

D-Link[®]

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User Manual

Media Streaming Adapter

DAP-1560

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Package Contents



DAP-1560 Media Streaming Adapter



Ethernet Cable



Power Adapter



CD-ROM

Note: Using a power supply with a different voltage rating than the one included with the DAP-1560 will cause damage and void the warranty for this product.

System Requirements

Network Requirements	<ul style="list-style-type: none">• An Ethernet-based Network• IEEE 802.11n/g wireless clients• IEEE 802.11a wireless clients• 10/100/1000 Ethernet
Web-based Configuration Utility Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows®, Macintosh, or Linux-based operating system• An installed Ethernet adapter <p>Browser Requirements:</p> <ul style="list-style-type: none">• Internet Explorer® 6.0 and higher• Mozilla Firefox 3.0 and higher• Google™ Chrome 2.0 and higher• Apple Safari 3.0 and higher <p>Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</p>
CD Installation Wizard Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows® 7/Vista®/XP (Service Pack 3)• An installed Ethernet adapter• CD-ROM drive

Introduction

The D-Link Media Streaming Adapter (DAP-1560) enable you to easily upgrade any router to support streaming of High-Definition (HD) multimedia content over a wireless connection. This device lets you create a 'bridge' between two different physical media types. This versatile kit transforms your wired device into a wireless one without the added hassle of installing Ethernet cables.

The DAP-1560 is the first true 4x4 spatial streaming WLAN on the market, it uses all four of its antennas to send out multiple data streams simultaneously, boosting the data rate up to 600Mbps*.

Selectable Dual Band technology enables you to stream HD videos and enjoy lag free gaming with less interference on the 5GHz band or chat, email and surf the web on the 2.4GHz band.

* 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

High-Definition Performance

The D-Link Media Streaming Adapter (DAP-1560) enables you to easily upgrade any router to support streaming of High-Definition (HD) multimedia content over a wireless connection. Connect any Ethernet-enabled devices in your entertainment center like your game consoles, Digital Video Recorder (DVR) or Digital Media Adapters (DMA) to the DAP-1560 to upgrade your network and enable dual-band wireless streaming.

Faster Speed and Performance

The DAP-1560 is the first true 4x4 spatial streaming WLAN on the market, it uses all four of its antennas to send out multiple data streams simultaneously, boosting the data rate up to 600Mbps*, providing you with faster speed and performance to enhance your gaming and HD video streaming experience. The DAP-1560 also uses Intelligent Antenna technology to transmit multiple streams of data by bouncing multiple wireless signals off of walls and ceilings to work around obstructions and help eliminate dead spots, enabling you to receive wireless signals in the farthest corners of your home.

Better Wireless Experience

Selectable dual band (2.4GHz or 5GHz) enables you to select the wireless signal that best fits your network usage. With speeds up to 600Mbps*, you can use the clearer 5GHz band to stream High-Definition movies and other media, and enjoy lag-free gaming, with less interference, giving you a better wireless experience with the fastest speeds possible.

Quality of Service

The DAP-1560 is equipped with Quality of Service (QoS), which helps organize and prioritize the data streams in your network so your VoIP, HD Video streaming, and gaming runs smoother over your wireless network.

Green Ethernet Technology

The DAP-1560 is a D-Link Green product, which means it helps you conserve energy.

* 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.

Hardware Overview Connections



1	WPS	Press the WPS button to automatically connect to a WPS-enabled wireless client.
2	LAN Port	Connect 10/100/1000 Ethernet devices such as computers, switches, and hubs.
3	Mode Selector	Slide to the left for Access Point (AP) Mode or to the right for Bridge mode.
4	Power Receptor	Receptor for the supplied power adapter.
5	Reset Button	Hold the reset button for at least 6 seconds to reset the device back to the factory default settings. All the LEDs will turn on for 2 second and then begin the reboot process.

LEDs



1	Power LED	A solid green light indicates a proper connection to the power supply.
2	Wireless LED	A blinking green light indicates the wireless function is working. The light will blink fast during data transmission. The light will be off during device reboot or if the wireless radio is disabled.
3	WPS LED	A blinking light indicates that the DAP-1560 is performing the WPS function.

Installation

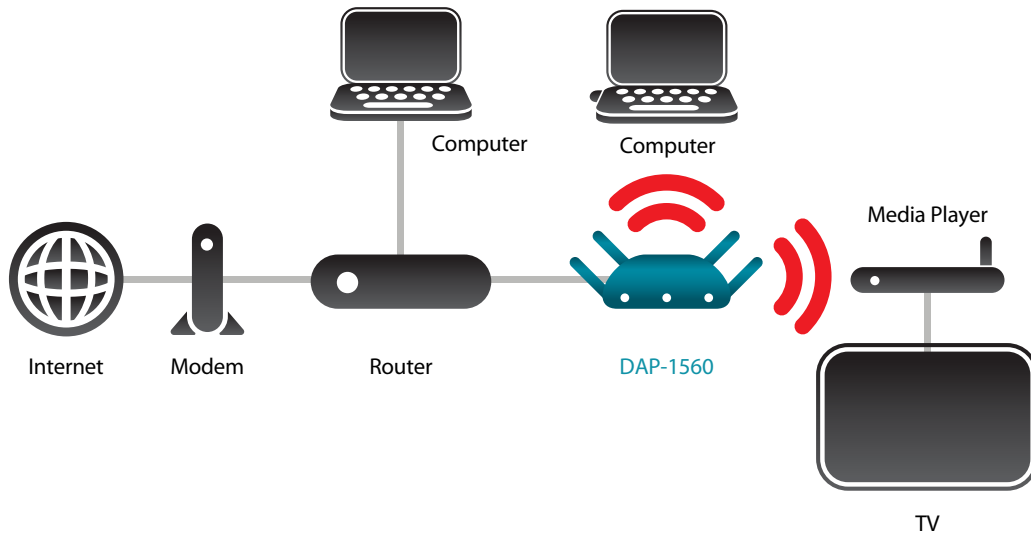
This section will walk you through the installation process. Placement of the DAP-1560 is very important. Do not place the DAP-1560 in an enclosed area such as a closet, cabinet, or in the attic or garage.

Wireless Modes

Depending on how you want to use your DAP-1560 will determine which mode you use. This section will help you figure out which setting works with your setup.

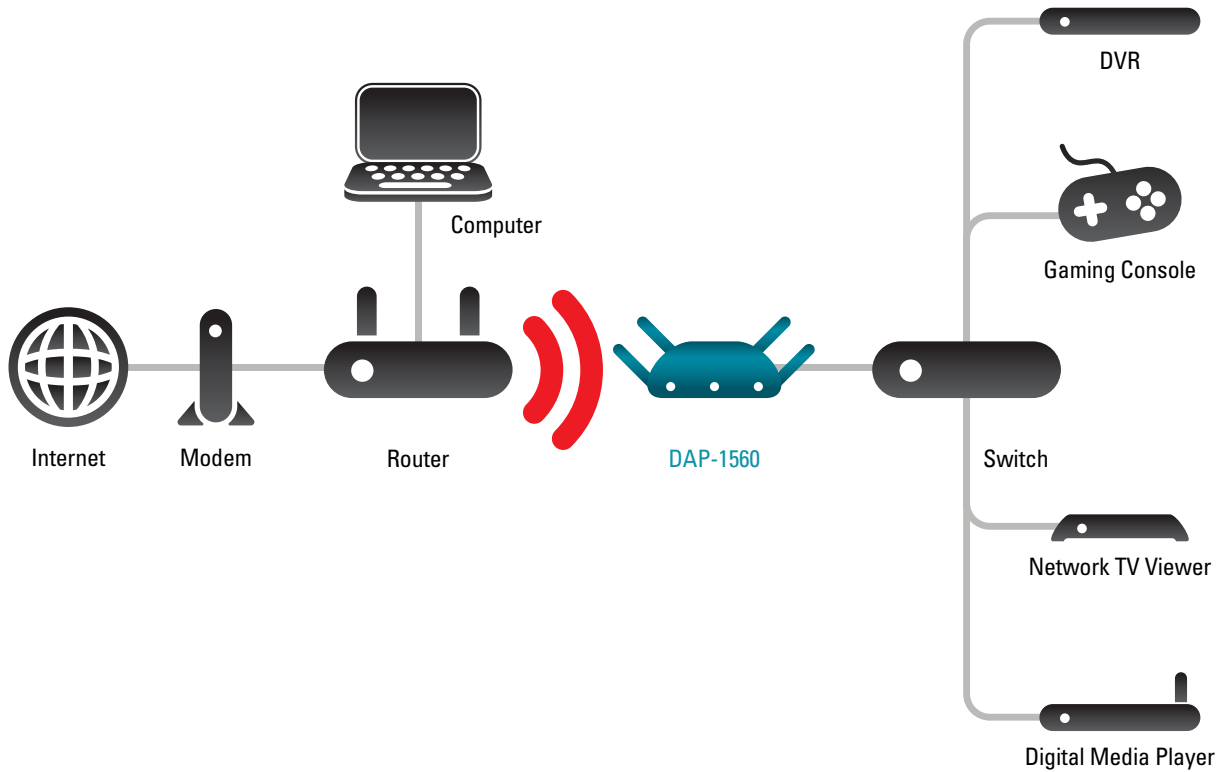
AP Mode

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-1560 to **AP**. Refer to page 14 for configuration instructions.



