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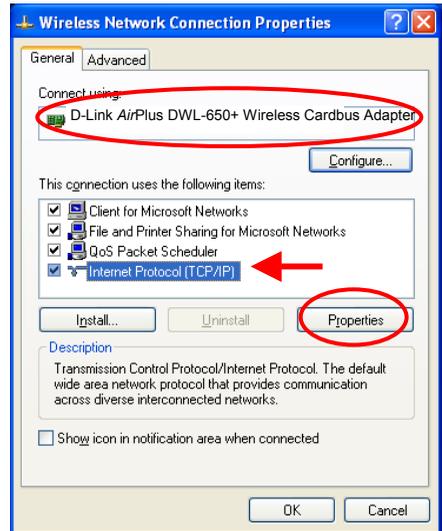
Connecting to a Wireless Network with a Wireless Router or an Access Point using a DHCP server in Windows XP.

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

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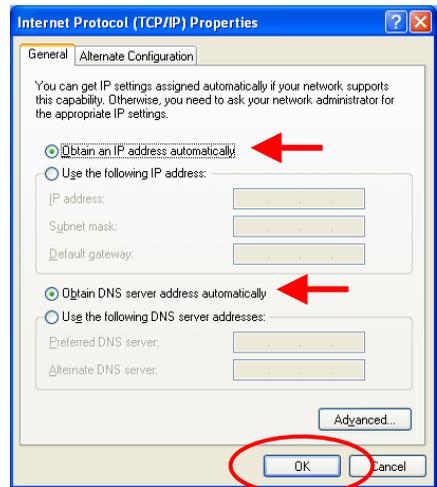
Click **OK**

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**
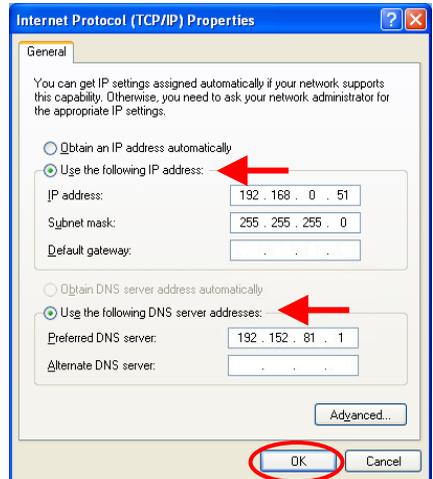
Connecting to a Wireless Network in Windows 2000

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**
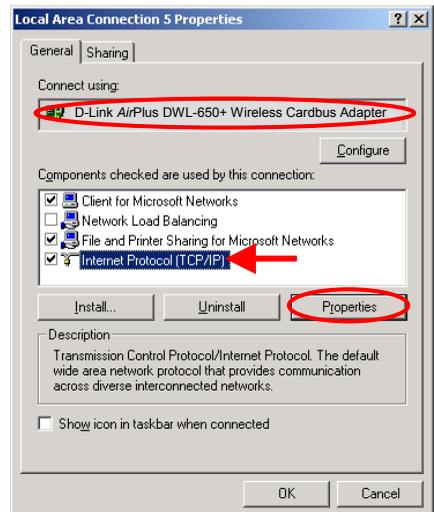
Networking Basics
Connecting to a Wireless Network

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.**
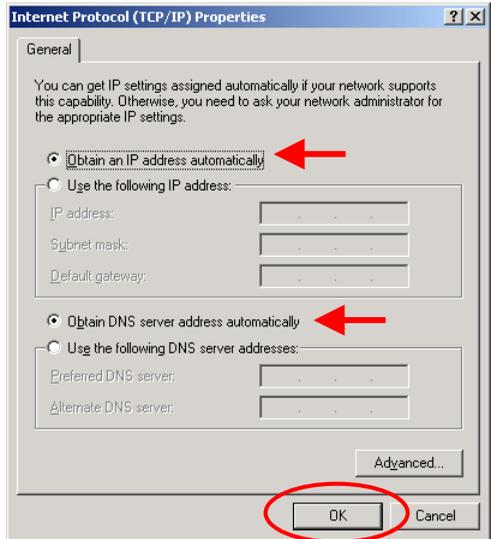
Click **OK**

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**
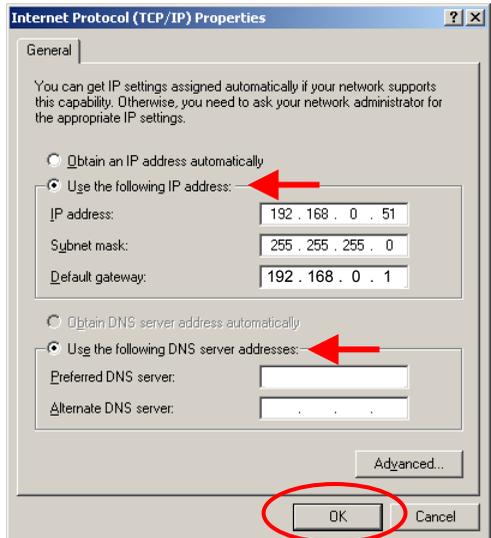
Networking Basics
Connecting to a Wireless Network

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**
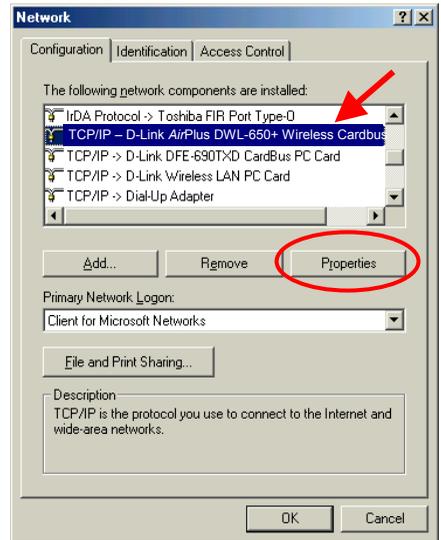
Connecting to a Wireless Network with a Wireless Router or an Access Point using a DHCP server in Windows Me and 98.

