D-Link *Air*Plus G DWL-G700AP

2.4GHz Wireless Access Point

> Manual Version 1.1



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Package Contents



Contents of Package:

- D-Link AirPlus[™] G DWL-G700AP 2.4GHz Wireless Access Point
- Power Supply 5V DC, 2.0A
- Manual on CD
- Quick Installation Guide
- Ethernet Cable

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

Note: Using a power supply with a different voltage rating than the one included with the DWL-G700AP will cause damage and void the warranty for this product.

System Requirements:

Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter

Internet Explorer or Netscape Navigator version 6.0 or above, with JavaScript enabled

Introduction

D-Link, an industry leader in networking, introduces the new D-Link *Air*Plus™ G DWL-G700AP Access Point. With the ability to transfer files with a maximum wireless signal rate of up to 54Mbps*, the DWL-G700AP gives you high-speed wireless network access for your home or office.

The DWL-G700AP is Wi-Fi IEEE 802.11g compliant, meaning that it can connect and interoperate with other 802.11g compatible wireless client devices. The G700AP is also backwards compatible to 802.11b.

The D-Link DWL-G700AP Access Point has been verified and successfully passed through the Intel Centrino™ Verification Program, which tests the compatibility of various access point devices and wireless service providers with common configuration of notebooks built on Intel® Centrino™ mobile technology**.

With its web-based setup wizard, the DWL-G700AP Access Point ensures that you will be up and running on a wireless network in just a matter of minutes. The DWL-G700AP also includes an embedded DHCP server that can automatically assign IP addresses to wireless network clients.

The DWL-G700AP Access Point features Wi-Fi Protected Access (WPA-PSK/WPA2-PSK) and 64/128-bit WEP Encryption to provide an enhanced level of security for wireless data communications. The DWL-G700AP also includes additional security features to keep your wireless connection safe from unauthorized access.

With easy-to-use Web-based management, the DWL-G700AP Access Point is the right choice for setting up your first wireless network or extending the range of an existing wireless network.

of Intel Corporation or its subsidiaries in the United States and other countries.

^{*} Maximum wireless signal rate based on IEEE Standard 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.

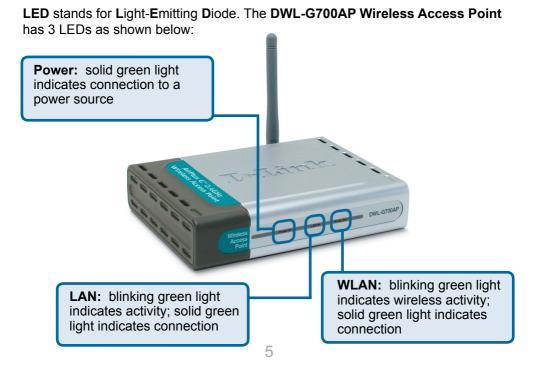
^{**} This wireless access point product has been verified for basic compatibility with corresponding Intel® Centrino™ mobile technology based notebooks. Notebooks based on Intel Centrino mobile technology do not support proprietary 802.11g performance enhancement features. Data rate features and performance may vary based on the configuration of your notebook and other factors.

Intel, the Intel Inside Logo, Intel Centrino and the Intel Centrino logo are trademarks or registered trademarks

Features and Benefits

- Up to 5X Faster with AirPlus G Products high-speed wireless data transfer rates up to 54Mbps*. With increased data rate and capacity, the DWL-G700AP delivers media rich content such as digital images, videos, and MP3 files much faster than standard 802.11b networks.
- Fully 802.11b Compatible Fully compatible with the IEEE 802.11b standard and interoperable with all existing 802.11b compliant devices.
- Network Security Supports 64/128-bit WEP encryption for a level of security for your data and wireless communication as well as WPA, WPA-PSK and WPA2-PSK.
- **Built-in DHCP Server** If enabled, it will automatically assign IP addresses to wireless clients on the local network.
- Web-based interface for Managing and Configuring Easy-to-use interface independent of the operating system.

LEDS



^{*} Maximum wireless signal rate based on IEEE Standard 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.

Wireless Basics

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

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

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

People use WLAN technology for many different purposes:

Mobility - Productivity increases when people have access to data in any location within the operating range of the WLAN. Management decisions based on real-time information can significantly improve worker efficiency.

Low Implementation Costs – WLANs are easy to set up, manage, change and relocate. Networks that frequently change can benefit from WLANs ease of implementation. WLANs can operate in locations where installation of wiring may be impractical.

