

D-Link *AirPlus*TM G DWL-G122

802.11g (2.4GHz)
Wireless G USB 2.0 Adapter

Manual

Version 2.0

D-Link[®]
Building Networks for People

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Package Contents



Contents of Package:

- **D-Link DWL-G122**
2.4 GHz Wireless G USB 2.0 Adapter
- Manual on CD-ROM
- Quick Installation Guide

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

System Requirements:

- A computer or laptop with an available USB port
Windows XP/2000
- At least 64MB of memory and a 500MHz processor
- Properly installed and working USB Controller

Introduction

The D-Link *AirPlus™* G DWL-G122 Wireless USB Adapter is a convenient Plug & Play USB 2.0 solution that brings wireless networking to your laptop or desktop PC.

With transfer rates up to 54Mbps you can connect to a wireless network at home, at the office or at any wireless hotspot. Now you can stay connected wherever you are and wherever you go.

The DWL-G122 is Wi-Fi compliant, meaning that it can connect and interoperate with other 802.11b or 802.11g Wi-Fi-compliant wireless routers, access points and adapters. The DWL-G122 connects to any available USB port on a laptop or desktop Windows. The DWL-G122 can be used at the local coffee shop, or in an airport terminal while waiting to board your next flight.

The adapter works with Microsoft Windows® XP and Windows® 2000 operating systems to ensure that you'll be up and running on a wireless network in just a matter of seconds.

Using its default settings, the DWL-G122 automatically connects to other D-Link *Air* or *AirPlus* wireless products as soon as it's active.

In addition to featuring 64- or 128-bit WEP encryption, the DWL-G122 offers the added security of WPA (Wi-Fi Protected Access) when used with other WPA devices in a network with a RADIUS server.

For home users that will not incorporate a RADIUS server in their network, the security for the DWL-G122, used in conjunction with other WPA-compatible 802.11 products, will still be much stronger than ever before when you use the **Pre- Shared Key mode** of WPA.

Features and Benefits

- **Provides high-speed wireless connection** at up to 54Mbps
- **Compact size** for placement anywhere
- **Convenience** of Plug & Play installation
- **Fully 802.11b/802.11g compatible**
- **Powered by the USB port**; no external power source is required
- **USB 2.0 standard**¹
- **Better Security with WPA** - In addition to 64-, 128-bit WEP encryption, you can also securely connect to a wireless network using WPA (Wi-Fi Protected Access) providing you a much higher level of security for your data and communication than has previously been available.
- **Supports Infrastructure networks via an access point and Peer-to-Peer communication in Ad-Hoc mode**
- **User-friendly configuration and diagnostic utilities**
- **Connects at up to 328 feet indoors**²
- **Three year warranty**

¹Using a USB 1.1 port will adversely affect throughput

²Environmental factors may adversely affect range

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 to 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.

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

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.

Wireless Basics *(continued)*

Installation Considerations

The DWL-G122 lets you access your network using a wireless connection from virtually anywhere within its operating range. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

- 1** Keep the number of walls and ceilings between the DWL-G122 and other network devices to a minimum - each wall or ceiling can reduce your DWL-G122's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
- 2** Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
- 3** Building materials 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

With its default settings, the DWL-G122 will connect with other D-Link AirPlus™ G products, right out of the box.

There are basically two modes of networking:

Infrastructure – using an access point or router, such as the DI-624.

Ad-Hoc – directly connecting to another computer, for Peer-to-Peer communication, using wireless network adapters on each computer, such as two or more DWL-G122 Wireless Network USB adapters.

On the following pages we will show you an example of an **Infrastructure Network** and an **Ad-Hoc Network**.

An **Infrastructure** network contains an access point or router. The **Infrastructure network** example shown on the following page contains the following D-Link network devices (your existing network may be comprised of other devices):

A wireless router - **D-Link AirPlus™ G DI-524**

A laptop computer with a **D-Link AirPlus™ G DWL-G122**

A desktop computer with a **D-Link AirPlus™ G DWL-G122**

A cable modem - **D-Link DCM-201**

Getting Started (continued)

Setting up a Wireless Infrastructure Network



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

- 1** You will need broadband Internet access (a cable or DSL-subscriber line into your home or office).
- 2** Consult with your cable or DSL provider for proper installation of the modem.
- 3** Connect the cable or DSL modem to your broadband router. (See the *Quick Installation Guide* included with your router.)
- 4** Install the D-Link AirPlus™ G DWL-G122 Wireless USB adapter into an available USB port on your desktop computer. (See the *Quick Installation Guide* included with the DWL-G122.)
- 5** Install the D-Link AirPlus G DWL-G122 wireless USB adapter into an available USB port on your laptop computer. (See the *Quick Installation Guide* included with the DWL-G122.)

Getting Started (continued)

Setting up a Wireless Ad-Hoc Network



- 1** Install the **D-Link AirPlus™ G DWL-G122** Wireless USB adapter into the desktop computer. (See the *Quick Installation Guide* included with the product.)
- 2** Install the **D-Link AirPlus™ G DWL-G122** Wireless USB adapter into the laptop computer. (See the *Quick Installation Guide* included with the product.)
- 3** Set the wireless configuration for the adapters to Ad-Hoc mode, set the adapters to the same channel, and assign an IP address to each computer on the Ad-Hoc network.

IP Address

When assigning IP addresses to the computers on the network, please remember that the **IP address for each computer must be in the same IP address range as all the computers in the network**, and the subnet mask must be exactly the same for all the computers in the network.

For example: If the first computer is assigned an IP address of 192.168.0.2 with a subnet mask of 255.255.255.0, then the second computer can be assigned an IP address of 192.168.0.3 with a subnet mask of 255.255.255.0, etc.

IMPORTANT: If computers or other devices are assigned the same IP address, one or more of the devices may not be visible on the

Using the Configuration

The **D-Link AirPlus™ G** uses the **Configuration Utility** as the management software. The utility provides the user an easy interface to change any settings related to the wireless adapter. After you have completed the installation of the DWL-G122 (refer to the *Quick Installation Guide* that came with your purchase) whenever you start the computer, the **Configuration Utility** starts automatically and the system tray icon is loaded in the toolbar (see illustration below.*) Clicking on the utility icon will start the **Configuration Utility**. Another way to start the **Configuration Utility** is to click on **Start>Programs>D-Link AirPlus G >D-Link AirPlus™ G Utility**.

If you are using Windows XP, you can use either the Zero Configuration Utility or the D-Link Configuration Utility.

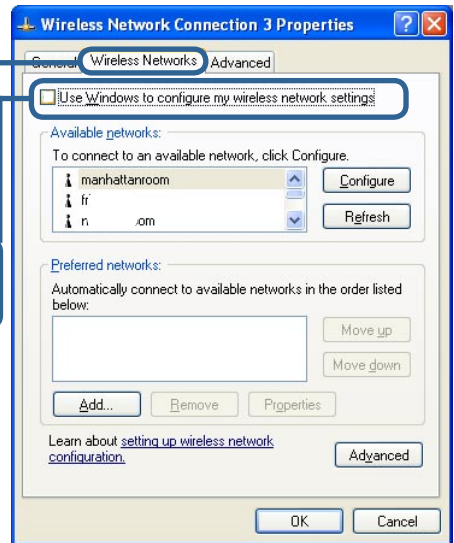
To use the D-Link Configuration Utility with XP, right-click on the wireless network icon in the taskbar in the lower right-hand corner of your computer screen.