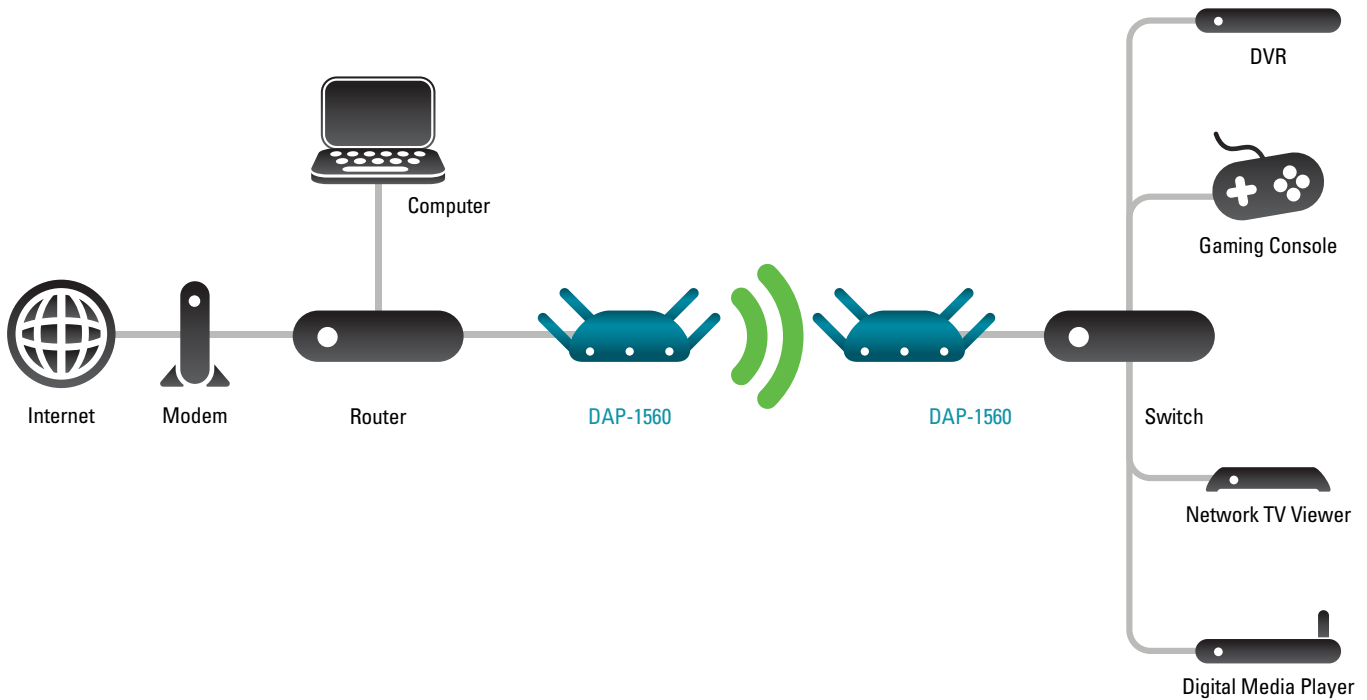
Bridge Mode

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-1560 to **Bridge**. Refer to page 44 for configuration instructions.



Create a Full MediaBand (5GHz wireless) Network

If you have two DAP-1560 devices and want to create a wireless network with full MediaBand technology you will need to connect one DAP-1560 to your router and move the switch on the back panel to **AP**. The second DAP-1560 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**.



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.

Configuration (AP Mode)

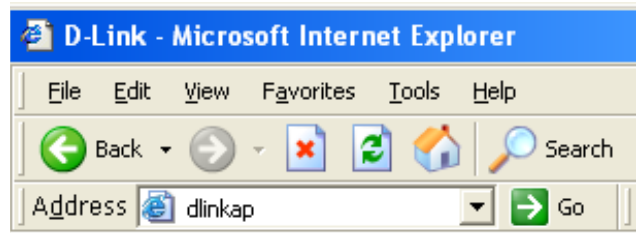
This section will show you how to configure your new D-Link wireless access point using the web-based configuration utility.

Web-based Configuration Utility

1. On the back of the DAP-1560, slide the mode selector to the left (AP Mode).

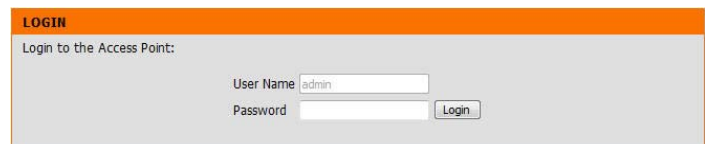


2. To access the configuration utility, open a web browser such as Internet Explorer and enter **dlinkap** or **192.168.0.50** in the address field.



3. Enter **admin** and then enter your password. Leave the password blank by default.

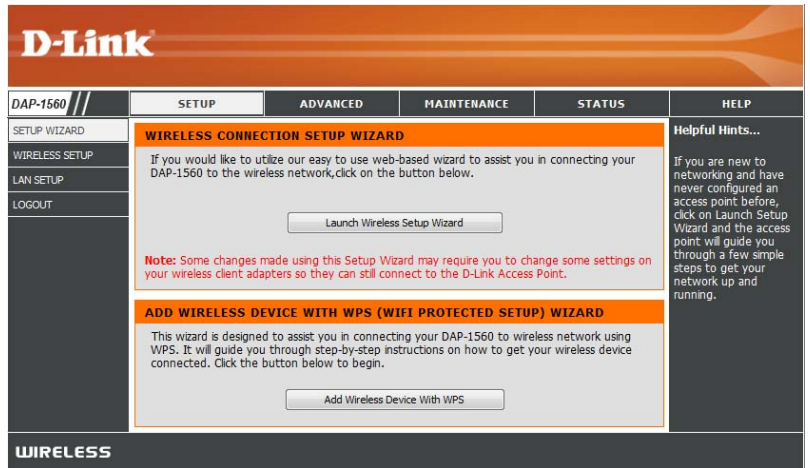
If you get a *Page Cannot be Displayed* error, please refer to the Troubleshooting section for assistance.



Setup Wizard

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

If you want to enter your settings without running the wizard, click **WIRELESS SETUP** on the left side and skip to page 25.



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.

SET YOUR DEVICE NAME

Enter the Device Name of the AP. Recommend 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) :

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 :

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

Skip to page 18 for Manual configuration.

Click **Next** to continue.

SELECT CONFIGURATION METHOD

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

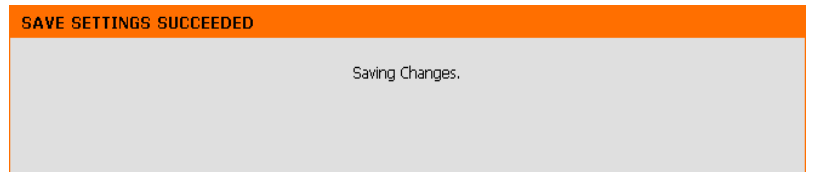
Auto -- Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)

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

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



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



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

Click **Next** to continue.

SELECT CONFIGURATION METHOD

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

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 20.

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

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 you 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

Section 3 - Configuration

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.

WELCOME TO THE D-LINK WIRELESS SETUP WIZARD

Please enter the following settings in the wireless device that you are adding to your wireless network and keep a note of it for future reference.

Wireless Network Name (SSID) : **dlink**

Wireless Security Mode : **WPA-PSK**

Network key : **1DE746CDD0273EC39370F58684BCCE2
3FD21D0312B8257CA9351717DB1C32B**

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.

SETUP 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**

Select **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):

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 you 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)

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 the following guidelines

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

Network key :

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.

WELCOME TO THE D-LINK WIRELESS SETUP WIZARD

Please enter the following settings in the wireless device that you are adding to your wireless network and keep a note of it for future reference.

Wireless Network Name (SSID) : dlink
Wireless Security Mode : WPA-PSK
Network key : 123456789

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 :

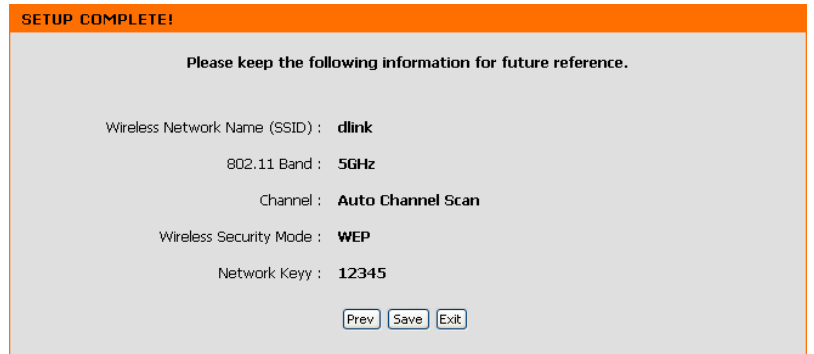
- Exactly 5 or 13 characters
- Exactly 10 or 26 characters using 0-9 and A-F

A longer WEP key is more secure than a short one

Network Key :

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

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



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 the next page.

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

Start **WPS** on the wireless device within 2 minutes (120 seconds) you are adding to your wireless network to complete the setup.

USING PIN NUMBER

Please start WPS on the wireless device you are adding to your wireless network within 53 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)

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

Press down the **Push Button** on the wireless device that you are adding to your network to complete the setup within 2 minutes (120 seconds).

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

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

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

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

Enable Auto Channel Scan: The Auto Channel Scan setting can be selected to allow the DAP-1560 to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DAP-1560. If you enable Auto Channel Scan, this option will be grayed out.

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:
802.11g Only - Select if all of your wireless clients are 802.11g.
Mixed 802.11n and 802.11g - Select if you are using both 802.11n and 802.11g wireless clients.
802.11n Only - Select only if all of your wireless clients are 802.11n.
Mixed 802.11n, 802.11g, and 802.11b - Select if you are using 802.11n, 802.11g, and 802.11b wireless clients.

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



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

Enable Hidden Wireless: Check this box if you do not want the SSID of your wireless network to be broadcasted by the DAP-1560. If enabled, the SSID of the DAP-1560 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DAP-1560 in order to connect to it.

Security Mode: Refer to page 68 for more information regarding the wireless security.

Enable: Enable the Wi-Fi Protected Setup feature.

Current PIN: Shows the current value of the access point's PIN.

Reset PIN to Default: Restore the default PIN of the access point.

Generate New PIN: 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 interface of the user.

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

Network Settings DHCP

DHCP stands for Dynamic Host Control Protocol. The DHCP Server (usually your router) will automatically assign an IP address to the DAP-1560 . When you turn your DAP-1560 on, it will automatically receive the proper TCP/IP settings provided by the DHCP Server.

My LAN Connection is: Use the drop-down menu to select Dynamic IP (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.

The screenshot shows the D-Link web interface for the DAP-1560. The main navigation bar includes 'DAP-1560', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' menu is expanded to show 'SETUP WIZARD', 'WIRELESS SETUP', 'LAN SETUP', and 'LOGOUT'. The 'LAN SETUP' page is titled 'NETWORK SETTINGS' and contains the following sections:

- NETWORK SETTINGS:** A text box explaining that the Device Name (NetBIOS Name) allows for easier configuration via TCP/IP protocol. It includes 'Save Settings' and 'Don't Save Settings' buttons.
- LAN CONNECTION TYPE:** A section with the instruction 'Choose the mode to be used by the Access Point.' Below it, a dropdown menu is set to 'Dynamic IP (DHCP)'.
- DYNAMIC IP(DHCP) LAN CONNECTION TYPE:** A section for 'IP Address Information' with input fields for:
 - IP Address: 192.168.0.50
 - Subnet Mask: 255.255.255.0
 - Gateway Address: (empty)
- DEVICE NAME(NETBIOS NAME):** A section with a 'Device Name' input field containing 'dlinkap'.

On the right side of the page, there is a 'Helpful Hints...' section with two sub-sections:

- LAN Settings:** Explains that LAN settings are private to the internal network and not visible to the Internet. The factory default setting is Dynamic IP (DHCP).
- LAN Connection type:** States that the factory default setting is Dynamic IP (DHCP) to allow the DHCP host to automatically assign the Access Point an IP address that conforms to the applied local area network. It also mentions that 'Static IP' can be manually configured in accordance to the applied local area network.

Static IP

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

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

Subnet Mask: Enter the Subnet Mask of your network.

