

# **D-Link *AirPlus* DWL-800AP+**

**Enhanced 2.4 GHz Wireless Range Extender**

## **Manual**

# Contents

1. Package Contents .....	3
2. Introduction.....	4
3. Wireless Basics .....	8
4. Getting Started .....	11
5. Using the Configuration Menu .....	13
6. Troubleshooting.....	18
7. Networking Basics.....	24
8. Technical Specifications .....	53
9. Contacting Technical Support.....	55
10. Warranty and Registration .....	56

# 1. Package Contents



## Contents of Package:

- **D-Link AirPlus DWL-800AP+** Enhanced 2.4GHz Wireless Range Extender
- Power Supply (5V, 2.5A)
- Manual and Warranty on CD
- Quick Installation Guide

*Note: Using a power supply with a different voltage rating than the one included with the DWL-800AP+ will cause damage and void the warranty for this product.*

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

## System Requirements For Configuration:

- Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter
- Internet Explorer 6.0 or later, or Netscape Navigator version 6.0 or above, with JavaScript enabled

## 2. Introduction

The D-Link *AirPlus* DWL-800AP+ Wireless Range Extender is an enhanced 802.11b high-performance, wireless device. It is an ideal way to extend the reach and number of computers connected to your wireless network.

The DWL-800AP+ can act as an access point or a wireless repeater. In repeating mode, the DWL-800AP+ repeats the wireless signal of D-Link *AirPlus* access points and wireless routers to extend the range of your wireless network.

Unlike most 802.11b devices, the DWL-800AP+ is capable of data transfer rates up to 22 Mbps (compared to the standard 11 Mbps) when used with other D-Link *AirPlus* products such as the DWL-520+ Wireless PCI Adapter, DWL-650+ Wireless Cardbus Adapter, and the DI-614+ Wireless Router.

After completing the steps outlined in the *Quick Installation Guide* (included in your package) you will have the ability to share information and resources, such as files and printers, and enjoy the freedom that wireless networking brings.

The DWL-800AP+ is compatible with most popular operating systems, including Macintosh, Linux and Windows, and can be integrated into a large network. This Manual is designed to help you connect the DWL-800AP+ and the D-Link *AirPlus* 2.4GHz Wireless Adapters into a network in Infrastructure mode. *Please take a look at the **Getting Started** section in this manual to see an example of an Infrastructure network using the DWL-800AP+.*

This manual provides a quick introduction to wireless technology and its application as it relates to networking. Please take a moment to read through this manual if you need to get acquainted with wireless technology.

## Connections

**Ethernet Port** – this RJ-45 Auto MDI/MDIX port provides connection to a network device using a Cat 5 Ethernet cable. (The Auto MDI/MDIX port accommodates either a Straight-Through or a Cross-Over cable and is auto-sensing.)

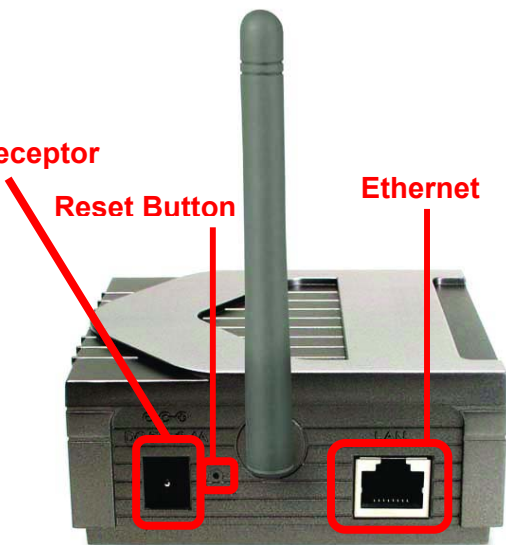
**Reset Button** – press this button to revert to the factory default settings of the DWL-800AP+

**Power Receptor** – connect one end of the 5V DC Power Adapter (included) to the power receptor on the DWL-800AP+ and connect the other end of the Power Adapter to a power outlet.

Power Receptor

Reset Button

Ethernet



**Category 5** is the most reliable grade of twisted-pair cable. It is available as either **Straight-Through** cable or **Cross-Over** cable. Always check your installation instructions to make sure that you have selected the correct type of Category 5 cable for your other networking devices. The DWL-800AP+ will accept either type of cable and will automatically sense the cable that you are using.

### Factory Default Settings for the DWL-800AP+\*

Wireless Mode	Repeater
SSID	default
Channel	6
Transmission rates	Auto
Encryption	No
Administrator password	Blank (no password needed)
IP Address mode	Static
IP Address	192.168.0.30
IP Subnet	255.255.255.0
username	admin (all lower case)

*\*By default, the DWL-800AP+ is set to **Repeater** mode. Just input the 12-digit Ethernet **MAC address** (e.g., 0080CO2C5551) of the remote router or access point that you wish to repeat. If you wish to use the DWL-800AP+ as an access point, you can select this option instead. Go to the Wireless tab in the Web Configuration Utility to make these selections.*

## Features & Benefits

- Extends the range of your wireless network
- Up to 2X Faster with AirPlus Products - high-speed wireless data transfer rates up to 22Mbps. With twice the data rate and capacity, the DWL-800AP+ 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
- Stronger Network Security with 256-bit WEP Encryption – Supports 64/128/256-bit WEP encryption for higher level of security for your data and wireless communication than encryption found in existing 802.11b products
- *Setup Wizard* – for easy configuration.
- Web-based interface for Managing and Configuring – Easy-to-use interface independent of the operating system
- 2 Different Operation Modes – Capable of operating in **Access Point** or **Repeater** mode. In **Repeater** mode the DWL-800AP+ will extend your existing wireless network up to 328 feet when used with the D-Link AirPlus DI-614+ Enhanced Wireless Router; the AirPlus DI-714P+ Enhanced Wireless Router with Print Server; the AirPro DI-764 Multimode Wireless Router, the AirPro DI-754 Multimode Wireless Router with the DWL-650+, or the AirPremier DWL-1000AP+ Enterprise Wireless Access Point
- Auto-MDI/MDIX Ethernet port

## LEDS

**LED** stands for **L**ight-**E**mitting **D**iode. The **DWL-800AP+ Wireless Range Extender** has 2 LEDs as shown below:



**Power** – a steady **Green** light indicates a proper connection to a power source.

**Wireless Link/Act** – a steady **Yellow** light indicates a good wireless connection. A blinking light indicates that the DWL-800AP+ is receiving/transmitting from/to the wireless network.

### 3. Wireless Basics

D-Link *AirPlus* 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. The D-Link *AirPlus* wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. 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.

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

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, both physically and logically, can benefit from a WLAN's 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 full infrastructure networks of thousands of users that allow roaming over a broad area.

*The DWL-800AP+ is compatible with the following **D-Link AirPlus** family of products:*

- ◆ DWL-650+ Enhanced 2.4GHz Wireless Cardbus Adapter for laptop PCs
- ◆ DWL-520+ Enhanced 2.4GHz Wireless PCI card for desktop PCs
- ◆ DWL-900AP+ Enhanced 2.4GHz Wireless Access Points
- ◆ DI-614+ Enhanced 2.4GHz Wireless Broadband Router

*The DWL-800AP+ is also compatible with the **D-Link Air** Wireless family of products and other 802.11b products including:*

- ◆ DWL-650 2.4GHz Wireless Cardbus Adapter for laptop PCs
- ◆ DWL-520 2.4GHz Wireless PCI card for desktop PCs
- ◆ DI-713P Print Server
- ◆ DWL-1000AP and DWL-900AP Wireless Access Points

## **Standards - Based Technology**

The IEEE standard-based technology assures that this product is interoperable with existing compatible 2.4GHz wireless technology. This means you will be able to transfer large files quickly or even watch a movie in MPEG format over your network without noticeable delays. The technology works by using multiple frequencies in the 2.4GHz range at speeds up to 22 Mbps. This D-Link *AirPlus* product will automatically sense the best possible connection speed to ensure the greatest speed and range possible with the technology.

## **Installation Considerations**

Designed to go up to 1,312 feet (400 meters) outdoors and up to 328 feet (100 meters) indoors, D-Link *AirPlus* DWL-800AP+ 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 wireless range extender and your receiving device (e.g., the DWL-650+) to a minimum - Each wall or ceiling can reduce your D-Link *AirPlus* Wireless product's range from 3-90 feet (1-30 meters.) Position your Range Extender, Access Points, Residential Gateways, and computers so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between the wireless range extender, Access Points, Residential Gateways (routers) and computers. 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 the range extender, Access Points and adapters 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 the range extender, Access Points, and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.
5. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that may generate extreme RF noise.

## 4. Getting Started

The default setting for the DWL-800AP+ is *Repeater* mode.

An Infrastructure network contains an *Access Point*. The diagram on the next page shows an example of a network with 2 DWL-800AP+'s. One is used as an *Access Point* and the other is used as a *Repeater*. The network illustration contains the following D-Link network devices:

A Wireless Range Extender - **D-Link AirPlus DWL-800AP+**

An Ethernet Broadband Router - **D-Link DI-604**

A laptop computer with a wireless adapter - **D-Link AirPlus DWL-650+**

A desktop computer with a wireless adapter - **D-Link AirPlus DWL-520+**

A Cable modem - **D-Link DCM-200**

**DHCP** stands for *Dynamic Host Configuration Protocol*.  
*It is a protocol for assigning dynamic IP addresses "automatically."*  
*With a DHCP-capable gateway/router, there is  
no need to manually assign an IP address.*

### IP ADDRESS

*Please note: If you have a DHCP-capable router, such as the  
DI-604, there is no need to assign an IP Address.*

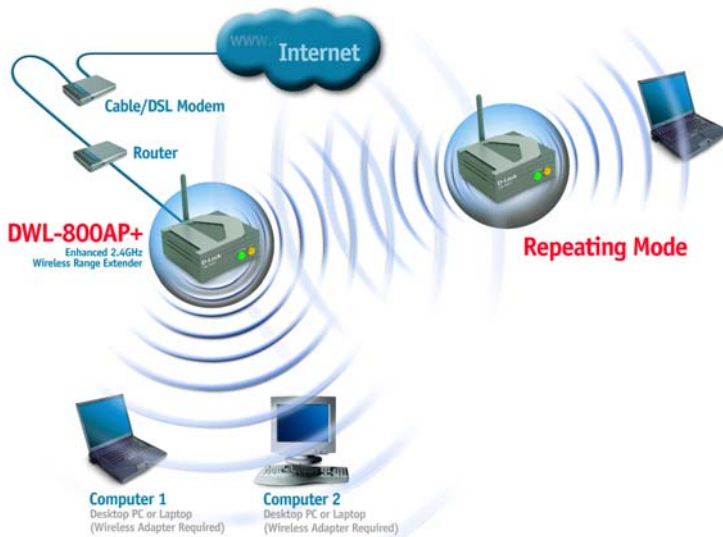
If you need to assign IP Addresses to the computers on the network, please remember that the **IP Address for each computer must be in the same IP Address range as all the computers in the network**, and the Subnet mask must be exactly the same for all the computers in the network.

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 network.

## Getting Started

### Setting Up an Infrastructure Network

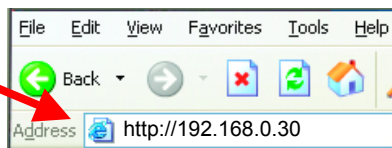


- 1** You will need a broadband Internet access (Cable/DSL) subscription.
- 2** Consult with your Cable/DSL provider for proper installation of the modem.
- 3** Connect the modem to an Ethernet Broadband Router (such as the **D-Link DI-604**) See the **Quick Installation Guide** included with the router.
- 4** Connect the router to the **D-Link AirPlus DWL-800AP+**. Refer to the **Quick Installation Guide** for setting up the Access Point.
- 5** If you are connecting a desktop computer in your network, you can install the **D-Link AirPlus DWL-520+** wireless PCI adapter into an available PCI slot. See the **Quick Installation Guide** included with the DWL-520+.
- 6** Install the drivers for the wireless cardbus adapter (**D-Link AirPlus DWL-650+**) into the laptop computer. See the **Quick Installation Guide** included with the DWL-650+ for installation instructions.

## 5. Using the Configuration Menu

Whenever you want to configure your network or the DWL-800AP+, you can access the **Configuration Utility** by opening the web-browser and typing in the IP Address of the DWL-800AP+. The DWL-800AP+ default IP Address is shown below:

- Open the web browser
- Type in the **IP Address** of the Access Point



*(The IP Address shown in the example above is the default setting. Use this IP address when connecting to a network consisting of other D-Link devices set to their default settings. If you have changed the IP Address of the DWL-800AP+ to conform to a network other than one with D-Link devices, at their default setting, then input that IP Address in the web browser, instead of the default IP Address shown.)*

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



### Home

The **Home** window will appear. Please refer to the *Quick Installation Guide*, included with your purchase, for more information regarding the *Setup Wizard*, accessible here. Once you have completed the configuration of the DWL-800AP+, the current settings will be displayed in this window.