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

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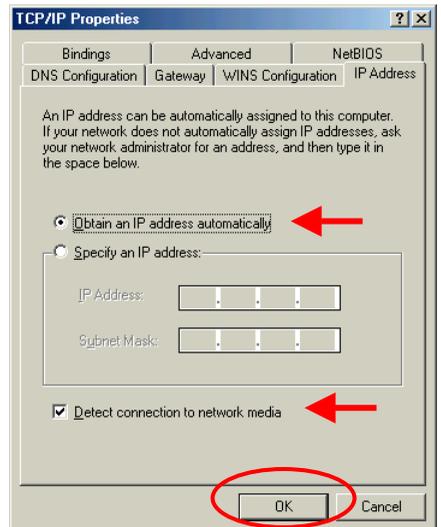
Click **OK**

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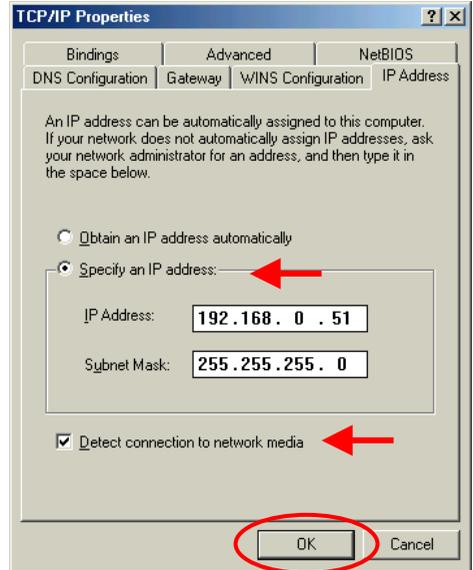
Checking the Wireless Connection by Pinging
For Windows XP and 2000:

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.
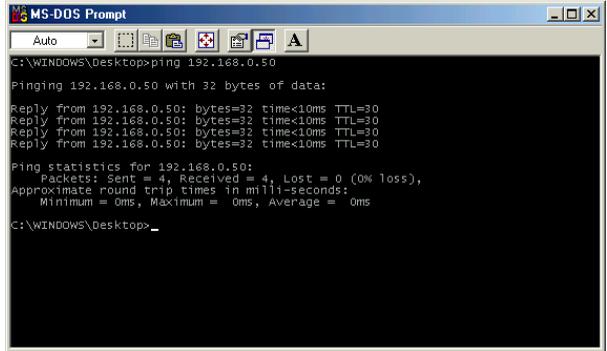
```
MS-DOS Prompt                                                    _ □ ×
Auto        ▼  □ ▣ ▣  ▣  ▣ ▣  A

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**
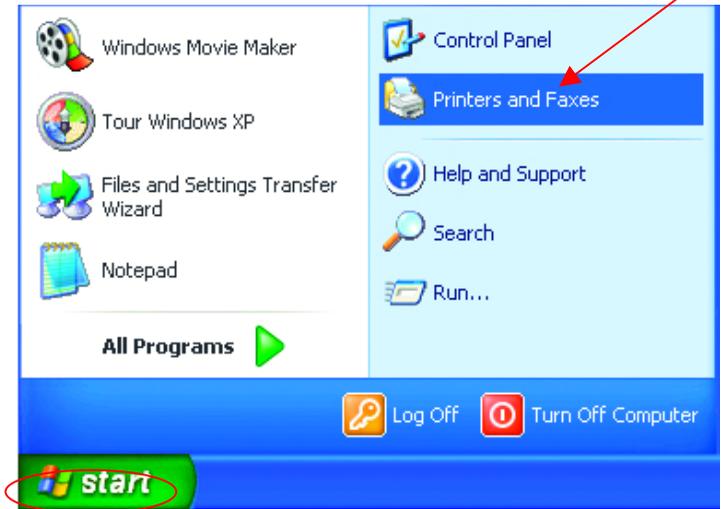