Default Gateway: Enter the Gateway of your network (usually the IP address of your router).

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.

The screenshot shows the D-Link DAP-1560 web interface. The top navigation bar includes 'DAP-1560', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'SETUP WIZARD', 'WIRELESS SETUP', 'LAN SETUP', and 'LOGOUT'. The main content area is titled 'NETWORK SETTINGS' and includes a 'Helpful Hints...' section on the right. The 'LAN CONNECTION TYPE' section shows 'My LAN Connection is:' set to 'Static IP'. The 'STATIC IP ADDRESS LAN CONNECTION TYPE' section contains input fields for 'IP Address' (192.168.0.50), 'Subnet Mask' (255.255.255.0), and 'Gateway Address'. The 'DEVICE NAME (NETBIOS NAME)' section has a 'Device Name' field with 'dlinkap' entered.

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.

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

MAC Address: Enter the MAC address of the adapter (client) that you want to filter. Click **Save Settings** at the top to save the filter rule.

D-Link											
DAP-1560	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP						
MAC ADDRESS FILTER	MAC ADDRESS FILTER				Helpful Hints...						
ADVANCED WIRELESS	The DAP-1560 can be setup to deny or only allow access to wireless clients with the listed MAC addresses.				Wireless Access Settings: Create a list of MAC addresses that you would either like to accept or reject access to your network.						
GUEST ZONE	<input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/>										
LOGOUT	WIRELESS ACCESS SETTINGS Use the client's MAC Address to authorize network access through the Access Point. MAC Address Filter : <input type="text" value="Disable"/>										
MAC FILTER LIST											
<table border="1"> <thead> <tr> <th>MAC Address</th> <th>Edit</th> <th>Del</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						MAC Address	Edit	Del			
MAC Address	Edit	Del									
WIRELESS											

Advanced Wireless

Transmit Power: Sets the transmit power of the antennas (**Low, Medium, or High**).

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.

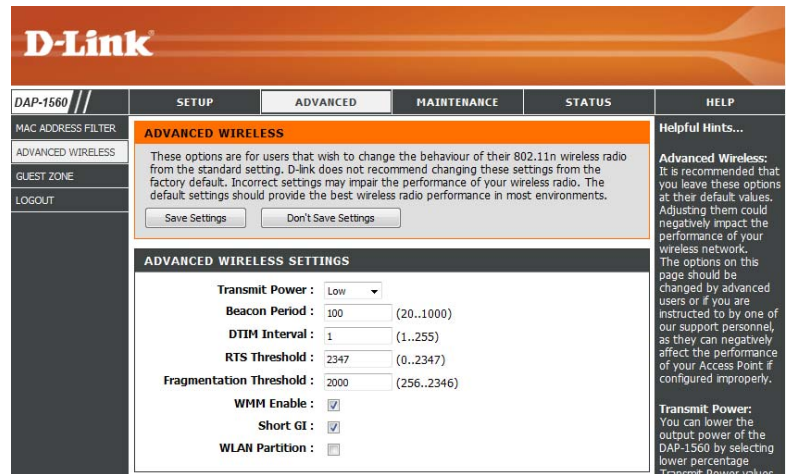
RTS Threshold: This value should remain at its default setting of 2347. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation Threshold: The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2000 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.

WLAN Partition: Check to enable WLAN Partition.



Guest Zone

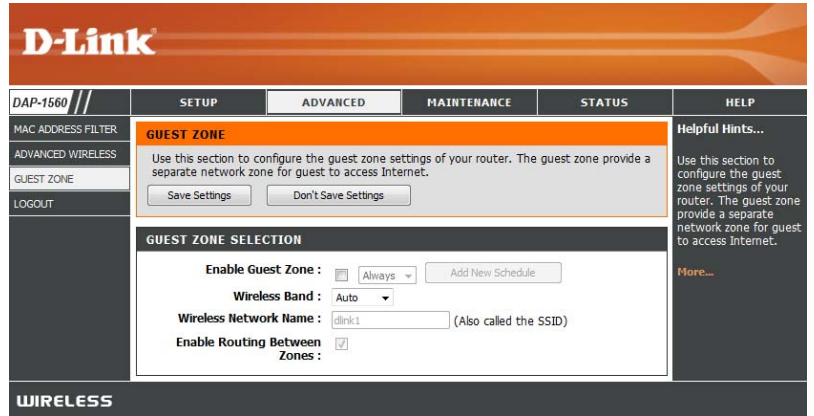
The Guest Zone feature will allow you to create temporary zones that can be used by guests to access the Internet. These zones will be separate from your main wireless network.

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

Wireless Band: Select **Auto**, **2.4GHz**, or **5GHz**.

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

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



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

Enable Graphical Authentication: Check this box to require users to type letters or numbers from a distorted image displayed on the login screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.

The screenshot displays the D-Link DAP-1560 Maintenance Admin interface. At the top, the D-Link logo is visible. Below it, a navigation menu includes tabs for 'DAP-1560', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'MAINTENANCE' tab is selected. The main content area is divided into sections: 'ADMINISTRATOR SETTINGS', 'PASSWORD', and 'ADMINISTRATION'. The 'ADMINISTRATOR SETTINGS' section contains instructions for changing the password and two buttons: 'Save Settings' and 'Don't Save Settings'. The 'PASSWORD' section prompts the user to enter the same password in two boxes for confirmation. The 'ADMINISTRATION' section includes a checkbox for 'Enable Graphical Authentication'. On the right side, there is a 'Helpful Hints...' sidebar with a 'Passwords:' section providing security advice.

System

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

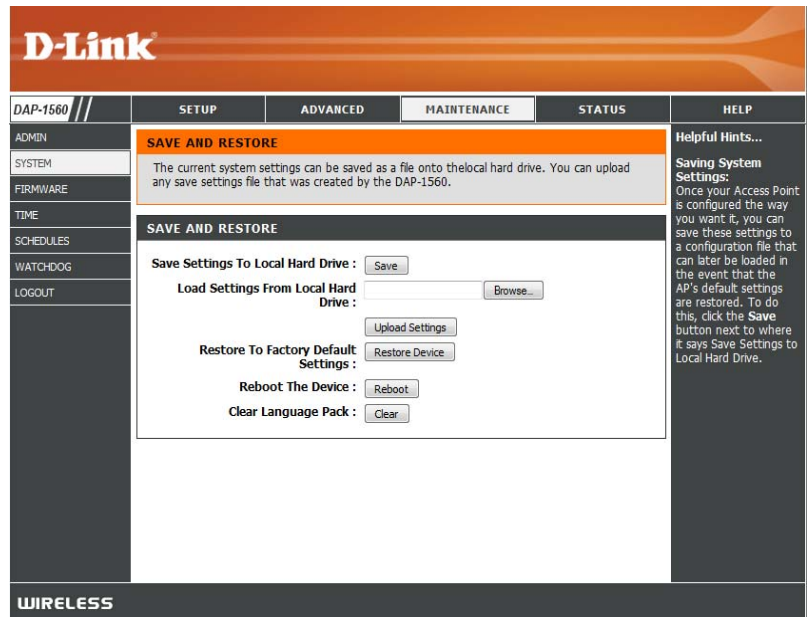
Load Settings from Local Hard Drive: Use this option to load previously saved access point configuration settings. First, click the **Browse** button to find a previously save file of configuration settings. Then, click the **Load** button to transfer those settings to the access point.

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

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

Reboot the Device: Click to reboot the access point.

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



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.

The screenshot shows the D-Link web interface for a DAP-1560 access point. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. A left sidebar contains menu items: ADMIN, SYSTEM, FIRMWARE, TIME, SCHEDULES, WATCHDOG, and LOGOUT. The main content area is divided into several sections:

- FIRMWARE:** Contains a message about new firmware for DAP-1560, a link to the support site, and a warning: "Do not update firmware through wireless network!!".
- FIRMWARE INFORMATION:** Displays "Current Firmware Version" and "Current Firmware Date".
- FIRMWARE UPGRADE:** Includes a note that some upgrades reset configuration to factory defaults, instructions for a wired connection, and an "Upload" button with a "Browse..." link.
- LANGUAGE PACKAGE INFORMATION:** Includes a note that language updates change web page display, instructions for a wired connection, and another "Upload" button with a "Browse..." link.
- Helpful Hints...:** A sidebar note explaining that firmware updates are released periodically to improve functionality and that users should check the support site for updates.

The bottom of the interface features a "WIRELESS" status indicator.

Section 3 - Configuration

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**.

SYSTEMEINSTELLUNGEN

Im Abschnitt "Systemeinstellungen" können Sie das Gerät neu starten oder den Access Point auf die Werkseinstellungen zurücksetzen. Wenn das Gerät auf die Werkseinstellungen zurückgesetzt wird, werden alle Einstellungen, einschließlich aller von Ihnen erstellten Regeln, gelöscht.

Die aktuellen Systemeinstellungen können als Datei auf der lokalen Festplatte gespeichert werden. Die gespeicherte Datei oder eine andere vom Gerät erstellte, gespeicherte Einstellungsdatei kann in das Gerät geladen werden.

SYSTEMEINSTELLUNGEN

Auf der lokalen Festplatte speichern :

Von der lokalen Festplatte laden :

Auf Werkseinstellungen zurücksetzen :
Alle Einstellungen auf die Werkseinstellungen zurücksetzen.

Starten Sie das Gerät neu :

Sprachpaket löschen :

PARÁMETROS DEL SISTEMA

La sección Parámetros del sistema le permite reiniciar el dispositivo o restaurar el punto de acceso a los parámetros predeterminados de fábrica. Al restaurar en la unidad los parámetros predeterminados de fábrica se borrarán todos los parámetros, incluidas las reglas que haya creado.

Se pueden guardar los parámetros del sistema actual como un archivo en la unidad de disco duro local. Puede cargarse en la unidad el archivo guardado o cualquier otro archivo de parámetros guardado creado por el dispositivo.

PARÁMETROS DEL SISTEMA

Guardar en la unidad de disco duro local :

Cargar desde la unidad de disco duro local :

Restablecer en los valores predeterminados de fábrica :
Restablecer todos los parámetros en los valores predeterminados de fábrica.

Reinicie el dispositivo :

Borrar paquete de idioma :

PARAMÈTRES SYSTÈME

La section Configuration du système vous permet de réinitialiser le périphérique ou de restaurer les paramètres d'usine point d'accès. Restaurer les valeurs d'usine de tous les paramètres efface tous vos paramètres, y compris toutes les règles que vous avez créées.

La configuration actuelle du système peut être enregistrée sous forme de fichier sur le disque dur local. Le fichier enregistré ou tout autre fichier de configuration enregistré et créé par le périphérique peut être chargé sur la machine.

