

USER MANUAL

DAP-1350

VERSION 1.0



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

Manual Revisions

Revision	Date	Description
1.0	October 13, 2009	• DAP-1350 Revision A1 with firmware version 1.00

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Package Contents

D-Link DAP-1350 Wireless N Compact Router /Access Point	
Power Adapter	
Ethernet Cable	
CD-ROM	
USB Power Cable	
Travel Case	

Note: Using a power supply with a different voltage rating than the one included with the DAP-1350 will cause damage and void the warranty for this product.

System Requirements

Network Requirements	<ul style="list-style-type: none">• An Ethernet-based Cable or DSL modem (router mode only)• IEEE 802.11n or 802.11g wireless clients (router or AP mode)• IEEE 802.11n or 802.11g wireless AP or router (client mode)• 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 or higher• Firefox 3.0 or higher• Safari 3.0 or higher• Chrome 2.0 or higher <p>Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</p>
CD Installation Wizard Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows® XP with Service Pack 2 or Vista®• An installed Ethernet adapter• CD-ROM drive

Introduction

D-Link, an industry leader in networking, introduces the new D-Link DAP-1350 Wireless N Range Extender. With the ability to transfer files with a maximum wireless signal rate of up to 300Mbps*, the DAP-1350 gives you high-speed wireless network access for your home or when you travel.

The DAP-1350 is Wi-Fi IEEE 802.11n compliant, meaning that it can connect and interoperate with other 802.11n compatible wireless client devices. The DAP-1350 is also backwards compatible with 802.11b/g. It can be flexibly configured to operate in 3 different modes: **Access Point**, **Wireless Client**, and **Router**. With its Setup Wizard, the DAP-1350 ensures that you will be up and running on a wireless network in just a matter of minutes.

The DAP-1350 features Wi-Fi Protected Access (WPA-PSK/WPA2-PSK) to provide an enhanced level of security for wireless data communications. The DAP-1350 also includes additional security features to keep your wireless connection safe from unauthorized access.

The DAP-1350 supports WPS on all three operation modes, with each capable of being conveniently set up by using the PIN method or Push Button.

• 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.

TOTAL PERFORMANCE

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

TOTAL SECURITY

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

TOTAL COVERAGE

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

ULTIMATE PERFORMANCE

The D-Link Wireless N Compact Router/Access Point (DAP-1350) is a 802.11n compliant device that delivers real world performance of up to 650% faster than an 802.11g wireless connection (also faster than a 100Mbps wired Ethernet connection). Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the DAP-1350 to router and share your high-speed Internet access with everyone on the network.

EXTENDED WHOLE HOME COVERAGE

This high performance Wireless AP provides superior Whole Home Coverage while reducing dead spots. The DAP-1350 is designed for use in bigger homes and for users who demand higher performance networking.

TOTAL NETWORK SECURITY

The DAP-1350 supports all of the latest wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA and WPA2 standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices.

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

Features

- **Faster Wireless Networking** - The DAP-1350 provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11n wireless access point gives you the freedom of wireless networking at speeds 650% faster than 802.11g.
- **Compatible with 802.11b and 802.11g Devices** - The DAP-1350 is still fully compatible with the 802.11b/g standards, so it can connect with existing 802.11b/g PCI, USB, and FireWire adapters.
- **WPS PBC-** (Wi-Fi Protected Setup Push Button Configuration) Push Button Configuration is a button that can be pressed to add the device to an existing network or to create a new network. A virtual button can be used on the utility while a physical button is placed on the side of the device.
This easy setup method allows you to form a secured wireless link between the DAP-1350 and another WPS enabled device. A PC is no longer needed to log into the Web-based interface.
- **WPS PIN** - (Wi-Fi Protected Setup Personal Identification Number) A PIN is a unique number that can be used to add the access point to an existing network or to create a new network. The default PIN may be printed on the bottom of the access point. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator (“admin” account) can change or reset the PIN.
- **User-friendly Setup Wizard** - Through its easy-to-use web-based user interface, you can configure your access point to your specific settings within minutes.

Hardware Overview

Connections

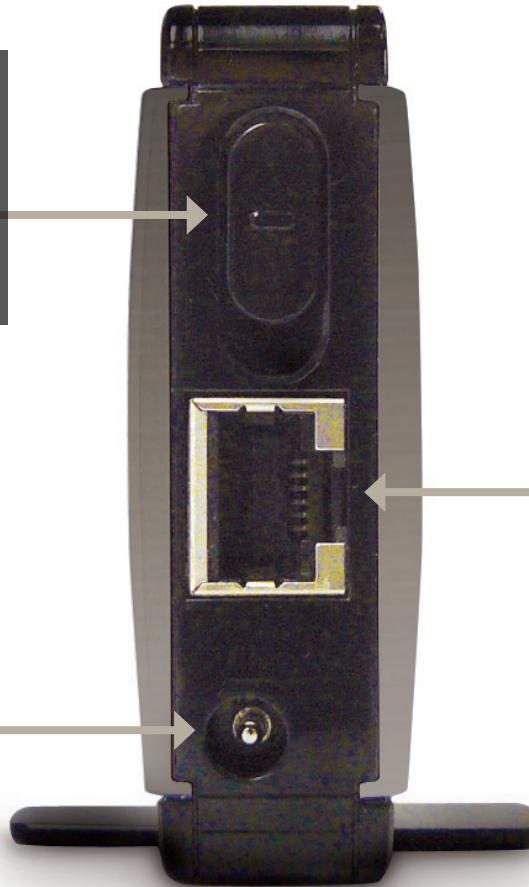
Mode Selector

Select from one of the three modes:

AP (top) - Access Point (AP) Mode

CL (middle) - Wireless Client Mode

RT (bottom) - Router Mode



LAN/WAN Port

When using as a LAN port, connect Ethernet devices such as computers or game consoles. When using as a WAN port, connect your Broadband modem or Internet connection.

Power Receptor

Receptor for the supplied power adapter.

Hardware Overview

Side



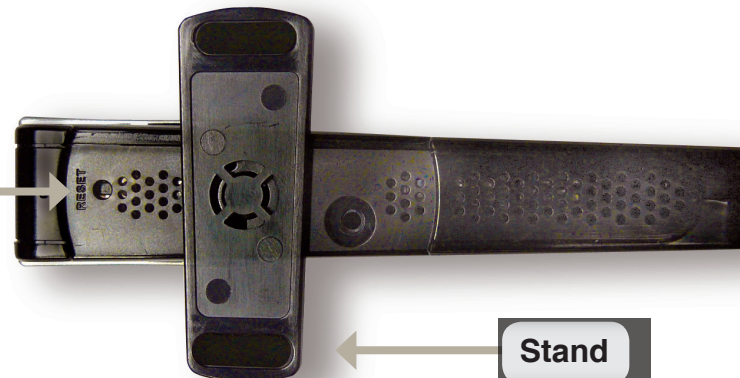
WPS Button/LED

Press to start the WPS process. You will have 120 seconds to start the WPS process on another wireless device. When enabling WPS, the light will blink during broadcast. Once connected, the LED will stay solid for 5 seconds and then turn off.

USB Port

The USB port is used to connect USB devices such as a printer to share on your network.

Bottom



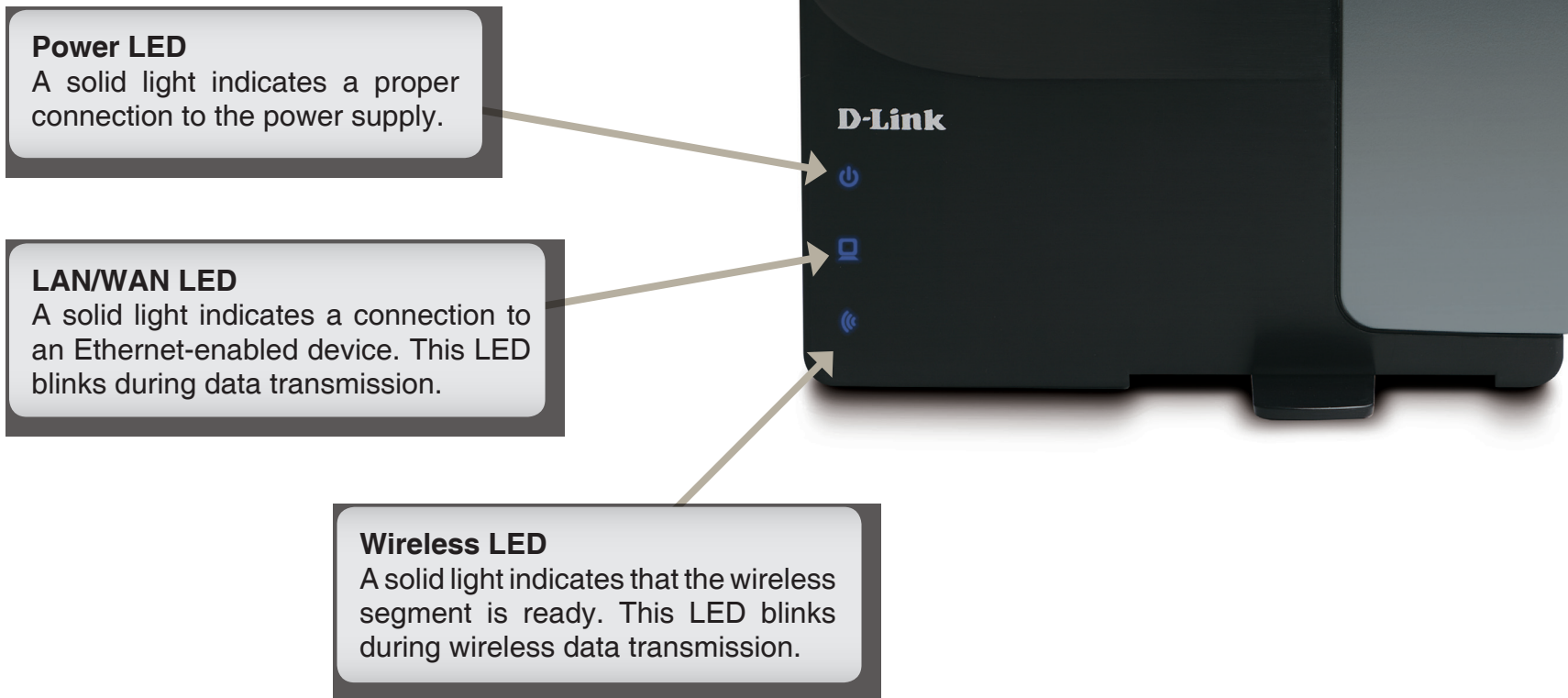
Reset Button

Press and hold to reset the device back to the factory default settings

Stand

Hardware Overview

LEDs



Installation

Please configure the DAP-1350 by following the Install Guide poster. The next few pages will explain the different operational modes you can use.

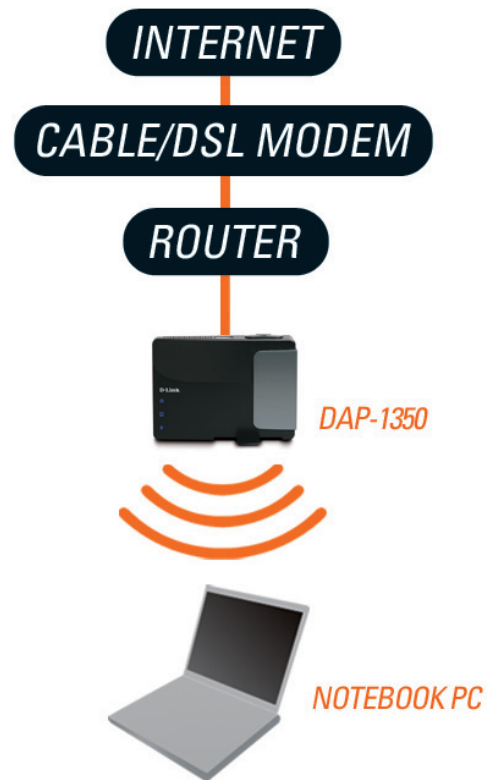
Operation Modes

Depending on how you want to use your DAP-1350 will determine which mode you use. This section will help you figure out which setting works with your setup.

- Access Point mode - page 14
- Wireless Client mode - page 43
- Router mode - page 62

Access Point Mode

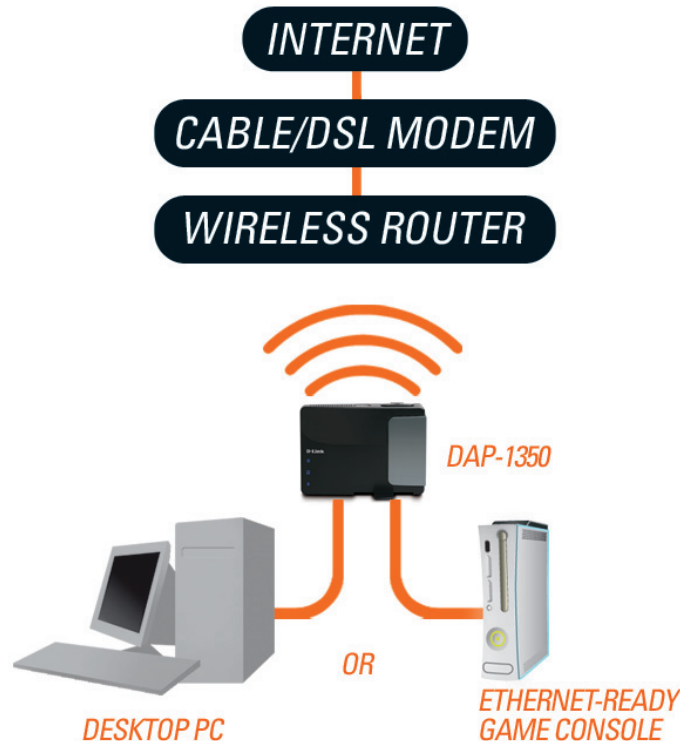
In the Access Point mode, the DAP-1350 acts as a central connection point for any computer (client) that has a 802.11n or backward-compatible 802.11b/g wireless network interface and is within range of the AP. Clients must use the same SSID (wireless network name) and channel as the AP in order to connect. If wireless security is enabled on the AP, the client will need to enter a password to connect to the AP. In Access Point mode, multiple clients can connect to the AP at the same time.



Wireless Client Mode

In the Wireless Client mode, the DAP-1350 acts as a wireless network adapter for your Ethernet-enabled device (such as a game console or a laptop). Connect your Ethernet-enabled device to the AP using an Ethernet cable. The AP Client mode can support one wired client.

Example: Connect a gaming console using an Ethernet cable to the DAP-1350. The unit is set to Wireless Client mode which will wirelessly connect to a wireless router on your network.



Router Mode

In the Router mode, the DAP-1350 connects to a broadband modem. In this mode, the DAP-1350 also acts as a router for wireless clients on your network and provides NAT (Network Address Translation) and a DHCP server to generate IP addresses. NAT and the DHCP server allow many computers to share the same Internet connection.



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

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

Access Point Mode

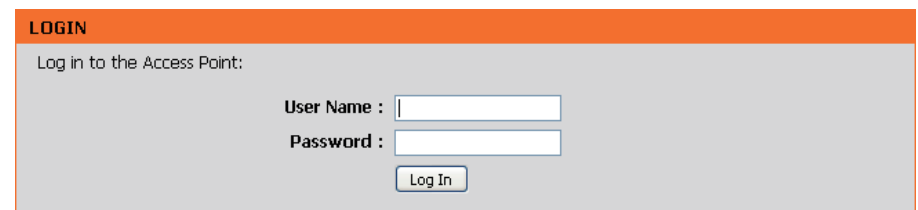
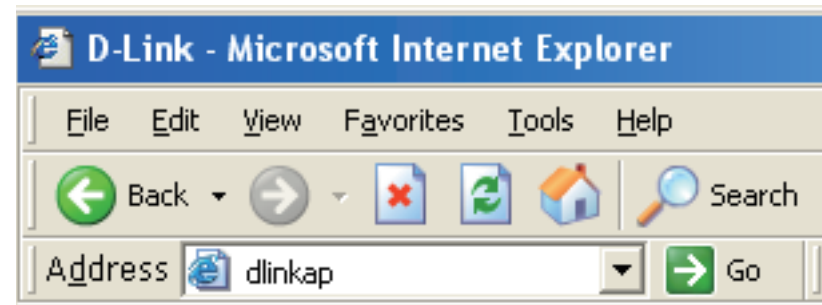
Change the mode selector to **AP** on the device. Connect an Ethernet cable from the Ethernet port on the DAP-1350 to a computer for configuration.

If you wish to change the default settings or optimize the performance of the DAP-1350, you may use the web-based configuration utility.

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

Type **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.



Wireless Setup Wizard

Click **Launch Wireless Setup Wizard** to configure your access point and skip to the next page.

To set up your wireless network, click **Add Wireless Device With WPS** and skip to page 24.

If you want to enter your settings without running the wizard, click **Wireless Setup** on the left side and skip to page 26.

The screenshot shows the D-Link web interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' menu is expanded, showing 'SETUP WIZARD', 'WIRELESS SETUP', 'LAN SETUP', and 'LOGOUT'. The main content area is titled 'WIRELESS CONNECTION SETUP WIZARD' and contains the following text:

If you would like to utilize our easy to use web-based wizard to assist you in connecting your DAP-1350 to the wireless network, click on the button below.

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

Below this is another section titled 'ADD WIRELESS DEVICE WITH WPS (WIFI PROTECTED SETUP) WIZARD' with the following text:

This wizard is designed to assist you in connecting your DAP-1350 to wireless network using WPS. It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button below to begin.

On the right side, there is a 'Helpful Hints...' section with the text: 'If you are new to networking and have never configured an access point before, click on Launch Setup Wizard and the access point will guide you through a few simple steps to get your network up and running.'

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

This Wizard is designed to assist you in configuring your DAP-1350 as an access point.

Enter the Device Name of the AP and click **Next** to continue. This is the NetBIOS name for the AP. It is recommended to change the Device Name if there is more than one D-Link device within the same wireless network.

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**. It is strongly recommended to change your password.

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 (WPS). For **Manual** setup, skip to the next page.

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

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

In order for your network settings to take effect the AP will reboot automatically.

When the device has finished rebooting the main screen will display.

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) : dlink20FE

Wireless Security Mode : WPA-PSK

Network key : 172B0133E2C6927F484EC6BC6BC464E
13572341DFB7333B396DCC47F0A5A0A

Prev Save Exit

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

Click **Next** to continue.

Enter a name for your wireless network (SSID).

Select **Automatically assign a network key** to have the access point generate a key for you to enter on your wireless clients. If you want to enter your own key, select **Manually assign a network key**.

To use WPA security, check the **use WPA encryption instead of WEP** box. If left unchecked, WEP encryption will be used.

Click **Next** to continue.

If you selected **Manually assign a network key** as the configuration method, enter your network key. This key must be entered on your wireless clients.

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.

SELECT CONFIGURATION METHOD

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

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

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

Prev Next Exit

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)

Prev Next Exit

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 :

Prev Next Exit

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.

