USER MANUAL DAP-1522

VERSION 1.3

D-Link





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Package Contents

- D-Link DAP-1522 Xtreme N Duo Wireless Bridge
- Power Adapter
- CAT5 Ethernet Cable
- Rubber Feet
- CD-ROM with User Manual

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Note: Using a power supply with a different voltage than the one included with the DAP-1522 will cause damage and void the warranty for this product.

System Requirements

- Computers with Windows[®], Macintosh[®], or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer Version 6.0 or higher, Firefox 3.0 or higher, or Safari 3.0 or higher (for configuration)

Introduction

TOTAL PERFORMANCE

Combines award winning access point features and Draft 802.11n wireless technology to provide the best wireless performance.

TOTAL SECURITY

The most complete set of security features including WPA2 and MAC Address Control to protect your network against outside intruders.

TOTAL COVERAGE

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

ULTIMATE PERFORMANCE

The D-Link Xtreme N[™] Duo Wireless Bridge (DAP-1522) is a draft 802.11n compliant device that delivers real world performance of up to 650% faster than an 802.11g wireless connection (also faster than a 100Mbps wired Ethernet connection). Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the Xtreme N[™] Duo Wireless Bridge to router and share your high-speed Internet access with everyone on the network. In addition, this Wireless Bridge includes a Quality of Service (QoS) engine that keeps digital phone calls (VoIP) and online gaming smooth and responsive, providing a better Internet experience.

EXTENDED WHOLE HOME COVERAGE

Powered by Xtreme N[™] Duo technology, this high performance Wireless Bridge provides superior Whole Home Coverage while reducing dead spots. The Xtreme N[™] Duo Wireless Bridge is designed for use in bigger homes and for users who demand higher performance networking. Add an Xtreme N[™] Duo notebook or desktop adapter and stay connected to your network from virtually anywhere in your home.

TOTAL NETWORK SECURITY

The Xtreme N[™] Duo Wireless Bridge 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 and WEP standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices.

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

Features

- Faster Wireless Networking The DAP-1522 provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11n wireless access point gives you the freedom of wireless networking at speeds 650% faster than 802.11g.
- Compatible with 802.11a, 802.11b, and 802.11g Devices The DAP-1522 is still fully compatible with the IEEE 802.11a/b/g standard, so it can connect with existing 802.11a/b/g PCI, USB, and Cardbus adapters.
- Advanced Firewall Features The Web-based user interface displays advanced network management features including Content Filtering, which allows easily applied content filtering based on MAC Address.
- WPS PBC- (Wi-Fi Protected Setup Push Button Configuration) Push Button Configuration is a button that can be pressed to add the device to an existing network or to create a new network. A virtual button can be used on the utility while a physical button is placed on the side of the device.

This easy setup method allows you to form a secured wireless link between the DAP-1522 and another WPS enabled device. A PC is no longer needed to log into the Web-based interface.

- WPS PIN (Wi-Fi Protected Setup Personal Identification Number) A PIN is a unique number that can be used to add the access point to an existing network or to create a new network. The default PIN may be printed on the bottom of the access point. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator ("admin" account) can change or reset the PIN.
- User-friendly Setup Wizard Through its easy-to-use Web-based user interface, the DAP-1522 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 access point to your specific settings within minutes.

Hardware Overview Connections



Hardware Overview LEDs



WPS connection. A blinking light indicates the device is trying to establish a connection.

Installation

This section will walk you through the installation process. Placement of the DAP-1522 is very important. Do not place the DAP-1522 in an enclosed area such as a closet, cabinet, or in the attic or garage.

Before you Begin

Please configure the Wireless Bridge with the computer that was last connected directly to your modem. Also, you can only use the Ethernet port on your modem. If you were using the USB connection before using the Wireless Bridge, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet port on the Wireless Bridge, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet).

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

Wireless Installation Considerations

The D-Link wireless access point 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 access point 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 access points, 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.

AP/Bridge/Auto Mode

Depending on how you want to use your DAP-1522 will determine which mode you use. This section will help you figure out which setting works with your setup.

AP Mode

If you already have a wired or wireless router, and want to add a MediaBand (5GHz wireless), to your network, you will need to move the switch on the back panel of the DAP-1522 to "AP".



Bridge Mode

If you want to wirelessly connect multiple Ethernet enabled devices such as game consoles, media players, or network attached storage devices you will need to move the switch on the back panel of the DAP-1522 to "Bridge".



Auto Mode

If the switch on the back panel of the DAP-1522 is set to "Auto", the device will wait for 30 seconds, looking for a DHCP server from the ethernet ports. If an IP address is assigned, it will automatically shift to AP mode. If an IP address is not assigned from a DHCP server, the DAP-1522 will automatically shift to Bridge mode.

Create a Full MediaBand (5GHz wireless) Network

If you have two DAP-1522 devices and want to create a wireless network with full MediaBand technology you will need to connect one Wireless Bridge to your router and move the switch on the back panel to "AP". The second Wireless Bridge will need to be placed next to your Ethernet-enabled devices and you will need to move the switch on the back panel to "Bridge".



Configuration for AP Mode

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

Web-based Configuration Utility

To access the configuration utility, open a web browser such as Internet Explorer and enter dlinkap or 192.168.0.50 in the address field.



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

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

D-I	ink			
	LOGIN			
	Login to the Access Point:			
		User Name admin		
		Password	Login	
WIRE	LESS			

Setup Wizard

Click Launch Wireless Setup Wizard to quickly configure your access point.

To set up your wireless network, click **Add Wireless Device With WPS** and skip to page 22.

If you want to enter your settings without running the wizard, click **Manual Wireless Network Setup** and skip to page 24.



Wireless Setup Wizard

This Wizard is designed to assist you in connecting your wireless device to your access point. It will guide you through step-by-step instructions on how to get your wireless device connected.

Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.

If you want to change the admin account password, enter a new password and click **Next**.

SET YOUR DEVICE NAME
Enter the Device Name of the AP. Recommand to change the Device Name if there're more than one D-Link devices within the subnet. Click Next to continue.
Device Name (NetBIOS Name) dlinkap
Next Exit

SET YOUR NEW PASSWORD
You may change the admin account password by entering in a new password. Click Next to continue.
Password : ••••••••• Verify Password : •••••
Prev Next Exit

Select Auto as the configuration method only if your wireless device supports Wi-Fi Protected Setup.

Skip to page 17 for Manual configuration.

Click **Next** to continue.

SELECT CONFIGURATION METHOD
Please select one of the following configuration methods and click next to continue.
 Auto Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)
O Manual Select this option if you want to setup your network manually
Prev Next Exit

Click **Save** to save your network settings.

SETUP COMPLETE!	
Please keep the fol	lowing information for future reference.
Wireless Network Name (SSID) :	dlink
802.11 Band :	2.4GHz
Channel :	6
Wireless Security Mode :	WPA2-Personal/AUTO (also known as WPA2 Personal)
Network Key :	DShXRQ8W
	Prev Save Exit

The following screen opens to indicate that you have successfully saved your new settings.

SAVE SETTINGS SUCCEEDED

Saving Changes.

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

Click Next to continue.



Please select one of the following configuration methods and click next to continue.

O Auto -- 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 Exit

Enter a network name and select Automatically assign a network key.

To Manually assign a network key, skip to page 19.

Click Next to continue.

WELCOME TO THE D-LINK WIRELESS SETUP WIZARD	
Give your network a name, using up to 32 characters.	
Network Name (SSID) : dlink	
802.11 Band 2.4GHz 5GHz 	
Channel 1 🔽	
Auto Channel Scan 🗹	
 Automatically assign a network key (Recommended) 	
To prevent outsiders from accessing your network, the AP will automatically assign a security key called WEP or WPA key) to your network.	(also
O Manually assign a network key	
Use this option if your prefer to create your own key.	
\bowtie Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-Link wireless client ada support WPA).	apters
Prev Next Exit	

If you choose WPA-PSK encryption, the following screen will show you your Network Key to enter on your wireless clients.

Click Save to finish the Setup Wizard.

SETUP COMPLETE!	
Please keep the fol	lowing information for future reference.
Wireless Network Name (SSID) :	dlink
802.11 Band :	2.4GHz
Channel :	Auto Channel Scan
Wireless Security Mode :	WPA2-Personal/AUTO (also known as WPA2 Personal)
Network Key :	wZmHA2KCwg05D0
	Prev Save Exit

If you choose WEP encryption, the following screen will show you your Network Key to enter on your wireless clients.

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

TUP COMPLETE!					
Please keep the following information for future reference.					
Wireless Network Name (SSID) :	dlink				
802.11 Band :	5GHz				
Channel :	Auto Channel Scan				
Wireless Security Mode :	WEP				
Network Key :	CF4D3EC6AE0D2015ED425117AF				
	Prev Save Exit				

Choose Manually assign a network key to create your own key.

Click Next to continue.

WELCOME TO THE D-LINK WIRELESS SETUP WIZARD
Give your network a name, using up to 32 characters.
Network Name (SSID) : dlink
802.11 Band 💿 2.4GHz 🔿 5GHz
Channel 1 🔛
Auto Channel Scan 🗹
 Automatically assign a network key (Recommended)
To prevent outsiders from accessing your network, the AP will automatically assign a security key (also called WEP or WPA key) to your network.
 Manually assign a network key
Use this option if your prefer to create your own key.
Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-Link wireless client adapters support WPA).
Prev Next Exit

For WPA encryption, enter a Network Key between 8 and 63 characters long or enter exactly 64 characters using 0-9 and A-F.

