

DWL-7100AP

Release 2.00

*AirPremier* Wireless 108AG

**Access Point**

**User Manual**

**Business Class Networking**

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# Package Contents

- D-Link DWL-7100AP Access Point
- Power Supply
- Manual and Software on CD
- CAT5 Ethernet Cable
- Quick Installation Guide



***Note: Using a power supply with a different voltage than the one included with the DWL-7100AP will cause damage and void the warranty for this product.***

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

# System Requirements

- A computer with Windows<sup>®</sup>, Macintosh, or Linux-based operating system with an installed Ethernet adapter.
- Internet Explorer, Netscape Navigator (version 6.0 or higher), or Firefox with JavaScript enabled.
- At least 128MB of RAM memory and a 500MHz processor

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# Introduction

D-Link, the industry pioneer in wireless networking, introduces a performance breakthrough in wireless connectivity – The D-Link AirPremier AG™ DWL-7100AP Access Point, designed for multimode network deployments capable of up to delivering 15x faster data rates than standard 802.11b in both 802.11a and 802.11g bands.

The DWL-7100AP is an ideal solution for creating a wireless backbone infrastructure or for extending an existing wireless network. For advanced configuration, network administrators can deploy multimode operation such as using the DWL-7100AP as a 5GHz 802.11a wireless bridge while simultaneously providing Access Point functionality for 2.4GHz 802.11b/g networks. The DWL-7100AP can operate as an Access Point, WDS, WDS with AP, Repeater or an AP Client. For compatibility with other D-Link AirPremier AG hardware, the DWL-7100AP uses Wireless Distribution System (WDS) technology when running in Repeater mode.

The DWL-7100AP provides maximum wireless security by supporting WPA (Wi-Fi Protected Access), 802.1x, and three levels of WEP Encryption (64/128/152-bit). Other security features include MAC Address Filtering, Wireless LAN segmentation, Disable SSID Broadcast, and support for Advanced Encryption Standard (AES) Encryption.

The DWL-7100AP delivers extremely fast wireless performance with maximum wireless signal rates reaching up to 108Mbps\* when set in Turbo mode for both 802.11g and 802.11a networks, while still remaining backwards compatible to 802.11b. With the ability to deliver blazing transfer speeds, network administrators have ample bandwidth to distribute amongst multiple workgroups and avoid network bottlenecks.

Network administrators can manage the DWL-7100AP settings via its Web-based configuration utility or through Telnet. For advanced network management, administrators can use D-Link's AP Manager or D-View SNMP management module to configure multiple access points from a single location.

With versatile dualband operation modes, solid security features, and extremely fast data transfer speeds, the D-Link AirPremier AG DWL-7100AP Wireless Access Point offers a high return on investment and provides SMB and Enterprise network administrators an ideal solution for establishing a new wireless network or for extending the range of an existing one.

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

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# Features and Benefits

<b>Up to 108Mbps* with D-Link 108AG Technology</b>	Using D-Link 108AG Technology, transfer rates reach up to 15x the speed of previous 802.11b wireless devices. Large data packets or bandwidth-intense files can now be transferred smoothly without interruption. With 4x the number of non-overlapping channels than a standard 802.11g device, you can increase the total amount of aggregated user bandwidth.
<b>Assign Users to 2.4GHz or 5GHz Frequency Bands</b>	For advanced configuration, the DWL-7100AP concurrently operates in both the 2.4GHz and 5GHz frequency band; network administrators can deploy multimode wireless settings such as using the DWL-7100AP as an 802.11a wireless bridge while simultaneously providing access point functionality to 802.11b/802.11g networks.
<b>Strong Security with WPA, AES, and 152-bit WEP Encryption</b>	Clients accessing the DWL-7100AP can securely connect using 802.1x and WPA for wireless user authentication. For increased data protection, the Advanced Encryption Standard (AES) and 152-bit WEP Encryption protocols are supported.
<b>Multimode Operation for Versatility in Setup</b>	The DWL-7100AP can operate in more than one mode: Access Point, WDS with AP, WDS, AP Client and AP Repeater. In repeater mode, the WDS feature allows users to freely roam about the location without having to change wireless settings.
<b>Advanced Network Management Options</b>	Users can manage the DWL-7100AP using any Web browser (e.g. Internet Explorer 6.0) or via Telnet. For advanced network management, D-Link's AP Manager and D-View's SNMP network management software are comprehensive management utilities designed to manage your entire wireless network features and options.

*\* Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11b and 802.11g 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.*

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# Hardware Overview

## LEDs

LED	LED Activity
Power	A steady light indicates a connection to a power source
LAN (10/100)	A steady light indicates a connection to the Ethernet port; a blinking light indicates activity
WLAN (802.11a and 802.11b or 802.11g)	A blinking light indicates activity in the respective wireless mode: 802.11a and/or 802.11b/802.11g

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# Installation

It's best to use a computer (with an Ethernet adapter) that is connected to a switch or router for configuring the DWL-7100AP. The default IP address for the DWL-7100AP is 192.168.0.50 with a Subnet Mask of 255.255.255.0.

You will need to assign your computer a Static IP address within the same range as the DWL-7100AP's IP address for the purpose of configuring the DWL-7100AP. See the Appendix if you need assistance in assigning a Static IP address for your network adapter.

## Connect to Your Network

- A.** First, connect the power adapter to the receptor at the back panel of the DWL-7100AP and then plug the other end of the power adapter to a wall outlet or power strip. The Power LED will turn ON to indicate proper operation.
- B.** Insert one end of the cable to the Ethernet port on the back panel of the DWL-7100AP and the other end of the cable to your network (switch or router).

**Note:** You also have the option of connecting the DWL-7100AP directly to the computer that will be used for configuration. The Link LED light will illuminate to indicate a proper Ethernet connection. (Note: The Ethernet Port on the DWL-7100AP is Auto-MDI/MDIX. Meaning you can use a straight-through or crossover Ethernet cable to connect to the Ethernet port on the DWL-7100AP.)

- C.** The DWL-G650 Wireless Cardbus Adapter and the DWL-G520 Wireless PCI Adapter will connect, out of the box, with the DWL-7100AP, using their default wireless settings. Computers with 802.11b wireless adapters can also connect to the DWL-7100AP.

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# Installation Considerations

D-Link lets you access your network from anywhere you want. However, keep in mind, that range is limited by the number of walls, ceilings, or other objects that the wireless signals must pass through. Typical ranges vary depending on the types of materials and background RF noise in your home or business. The key to maximizing range is to follow these basic principles:

1. Keep the number of walls and ceilings to a minimum - Each wall or ceiling can rob your D-Link Wireless product of 3-90 ft. of range. Position your Access Points, Residential Gateways, and computers so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between access points, routers, and computers - A wall that is 1.5 feet thick, at a 45 degree angle, appears to be almost 3 feet thick. At a 2-degree angle it looks over 42 feet thick. Try to make sure that the access point and adapters are positioned so that the signal will travel straight through a wall or ceiling 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, routers, and computers so that the signal passes through drywall or open doorways and not other materials.
4. Make sure that the antenna is positioned for best reception by using the software signal strength tools included with your product.
5. Keep your product away (at least 3-6 feet) from electrical devices that generate RF noise, like microwaves, monitors, electric motors, UPS units, etc.
6. 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 will degrade dramatically or drop completely. Anything using the 2.4Ghz frequency will interfere with your wireless network.

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# Configuration

To configure the DWL-7100AP, use a computer which is connected to the DWL-7100AP with an Ethernet cable. You may use the web-based configuration or the AP Manager software to configure your access point. Please refer to page 52 to use the AP Manager software.

## Web Configuration Utility

First, disable the Access the Internet using a proxy server function. To disable this function, go to **Control Panel > Internet Options > Connections > LAN Settings** and uncheck the enable box.

Open your web browser program such as Internet Explorer. Type the IP address of the DWL-7100AP in the address field (**http://192.168.0.50**) and press **Enter**. Make sure that the IP addresses of the DWL-7100AP and your computer are in the same subnet.



After the connection is established, Enter your user name (admin) and your password (leave blank by default). Click **OK** to continue.



# Home

The **Home > Wizard** screen will appear. Please refer to the *Quick Installation Guide* for more information regarding the Setup Wizard.

These buttons appear on most of the configuration screens in this section. Please click on the appropriate button at the bottom of each screen after you have made a configuration change.



Apply

Clicking **Apply** will save changes made to the page



Cancel

Clicking **Cancel** will clear changes made to the page



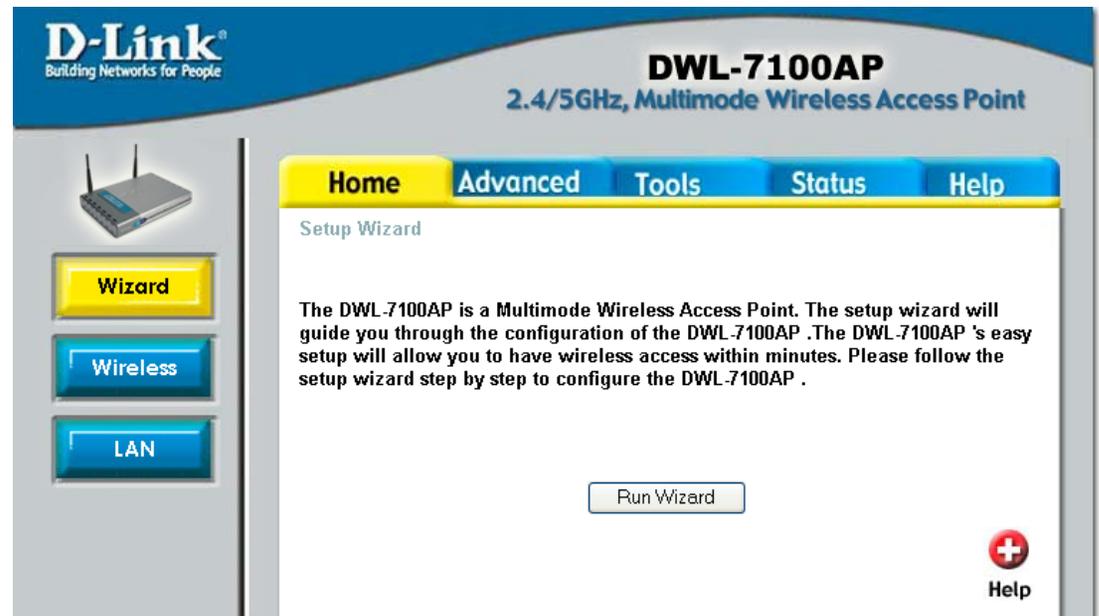
Help

Clicking **Help** will bring up helpful information regarding the page



Restart

Clicking **Restart** will restart the router. (Necessary for some changes.)



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# Wireless Modes

<b>AP Mode</b>	<b>Authentication Available</b>
<b>Access Point</b>	Open System Shared Key Open System/Shared Key WPA-EAP WPA-PSK WPA2-EAP WPA2-PSK WPA-Auto-EAP WPA-Auto-PSK
<b>WDS with AP</b>	Open System Shared Key Open System/Shared Key WPA-PSK WPA2-PSK WPA-Auto-PSK
<b>WDS</b>	Open System Shared Key Open System/Shared Key WPA-PSK WPA2-PSK WPA-Auto-PSK
<b>AP Repeater</b>	Open System Shared Key
<b>AP Client</b>	Open System Shared Key WPA-PSK WPA2-PSK

# Access Point Mode

**Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.

**Mode:** **Access Point** is selected from the drop-down menu.

**SSID:** Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

**SSID Broadcast:** **Enable** or **Disable** SSID broadcast. Enabling this feature broadcasts the SSID across the network.

**Channel:** **Auto Channel Scan** is enabled by default. All devices on the network must share the same channel.

The radio frequency will vary depending on the wireless channel that is chosen.

**Authentication:** Select **Open System** to communicate the key across the network.

Select **Shared Key** to limit communication to only those devices that share the same WEP settings.

Select **Open System/Shared Key** to allow either form of data encryption.

Select **WPA-EAP** to secure your network with the inclusion of a RADIUS server.

Select **WPA-PSK** to secure your network using a password and dynamic key changes (No RADIUS server required).

Select **WPA2-EAP** to secure your network with the inclusion of a RADIUS server and upgrade the encryption of data with the Advanced Encryption Standard (AES).

The screenshot displays the web management interface for a D-Link DWL-7100AP. The page title is "D-Link Building Networks for People" and the device model is "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The interface has a navigation menu with "Home", "Advanced", "Tools", "Status", and "Help". On the left side, there are buttons for "Wizard", "Wireless", and "LAN". The main content area is titled "Wireless Settings" and includes the following fields:

- Wireless Band: IEEE802.11a
- Mode: Access Point
- SSID: dlink
- SSID Broadcast: Enable
- Channel: 60 (5.3 GHz) with Auto Channel Scan checked
- Authentication: Open System

Below these settings is a "Key Settings" section with radio buttons for "Disabled" (selected) and "Enabled". It includes fields for Key Type (HEX), Key Size (64 Bits), Valid Key (First), and four key input fields (First Key, Second Key, Third Key, Fourth Key). At the bottom right, there are "Apply", "Cancel", and "Help" buttons.

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Select **WPA2-PSK** to secure your network using a password and dynamic key changes. No RADIUS server required and encryption of data is upgraded with the Advanced Encryption Standard (AES).

Select **WPA-Auto-EAP** to allow the client to either use **WPA-EAP** or **WPA2-EAP**.

Select **WPA-Auto-PSK** to allow the client to either use **WPA-PSK** or **WPA2-PSK**.

# Access Point (WEP)

**Wireless Band:** Select IEEE802.11a or IEEE802.11g.

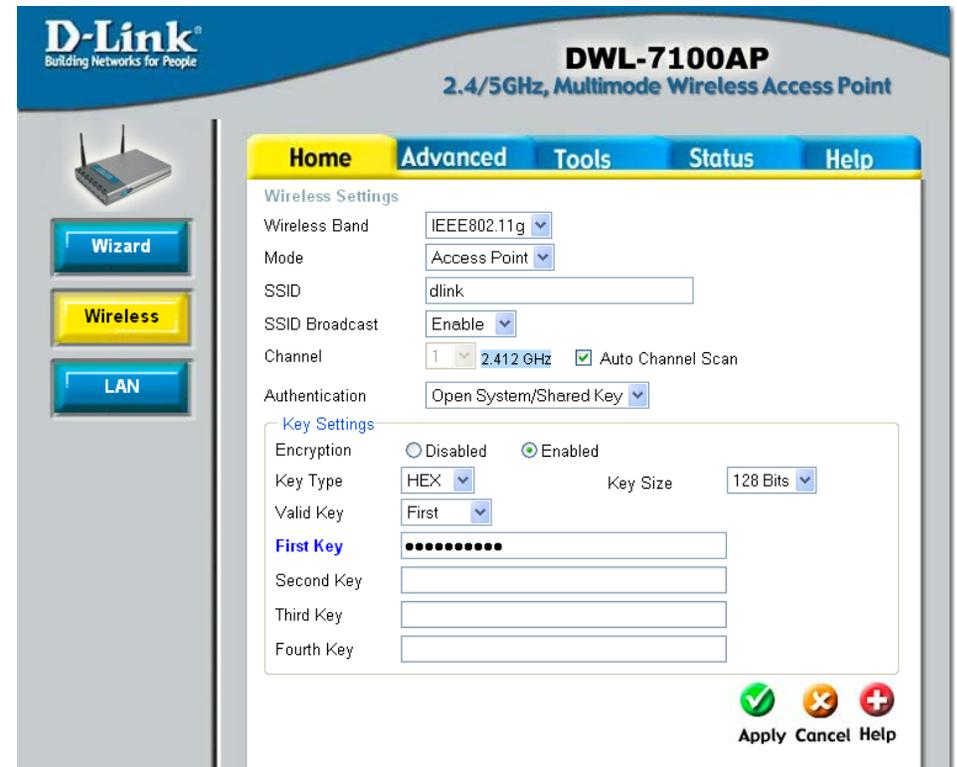
**Encryption:** Select Disabled or Enabled.

**Key Type:** Select HEX or ASCII.

**Key Size:** Select 64-bit, 128-bit, or 152-bit.

**Valid Key:** Select the 1st through the 4th key to be the active key.

**First through Fourth keys:** Input up to four keys for encryption. You will select one of these keys in the valid key field.



**D-Link**  
Building Networks for People

**DWL-7100AP**  
2.4/5GHz, Multimode Wireless Access Point

Home Advanced Tools Status Help

Wireless Settings

Wireless Band: IEEE802.11g  
Mode: Access Point  
SSID: dlink  
SSID Broadcast: Enable  
Channel: 1 2.412 GHz  Auto Channel Scan  
Authentication: Open System/Shared Key

Key Settings

Encryption:  Disabled  Enabled  
Key Type: HEX Key Size: 128 Bits  
Valid Key: First

First Key: [.....]  
Second Key: [.....]  
Third Key: [.....]  
Fourth Key: [.....]

Apply Cancel Help

# Access Point (WPA-EAP/WPA2-EAP)

- Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.
- Cipher Type:** When you select **WPA-EAP**, **WPA2-EAP** or **WPA-Auto-EAP**, you must select **AUTO**, **AES**, or **TKIP** from the drop-down menu.
- Group Key Update Interval:** Select the interval during which the group key will be valid. 1800 is the recommended value. A lower interval may reduce transfer data rate.
- Radius Server:** Enter the IP address of the Radius server.
- Radius Port:** Enter the Radius port.
- Radius Secret:** Enter the Radius secret.

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Building Networks for People

**DWL-7100AP**  
2.4/5GHz, Multimode Wireless Access Point

Home Advanced Tools Status Help

Wizard  
Wireless  
LAN

Wireless Settings

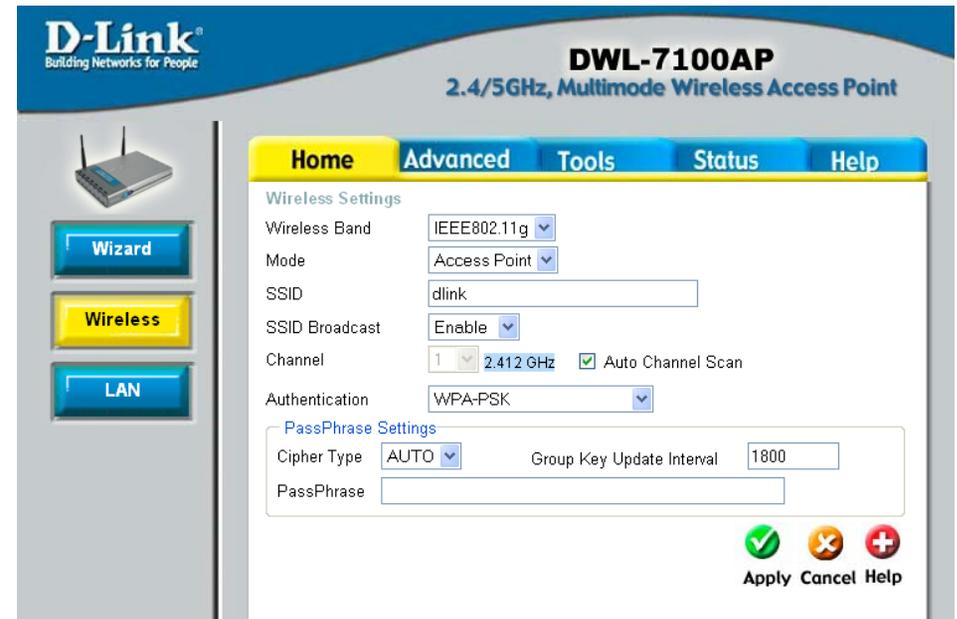
Wireless Band: IEEE802.11g  
Mode: Access Point  
SSID: dlink  
SSID Broadcast: Enable  
Channel: 1 2.412 GHz  Auto Channel Scan  
Authentication: WPA-EAP

**RADIUS Server Settings**

Cipher Type: AUTO Group Key Update Interval: 1800  
RADIUS Server:   
RADIUS Port: 1812  
RADIUS Secret:   
  
Apply Cancel Help

# Access Point (WPA-PSK/WPA2-PSK)

- Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.
- Cipher Type:** Select **AUTO**, **AES**, or **TKIP** from the drop-down menu.
- Group Key Update Interval:** Select the interval during which the group key will be valid. The default value of 1800 is recommended.
- PassPhrase:** Enter a passphrase. The passphrase is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?\*&\_) and spaces. Make sure you enter this key exactly the same on all other wireless clients.