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

ADD WIRELESS DEVICE WITH WPS (WIFI PROTECTED SETUP) WIZARD

There are two ways to add 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 click the below 'Connect' Button within 120 seconds

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

Click **Connect** to continue.

ADD WIRELESS DEVICE WITH WPS (WIFI PROTECTED SETUP) WIZARD

There are two ways to add 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 click the below 'Connect' Button within 120 seconds

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

VIRTUAL PUSH BUTTON

Please press down the Push Button (physical or virtual) on the wireless device you are adding to your wireless network within **118** seconds...

Wireless Setup

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. You may also set up a specific time range (schedule). Select a schedule from the drop-down menu or click **Add New Schedule** to create a new schedule.

Wireless Mode: **Access Point** will be selected.

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

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DAP-1350 to select the channel with the least amount of interference (during boot-up).

Wireless Channel: Indicates the channel setting for the DAP-1350. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable Auto Channel Scan, this option will be grayed out.

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

The screenshot shows the D-Link configuration interface for a DAP-1350 AP. The 'WIRELESS CONNECTION' section is active, showing options to enable wireless, set the mode to 'Access Point', and configure the wireless network name (SSID) to 'dlink'. It also includes settings for auto channel scan, wireless channel (6), 802.11 mode (Mixed 802.11n, 802.11g and 802.11b), channel width (20 Mhz), transmission rate (Auto), and hidden wireless (disabled). The 'WIRELESS SECURITY MODE' section shows 'Security Mode' set to 'Disable Wireless Security (not recommended)'. The 'WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)' section shows 'Enable' checked, 'Current PIN' as 97730668, and 'Wi-Fi Protected Status' as 'Enabled/Not Configured'. A sidebar on the right contains helpful hints for wireless network name, hidden wireless, security keys, and Wi-Fi Protected Setup.

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.

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

Enable Hidden Wireless: Check the box if you do not want the SSID of your wireless network to be broadcasted by the DAP-1350. If checked, the SSID of the DAP-1350 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DAP-1350 in order to connect to it.

Security Mode: Refer to page 107 for more information regarding the wireless security.

Enable: Enable the Wi-Fi Protected Setup feature.

Lock Wireless Security Settings: Locking the wireless security settings prevents the settings from being changed by any new external user using its PIN. Devices can still be added to the wireless network using Wi-Fi Protected Setup. It is still possible to change wireless network settings with Manual Wireless Network Setup, Wireless Network Setup Wizard, or an existing external WLAN Manager user.

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

Generate New 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 PIN to Default: Restore the default PIN of the access point.

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

LAN Setup

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

LAN Connection Type: 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-1350 AP. The main navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for SETUP WIZARD, WIRELESS SETUP, LAN SETUP (which is active), and LOGOUT. The main content area 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. 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.' and a dropdown menu labeled 'My LAN Connection is:' set to 'Dynamic IP (DHCP)'.
- DYNAMIC IP(DHCP) LAN CONNECTION TYPE:** A section for 'IP Address Information' with three input fields: 'IP Address' (192.168.0.50), 'Subnet Mask' (255.255.255.0), and 'Gateway Address' (0.0.0.0).
- DEVICE NAME(NETBIOS NAME):** A section with an input field for 'Device Name' containing the text 'dlinkap'.

On the right side of the interface, there is a 'Helpful Hints...' section with the following text:

LAN Settings: Also referred as private settings. LAN settings allow you to configure LAN interface of DAP-1350. LAN IP address is private to your internal network and is not visible to Internet. The factory default setting is Dynamic IP(DHCP).

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-1350 to be manually configured in accordance to the applied local area network.

IP Address: The default IP address is 192.168.0.50. It can

Static IP

Select **Static IP** to manually enter the IP address, subnet mask, and default gateway addresses.

LAN Connection Type: Select Static IP from the drop-down menu.

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

Subnet Mask: Enter the Subnet Mask.

Default Gateway: Enter the Gateway. This is usually the LAN or internal 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. You can enter the device name of the AP into your web browser to access the instead of IP address for configuration. If you are using the device name to connect, make sure that your PC and your DAP-1350 are on the same network.

The screenshot shows the D-Link configuration utility for a DAP-1350 AP. The interface includes a navigation menu on the left with options: SETUP WIZARD, WIRELESS SETUP, LAN SETUP (selected), and LOGOUT. The main content area is titled 'NETWORK SETTINGS' and contains the following sections:

- NETWORK SETTINGS:** A header section with instructions on how to use the section and a 'Save Settings' button.
- LAN CONNECTION TYPE:** A section where the user can choose the mode for the Access Point. The 'My LAN Connection is' dropdown menu is set to 'Static IP'.
- STATIC IP ADDRESS LAN CONNECTION TYPE:** A section for entering static address information. It includes three input fields:
 - IP Address: 192.168.0.50
 - Subnet Mask: 255.255.255.0
 - Gateway Address: 0.0.0.0
- DEVICE NAME(NETBIOS NAME):** A section with a 'Device Name' input field containing 'dlinkap'.

On the right side of the utility, there is a 'Helpful Hints...' section with the following text:

LAN Settings: Also referred as private settings. LAN settings allow you to configure LAN interface of DAP-1350. LAN IP address is private to your internal network and is not visible to Internet. The factory default setting is Dynamic IP(DHCP).

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-1350 to be manually configured in accordance to the applied local area network.

IP Address: The default IP address is 192.168.0.50. It can be changed to any other IP address.

MAC Address Filter

Use MAC (Media Access Control) Filters to authorize wireless clients by their MAC addresses to access your network. When enabled, any client not on the MAC filter list will not be able to access your network.

MAC Address Filter: Select **Enable** or **Disable** from the drop-down menu.

MAC Address: Enter the MAC address you would like to filter. To find the MAC address on a computer, please refer to the Networking Basics section in this manual. Click **Save Settings** to activate and save.

Note: Make sure you enter the computer you are currently using to configure the access point first or you will not be able to access the configuration utility once you click Save Settings.

MAC Filter List: Displays the list of clients in the filter list.

The screenshot shows the D-Link configuration utility interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'ADVANCED' tab is selected, and the 'MAC ADDRESS FILTER' sub-tab is active. The main content area is divided into three sections:

- MAC ADDRESS FILTER:** A header section with an orange background. Below it, a message states: "The DAP-1350 can be setup to deny or only allow access to wireless clients with the listed MAC addresses." There are two buttons: "Save Settings" and "Don't Save Settings".
- WIRELESS ACCESS SETTINGS:** A section with a dark background. It contains the instruction: "Use the client's MAC Address to authorize network access through the Access Point." Below this, there is a "MAC Address Filter" dropdown menu set to "Disable", and a "MAC Address" input field with a "Clear" button.
- MAC FILTER LIST:** A table with columns for "MAC Address", "Edit", and "Del".

On the right side of the interface, there is a "Helpful Hints..." section with two sub-sections: "Wireless Access Settings" and "Connected PCs".

Wireless Access Settings: Create a list of MAC addresses that you would either like to accept or reject access to your network.

Connected PCs: It will show the MAC address of all connected STAs. You can select what you want and click "done". Then the MAC address will show into "MAC address" part automatically.

The bottom of the page features a dark blue bar with the word "WIRELESS" in white capital letters.

Advanced Wireless

Transmit Power: Sets the transmit power of the antennas.

Note: Transmit power is regulated by international standard. Users are forbidden to change its maximum limit.

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

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

RTS Threshold: This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation 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.

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's less reliable and may create higher data loss.

The screenshot shows the D-Link web interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'ADVANCED' tab is selected, and the 'ADVANCED WIRELESS' sub-tab is active. The page contains a warning message about changing 802.11g wireless radio settings, with 'Save Settings' and 'Don't Save Settings' buttons. Below this is the 'ADVANCED WIRELESS SETTINGS' section with the following values:

Transmit Power :	100%	
Beacon Period :	100	(20..1024)
DTIM Interval :	1	(1..255)
RTS Threshold :	2346	(1..2347)
Fragmentation Threshold :	2346	(256..2346)
WMM Enable :	<input checked="" type="checkbox"/>	
Short GI :	<input checked="" type="checkbox"/>	
IGMP Snooping :	<input type="checkbox"/>	
WLAN Partition :	<input type="checkbox"/>	

On the right side, there is a 'Helpful Hints...' section with the following text:

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

Transmit Power:
You can lower the output power of the DAP-1350 by selecting lower percentage Transmit Power values from the drop down. Your choices are:

User Limit

Enter the maximum number of wireless clients that can connect at one time to your access point.

Enable User Limit: Check the **Enable User Limit** box to enable this feature.

User Limit: Enter the maximum number of clients, between 1 and 32.

Save Settings: Click **Save Settings** to save and activate the new changes.

The screenshot shows the D-Link configuration interface for a DAP-1350 AP. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The main content area is titled 'USER LIMIT SETTINGS' and contains the following elements:

- A message: "Please Apply the settings to limit how many wireless stations connecting to AP."
- Two buttons: "Save Settings" and "Don't Save Settings".
- A section titled "USER LIMIT SETTINGS" with two settings:
 - Enable User Limit :**
 - User Limit(1 - 32) :**

On the right side, there is a "Helpful Hints..." section with the following text:

User Limit can set a limit upon the number of wireless clients. Using user limit, you can prevent scenarios where the DAP-1350 in your network shows performance degradation because it is handling heavy wireless traffic.

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

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: Enables a challenge-response test to require users to type letters or numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your router's network settings. This feature is disabled by default.

The screenshot shows the D-Link web interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'ADMIN' menu item is selected. The main content area is titled 'ADMINISTRATOR SETTINGS' and contains the following text: '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 text are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'PASSWORD' section contains the instruction: 'Please enter the same password into both boxes, for confirmation.' followed by two input fields: 'New Password :' and 'Verify Password :'. The 'ADMINISTRATION' section contains a checkbox for 'Enable Graphical Authentication :'. The sidebar on the right is titled 'Helpful Hints...' and contains the 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 to Local Hard Drive: Use this option to save the current access point configuration settings to a file on the hard disk of the computer you are using. Click the **Save** button. You will then see a file dialog where you can select a location and file name for the settings.

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

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

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

Reboot the Device: Click to reboot the access point.

The screenshot displays the D-Link web interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists 'ADMIN', 'SYSTEM', 'FIRMWARE', 'TIME', 'SCHEDULES', and 'LOGOUT'. The main content area is titled 'SAVE AND RESTORE' and contains the following text and controls:

SAVE AND RESTORE
The current system settings can be saved as a file onto the local hard drive. You can upload any save settings file that was created by the DAP-1350.

SAVE AND RESTORE

Save Settings To Local Hard Drive :

Load Settings From Local Hard Drive :

Restore To Factory Default Settings :

Reboot The Device :

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

Helpful Hints...

Saving System Settings: Once your Access Point is configured the way you want it, you can save these settings to a configuration file that can later be loaded in the event that the AP's default settings are restored. To do this, click the **Save** button next to where it says Save Settings to Local Hard Drive.

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.

Note: In most cases you must unzip the file first before uploading.

The screenshot shows the D-Link web interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'ADMIN', 'SYSTEM', 'FIRMWARE', 'TIME', 'SCHEDULES', and 'LOGOUT'. The main content area is divided into three sections:

- FIRMWARE:** Contains a warning about new firmware, instructions to browse and upload, and a strong warning: "Do not update firmware through wireless network!!".
- FIRMWARE INFORMATION:** Shows "Current Firmware Version : 1.00" and "Current Firmware Date : Mon, 10 Aug 2009".
- FIRMWARE UPGRADE:** Includes a note that some upgrades reset configuration, instructions to use a wired connection, and an "Upload" section with a "Browse..." button and an "Upload" button.
- LANGUAGE PACKAGE INFORMATION:** Includes a note about language changes, instructions to use a wired connection, and a "Language Package Upgrade" section with a "Browse..." button and an "Upload" button.

On the right side, there is a "Helpful Hints..." section titled "Firmware Updates:" which explains that updates are released periodically to improve functionality and add features, and provides a link to check for updates.

Time

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

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

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

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

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

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

The screenshot shows the D-Link web interface for a DAP-1350 AP. The main content area is titled 'TIME' and contains the following sections:

- TIME CONFIGURATION:**
 - Current Router Time: Jan/01/2008 00:21:37
 - Time Zone: (GMT-08:00) Pacific Time (US/Canada), Tijuana
 - Enable Daylight Saving:
 - Daylight Saving Offset: +1:00
 - Daylight Saving Dates:

	Month	Week	Day of Week	Time
DST start	Mar	3rd	Sun	2 am
DST End	Nov	2nd	Sun	2 am
- AUTOMATIC TIME CONFIGURATION:**
 - Enable NTP Server:
 - NTP Server Used: << Select NTP Server
- SET THE DATE AND TIME MANUALLY:**
 - Date And Time: Year 2008, Month Jan, Day 01, Hour 00, Minute 00, Second 00
 - Copy Your Computer's Time Settings

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

Schedules

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

Name: Enter a name for your new schedule.

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

Time: Check **All Days** or enter a start and end time for your schedule.

Wireless: Select **On** or **Off** from the drop-down menu.

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

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

The screenshot shows the D-Link web interface for a DAP-1350 AP. The top navigation bar includes 'DAP-1350 // AP', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'ADMIN', 'SYSTEM', 'FIRMWARE', 'TIME', 'SCHEDULES', and 'LOGOUT'. The main content area is titled 'SCHEDULES' and contains the following sections:

- SCHEDULES:** A header section with a description: "The Schedule configuration option is used to manage schedule rules for wireless Lan control features."
- ADD SCHEDULE RULE:** A form with the following fields:
 - Name:** A text input field.
 - Day(s):** Radio buttons for 'All Week' and 'Select Day(s)'. Under 'Select Day(s)', there are checkboxes for Sun, Mon, Tue, Wed, Thu, Fri, and Sat.
 - All Day - 24 hrs:** A checkbox.
 - Start Time:** A time selection field with hour (12), minute (00), and AM/PM dropdown. A note indicates "(hour:minute, 12 hour time)".
 - End Time:** A time selection field with hour (12), minute (00), and AM/PM dropdown. A note indicates "(hour:minute, 12 hour time)".
 - Buttons:** 'Save' and 'Clear' buttons.
- SCHEDULE RULES LIST:** A table with columns for 'Name', 'Day(s)', and 'Time Frame'. The table is currently empty.

The right sidebar contains 'Helpful Hints...' with the following text:

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

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

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

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

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

Device Info

This page displays the current information for the DAP-1350. 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.

DAP-1350 // AP	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
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					
WIRELESS	GENERAL				
LOGOUT	Time : Jan/01/2008 02:08:14 Firmware Version : 1.00, Mon, 10 Aug 2009				
	LAN				
	MAC Address : 00:18:e7:6a:20:fe Connection : Static IP IP Address : 192.168.0.50 Subnet Mask : 255.255.255.0 Gateway Address : 0.0.0.0				
	WIRELESS LAN				
	MAC Address : 00:18:e7:6a:23:40 Network Name (SSID) : dlink Channel : 9 Security Mode : Disable				
WIRELESS					

Logs

The DAP-1350 keeps a running log of events and activities occurring on the AP. If the AP is rebooted, the logs are automatically cleared. You can save the log files under Log Settings.

Log Options: You can select the types of messages that you want to display from the log: **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice**. Select and click **Apply Log Settings Now**.

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

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

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

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

Clear: This button clears all current log content.

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

Refresh: This button refreshes the log.

D-Link

DAP-1350 // AP

SETUP ADVANCED MAINTENANCE STATUS HELP

LOGS

Use this option to view the device logs. You can define what types of events you want to view and the event levels to view. This device also has internal syslog server support so you can send the log files to a computer on your network that is running a syslog utility.

LOG OPTIONS

Log Type : System Activity Debug Information Attacks
 Dropped Packets Notice

Apply Log Settings Now

LOG DETAILS

First Page Last Page Previous Next Clear

Log Settings Refresh

1/1

Time	Message
Jan 1 00:00:17	Sending discover...
Jan 1 00:00:16	0x001a0000-0x01000000 : "RootFS"
Jan 1 00:00:16	0x000b0000-0x001a0000 : "Kernel"
Jan 1 00:00:16	0x00070000-0x000b0000 : "Language"
Jan 1 00:00:16	0x00030000-0x00040000 : "Factory"
Jan 1 00:00:16	0x00000000-0x00030000 : "Bootloader"
Jan 1 00:00:16	cfi_cmdset_0002: Disabling erase-suspend-program due to code brokenness.
Jan 1 00:00:16	number of CFI chips: 1
Jan 1 00:00:16	ralink flash device: 0x1000000 at 0x1f000000
Jan 1 00:00:16	klogd started: BusyBox v1.01 (2009.09.21-12:53+0000)

WIRELESS

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

Statistics

The DAP-1350 keeps statistics of the traffic that passes through it. You can view the amount of packets that pass through the LAN and wireless portions of the network. The traffic counter will reset if the access point is rebooted.

D-Link

DAP-1350 // AP SETUP ADVANCED MAINTENANCE **STATUS** HELP

DEVICE INFO
LOGS
STATISTICS
WIRELESS
LOGOUT

TRAFFIC STATISTICS

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

Refresh Statistics Clear Statistics

LAN STATISTICS

Sent : 23	Received : 22
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WIRELESS STATISTICS

Sent : 0	Received : 123
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

Helpful Hints...

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

WIRELESS

Wireless

The wireless 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: The Ethernet ID (MAC address) of the wireless client.

D-Link

DAP-1350 // AP SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFO **WIRELESS** Helpful Hints...

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

STATISTICS

WIRELESS NUMBER OF WIRELESS CLIENTS : 0

LOGOUT Connected Time MAC Address

WIRELESS

Help

The screenshot displays the D-Link web interface for the DAP-1350 AP. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The HELP tab is selected, showing a 'HELP MENU' with links to various sections: Setup (Setup Wizard, Wireless Setup, Lan Setup), Advanced (MAC Address Filter, Advanced Wireless, User Limit), Maintenance (Admin, System, Firmware, Time, Schedules), and Status (Device Info, Logs, Statistics, Wireless). A 'Helpful Hints...' section on the right provides instructions to click on links for more information. The bottom of the interface features a 'WIRELESS' section header.

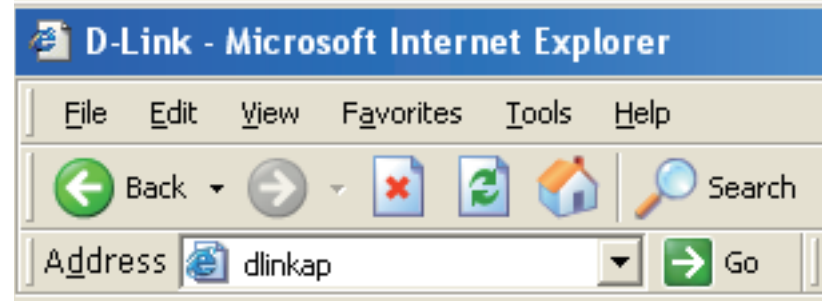
D-Link					
DAP-1350 // AP	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MENU	HELP MENU <ul style="list-style-type: none"> Setup <ul style="list-style-type: none"> • Setup Wizard • Wireless Setup • Lan Setup Advanced <ul style="list-style-type: none"> • MAC Address Filter • Advanced Wireless • User Limit Maintenance <ul style="list-style-type: none"> • Admin • System • Firmware • Time • Schedules Status <ul style="list-style-type: none"> • Device Info • Logs • Statistics • Wireless 				Helpful Hints... Click on the links for more informations of each section in the GUI.
WIRELESS					

Wireless Client Mode

Change the mode selector to **CL** on the device. Connect an Ethernet cable from the Ethernet port on the DAP-1350 to a computer for configuration.

