D-Link DI-707P

Express EtherNetwork™
Broadband Router

Manual

D-Link®

Building Networks for People

Contents

Package Contents
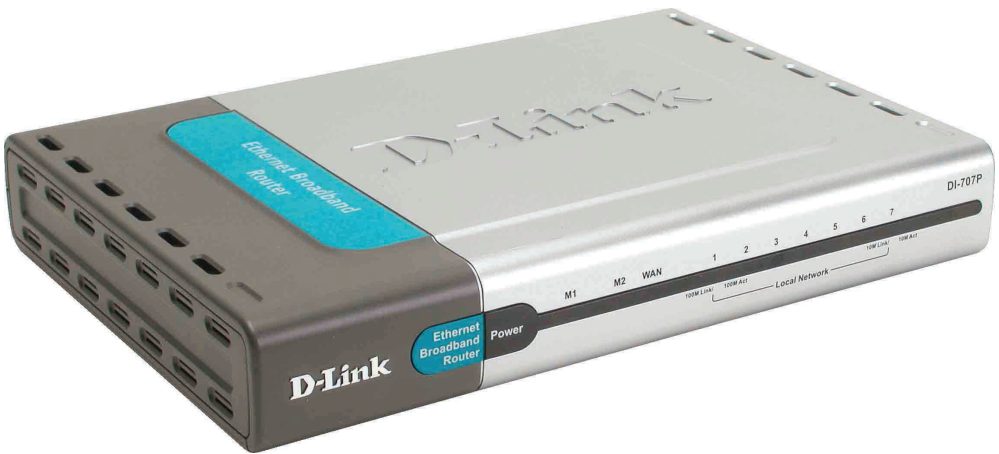
Contents of Package:

- **D-Link DI-707P** Express EtherNetwork™ Broadband Router
- Power Adapter – 5V AC
- Ethernet (CAT5-UTP/Straight-Through) Cable
- Manual on CD
- Quick Installation Guide

Note: Using a power supply with a different voltage rating than the one included with the DI-707P will cause damage and void the warranty for this product.

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

System Requirements For Configuration:

- Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter

- Internet Explorer version 6x or Netscape Navigator version 6x and above, with JavaScript enabled
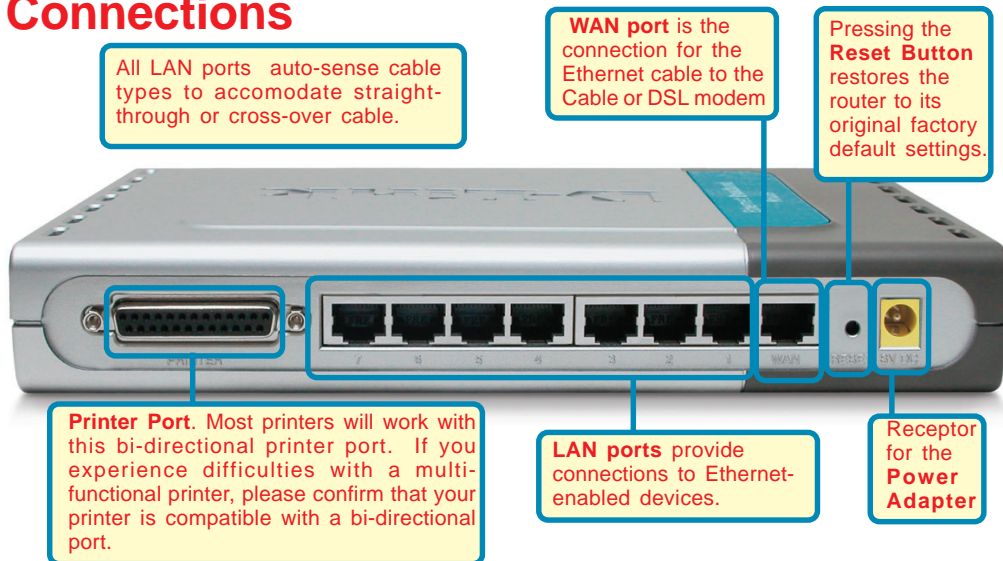
Introduction

The D-Link DI-707P Broadband Router includes 7 ports and a printer port. It provides a complete solution for Internet surfing and office resources sharing. It is an ideal way to extend the reach and number of computers connected to your network.

After completing the steps outlined in the *Quick Installation Guide* (included in your package), you will have the ability to share information and resources, as well as share a printer on your network.

The DI-707P is compatible with most popular operating systems, including Macintosh, Linux, and Windows, and can be integrated into a large network.

Connections

WAN port is the connection for the Ethernet cable to the Cable or DSL modem

Pressing the **Reset Button** restores the router to its original factory default settings.

Printer Port. Most printers will work with this bi-directional printer port. If you experience difficulties with a multi-functional printer, please confirm that your printer is compatible with a bi-directional port.

LAN ports provide connections to Ethernet-enabled devices.

Receptor for the **Power Adapter**

Features & Benefits

- **Broadband modem and IP sharing**
  Connects multiple computers to a broadband (cable or DSL) modem to surf the Internet.

- **Auto-sensing Ethernet Switch**
  Equipped with a 7-port auto-sensing Ethernet switch.

- **VPN Pass-Through supported**
  Supports pass-through PPTP sessions and allows you to setup a VPN server and VPN clients.

- **Printer sharing (Optional)**
  Embeds a print server to allow all of the networked computers to share one printer.

- **Firewall**
  All unwanted packets from outside intruders are blocked to protect your network.

- **DHCP server supported**
  All of the networked computers can retrieve TCP/IP settings automatically from the DI-707P.

- **Web-based configuration**
  Configurable through any networked computer's web browser using Netscape or Internet Explorer.

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Features & Benefits continued

■ **Access Control supported**
Allows you to assign different access rights for different users.

■ **Packet filter supported**
Packet Filter allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.

■ **Virtual Server supported**
Enables you to expose WWW, FTP, and other services on your LAN to be accessible to Internet users.

■ **User-Definable Application Sensing Tunnel**
User can define the attributes to support special applications requiring multiple connections, such as Internet gaming, video conferencing, Internet telephony and so on. The DI-707P can sense the application type and open a multi-port tunnel for it.

■ **DMZ Host supported**
Allows a networked computer to be fully exposed to the Internet; this function is used when the special "application-sensing tunnel feature" is insufficient to allow an application to function correctly.

Introduction to Broadband Router Technology

A router is a device that forwards data packets from a source to a destination. Routers forward data packets using IP addresses and not a MAC address. A router will forward data from the Internet to a particular computer on your LAN.

The information that makes up the Internet gets moved around using routers. When you click on a link on a web page, you send a request to a server to show you the next page. The information that is sent and received from your computer is moved from your computer to the server using routers. A router also determines the best route that your information should follow to ensure that the information is delivered properly.

A router controls the amount of data that is sent through your network by eliminating information that should not be there. This provides security for the computers connected to your router, because computers from the outside cannot access or send information directly to any computer on your network. The router determines which computer the information should be forwarded to and sends it. If the information is not intended for any computer on your network, the data is discarded. This keeps any unwanted or harmful information from accessing or damaging your network.

Introduction to Firewalls

A firewall is a device that sits between your computer and the Internet that prevents unauthorized access to or from your network. A firewall can be a computer using firewall software or a special piece of hardware built specifically to act as a firewall. In most circumstances, a firewall is used to prevent unauthorized Internet users from accessing private networks or corporate LANs and Intranets.

A firewall watches all of the information moving to and from your network and analyzes each piece of data. Each piece of data is checked against a set of criteria that the administrator configures. If any data does not meet the criteria, the data is blocked and discarded. If the data meets the criteria, the data is passed through. This method is called packet filtering.

A firewall can also run specific security functions based on the type of application or type of port that is being used. For example, a firewall can be configured to work with an FTP or Telnet server. Or a firewall can be configured to work with specific UDP or TCP ports to allow certain applications or games to work properly over the Internet.

Introduction to Local Area Networking

Local Area Networking (LAN) is the term used when connecting several computers together over a small area such as a building or group of buildings. LANs can be connected over large areas. A collection of LANs connected over a large area is called a Wide Area Network (WAN).

A LAN consists of multiple computers connected to each other. There are many types of media that can connect computers together. The most common media is a CAT5 cable (UTP or STP twisted pair wire). On the other hand, wireless networks do not use wires; instead they communicate over radio waves. Each computer must have a Network Interface Card (NIC), which communicates the data between computers. A NIC is usually a 10Mbps network card, a 10/100Mbps network card, or a wireless network card.

Most networks use hardware devices such as hubs or switches that each cable can be connected to in order to continue the connection between computers. A hub simply takes any data arriving through each port and forwards the data to all other ports. A switch is more sophisticated, in that it can determine the destination port for a specific piece of data. A switch minimizes network traffic overhead and speeds up the communication over a network.

Networks take some time to plan and implement correctly. There are many ways to configure your network. You may want to take some time to determine the best network set-up for your needs.

Introduction to Virtual Private Networking

Virtual Private Networking (VPN) uses a publicly wired network (the Internet) to securely connect two different networks as if they were the same network. For example, an employee can access the corporate network from home using VPN, allowing the employee to access files and printers. Here are several different implementations of VPN that can be used.

Point-to-Point Tunneling Protocol (PPTP)

PPTP uses proprietary means of connecting two private networks over the Internet. PPTP is a way of securing the information that is communicated between networks. PPTP secures information by encrypting the data inside of a packet.

IP Security (IPSec)

IPSec provides a more secure network-to-network connection across the Internet or a Wide Area Network (WAN). IPSec encrypts all communication between the client and the server whereas PPTP only encrypts the data packets.

Both of these VPN implementations are used because there is not a standard for VPN server software. Because of this, each ISP or business can implement its own VPN network making interoperability a challenge.

LEDS

LED stands for **L**ight-**E**mitting **D**iode. The **DI-707P** has the following LEDs as described below:

LED	LED Activity
Power	A steady light indicates a connection to a power source.
M1 LED	Flashes once per second to indicate an active system.
M2 LED	Lights up when the device has an Internet connection.
WAN	A solid light indicates connection on the WAN port. This LED blinks during data transmission.
LAN	This LED blinks during data transmission.
LOCAL NETWORK (Ports 1-7)	A solid light indicates a connection to an Ethernet-enabled computer on ports 1-7. This LED blinks during data transmission.

Getting Started

With its default settings, the DI-707P, when activated, will connect with other D-Link Express EtherNetwork products, right out of the box.

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

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

Using the Configuration Menu - learn the settings for the DI-707P, using the web-based interface.
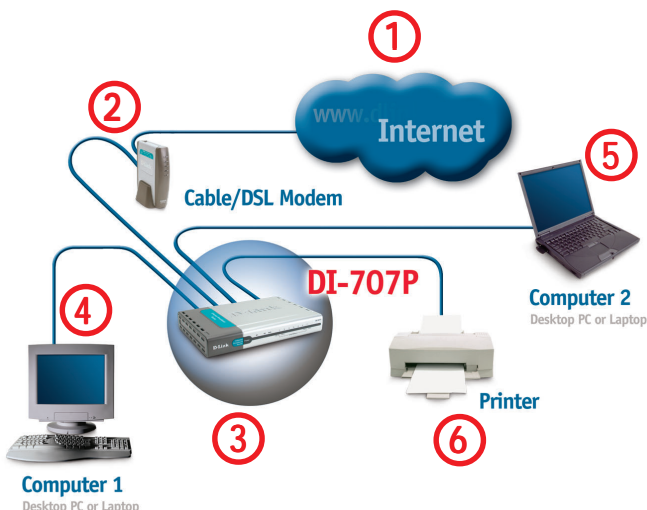
For a typical network setup at home (as shown above), please do the following:

1 You will need broadband Internet access (a Cable or DSL subscription 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 the DI-707P wireless broadband router (*see the Quick Installation Guide included with the DI-707P*).

4 If you are connecting a desktop computer to your network, you can install the D-Link *DFE-530TX+* ethernet adapter into an available PCI slot. (See the Quick Installation Guide included with the DWL-530TX+.)

5 If you are connecting a laptop computer to your network, install the drivers for the Ethernet Cardbus adapter (e.g., D-Link DFE-690TXD) into a laptop computer.(See the Quick Installation Guide included with the DFE-690TXD.)

6 Connect your printer to the printer port on the DI-707P. Please refer to the quick installation guide for loading the print server software.

