D-Link *Air*Plus DWL-120+

2.4GHz Wireless USB Adapter

Manual

D-Link

Building Networks for People

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Package Contents

Contents of Package:

- **D-Link *Air*Plus DWL-120+**
  2.4 GHz Wireless USB Adapter
- Manual on CD-ROM
- Quick Installation Guide
- USB Cable

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

System Requirements:

- A computer or laptop with an available USB port
- Windows XP/2000/Me/98SE
- At least 32 MB of memory and a 300 MHz processor
- Properly installed and working USB Controller

Introduction

The D-Link *Air*Plus DWL-120+ 2.4GHz Wireless USB Adapter is a convenient Plug & Play USB 1.1 solution that brings wireless networking to your laptop or desktop PC. It provides up to 256-bit level of WEP security to your wireless data transfers.

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, printers, and Internet connection and enjoy the freedom that wireless networking delivers.

The DWL-120+ comes with software drivers for the most popular Microsoft Windows operating systems and can be integrated into a larger network, running Windows XP, Windows 2000, Windows Me, or Windows 98SE in either Ad Hoc mode (without an Access Point or Router) or Infrastructure mode (with an Access Point or Router). The IEEE 802.11b Ethernet standard allows you to connect computers and 802.11b compatible devices at speeds up to 22Mbps*, dependent upon the distance between wireless adapters, the configuration of your working environment, or the capabilities or limitations of your computer systems.

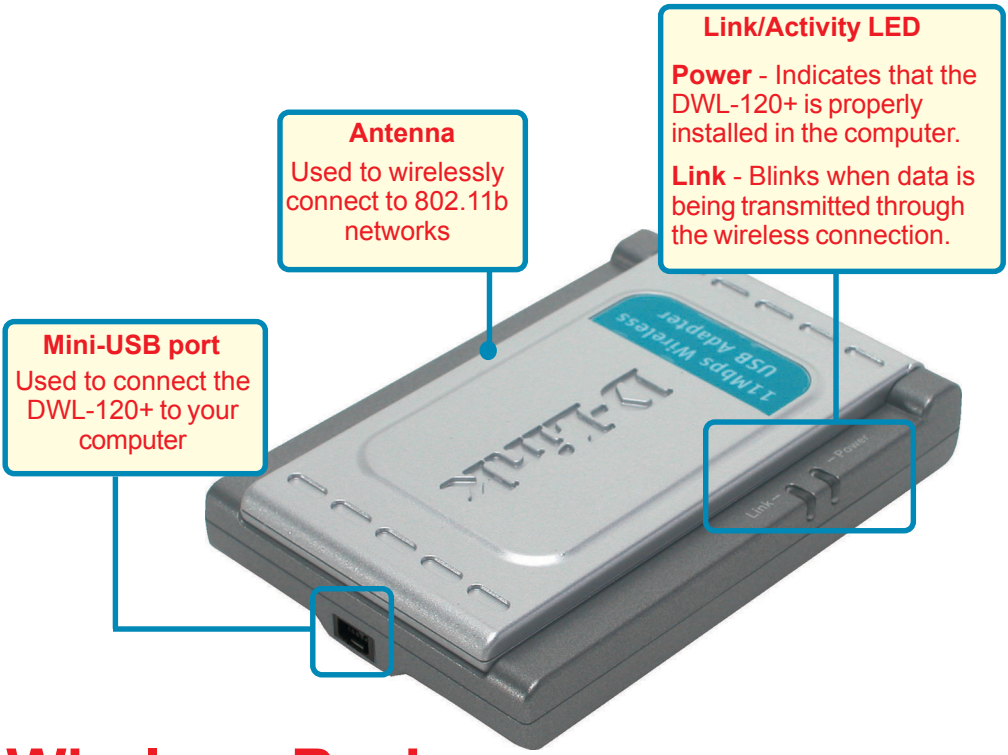
* This is the theoretical maximum of the chipset used in the DWL-120+ USB Adapter. Actual through-put may vary.

Features and Benefits

- Convenience of Plug & Play installation
- Fully 802.11b compatible
- USB 1.1 standard
- Stronger Network Security with 256-bit WEP encryption
- Supports infrastructure networks via an Access Point or Router and Peer-to-Peer communication in Ad-Hoc mode
- User-friendly configuration and diagnostic utilities
- Connects at up to 328 feet indoors*
- Three year warranty (USA only)

** Environmental factors may adversely affect range*

Features



Wireless Basics

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

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

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

Wireless Basics *(continued)*

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

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

Scalability – WLANs can be configured in a variety of 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 larger infrastructure networks to accommodate hundreds or thousands of users, depending on the number of wireless devices deployed.

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

Standards-Based Technology

Based on the IEEE **802.11b** standard, the DWL-120+ is interoperable with existing compatible 2.4GHz wireless technology with data transfer speeds of up to 22Mbps when used with other D-Link *Air*Plus devices.

Installation Considerations

The D-Link *Air*Plus DWL-120+ lets you access your network, using a wireless connection, from virtually anywhere within its operating range. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the antenna of the DWL-120+ in an upright position.

2. Keep the number of walls and ceilings between the DWL-120+ and other network devices to a minimum - each wall or ceiling can reduce your D-Link wireless product's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.

3. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.

4. Building Materials can impede the wireless signal - a solid metal door or aluminum studs may have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.

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

Getting Started

With its default settings, the DWL-120+ will connect with other D-Link *Air*Plus products, right out of the box.

There are basically two modes of networking:

Infrastructure – using an Access Point or Router, such as the DI-614+.

Ad-Hoc – directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DWL-120+ wireless USB adapters.

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

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

A wireless broadband Router-
D-Link *Air*Plus DI-614+

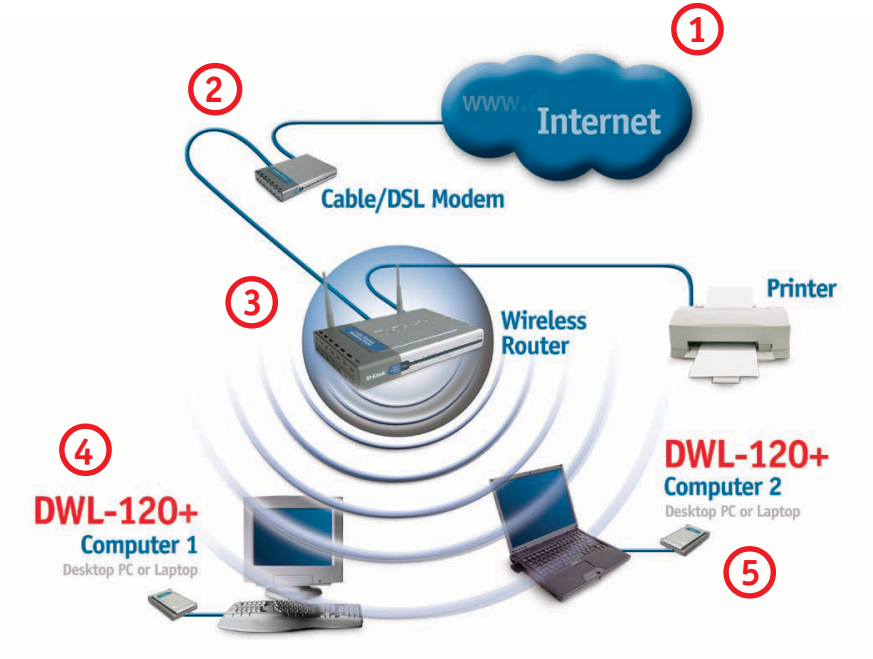
A laptop computer with a USB wireless network adapter -
D-Link *Air*Plus DWL-120+

A desktop computer with a USB wireless network adapter -
D-Link *AirPlus* DWL-120+

A Cable modem -
D-Link DCM-201

Getting Started

Setting up a Wireless Infrastructure Network



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

1. You will need broadband Internet access (a Cable or DSL-subscriber line into your home or office)
2. Consult with your Cable or DSL provider for proper installation of the modem
3. Connect the Cable or DSL modem to your broadband router (*see the Quick Installation Guide included with your router.*)
4. Install the D-Link *Air*Plus DWL-120 wireless USB adapter into an available USB port on your desktop computer. *(See the Quick Installation Guide included with the DWL-120+.)*
5. If you are connecting a laptop computer to your network, you can install the DWL-120+ into an available USB port on your laptop. (*See the Quick Installation Guide included with the DWL-120+.*)