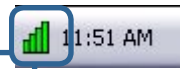
In the window that appears, select **View Available Wireless Networks** and click the **Advanced** button. The screen at right will appear.

Select the **Wireless Networks** tab.

Uncheck the box in the properties window that enables windows configuration.



After you have done this, you can then use the D-Link Configuration Utility with XP by clicking on the D-Link Configuration Utility icon.



*Configuration Utility icon in the system tray

If the icon does not display in the taskbar, then click on this icon on your desktop to open.



Using the Configuration Utility (continued)

Status:

Displays the MAC address of the access point or router to which the DWL-G122 is associated.

SSID:

The Service Set Identifier is the name assigned to the wireless network. The factory SSID setting is **default**.

Tx Rate:

The default setting is **Auto**; Tx Rate settings are automatically determined for an optimal speed up to a maximum of 54Mbps.

Channel:

The default setting is **Auto**. The channel selection is automatically determined by the DWL-G122.

Rescan Button:

Rescans for the strongest signal with the current SSID and associates with that access point or router.

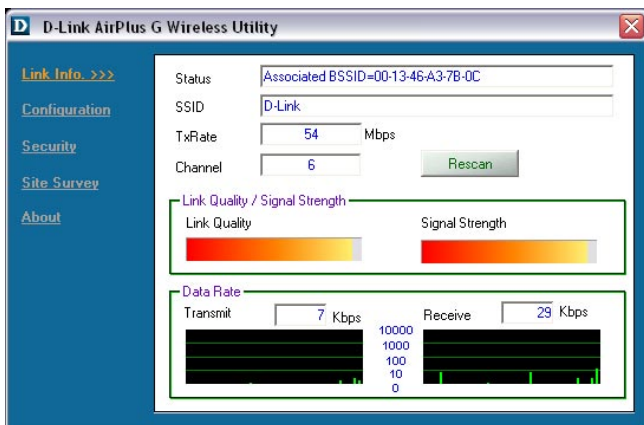
Link Quality/Signal Strength:

Displays the signal strength and the link quality of the DWL-G122's wireless connection to the access point or router.

Data Rate:

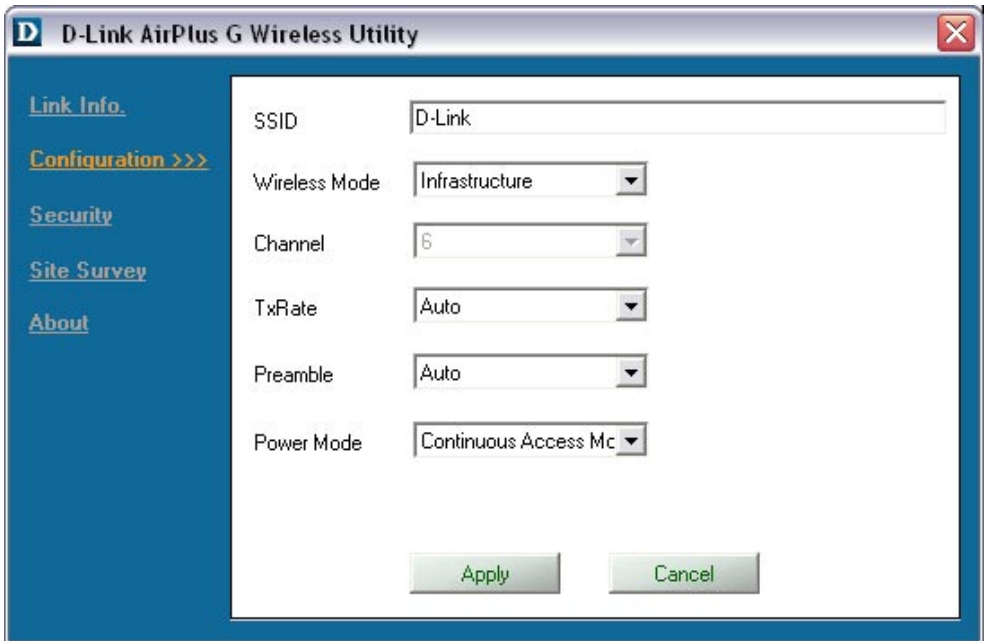
Displays the statistics of the data packets that are transmitted and received.

Link Info



Using the Configuration Utility (continued)

Configuration



SSID:

Service Set Identifier is a name that identifies a wireless network. Access points and wireless devices attempting to connect to a specific WLAN (Wireless Local Area Network) must use the same SSID. The default setting is **default**.

Wireless Mode:

Click on the pull-down menu; select from the following options:

Infrastructure - connecting to the WLAN using an access point. (This is the **default** setting).

Ad-Hoc – wireless mode used when connecting directly to a computer equipped with a wireless adapter in a Peer-to-Peer environment.

Channel:

The default setting is **Auto**. The channel selection is automatically determined by the DWL-G122.

Tx Rate:

The default setting is **Auto**; Tx Rate settings are automatically determined for an optimal speed up to a maximum of 54Mbps.

Using the Configuration Utility (continued)

Preamble:

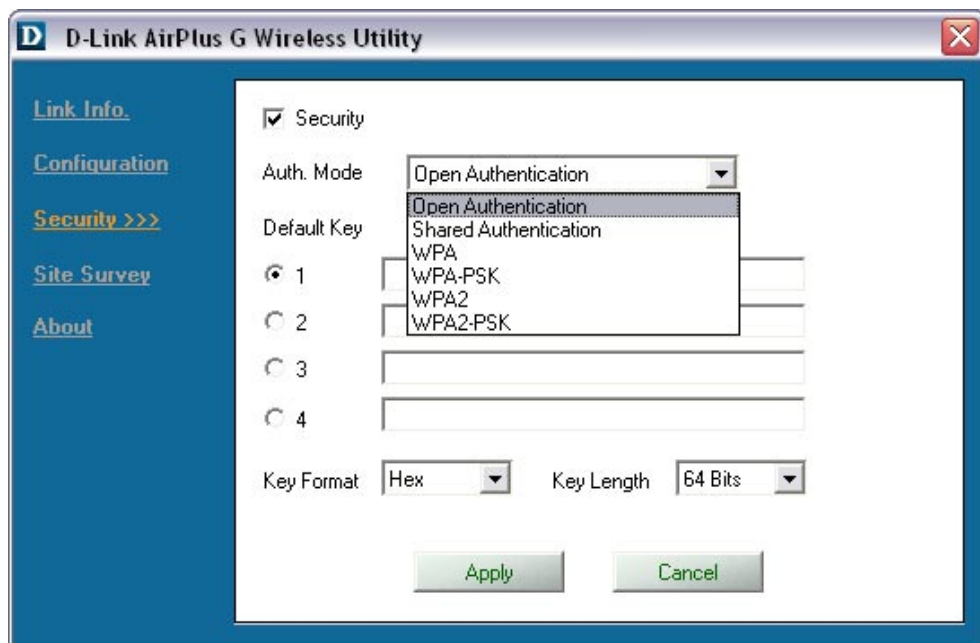
The default setting is **Auto**. The preamble selection is automatically determined by the DWL-G122.

Power Mode:

Disable - This default setting consumes the most power.

Enable - This setting consumes the least power.