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Using the Configuration Menu

Whenever you want to configure your network or the DI-707P, you can access the Configuration Menu by opening the web-browser and typing in the IP Address of the DI-707P. The DI-707P default IP Address is shown below:

■ Open the web browser
■ Type in the **IP Address** of the DI-707P
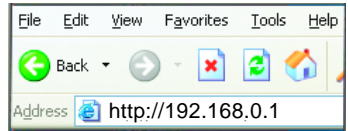
Note: if you have changed the default IP Address assigned to the DI-707P, make sure to enter the correct IP Address.

The factory default **User name** is **admin** and the default **Password** is blank (empty). It is recommended that you change the admin password for security purposes. Please refer to **Tools>Admin** to change the admin password.

Home > Wizard
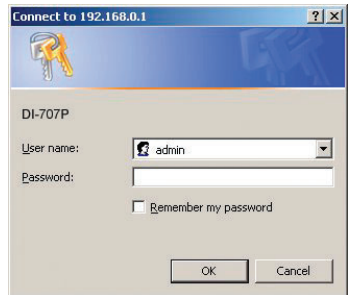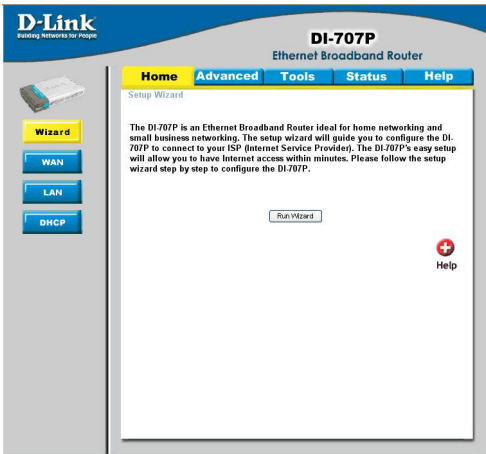
The **Home>Wizard** screen will appear. Please refer to the *Quick Installation Guide* for more information regarding the Setup Wizard.

Clicking **Apply** will save changes made to the page.
Apply

Clicking **Cancel** will clear changes made to the page.
Cancel

Clicking **Help** will bring up helpful information regarding the page.
Help

Clicking **Restart** will restart the router. (Necessary for some changes.)

Using the Configuration Menu

Home > WAN

Choose WAN Type

WAN stands for *Wide Area Network*. In this case WAN represents the mode in which you connect to the Internet. If you are uncertain, please ask your ISP which of the following represents your connection mode to the Internet:

Dynamic IP Address-   Obtain an IP address from your ISP automatically (mainly for Cable users).

Static IP Address-   Your ISP assigns you a Static IP Address.

PPP over Ethernet-   Some ISPs require the use of PPPoE to connect to their services (mainly for DSL users).

Others-

    PPTP-   For use in Europe only.

    Big Pond Cable-   For use in Australia only.

Using the Configuration Menu

Home > WAN > Dynamic IP Address

Most Cable modem users will select this option to obtain an IP Address automatically from their ISP (Internet Service Provider).

Host Name-
This is optional, but may be required by some ISPs. The host name is the device name of the Router.

MAC Address-
The default MAC Address is set to the WAN's physical interface MAC address on the Router.

**Clone
MAC Address-**
This feature will copy the MAC address of the Ethernet card, and replace the WAN MAC address of the Router with this Ethernet card MAC address. It is not recommended that you change the default MAC address unless required by your ISP.

**Primary DNS
Address-**
Input the primary DNS address provided by your ISP

**Secondary DNS
Address-**
(Optional) Input the Secondary DNS address provided by your ISP.

MTU-
Maximum Transmission Unit; default is 1500; you may need to change the MTU to conform to your ISP.

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

Using the Configuration Menu

Home > WAN > Static IP Address

If you use a Static IP Address, you will input information here that your ISP has provided to you.

IP Address-   Input the IP Address provided by your ISP.

Subnet Mask-   Input the Subnet Mask provided by your ISP.

ISP Gateway-   Input the Gateway address provided by your ISP.

**Primary DNS
Address-**   Input the primary DNS address provided by your ISP.

**Secondary DNS   (Optional) Input the Secondary DNS address provided by your
Address-**   ISP.

MTU-   *Maximum Transmission Unit*; default is 1500; you may need to
                            change the MTU to conform to your ISP.

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Using the Configuration Menu

Home > WAN > PPPoE

Most DSL users will select this option to obtain an IP address automatically from their ISP through the use of PPPoE.

User Name-   Your PPPoE username provided by your ISP

Password-   Your PPPoE password is provided by your ISP

Service Name-   (Optional) Check with your ISP for more information if they require the use of service name.

IP Address-   (Optional) Enter in the IP Address if you are assigned a static PPPoE address.

Primary DNS Address-   You will get the DNS IP automatically from your ISP but you may enter a specific DNS address that you want to use instead.

(Optional) Input the secondary DNS address

Maximum Idle Time-   Enter a maximum idle time during which Internet connection is maintained during inactivity. To disable this feature, enable *Auto-reconnect*.

MTU-   *Maximum Transmission Unit*; default is 1492; you may need to change the MTU to conform to your ISP.

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

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Using the Configuration Menu
Home > WAN > PPTP

Point-to-Point Tunneling Protocol (PPTP) is a WAN connection used in Europe.

My IP Address-   Enter the IP Address.

My Subnet Mask-   Enter the Subnet Mask.

Server IP Address- Enter the Server IP Address.

PPTP Account-   Enter the PPTP account name.

PPTP Password-   Enter the PPTP password.

Connection ID-   (Optional) Enter the connection ID if required by your ISP.

Maximum Idle Time-   Enter a maximum idle time during which Internet connection is maintained during inactivity. To disable this feature, enable *Auto-reconnect.*

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

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Using the Configuration Menu

Home > WAN > BigPond Cable

Dynamic IP Address for BigPond is a WAN connection used in Australia.

User Name-   Enter in the username for the BigPond account.

Password-   Enter the password for the BigPond account.

Login Server-   (Optional) Enter the Login Server name if required.

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

Using the Configuration Menu

Home > LAN

LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the DI-707P. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

DHCP stands for *Dynamic Host Control Protocol*. The DI-707P has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DI-707P. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

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

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

Domain Name-   (Optional) The name of your local domain.

Using the Configuration Menu
Home > DHCP

DHCP stands for Dynamic Host Control Protocol. The DI-707P has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DI-707P. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

Using the Configuration Menu
Advanced > Virtual Server
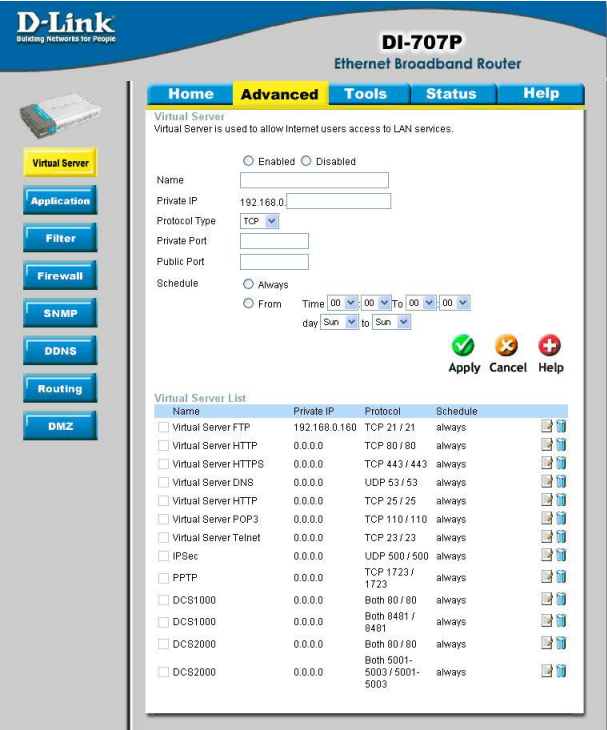
The DI-707P can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DI-707P firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DI-707P are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling *Virtual Server.* Depending on the requested service, the DI-707P redirects the external service request to the appropriate server within the LAN network.

Enable-	Select to activate the policy.
Name-	You can name the Virtual Server.
Private IP-	The IP address of the internal computer that will be using the virtual service.
Protocol Type-	Select the protocol the Virtual Server will use.
Private/ Public Ports-	Enter in the private and public port or ports to be used. A range of ports can be specified with a hyphen. *(e.g., 20-21)*
Schedule-	Select **Always**, or choose **From** and enter the time period during which the virtual service will be available.

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Using the Configuration Menu

Advanced > Application
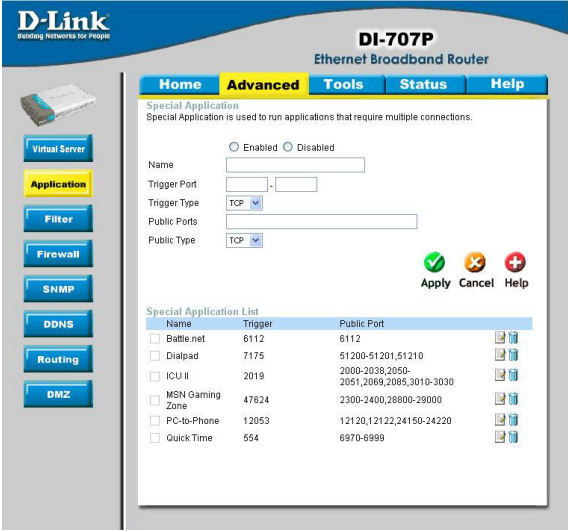
Some applications require multiple connections, such as Internet gaming, video conferencing, and Internet telephony. These applications have difficulties working through NAT (Network Address Translation). **Special Applications** makes some of these applications work with the DI-707P. If you need to run applications that require multiple connections, specify the port normally associated with an application in the **Trigger** field, then enter the public ports associated with the trigger port into the **Incoming Ports** field.

At the bottom of the screen, there are already defined special applications. To use them, select one from the drop down list and select an ID number you want to use. Then click the "Copy to" button and the router will fill in the appropriate information to the list. You will then need to enable the service. If the mechanism of Special Applications fails to make an application work, try using DMZ host instead.

Note! Only one PC can use each Special Application tunnel.

Enable-	Select to activate the policy.
Name-	You can name the defined special applications.
Trigger Port-	This is the port used to trigger the application. It can be either a single port or a range of ports.
Trigger Type-	Select the trigger protocol you would like to initiate. To chage the selection, use the drop down arrow and other choices will be listed.
Public Ports-	This is the port number on the WAN side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.
Public Type-	Select the public type the special application will use.

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Using the Configuration Menu
Advanced > IP Filter

Use IP (Internet Protocol) filters to allow or deny computers access to the Internet based on their IP address.

Disabled IP Filter- Select this option if you do not want to use IP filters.

Enabled or Disabled- Click **Enabled** to apply the filter policy or click **Disabled** to enter an inactive filter policy. (You can reactivate the policy later.)

IP Address- Enter the IP address range of the computers that you want the policy to apply to. If it is only a single computer that you want the policy applied to, then enter the IP address of the computer in the Start Source IP and leave the End Source IP blank.

Port Range- Enter in the port range of the TCP/UDP ports that you want the policy to apply to. If it is only a single port that you want the policy applied to, then enter the port number in the Start Port field and leave the End Port field blank. If you want to use all the ports, you can leave the port range empty.

Protocol- Select the protocol the IP filter will use.

Schedule- Select **Always**, or choose **From** and enter the time period during which the IP filter policy will be in effect.

Using the Configuration Menu

Advanced > MAC Filters

MAC (Media Access Control) Filters are used to deny or allow LAN (Local Area Network) computers from accessing the Internet and network by their MAC address.

At the bottom of the screen, there is a list of MAC addresses from the DHCP client computers connected to the DI-707P. To use them, select one from the drop down list and select an IP number you want to use. Then click the "Copy to" button and the DI-707P will fill in the appropriate information in the list.

Disabled MAC Filter- Select this option if you do not want to use MAC filters.

Only allow computers with MAC address listed below to access the network-
Select this option to only allow computers that are in the list to access the network and Internet. All other computers will be denied access to the network and Internet.

Only deny computers with MAC address listed below to access the network-
Select this option to only deny computers that are in the list to access the network and Internet. All other computers will be allowed access to the network and Internet.

Name- Enter a name to create a profile for the associated computer(s) on the network.