Setting up a Wireless Ad Hoc Network

1. Install the **D-Link *Air*Plus DWL-120+** Wireless USB adapter into the desktop computer. *(See the **Quick Installation Guide** included with the product for installation instructions.)*

2. Install another DWL-120+ into the laptop computer. Or you may install another wireless adapter such as the D-Link *Air*Plus DWL-650+ wireless cardbus adapter. *(See the **Quick Installation Guide** included with the product for installation instructions.)*

3. Set the wireless configuration for the adapters to *Ad-Hoc* mode, set the adapters to the same channel, and assign an IP Address to each computer on the Ad-Hoc network. *(See Box below)*

IP Address

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

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

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

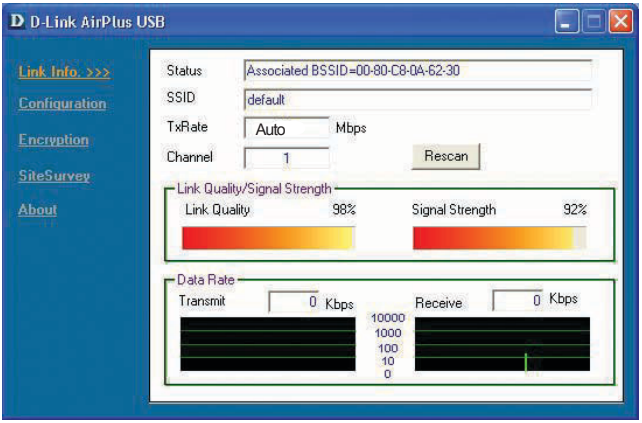
Using the Configuration Utility

D-Link *Air*Plus DWL-120+ uses the **Configuration Utility** as the management software. The utility provides the user an easy interface to change any settings related to the wireless adapter. When the computer is started, the **Configuration Utility** starts automatically and the system tray icon is loaded in the toolbar (see illustration below.) Clicking on the utility icon will start the **Configuration Utility**. Another way to start the **Configuration Utility** is to click on **Start>Programs>D-Link DWL-120+**.

If you are using Windows XP, you can use either the Zero Configuration Utility or the D-Link Configuration Utility. To use the D-Link Configuration Utility with XP, click on the Zero Configuration Utility in the taskbar in the lower corner of your computer screen and uncheck the box in the properties window that enables windows configuration. After you have done this, you can then use the D-Link Configuration Utility with XP.

A new icon will appear in your Icon tray. **Double-click** on the icon shown at right. The screen below will be displayed with the following default settings:

Link Info



Status:
Displays the current connection state of the DWL-120+.

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

Tx Rate:
The default setting is Auto; Tx Rate settings are automatically determined for optimal speed up to a maximum speed of 22Mbps.

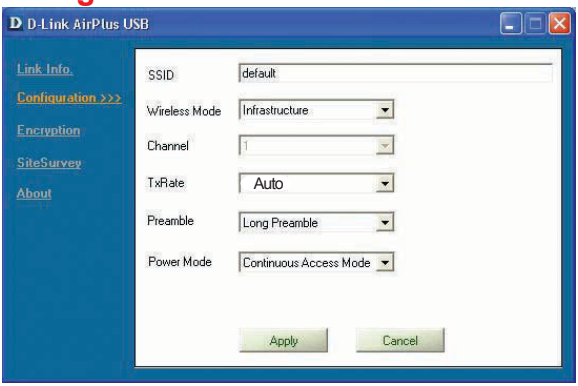
Channel:
The default setting is 6.

Link Quality:
Displays the wireless signal strength for the DWL-120+ wireless connection to the access point.

Data Rate:
Displays the statistics of the data that is transmitted and received.

Using the Configuration Utility

Configuration



SSID:

The Service Set Identifier is the name assigned to the wireless network. The factory SSID setting is set to **default**. Make changes here to match the SSID on the existing Wireless Router or Access Point.

Wireless Mode:

Infrastructure is the factory default setting. **Ad-Hoc** mode is used for peer-to-peer networking. See the *Getting Started* section in this manual for examples of these network types.

Channel:

The default channel setting is channel **6**. In **Infrastructure** mode, the DWL-120+ will automatically select the channel to match the channel setting for the selected Access Point. In **Ad Hoc** mode, the channel must be manually set to the same channel for each wireless adapter.

Tx Rate:

You can adjust the transmission rate to get the best signal possible depending on your usage and your environment. The Tx Rate will be determined automatically by signal strength. Default is set to **Auto**.

Preamble:

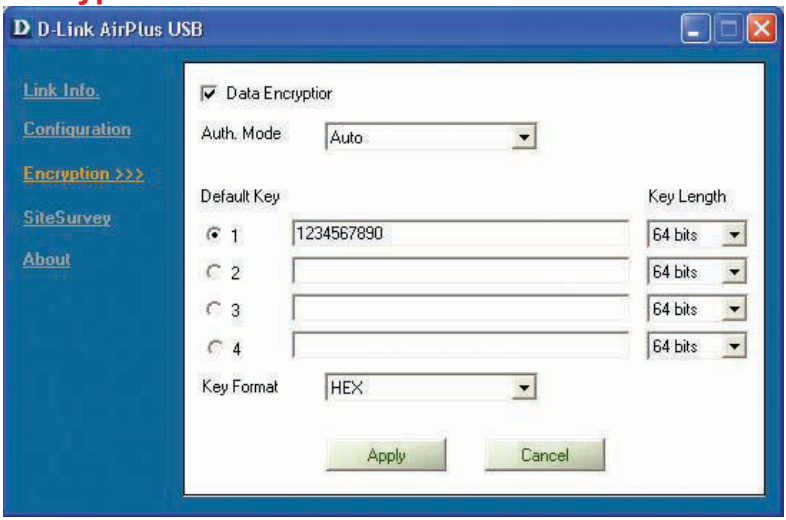
Select **Long** or **Short Preamble**. The Preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) for communication between the Access Point and the roaming wireless Network adapters. *Long Preamble* is the default setting. High network traffic areas should use the *Short Preamble*.

Power Mode:

Select from three modes:
Continuous Access Mode - this default setting consumes the most power
Maximum Power Save - this setting consumes the least power
Power Save - this setting consumes a moderate amount of power
Click **Apply** to save changes.

Using the Configuration Utility

Encryption



Data Encryption:

Enable encryption by clicking in the box. Data encryption is de-selected as the default setting.

Authorization Mode:

Open Authentication - communicates the key across the network
Shared Authentication - allows communication only with other devices with identical WEP settings
Auto - will automatically adjust to the Authentication mode of the wireless Access Point or Router

Default Key:

Enter a key in either ASCII (e.g., a word) or hexadecimal format. Select one of the 4 keys that you have created to be the default key.

