D-Link *Air*Plus DI-614+
Enhanced 2.4 GHz Wireless Broadband Router

Manual

Rev. 070502

D-Link®
Building Networks for People

Contents

1.   Package Contents

Contents of Package:

- **D-Link *Air*Plus DI-614+** Enhanced 2.4GHz Wireless Access Point
- Power Adapter – 5V DC, 2.5A
- Manual on CD
- Quick Installation Guide

Note: Using a power supply with a different voltage rating than the one included with the DI-614+ will cause damage and void the warranty for this product.

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

System Requirements:

- Computer with a Windows, Macintosh, or Linux based operating system with an installed Ethernet adapter
- Internet Explorer or Netscape Navigator, version 4.0 or above, with JavaScript enabled

2. Introduction

The D-Link *Air*Plus DI-614+ Wireless Broadband Router is an enhanced 802.11b high-performance, wireless router. It is an ideal way to extend the reach and number of computers connected to your wireless network.

Unlike most 802.11b routers, the DI-614+ is capable of data transfer speeds up to 22 Mbps (compared to the standard 11 Mbps) when used with other D-Link *Air*Plus products such as the DWL-520+ Wireless PCI Adapter.

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 delivers.

The DI-614+ 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 Router and the D-Link *Air*Plus 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 DI-614+.*

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 and get acquainted with wireless technology.

Connections

Ports 1-4   **WAN**   **Reset**   **Power**
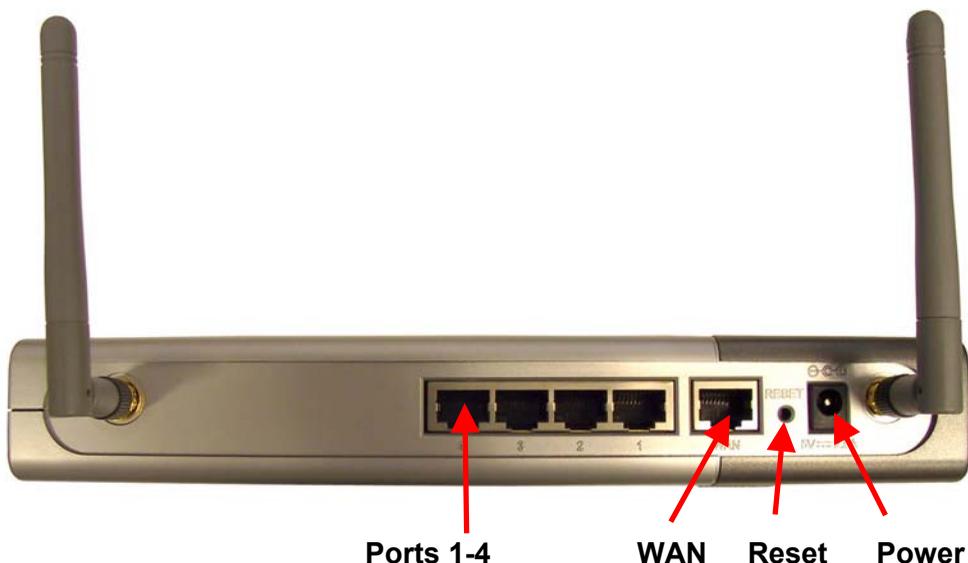
Reset: Used to restore the DI-614+ to the factory default settings

Power: Connect one end of the included power adapter into the power port and the other end into the power outlet.

WAN: WAN port socket (CAT5 Ethernet RJ-45 cable.) Connect your Cable or DSL modem.

PORTS 1-4: LAN port sockets (CAT5 Ethernet RJ-45 cable.)   The LED glows steadily when a port is connected to a hub, switch or network-adapter-equipped computer in the local area network.

Features and Benefits

- Connects multiple computers to a Broadband (Cable or DSL) modem to share the Internet connection

- Supports VPN pass-through, providing added security

- Advanced Firewall features

- DHCP server supported enables all networked computers to automatically receive IP addresses

- Up to 2x faster with other *Air*Plus products with speeds up to 22Mbps

- Web-based interface for Managing and Configuring

- Access Control to manage users on the network

- Supports special applications that require multiple connections

- Operates in the 2.4GHz frequency range

- Maximum reliability, throughput and connectivity with automatic data rate switching.

- Stronger network security with 256-bit encryption.

LEDS

M1 LED - A solid light indicates that the DI-614+ is ready.

M2 LED - A solid light indicates that the unit is defective.

WAN LED - A solid light indicates connection on the WAN port. This LED blinks during data transmission.

POWER LED - A solid light indicates a proper connection to the power supply.

WLAN LED - A solid light indicates that the wireless segment is ready. This LED blinks during wireless data transmission.

LOCAL NETWORK LED - A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4. This LED blinks during data transmission.

3.   Wireless Basics

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

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

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

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

People use wireless LAN 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 (Wireless Local Area Networks) are easy to set up, manage, change and relocate. Networks that frequently change, both physically and logically, can benefit from WLANs ease of implementation. WLANs can operate in locations where installation of wiring may be impractical.

Installation Speed and Simplicity - Installing a wireless LAN system can be fast and easy and can eliminate the need to pull cable through walls and ceilings.

Wireless Basics

Network Expansion - Wireless technology allows the network to go where wires cannot go.

Reduced Cost-of-Ownership - While the initial investment required for wireless LAN hardware might be higher than the cost of wired LAN hardware, overall installation expenses and life-cycle costs will be significantly lower. Long-term cost benefits are greatest in dynamic environments requiring frequent moves, adds, and changes.

Scalability – Wireless Local Area Networks (WLANs) can be configured in a variety of topologies 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.

*D-Link Air*Plus *Wireless Family of LAN products include*:

◆ Enhanced 2.4GHz Wireless Cardbus Adapters used with laptop computers (DWL-650+)

◆ Enhanced 2.4GHz Wireless PCI cards used with desktop computers (DWL-520+)

◆ Enhanced 2.4GHz Wireless Router and Access Point (DI-614+,DWL-900AP+)

The DI-614+ is also compatible with the D-Link Air 802.11b family of products, which include:

◆ 2.4GHz Wireless Cardbus Adapters used with laptop computers (DWL-650)

◆ 2.4GHz Wireless PCI cards used with desktop computers (DWL-520)

◆ Wireless Router/Access Point/Print Servers (DI-713P)

◆ Wireless Access Points (DWL-1000AP, DWL-900AP)

Standards - Based Technology

The IEEE standard-based technology assures that the D-Link *Air*Plus Products are 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. D-Link *Air*Plus products will automatically

Wireless Basics

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 *Air*Plus DI-614+ lets you access your network with your laptop computer from virtually anywhere. Keep in mind, however, that the number, thickness and location of walls, ceilings or other objects that the wireless signals must pass thru may limit 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 range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the wireless Access Point and your receiving device (e.g., the DWL-650+) to a minimum - Each wall or ceiling can reduce your D-Link *Air* Wireless product's range from 3-90 feet (1-30 meters.) Position your Access Points, Residential Gateways, and computers so that the number of walls or ceilings is minimized.

2. Be aware of the direct line between Access Points, 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! Try to make sure that the Access Points and adapters are positioned so that the signal will travel straight through a wall or ceiling for better reception.

3. Building Materials make a difference - A solid metal door or aluminum studs may have a negative effect on range. Try to position Access Points, and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.

4. Make sure that the device's antenna is positioned for best reception by using the software signal strength tools included with your product.

5. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that may generate extreme RF noise.

For the average home, signal range should not be an issue. If you experience low or no signal strength in areas of your home that you wish to access, consider positioning the Access Point in a location directly between the computers with wireless adapters. Additional Access Points can be connected to provide better coverage in rooms where the signal does not appear as strong as desired.

4.   Getting Started

> **Right out of the box, with its default settings, the DI-614+ will automatically connect with other D-Link *Air* or *Air*Plus products.**

For the price of a single IP Address from your Broadband Internet Service provider you can share the Internet with all the computers on your local network, without sacrificing speed or security, using D-Link *Air*Plus networking products.

IP ADDRESS

> *Please note: If you have a DHCP-capable router, such as the D-Link DI-614+, 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.**

The **Infrastructure Network** example shown on the following page contains the following D-Link network devices:

A wireless Broadband Router - **D-Link *Air*Plus DI-614+**
A laptop computer with a wireless adapter - **D-Link *Air*Plus DWL-650+**
A desktop computer with a wireless adapter - **D-Link *Air*Plus 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.*

Getting Started
Setting Up an Infrastructure Network

Please refer to the following sections of this manual for additional information about setting up a network:

Networking Basics- *learn how to check your IP Address; share printers and files.*

Using the Configuration Utility- *learn the settings you must use on each computer in your network for successful communication.*

Troubleshooting- *learn how to check for the proper installation of the network adapters' drivers and other tips for troubleshooting the network.*

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

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 the DI-614+ Wireless Broadband Router. *See the **Quick Installation Guide** included with the router.*

④   If you are including a desktop computer in your network, you can install the **D-Link DFE-*530TX+*** Ethernet NIC adapter into the desktop computer. *See the **Quick Installation Guide** included with the DFE-530TX+.*

⑤   Install the drivers for the wireless network adapter (such as the **D-Link *Air*Plus DWL-650+**) into the laptop computer. *See the **Quick Installation Guide** included with the DWL-650+.*

5. Using the Configuration Menu

Whenever you want to configure your network or the DI-614+, you can access the Configuration Utility by opening the web-browser and typing in the IP Address of the DI-614+. The DI-614+ default IP Address is shown below:

- Open the web browser
- Type in the **IP Address** of the Access Point
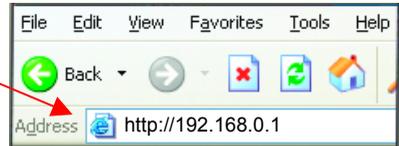
(The IP Address shown in the example above is the default setting.   If you have changed the IP Address of the DI-614+ to conform to a network, then input that IP Address in the web browser, instead of the default IP Address shown.)

- Type **admin** in the **User Name** field (lower case)

- Leave the **Password** blank

- Click **OK**

Setup Wizard

The Setup Wizard page is the first page that appears when logging into the web-based management interface. The Setup Wizard is a utility used to quickly configure the DI-614+. It will guide you through four quick and basic steps to help you connect to your ISP. You will be connected to your ISP (Internet Service Provider) and have Internet access within minutes.

Home > Wizard

Wireless

Wireless Settings are settings for the (Access Point) Portion of the Wireless Router. Allow you to change the wireless settings to fit an existing wireless network or to customize your wireless network.

Home > Wireless

SSID

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

Channel

Indicates the channel setting for the DI-614+. By default the channel is set to **6**. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network.

WEP

Wired Equivalent Protocol (WEP) is a wireless security protocol for Wireless Local Area Networks (WLAN). WEP provides security by encrypting the data that is sent over the WLAN. The DI-614+ supports 3 levels of WEP Encryption: 64Bit encryption, 128Bit encryption, and 256Bit encryption. WEP is **disabled** by default. The WEP setting can be changed to fit an existing wireless network or to customize your wireless network.

Key Type

The Key Types that are supported by the DI-614+ are HEX (Hexadecimal) and ASCII (American Standard Code for Information Interchange.) The Key Type can be changed to fit an existing wireless network or to customize your wireless network.

Passphrase

Enter a passphrase (HEX or ASCII characters) and the DI-614+ will automatically generate the keys 1-4 when the "Generate" button is pressed.

KEYS

Keys 1-4 allow you to easily change wireless encryption settings to maintain a secure network. Simply select the specific key to be used for encrypting wireless data on the network.

WAN

WAN is short for Wide Area Network. The WAN settings can be referred to as the Public settings. All IP information in the WAN settings are public IP addresses which are accessible on the Internet.

The WAN settings consist of three options: *Dynamic IP Address*, *Static IP Address*, and *PPPoE*. Select the appropriate option and fill in the information needed to connect to your ISP.

Home > WAN

Please be sure to remove any existing PPPoE client software installed on your computers
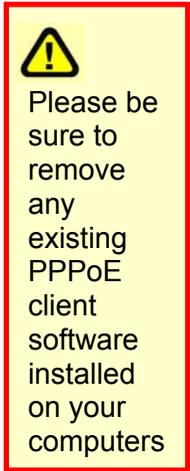
Dynamic IP Address

Choose **Dynamic IP Address** to obtain IP address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for Cable modem services.

Host Name: The Host Name field is optional but may be required by some ISPs. The host name is the device name of the Broadband Router.

MAC Address: The default MAC address is set to the WAN's physical interface MAC address on the Broadband Router. You can use the "Clone MAC Address" button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with this MAC address. It is not recommended that you change the default MAC address unless required by your ISP.

Static IP Address

Choose Static IP Address if all WAN IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four IP octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.

IP Address: Public IP address provided by your ISP.

Subnet Mask: Subnet mask provided by your ISP.

ISP Gateway Address: Public IP address of your ISP that you are connecting to.

Primary DNS Address: Primary DNS (Domain Name Server) IP provided by your ISP

Secondary DNS Address: optional

PPPoE

Please be sure to remove any Client Software program on your computer before you start your configuration of the DI-614+ Router.

Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Select Dynamic PPPoE to obtain an IP address automatically for your PPPoE connection. Select Static PPPoE to use a static IP address for your PPPoE connection.

Dynamic PPPoE: PPPoE connection where you will receive an IP address automatically from your ISP

Static PPPoE: PPPoE connection where you have an assigned (static) IP address

User Name: Your PPPoE username provided by your ISP

Password: Your PPPoE password provided by your ISP

Retype Password: Re-enter PPPoE password

Service Name: Enter the service name provided by your ISP. (optional)

IP Address: This option is only available for Static PPPoE. Enter in the static IP address for the PPPoE connection.

Primary DNS Address: Primary DNS IP provided by your ISP

Secondary DNS Address: optional

Maximum Idle time: The amount of time of inactivity before disconnecting your PPPoE session. Enter a Maximum Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the defined

Maximum Idle Time, then the connection will be dropped. Either set this to zero or enable Auto-reconnect to disable this feature.