MAC Address- Enter the **MAC Address** of the client that will be filtered.
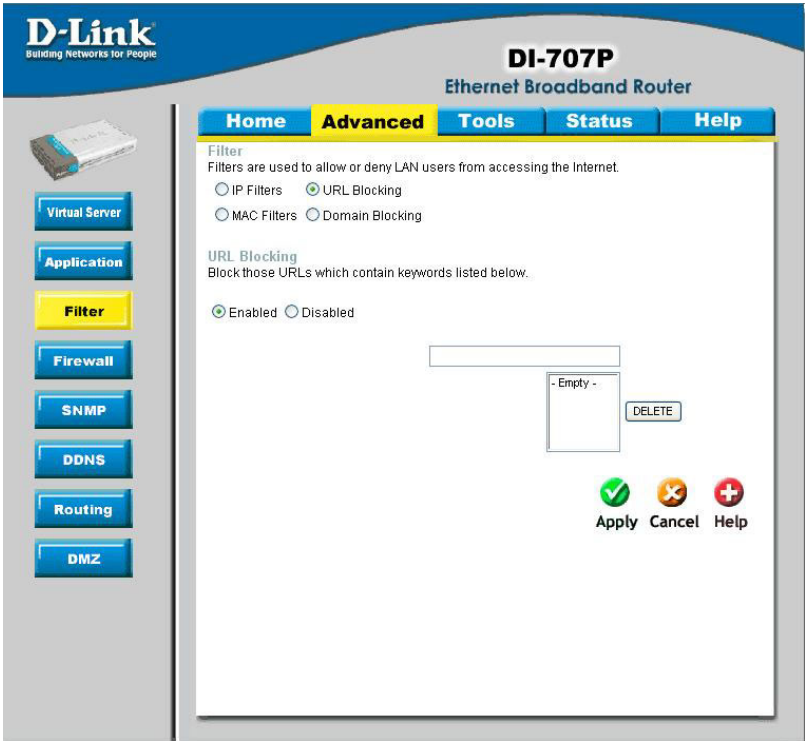
Enable- Select this option for the specific IP filter policy to take effect.

Disabled MAC Filter- Select from the DHCP Client list and click the Clone button to automatically clone that computer's MAC address to the MAC address field.

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Using the Configuration Menu
## Advanced > URL Blocking

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

Disabled URL Blocking-
Select this option if you do not want to use URL Blocking.

Using the Configuration Menu

Advanced > Domain Filter
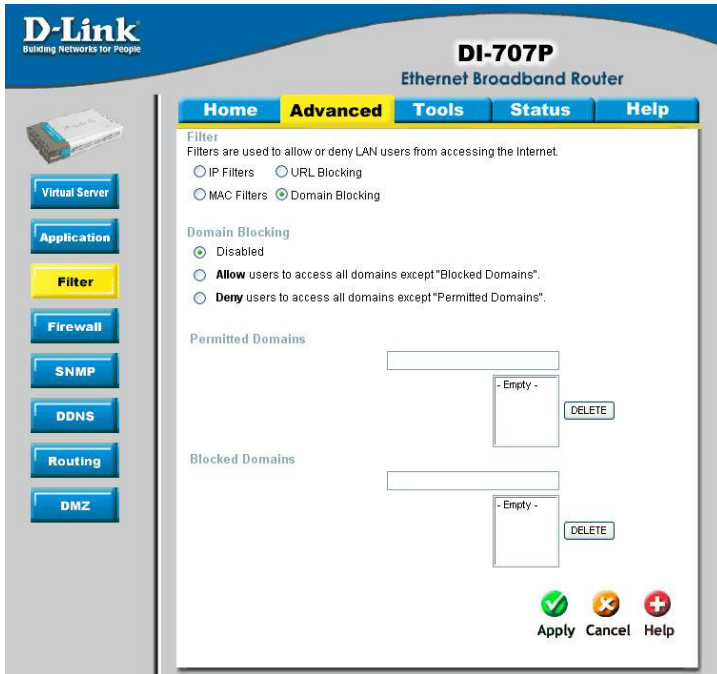
Use Domain filters to allow or deny computers access to specific Internet domains whether it is through www, ftp, snmp, etc. Domain filters apply to both wired computers connected to one of the four Ethernet LAN ports and to wireless clients connected wirelessly to the DI-707P.

Disabled Domain Filter- Select this option if you do not want to use Domain filters.

Allow users to access the following domains and block all other domains-
Select this option to allow users to access the specified Internet domains listed below. Users will be denied access to all other Internet domains.

**Deny users to access the following domains and permit all other domains-**
Select this option to deny users access to the specified Internet domains listed below. Users will be allowed access to all other Internet domains.

Permitted/Blocked Domains-
This is a list of domain suffixes of the Internet domain you want to permit or block. (Example: shopping.com, sports.net.)

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Using the Configuration Menu
Advanced > Firewall
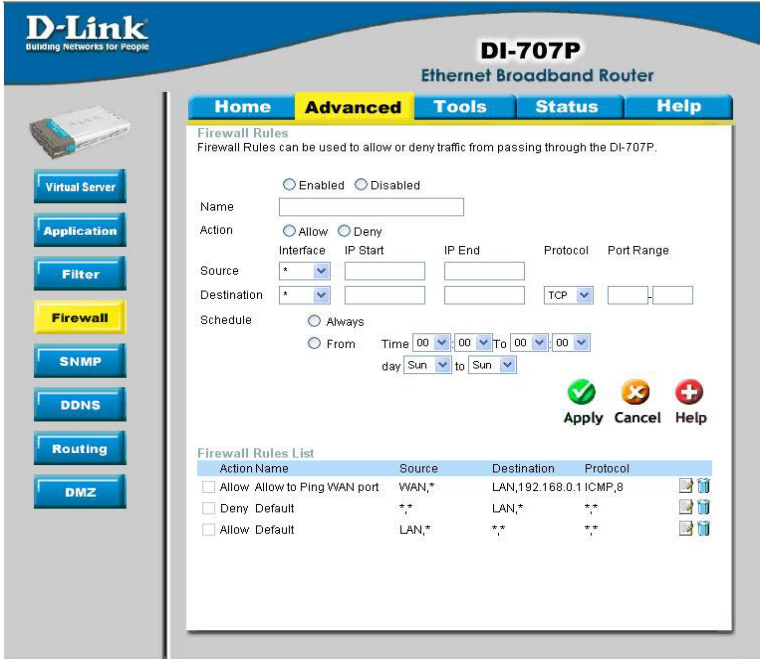
Firewall Rules is an advance feature used to deny or allow traffic from passing through the device. It works in the same way as IP Filters with additional settings. You can create more detailed rules for the device.

Enabled or Disabled-
Click **Enabled** to apply the filter policy or click **Disabled** to enter an inactive filter policy (You can reactivate the policy later).

Name-
Enter the name of the Firewall Rule.

Action-
Select Allow or Deny to allow or deny traffic to pass through the DI-804HV.

Interface Source -
Choose between a LAN or WAN source. An asterisk signifies the selection of both sources.

Interface Destination-
Choose between a LAN or WAN destination. An asterisk signifies the selection of both destinations.

IP Start-
The starting IP address for the filter policy. Leaving the field blank selects all IPs.

IP End-
The ending IP address for the filter policy. Leaving the field blank sleects all IPs.

Using the Configuration Menu

Advanced > Firewall *Continued*

Protocol-
Select one of the following protocols: TCP, UDP, or ICMP.

Port Range-
Enter in the port range of the TCP/UDP ports that you want the policy to apply to. If it is only a single port that you want the policy applied to, then enter the port number in the Start Port field and leave the End Port field blank. If you want to use all the ports, you can leave the port range empty.

Schedule-
Select **Always**, or choose **From** and enter the time period during which the virtual service will be available

Using the Configuration Menu
Advanced > SNMP

SNMP (Simple Network Management Protocol) is a widely used network monitoring and control protocol that reports activity on each network device to the administrator of the network. SNMP can be used to monitor traffic and statistics of the DI-707P. The DI-707P supports SNMP v1.

Enable SNMP-   (Simple Netwokkr Management Protocol)

Local-   LAN (Local Area Network)

Remote-   WAN (Wide Area Network)

Get Community-   Enter the password **public** in this field to allow "Read only" access to the network administration using SNMP. You can view the network, but no configuration is possible with this setting.

Set Community-   Enter the password **private** in this field to gain "Read and Write" access to the network using SNMP software. The administrator can configure the network with this setting.

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Using the Configuration Menu

Advanced > DDNS

DDNS (Dynamic Domain Name System) keeps dynamic IP addresses (e.g., IP addresses assigned by a DHCP capable router or server) linked to a domain name. Users who have a Dynamic DNS account may use this feature on the DI-707P.

DDNS-   When an IP address is automatically assigned by a DHCP server, DDNS automatically updates the DNS server. Select **Disabled** or **Enabled.**

Provider-   Select from the pull-down menu.

Host Name-   Enter the Host name.

Username/Email- Enter the username/email address.

Password/Key-   Enter the password/key.

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Using the Configuration Menu

Advanced > Routing

Static routes can be added if you require specific routes within your internal network. These routes will not apply to the WAN (Internet) network.

Destination- Enter in the IP of the specified network that you want to access using the static route.

Subnet Mask- Enter in the subnet mask to be used for the specified net work.

Gateway- Enter in the gateway IP address to the specified network.
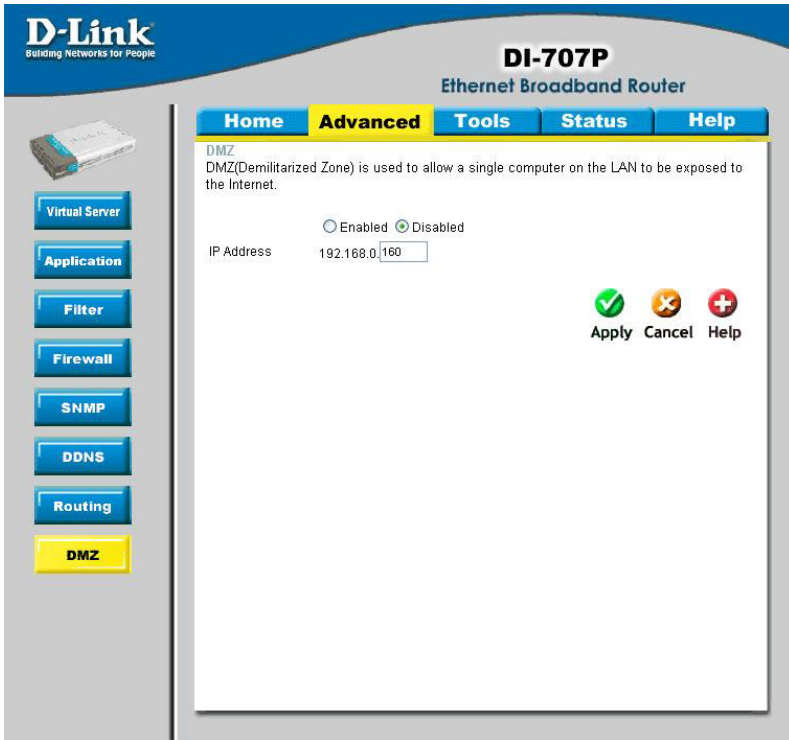
Hop- Enter in the amount of hops it will take to the specified network.

Enable- Select this option for the specified static route to take effect.

Hop Count - In a transmission path, each link is terminated at a network device such as a router or gateway. The number of hops equals the number of routers or gateways that data must pass through before reaching the destination.

Using the Configuration Menu

Advanced > DMZ

If you have a computer that cannot run Internet applications properly from behind the DI-707P, then you can allow that computer to have unrestricted Internet access. Enter the IP address of that computer as a DMZ (Demilitarized Zone) host with unrestricted Internet access. Adding a client to the DMZ may expose that computer to a variety of security risks, so only use this option as a last resort.

Using the Configuration Menu

Tools> Admin

You can change the admin password here. It is recommended that you change the admin password from the default setting. The default password is blank (no password).

Password-
To change the admin password, enter in the old password, and enter the new password twice to confirm.

Remote Management-
Remote Management allows the device to be configured through the WAN (Wide Area Network) port from the Internet using a web browser. A username and password is still required to access the browser-based management interface.

IP Address-
Internet IP Address of the computer that has access to the DI-707P. If the IP Address is set to 0.0.0.0, this allows all Internet IP addresses to access the DI-707P.