Key Length:

select the key length, either 64, 128 or 256 bits

Key Format:

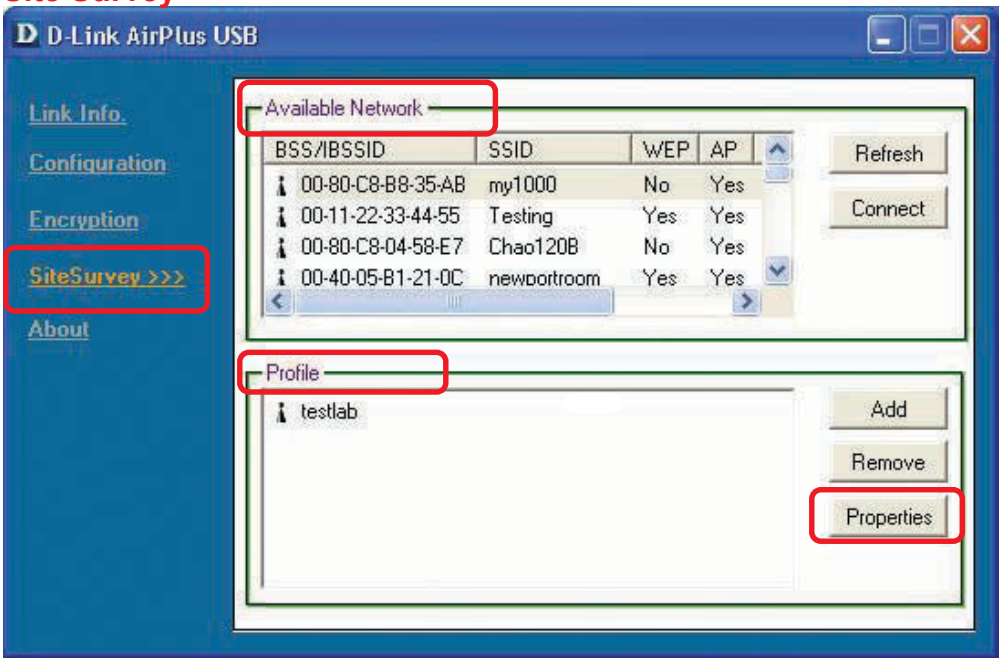
ASCII (e.g., a word) or Hexadecimal format

> ***Hexadecimal*** *digits consist of the numbers 0-9 and the letters A-F*
> ***ASCII*** *(American Standard Code for Information Interchange) is a code for representing English letters as numbers from 0-127*

Click **Apply** if you have made any changes

Using the Configuration Utility

Site Survey



Available Networks:

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

Profiles:

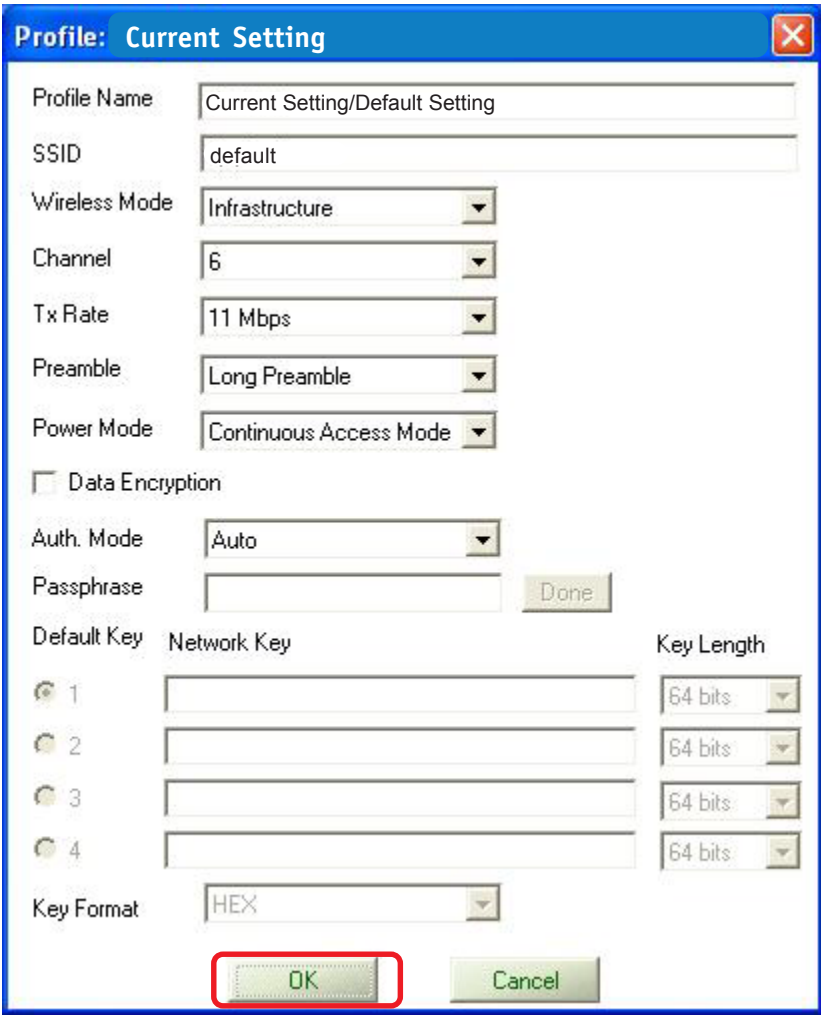
In the lower half of the screen, you can manage the profiles that you have created for the wireless network at home, at the office and in public places. Scroll up and down and highlight the profile that you wish to configure. You can **ADD** or **REMOVE** a profile, or configure the **Properties** of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

Properties:

Click on Properties and the screen on the next page will appear.

Using the Configuration Utility (continued)

Properties

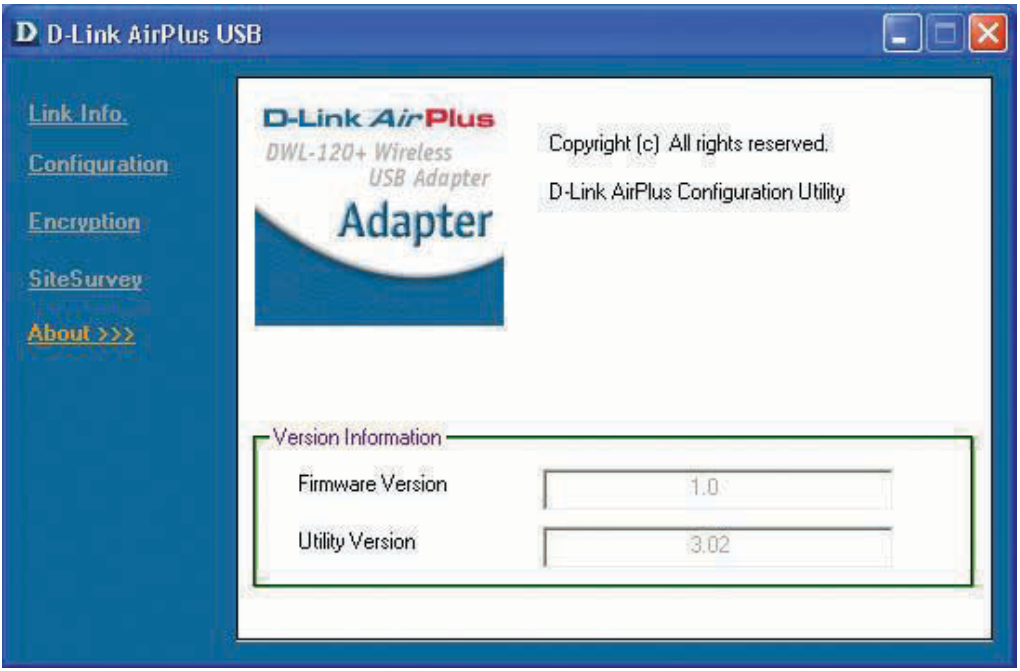


In this window you can configure all the properties of a profile in order to connect with a network of your choice.

Click **OK** to save the changes.

Using the Configuration Utility

About



The **About** tab displays the utility and the firmware versions.