MTU: MTU stands for Maximum Transmission Unit. For PPPoE connections, you may need to change the MTU settings in order to work correctly with your ISP.

Auto-reconnect: If enabled, the Broadband Router will automatically connect to your ISP after your system is restarted or if the connection is dropped.

HOME > LAN

LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the DI-614+. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

IP Address: The IP address of the LAN interface. The default IP address is 192.168.0.1.

Subnet Mask: The subnet mask of the LAN interface. The default subnet mask is 255.255.255.0.

Local Domain Name: This field is optional. Enter in the your local domain name.
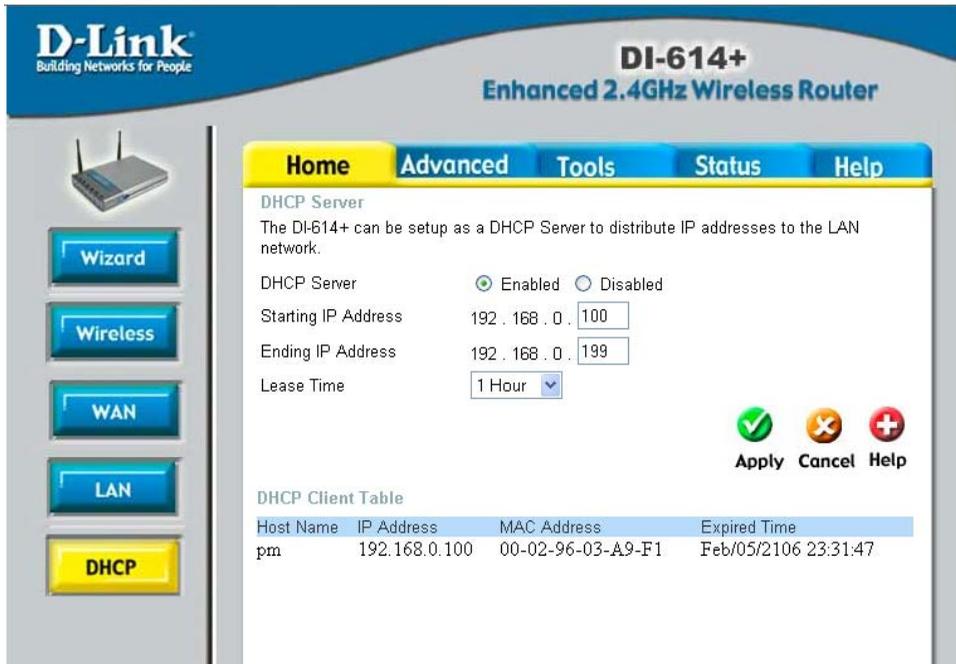
DHCP

DHCP stands for Dynamic Host Control Protocol. The DI-614+ has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DI-614+. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

Starting IP address: The starting IP address for the DHCP server's IP assignment.

Ending IP address: The ending IP address for the DHCP server's IP assignment.

Lease Time: The length of time for the IP lease.

ADVANCED > VIRTUAL SERVER

Virtual Server

The DI-614+ can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DI-614+ firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DI-614+ are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling *Virtual Server.* Depending on the requested service, the DI-614+ redirects the external service request to the appropriate server within the LAN network.

The DI-614+ is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

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

Name: The name referencing the virtual service.
Private IP: The server computer in the LAN (Local Area Network) that will be providing the virtual services.
Private Port: The port number of the service used by the Private IP computer.
Protocol Type: The protocol used for the virtual service.
Public Port: The port number on the WAN side that will be used to access the virtual service.
Schedule: The schedule of time when the virtual service will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. If it is set to Time, select the time frame for the service to be enabled. If the system time is outside of the scheduled time, the service will be disabled.

Example #1:
If you have a Web server that you wanted Internet users to access at all times, you would need to enable it. Web (HTTP) server is on LAN (Local Area Network) computer 192.168.0.25. HTTP uses port 80, TCP.
Name: Web Server
Private IP: 192.168.0.25
Protocol Type: TCP
Private Port: 80
Public Port: 80
Schedule: always

Virtual Servers List

	Name	Private IP	Protocol	Schedule	
☒	Virtual Server HTTP	192.168.0.25	TCP 80/80	always	

Click on this icon to edit the virtual service.

Click on this icon to delete the virtual service.

Example #2:
If you have an FTP server that you wanted Internet users to access by WAN port 2100 and only during the weekends, you would need to enable it as such. FTP server is on LAN computer 192.168.0.30. FTP uses port 21, TCP.

Name: FTP Server
Private IP: 192.168.0.30
Protocol Type: TCP
Private Port: 21
Public Port: 2100
Schedule: From: 01:00AM to 01:00AM, Sat to Sun

- All Internet users who want to access this FTP Server must connect to it from port 2100. This is an example of port redirection and can be useful in cases where there are many of the same servers on the LAN network.

ADVANCED > APPLICATIONS

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have

difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the DI-614+. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

The DI-614+ provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it. *Note! Only one PC can use each Special Application tunnel.*

Trigger Name: This is the name referencing the special application.
Trigger Port: This is the port used to trigger the application. It can be either a single port or a range of ports.
Trigger Type: This is the protocol used to trigger the special application.
Public Port: This is the port number on the WAN side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.
Public Type: This is the protocol used for the special application.
Schedule: This is the schedule of time when the special application will be enabled.

Filters

Filters are used to deny or allow LAN (Local Area Network) computers from accessing the Internet. The DI-614+ can be setup to deny internal computers by their IP or MAC addresses. The DI-614+ can also block users from accessing restricted web sites.

IP Filters

Use IP Filters to deny LAN IP addresses from accessing the Internet. You can deny specific port numbers or all ports for

ADVANCED > FILTERS

the specific IP address.

IP: The IP address of the LAN computer that will be denied access to the Internet.

Port: The single port or port range that will be denied access to the Internet.

Schedule: This is the schedule of time when the IP Filter will be enabled.

MAC Filters

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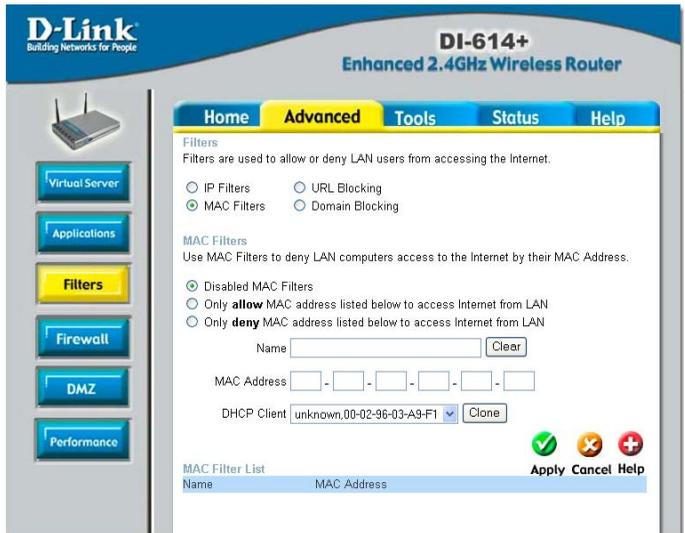
URL Blocking

URL Blocking is used to deny LAN computers from accessing specific web sites by its URL. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the blocked word, the site will not be accessible and the web page will not display.
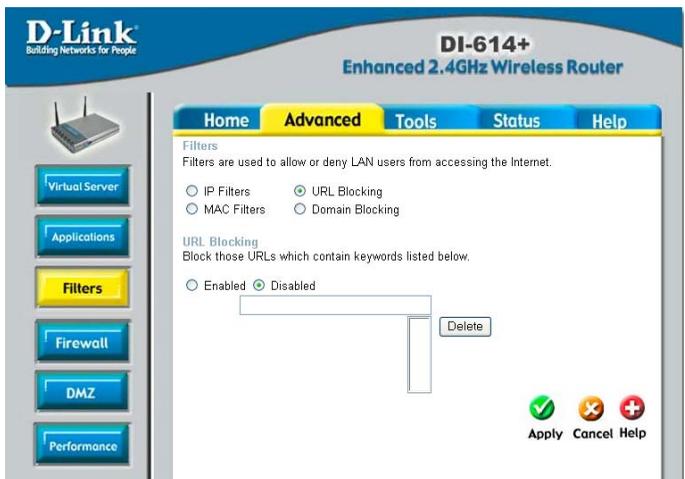
Domain Blocking

Domain Blocking is used to allow or deny LAN (Local Area Network) computers from accessing specific domains on the Internet. Domain blocking will deny all requests to a specific domain such as http and ftp. It can also allow computers to access specific sites and deny all other sites.

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DI-614+
Enhanced 2.4GHz Wireless Router

| Home | **Advanced** | Tools | Status | Help |

Filters
Filters are used to allow or deny LAN users from accessing the Internet.

- Virtual Server
- Applications
- **Filters**
- Firewall
- DMZ
- Performance

○ IP Filters   ○ URL Blocking
○ MAC Filters   ⊙ Domain Blocking

Domain Blocking
⊙ Disabled
○ **Allow** users to access all domains except "Blocked Domains"
○ **Deny** users to access all domains except "Permitted Domains"

Permitted Domains
[Delete]

Blocked Domains
[Delete]

✓ ✕ ✚
Apply Cancel Help

ADVANCED > FIREWALL

Firewall Rules is an advance feature used to deny or allow traffic from passing through the Broadband Router. It works in the same way as IP Filters with additional settings. You can create more detailed access rules for the DI-614+. When virtual services are created and enabled, it will also display in Firewall Rules. Firewall Rules contains all network firewall rules pertaining to IP (Internet Protocol).

In the **Firewall Rules List** at the bottom of the screen, the priorities of the rules are from top (highest priority) to bottom (lowest priority.)

Note: The DI-614+ MAC Address filtering rules have precedence over the Firewall Rules.

ADVANCED > DMZ
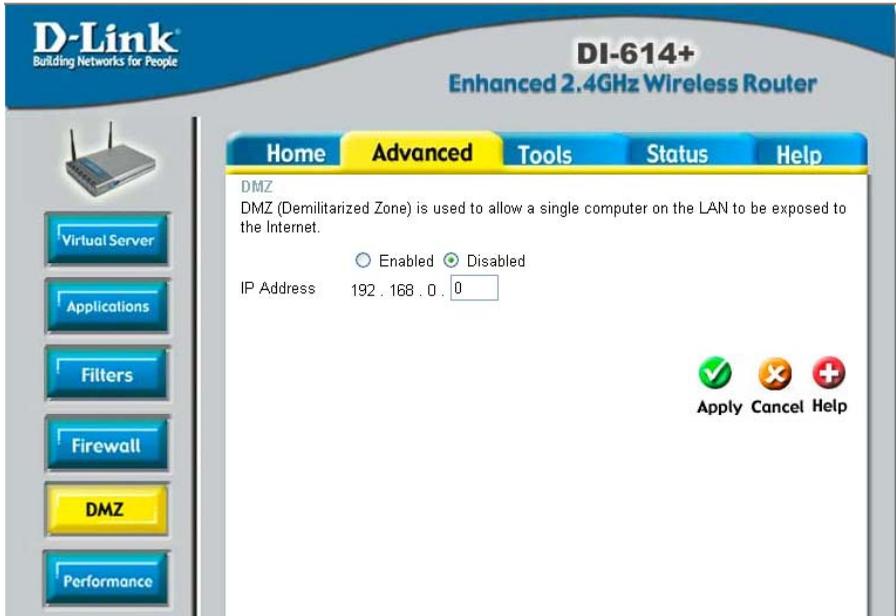
If you have a client PC that cannot run Internet applications properly from behind the DI-614+, then you can set the client up to unrestricted Internet access. It allows a computer to be exposed to the Internet. This feature is useful for gaming purposes. Enter the IP address of the internal computer that will be the DMZ host. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.

TOOLS > ADMIN

Admin

At this page, the DI-614+ administrator can change the system password. There are two accounts that can access the Broadband Router's Web-Management interface. They are *admin* and *user*. *Admin* has read/write access while *user* has read-only access. *User* can only view the settings but cannot make any changes.

Remote Management
Remote Management allows the DI-614+ to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform "Administrator" tasks. This feature enables you to perform "Administrator" tasks from the remote (Internet) host.
IP Address: Internet IP address of the computer that has access to the Broadband Router. *It is not recommended that you set the IP address to * (star), because this allows any Internet IP address to access the Broadband Router, which could result in a loss of security for your network.* If you elect to **enable** Remote Management, enter the IP Address of your remote location.
Port: Select the port number used to access the Broadband Router.
Example: http://x.x.x.x:8080   whereas x.x.x.x is the WAN IP address of the Broadband Router and 8080 is the port used for the Web-Management interface.

TOOLS > TIME

Time
The system time is the time used by the DI-614+ for scheduling services. You can manually set the time or connect to a NTP (Network Time Protocol) server. If an NTP server is set, you will only need to set the time zone. If you manually set the time, you may also set Daylight Saving dates and

the system time will automatically adjust on those dates.

TOOLS > SYSTEM

System Settings
The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file can be loaded back on the Broadband Router. To reload a system settings file, click on Browse to browse the

local hard drive and locate the system file to be used. You may also reset the Broadband Router back to factory settings by clicking on **Restore**.

Firmware Upgrade
You can upgrade the firmware of the Broadband Router at this page. Make sure the firmware you want to use is on the local hard drive of the computer. Click on Browse to browse the local hard drive and locate the firmware to be used for the update. Please check the D-Link support site for firmware updates at http://support.dlink.com.