Port-
The port number used to access the DI-707P.
E.g., http://x.x.x.x:80, where x.x.x.x. is the WAN IP address of the DI-707P and 80 is the port used for the Web Management interface.

Using the Configuration Menu

Tools> Time

Set the time here by entering it manually or by using NTP (Network Time Protocol.) NTP is a standard protocol on the Internet that sychronizes the time settings accurately for all the computers on your network.

Enable NTP-   Select to enable NTP and synchronize the time settings on your network using an NTP server.

Default NTP server-   If you are enabling NTP, please enter the link to the default server.

Time Zone-   Select your time zone from the pull-down menu.

Set Device Date and Time-   If you are entering the time manually, select the correct Year, Month, Day, Hour, Minute, and Second.

Using the Configuration Menu

Tools > System
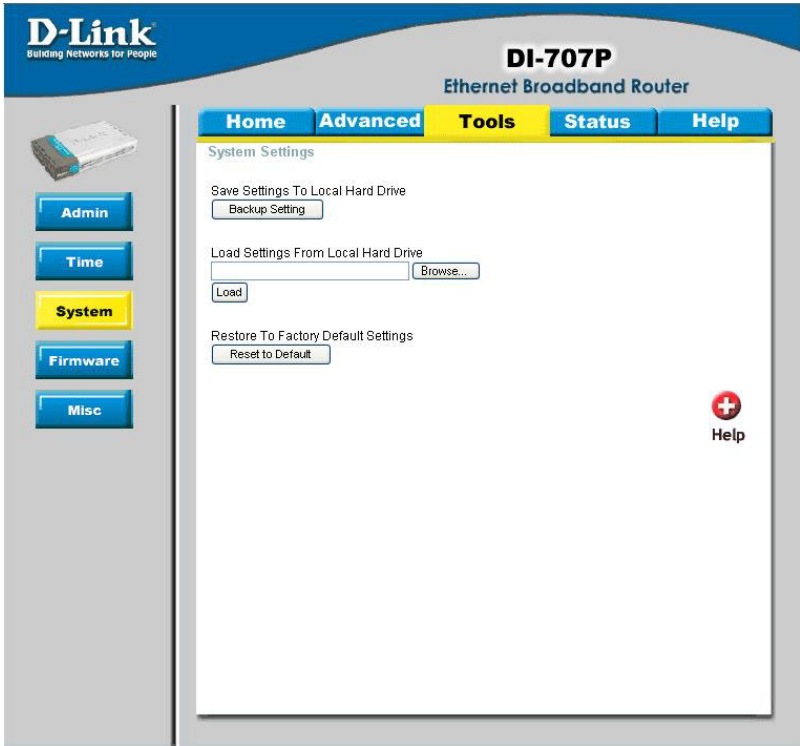
The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file created by the DI-707P can be uploaded to the unit. To reload a system settings file, click on **Browse** to search the local hard drive for the file to be used. The device can also be reset back to factory default settings by clicking on the **Reset to Default** button. Use the restore feature only if necessary. This will erase previously saved settings for the unit. Make sure to save your system settings to the hard drive before doing a factory restore.

Save Settings to
Local Hard Drive-   Click **Backup Setting** to save the current settings to the local Hard Drive.

Load Settings from
Local Hard Drive-   Click **Browse** to find the settings file, then click **Load.**

Restore to Factory
Default Settings-   Click **Reset to Default** to restore the factory default settings.

Using the Configuration Menu
Tools > Firmware
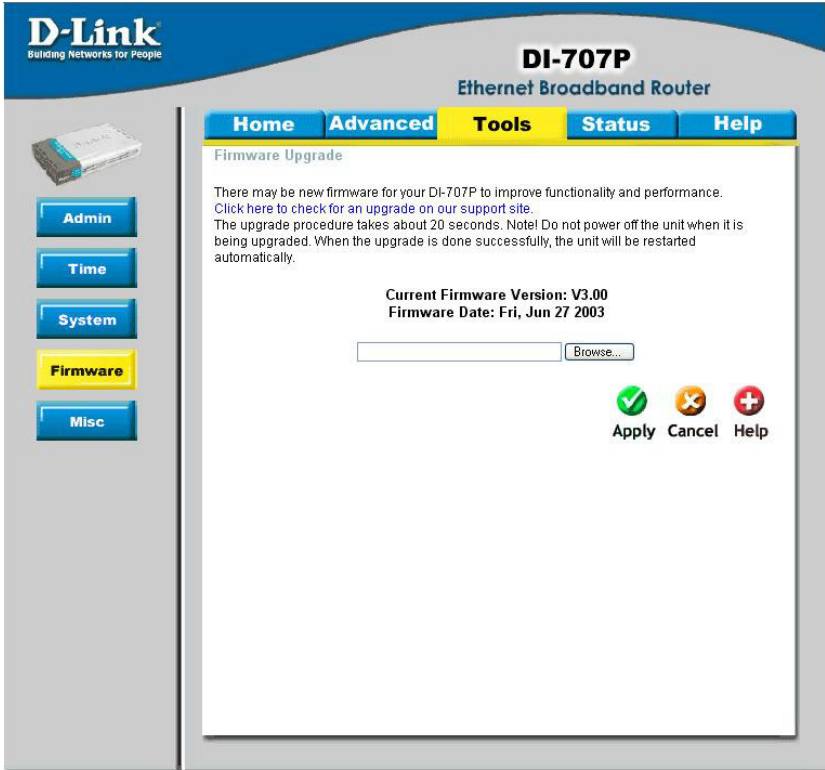
You can upgrade the firmware by using this tool. First, check the D-Link support site for firmware updates at http://support.dlink.com. Make sure that the firmware you want to use is saved on the local hard drive of your computer. Click on **Browse** to search the local hard drive for the firmware that you downloaded from the D-Link website to be used for the update. Upgrading the firmware will not change any of your system settings but it is recommended that you save your system settings before doing a firmware upgrade.

Browse-   After you have downloaded the new firmware, click **Browse** in this window to locate the firmware update on your hard drive. Click **Apply** to complete the firmware upgrade.

Note: Do not power off the unit when it is being upgraded. When the upgrade is complete, the unit will automatically restart.

Using the Configuration Menu

Tools > Misc

D-Link
Building Networks for People

DI-707P
Ethernet Broadband Router

| Home | Advanced | Tools | Status | Help |

Admin
Time
System
Firmware
Misc

Ping Test
Ping Test is used to send "Ping" packets to test if a computer is on the Internet.

Host Name or IP address [   ] [Ping]

Restart Device
Reboots the DI-707P.

[Reboot]

Block WAN Ping
When you "Block WAN Ping", you are causing the public WAN IP address on the DI-707P to not respond to ping commands. Pinging public WAN IP addresses is a common method used by hackers to test whether your WAN IP address is valid.

Discard PING from WAN side ○ Enabled ⊙ Disabled

SPI mode
You can setup this item if you want to enable SPI mode.

○ Enabled ⊙ Disabled

UPnP Setting
You can disable or enable UPnP functions at anytime.
⊙ Enabled ○ Disabled

VPN Pass-Through
Allows VPN connections to work through the DI-707P.

PPTP ⊙ Enabled ○ Disabled
IPSec ⊙ Enabled ○ Disabled

Non-standard FTP port
You have to setup this item if you want to access an FTP server whose port number is not 21.

Port: [0]

✓ Apply   ✕ Cancel   ➕ Help

Using the Configuration Menu

Ping Test-

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

Restart Device-

Click reboot to restart the unit.

Block WAN Ping-

Click **Enable** to block the WAN ping. Computers on the Internet will not get a reply back from the DI-707P when it is being "ping"ed. This may help to increase security.

SPI Mode-

Stateful Packet Inspection is a form of firewall protection that will inspect all of the packets transmitted through the DI-707P. It carefully inspects all incoming packets and if it packets contain suspecious information, it will automatically drop those packets.

UPnP Setting-

Universal Plug and Play is a feature that is preset to allow certain popular applications such as MSN messenger to be functional using the router without making any configurations. By default UPnP setting is set to enable. It is recommended to keep UPnP Setting on enable.

VPN Pass Through-

For users who telecommute or use Virtual Private Network (VPN), you can select PPTP or IPSec to be used with this router.

Non-standard FTP port- If an FTP server you want to access is not using the standard port 21, then enter in the port number that the FTP server is using instead.

Using the Configuration Menu

Status > Device Info
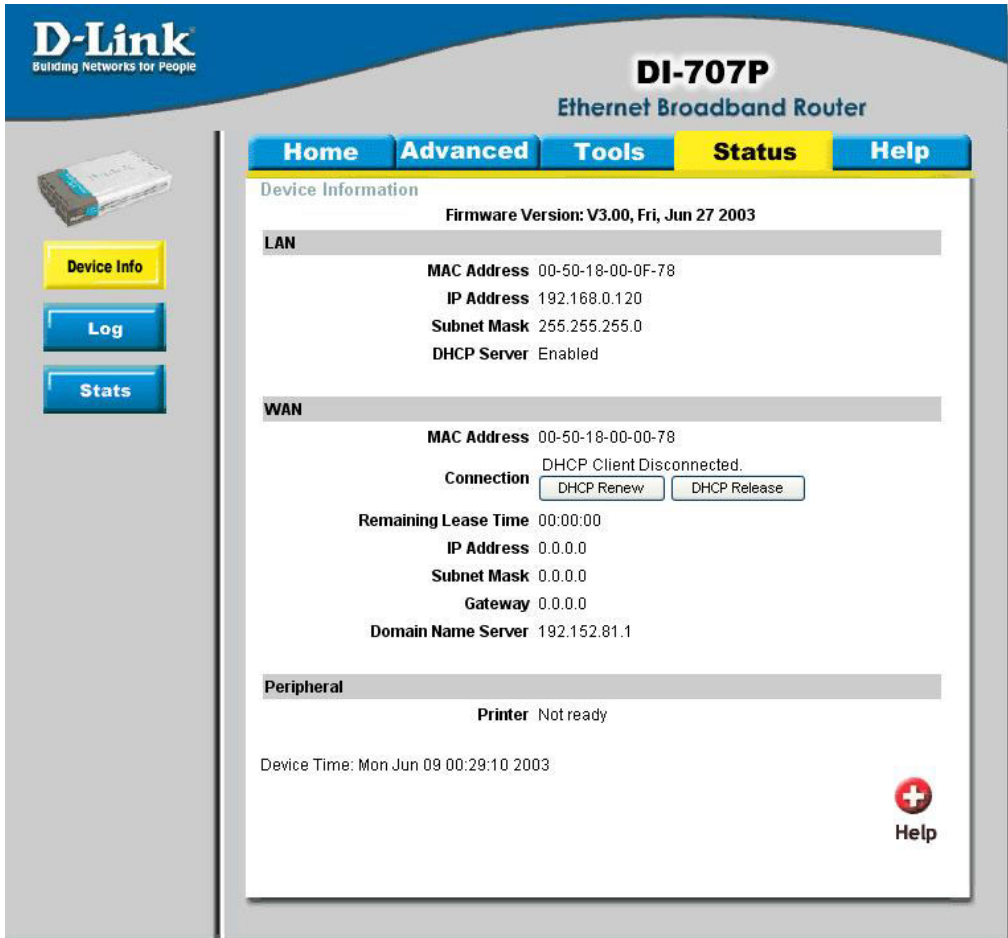
This screen displays information about the DI-707P.

DHCP Renew-   Click to refresh IP addresses sent from the DHCP server.

DHCP Release-   Click to release IP addreses sent from the DHCP server.