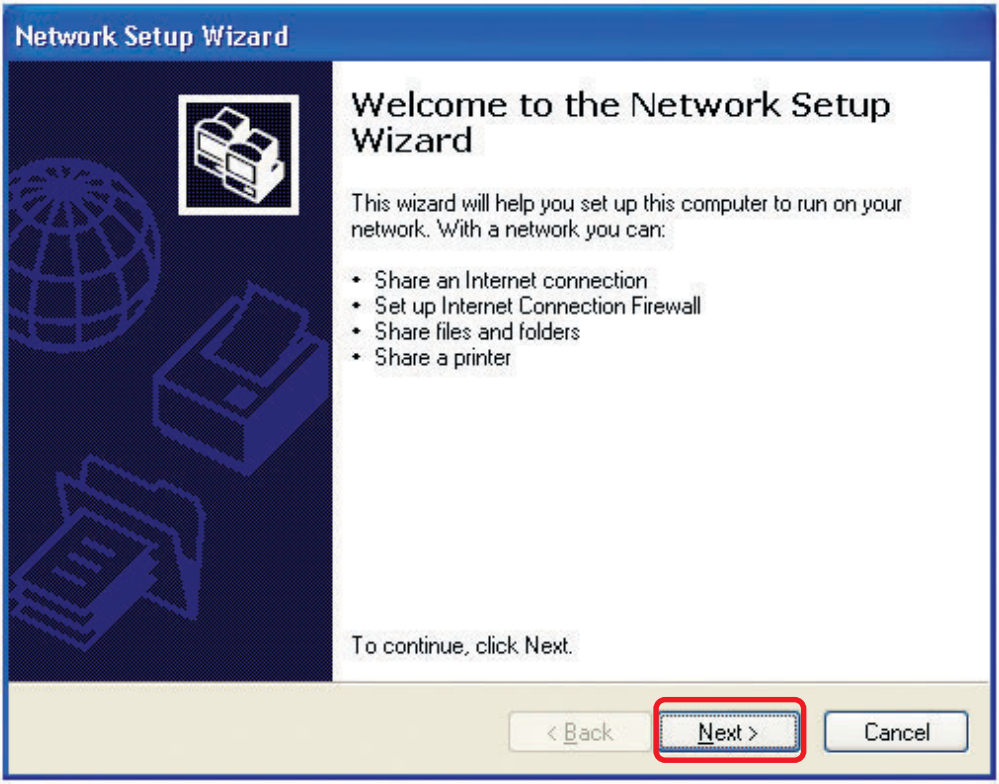
Networking Basics

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 98SE.

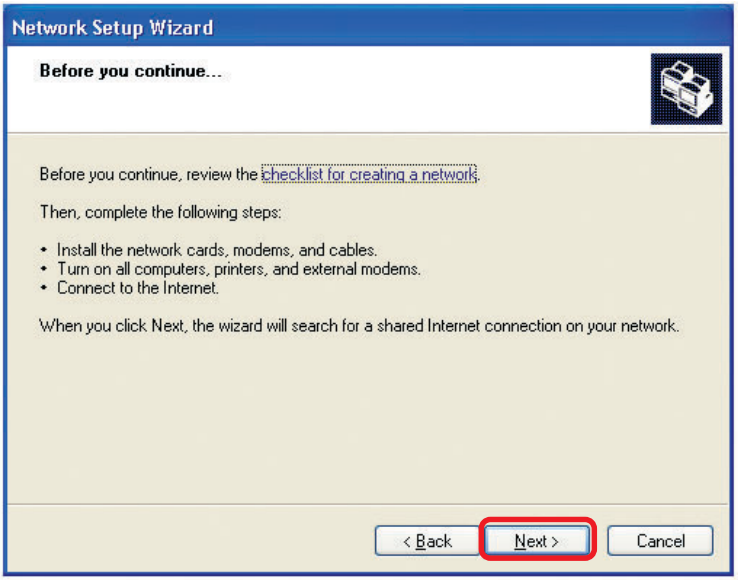
Go to **Start>Control Panel>Network Connections**
Select **Set up a home or small office network**



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

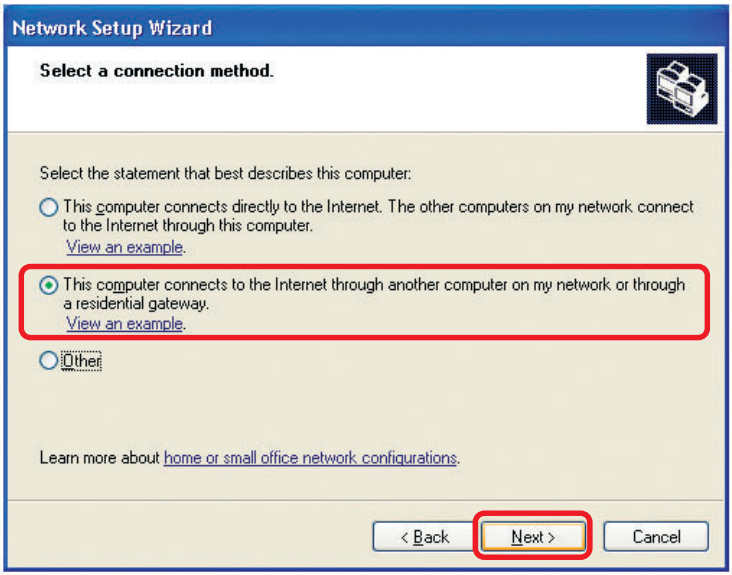
Networking Basics

Please follow all the instructions in this window:



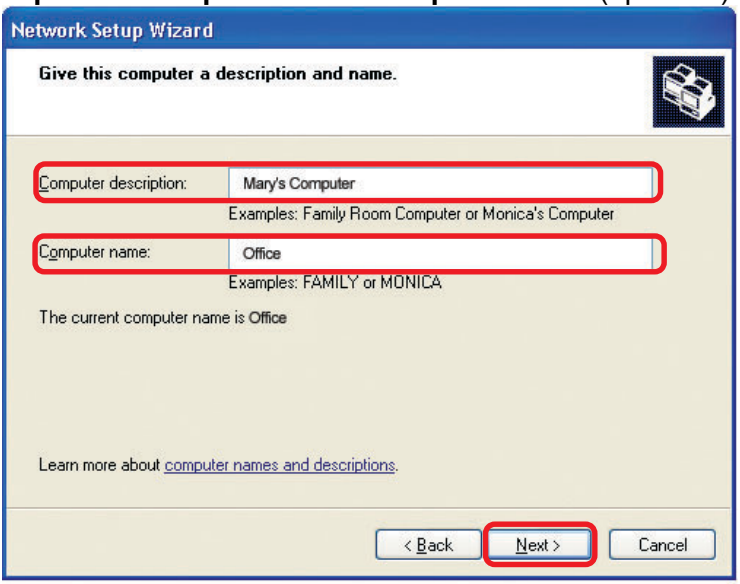
Click **Next**

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.



