D-Link **DFE-530TX+**

Fast Ethernet Adapter for PCI Bus

Manual

Rev. 08 (March 18, 2003)

Printed in Taiwan

D-Link®
Building Networks for People

Table of Contents

Introduction

The D-Link DFE-530TX+ is ideal for the small office or home office environment. After completing the steps in this manual, you will have the ability to share information and resources - such as files and printers - and take full advantage of a “connected” environment for work and play!

The DFE-530TX+ comes with drivers for the most popular operating systems and can be integrated into a larger network. However, this Guide is designed to help you network two computers running Windows 95/98, Windows Me and Windows 2000 in a peer-to-peer configuration. Yet, the standards compliant DFE-530TX+ gives you the flexibility to expand and customize your Ethernet / Fast Ethernet network at will.

The Ethernet standard allows you to connect computers and devices at speeds up to 10 Mbps. Fast Ethernet allows speeds up to 100 Mbps. A Dual-Speed 10/100 Mbps Ethernet / Fast Ethernet network combines both standards allowing computers and devices of different speeds to communicate with each other. The DFE-530TX+ is a Dual-Speed 10/100 Mbps Ethernet / Fast Ethernet network card.

Contents of Package

DFE-530TX+ Fast Ethernet Adapter
Package Contents

1 DFE-530TX+ Fast Ethernet Adapter
2 Drivers
3 Manual
4 Quick Installation Guide

Technology Basics

About Fast Ethernet

Fast Ethernet is a network technology specified by IEEE Standard 802.3u. It extends the traditional 10Mbps Ethernet technology to achieve 100Mbps transmission and reception, while retaining the same CSMA/CD Ethernet protocol. Thus, while Fast Ethernet provides a tenfold increase in network capacity, it is wholly compatible with traditional 10Mbps Ethernet network facilities. This compatibility is the key to easy and efficient upgrades to 100Mbps in your network areas needing greater bandwidth. Upgrading selected areas to Fast Ethernet does not require hardware or software changes in network areas where traditional 10Mbps Ethernet is providing good service. For upgrading, Fast Ethernet is the clear choice in terms of cost-effectiveness, as well as convenience and smoothness in transition.

Category 5 cabling is required for 100Base-TX Fast Ethernet in order to provide full duplex operation. Full duplex 100Base-TX operation allows simultaneous transmission and reception, both at 100Mbps, thus providing service potentially equal to 200Mbps full-duplex service

To provide compatibility in traditional 10Mbps Ethernet environments (where, for example, DFE-530TX+ adapters are installed anticipating upgrade of supporting switch equipment to Fast Ethernet), the DFE-530TX+ also supports traditional 10Mbps Ethernet operation, in full-duplex as well as half-duplex modes. Selection of the best operation mode in any given installation is automatically governed by auto-negotiation.

About Auto-Negotiation

You have probably had the experience of making a dialup connection through a modem, and have heard the sound exchange between your modem and the modem at the other end of the telephone line. As irritating as those few seconds of noise may be, they do let you know that your modem and the remote modem are on the job, preparing for your intended communication with the remote computer.

When the two modems have tested the phone-line quality and settled on the combination of shared options and parameters which will provide the best data communication over the connecting phone line, then you are given the “connect” message which signals the end of the intermodem negotiation and the beginning of your intended communication with the remote computer.

Auto-negotiation between devices within an Ethernet LAN is similar in concept, but much briefer. The two devices involved in the auto-negotiation will be the DFE-530TX+ Adapter serving your station (installed in your computer), and the switch through which it is connected to the LAN. The options to be negotiated between the DFE-530TX+ and its supporting switch includes Ethernet type (100BASE-TX Fast Ethernet or 10BASE-T Ethernet) and duplex mode (half-duplex, being one-way-at-a-time, or full duplex, being simultaneous transmit-and receive.)

Startup communication between the two devices occurs when both devices are powered up. Once the cable connection and the Network Operating System software is satisfied, the preparatory process of auto-negotiation between the DFE-530TX+ and its supporting switch proceeds automatically. If the switch has auto-negotiation functionality, it and the DFE-530TX+ exchange a series of messages, each device signals its capabilities and listens for corresponding information about the other. The auto-negotiation process requires only a few milliseconds, and the two devices select the best communication parameters supported by both.

If the switch does not support auto-negotiation, the (single capability) message will be recognized by the DFE-530TX+ auto-negotiation facility, which will switch to those settings of its own capabilities, which match that of the switch.
Auto-negotiation reoccurs any time the linkage is restored, making the line ready again for optimal data communications.

About PCI Bus

Your DFE-530TX+ Adapter delivers outstanding performance by fully exploiting the advance features of your computer’s PCI bus. DFE-530TX+ Adapters utilize the Bus Master Mode of the PCI bus, allowing direct transfers of Ethernet packet content between computer memory and the adapter’s controller, thus minimizing network demands on the CPU. The adapter’s controller function provides the additional benefit of reduced command processing overhead.

The working relationship between a DFE-530TX+ adapter and main memory working in Bus Master mode is powered by the Bridge/Memory Controller of the PCI bus. This reduces the CPU role in network operations, thus freeing the CPU to service other tasks, with resulting improvement in overall computing (multitasking) performance. At the same time, it produces superior network throughput by reducing latency (waiting for CPU service) during transmissions and receptions.

Features

Wake On LAN

Wake On LAN (WOL) is an ACPI function allowing a powered down (sleeping) computer to be powered ON from a remote station. To use the WOL feature, the NIC must be WOL capable and the motherboard of the PC must be ACPI compliant. While powered-down computers Sleep, WOL enabled NICs monitor LAN traffic for valid Wake-up frames. When one is received, the NIC will immediately wake-up and send a signal to the motherboard to power ON the computer.

Some uses for the WOL feature include:

- Forgot a document and are out of town? Send a Wake-up signal to your computer and retrieve the needed file.
- Initiate long routines and reports before you get to work.
- Transfer files when the network traffic is low (during late hours).
- Power ON your PC before you arrive to work.
- The MIS department can upgrade software on computers after hours from a remote station.

Connecting the WOL Cable

NOTE: If your system's motherboard WOL Connector does not fit the WOL Cable or does not have 3 pins, do not attempt to force a connection or alter the components to fit. Doing so could permanently damage your computer.

The WOL function is system dependent, in addition to the following instructions, you may need to download WOL software from INTEL or another manufacturer's website.

Please consult your computer's manual for specific BIOS settings.

The WOL Cable is an interconnect cable with standard 3-pin connectors on each end. Please follow the procedures listed below to ensure proper installation of the WOL cable.

1. Connect either end connector of the WOL Cable to the NIC WOL Connector. Both ends of the WOL Cable are identical, so either end may be used.

Examine the PC motherboard and/or refer to the manual for the motherboard to locate the corresponding WOL Connector on the motherboard. The actual location is system dependent, but the motherboard may have a label beside the WOL Connector. After you have located the WOL connector on the motherboard, connect the cable.

1. Power-ON the PC and press “Delete” or “F1” when prompted to enter the PCI/ISA BIOS CMOS Setup. Enable the WOL function or the power-ON function of the PC. The name of this function is system dependent, but may be located in a category heading titled something like *Power Management*. Refer to your computer’s manual for more information regarding the CMOS Setup Utility and BIOS settings.

Flow Control

The DFE-530TX+ implements IEEE 802.3x compliant flow control for full-duplex, which provides traffic management functions for full-duplex operation. Flow control allows for enhanced full-duplex operation with switches. When operating at full-duplex (requiring a direct connection to a switch) and the switch’s data buffer is about to overflow, a Pause frame will be transmitted to the DFE-530TX+. The ensuing idle time keeps the buffer from overflowing and prevents data from being lost. This enhancement can improve network throughput, avoid collisions and prevent lost data, helping the network achieve optimal performance.