The screenshot displays the web management interface for a D-Link DWL-7100AP. The interface is titled "D-Link Building Networks for People" and "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". It features a navigation menu with "Home", "Advanced", "Tools", "Status", and "Help". On the left side, there are three buttons: "Wizard", "Wireless", and "LAN". The "Wireless" button is highlighted in yellow. The main content area shows the "Wireless Settings" section with the following fields:

- Wireless Band: IEEE802.11g
- Mode: Access Point
- SSID: dlink
- SSID Broadcast: Enable
- Channel: 1 (2.412 GHz) with a checked "Auto Channel Scan" option
- Authentication: WPA-PSK

Below these settings is the "PassPhrase Settings" section, which includes:

- Cipher Type: AUTO
- Group Key Update Interval: 1800
- PassPhrase: (empty text input field)

At the bottom right of the settings area, there are three icons: a green checkmark for "Apply", a red X for "Cancel", and a red plus sign for "Help".

# WDS with AP

In WDS with AP mode, the DWL-7100AP wirelessly connects multiple networks, while still functioning as a wireless AP. WDS (Wireless Distribution System) allows access points to communicate with one another wirelessly in a standardized way. It can also simplify the network infrastructure by reducing the amount of cabling required. Basically the access points will act as a client and an access point at the same time.

**Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.

**Mode:** **WDS with AP** is selected from the drop-down menu.

**SSID:** Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

**SSID Broadcast:** Enable or Disable SSID broadcast. Enabling this feature broadcasts the SSID across the network.

**Channel:** **6** is the default channel for IEEE 802.11g. All devices on the network must share the same channel.

**Note:** *The wireless adapters will automatically scan and match the wireless setting.*

**Auto Channel Scan:** This option is unavailable in WDS with AP mode.

**Remote AP MAC Address:** Enter the MAC addresses of the APs in your network that will serve as bridges to wirelessly connect multiple networks.

The screenshot displays the configuration page for a D-Link DWL-7100AP. The interface includes a navigation menu with 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. On the left, there are buttons for 'Wizard', 'Wireless', and 'LAN'. The main content area is titled 'Wireless Settings' and shows the following configuration:

- Wireless Band: IEEE802.11a
- Mode: WDS with AP
- SSID: dlink
- SSID Broadcast: Enable
- Channel: 60, 5.3 GHz, Auto Channel Scan (unchecked)

Below these settings is a section for 'WDS with AP' configuration:

- Remote AP MAC Address: A grid of 8 input fields for MAC addresses, numbered 1 through 8.
- Authentication: Open System

At the bottom, there is a 'Key Settings' section:

- Encryption: Disabled (selected), Enabled (unselected)
- Key Type: HEX
- Key Size: 64 Bits
- Valid Key: First
- First Key: [Redacted]
- Second Key: [Redacted]
- Third Key: [Redacted]
- Fourth Key: [Redacted]

---

**Authentication:** Select **Open System** to communicate the key across the network.

Select **Shared Key** to limit communication to only those devices that share the same WEP settings.

Select **Open System/Shared Key** to allow either form of data encryption.

Select **WPA-PSK**, **WPA2-PSK**, or **WPA-Auto-PSK** to secure your network using a password and dynamic key changes (No RADIUS server required).

**Note:** *WDS is not completely specified in WiFi or IEEE standards. Communication with other vendor's access points is not guaranteed.*

# WDS with AP (WEP)

**Encryption:** Select **Disabled** or **Enabled**. (**Disabled** is selected here).

**Key Type:** Select **HEX** or **ASCII**.

**Key Size:** Select **64-bit**, **128-bit**, or **152-bit**.

**Valid Key:** Select the **1st** through the **4th** key to be the active key.

**First through Fourth keys:** Input up to four keys for encryption. You will select one of these keys in the valid key field.

\* **Hexadecimal** digits consist of the numbers 0-9 and the letters A-F.

**ASCII** (American Standard Code for Information Interchange) is a code for representing English letters as numbers 0-127.

The screenshot shows the web interface for a D-Link DWL-7100AP. The page title is "D-Link Building Networks for People" and "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation tabs are "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, and the "Wireless Settings" section is active. The settings are as follows:

- Wireless Band: IEEE802.11a
- Mode: WDS with AP
- SSID: dlink
- SSID Broadcast: Enable
- Channel: 60 (5.3 GHz), with an unchecked "Auto Channel Scan" option.
- WDS with AP section: Remote AP MAC Address fields (1-8) are empty.
- Authentication: Shared Key
- Key Settings section: Encryption is set to "Enabled". Key Type is "HEX". Key Size is "128 Bits". Valid Key is "First".
- Four key input fields are shown: "First Key" (filled with 12 dots), "Second Key", "Third Key", and "Fourth Key" (all empty).

# WDS

In WDS, the **DWL-7100AP** wirelessly connects multiple networks, without functioning as a wireless AP.

**Wireless Band:** Select **IEEE 802.11g** or **IEEE 802.11a**.

**Mode:** **WDS** is selected from the drop-down menu.

**SSID:** Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network, or to establish a new wireless network.

**SSID Broadcast:** Enable or Disable SSID broadcast. Enabling this feature broadcasts the SSID across the network.

**Channel:** All devices on the network must share the same channel.

**Note:** *The wireless adapters will automatically scan and match the wireless setting.*

**Auto Channel Scan:** This option is unavailable in WDS.

**Remote AP MAC Address:** Enter the MAC addresses of the APs in your network that will serve as bridges to wirelessly connect multiple networks.

The screenshot shows the web interface for the D-Link DWL-7100AP. The page title is "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation tabs are "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, and the "Wireless Settings" section is active. The settings are as follows:

- Wireless Band: IEEE802.11g
- Mode: WDS
- SSID: dlink
- SSID Broadcast: Enable
- Channel: 1 (2.412 GHz), with an unchecked "Auto Channel Scan" option.

The "WDS" section is expanded, showing a "Remote AP MAC Address" table with 8 empty input fields:

1		2	
3		4	
5		6	
7		8	

The "Authentication" dropdown is set to "Open System". The "Key Settings" section shows "Encryption" set to "Disabled", "Key Type" set to "HEX", and "Key Size" set to "64 Bits". There are four input fields for keys: "First Key" (containing 8 dots), "Second Key", "Third Key", and "Fourth Key".

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**Authentication:** Select **Open System** to communicate the key across the network.

Select **Shared Key** to limit communication to only those devices that share the same WEP settings.

Select **Open System/Shared Key** to allow either form of data encryption.

Select **WPA-PSK**, **WPA2-PSK**, or **WPA-Auto-PSK** to secure your network using a password and dynamic key changes (No RADIUS server required).

# WDS (WEP)

- Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.
- Encryption:** Select **Disabled** or **Enabled**. (**Disabled** is selected here).
- Key Type:** Select **HEX** or **ASCII**.
- Key Size:** Select **64-bit**, **128-bit**, or **152-bit**.
- Valid Key:** Select the **1st** through the **4th** key to be the active key.
- First through Fourth keys:** Input up to four keys for encryption. You will select one of these keys in the valid key field.

\* **Hexadecimal** digits consist of the numbers 0-9 and the letters A-F.  
**ASCII** (American Standard Code for Information Interchange) is a code for representing English letters as numbers 0-127.

The screenshot shows the configuration page for a D-Link DWL-7100AP. The interface includes a navigation menu with 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Advanced' tab is selected, and the 'Wireless Settings' section is active. The 'WDS' mode is configured with the following settings:

- Wireless Band: IEEE802.11a
- Mode: WDS
- SSID: dlink
- SSID Broadcast: Enable
- Channel: 60 (5.3 GHz), with an option for Auto Channel Scan.

The 'WDS' section includes a 'Remote AP MAC Address' table with 8 input fields (1-8). The 'Authentication' is set to 'Shared Key'. The 'Key Settings' section shows 'Encryption' set to 'Enabled', 'Key Type' set to 'HEX', and 'Key Size' set to '128 Bits'. The 'Valid Key' is set to 'First'. Below this, there are four input fields for 'First Key', 'Second Key', 'Third Key', and 'Fourth Key'. The 'First Key' field contains eight dots, indicating masked characters.

# AP Repeater

- Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.
- Mode:** Select **AP Repeater** from the drop-down menu.
- SSID Broadcast:** Select **Enable** to broadcast your SSID over the wireless network. Select **Disable** to hide your SSID.
- Channel:** The channel used will be displayed. The channel will follow the root AP.
- Auto Channel Scan:** This feature is not available in Repeater mode.
- Root AP MAC Address/SSID:** Click on Scan and select the root AP you wish to repeat. When you select the AP, the MAC Address and the SSID fields will populate.
- Authentication:** Select **Open System** or **Shared Key**. Refer to the next page.
- Super G Mode/Super A Mode:** Disabled by default. You can select **Enable** if the access point you are connecting to is using Super G or A mode.

The screenshot shows the web interface for the D-Link DWL-7100AP. The page title is "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation tabs are "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected. On the left side, there are three buttons: "Wizard", "Wireless", and "LAN". The "Wireless" button is highlighted in yellow. The main content area is titled "Wireless Settings" and contains the following fields:

- Wireless Band: IEEE802.11g
- Mode: AP Repeater
- SSID Broadcast: Enable
- Channel: 1 (2.412 GHz) with an "Auto Channel Scan" checkbox.

Below these settings is a section for "AP Repeater" configuration:

- Root AP MAC Address: [Empty text box]
- SSID: dlink

There is a "Site Survey" section with a "Scan" button and a table with columns: Type, CH, Signal, BSSID, Security, and SSID. The table is currently empty.

Below the site survey is the "Authentication" section, set to "Open System". Under "Key Settings", "Encryption" is set to "Disabled". The "Key Type" is "HEX" and "Key Size" is "64 Bits". There are four text boxes for "First Key", "Second Key", "Third Key", and "Fourth Key", with the first one containing eight dots.

At the bottom right, there are three icons: a green checkmark (Apply), a red X (Cancel), and a red plus sign (Help).

# AP Repeater (WEP)

**Encryption:** Select **Disabled** or **Enabled**. (**Disabled** is selected here).

**Key Type:** Select **HEX** or **ASCII**.

**Key Size:** Select **64-bit**, **128-bit**, or **152-bit**.

**Valid Key:** Select the **1st** through the **4th** key to be the active key.

**First through Fourth keys:** Input up to four keys for encryption. You will select one of these keys in the valid key field.

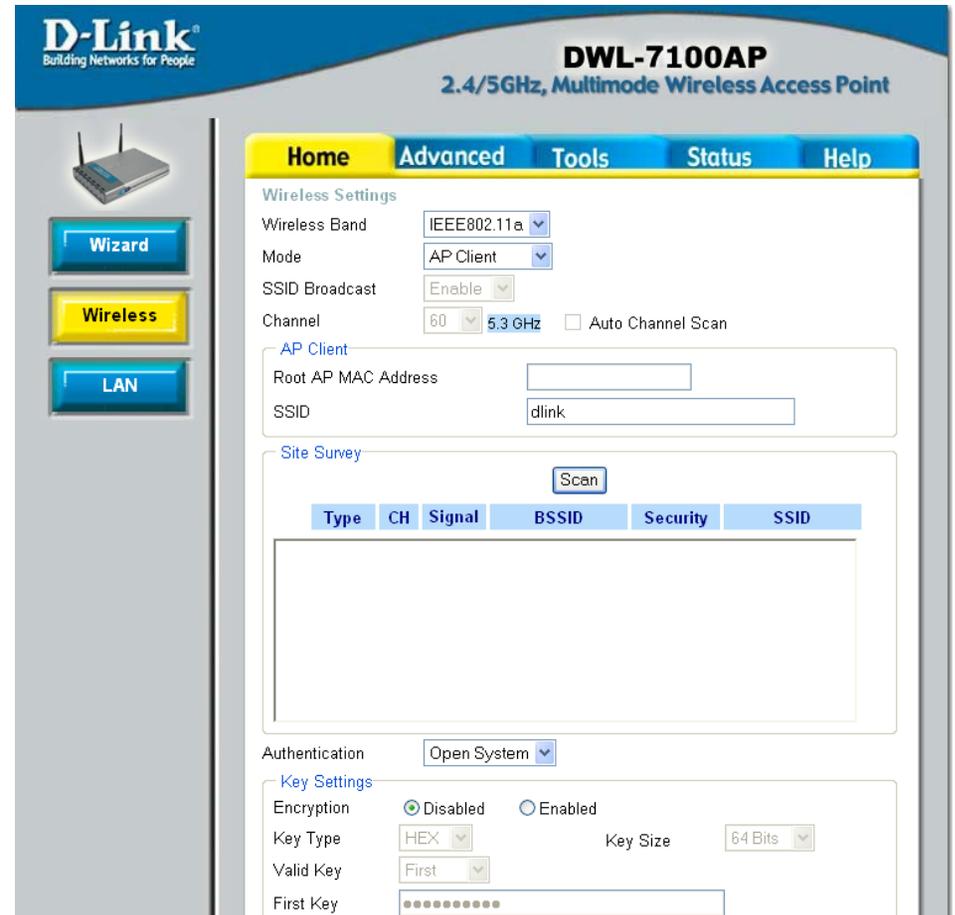
\* **Hexadecimal** digits consist of the numbers 0-9 and the letters A-F.  
**ASCII** (American Standard Code for Information Interchange) is a code for representing English letters as numbers 0-127.

The screenshot displays the web interface for the D-Link DWL-7100AP, a 2.4/5GHz Multimode Wireless Access Point. The interface is divided into several sections:

- Navigation:** A sidebar on the left contains buttons for "Wizard", "Wireless", and "LAN".
- Wireless Settings:** This section includes dropdown menus for "Wireless Band" (IEEE802.11g), "Mode" (AP Repeater), and "SSID Broadcast" (Enable). It also features a "Channel" dropdown set to 1 (2.412 GHz) and an "Auto Channel Scan" checkbox.
- AP Repeater:** This section contains input fields for "Root AP MAC Address" and "SSID" (pre-filled with "dlink").
- Site Survey:** A "Scan" button is present above a table with columns for "Type", "CH", "Signal", "BSSID", "Security", and "SSID".
- Authentication:** A dropdown menu is set to "Open System".
- Key Settings:** This section includes radio buttons for "Encryption" (Disabled is selected), a "Key Type" dropdown (HEX), and a "Key Size" dropdown (64 Bits). Below these are four input fields for "Valid Key" (set to "First"), "First Key", "Second Key", "Third Key", and "Fourth Key".
- Footer:** At the bottom right, there are three icons: a green checkmark for "Apply", an orange 'X' for "Cancel", and a red plus sign for "Help".

# AP Client

- Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.
- Mode:** Select **AP Client** from the drop-down menu.
- SSID Broadcast:** Select **Enable** to broadcast your SSID over the wireless network. Select **Disable** to hide your SSID.
- Channel:** The channel used will be displayed. The channel will follow the root AP.
- Auto Channel Scan:** This feature is not available in Repeater mode.
- Root AP MAC Address/SSID:** Click on **Scan** and select the root AP you wish to repeat. When you select the AP, the MAC Address and the SSID fields will populate.
- Authentication:** Select **Open System** to communicate the key across the network.
- Select **Shared Key** to limit communication to only those devices that share the same WEP settings.
- Select **WPA-PSK** or **WPA2-PSK** to secure your network using a password and dynamic key changes (No RADIUS server required).
- Super G Mode:** Disabled by default. You can select **Super G without Turbo** or **Super G with Dynamic Turbo**.



The screenshot displays the web management interface for a D-Link DWL-7100AP. The page title is "D-Link Building Networks for People" and the device model is "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation menu includes "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, showing the "Wireless Settings" section. The "Wireless Band" is set to "IEEE802.11a", the "Mode" is "AP Client", and "SSID Broadcast" is "Enable". The "Channel" is set to "60" at "5.3 GHz", with an "Auto Channel Scan" checkbox. Below this is the "AP Client" section with fields for "Root AP MAC Address" and "SSID" (containing "dlink"). A "Site Survey" section features a "Scan" button and a table with columns for "Type", "CH", "Signal", "BSSID", "Security", and "SSID". The "Authentication" section is set to "Open System". The "Key Settings" section shows "Encryption" as "Disabled", "Key Type" as "HEX", "Key Size" as "64 Bits", "Valid Key" as "First", and a "First Key" field with masked characters.

# AP Client (WEP)

**Encryption:** Select **Disabled** or **Enabled**. (**Disabled** is selected here).

**Key Type:** Select **HEX** or **ASCII**.

**Key Size:** Select **64-bit**, **128-bit**, or **152-bit**.

**Valid Key:** Select the **1st** through the **4th** key to be the active key.

**First through Fourth keys:** Input up to four keys for encryption. You will select one of these keys in the valid key field.

\* **Hexadecimal** digits consist of the numbers 0-9 and the letters A-F.  
**ASCII** (American Standard Code for Information Interchange) is a code for representing English letters as numbers 0-127.