Click Next to continue.

WELCOME	TO THE	D-LINK	WIRELESS	SETUP	WIZARD

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

- Between 8 and 63 ASCII characters or 64 hex characters(A longer WPA key is more secure than a short one)

Network Key :

Prev Next Exit

If you select WPA encryption, the following screen will show you your network key to enter on your wireless clients.

Click Save to finish the Setup Wizard.

SETUP COMPLETE!	
Please keep the fol	owing information for future reference.
Wireless Network Name (SSID) :	dlink
802.11 Band :	2.4GHz
Channel :	Auto Channel Scan
	Prev Save Exit

For **WEP** encryption, enter a Network Key exactly 5 or 13 characters long or exactly 10 or 26 characters using 0-9 and A-F.

Click Next to continue.

WELCOME TO THE D-LINK WIRELESS SETUP WIZARD
The WEP (Wired Equivalent Privacy) key must meet one of the following guidelines :
- Exactly 5 or 13 characters - Exactly 10 or 26 characters using 0-9 and A-F
A longer WEP key is more secure than a short one
Network Key :
Prev Next Exit

If you select **WEP** encryption, the following screen will show you your network key to enter on your wireless clients.

S

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

TUP COMPLETE!	
Please keep the fol	lowing information for future reference.
Wireless Network Name (SSID) :	dlink
802.11 Band :	5GHz
Channel :	Auto Channel Scan
Wireless Security Mode :	WEP
Network Keyy :	12345
	Prev Save Exit

Add Wireless Device With WPS

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.

Select **PIN** to use your **PIN** number from your wireless device to connect to your network.

For **PBC** configuration, skip to page 23.

Click **Connect** to continue.

ADD A WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP)
There are two ways to add a wireless device to your wireless network:
- PIN (Personal Identification Number)
- PBC (Push Button Configuration)
PIN : Please enter the PIN from your wireless device and click the below "Connect" button PBC Please press the push button on your wireless device and press the "Connect" button below within 120 seconds Connect Exit

Start **WPS** on the wireless device you are adding to you wireless network to complete the setup.

USING PIN NUMBER
Please start WPS on the wireless device you are adding to your network within 118 seconds

Select **PBC** to use the Push Button Configuration in order to connect to your network.

Click **Connect** to continue.

ADD A WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP)
I nere are two ways to add a wireless device to your wireless network;
- PIN (Personal Identification Number)
- PBC (Push Button Configuration)
O PIN :
Please enter the PIN from your wireless device and click the below "Connect" button
PBC Please press the push button on your wireless device and press the "Connect" button below within 120 seconds
Connect Exit

Press down the **Push Button** on the wireless device that you are adding to your network to complete the setup.

VIRTUAL PUSH BUTTON

Please press down the Push Button (physical or virtual) on the wireless device you are adding to your wireless network within 116 seconds ...

Manual Configuration Wireless Settings

Wireless The current wireless mode is set to Access Point, it Mode: will create a wireless infrastructure network.

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

Wireless When you are browsing for available wireless Network networks, this is the name that will appear in the list Name: (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 pre-configured network name.

- **802.11 Band:** Operating frequency band. Choose 2.4GHz for visibility to legacy devices and for longer range. Choose 5GHz for least interference.
- **802.11 Mode:** If you choose 2.4GHz band, then select one of the following:

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

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.

If you choose 5GHz band, then select either 802.11a Only, 802.11n Only, or Mixed 802.11n and 802.11a.

Enable Auto The Auto Channel Scan setting can be selected to allow the DAP-1522 to choose the channel with the least amount of Channel Scan: interference.

Wireless Indicates the channel setting for the DAP-1522. The Channel can be changed to fit the channel setting for an existing wireless **Channel:** network or to customize the wireless network. If you enable Auto Channel Scan, this option will be grayed out.

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

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 Select Invisible if you do not want the SSID of your wireless network to be broadcasted by the DAP-1522. If Invisible is Status: selected, the SSID of the DAP-1522 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DAP-1522 in order to connect to it.
- Security Mode: Refer to page 65 for more information regarding the wireless security.

Enable: Enable the Wi-Fi Protected Setup feature.

- Lock Wireless Locking the wireless security settings prevents the settings from being changed by any new external user using its PIN. Devices security can still be added to the wireless network using Wi-Fi Protected Setup. It is still possible to change wireless network settings settings: with Manual Wireless Network Setup, Wireless Network Setup Wizard, or an existing external WLAN Manager user.
 - Current PIN: Shows the current value of the access point's PIN.
- Generate New Create a random number that is a valid PIN. This becomes the access point's PIN. You can then copy this PIN to the user PIN: interface of the user.
- **Reset PIN to** Restore the default PIN of the access point. **Default:**

Reset to Resets Wi-Fi Protected Status to Not Configured. Vista WPS icon will only be displayed when the Wi-Fi Protected Status is **Unconfigured**: Not Configured.

Network Settings DHCP

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

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



Static IP

LAN Connection Use the drop-down menu to select Static IP. Type:

Access Point IP Enter the IP address of the access point. The default Address: 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.

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.

DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
WIRELESS SETTINGS NETWORK SETTINGS	NETWORK SETTINGS Use this section to configure configure the built-in DHCP s The IP Address that is config management interface. If yo network settings to access to Save Settings Don't ACCESS POINT SETTIN Use this section to configure that is configured here is the interface. If you change the settings to access the netw LAN Connection Access Point IP A Subne Default Ga DEVICE NAME (NETBIO	e the internal netwo Server to assign IP a jured here is the IP uc change the IP Ad the network again. Save Settings GS e the internal network i IP Address that yo IP Address that yo I	k settings of your access p ddresses to the computers Address that you use to ac dress here, you may need k settings of your access p u use to access the Web-b u may need to adjust your	ioint and also to on your network. cress the Web-based to adjust your PC's noint. The IP Address ased management PC 's network	Helpful Hints Also referred as private settings. LAN settings allow you to configure LAN interface of DAP-1522. LAN IP address is private to your internal network and is not visible to internet. The default IP address is 192. 168.0.50 with subnet mask as 255.255.255.0. LAN Connection-The factory default setting is "Dynamic IP (OHCO)" to allow the DHCP host to automatically DHCP host to automatically assign the Access Point an IP address that confirms to the applied local area network. Enable "Static IP" to allow the IP Address of the DAP-1522 to be manually configured in accordance to the applied local area network. 3 MOTO	
	Device	e Name : dlinkap				

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 When Turn MAC Filtering OFF is selected, MAC Filtering: 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.

Add MAC This parameter allows you to manually add a MAC Filtering Rule: filtering rule. Click the Add button to add the new MAC filtering rule to the MAC Filtering Rules list at the bottom of this screen.

D-Lin	k				\prec
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MAC ADDRESS FILTER ADVANCED WIRELESS WLAN PARTITION DHCP SERVER QOS TRAFFIC MANAGER SCHEDULE	MAC ADDRESS FIL The MAC (Media Access on the MAC Address o manufacturer of the ner- network access. Save Settings MAC FILTERING SE Configure MAC Filtering Turn MAC Filtering OFF ADD MAC FILTERING	TER S Controller) Address filter f the network adapter. A etwork adapter. This feat Don't Save Settings ETUP g below : NG RULE	r option is used to control MAC address is a unique II ure can be configured to A	network access based) assigned by the ILLOW or DENY	Helpful Hints Create a list of MAC addresses that you would either like to allow or deny access to your network. Select filter OFF, ALLOW or DENY, enter a MAC address, and then click the "Add" button to add a new MAC filtering rule. Click the delete icon to remove the MAC address from the MAC filtering rules. More
	MAC FILTERING RI	ULES Delete	MAC Address	Delete	

Advanced Wireless

Transmit Power: Sets the transmit power of the antennas.

- **Beacon Period:** Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value. 100 is the default setting and is recommended.
- **DTIM Interval:** (Delivery Traffic Indication Message) 1 is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.
- **RTS Threshold:** This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.
- Fragmentation The fragmentation threshold, which is specified Threshold: in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte

setting will be fragmented before transmission. 2346 is the default setting.



- WMM Enable: 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 is less reliable and may create higher data loss.
- IGMP Snooping: This enables IGMP snooping for the wireless connection. We recommend enabling this if you often use multicast services such as video conferencing and streaming audio/video.

WLAN Partition

WLAN Partition allows you to segment your Wireless network by managing access to both the internal station and Ethernet access to your WLAN.

Internal Use the drop-down menu to either Allow or Deny Station internal station connection.

Ethernet Use the drop-down menu to either Allow or Deny to WLAN Ethernet to Wireless LAN access. Access:



DHCP Server

DHCP stands for Dynamic Host Control Protocol. The DAP-1522 has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DAP-1522. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer.

Enable DHCP Check to enable the DHCP Server on the access Server: point.

IP Address From/ Enter the IP address range to assign to the **To:** clients on your network.

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

Default Subnet Enter the subnet mask. Mask:

Default Gateway: Enter the default gateway IP address.

Default Wins: Enter the WINS server IP address.

Default DNS: Enter the DNS server IP address.

- DHCP Lease Enter the DHCP lease time (in minutes). Time:
- DHCP Client List: Clients on your network that are assigned IP addresses will be displayed here.