PARAMÈTRES SYSTÈME

Enregistrer sur le disque dur local :

Charger depuis le disque dur local :

Restaurer les paramètres par défaut :
Restaurer tous les paramètres sur les valeurs définies à l'usine.

Réinitialiser le périphérique :

Effacer le pack linguistique :

IMPOSTAZIONI SISTEMA

La sezione Impostazioni sistema consente di riavviare il dispositivo o di ripristinare le impostazioni predefinite del punto di accesso. Il ripristino delle impostazioni predefinite comporta la cancellazione di tutte le impostazioni precedenti, incluse eventuali regole create dall'utente.

È possibile salvare le impostazioni di sistema correnti in un file del disco fisso locale. Il file salvato o qualsiasi altro file di impostazioni salvato creato dal dispositivo può quindi essere caricato nell'unità.

IMPOSTAZIONI SISTEMA

Salva su Disco fisso locale :

Carica da disco fisso locale :

Ripristina impostazioni predefinite :
Ripristina tutte le impostazioni predefinite.

Riavvio del dispositivo :

Cancella Language Pack :

Time

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

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

Daylight Saving: To select Daylight Saving time manually, click the **Enable Daylight Saving** 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.



Schedules

Name: Enter a name for your new schedule.

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

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

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

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

The screenshot shows the D-Link configuration web interface for the DAP-1560. The main content area is titled 'SCHEDULES' and contains the following elements:

- Navigation Menu (Left):** ADMIN, SYSTEM, FIRMWARE, TIME, SCHEDULES (selected), WATCHDOG, LOGOUT.
- Page Header:** D-Link logo and 'DAP-1560 //'. Below it are tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP.
- SCHEDULES Section:**
 - ADD SCHEDULE RULE:** A form with fields for Name, Day(s) (radio buttons for All Week and Select Day(s)), checkboxes for days of the week (Sun-Sat), an 'All Day - 24 hrs' checkbox, Start Time, and End Time (both with AM/PM dropdowns and '(hour:minute, 12 hour time)' labels). 'Save' and 'Clear' buttons are at the bottom.
 - SCHEDULE RULES LIST:** A table with columns for Name, Day(s), and Time Frame. The table is currently empty.
- Helpful Hints... (Right Sidebar):**
 - Text: "Schedules are used with a number of other features to define when those features are in effect."
 - Text: "Give each schedule a name that is meaningful to you. For example, a schedule for Monday through Friday from 3:00pm to 9:00pm, might be called 'After School'."
 - Text: "Click Save to add a completed schedule to the list below."
 - Text: "Click the Edit icon to change an existing schedule."
 - Text: "Click the Delete icon to permanently delete a schedule."

Watchdog

The Watchdog feature pings a specific IP address. If the IP address stops responding to pings, your access point will be rebooted. You can also select an option to have the send an email alert, if the specified IP address stops responding to pings.

Enable: Check to enable Watchdog.

Update Time Interval: Enter the interval to ping the entered address.

Watchdog Response IP: Enter the IP address of a device that can respond back to the access point.

Enable Mail Alert: Check to have the DAP-1560 email you if it cannot ping the above IP address. Syslog must be enabled for this feature to work.

SMTP Server: Enter the SMTP mail server address (IP address or URL)

Sender E-mail: Enter the "From" E-mail address.

Receiver E-mail: Enter the E-mail address to send to.

Enable Authentication: If your E-mail server requires authentication, check this box.

Account Name: Enter the account name.

Password: Enter the account password.

Verify Password: Enter the password again to verify.

The screenshot shows the D-Link configuration interface for the Watchdog feature. The main content area is titled "WATCHDOG (PING OF LIFE)" and contains the following text: "The Watchdog feature pings a specified IP address. If the IP address stops responding to pings, your access point will be rebooted. You can also select an option to have the send an e-mail alert if the specified IP address stops responding to pings." Below this text are two buttons: "Save Settings" and "Don't Save Settings".

The "WATCHDOG" section below contains the following fields:

- Enable:**
- Update Time Interval:** (minutes, range:1-60, default:1)
- Watchdog Response IP:**
- Enable Mail Alert:**
- SMTP Server:**
- Sender E-mail:**
- Receiver E-mail:**
- Enable Authentication:**
- Account Name:**
- Password:**
- Verify Password:**

On the right side, there are "Helpful Hints..." which include:

- Enable Watchdog (Ping of Life):** Enable the Watchdog (Ping of Life) to check some host IP.
- Update Time Interval:** The interval to ping.
- Watchdog Response IP:** Pair this DAP-1560 with a device that can respond back to the pings.
- Enable Mail Alert:** If you want to enable Mail Alert, you must enable Syslog first. When DAP-1560 can't ping the host IP, the DAP-1560 will send mail to the user.
- SMTP server:** Please enter the mail server IP.
- Mail Address:** Please enter the mail address of the user to be notified.

Status Device Info

This page displays the current information for the DAP-1560. 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.

The screenshot shows the D-Link web interface for the DAP-1560. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The main content area is divided into several sections:

- DEVICE INFORMATION:** A message stating, "All of your wireless and network connection details are displayed on this page. The firmware version is also displayed here."
- GENERAL:**
 - Time : 2010/01/01 00:26:31
 - Firmware Version : 1.00, 2010, June 4
- LAN:**
 - MAC Address : 00:18:E7:6A:31:59
 - Connection : static IP
 - IP Address : 192.168.0.50
 - Subnet Mask : 255.255.255.0
 - Gateway Address :
- WIRELESS LAN:**
 - Channel : 161
 - SSID List:

Network Name (SSID)	Guest	MAC Address	Security Mode
dlink	No	00:18:e7:6a:31:59	Open

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.

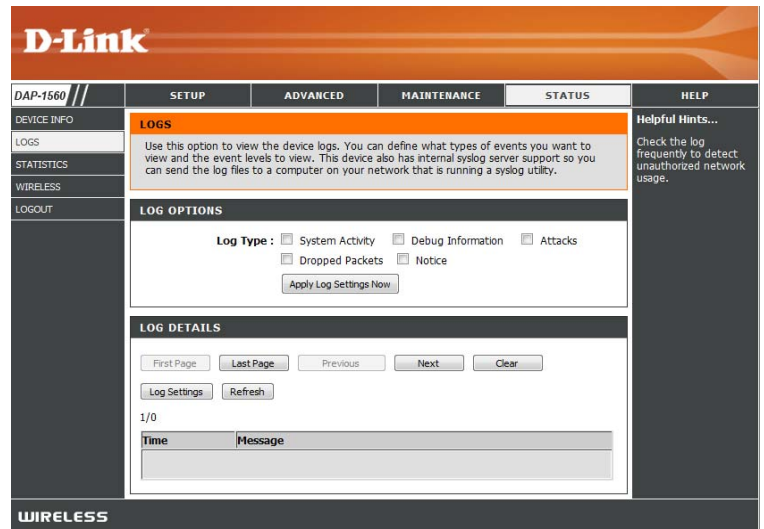
Log Type: There are five types of logs that can be viewed: **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice**. Click the corresponding check box for the type(s) that you want displayed in the log.

Apply Log Settings Now: Click this button to immediately filter the log results 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.



Statistics

The Statistics page displays all of the LAN (Ethernet port) and Wireless packets transmit and receive statistics.

Sent: The total number of packets sent from the access point.

Received: The total number of packets received by the access point.

TX Packets Dropped: Displays the number of packets that were dropped while sending, due to errors, collisions, or access point resource limitations.

RX Packets Dropped: Displays the number of packets that were dropped while receiving, due to errors, collisions, or access point resource limitations.

Collisions: Displays the number of collisions.

Errors: Displays the number of errors.

The screenshot shows the D-Link DAP-1560 web interface. The top navigation bar includes 'D-Link', 'DAP-1560', and tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains links for 'DEVICE INFO', 'LOGS', 'STATISTICS', 'WIRELESS', and 'LOGOUT'. The main content area is titled 'TRAFFIC STATISTICS' and includes a description: 'Traffic Statistics display Receive and Transmit packets passing through your router.' Below this are two buttons: 'Refresh Statistics' and 'Clear Statistics'. The statistics are organized into three sections:

LAN STATISTICS			
Sent :	1185	Received :	3423
TX Packets Dropped :	0	RX Packets Dropped :	0
Collisions :	0	Errors :	0

WIRELESS STATISTICS			
Sent :	3197	Received :	4
TX Packets Dropped :	0	RX Packets Dropped :	4
Collisions :	0	Errors :	0

On the right side, there is a 'Helpful Hints...' section with the text: 'This is a summary of the number of packets that have passed between the Wireless and the LAN since the device was last initialized.'

Wireless

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

Connection Time: Displays the amount of time the wireless client has been connected to the access point.

MAC Address: Displays the MAC address of the wireless client.

The screenshot shows the D-Link web interface for a DAP-1560 device. The top navigation bar includes 'DAP-1560', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The main content area is titled 'WIRELESS' and contains a 'Helpful Hints...' section with the following text: 'Wireless Displays connected client station main parameters, such as Connect Time and station MAC address. In AP Client mode it displays the connected AP's MAC address and connected Time.' Below this, there is a section for 'NUMBER OF WIRELESS CLIENTS : 1' which contains a table with two columns: 'Connected Time' and 'MAC Address'. The 'MAC Address' column shows the value 'undefined'.

Help

D-Link

DAP-1560 // SETUP ADVANCED MAINTENANCE STATUS HELP

MENU

HELP MENU

Setup

- [Setup Wizard](#)
- [Wireless Setup](#)
- [Lan Setup](#)

Advanced

- [MAC Address Filter](#)
- [Advanced Wireless](#)
- [User Limit](#)

Maintenance

- [Admin](#)
- [System](#)
- [Firmware](#)
- [Time](#)
- [Schedules](#)

Status

- [Device Info](#)
- [Logs](#)
- [Statistics](#)
- [Wireless](#)

Helpful Hints...

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

WIRELESS

Configuration (Bridge Mode)

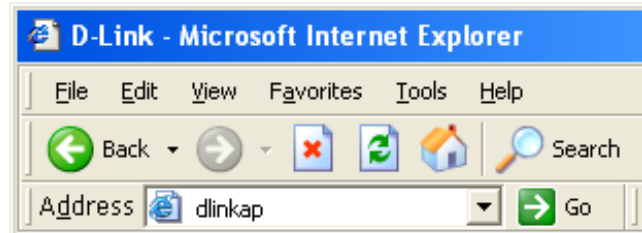
This section will show you how to configure your new D-Link wireless access point using the web-based configuration utility.

Web-based Configuration Utility

1. On the back of the DAP-1560, slide the mode selector to the right (Bridge Mode).



2. 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.