Security



The screenshot shows the 'D-Link AirPlus G Wireless Utility' window with the 'Security' tab selected. The 'Security' checkbox is checked. The 'Auth. Mode' dropdown is set to 'Open Authentication', and its menu is open, showing options: 'Open Authentication', 'Shared Authentication', 'WPA', 'WPA-PSK', 'WPA2', and 'WPA2-PSK'. The 'Default Key' section has four radio buttons labeled 1, 2, 3, and 4, with radio button 1 selected. Below the radio buttons are four empty text input fields. The 'Key Format' dropdown is set to 'Hex' and the 'Key Length' dropdown is set to '64 Bits'. At the bottom are 'Apply' and 'Cancel' buttons.

Security:

Check this checkbox if you would like security.

Auth. Mode:

Select **Open/Shared Authentication**, **WPA**, **WPA-PSK**, **WPA2**, or **WPA2-PSK**.

Keys 1-4:

Select the default key.

Key Format:

Select either Hex or ASCII.

Key Length:

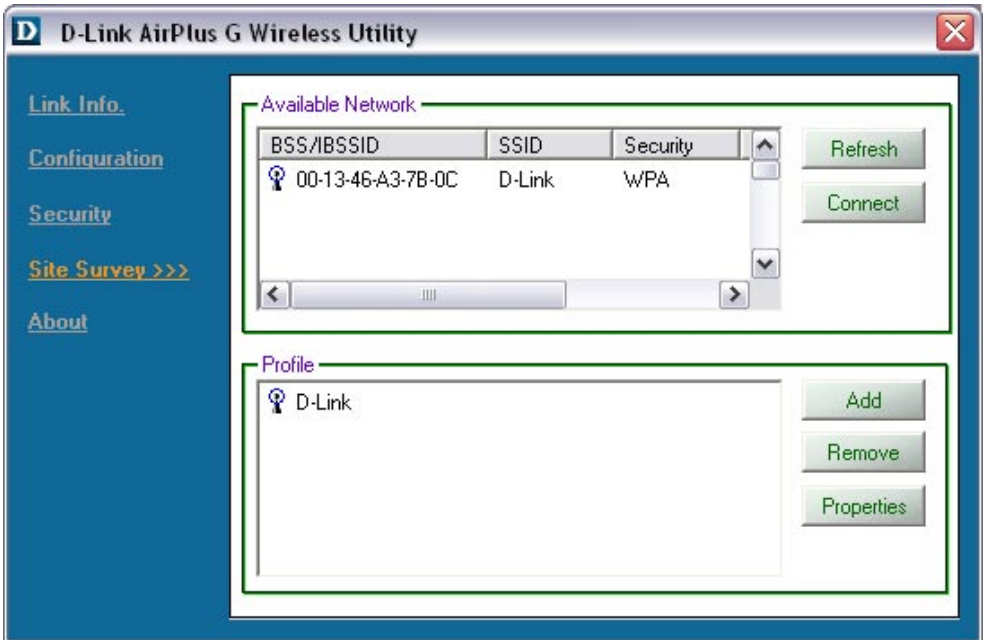
Select either 64 Bits or 128 Bits.

Using the Configuration Utility (*continued*)

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.

Site Survey



Available Network:

The top section of the window displays the **Available Networks**. Scroll up and down the list and highlight the network to which you wish to connect. Click on the **Connect** button.

Profile:

In the lower half of the screen, you can manage the profiles that you have created for the wireless network at home, at the office and in public places. Scroll up and down and highlight the profile that you wish to configure. You can **Add** or **Remove** a profile, or configure the **Properties** of the profile in order to connect with an available network.

Using the Configuration Utility (*continued*)

Refresh:

Click on **Refresh** to get the most updated list of available networks.

Connect:

Highlight an existing network and click **Connect**; the connect window on the next page will appear.

Add:

Click **Add** and the screen on the next page will appear.

Remove:

Highlight a network profile; click **Remove** to remove a network from the profile list.

Properties:

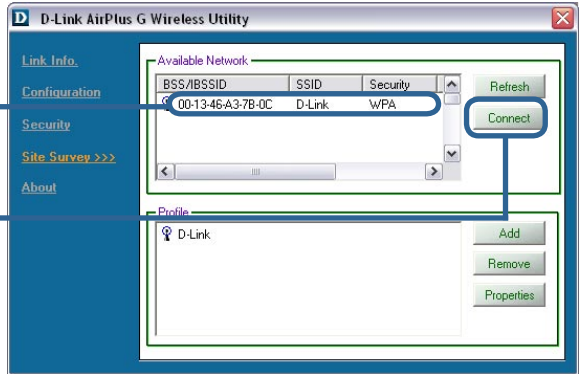
Highlight a network profile; click **Properties** and the screen on the next page will appear.

Using the Configuration Utility (continued)

Authentication > WPA

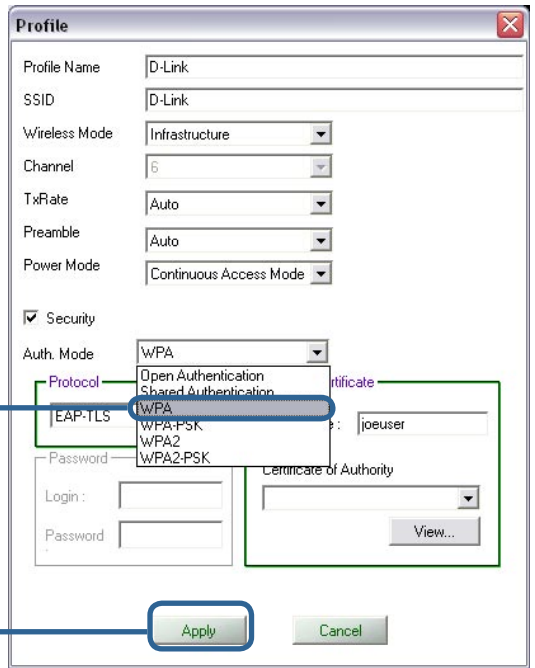
Select the available network to which you want to connect.

Click **Connect**.



Select **WPA** in the *Auth. Mode* field.

Click **Apply**.



Using the Configuration Utility (continued)

Authentication > WPA

The screenshot shows a configuration window for WPA authentication. The 'Auth. Mode' is set to 'WPA'. The 'Protocol' dropdown is set to 'EAP-TLS'. The 'Personal Certificate' section contains a 'User Name' field with 'joeuser' and a 'Certificate of Authority' dropdown which is currently blank. There are 'Login' and 'Password' fields below the protocol section. At the bottom are 'Apply' and 'Cancel' buttons. Blue callout boxes with lines pointing to the interface provide instructions: 'Select the Protocol type here.' points to the 'EAP-TLS' dropdown; 'Leave the Certificate of Authority field blank.' points to the empty 'Certificate of Authority' dropdown; 'Enter the User Name.' points to the 'joeuser' text in the 'User Name' field; and 'Click Apply to save the changes.' points to the 'Apply' button.

Select the **Protocol** type here.

Leave the **Certificate of Authority** field blank.

Enter the **User Name**.

Click **Apply** to save the changes.

Using the Configuration Utility (continued)

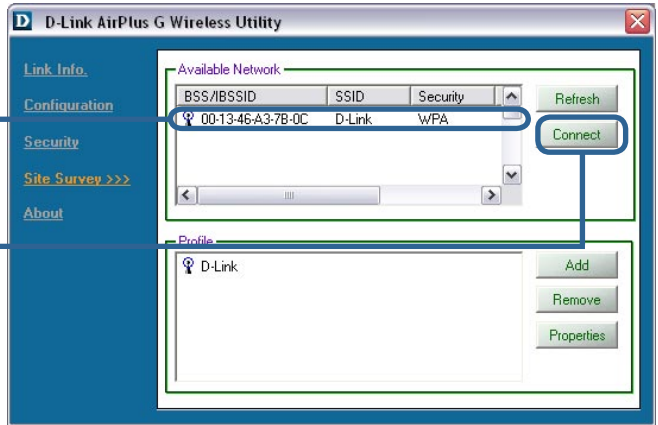
Authentication > WPA-PSK

Select the available network to which you want to connect.