D-Lin	C					
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
MAC ADDRESS FILTER	NETWORK SETTING	3			Helpful Hints	
ADVANCED WIRELESS	Use this section to con	figure the internal ne	twork settings of your Acces	s Point and also to	If you already have a DHCP server on your network or	
WLAN PARTITION	IP address that is conf	gured here is the IP	address that you use to acce	ss the Web-based	are using static IP addresses on all the devices on your	
DHCP SERVER QOS	network settings to ac	cess the network ag	adaress here, you may hee ain.	a to adjust your PCs	network, uncheck Enable DHCP Server to disable this feature.	
	Please note that thi settings here to get	s section is optiona your network up a	l and you do not need to nd running.	change any of the	More	
	Save Settings	Don't Save Settings				
		contro bottings				
	DHCP SERVER SET	TINGS				
	Use this section to cor your network.					
	Enable					
	IP A					
	Default					
	Def	Default Gateway :				
		Default Wins :				
	рна	Default DNS :				
		20056 Hitte . [100				
	DHCP CLIENT LIST	Ī				
	Host Name	IP Address	MAC Address Exp	ired Time		
	16 - DHCP RESER					
	Remaining number of a					
	Computer Name	e IP Address	MAC Address			
				Computer Name 💌		
				Computer Name 🔽		
				Computer Name		

DHCP Reservation

If you want a computer or device to always have the same IP address assigned, you can create a DHCP reservation. The access point 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.

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.

QoS

The Quality of Service (QoS) feature regulates the flow of data through the access point by assigning a priority to each packet. It enhances your experience of wireless network usage by prioritizing the traffic of different applications. Enabling this option allows the AP to prioritize traffic. There are two options available for the special application.

- Enable QoS: Enable this option if you want QoS to prioritize your traffic.
 - **QoS Type:** There are two options available for your special application: (1) Priority by LAN Port, and (2) Priority by Protocol.
- Priority by LAN There are four priority levels for all LAN ports. The Port: priority level values assigned are 1 for Background, 3 for Best Effort, 5 for Video, and 7 for Voice (Voice is the highest level and Background is the lowest level) at a normal priority.

D-Lini	C				
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MAC ADDRESS FILTER ADVANCED WIRELESS WLAN PARTITION DHCP SERVER QOS TRAFFIC MANAGER SCHEDULE	QOS QoS prioritizes the traffic of various wireless applications. Save Settings Don't Save Settings QOS Enable QOS :			Helpful Hints Enable this option if you want to allow QOS to prioritize wireless traffic. There are two options for QOS Type selected, such as priority by Lan port and by protocol, which ensure the right priorities available for your special applications.	
	PORT QOS				
	LAN PO LAN PO LAN PO LAN PO	ort 1 Priority : Backgrour ort 2 Priority : Best Effor ort 3 Priority : Video ort 4 Priority : Voice	id V t V		

- Priority by Users can set the priority and percentage of total bandwidth Protocol: reserved for each of their four traffic categories. Please note that the combined percentage value of transmission limits does not have to be 100%. These percentages represent the maximum bandwidth designated for each traffic category.
- Ethernet to The value entered here indicates the Ethernet to wireless Wireless: speed required before the Advanced QoS function is enabled. Advanced QoS will be enabled once the total bandwidth reaches or surpasses the set value. The suggested range is 800 ~ 96000kbits/sec.
- Wireless to The value entered here indicates the wireless to Ethernet Ethernet: speed required before the Advanced QoS function is enabled. Advanced QoS will be enabled once the total bandwidth reaches or surpasses the set value. The suggested range is 800 ~ 96000kbits/sec.



ACK/DHCP/ICMP/ Represents the priority value and bandwidth limit applied to ACK, DHCP, ICMP, and DNS for packet delivering. DNS Priority:

Web Traffic Traffic generated by typical Web services (packets sent through ports 80,443, 3128 and 8080). Priority:

Mail Traffic Traffic generated by e-mail sending and receiving (ports 25, 110, 465 and 995). Priority:

Ftp Traffic Priority: Traffic generated by FTP Uploading and Downloading (ports 20, 21).

Other Traffic Other traffic generated that does not regard the aforementioned packet delivery. Priority:

Note: Normally the wireless connection transmits application data packets based on the wireless to Ethernet speed and Ethernet to wireless speed. Users can treat the two speeds as system transmission bandwidth, where all applications will share the whole system bandwidth based on assigned priorities. Note that the maximum amount of bandwidth that can be used is the same as the set value of both speeds.

Traffic Manager

Traffic Manager assigns the device's entire bandwidth, which includes both the wireless to Ethernet speed and Ethernet to wireless speed. The user may add rules for data transmission performance between the access point device and the individual client. For unlisted client traffic, users can either choose to deny or forward packet transferred for such clients.

- Enable Traffic Traffic Manager enables traffic control of the Manager: delivering and receiving of data packets.
- Unlisted Clients There are two options available for Unlisted Clients Traffic: Traffic: (1) deny, and (2) forward.
 - **Ethernet to** This section allows the user to indicate the device's **Wireless:** maximum bandwidth from Ethernet to wireless.
 - Wireless to This section allows the user to indicate the device's Ethernet: maximum bandwidth from wireless to Ethernet.



Add Traffic Manager Rule

In Traffic Manager Rule enter settings for each user of your network, using adequate IP (Client IP) or MAC address (Client MAC). Set appropriate Ethernet to Wireless and Wireless to Ethernet speeds for the traffic you want to regulate.

Name: Enter a name for your new rule.

Client IP (optional): The IP address assigned to the client.

- Client MAC (optional): By assigning MAC addresses to the set of traffic manager rules, specific rules can be defined for individual devices.
- Ethernet to Wireless: Represents the available bandwidth for client data to be forwarded from Ethernet to wireless, the suggested range is 800 ~ 96000kbits/sec.
- Wireless to Ethernet: Represents the available bandwidth for client data to be forwarded from wireless to Ethernet, the suggested range is 800 ~ 96000kbits/sec.

Note: Normally the wireless connection transmits application data packets based on the wireless to Ethernet speed and Ethernet to wireless speed. Users can treat the two speeds as system transmission bandwidth, where all applications will share the whole system bandwidth based on assigned priorities. Note that the maximum amount of bandwidth that can be used is the same as the set value of both speeds.
Schedule

- 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 Days or enter a start and end time for your schedule.
- Wireless: Select On or Off from the drop-down menu.
 - Add: Click Add 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 theList:Edit icon to make changes or click the Delete
icon to remove the schedule.

AP-1522 /// SETUP ADVANCED MAINTENANCE STATUS HELP AC ADDRESS FILTER DVANCED WIRELESS WIRELESS SCHEDULE SETTINGS DAP-1522's radio can scheduled by week or ncheduled days. DAP-1522's radio can scheduled by week or nchedule days. DAP-1522's radio can scheduled by week or nchedule days. DAP-1522's radio can schedule days. DAP-1522's radio can schedule days. DAP-1522's radio can schedule days. DAP-152's radio can schedule days. <t< th=""><th></th><th></th><th></th></t<>			
AP-1522 SETUP ADVANCED MAINTENANCE STATUS HELP AC ADDRESS FILTER DVANCED WIRELESS WIRELESS SCHEDULE SETTINGS Helpful Hints DAP-1522's radio can chained by week or ndividual days. Dap-1522's radio can chained by week or ndividual days. Dap-1522's radio can chained by week or ndividual days. VIRELESS SCHEDULE SETTINGS WIRELESS SCHEDULE SETTINGS More VS Wireless Schedule : Disable More OS Wireless Schedule : Disable More ADD SCHEDULE RULE Image: Day(s) : All Week @ Select Day(s) 		link .	
AP-1522 /// SETUP ADVANCED MAINTENANCE STATUS HELP AC ADDRESS FILTER DVANCED WIRELESS WIRELESS SCHEDULE SETTINGS DAP-1522's radio can scheduled by week or individual days. DAP-1522's radio can scheduled by week or individual days. DAP-1522's radio can scheduled by week or individual days. VIRELESS SCHEDULE SETTINGS WIRELESS SCHEDULE SETTINGS More VIRELESS SCHEDULE SETTINGS Wireless Schedule : Disable More VIRELESS SCHEDULE SETTINGS Wireless Schedule : Disable More VARFIC MANAGER ADD SCHEDULE RULE More Day(s) : All Week © Select Day(s) 			
AC ADDRESS FILTER VAIACED WIRELESS LAN PARTITION HCP SERVER OS ARFFIC MANAGER DEEDULE ADD SCHEDULE RULE Name :	ADVANCED MAINTENANCE STATUS HELP	// setup	AP-1522
Wireless : Off Y Add Clear SCHEDULE RULE LIST Name Day(s) Time Frame Wireless Edit Delete	ADVANCED MAINTENANCE STATUS HELP SETTINGS DAP-1522's radio can be scheduled by week or by individual days. DAP-1522's radio can be scheduled by week or by individual days. SETTINGS Image: Constraint of the schedule by week or by individual days. More SETTINGS Image: Constraint of the schedule by week or by individual days. More SETTINGS Image: Constraint of the schedule by week or by individual days. More SETTINGS Image: Constraint of the schedule by week or by individual days. More SETTINGS Image: Constraint of the schedule by week or by individual days. More SETTINGS Image: Constraint of the schedule by week or by individual days. More SETTINGS Image: Constraint of the schedule by week or by individual days. More Sum On Tue Week Image: Constraint of the schedule by week or by individual days. More Image: Constraint of the schedule by week or by individual days. More Image: Constraint of the schedule by week or by individual days. More Image: Constraint of the schedule by week or by individual days. More Image: Constraint of the schedule by week or by individual days. More Image: Constraint of the schedule by week or by individual days. More Image: Constrein the schedule by week or by individual days. <	SETUP SS FILTER WIRELESS TION R WIRELESS Save Settings D WIRELESS Save Settings D WIRELESS Save Settings WIRELESS Save Settings WIRELESS Schedule Name	AC ADDRESS FILTER VAACED WIRELESS LAN PARTITION ICP SERVER OS AFFIC MANAGER HEDULE

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.