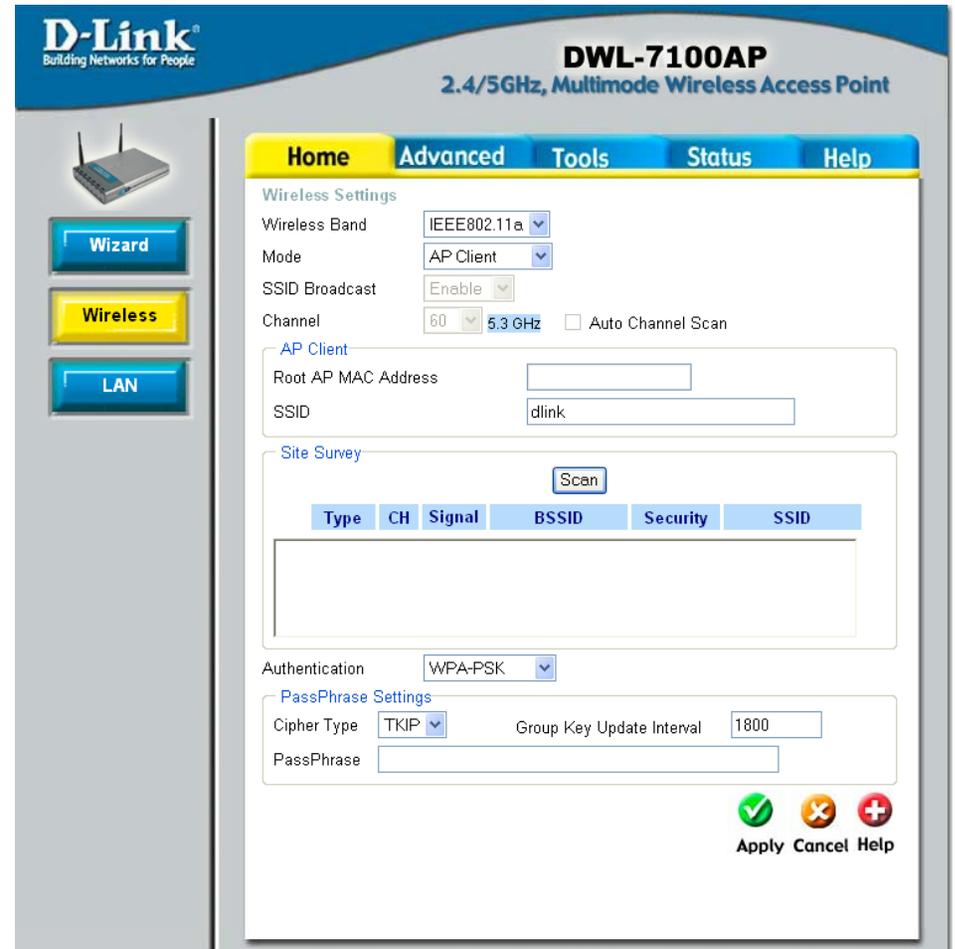
The screenshot shows the web interface for a D-Link DWL-7100AP. The page is titled "D-Link Building Networks for People" and "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation tabs are "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, and the "Wireless Settings" section is active. The "Wireless Settings" section includes fields for "Wireless Band" (IEEE802.11a), "Mode" (AP Client), "SSID Broadcast" (Enable), "Channel" (60, 5.3 GHz), and "Auto Channel Scan" (unchecked). Below this is the "AP Client" section with fields for "Root AP MAC Address" and "SSID" (dlink). The "Site Survey" section has a "Scan" button and a table with columns "Type", "CH", "Signal", "BSSID", "Security", and "SSID". The "Authentication" section is set to "Shared Key". The "Key Settings" section has "Encryption" set to "Enabled", "Key Type" set to "HEX", and "Key Size" set to "152 Bits". The "Valid Key" is set to "First". There are four input fields for "First Key", "Second Key", "Third Key", and "Fourth Key", with the "First Key" field containing eight dots. At the bottom right, there are three buttons: "Apply" (green checkmark), "Cancel" (orange X), and "Help" (red plus).

# AP Client (WPA-PSK/WPA2-PSK)

**Cipher Type:** When you select **WPA-PSK**, **WPA2-PSK**, or **WPA-Auto-PSK** you must select **AES** or **TKIP** from the drop-down menu.

**Group Key Update Interval:** Select the interval during which the group key will be valid. The default value of 1800 is recommended.

**PassPhrase:** Enter a passphrase. The passphrase is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?\*&\_) and spaces. Make sure you enter this key exactly the same on all other wireless clients.



The screenshot displays the web management interface for a D-Link DWL-7100AP. The interface is titled "D-Link Building Networks for People" and "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". It features a navigation menu with "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, showing "Wireless Settings".

Under "Wireless Settings", the following options are visible:

- Wireless Band: IEEE802.11a
- Mode: AP Client
- SSID Broadcast: Enable
- Channel: 60, 5.3 GHz, with an "Auto Channel Scan" checkbox.

The "AP Client" section includes:

- Root AP MAC Address: [text input]
- SSID: dlink

The "Site Survey" section features a "Scan" button and a table with columns: Type, CH, Signal, BSSID, Security, and SSID.

The "Authentication" section is set to WPA-PSK. Below it, the "PassPhrase Settings" section includes:

- Cipher Type: TKIP
- Group Key Update Interval: 1800
- PassPhrase: [text input]

At the bottom right, there are three icons: a green checkmark (Apply), a red X (Cancel), and a red plus sign (Help).

# LAN Settings

## Static IP Address

LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the DWL-7100AP. These settings may be referred to as private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

**Get IP From:** Static (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DWL-7100AP.

**IP Address:** The default IP address is 192.168.0.50. Assign a static IP address that is within the IP address range of your network.

**Subnet Mask:** Enter the subnet mask. All devices in the network must share the same subnet mask..

**Default Gateway:** Enter the IP address of the gateway in your network. If there isn't a gateway in your network, please enter an IP address within the range of your network.



The screenshot shows the web interface for the D-Link DWL-7100AP. The page title is "D-Link Building Networks for People" and "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation tabs are "Home", "Advanced", "Tools", "Status", and "Help". The "LAN Settings" section is active, showing the following configuration:

Field	Value
Get IP From	Static (Manual)
IP Address	192.168.0.50
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0

At the bottom right, there are three buttons: "Apply" (with a green checkmark), "Cancel" (with a red X), and "Help" (with a red plus sign).

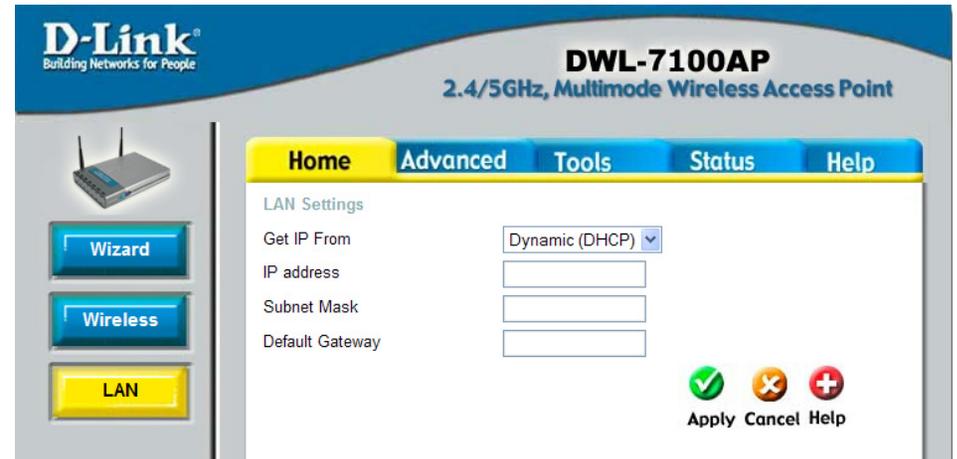
# Dynamic IP Address

**Get IP From:** Dynamic (DHCP) is chosen here. Choose Dynamic IP Address to obtain an IP Address automatically from a DHCP server in your network.

**IP Address:** This field is unavailable when DHCP is chosen.

**Subnet Mask:** This field is unavailable when DHCP is chosen.

**Default Gateway:** This field is unavailable when DHCP is chosen.



# Advanced Performance Settings

- Wireless Band:** Select **IEEE802.11a** or **IEEE802.11g**.
- Auto Channel Select:** When enabled, the access point will scan for the best channel automatically.
- Data Rate:** Select the speed or data rate. Select **Auto** for best results.
- Beacon Interval:** Beacons are packets sent by an access point to synchronize a network. Specify a beacon interval value. The default (100) is recommended.
- DTIM:** (*Delivery Traffic Indication Message*) - Select a setting between 1 and 255. **1** is the default setting. DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.
- Fragment Length:** 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.
- RTS Length:** This value should remain at its default setting of 2346. If you encounter inconsistent data flow, only minor modifications to the value range between 256 and 2346 are recommended.



**D-Link**  
Building Networks for People

**DWL-7100AP**  
2.4/5GHz, Multimode Wireless Access Point

Home **Advanced** Tools Status Help

Advance Wireless Settings

Wireless Band: IEEE802.11g

Frequency: 5.28 GHz

Channel: 56

Auto Channel Select: Enabled

Data Rate: Auto

Beacon Interval (20 - 1000): 100

DTIM (1 - 255): 1

Fragment Length (256 - 2346): 2346

RTS Length (256 - 2346): 2346

Transmit Power: full

Super Mode: Disabled

Radio Wave: On

Apply Cancel Help

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**Transmit Power:** Choose full, half (-3dB), quarter (-6dB), eighth (-9dB), minimum power.

**Super Mode:** Select **Disable** or **Enable** from the drop-down menu.

**Radio Wave:** Select **ON** or **OFF**.

# Filters

## Wireless Access Settings

**Wireless Band:** Select **IEEE802.11g** or **IEEE802.11a**.

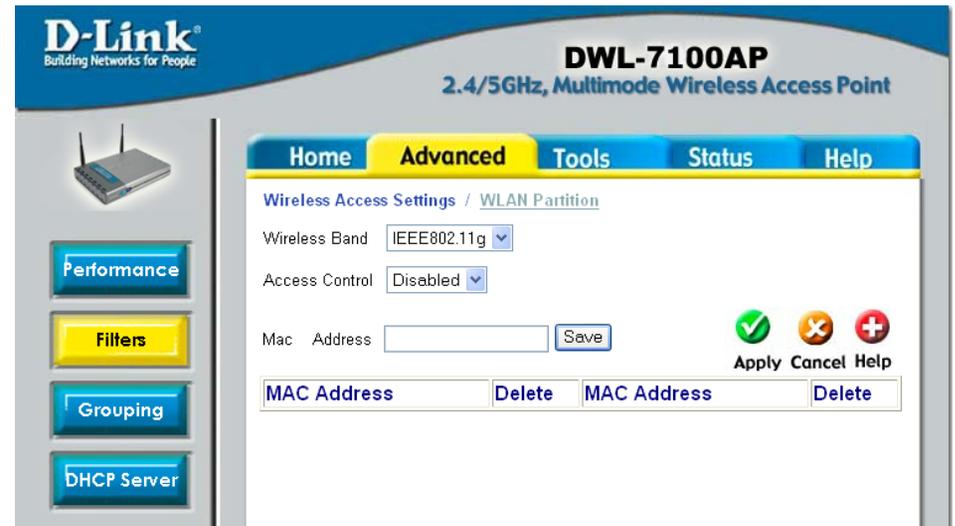
**Access Control:** Select **Disabled** to disable the filters function.

Select **Accept** to accept only those devices with MAC addresses in the Access Control List.

Select **Reject** to reject the devices with MAC addresses in the Access Control List.

**MAC Address:** Enter the MAC addresses that you wish to include in your filters list, and click **Save**.

**MAC Address List:** When you enter a MAC address, it appears in this list. Click **Delete** next to a MAC address to remove it from the list.

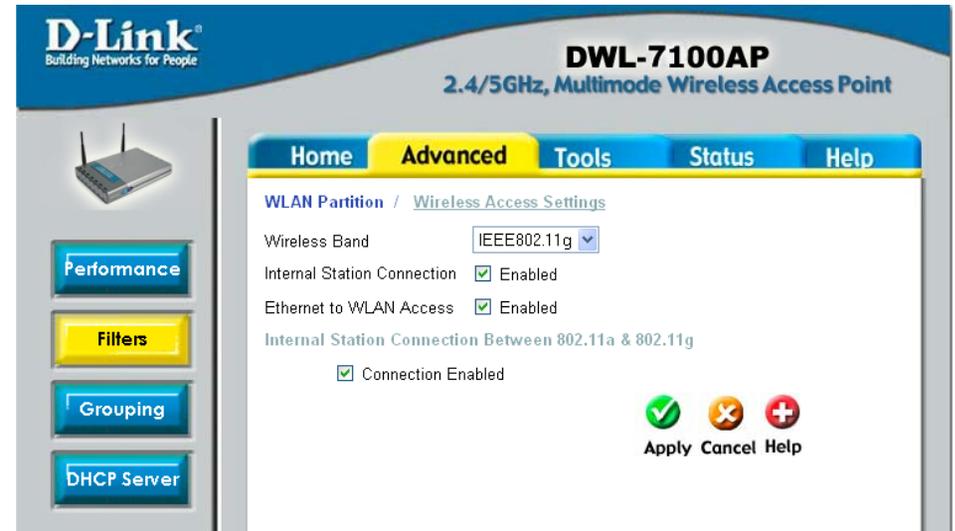


# WLAN Partition

**Wireless Band:** Select **IEEE802.11g** or **IEEE802.11a**.

**Internal Station Connection:** Enabling this feature allows wireless clients to communicate with each other. If this is disabled, wireless stations of the selected band are not allowed to exchange data through the access point.

**Ethernet to WLAN Access:** Enabling this feature allows Ethernet devices to communicate with wireless clients. If this is disabled, all data from the Ethernet to associated wireless devices is blocked. Wireless devices can still send data to the Ethernet.



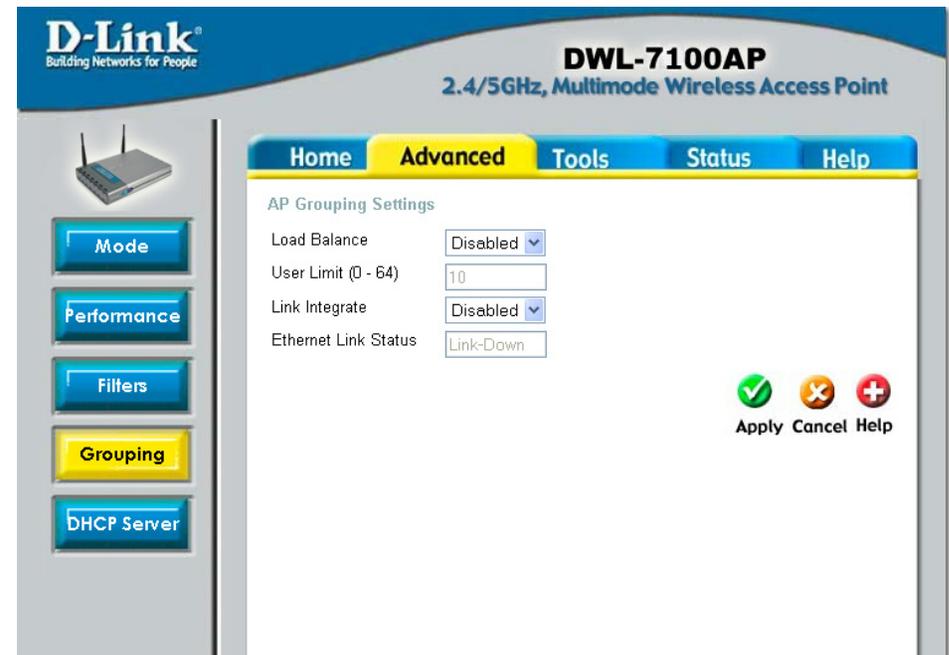
# Grouping

**Load Balance:** Load Balancing allows you to balance and share the wireless network traffic and clients using multiple DWL-7100APs. Select Enable or Disable.

**User Limit:** Sets the maximum amount of users allowed (0-64).

**Link Integrate:** If the Ethernet connection between the LAN and the DWL-7100AP is disconnected, the Link Integrate option will cause the wireless segment associated with the AP to be disconnected from the AP. Select **Enable** or **Disable**.

**Ethernet Link Status:** Displays the status of the Ethernet connection.



# DHCP Server

## Dynamic Pool Settings

**DHCP Server Control:** **Dynamic Host Configuration Protocol** assigns dynamic IP addresses to devices on the network. This protocol simplifies network management and allows new wireless devices to receive IP addresses automatically without the need to manually assign new IP addresses.

Select **Enable** to allow the DWL-7100AP to function as a DHCP server.

**IP Assigned From:** Input the first IP address available for assignment in your network.

**The Range of Pool (1-255):** Enter the number of IP addresses available for assignment.

**SubMask:** All devices in the network must have the same subnet mask to communicate. Enter the submask for the network here.

**Gateway:** Enter the IP address of the gateway on the network.

**Wins:** Enter the number of IP addresses available for assignment.

**DNS:** All devices in the network must have the same subnet mask to communicate. Enter the submask for the network here.

The screenshot shows the web interface for a D-Link DWL-7100AP. The page title is "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation menu includes "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, and the "DHCP Server Control" section is active. The "Function Enable/Disable" dropdown is set to "Disabled". The "Dynamic Pool Settings" section contains the following fields:

Dynamic Pool Settings	
IP Assigned From	<input type="text" value="0.0.0.0"/>
The Range of Pool (1-255)	<input type="text" value="0"/>
SubMask	<input type="text" value="0.0.0.0"/>
Gateway	<input type="text" value="0.0.0.0"/>
Wins	<input type="text" value="0.0.0.0"/>
DNS	<input type="text" value="0.0.0.0"/>
Domain Name	<input type="text"/>
Lease Time (60 - 31536000 sec)	<input type="text" value="0"/>
Status	<input type="text" value="OFF"/>

At the bottom right, there are three icons: a green checkmark, an orange 'X', and a red plus sign, with the labels "Apply", "Cancel", and "Help" respectively.

---

**Domain Name:** Enter the domain name of the DWL-7100AP, if applicable. (An example of a domain name is: www.dlink.com.)

**Lease Time :** The Lease Time is the period of time before the DHCP server will assign new IP addresses.

**Status:** Turn the **Dynamic Pool Settings ON** or **OFF** here.

# Static Pool Settings

**DHCP Server Control:** **Dynamic Host Configuration Protocol** assigns IP addresses to wireless devices on the network. This protocol simplifies network management and allows new wireless devices to receive IP addresses automatically without the need to manually assign IP addresses.

Select **Enable** to allow the DWL-7100AP to function as a DHCP server.

**Assigned IP:** Use the **Static Pool Settings** to assign the same IP address to a device at every restart. The IP addresses assigned in the Static Pool list must NOT be in the same IP range as the Dynamic Pool. After you have assigned a static IP address to a device via its MAC address, click **Apply**; the device will appear in the **Assigned Static Pool** at the bottom of the screen. Edit or delete the device in this list.