Click **Connect**.

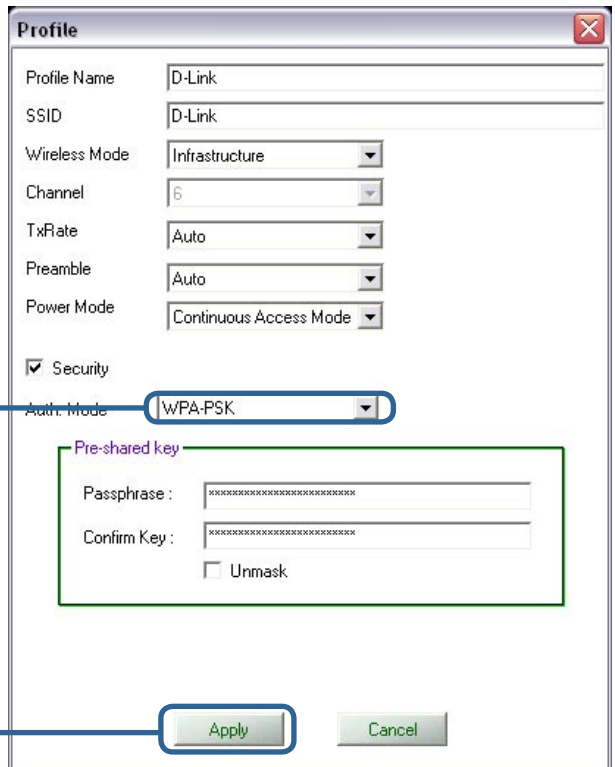


WPA-PSK does not require a **RADIUS Server** in the network.



Select **WPA-PSK** in the *Auth. Mode* field.

Click **Apply**.



Using the Configuration Utility (continued)

Authentication > WPA-PSK (continued)

The screenshot shows a 'Profile' configuration window with the following fields and options:

- Profile Name: D-Link
- SSID: D-Link
- Wireless Mode: Infrastructure
- Channel: 6
- TxRate: Auto
- Preamble: Auto
- Power Mode: Continuous Access Mode
- Security
- Auth. Mode: WPA-PSK

The 'Pre-shared key' section is highlighted with a green border and contains:

- Passphrase : [masked]
- Confirm Key : [masked]
- Unmask

At the bottom of the window are 'Apply' and 'Cancel' buttons. A callout box points to the 'Apply' button with the text: 'Click **Apply**. The configuration is done.'

Another callout box points to the 'Passphrase' and 'Confirm Key' fields with the text: 'Enter the **Passphrase**.'

Using the Configuration Utility (continued)

Authentication > Open Authentication

Profile

Profile Name: D-Link

SSID: D-Link

Wireless Mode: Infrastructure

Channel: 6

TxRate: Auto

Preamble: Auto

Power Mode: Continuous Access Mode

Security

Auth. Mode: Open Authentication

Default Key

1: 0123456789

2

3

4

Key Format: Hex Key Length: 64 Bits

Apply Cancel

Enter the **Default Key** and select the **Key Format** and **Key Length**.

Click **Apply**.
The configuration is done.

About

D-Link AirPlus G Wireless Utility

Link Info

Configuration

Security

Site Survey

About >>>

D-Link

AirPlus™ G

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Version Information

Driver Version	2.1.0.4
DLL Version	306.51.43.3113
Utility Version	1.0

The **About** screen gives you the MAC address, Utility Version and the Driver Version of the DWL-G122.

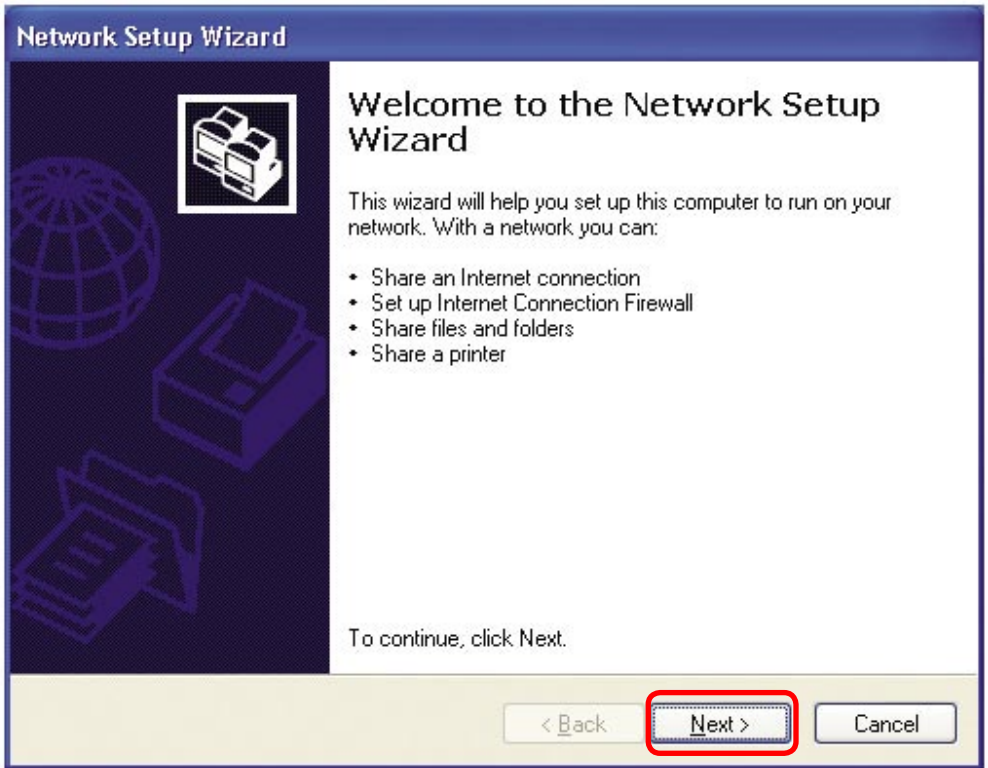
Networking Basics

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.microsoft.com/windows2000> for information about networking computers using Windows XP/2000.

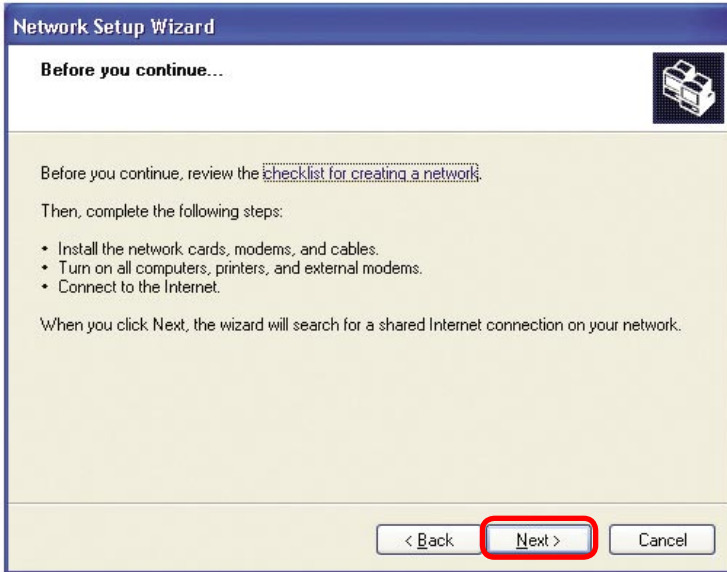
Go to **Start>Control Panel>Network Connections**.
Select **Set up a home or small office network**.