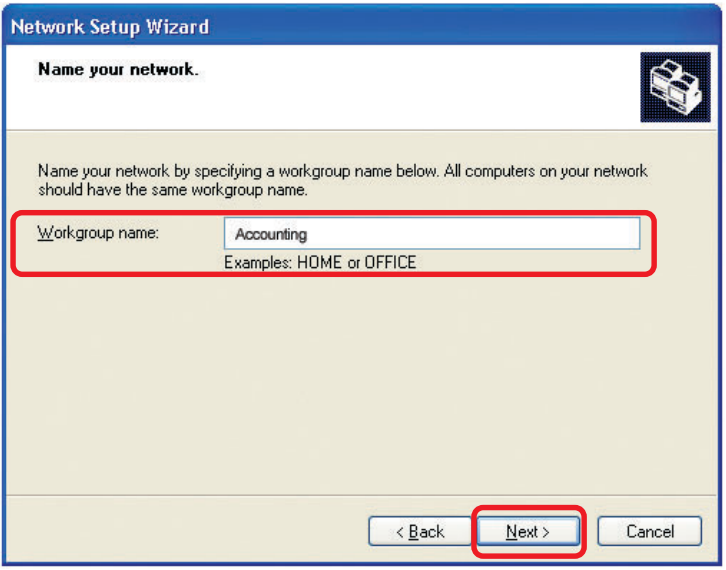
Click **Next**

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



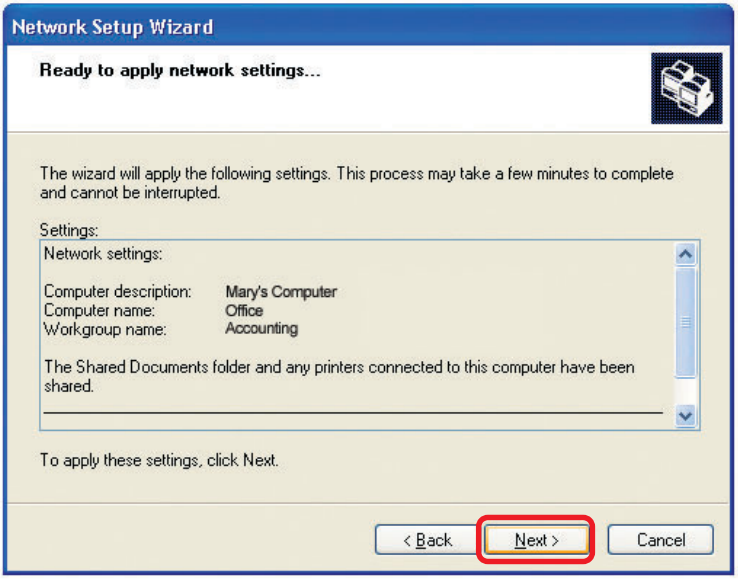
Click **Next**

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



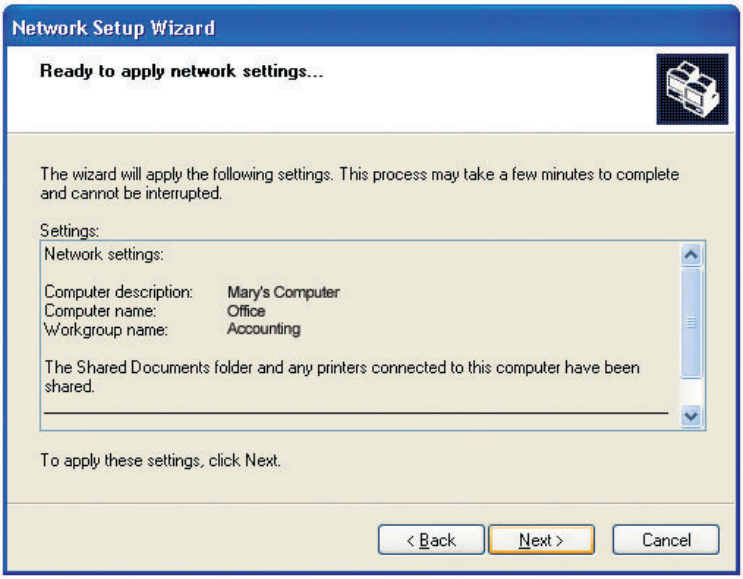
Click **Next**

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

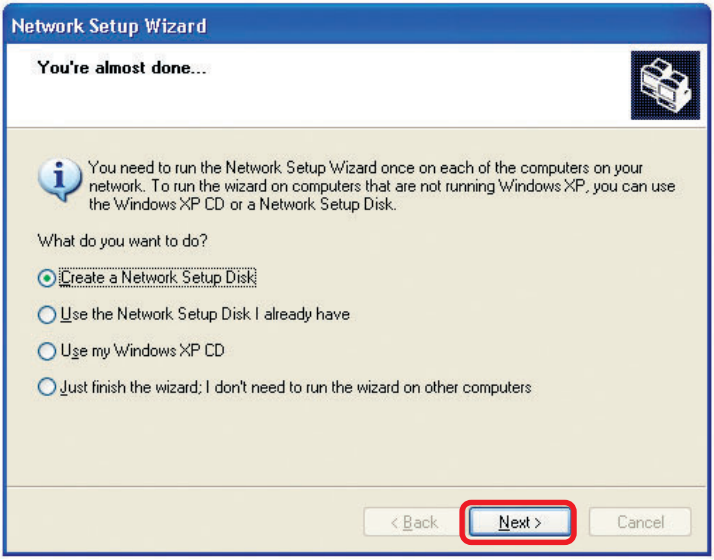


When the changes are complete, click **Next**.

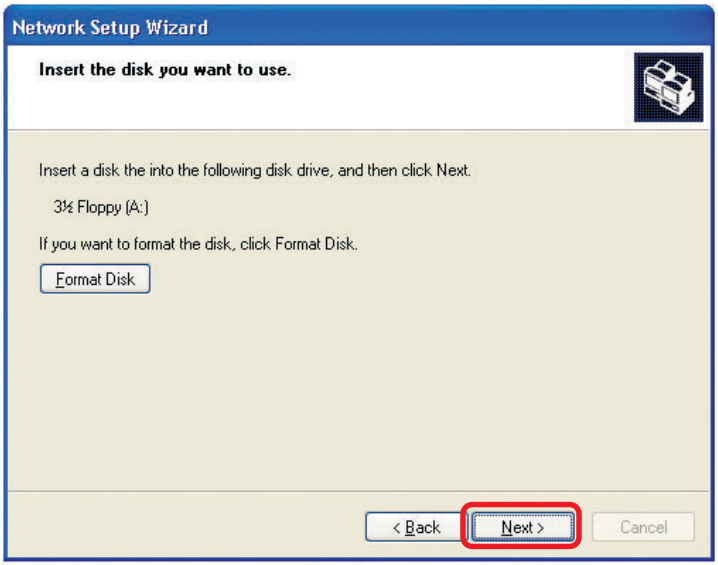
Please wait while the **Network Setup Wizard** configures the computer. This may take a few minutes.

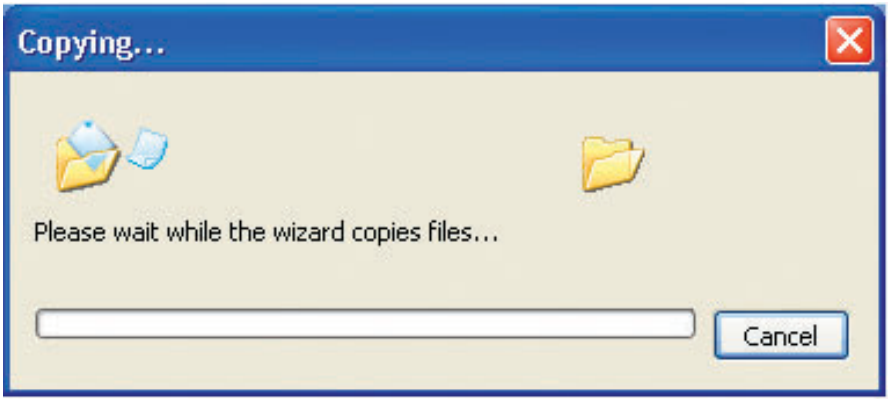


In the window below, select the option that fits your needs. In this example, **Create a Network Setup Disk** has been selected. You will run this disk on each of the computers on your network. Click **Next**.