- Click on **Add a printer**
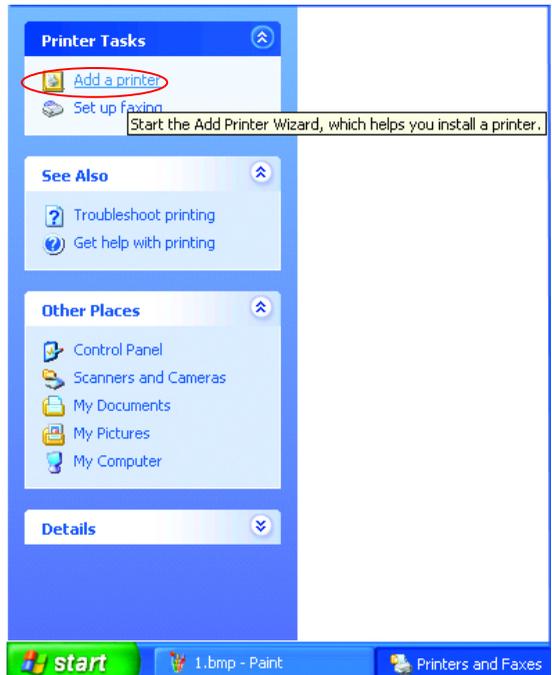
Adding a local printer

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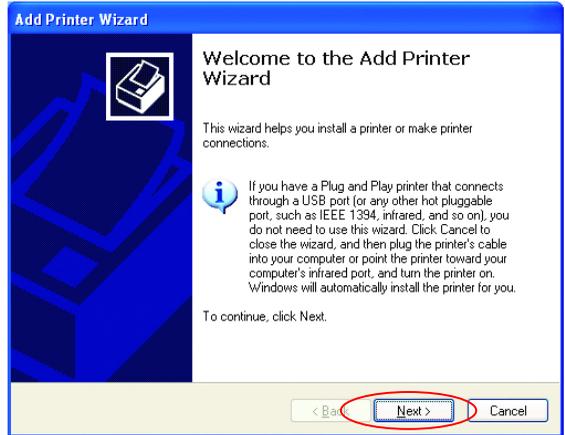
- Select **Local printer attached to this computer**

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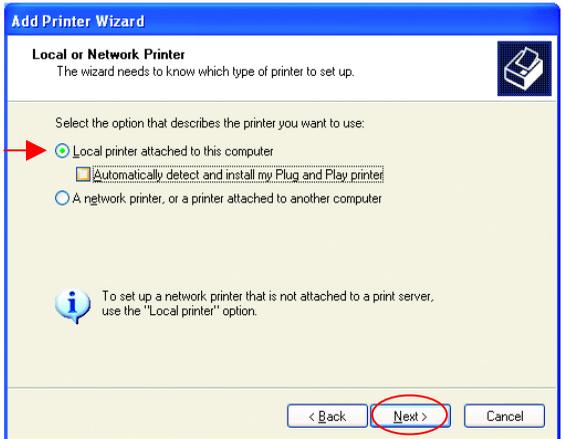
- Click **Next**

- 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**
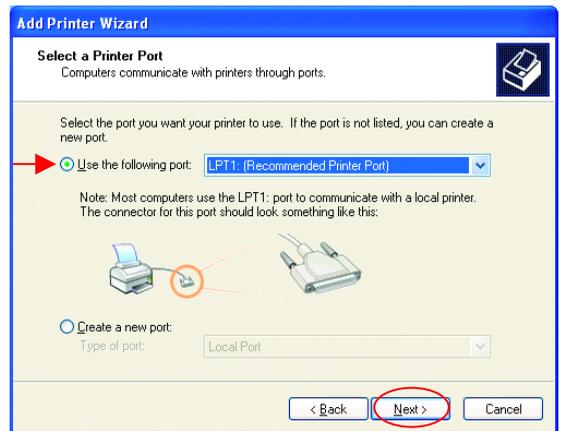
Networking Basics
Adding a local printer

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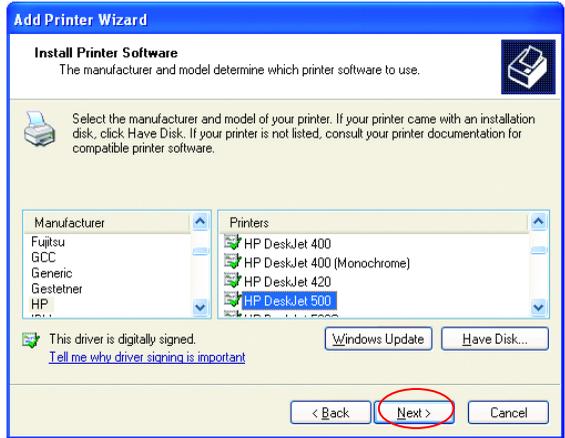
- At this screen, you can change the name of the printer (optional.)