When this screen appears, click **Next**.

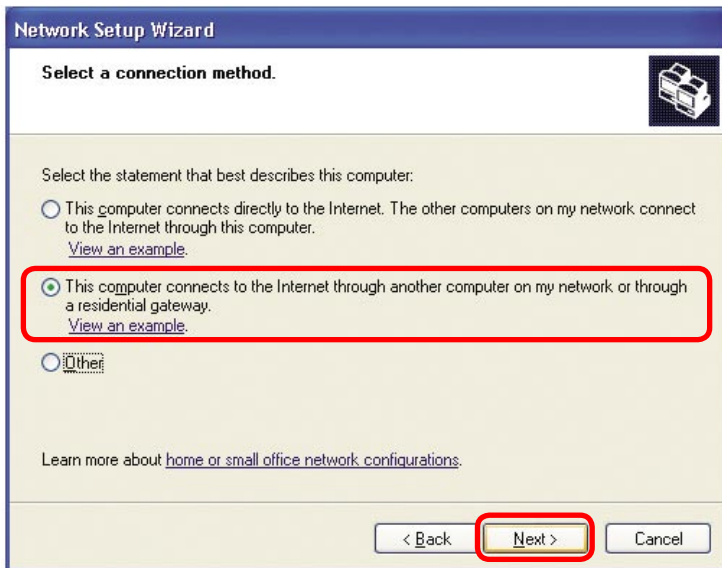
Networking Basics (continued)

Please follow all the instructions in this window:



Click **Next**.

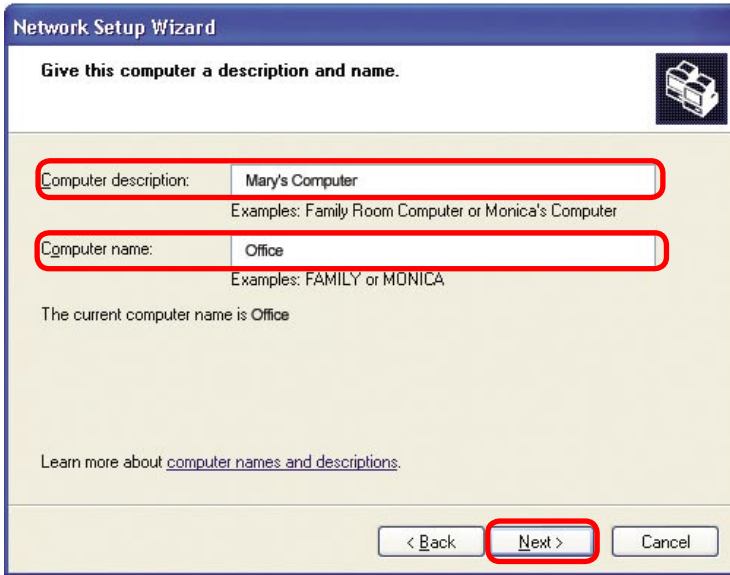
In the following window, select the best description of your computer. If your computer connects to the Internet through a router, select the second option as shown.



Click **Next**.

Networking Basics (continued)

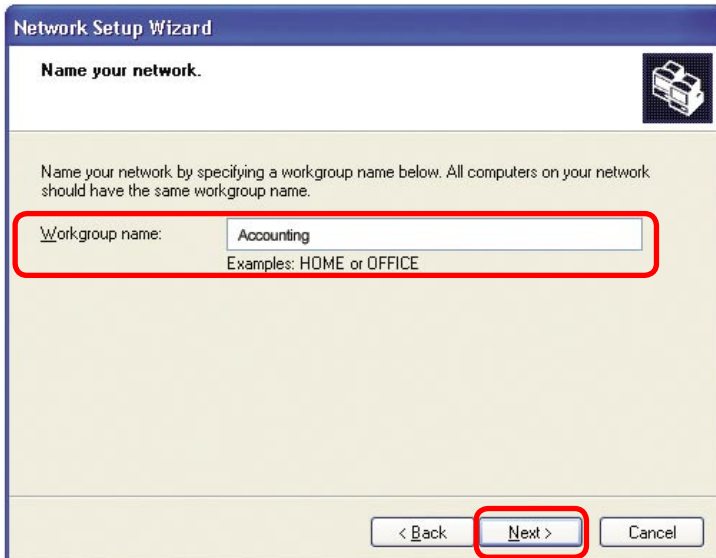
Enter a **Computer description** and a **Computer name** (optional.)



The screenshot shows the 'Network Setup Wizard' dialog box. The title bar reads 'Network Setup Wizard'. The main heading is 'Give this computer a description and name.' with a computer icon to the right. Below the heading are two text input fields. The first is labeled 'Computer description:' and contains the text 'Mary's Computer'. Below it, smaller text reads 'Examples: Family Room Computer or Monica's Computer'. The second field is labeled 'Computer name:' and contains the text 'Office'. Below it, smaller text reads 'Examples: FAMILY or MONICA'. A line of text below the fields states 'The current computer name is Office'. At the bottom left, there is a link: 'Learn more about [computer names and descriptions](#).' At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red rectangle.

Click **Next**.

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

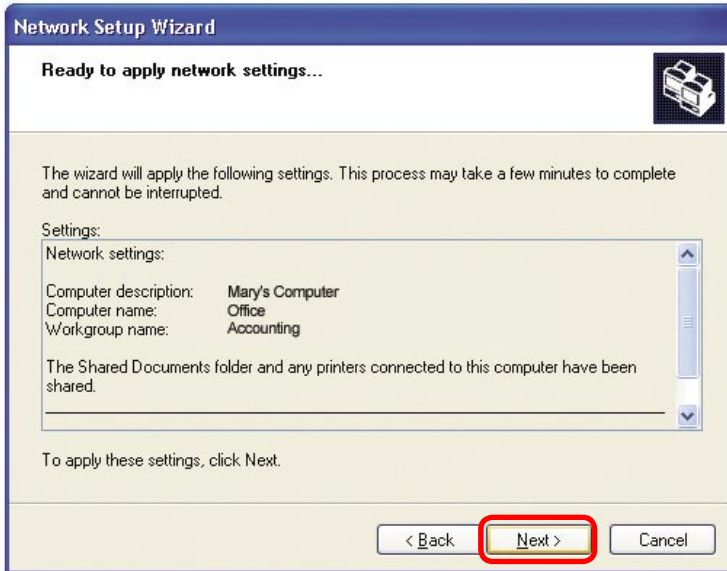


The screenshot shows the 'Network Setup Wizard' dialog box. The title bar reads 'Network Setup Wizard'. The main heading is 'Name your network.' with a computer icon to the right. Below the heading, text reads 'Name your network by specifying a workgroup name below. All computers on your network should have the same workgroup name.' Below this text is a text input field labeled 'Workgroup name:' containing the text 'Accounting'. Below the field, smaller text reads 'Examples: HOME or OFFICE'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a red rectangle.

Click **Next**.