Using the Configuration Menu

Status > Log
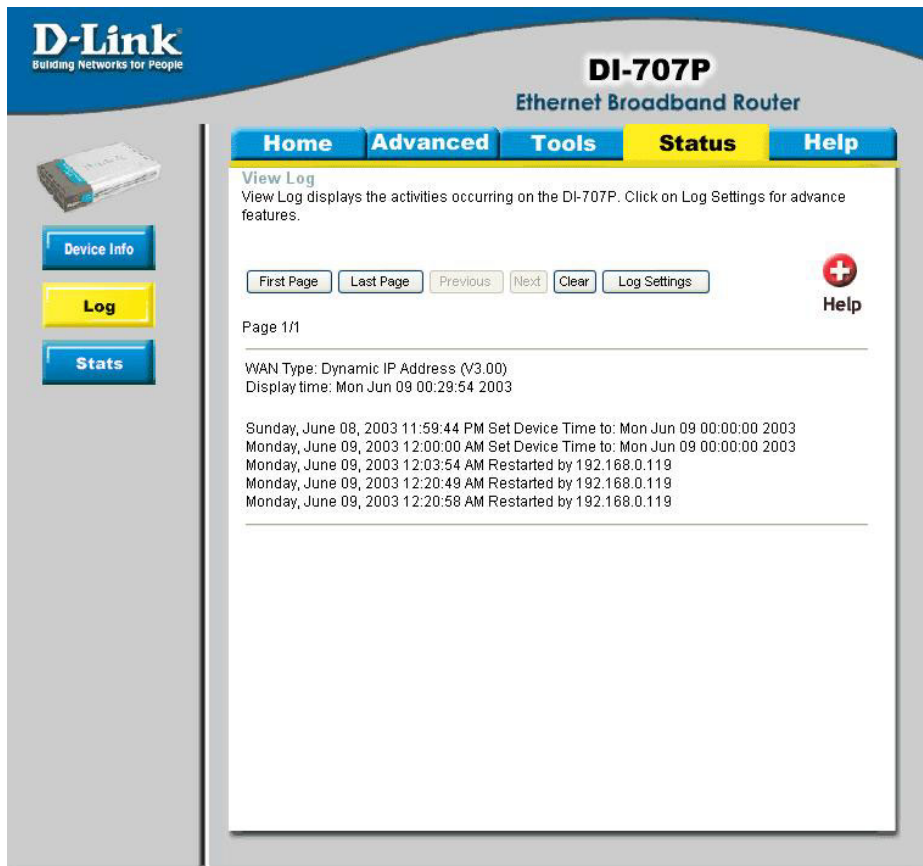
This screen displays activities occurring on the DI-707P.

First Page-   Click **First Page** to go to the first page of the log.

Last Page-   Click **Last Page** to go to the last page of the log.

Previous-   Click **Previous** to go to the previous page of the log.

Next-   Click **Next** to go to the next page of the log.

Clear-   Click **Clear** to clear the current page of the log.

Log Settings-   Click for advanced features (see next page.)

Using the Configuration Menu

Status > Log Settings

E-Mail Alert-	The DI-707P can be set up to send the log files to a specific email address.
SMTP Server IP-	Enter in the IP address of the mail server.
Email Address-	Enter in the email address of the recipient who will receive the email log.
Send Mail Now-	Click to send mail immediately.
Syslog Server IP Address-	Enter in the IP address of a syslog server within the network. Click **Enable** to activate the policy. The DI-707P will send all of it's logs to the specified syslog server.
Log Type-	Select the types of activity to log. By default, all values are selected.

Using the Configuration Menu

Status > Stats
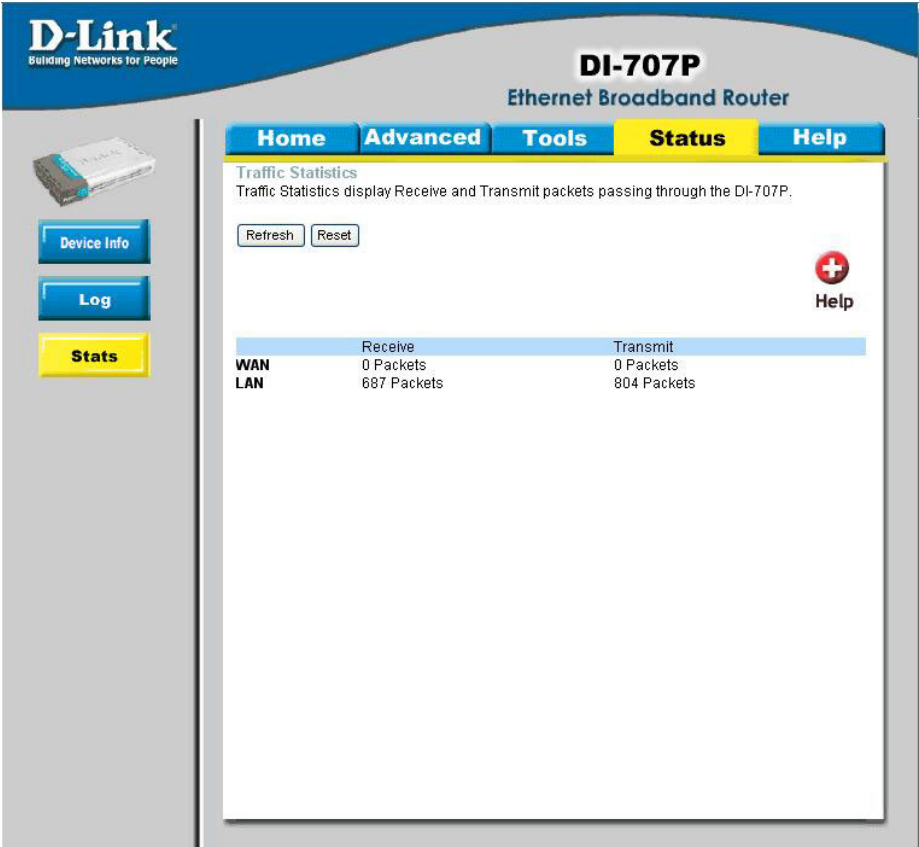
In Stats section, traffic statistics are displayed.

Refresh-   This will update the page.

Reset-   This will reset the packet counter to zero.

WAN-   Displays Received / Transmitted packets from the WAN port.

LAN-   Displays Received / Transmitted packets from the LAN port.

Using the Configuration Menu

Help

This screen displays the complete **Help** menu. For help at anytime, click the **Help** tab in the Configuration menu.

Installing the Print Server Software

Insert the installation CD-ROM into the CD-ROM drive. The following window will be shown automatically. If it is not, please run "install.exe" on the CD-ROM.

Click Install Print Server Software

Select the Operating System

Click Next
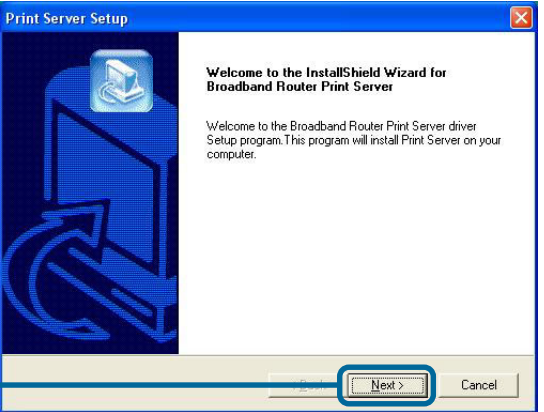
Installing the Print Server Software (continued)

Select the destination folder.

Print Server Setup

Choose Destination Location
Select folder where Setup will install files.

Setup will install Broadband Router Print Server in the following folder.

To install to this folder, click Next. To install to a different folder, click Browse and select another folder.

Destination Folder
C:\...\D-Link\Broadband Router Print Server   Browse...

InstallShield
< Back   Next >   Cancel

Click Browse to select a destination folder

Click Next

Print Server Setup

InstallShield Wizard Complete

The InstallShield Wizard has successfully installed Broadband Router Print Server. Click Finish to exit the wizard.

< Back   Finish   Cancel

Click Finish

reboot

You must reboot your PC for all changes to take effect.
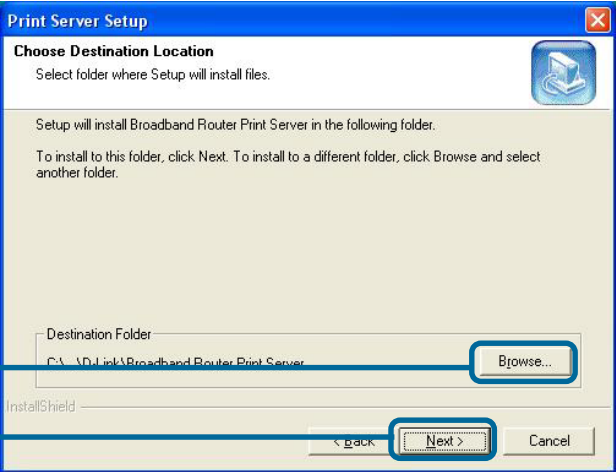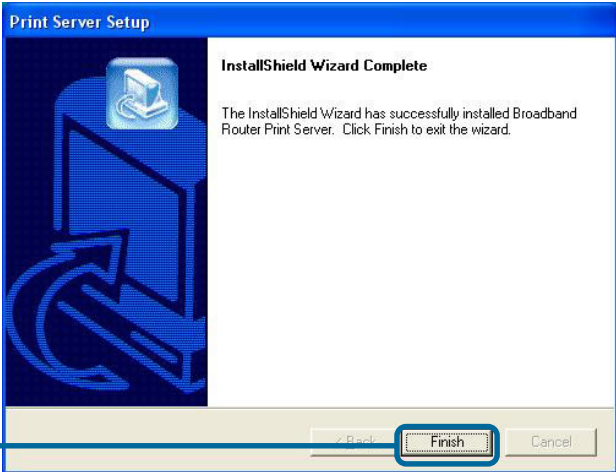
Select the option for restarting the computer.

⦿ Yes, I want to restart my computer now.

○ No, I will restart my computer later.

OK

Click OK
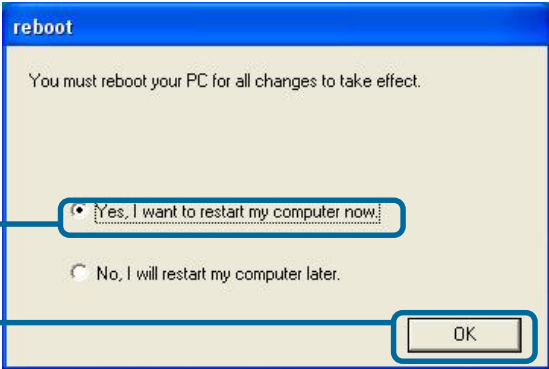
After rebooting your computer, the software installation procedure is finished.

Configuring on Windows 98SE/ME Platforms

After you finish the software installation procedure, your computer will be capable of network printing provided by the DI-707P. For convenience, we call the printer connected to the printer port of the DI-707P a *print server*. On a Windows 95/98 platform, open the *Printers* window in the *My Computer* menu.
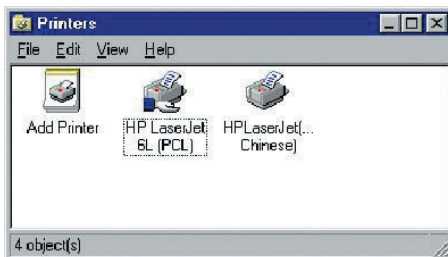
Now, you can configure the print server of the DI-707P:
Find out the corresponding icon of your *print server*, for example, the **HP LaserJet 6L**. Right click on that icon, and then select *Properties.*

The screen at right appears.

Click on the Details tab
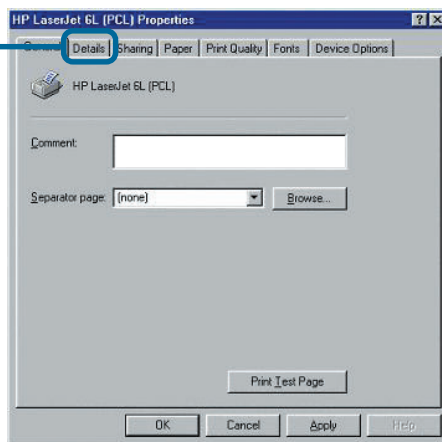
Choose the "PRTmate: (All-in-1)" from the list attached at the *Print To* item. Be sure that the *Printer Driver* item is configured to the correct driver of your *printer server.*

Click Port Settings

Type in the IP address of the DI-707P.