TOOLS > FIRMWARE
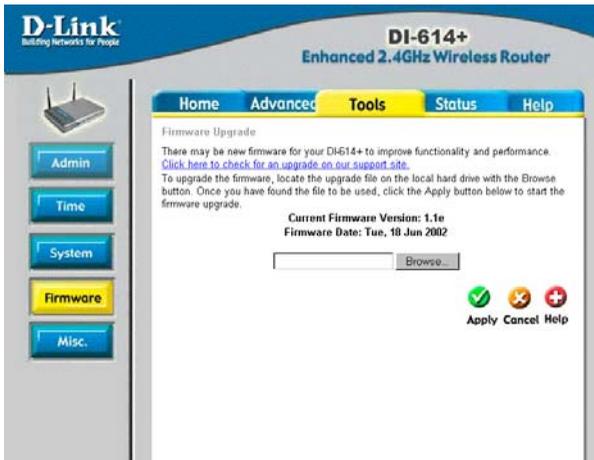
TOOLS > MISC

Miscellaneous Items
These are additional tools and features of the Broadband Router.

Ping Test
This useful diagnostic utility can be used to check if a computer is on the Internet. It sends ping packets and listens for replies from the specific host.
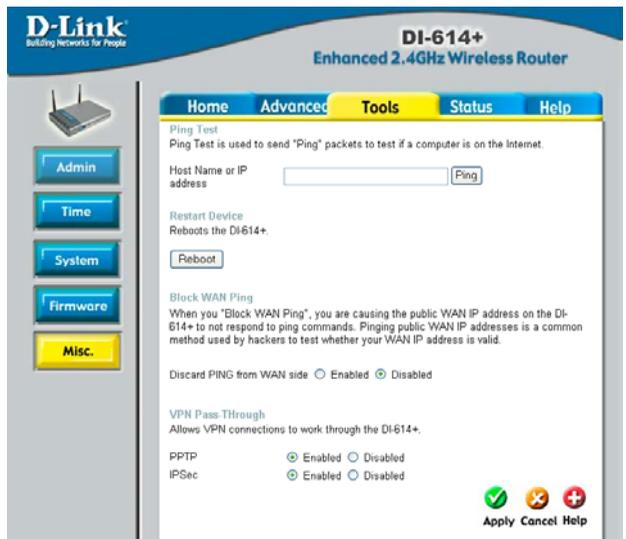
Restart Device

If for any reason the Broadband Router is not responding correctly, you may want to restart the Broadband Router.

Block WAN Ping

When you "Block WAN Ping", will not respond to ping commands from the Internet. Pinging public WAN IP addresses is a common method used by hackers to test whether your WAN IP address is valid.

Discard PING from WAN side: By enabling this option, the DI-614+ will not reply to ping (ICMP) request packets from the Internet.

VPN Pass-Through

The Broadband Router supports VPN (Virtual Private Network) pass-through for both PPTP (Point-to-Point Tunneling Protocol) and IPSec (IP Security). Once VPN pass-through is enabled, there is no need to open up virtual services. Multiple VPN connections can be made through the Broadband Router. This is useful when you have many VPN clients on the LAN network.

STATUS > DEVICE INFO

Device Information

This page in the Configuration Utility displays the current information for the Broadband Router. It will display the WAN, LAN, and MAC address information.

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

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

This page allows you to observe the DI-614+'s working status:
WAN
- **IP Address:** WAN/Public IP Address
- **Subnet Mask:** WAN/Public Subnet Mask
- **Gateway:** WAN/Public Gateway IP Address
- **Domain Name Server:** WAN/Public DNS IP Address
- **Wan Status:** WAN Connection Status

LAN
- **IP Address:** LAN/Private IP Address of the DI-614+
- **Subnet Mask:** LAN/Private Subnet Mask of the DI-614+

Firmware version: Displays the current firmware version
WAN MAC Address: Displays the WAN port MAC/hardware address
LAN MAC Address: Displays the LAN port MAC/hardware address

Log

STATUS > LOG

The Broadband Router keeps a running log of events and activities occurring on the Router. If the device is rebooted, the logs are automatically cleared. You may save the log files under Log Settings.

First Page - The first page of the log.
Last Page - The last page of the log.
Previous - Moves back one log page.
Next - Moves forward one log page.
Clear - Clears the logs completely.
Log Settings - Brings up the page to configure the logs.

Log Settings

Not only does the Broadband Router display the logs of activities and events, it can be setup to send these logs to another location.

SMTP Server - The address of the SMTP server that will be used to send the logs.
Send to - The email address the logs will be sent to. Click on Email Log Now to send the email.

STATUS > STATS

Traffic Statistics

The Broadband Router keeps statistic of traffic that passes through it. You are able to view the amount of packets that passes through the Router on both the WAN port and the LAN port. The traffic counter will reset if the device is rebooted.

STATUS > WIRELESS

Connected Wireless Clients List

The wireless client table displays a list of current connected wireless clients. This table also displays the time and MAC address of the wireless client connected.
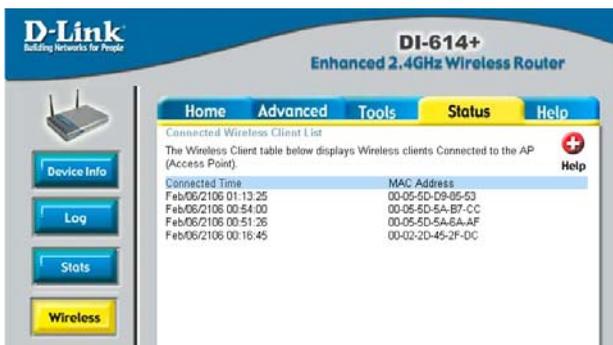
6. Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DI-614+ Wireless Access Point. We cover various aspects of the network setup, including the network adapters. Please read the following if you are having problems.

(Note: It is recommended that you use an Ethernet connection to configure the DI-614+ Access Point.)

1. The computer used to configure the DI-614+ cannot access the Configuration menu.

- Check that the **Ethernet LED** on the DI-614+ 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 6 (**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 DI-614+. Please see **Checking the IP Address in Windows XP** in the **Networking Basics** section of this manual.

Note: The IP Address of the DI-614+ is 192.168.0.1. All the computers on the network must have a unique IP Address in the same range, e.g., 192.168.0.x. and a Subnet Mask of 255.255.255.0. Any computers that have identical IP Addresses will not be visible on the network.

- Do a **Ping test** to make sure that the DI-614+ is responding. Go to **Start**>**Run**>Type **Command**>Type **ping 192.168.0.1.** A successful ping will show four replies.
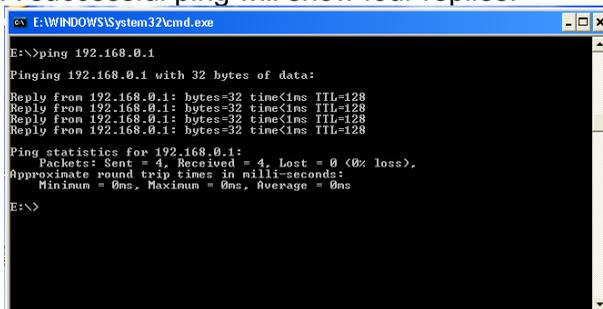
Troubleshooting

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

- Make sure the wireless client is associated and joined with the correct router. 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.
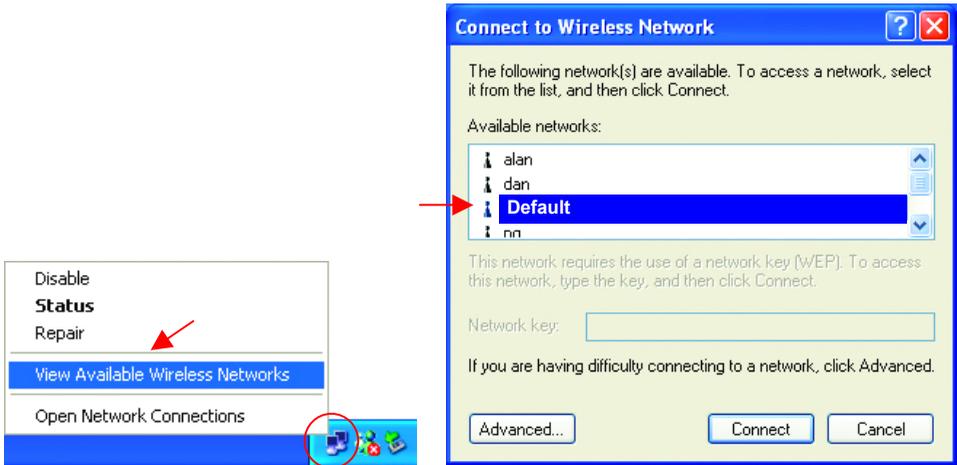
- Check that the **IP Address** assigned to the wireless adapter is within the same **IP Address range** as the gateway. *Since the DI-614+ has an IP Address of 192.168.0.1, wireless adapters must have an IP Address in the same range, e.g., 192.168.0.x. Each device must have a unique IP Address; no two 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.)*

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**

> **NOTE**: Screen shots taken using Windows XP. If you are using a different Operating System your screen may look different.

- **Select** the **Hardware Tab**

- Click **Device Manager**
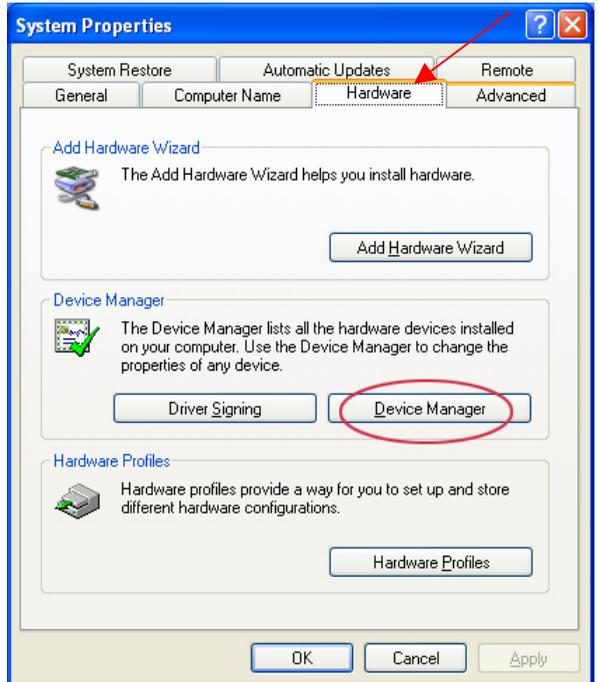
Troubleshooting

- Double-click on **Network Adapters**

- **Right-click** on **D-Link** *Air***Plus DWL-650+ Wireless Cardbus Adapter**

- Select **Properties** to check that the drivers are installed properly

Device Manager

```
File   Action   View   Help

PMTEST
├ Batteries
├ Computer
├ Disk drives
├ Display adapters
├ Floppy disk controllers
├ Floppy disk drives
├ IDE ATA/ATAPI controllers
├ Keyboards
├ Mice and other pointing devices
├ Modems
├ Monitors
├ Network adapters
│    D-Link AirPlus DWL-650 Wireless Cardbus Adapter
├ PCMCIA adapters
├ Ports (COM & LPT)
├ Processors
├ Sound, video and game controllers
├ System devices
└ Universal Serial Bus controllers
```

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

D-Link *Air***Plus DWL-650+ Wireless Cardbus Adapter**

General | Advanced | Settings | Driver | Resources

D-Link AirPlus DWL-650+ Wireless Cardbus Adapter

Device type: Network adapters
Manufacturer: D-Link
Location: PCI bus 5, device 0, function 0

Device status

This device is working properly.

If you are having problems with this device, click Troubleshoot to start the troubleshooter.

[Troubleshoot...]

Device usage:

Use this device (enable)

- Click **OK**

[OK] [Cancel]

Troubleshooting

4. Resetting the DI-614+ to Factory Default Settings

After you have tried other methods for troubleshooting your network, you may choose to **Reset** the DI-614+ to the factory default settings. Remember that D-Link *Air*Plus products network together, out of the box, at the factory default settings.

To hard-reset the D-Link *Air*Plus DI-614+ to Factory Default Settings, please do the following:

- Leave the device powered on, do not disconnect the power
- Press the reset button and hold (use a paper clip)
- Keep the button pressed about 10 seconds
- Release the button

The DI-614+ will then automatically reboot itself.