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



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, tick 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.
 - Manual: 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.



System

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

Restore to This option will restore all configuration settings Factory Default: 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 Click to reboot the access point. **Device:**

Clear Language Click to clear the language pack. This will put the Pack: web UI back to English.

D-I imi	- ⁸					
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
ADMIN TIME SYSTEM FIRMWARE	SYSTEM SETTINGS The System Settings s the factory default set settings, including any The current system se any other saved settin	ection allows you to rebo tings. Restoring the unit t rules that you have creat ettings can be saved as a f g file created by device ca	ot the device, or restore th o the factory default settir ed. le onto the local hard drive in be uploaded into the un	ne access point to igs will erase all . The saved file or it.	Helpful Hints Once your access point is configured the way you want it, you can save the configuration settings to a configuration file. You might need this file so that in use I and some	
	SYSTEM SETTINGS Save To Loc Load From Loc	al Hard Drive : Save al Hard Drive : Re	Configuration	Browse	configuration later in the event that the access point's default settings are restored. To save the configuration, click the "Save Configuration" button. More	
	Restore To Fa	ctory Default : Rest Restore a ot The Device : Reboo	ore Factory Defaults Il settings to the factory de t the Device	afaults.		

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.

- 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.

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DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP			
ADMIN	FIRMWARE Helpful Hints							
TIME SYSTEM FIRMWARE	Use the Firmware sector performance.	ion to install the latest firn Don't Save Settings	nware code to improve fun	ctionality and	Firmware updates are released periodically to improve the functionality of your access point and to add features. If you run into a problem with a specific			
	FIRMWARE INFORMATION feature of the							
	FIRMWARE UPGRA Note: Some firmwar defaults. Before per from the <u>Maintenar</u> To upgrade the firm Enter the name of t Upload :	NDE re upgrades reset the ci forming an upgrade, b ice -> Admin screen. ware, your PC must ha ihe firmware upgrade fi load	onfiguration options to e sure to save the current ve a wired connection t le, and click on the Uplo Browse	the factory nt configuration o the access point. ad button.	More			
	LANGUAGE PACKA Note: Update langu Before performing a To upgrade the lang access point. Enter Upload button.	GE INFORMATION age package will make (n upgrade, be sure to guage package, your PC the name of the langue	changes language displa do it! C must have a wired con ge package upgrade file Browse	y on web page. nection to the e, and click on the				
WIRELESS		load						

If you load a language pack and would like to go back to English, click **Maintenance** > **System** and click on **Clear** next to **Clear Language Pack**.



AP-1522	CONFIGURACIÓN	AVANZADO	MANTENIMIENTO	ESTADO	AYUDA
DMINISTRADOR	PARÁMETROS DEL	SISTEMA			Sugerencias útiles
IORA ISTEMA IRMWARE	La sección Parámetros o acceso a los parámetros predeterminados de fáb creado. Se pueden guardar los p local. Puede cargarse er guardado creado por el	el sistema le permite reini predeterminados de fábr rica se borrarán todos los barámetros del sistema aci la unidad el archivo guan dispositivo.	ciar el dispositivo o restaura (ca. Al restaurar en la unida parámetros, incluidas las reg tual como un archivo en la u dado o cualquier otro archiv	r el punto de d los parámetros glas que haya unidad de disco duro o de parámetros	Una vez que el punto de acceso está configurado como lo desea, puede guardar los parámetros de configuración en un archivo de configuración. Puede que necesite este archivo para poder cargar la configuración más adelante en el caso de que se
	Guardar en la uni disco durc Cargar desde la uni disco durc	dad de local :Guardar confii dad de local : Restablec	guración B er la configuración del archivo	rowse	rescapezcamos parametros predeterminaciós del punto de acceso. Para guardar la configuración, haga clic en el botón "Guardar configuración". Más Información
	Restablecer en los predetermina f Reinicie el dispo	valores dos de sbrica : Restablecer todo predeterminados sitivo : Reiniciar el dis	ecer valores predeterminados o s los parámetros en los valo de fábrica. positivo	de fábrica	
	Borrar paquete de	dioma: Borrar			





D-Link DAP-1522 User Manual

Status Device Info

This page displays the current information for the DAP-1522. It will display the LAN and wireless LAN information.

- General: Displays the access point's time and firmware version.
 - LAN: Displays the MAC address and the private (local) IP settings for the access point.
- Wireless LAN: Displays the wireless MAC address and your wireless settings such as SSID and Channel.



Wireless

The wireless section allows you to view the wireless clients that are connected to your wireless access point.

- MAC Address: The Ethernet ID (MAC address) of the wireless client.
 - **UpTime:** Displays the amount of time the wireless client has been connected to the access point.
 - Mode: The transmission standard being used by the client. Values are 11a, 11b, 11g, 11ng or 11na for 802.11a, 802.11b, 802.11g or 802.11n respectively.

D-Lin	k 📃				\prec	
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
DEVICE INFO	WIRELESS				Helpful Hints	
WIRELESS	View the wireless clien	This is a list of all wireless clients that are currently				
LOGS	NUMBER OF WIRE	LESS CLIENTS : O			connected to your access point.	
	MAC Addres	ss UpTime	Mode	Signal (%)	More	

Signal: This is a relative measure of signal quality. The value is expressed as a percentage of theoretical best quality. Signal quality can be reduced by distance, by interference from other radio-frequency sources (such as cordless telephones or neighboring wireless networks), and by obstacles between the access point and the wireless device.

Logs

The access point automatically logs (records) events of possible interest in its internal memory. If there isn't enough internal memory for all events, logs of older events are deleted, but logs of the latest events are retained. The Logs option allows you to view the access point logs. You can define what types of events you want to view and the level of the events to view. This access point 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: There are three types of logs that can be viewed: System Activity, Wireless Activity, and Notice. Tick the corresponding check box for the type(s) that you want displayed in the log.

Enable Select the check box and enter a Log Server name **Remote Log:** or IP address to enable the remote log feature.

Apply Log Click this button to immediately filter the log results Settings Now: so that only the selected options appear in the Log Details section of this screen.

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

Clear: Clear all of the log contents.

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

D-Lin	1 k				\prec	
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
DEVICE INFO	LOGS				Helpful Hints	
WIRELESS View the logs. You can define the event levels to view. Check the detect una network us ne						
STATISTICS	LOG OPTIONS					
	What to View	: 🗹 System Activity	Wireless Activity	Notice	More	
	Enable Remo	te Log : 📃 🛛 Log Ser	ver / IP Address :			
		Apply Log Se	ettings Now			
	First Page Last Pa Page 1 of 2	ge Previous Next ([lear] Refresh Save Log			
	Time	Priority N	1essage			
	Uptime 0 day 00:27:2	27 [SYSACT]Web	ogin success from 192.168	.0.100		
	Uptime 0 day 00:26:4	40 [SYSACT]Web I	ogout from 192.168.0.100			
	Uptime 0 day 00:23:	39 [SYSACT]Web I	ogin success from 192.168	.0.100		
	Uptime 0 day 00:23:	34 [SYSACT]Web I	ogout from 192.168.0.100			
	Uptime 0 day 00:20:2	20 [Wireless]Initiate	e Wireless success			
	Uptime 0 day 00:20:2	20 [Wireless]Auto	channel:Best channel is 1			
	Uptime 0 day 00:20:	13 [Wireless]Stop \	Wireless success			
	Uptime 0 day 00:06:	21 [SYSACT]Web	ogin success from 192.168	.0.100		
	Uptime 0 day 00:06:	15 [SYSACT]Web	ogout from 192.168.0.100			
	Uptime 0 day 00:01:4	19 [SYSACT]Web I	ogin success from 192.168	.0.100		
WIRELESS						

Statistics

The Statistics page displays all of the LAN and Wireless packets transmit and receive statistics.

- **TX Packets:** The total number of packets sent from the access point.
- **RX Packets:** The total number of packets received by the access point.
- **TX Packets** Displays the number of packets that were dropped **Dropped:** while sending, due to errors, collisions, or access point resource limitations.
- **RX Packets** Displays the number of packets that were dropped **Dropped:** while receiving, due to errors, collisions, or access point resource limitations.
 - **TX Bytes:** Displays the number of bytes that were sent from the access point.
- **RX Bytes:** Displays the number of bytes that were received by the access point.