**Assigned MAC Address:** Enter the MAC address of the device here.

**SubMask:** Enter the subnet mask here.

**Gateway:** Enter the IP address of the gateway on the network.

**D-Link**  
Building Networks for People

**DWL-7100AP**  
2.4/5GHz, Multimode Wireless Access Point

Home Advanced Tools Status Help

Static Pool Settings / Current IP Mapping List / Dynamic Pool Settings

**DHCP Server Control**

Function Enable/Disable Disabled

**Static Pool Settings**

Assigned IP 0.0.0.0

Assigned MAC Address

SubMask 0.0.0.0

Gateway 0.0.0.0

Wins 0.0.0.0

DNS 0.0.0.0

Domain Name

Status OFF

Apply Cancel Help

**Assigned Static Pool**

MAC Address	IP address	State	Edit	Delete
-------------	------------	-------	------	--------

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**Wins:** **Windows Internet Naming Service** is a system that determines the IP address of a network computer with a dynamically assigned IP address, if applicable.

**DNS:** Enter the IP address of the Domain Name Server, if applicable. The DNS translates domain names such as www.dlink.com into IP addresses.

**Domain Name:** Enter the domain name of the DWL-7100AP, if applicable.

**Status:** This option turns the Static Pool settings **ON** or **OFF**.

# Current IP Mapping List

This screen displays information about the current DHCP dynamic and static IP address pools. This information is available when you enable the DHCP function of the DWL-7100AP and assign dynamic and static IP address pools.

**Current DHCP Dynamic Pools:** These are IP address pools to which the DHCP server function has assigned dynamic IP addresses.

**Binding MAC address:** The MAC address of a device on the network that is within the DHCP dynamic IP address pool.

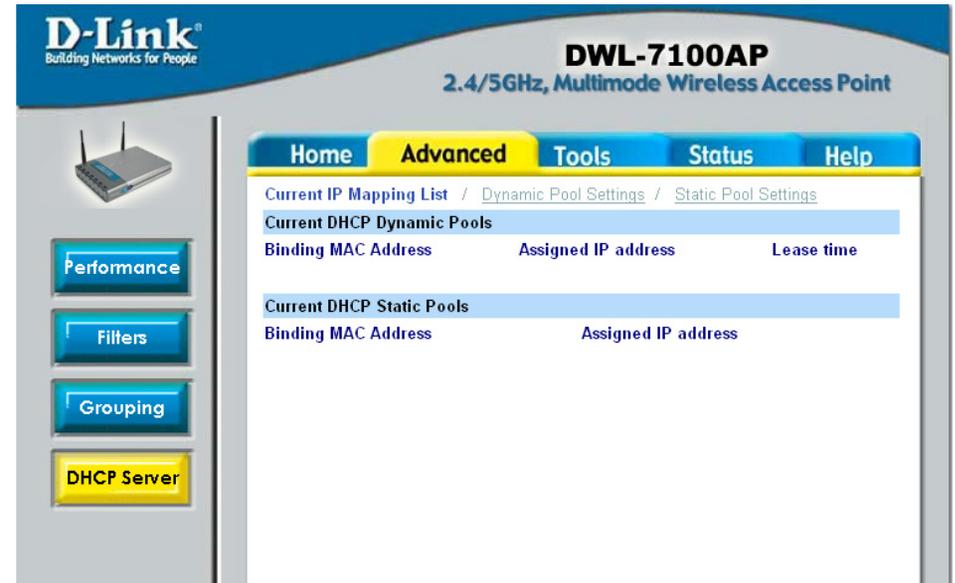
**Assigned IP address:** The current corresponding DHCP-assigned dynamic IP address of the device.

**Lease Time:** The length of time that the dynamic IP address will be valid.

**Current DHCP Static Pools:** These are IP address pools to which the DHCP server function has assigned static IP addresses.

**Binding MAC address:** The MAC address of a device on the network that is within the DHCP static IP address pool.

**Assigned IP address:** The current corresponding DHCP-assigned static IP address of the device.

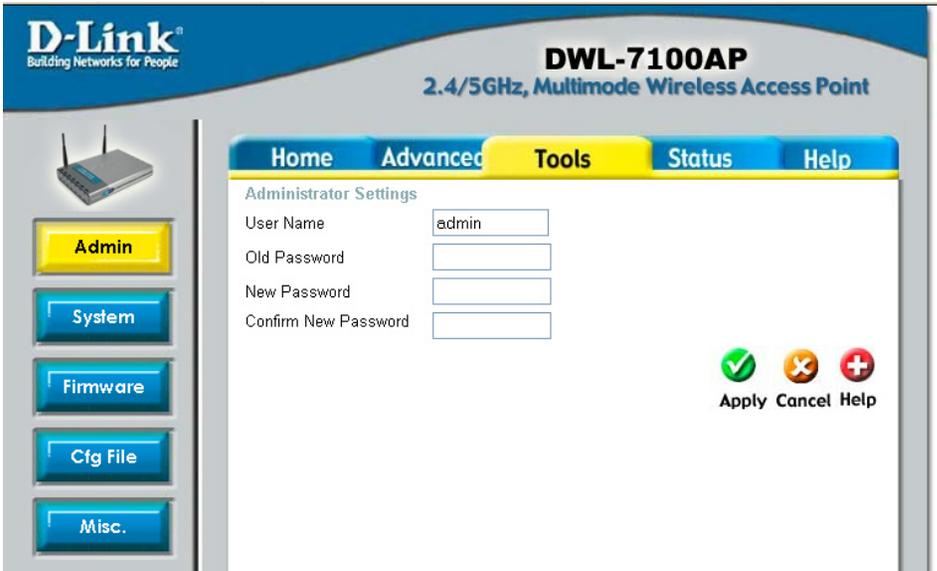


# Admin Settings

**User Name:** Enter a user name. The default setting is admin.

**Old Password:** Enter the current password (blank by default).

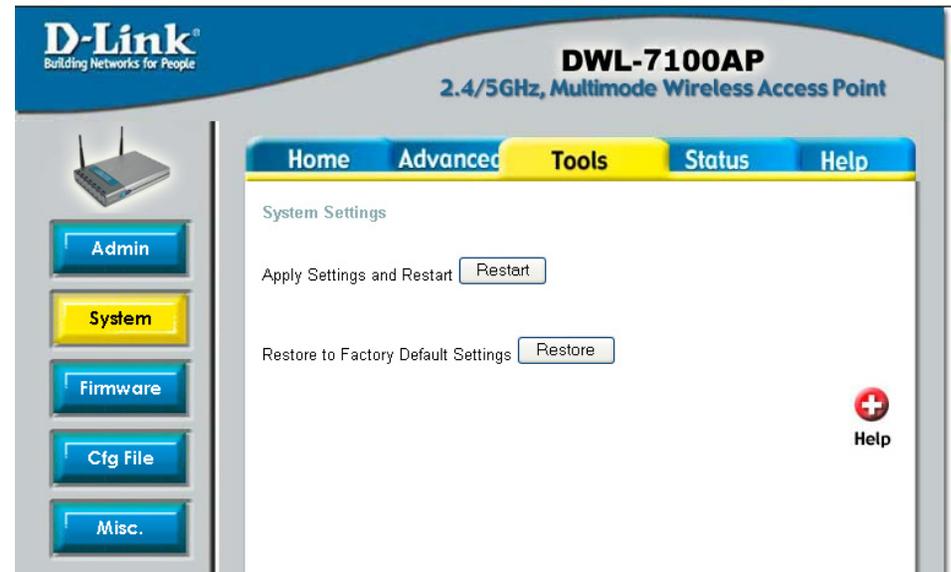
**New Password:** Enter a new password and enter it again in the Confirm Password box.



# System Settings

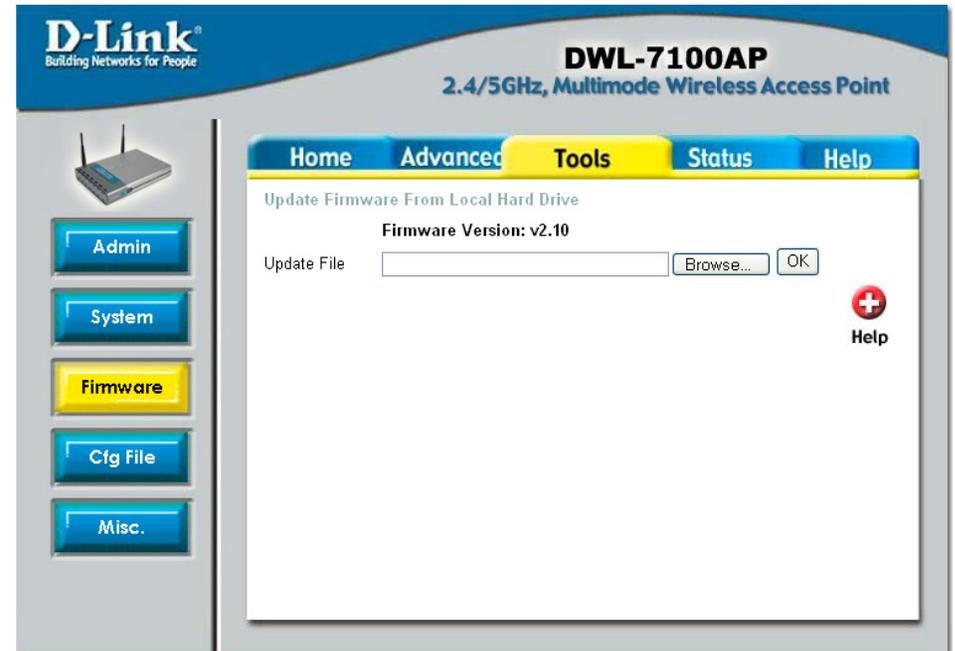
**Apply Settings and Restart:** Click **Restart** to apply the system settings and restart the DWL-7100AP.

**Restore to Factory Default Settings:** Click **Restore** to return the DWL-7100AP to its factory default settings.



# Upgrade Firmware

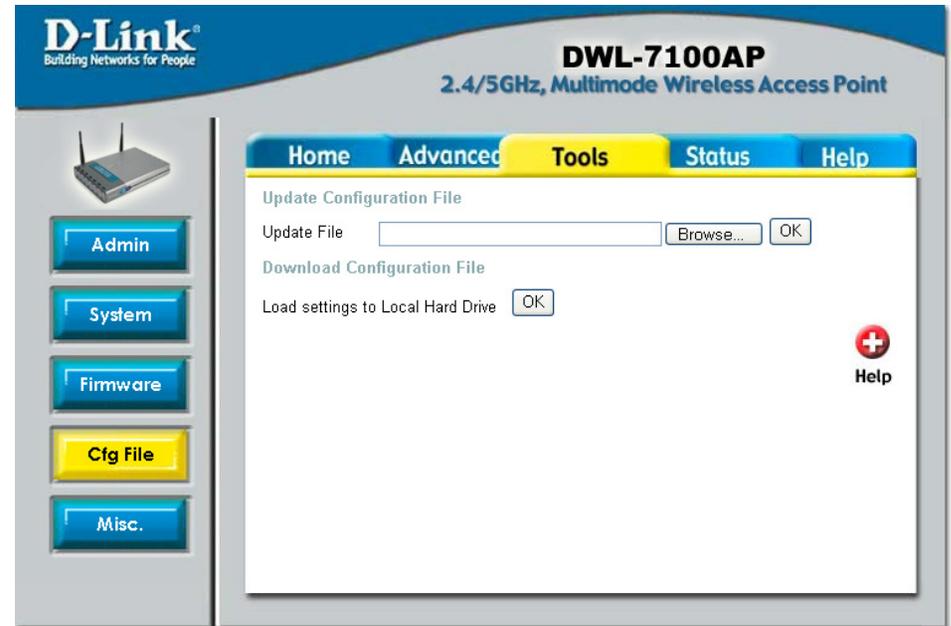
**Update File:** After you have downloaded the most recent version of the firmware from <http://support.dlink.com> to your hard drive, you can **Browse** your hard drive to locate the downloaded file. Select the file and click **OK** to update the firmware.



# Configuration File

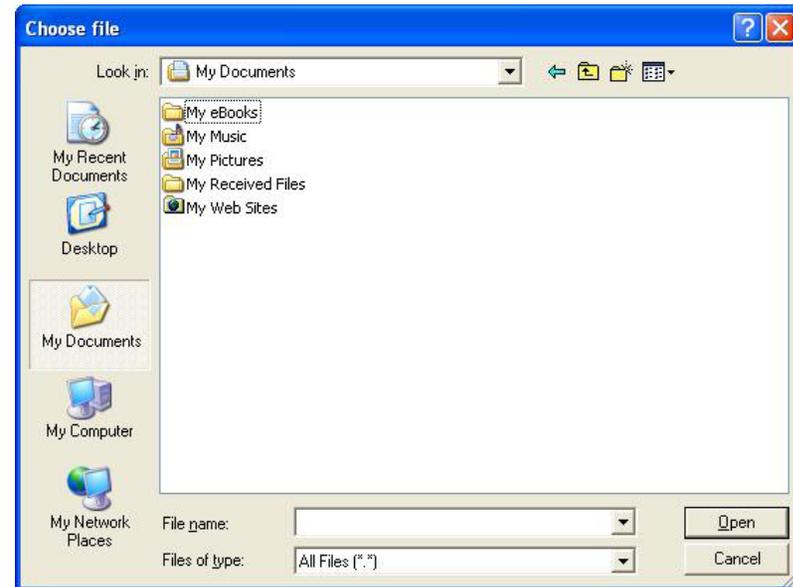
**Update File:** Browse for the configuration settings that you have saved to your hard drive. Click **OK** after you have selected the settings file.

**Load Settings to the Local Hard Drive:** Click **OK** to save the selected settings to your hard drive.

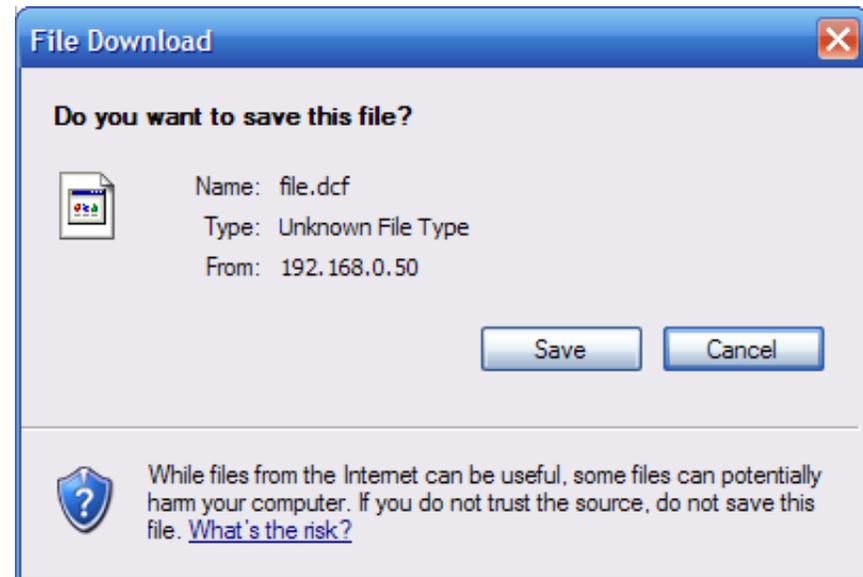


When you click **Browse** in the previous screen, the dialog box shown above appears.

Select the file you wish to download and click **Open**.



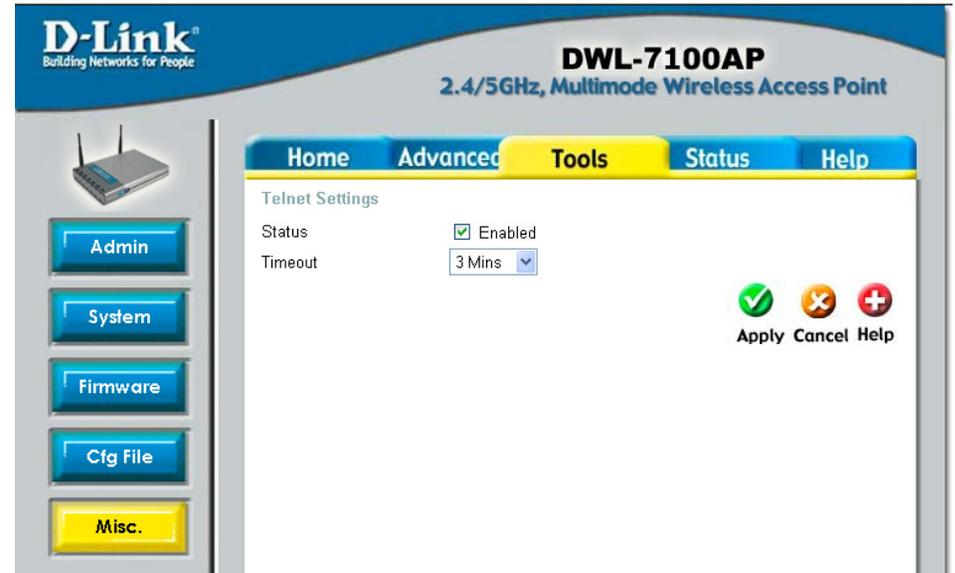
When this dialog box appears, click **Save** and select a location to save the configuration file.



# Telnet Settings

**Status:** Check the enable box to allow a Telnet connection.

**Timeout:** Select a time period after which a session timeout will occur.



# Device Information

**Device Information:** This window displays the settings of the DWL-7100AP, the firmware version and the MAC address.



The screenshot shows the web interface for a D-Link DWL-7100AP. The page title is "DWL-7100AP 2.4/5GHz, Multimode Wireless Access Point". The navigation menu includes Home, Advanced, Tools, Status, and Help. The "Status" tab is selected, and the "Device Information" section is active. The interface displays the following information:

- Firmware Version:** v2.10
- MAC Address:** 00:13:46:9a:a7:9a
- Ethernet**
  - Get IP From: Manual
  - IP address: 192.168.0.50
  - Subnet Mask: 255.255.255.0
  - Gateway: 0.0.0.0
- Wireless (802.11a)**
  - SSID: dlink
  - Channel: 56
  - Super Mode: Disabled
  - Rate: Auto
  - Security Level: Open System / Encryption Disabled
- Wireless (802.11g)**
  - SSID: dlink
  - Channel: 6
  - Super Mode: Disabled
  - Rate: Auto
  - Security Level: Open System / Encryption Disabled

A "Help" icon is located in the bottom right corner of the interface.