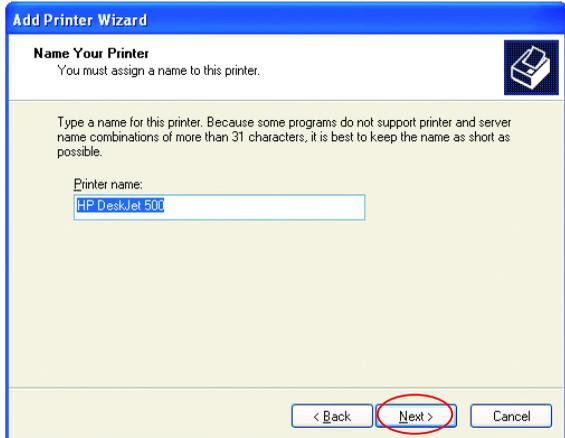
- Click **Next**

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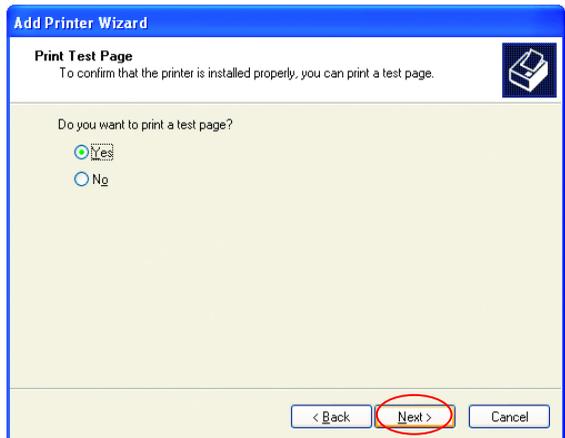
- Click **Next**

Networking Basics
Adding a local printer

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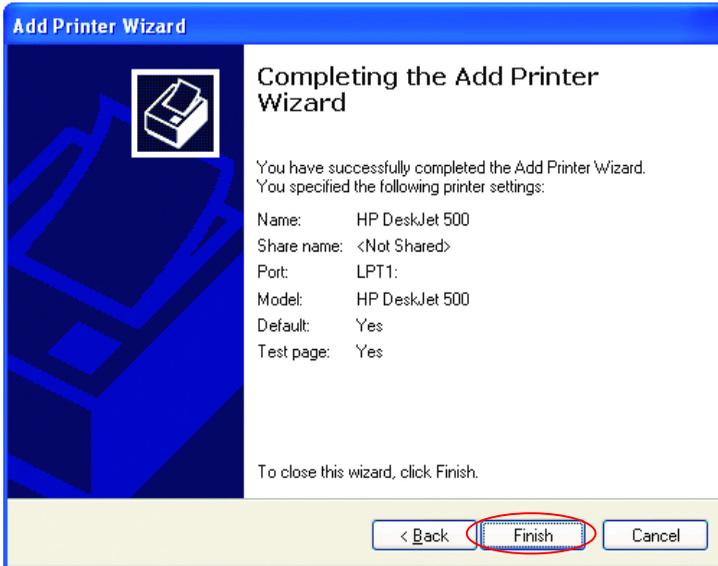
Click **Finish**

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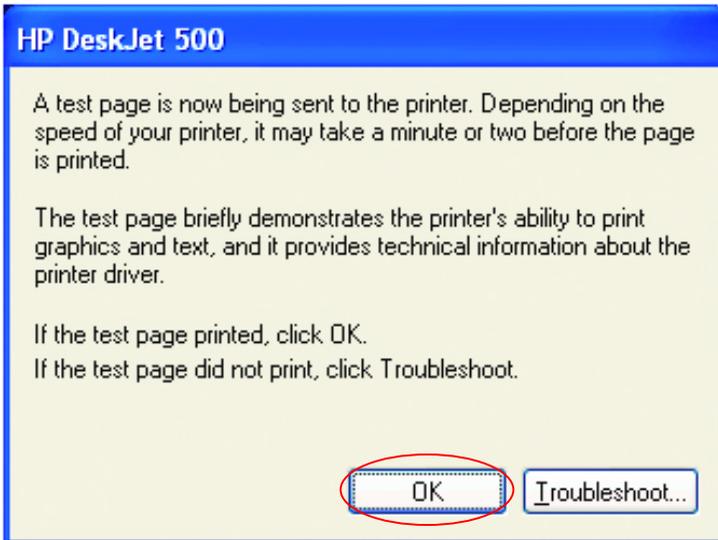
Click **OK**

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.