Click OK

45
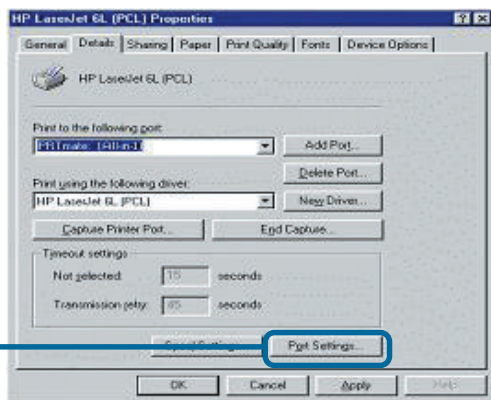
Configuring on Windows XP/2000/NT Platforms

Click Port
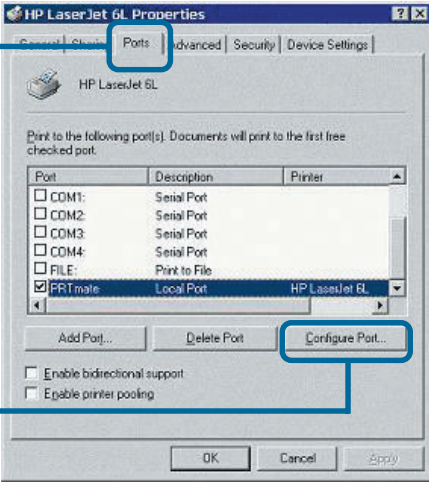
The configuration procedure for a Windows 2000/XP platform is similar to that of Windows 95/98 except for the printer *Properties* screen:

Click Configure Port

Type in the IP address of the DI-707P.

Click OK
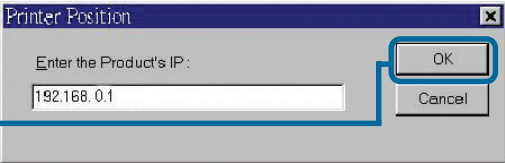
(Note: Screen shots are taken in Windows 2000, similar screens will appear in Windows XP.)

Networking Basics

Using the Network Setup Wizard in Windows XP

In this section you will learn how to establish a network at home or work, using **Microsoft Windows XP.**

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

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

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

Networking Basics

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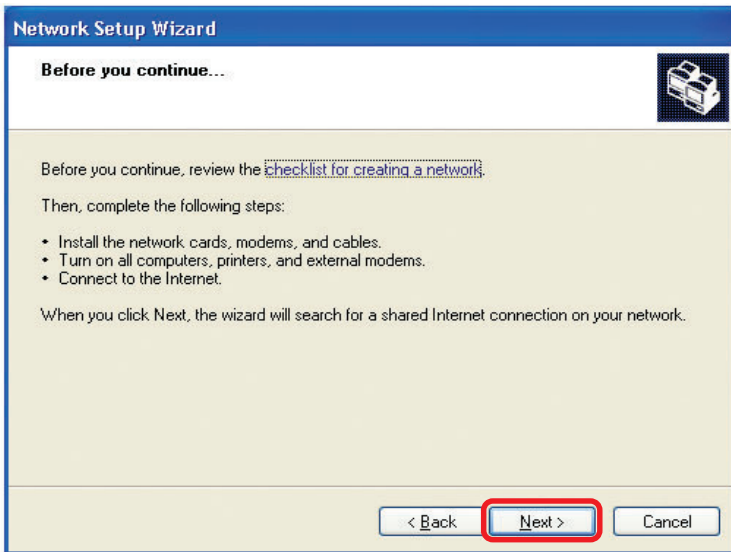
Click **Next**.
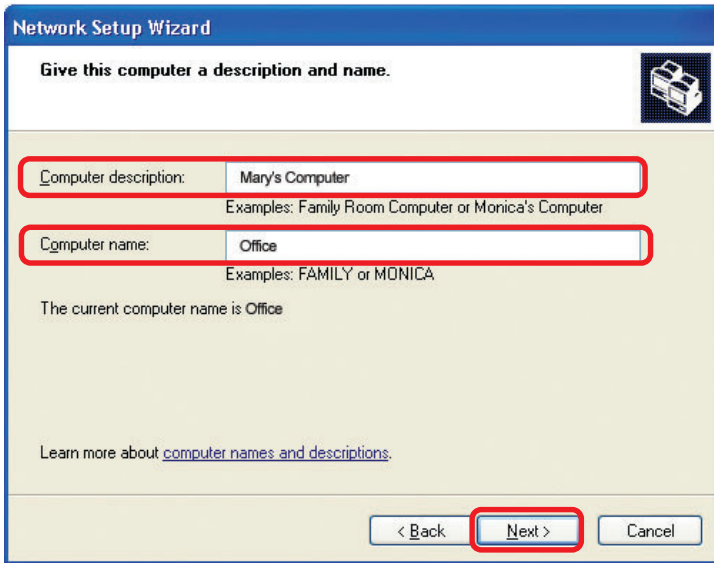
In the following window, select the description that best fits your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.
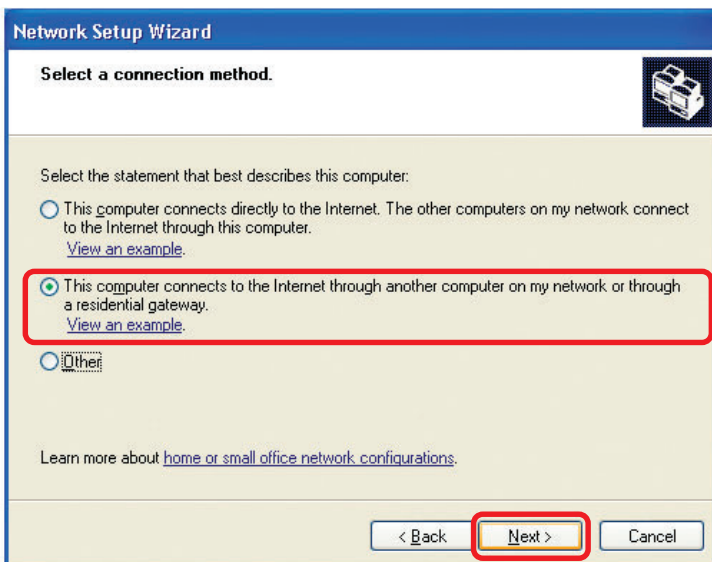
Click **Next**.

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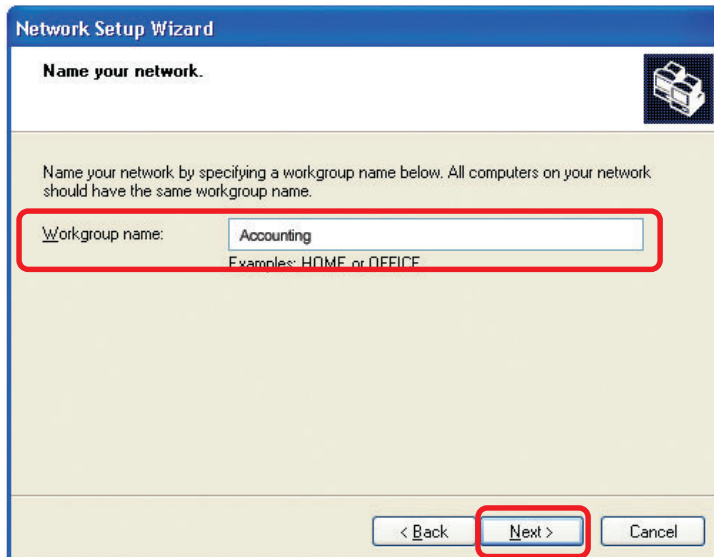
Enter a **Computer description** and a **Computer name** (optional).

Click **Next**.

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

Click **Next**.

Networking Basics

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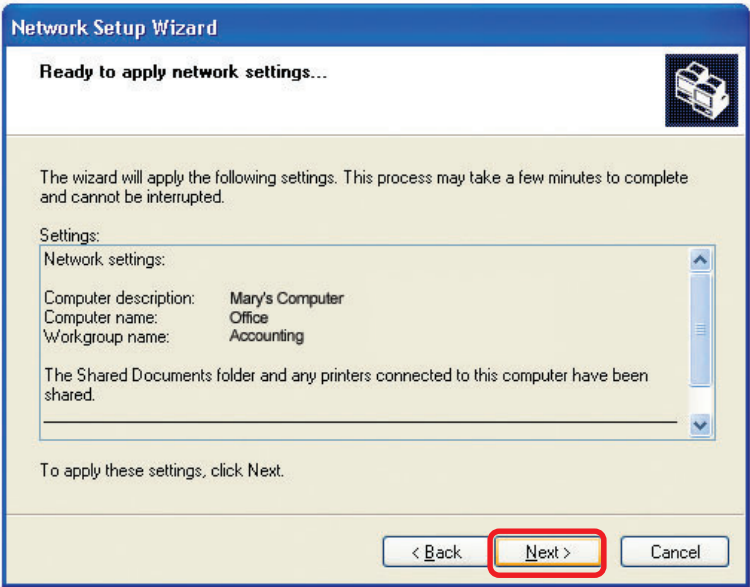
When the changes are complete, click **Next**.

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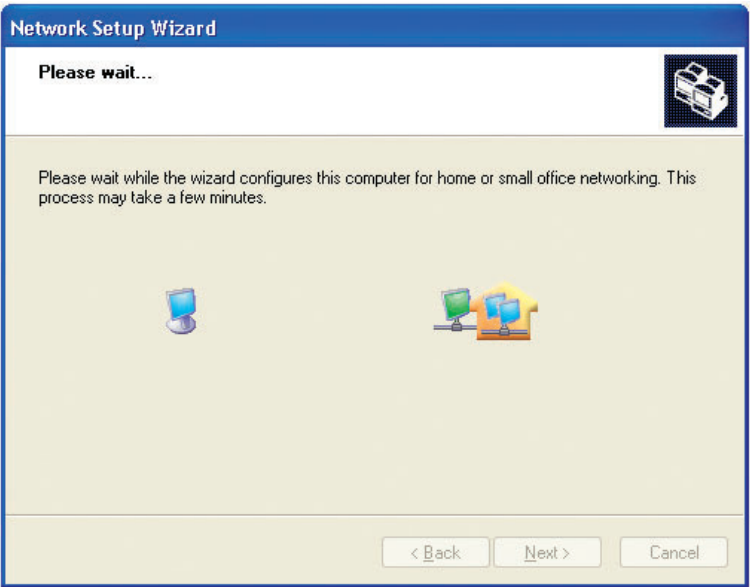
Networking Basics

In the window below, select the 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**.

Network Setup Wizard

You're almost done...

(i) You need to run the Network Setup Wizard once on each of the computers on your network. To run the wizard on computers that are not running Windows XP, you can use the Windows XP CD or a Network Setup Disk.

What do you want to do?

⊙ Create a Network Setup Disk
○ Use the Network Setup Disk I already have
○ Use my Windows XP CD
○ Just finish the wizard; I don't need to run the wizard on other computers

[< Back] [Next >] [Cancel]

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

Network Setup Wizard

Insert the disk you want to use.

Insert a disk the into the following disk drive, and then click Next.

3½ Floppy (A:)

If you want to format the disk, click Format Disk.

[Format Disk]