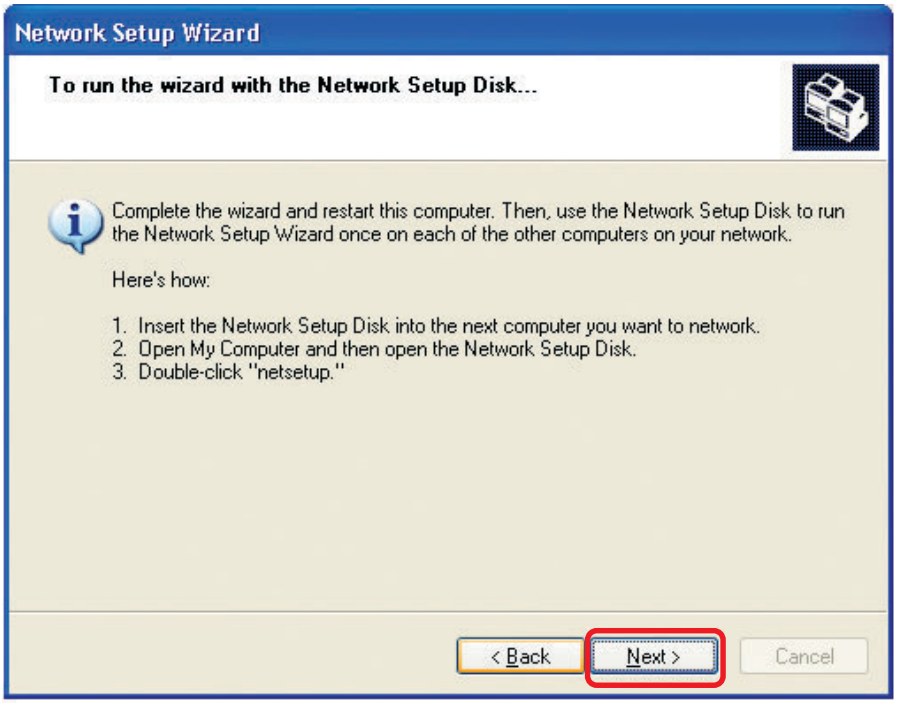


Insert a disk into the Floppy Disk Drive, in this case drive **A.**



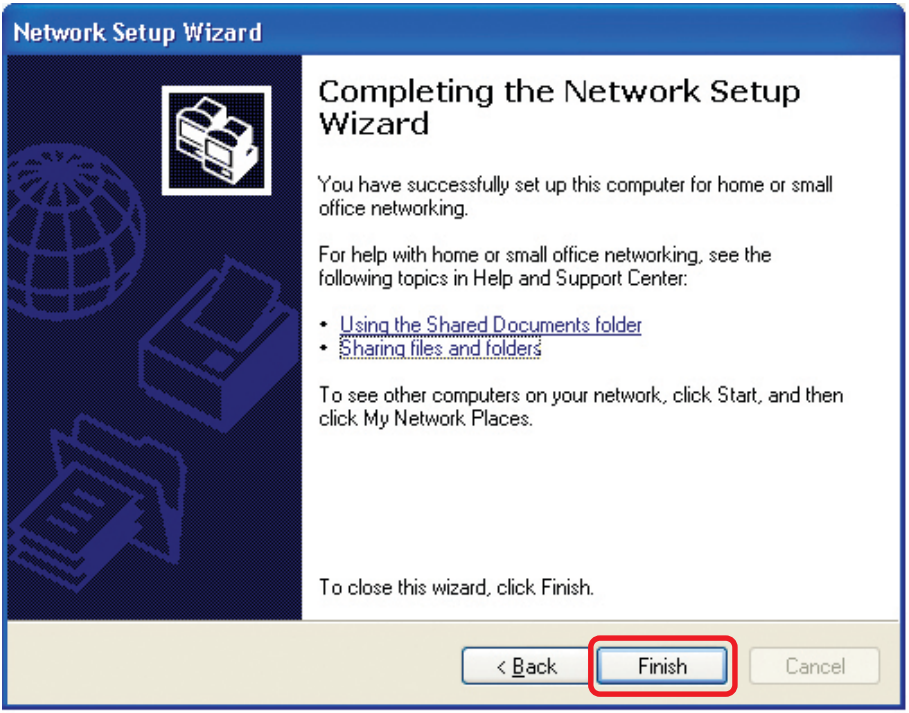


Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next.**

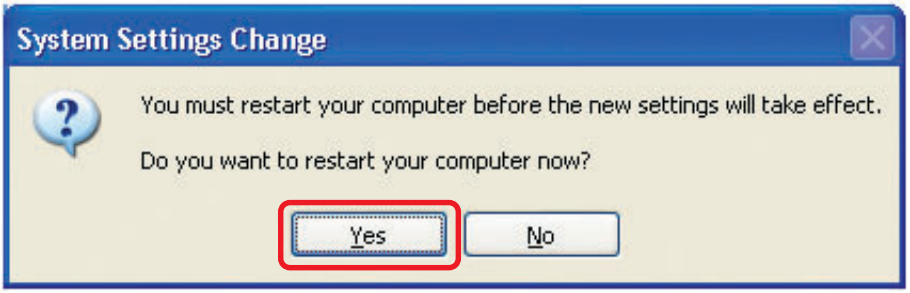


Networking Basics

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.



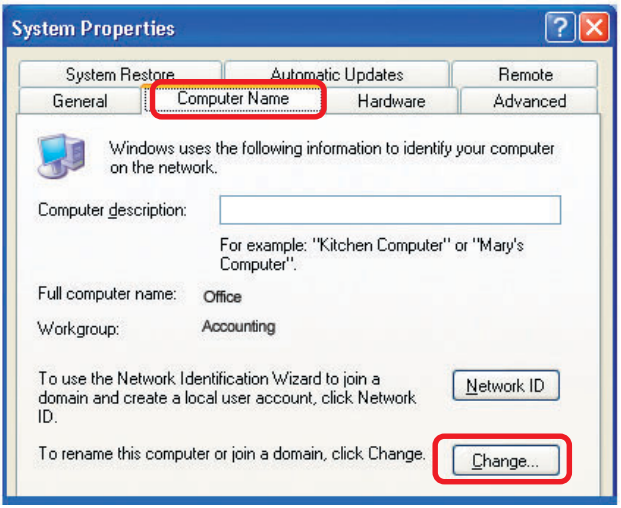
You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

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.

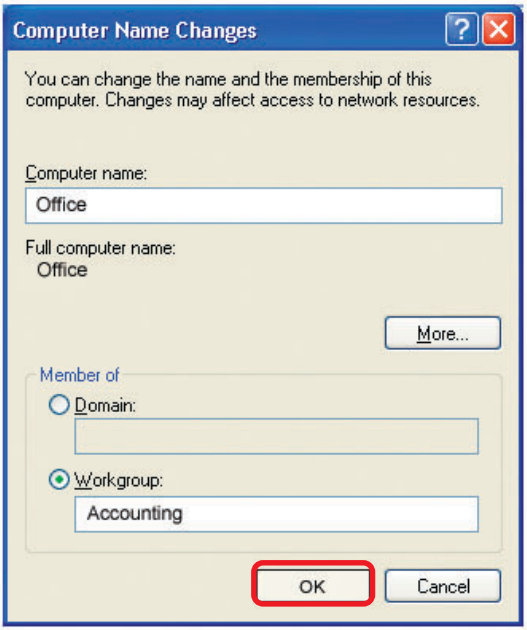


- You may enter a **Computer Description** if you wish; this field is optional.

- To rename the computer and join a domain, Click **Change**.

Naming your Computer

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



Checking the IP Address in Windows XP

The wireless adapter-equipped computers in your network must be in the same IP Address range (see Getting Started in this manual for a definition of IP Address Range.) To check on the IP Address of the adapter, please do the following:

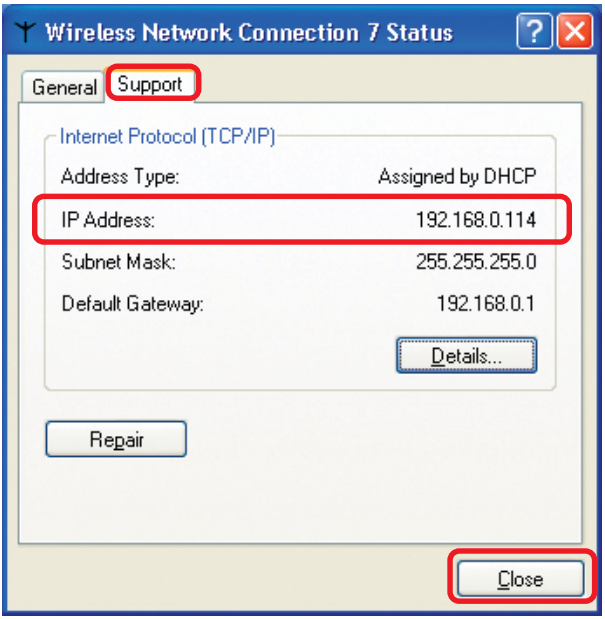
- Right-click on the ***Local Area Connection icon*** in the task bar
- Click on **Status**

Checking the IP Address in Windows XP

This window will appear.

- Click the **Support tab**

- Click **Close**



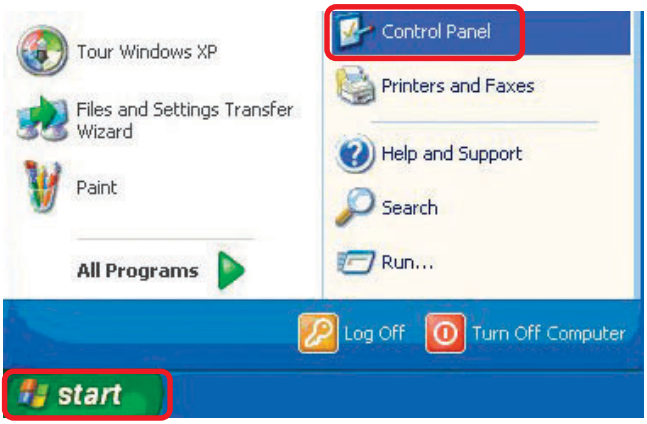
Assigning a Static IP Address in Windows XP/2000

Note: Residential Gateways/Broadband Routers will automatically assign IP Addresses to the computers on the network, using DHCP (Dynamic Host Configuration Protocol) technology. If you are using a DHCP-capable Gateway/Router you will not need to assign Static IP Addresses.