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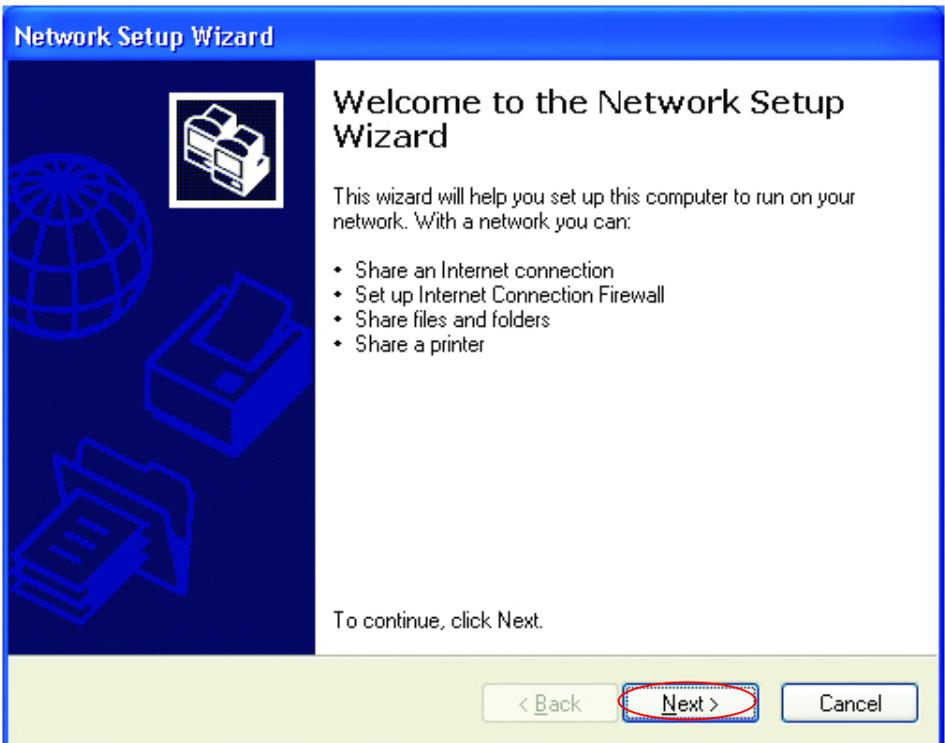
When this screen appears, **Click Next.**

Networking Basics

Please follow all the instructions in this window:
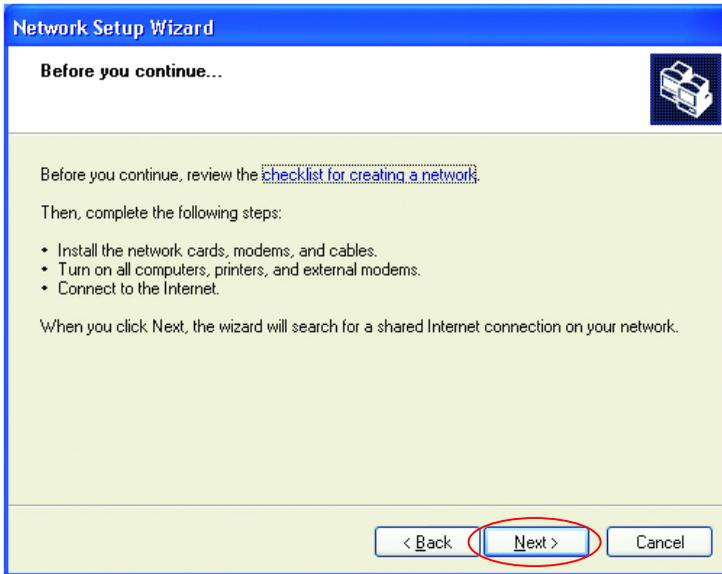
Click **Next**
In the following window, select the best description of your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.
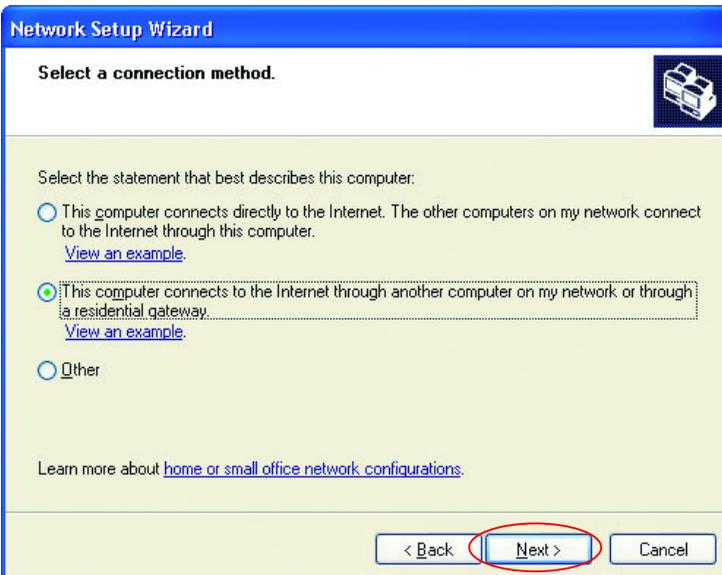
Click **Next**

Networking Basics

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

Click **Next**

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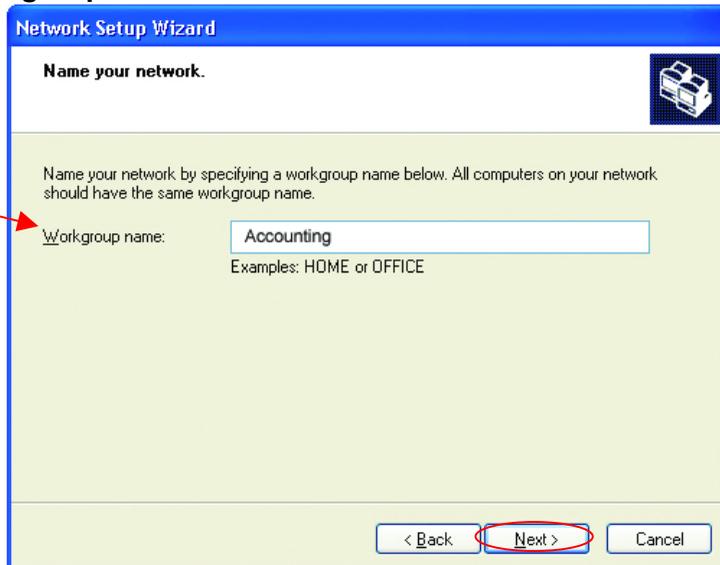
Click **Next**

Networking Basics

Please wait while the **Network Setup Wizard** applies the changes.
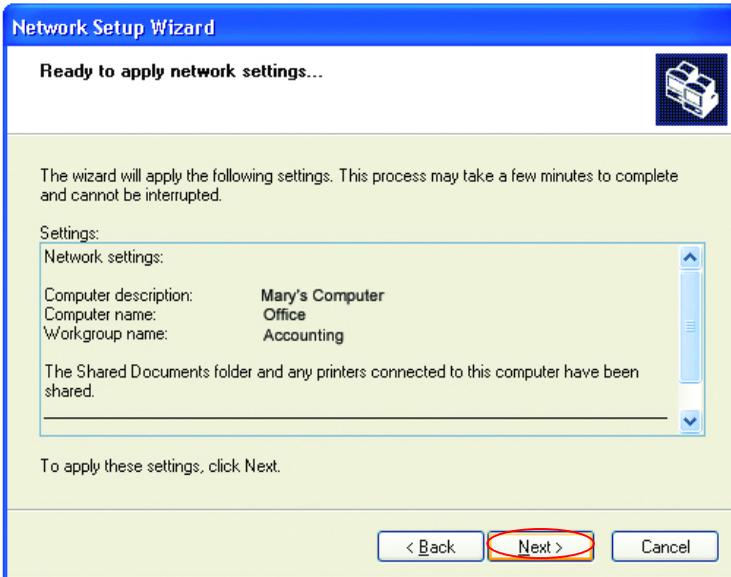
When the changes are complete, click **Next**.

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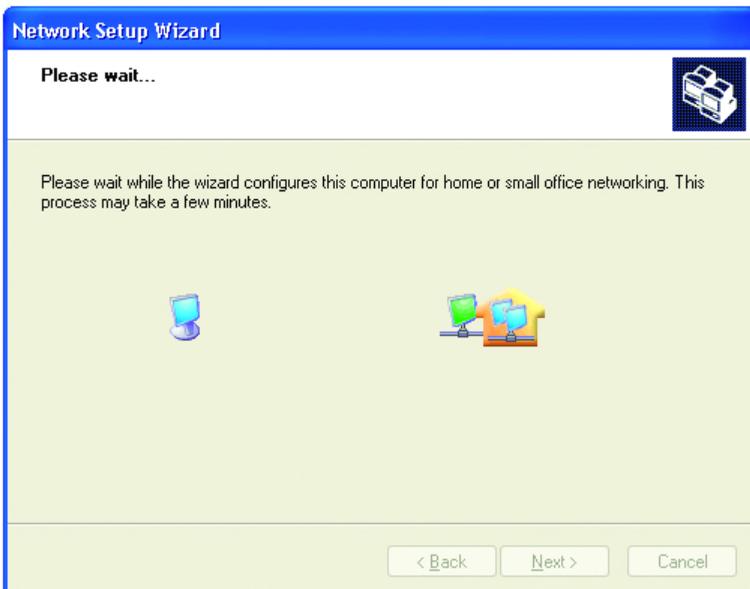
Networking Basics

In the window below, select the best option. 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**.
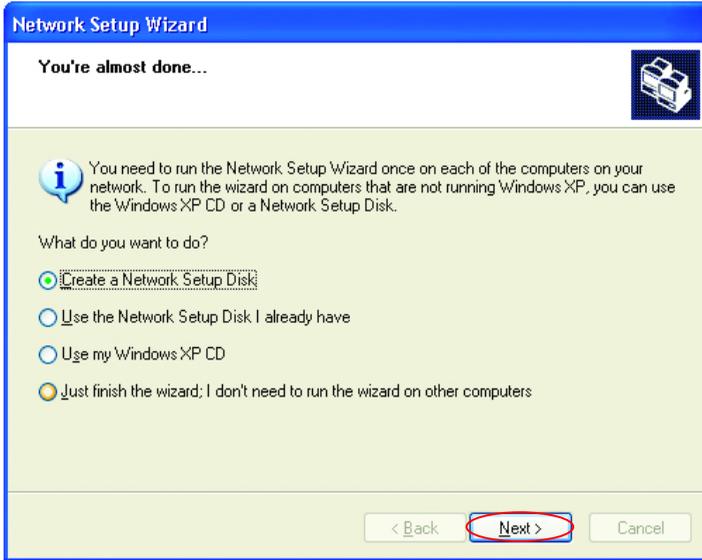
Insert a disk into the Floppy Disk Drive, in this case drive **A.**

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.**
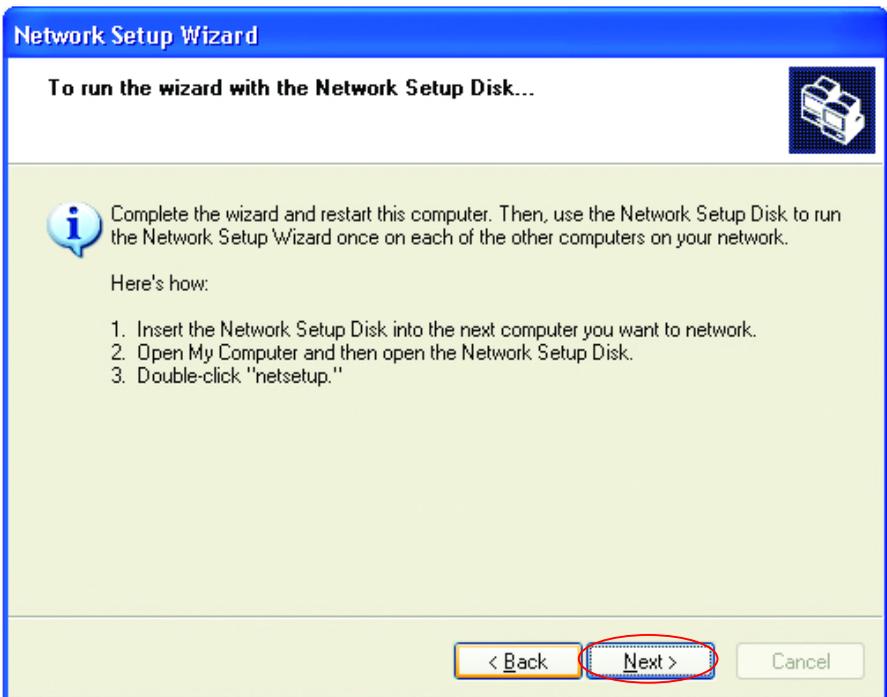
Networking Basics

Please read the information on this screen, then click **Finish** to complete the **Network Setup Wizard**.
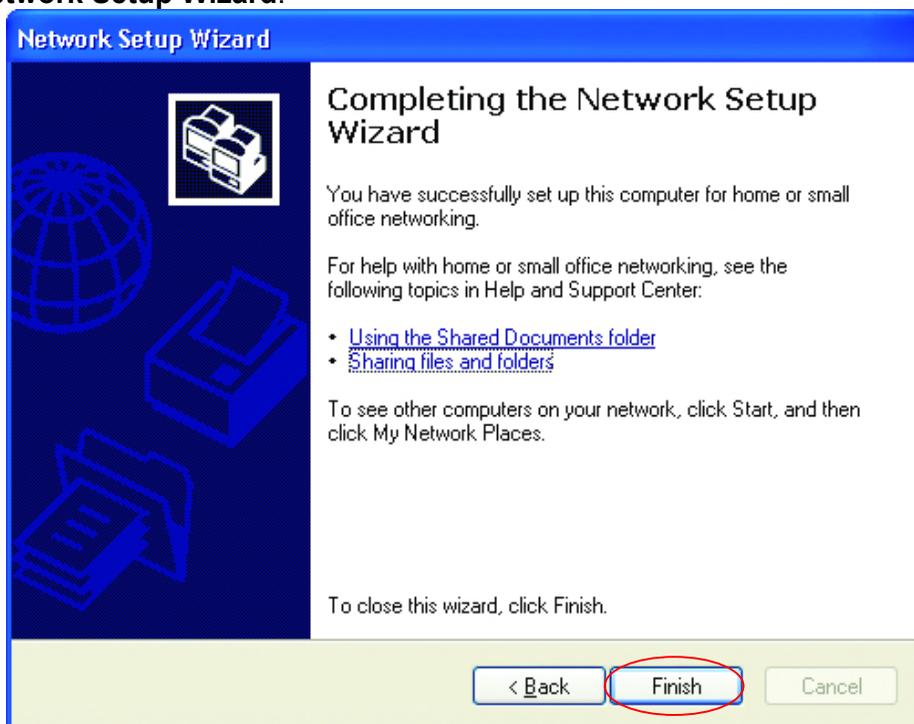
The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.
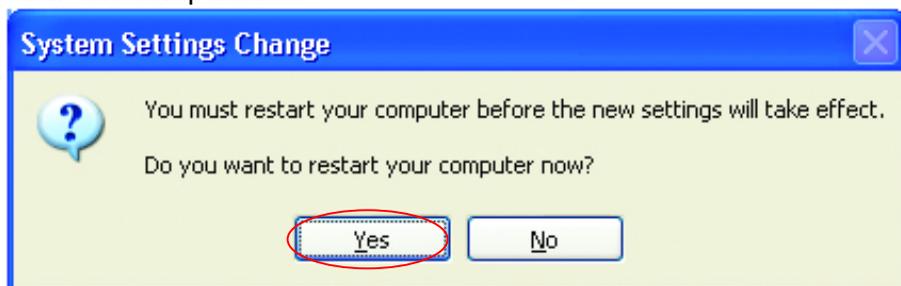
You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

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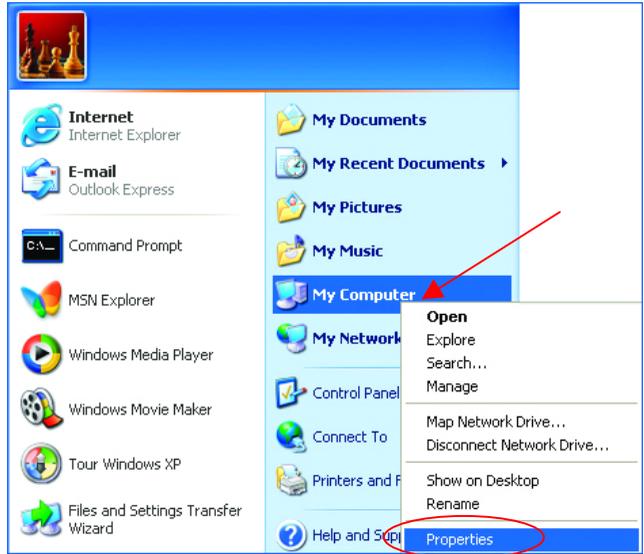
- Select the **Computer Name Tab** in the **System Properties** window.