## Configuration Menu

This window displays the default settings of the DWL-800AP+. The default IP Address is 192.168.0.30. If you select **Dynamic IP Address**, you will obtain a dynamic IP Address from a DHCP server on your network. The **Subnet Mask** is 255.255.255.0. Input the IP Address of the **Gateway** (the router on your network.) Click **Apply** if you have made any changes.

### Network

The screenshot shows the 'Network' tab of the D-Link DWL-800AP+ configuration interface. The page title is 'AirPlus Enhanced 2.4GHz Wireless Range Extender'. The 'Network' tab is selected, and the 'IP Address Settings' section is visible. It includes fields for LAN IP (Dynamic IP Address selected), IP Address (192.168.0.30), Subnet Mask (255.255.255.0), and Gateway (0.0.0.0). There are 'Apply' and 'Cancel' buttons at the bottom right.

**Operating Mode:**  
The default setting is **Repeater**.

Select **AP Mode** or **Repeater**. The DWL-800AP+ can act as an access point or a wireless repeater. In repeating mode, the DWL-800AP+ repeats the wireless signal of D-Link *AirPlus* access points and routers to extend the range of your wireless network.

### Wireless

The screenshot shows the 'Wireless' tab of the D-Link DWL-800AP+ configuration interface. The page title is 'AirPlus Enhanced 2.4GHz Wireless Range Extender'. The 'Wireless' tab is selected, and the 'Wireless Settings' section is visible. It includes fields for Operating Mode (Repeater selected), AP Name (DWL-800AP+), SSID (default), Channel (6), WEP (Enabled selected), WEP Encryption (64Bit), WEP Mode (HEX), Key1, Key2, Key3, Key4, TX Rate (1-2.5-5-11-22 (Mbps) selected), and Authentication (Auto selected). There are 'Apply' and 'Cancel' buttons at the bottom right.

**AP Name:** You may choose to rename your DWL-800AP+, especially if you have more than one Access Point on your network.

## Configuration Menu

**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. The SSID can be up to 32 characters in length.

**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.

**WEP Encryption:** Select **Enable Encryption** to use **WEP (Wired Equivalent Privacy)** on the network. All devices on the network, and the Access Point, must share the same WEP selection – either **Enable** or **Disable**, and they must share the same WEP key. The WEP key is generated from **ASCII** or **Hexadecimal** entries that are either 64, 128, or 256 bit in length. When enabling encryption, select the **Key Type** (ASCII or Hexadecimal) and then input the appropriate digits or letters. You can create up to 4 keys. Select the key you wish to use.

**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

**Transmission Rate:** Select the transmission rate for the network. The default setting is 1-2-5.5-11-22 (Mbps)

### Authentication:

**Open System** – communicates the key across the network

**Shared Key** – devices must have identical WEP settings to communicate

**Auto** – automatically adjusts to the Authentication mode of the wireless client

Click **Apply** if you have made any changes or additions.

## Configuration Menu

### Admin

The screenshot shows the configuration interface for a D-Link DWL-800AP+ AirPlus Enhanced 2.4GHz Wireless Range Extender. The top navigation bar includes tabs for Home, Network, Wireless, Admin (selected), and Help. The Admin tab is highlighted in yellow. The main content area is divided into three sections: Administrator Settings, System Settings, and Firmware Upgrade. In the Administrator Settings section, there are fields for New Password and Confirm Password, both masked with dots, and buttons for Apply and Cancel. The System Settings section includes checkboxes for saving and loading settings to/from the local hard drive, with corresponding Save, Browse, Load, and Restore buttons. The Firmware Upgrade section shows the current firmware version (1.7) and date (Fri, 3 Jan 2003), along with a field for the firmware file and a Browse button. At the bottom right, there are three status icons: a green checkmark, a red X, and a red plus sign, with labels Apply, Cancel, and Help below them.

**D-Link**  
Building Networks for People

**DWL-800AP+**

**AirPlus**  
Enhanced 2.4GHz Wireless Range Extender

**Home Network Wireless Admin Help**

**Administrator Settings**

☐ New Password

☐ Confirm Password

**System Settings**

☐ Save Settings to Local Hard Drive

☐ Load Settings From Local Hard Drive

☐ Restore to Factory Default Settings

**Firmware Upgrade**

☐ Current Firmware Version: 1.7

☐ Firmware Date: Fri, 3 Jan 2003

☒ ☐ ☐

**Apply Cancel Help**

**Administrator Settings:** Change your password in this window. Re-enter the new password to confirm. It can be up to 14 characters in length. Please keep a copy of your password in a safe place. Click **Apply**, if you have made any changes.

**System Settings:** The current system settings can be saved as a file onto the local hard drive by clicking **Save**. The saved file can be loaded back on the DWL-800AP+ by clicking **Browse**. When you have selected the settings file, click **Load**.

Click **Restore** to return to **Factory Default Settings**.

**Firmware Upgrade:** Upgrade the firmware for the DWL-800AP+. Find upgrades to the firmware on the D-Link website at <http://support.dlink.com>. After you have downloaded a firmware upgrade to your local drive, click **Browse**. Select the firmware and click **Apply** to complete the upgrade.



## Configuration Menu

### Help



The **Help** window displays information about each window in the Configuration menu. When you change the settings in the Configuration menu, you will need to restart the DWL-800AP+ for the changes to take effect.

## 6. Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DWL-800AP+ Wireless Range Extender. We cover various aspects of the network setup, including the network adapters. Please read the following if you are having problems.

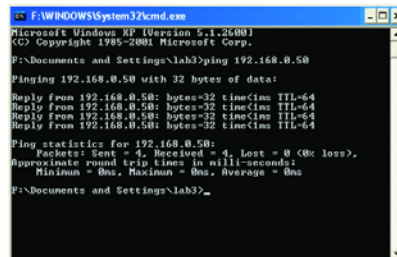
**Note:** It is recommended that you use an Ethernet connection to configure the DWL-800AP+ Wireless Range Extender.

### 1. The computer used to configure the DWL-800AP+ cannot access the Configuration menu.

- Check that the **Ethernet LED** on the DWL-800AP+ 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-800AP+. Please see **Checking the IP Address in Windows XP** in the **Networking Basics** section of this manual.

**Note:** The IP Address of the DWL-800AP+ is 192.168.0.30. 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-800AP+ is responding. Go to **Start>Run>Type Command>Type ping 192.168.0.30** A successful ping will show four replies.



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

P:\Documents and Settings\lab3>ping 192.168.0.30

Pinging 192.168.0.30 with 32 bytes of data:

Reply from 192.168.0.30: bytes=32 time=1ms TTL=64
Reply from 192.168.0.30: bytes=32 time=1ms TTL=64
Reply from 192.168.0.30: bytes=32 time=1ms TTL=64
Reply from 192.168.0.30: bytes=32 time=1ms TTL=64

Ping statistics for 192.168.0.30:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milliseconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