# Stats

**WLAN 802.11g Traffic Statistics:** This window displays the statistics of the IEEE802.11g network.

The screenshot shows the 'Stats' page for the DWL-7100AP. The left sidebar contains 'Device Info', 'Stats', and 'Client Info' buttons. The main content area displays the following statistics:

ThroughPut	
Transmit Success Rate	23 %
Transmit Retry Rate	0 %
Receive Success Rate	3 %
Receive Duplicate Rate	1 %
RTS Success Count	0
RTS Failure Count	38630

Transmitted Frame Count	
Transmitted Frame Count	966
Multicast Transmitted Frame Count	298
Transmitted Error Count	3336
Transmitted Total Retry Count	0
Transmitted Multiple Retry Count	0

Received Frame Count	
Received Frame Count	1160
Multicast Received Frame Count	428
Received Frame FCS Error Count	38630
Received Frame Duplicate Count	16
Ack Rcv failure Count	17736

Wep Frame Error Count	
WEP Excluded Frame Count	0
WEP ICV Error Count	0

**WLAN 802.11a Traffic Statistics:** This window displays the statistics of the IEEE802.11a network.

The screenshot shows the 'Stats' page for the DWL-7100AP, identical to the one above. The left sidebar contains 'Device Info', 'Stats', and 'Client Info' buttons. The main content area displays the following statistics:

ThroughPut	
Transmit Success Rate	23 %
Transmit Retry Rate	0 %
Receive Success Rate	3 %
Receive Duplicate Rate	1 %
RTS Success Count	0
RTS Failure Count	38630

Transmitted Frame Count	
Transmitted Frame Count	966
Multicast Transmitted Frame Count	298
Transmitted Error Count	3336
Transmitted Total Retry Count	0
Transmitted Multiple Retry Count	0

Received Frame Count	
Received Frame Count	1160
Multicast Received Frame Count	428
Received Frame FCS Error Count	38630
Received Frame Duplicate Count	16
Ack Rcv failure Count	17736

Wep Frame Error Count	
WEP Excluded Frame Count	0
WEP ICV Error Count	0

# Client Information

**Client Information:** Select this option to obtain information on IEEE802.11g clients. A client is a device on the network that is communicating with the DWL-7100AP.



The following information is available for each client that is communicating with the DWL-7100AP.

**MAC:** Displays the MAC address of the client.

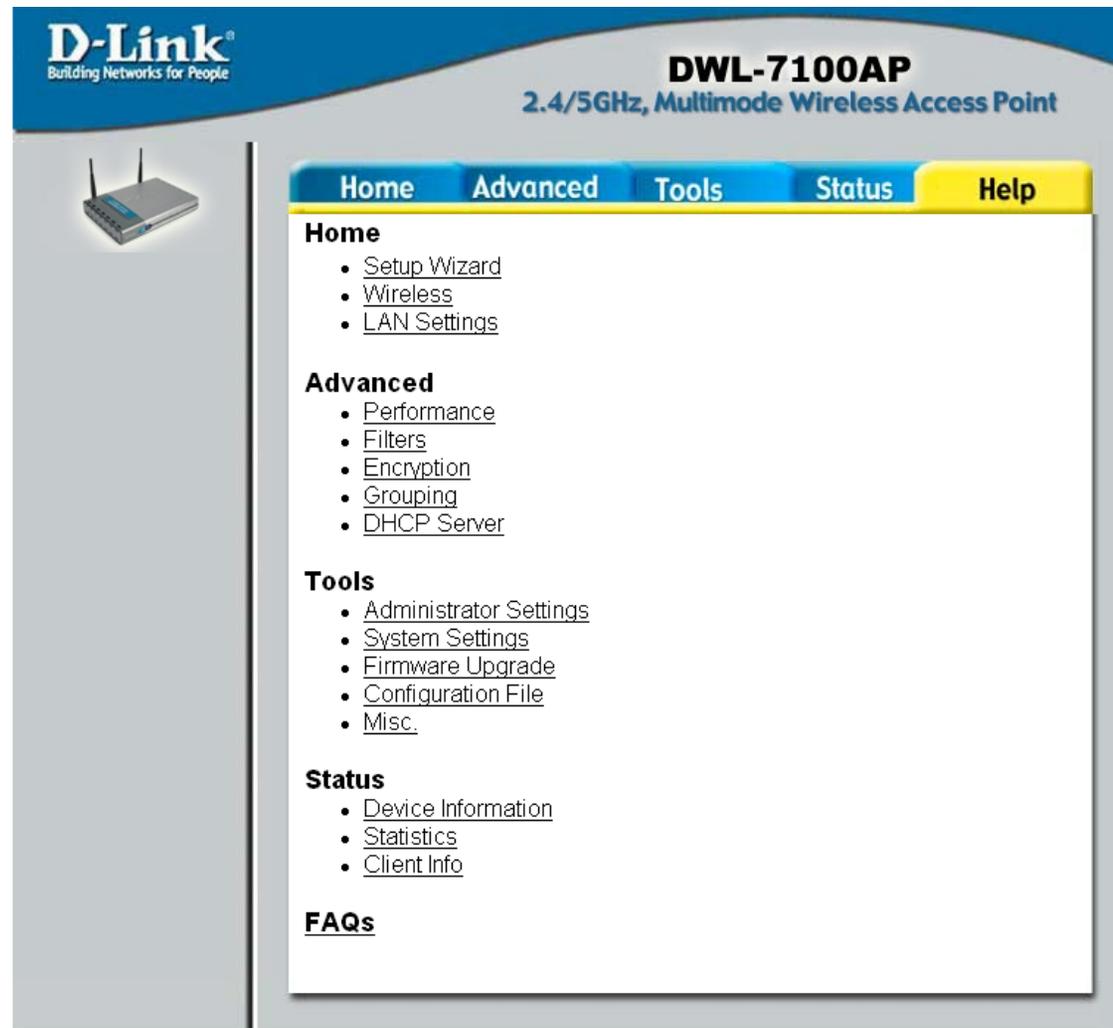
**Band:** Displays the wireless band.

**Authentication:** Displays the type of authentication that is enabled.

**Signal:** Receive Signal Strength Indicator indicates the strength of the signal

**Power Saving Mode:** Displays the status of the power saving feature.

# Help



**Help:** Click on any item in the Help screen for more information.

# Using the AP Manager

The **AP Manager** is a convenient tool to manage the configuration of your network from a central computer. With **AP Manager** there is no need to configure devices individually.

To launch the **AP Manager**:

- Go to the **Start Menu**
- Select **Programs**
- Select **D-Link AirPlus Xtreme AP Manager**
- Select **DWL-7100AP**

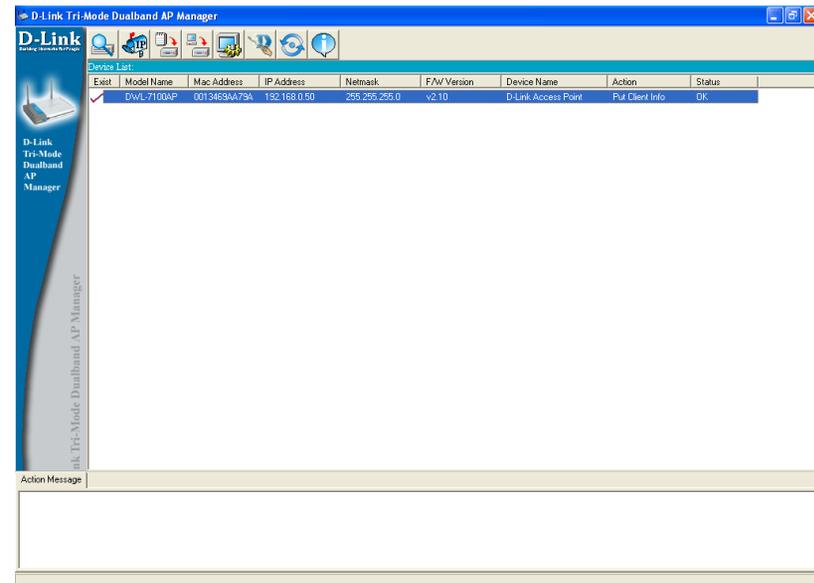
## Discovering Devices



Click on this button to **discover the devices** available on the network.

Select the AP that you want to assign an IP address to and click the IP button. Enter the IP address and IP netmask for the selected device and click **OK**.

You can configure multiple AP's with IP addresses all at once. Click on the IP button after you've selected all of the AP's you want to assign an IP address. Enter the IP address you want to assign the first unit and the AP manager will automatically assign sequential IP addresses.



---

# Device Configuration



Click on this button to access the configuration properties of the selected device(s).

The device configuration window allows you to configure settings but does not actually apply the settings to the device unless you click the **Apply** button. You can also save and load configuration files from this window. When you load a configuration file, you must click **Apply** if you want the settings to be applied to the selected device(s).

You can configure a single device by highlighting one device in the list, or you can configure multiple devices by highlighting multiple devices before clicking on the Device Configuration icon pictured above. The examples in this section show single device configuration. When you select multiple devices for configuration the procedure will be similar.

## Check All

The Check All button will select all configurable options. Any setting that has a checkmark next to it is applied to the device or saved to the configuration file.

## Clear Checks

The Clear Checks button deselects all configurable options. This feature is useful if you only want to change a few settings. Deselect all items and only check the items that you want to modify.

## Refresh

Refresh will revert to the actual device settings of the selected device(s).

## Apply

To save settings to the device, you must click the Apply button. Only settings that have a checkmark next to them will be applied.

## Open

The open button is used to load a previously saved configuration file. After opening a configuration file, you must click the Apply button to save the settings to the selected device(s).

## Save

The save button allows you to save a configuration file of the selected device settings. Only settings that have a checkmark next to them are saved. You cannot save a configuration file if you selected more than one device in the device list.

## Exit

The Exit button will close the device configuration window. Any settings that haven't been applied will be lost.

# General



**Device Name(\*):** When selecting multiple devices for configuration, some options are unavailable for configuration by default as noted(\*) below:

This allows you to change the device name for the selected access point. You must place a checkmark in the Device Name box to change the name. This option should only be configured when one access point is selected for configuration.

**IP address and Subnet Mask(\*):** If you've selected one device for configuration and you want to change the IP address of the device, check the IP Address box. You can then enter an IP address and Subnet Mask for the selected access point. This option should only be configurable when one access point is selected for configuration. To configure multiple devices with an IP address at one time, please reference the previous page.

**Gateway:** Enter the IP address of your gateway, typically your router address.

**DHCP Client:** There is a drop-down menu to select enabled or disabled. When enabled, the selected device(s) will function as a DHCP client(s). This allows them to receive IP configuration information from a DHCP server. When disabled, the access point(s) must have a static IP address assigned to them.

**Device Configuration**

General | Wireless | Security | Filters | AP Mode | DHCP Server | Client Info

Device Name: D-Link Access Point

**LAN**

IP Address: 192 . 168 . 0 . 50     Gateway: 0 . 0 . 0 . 0

Subnet Mask: 255 . 255 . 255 . 0     DHCP client: Disable

**Grouping**

Load Balance: Disable

User Limit (0-64): 10

Link Integrity: Disable

**Telnet**

Telnet Support: Enable

Telnet Timeout: 3 minute(s)

Check All | Clear Checks | Refresh | Apply | Open | Save | Exit

---

**Telnet Timeout:** This drop-down selection defines the timeout period during a Telnet session with the selected device(s).

**Console Protocol:** This drop-down selection enables or disables the ability to Telnet into the selected device(s).

**Limit Administrator IP:** Check the box to limit the administrator to login to the DWL-7100AP from a certain IP address.

**SNMP Status:** Check **Enabled** to use SNMP. SNMP is disabled by default.

**Public Community String:** When SNMP is enabled, you may modify the public community string (read-only).

**Private Community String:** When SNMP is enabled, you may modify the private community string (read-write).

# Wireless Settings

**SSID:** The Service Set (network) Identifier of your wireless network.

**Channel:** Allows you to select a channel. 6 is the default setting.

**SSID Broadcast:** Allows you to enable or disable the broadcasting of the SSID to network clients.

**Super A/Super G:** Disabled by default. You can select **Super A/G without Turbo** or **Super A/G with Dynamic Turbo**.

**Radio Wave:** Select **Disable** or **Enable** from the drop-down menu.

**Wireless QoS (WMM):** Select **Disable** or **Enable** from the drop-down menu.

**Preamble:** Select **Short and Long** (default) or **Long Only**.

**Data Rate:** A drop-down menu to select the maximum wireless signal rate for the selected device(s).

**Beacon Interval (20~1000):** Beacons are packets sent by an access point to synchronize a network. Specify the beacon value for the selected device(s) here. The default value of 100 is recommended.

The screenshot shows the 'Device Configuration' window with the 'Wireless' tab selected. It displays settings for two wireless standards: IEEE802.11a and IEEE802.11g. For IEEE802.11a, the SSID is 'dlink', Channel is 56, SSID Broadcast is 'Enable', Super A is 'Disable', and Radio Wave is 'Enable'. For IEEE802.11g, the SSID is 'dlink', Channel is 6, SSID Broadcast is 'Enable', Super G is 'Disable', and Radio Wave is 'Enable'. Both standards have a Data Rate of 'Auto', Beacon Interval of 100, DTIM of 1, Fragment Length of 2346, and RTS Length of 2346. The Tx Power is set to 'Full'. The Auto Channel Scan is 'Enable' for IEEE802.11a and 'Disable' for IEEE802.11g. At the bottom, there are buttons for 'Check All', 'Clear Checks', 'Refresh', 'Apply', 'Open', 'Save', and 'Exit'.

---

<b>DTIM (1~255):</b>	DTIM (Delivery Traffic Indication Message) is a countdown informing clients of the next listening window for broadcast and multicast messages.
<b>Fragment Length (256~2346):</b>	This sets the fragmentation threshold (specified in bytes). Packets exceeding the value set here will be fragmented. The default is 2346.
<b>RTS Length:</b>	The RTS value should not be changed unless you encounter inconsistent data flow. The default value is 2346.
<b>Tx Power:</b>	A drop-down menu for selecting the transmit power of the selected device(s).
<b>Auto Channel Scan:</b>	Enable this option to allow the access point to automatically scan for an available channel.

# Security

The Security tab contains the WEP configuration settings on the initial page. If you select WPA as the authentication type, an additional tab will appear with the WPA configuration options based on your selection.

**Authentication Type:** Select from the drop-down menu the type of authentication to be used on the selected device(s).

**Open:** The key is communicated across the network.

**Shared:** Limited to communication with devices that share the same WEP settings.

**Open System/ Shared Key:** The key is communicated and identical WEP settings are required.

**WPA:** Used to authenticate clients via a RADIUS server.

**WPA-PSK:** Does not utilize a RADIUS server for authentication but uses a passphrase that is configured on the clients and access points.

**Encryption:** Enable or disable encryption on the selected device(s).

**Key Values:** Select which defined key is active on the selected device(s).

Select the key size (64-bit, 128-bit, or 152-bit) and key type (HEX or ASCII) and then enter a string to use as the key. The key length is automatically adjusted based on the settings you choose.

The screenshot shows the 'Device Configuration' window with the 'Security' tab selected. It displays WEP Key settings for two standards: IEEE802.11a and IEEE802.11g. For each standard, the 'Authentication' is set to 'Open System', 'Encryption' is 'Disable', and 'Active Key Index' is '1'. There are four key slots (1st Key to 4th Key), each with a key size dropdown (all set to 64), a key type dropdown (all set to HEX), and a text input field containing '00 00 00 00 00'. At the bottom, there are buttons for 'Check All', 'Clear Checks', 'Refresh', 'Apply', 'Open', 'Save', and 'Exit'.

# WEP Encryption

**Authentication Type:** Select from the drop-down menu the type of authentication to be used on the selected device(s).

**Open:** The key is communicated across the network.

**Shared:** Limited to communication with devices that share the same WEP settings.

**Open System/ Shared Key:** The key is communicated and identical WEP settings are required.

**Active Key Index:** Select which defined key is active on the selected device(s).

**Key Values:** Select the key size (64-bit, 128-bit, or 152-bit) and key type (HEX or ASCII) and then enter a string to use as the key. The key length is automatically adjusted based on the settings you choose.

The screenshot shows the 'Device Configuration' window with the 'Security' tab selected. The 'Wep Key' section is expanded, showing settings for IEEE802.11a and IEEE802.11g. For IEEE802.11a, the 'Authentication' is set to 'Open System' (with a dropdown menu open showing options: Open System, Shared Key, Open System/Share, WPA-EAP, WPA-PSK), 'Encryption' is 'Open System', and the 'Active Key Index' is 1. Four keys are listed, each with a size of 64 bits and a type of HEX, all containing the value '00 00 00 00 00'. For IEEE802.11g, the 'Authentication' is 'Open System', 'Encryption' is 'Disable', and the 'Active Key Index' is 1. Four keys are listed, each with a size of 64 bits and a type of HEX, all containing the value '00 00 00 00 00'. At the bottom of the window are buttons for 'Check All', 'Clear Checks', 'Refresh', 'Apply', 'Open', 'Save', and 'Exit'.

# WPA-EAP/WPA2-EAP/ WPA-Auto-EAP

- Cipher Type:** Select **Auto**, **TKIP**, or **AES** from the drop-down menu.
- Group Key Update Interval:** Select the interval during which the group key will be valid. 1800 is the recommended setting. A lower interval may reduce transfer rates.
- RADIUS Server:** Enter the IP address of the RADIUS server.
- RADIUS Port:** Enter the port used on the RADIUS server (1812 is default).
- RADIUS Secret:** Enter the RADIUS secret.

The screenshot shows the 'Device Configuration' window with the 'Security' tab selected. The 'WEP Key' is set to 'IEEE802.11g WPA'. A checkbox is checked, and the 'WPA setting' section is expanded. In this section, 'Cipher Type' is set to 'Auto', 'Group Key Update Interval' is '1800' (with a range of 300 - 9999999), and 'PassPhrase' is empty (with a range of 8 - 63 chars). The 'Security Server' section is also expanded, showing 'RADIUS Server' (empty), 'RADIUS Port (1- 65535)' set to '1812', and 'RADIUS Secret' (empty). At the bottom of the window are buttons for 'Check All', 'Clear Checks', 'Refresh', 'Apply', 'Open', 'Save', and 'Exit'.

# WPA-EAP/WPA2-EAP/ WPA-Auto-EAP

**Cipher Type:** Select **Auto**, **TKIP**, or **AES** from the drop-down menu.

**Group Key Update Interval:** Select the interval during which the group key will be valid. 1800 is the recommended setting. A lower interval may reduce transfer rates.

**PassPhrase:** Enter a PassPhrase between 8-63 characters in length.

The screenshot shows the 'Device Configuration' window with the 'Security' tab selected. The 'Wep Key' section is active, showing settings for IEEE802.11a and IEEE802.11g. For IEEE802.11a, Authentication is set to WPA-EAP, Encryption is Enable, and Active Key Index is 1. For IEEE802.11g, Authentication is set to Open System, Encryption is Disable, and Active Key Index is 1. Both sections have four keys, each with a 64-bit length, HEX format, and a value of 00 00 00 00 00.