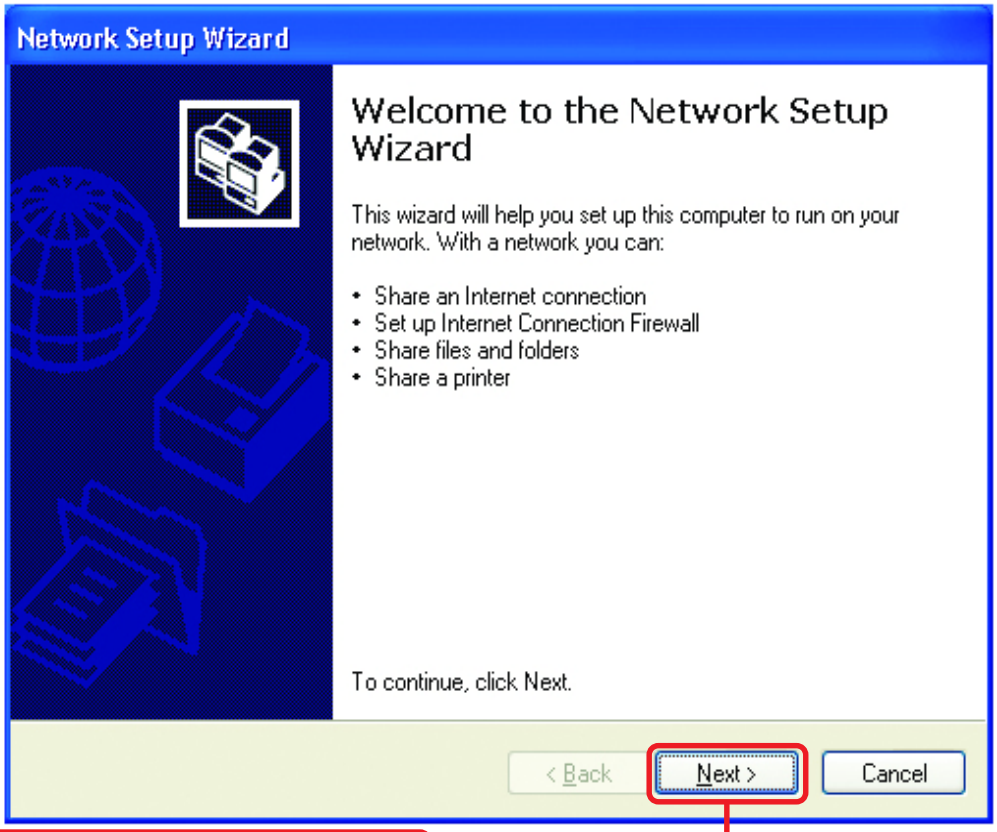
Networking Basics

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.**

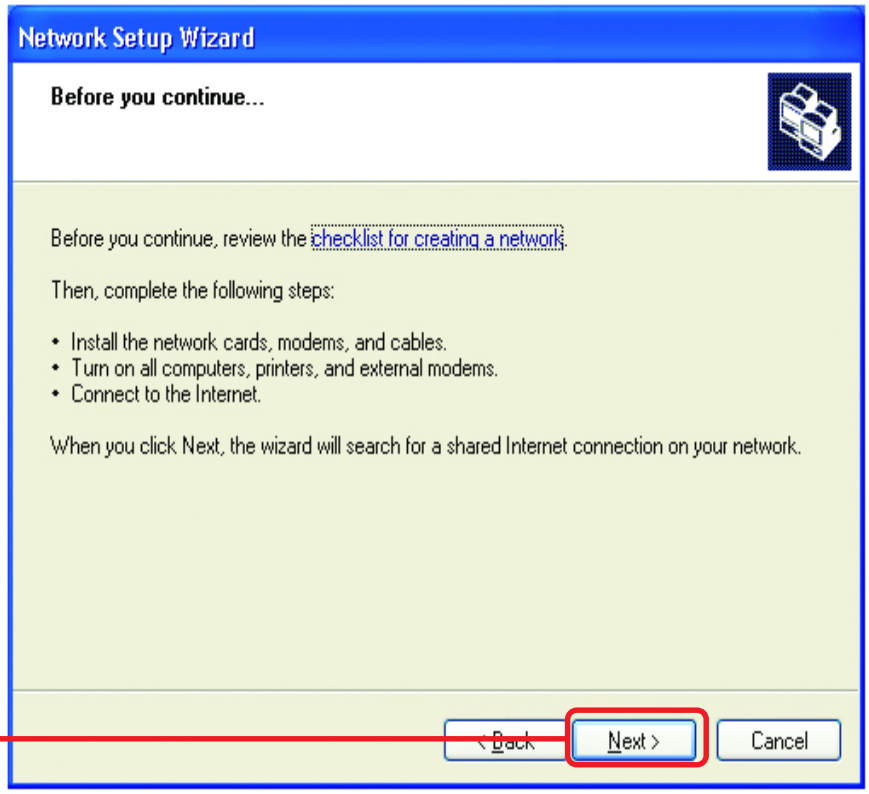
Note: Please refer to websites such as http://www.homenethelp.com and http://www.microsoft.com/windows2000 for information about networking computers using Windows 2000, ME or 98.

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



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

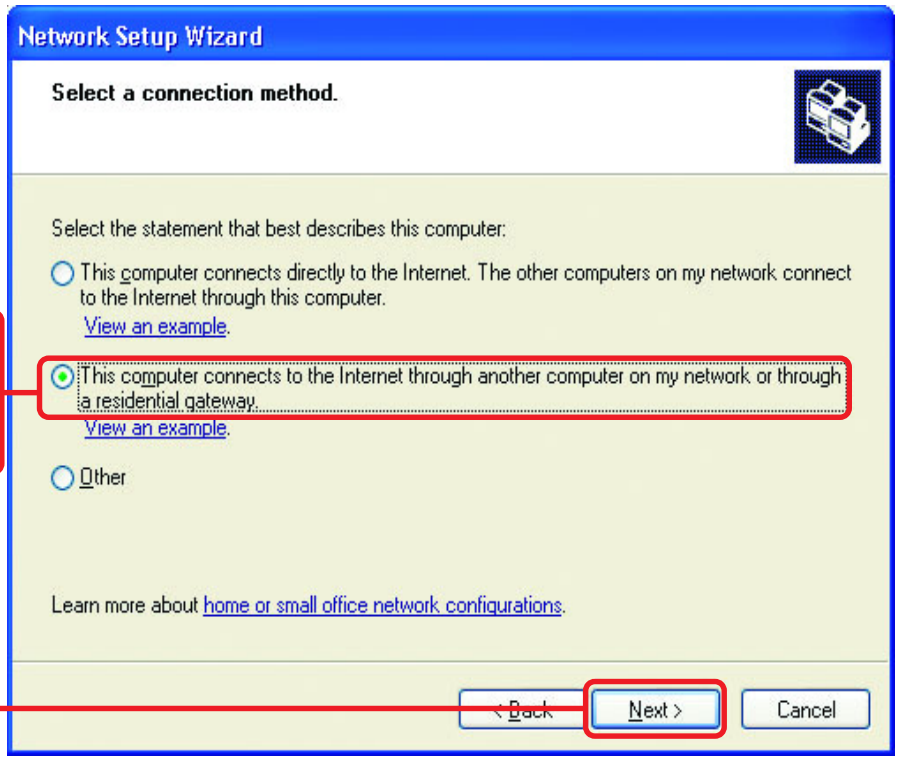
Please follow all the instructions in this window:



Click **Next**

In the following window, select the best description of your computer.

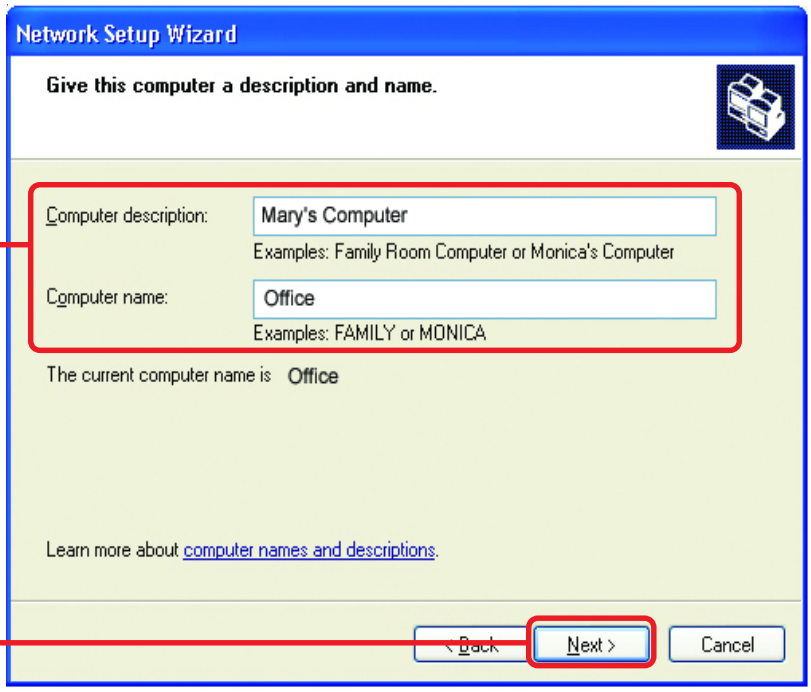
If your computer connects to the Internet through a gateway/router, select the second option as shown.