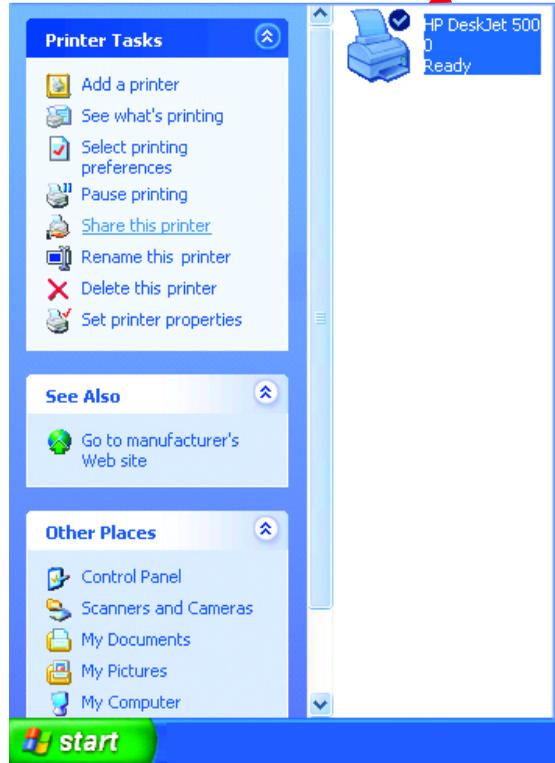
Sharing a network printer

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**
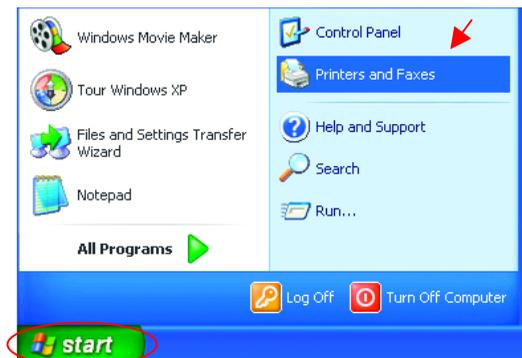
Networking Basics
Sharing a network printer

• Click on
Add a Printer

• Click **Next**

• Select **Network Printer**

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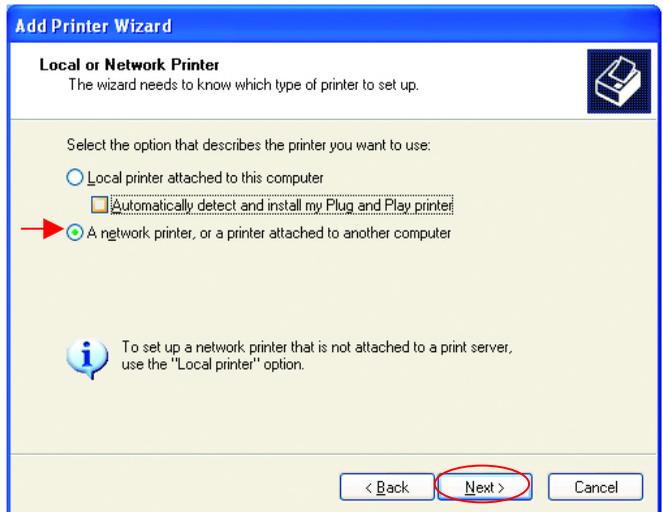
Networking Basics
Sharing a network printer

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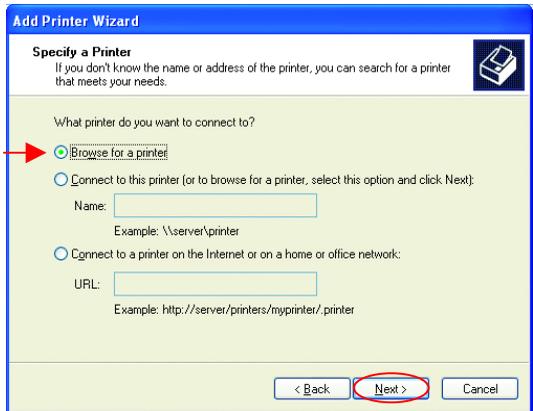
- Click **Next**

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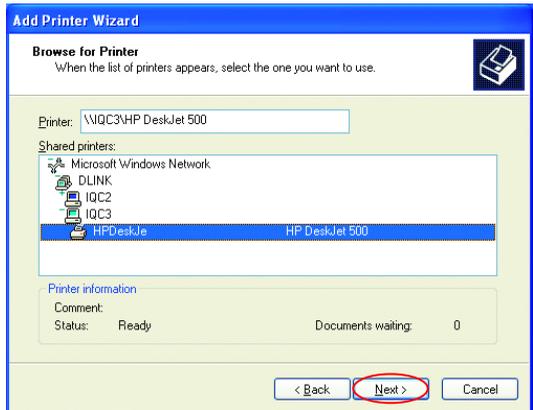
- Click **Next**
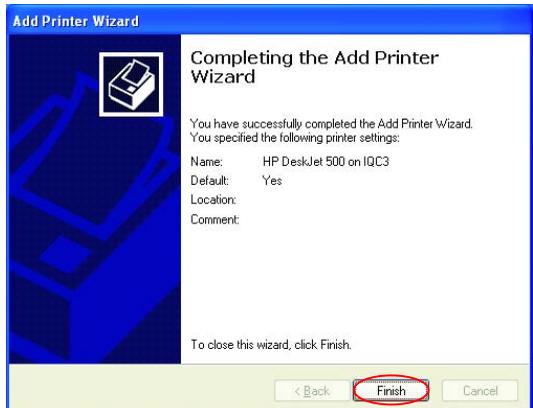
- Click **Finish**

Networking Basics
Sharing a network printer

To check for proper installation:

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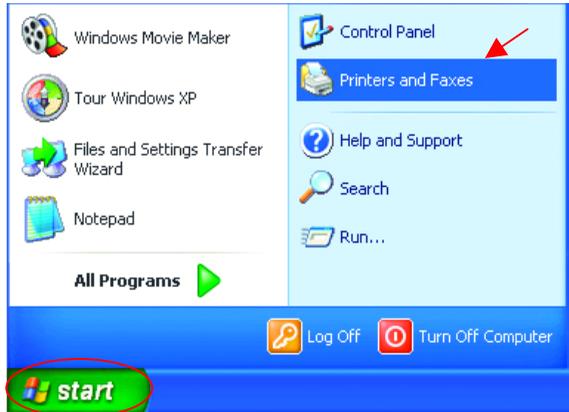
The printer icon will appear at right, indicating proper installation.