Standard	Authentication	Encryption	Active Key Index	1st Key	2nd Key	3rd Key	4th Key
IEEE802.11a	WPA-EAP	Enable	1	64 HEX 00 00 00 00 00			
IEEE802.11g	Open System	Disable	1	64 HEX 00 00 00 00 00			

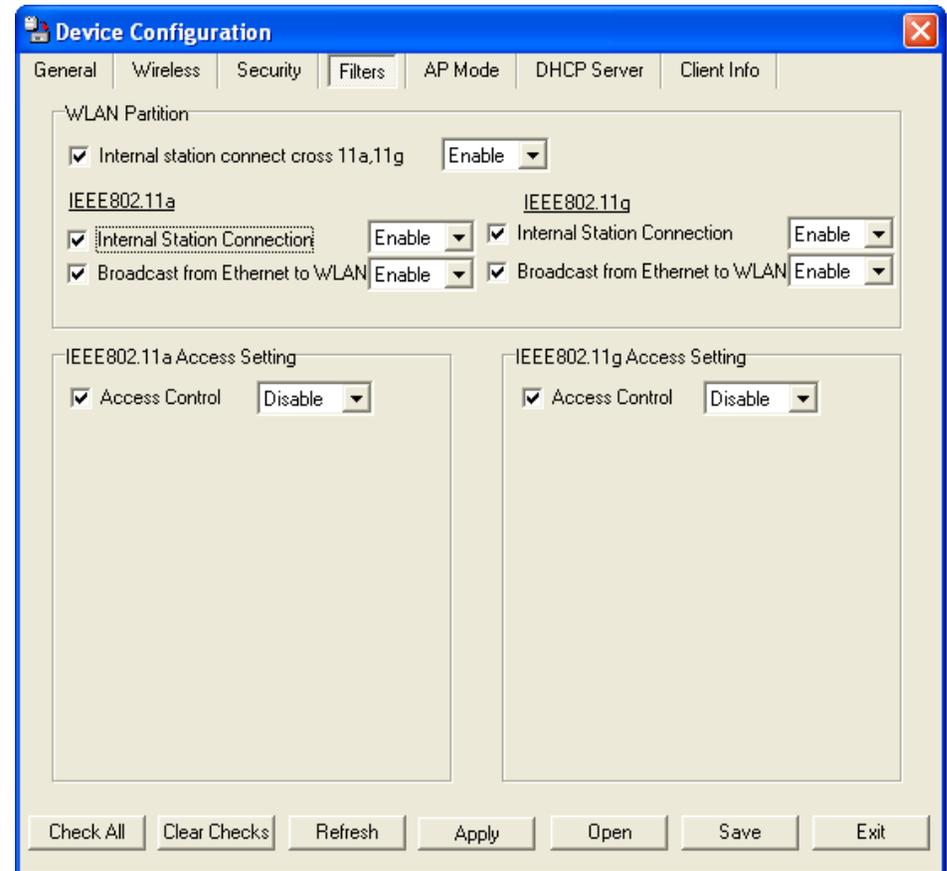
# Filters

**Internal Station Connection:** Enabling this allows wireless clients to communicate with each other. When this option is disabled, wireless stations are not allowed to exchange data through the access point.

**Broadcast from Ethernet to WLAN:** Enabling this option allows Ethernet devices to communicate with wireless clients. When this option is disabled, all data from Ethernet to wireless clients is blocked. Wireless devices can still send data to the Ethernet devices when this is disabled.

**Access Control:** When disabled access control is not filtered based on the MAC address. If Accept or Reject is selected, then a box appears for entering MAC addresses. When **Accept** is selected, only devices with a MAC address in the list are granted access. When **Reject** is selected, devices in the list of MAC addresses are not granted access.

**Access Control List:** **Add** or **Delete** MAC addresses in the Access Control List.



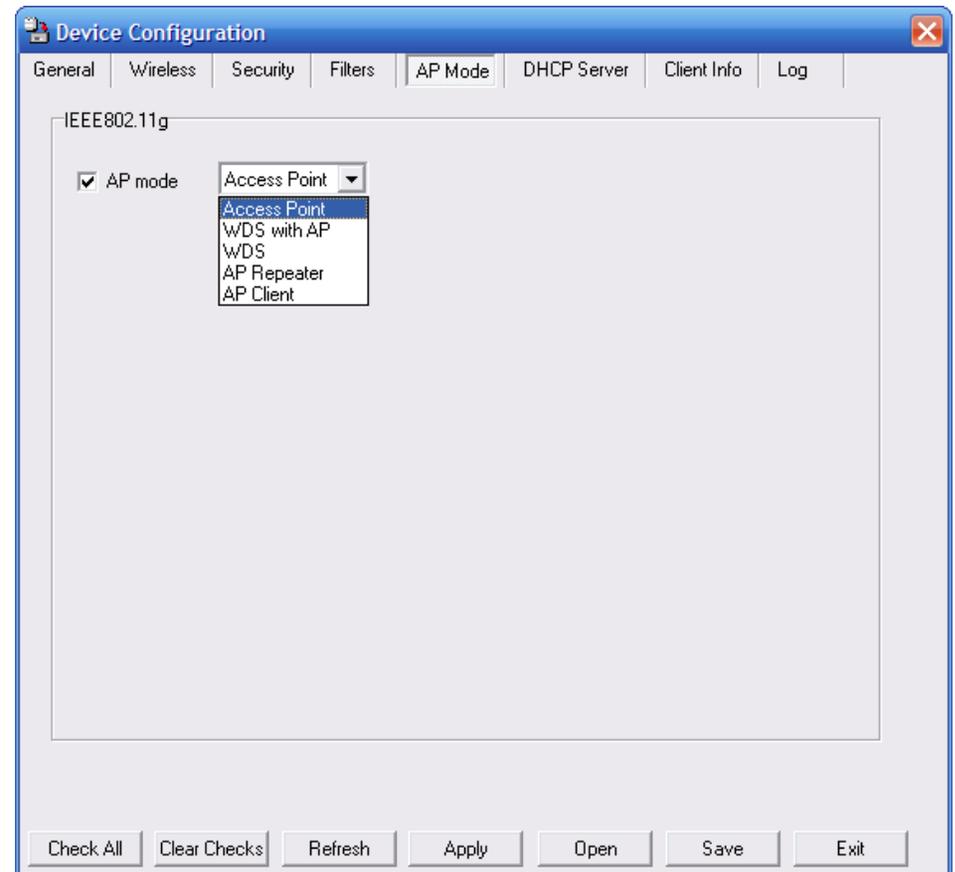
# AP Mode

**Access Point:** There are 5 AP modes that are configurable in IEEE802.11g:

- **Access Point**
- **WDS with AP**
- **WDS**
- **AP Repeater**
- **AP Client**

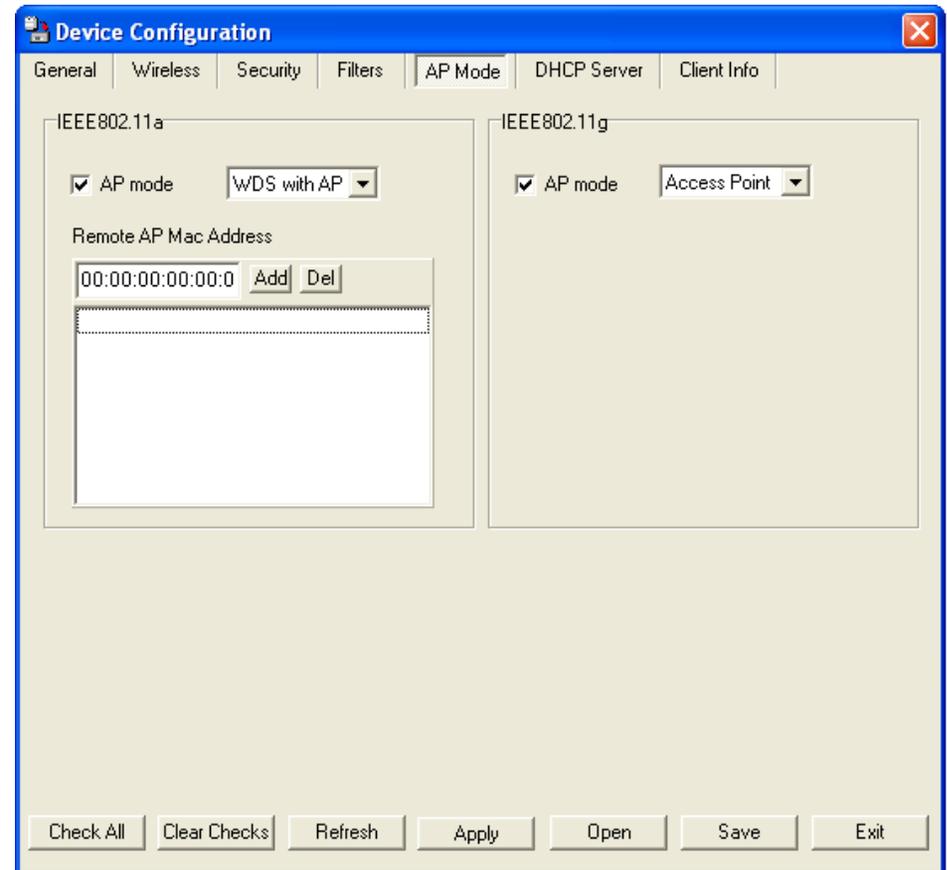
Access Point, the default setting used to create a wireless LAN, is displayed here.

Please see the following pages for an explanation of the other 4 AP modes.



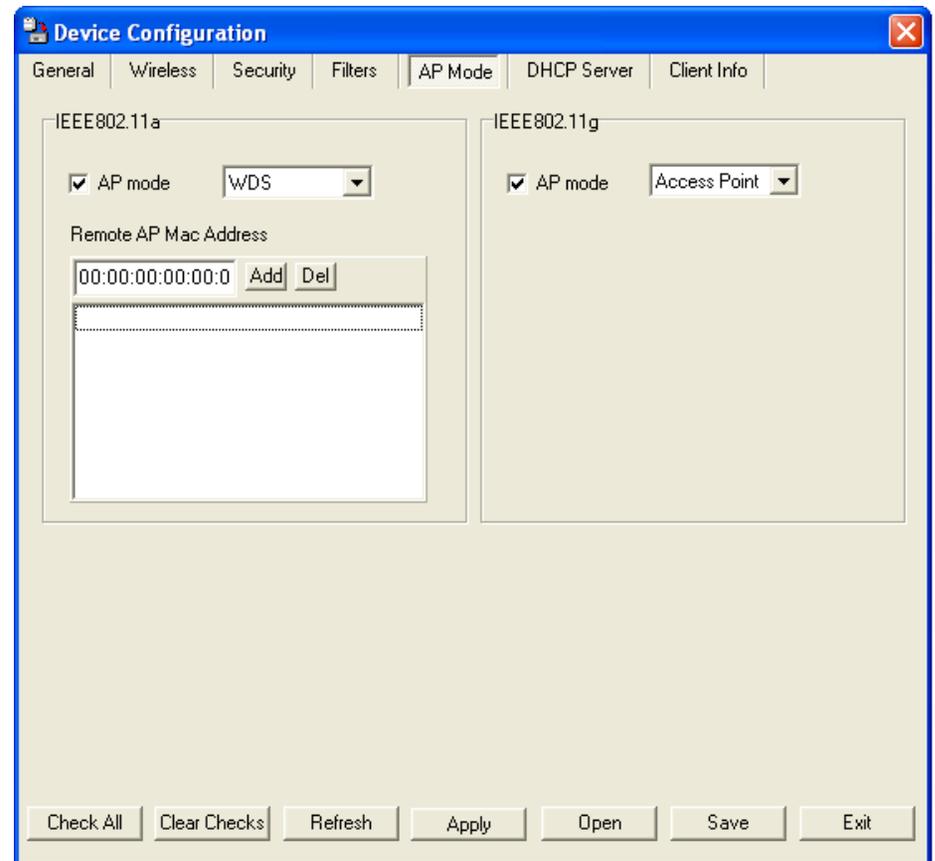
# WDS with AP

**WDS with AP:** Allows you to connect multiple wireless LANs together while acting as an access point at the same time. This only works with other DWL-7100APs. If enabled, you must enter the MAC address of the other DWL-7100AP(s) on your network.



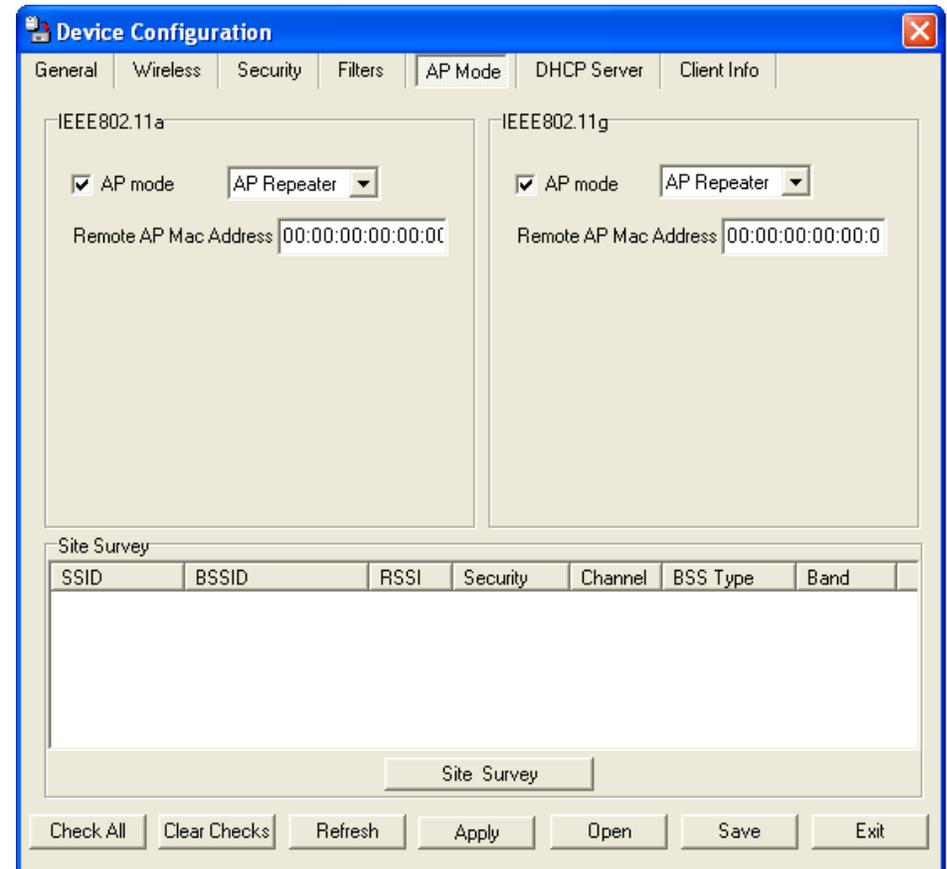
# WDS

**WDS:** Allows you to connect multiple wireless LANs together. All other LANs must be using DWL-7100APs. When enabled, you must enter the MAC address of the other DWL-7100AP(s) on your network (you can enter up to eight addresses).



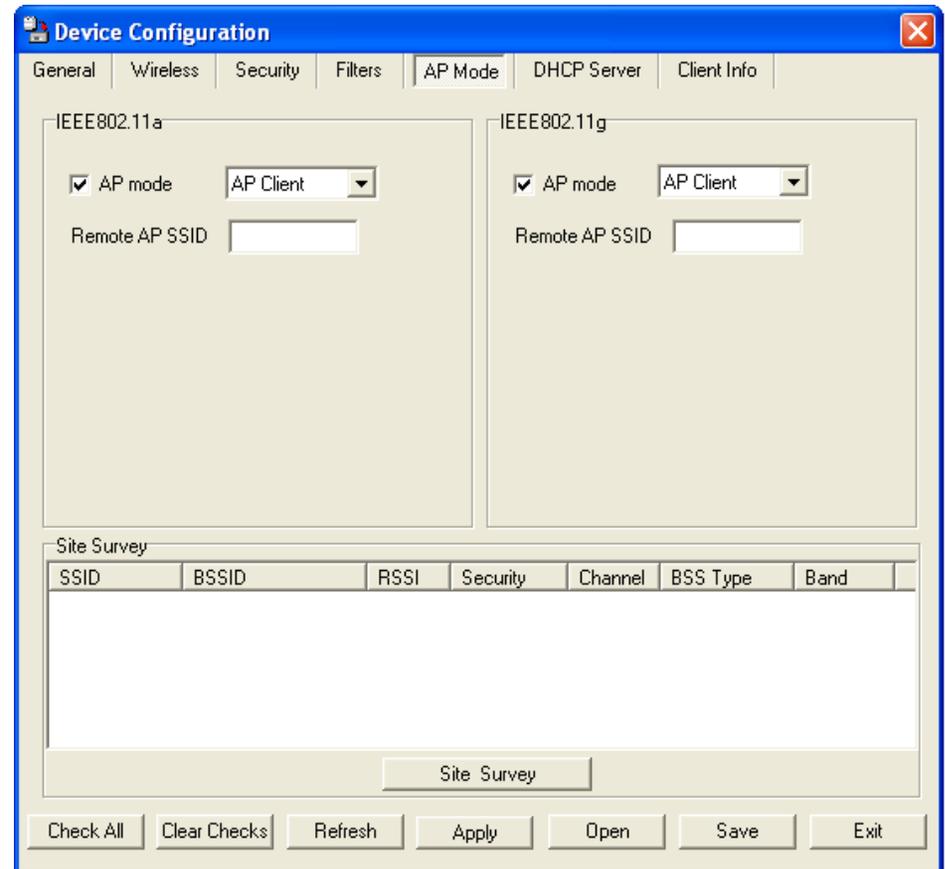
# AP Repeater

**AP Repeater:** Click on **Site Survey** and select the SSID that you want the AP to repeat or enter the MAC address manually of the access point you want to repeat.



# AP Client

**AP Client:** Allows you to use the access point as a wireless client. Click on **Site Survey** and click on the SSID that you want the AP to connect to, or manually enter the root AP SSID.



# DHCP Server

**DHCP Server:** Enable or disable the DHCP server function.

**Dynamic Pool Settings:** Click to enable Dynamic Pool Settings. Configure the IP address pool in the fields below.

**Static Pool Settings:** Click to enable Static Pool Settings. Use this function to assign the same IP address to a device at every restart. The IP addresses assigned in the Static Pool list must NOT be in the same IP range as the Dynamic Pool.

**IP Assigned From:** Enter the initial IP address to be assigned by the DHCP server.

**Range of Pool (1~255):** Enter the number of allocated IP addresses.

**SubMask:** Enter the subnet mask.

**Gateway:** Enter the gateway IP address, typically a router.

**WINS:** WINS (Windows Internet Naming Service) is a system that determines the IP address of a network computer with a dynamically assigned IP address, if applicable.

**DNS:** All devices in the network must have the same subnet mask to communicate. Enter the submask for the network here.

**Domain Name:** Enter the domain name of the DWL-7100AP, if applicable. (An example of a domain name is: www.dlink.com.)

**Lease Time :** The Lease Time is the period of time before the DHCP server will assign new IP addresses.

**Status:** Turn the **Dynamic Pool Settings ON** or **OFF** here.

The screenshot shows the 'Device Configuration' window with the 'DHCP Server' tab selected. The 'DHCP Server' checkbox is checked, and the status is set to 'Disable'. The 'Dynamic Pool Settings' section is active, showing fields for 'IP Assigned From' (0.0.0.0), 'Range of Pool (1~255)' (0), 'SubMask' (0.0.0.0), 'Gateway' (0.0.0.0), 'Wins' (0.0.0.0), 'DNS' (0.0.0.0), 'Domain Name', 'Lease Time(60~31536000 sec)' (0), and 'Status' (OFF). The 'Static Pool Settings' section is inactive. A table with columns 'Mac Address', 'IP Address', and 'Status' is visible but empty. At the bottom, there are buttons for 'Check All', 'Clear Checks', 'Refresh', 'Apply', 'Open', 'Save', and 'Exit'.