Click **Next**

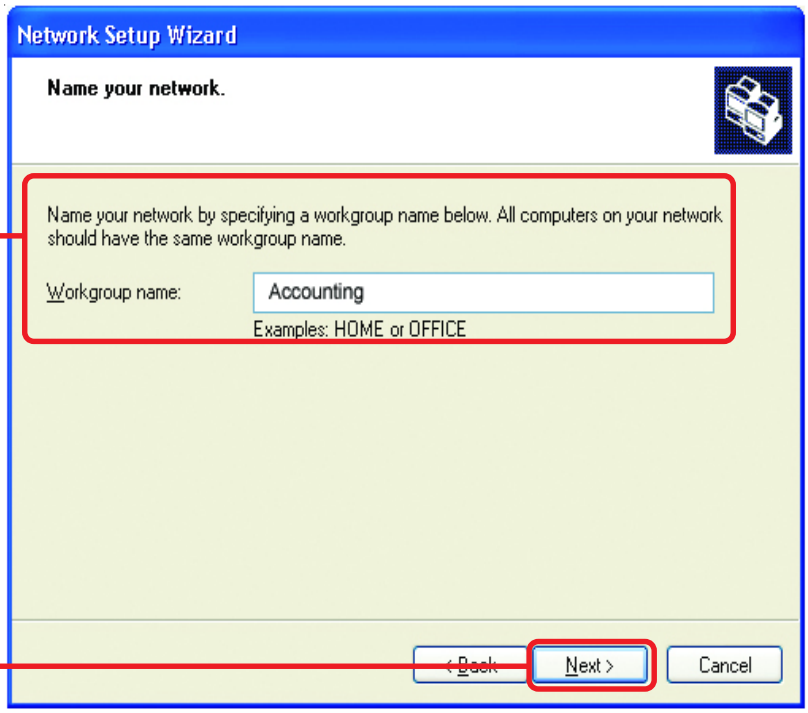
Enter a Computer description and a Computer name (optional.)

Click **Next**



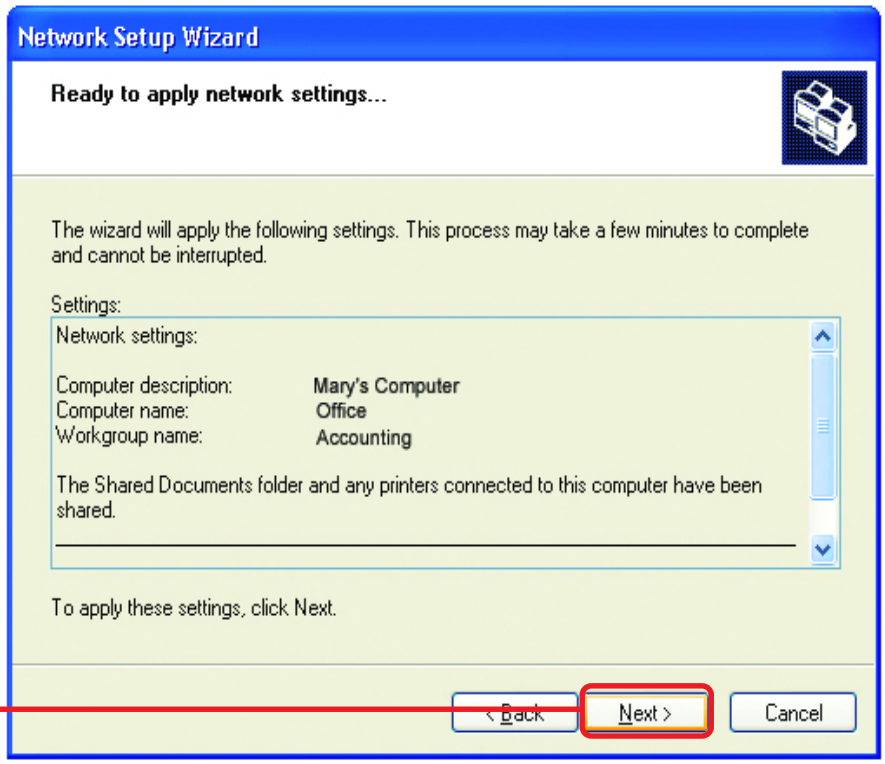
Enter a Workgroup name. All computers on your network should have the same Workgroup name.

Click **Next**

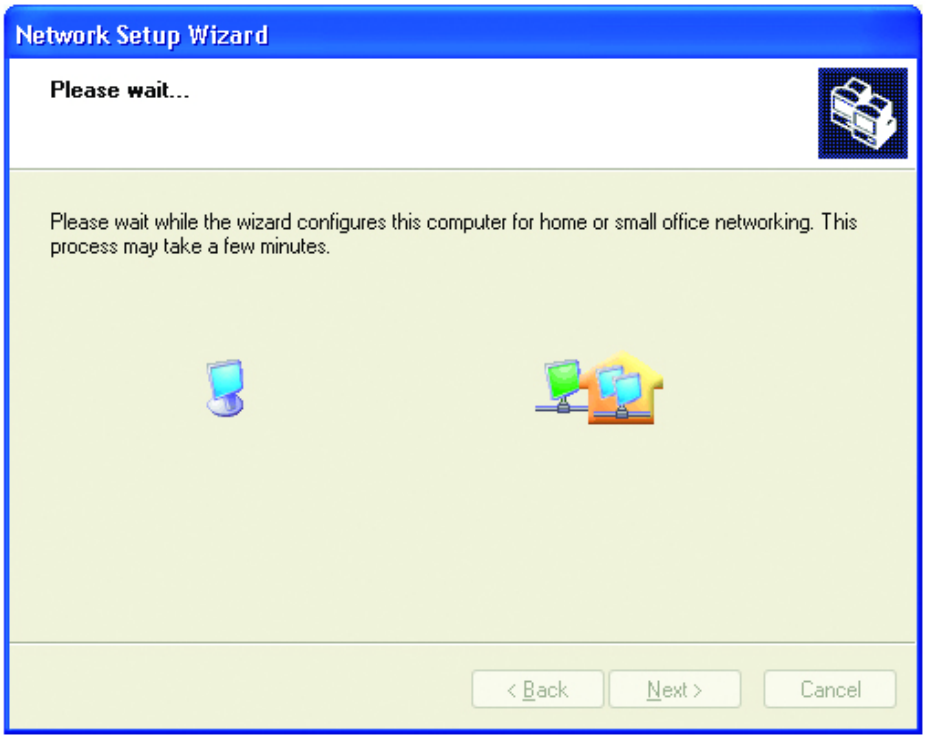


Please wait while the **Network Setup Wizard** applies the changes.