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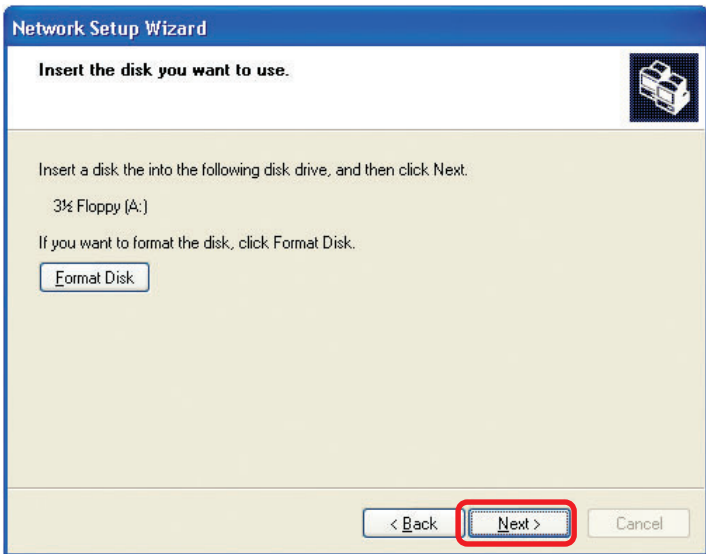
Networking Basics
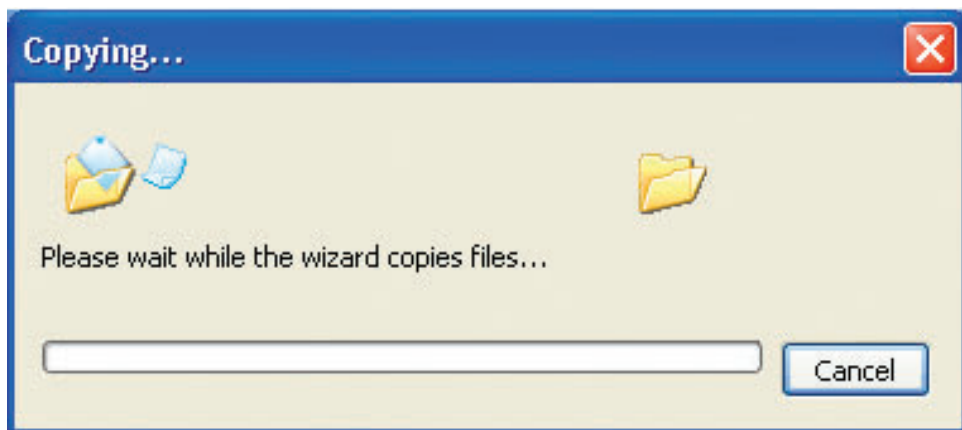
Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.
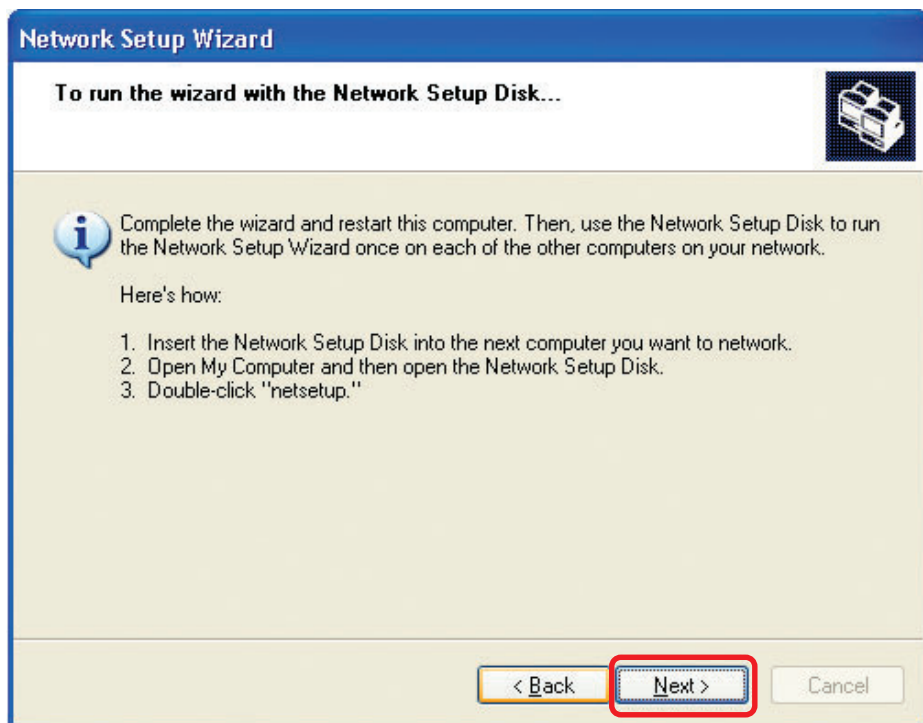
Networking Basics

Please read the information on this screen, then click **Finish** to complete the **Network Setup Wizard**.

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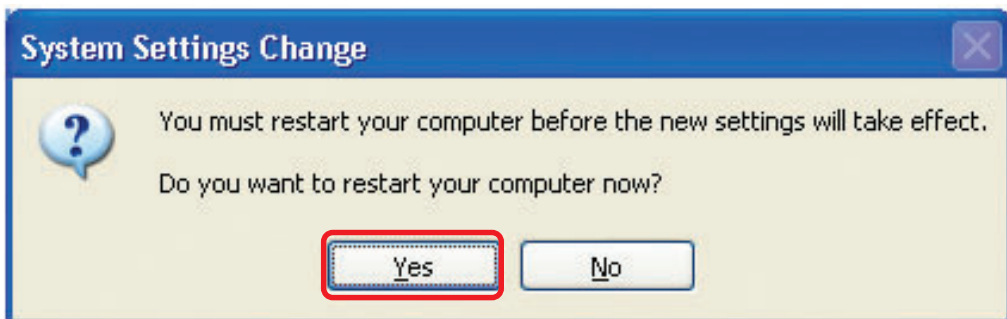
You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

Networking Basics
Naming your Computer

To name your computer, please follow these directions. In **Windows XP**:

- Click **Start** (in the lower left corner of the screen).

- **Right-click** on **My Computer**.

- Select **Properties** and click.
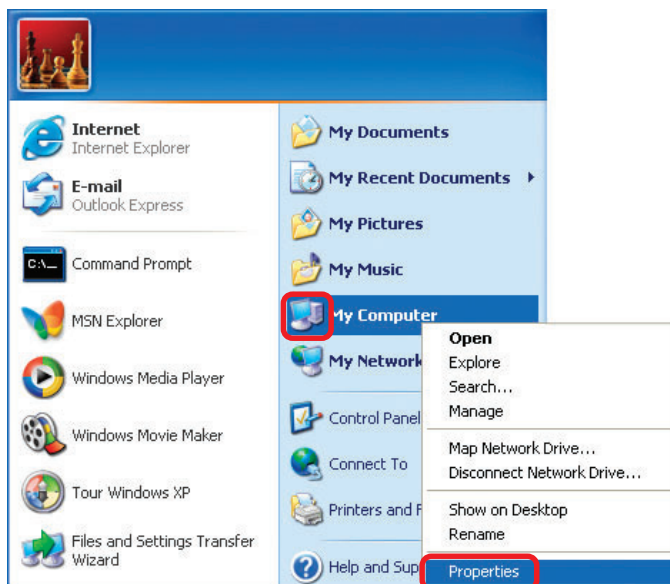
- Select the **Computer Name Tab** in the System Properties window.
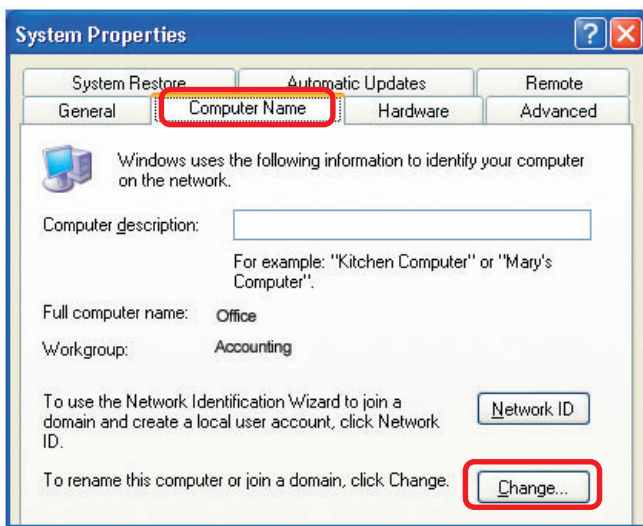
- You may enter a **Computer Description** if you wish; this field is optional.

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

Networking Basics
Naming your Computer

- In this window, enter the **Computer name**.

- Select **Workgroup** and enter the name of the **Workgroup**.

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

- Click **OK**.

Computer Name Changes

You can change the name and the membership of this computer. Changes may affect access to network resources.

Computer name:

Office

Full computer name:

Office

More...

Member of

○ Domain:

⦿ Workgroup:

Accounting

OK   Cancel
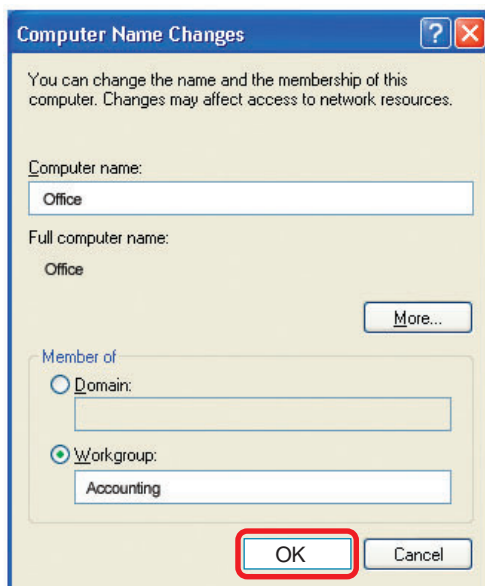
Assigning a Static IP Address in Windows XP/2000

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**.

Tour Windows XP

Paint

Files and Settings Transfer Wizard

All Programs ▶

Control Panel

Printers and Faxes

Help and Support

Search

Run...

Log Off   Turn Off Computer

start

55
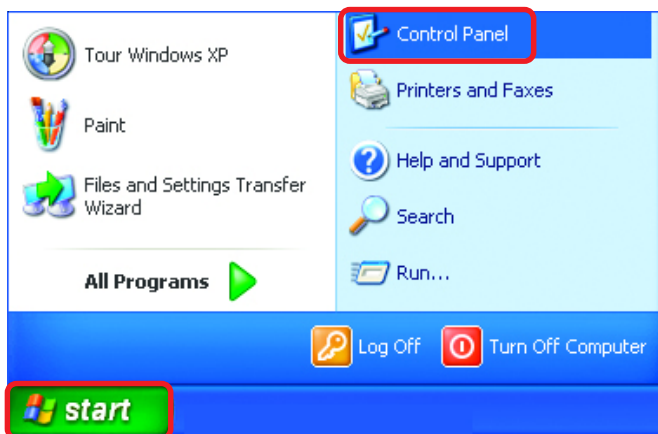
■ Double-click on
    **Network
    Connections**.
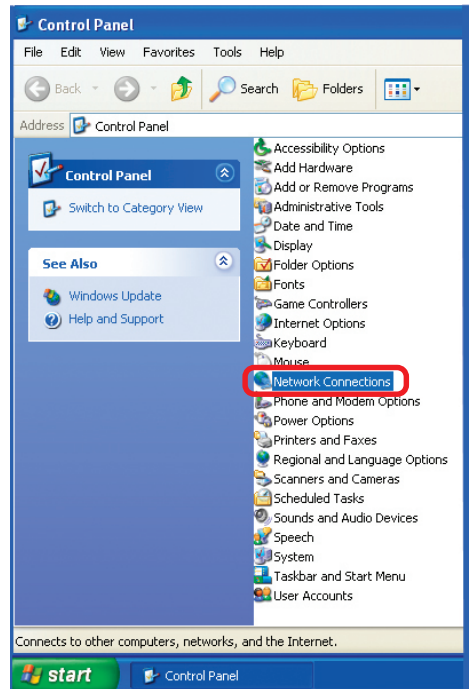
■ Right-click on **Local Area
    Connections**.

■ Double-click on
    Properties.

56
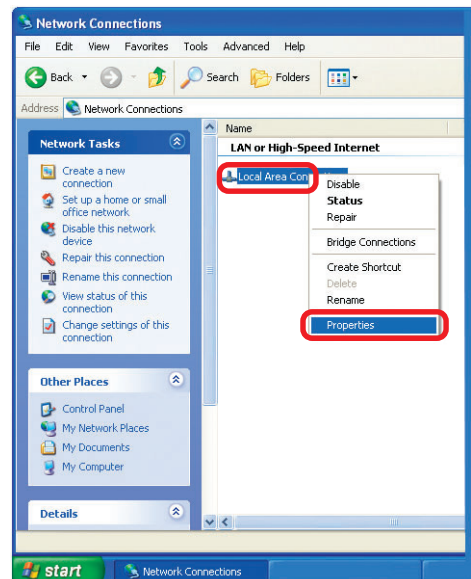
Networking Basics
Assigning a Static IP Address in Windows XP/2000

■ Click on **Internet Protocol (TCP/IP)**.

■ Click **Properties**.
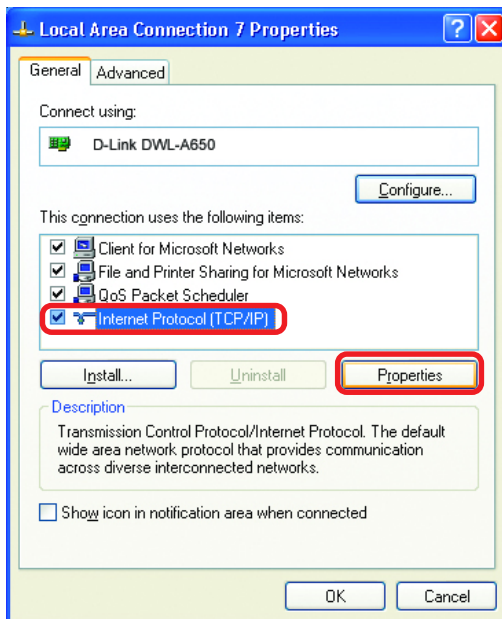
■ Enter the LAN IP address of the Wireless Router. (D-Link wireless routers have a LAN IP address of 192.168.0.1.)