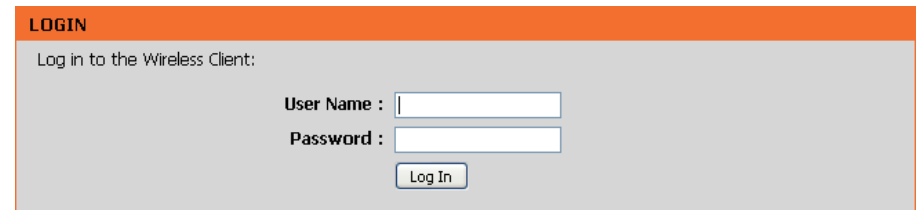
If you wish to change the default settings or optimize the performance of the DAP-1350, you may use the web-based configuration utility.

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



Type **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.



Wireless Setup Wizard

This Wizard is designed to assist you in configuring your DAP-1350 as a wireless client.

Click the **Launch Wireless Setup Wizard** button to use the wizard to setup your network.

D-Link

DAP-1350 // CLT SETUP ADVANCED MAINTENANCE STATUS HELP

SETUP WIZARD

WIRELESS SETUP

LAN SETUP

LOGOUT

WIRELESS CONNECTION SETUP WIZARD

If you would like to utilize our easy to use web-based wizard to assist you in connecting your DAP-1350 to the wireless network, click on the button below.

Launch Wireless Setup Wizard

Note: Some changes made using this Setup Wizard must be the same with the settings of the D-Link Access Point which you want to connect.

Helpful Hints...

If you are new to networking and have never configured an access point before, click on Launch Setup Wizard and the access point will guide you through a few simple steps to get your network up and running.

WIRELESS

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 same wireless network.

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) :

Next Exit

If you want to change the admin account password, enter a new password and click **Next**. It is strongly recommended to change your password.

SET YOUR NEW PASSWORD

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

Password :

Verify Password :

Prev Next Exit

Select **Auto** as the configuration method only if your wireless device supports Wi-Fi Protected Setup (WPS). For **Manual** setup, skip to the next page.

Click **Next** to continue.

For PBC (Push Button Configuration), skip to the next page.

Select **PIN** to connect your wireless device with WPS. You may click **Generate New PIN** to use a different PIN number. Click **Connect** to start the WPS scan.

Within 2 minutes, enter the PIN number into the other device you want to connect to.

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

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 :97730668
SSID :

Generate New PIN Reset PIN to Default

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

Prev Connect Exit

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

Click **Connect** to continue.

Note: You may also press the WPS button located on the side of the DAP-1350 instead of running this wizard.

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 :97730668
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

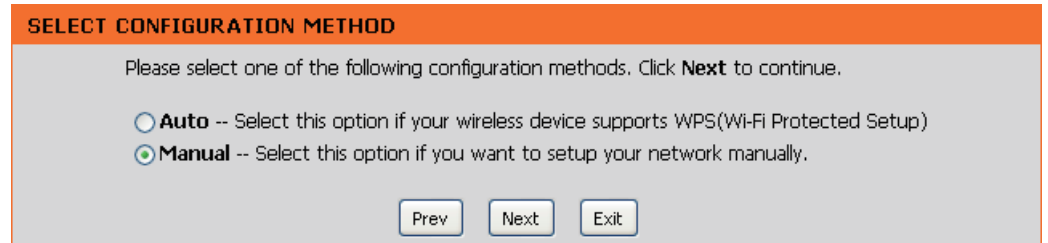
On the device you want to connect to, start the PBC process on the device. You will have 2 minutes to start the PBC process on both devices.

VIRTUAL PUSH BUTTON

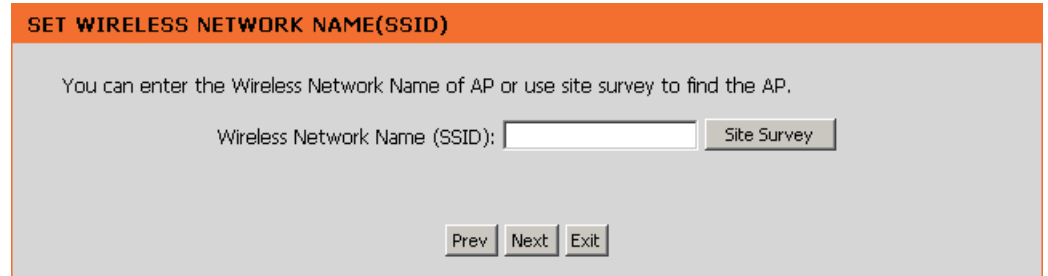
Please press down the Push Button (physical or virtual) on the wireless device you are adding to your wireless network within **118** seconds...

Select **Manual** configuration to setup your network manually.

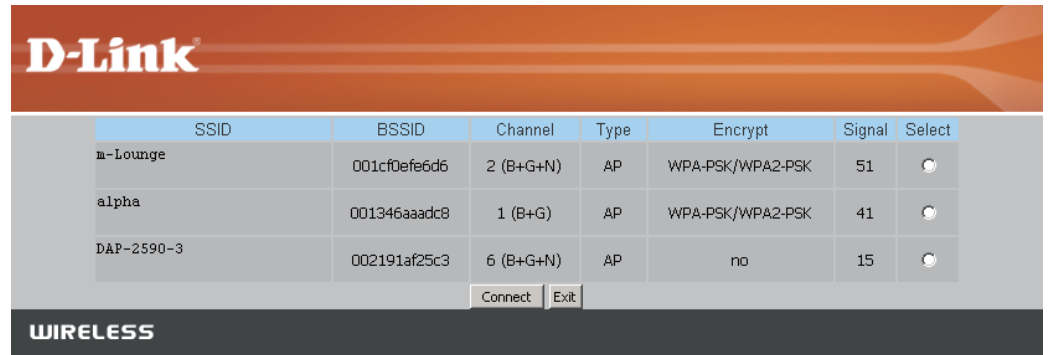
Click **Next** to continue.



Enter the network name (SSID) of the network you want to connect to. If you do not know the exact name or would like to search for the wireless network, click **Site Survey**.



Find your access point from the list, click the radio button in the right column, and click **Connect**.



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

SELECT WIRELESS SECURITY MODE

Please select the wireless security mode.

None
 WEP
 WPA
 WPA2

Prev Next Exit

If you select **WEP**, choose the key type (ASCII or HEX), the key size (64 or 128-bit), and enter the wireless security password. Click **Next** to complete the Setup Wizard.

SET YOUR WIRELESS SECURITY PASSWORD

Please enter the wireless security password to establish wireless connection.

Key Type: ASCII
Key Size: 64-Bit

Wireless Security Password:

Prev Next Exit

If you select **WPA** or **WPA2**, enter the wireless security password. Click **Next** to complete the Setup Wizard.

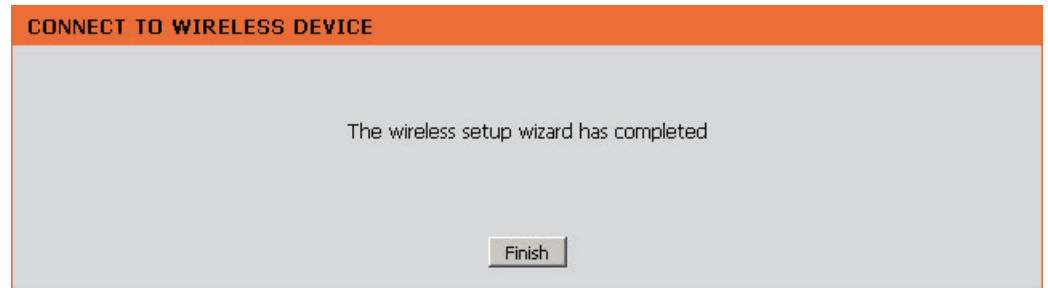
SET YOUR WPA2 PERSONAL PASSPHRASE

Please enter the WPA2 personal passphrase to establish wireless connection.

WPA2 Personal Passphrase:
(8 to 63 characters)

Prev Next Exit

The Wireless Setup Wizard is complete. Click **Finish** to reboot the device.



Manual Wireless Setup

Wireless Mode: **Wireless Client Mode** is selected.

Site Survey: Click **Site Survey** to display a list of wireless networks in your area. You may select the wireless access point to connect to.

Wireless Type: Select **Infrastructure** if connecting to an access point or wireless router, or select **Ad-Hoc** if connecting to another wireless client.

Wireless Network Name: Enter the SSID of the wireless network you want to connect to. If you do not know for sure, click **Site Survey** and select it from the list, if available.

Wireless Channel: The channel will automatically change to the channel of the AP you are connected to.

802.11 Mode: Select the appropriate 802.11 mode based on the wireless clients in your network. Select **Mixed 802.11b/g**, **802.11n Only**, or **Mixed 802.11b/g/n** from the drop-down menu.

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.

Transmission Rate: Select the transmission rate. It is strongly suggested to use the Auto setting for optimal performance.

Wireless MAC Clone: You can clone the MAC address of the device connected via Ethernet to the DAP-1350.

Wireless Security Mode: Select a wireless security setting. Options are **None**, **WEP**, **WPA**, or **WPA2**. See the Wireless Security section in this manual for a detailed explanation of the wireless security options.

WPS: Select enable if you want to configure the DAP-1350 with Wi-Fi Protection setup.

The screenshot displays the D-Link web interface for configuring the wireless settings of a DAP-1350. The main content area is titled 'WIRELESS CONNECTION' and includes a 'Site Survey' button. Below this, the 'WIRELESS NETWORK SETTINGS' section contains several configuration options: Wireless Mode (Wireless Client), Wireless Type (Infrastructure), Wireless Network Name (karoni), Wireless Channel (9), 802.11 Mode (Mixed 802.11n, 802.11g and 802.11b), Channel Width (Auto 20/40 MHz), and Transmission Rate (Auto). The 'WIRELESS MAC CLONE' section has an 'Enable' checkbox, 'MAC Source' (Auto), and a 'MAC Address' field with a 'Scan' button. The 'WIRELESS SECURITY MODE' section shows 'Security Mode' set to 'Disable Wireless Security (not recommended)'. The 'WIFI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)' section has 'Enable' checked and 'Current PIN' 97730668, with buttons for 'Reset PIN to Default' and 'Generate New PIN'. A sidebar on the right contains 'Helpful Hints...' and 'Security Keys...'.

LAN Settings

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

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

IP Address: 192.168.0.50 is the default IP Address of the DAP-1350.

Subnet Mask: 255.255.255.0 is the default subnet mask. All devices on the network must have the same subnet mask to communicate on the network.

Default Gateway: Enter the IP Address of the gateway in your 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.

D-Link

DAP-1350 // CLT

SETUP ADVANCED MAINTENANCE STATUS HELP

SETUP WIZARD
WIRELESS SETUP
LAN SETUP
LOGOUT

NETWORK SETTINGS

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.

Save Settings Don't Save Settings

LAN CONNECTION TYPE

Choose the mode to be used by the Access Point.

My LAN Connection is : Dynamic IP (DHCP)

DYNAMIC IP(DHCP) LAN CONNECTION TYPE

IP Address Information.

IP Address : 192.168.0.50
Subnet Mask : 255.255.255.0
Gateway Address : 0.0.0.0

DEVICE NAME(NETBIOS NAME)

Device Name : dlinkap

Helpful Hints...

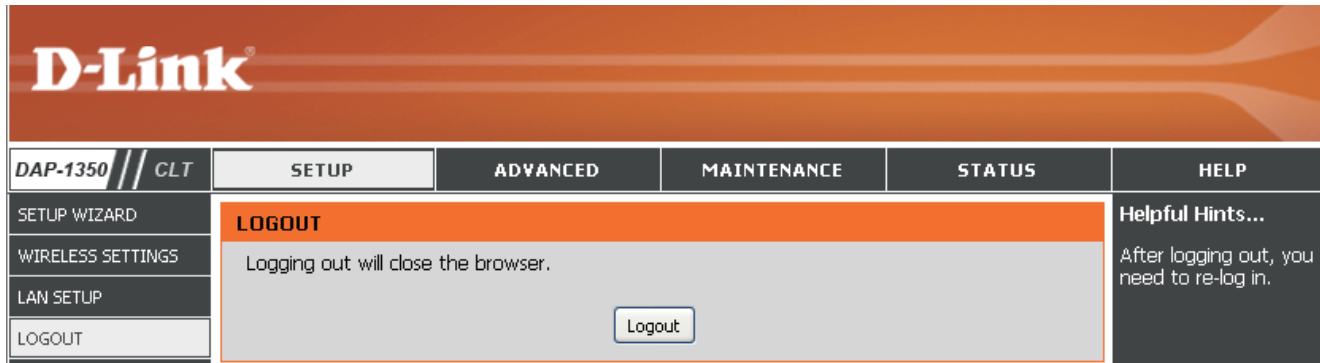
LAN Settings:
Also referred as private settings. LAN settings allow you to configure LAN interface of DAP-1350. LAN IP address is private to your internal network and is not visible to Internet. The factory default setting is Dynamic IP(DHCP).

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-1350 to be manually configured in accordance to the applied local area network.

IP Address:
The default IP address is 192.168.0.50. It can be modified to conform

Logout

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



Advanced Wireless

Transmit Power: Sets the transmit power of the antennas.

Note: Transmit power is regulated by international standard. Users are forbidden to change its maximum limit.

RTS Threshold: This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation 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's less reliable and may create higher data loss.

D-Link

DAP-1350 // CLT SETUP **ADVANCED** MAINTENANCE STATUS HELP

ADVANCED WIRELESS

LOGOUT

ADVANCED WIRELESS

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

Save Settings Don't Save Settings

ADVANCED WIRELESS SETTINGS

Transmit Power : 100% ▾

RTS Threshold : 2346 (1..2347)

Fragmentation Threshold : 2346 (256..2346)

Short GI :

Helpful Hints...

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

Transmit Power: You can lower the output power of the DAP-1350 by selecting lower percentage Transmit Power values from the drop down. Your choices are: 100%, 50%, 25%, and 12.5%.

WIRELESS

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

The screenshot shows the D-Link web interface for the DAP-1350 CLT. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: ADMIN, SYSTEM, FIRMWARE, TIME, 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 to Local Hard Drive: Use this option to save the current access point configuration settings to a file on the hard disk of the computer you are using. Click the **Save** button. You will then see a file dialog where you can select a location and file name for the settings.

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

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

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

Reboot the Device: Click to reboot the access point.

The screenshot shows the D-Link web interface for a DAP-1350 access point. The top navigation bar includes 'DAP-1350 // CLT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'ADMIN', 'SYSTEM', 'FIRMWARE', 'TIME', and 'LOGOUT'. The main content area is titled 'SAVE AND RESTORE' and contains the following text and controls:

The current system settings can be saved as a file onto the local hard drive. You can upload any save settings file that was created by the DAP-1350.

Save Settings To Local Hard Drive :

Load Settings From Local Hard Drive :

Upload Settings :

Restore To Factory Default Settings :

Reboot The Device :

On the right side, there is a 'Helpful Hints...' section titled 'Saving System Settings:' which states: 'Once your Access Point is configured the way you want it, you can save these settings to a configuration file that can later be loaded in the event that the AP's default settings are restored. To do this, click the Save button next to where it says Save Settings to Local Hard Drive.'

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

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.

Note: In most cases you must unzip the file first before uploading.

The screenshot shows the D-Link web interface for a DAP-1350 CLT. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for ADMIN, SYSTEM, FIRMWARE, TIME, and LOGOUT. The main content area is titled 'FIRMWARE' and contains the following sections:

- FIRMWARE INFORMATION:**
 - Current Firmware Version : 1.00
 - Current Firmware Date : Mon, 10 Aug 2009
- FIRMWARE UPGRADE:**
 - Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the Maintenance -> System screen.
 - To upgrade the firmware, your PC must have a wired connection to the access point. Enter the name of the firmware upgrade file, and click on the Upload button.
 - Upload :
- LANGUAGE PACKAGE INFORMATION:**
 - Note: Update language package will make changes language display on web page. Before performing an upgrade, be sure to do it!
 - To upgrade the language package, your PC must have a wired connection to the access point. Enter the name of the language package upgrade file, and click on the Upload button.
 - Upload :

On the right side, there is a 'Helpful Hints...' section titled 'Firmware Updates' which states: 'Firmware updates are released periodically to improve the functionality of your Access Point and also to add features. If you run into a problem with a specific feature of the Access Point, check our support site by clicking on the Click here to check for an upgrade on our support site link and see if an updated firmware is available for your Access Point.'

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

Time

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

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

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

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

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

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

The screenshot shows the D-Link web interface for the DAP-1350. The top navigation bar includes 'DAP-1350 // CLT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'ADMIN', 'SYSTEM', 'FIRMWARE', 'TIME', and 'LOGOUT'. The main content area is titled 'TIME' and contains the following sections:

- TIME CONFIGURATION:**
 - Current Router Time : Jan/01/2008 00:22:32
 - Time Zone : [(GMT-08:00) Pacific Time (US/Canada), Tijuana]
 - Enable Daylight Saving :
 - Daylight Saving Offset : [+1:00]
 - Daylight Saving Dates :

	Month	Week	Day of Week	Time
DST start	Mar	3rd	Sun	2 am
DST End	Nov	2nd	Sun	2 am
- AUTOMATIC TIME CONFIGURATION:**
 - Enable NTP Server :
 - NTP Server Used : << [Select NTP Server]
- SET THE DATE AND TIME MANUALLY:**
 - Date And Time : Year [2008] Month [Jan] Day [01]
 - Hour [00] Minute [00] Second [00]
 - [Copy Your Computer's Time Settings]

The right sidebar contains 'Helpful Hints...' and 'System Time Settings: This section allows admins to configure, update, and maintain the correct time on the Access Point's internal system clock.'

Device Info

This page displays the current information for the DAP-1350. 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.

DAP-1350 // CLT	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
DEVICE INFO	DEVICE INFORMATION				Helpful Hints... All of your LAN and Wireless connection details are displayed here.
LOGS	All of your wireless and network connection details are displayed on this page. The firmware version is also displayed here.				
STATISTICS	GENERAL Time : Jan/01/2008 00:16:07 Firmware Version : 1.00, Mon, 10 Aug 2009				
LOGOUT	LAN MAC Address : 00:18:e7:6a:20:fe Connection : Static IP IP Address : 192.168.0.50 Subnet Mask : 255.255.255.0 Gateway Address : 0.0.0.0				
WIRELESS LAN MAC Address : 00:18:e7:6a:23:40 Network Name (SSID) : dlink Channel : 7 Security Mode : Disable					
WIRELESS					

Logs

The DAP-1350 keeps a running log of events and activities occurring on the AP. If the AP is rebooted, the logs are automatically cleared. You can save the log files under Log Settings.