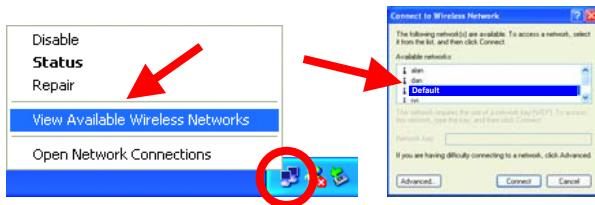
P:\Documents and Settings\lab3>
```

*Note: If you have changed the default IP Address, make sure to ping the correct IP Address assigned to the DWL-800AP+.*

## Troubleshooting

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

- Make sure the wireless client is associated and joined with the correct device. 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.



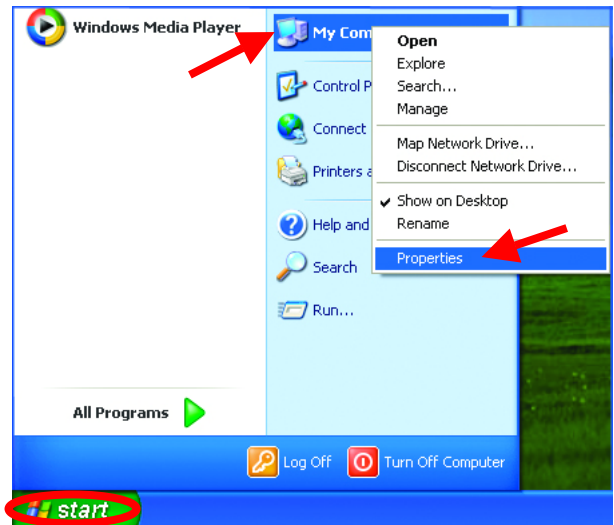
- Check that the **IP Address** assigned to the wireless adapter is within the same **IP Address range** as the existing network. *Since the DWL-800AP+ has an IP Address of 192.168.0.30, wireless adapters must have an IP Address in the same range, e.g., 192.168.0.x. Each device must have a unique IP 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**.)*
- If you are using the DWL-800AP+ to repeat the wireless signal, check that the Ethernet MAC address of the wireless router or Access Point is entered properly in the settings. Please note that the Repeater function is compatible with most D-Link wireless routers and Access Points. If you wish to repeat a device that is not a D-Link product, please check the FAQs for supported products on the D-Link support website ( <http://support.dlink.com> ) to make certain that the device can be repeated by the DWL-800AP+.

## Troubleshooting

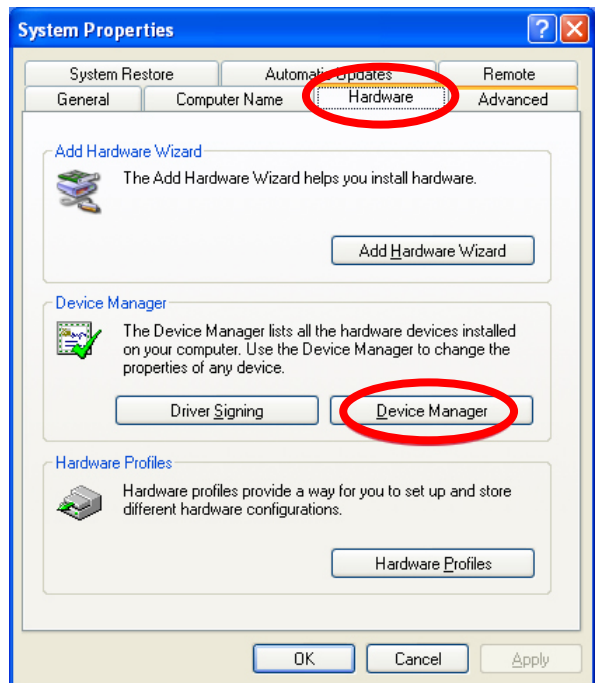
### 3. Check that the drivers for the network adapters are installed properly.

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**

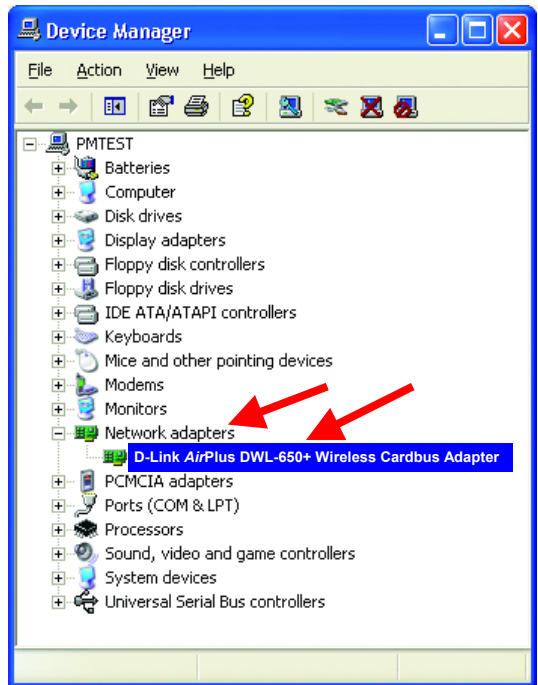


- **Select the Hardware Tab**
- Click **Device Manager**

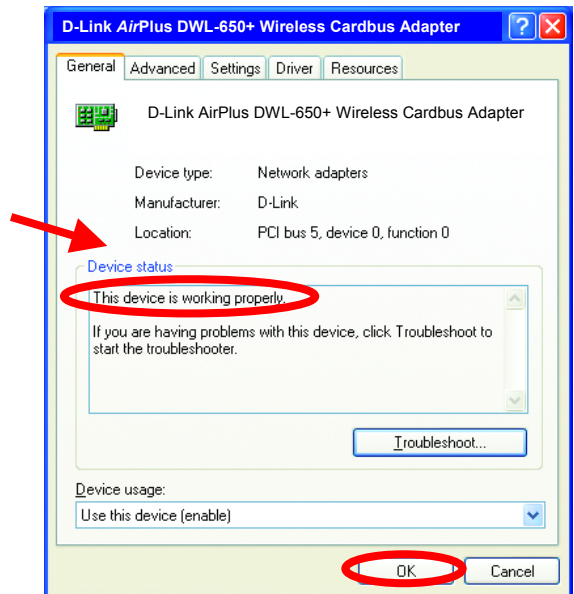


## Troubleshooting

- Double-click on **Network Adapters**
- **Right-click** on **D-Link AirPlus DWL-650+ Wireless Cardbus Adapter**. (Please note that we use the DWL-650+ as an example of a wireless network adapter. You may be using a different wireless network adapter, but your troubleshooting procedure will be similar to this example.)
- 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

### 4. 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.

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

- Antenna Orientation- Try different antenna orientations for the DWL-800AP+. Try to keep the antenna at least 6 inches away from the wall or other objects.
- If you are using 2.4GHz cordless phones, X-10 equipment or other home security systems, ceiling fans, and lights, your wireless connection will degrade dramatically or drop altogether. Try changing the Channel on your 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.

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

If you have enabled Encryption on the DWL-800AP+, you must also enable encryption on all wireless clients in order to establish a wireless connection.

- Make sure that the encryption bit level is the same on the DWL-800AP+ and the Wireless Client.
- Make sure that the SSID on the DWL-800AP+ and the Wireless Client are exactly the same. If they are not, wireless connection will not be established.
- Check that the DWL-800AP+ is configured properly, whether as a repeater or an access point.
- Check that the wireless clients are working properly.