Installation and Network Expansion - Installing a WLAN system can be fast and easy and can eliminate the need to pull cable through walls and ceilings. Wireless technology allows the network to go where wires cannot go - even outside the home or office.

Scalability – WLANs can be configured in a variety of ways to meet the needs of specific applications and installations. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to larger infrastructure networks to accommodate hundreds or thousands of users, depending on the number of wireless devices deployed.

Inexpensive Solution - Wireless network devices are as competitively priced as conventional Ethernet network devices.

Wireless Basics (continued)

Installation Considerations

Keep in mind, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

- 1 Keep the number of walls and ceilings between the DWL-G700AP and other network devices to a minimum each wall or ceiling can reduce your DWL-G700AP's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
- Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
- 3 Building materials can impede the wireless signal a solid metal door or aluminum studs may have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.
- 4 Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.

Getting Started



Please remember that D-Link AirPlus G wireless devices are pre-configured to connect together, right out of the box, with their default settings.

For a typical wireless setup at home (as shown above), please do the following:

- You will need broadband Internet access (a Cable or DSL-subscriber line into vour home or office)
- Consult with your Cable or DSL provider for proper installation of the modem
- Connect the Cable or DSL modem to your broadband router (see the Quick **Installation Guide** included with your router.)
- Connect the router to the D-Link AirPlus G DWL-G700AP. (See the **Quick Installation Guide** included with the DWL-G700AP.)
- If you are connecting a desktop computer in your network, you can install the D-Link AirPlus G DWL-G510 wireless PCI adapter into an available PCI slot on your desktop computer.
 - (See the Quick Installation Guide included with the DWL-G510.)
- Install the drivers for the wireless Cardbus adapter into a laptop computer. (e.g. the DWL-G630; See the Quick Installation Guide included with the DWL-G630.)

Using the Configuration Utility

If you wish to change the default settings or optimize the performance of the DWL-G700AP, D-Link has included a configuration utility for this purpose.

After you have completed the initial installation and the Setup Wizard (as illustrated in the Quick Installation Guide that is included with the DWL-G700AP), you can access the configuration menu, at any time, by opening the web-browser and typing in the IP address of the DWL-G700AP. The DWL-G700AP's default IP address is shown below:

- Open the web browser
- Type in the IP address of the DWL-G700AP. (192.168.0.50).



Note: If you have changed the default IP address assigned to the DWL-G700AP, make sure to enter the correct IP address

- Type admin in the User Name field
- Leave the Password blank
- Click OK

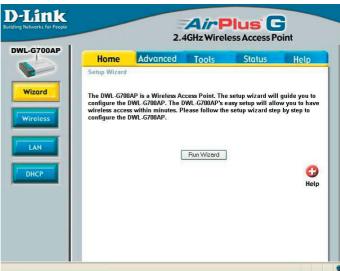
User name:

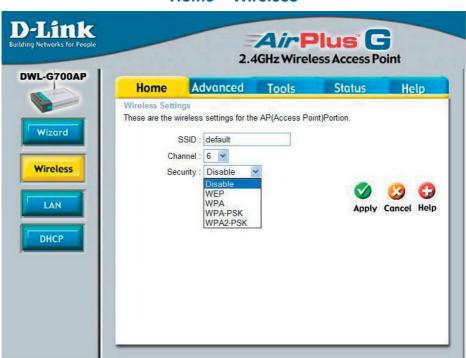
Password:

Remember my password

OK Cancel

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





Home > Wireless

SSID: (Service Set Identifier) Default is the default setting. The SSID is a unique name that identifies a network. All devices on a network must share the same SSID name in order to communicate on the network. If you choose to change the SSID from the default setting, input your new SSID name in this field.

Channel: Channel 6 is the default channel. Input a new number if you want to change the default setting. All devices on the network must be set to the same channel to communicate on the network.

Security: Select the level of security for your wireless network:

Disable: Select to use no security.

WEP: Select to use WEP Encryption.

WPA: Select to use WPA (Wi-Fi Protected Access) authentication in conjunction with a RADIUS server.

WPA-PSK/WPA2-PSK: Select to use WPA-PSK or WPA2-PSK without a RADIUS server.

Home > Wireless > WEP



Security: Select **WEP.**

Authentication: Select **Open System** to communicate the key across the network. Select **Shared Key** to limit communication only to those devices that share the same WEP settings.

WEP Encryption: Select **64-bit** or **128-bit** WEP encryption.

Key Type: Select **Hexadecimal** or **ASCII** key type

Keys 1-4: Input up to four encryption keys. You will select one of these to be the active key.