3. Enter **admin** 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.

LOGIN
Log in to the Bridge:

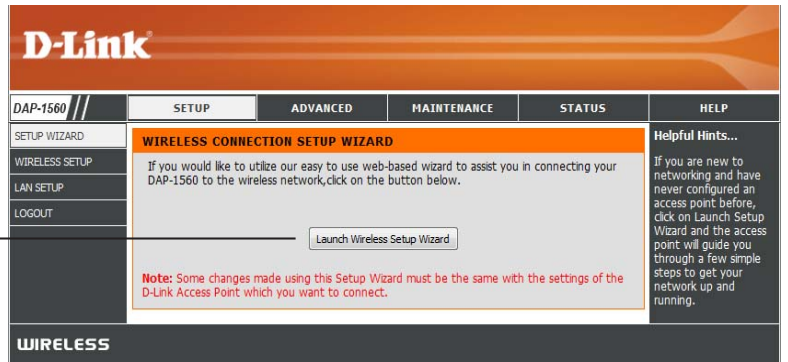
User Name

Password

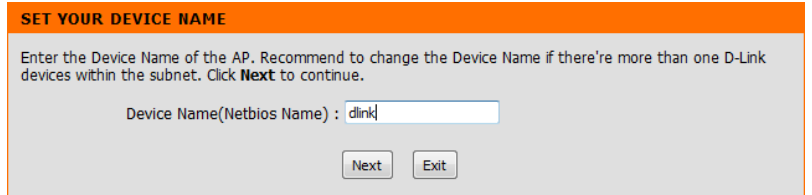
Setup Wizard

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.

Click **Launch Wireless Setup Wizard**



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 NEW PASSWORD

You may change the **admin** account password by entering in a new password. Click **Next** to continue.

Password :

Verify Password :

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

If you want to set up your network manually, skip to page 48.

Click **Next** to continue.

SELECT CONFIGURATION METHOD

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

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.

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

For **PBC** configuration, skip to the next page.

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

CONNECT TO WIRELESS DEVICE WITH WPS

There are two ways to connect to wireless device with WPS

- PIN(Personal Identification Number)
- PBC(Push Button Configuration)

PIN :24872218
SSID :

Please enter the above PIN into your Access Point and enter your Access Point's SSID into the SSID field above and click the below 'Connect' button.

PBC
please press the push button on your wireless device and click the below 'Connect' Button within 120 seconds

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 ...

Section 3 - Configuration

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 connect to wireless device with WPS

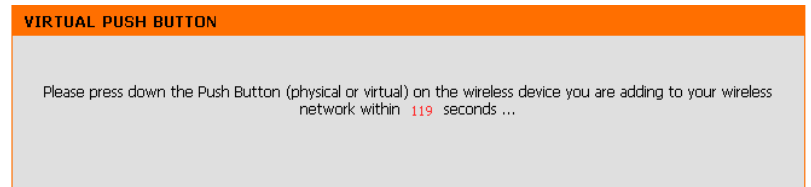
- PIN(Personal Identification Number)
- PBC(Push Button Configuration)

PIN :
SSID : dlink

Please enter the above PIN into your Access Point and enter your Access Point's SSID into the SSID field above and click the below 'Connect' button.

PBC
please press the push button on your wireless device and click the below 'Connect' Button within 120 seconds

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. Click **Next** to continue.

- 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.

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

Click **Next** to continue.

SET WIRELESS NETWORK NAME(SSID)

You can enter the Wireless Network Name of AP or use site survey to find the AP.

Wireless Network Name (SSID):

Section 3 - Configuration

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.

The screenshot shows the 'SITE SURVEY PAGE' with a table of detected wireless networks. The table has columns for SSID, BSSID, CH, Security, Signal, and Type. Below the table are 'Connect' and 'Exit' buttons.

SSID	BSSID	CH	Security	Signal	Type
7700_11g	00:50:62:35:97:30	1	WPA-PSK	50%	Infrastructure
dlinkmargg	00:1D:6A:12:0F:82	1	WPA-AUTO-PSK	50%	Infrastructure
dlink	00:17:9A:36:47:9C	1	OPEN	50%	Infrastructure
D-Link DVA-G3672B	00:50:BA:11:22:3D	1	OPEN	68%	Infrastructure
12345678901234567890123456789012	00:18:02:1B:87:96	3	OPEN	52%	Infrastructure
AlexDI524	00:13:46:A1:A4:0A	4	SHARED	50%	Infrastructure
james54g	00:13:46:E5:3C:72	6	WPA-EAP	50%	Infrastructure
di624s	00:17:9A:CF:96:0C	6	SHARED	54%	Infrastructure
dlink EC	00:0F:3D:3D:90:0E	6	WPA-PSK	50%	Infrastructure
default	00:55:19:06:24:01	6	OPEN	52%	Infrastructure
SD1VAPB0	00:11:95:95:CA:18	6	WPA-PSK	52%	Infrastructure
SD1VAPR1	08:11:95:95:CA:18	6	OPEN	50%	Infrastructure

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

The screenshot shows the 'SELECT WIRELESS SECURITY MODE' screen. It prompts the user to 'Please select the wireless security mode.' with radio button options for 'None', 'WEP', 'WPA', and 'WPA2'. Below the options are 'Prev', 'Next', and 'Exit' buttons.

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

The screenshot shows a configuration window titled "SET YOUR WIRELESS SECURITY PASSWORD". The background is light gray. At the top, there is an orange header bar with the title in white. Below the header, the text "Please enter the wireless security password to establish wireless connection." is centered. Underneath, there are two dropdown menus: "Key Type" set to "ASCII" and "Key Size" set to "64 bit". Below these is a text input field labeled "Wireless Security Password :". At the bottom, there are three buttons: "Prev", "Next", and "Exit".

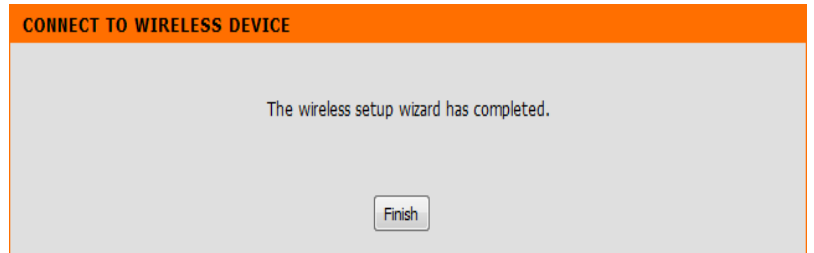
If you choose **WPA**, enter the **WPA** Personal Passphrase and click **Next** to complete the Setup Wizard.

The screenshot shows a configuration window titled "SET YOUR WPA PERSONAL PASSPHRASE". The background is light gray. At the top, there is an orange header bar with the title in white. Below the header, the text "Please enter the WPA personal passphrase to establish wireless connection." is centered. Underneath, there is a text input field labeled "WPA Personal Passphrase :" containing the text "12345678". Below the input field, the text "(8 to 63 characters)" is displayed. At the bottom, there are three buttons: "Prev", "Next", and "Exit".

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

The screenshot shows a configuration window titled "SET YOUR WPA2 PERSONAL PASSPHRASE". The background is light gray. At the top, there is an orange header bar with the title in white. Below the header, the text "Please enter the WPA2 personal passphrase to establish wireless connection." is centered. Underneath, there is a text input field labeled "WPA2 Personal Passphrase :" containing the text "12345678". Below the input field, the text "(8 to 63 characters)" is displayed. At the bottom, there are three buttons: "Prev", "Next", and "Exit".

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



Wireless

Wireless Mode: Wireless Client will be displayed.

Site Survey: Click to display available wireless networks within range of the DAP-1560. Select the network you want to connect to and enter any security settings required.

Wireless Type: Select **Infrastructure** if connecting to a wireless router or access point (most common) or **Ad-Hoc** if connecting directly to another wireless client in Ad-Hoc mode.

Wireless Network Name: If you did not use the Site Survey option, enter the SSID or network name exactly as it is set on your wireless router or access point.

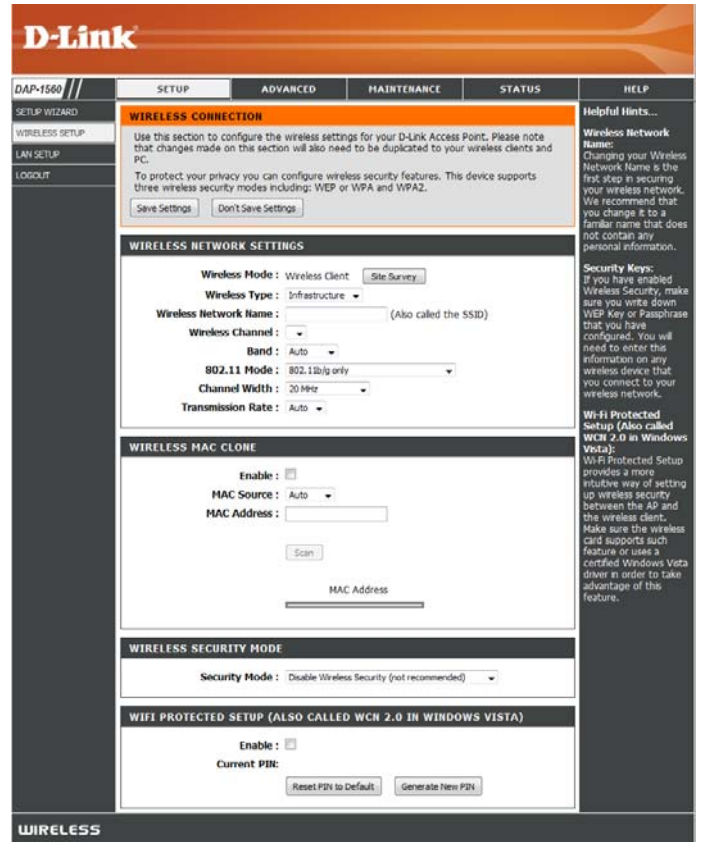
Wireless Channel: Indicates the channel setting for the DAP-1560. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network (Ad-Hoc mode).

802.11 Band The options include 2.4GHz, 5GHz, and 2.4GHz/5GHz.

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.

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



Security Mode: Refer to page 68 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-1560. If not manually assigned, the packet's source MAC address field will be automatically selected as the DAP-1560's MAC address.

MAC Address: Enter the desired MAC address connected to your DAP-1560 to enable the clone function.

Scan: Click the **Scan** button to search for all available devices connected to your DAP-1560'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 Connection Type: Use the drop-down menu to select **Static IP** if you want to manually assign the IP address, subnet mask, and gateway addresses. Select **Dynamic IP (DHCP)** to automatically receive an IP address from your DHCP server or router.

Access Point IP Address: Enter the IP address you want to assign the bridge.

Subnet Mask: Enter the Subnet Mask you want to assign the bridge.

Default Gateway: Enter the Gateway you want to assign the bridge.

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.