## 7. Resetting the DWL-800AP+ to Factory Default Settings

After you have tried other methods for troubleshooting your network, you may choose to **Reset** the DWL-800AP+ to the factory default settings. Remember that D-Link *AirPlus* products network together, out of the box, at the factory default settings.



To hard-reset the D-Link *AirPlus* DWL-800AP+ to Factory Default Settings, please do the following:

- Locate the **Reset** button on the back of the DWL-800AP+
- Use a paper clip to press the **Reset** button.
- Hold for about 5 seconds and then release
- After the DWL-800AP+ reboots (this may take a few minutes) it will be reset to the factory **Default** settings.

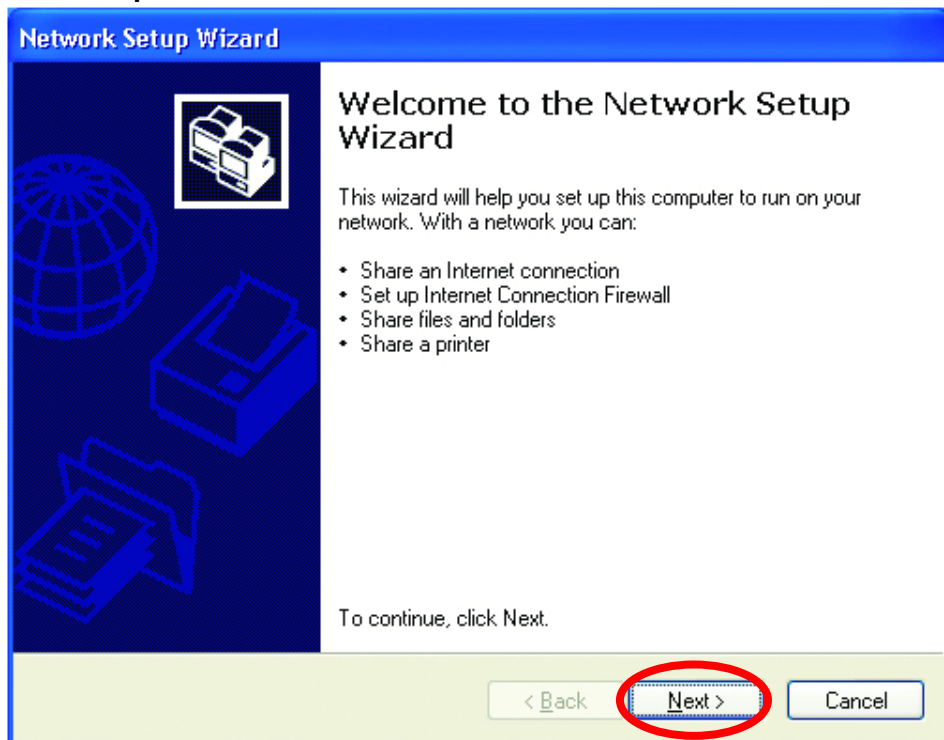
## 7. Networking Basics

### 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 2000, ME or 98.*

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

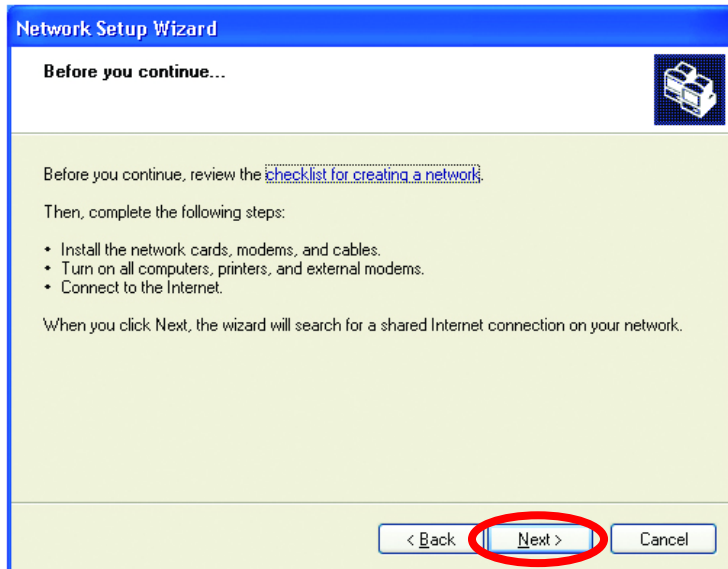


When this screen appears, **Click Next**.



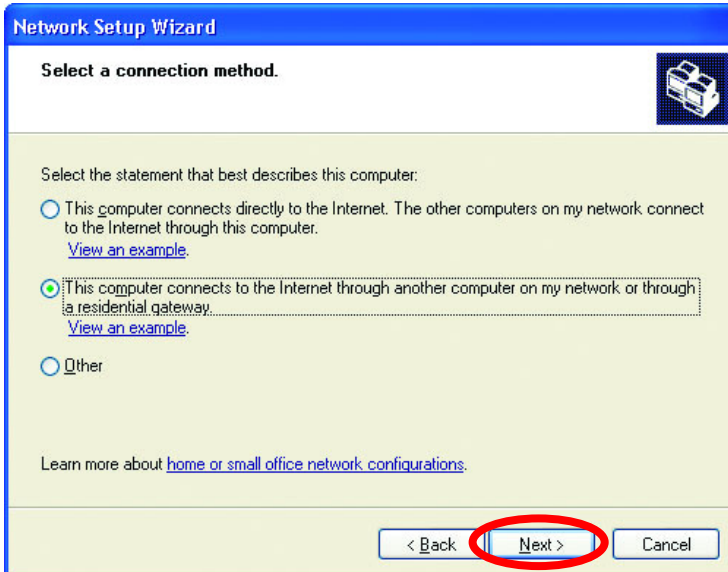
## Networking Basics

Please follow all the instructions in this window:



Click **Next**

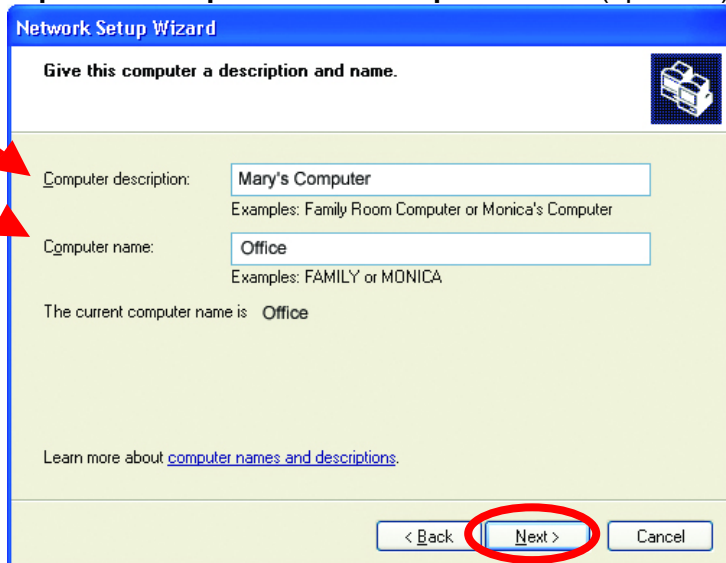
In the following window, select the best description of your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.



Click **Next**

## Networking Basics

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



**Network Setup Wizard**

**Give this computer a description and name.**

Computer description:   
Examples: Family Room Computer or Monica's Computer

Computer name:   
Examples: FAMILY or MONICA

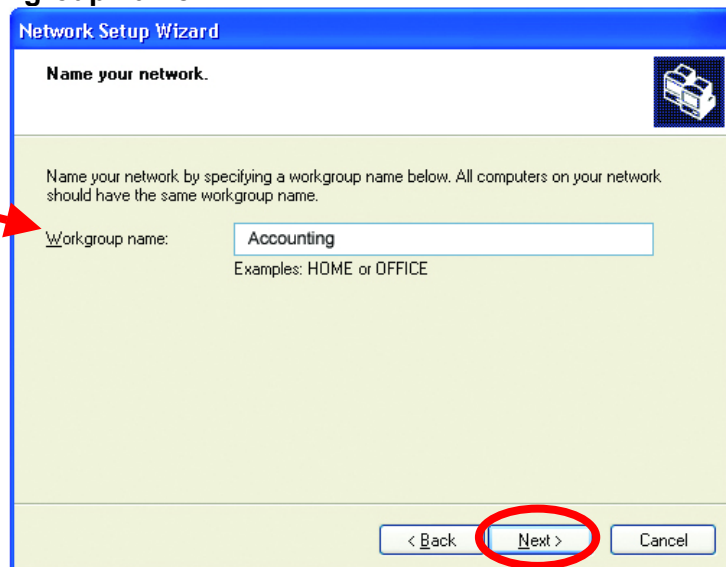
The current computer name is **Office**

Learn more about [computer names and descriptions](#).

< Back **Next >** Cancel

Click **Next**

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



**Network Setup Wizard**

**Name your network.**

Name your network by specifying a workgroup name below. All computers on your network should have the same workgroup name.

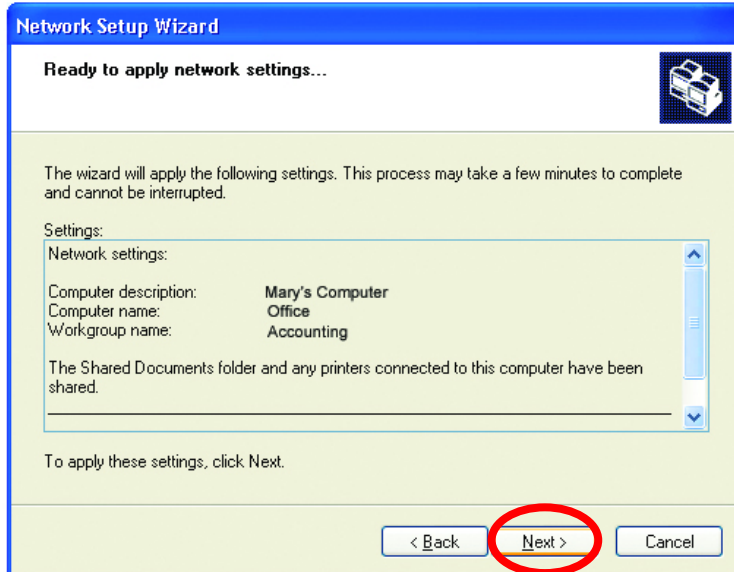
Workgroup name:   
Examples: HOME or OFFICE

< Back **Next >** Cancel

Click **Next**

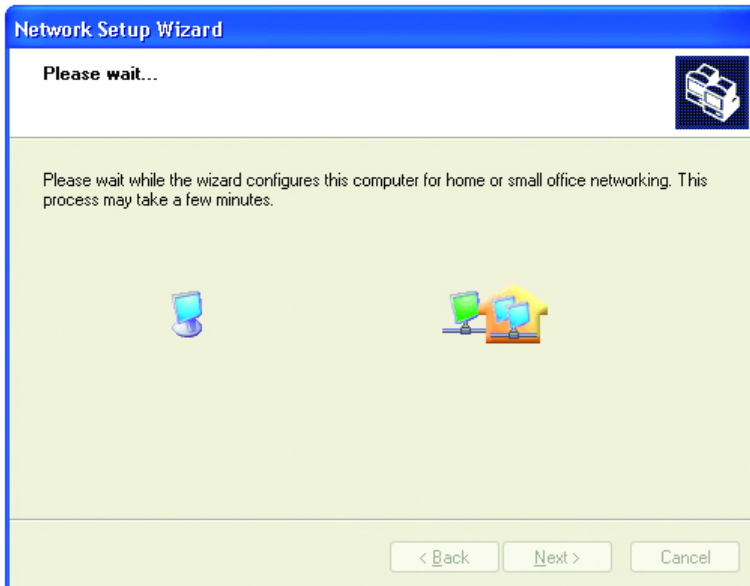
## Networking Basics

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



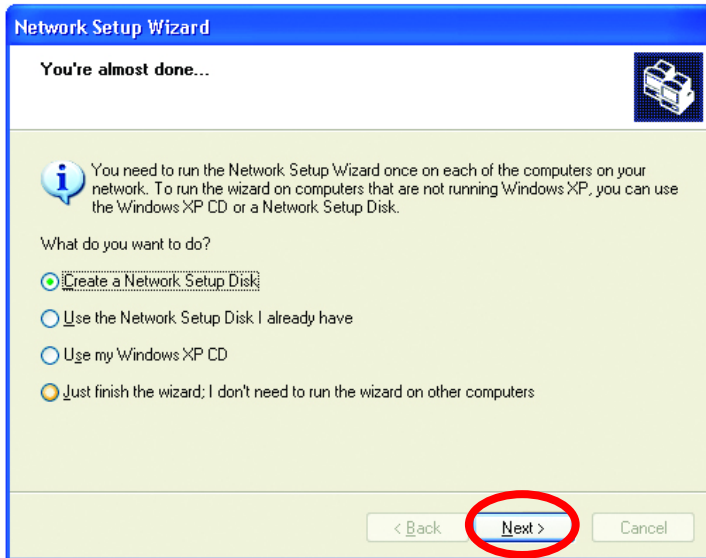
When the changes are complete, click **Next**.

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



## Networking Basics

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**.



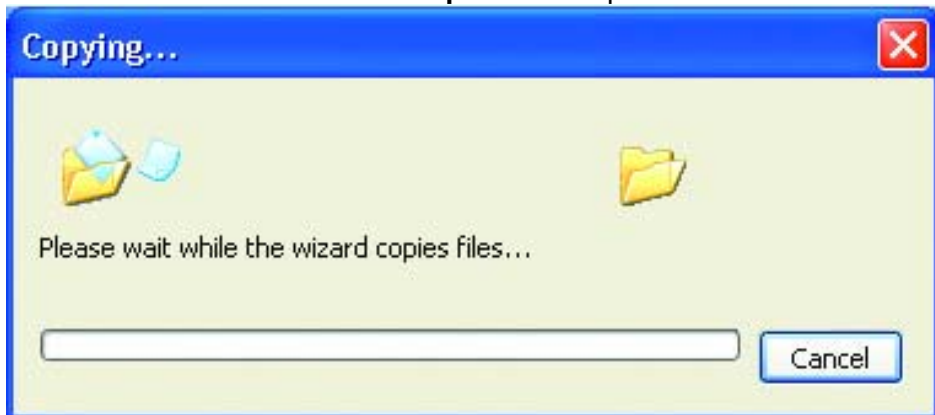
Insert a disk into the Floppy Disk Drive, in this case drive **A**.



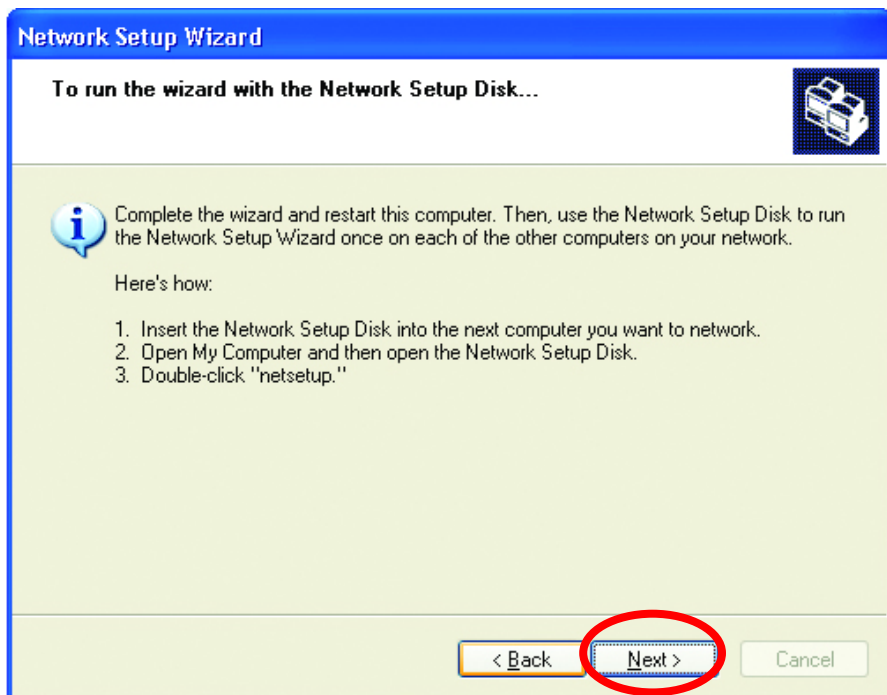
Format the disk if you wish, and click **Next**.

## Networking Basics

Please wait while the **Network Setup Wizard** copies the files.

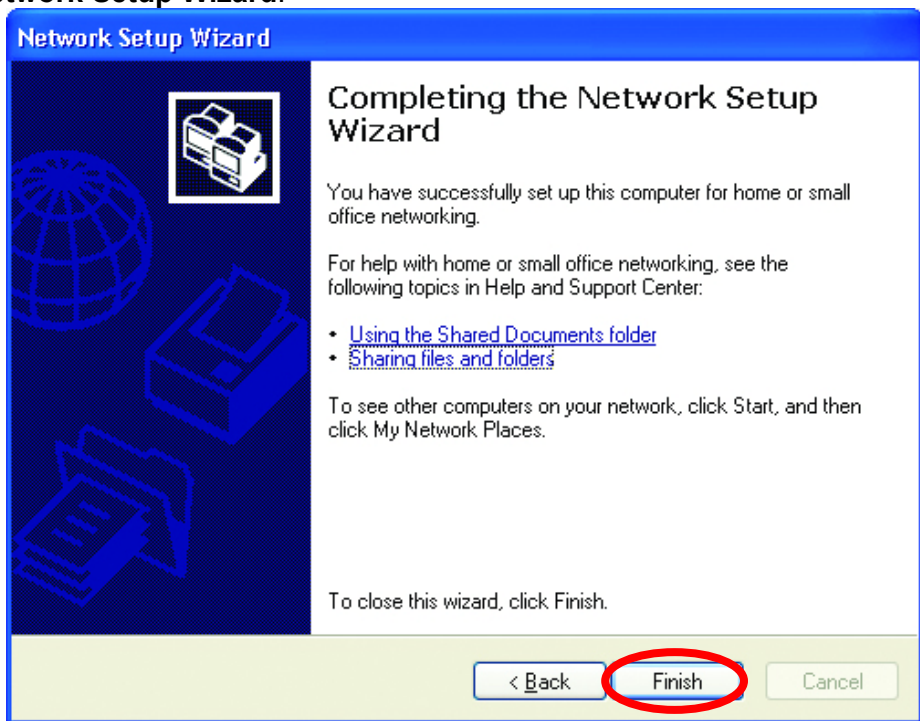


Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.

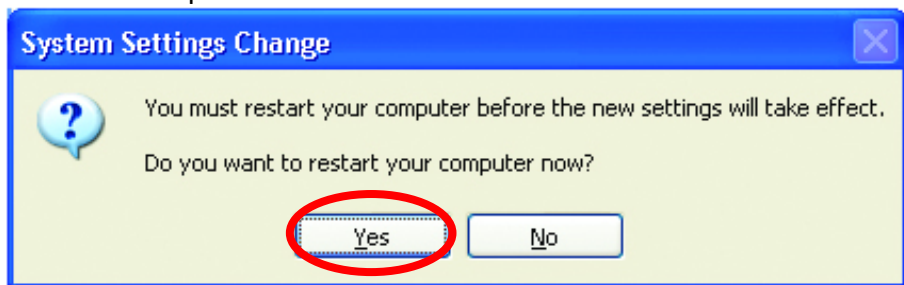


## Networking Basics

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.

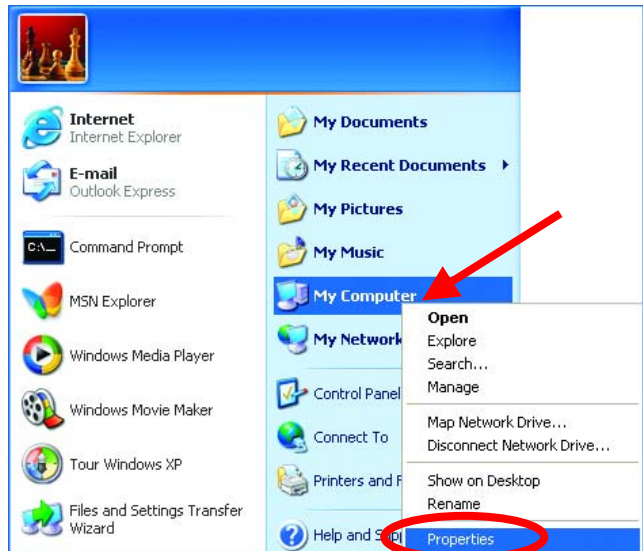
## Networking Basics

### Naming your Computer

To name your computer, please follow these directions:

In **Windows XP**:

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

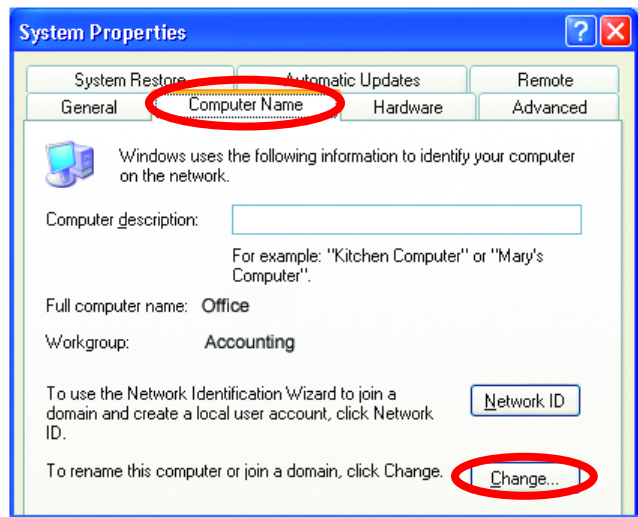


- Select the **Computer Name Tab** in the **System Properties** window.