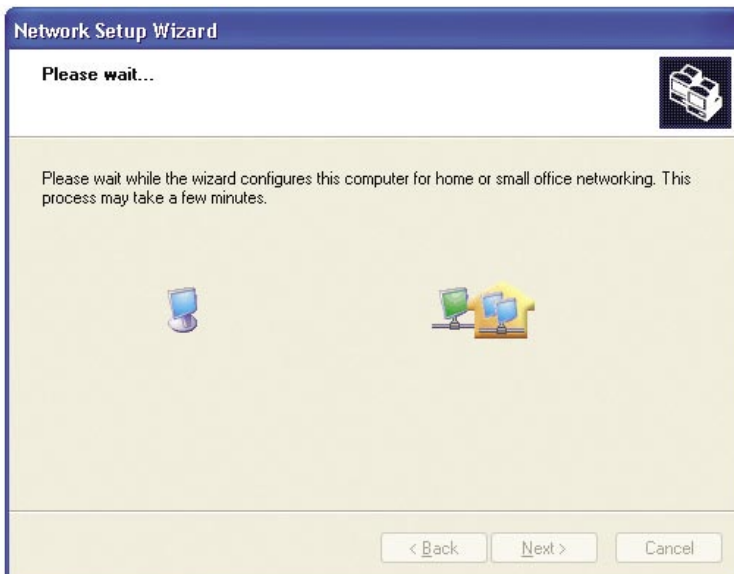
Networking Basics (continued)

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.



Networking Basics (continued)

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**.



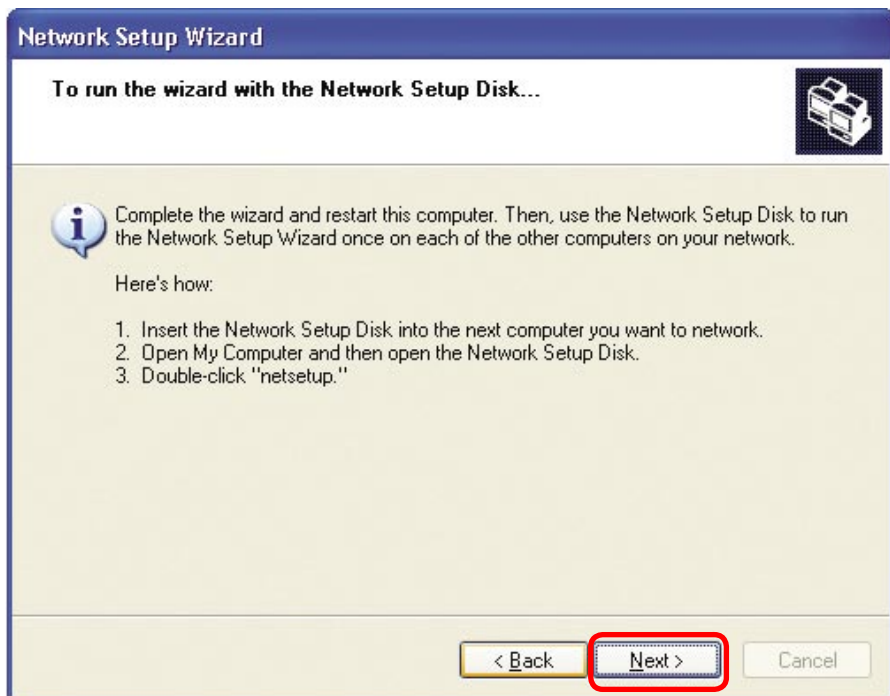
Insert a disk into the Floppy Disk Drive, in this case drive **A**.



Networking Basics (continued)



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**.

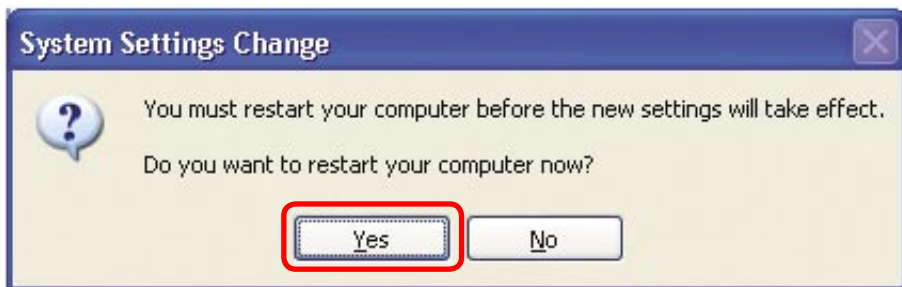


Networking Basics (continued)

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.

Networking Basics (continued)

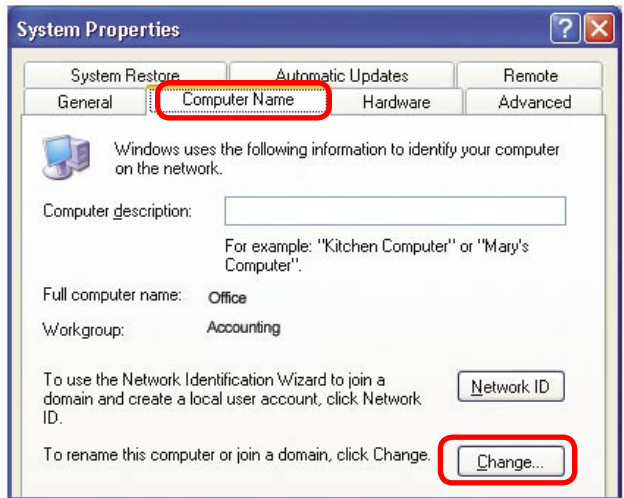
Naming Your Computer

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**.



- 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**.

Networking Basics (continued)

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

All 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 an adapter, please do the following:

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

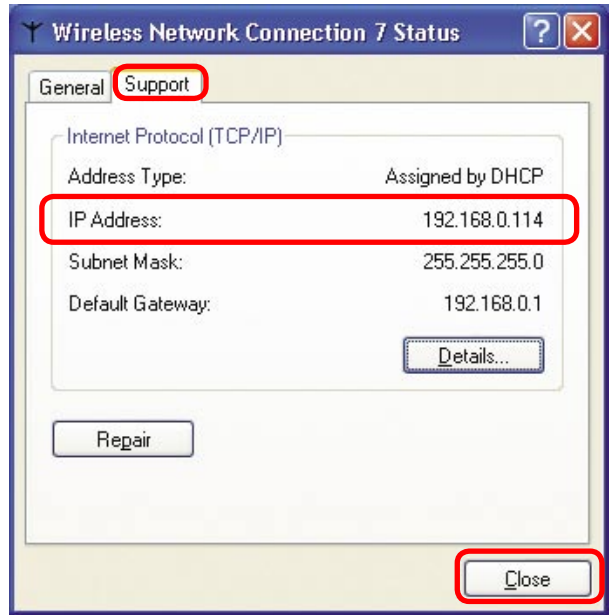


Networking Basics (continued)

Checking the IP Address in Windows XP

This window will appear.