Apply: Click **Apply** to apply the changes.

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 from 0-127

Home > Wireless > WPA



Security: Select WPA.

RADIUS Server 1 IP: Enter the IP address of the RADIUS server.

Port: Enter the RADIUS port (1812 is default).

Shared Secret: Enter the RADIUS passphrase or key.

RADIUS Server 2 IP: (Optional) Enter the IP address of a 2nd RADIUS

server.

Port: Enter the 2nd RADIUS port (1812 is default).

Shared Secret: Enter the 2nd RADIUS passphrase or key.

Apply: Click **Apply** to apply the changes.

Home > Wireless > WPA-PSK/WPA2-PSK



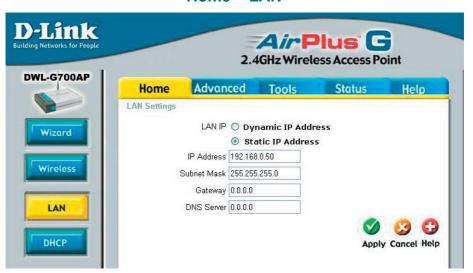
Security: Select WPA-PSK or WPA2-PSK.

Passphrase: Enter your passphrase. The passphrase can be between 8 and 63 characters.

Confirm Passphrase: Enter the passphrase again.

Apply: Click Apply to apply the changes.

Home > LAN



Dynamic IP Address: Select this option if you would like to have an IP Address automatically assigned to the DWL-G700AP by a DHCP server in your network.

DHCP stands for Dynamic Host Configuration Protocol. It is a protocol for assigning dynamic IP addresses "automatically." With a DHCP Server there is no need to manually assign an IP Address.

Static IP Address: Select this option if you are manually assigning an IP Address.

IP Address: 192.168.0.50 is the default IP Address of the Access Point.

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

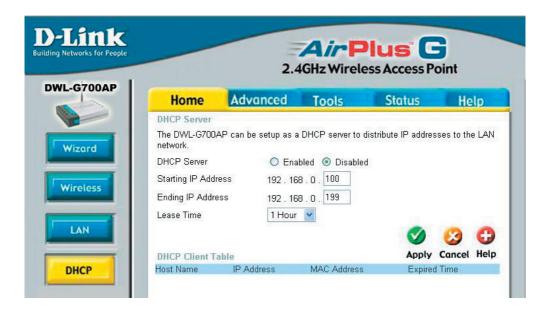
Gateway: Enter the IP Address of the router in your network

DNS Server: Enter the IP address of the DNS server. The DNS server translates domain names such as www.dlink.com into IP addresses.

IP Address

If you need to assign static IP addresses to the devices in your network, please remember that the IP address for each computer or device must be in the same IP address range as all the devices in the network. Each device must also have the same subnet mask. For example: Assign the first computer an IP address of 192.168.0.2 and a subnet mask of 255.255.255.0, the second device an IP address of 192.168.0.3 and a subnet mask of 255.255.255.0, and so on. Note: Devices that are assigned the same IP address may not be visible on the network.

Home > DHCP



DHCP Server: Select **Enabled** or **Disabled**. Disabled is the default setting. If you want to use the DWL-G700AP as a DHCP server, to automatically assign dynamic IP addresses on the network, you will select Enabled.

Starting IP Address: If you have enabled the DHCP server function, enter the starting point of the IP address range for your network.

Ending IP Address: Enter the ending IP address of your IP address range, if you have enabled the DHCP function of the DWI -G700AP.

Lease Time: Choose the length of time during which the DHCP function of the DWL-G700AP automatically regenerates the IP addresses to the devices in your network.

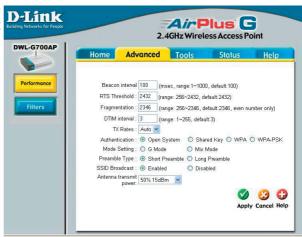
DHCP Client Table: Lists the devices on your network that are receiving dynamic IP addresses from the DWL-G700AP.

Advanced > Performance

Beacon Interval: Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. Default (100) is recommended.

RTS Threshold: This value should remain at its default setting of 2,432. If you encounter inconsistent data flow, only minor modifications to the value range between 256 and 2,432 are recommended.

Fragmentation: This value should remain at its default setting of 2,346. If you experience a high



packet error rate, you may slightly increase your fragmentation threshold within the value range of 256 to 2,346. Setting the fragmentation threshold too low may result in poor performance.