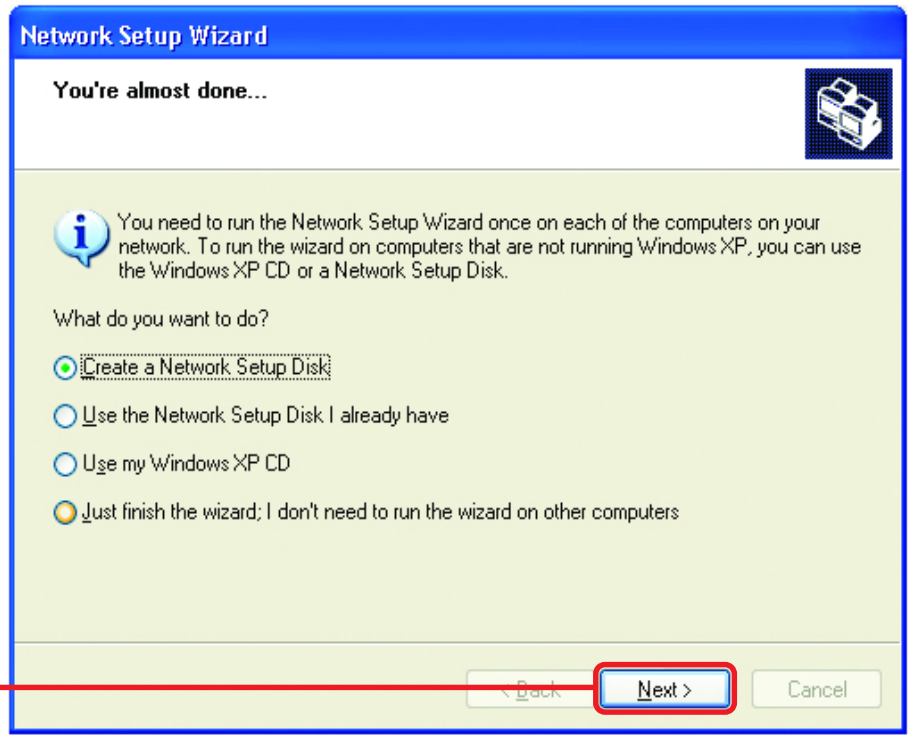
When the changes are complete, click **Next**



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



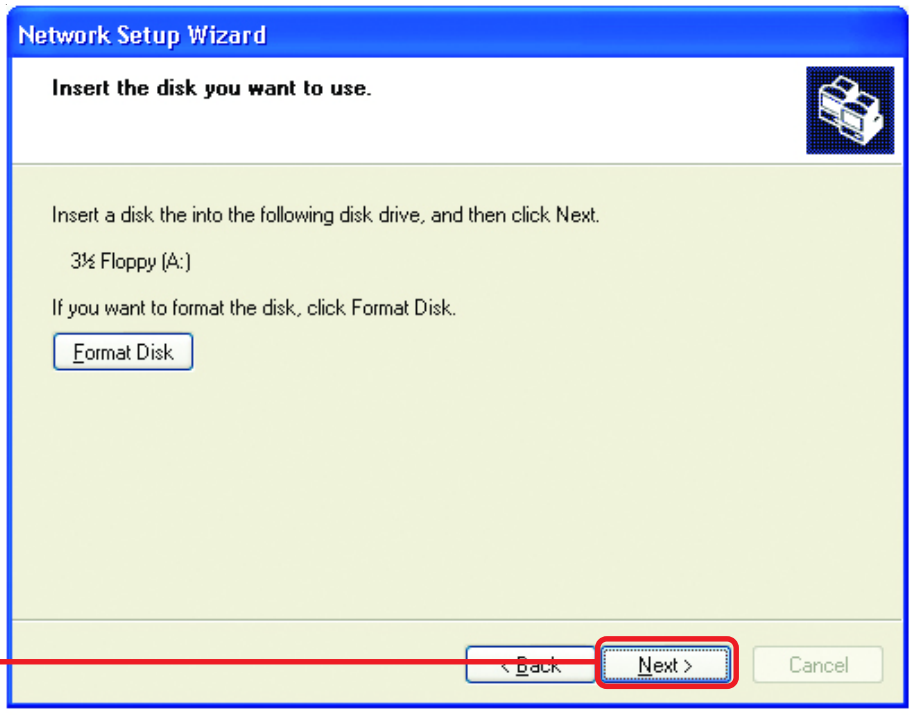
In this window, select the best option. In this example, **Create a Network Setup Disk** has been selected. You will run this disk on each of the computers on your network.



Click **Next**

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

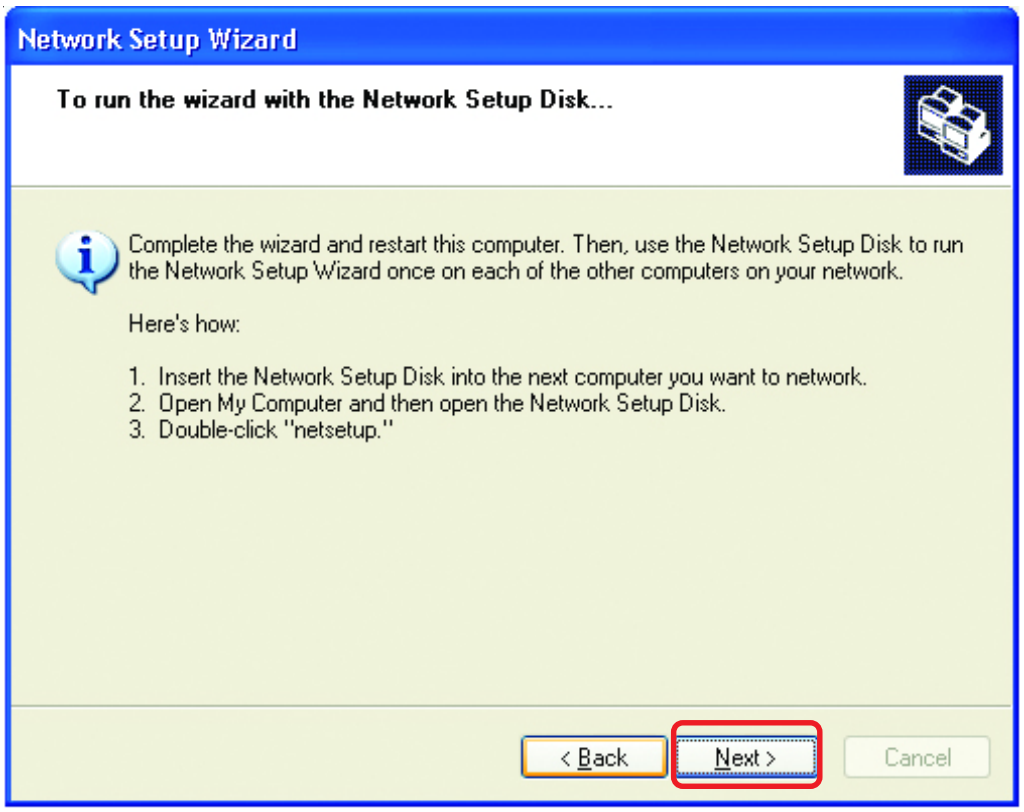
Format the disk if you wish.



Click **Next**

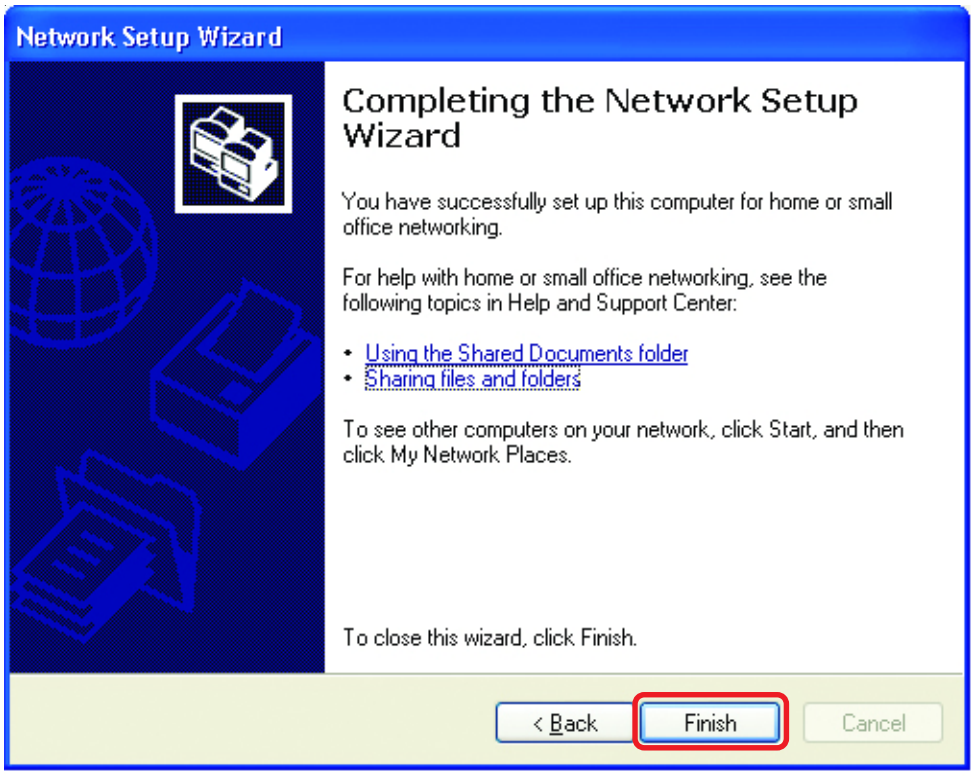
Please wait while the **Network Setup Wizard** copies the files.