*You may enter a **Computer description** if you wish, this field is optional.*

To rename the computer and join a domain,

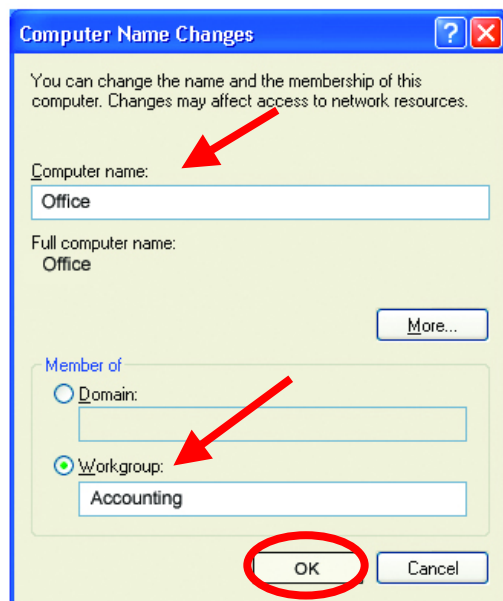
- Click **Change**



## Networking Basics

### 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**

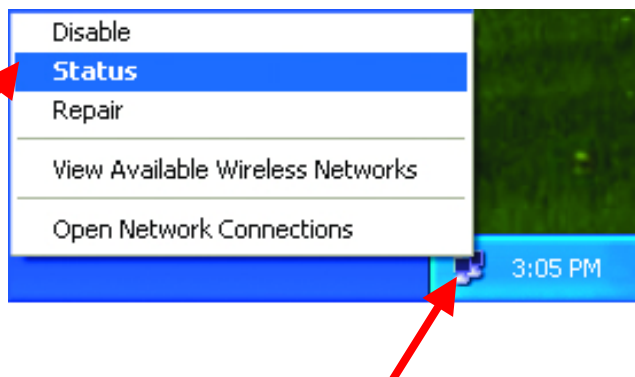


### Checking the IP Address in Windows XP

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.) 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**





## Networking Basics

### Checking the IP Address in Windows XP

This window will appear.

Click the **Support Tab**

Click **Close**.

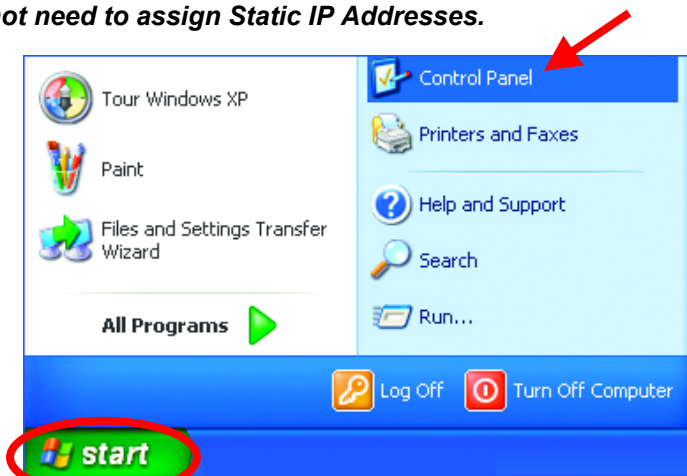


### Assigning a Static IP Address in Windows XP/2000

**Note:** 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:

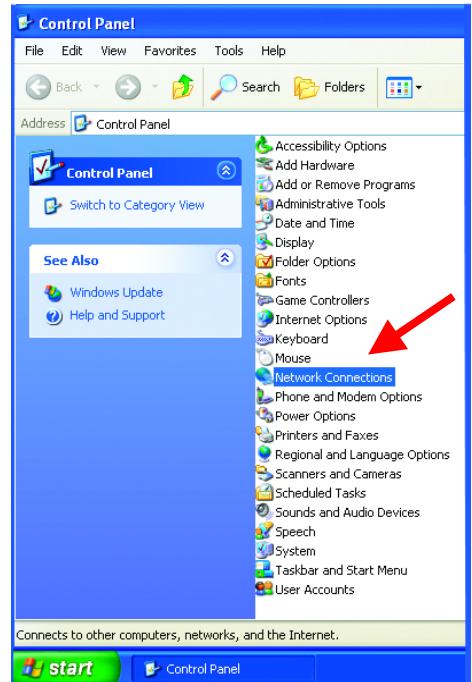
- Go to **Start**
- **Double-click** on **Control Panel**



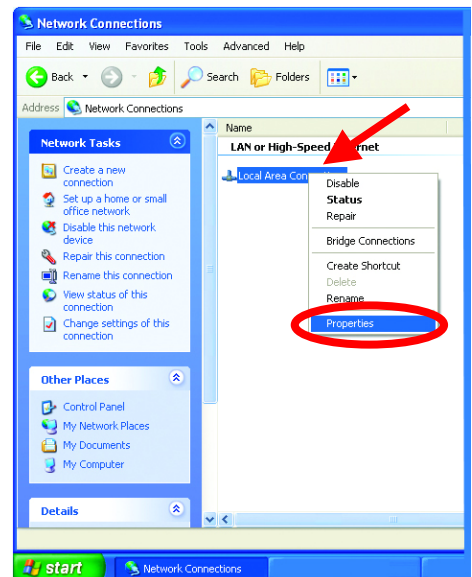
## Networking Basics

### Assigning a Static IP Address

- Double-click on **Network Connections**



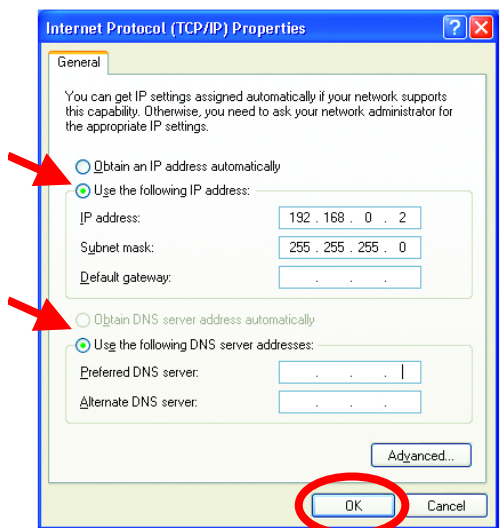
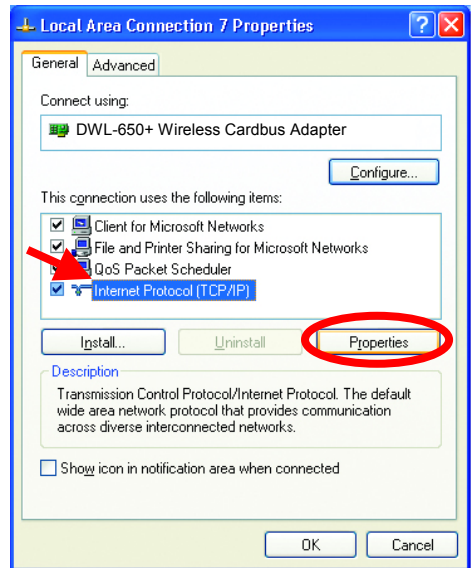
- Right-click on **Local Area Connections**.
- Double-click **Properties**



## Networking Basics

### Assigning a Static IP Address

- 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 Gateway/Router.)

## Networking Basics

### Assigning a Static IP Address with *Macintosh OS X*

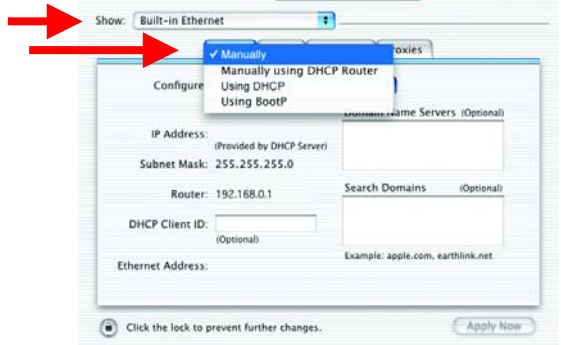
Go to the **Apple Menu** and select **System Preferences**.

Click on **Network**



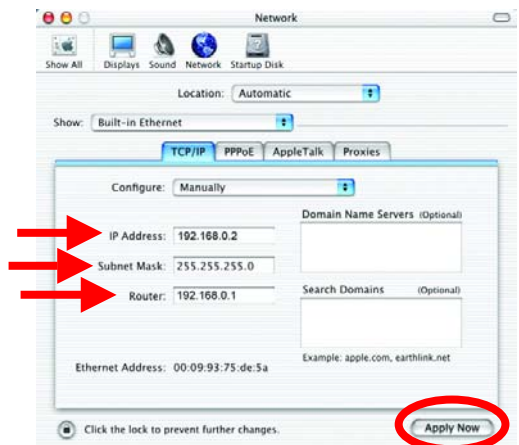
Select **Built-in Ethernet** in the **Show** pull-down menu.

Select **Manually** in the **Configure** pull-down menu.



Input the **Static IP Address**, the **Subnet Mask** and the **Router IP Address** in the appropriate fields.

Click **Apply Now**



## Networking Basics

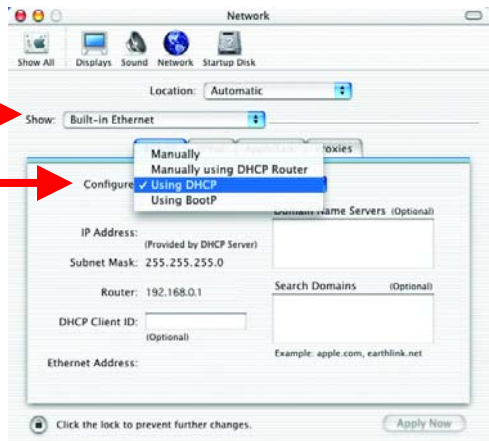
### Selecting a Dynamic IP Address with *Macintosh OS X*

Go to the **Apple Menu** and select **System Preferences**.

Click on **Network**



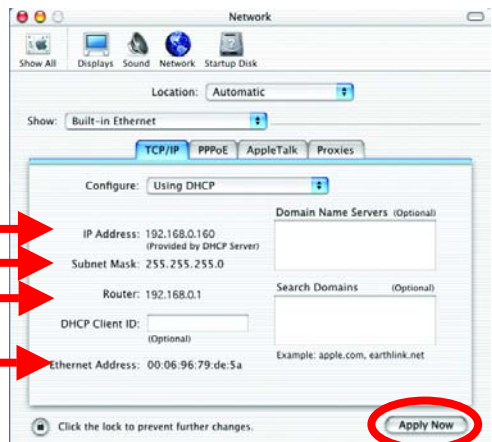
Select **Built-in Ethernet** in the **Show** pull-down menu.



Select **Using DHCP** in the **Configure** pull-down menu.

Click **Apply Now**

The **IP Address**, **Subnet mask**, and the **Router's IP Address** will appear in a few seconds.

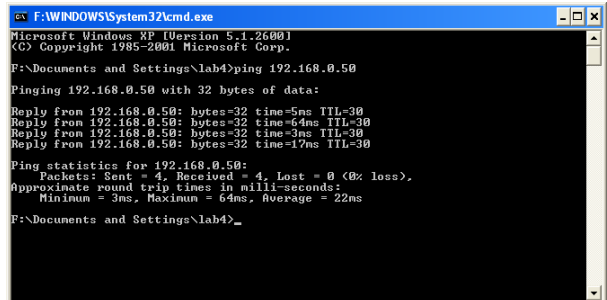


## Networking Basics

### Checking the Wireless Connection by Pinging For Windows XP and 2000:

Go to **Start > Run > type cmd**. A window similar to *Fig. 9.25* 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 [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lab4>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

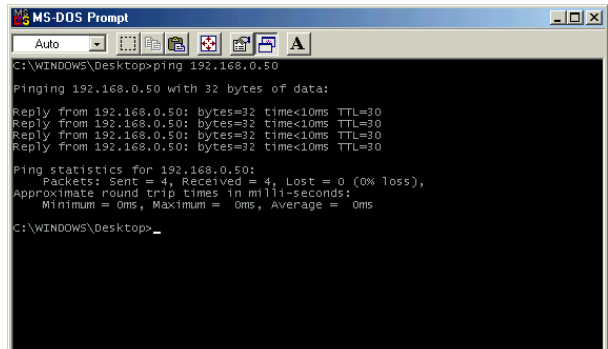
Reply from 192.168.0.50: bytes=32 time=5ms TTL=30
Reply from 192.168.0.50: bytes=32 time=64ms TTL=30
Reply from 192.168.0.50: bytes=32 time=3ms TTL=30
Reply from 192.168.0.50: bytes=32 time=17ms TTL=30

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

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

### Checking the Wireless Connection by Pinging For Windows Me and 98:

Go to **Start > Run > type command**. A window similar to *Fig. 9.26* 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.