DTIM Interval (Beacon Rate): (Delivery Traffic Indication Message) Enter a value between 1 and 255 (default is 3) for the Delivery Traffic Indication Message (DTIM.) A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

TX Rates: Select the transmission rate for the network.

Authentication:

Open System - Communicates the key across the network.

Shared Key - Devices must have identical WEP settings to communicate.

WPA - WPA authentication in conjunction with a RADIUS server.

WPA-PSK - WPA authentication without a RADIUS server in the network.

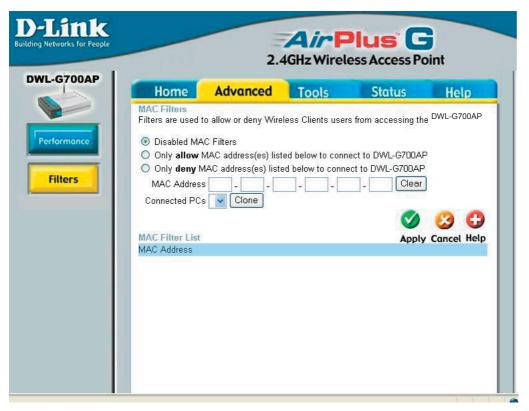
Mode Setting: For utmost speed, select **G Mode** to include only 802.11g devices in your network. Select **Mix Mode** to include 802.11g and 802.11b devices in your network.

Preamble: Long Preamble is the default setting. (High traffic networks should use the shorter preamble type.) The preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) used in communication between the access point and the wireless network adapters.

SSID Broadcast: (Service Set Identifier) Enable or Disable (default) the broadcast of the SSID name across the network. SSID is a name that identifies a wireless network. All devices on a network must use the same SSID to establish communication.

Antenna Transmit Power: Select the transmission power of the antenna. Limiting antenna power can be useful for security purposes.

Advanced > Filters



Use MAC Filters to allow or deny wireless clients, by their MAC addresses, from accessing the DWL-G700AP. You can manually add a MAC address or select the MAC address from the list of clients that are currently connected to the router (Connected PCs). The default setting is Disabled MAC Filters.

MAC Filter List: This list will display the MAC addresses that are in the selected filter.

New Password: Enter the new password.

Confirm Password:

Re-enter the password to confirm it.

Tools > Admin



Save Settings: The current system settings can be saved as a file onto the local hard drive.

Load Settings: The saved file or any other saved setting file can be loaded back on the access point. To reload a system settings file, click on Browse to browse the local hard drive and locate the system file to be used. Click Load when you have selected the file to be loaded back onto the access point.

Tools > System

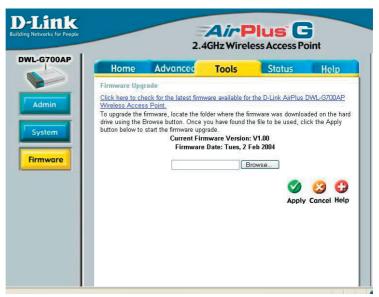


Restore: You may also reset the DWL-G700AP back to factory settings by clicking on **Restore**. Make sure to save the unit's settings before clicking on **Restore**. You will lose your current settings when you click **Restore**.

Tools > Firmware

You can upgrade the firmware of the DWL-G700AP at this page. When you click Click here to check...

in this window you will be connnected to D-Link's website, where you can download the latest firmware update. After you have completed the firm ware download to your hard drive, click **Browse** to browse your local hard drive and locate the firmware to be used for the update.



Click Apply.

Status > Device Info

This screen displays the current firmware version, and the current wireless and Ethernet settings of the DWI -G700AP



Status > Log



View Log

The DWL-G700AP keeps a running log of events and activities occurring on the AP. If the device is rebooted, the logs are automatically cleared. You may save the log files under Log Setting.

First Page - The first page of the log.

Last Page - The last page of the log.

Previous - Moves back one log page.

Next - Moves forward one log page.

Clear - Clears the logs completely.

Log Settings - Brings up the page to configure the logs.

Log Settings

Not only does the DWL-G700AP display the logs of activities and events, it can be setup to send these logs to another location. The logs can be sent via email to an email account.

Traffic Statistics

The DWL-G700AP keeps statistics of traffic that passes through it. You are able to view the amount of packets that pass through the Ethernet and wireless portions of the network. The traffic counter will reset if the device is rebooted.

Connected Wireless PCs List

This list displays the MAC Addresses of connected PCs and the length of time that they have been connected.

Menu

Select from this menu for extra help.