Log Options: You can select the types of messages that you want to display from the log: **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice**. Select and click **Apply Log Settings Now**.

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

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

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

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

Clear: This button clears all current log content.

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

Refresh: This button refreshes the log.

D-Link

DAP-1350 // CLT SETUP ADVANCED MAINTENANCE STATUS HELP

LOGS

Use this option to view the device logs. You can define what types of events you want to view and the event levels to view. This device also has internal syslog server support so you can send the log files to a computer on your network that is running a syslog utility.

LOG OPTIONS

Log Type : System Activity Debug Information Attacks
 Dropped Packets Notice

Apply Log Settings Now

LOG DETAILS

First Page Last Page Previous Next Clear

Log Settings Refresh

1/2

Time	Message
Jan 1 00:00:43	device_lan_ip=192.168.0.50 , device_lan_subnet_mask=255.255.255.0
Jan 1 00:00:43	DHCP server start.
Jan 1 00:00:33	Sending discover...
Jan 1 00:00:31	Sending discover...
Jan 1 00:00:29	Sending discover...
Jan 1 00:00:15	Sending discover...
Jan 1 00:00:14	0x001a0000-0x01000000 : "RootFS"
Jan 1 00:00:14	0x000b0000-0x001a0000 : "Kernel"
Jan 1 00:00:14	0x00070000-0x000b0000 : "Language"
Jan 1 00:00:14	0x00030000-0x00040000 : "Factory"

WIRELESS

Statistics

The DAP-1350 keeps statistics of the traffic that passes through it. You can view the amount of packets that pass through the LAN and wireless portions of the network. The traffic counter will reset if the access point is rebooted.

D-Link

DAP-1350 // CLT SETUP ADVANCED MAINTENANCE **STATUS** HELP

DEVICES INFO
LOGS
STATISTICS
LOGOUT

TRAFFIC STATISTICS

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

Refresh Statistics Clear Statistics

LAN STATISTICS

Sent :	22	Received :	1107
TX Packets Dropped :	0	RX Packets Dropped :	0
Collisions :	0	Errors :	0

WIRELESS STATISTICS

Sent :	2897	Received :	867
TX Packets Dropped :	0	RX Packets Dropped :	0
Collisions :	0	Errors :	0

WIRELESS

Helpful Hints...

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

Help

The screenshot shows the D-Link web interface for the DAP-1350 CLT. At the top, the D-Link logo is displayed on an orange background. Below the logo is a navigation bar with tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The HELP tab is selected. The main content area is divided into two columns. The left column, labeled 'MENU', contains a 'HELP MENU' section with the following links:

- Setup
 - [Setup Wizard](#)
 - [Wireless Setup](#)
 - [Lan Setup](#)
- Advanced
 - [Advanced Wireless](#)
- Maintenance
 - [Admin](#)
 - [System](#)
 - [Firmware](#)
 - [Time](#)
- Status
 - [Device Info](#)
 - [Logs](#)
 - [Statistics](#)

The right column, labeled 'Helpful Hints...', contains the text: "Click on the links for more informations of each section in the GUI." At the bottom of the interface, the word 'WIRELESS' is displayed in a dark bar.

Router Mode

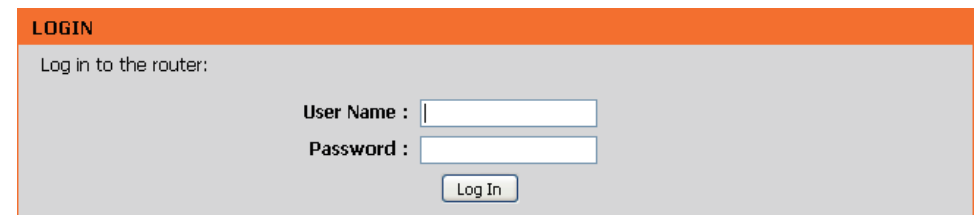
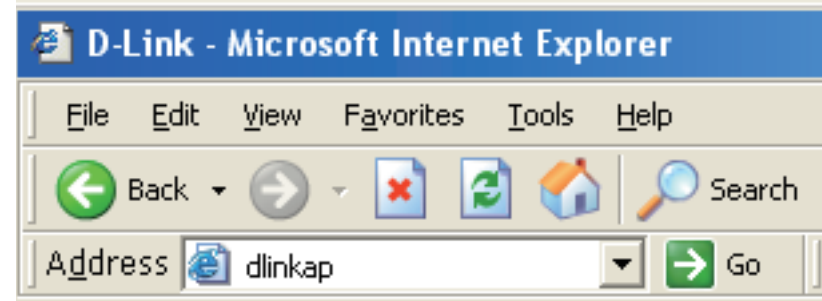
Change the mode selector to **RT** on the device. Connect an Ethernet cable from the Ethernet port on the DAP-1350 to your broadband modem. You will need to connect wirelessly to the DAP-1350 to configure it.

If you wish to change the default settings or optimize the performance of the DAP-1350, you may use the web-based configuration utility.

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

Type **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.

A screenshot of the router's login page. The page has an orange header with the word "LOGIN" in white. Below the header, the text "Log in to the router:" is displayed. There are two input fields: "User Name :" and "Password :". Below the password field is a "Log In" button.

Setup Wizard

Click **Launch Internet Connection Setup Wizard** to begin.

If you want to enter your settings without running the wizard, click **Manual Internet Configuration Setup** and skip to page 65.

The screenshot shows the D-Link web interface for a DAP-1350 RT router. The top navigation bar includes 'D-Link', 'DAP-1350 RT', and tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' tab is active, and the 'INTERNET CONNECTION' sub-tab is selected. The main content area is divided into three sections: 'INTERNET CONNECTION' (with a brief overview), 'INTERNET CONNECTION SETUP WIZARD' (with a 'Launch Internet Connection Setup Wizard' button), and 'MANUAL INTERNET CONNECTION OPTIONS' (with a 'Manual Internet Connection Setup' button). A 'Helpful Hints...' sidebar on the right provides additional guidance for new users and advanced users.

Click **Next** to continue.

This screen displays the welcome message for the Internet Connection Setup Wizard. It states: 'This wizard will guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.' Below this, a list of four steps is provided: Step 1: Set your Password, Step 2: Select your Time Zone, Step 3: Configure your Internet Connection, and Step 4: Save Settings and Connect. At the bottom, there are four buttons: 'Prev', 'Next', 'Cancel', and 'Connect'.

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

This screen is titled 'STEP 1: SET YOUR PASSWORD'. It explains that the router does not have a password configured by default and that the user should set and verify a password. Below the text, there are two input fields: 'Password :' and 'Verify Password :'. At the bottom, there are four buttons: 'Prev', 'Next', 'Cancel', and 'Connect'.

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

STEP 2: SELECT YOUR TIME ZONE

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

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

Prev Next Cancel Connect

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

STEP 3: CONFIGURE YOUR INTERNET CONNECTION

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

Not Listed or Don't Know

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

- DHCP Connection (Dynamic IP Address)**
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
- Username / Password Connection (PPPoE)**
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.
- Username / Password Connection (PPTP)**
PPTP client.
- Username / Password Connection (L2TP)**
L2TP client.
- Static IP Address Connection**
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
- 3G connection**
Choose this option for 3G connection

Prev Next Cancel Connect

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

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

Click **Connect** to save your settings. Once the router is finished rebooting, click **Continue**. Please allow 1-2 minutes to connect.

Close your browser window and reopen it to test your Internet connection. It may take a few tries to initially connect to the Internet.

DHCP CONNECTION (DYNAMIC IP ADDRESS)

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

MAC Address : (optional)

Host Name :

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

DNS SETTINGS

Primary DNS Address :
Secondary DNS Address :

SETUP COMPLETE!

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

Internet Setup

If you opt to set up your Internet connection manually, you will be redirected to a WAN page that allows you to select your Internet type and enter the correct configuration parameters.

Select your Internet connection type using the “**My Internet Connection is**” drop-down menu.

Click the **Save Settings** button when you have configured the connection.

D-Link

DAP-1350 // RT

SETUP ADVANCED MAINTENANCE STATUS HELP

INTERNET SETTINGS

WIRELESS SETTINGS

NETWORK SETTINGS

USB SETTINGS

LOGOUT

WAN

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, and L2TP. If you are unsure of your connection method, please contact your Internet Service Provider.

Note : If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Save Settings Don't Save Settings

INTERNET CONNECTION TYPE

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

My Internet Connection is : Dynamic IP (DHCP)

DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE :

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

Host Name :

Use Unicasting : (compatibility for some DHCP Servers)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

Clone Your PC's MAC address

Helpful Hints...

When configuring the router to access the Internet, be sure to choose the correct **Internet Connection Type** from the drop down menu. If you are unsure of which option to choose, contact your **Internet Service Provider (ISP)**.

If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.

For added security, it is recommended that you disable the WAN Ping Respond option. Ping is often used by malicious Internet users to locate active networks or PCs.

If you are having trouble receiving multicast streams from the Internet, make sure the Multicast Streams option is enabled.

More...

WIRELESS

Dynamic IP (DHCP)

Select Dynamic IP(DHCP) to obtain IP Address information automatically from your ISP. Select this option if your ISP does not give you any IP number to use. This option is commonly used for Cable modem services.

Host Name: The Host Name is optional but may be required by some ISPs.

Use Unicasting: Select if you are having problems obtaining an IP address from your DHCP server.

DNS Server: Enter the Primary and Secondary DNS server IP address assigned by your ISP.

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

MAC Address: The default MAC address is set to the Ethernet MAC address your DAP-1350. You can click the **Clone Your PC's MAC Address** button to replace the AP's MAC address with the MAC address of the PC that you used to register with your ISP. It is not recommended that you change the default MAC address unless required by your ISP.

INTERNET CONNECTION TYPE

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

My Internet Connection is : Dynamic IP (DHCP) ▼

DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE :

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

Host Name :

Use Unicasting : (compatibility for some DHCP Servers)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

Static IP

Select Static IP if all WAN IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP.

IP Address: Enter the IP Address provided by your ISP (Internet Service Provider).

Subnet Mask: 255.255.255.0 is the default subnet mask. All devices on the network must have the same subnet mask to communicate on the network.

Default Gateway: Enter the IP Address of the gateway in your network.

Primary DNS Server: Enter the Primary DNS (Domain Name System) server IP address assigned by your ISP.

Secondary DNS Server: Enter the Secondary DNS (optional) server IP address assigned by your ISP.

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

Clone MAC Address: The default MAC address is set to the MAC address on the AP (Access Point). You can click the Clone Your PC's MAC Address button to replace the AP's MAC address with the MAC address of your Ethernet card. It is not recommended that you change the default MAC address unless required by your ISP.

INTERNET CONNECTION TYPE

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

My Internet Connection is :

STATIC IP ADDRESS INTERNET CONNECTION TYPE :

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

IP Address :

Subnet Mask :

Default Gateway :

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

PPPoE

Select PPPoE (Point-to-Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through the DAP-1350.

Username: Enter your PPPoE user name.

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

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

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

Maximum Idle Time: Enter the time (in minutes) where the router will disconnect if idle for the time specified.

DNS Servers: Enter the Primary and Secondary DNS (Domain Name System) server IP address assigned by your ISP.

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

Clone MAC Address: The default MAC address is set to the MAC address on the AP (Access Point). You can click the **Clone Your PC's MAC Address** button to replace the AP's MAC address with the MAC address of your Ethernet card. It is not recommended that you change the default MAC address unless required by your ISP.

INTERNET CONNECTION TYPE

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

My Internet Connection is : PPPoE (Username / Password) ▼

PPPOE INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

IP Address :

Username :

Password :

Verify Password :

Service Name : (optional)

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server : (optional)

Secondary DNS Server : (optional)

MTU : (bytes) MTU default = 1492

MAC Address :

PPTP

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

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

PPTP Subnet Mask: Enter the subnet mask.

PPTP Server IP Address: Enter the Server IP Address provided by your ISP.

Username: Enter your PPTP username.

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

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

Maximum Idle Time: Enter the time (in minutes) where the router will disconnect if idle for the time specified.

DNS Servers: Enter the Primary and Secondary DNS (Domain Name System) server IP address assigned by your ISP.

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

Clone MAC Address: The default MAC address is set to the MAC address on the AP (Access Point). You can click the **Clone Your PC's MAC Address** button to replace the AP's MAC address with the MAC address of your Ethernet card. It is not recommended that you change the default MAC address unless required by your ISP.

INTERNET CONNECTION TYPE

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

My Internet Connection is : PPTP (Username / Password) ▼

PPTP INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

PPTP Server IP Address :

Username :

Password :

Verify Password :

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1492

MAC Address :

Clone Your PC's MAC address

L2TP

Choose L2TP (Point-to-Point Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

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

PPTP Subnet Mask: Enter the subnet mask.

PPTP Server IP Address: Enter the Server IP Address provided by your ISP.

Username: Enter your PPTP username.

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

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

Maximum Idle Time: Enter the time (in minutes) where the router will disconnect if idle for the time specified.

DNS Servers: Enter the Primary and Secondary DNS (Domain Name System) server IP address assigned by your ISP.

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

Clone MAC Address: The default MAC address is set to the MAC address on the AP (Access Point). You can click the **Clone Your PC's MAC Address** button to replace the AP's MAC address with the MAC address of your Ethernet card. It is not recommended that you change the default MAC address unless required by your ISP.

INTERNET CONNECTION TYPE

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

My Internet Connection is : L2TP (Username / Password) ▼

L2TP INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

L2TP IP Address :

L2TP Subnet Mask :

L2TP Gateway IP Address :

L2TP Server IP Address :

Username :

Password :

Verify Password :

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : (minutes, 0=infinite)

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1492

MAC Address :

Clone Your PC's MAC address

3G Mobile Connection

Choose USB3G if you want to connect your router to the Internet through a compatible D-Link 3G USB adapter. Plug in your USB 3G adapter to the DAP-1350's USB port, then select **USB3G** from the drop down box and click on **Save Settings**. Your DAP-1350 will reboot and auto-load most of the required settings from the 3G adapter.

ISP Name: Displays the name of your **Internet Service Provider** (ISP).

APN: Enter a name for the access point. This is set to **Auto** by default, though you can select **Manual** to manually enter an access point name.

Dial Number: Enter the dial-up number.

PIN: Enter the PIN code required to unlock the 3G SIM card in your 3G USB adapter, then enter it again in the **Verify PIN** box. This field is only necessary if your SIM card is locked with a PIN code.

Auth Protocol: Choose the authentication type from the drop-down list. The default setting is **Auto**.

Username: Enter the username required to log in to your 3G Internet service. This field is only necessary if you need to use a username and password to connect to your 3G service.

Password: Enter the password required to log in to your 3G Internet service, then enter it again in the **Verify Password** box. This field is only necessary if you need to use a username and password to connect to your 3G service.

INTERNET CONNECTION TYPE

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

My Internet Connection is : Usb3g (Username / Password) ▾

USB3G INTERNET CONNECTION TYPE :

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

ISP Name : 00000

APN : Auto
 Manual

Dial Number :

PIN : (Option)

Verify PIN : (Option)

Auth Protocol : Auto (CHAP + PAP) ▾

Username : (Option)

Password : (Option)

Verify Password : (Option)

Reconnect Mode : Always on On demand Manual

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

Keep-alive Interval : 60 (seconds)

Keep-alive Server1 : (Option)

Keep-alive Server2 : (Option)

Reconnect Mode: Select **Always-on**, **On Demand**, or **Manual** to configure how the DAP-1350 stays connected.

Maximum Idle Time: Enter the maximum idle time during which the Internet connection is maintained during inactivity. This function does not apply if you have selected **Reconnect Mode** as **Always on**.

Keep-alive Interval: Set the number of seconds to send a keepalive signal. This is set to 60 seconds by default.

Keep-alive Server: Enter the servers you want to send keepalive signals to for your connection.

INTERNET CONNECTION TYPE

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

My Internet Connection is : Usb3g (Username / Password) ▾

USB3G INTERNET CONNECTION TYPE :

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

ISP Name : 00000

APN : Auto Manual

Dial Number :

PIN : (Option)

Verify PIN : (Option)

Auth Protocol : Auto (CHAP + PAP) ▾

Username : (Option)

Password : (Option)

Verify Password : (Option)

Reconnect Mode : Always on On demand Manual

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

Keep-alive Interval : 60 (seconds)

Keep-alive Server1 : (Option)

Keep-alive Server2 : (Option)

Wireless Setup Wizard

You may click **Wireless Network Setup Wizard** to quickly configure your router. Refer to the next page.

To set up your wireless network, click **Add Wireless Device With WPS** and skip to page 76.

If you want to enter your settings without running the wizard, click **Manual Wireless Network Setup** and skip to page 77.

The screenshot shows the D-Link web interface for the DAP-1350 RT router. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: INTERNET SETTINGS, WIRELESS SETTINGS, NETWORK SETTINGS, USB SETTINGS, and LOGOUT. The main content area is titled "WIRELESS SETTINGS" and contains the "WIRELESS NETWORK SETUP WIZARD" section. This section includes three options: "Wireless Network Setup Wizard", "Add Wireless Device With WPS", and "Manual Wireless Network Setup". Each option has a brief description and a button. A "Helpful Hints..." sidebar on the right provides additional guidance for users with existing networks, new users, and advanced users.

DAP-1350 // RT	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
INTERNET SETTINGS	WIRELESS SETTINGS				Helpful Hints... If you already have a wireless network setup with Wi-Fi Protected Setup, click on Add Wireless Device Wizard to add new device to your wireless network. If you are new to wireless networking and have never configured a wireless router before, click on Wireless Network Setup Wizard and the router will guide you through a few simple steps to get your wireless network up and running. If you consider yourself an advanced user and have configured a wireless router before, click Manual Wireless Network Setup to input all the settings manually. More...
WIRELESS SETTINGS	The following Web-based wizards are designed to assist you in your wireless network setup and wireless device connection. Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.				
NETWORK SETTINGS	WIRELESS NETWORK SETUP WIZARD This wizard is designed to assist you in your wireless network setup. It will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure. <input type="button" value="Wireless Network Setup Wizard"/>				
USB SETTINGS	ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD This wizard is designed to assist you in connecting your wireless device to your wireless router. It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button below to begin. <input type="button" value="Add Wireless Device With WPS"/>				
LOGOUT	MANUAL WIRELESS NETWORK SETUP If your wireless network is already set up with Wi-Fi Protected Setup, manual configuration of the wireless network will destroy the existing wireless network. If you would like to configure the wireless settings of your new D-Link Systems Router manually, then click on the Manual Wireless Network Setup button below. <input type="button" value="Manual Wireless Network Setup"/>				

Type your desired wireless network name (SSID).