Help

D-Lin	K				\prec
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MENU	SUPPORT MENU				Helpful Hint <i>s</i>
SETUP	Setup Help				
ADVANCED	 <u>Wireless Settin</u> <u>Network Settin</u> 	<u>qs</u> 1 <u>qs</u>			
MAINTENANCE		_			
STATUS	MAC Address Fi <u>Advanced Wire</u> <u>WLAN Partition</u> <u>DHCP Server</u> <u>QoS</u> <u>Traffic Manager</u> <u>Schedule</u>	i <u>ter</u> i <u>less</u> i			
	Maintenance Help • <u>Admin</u> • <u>Time</u> • <u>System</u> • <u>Firmware</u>				
	Device Info <u>Device Info</u> <u>Wireless</u> <u>Logs</u> <u>Statistics</u>				

Configuration for Bridge Mode

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

Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter dlinkap or enter 192.168.0.50 in the address field.

🕘 D-L	ink -	Micros	oft Inte	ernet	Explo	rer	
Eile	<u>E</u> dit	⊻iew	F <u>a</u> vorite	es <u>T</u>	ools	<u>H</u> elp	
] 🕝 в	ack 🝷	\bigcirc	- 🔀	2		🔎 Se	arch
Addres	ss 🧃	dlinkap)		·	🚽 🔁 G	o]

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

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

r	
1	LOGIN
	Log in to the Bridge:
	User Name admin
	Password Login
Э	

Setup Wizard

This wizard is designed to assist you in configuring the wireless settings for your bridge. It will guide you through step-by-step instructions on how to setup your wireless network.



Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.

SET YOUR DEVICE NAME
Enter the Device Name of the AP. Recommand to change the Device Name if there're more than one D-Link devices within the subnet. Click Next to continue.
Device Name (NetBIOS Name) dlinkap
Next Exit

If you want to change the admin account password, enter a new password and click Next.

SET YOUR NEW PASSWORD
You may change the admin account password by entering in a new password. Click Next to continue.
Password :
Verify Password :
Prev Next Exit

Select Auto configuration if you want to use Wi-Fi Protected Setup.

If you want to set up your network manually, skip to page 53.

Click **Next** to continue.

SELECT CONFIGURATION METHOD
Please select one of the following configuration methods and click next to continue.
 Auto (Select this option if you want to use Wi-Fi Protected Setup)
Manual (Select this option if you want to setup your network manually)
Prev Next Exit

Select **PIN** to connect your wireless device with WPS.

For **PBC** configuration, skip to page 52.

Enter the **PIN** number used into you access point and click Connect.

CONNECT TO WIRELESS DEVICE WITH WPS
There are two ways to add wireless device to your wireless network: - PIN (Personal Identification Numner)
- PBC (Push Button Configuration)
PIN : 12345678 Generate New PIN Reset PIN to Default Please Enter the above PIN information into your Acces Point and click the below "Connect" button.
O PBC Please press the push button on your wireless device and press the "Connect" button below within 120 seconds
Prev Connect Exit

Start WPS on the wireless device you are adding to you wireless network to complete the setup.

USING PIN NUMBER
Please start WPS on the wireless device you are adding to your wireless network within 118 seconds

Select **PBC** to use the Push Button Configuration to connect to your network.

Click **Connect** to continue.

CONNECT TO WIRELESS DEVICE WITH WPS
There are two ways to add wireless device to your wireless network:
- PIN (Personal Identification Numner)
- PBC (Push Button Configuration)
PIN : 12345678 Generate New PIN Reset PIN to Default Please Enter the above PIN information into your Acces Point and click the below "Connect" button. PBC Please press the push button on your wireless device and press the "Connect" button below within 120 seconds Prev Connect Exit

Press down the WPS Button on the wireless device you are adding to your network to complete the setup.

VIRTUAL PUSH BUTTON

Please press down the Push Button (physical or virtual) on the wireless device you are adding to your wireless network within 119 seconds ...

Select **Manual** configuration to set up your network manually.

Click Next to continue.

SELECT CONFIGURATION METHOD

Please select one of the following configuration methods and click next to continue.

○ Auto (Select this option if you want to use Wi-Fi Protected Setup)

 \odot Manual (Select this option if you want to setup your network manually)

Prev Next Exit

Enter the **Wireless Network Name** of the AP or click the Site Survey button to find the AP.

Click **Next** to continue on to page 54.

SET WIRELESS NETWORK NAME
You can enter the Wireless Network Name of AP or use site survey to find the AP.
Wireless Network Name (SSID) Site Survey
Prev Next Exit

If you clicked on **Site Survey**, the following screen will be displayed.

Find your access point from the list and click **Connect** to complete the Setup Wizard.

SSID	BSSID	CH	Security	Signal	Type	
7700_11g	00:50:62:35:97:30	1	WPA-PSK	50%	Infrastructure	0
dlinkmargg	00:1D:6A:12:0F:82	1	WPA-AUTO-PSK	50%	Infrastructure	0
dlink	00:17:9A:36:47:9C	1	OPEN	50%	Infrastructure	0
D-Link DVA-G3672B	00:50:BA:11:22:3D	1	OPEN	68%	Infrastructure	0
12345678901234567890123456789012	00:18:02:1B:87:96	3	OPEN	52%	Infrastructure	0
AlexDI524	00:13:46:A1:A4:0A	4	SHARED	50%	Infrastructure	0
james54g	00:13:46:E5:3C:72	6	WPA-EAP	50%	Infrastructure	0
di624s	00:17:9A:CF:96:0C	6	SHARED	54%	Infrastructure	0
dlink EC	00:0F:3D:3D:90:0E	6	WPA-PSK	50%	Infrastructure	0
default	00:55:19:06:24:01	6	OPEN	52%	Infrastructure	0
SD1VAPB0	00:11:95:95:CA:18	6	WPA-PSK	52%	Infrastructure	0
SD1VAPB1	06:11:95:95:CA:18	ĥ	OPEN	50%	Infrastructure	0

Choose which Security Mode you want to use and click **Next** to continue.

SELECT WIRELESS SECURITY MODE

Please select the wireless security mode.
None 💿
WEP 🔿
WPA 🔿
WPA2 🔿
Prev Next Exit

If you choose **WEP**, enter the wireless security password and click **Next** to complete the Setup Wizard.

SET YOUR WIRELESS SECURITY PASSWORD						
Please enter the wireless password to establish wireless connection.						
Password Type: 64Bit (10 hex digits)						
Prev Next Exit						

If you choose **WPA**, enter the **WPA** Personal Passphrase and click Next to complete the Setup Wizard.

SET	YOUR WIRELESS SECURITY PASSWORD
Pleas	se enter the wireless password to establish wireless connection.
	Password:
	Prev Next Exit

If you choose WPA2, enter the WPA2 Personal Passphrase and click Next to complete the Setup Wizard.

SET YOUR WIRELESS SECURITY PASSWORD
Please enter the wireless password to establish wireless connection.
Password:
Prev Next Exit

The following screen opens to indicate that you have successfully saved your new settings.

SAVE SETTINGS SUCCEEDED

Saving Changes.

Wireless

Wireless Select Infrastructure to connect to a wireless (AP) Access Mode: Point, select Ad-hoc to connect to another bridge or wireless station.

Site Survey: A function that looks for available wireless networks.

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

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

- **802.11 Band** The options include 2.4GHz, 5GHz, and 2.4GHz/5GHz. This option is unavailable in Bridge Mode.
- **802.11 Mode:** If all of the wireless devices in your wireless network can connect in the same transmission mode, you can improve performance slightly by choosing the appropriate "Only" mode. If you have some devices that use a different transmission mode, choose the appropriate "Mixed" mode. This option is unavailable in Bridge Mode.

Enable Auto The Auto Channel Scan setting is used to allow the Channel Scan: DAP-1522 to choose the channel with the least amount of interference. This option is unavailable in Bridge Mode.

Wireless Indicates the channel setting for the DAP-1522. The Channel **Channel:** can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. This option is unavailable in Bridge Mode.



Section 3 - Configuration

Transmission Select the transmit rate. It is strongly suggested to select Best (automatic) for best performance. This option is unavailable Rate: in Bridge Mode.

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.

Visibisibility This setting determines whether the DAP-1522 will continue to periodically broadcast its presence on the network. This option Status: is unavailable in Bridge Mode.

Security Mode: Refer to page 65 for more information regarding wireless security.

Enable: Enable the Wi-Fi Protected Setup feature.

Wireless MAC Cloning

Enabling this option allows the user to manually assign the source MAC address to packets forwarded by the DAP-1522. If not manually assigned, the packet's source MAC address field will be automatically selected as the DAP-1522's MAC address.

MAC Address: Enter the desired MAC address connected to your DAP-1522 to enable the clone function.

Scan: Click the Scan button to search for all available devices connected to your DAP-1522's Ethernet ports

Network Settings Static

This section will allow you to change the local network settings of the bridge and to configure the Static settings.

LAN Use the drop-down menu to select Static IP if Connection your ISP assigned you the IP address, subnet Type: mask, gateway, and DNS server addresses. Select Dynamic IP (DHCP) to automatically assign an IP address to the computers on the LAN/private network.

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

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

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

Device Name: Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.

	1_0							
	C							
AP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP			
IZARD IRELESS ITWORK SETTINGS	NETWORK SETTING Use this section to cor configure the built-in I The IP Address that is management interface network settings to ac Save Settings LAN SETTINGS Use this section to cor that is configured here interface. If you chang settings to access the	and the internal networ HCP Server to assign IP ar configured here is the IP . If you change the IP Ad ccess the network again. Don't Save Settings Infigure the internal networ is the IP Address that you the IP Address that you network again.	k settings of your access p ddresses to the computers Address that you use to ad dress here, you may need k settings of your access p u use to access the Web-b u may need to adjust your	point and also to conyour network. ccess the Web-based to adjust your PC's point. The IP Address pased management PC's network	Helpful Hints If you have a DHCP server on your network, you can select DHCP to get the IP address from a DHCP server. More			
	Access Point S Defa	IP Address : 192.168.0 ubnet Mask : 255.255.2	55.0					
	DEVICE NAME (NE	TBIOS NAME) Device Name : dlinkap						

DHCP

- LAN Connection Select DHCP to automatically obtain an IP Type: address on the LAN/private network.
 - **Device Name:** Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.