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.**

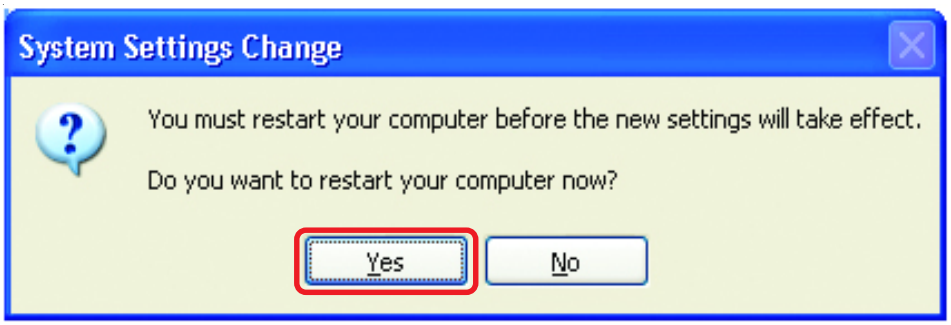


Networking Basics

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 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)

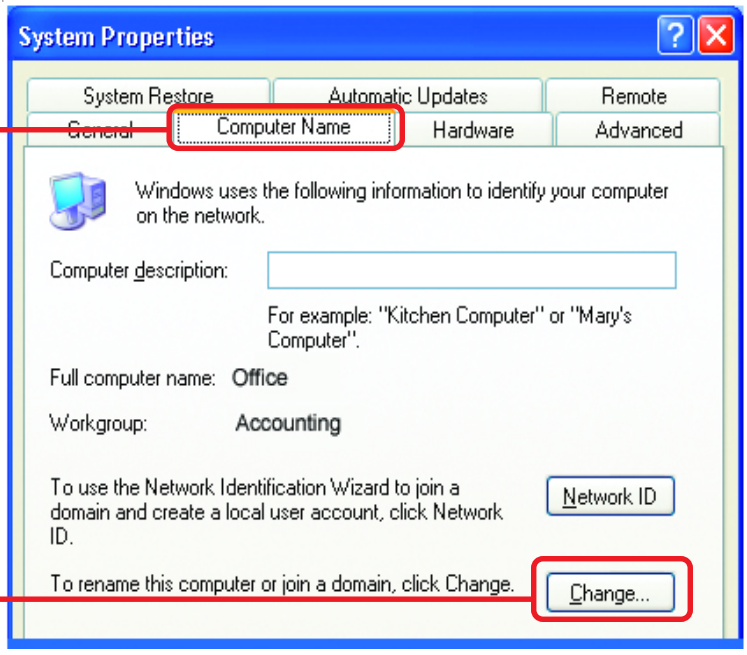
Right-click on **My Computer**

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 the domain, click **Change.**



Networking Basics

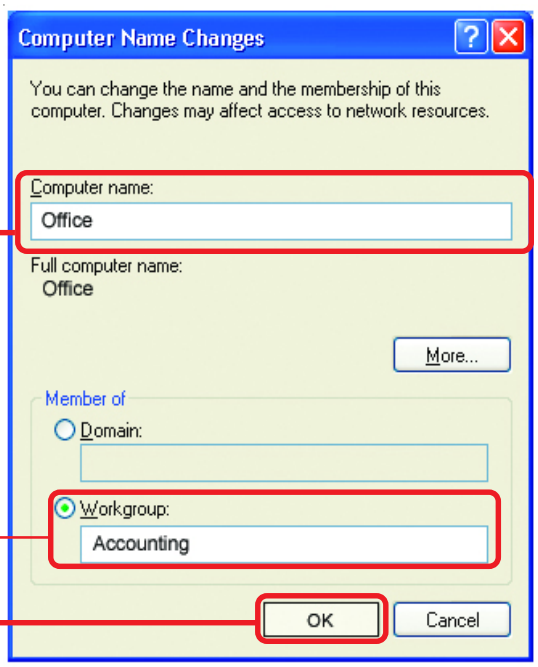
Naming your Computer

In this window, enter the computer name.

All computers on your network must have the same Workgroup name.

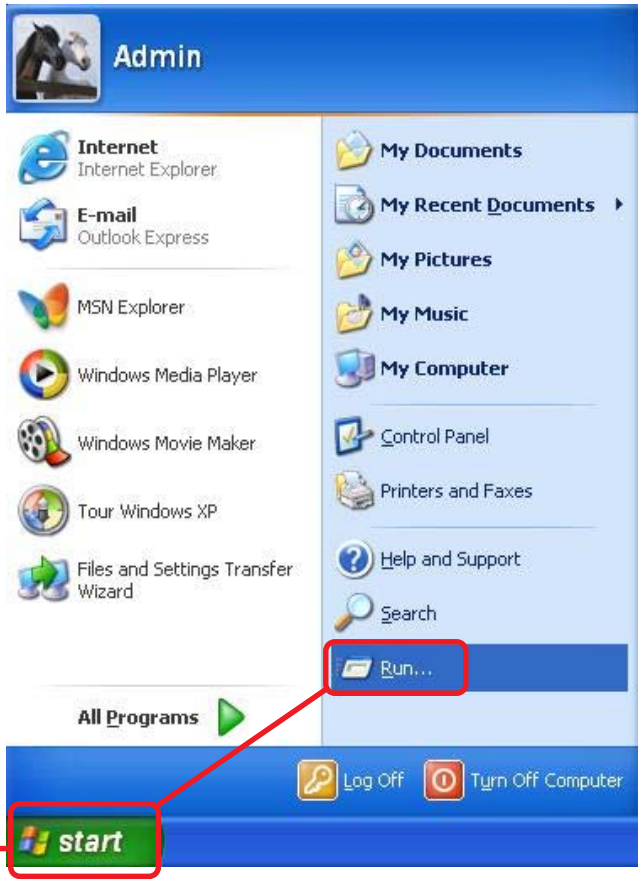
Select Workgroup and enter the name of the Workgroup.