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

To rename the computer and join a domain,

- Click **Change**
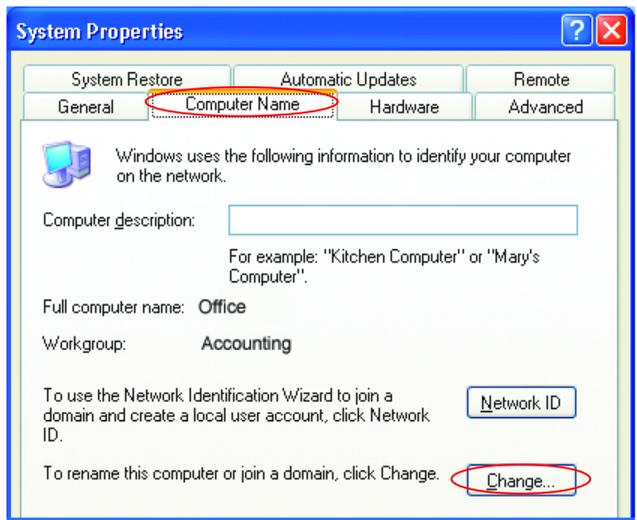
Networking Basics
Naming your Computer

- 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**
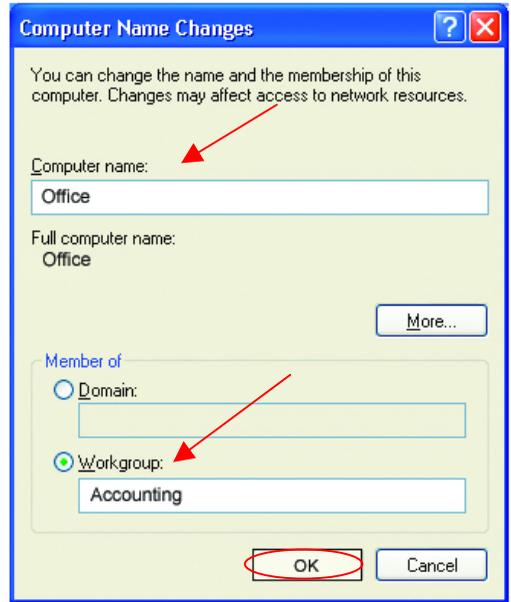
Checking the IP Address in Windows XP/2000

Go to Start > All Programs > Accessories > Command Prompt

Networking Basics
Checking the IP Address in Windows XP/2000

Type **Command**
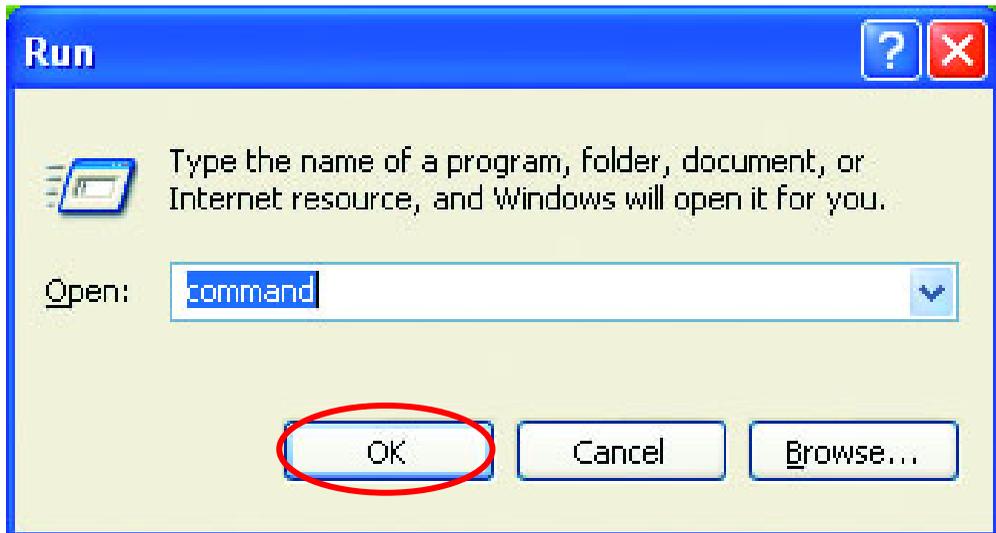
Click **OK**

Checking the IP Address in Windows XP/2000

Type **ipconfig /all** at the prompt. Click **Enter**. All the configuration settings are displayed as shown below.
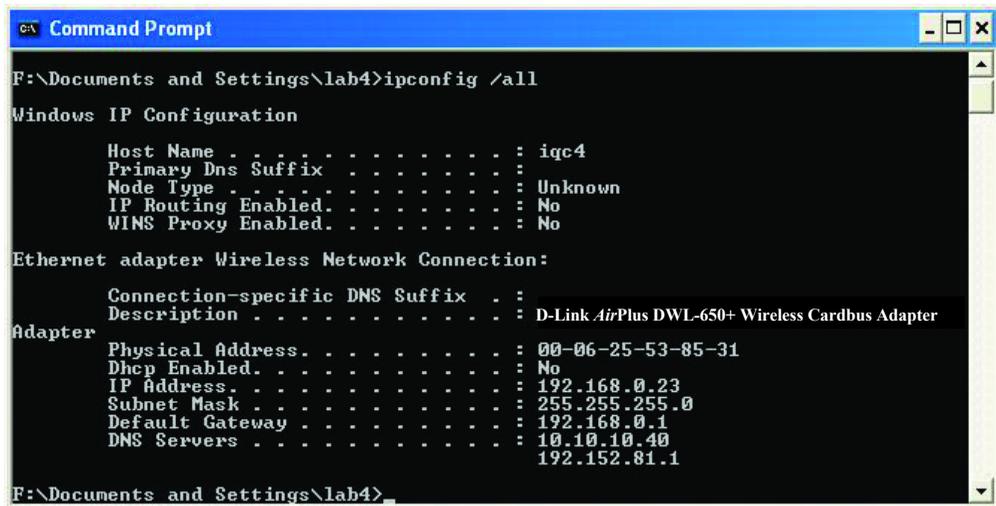
Networking Basics
Checking the IP Address in Windows XP/2000

Type **ipconfig /renew** at the prompt to get a new IP Address. Click **Enter**. The new IP Address is shown below.
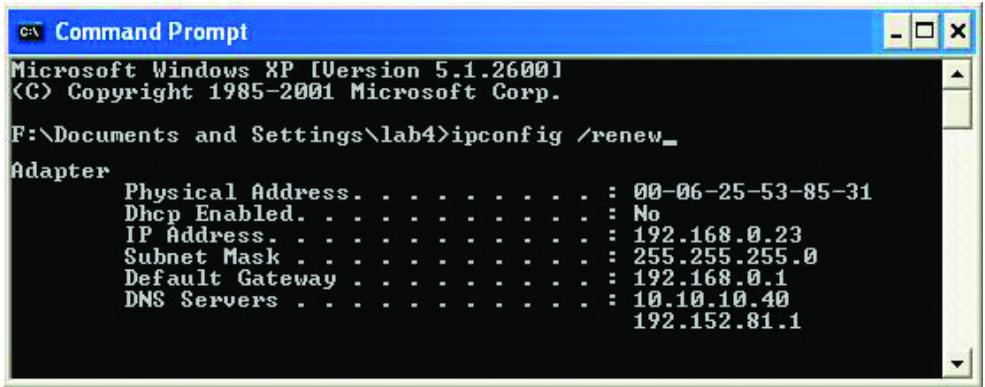

```
Command Prompt                                          _ □ ×

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lab4>ipconfig /renew_

Adapter
        Physical Address. . . . . . . . . : 00-06-25-53-85-31
        Dhcp Enabled. . . . . . . . . . . : No
        IP Address. . . . . . . . . . . . : 192.168.0.23
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.0.1
        DNS Servers . . . . . . . . . . . : 10.10.10.40
                                            192.152.81.1
```

(**Windows 98/ME users:** go to **Start** > **Run**. Type **Command**. Type **winipcfg** at the prompt. Click **Release and Renew** to obtain a new IP Address.)

Assigning a Static IP Address

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**

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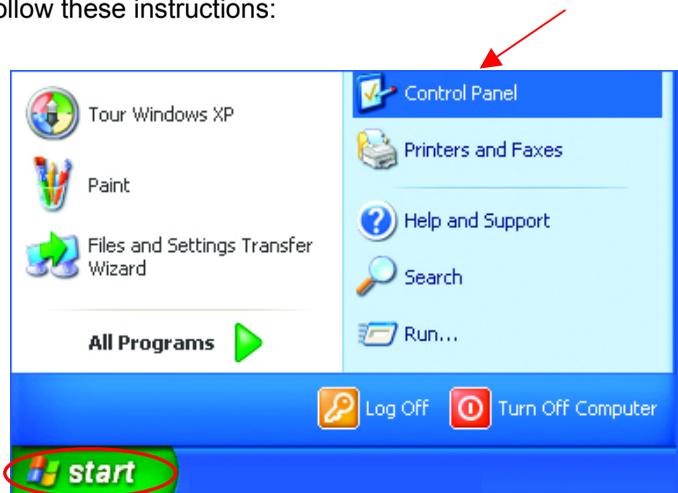
Networking Basics
Assigning a Static IP Address

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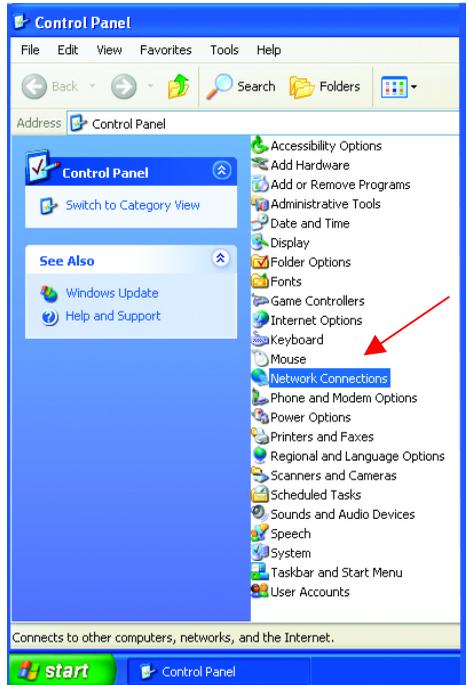
- **Right-click** on **Local Area Connections.**

- **Double-click Properties**
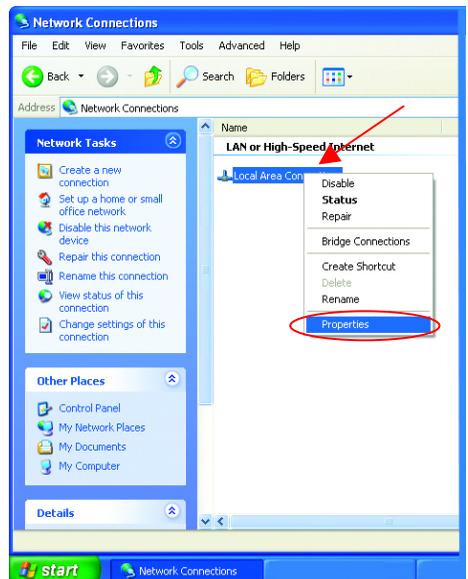
Networking Basics
Assigning a Static IP Address

- Highlight
  **Internet
  Protocol
  (TCP/IP)**

- Click **Properties**

- **Select Use the following
  IP address**
  in the **Internet Protocol
  (TCP/IP) Properties**
  window,
- 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 provided by your ISP
(Internet Service Provider.)*
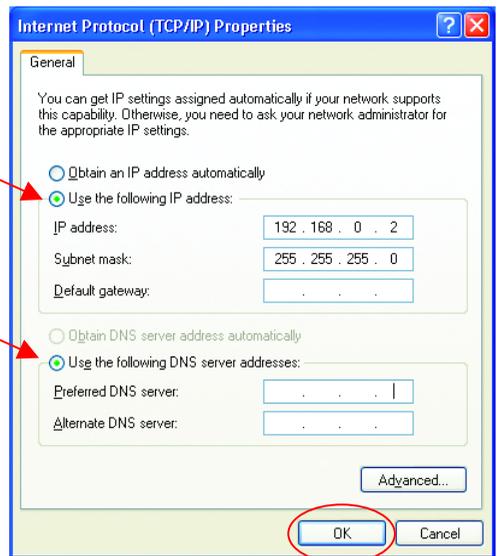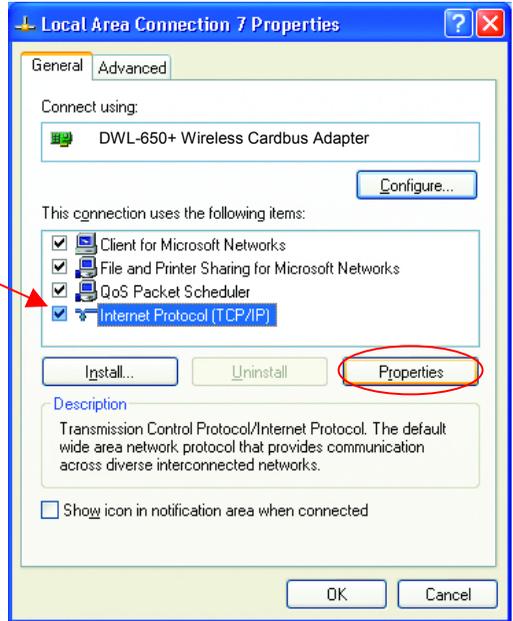
- Click **OK**

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.)*

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Networking Basics
Connecting to a Wireless Network in Windows XP

To be able to connect to a wireless network, make sure the proper network settings are configured for DWL-650+.