Status> Stats



Status > Wireless



Help



Networking Basics

Using the Network Setup Wizard in Windows XP

In this section you will learn how to establish a network at home or work, using **Microsoft Windows XP**.

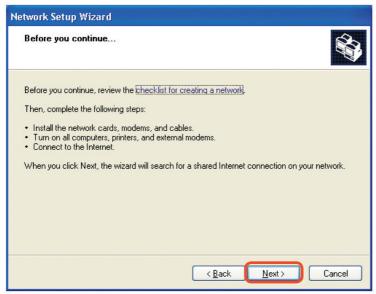
Note: Please refer to websites such as http://www.homenethelp.com and http://www.homenethelp.com

Go to Start>Control Panel>Network Connections Select Set up a home or small office network



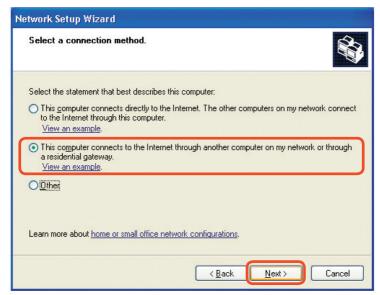
When this screen appears, click Next.

Please follow all the instructions in this window:



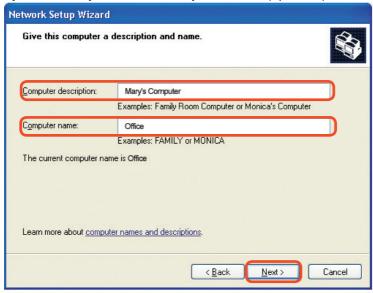
Click Next.

In the following window, select the best description of your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.



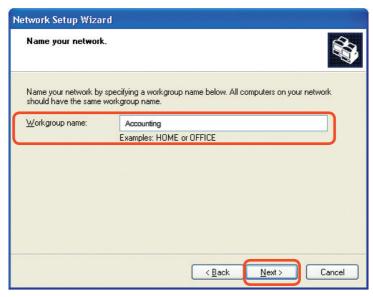
Click Next.

Enter a Computer description and a Computer name (optional.)



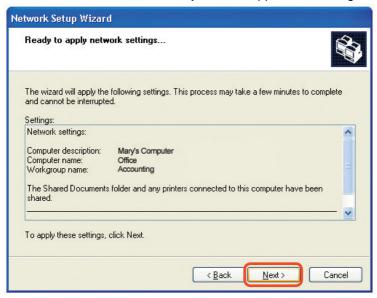
Click Next.

Enter a **Workgroup** name. All computers on your network should have the same **Workgroup** name.



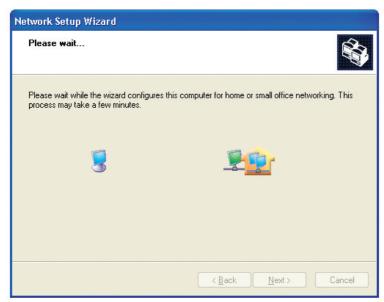
Click Next.

Please wait while the **Network Setup Wizard** applies the changes.



When the changes are complete, click **Next**.

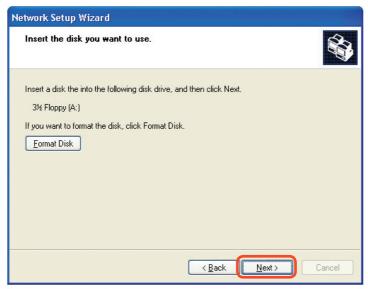
Please wait while the **Network Setup Wizard** configures the computer. This may take a few minutes.



In the window below, select the option that fits your needs. In this example, **Create a Network Setup Disk** has been selected. You will run this disk on each of the computers on your network. Click **Next**.

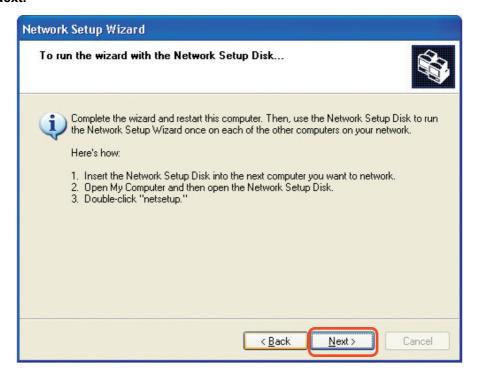


Insert a disk into the Floppy Disk Drive, in this case drive A.





Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.



Please read the information on this screen, then click **Finish** to complete the **Network Setup Wizard**.