The screenshot shows the D-Link web interface for the DAP-1560. The main navigation menu includes SETUP WIZARD, WIRELESS SETUP, LAN SETUP, and LOGOUT. The current page is titled "NETWORK SETTINGS" and contains the following sections:

- NETWORK SETTINGS:** A header section with a description: "Use this section to configure the internal network settings of your AP. Device Name(NetBIOS Name) allows you to configure this device more easily when your network using TCP/IP protocol. You can enter the device name of the AP into your web browser to access the instead of IP address for configuration. Recommend to change the device name if there're more than one D-Link devices within the subnet." Below this are "Save Settings" and "Don't Save Settings" buttons.
- LAN CONNECTION TYPE:** A section titled "Choose the mode to be used by the Access Point." with a dropdown menu labeled "My LAN Connection is:" currently set to "Static IP".
- STATIC IP ADDRESS LAN CONNECTION TYPE:** A section titled "Enter the static address information." with input fields for:
 - IP Address: 192.168.0.50
 - Subnet Mask: 255.255.255.0
 - Gateway Address: (empty)
- DEVICE NAME (NETBIOS NAME):** A section with an input field for "Device Name" containing "dlinkap".

On the right side of the interface, there is a "Helpful Hints..." section with two sub-sections:

- LAN Settings:** "Also referred as private settings. LAN settings allow you to configure LAN interface of DAP-1560. LAN IP address is private to your internal network and is not visible to Internet. The factory default setting is Dynamic IP(DHCP)." (Note: The text in the image is partially obscured and appears to be a mix of two paragraphs).
- LAN Connection type:** "The factory default setting is Dynamic IP (DHCP) to allow the DHCP host to automatically assign the Access Point an IP address that conforms to the applied local area network. Enable 'Static IP' which allows the IP address of the DAP-1560 to be manually configured in accordance to the applied local area network."

At the bottom right, there is an "IP Address:" note: "The default IP address is 192.168.0.50. It can be modified to conform..."

DHCP

LAN Connection Type: Select DHCP to automatically obtain an IP 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-Link						
DAP-1560	<table border="1"> <tr> <th>SETUP</th> <th>ADVANCED</th> <th>MAINTENANCE</th> <th>STATUS</th> <th>HELP</th> </tr> </table>	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
SETUP	ADVANCED	MAINTENANCE	STATUS	HELP		
<ul style="list-style-type: none"> SETUP WIZARD WIRELESS SETUP LAN SETUP LOGOUT 	<p>NETWORK SETTINGS</p> <p>Use this section to configure the internal network settings of your AP.</p> <p>Device Name(NetBIOS Name) allows you to configure this device more easily when your network using TCP/IP protocol. You can enter the device name of the AP into your web browser to access the instead of IP address for configuration. Recommend to change the device name if there're more than one D-Link devices within the subnet.</p> <p>Save Settings Don't Save Settings</p> <hr/> <p>LAN CONNECTION TYPE</p> <p>Choose the mode to be used by the Access Point.</p> <p>My LAN Connection is : Dynamic IP (DHCP)</p> <hr/> <p>DYNAMIC IP(DHCP) LAN CONNECTION TYPE</p> <p>IP Address Information.</p> <p>IP Address : <input type="text" value="192.168.0.50"/></p> <p>Subnet Mask : <input type="text" value="255.255.255.0"/></p> <p>Gateway Address : <input type="text"/></p> <hr/> <p>DEVICE NAME(NETBIOS NAME)</p> <p>Device Name : <input type="text" value="dlinkap"/></p>					
	<p>Helpful Hints...</p> <p>LAN Settings: Also referred as private settings. LAN settings allow you to configure LAN interface of DAP-1560. LAN IP address is private to your internal network and is not visible to Internet. The factory default setting is Dynamic IP(DHCP).</p> <p>LAN Connection type: The factory default setting is Dynamic IP (DHCP) to allow the DHCP host to automatically assign the Access Point an IP address that conforms to the applied local area network. Enable "Static IP" which allows the IP address of the DAP-1560 to be manually configured in accordance to the applied local area network.</p> <p>IP Address: The default IP address is 192.168.0.50. It can be modified to conform</p>					

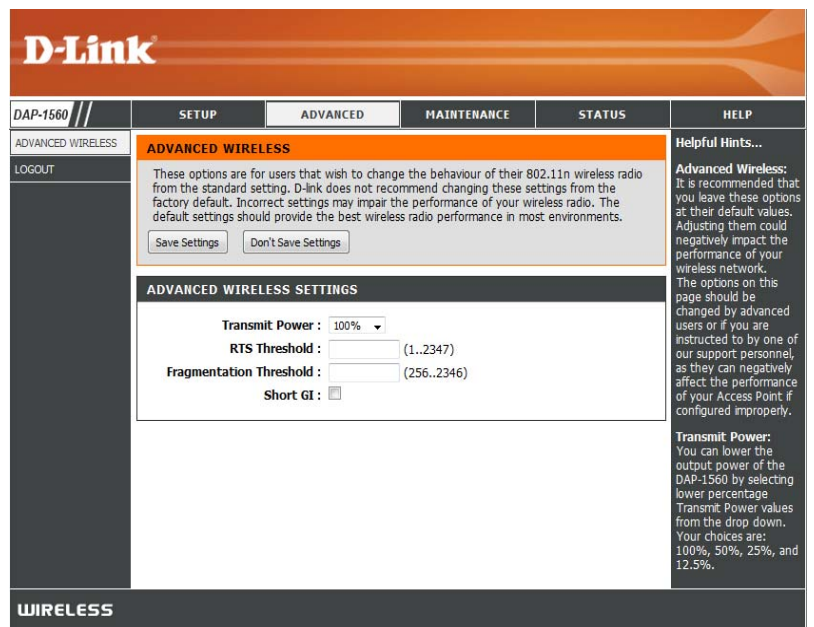
Advanced Advanced Wireless

Transmit Power: Set the transmit power of the antennas.

RTS Threshold: This value should remain at its default setting of 2347. If inconsistent data flow is a problem, only a minor modification should be made.

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

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.



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

Enable Graphical Authentication: Check this box to require users to type letters or numbers from a distorted image displayed on the login screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.

The screenshot shows the D-Link DAP-1560 Maintenance Admin interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE (selected), STATUS, and HELP. A sidebar on the left lists menu items: ADMIN, SYSTEM, FIRMWARE, TIME, WATCHDOG, and LOGOUT. The main content area is titled 'ADMINISTRATOR SETTINGS' and contains the following sections:

- ADMINISTRATOR SETTINGS:** A text box with instructions: "Enter the new password in the 'New Password' field and again in the next field to confirm. Click on 'Save Settings' to execute the password change. The Password is case-sensitive, and can be made up of any keyboard characters. The new password must be between 0 and 15 characters in length." Below this are two buttons: "Save Settings" and "Don't Save Settings".
- PASSWORD:** A section with the instruction "Please enter the same password into both boxes, for confirmation." It contains two input fields: "New Password :" and "Verify Password :".
- ADMINISTRATION:** A section with a checkbox labeled "Enable Graphical Authentication :".

On the right side of the interface, there is a "Helpful Hints..." section with the following text: "Passwords: For security reasons, it is recommended that you change the Password for the Administrator accounts. Be sure to write down the Passwords to avoid having to reset the AP in the event that they are forgotten."

System

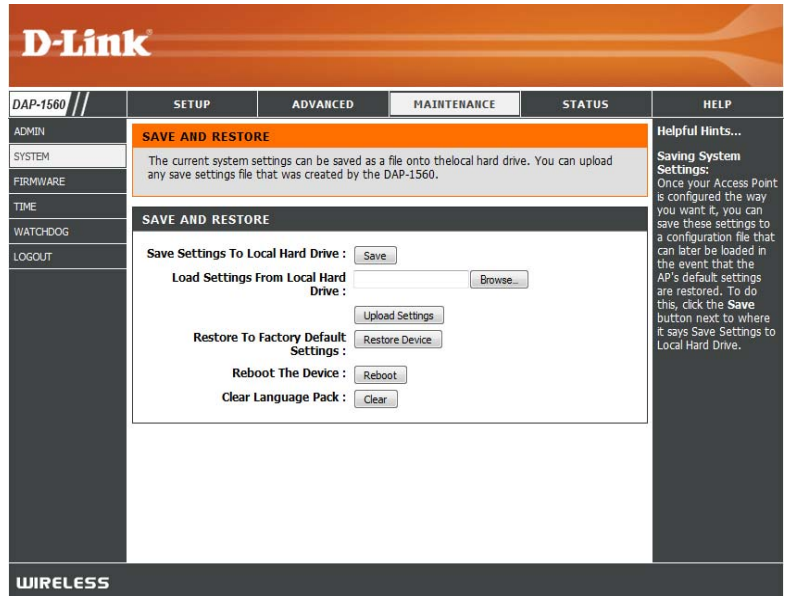
Save Settings To Local Hard Drive: Use this option to save the current access point configuration settings to a file on the hard disk of the computer you are using. First, click the **Save** button. You will then see a file dialog, where you can select a location and file name for the settings.

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

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

Reboot The Device: Click to reboot the bridge.

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



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.

The screenshot shows the D-Link web interface for a DAP-1560 device. The top navigation bar includes 'DAP-1560', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'ADMIN', 'SYSTEM', 'FIRMWARE', 'TIME', 'WATCHDOG', and 'LOGOUT'. The main content area is divided into several sections:

- FIRMWARE:** Contains a message about new firmware for DAP-1560, a link to check for updates, instructions on how to upgrade, and a warning: "Do not update firmware through wireless network!".
- FIRMWARE INFORMATION:** Displays "Current Firmware Version" and "Current Firmware Date".
- FIRMWARE UPGRADE:** Includes a note that some upgrades reset factory defaults, instructions for wired connection, and an "Upload" section with a "Browse..." button and an "Upload" button.
- LANGUAGE PACKAGE INFORMATION:** Includes a note that language updates change the web page display, instructions for wired connection, and another "Upload" section with a "Browse..." button and an "Upload" button.
- Helpful Hints...:** A sidebar section providing information about firmware updates and how to check for them.

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

Section 3 - Configuration

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**.

SYSTEMEINSTELLUNGEN

Im Abschnitt "Systemeinstellungen" können Sie das Gerät neu starten oder den Access Point auf die Werkseinstellungen zurücksetzen. Wenn das Gerät auf die Werkseinstellungen zurückgesetzt wird, werden alle Einstellungen, einschließlich aller von Ihnen erstellten Regeln, gelöscht.

Die aktuellen Systemeinstellungen können als Datei auf der lokalen Festplatte gespeichert werden. Die gespeicherte Datei oder eine andere vom Gerät erstellte, gespeicherte Einstellungsdatei kann in das Gerät geladen werden.

SYSTEMEINSTELLUNGEN

Auf der lokalen Festplatte speichern :

Von der lokalen Festplatte laden :

Auf Werkseinstellungen zurücksetzen :
Alle Einstellungen auf die Werkseinstellungen zurücksetzen.