Go to **Start** > right-click on **My Network Places** >
select **Properties** > double-click on the **Wireless Network Connection** associated with the DWL-650+ > select **Properties** > select **Internet Protocol (TCP/IP)** > click **Properties**
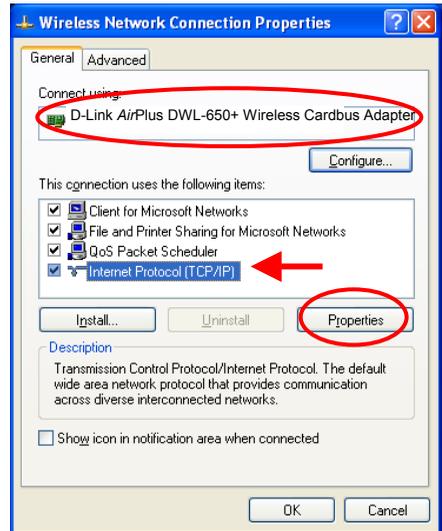
Connecting to a Wireless Network with a Wireless Router or an Access Point using a DHCP server in Windows XP.

Select **Obtain an IP address automatically** - if the Wireless Router or Access Point has DHCP server enabled

Select **Obtain DNS server address automatically.**
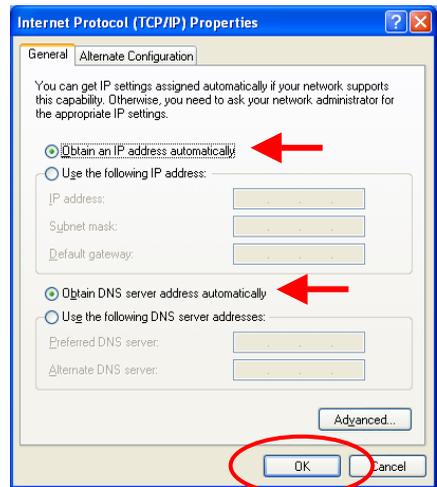
Click **OK**

Networking Basics
Connecting to a Wireless Network

Connecting to a Wireless Network with a Wireless Router or an Access Point using a static IP address in Windows XP.

Select **Use the following IP address** - if the Wireless Router or Access Point **does not** have a DHCP server enabled.

Input a static IP address within the same range as the Wireless Router or Access Point.

IP address: 192.168.0.51
Subnet mask: 255.255.255.0
Default Gateway: Enter the LAN IP address of the Wireless Router

Select **Use the following DNS server address**. Enter the LAN IP address of the Wireless Router.
Click **OK**
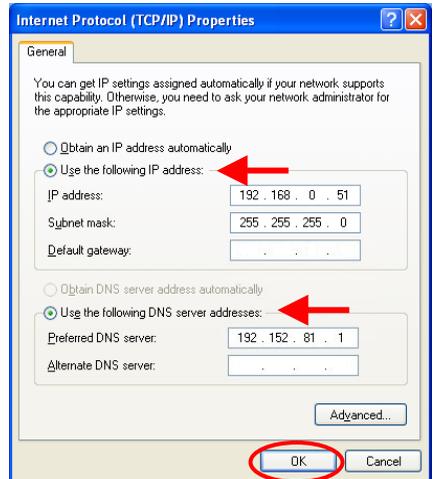
Connecting to a Wireless Network in Windows 2000

Go to **Start** > **Settings** > **Network and Dial-up Connections** > Double click on the **Local Area Connection** associated with the DWL-650+ > select **Properties** > select **Internet Protocol (TCP/IP)** > click **Properties**
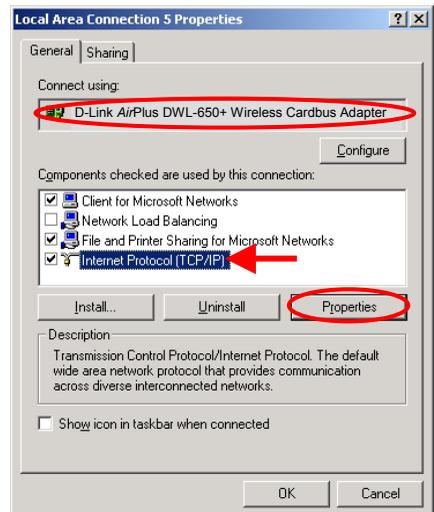
Networking Basics
Connecting to a Wireless Network

Connecting to a Wireless Network with a Wireless Router or an Access Point using a DHCP server in Windows 2000.

Select **Obtain an IP address automatically.**

Select **Obtain DNS server address automatically.**
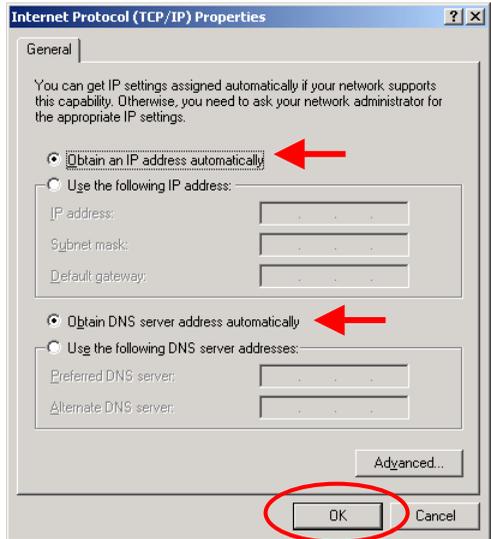
Click **OK**

Connecting to a Wireless Network with a Wireless Router or an Access Point using a static IP address in Windows 2000.

Select **Use the following IP address**

Input a static IP Address within the same IP Address range as the wireless router or the access point.

IP address: 192.168.0.51
Subnet mask: 255.255.255.0
Default Gateway: Enter the LAN IP address of the Wireless Router

Select **Use the following DNS server address.** Leave this section blank.
Click **OK**
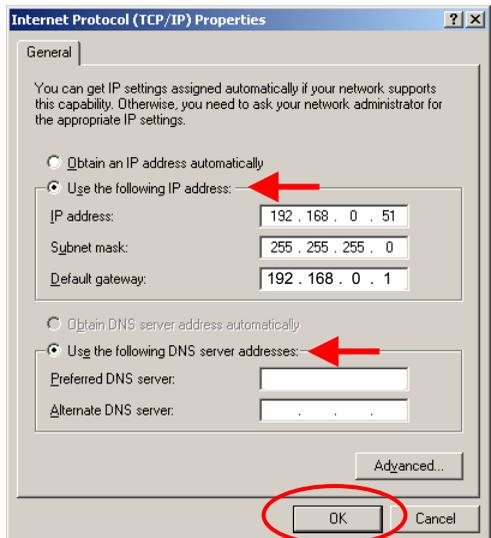
Networking Basics
Connecting to a Wireless Network

Connecting to a Wireless Network in Windows Me and 98

Go to **Start** > **Settings** > **Control Panel** > Double-click on the **Network** associated with the DWL-650+ > click **Properties** > select **Internet Protocol (TCP/IP)** > click **Properties**
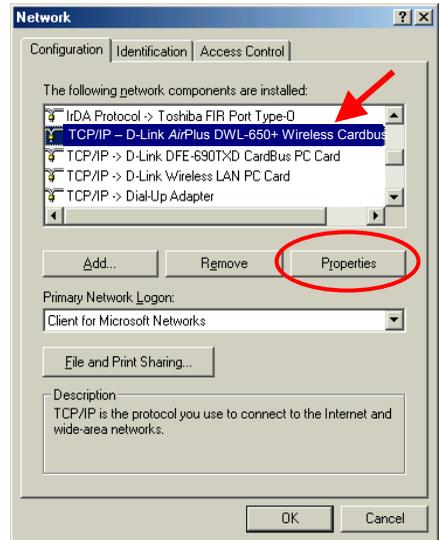
Connecting to a Wireless Network with a Wireless Router or an Access Point using a DHCP server in Windows Me and 98.

Select the **IP Address** tab. Then, select **Obtain an IP address automatically**.

Select **Detect connection to network media**.
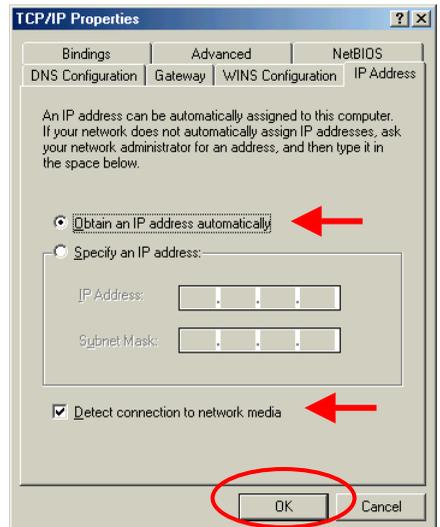
Click **OK**

Networking Basics
Connecting to a Wireless Network

**Connecting to a Wireless Network with a Wireless Router or Access Point using a static IP address in Windows Me or Windows 98.**

Select **Specify an IP address.**

Input a static IP address within the same IP Address range as the wireless router or access point.

IP address: 192.168.0.51
Subnet mask: 255.255.255.0

Select **Detect connection to network media.**

Click **OK**

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.