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.
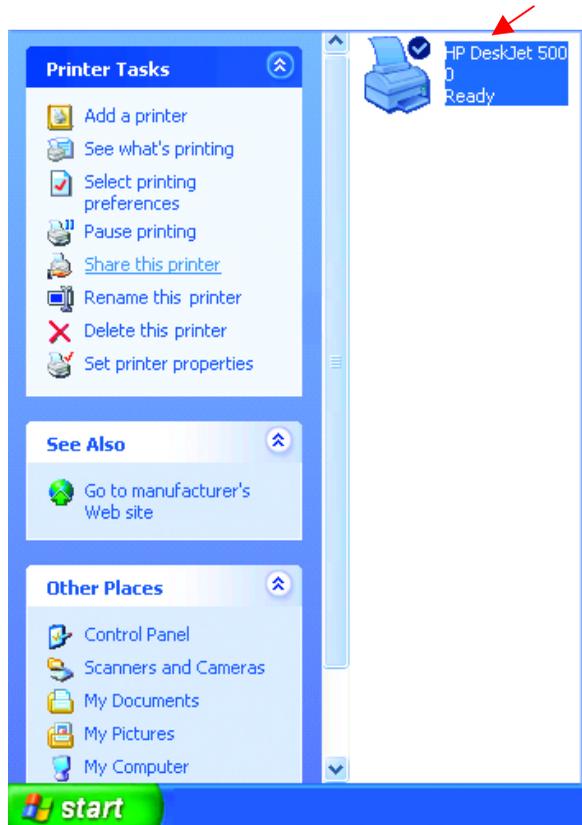
Networking Basics
Sharing an LPR printer

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**
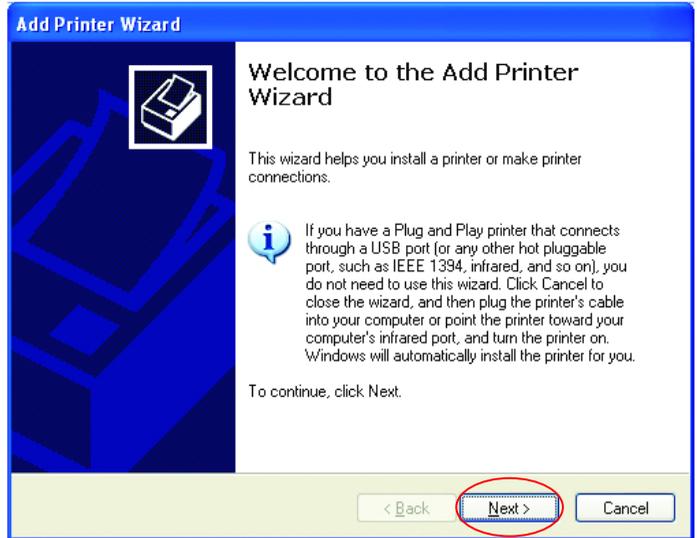
- Select **Local printer…**

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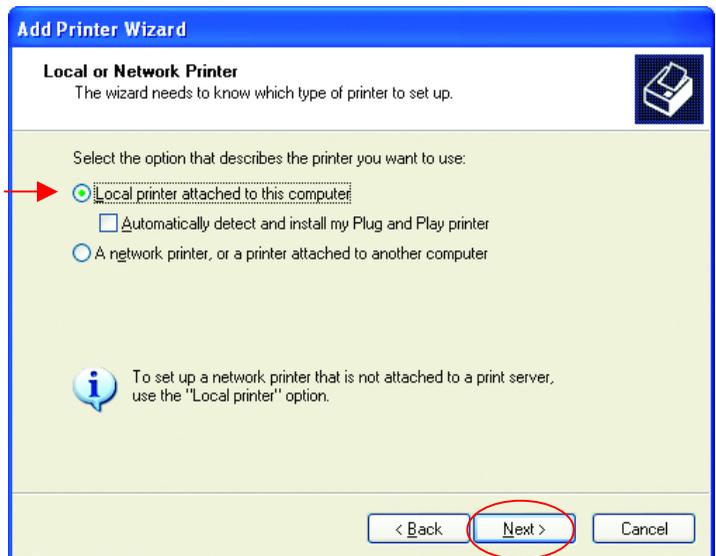
Networking Basics
Sharing an LPR printer

- Select **Create a new port**

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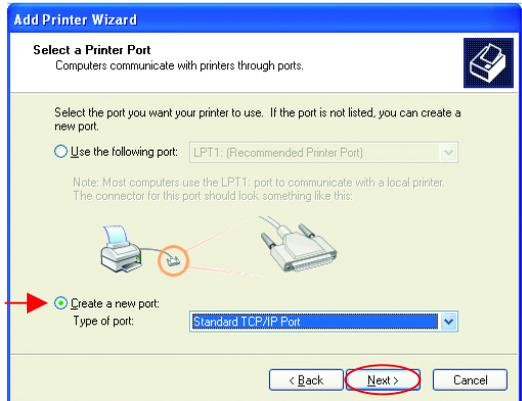
- Click **Next**

- Please read the instructions on this screen.