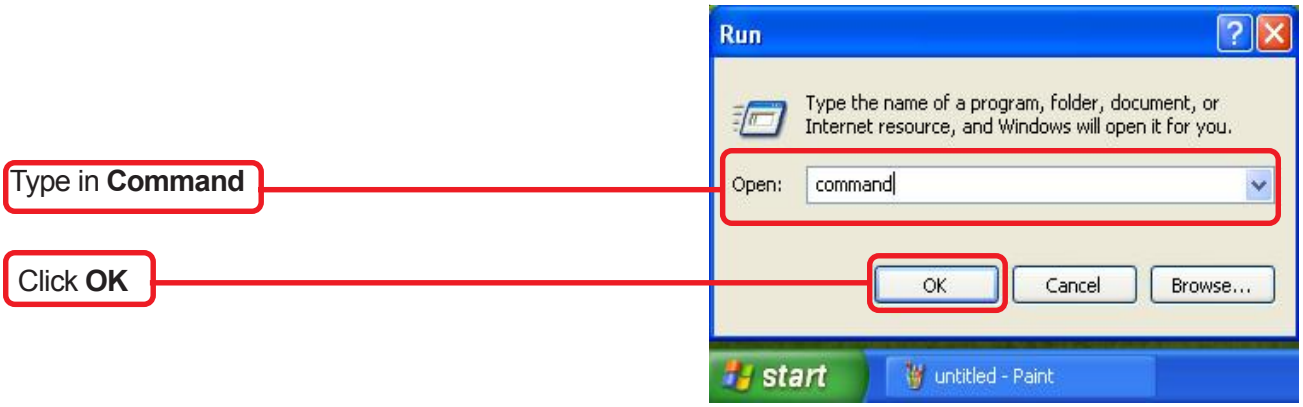
Click **OK**



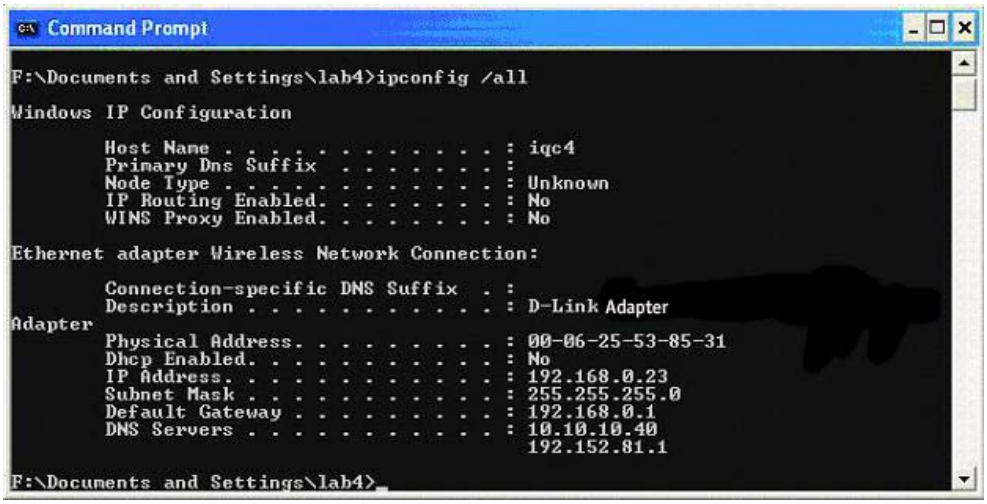
Checking the IP Address in Windows XP/2000

Go to Start >Run



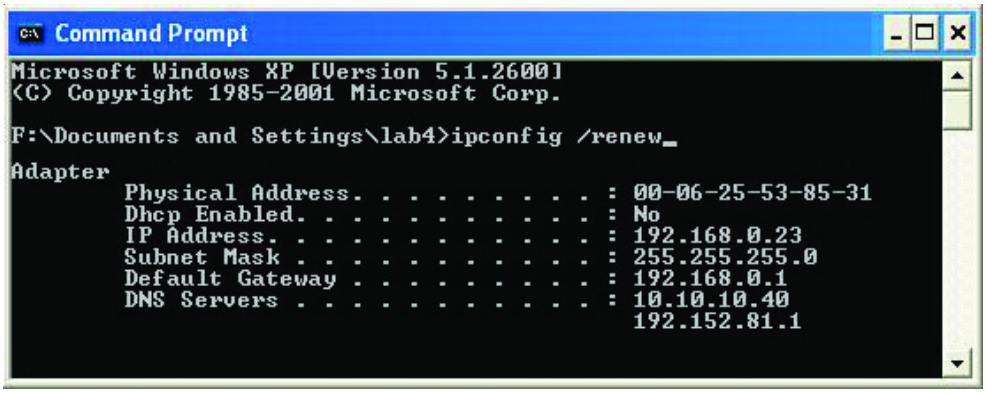


Type **ipconfig /all** at the prompt. Hit **Enter**. All the configuration settings are displayed as shown below.



Checking the IP Address in Windows XP/2000

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



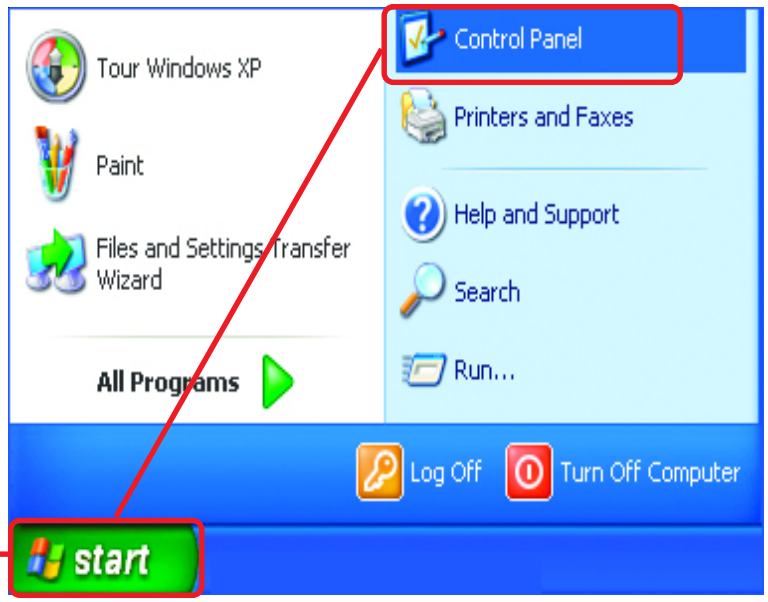
(**Windows 98/ME users:** go to **Start** > **Run**. Type **Command**. Type **winipcfg** at the prompt. Click **Release and Renew** to obtain a new IP Address.)

Assigning a Static IP Address

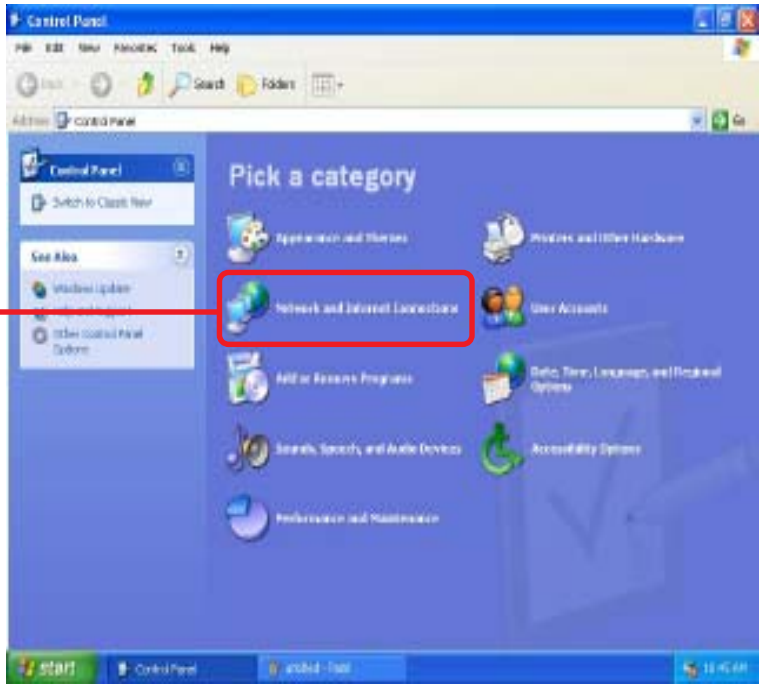
Note: Residential Gateways/Broadband Routers will automatically assign IP Addresses to the computers on the network, using DHCP (Dynamic Host Configuration Protocol) technology. If you are using a DHCP-capable Gateway/Router you will not need to assign Static IP Addresses.

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

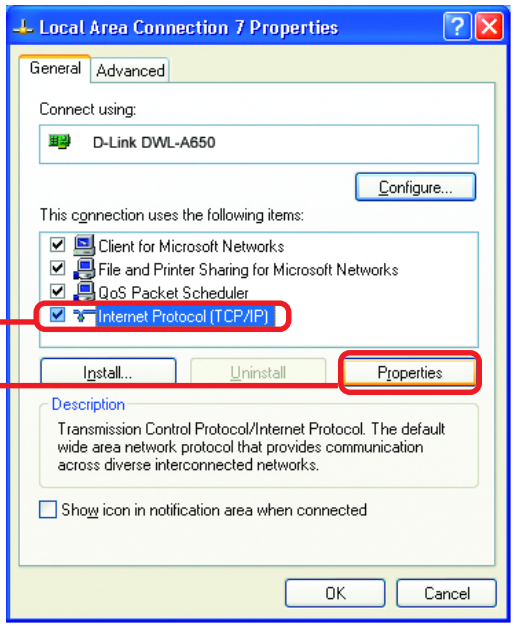
Go to Start
Click on Control Panel



Click on **Network Connections**



Assigning a Static IP Address continued



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

Click **Properties**

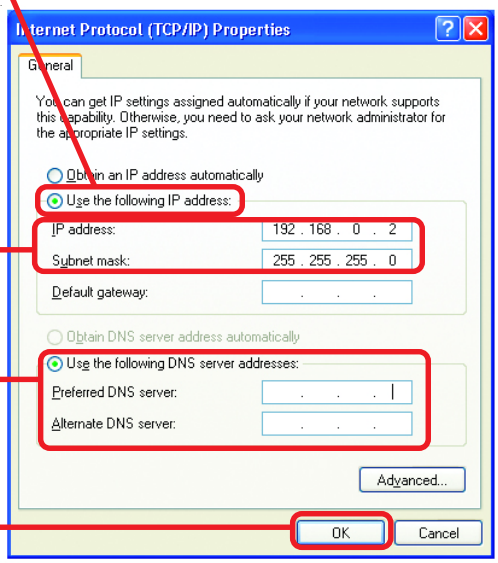
Select **Use the following IP Address** in the Internet Protocol (TCP/IP) Properties window

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 Ad dress 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 address**. (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.)*

Other networking 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.