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

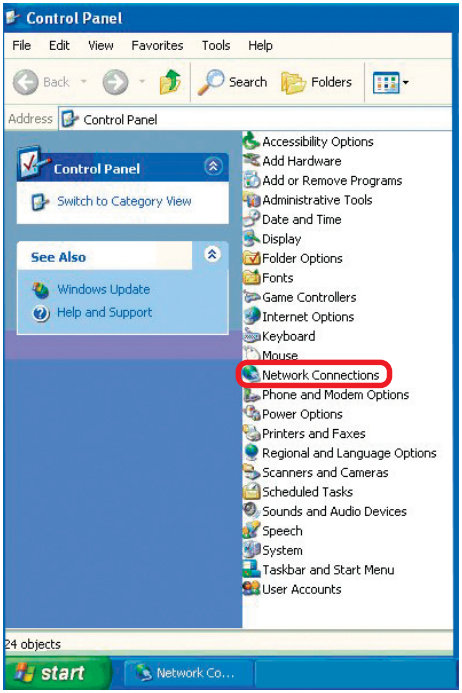
- Go to **Start**

- Double-click on **Control Panel**

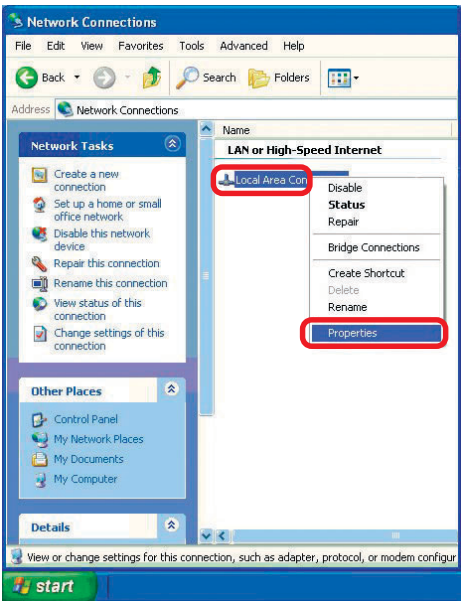


Assigning a Static IP Address in Windows XP/2000

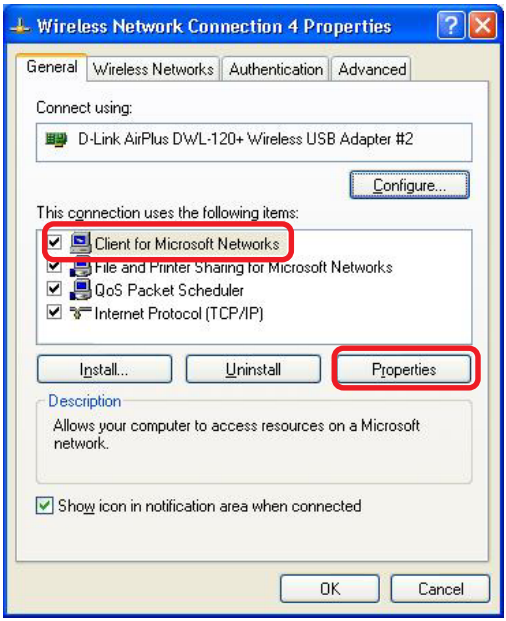
- Double-click on **Network Connections**



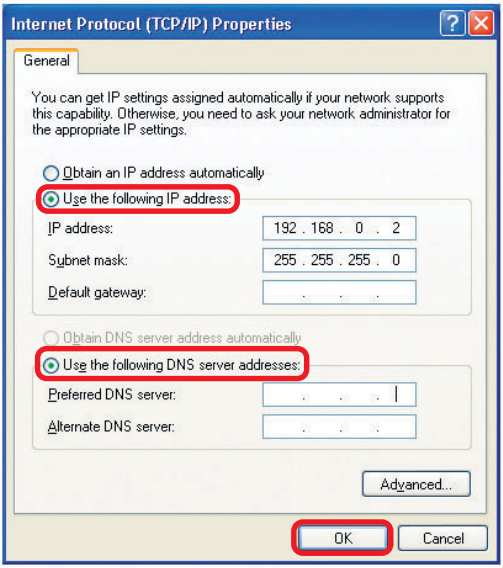
- Right-click on **Local Area Connections**
- Double-click on **Properties**



Assigning a Static IP Address in Windows XP/2000



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



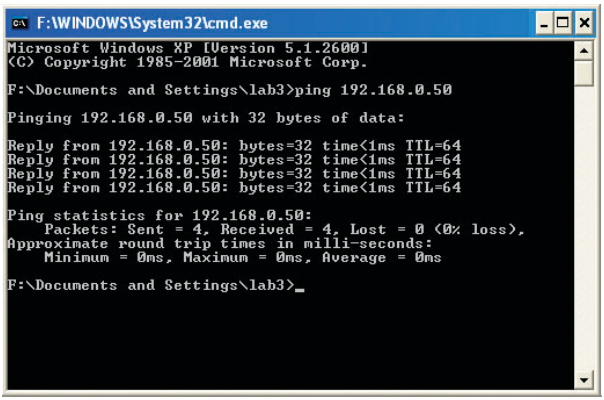
- Input your **IP address and subnet mask.** (The IP Addresses on your network must be within the same range. For example, if one computer has an IP Address of 192.168.0.2, the other computers should have IP Addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The subnet mask must be the same for all the computers on the network.)
- Input your **DNS server addresses. (Note: If you are entering a DNS server, you must enter the IP Address of the Default Gateway.)**

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

- Click **OK**

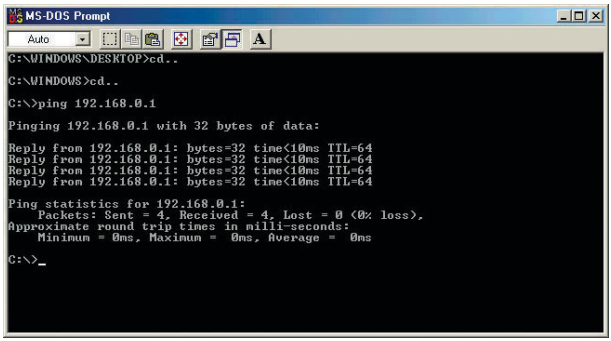
*Checking the Wireless Connection by Pinging in Windows XP and 2000**

- Go to **Start** > **Run** > type **cmd**. A window similar to this one will appear. Type **ping xxx.xxx.xxx.xxx**, where **xxx** is the **IP Address** of the Wireless Router or Access Point. A good wireless connection will show four replies from the Wireless Router or Acess Point, as shown.



*Checking the Wireless Connection by Pinging in Windows Me and 98**

- Go to **Start** > **Run** > type **command**. A window similar to this will appear. Type **ping xxx.xxx.xxx.xxx** where **xxx** is the **IP Address** of the Wireless Router or Access Point. A good wireless connection will show four replies from the wireless router or access point, as shown.



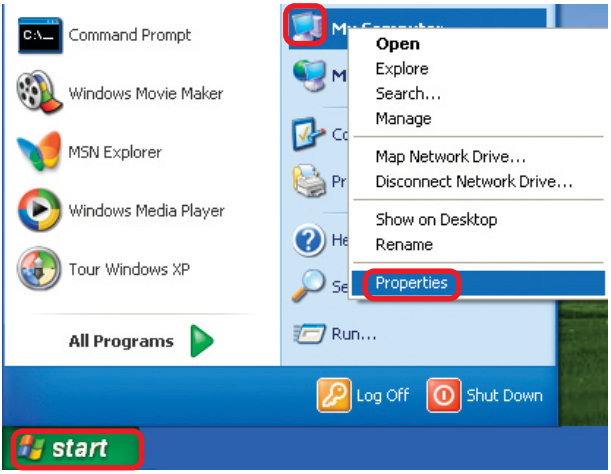
** The IP Addresses in these illustrations are examples only. The actual IP Addresses that you ping may be different than those displayed here.*

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DWL-120+. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows XP. If you have another operating system, these solutions will still apply although the appearance on your computer screen may differ.)