- Click **Next**

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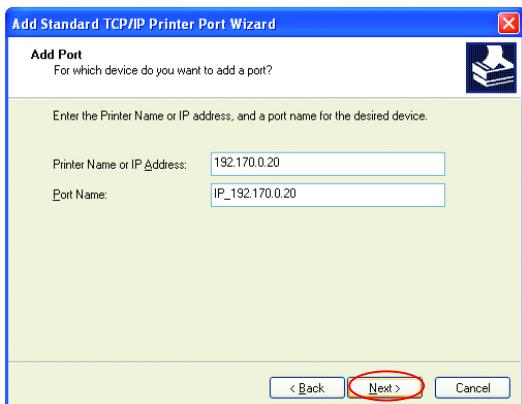
- Click **Next**

Sharing an LPR printer

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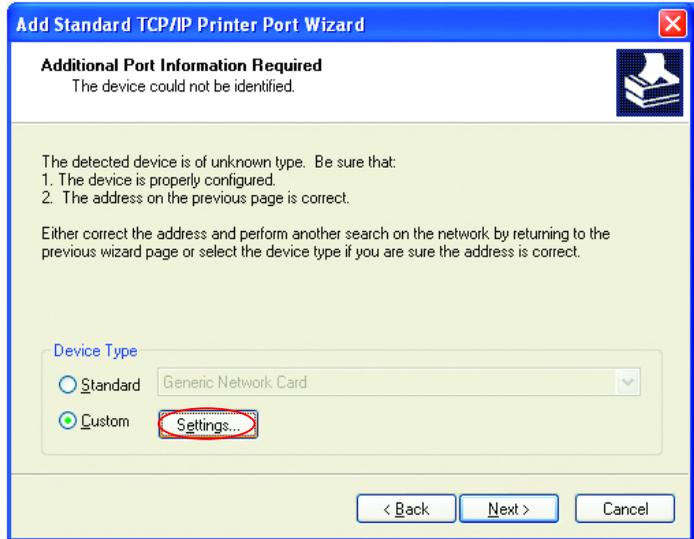
- Click **Settings**

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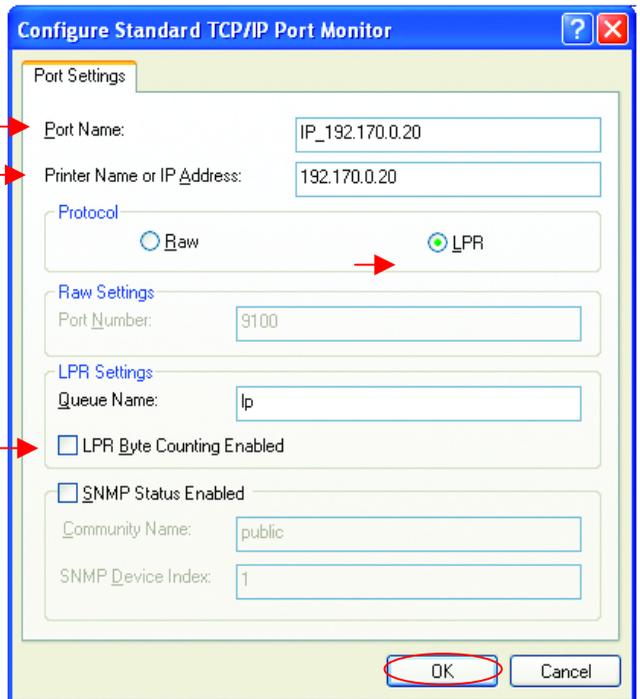
- Select **LPR**

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

- Click **OK**

Networking Basics
Sharing an LPR printer

- This screen will show you information about your printer.