Troubleshooting

A network can be simple to install and maintain. However, occasionally something might go wrong. The best approach to troubleshooting network problems is to start at the very simplest level and work your way up.

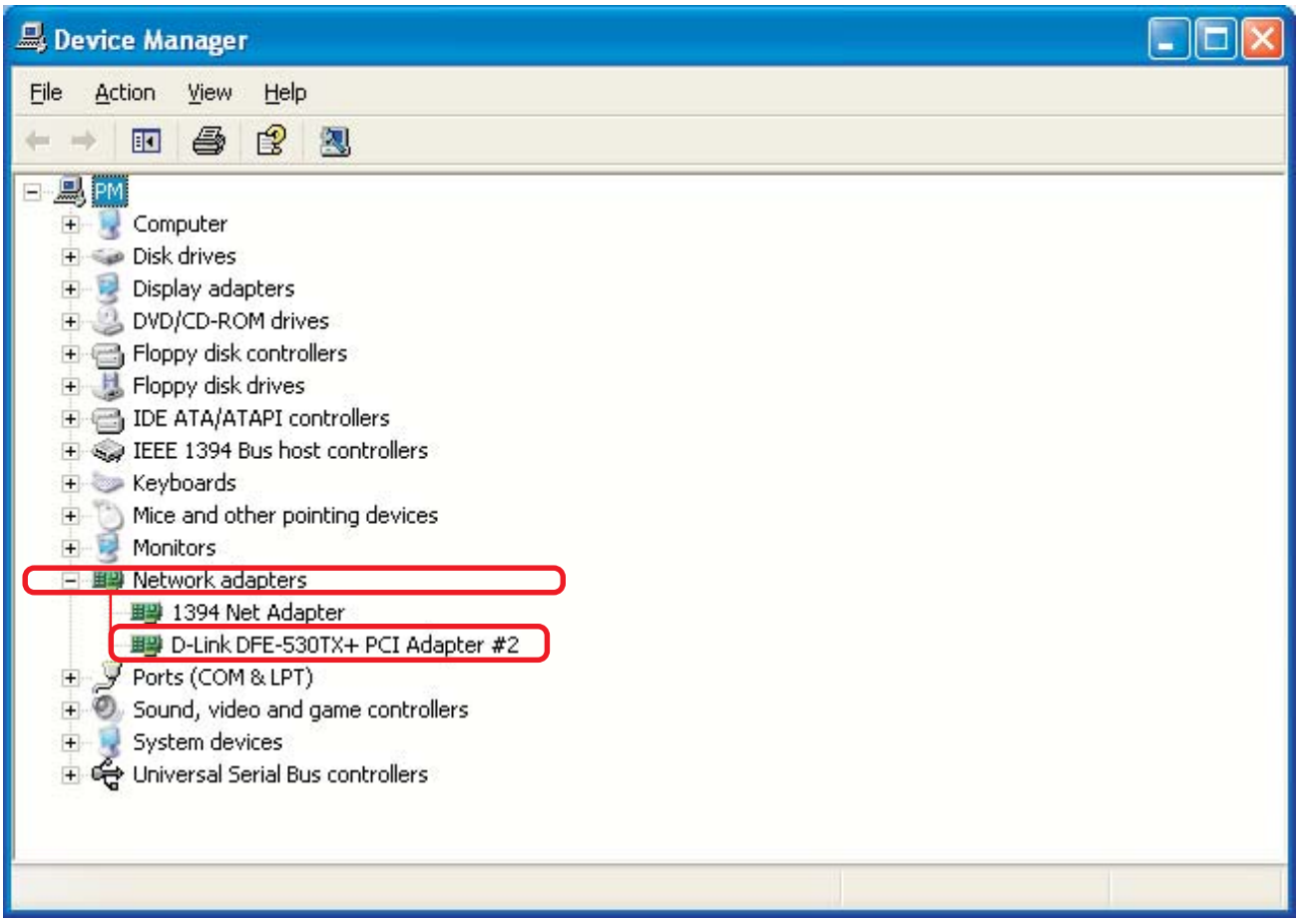
Verify Each Computers Identification

If more than one computer on your network has the same **Computer Name**, communications may be negatively affected. Also, each computer must have the same **Workgroup** name to communicate properly. Use the steps in **Networking Basics** to ensure that each computer on your network has a unique **Computer Name** and identical **Workgroup**.

Verify Network Adapter Installation

If your Network Adapters were not properly installed, including the Network System Software or device drivers, your network will not function properly. Use these steps to verify that your Network Adapter are properly installed:

1. Double-click the **System** icon in the Control Panel.
2. Select the **Device manager** tab on top of the **System Properties** dialog box.
3. Double-click **Network adapters** if you do not see any items branching out. You should see D-Link DFE-530TX+ Fast Ethernet PCI Adapter branching out after double-clicking **Network adapters.**



If you do not see any items branching out after double-clicking “Network adapters,” your Network Adapter has not been properly installed. Start at the beginning of the guide and follow all the steps for this computer.

If you see symbols such as a yellow exclamation point or red “X” over the icon adjacent to “D-Link DFE-530TX+ Fast Ethernet PCI Adapter,” your adapter is not installed properly or may have a problem. Double-click the “D-Link DFE-530TX+ Fast Ethernet PCI Adapter” to read the explanation of the problem. This information will be helpful if you require technical support from D-Link.

Verify Cable Connections

Check to see that the computer(s) you are troubleshooting are properly connected. Each computer must be connected from its DFE-530TX+ with Category 5 UTP cables. Examine the Network cables and ensure that they have not been damaged by walking-on, rolling over with chairs, or closed in doors. Additionally, make note of and alleviate any possible electromagnetic interference that may be affecting your network.

Your network cables can be plugged into any port on your hub except the “Uplink” port. The “Uplink” port is only used when connecting your hub to another hub or switch.

Understanding Indicators

Your DFE-530TX+ has indicators or lights that can give you information about your network traffic and help you determine problems when troubleshooting.

Your DFE-530TX+’s have two indicators labeled “ACT” and “LINK” on their back panels. A steady green “LINK” light indicates a good connection with the switch. A flashing green “ACT” light indicates that the Network Adapter is sending or receiving data.