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

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

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

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

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

Wireless Network Name (SSID) :

Automatically assign a network key (Recommended)
To prevent outsiders from accessing your network, the router will automatically assign a security to your network.

Manually assign a network key
Use this options if you prefer to create our own key.

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

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

SETUP COMPLETE!

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

Wireless Network Name (SSID) : dlink

WEP Key Length : 128 bits

Default WEP Key to Use : 1

Authentication : Both

WEP Key : 662247F9E4A672D452B052C6CD

If you selected **Manually assign a network key** as the configuration method, enter your network key. This key must be entered on your wireless clients.

Check the **Use WPA encryption instead of WEP** box to use WPA Encryption instead of WEP.

Click **Next** to continue.

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

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

Wireless Network Name (SSID) :

Automatically assign a network key (Recommended)
To prevent outsiders from accessing your network, the router will automatically assign a security to your network.

Manually assign a network key
Use this options if you prefer to create our own key.

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

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

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.

STEP 2: SET YOUR WIRELESS SECURITY PASSWORD

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

The WEP (Wired Equivalent Privacy) key must meet one of following guidelines:

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

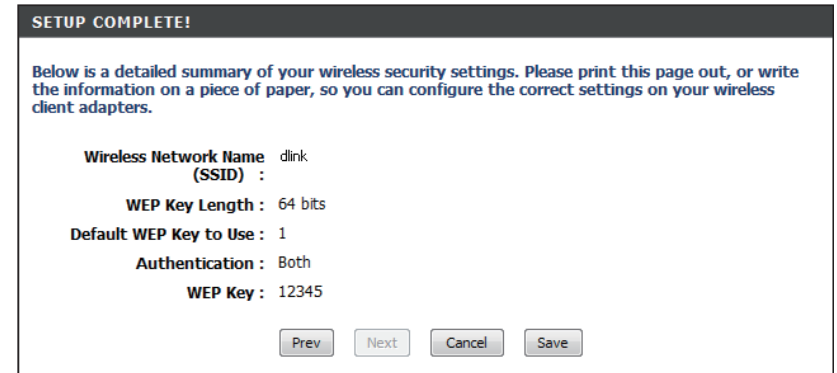
A longer WEP key is more secure than a short one

Wireless Security Password :

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

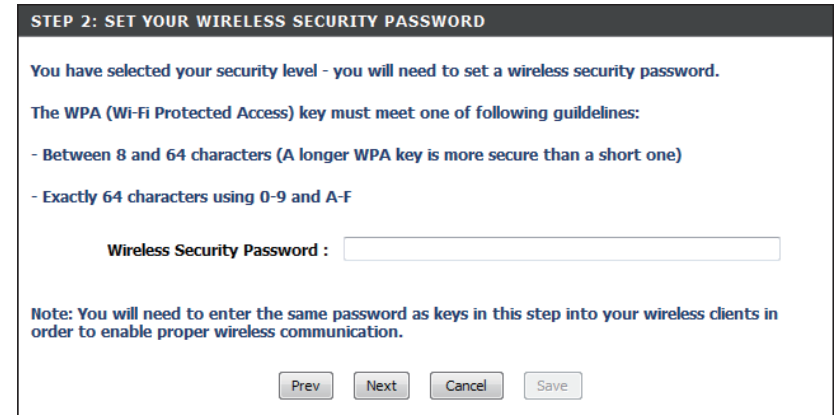
The summary screen will appear.

Click **Save** to continue.



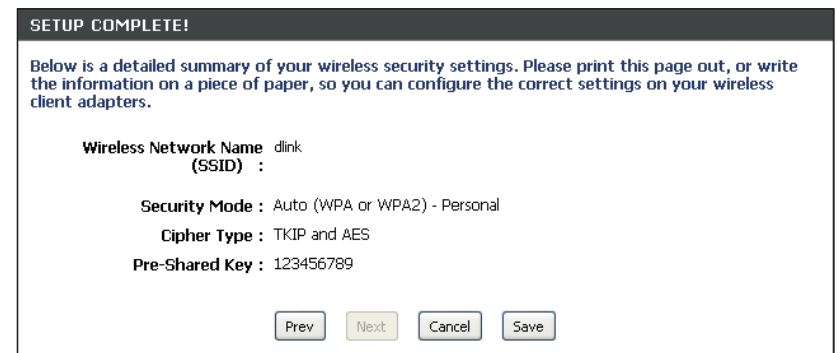
If you select **WPA**, enter the wireless security password (8-32 characters). Click **Next** to complete the Setup Wizard.

Click **Next** to continue.



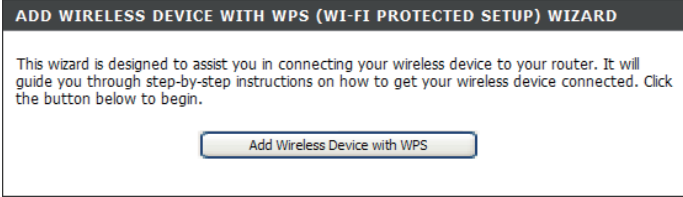
The summary screen will appear.

Click **Save** to continue.



Add Wireless Device with WPS Wizard

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



ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD

This wizard is designed to assist you in connecting your wireless device to your router. It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button below to begin.

Add Wireless Device with WPS

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

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



STEP 1: SELECT CONFIGURATION METHOD FOR YOUR WIRELESS NETWORK

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

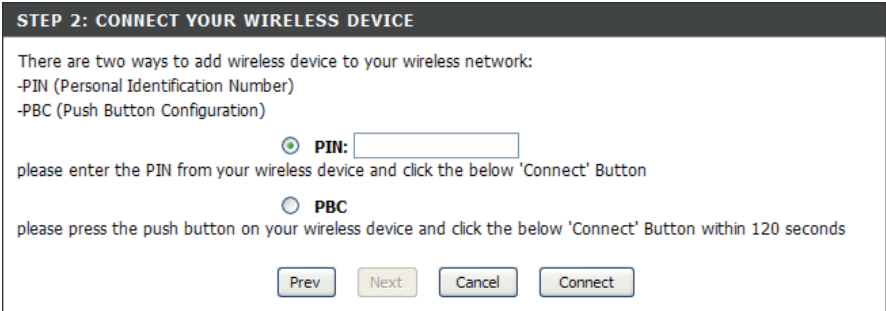
Auto Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)

Manual Select this option will display the current wireless settings for you to configure the wireless device manually

Prev Next Cancel Connect

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

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



STEP 2: CONNECT YOUR WIRELESS DEVICE

There are two ways to add 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 click the below 'Connect' Button within 120 seconds

Prev Next Cancel Connect

Wireless Settings

Enable Wireless: Select this to turn the Wi-Fi module on and off. Use the drop-down box to select if you want to use a schedule. Click **Add New Schedule** to add or change a schedule.

Wireless Network Name: Enter a wireless network name (SSID) for your network (up to 32 characters).

Wireless Mode: Select the appropriate 802.11 mode based on the wireless clients in your network. The drop-down menu options are **802.11g Only**, **Mixed 802.11b/g**, **802.11b Only**, **802.11n Only**, or **Mixed 802.11b/g/n**.

Enable Auto Channel Scan: Check this box to have the device automatically scan for the best available channel.

Wireless Channel: Select a wireless channel. It is recommended to use channels 1,6, or 11. This option will be disabled if the **Auto Channel Scan** box is checked.

Transmission Rate: Select the transmission rate. It is strongly suggested to use the Auto setting for optimal performance.

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

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcast by the DAP-1350. If Invisible is selected, the SSID of the DAP-1350 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DAP-1350 in order to connect to it.

Wireless Security Mode: Select a wireless security setting. Options are None, WEP, WPA, or WPA2. Refer to the **Wireless Security** section of this manual for a detailed explanation of the wireless security options.

The screenshot shows the D-Link configuration interface for a DAP-1350 RT router. The 'WIRELESS' settings are as follows:

- Enable Wireless:** Always Add New Schedule
- Wireless Network Name:** dlink (Also called the SSID)
- Wireless Mode:** Mixed 802.11n, 802.11g and 802.11b
- Enable Auto Channel Scan:**
- Wireless Channel:** 6 (Domain:United States)
- Transmission Rate:** Auto (Mbit/s)
- Channel Width:** 20 MHz
- Visibility Status:** Visible Invisible

The **WIRELESS SECURITY MODE** section shows:

- Security Mode:** None

Helpful Hints...: Changing your Wireless Network Name is the first step in securing your wireless network. Change it to a familiar name that does not contain any personal information. Enable Auto Channel Scan: the router can select the best possible channel for your wireless network to operate on. Enabling Hidden Mode is another way to secure your network. With this option enabled, no wireless clients will be able to see your wireless network when they scan to see what's available. For your wireless devices to connect to your router, you will need to manually enter the Wireless Network Name.

Network Settings

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

If you change the IP address, once you click **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. The default subnet mask is 255.255.255.0.

Local Domain: Enter the Domain name (Optional).

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

D-Link

DAP-1350 // RT

SETUP ADVANCED MAINTENANCE STATUS HELP

INTERNET SETTINGS
WIRELESS SETTINGS
NETWORK SETTINGS
USB SETTINGS
LOGOUT

NETWORK SETTINGS

Use this section to configure the internal network settings of your router and also to configure the built-in DHCP Server to assign IP addresses to the computers on your network. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

Save Settings Don't Save Settings

ROUTER SETTINGS

Use this section to configure the internal network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

Router IP Address : 192.168.0.50
Subnet Mask : 255.255.255.0
Device Name : dlinkap
Local Domain Name : (optional)
Enable DNS Relay :

DHCP SERVER SETTINGS

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

Enable DHCP Server :
DHCP IP Address Range : 192.168.0.100 to 192.168.0.199
DHCP Lease Time : 10080 (minutes)

ADD DHCP RESERVATION

Enable :
Computer Name : << Computer Name
IP Address :
MAC Address :
Clone Your PC's MAC address
Save Clear

DHCP RESERVATIONS LIST

Enable	Computer Name	MAC Address	IP Address

NUMBER OF DYNAMIC DHCP CLIENTS:

Hardware Address	Assigned IP	Hostname	Expires
00:1e:58:48:cc:96	192.168.0.100	dlinkpm2-niszm	Tue Jan 8 00:01:02 2008

WIRELESS

Helpful Hints...

If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck **Enable DHCP Server** to disable this feature.

If you have devices on your network that should always have fixed IP addresses, add a **DHCP Reservation** for each such device.

[More...](#)

DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DAP-1350 has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to “Obtain an IP Address Automatically.” When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DAP-1350. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

Enable DHCP Server: Check this box to enable the DHCP server on your router. Uncheck to disable this function.

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

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

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

Add DHCP Reservation: Refer to the next page for the DHCP Reservation function.

DHCP SERVER SETTINGS

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

Enable DHCP Server :

DHCP IP Address Range : to

DHCP Lease Time : (minutes)

ADD DHCP RESERVATION

Enable :

Computer Name : << Computer Name ▾

IP Address :

MAC Address :

DHCP RESERVATIONS LIST

Enable	Computer Name	MAC Address	IP Address

NUMBER OF DYNAMIC DHCP CLIENTS:

Hardware Address	Assigned IP	Hostname	Expires
00:1e:58:48:cc:86	192.168.0.101	dlinkpm2-niszmn	Tue Jan 8 00:00:04 2008

DHCP Reservation

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

Note: This IP address must be within the DHCP IP Address Range.

Enable: Check this box to enable the reservation.

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

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

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

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

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

Number of Dynamic DHCP Clients: In this section you can see what LAN devices are currently leasing IP addresses.

DHCP SERVER SETTINGS

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

Enable DHCP Server :

DHCP IP Address Range : to

DHCP Lease Time : (minutes)

ADD DHCP RESERVATION

Enable :

Computer Name : << ▼

IP Address :

MAC Address :

DHCP RESERVATIONS LIST

Enable	Computer Name	MAC Address	IP Address

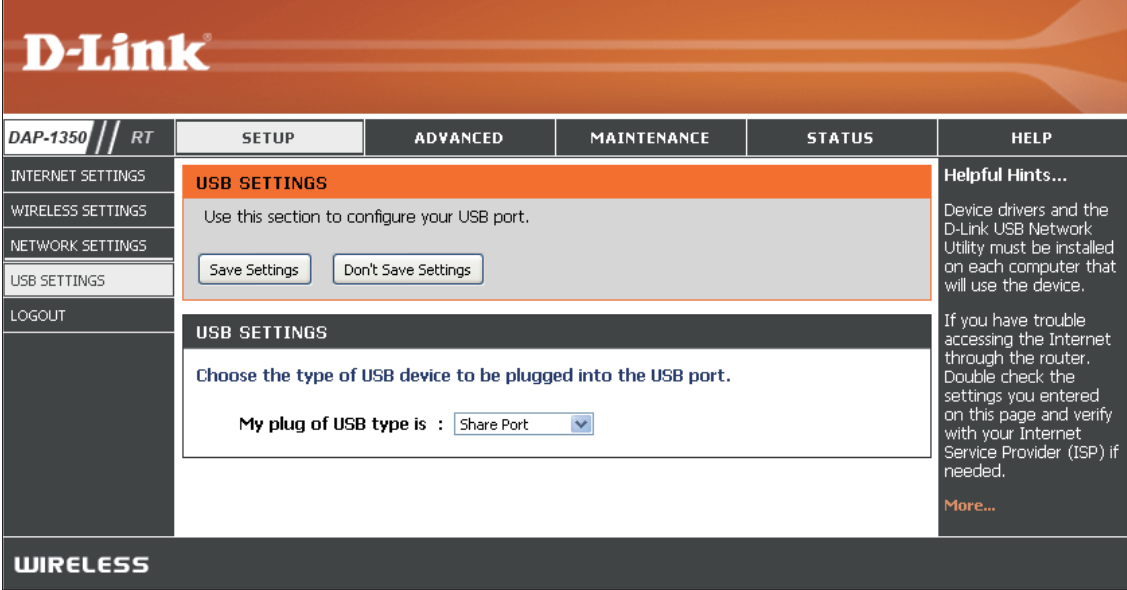
NUMBER OF DYNAMIC DHCP CLIENTS:

Hardware Address	Assigned IP	Hostname	Expires
00:1e:58:48:cc:86	192.168.0.101	dlinkpm2-niszmn	Tue Jan 8 00:00:04 2008

USB Settings

Use this section to configure your USB port. Share Port will be selected.

Note: If using the SharePort option, users will need to install the SharePort Utility into the computers to share the USB device through the router. Please see the SharePort Manual on the CD for more information.



The screenshot shows the D-Link web interface for the DAP-1350 RT. The top navigation bar includes 'DAP-1350 // RT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists 'INTERNET SETTINGS', 'WIRELESS SETTINGS', 'NETWORK SETTINGS', 'USB SETTINGS', and 'LOGOUT'. The main content area is titled 'USB SETTINGS' and contains the text: 'Use this section to configure your USB port.' Below this are two buttons: 'Save Settings' and 'Don't Save Settings'. A second 'USB SETTINGS' section contains the instruction: 'Choose the type of USB device to be plugged into the USB port.' and a dropdown menu labeled 'My plug of USB type is : Share Port'. The right sidebar, titled 'Helpful Hints...', provides instructions on installing drivers and verifying settings, with a 'More...' link at the bottom.

Note: The USB port may be used for 3G adapters. Currently only D-Link's 3G cards will be supported.

Virtual Server

The DAP-1350 can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DAP-1350 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DAP-1350 are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling Virtual Server. Depending on the requested service, the DAP-1350 redirects the external service request to the appropriate server within the LAN network.

The DAP-1350 is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

Each virtual service that is created will be listed at the bottom of the screen in the Virtual Servers List. There are pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

For a list of ports for common applications, please visit http://www.dlink.com/support/faq/?prod_id=1191.

This will allow you to open ports (port forwarding).

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

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

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

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

Inbound Filter: Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced > Inbound Filter** page.

Schedule: The schedule of time when the Virtual Server Rule will be enabled. 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.

D-Link

DAP-1350 RT

SETUP ADVANCED MAINTENANCE STATUS HELP

VIRTUAL SERVER

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

Save Settings Don't Save Settings

8--VIRTUAL SERVERS LIST

			Port	Traffic Type
<input type="checkbox"/>	Name	<< Application Name	Public 0	Protocol TCP
	IP Address	<< Computer Name	Private 0	6
<input type="checkbox"/>	Name	<< Application Name	Public 0	Protocol TCP
	IP Address	<< Computer Name	Private 0	6
<input type="checkbox"/>	Name	<< Application Name	Public 0	Protocol TCP
	IP Address	<< Computer Name	Private 0	6
<input type="checkbox"/>	Name	<< Application Name	Public 0	Protocol TCP
	IP Address	<< Computer Name	Private 0	6

Helpful Hints...

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

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

[More...](#)

Application Rules

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the DAP-1350. If you need to run applications that require multiple connections, specify the port normally associated with an application in the “Trigger Port” field, select the protocol type as TCP or UDP, then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

The DAP-1350 provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

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

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

Traffic Type: Select the protocol of the trigger port (TCP, UDP, or Both).

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

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

D-Link

DAP-1350 RT SETUP **ADVANCED** MAINTENANCE STATUS HELP

APPLICATION RULES

This option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a "trigger" port or port range. Special Applications rules apply to all computers on your internal network.

Save Settings Don't Save Settings

8 -- APPLICATION RULES

	Name	Application	Trigger	Traffic Type
<input type="checkbox"/>	<input type="text"/>	<< Application Name	<input type="text"/>	TCP
			Firewall	TCP
<input type="checkbox"/>	<input type="text"/>	<< Application Name	<input type="text"/>	TCP
			Firewall	TCP
<input type="checkbox"/>	<input type="text"/>	<< Application Name	<input type="text"/>	TCP
			Firewall	TCP
<input type="checkbox"/>	<input type="text"/>	<< Application Name	<input type="text"/>	TCP
			Firewall	TCP
<input type="checkbox"/>	<input type="text"/>	<< Application Name	<input type="text"/>	TCP
			Firewall	TCP

Helpful Hints...

Use this feature if you are trying to execute one of the listed network applications and it is not communicating as expected.

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

[More...](#)

MAC Address Filter

Use MAC (Media Access Control) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the Network. You can either manually add a MAC address or select the MAC address from the list of clients that are currently connected to the Broadband Router.

Configure MAC Filtering: Select Turn MAC Filtering Off, allow MAC addresses listed below, or deny MAC addresses listed below from the drop-down menu.

MAC Address: Enter the MAC address you would like to filter. To find the MAC address on a computer, please refer to the Networking Basics section in this manual.