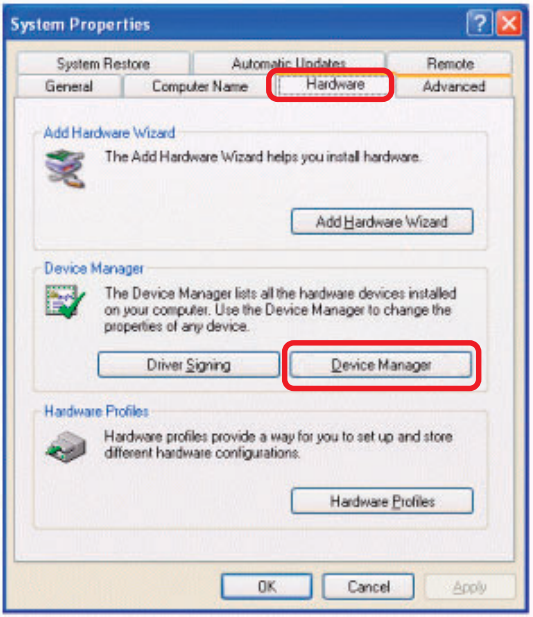
1. Check that the drivers for the DWL-120+ are installed properly.

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



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

- Click **Device Manager**

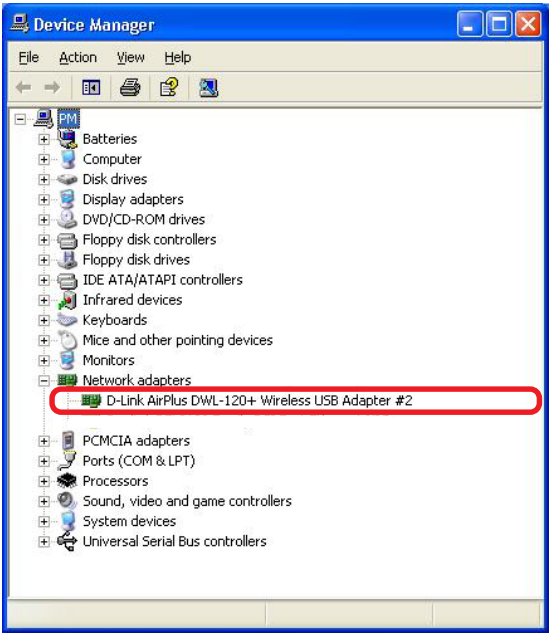


Troubleshooting

- Double-click on **Network Adapters**

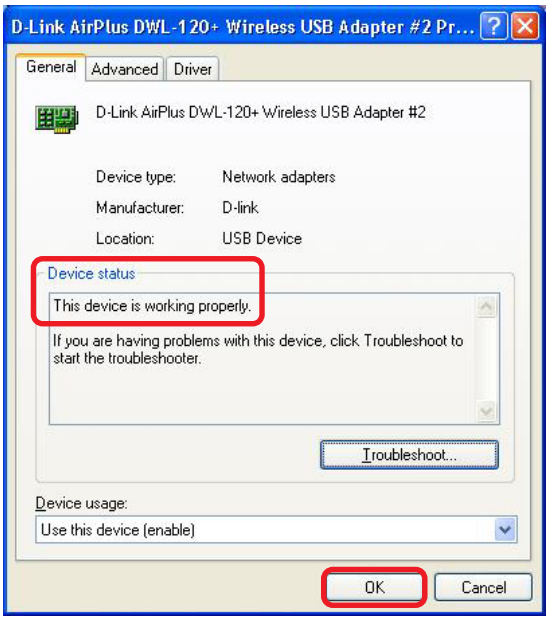
- Right-click on **D-Link *Air*Plus DWL-120+ Wireless USB Adapter**

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



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

- Click **OK**



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

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

3. Why does my wireless connection keep dropping?

- Antenna Orientation- Try different antenna orientations for the D-Link DWL-120+. Try to keep the antenna at least 6 inches away from the wall or other objects.
- If you are using 2.4GHz cordless phones, X-10 equipment or other home security systems, ceiling fans, and lights, your wireless connection will degrade dramatically or drop altogether. Try changing the Channel on your Router, Access Point and Wireless adapter to a different Channel to avoid interference.
- Keep your product away (at least 3-6 feet) from electrical devices that generate RF noise, like microwaves, Monitors, electric motors, etc.

4. Why can't I get a wireless connection?

If you have enabled Encryption on the DWL-120+, you must also enable encryption on all wireless devices in the network in order to establish a wireless connection.

- The Encryption settings are: 64, 128 or 256-bit. Make sure that the encryption bit level is the same on the Router and the DWL-120+.
- Make sure that the SSID on the Router (if you have one in your network) and the DWL-120+ are exactly the same. If they are not, wireless connection will not be established. The default SSID is **default**.

Technical Specifications

Standard

- IEEE 802.11b

Diagnostic LED

- Power
- Link Status

Temperature

- Operating: 0ºC to 55ºC (32ºF to 131ºF)
- Storing: -20ºC to 75ºC (-4ºF to 167ºF)

Humidity:

- 95%, non-condensing

Antenna Type:

- Single External, Dual Diversity

Modulation Technique:

- DSSS

Physical Dimensions:

- L = 3 inches
- W = 2 inches
- H = 0.5 inches

Data Rates:

- 1,2,5.5,11,22 Mbps (with Automatic Fallback)

Interface:

- USB 1.1

Available Channels:

- Eleven channels for North America

Media Access Protocol:

- CSMA/CA with ACK

Technical Support

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

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

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

Tech Support for customers within the United States:

D-Link Technical Support over the Telephone:
(877) 453-5465
24 hours a day, seven days a week.

D-Link Technical Support over the Internet:
http://support.dlink.com
email:support@dlink.com

Tech Support for customers within Canada:

D-Link Technical Support over the Telephone:
(800) 361-5265
Monday to Friday 8:30am to 9:00pm EST

D-Link Technical Support over the Internet:
http://support.dlink.ca
email:support@dlink.ca

Warranty and Registration
(USA only)

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

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

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

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

- Hardware (excluding power supplies and fans) Three (3) Years
- Power Supplies and Fans One (1) Year
- Spare parts and spare kits Ninety (90) days

D-Link’s sole obligation shall be to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund at D-Link’s sole discretion. Such repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement Hardware need not be new or have an identical make, model or part. D-Link may in its sole discretion replace the defective Hardware (or any part thereof) with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement Hardware will be warranted for the remainder of the original Warranty Period from the date of original retail purchase. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware (or part thereof) that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty: D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. D-Link’s sole obligation shall be to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund at D-Link’s sole discretion. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Software will be warranted for the remainder of the original Warranty Period from the date or original retail purchase. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty: The Limited Warranty provided hereunder for hardware and software of D-Link’s products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold “As-Is” without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim: The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same.

- The original product owner must obtain a Return Material Authorization ("RMA") number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.

- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

- Return Merchandise Ship-To Address

USA: 53 Discovery Drive, Irvine, CA 92618
Canada: 2180 Winston Park Drive, Oakville, ON, L6H 5W1 (Visit http://www.dlink.ca for detailed warranty information within Canada)

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered: This limited warranty provided by D-Link does not cover: Products, if in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this Warranty.

Disclaimer of Other Warranties: EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability: TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM

LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law: This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This limited warranty provides specific legal rights and the product owner may also have other rights which vary from state to state.

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CE Mark Warning: This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures**:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

FCC Caution:

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

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. The antenna(s) used for this equipment must be installed to provide a separation distance of at least eight inches (20 cm) from all persons.

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

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