confirm network key:]
	<u>Connect</u> Cancel)

Configure WPA-PSK

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

 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.



(1) Wireless Network Connection 6		
Network Tasks	Choose a wireless network	
🛃 Refresh network list	Click an item in the list below to connect to a wireless network in range or to get a information.	nore
Set up a wireless network for a home or small office	((Q)) Test	•0000
Related Tasks	Unsecured wireless network ((\origin)) default	
 ↓ Learn about wireless networking ☆ Change the order of preferred networks 	Unsecured wireless network ((Q)) salestest	•000U
	C Security-enabled wireless network	
Change advanced settings	((•)) test1	attl
	This network requires a network key. If you want to connect to this network, dick Connect.	
	((ດາ)) DGL-4300	<u></u>
		Connect

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

Section 5 - Connecting to a Wireless Network

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.

Wireless Network Conr	nection 🛛 🔀
The network 'test1' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.	
Type the key, and then click Connect.	
Network <u>k</u> ey:	
Confirm network key:	
	<u>C</u> onnect Cancel

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-625. 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 on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

• Make sure you have an updated Java-enabled web browser. We recommend the following:

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

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

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

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

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

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

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

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

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

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

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

Example: ping yahoo.com -f -l 1472

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
 Packet needs to be fragmented but DF set.
Ping statistics for 66.94.234.13:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:_
     Minimum = Oms, Maximum = Oms, Average =
                                                            Øms
C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52
Ping statistics for 66.94.234.13:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
     Minimum = 93ms, Maximum = 203ms, Average =
                                                                132ms
C:∖>
```

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

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

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

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

Wireless Basics

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

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

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

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

What is Wireless?

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

Why D-Link Wireless?

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

How does wireless work?

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

Wireless Local Area Network (WLAN)

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

Wireless Personal Area Network (WPAN)

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

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

Who uses wireless?

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

Home

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

Small Office and Home Office

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

Where is wireless used?

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

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

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

Tips

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

Centralize your router or Access Point

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

Eliminate Interference

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

Security

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

Wireless Modes

There are basically two modes of networking:

- Infrastructure All wireless clients will connect to an access point or wireless router.
- Ad-Hoc Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DIR-625 wireless network Cardbus adapters.

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

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

Networking Basics

Check your IP address

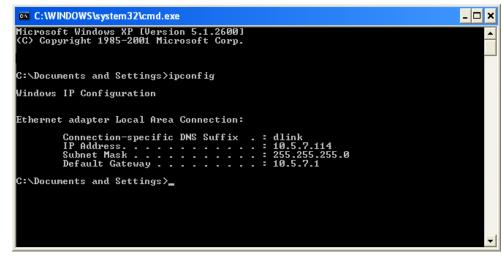
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

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

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

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

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



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

Statically Assign an IP address

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

Step 1

Windows[®] XP - Click on **Start** > **Control Panel** > **Network Connections**. Windows[®] 2000 - From the desktop, right-click **My Network Places** > **Properties**.

Step 2

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

Step 3

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

Step 4

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

	automatically if your network support ed to ask your network administrator I
🔿 Obtain an IP address autom	natically
Subsethe following IP addres	s:
IP address:	192.168.0.52
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.0.1
 Obtain DNS server address 	automatically
💿 Use the following DNS serv	er addresses:
Preferred DNS server:	192.168.0.1
Alternate DNS server:	<u> </u>
	Advance

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

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

Step 5

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

Technical Specifications

Standards

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

Security

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

Wireless Signal Rates*

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

MSC (0-15)

- 130Mbps (270) 117Mbps (243)
- 104Mbps (216) 78Mbps (162)
- 66Mbps (135)
- 52Mbps (108)
- 26Mbps (54)
- 19.5Mbps (40.5)

• 39Mbps (81)

• 58.5Mbps (121.5)

• 12Mbps (27) • 6.5Mbps (13.5)

Frequency Range 2.4GHz to 2.483GHz

Transmitter Output Power 15dBm ± 2dB

External Antenna Type Two (2) detachable reverse SMA Antennas

• LAN (10/100)

LEDs

- Power
 Internet
- Status
- USB

Operating Temperature

WLAN

32°F to 131°F (0°C to 55°C)

Humidity 95% maximum (non-condensing)

Safety & Emissions

- FCC
- CE

Dimensions

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

Warranty

1 Year

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

Contacting Technical Support

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

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

- Model number of the product (e.g. DIR-625)
- 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

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. All Hardware or part thereof that is replaced 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 DLink 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 (and all copies the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty:

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

Submitting A Claim:

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

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow 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. DLink will only replace the defective
 portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered:

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

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

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

Disclaimer of Other Warranties:

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

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

Limitation of Liability:

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

Governing Law:

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

Trademarks:

D-Link is a registered trademark of D-Link Corporation/D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective owners.

Copyright Statement:

No part of this publication or documentation accompanying this product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976 and any amendments thereto. Contents are subject to change without prior notice.

Copyright ©2006 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

CE Mark Warning:

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

FCC Statement:

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

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

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

FCC Caution:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

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

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

IC statement

Operation is subject to the following two conditions:

1) This device may not cause interference and

2) This device must accept any interference, including interference that may cause undesired operation of the device.

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

IMPORTANT NOTE:

IC Radiation Exposure Statement:

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

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

Règlement d'Industry Canada

Les conditions de fonctionnement sont sujettes à deux conditions:

1) Ce périphérique ne doit pas causer d'interférence et.

2) Ce périphérique doit accepter toute interférence, y compris les interférences pouvant perturber le bon fonctionnement de ce périphérique.

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

Cet appareil numerique de la class [B] respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

Registration



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

Version 3.0 March 5, 2007