```
MS-DOS Prompt

C:\WINDOWS\Desktop>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<10ms TTL=30
Reply from 192.168.0.50: bytes=32 time<10ms TTL=30
Reply from 192.168.0.50: bytes=32 time<10ms TTL=30
Reply from 192.168.0.50: bytes=32 time<10ms TTL=30

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

C:\WINDOWS\Desktop>
```

## ***Adding and Sharing Printers in Windows XP***

After you have run the **Network Setup Wizard** on all the computers in your network (please see the **Network Setup Wizard** section at the beginning of **Networking Basics**,) you can use the **Add Printer Wizard** to add or share a printer on your network.

Whether you want to add a **local printer** (a printer connected directly to one computer,) share an **LPR printer** (a printer connected to a print server) or share a **network printer** (a printer connected to your network through a Gateway/Router,) use the **Add Printer Wizard**. Please follow the directions below:

***First, make sure that you have run the Network Setup Wizard on all of the computers on your network.***

We will show you 3 ways to use the **Add Printer Wizard**

1. Adding a local printer
2. Sharing an network printer
3. Sharing an LPR printer

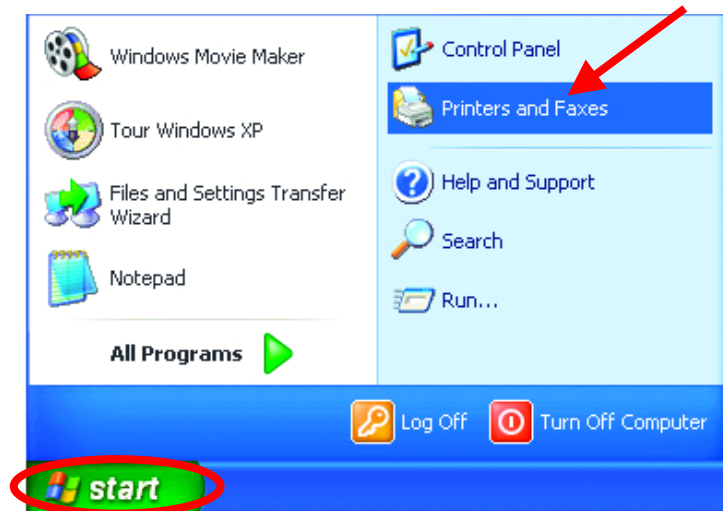
## Networking Basics

### Adding a local printer

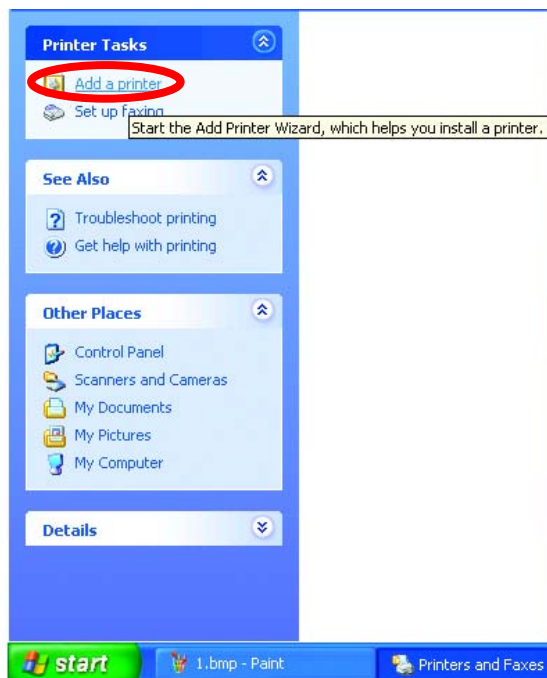
*(A printer connected directly to a computer)*

A printer that is not shared on the network and is connected directly to one computer is called a **local printer**. If you do not need to share your printer on a network, follow these directions to add the printer to one computer.

- Go to **Start> Printers and Faxes**



- Click on **Add a printer**

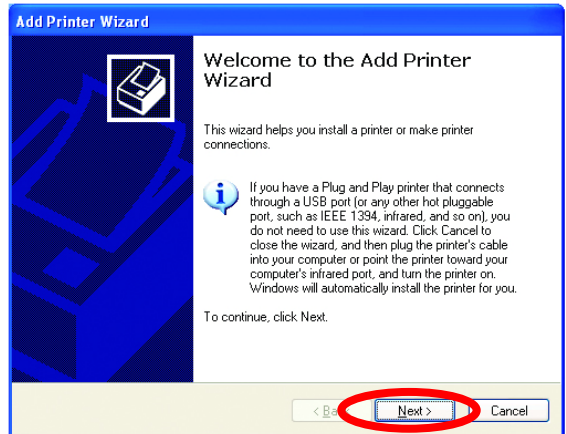




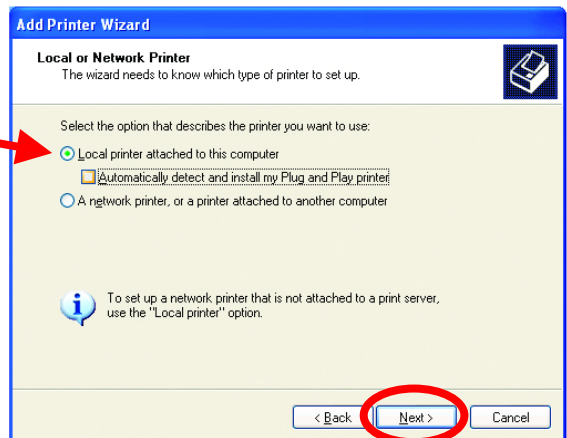
## Networking Basics

### Adding a local printer

- Click **Next**



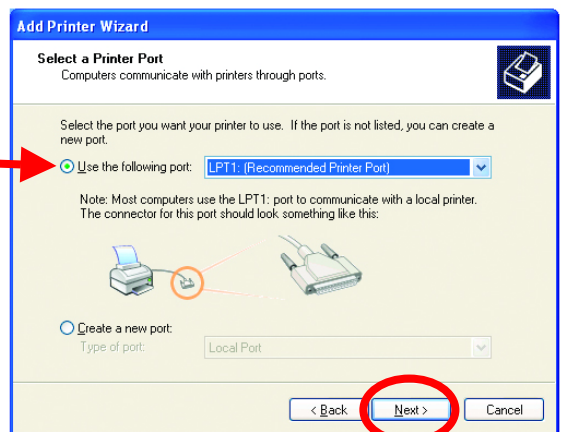
- Select **Local printer attached to this computer**
- (Deselect **Automatically detect and install my Plug and Play printer** if it has been selected.)*
- Click **Next**



- Select **Use the following port:**
- From the pull-down menu **select the correct port** for your printer

*(Most computers use the **LPT1: port**, as shown in the illustration.)*

- Click **Next**

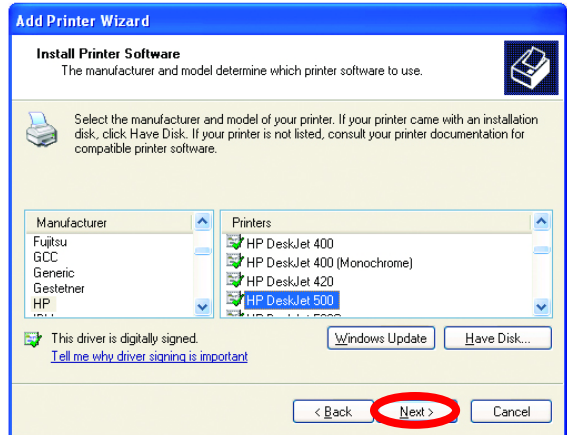


## Networking Basics

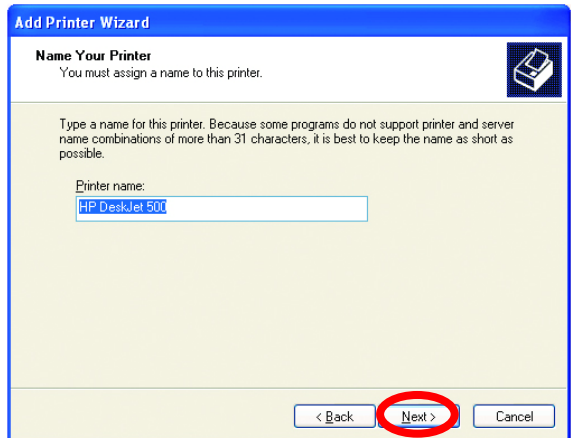
### Adding a local printer

- Select and highlight the **correct driver** for your printer.
- Click **Next**

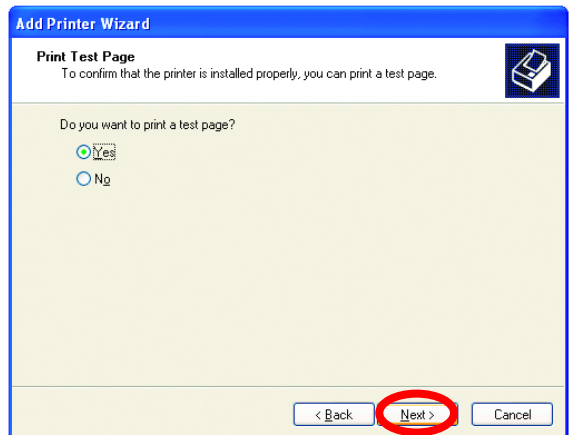
*(If the correct driver is not displayed, insert the CD or floppy disk that came with your printer and click **Have Disk.**)*



- At this screen, you can change the name of the printer (optional.)



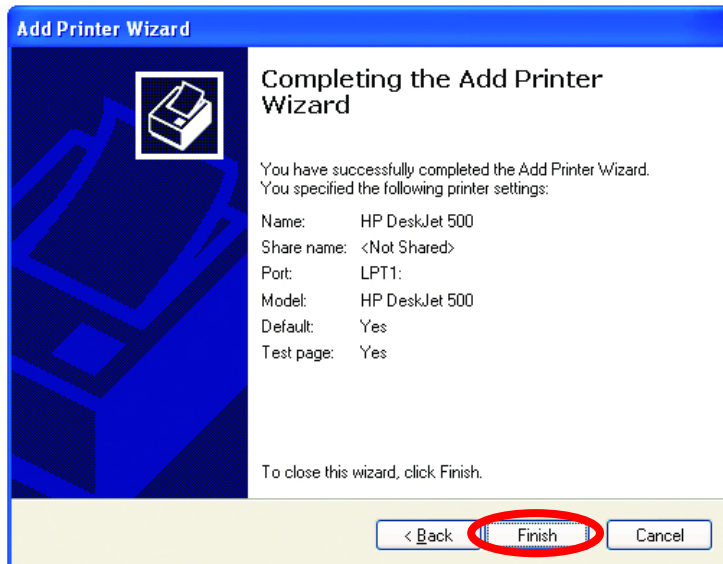
- Click **Next**
- Select **Yes**, to print a test page. A successful printing will confirm that you have chosen the correct driver.
- Click **Next**



## Networking Basics

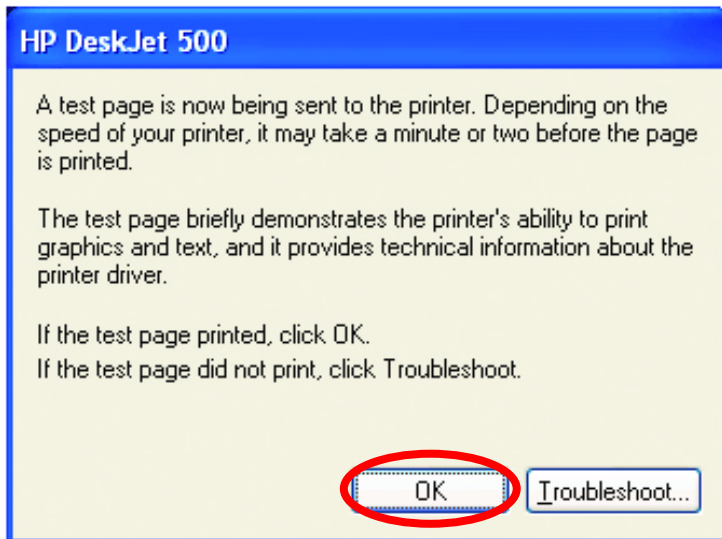
### *Adding a local printer*

This screen gives you information about your printer.



Click **Finish**

When the test page has printed,



Click **OK**

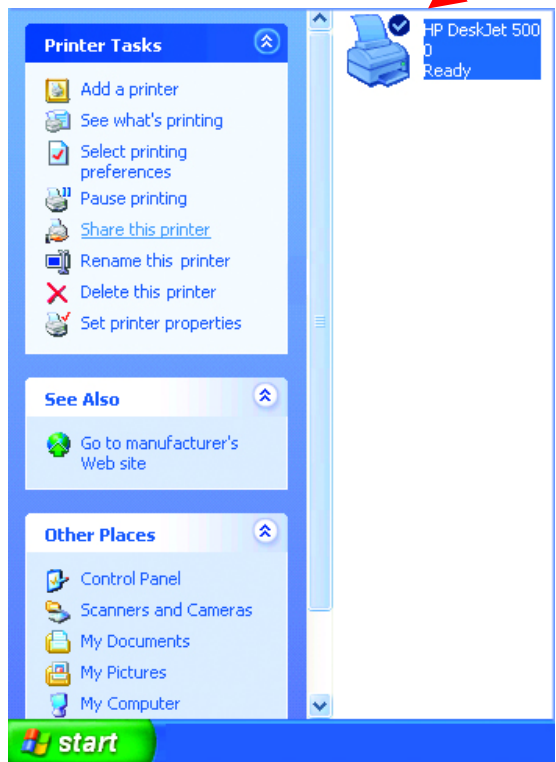
## Networking Basics

### Adding a local printer

- Go to **Start> Printers and Faxes**

*A successful installation will display the printer icon as shown at right.*

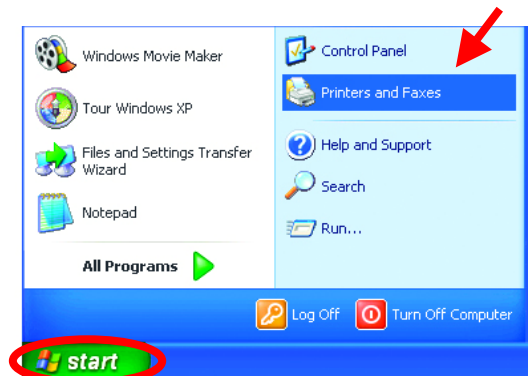
You have successfully added a local printer.



### Sharing a network printer

After you have run the **Network Setup Wizard** on all the computers on your network, you can run the **Add Printer Wizard** on all the computers on your network. Please follow these directions to use the **Add Printer Wizard** to share a printer on your network:

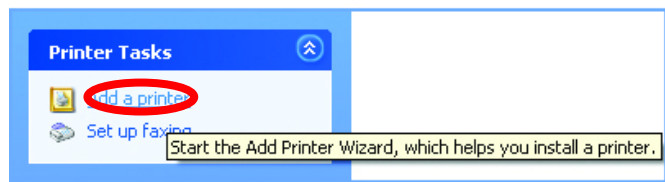
- Go to **Start> Printers and Faxes**



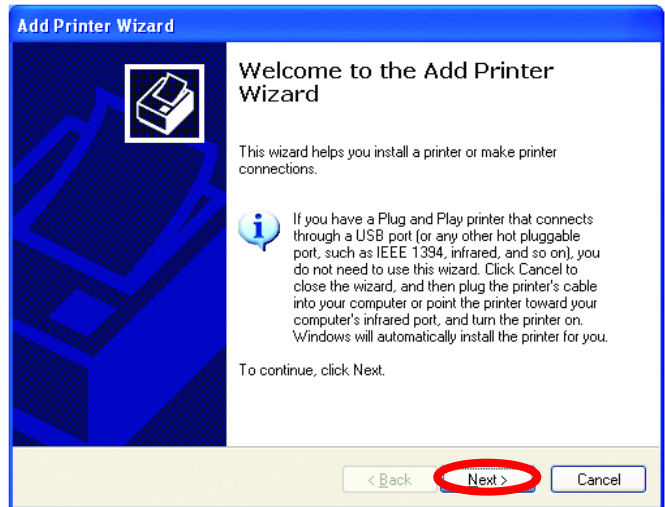
## Networking Basics

### Sharing a network printer

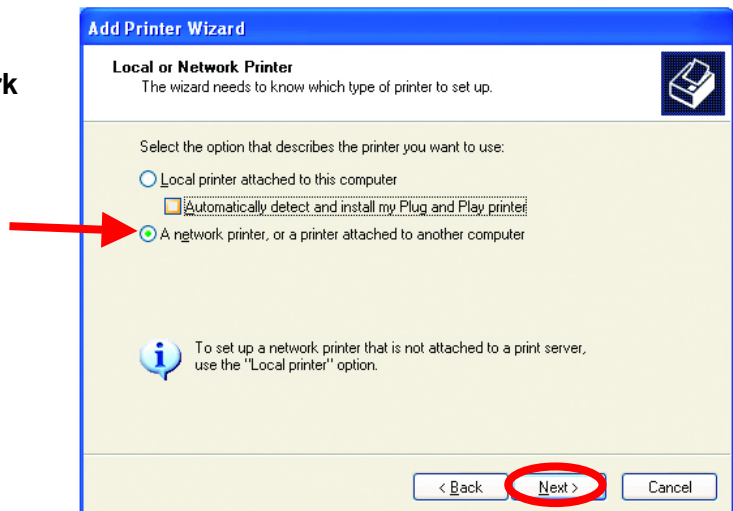
- Click on **Add a Printer**



- Click **Next**



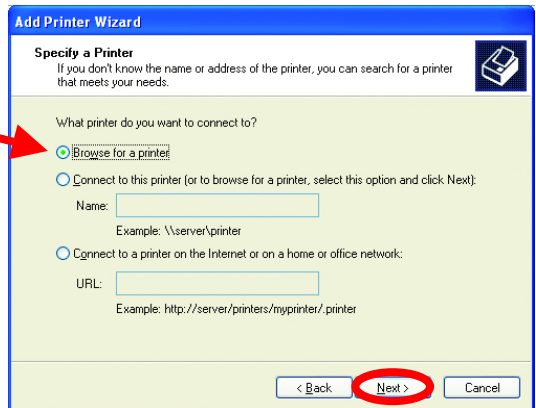