Networking Basics
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.
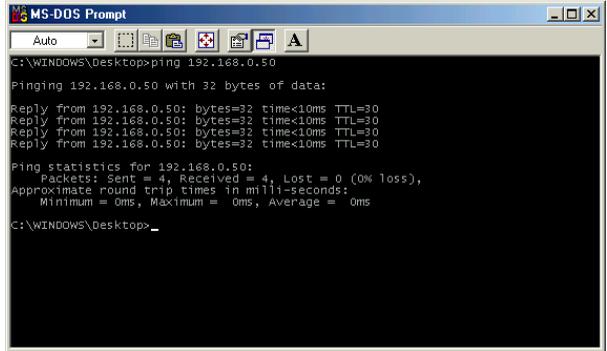
```
MS-DOS Prompt                                              _ □ ×
Auto        ▼    □ ▣ ▣  ▣  ▣ ▣  A
C:\WINDOWS\Desktop>ping 192.168.0.50

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 <u>Network Setup Wizard</u> 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**
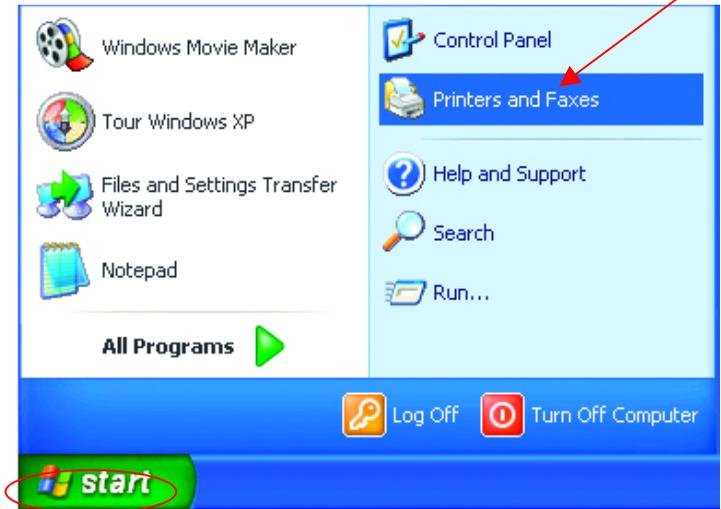
- Click on **Add a printer**
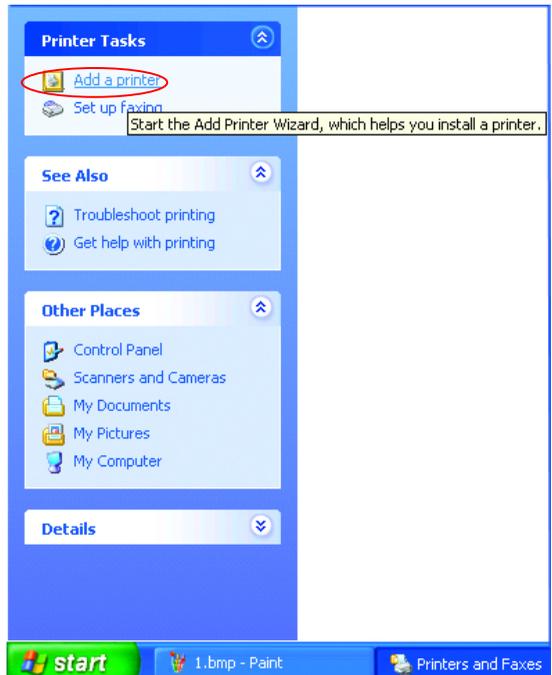
Adding a local printer

- Click **Next**
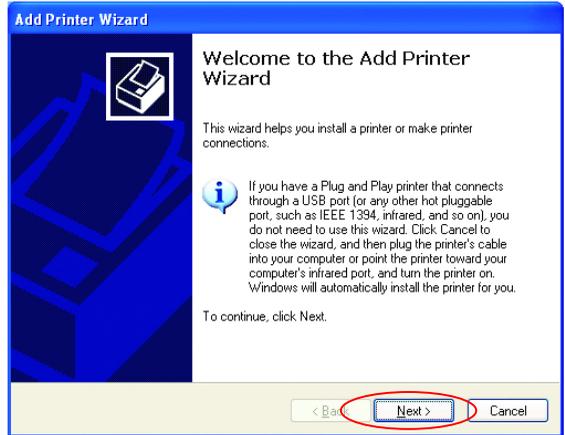
- Select **Local printer attached to this computer**

- *(Deselect Automatically detect and install my Plug and Play printer if it has been selected.)*
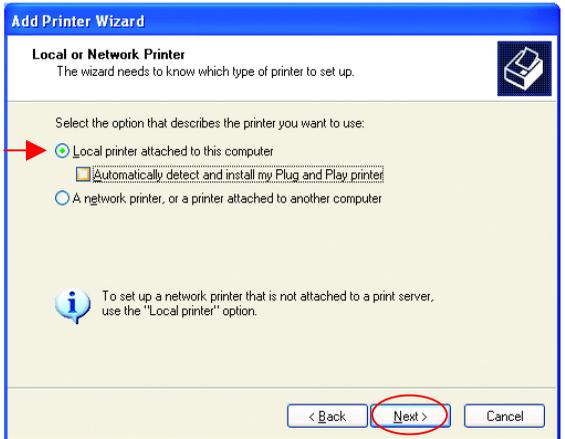
- Click **Next**

- 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**
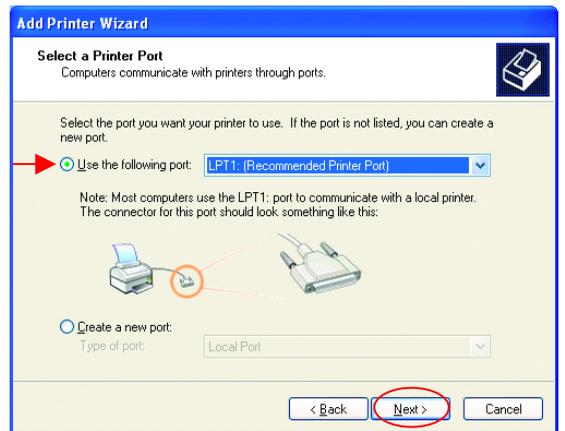
Networking Basics
Adding a local printer

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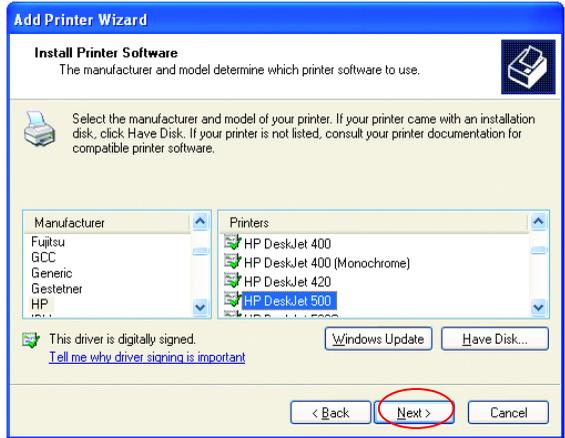
- At this screen, you can change the name of the printer (optional.)
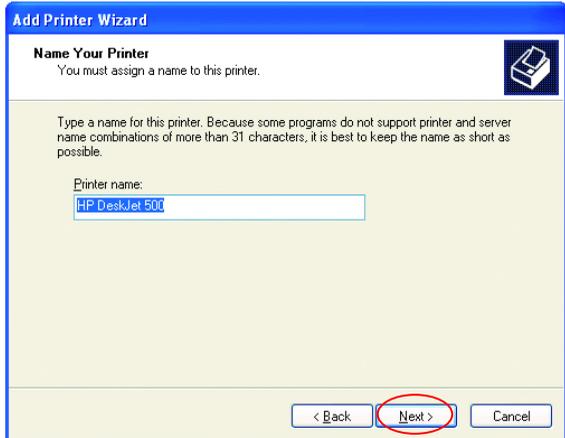
- Click **Next**

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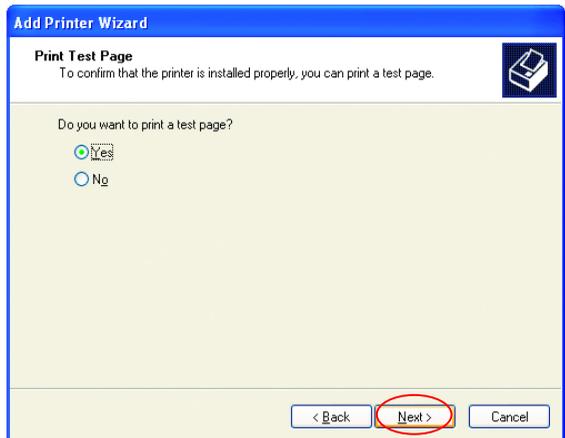
- Click **Next**

Networking Basics
Adding a local printer

This screen gives you information about your printer.
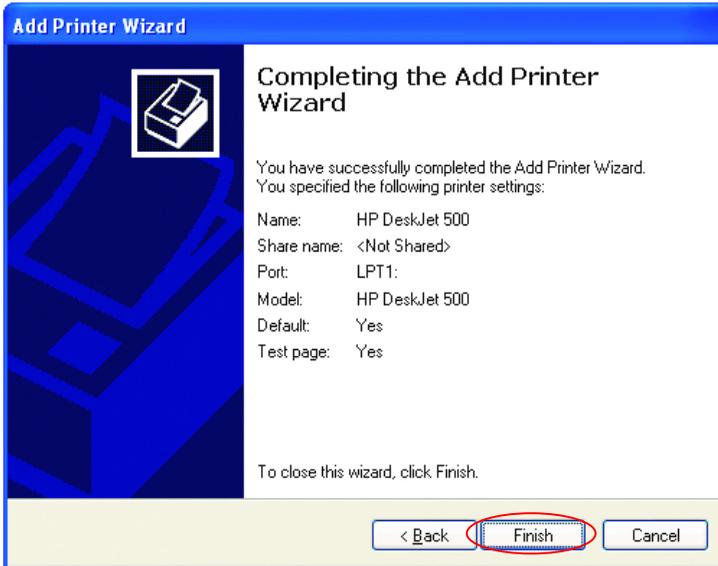
Click **Finish**

When the test page has printed,
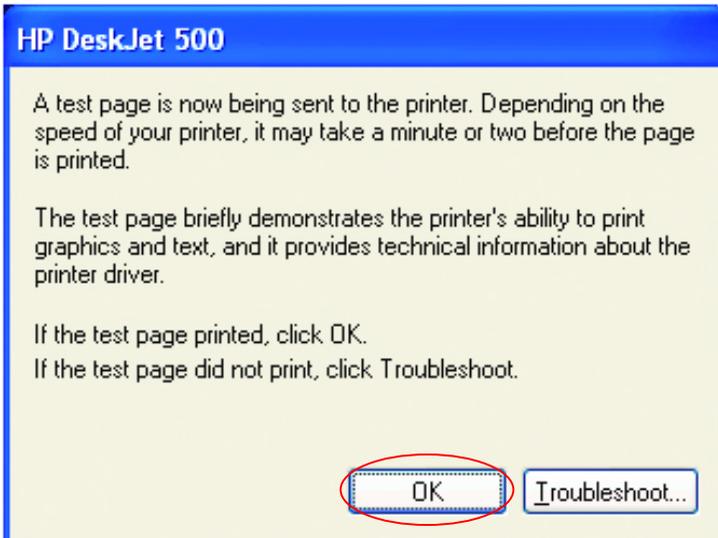
Click **OK**

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.
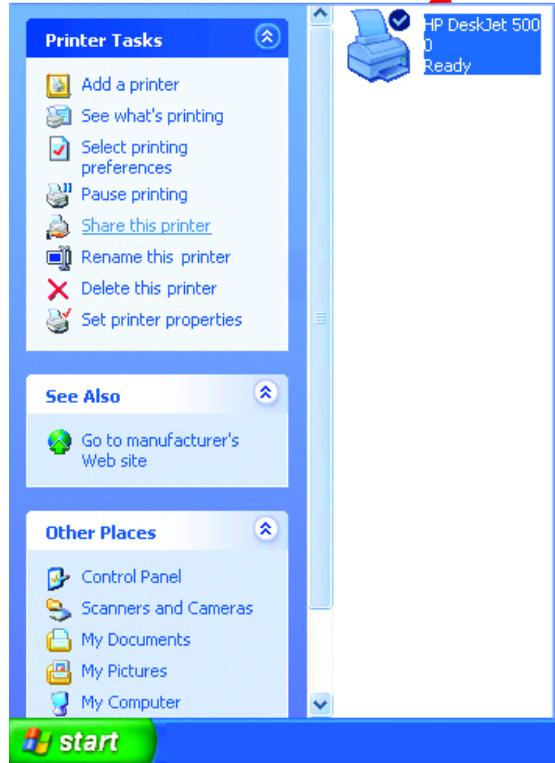
Sharing a network printer

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**
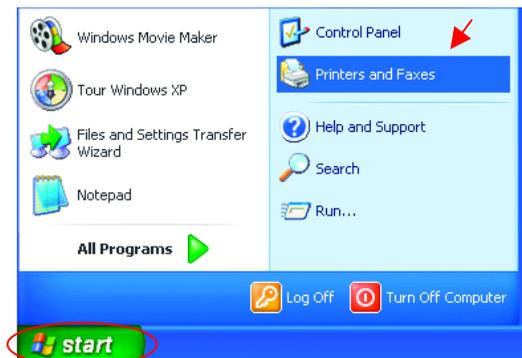
Sharing a network printer

- Click on
  Add a Printer

- Click **Next**

- Select **Network Printer**

- Click **Next**
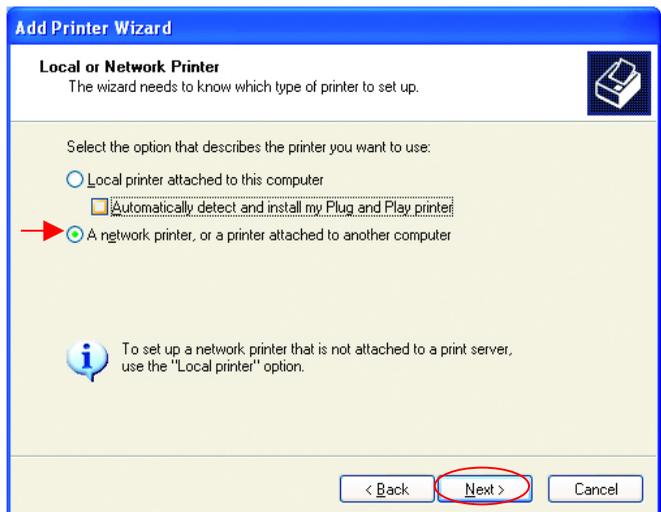
Networking Basics
Sharing a network printer

- Select **Browse for a printer**
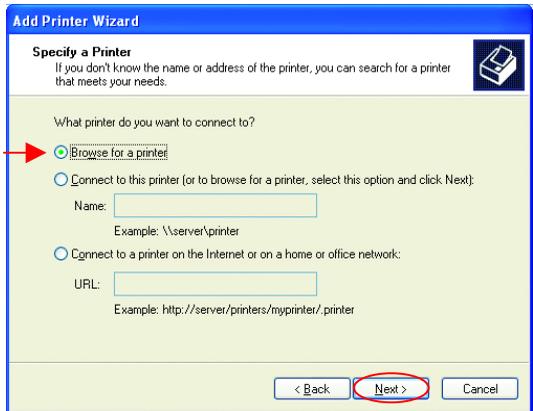
- Click **Next**

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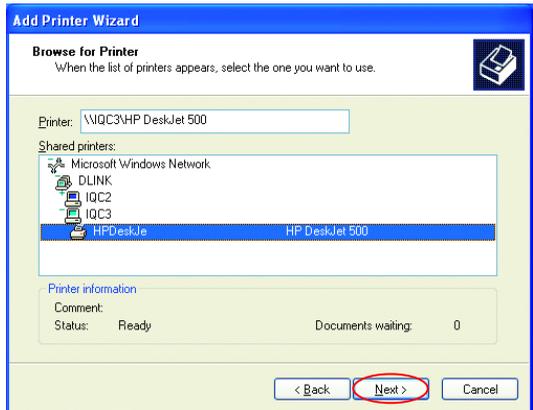
- Click **Next**

- Click **Finish**

Networking Basics
Sharing a network printer

To check for proper installation:

- Go to **Start**>
  Printers and Faxes
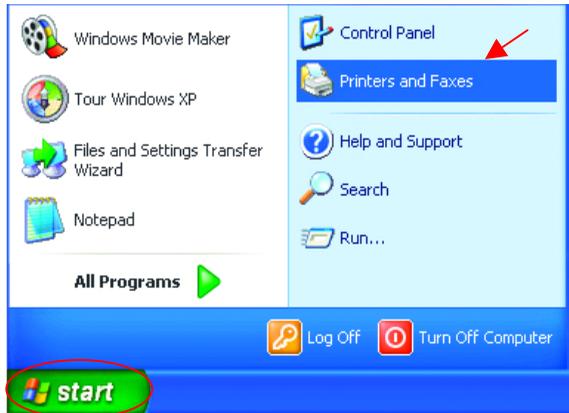
The printer icon will appear at right, indicating proper installation.

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.
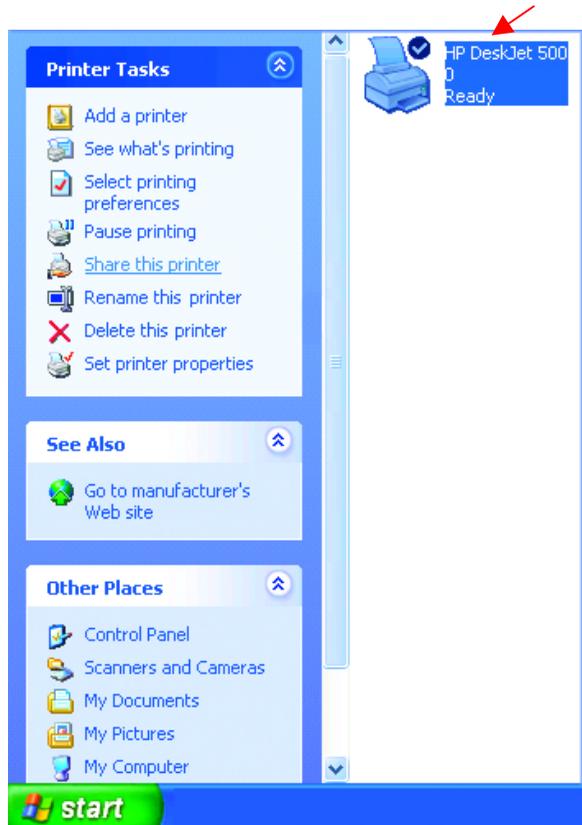
Networking Basics
Sharing an LPR printer

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**
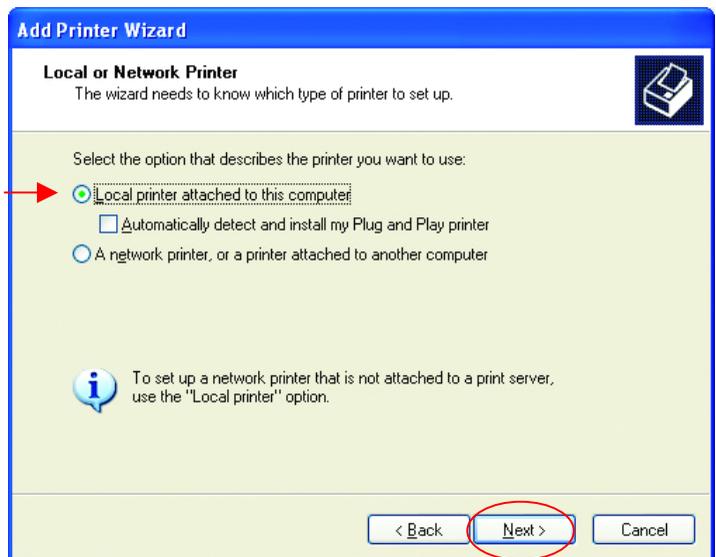
Networking Basics
Sharing an LPR printer

- Select **Create a new port**

- From the pull-down menu, select **Standard TCP/IP Port**, as shown.
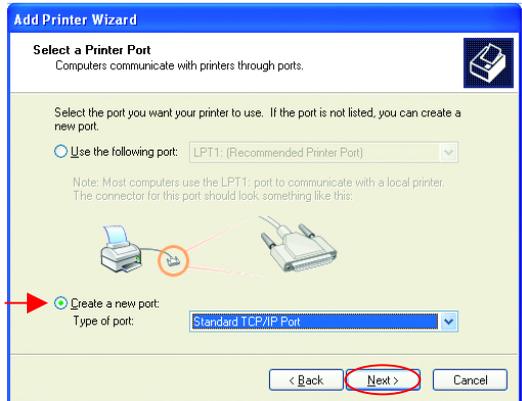
- Click **Next**

- Please read the instructions on this screen.

- Click **Next**

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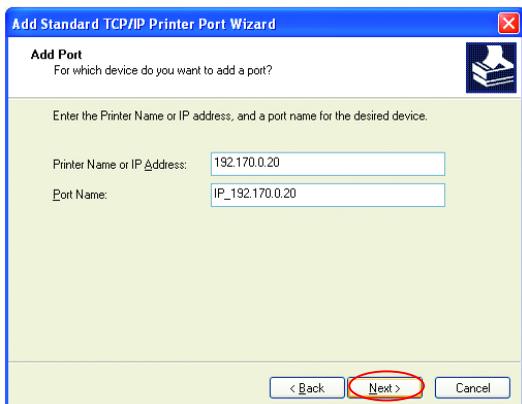
- Click **Next**

Sharing an LPR printer

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

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

- Click **Settings**

Configure Standard TCP/IP Port Monitor

Port Settings

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

Port Name: IP_192.170.0.20

Printer Name or IP Address: 192.170.0.20

Protocol
- ○ Raw   ● LPR

Raw Settings
Port Number: 9100
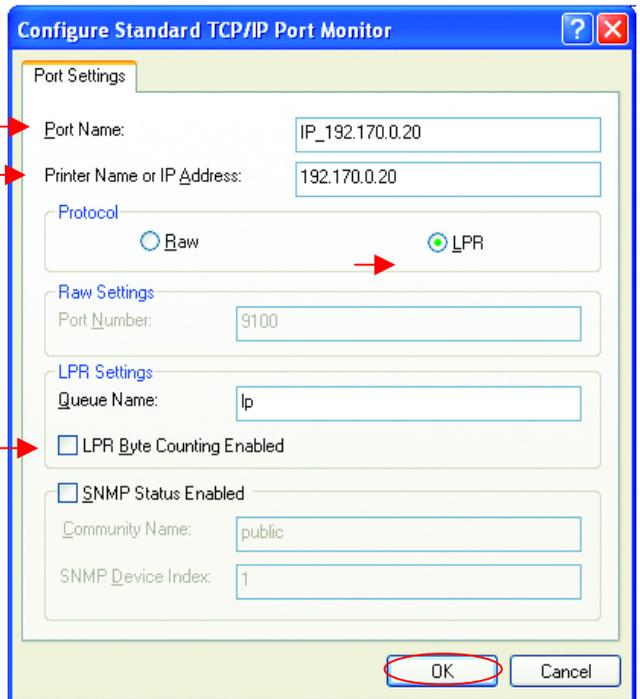
- Select **LPR**

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

LPR Settings
Queue Name: lp

☐ LPR Byte Counting Enabled

☐ SNMP Status Enabled
Community Name: public
SNMP Device Index: 1

- Click **OK**

OK   Cancel

Networking Basics
Sharing an LPR printer

- This screen will show you information about your printer.

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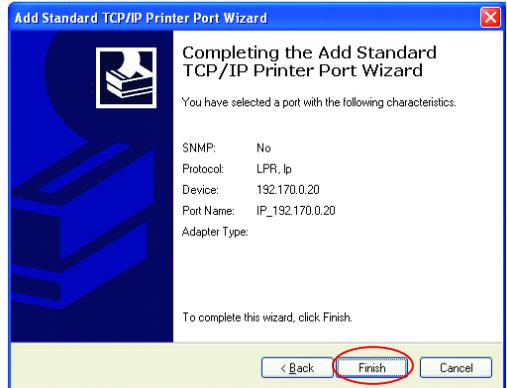
- Select the **printer** you are adding from the list of **Printers**.

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

- Click **Have Disk**
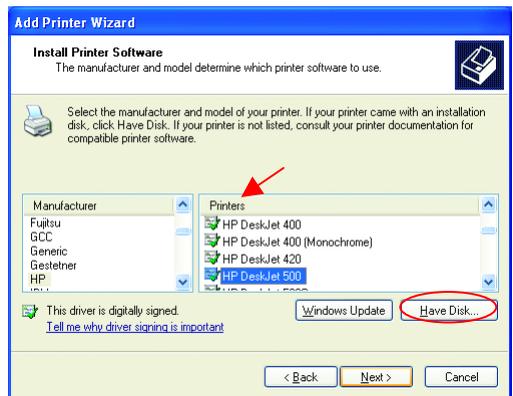
If the printer driver is already installed,

- Select **Keep existing driver**

- Click **Next**
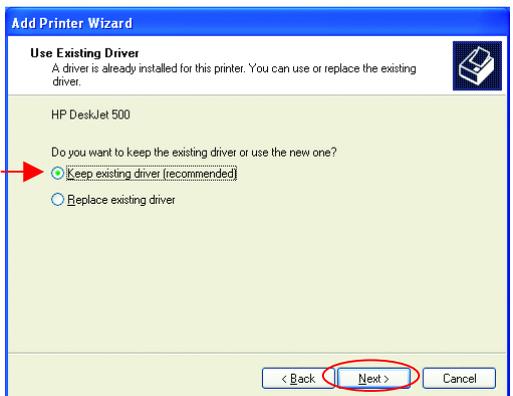
Networking Basics
Sharing an LPR printer

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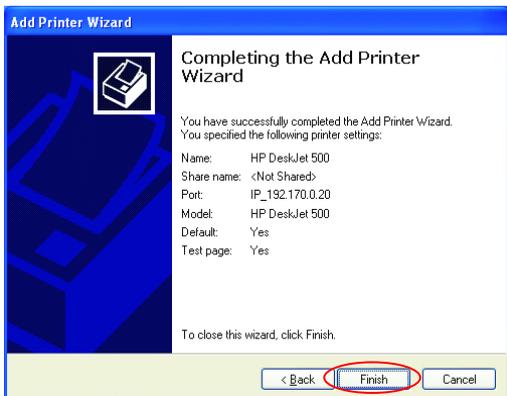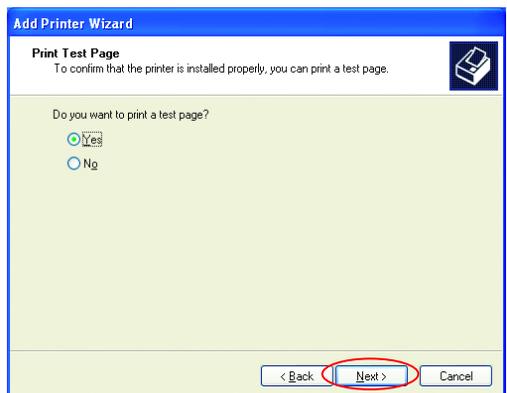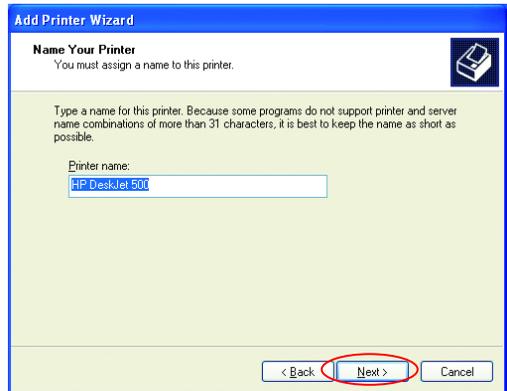