Starten Sie das Gerät neu :

Sprachpaket löschen :

PARÁMETROS DEL SISTEMA

La sección Parámetros del sistema le permite reiniciar el dispositivo o restaurar el punto de acceso a los parámetros predeterminados de fábrica. Al restaurar en la unidad los parámetros predeterminados de fábrica se borrarán todos los parámetros, incluidas las reglas que haya creado.

Se pueden guardar los parámetros del sistema actual como un archivo en la unidad de disco duro local. Puede cargarse en la unidad el archivo guardado o cualquier otro archivo de parámetros guardado creado por el dispositivo.

PARÁMETROS DEL SISTEMA

Guardar en la unidad de disco duro local :

Cargar desde la unidad de disco duro local :

Restablecer en los valores predeterminados de fábrica :
Restablecer todos los parámetros en los valores predeterminados de fábrica.

Reinicie el dispositivo :

Borrar paquete de idioma :

PARAMÈTRES SYSTÈME

La section Configuration du système vous permet de réinitialiser le périphérique ou de restaurer les paramètres d'usine point d'accès. Restaurer les valeurs d'usine de tous les paramètres efface tous vos paramètres, y compris toutes les règles que vous avez créées.

La configuration actuelle du système peut être enregistrée sous forme de fichier sur le disque dur local. Le fichier enregistré ou tout autre fichier de configuration enregistré et créé par le périphérique peut être chargé sur la machine.

PARAMÈTRES SYSTÈME

Enregistrer sur le disque dur local :

Charger depuis le disque dur local :

Restaurer les paramètres par défaut :
Restaurer tous les paramètres sur les valeurs définies à l'usine.

Réinitialiser le périphérique :

Effacer le pack linguistique :

IMPOSTAZIONI SISTEMA

La sezione Impostazioni sistema consente di riavviare il dispositivo o di ripristinare le impostazioni predefinite del punto di accesso. Il ripristino delle impostazioni predefinite comporta la cancellazione di tutte le impostazioni precedenti, incluse eventuali regole create dall'utente.

È possibile salvare le impostazioni di sistema correnti in un file del disco fisso locale. Il file salvato o qualsiasi altro file di impostazioni salvato creato dal dispositivo può quindi essere caricato nell'unità.

IMPOSTAZIONI SISTEMA

Salva su Disco fisso locale :

Carica da disco fisso locale :

Ripristina impostazioni predefinite :
Ripristina tutte le impostazioni predefinite.

Riavvio del dispositivo :

Cancel Language Pack :

Time

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

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

Daylight Saving: To select Daylight Saving time manually, click the **Enable Daylight Saving** 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.



Watchdog

The Watchdog feature pings a specific IP address. If the IP address stops responding to pings, your access point will be rebooted. You can also select an option to have the send an email alert, if the specified IP address stops responding to pings.

Enable: Check to enable Watchdog.

Update Time Interval: Enter the interval to ping the entered address.

Watchdog Response IP: Enter the IP address of a device that can respond back to the access point.

Enable Mail Alert: Check to have the DAP-1560 email you if it cannot ping the above IP address. Syslog must be enabled for this feature to work.

SMTP Server: Enter the SMTP mail server address (IP address or URL)

Sender E-mail: Enter the "From" E-mail address.

Receiver E-mail: Enter the E-mail address to send to.

Enable Authentication: If your E-mail server requires authentication, check this box.

Account Name: Enter the account name.

Password: Enter the account password.

Verify Password: Enter the password again to verify.

The screenshot shows the D-Link configuration interface for the Watchdog (Ping of Life) feature. The page is titled "WATCHDOG (PING OF LIFE) :". It includes a "Save Settings" button and a "Don't Save Settings" button. Below this, there are several configuration options:

- Enable:** A checkbox that is currently unchecked.
- Update Time Interval:** A text input field with a value of "1" and a note "(minutes, range:1-60, default:1)".
- Watchdog Response IP:** A text input field.
- Enable Mail Alert:** A checkbox that is currently checked.
- SMTP Server:** A text input field.
- Sender E-mail:** A text input field.
- Receiver E-mail:** A text input field.
- Enable Authentication:** A checkbox that is currently checked.
- Account Name:** A text input field.
- Password:** A text input field.
- Verify Password:** A text input field.

On the right side of the page, there are several helpful hints:

- Helpful Hints...:** "Enable Watchdog (Ping of Life): Enable the Watchdog (Ping of Life) to check some host IP."
- Update Time Interval:** "The interval to ping."
- Watchdog Response IP:** "Pair this DAP-1560 with a device that can respond back to the pings."
- Enable Mail Alert:** "If you want to enable Mail Alert, you must enable Syslog first. When DAP-1560 can't ping the host IP, the DAP-1560 will send mail to the user."
- SMTP server:** "Please enter the mail server IP."
- Mail Address:** "Please enter the mail address of the user to be notified."

Status Device Info

This page displays the current information for the DAP-1560. It will display the LAN and wireless LAN information.

General: Displays the DAP-1560'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.

The screenshot shows the D-Link web interface for the DAP-1560. The top navigation bar includes 'DAP-1560 //', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'STATUS' tab is selected, and the 'DEVICE INFO' sub-tab is active. The main content area is titled 'DEVICE INFORMATION' and contains three sections: 'GENERAL', 'LAN', and 'WIRELESS LAN'. A 'Helpful Hints...' sidebar is visible on the right.

Navigation	Page Title	Helpful Hints...
DAP-1560 //	STATUS	
DEVICE INFO	DEVICE INFORMATION	Helpful Hints...
LOGS	All of your wireless and network connection details are displayed on this page. The firmware version is also displayed here.	All of your LAN and Wireless connection details are displayed here.
STATISTICS		
LOGOUT		
	GENERAL	
	Time : 2010/01/01 00:25:31 Firmware Version : 1.00, 2010, June 4	
	LAN	
	MAC Address : 00:18:E7:6A:31:59 Connection : static IP IP Address : 192.168.0.50 Subnet Mask : 255.255.255.0 Gateway Address :	
	WIRELESS LAN	
	MAC Address : 00:18:E7:6A:31:59 Network Name (SSID) : Channel : 0 Security Mode : Disable	
	WIRELESS	

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.

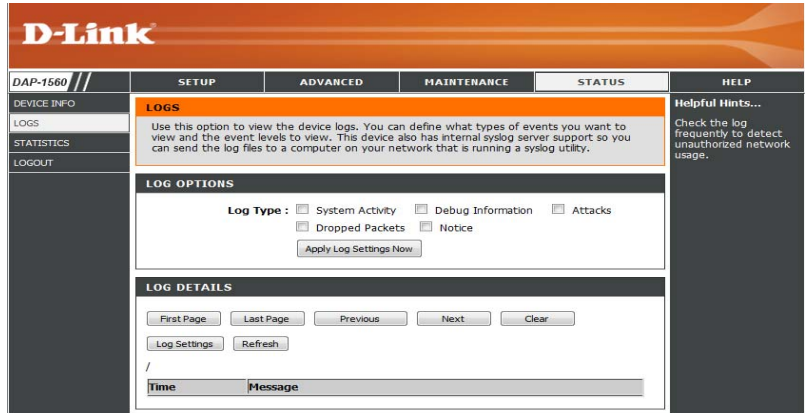
Log Type: There are five types of logs that can be viewed: **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice**. Click the corresponding check box for the type(s) that you want displayed in the log.

Apply Log Settings Now: Click this button to immediately filter the log results 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.



Statistics

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

Sent: The total number of packets sent from the bridge.

Received: The total number of packets received by the bridge.

TX Packets Dropped: Displays the number of packets that were dropped while sending, due to errors, collisions, or access point resource limitations.

RX Packets Dropped: Displays the number of packets that were dropped while receiving, due to errors, collisions, or access point resource limitations.

Collisions: Displays the number of collisions.

Errors: Displays the number of errors.

The screenshot shows the D-Link web interface for the DAP-1560. The main content area is titled 'TRAFFIC STATISTICS' and contains a sub-section 'LAN STATISTICS' and 'WIRELESS STATISTICS'. Each sub-section has a table with the following columns: Sent, Received, TX Packets Dropped, RX Packets Dropped, Collisions, and Errors. The 'Helpful Hints...' section on the right states: 'This is a summary of the number of packets that have passed between the Wireless and the LAN since the device was last initialized.'

Help

The screenshot displays the D-Link web interface for the DAP-1560. At the top, there is an orange header with the D-Link logo. Below this is a navigation bar with tabs for 'DAP-1560', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'HELP' tab is currently selected. The main content area is divided into a 'MENU' sidebar on the left and a central 'HELP MENU' area. The 'HELP MENU' is organized into sections: 'Setup' (with links for Setup Wizard, Wireless Setup, and Lan Setup), 'Advanced' (with a link for Advanced Wireless), 'Maintenance' (with links for Admin, System, Firmware, and Time), and 'Status' (with links for Device Info, Logs, and Statistics). To the right of the 'HELP MENU' is a 'Helpful Hints...' section with a text box that reads: 'Click on the links for more informations of each section in the GUI.' At the bottom of the interface, there is a dark grey bar with the word 'WIRELESS' in white capital letters.

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DAP-1560 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

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 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 (64 or 128-bit). Hex - (recommended) Letters A-F and numbers 0-9 are valid.
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.

The screenshot shows the 'WIRELESS SECURITY MODE' configuration page. Under 'Security Mode', 'WEP' is selected. The 'WEP' section includes: 'WEP Key Length' set to '64Bit (10 hex digits)', 'WEP Key value' and 'Verify WEP Key value' as empty text boxes, 'Default WEP Key' set to 'WEP Key 1', and 'Authentication' set to 'Open'.

Configure WPA-Personal (AP 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 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.

The screenshot displays the configuration interface for wireless security. It is divided into three main sections: WIRELESS SECURITY MODE, WPA, and PRE-SHARED KEY. In the WIRELESS SECURITY MODE section, the Security Mode is set to WPA-Personal. The WPA section shows WPA Mode set to Auto (WPA or WPA2), Cipher Type set to TKIP, and Group Key Update Interval set to 1800 seconds. The PRE-SHARED KEY section has a Passphrase field that is currently empty.

WIRELESS SECURITY MODE	
Security Mode :	WPA-Personal

WPA	
WPA Mode :	Auto (WPA or WPA2)
Cipher Type :	TKIP
Group Key Update Interval :	1800 (seconds)

PRE-SHARED KEY	
Passphrase :	

Configure WPA-Enterprise (AP 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 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.

The screenshot displays the configuration interface for wireless security. It is divided into three main sections: WIRELESS SECURITY MODE, WPA, and EAP (802.1X). In the WIRELESS SECURITY MODE section, the Security Mode is set to WPA-Enterprise. The WPA section shows WPA Mode set to Auto (WPA or WPA2), Cipher Type set to TKIP, and Group Key Update Interval set to 1800 seconds. The EAP (802.1X) section contains fields for RADIUS Server IP Address, RADIUS Server Port (set to 1812), and RADIUS Server Shared Secret.