- Select **Network Printer**
- Click **Next**



## Networking Basics

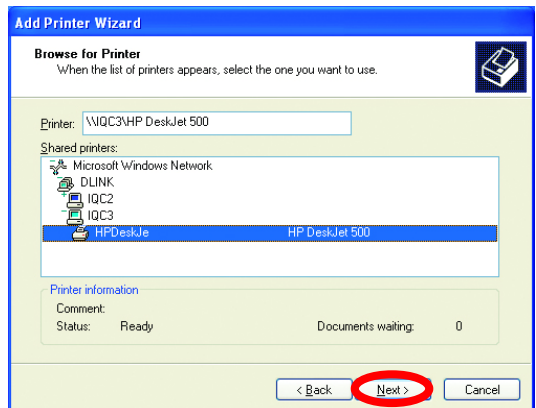
### Sharing a network printer

- Select **Browse for a printer**

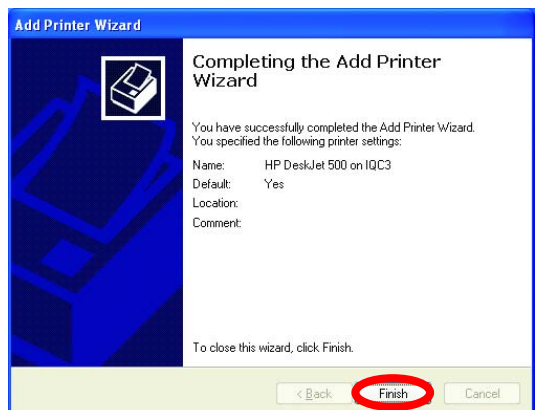


- Click **Next**

- Select the **printer** you would like to share.



- Click **Next**



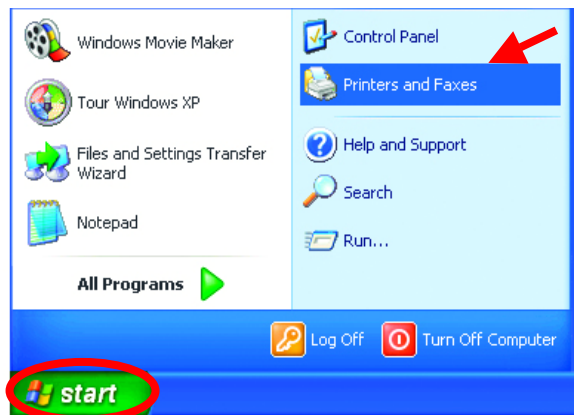
- Click **Finish**

## Networking Basics

### Sharing a network printer

To check for proper installation:

- Go to **Start> Printers and Faxes**



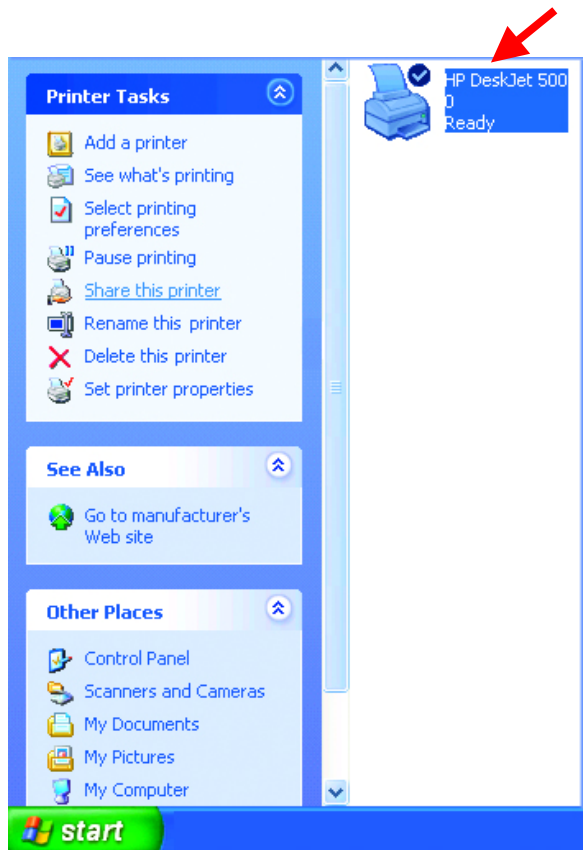
*The printer icon will appear at right, indicating proper installation.*

**You have completed adding the printer.**

*To share this printer on your network:*

- Remember the **printer name**
- Run the **Add Printer Wizard** on all the computers on your network.
- Make sure you have already run the **Network Setup Wizard** on all the network computers.

After you run the **Add Printer Wizard** on all the computers in the network, you can share the printer.





## Networking Basics

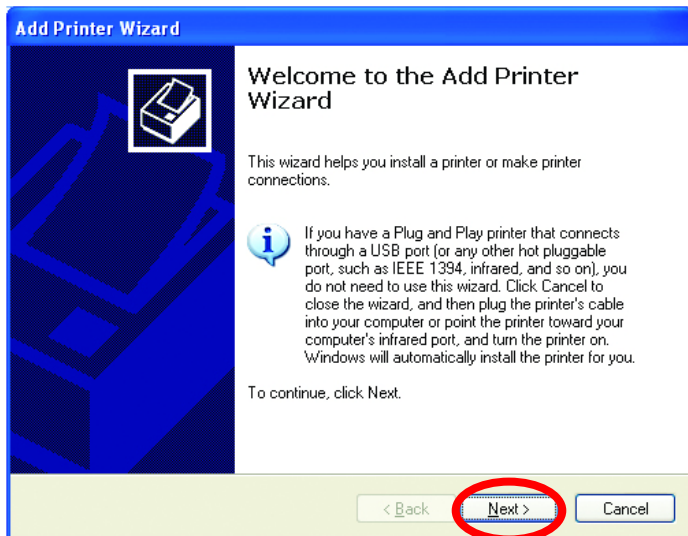
### Sharing an LPR printer

To share an **LPR printer** (using a print server,) you will need a Print Server such as the **DP-101P+**. Please make sure that you have run the **Network Setup Wizard** on all the computers on your network. To share an **LPR printer**, please follow these directions:

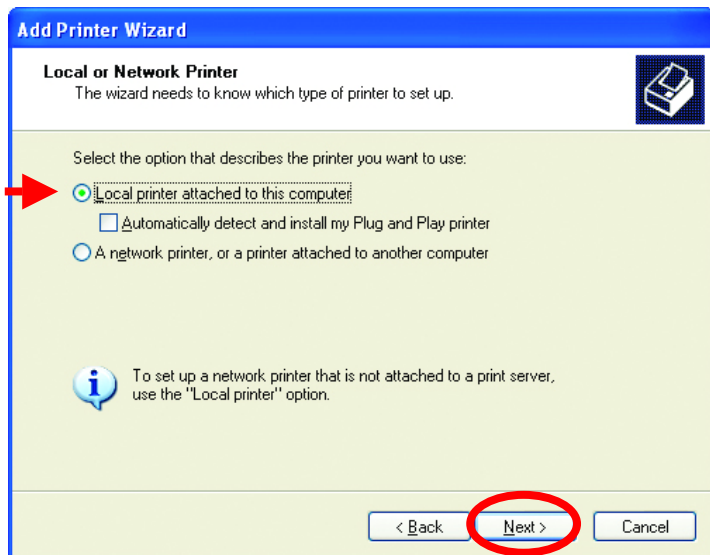
- Go to **Start> Printers and Faxes**
- Click on **Add a Printer**

The screen to the right will display.

- Click **Next**



- Select **Local printer...**



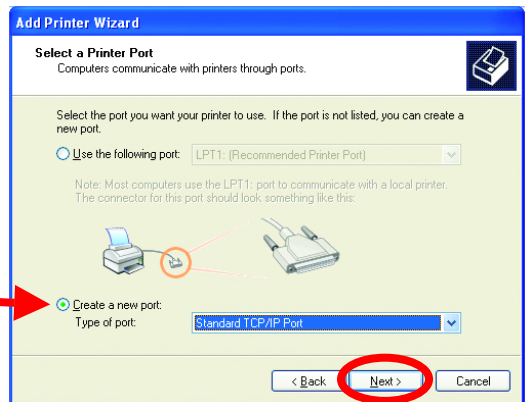
- Click **Next**



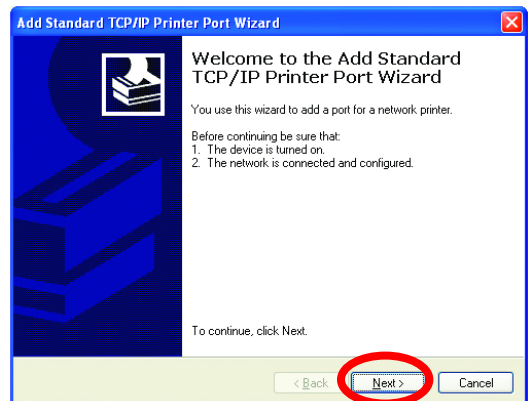
## Networking Basics

### Sharing an LPR printer

- Select **Create a new port**
- From the pull-down menu, select **Standard TCP/IP Port**, as shown.

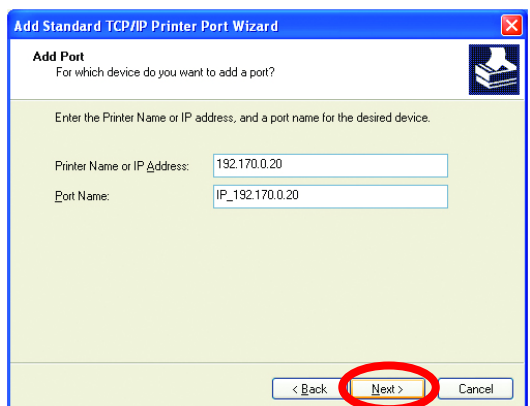


- Click **Next**
- Please read the instructions on this screen.



- Click **Next**

- Enter the **Printer IP Address** and the **Port Name**, as shown.



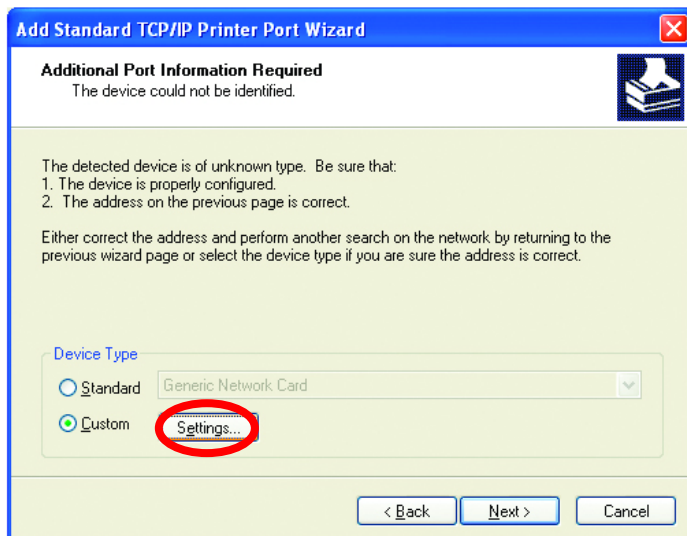
- Click **Next**

## Networking Basics

### Sharing an LPR printer

- In this screen, select **Custom**.

- Click **Settings**



**Add Standard TCP/IP Printer Port Wizard**

**Additional Port Information Required**  
The device could not be identified.

The detected device is of unknown type. Be sure that:

1. The device is properly configured.
2. The address on the previous page is correct.

Either correct the address and perform another search on the network by returning to the previous wizard page or select the device type if you are sure the address is correct.

**Device Type**

☐ Standard Generic Network Card

☒ Custom **Settings...**

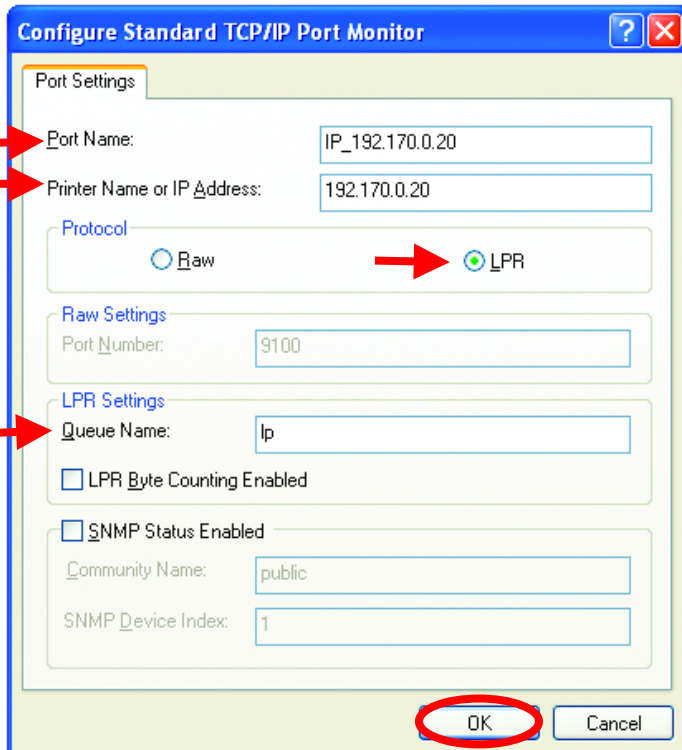
< Back Next > Cancel

- Enter the **Port Name** and the **Printer Name** or **IP Address**.

- Select **LPR**

- Enter a **Queue Name** (if your Print-Server/ Gateway has more than one port, you will need a **Queue name**.)

- Click **OK**



**Configure Standard TCP/IP Port Monitor**

**Port Settings**

Port Name: IP\_192.170.0.20

Printer Name or IP Address: 192.170.0.20

**Protocol**

☐ Raw ☒ LPR

**Raw Settings**

Port Number: 9100

**LPR Settings**

Queue Name: lp

☐ LPR Byte Counting Enabled

☐ SNMP Status Enabled

Community Name: public

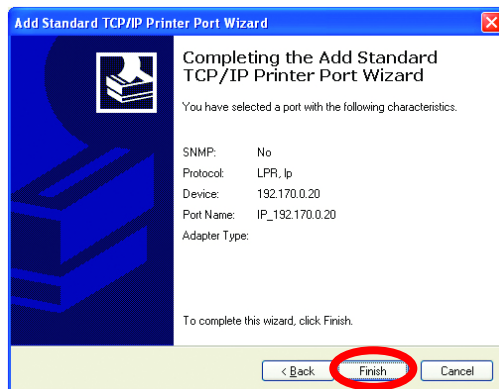
SNMP Device Index: 1

OK Cancel

## Networking Basics

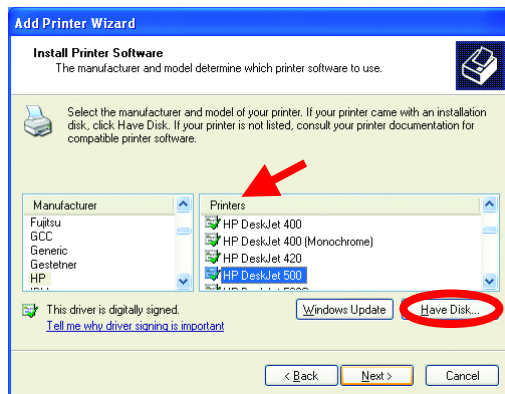
### Sharing an LPR printer

- This screen will show you information about your printer.



- Click **Finish**

- Select the **printer** you are adding from the list of **Printers**.

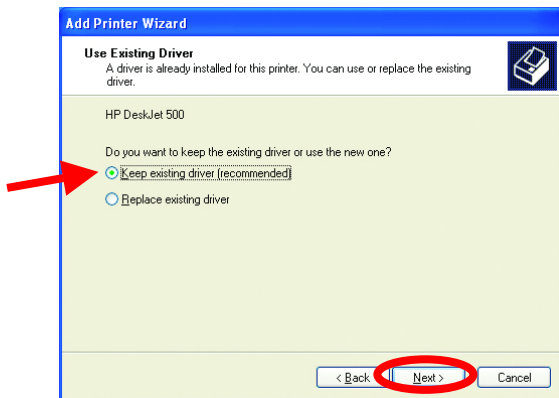


- Insert the printer driver disk that came with your printer.

- Click **Have Disk**

If the printer driver is already installed,

- Select **Keep existing driver**



- Click **Next**

## Networking Basics

### Sharing an LPR printer

- You can rename your printer if you choose. It is optional.

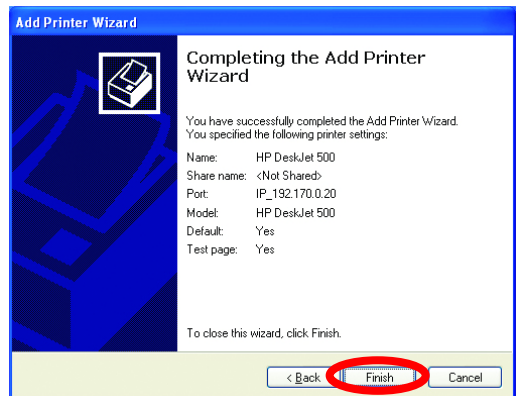
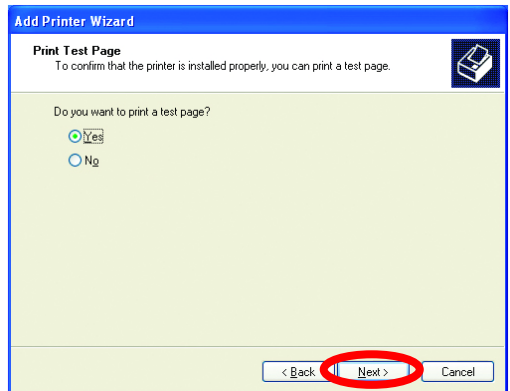