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

The screenshot shows the D-Link web interface for the DAP-1350 RT. The top navigation bar includes 'D-Link' and tabs for 'DAP-1350 // RT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists various configuration sections: VIRTUAL SERVER, APPLICATION RULES, MAC ADDRESS FILTER (highlighted), WEBSITE FILTER, FIREWALL SETTINGS, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, UPNP SETTINGS, GUEST ZONE, DMZ, and LOGOUT. The main content area is titled 'MAC ADDRESS FILTER' and contains the following text: 'The DAP-1350 can be setup to deny or only allow access to wireless clients with the listed MAC addresses.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. The next section is 'WIRELESS ACCESS SETTINGS', which includes the instruction: 'Use the client's MAC Address to authorize network access through the Router.' This section contains three fields: 'MAC Address Filter' with a dropdown menu set to 'Disable', 'MAC Address' with five input boxes and a 'Clear' button, and 'Connected PCs' with a 'Computer Name' dropdown and a 'done' button. The bottom section is 'MAC FILTER LIST', which is currently empty. On the right side, there are 'Helpful Hints...' for 'Wireless Access Settings' and 'Connected PCs'. The bottom of the page features a 'WIRELESS' section header.

Website Filters

Website Filters are used to deny LAN computers from accessing specific web sites by the URL or domain. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the blocked word, the site will not be accessible and the web page will not display. To use this feature, enter the text string to be blocked and click **Save Settings**. The text to be blocked will appear in the list. To delete the text, click **Clear the List Below**.

Website URL/ Domain: Enter the keywords or URLs that you want to block (or allow). Any URL with the keyword in it will be blocked.

The screenshot displays the D-Link web interface for the DAP-1350 RT. The top navigation bar includes 'D-Link' and tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists various configuration options, with 'WEBSITE FILTER' selected. The main content area is titled 'WEBSITE FILTER' and contains the following elements:

- WEBSITE FILTER** (Section Header)
- Instructional text: "The Website Filter option allows you to set up a list of Web sites you would like to allow or deny through your network. To use this feature, you must also select the 'Apply Web Filter' checkbox in the Access Control section."
- Buttons: "Save Settings" and "Don't Save Settings"
- 40 -- WEBSITE FILTERING RULES** (Section Header)
- Configuration options: "Configure Website Filter below:" with a dropdown menu set to "DENY computers access to ONLY these sites" and a "Clear the list below..." button.
- Website URL/Domain** (Table Header)
- A table with three empty rows for entering website URLs or domains.

On the right side of the interface, there is a "Helpful Hints..." section with the text: "Create a list of Web Sites to which you would like to deny or allow through the network." and a "More..." link.

Firewall Settings

A firewall protects your network from the outside world. The D-Link DAP-1350 offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

Enable SPI: SPI (Stateful Packet Inspection, also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

NAT Endpoint Filtering: Select one of the following for TCP and UDP ports:

Endpoint Independent - Any incoming traffic sent to an open port will be forwarded to the application that opened the port. The port will close if idle for 5 minutes.

Address Restricted - Incoming traffic must match the IP address of the outgoing connection.

Address + Port Restriction - Incoming traffic must match the IP address and port of the outgoing connection.

D-Link

DAP-1350 // RT

SETUP | **ADVANCED** | MAINTENANCE | STATUS | HELP

VIRTUAL SERVER

APPLICATION RULES

MAC ADDRESS FILTER

WEBSITE FILTER

FIREWALL SETTINGS

ADVANCED WIRELESS

WI-FI PROTECTED SETUP

UPNP SETTINGS

GUEST ZONE

DMZ

LOGOUT

FIREWALL SETTINGS

The Firewall Settings allow you to set a single computer on your network outside of the router.

Save Settings | Don't Save Settings

FIREWALL SETTINGS

Enable SPI :

NAT ENDPOINT FILTERING

UDP Endpoint Filtering:

- Endpoint Independent
- Address Restricted
- Port And Address Restricted

TCP Endpoint Filtering:

- Endpoint Independent
- Address Restricted
- Port And Address Restricted

ANTI-SPOOF CHECKING

Enable anti-spoof checking :

WIRELESS

Helpful Hints...

ALGs provide special handling of the IP payload for some protocols and applications to make them work with network address translation (NAT).

More...

Advanced Wireless Settings

Transmit Power: Set the transmit power of the antennas.

Note: Transmit power is regulated by international standard. Users are forbidden to change its maximum limit.

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

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

RTS Threshold: This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation 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.

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

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

The screenshot shows the D-Link DAP-1350 RT web interface. The top navigation bar includes 'D-Link' and tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists various settings categories: VIRTUAL SERVER, APPLICATION RULES, MAC ADDRESS FILTER, WEBSITE FILTER, FIREWALL SETTINGS, ADVANCED WIRELESS (selected), WI-FI PROTECTED SETUP, UPNP SETTINGS, GUEST ZONE, DMZ, and LOGOUT. The main content area is titled 'ADVANCED WIRELESS' and contains a warning message: 'If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings.' Below this are 'Save Settings' and 'Don't Save Settings' buttons. The 'ADVANCED WIRELESS SETTINGS' section includes the following configuration options:

- Transmit Power : 100% (dropdown)
- Beacon Period : 100 (20..1024)
- DTIM Interval : 1 (1..255)
- RTS Threshold : 2346 (1..2347)
- Fragmentation Threshold : 2346 (256..2346)
- WMM Enable :
- Short GI :
- IGMP Snooping :
- WLAN Partition :

On the right side, there is a 'Helpful Hints...' section with the following text: 'It is recommended that you leave these parameters at their default values. Adjusting them could limit the performance of your wireless network. Enabling WMM can help control latency and jitter when transmitting multimedia content over a wireless connection. More...'

Wi-Fi Protected Setup

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

Enable: Enable the Wi-Fi Protected Setup feature.

Lock Wireless Security Settings: Locking the wireless security settings prevents the settings from being changed by the Wi-Fi Protected Setup feature of the router. Devices can still be added to the network using Wi-Fi Protected Setup. However, the settings of the network will not change once this option is checked.

PIN Settings: A PIN is a unique number that can be used to add the router to an existing network or to create a new network. The default PIN may be printed on the bottom of the router. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator (“admin” account) can change or reset the PIN.

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

Reset PIN to Default: Restore the default PIN of the router.

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

The screenshot displays the D-Link router's configuration interface for Wi-Fi Protected Setup. The main content area is divided into several sections:

- WI-FI PROTECTED SETUP:** This section contains an 'Enable' checkbox which is checked. Below it is a 'Reset to Unconfigured' button.
- PIN SETTINGS:** This section shows the 'Current PIN' as 97730668. It includes two buttons: 'Reset PIN to Default' and 'Generate New PIN'.
- ADD WIRELESS STATION:** This section features a button labeled 'Add Wireless Device With WPS'.

On the right side of the interface, there is a 'Helpful Hints...' section with the following text: 'Enable if other wireless devices you wish to include in the local network support Wi-Fi Protected Setup. Only "Admin" account can change security settings. Click Add Wireless Device Wizard to use Wi-Fi Protected Setup to add wireless devices to the wireless network. More...'.

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

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

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

Add Wireless Device Wizard: Start the wizard.

UPnP Settings

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

The screenshot shows the D-Link web interface for the DAP-1350 RT. The main navigation menu includes SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration options, with UPNP SETTINGS selected. The main content area displays the UPNP SETTINGS page, which includes a description of UPnP, 'Save Settings' and 'Don't Save Settings' buttons, and a checkbox for 'Enable UPnP' which is checked. A sidebar on the right contains 'Helpful Hints...' and a 'More...' link.

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.

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

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

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

Security Mode: Select the type of security or encryption you would like to enable for the guest zone.

The screenshot displays the D-Link router's configuration interface for the Guest Zone feature. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists various configuration categories, with 'GUEST ZONE' currently selected. The main content area is divided into two sections: 'GUEST ZONE' and 'GUEST ZONE SELECTION'. The 'GUEST ZONE' section contains a descriptive text and two buttons: 'Save Settings' and 'Don't Save Settings'. The 'GUEST ZONE SELECTION' section includes the following settings:

- Enable Guest Zone:** A checkbox that is currently unchecked, followed by a dropdown menu set to 'Always' and an 'Add New Schedule' button.
- Wireless Band:** Set to '2.4GHz Band'.
- Wireless Network Name:** A text input field containing 'dlink_guest', with a note '(Also called the SSID)'.
- Enable Routing Between Zones:** A checkbox that is currently unchecked.

On the right side of the page, there is a 'Helpful Hints...' sidebar with a 'More...' link.

DMZ

This feature allows you to set up a DMZ (Demilitarized Zone) host. If you have a client PC that cannot run Internet applications properly from behind the DAP-1350, then you can set the client up for unrestricted Internet access. The DMZ allows a computer to be exposed to the Internet. This feature is useful for gaming purposes. Enter the IP address of the computer that will be the DMZ host. Adding a client to the DMZ may expose your local network to a variety of security risks, so only use this option as a last resort.

Enable DMZ: Check this box to enable DMZ.

DMZ Host IP Address: Enter the IP address of the computer you would like to open all ports to. You can select a computer from the Computer Name drop-down menu and click << to enter the computer name into the DMZ Host IP Address field.

The screenshot shows the D-Link web interface for the DAP-1350 RT. The top navigation bar includes 'D-Link', 'DAP-1350 RT', and tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar lists various settings categories, with 'DMZ' selected. The main content area is titled 'DMZ SETTINGS' and contains the following information:

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

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

Buttons: Save Settings, Don't Save Settings

DMZ HOST

Enable DMZ :

DMZ IP Address : <<

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

Administrator Settings

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

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

User Password: Enter the new password for the User login. If you login as the User, you can only see the settings, but cannot change them.

Gateway Name: Enter a name for the DAP-1350 router.

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

Enable HTTPS Server: Check to enable HTTPS to connect to the router securely.

Remote Management: Remote management allows the DAP-1350 to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.

Remote Admin Port: The port number used to access the DAP-1350.

The screenshot shows the D-Link DAP-1350 RT web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: ADMIN, TIME, SYSLOG, SYSTEM, FIRMWARE, SCHEDULES, and LOGOUT. The main content area is titled 'ADMINISTRATOR SETTINGS' and contains the following sections:

- ADMINISTRATOR SETTINGS:** A text box explaining that 'admin' and 'user' accounts can access the management interface. It notes that 'admin' has read/write access and can change passwords, while 'user' has read-only access. It also states that by default, there is no password configured and it is highly recommended to create a password for security. Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'.
- ADMIN PASSWORD:** A section titled 'Please enter the same password into both boxes, for confirmation.' It contains two input fields: 'Password' and 'Verify Password'.
- USER PASSWORD:** A section titled 'Please enter the same password into both boxes, for confirmation.' It contains two input fields: 'Password' and 'Verify Password'.
- ADMINISTRATION:** A section with several checkboxes and a text input field:
 - Enable Graphical Authentication:
 - Enable HTTPS Server:
 - Enable Remote Management:
 - Remote Admin Port:

On the right side of the interface, there is a 'Helpful Hints...' section with the following text:

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

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

Choose a port to open for remote management.

[More...](#)

Time Settings

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

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

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

Enable NTP 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 **Set Time**. You can also click **Copy Your Computer's Time Settings**.

D-Link

DAP-1350 // RT SETUP ADVANCED MAINTENANCE STATUS HELP

TIME

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

Save Settings Don't Save Settings

TIME CONFIGURATION

Current Router Time : Jan/01/2008 00:52:12

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

Enable Daylight Saving :

Daylight Saving Dates :

DST start	Month	Week	Day of Week	Time
Mar	3rd	Sun	2 am	
Nov	2nd	Sun	2 am	

AUTOMATIC TIME CONFIGURATION

Enable NTP Server :

NTP Server Used : << Select NTP Server

SET THE DATE AND TIME MANUALLY

Date And Time : Year 2008 Month Jan Day 01

Hour 00 Minute 00 Second 00

Copy Your Computer's Time Settings

WIRELESS

Helpful Hints...

Good timekeeping is important for accurate logs and scheduled firewall rules.

More...

SysLog

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

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

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

The screenshot shows the D-Link web interface for the DAP-1350 RT router. The top navigation bar includes 'DAP-1350 // RT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SYSLOG' menu item is selected. The main content area is titled 'SYSLOG' and contains the following text: 'The SysLog options allow you to send log information to a SysLog Server.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'SYSLOG SETTINGS' section is visible, showing the option 'Enable Logging To Syslog Server' with an unchecked checkbox. On the right side, there is a 'Helpful Hints...' section with the following text: 'A System Logger (syslog) is a server that collects in one place the logs from different sources. If the LAN includes a syslog server, you can use this option to send the router's logs to that server.' Below this text is a 'More...' link. The bottom of the page features a 'WIRELESS' section.

System Settings

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

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

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

Reboot Device: Click to reboot the router.

The screenshot shows the D-Link web interface for the DAP-1350 RT. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar lists menu items: ADMIN, TIME, SYSLOG, SYSTEM (highlighted), FIRMWARE, SCHEDULES, and LOGOUT. The main content area is titled 'SYSTEM SETTINGS' and contains the following options:

- Save Settings To Local Hard Drive :** Save Configuration
- Load Settings From Local Hard Drive :** Browse... Restore Configuration from File
- Restore To Factory Default Settings :** Restore Factory Defaults
Restore all settings to the factory defaults.
- Reboot The Device :** Reboot the Device

The right sidebar, titled 'Helpful Hints...', provides instructions: 'Once your router is configured the way you want it, you can save the configuration settings to a configuration file. You might need this file so that you can load your configuration later in the event that the router's default settings are restored. To save the configuration, click the Save Configuration button. More...'

Firmware Update

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

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

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

Notifications Options: Check **Automatically Check Online for Latest Firmware Version** to have the router check automatically to see if there is a new firmware upgrade.

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

The screenshot shows the D-Link router's web interface. At the top, the D-Link logo is displayed. Below it, a navigation menu includes 'DAP-1350 // RT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'MAINTENANCE' tab is selected, and the 'FIRMWARE' sub-tab is active. The main content area is divided into three sections:

- FIRMWARE:** A notification box stating: "There may be new firmware for your DAP-1350 to improve functionality and performance. Click here to check for an upgrade on our support site." Below this, it says: "After you have download the new firmware file from our support site, click the Browse button below to find the firmware file on your local hard drive. Click the Save Settings button to update the firmware on the DAP-1350." A warning reads: "Do not update firmware through wireless network!!".
- FIRMWARE INFORMATION:** A box showing "Current Firmware Version : 1.00" and "Current Firmware Date : Mon, 10 Aug 2009".
- FIRMWARE UPGRADE:** A section with a note: "Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration from the Maintenance -> System screen." It instructs: "To upgrade the firmware, your PC must have a wired connection to the access point. Enter the name of the firmware upgrade file, and click on the Upload button." Below this is an "Upload:" field with a "Browse..." button and an "Upload" button.

At the bottom of the interface, there is a "LANGUAGE PACKAGE INFORMATION" section with a similar note and instructions for upgrading the language package, also featuring an "Upload:" field with "Browse..." and "Upload" buttons. A "WIRELESS" tab is visible at the very bottom of the page.

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

The screenshot shows the D-Link DAP-1350 RT web interface. The top navigation bar includes 'DAP-1350 // RT', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'ADMIN', 'TIME', 'SYSLOG', 'SYSTEM', 'FIRMWARE', 'SCHEDULES', and 'LOGOUT'. The main content area is titled 'SCHEDULES' and contains the following sections:

- SCHEDULES:** The Schedule configuration option is used to manage schedule rules for various firewall and parental control features.
- ADD SCHEDULE RULE:**
 - Name:** [Text input field]
 - Day(s):** All Week ; Select Day(s) :
 - Sun Mon Tue Wed Thu Fri Sat
 - All Day - 24 hrs:**
 - Start Time:** [12] : [00] [AM] (hour:minute, 12 hour time)
 - End Time:** [12] : [00] [AM] (hour:minute, 12 hour time)
 - Buttons:** Save, Clear
- SCHEDULE RULES LIST:**

Name	Day(s)	Time Frame		

The right sidebar contains 'Helpful Hints...' with the following text:

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

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

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

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

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

[More...](#)

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

Device Information

This page displays the current information for the DAP-1350. It will display the LAN, WAN (Internet), and Wireless information.

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

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

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

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

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

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

LAN Computers: Displays computers and devices that are connected to the router via Ethernet and that are receiving an IP address assigned by the router (DHCP).

D-Link

DAP-1350 // RT SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFORMATION

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

GENERAL

Time : Jan/01/2008 01:48:38
 System Up Time : 0 Day, 01:49:00
 Firmware Version : 1.00, Mon, 10 Aug 2009

WAN

Connection Type : DHCP client
 Cable Status : Connected
 Network Status : Connected

Connection Up Time : 0 Day, 01:48:44
 MAC Address : 00:18:e7:6a:20:ff
 IP Address : 67.130.140.148
 Subnet Mask : 255.255.255.0
 Default Gateway : 67.130.140.1
 Primary DNS Server : 67.130.140.2
 Secondary DNS Server : 192.152.81.1

LAN

MAC Address : 00:18:e7:6a:20:fe
 IP Address : 192.168.0.50
 Subnet Mask : 255.255.255.0
 DHCP Server : Enable

WIRELESS LAN

Wireless Radio : Enable
 Wireless Mode : Mixed 802.11n, 802.11g and 802.11b
 Channel Width : 20 MHz
 Channel : 10
 Wi-Fi Protected Setup : Enable / Configured

SSID List

Network Name (SSID)	Guest	MAC Address	Security Mode
dlink	No	00:18:e7:6a:23:40	Disable

LAN COMPUTERS

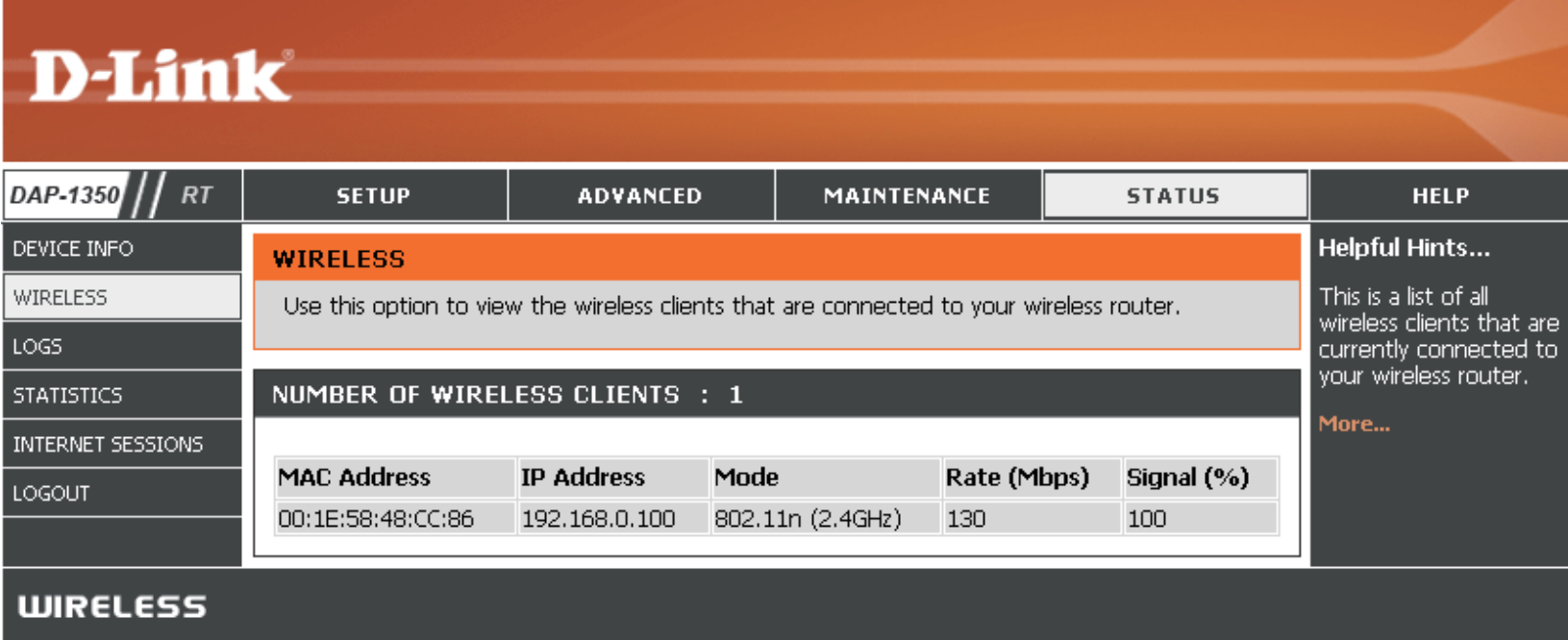
IP Address	Name(If Any)	MAC
192.168.0.100	dlinkpm2-niszmn	00:1e:58:48:cc:86

WIRELESS

Helpful Hints...
 All of your WAN and LAN connection details are displayed here.
 More...