The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.



You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

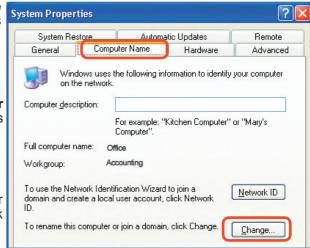
Naming your Computer

To name your computer in Windows XP, please follow these directions:

- Click Start (in the lower left corner of the screen).
- Right-click on My Computer.
- Select Properties and click.

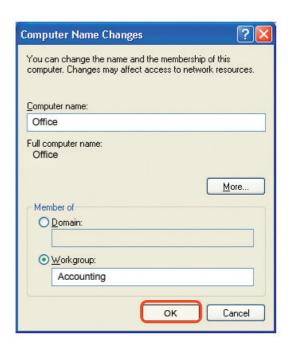


- Select the Computer Name Tab in the System Properties window.
- You may enter a Computer Description if you wish; this field is optional.
- To rename the computer and join a domain, Click Change.



Naming your Computer

- In this window, enter the Computer name.
- Select Workgroup and enter the name of the Workgroup.
- All computers on your network must have the same Workgroup name.
- Click OK.



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.

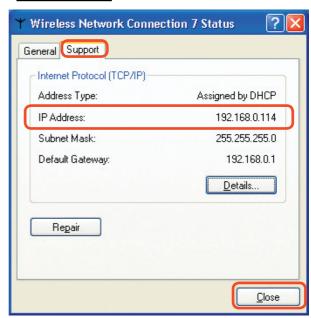


Checking the IP Address in Windows XP

This window will appear.

Click theSupport tab.

Click Close.



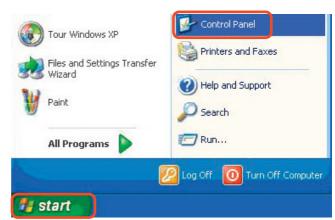
Assigning a Static IP Address in Windows XP/2000

Note: Residential Gateways/Broadband 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 Gateway/Router you will not need to assign Static IP Addresses.

If you are not using a DHCP capable Gateway/Router, or you need to assign a Static IP Address, please follow these instructions:

Go to Start.

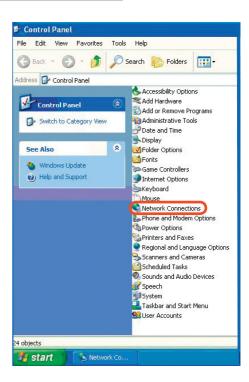
Double-click on Control Panel.

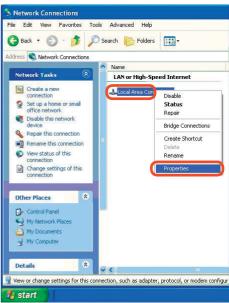


Assigning a Static IP Address in Windows XP/2000

Double-click on NetworkConnections.

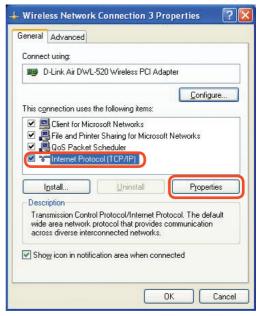
- Right-click on Local Area Connections.
- Double-click on Properties.





Assigning a Static IP Address in Windows XP/2000

- Click on Internet Protocol (TCP/IP).
- Click Properties.



In the window below, select **Use the following IP address**. 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.)

IP Address:

e.g., 192.168.0.2

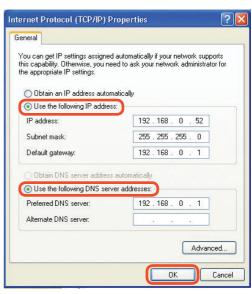
Subnet Mask:

255, 255, 255, 0

Default Gateway:

Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)

- Select Use the following DNS server address. Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)
- Click OK.



You have completed the assignment of a static IP address. (You do not need to assign a static IP address if you have a DHCP-capable router.)

Checking the Wireless Connection by Pinging in Windows XP/2000

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.

```
Microsoft Windows XP [Uersion 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 IIL=64
Reply from 192.168.0.50: microsoft bytes=32 time(1ms IIL=64
Reply from 192.168.0.50: bytes
```

Checking the Wireless Connection by Pinging in Windows Me /98SE

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

```
SX F:WINDOWS\System32\cmd.exe

Microsoft Windows XP [Uersion 5.1.26001
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lah3\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 ITL=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\_
```

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DWL-G700AP. We cover various aspects of the network including network adapters. (The examples below are illustrated in Windows XP. If you have another operating system, these solutions will still apply, although the appearance on your computer screen may differ.)