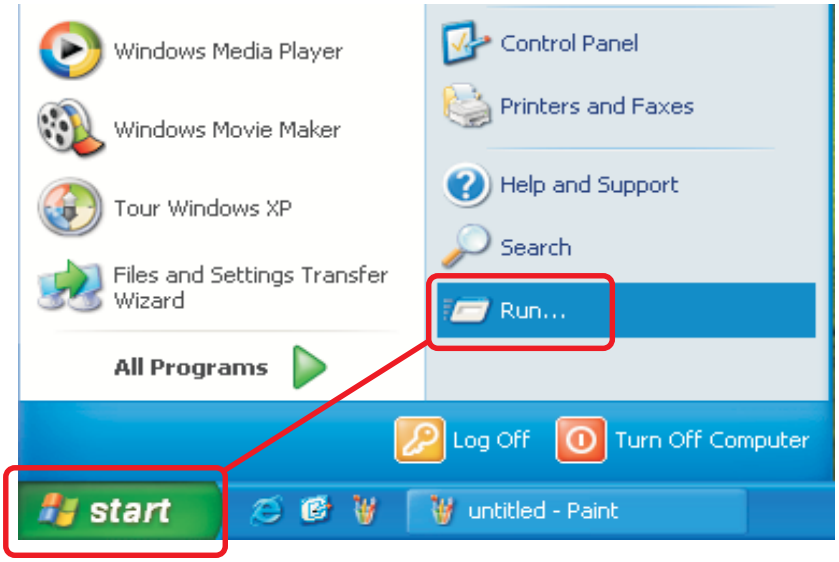
Pinging your DFE-530TX+ Card

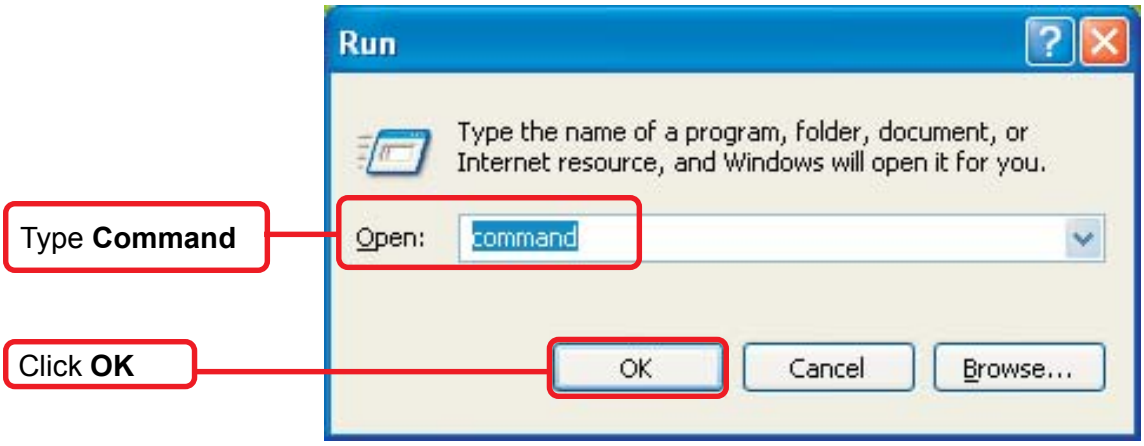
Follow these steps to Ping a device:

Ping is the acronym for Packet Internet Groper (PING), a utility to determine if a specific IP address is accessible. It works by sending a packet to the specified address and waiting for a reply. Ping is primarily used to troubleshoot Internet connections. By sending out a ping, you are verifying that a specific computer is available. Since all computers on the network must have a unique IP address, getting a reply means that a computer is on the network and that they can communicate. If they can communicate, then the hardware and cabling is probably okay. If you cannot ping another computer, then there is probably a problem with the hardware. Check the cabling and adapter installation. If you are unable to network, even when you receive a reply to your ping, it is probably a software configuration issue. Verify that all the settings are correct.

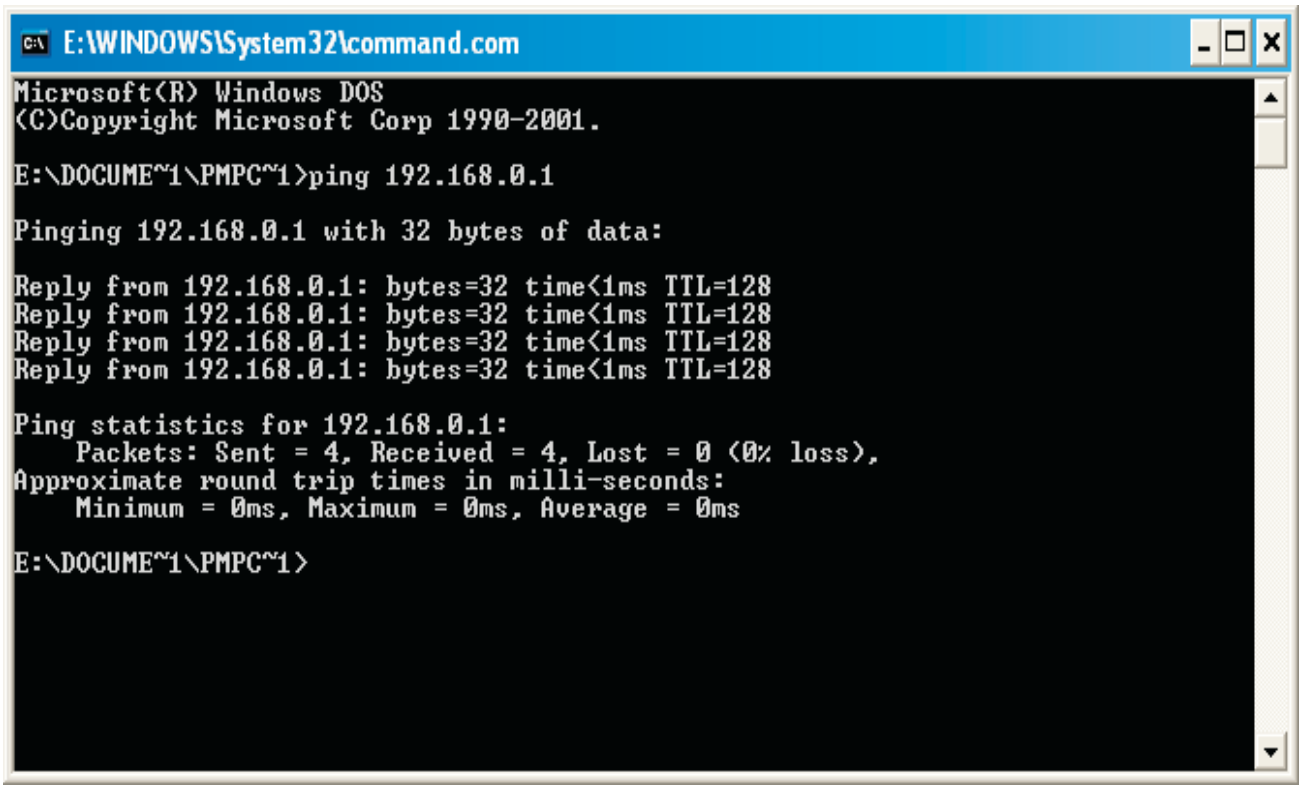
Pinging your DFE-530TX+ Card *continued*

Go to **Start> Run.**





Type in the following: **ping xxx.xxx.xxx.xxx**, where xxx.xxx.xxx.xxx is the IP address to be pinged (i.e. 192.168.0.1). In this case, computer B with the IP address=192.168.0.1 is being pinged from computer A. Press Enter to begin pinging.



If the connection is good, you will receive four “Reply from” messages. Type **exit** at the prompt to return to Windows.

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

Technical Specifications

Network Type:

- Fast Ethernet 100Base-TX
  IEEE 802.3u standard for 100 Mbps baseband CSMA/CD local area network
- Ethernet 10Base-T
  IEEE 802.3 standard for 10Mbps baseband CSMA/CD local area network

Jumperless Hardware

Auto-negotiation functionality

ACPI PCI power management support

Remote Wake up of ACPI/APM system support

With AMD magic packet,

Link Chg.
Microsoft wake-up frame

Media interface: RJ-45

EMI Compatibility:

FCC Class B
VCCI Class B
CISPR B
Canada ICES-003, Class B
CE Certification, Class B
C-Tick

Host Interface: PCI 2.1 and PCI 2.2 Bus (Bus Master)

I/O & IRQ base address: assigned by Plug and Play system

Physical Dimensions: 12 cm x 5.8 cm

Environment:

Storage: -10° to 70°C, (14° to 158°F)

Operating: 0° to 55°C, (32° to 131° F)

Humidity: 10% to 90% RH, non-condensing

Power Consumption: 0.32W (96mA @ 3.3V)max

PCB Layer: 2 layers

Software drivers for:

- Microsoft Windows 95, 98
- Microsoft Windows NT3.51, NT4.0
- Microsoft Windows 2000
- DECnet PathWorks v4.0
- Microsoft Window for Workgroups 3.11
- IBM Communication Manager v1.0
- Microsoft LAN Manager v2.1
- Novell Netware 3.x, 4.x, 5.0 ODI driver
- NDIS driver
- FTP PC/TCP
- IBM LAN Support Program v1.3x
- IBM LAN Server v4.0, v3.0, v2.0
- Win/TCP PathWay Access for DOS v1.1
- Packet Driver

D-Link®
Building Networks for People

Limited Warranty
(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.

Limited Lifetime Warranty for the Product(s) is defined as follows:

- Hardware for as long as the original customer/end user owns the product, or five years after product discontinuance, whichever occurs first (excluding power supplies and fans)
- Power Supplies and Fans Three (3) 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 and shipped to **D-Link Systems, Inc., 53 Discovery Drive, Irvine, CA 92618**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

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

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

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

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

Trademarks: D-Link is a registered trademark of D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective manufacturers or owners.

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.

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