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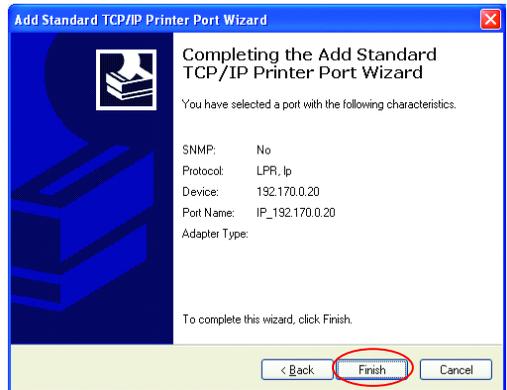
- Select the **printer** you are adding from the list of **Printers**.

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

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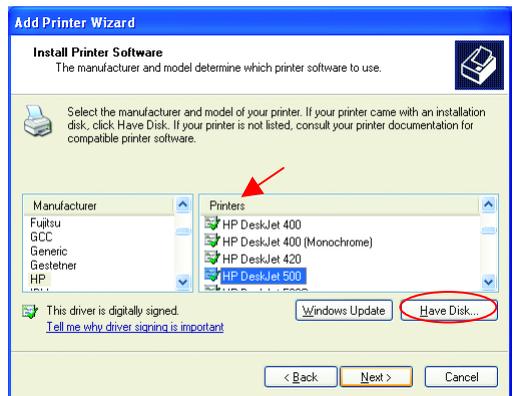
If the printer driver is already installed,

- Select **Keep existing driver**

- Click **Next**
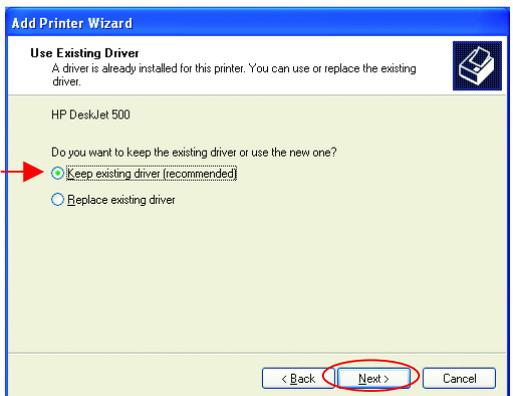
Sharing an LPR printer

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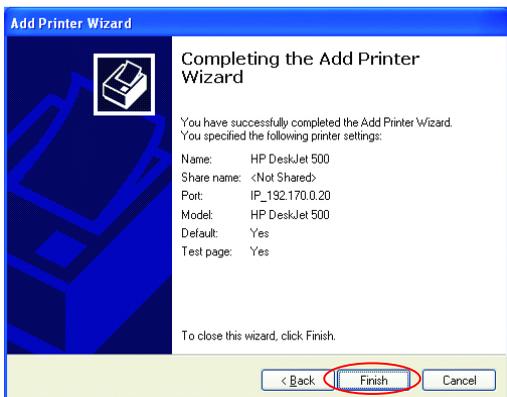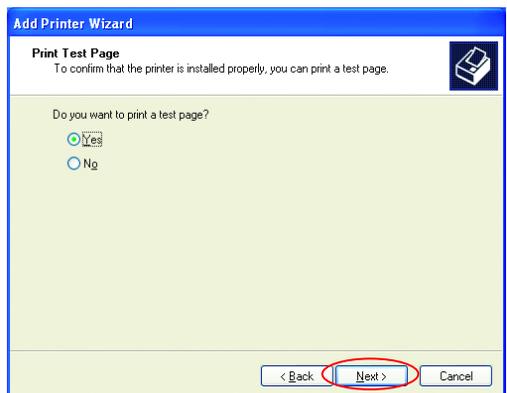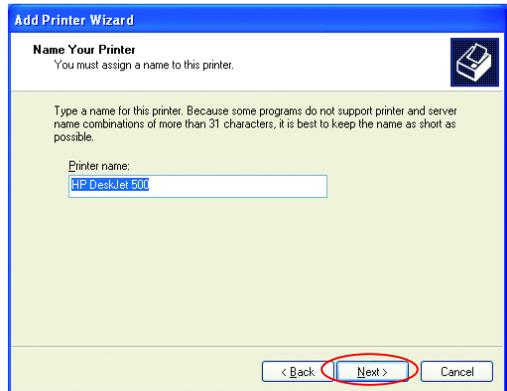
*Note: You must run the **Network Setup Wizard** on all the computers on your network before you run the **Add Printer Wizard**.*

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

Federal Communication Commission Interference 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 communications.   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 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 minimum distance 20cm between the radiator & your body.

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