D-Lini	1 c [°]				
DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
WIZARD	NETWORK SETTING	iS			Helpful Hints
WIRELESS	Use this section to co the built-in DHCP Serv Address that is config management interface network settings to a Save Settings	If you have a DHCP server on your network, you can select DHCP to get the IP address from a DHCP server. More			
	The IP Address that is nanagement interface. work settings to access				
	LAN Connecti	on Type : Dynamic IP (D	HCP) 🔽		
	DEVICE NAME (NET	IBIOS NAME)			
	Dev	ice Name: dlinkap			
WIRELESS					

Advanced Advanced Wireless

Transmit Power: Set the transmit power of the antennas.

- **RTS Threshold:** This value should remain at its default setting of 2436. If inconsistent data flow is a problem, only a minor modification should be made.
- Fragmentation The fragmentation threshold, which is specified Threshold: in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.
 - Short GI: Check this box to reduce the guard interval time therefore increasing the data capacity. However, it is less reliable and may create higher data loss.

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DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADVANCED WIRELESS QOS SCHEDULE	ADVANCED WIREL If you are not familiar w before attempting to r Save Settings ADVANCED WIREL Transmit	Helpful Hints It is recommended that you leave these parameters at their default values. Adjusting them could limit the performance of your wireless network. More			
	Fragmentation Three				

QoS

The Quality of Service (QoS) feature regulates the flow of data through the access point by assigning a priority to each packet. It enhances your experience of wireless network usage by prioritizing the traffic of different applications. Enabling this option allows the AP to prioritize traffic. There are two options available for the special application.

- **Enable QoS:** Enable this option if you want QoS to prioritize your traffic.
 - **QoS Type:** There are two options available for your special application: (1) Priority by LAN Port, and (2) Priority by Protocol.
- Priority by LAN There are four priority levels for all LAN ports. The Port: priority level values assigned are 1 for Background, 3 for Best Effort, 5 for Video, and 7 for Voice (Voice is the highest level and Background is the lowest level) at a normal priority.

	 ®				
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADVANCED WIRELESS 205 SCHEDULE	QOS QoS prioritizes the traf Save Settings QOS	affic of various wireless applications. Don't Save Settings Enable QoS : QOS Type : Priority by LAN Port			Helpful Hints Enable this option if you want to allow QOS to prioritize wireless traffic. There are two options for QOS Type selected,such as priority by Lan port and by protocol, which ensure the right priorities available for your special applications.
	PORT QOS LAN PO LAN PO LAN PO LAN PO	ort 1 Priority : Backgroun ort 2 Priority : Best Effor ort 3 Priority : Video ort 4 Priority : Voice	d V V V		

- Priority by Users can set the priority and percentage of total bandwidth Protocol: reserved for each of their four traffic categories. Please note that the combined percentage value of transmission limits does not have to be 100%. These percentages represent the maximum bandwidth designated for each traffic category.
- Ethernet to The value entered here indicates the Ethernet to wireless Wireless: speed required before the Advanced QoS function is enabled. Advanced QoS will be enabled once the total bandwidth reaches or surpasses the set value. The suggested range is 800 ~ 96000kbits/sec.
- Wireless to The value entered here indicates the wireless to Ethernet Ethernet: speed required before the Advanced QoS function is enabled. Advanced QoS will be enabled once the total bandwidth reaches or surpasses the set value. The suggested range is 800 ~ 96000kbits/sec.



ACK/DHCP/ICMP/ Represents the priority value and bandwidth limit applied to ACK, DHCP, ICMP, and DNS for packet delivering. DNS Priority:

Web Traffic Traffic generated by typical Web services (packets sent through ports 80,443, 3128 and 8080). Priority:

Mail Traffic Traffic generated by e-mail sending and receiving (ports 25, 110, 465 and 995). Priority:

Ftp Traffic Priority: Traffic generated by FTP Uploading and Downloading (ports 20, 21).

Other Traffic Other traffic generated that does not regard the aforementioned packet delivery. Priority:

Note: Normally the wireless connection transmits application data packets based on the wireless to Ethernet speed and Ethernet to wireless speed. Users can treat the two speeds as system transmission bandwidth, where all applications will share the whole system bandwidth based on assigned priorities. Note that the maximum amount of bandwidth that can be used is the same as the set value of both speeds.

Schedule

- 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 Days or enter a start and end time for your schedule.
- Wireless: Select On or Off from the drop-down menu.
 - Add: Click Add 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 theList:Edit icon to make changes or click the Delete
icon to remove the schedule.

D-Lini	K						
			-				
AP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP		
DVANCED WIRELESS	WIRELESS SCHED	JLE SETTINGS			Helpful Hints		
OS CHEDULE	Save Settings	Don't Save Settings			DAP-1522's radio can be scheduled by week or by individual days.		
	WIRELESS SCHED	JLE SETTINGS			More		
	Wireless Sche	dule : Disable 💌					
	ADD SCHEDULE RU	JLE	_				
	N						
	Da	y(s): ⊂ All Week ⊚ S	elect Day(s)				
	All D	ay(s)	The Wear In	iu i Fii i Sat			
	Start Time : (hour:minute, 24 hour time)						
	End	fime : 📃 : 📃 (hour:minute, 24 hour tim	ne)			
	Wire	less : Off 🚽					
				Add Clear			
	SCHEDULE RULE L	IST					
	Name	Day(s)	Time Frame 🛛 🛛	Vireless Edit Delete			
WIRELESS							

Maintenance Admin

This page will allow you to change the Administrator password. Admin has read/write access.

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

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



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, tick 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.
 - Manual: 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.

	1_0					
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
ADMIN	TIME				Helpful Hints	
TIME SYSTEM FIRMWARE	The Time Configuratio on the internal system set the NTP (Network automatically adjust th Save Settings Don	n option allows you to cor clock. From this section y Time Protocol) Server. D: e time when needed. t Save Settings	nfgure, update, and mainta ou can set the time zone t aylight Saving can also be c	in the correct time hat you are in and onfigured to	Good timekeeping is important for accurate logs. More	
	TIME CONFIGURATION Time : 01/01/2000 00:05:51 Time Zone : (GMT-08:00) Pacific Time (US & Canada); Tijuana Enable Daylight Saving : Daylight Saving Offset : +1:00 > Month Week Daylight Saving Dates : DST Start Jan > DST End Jan >					
	AUTOMATIC TIME Enable NTP ser NTP Ser					
	SET THE DATE AND Date And Time : Ye Ho	D TIME MANUALLY ar 2009 Month ur 2 Minute topy Your Computer's Time Se	Jul • Day 17 57 • Second 10 ttings	v v PM v		
WIRELESS						

System

Save To Use this option to save the current access point Local Hard configuration settings to a file on the hard disk of Drive: 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 From Use this option to load previously saved access
 Local Hard point configuration settings. First, use the Browse
 Drive: control to find a previously save file of configuration settings. Then, click the Load button to transfer those settings to the access point.

Restore This option will restore all configuration settings To Factory back to the settings that were in effect at the time Default: 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.

Reboot The Click to reboot the bridge. Device:

Clear Click to clear the language pack. This will put the web UI back to English. Language Pack:

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DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADMIN	SYSTEM SETTINGS	1			Helpful Hints
TIME SYSTEM	The System Settings s the factory default set settings, including any	ection allows you to rebo tings. Restoring the unit t rules that you have creat	ot the device, or restore th to the factory default setting ed.	e access point to gs will erase all	Once your access point is configured the way you want it, you can save the configuration settings to a
FIRMWARE	The current system se any other saved settin	. The saved file or t.	configuration hie. You might need this file so that you can load your configuration later in the event that the access point's default settings are restored.		
	SYSTEM SETTINGS				
	Save To Loca Load From Loca	I Hard Drive :	iguration	Browse	To save the configuration, click the "Save Configuration" button. More
	Restore To Fact	ory Default : <u>Restore Fa</u> Restore all	actory Defaults settings to the factory defa	ults.	
	Reboot	The Device : Reboot the	e Device		
	Clear Lan	guage Pack : Clear			

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 site for firmware updates at http://support.dlink.com. You can download firmware upgrades to your hard drive from the D-Link support site.

- 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 bridge.

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.