Wireless

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



D-Link

DAP-1350 // RT SETUP ADVANCED MAINTENANCE **STATUS** HELP

DEVICE INFO

WIRELESS

Use this option to view the wireless clients that are connected to your wireless router.

LOGS

STATISTICS

INTERNET SESSIONS

LOGOUT

NUMBER OF WIRELESS CLIENTS : 1

MAC Address	IP Address	Mode	Rate (Mbps)	Signal (%)
00:1E:58:48:CC:86	192.168.0.100	802.11n (2.4GHz)	130	100

Helpful Hints...

This is a list of all wireless clients that are currently connected to your wireless router.

[More...](#)

WIRELESS

Logs

The router 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 router logs. You can define what types of events you want to view and the level of the events to view. This router also has external Syslog Server support so you can send the log files to a computer on your network that is running a Syslog utility.

Log Options: You can select the types of messages that you want to display from the log: **System Activity**, **Debug Information**, **Attacks**, **Dropped Packets**, and **Notice**. Select and click **Apply Log Settings Now**.

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

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

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

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

Clear: This button clears all current log content.

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

Refresh: This button refreshes the log.

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

D-Link

DAP-1350 // RT SETUP ADVANCED MAINTENANCE STATUS HELP

LOGS

Use this option to view the device logs. You can define what types of events you want to view and the event levels to view. This device also has internal syslog server support so you can send the log files to a computer on your network that is running a syslog utility.

LOG OPTIONS

Log Type : System Activity Debug Information Attacks
 Dropped Packets Notice

LOG DETAILS

1/7

Time	Message
Jan 1 00:04:51	Sending discover...
Jan 1 00:04:49	Sending discover...
Jan 1 00:04:47	Sending discover...
Jan 1 00:04:33	Sending discover...
Jan 1 00:04:31	Sending discover...
Jan 1 00:04:29	Sending discover...
Jan 1 00:04:27	UDHCPD Inform: add_lease 192.168.0.100
Jan 1 00:04:22	UDHCPD sending OFFER of 192.168.0.100
Jan 1 00:04:15	Sending discover...
Jan 1 00:04:13	Sending discover...

WIRELESS

Helpful Hints...
Check the log frequently to detect unauthorized network usage.
[More...](#)

Statistics

The screen below displays the Traffic Statistics. Here you can view the amount of packets that pass through the DAP-1350 on the Internet, wireless, and the LAN ports. The traffic counter will reset if the device is rebooted.

D-Link

DAP-1350 // RT SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFO
WIRELESS
LOGS
STATISTICS
INTERNET SESSIONS
LOGOUT

TRAFFIC STATISTICS
Traffic Statistics display Receive and Transmit packets passing through your router.
Refresh Statistics Clear Statistics

LAN STATISTICS

Sent : 20	Received : 24
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WAN STATISTICS

Sent : 33	Received : 46
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

WIRELESS STATISTICS

Sent : 116	Received : 235
TX Packets Dropped : 0	RX Packets Dropped : 0
Collisions : 0	Errors : 0

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

WIRELESS

Internet Sessions

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

Local: The IP address and, where appropriate, port number of the local application.

NAT: The port number of the LAN-side application as viewed by the WAN-side application.

Internet: The IP address and, where appropriate, port number of the application on the Internet.

Protocol: The communications protocol used for the conversation.

State: State for sessions that use the TCP protocol:

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

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

EST: Established -- the connection is passing data.

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

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

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

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

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

D-Link

DAP-1350 // RT

SETUP ADVANCED MAINTENANCE STATUS HELP

DEVICE INFO **INTERNET SESSIONS** Helpful Hints...

WIRELESS This page displays the full details of active internet sessions to your router. This is a list of all active conversations between WAN computers and LAN computers.

LOGS

STATISTICS

INTERNET SESSIONS

LOGOUT

Local	Nat	Internet Settings	Protocol	State	Dir	Time-Out
219.77.195.156:4260	4260	192.168.0.101:4147	UDP	-	IN	68
192.168.0.101:4147	4147	119.145.130.15:17788	UDP	-	IN	5
219.78.149.227:8733	8733	192.168.0.101:4147	UDP	-	IN	69
94.194.226.253:14917	14917	192.168.0.101:4147	UDP	-	IN	37
75.6.228.232:49158	49158	192.168.0.101:4147	UDP	-	IN	51
192.168.0.101:4147	4147	75.22.69.114:4747	UDP	-	IN	63
222.73.25.118:17788	17788	192.168.0.101:4147	UDP	-	IN	12
192.168.0.101:4147	4147	208.120.72.146:2967	UDP	-	IN	58
121.9.13.20:17788	17788	192.168.0.101:4147	UDP	-	IN	37
113.254.188.21:3183	3183	192.168.0.101:4147	UDP	-	IN	62

WIRELESS

Dir: The direction of initiation of the conversation:

Out - Initiated from LAN to WAN.

In - Initiated from WAN to LAN.

Priority: The preference given to outbound packets of this conversation by the QoS Engine logic. Smaller numbers represent higher priority.

Time Out: The number of seconds of idle time until the router considers the session terminated. The initial value of Time Out depends on the type and state of the connection.

300 seconds - UDP connections.

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

7800 seconds - Established or closing TCP connections.

Help

D-Link

DAP-1350 // RT

	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MENU	SUPPORT MENU				Helpful Hints... Click on the links for more informations of each section in the GUI.
SETUP	<ul style="list-style-type: none"> • Setup • Advanced • Maintenance • Status 				
ADVANCED					
MAINTENANCE					
STATUS					
	SETUP HELP				
	<ul style="list-style-type: none"> • Internet Connection • Internet Settings • Wireless Settings • Network Settings • USB Settings 				
	ADVANCED HELP				
	<ul style="list-style-type: none"> • Virtual Server • Application Rules • MAC Address Filter • Website Filter • Firewall Settings • Advanced Wireless • Wi-Fi Protected Setup • UPNP Settings • Guest Zone • DMZ 				
	MAINTENANCE HELP				
	<ul style="list-style-type: none"> • Admin • Time • SysLog • System • Firmware • Schedules 				
	STATUS HELP				
	<ul style="list-style-type: none"> • Device Info • Wireless • Logs • Statistics • Internet Sessions 				

WIRELESS

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DAP-1350 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

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 **Enable WEP Wireless Security (Basic)**.
3. Next to **Authentication**, select **Open** or **Shared Key**.
4. Next to **WEP Encryption**, select **64-bit** or **128-bit** encryption.
5. Next to **Key Type**, select either **Hex** or **ASCII**.
Hex (recommended) - Letters A-F and numbers 0-9 are valid.
ASCII - All numbers and letters are valid.
6. Next to Key 1, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys.
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 WEP on your adapter and enter the same WEP key as you did on the access point.

WIRELESS SECURITY MODE :

Security Mode :

WEP :

WEP is the wireless encryption standard. To use it you must enter the same key(s) into the AP and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Open Key" when WEP is enabled.

You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. 5 text characters can be entered for 64 bit keys, and 13 characters for 128 bit keys.

Authentication :

WEP Encryption :

Key Type :

Default WEP Key :

WEP Key 1 :

WEP Key 2 :

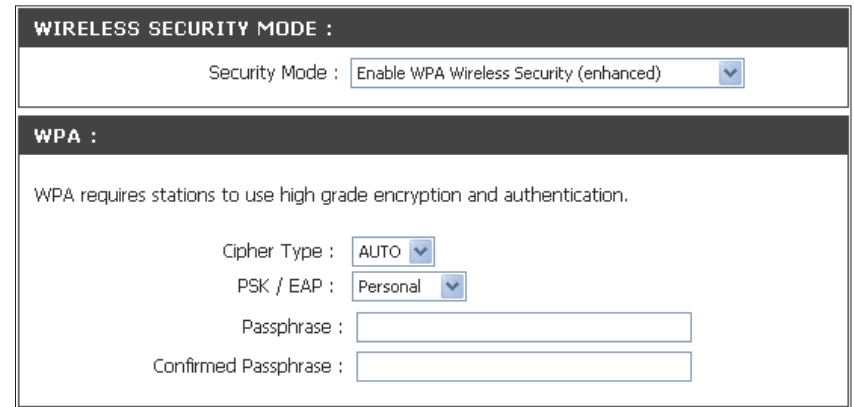
WEP Key 3 :

WEP Key 4 :

Configure WPA/WPA2 Personal

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**, select **Enable WPA Wireless Security**, **Enable WPA2 Wireless Security**, or **Enable WPA2-Auto Wireless Security**.
3. Next to **Cipher Type**, select **TKIP**, **AES**, or **Auto**.
4. Next to **PSK / EAP**, select **Personal**.
5. Next to **Passphrase**, enter a key. The key is entered as a passphrase in ASCII format at both ends of the wireless connection. The passphrase must be between 8-63 characters.
6. Click **Save Settings** at the top of the window to save your 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 shows a web-based configuration interface for wireless security. It is divided into two main sections: "WIRELESS SECURITY MODE" and "WPA".

WIRELESS SECURITY MODE :
Security Mode :

WPA :
WPA requires stations to use high grade encryption and authentication.

Cipher Type :

PSK / EAP :

Passphrase :

Confirmed Passphrase :

Configure WPA/WPA2 Enterprise

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**, select **Enable WPA Wireless Security**, **Enable WPA2 Wireless Security**, or **Enable WPA2-Auto Wireless Security**.
3. Next to **Cipher Mode**, select **TKIP**, **AES**, or **Auto**.
4. Next to **Personal / Enterprise**, select **Enterprise**.
5. Next to **RADIUS Server**, enter the IP Address of your RADIUS server.
6. Next to **Port**, enter the port you are using with your RADIUS server. 1812 is the default port.
7. Next to **Shared Secret**, enter the security key.
8. Click **Save Settings** to save your settings.

WIRELESS SECURITY MODE :

Security Mode :

WPA :

WPA requires stations to use high grade encryption and authentication.

Cipher Type :

PSK / EAP :

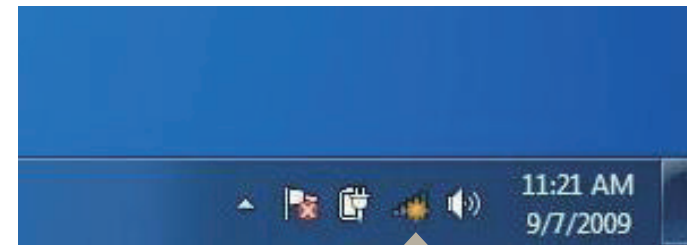
802.1X

RADIUS Server 1 : IP	<input type="text"/>
Port	<input type="text" value="1812"/>
Shared Secret	<input type="text"/>
RADIUS Server 2 : IP	<input type="text"/>
Port	<input type="text" value="1812"/>
Shared Secret	<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.

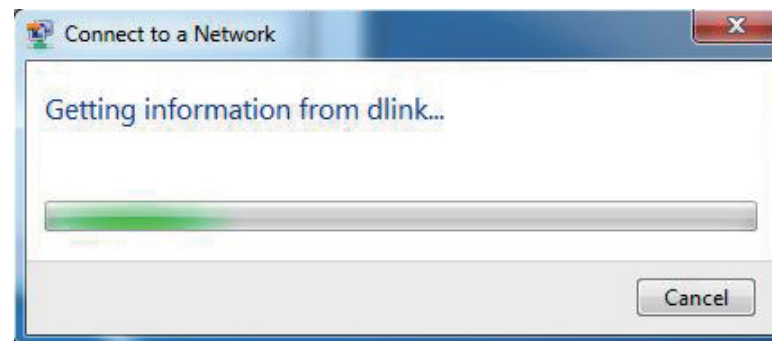


3. Highlight the wireless network (SSID) you would like to connect to and click the Connect button.

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.

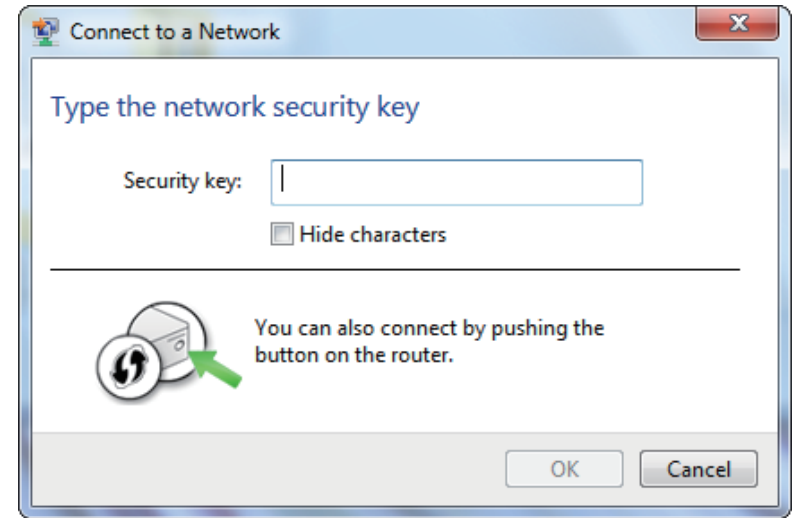


4. The following window appears while your computer tries to connect to the router.



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.

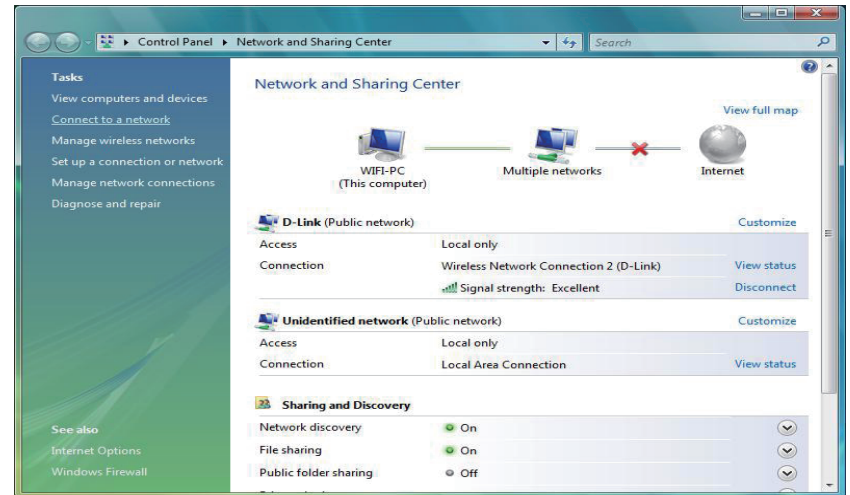
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



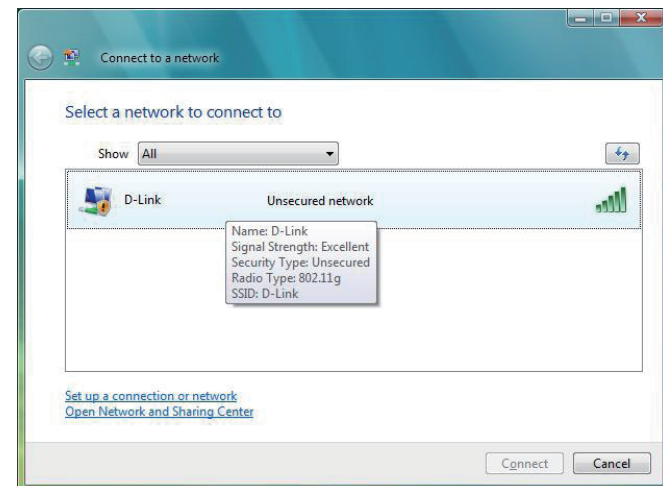
Connect to a Wireless Network Using Windows Vista®

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

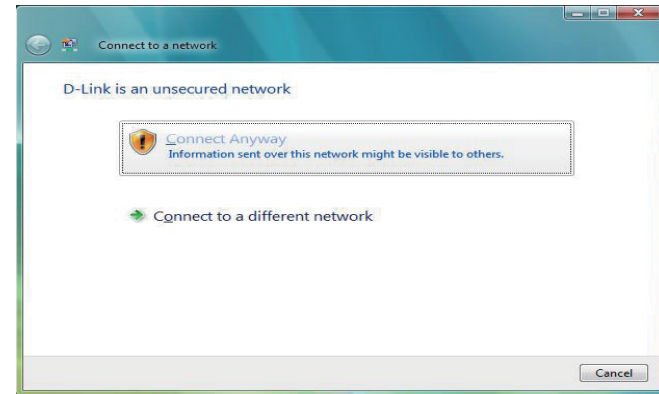
From the Start menu, go to Control Panel, and then click on **Network and Sharing Center**.



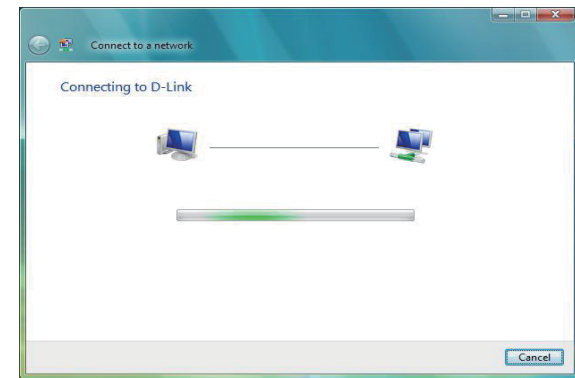
The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) under **Select a network to connect to** and then click the **Connect** button.



Click **Connect Anyway** to continue.