*Note: You must run the **Network Setup Wizard** on all the computers on your network before you run the **Add Printer Wizard**.*

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 802.11b   • IEEE 802.3
• IEEE 802.3u   • IEEE 802.3

VPN Pass Through / Multi-Sessions
• PPTP
• L2TP
• IPSec

Advanced Firewall Features

Device Management
Web-Based – Internet Explorer v5
or later; Netscape Navigator v4 or
later; or other Java- enabled browsers.

Wireless Data Rates
With Automatic Fallback
• 22Mbps   • 11Mbps
• 5.5Mbps   • 2Mbps
• 1Mbps

Encryption
64/128/256-bit RC4

Media Access Control
CMSA/CA with ACK

Wireless Frequency Range
2.4GHz to 2.462GHz

Wireless Operating Range
Indoors: Up to 328 feet
(100 meters)
Outdoors: Up to 1,312 feet
(400 meters)

Wireless Modulation Technology
PBCC - Packet Binary
Convolutional Coding
Direct Sequence Spread
Spectrum (DSSS)
11-chip Barker sequence

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

Wireless Transmit Power
15dBm ± 2dB

External Antenna Type
Dual detachable reverse SMA

LEDs
• Power
• M1
• M2
• WAN
• Local Network—10/100
• WLAN (Wireless Connection)

Operating Temperature
32°F to 131°F (0°C to 55°C)

Humidity
95% maximum (non-condensing)

Power Input
Ext. Power Supply DC 5V, 2.0A

Safety & Emissions
• FCC
• UL

Dimensions
• L = 9.25 inches (233mm)
• W = 6.5 inches (165mm)
• H = 1.375 inches (35mm)

Weight
~2.0 lbs (907g)

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

D-Link Systems, Inc. ("D-Link") provides this 3-Year warranty for its product only to the person or entity who originally purchased the product from:

- D-Link or its authorized reseller or distributor.
- Products purchased and delivered within the fifty United States, the District of Columbia, US Possessions or Protectorates, US Military Installations, addresses with an APO or FPO.

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

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

- Hardware (excluding power supplies and fans)
- Spare parts and spare kits Ninety (90) days.

D-Link's sole obligation shall be to repair or replace the defective Hardware at no charge to the original owner. 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 of an identical make, model or part; D-Link may in its 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. The Warranty Period shall extend for an additional ninety (90) days after any repaired or replaced Hardware is delivered. 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 delivery of the Software for a period of ninety (90) days ("Warranty Period"), if 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. 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. The Warranty Period shall extend for an additional ninety (90) days after any replacement Software is delivered. 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.

What You Must Do For Warranty Service:
Registration is conducted via a link on our Web Site (http://www.dlink.com/). Each product purchased must be individually registered for warranty service within ninety (90) days after it is purchased and/or licensed.

FAILURE TO PROPERLY TO REGISTER MAY AFFECT THE WARRANTY FOR THIS PRODUCT.

Submitting A Claim. Any claim under this limited warranty must be submitted in writing before the end of the Warranty Period to an Authorized D-Link Service Office.

- The customer must submit 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.
- The customer is responsible for all shipping charges to and from D-Link (No CODs allowed). Products sent COD will become the property of D-Link Systems, Inc. Products should be fully insured by the customer and shipped to **D-Link Systems Inc., 53 Discovery Drive, Irvine CA 92618**.

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 that 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; and Any hardware, software, firmware or other products or services provided by anyone other than D-Link.

Disclaimer of Other Warranties: EXCEPT FOR THE 3-YEAR LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND 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, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, 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.

GOVERNING LAW: This 3-Year 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 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 of 20 cm (approximately 8 inches) between the radiator and your body.

Registration: Register your D-Link *Air*Plus DI-614+ online at http://www.support.dlink.com/register