Note: It is recommended that you use an Ethernet connection to configure the DWL-G700AP Access Point.

- 1. The computer used to configure the DWL-G700AP cannot access the configuration menu.
 - Check that the Ethernet LED on the DWL-G700AP 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. Please see item 3 (Check that the drivers for the network adapters are installed properly) in this Troubleshooting section to check that the drivers are loaded properly.
 - Check that the IP address is in the same range and subnet as the DWL-G700AP. Please see Checking the IP Address in Windows XP in the Networking Basics section of this manual.

Note: The IP address of the DWL-G700AP 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-G700AP is responding. Go to Start>Run>Type Command>Type ping 192.168.0.50. A successful ping will show four replies.

```
Microsoft Windows XP (Version 5.1.2600)

(G) Copyright 1985-2001 Microsoft Corp.

E:\Documents and Settings\PM1\ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<ins ITL=128

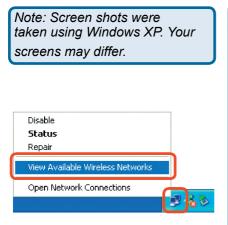
Ping statistics for 192.168.0.50:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Meraage = 0ms

E:\Documents and Settings\PM1\_
```

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 (DWL-G700AP). To check this connection: Right-click on the Local Area Connection icon in the taskbar> 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.



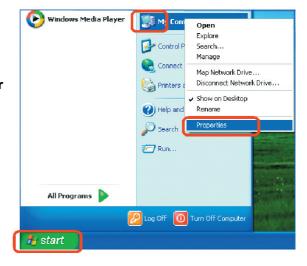


- Check that the **IP** address assigned to the wireless adapter is within the same **IP** address range as the access point and gateway. Since the DWL-700AP has an IP address of 192.168.0.50, wireless adapters must have an IP address in the same range, e.g., 192.168.0.x. Each device must have a unique 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.)

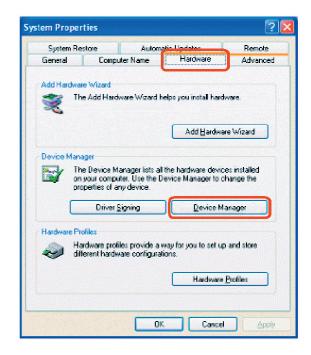
3. Check that the drivers for the network adapters are installed properly.

You may be using different network adapters than those illustrated here, but this procedure will remain the same, regardless of the type of network adapters you are using.

- Go to Start
- Right-click on My Computer
- Click Properties



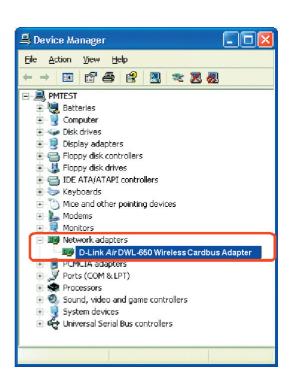
- Select the Hardware Tab
- Click Device Manager



- Double-click on Network Adapters
- Right-click on
 D-Link Air DWL-650
 Wireless Cardbus Adapter
 (or whatever network
 adapter you are using)
- Select Properties to check that the drivers are installed properly

Look under Device Status to check that the device is working properly.







4. Resetting the DWL-G700AP to Factory Default Settings

After you have tried other methods for troubleshooting your network, you may choose to Reset the DWL-G700AP to the factory default settings. Remember that D-Link *Air*Plus G products network together, out of the box, at the factory default settings.



To hard-reset the D-Link *Air*Plus G DWL-G700AP to Factory Default Settings, please do the following:

- Locate the Reset button on the back of the DWL-G700AP
- Use a paper clip to press the Reset button
- Hold for about 5 seconds and then release
- After the DWL-G700AP reboots (this may take a few minutes) it will be reset to the factory default settings.

Technical Specifications

Standards

- · IEEE 802.11b
- · IEEE 802.11g
- · IEEE 802.3
- · IEEE 802.3u

Device Management

 Web-Based — Internet Explorer v6 or later; Netscape Navigator v6 or later; or other Java-enabled browsers.