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DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADMIN TIME SYSTEM FIRMWARE	FIRMWARE Use the Firmware sect performance. Save Settings Don' FIRMWARE INFOR Current Firmware Current Firmware FIRMWARE UPGRA Note: Some firmwar defaults. Before per from the Maintenar To upgrade the firm Enter the name of t Upload : Upload : Upload the langu Before performing a Coupgrade the langu Curper Spoint, Enter Upload the langu Before performing a Coupgrade the langu Curper Spoint, Enter Upload	ion to install the latest firm t Save Settings MATION Version 1.21 t Date : 09:31:38 06/0 ADE re upgrades reset the co forming an upgrade, be ice -> Admin screen. Ware, your PC must ha the firmware upgrade fil load GE INFORMATION age package will make co in upgrade, be sure to o guage package, your PC the name of the langua	ware code to improve fun D4/2009 Dafiguration options to a sure to save the current ve a wired connection to le, and click on the Uplo Browse thanges language displation thanges language displation thange language displation that the language displation the language displa	ctionality and the factory nt configuration o the access point. ad button. y on web page. nection to the , and click on the	Helpful Hints Helpful Hints Firmware updates are released periodically to improve the functionality of your access point and to add features. If you run into a problem with a specific feature of the access point, check our support site by clicking the "Click here to check for an upgrade on our support site" link and see if updated firmware is available for your access point. More
WIRELESS					

If you load a language pack and would like to go back to English, click **Maintenance** > **System** and click on **Clear** next to **Clear Language Pack**.



AP-1522	CONFIGURACIÓN	AVANZADO	MANTENIMIENTO	ESTADO	AYUDA
DMINISTRADOR	PARÁMETROS DEL	SISTEMA			Sugerencias útiles
ORA ISTEMA IRMWARE	La sección Parámetros o acceso a los parámetros predeterminados de fálo creado. Se pueden guardar los ; local. Puede cargarse er guardado creado por el	Una vez que el punto de acceso está configurado como lo desea, puede guardar los parámetros de configuración en un archivo de configuración. Puede que necesite este archivo para poder cargar la configuración más adelante			
	PARÁMETROS DEL Guardar en la uni disco dur Cargar desde la uni disco dure	SISTEMA dad de local : Guardar confi dad de local : Restablec	en el caso de que se restablezan los parámetros predeterminados del punto de acceso. Para guardar la configuración, haga clic en el botón "suardar configuración". Más información		
	Restablecer en los predetermina f Reinicie el dispo	valores dos de Restabl ábrica : Restablecer todo predeterminados sitivo : Reiniciar el dis	lecer valores predeterminados o is los parámetros en los valo de fábrica. positivo	de fábrica	
	Borrar paquete de	idioma: Borrar			





D-Link DAP-1522 User Manual

Status Device Info

This page displays the current information for the DAP-1522. It will display the LAN and wireless LAN information.

- **General:** Displays the access point's time and firmware version.
 - LAN: Displays the MAC address and the private (local) IP settings for the access point.
- Wireless LAN: Displays the wireless MAC address and your wireless settings such as SSID and Channel.

D-Lin	<mark>ik</mark>					
DAP-1522	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
DEVICE INFO	DEVICE INFORMAT	FION			Helpful Hints	
LOGS	– All of your network co displayed here.	nnection details are displa	yed on this page. The firm	ware version is also	All of your LAN and WLAN connection details are displayed here.	
	GENERAL				More	
	Firmw	vare Version : 1.21 , Thu	ı 04 Jun 2009			
	LAN					
	Conn	ection Type : Static IP				
	MAC Address : 00:22:b0:73:50:5f					
	S					
	Default Gateway :					
	WIRELESS LAN					
	Win	eless Radio : Enabled				
		Status : connected				
	м					
	Network					
	Se	curity Type : Open / Di	sabled			
	Wi-Fi Prote	ected Setup : Enabled / r	Not Configured			
WIRELESS	5					

Logs

The access point automatically logs (records) events of possible interest in its internal memory. If there isn't enough internal memory for all events, logs of older events are deleted, but logs of the latest events are retained. The Logs option allows you to view the access point logs. You can define what types of events you want to view and the level of the events to view. This access point 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: There are three types of logs that can be viewed: System Activity, Wireless Activity, and Notice. Click on the corresponding check box for the type(s) that you want displayed in the log.

Enable Select this check box and enter a Log Server name **Remote Log:** or IP address to enable the remote log feature.

Apply Log Click this button to immediately filter the log results Settings Now: so that only the selected options appear in the Log Details section of this screen.

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

Clear: This option clears all of the log contents.

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

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	(C				
DAP-1522	SETUP	ADVANCED	MAINTENANLE	STATUS	HELP
DEVICE INFO	LOGS				Helpful Hints
LOGS	View the logs. You car	n define the event levels t	o view.		Check the log frequently to detect unauthorized network usage.
	LOG OPTIONS				Ĩ
	What to View	: System Activity	Vireless Activity	✓ Notice	More
	Enable Remo	te Log : 📃 🛛 Log Ser	ver / IP Address :		
		Apply Log Se	attings Now		
	LOG DETAILS				
	First Page Last Pa	ge Previous Next (lear Refresh Save Log		
	Page 1 of 2				
	Time	Priority	Message		
	Uptime 0 day 09:55:4	14 [Wireless]Initia	te Wireless success		
	Uptime 0 day 09:55:3	89 [Wireless]Stop	Wireless success		
	Uptime 0 day 09:55:3	39 [Wireless]Initiat	te Wireless success		
	Uptime 0 day 09:55:3	88 [Wireless]Stop	Wireless success		
	Uptime 0 day 09:32:2	23 [SYSACT]Web	login success from 192.16	8.0.5	
	Uptime 0 day 09:32:3	L4 [SYSACT] Devi	ce is operating in Bridge m	ode!	
	Uptime 0 day 09:32:0)7 [Wireless]Initia	te Wireless success		
	Uptime 0 day 09:32:0	05 [Wireless]Stop	Wireless success		
	Uptime 0 day 09:30:0	05 [SYSACT]Web	login success from 192.16	3.0.5	
	Uptime 0 day 09:27:5	59 [SYSACT]Web	logout from 192.168.0.5		

Help

۲				
SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
SUPPORT MENU Setup Help	<u>Qs</u> less			Helpful Hints
	SETUP SUPPORT MENU Setup Help . Wizard . Wireless . Network Settin Advanced Help . Advanced Help . Advanced Wire . QoS . Schedule Maintenance Help . Admin . Time . System . Eirmware Status Help . Device Info . Logs	SETUP ADVANCED SUPPORT MENU Setup Help • Wizard • Wireless • Wireless • Network Settings Advanced Help • Advanced Wireless • OoS • Schedule Maintenance Help • Admin • Time • System • System • Device Info • Logs	SETUP ADVANCED MAINTENANCE SUPPORT MENU Setup Help . • Wizard . . • Wizards . . • Wireless . . • Network Settings . . Advanced Wireless . . • Ogs . . • Schedule . . Maintenance Help . . • System . . • Eirmwares . . Status Help . . • Device Info . . • Logs . .	SETUP ADVANCED MAINTENANCE STATUS SUPPORT MENU Setup Help .
Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DAP-1522 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 bridge 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 WEP in AP Mode

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on **Setup** and then click **Wireless Settings** on the left side.
- 2. Next to Security Mode in the Wireless Security Mode section, select **WEP**.
- 3. Next to WEP Key Length in the WEP section, select both the type of input (hexidecimal or ASCII) and the level of encryption (64bit or 128-bit). Hex-(recommended) Letters A-F and numbers 0-9 are valid.

WIRELESS SECURITY MODE	
Security Mode :	WEP
WEP	
WEP Key Length :	64Bit (10 hex digits)
WEP Key value :	
Verify WEP Key value :	
Default WEP Key :	WEP Key 1 💌
Authentication :	Open 🔽

- 4. Next to Default WEP Key and the first selection on the drop-down menu, WEP Key 1. Enter a WEP key that you create in the WEP Key value and Verify WEP Key value fields. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys using the Default WEP Key drop-down menu.
- 5. Next to Authentication, select **Open** or **Shared Key**.
- 6. Click **Save Settings** at the top of the window to save your settings. If you are configuring the access point 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 access point.

Configure WPA-Personal (AP Mode)

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on Setup and then click Wireless Settings on the left side.
- 2. Next to Security Mode in the Wireless Security Mode section, select WPA-Personal.
- 3. Next to *WPA Mode in the WPA section*, select Auto (WPA or WPA2), WPA2 Only, or WPA Only. Use Auto if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select TKIP, AES, or TKIP and AES.
- 5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed.
- 6. Next to the *Pre-Shared Key* section, enter a key in the Passphrase field. 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.
- 7. Click **Save Settings** at the top of the window to save your settings. If you are configuring the access point 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 access point.

WIRELESS SECURITY MODE	
Security Mode :	WPA-Personal
WPA	
WPA Mode : Cipher Type : Group Key Update Interval :	Auto (WPA or WPA2) V TKIP V 1800 (seconds)
PRE-SHARED KEY	
Passphrase :	

Configure WPA-Enterprise (AP Mode)

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on **Setup** and then click **Wireless Settings** on the left side.
- 2. Next to Security Mode in the Wireless Security Mode section, select **WPA-Enterprise**.
- 3. Next to *WPA Mode in the WPA section*, select **Auto (WPA or WPA2), WPA2 Only, or WPA** Only. Use Auto if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select TKIP, AES, or TKIP and AES.
- 5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed.
- 6. Next to RADIUS Server IP Address in the EAP (802.1X) section, 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.
- 9. Click Save Settings at the top of the window to save your settings.