# Client-Info

**Client Info:** Select this option to obtain information on 802.11g and 802.11a clients. A client is a device on the network that is communicating with the DWL-7100AP.

The following information is available for each client that is communicating with the DWL-7100AP.

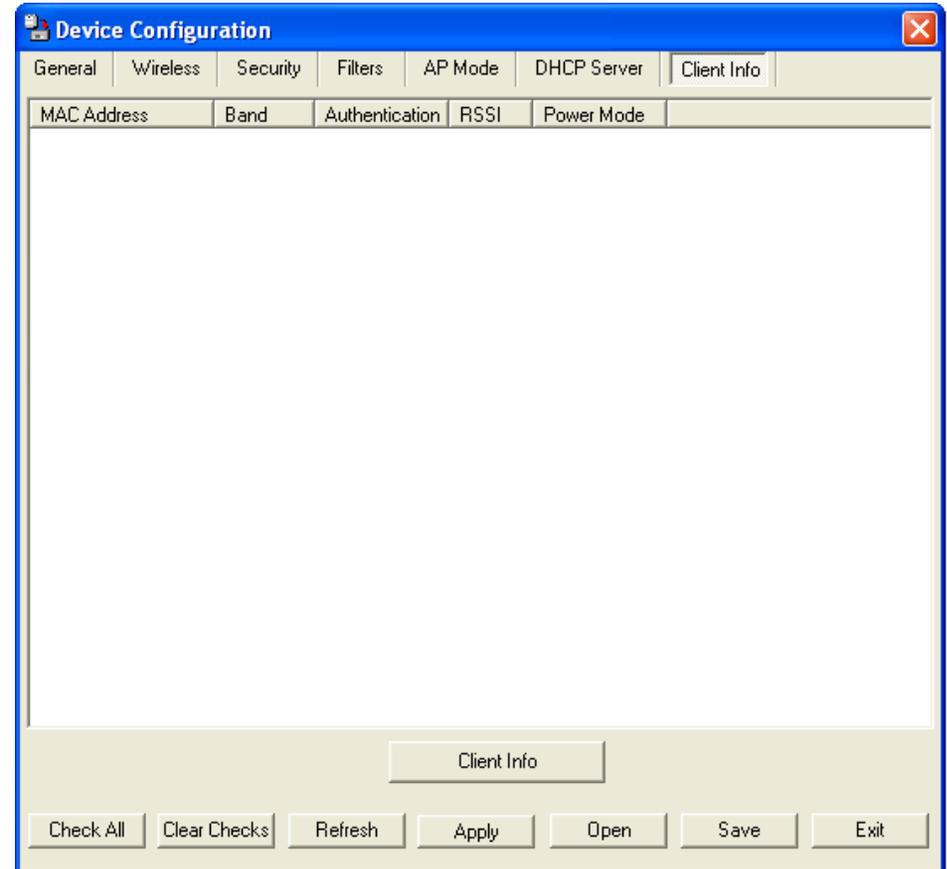
**MAC Address:** Displays the MAC address of the client.

**Band:** Displays the wireless band.

**Authentication:** Displays the type of authentication that is enabled.

**RSSI:** Receive Signal Strength Indicator indicates the strength of the signal.

**Power Saving Mode:** Displays the status of the power saving feature.



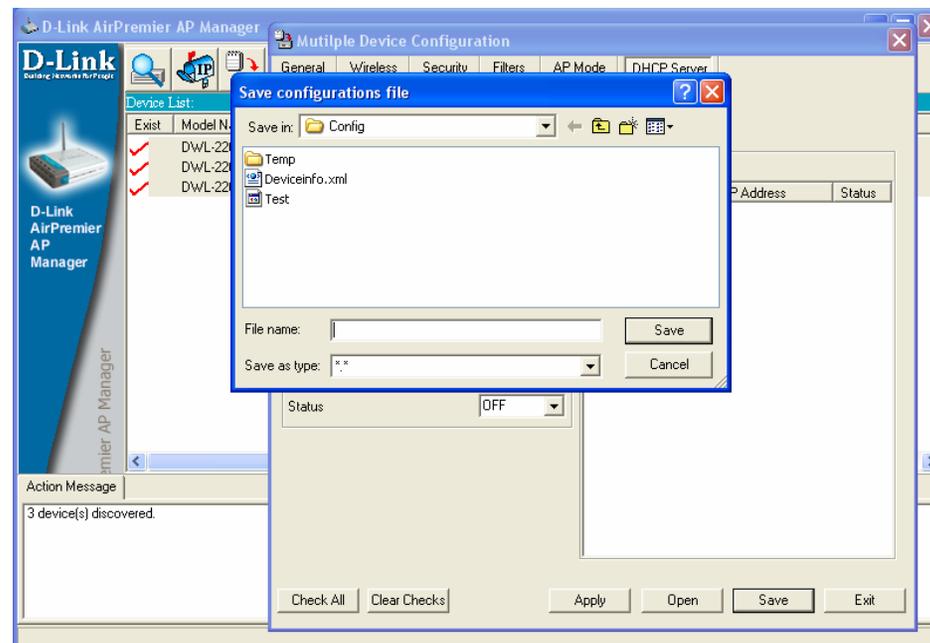
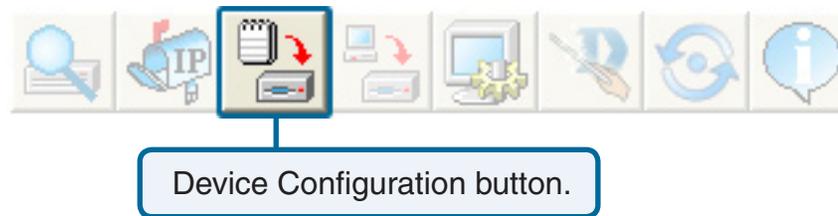


# Configuration Files

The DWL-7100AP allows you to save the device settings to a configuration file. To save a configuration file follow these steps:

- Select a device from the Device List on the main screen of the AP Manager.
- Click the device configuration button.
- Click the **Save** button after you have all the settings as you want them.
- A popup window will appear prompting you for a file name and location. Enter the file name, choose a file destination, and click **Save**.

**Note:** You must always click **Apply** in the Configuration window if you want the settings to take effect.



---

# Firmware



You can upgrade the firmware by clicking on this button after selecting the device(s).

To upgrade the firmware:

- Download the latest firmware upgrade from <http://support.dlink.com> to an easy to find location on your hard drive.
- Click on the firmware button as shown above.
- A popup window will appear. Locate the firmware upgrade file and click **Open**.

**IMPORTANT! DO NOT DISCONNECT POWER FROM THE UNIT WHILE THE FIRMWARE IS BEING UPGRADED.**

---

# System Settings



You can customize the basic System Settings for the DWL-7100AP by clicking on this button.

Setting	Value
Access Password	<input type="text"/>
Setting Timeout (s)	5
Reboot Time (s)	30
Configuration Upload Time (s)	30
Configuration Download Time (s)	30
Configuration Flash Update Time (s)	30
Factory Reset Time (s)	30
F/W Download Time (s)	60
F/W Flash Update Time (s)	60
Timing Tolerance (s)	5
Discovery Timeout (s)	5
Discovery Packets Number	1
<input type="checkbox"/> Auto Refresh	<input type="text"/>

Buttons: Default, OK, Cancel

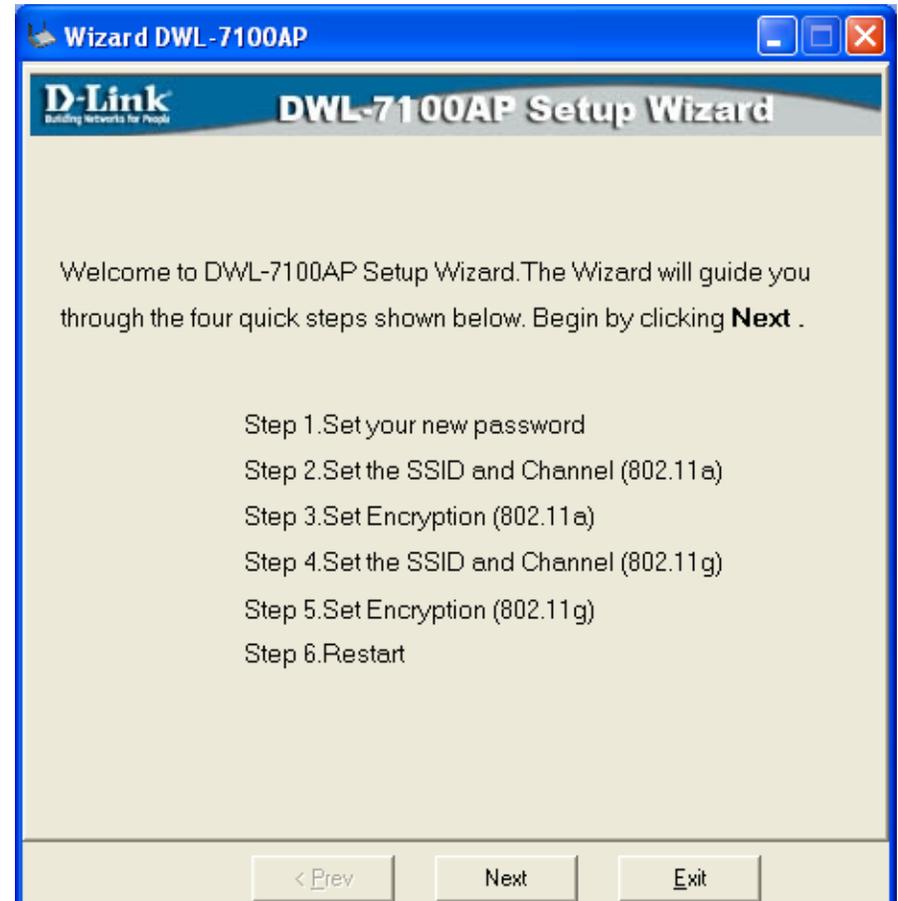
**Access Password:** This sets the admin password for the select device(s).

**Auto Refresh:** This setting allows you to enable auto refreshing of the network device list. By default this option is disabled. If you choose to enable it, you must enter the refresh interval in seconds. All other settings on this screen should be left at the default setting.

# Setup Wizard



This button will launch the Setup Wizard that will guide you through device configuration.



Click **Next**.

Enter a **Password** and retype it in the **Verify Password** field.

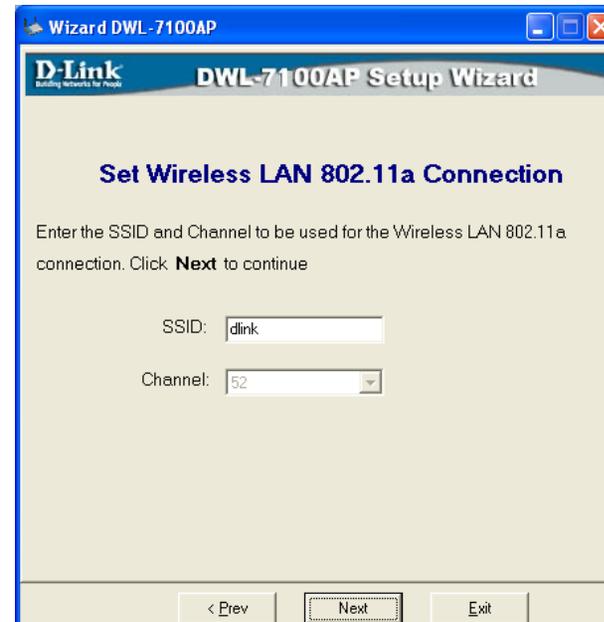


The screenshot shows the 'Set Password' step of the DWL-7100AP Setup Wizard. The window title is 'Wizard DWL-7100AP'. The header includes the D-Link logo and 'DWL-7100AP Setup Wizard'. The main heading is 'Set Password'. Below the heading, there is a message: 'You may change the password by entering a new password. Verify the new password. Click **Next** to continue'. There are two text input fields: 'Password' and 'Verify Password'. At the bottom, there are three buttons: '< Prev', 'Next', and 'Exit'. The 'Next' button is highlighted with a dashed border.

Click **Next**.

Enter the **SSID** and the **Channel** for the IEEE network.

Auto Channel Scan is enabled by default. The access point will scan for the best available channel.



The screenshot shows the 'Set Wireless LAN 802.11a Connection' step of the DWL-7100AP Setup Wizard. The window title is 'Wizard DWL-7100AP'. The header includes the D-Link logo and 'DWL-7100AP Setup Wizard'. The main heading is 'Set Wireless LAN 802.11a Connection'. Below the heading, there is a message: 'Enter the SSID and Channel to be used for the Wireless LAN 802.11a connection. Click **Next** to continue'. There are two input fields: 'SSID' with the text 'dlink' and 'Channel' with a dropdown menu showing '52'. At the bottom, there are three buttons: '< Prev', 'Next', and 'Exit'. The 'Next' button is highlighted with a dashed border.

Click **Next**.

If you want to enable Encryption, enter the Encryption values here.

The screenshot shows the 'WEP Encryption for 802.11a' screen in the DWL-7100AP Setup Wizard. The window title is 'Wizard DWL-7100AP'. The D-Link logo is in the top left. The main heading is 'WEP Encryption for 802.11a'. Below the heading, there is a paragraph: 'If you wish to use encryption, enable it here and enter the encryption key values. Click **Next** to continue.' There are four configuration fields: 'WEP:' with a dropdown menu set to 'disable'; 'Key Size:' with a dropdown menu set to '64'; 'Key Type:' with a dropdown menu set to 'HEX'; and 'First Key:' with a text input field containing '00 00 00 00 00'. At the bottom, there are three buttons: '< Prev', 'Next', and 'Exit'. The 'Next' button is highlighted with a dashed border.

Click **Next**.

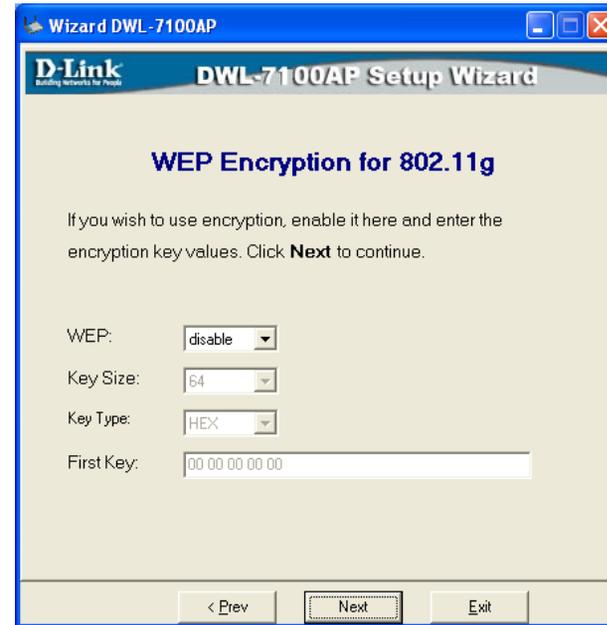
Enter the **SSID** and the **Channel** for the IEEE network.

Auto Channel Scan is enabled by default. The access point will scan for the best available channel.

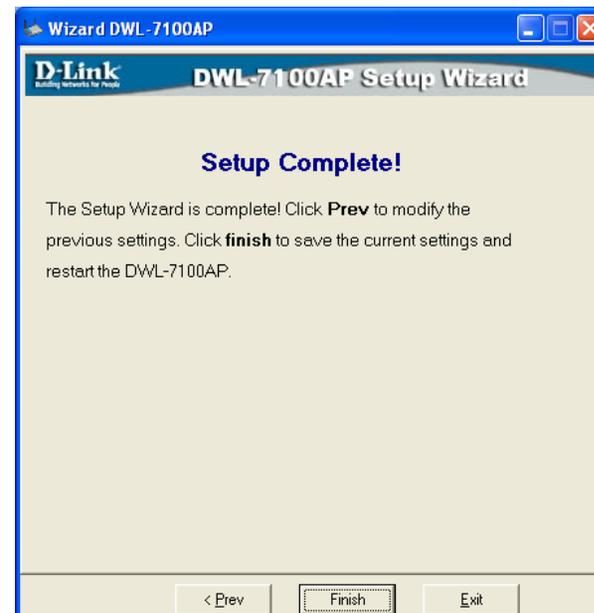
The screenshot shows the 'Set Wireless LAN 802.11g Connection' screen in the DWL-7100AP Setup Wizard. The window title is 'Wizard DWL-7100AP'. The D-Link logo is in the top left. The main heading is 'Set Wireless LAN 802.11g Connection'. Below the heading, there is a paragraph: 'Enter the SSID and Channel to be used for the Wireless LAN 802.11g connection. Click **Next** to continue'. There are two configuration fields: 'SSID:' with a text input field containing 'dlink'; and 'Channel:' with a dropdown menu set to '6'. At the bottom, there are three buttons: '< Prev', 'Next', and 'Exit'. The 'Next' button is highlighted with a dashed border.

Click **Next**.

If you want to enable Encryption, enter the Encryption values here.



Click **Next**.



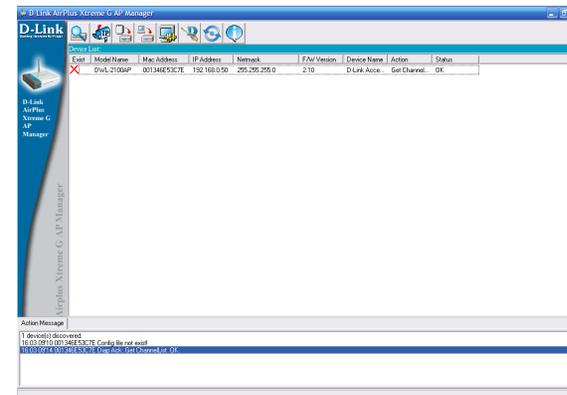
Click **Finish** to complete the setup.

# Refresh



Click on this button to **refresh the list of devices** available on the network.

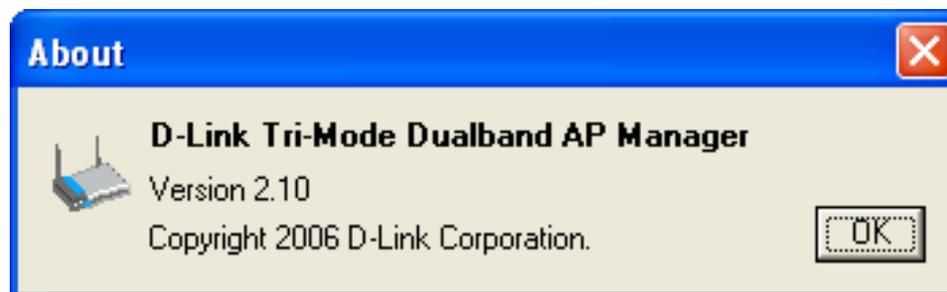
Devices with a checkmark next to them are still available on the network. Devices with an X are no longer available on the network.