Data Rate*

For 802.11g:

· 54, 48, 36, 24, 18, 12, 9, and 6Mbps

For 802.11b:

· 11, 5.5, 2, and 1Mbps

Security

- · 64-, 128-bit WEP
- · WPA (Wi-Fi Protected Access)
- MAC address filtering
- · SSID Broadcast Disable function

Wireless Frequency Range

- · 2.412GHz to 2.462GHz
- 2.4GHz band utilizes Channels 1-11

Wireless Operating Range*

- · Indoors: Up to 328ft (100 meters)
- · Outdoors: Up to 1312ft (400 meters)

Modulation Technology

- · Orthogonal Frequency Division Multiplexing (OFDM)
- · Complementary Code Keying (CCK)
- · BPSK
- · QPSK

^{*} Maximum wireless signal rate based on IEEE Standard 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.

Technical Specifications (continued)

Receiver Sensitivity

- · 54Mbps 64QAM, 10% PER,-65dBm
- · 48Mbps 64QAM, 10% PER,-66dBm
- · 36Mbps 16QAM, 10% PER,-70dBm
- · 24Mbps 16QAM, 10% PER,-74dBm
- · 18Mbps QPSK, 10% PER,-77dBm
- · 12Mbps QPSK, 10% PER,-79dBm
- · 11Mbps CCK, 8% PER,-82dBm
- · 9Mbps BPSK, 10% PER,-81dBm
- · 6Mbps BPSK, 10% PER,-82dBm
- 5.5Mbps CCK, 8% PER,-85dBm2Mbps QBSK, 8% PER,-87dBm
- 1Mbps BPSK, 8% PER,-87dBm

Wireless Transmit Power

· 15dBm (32mW)±2dB

External Antenna Type

· Detachable antenna with 2dB gain

LEDs

- Power
- · WLAN
- · LAN (10/100)

Power

- · External Power Supply: DC 5V/2.0A
- · AC Adapter: 100V

Temperature

- · Operating: 32°F to 131°F (0°C to 55°C)
- Storing: -4°F to 149°F (-20°C to 65°C)

Humidity

· 5%~95% non-condensing

Certifications

- · FCC part 15 class B & C
- · Wi-Fi

Dimensions

- · L = 5.59 inches (142mm)
- · W = 4.29 inches (109mm)
- · H = 1.22 inches (31mm)

Weight

· ~0.44lb (200g)

Warranty

· 1 Year

Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product.

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

Tech Support for customers within the United States:

D-Link Technical Support over the Telephone:

(877) 453-5465

24 hours a day, seven days a week.

D-Link Technical Support over the Internet:

http://support.dlink.com email:support@dlink.com

Tech Support for customers within Canada:

D-Link Technical Support over the Telephone:

(800) 361-5265

Monday to Friday 7:30am to 3:00am EST Saturday & Sunday 9:00am to 12:00am EST

D-Link Technical Support over the Internet:

http://support.dlink.ca email:support@dlink.ca



Limited Warranty (USA Only)

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited warranty for its product only to the person or entity that originally purchased the product from:

- D-Link or its authorized reseller or distributor and
- 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, addresses with an APO or FPO.

Limited Warranty: D-Link warrants that the hardware portion of the D-Link products described below will be free from material defects in workmanship and materials from the date of original retail purchase of the product, for the period set forth below applicable to the product type ("Warranty Period"), except as otherwise stated herein.

1-Year Limited Warranty for the Product(s) is defined as follows:

- Hardware (excluding power supplies and fans) One (1) Year
- Power Supplies and Fans One (1) Year
- Spare parts and spare kits Ninety (90) days

D-Link's sole obligation shall be to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund at D-Link's sole discretion. Such 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 in its sole discretion 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 from the date of original retail purchase. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the 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.

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 or a period of ninety (90) days ("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 Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. D-Link's sole obligation shall be 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 at D-Link's sole discretion. Except as otherwise agreed by D-Link 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. Software will be warranted for the remainder of the original Warranty Period from the date or original retail purchase. 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 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 D-Link to confirm the same.

- The original product owner must obtain a Return Material Authorization ("RMA") number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.
- 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. D-Link 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. 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, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.
- Return Merchandise Ship-To Address

USA: 17595 Mt. Herrmann, Fountain Valley, CA 92708

Canada: 2180 Winston Park Drive, Oakville, ON, L6H 5W1 (Visit http://www.dlink.ca for detailed warranty information within Canada)

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: This limited warranty provided by D-Link does not cover: Products, if 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; 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. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this 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 NON-INFRINGEMENT. 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 NINETY (90) DAYS. 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 NON-CONFORMING 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 the product owner 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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

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

Registration



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

Version 1.1 Revised: 8/26/2005