WIRELESS SECURITY MODE	
Security Mode : 🛛	VPA-Enterprise
WPA	
WPA Mode: A Cipher Type: T Group Key Update Interval: 18	NUTO (WPA or WPA2) V KIP V 800 (seconds)
EAP (802.1X)	
RADIUS Server IP Address : RADIUS Server Port : 18 RADIUS Server Shared Secret :	812

Configure WEP (Bridge Mode)

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the bridge (192.168.0.50). Click on **Setup** and then click **Wireless Settings**.
- 2. For **Security Mode** in the *Wireless Security Mode* section, select WEP.
- 3. Next to WEP Key Length in the WEP section, select both the type of input (hexidecimal or ASCII) and the level of encryption (64bit or 128-bit). Hex-(recommended) Letters A-F and numbers 0-9 are valid.

WIRELESS SECURITY MODE	
Security Mode :	WEP
WEP	
WEP Key Length :	64Bit (10 hex digits)
WEP Key value :	
Verify WEP Key value :	
Default WEP Key :	WEP Key 1 💌
Authentication :	Open 💌

- 4. For the Default WEP Key and the first selection on the drop-down menu, WEP Key 1. Enter a WEP key that you create in the WEP Key value and Verify WEP Key value fields. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys using the Default WEP Key drop-down menu.
- 5. For Authentication, select **Open** or **Shared Key**.
- 6. Click **Save Settings** to save your settings. If you are configuring the access point 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 access point.

Configure WPA-Personal (Bridge Mode)

It is recommended to enable encryption on your wireless access point 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 bridge (192.168.0.50).

 Click on Setup and then click Wireless Settings on the left side.

 Security Mode : WPA-Personal
- 2. Next to Security Mode in the Wireless Security Mode section, select **WPA-Personal.**
- 3. Next to *WPA Mode in the WPA section*, select **Auto (WPA or WPA2), WPA2 Only, or WPA** Only. Use **Auto** if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select **TKIP**, **AES**, or **TKIP** and **AES**.
- 5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed.
- 6. Next to the *Pre-Shared Key section*, enter a key in the Passphrase field. 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.
- 7. Click **Save Settings** at the top of the window to save your settings. If you are configuring the access point 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 access point.

WIRELESS SECURITY MODE
Security Mode : WPA-Personal
WPA
WPA
WPA
Cipher Type : TKIP
Group Key Update Interval : (seconds)
PRE-SHARED KEY
Passphrase : _____

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 bridge 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.**



90 Wireless Network Connect	ion 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.
Set up a wireless network for a home or small office	((o)) Test
Related Tasks	Unsecured wireless network
(i) Learn about wireless	Unsecured wireless network
Change the order of preferred networks	((p)) salestest
Change advanced settings	((•)) test1
	This network, requires a network key. If you want to connect to this network, dick Connect.
	((p))
	Connect

3. The **Wireless Network Connection** box will appear. Enter the same WEP key that is on your access point 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 access point.

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

Configure WPA-PSK

It is recommended to enable WEP on your wireless bridge 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.**



- Wireless Network Connection 6 Choose a wireless network Network Tasks 🚭 Refresh network list Click an item in the list below to connect to a wireless network in range or to get more information ~ Test 🚜 Set up a wireless network ((Q)) for a home or small office •00D Unsecured wireless network default ((O)) Related Tasks 000U Unsecured wireless network Learn about wireless networking salestest ((Q)) ☆ Change the order of **BOOU** preferred networks 📅 Security-enabled wireless network test1 One of the second se ((0)) settings alli Security-enabled wireless network This network requires a network key. If you want to connect to this network, dick Connect. <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 access point.

Wireless Network Con	nection 🔀
The network 'test1' require key helps prevent unknown	is a network key (also called a WEP key or WPA key). A network n intruders from connecting to this network.
Type the key, and then clic	:k Connect.
Network <u>k</u> ey:	1
Confirm network key:	
	<u>C</u> onnect Cancel

Connect to a Wireless Network Using Windows Vista®

Windows Vista® users may use the convenient, built-in wireless utility. Follow these instructions:

From the Start menu, go to Control Panel, and then click on **Network and Sharing Center**.

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





Click Connect Anyway to continue.

The utility will display the following window to indicate a connection is being made.

The final window indicates the establishment of a successful connection.

The next two pages display the windows used to connect to either a WEP or a WPA-PSK wireless network.







Configure WEP

It is recommended to enable WEP on your wireless bridge 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.

Click on a network (displayed using the SSID) using WEP under Select a network to connect to and then click the **Connect** button.

Enter the appropriate security key or passphrase in the field provided and then click the **Connect** button.

		L
D-Link	Security-enabled network	20
	Name: D-Link Signal Strength: Excellent Security Type: WEP Radio Type: 802.11g SSID: D-Link	



Configure WPA-PSK

It is recommended to enable WEP on your wireless bridge 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.

Click on a network (displayed using the SSID) using WPA-PSK under Select a network to connect to and then click the **Connect** button.

Enter the appropriate security key or passphrase in the field provided and then click the **Connect** button.

Show	All	~]	[·
D	-Link	Security-enabled network	llee
		Name: D-Link Signal Strength: Excellent Security Type: WPA-P5K Radio Type: 802.11g SSID: D-Link	
		SSID: D-Link	



Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DAP-1522. 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 access point (192.168.0.50 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
 - Firefox 3.0 or higher
 - Safari 3.0 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 access point 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 access point 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 access point. Unfortunately this process will change all your settings back to the factory defaults.

To reset the access point, locate the reset button (hole) on the rear panel of the unit. With the access point powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the access point will go through its reboot process. Wait about 30 seconds to access the access point. The default IP address is 192.168.0.50. 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 access point?

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:

	C:∖>ping yahoo.com -f -l 1482
ping [url] [-f] [-l] [MTU value]	Pinging yahoo.com [66.94.234.13]
	Packet needs to be fragmented bu Packet needs to be fragmented bu Packet needs to be fragmented bu Packet needs to be fragmented bu
xample: ping vahoo.com -f -l 1472	Ping statistics for 66.94.234.13 Packets: Sent = 4, Received Approximate round trip times in Minimum = Øms, Maximum = Øm
	C:∖>ping yahoo.com -f -l 1472
	Pinging yahoo.com [66.94.234.13]
	Reply from 66.94.234.13: bytes=1 Reply from 66.94.234.13: bytes=1 Reply from 66.94.234.13: bytes=1 Reply from 66.94.234.13: bytes=1 Reply from 66.94.234.13: bytes=1
	Ping statistics for 66.94.234.13 Packets: Sent = 4, Received Approximate round trip times in Minimum = 93ms, Maximum = 2
	C:\>

E

with 1482 bytes of data:

0, Lost = 4 (100% loss)

with 1472 bytes of data:

Lost = 0 (0% loss).

72 time=93ms TTL=52 72 time=109ms TTL=52 72 time=125ms TTL=52 72 time=203ms TTL=52

DF set. DF set. DF set. DF set.

illi-seconds: , Average = Oms

illi-seconds: 3ms, Average = 132ms 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 access point with the proper MTU size.

To change the MTU rate on your access point follow the steps below:

- Open your browser, enter the IP address of your access point (192.168.0.50) 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 Access point 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.

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, 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 access point or Access Point

Make sure you place the bridge/access point in a centralized location within your network for the best performance. Try to place the bridge/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, wireless speakers, and televisions as far away as possible from the bridge/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

Security

Don't let your next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the access point. 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 bridge.
- Ad-Hoc Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more wireless network Cardbus adapters.

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

this capability. Otherwise, you r the appropriate IP settings.	ed automatically if your network support need to ask your network administrator f
🔿 Obtain an IP address auto	omatically
💿 Use the following IP addre	
IP address:	192.168.0.52
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.0.1
Obtain DNS server addres Ottain DNS server addres Ottain DNS server	rver addresses:
Frerened Divis server.	132.168.0.1
Alternate DNS server:	

Example: If the access point'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 access point (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
- IEEE 802.11a
- 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 Rates¹

- 300Mbps 108Mbps
- 54Mbps 48Mbps
- 36Mbps 24Mbps
- 18Mbps 12Mbps
- 11Mbps 9Mbps
- 6Mbps 5.5Mbps
- 2Mbps 1Mbps

Maximum Operating Voltage

• 3.3V

Maximum Operating Current

• 1435 mA

Modulation

- 11b: DQPSK, DBPSK and CCK
- 11a/g: BPSK, QPSK, 16QAM, 64QAM, OFDM
- 11n: BPSK, QPSK, 16QAM, 64QAM, OFDM, MCS

Frequency Range²

• 2.4GHz to 2.483GHz • 5.15GHz~5.825GHz³

LEDs

- Power
 Bridge
- AP LAN

Operating Temperature

• 32°F to 104°F (0°C to 40°C)

Humidity

• 90% maximum (non-condensing)

Safety & Emissions

- FCC CE • IC • C-Tick
 - IC C-
- CSA

Dimensions

- L = 5.75 inches
- W = 4.5 inches
- H = 1.25 inches

¹Maximum wireless signal rate derived from IEEE Standard 802.11g, 802.11a and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

²Range varies depending on country's regulation.

 $^{3}\mbox{The DAP-1522}$ doesn't include 5.25-5.35GHz & 5.47~5.725GHz.

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.

Federal Communication Commission Interference 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.

For operation within 5.15 ~ 5.25GHz frequency range, it is restricted to indoor environment.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

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.

Industry Canada Statement

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

1) this device may not cause interference and

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

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

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

Caution:

The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to cochannel mobile satellite systems.

Because high power radars are allocated as primary users (meaning they have priority) in 5250-5350 MHz and 5650-5850 MHz, these radars could cause interference and/or damage to license exempt LAN devices.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

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

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.

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