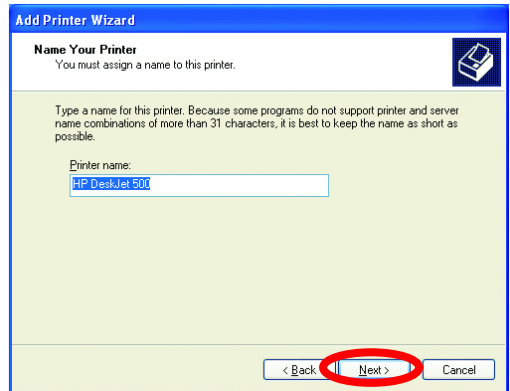
*Please remember the name of your printer. You will need this information when you use the **Add Printer Wizard** on the other computers on your network.*

- Click **Next**
- Select **Yes**, to print a test page.

- Click **Next**

*This screen will display information about your printer.*

- Click **Finish** to complete the addition of the printer.
- Please run the **Add Printer Wizard** on all the computers on your network in order to share the printer.



*Note: You must run the **Network Setup Wizard** on all the computers on your network before you run the **Add Printer Wizard**.*

## **Networking Basics**

### ***Other Tasks***

For help with other tasks in home or small office networking, see **Using the Shared Documents** folder and **Sharing files and folders** in the **Help and Support Center** in Microsoft Windows XP.

## **8. Technical Specifications**

### **Standards**

- IEEE 802.11
- IEEE 802.11b
- IEEE 802.3
- IEEE 802.3u

### **Port**

- Auto MDIX 10/100 Mbps Fast Ethernet

### **Frequency Range**

- 2.4 – 2.4835 GHz

### **Data Rates with Automatic Fallback**

- 22 Mbps
- 11 Mbps
- 5.5 Mbps
- 2 Mbps
- 1 Mbps

### **Encryption**

- 64, 128, 256-bit WEP

### **Diagnostic LEDs**

- Power (Green)
- WLAN (Yellow)

### **External Antenna Type**

- Detachable with reverse SMA connector

### **Operating Range\***

- Indoors – up to 328 feet (100 meters)
- Outdoors – up to 1,312 feet (400 meters)

\*Environmental factors may adversely affect range

**Temperature**

- Operating: 32°F to 131°F (0°C to 55°C)
- Storage: -4°F to 167°F (-4°C to 167°C)

**Humidity:**

- 5%-95% maximum, (non-condensing)

**Safety & Emissions:**

- FCC
- UL

**Media Access Control:**

- CSMA/CA with ACK

**Modulation Technology:**

- PBCC-Packet Binary Convolutional Coding
- Direct Sequence Spread Spectrum (DSSS)
- CCK – Complementary Code Keying
- 11-chip Barker sequence

**Modulation Techniques:**

- PBCC (22Mbps/8.5db)
- PBCC (11Mbps/4.5db)
- CCK (11 Mbps/8.5db)
- PBCC (5.5 Mbps/1.5db)
- CCK (5.5Mbps/5.5db)
- Barker (2 Mbps/3db)
- Barker 1Mbps/0db)

**Power Input:**

- External Power Supply
- DC 5V, 2.5A

**Transmitter Output Power:**

- 15dBm (32mW)  $\pm$  2dB

**Over-driving levels:**

- Tolerates up to +17dBm at the antenna

**Device Management:**

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

**Dimensions:**

- L=3.5 inches (90mm)
- W=3.2 inches (82mm)
- H=1.6 inch (40mm)

**Weight:**

- .34 lbs (153g)

**Warranty:**

- 3 years

## **9. Contacting Technical Support**

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

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

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

**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>

*When contacting technical support, please provide the following information:*

- *Serial number of the unit*
- *Model number or product name*
- *Software type and version number*

# 10. Warranty and Registration

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.

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

- Hardware (excluding power supplies and fans) Three (3) Years
- 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 for 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 of 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 and shipped to **D-Link Systems, Inc., 53 Discovery Drive, Irvine, CA 92618**. 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.

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

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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.

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

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

#### **IMPORTANT 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 a minimum distance of about eight inches (20cm) between the radiator and your body.

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

03/25/03

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