WIRELESS SECURITY MODE	
Security Mode :	WPA-Enterprise

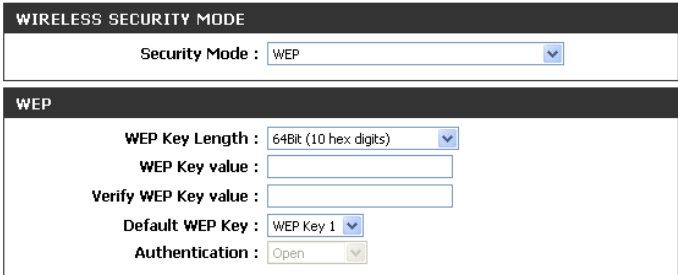
WPA	
WPA Mode :	Auto (WPA or WPA2)
Cipher Type :	TKIP
Group Key Update Interval :	1800 (seconds)

EAP (802.1X)	
RADIUS Server IP Address :	
RADIUS Server Port :	1812
RADIUS Server Shared Secret :	

Configure WEP (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**.
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 (64 or 128-bit). Hex - (recommended) Letters A-F and numbers 0-9 are valid.
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.



The screenshot shows the 'WIRELESS SECURITY MODE' configuration page. Under 'Security Mode', 'WEP' is selected. The 'WEP' section includes: 'WEP Key Length' set to '64Bit (10 hex digits)', 'WEP Key value' and 'Verify WEP Key value' as empty text boxes, 'Default WEP Key' set to 'WEP Key 1', and 'Authentication' set to 'Open'.

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.

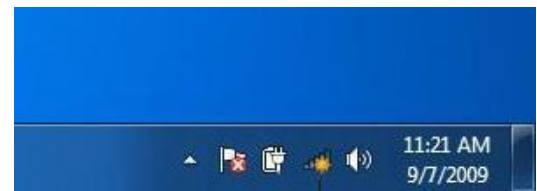
1. Log into the web-based configuration by opening a web browser and entering the IP address of the bridge (192.168.0.50). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to *Security Mode in the Wireless Security Mode section*, select **WPA-Personal**.
3. Next to *WPA 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 <input type="button" value="v"/>
WPA	
WPA Mode :	Auto (WPA or WPA2) <input type="button" value="v"/>
Cipher Type :	TKIP <input type="button" value="v"/>
Group Key Update Interval :	<input type="text"/> (seconds)
PRE-SHARED KEY	
Passphrase :	<input type="text"/>

Connect to a Wireless Network Using Windows® 7

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.

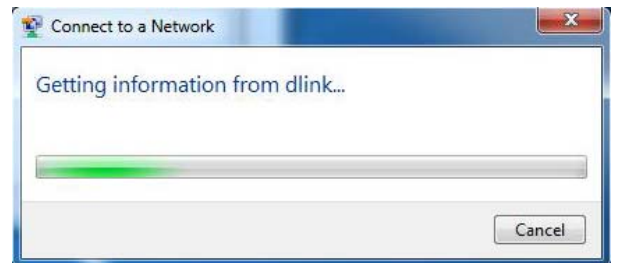


3. Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button.

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

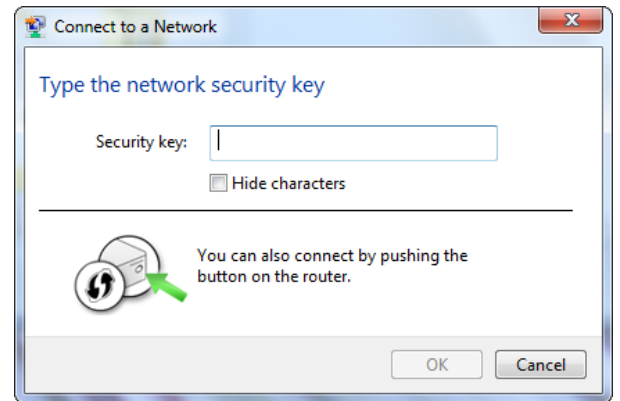


4. The following window appears while your computer tries to connect to the router.



5. Enter the same security key or passphrase that is on your router and click **Connect**. You can also connect by pushing the WPS button on the router.

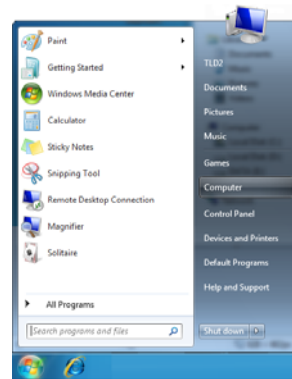
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



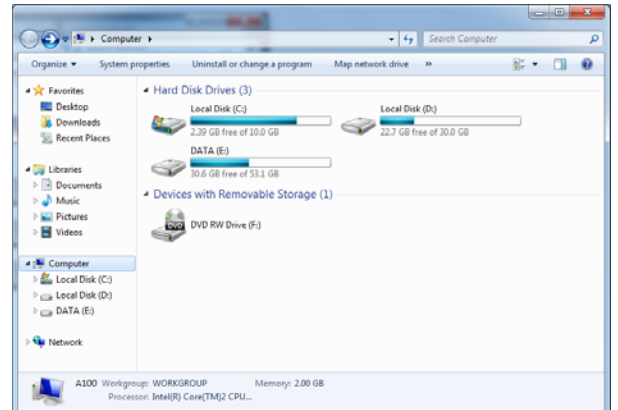
Configure WPS

The WPS feature of the DAP-1560 can be configured using Windows® 7. Carry out the following steps to use Windows® 7 to configure the WPS feature of the DAP-1560:

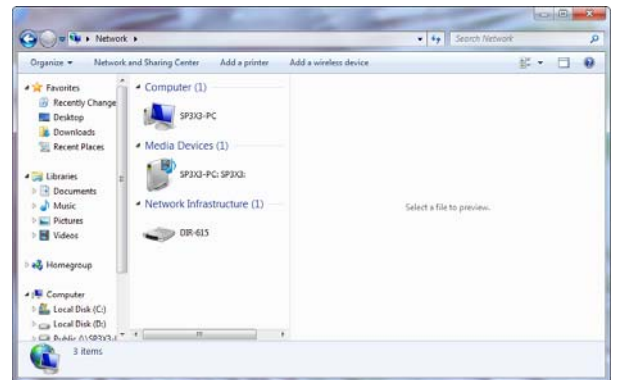
1. Click the **Start** button and select **Computer** from the Start menu.



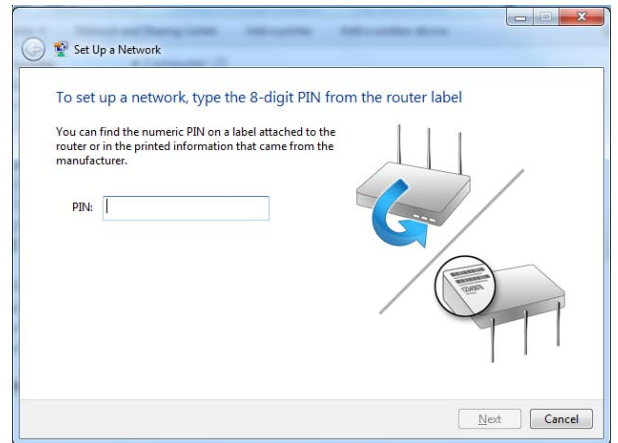
2. Click the **Network** option.



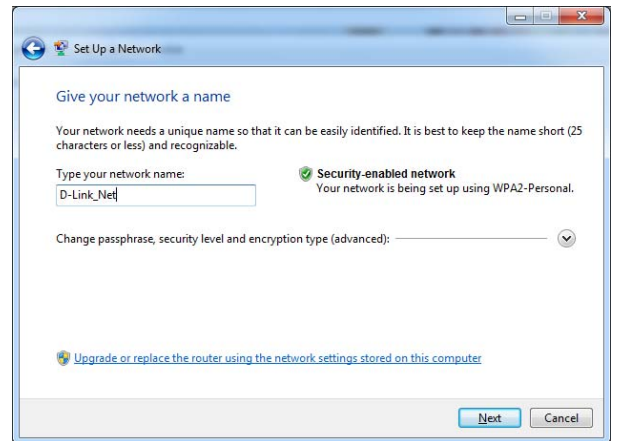
3. Double-click the DAP-1560.




4. Input the WPS PIN number (displayed in the WPS window on the Router's LCD screen or in the **Setup > Wireless Setup** menu in the Router's Web UI) and click **Next**.

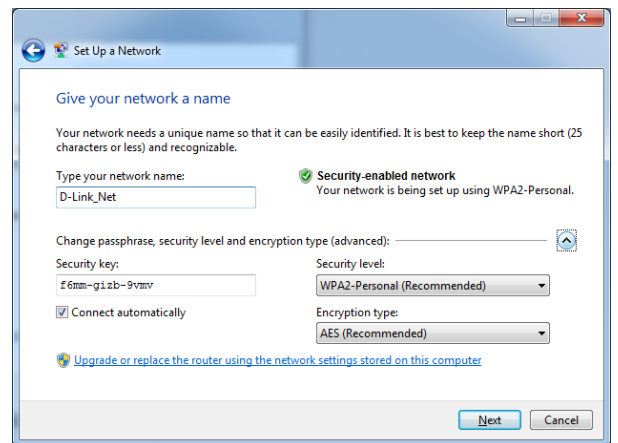


5. Type a name to identify the network.



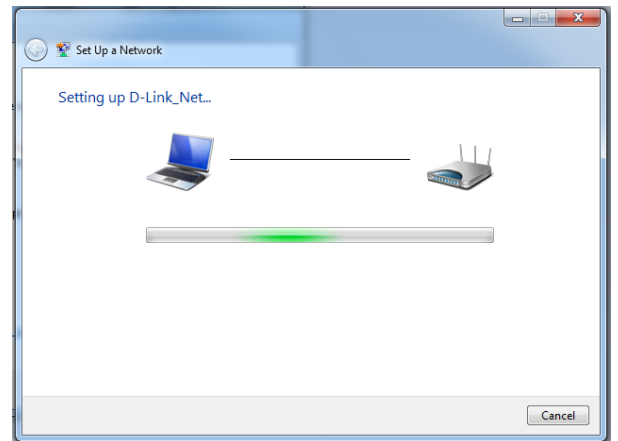
6. To configure advanced settings, click the  icon.

Click **Next** to continue.



7. The following window appears while the Router is being configured.

Wait for the configuration to complete.



8. The following window informs you that WPS on the DAP-1560 has been setup successfully.

Make a note of the security key as you may need to provide this security key if adding an older wireless device to the network in the future.

9. Click **Close** to complete WPS setup.