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

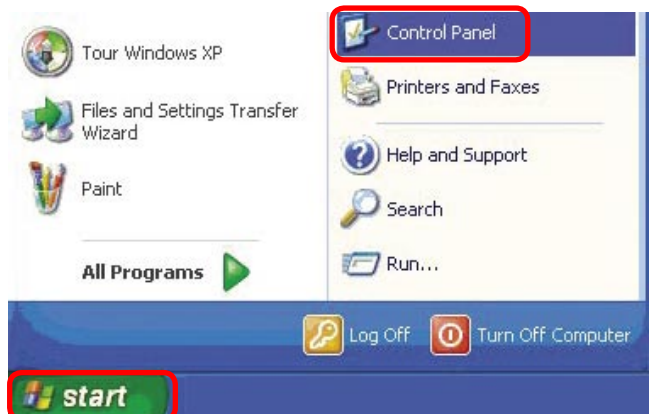


Assigning a Static IP Address in Windows XP/2000

Note: Many 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 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:

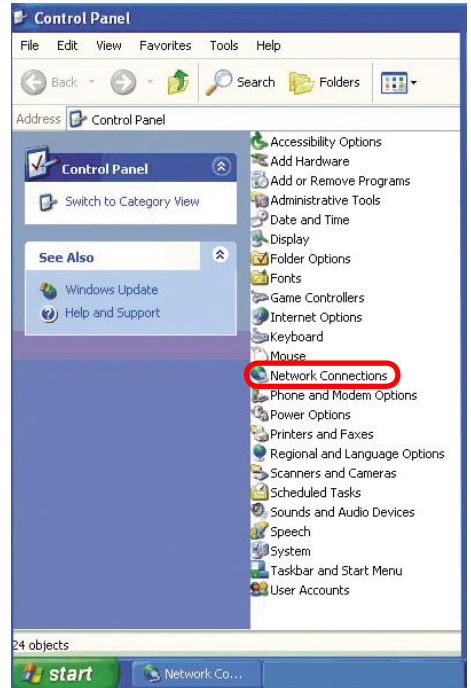
- Go to **Start**.
- Click on **Control Panel**.



Networking Basics (continued)

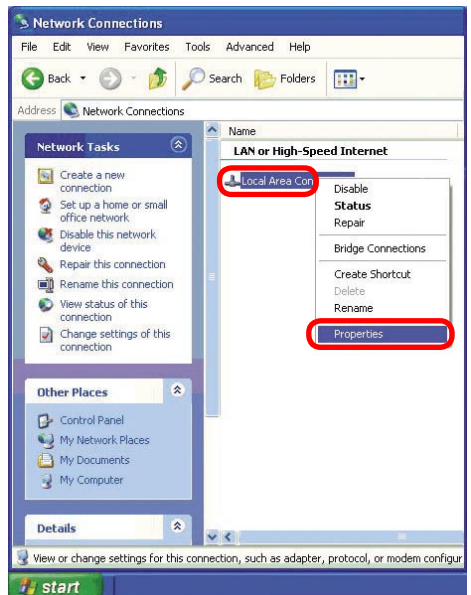
Assigning a Static IP Address in Windows XP/2000

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



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

- Click on **Properties**.



Networking Basics (continued)

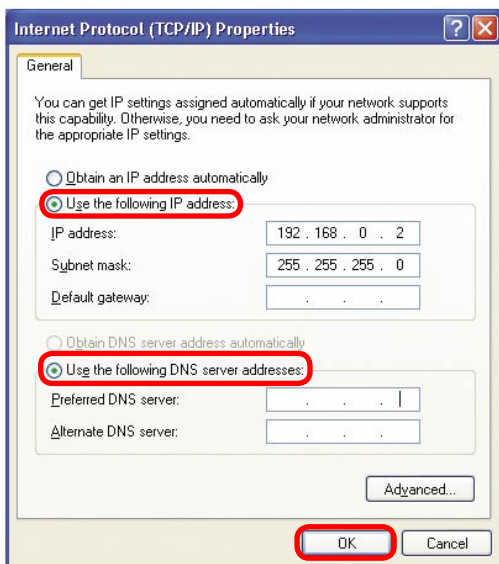
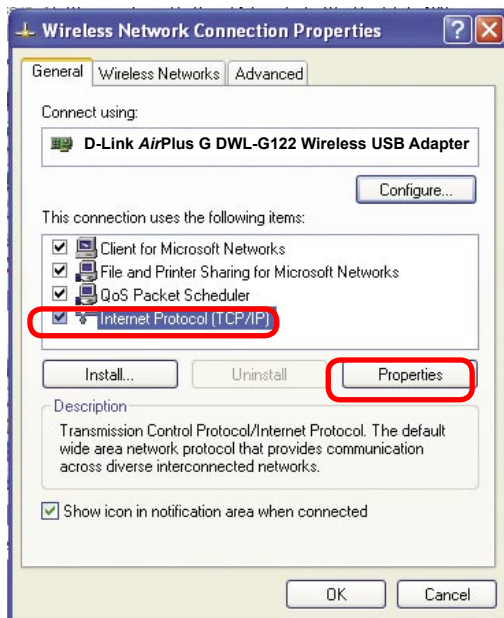
Assigning a Static IP Address in Windows XP/2000

- 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.)

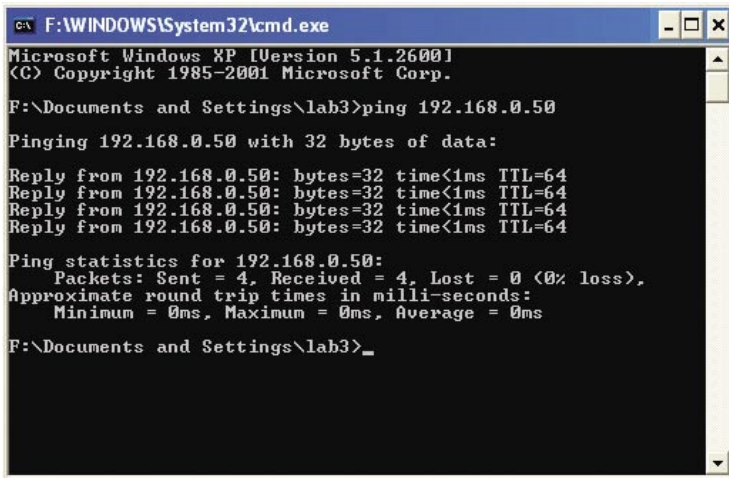
The DNS server information will be supplied by your ISP (Internet Service Provider.)

Click **OK**.



Networking Basics (continued)

Checking the Wireless Connection by Pinging in Windows XP and 2000



```
CA 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
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
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>_
```

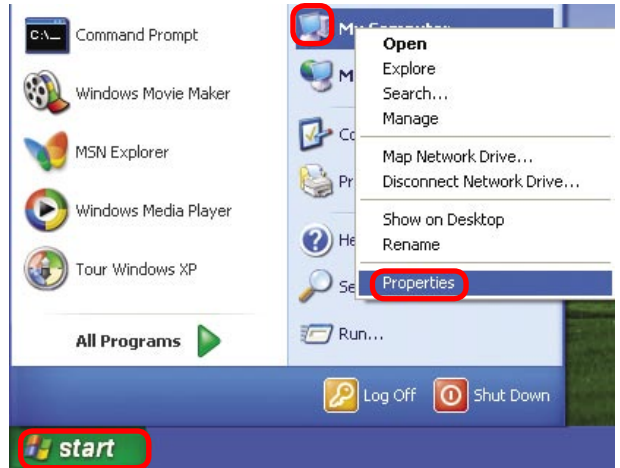
Go to **Start > Run > type cmd**. A window similar to this one will appear. Type **ping xxx.xxx.xxx.xxx**, where **xxx** is the **IP address** of the wireless router or access point. A good wireless connection will show four replies from the wireless router or access point, as shown.