# About



Click on this button to view the version of AP Manager.



# Networking Basics

## Checking the IP Address in Windows® XP

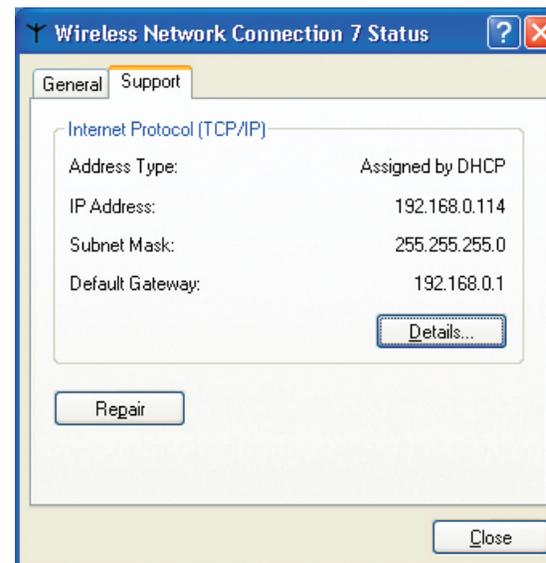
The wireless adapter-equipped computers in your network must be in the same IP Address range (see Getting Started in this manual for a definition of IP Address Range.) To check on the IP Address of the adapter, please do the following:

- Right-click on the **Local Area Connection icon** in the task bar.
- Click on **Status**.



This window will appear:

- Click the **Support** tab.
- Click **Close**.

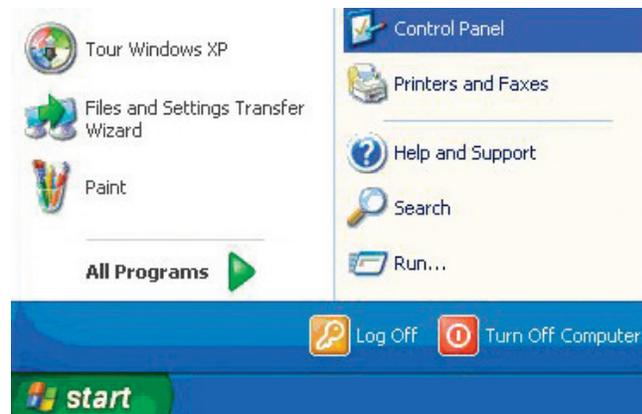


# Assigning a Static IP Address in Windows® XP/2000

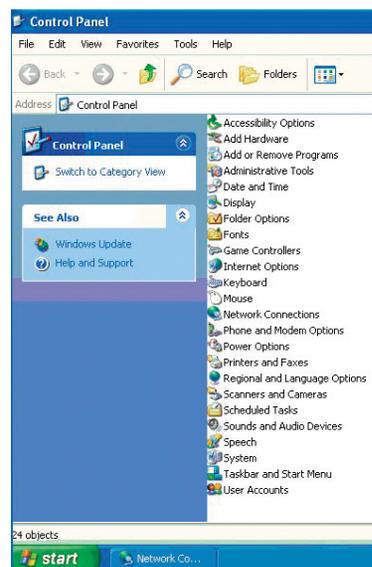
**Note:** DHCP-enabled routers will automatically assign IP addresses to the computers on the network, using DHCP (Dynamic Host Configuration Protocol) technology. If you are using a DHCP-capable router you will not need to assign static IP addresses.

If you are not using a DHCP capable router, or you need to assign a static IP address, please follow these instructions:

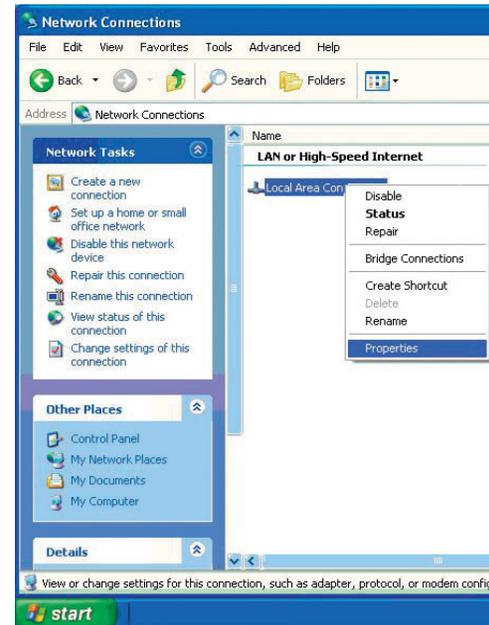
- Go to **Start**.
- Double-click on **Control Panel**.



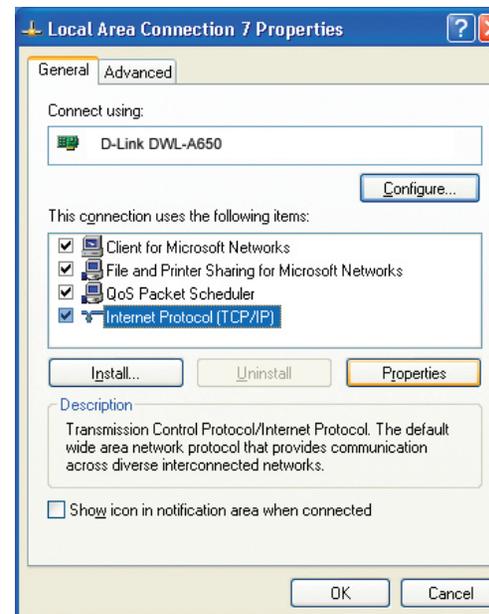
- Double-click on **Network Connections**.



- Right-click on **Local Area Connections**.
- Double-click on **Properties**.



- Click on **Internet Protocol (TCP/IP)**.
- Click **Properties**.
- Input your **IP address and subnet mask**. (The IP addresses on your network must be within the same range. For example, if one computer has an IP address of 192.168.0.2, the other computers should have IP addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The subnet mask must be the same for all the computers on the network.)

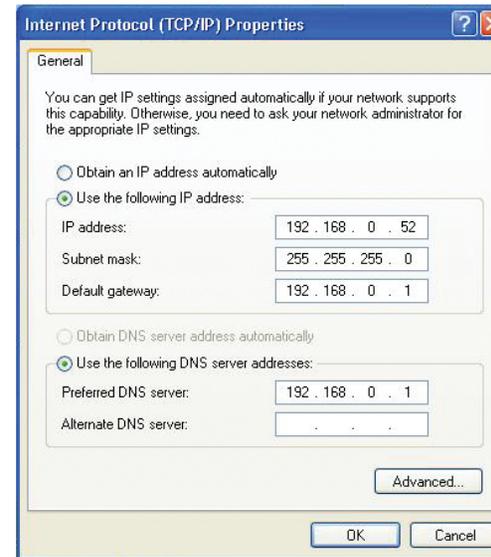


- Input your **DNS server addresses**.

**Note:** *If you are entering a DNS server, you must enter the IP address of the default gateway.*

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

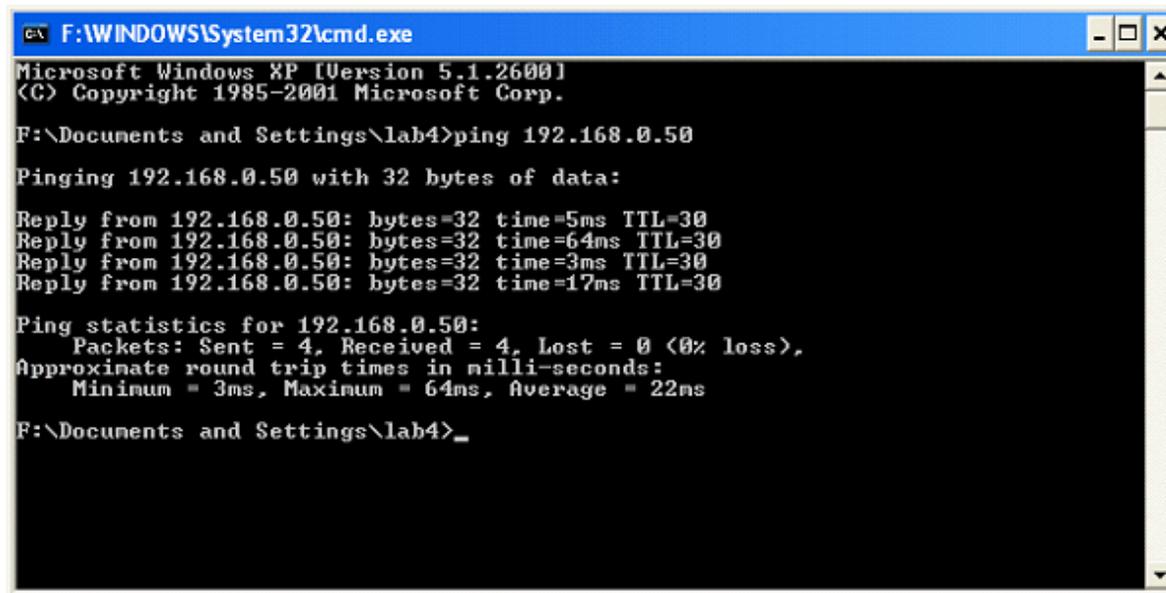
- Click **OK**.



---

# Checking the Wireless Connection by Pinging in Windows® XP and 2000

Go to **Start > Run > type cmd**. A window similar to this one will appear. Type **ping xxx.xxx.xxx.xxx**, where **xxx** is the **IP address** of the wireless router or access point. A good wireless connection will show four replies from the wireless router or access point, as shown.



```
cmd F:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lab4>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time=5ms TTL=30
Reply from 192.168.0.50: bytes=32 time=64ms TTL=30
Reply from 192.168.0.50: bytes=32 time=3ms TTL=30
Reply from 192.168.0.50: bytes=32 time=17ms TTL=30

Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 64ms, Average = 22ms

F:\Documents and Settings\lab4>_
```

---

# Troubleshooting

This Chapter provides solutions to problems that can occur during the installation and operation of the DWL-7100AP Wireless Access Point. We cover various aspects of the network setup, including the network adapters. Please read the following if you are having problems.

**Note:** *It is recommended that you use an Ethernet connection to configure the DWL-7100AP.*

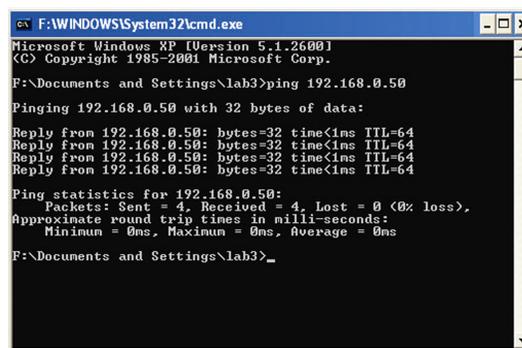
## 1. The computer used to configure the DWL-7100AP cannot access the Configuration menu.

- Check that the **Ethernet LED** on the DWL-7100AP is **ON**. If the **LED** is not **ON**, check that the cable for the Ethernet connection is securely inserted.
- Check that the Ethernet Adapter is working properly.
- Check that the **IP address** is in the same range and subnet as the DWL-7100AP. Please see **Checking the IP Address in Windows® XP** in the **Networking Basics** section of this manual.

**Note:** *The IP address of the DWL-7100AP is 192.168.0.50. All the computers on the network must have a unique IP address in the same range, e.g., 192.168.0.x. Any computers that have identical IP addresses will not be visible on the network. They must all have the same subnet mask, e.g., 255.255.255.0.*

- Do a **Ping test** to make sure that the DWL-7100AP is responding. Go to **Start > Run > Type Command > Type ping 192.168.0.50**. A successful ping will show four replies.

**Note:** *If you have changed the default IP address, make sure to ping the correct IP address assigned to the DWL-7100AP.*

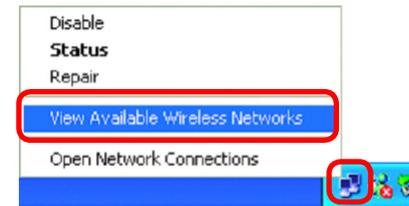


```
ex F:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
F:\Documents and Settings\lab3>ping 192.168.0.50
Pinging 192.168.0.50 with 32 bytes of data:
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
F:\Documents and Settings\lab3>_
```

## 2. The wireless client cannot access the Internet in the Infrastructure mode.

Make sure the wireless client is associated and joined with the correct access point. To check this connection:

Right-click on the Local Area Connection icon in the taskbar and then select **View Available Wireless Networks**. The *Connect to Wireless Network* screen will appear. Please make sure you have selected the correct available network, as shown in the illustrations below.



Check that the IP address assigned to the wireless adapter is within the same IP address range as the access point and gateway. (Since the DWL-7100AP has an IP address of 192.168.0.50, wireless adapters must have an IP address in the same range, e.g., 192.168.0.x. Each device must have a unique IP address; no two devices may have the same IP address. The subnet mask must be the same for all the computers on the network.) To check the IP address assigned to the wireless adapter, double-click on the local area connection icon in the taskbar > select the support tab and the IP address will be displayed. (Please refer to Checking the IP Address in the Networking Basics section of this manual.)

If it is necessary to assign a static IP address to the wireless adapter, please refer to the appropriate section in Networking Basics. If you are entering a DNS server address you must also enter the default gateway address. (Remember that if you have a DHCP-capable router, you will not need to assign a static IP address. See Networking Basics: Assigning a Static IP Address.)

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### 3. Why does my wireless connection keep dropping?

- Antenna orientation - Try different antenna orientations for the DWL-7100AP. Try to keep the antenna at least 6 inches away from the wall or other objects.
- If you are using 2.4GHz cordless phones, X-10 equipment or other home security systems, ceiling fans, and lights, your wireless connection will degrade dramatically or drop altogether. Try changing the channel on your access point and wireless adapter to a different channel to avoid interference.
- Keep your product away (at least 3-6 feet) from electrical devices that generate RF noise, like microwaves, monitors, electric motors, etc.

### 4. Why can't I get a wireless connection?

To establish a wireless connection, while enabling Encryption on the DWL-7100AP, you must also enable encryption on the wireless client.

- For 802.11a, the Encryption settings are: 64, 128, or 152-bit. Make sure that the encryption bit level is the same on the access point and the wireless client.
- For 802.11b, the Encryption settings are: 64, or 128
- For 802.11b, the Encryption settings are: 64, 128, or 256-bit. Make sure that the encryption bit level is the same on the access point and the wireless client., or 256-bit. Make sure that the encryption bit level is the same on the access point and the wireless client.

Make sure that the SSID on the access point and the wireless client are exactly the same. If they are not, wireless connection will not be established. Please note that there are two separate SSIDs for 802.11a and 802.11b. The default SSID for both 802.11a and 802.11b is **default**.

---

# Technical Specifications

## Standards:

- IEEE 802.11a
- IEEE 802.11b
- IEEE 802.11g
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x

## Device Management

- Web-Based – Internet Explorer v6 or later; Netscape Navigator v6 or later; or other Java-enabled browsers.
- Telnet
- AP Manager
- SNMP v.3

## Security:

- 64, 128, and 152-bit WEP
- WPA – Wi-Fi Protected Access (WPA-TKIP and WPA-PSK)
- 802.1x (EAP-MD5/TLS/TTLS/PEAP)
- MAC Address Access Control List
- Advanced Encryption Standard (AES-CCM)

## Wireless Frequency Range:

- 2.4GHz to 2.4835GHz
- 5.15GHz to 5.35GHz and
- 5.725GHz to 5.825GHz

## Radio and Modulation Type:

For 802.11b:

DSSS:

- DBPSK @ 1Mbps
- DQPSK @ 2Mbps
- CCK @ 5.5 and 11Mbps

For 802.11a/g:

OFDM:

- BPSK @ 6 and 9Mbps
- QPSK @ 12 and 18Mbps
- 16QAM @ 24 and 36Mbps
- 64QAM @ 48 and 54Mbps

DSSS:

- DBPSK @ 1Mbps
- DQPSK @ 2Mbps
- CCK @ 5.5 and 11Mbps

## Receiver Sensitivity:

For 802.11a:

- 6Mbps: -87dBm
- 9Mbps: -86dBm
- 11Mbps: -88dBm
- 12Mbps: -85dBm
- 18Mbps: -83dBm
- 24Mbps: -80dBm
- 36Mbps: -76dBm
- 48Mbps: -71dBm
- 54Mbps: -71dBm

For 802.11b:

- 1Mbps: -92dBm
- 2Mbps: -89dBm
- 5.5Mbps: -88dBm
- 11Mbps: -83dBm

For 802.11g:

- 1Mbps: -95dBm
- 2Mbps: -91dBm
- 5.5Mbps: -89dBm
- 6Mbps: -87dBm
- 9Mbps: -85dBm
- 11Mbps: -88dBm
- 12Mbps: -80dBm
- 18Mbps: -80dBm
- 24Mbps: -77dBm
- 36Mbps: -73dBm
- 48Mbps: -72dBm
- 54Mbps: -72dBm

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**Transmit Output Power:**

For 802.11a:

- 63mW (18dBm)
- 40mW (16dBm)
- 32mW (15dBm)
- 6mW (7dBm)
- 1mW (0dBm)

For 802.11b:

- 63mW (18dBm)
- 40mW (16dBm)
- 32mW (15dBm)
- 23mW (13dBm)
- 10mW (10dBm)
- 6mW (7dBm)
- 1mW (0dBm)

For 802.11g:

- 63mW (18dBm)
- 40mW (16dBm)
- 32mW (15dBm)
- 6mW (7dBm)

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# Contacting Technical Support

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

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

- Model number of the product (e.g. DWL-7100AP)
- Hardware Revision (located on the label on the bottom of the unit (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the unit).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

## For customers within the United States:

**Phone Support:**  
(877) 354-6555

**Internet Support:**  
<http://support.dlink.com>

## For customers within Canada:

**Phone Support:**  
(877) 354-6560

**Internet Support:**  
<http://support.dlink.com>

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# Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

## **Limited Warranty:**

D-Link warrants that the hardware portion of the D-Link product described below (“Hardware”) will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below (“Warranty Period”), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

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### **Limited Software Warranty:**

D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Software Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by DLink in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

### **Non-Applicability of Warranty:**

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

### **Submitting A Claim:**

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

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow DLink to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.

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- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. DLink will only replace the defective portion of the product and will not ship back any accessories.
  - The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

### **What Is Not Covered:**

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

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

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

### **Disclaimer of Other Warranties:**

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

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

**Limitation of Liability:**

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

**Governing Law:**

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

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**CE Mark Warning:**

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

**FCC Statement:**

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

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

**FCC Caution:**

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

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

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

**IMPORTANT NOTICE:****FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

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

**Industry Canada Notice:**

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

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

**IMPORTANT NOTE:**

**Radiation Exposure Statement:**

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

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

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# Registration



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

Version 2.00  
June 22, 2007