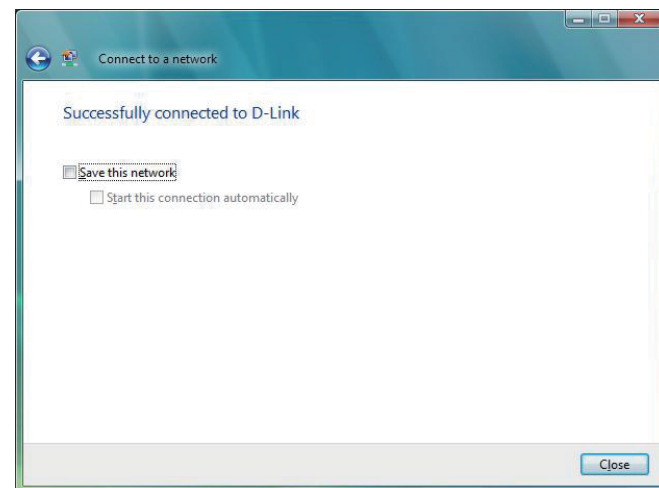


The utility will display the following window to indicate a connection is being made.



The final window indicates the establishment of a successful connection.

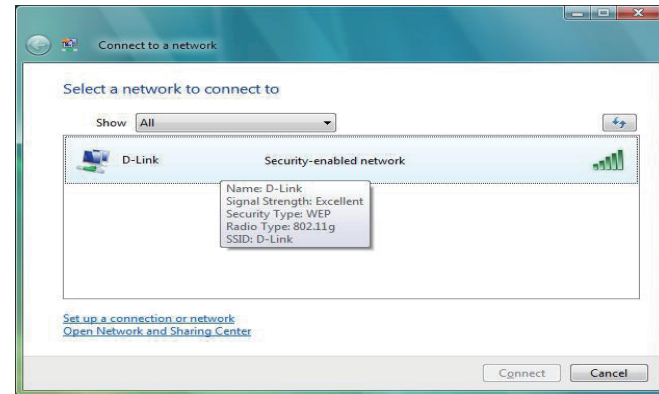
The next two pages display the windows used to connect to either a WEP or a WPA-PSK wireless network.



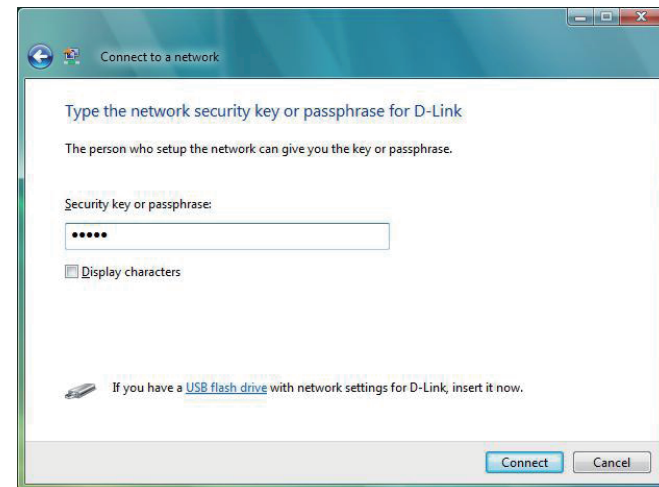
Configure WEP

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

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



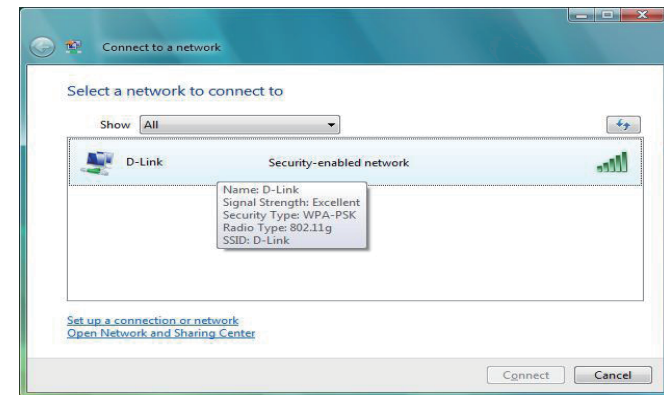
Enter the appropriate security key or passphrase in the field provided and then click the **Connect** button.



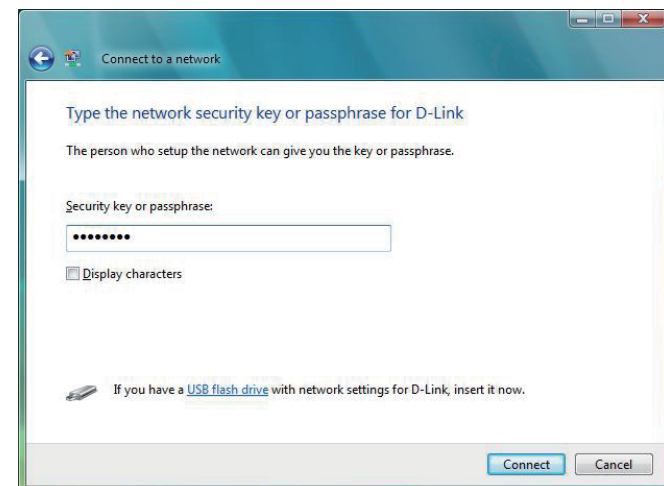
Configure WPA-PSK

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

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



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



Connect to a Wireless Network Using Windows® XP

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

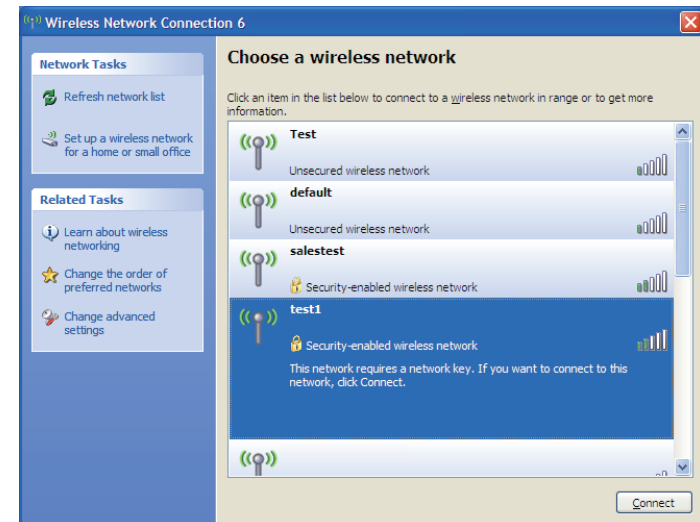
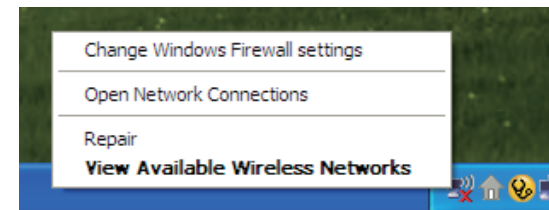
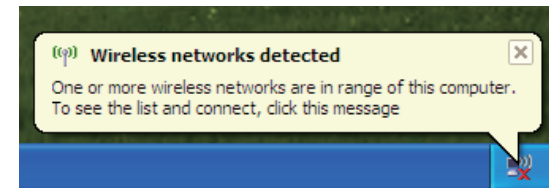
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

or

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

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

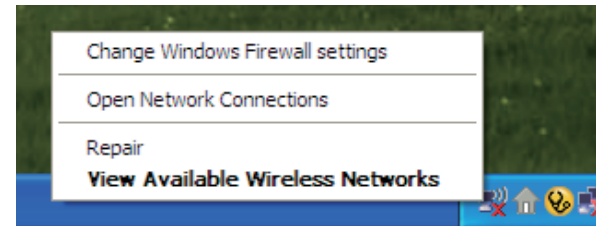
If you get a good signal, but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



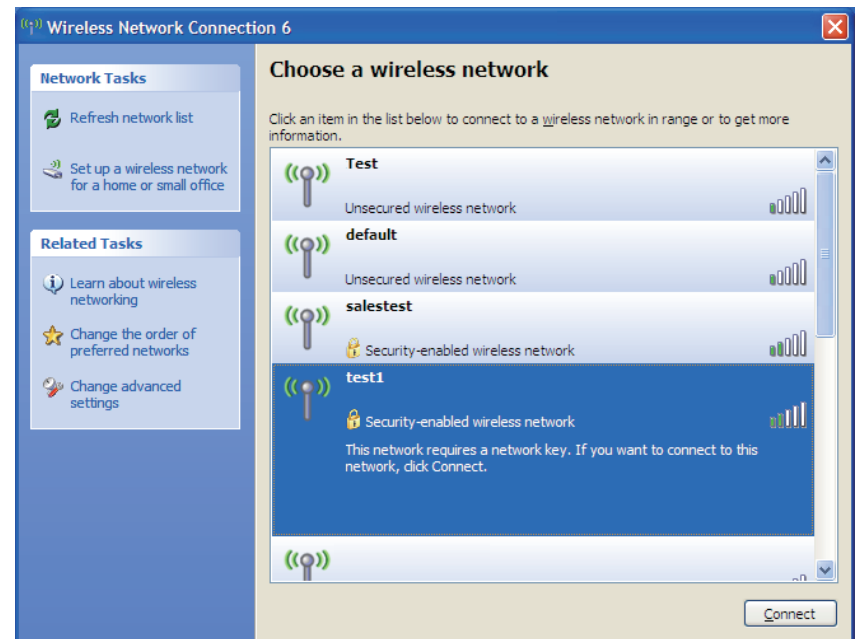
Configure WEP

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

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

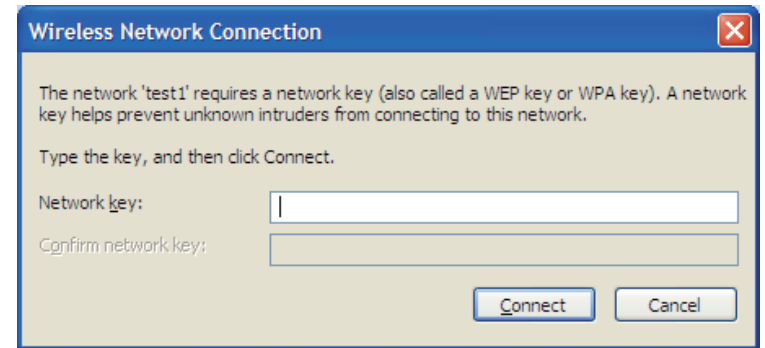


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



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

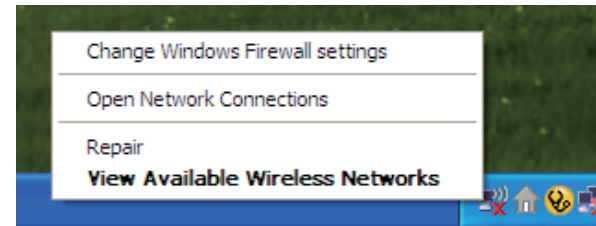
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WEP settings are correct. The WEP key must be exactly the same as on the wireless access point.



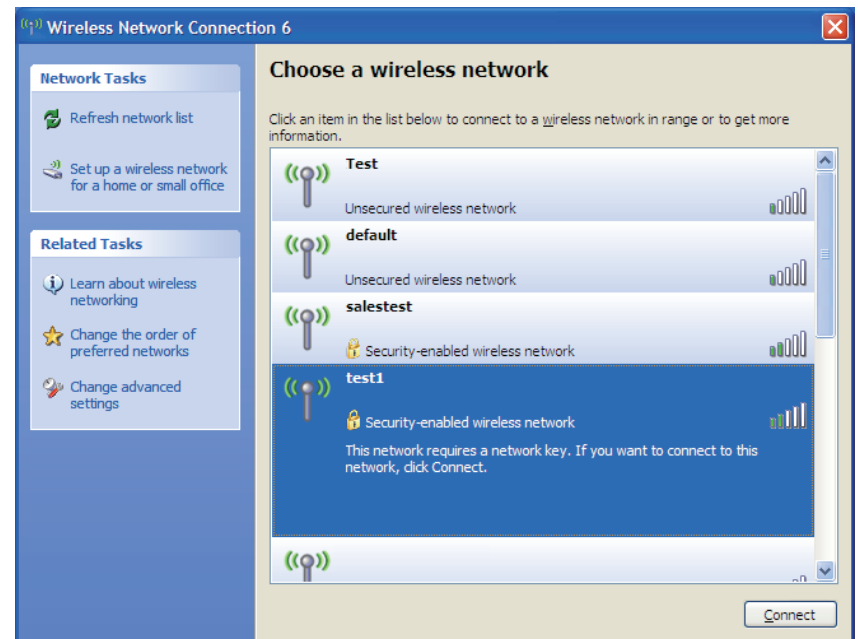
Configure WPA-PSK

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

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

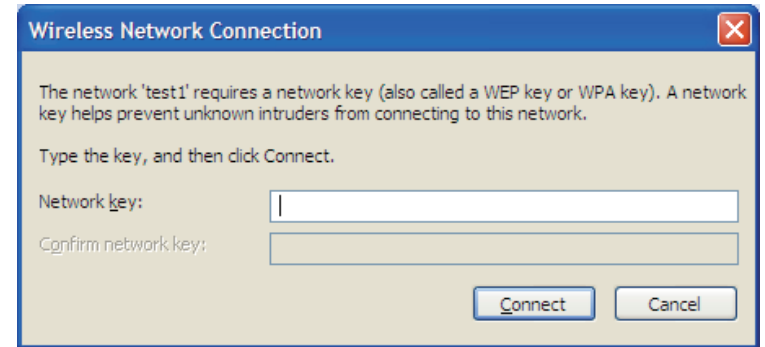


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless access point.



Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DAP-1350. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link access point (192.168.0.50 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
 - Microsoft Internet Explorer® 6.0 and higher
 - Mozilla Firefox 3.0 and higher
 - Google™ Chrome 2.0 and higher
 - Apple Safari 3.0 and higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

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

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

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

To reset the access point, locate the reset button (hole) on the rear panel of the unit. With the access point powered on, use a paperclip to hold the button down for 5 seconds. Release the button and the access point will go through its reboot process. Wait about 30 seconds to access the access point. The default IP address is 192.168.0.50. When logging in, the username is admin and leave the password box empty.

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

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

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

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

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

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

Example: ping yahoo.com -f -l 1472

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 203ms, Average = 132ms

C:\>
```

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

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

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

- Open your browser, enter the IP address of your access point (192.168.0.50) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on **Setup** and then click **Manual Configure**.
- To change the MTU enter the number in the MTU field and click **Save Settings** to save your settings.
- Test your email. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

Wireless Basics

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

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

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

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

What is Wireless?

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

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

How does wireless work?

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

Wireless Local Area Network (WLAN)

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

Wireless Personal Area Network (WPAN)

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

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

Who uses wireless?

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

Home

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

Small Office and Home Office

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

Where is wireless used?

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

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

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

Tips

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

Centralize your access point or Access Point

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

Eliminate Interference

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

Security

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

Wireless Modes

There are basically two modes of networking:

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

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

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

Networking Basics

Check your IP address

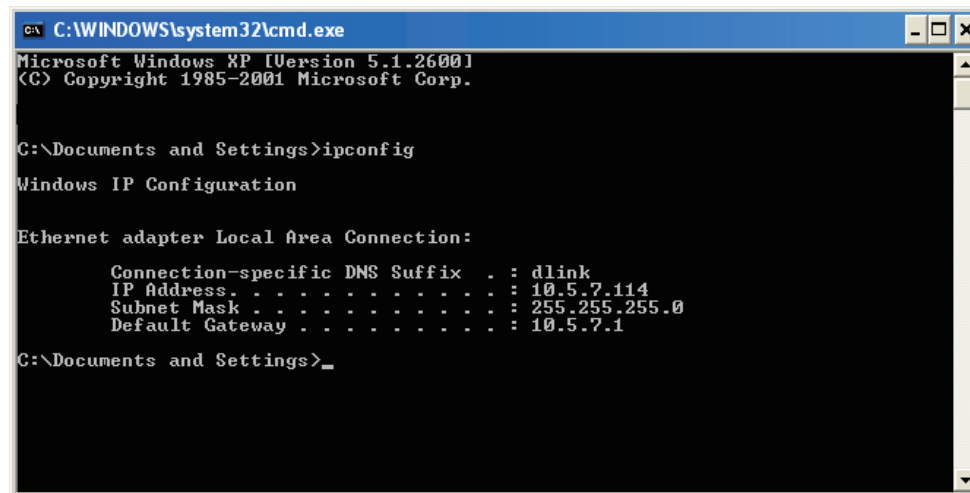
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start > Run**. In the run box type **cmd** and click **OK**. (Windows Vista® users type **cmd** in the **Start Search** box.)

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

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

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



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address . . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and Settings>_
```

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

Statically Assign an IP address

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

Step 1

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

Windows® XP - Click on **Start > Control Panel > Network Connections.**

Windows® 2000 - From the desktop, right-click **My Network Places > Properties.**

Step 2

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

Step 3

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

Step 4

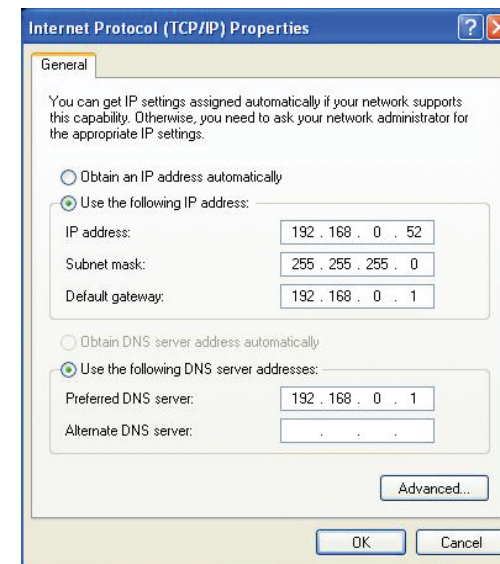
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

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

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

Step 5

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



Technical Specifications

Standards

- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.3
- IEEE 802.3u

Security

- Wi-Fi Protected Access (WPA, WPA2)[®]
- Wi-Fi Protected Setup™ (WPS)
 - WPS Push Button
 - PIN

Interface Type

- 1 10/100 LAN/WAN Port
- 1 USB Port for SharePort™¹
- 1 Push-Button (for Wi-Fi Protected Setup™)

Antenna Type

- Embedded Antennas

Wireless Signal Rates²

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

Maximum Operating Voltage

- 5V 2.5A

Modulation

- DQPSK
- DBPSK
- CCK
- OFDM

Frequency Range³

- 2.4GHz to 2.483GHz

LEDs

- Power
- Ethernet
- WLAN

Operating Temperature

- 32°F to 131°F (0°C to 55°C)

Humidity

- 90% maximum (non-condensing)

Safety & Emissions

- FCC Class B
- CE
- C-Tick
- IC
- Wi-Fi[®]

Dimensions

- W3.6" x D2.6" x H0.8" (91.4mm x 66mm x 20.3mm)

Weight

- 0.15lbs (0.066kg)

¹. USB SharePort only supported in Router Mode.

². Maximum wireless signal rate derived from IEEE Standard 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

³. Range varies depending on country's regulation.