Troubleshooting

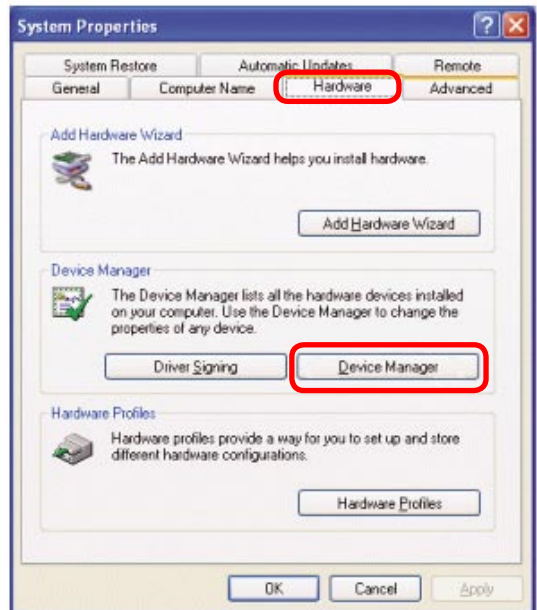
This chapter provides solutions to problems that can occur during the installation and operation of the DWL-G122. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows XP. If you have another operating system, these solutions will still apply although the appearance on your computer screen may differ.)

1. How do I check to see that the drivers for the DWL-G122 are installed properly?

- Go to **Start > My Computer > Properties.**



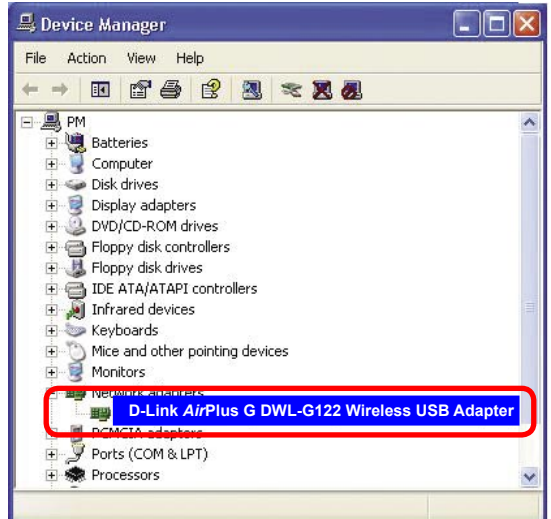
- Select the **Hardware Tab.**



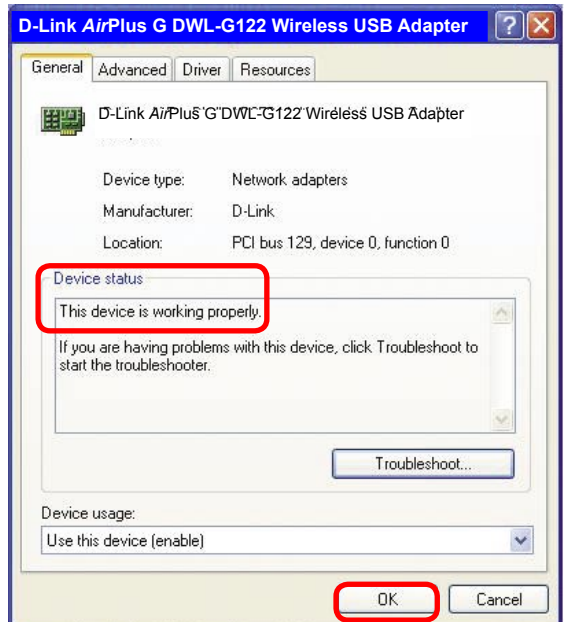
- Click **Device Manager.**

Troubleshooting (continued)

- Double-click on **Network Adapters**.
- Right-click on **D-Link AirPlus G DWL-G122 Wireless USB Adapter**.
- Select **Properties** to check that the drivers are installed properly.



- Look under **Device Status** to check that the device is working properly.
- Click **OK**.



Troubleshooting (continued)

2. What variables may cause my wireless products to lose reception?

D-Link products let you access your network from virtually anywhere you want. However, the positioning of the products within your environment will affect the wireless range. Please refer to **Installation Considerations** in the **Wireless Basics** section of this manual for further information about the most advantageous placement of your D-Link wireless products.

3. Why does my wireless connection keep dropping?

- 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 router, 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?

If you have enabled encryption on the DWL-G122, you must also enable encryption on all wireless devices in the network in order to establish a wireless connection.

- The encryption settings are: 64- or 128-bit. Make sure that the encryption bit level is the same on the router and the DWL-G122.
- Make sure that the SSID on the wireless router (if you have one in your network) and the DWL-G122 are exactly the same. If they are not, wireless connection will not be established. The default SSID is **default**.

Technical Specifications

Standard

- USB 2.0¹
- IEEE 802.11g
- IEEE 802.11b

Bus Type

- USB 2.0

Temperature

- Operating: 0°C to 40°C (32°F to 104°F)
- Storing: -20°C to 75°C (4°F to 167°F)

Humidity:

- 80% maximum, non-condensing

Antenna Type:

- Omni-directional

Modulation Technology:

- Orthogonal Frequency Division Multiplexing (OFDM)
- Complimentary Code Keying (CCK)

Security:

- 64-, 128-bit WEP
- WPA - Wi-Fi Protected Access

Data Rates*:

- 54, 48, 36, 24, 18, 11, 9, 6, 5.5, 2, 1Mbps (with Automatic Fallback)

Frequency Range:

- 2.4GHz to 2.462GHz

Range:²

- Indoors: Up to 328 feet (100 meters)
- Outdoors: Up to 1,312 feet (400 meters)

Media Access Control:

- CSMA/CA with ACK

* - Maximum wireless signal rate derived from IEEE Standard 802.11_ 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 may adversely affect wireless signal range.

1 - Using a USB 1.1 port will adversely affect range

2 - Environmental factors may adversely affect wireless signal range

Technical Specifications (continued)

Receiver Sensitivity:

- 54Mbps OFDM
- 48Mbps OFDM
- 36Mbps OFDM
- 24Mbps OFDM
- 18Mbps OFDM
- 12Mbps OFDM
- 11Mbps OFDM
- 9Mbps OFDM
- 6Mbps OFDM
- 5.5Mbps CCK
- 2Mbps QPSK
- 1Mbps BPSK

Transmitter Output Power:

- 14Bm +/-2dB

Physical Dimensions:

- L = 3.3 inches
- W = 2.1 inches
- H = 0.2 inches

Weight:

- 0.021 lb. (4.4g)

Certifications:

- FCC part 15b

Warranty:

- 3 years

D-Link AirPlus™ G products can transfer data up to 5 times faster than standard 802.11b networks. They are also interoperable with 802.11b compliant wireless devices.

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](mailto: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 9:00pm EST

D-Link Technical Support over the Internet:

<http://support.dlink.ca>

[email:support@dlink.ca](mailto:support@dlink.ca)

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): Three (3) years
- 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.

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 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. 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.

- 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. Hermann St., 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.

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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 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.

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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:

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment; such modifications could void the user's authority to operate the equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying R F exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

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

We declare that the product is limited in CH1~CH11 by specified firmware controlled in the USA.

Highest SAR test value: 1.13W/kg

For a detailed warranty outside the United States, please contact the corresponding local D-Link office.

Registration

**Register your product online at:
<http://support.dlink.com/register>**



(09/27/2005)