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

■ Click **OK**
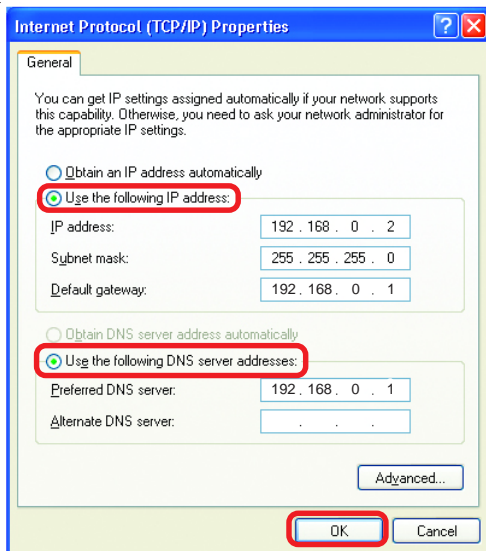
Networking Basics
Assigning a Static IP Address with <u>Macintosh OSX</u>

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

■ Click on **Network**.
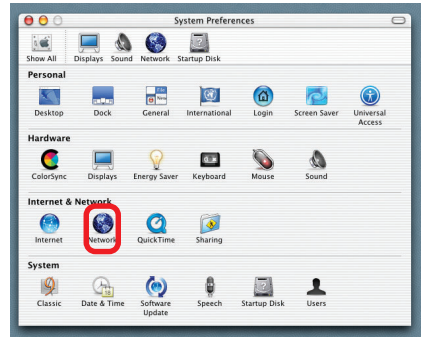
■ Select **Built-in Ethernet** in the **Show** pull-down menu.

■ Select **Manually** in the **Configure** pull-down menu.
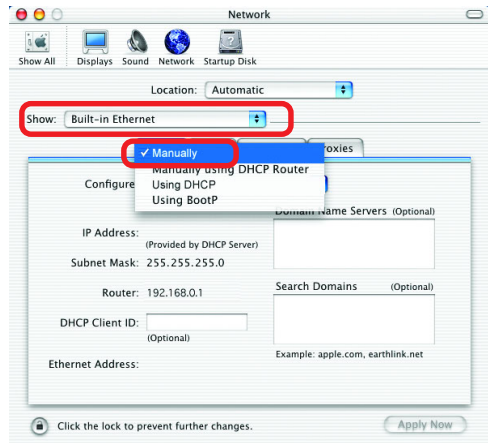
■ Input the **Static IP Address**, the **Subnet Mask**, and the **Router IP Address** in the appropriate fields.
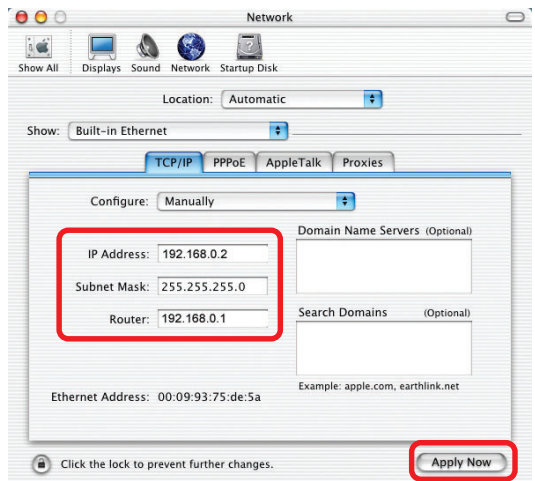
■ Click **Apply Now**.

Networking Basics
Selecting a Dynamic IP Address with <u>Macintosh OSX</u>

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

■ Click on **Network**.
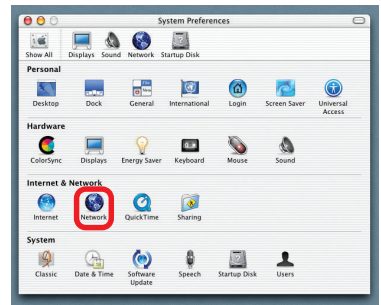
■ Select **Built-in Ethernet** in the **Show** pull-down menu.

■ Select **Using DHCP** in the **Configure** pull-down menu.
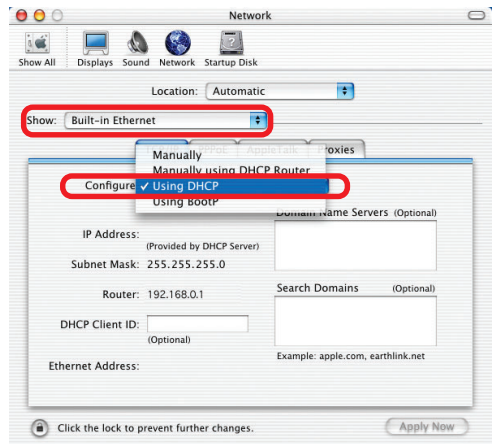
■ Click **Apply Now**.

■ The **IP Address, Subnet mask**, and the **Router's IP Address** will appear in a few seconds.
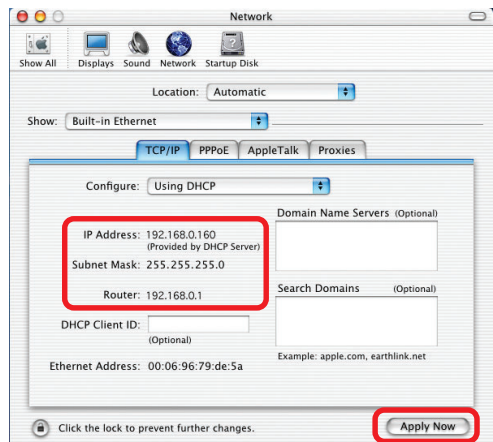
Networking Basics
Adding and Sharing Printers in <u>Windows XP</u>

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.

On the following pages, we will show you these 3 ways to use the **Add Printer Wizard:**

1. Adding a local printer

2. Sharing an network printer

3. Sharing an LPR printer

(Other Networking Tasks)

For help with other tasks, that we have not covered here, 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**.

Networking Basics
Adding a local printer *(a printer connected directly to a computer)*

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

- Go to **Start> Printers and Faxes**.
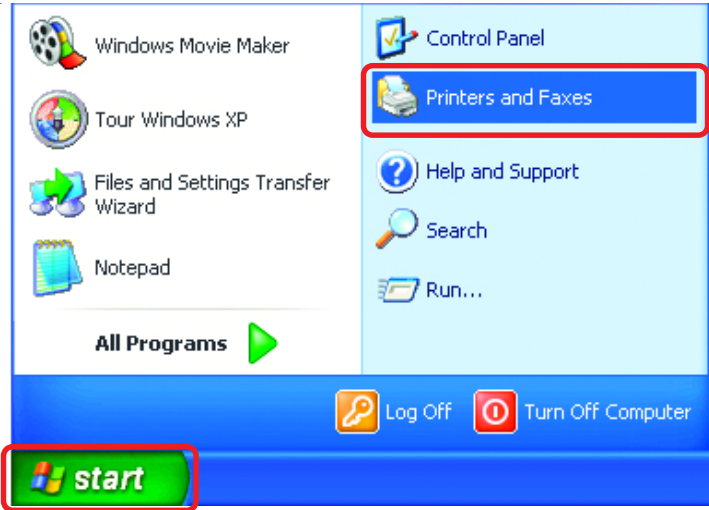
- Click on **Add a printer**.
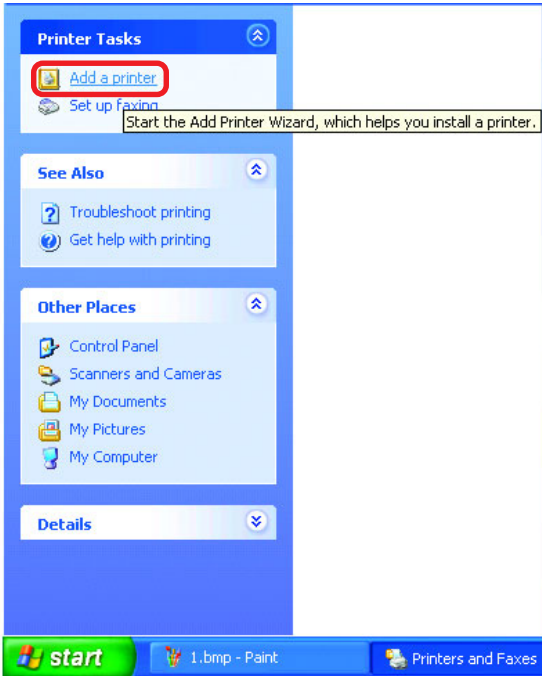
Networking Basics
Adding a local printer

■ Click **Next**.
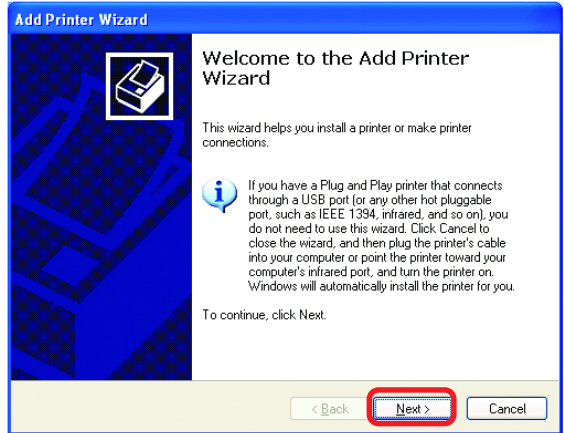
■ Select **Local printer attached to this computer**.

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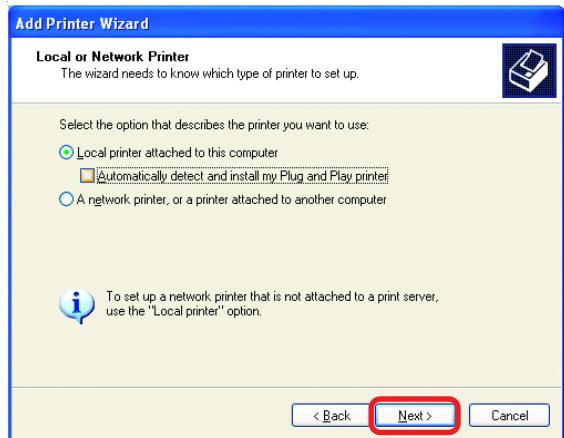
■ Click **Next**.

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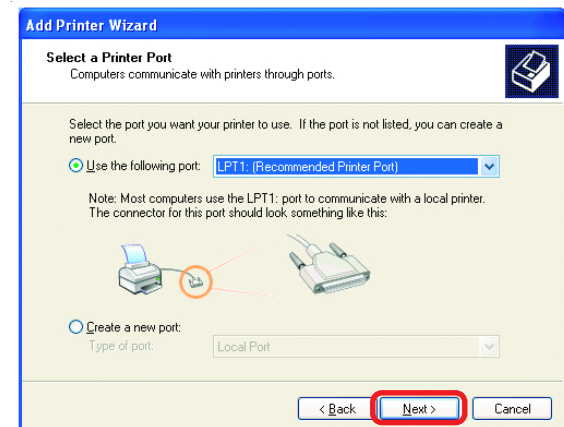
■ From the pull-down menu **select the correct port** for your printer.

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

■ Click **Next**.

Networking Basics
Adding a local printer

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

- Click **Next**.

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

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

- Click **Next**.

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

- Click **Next**.
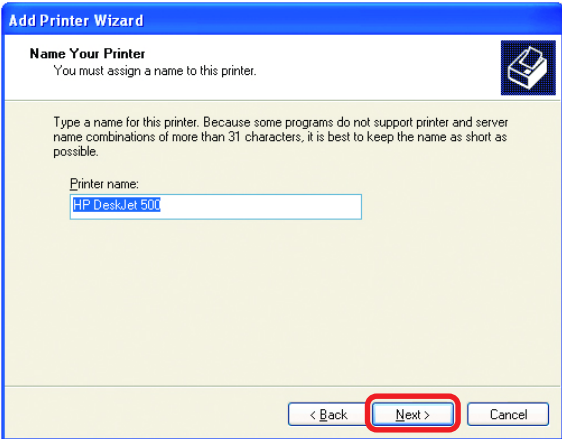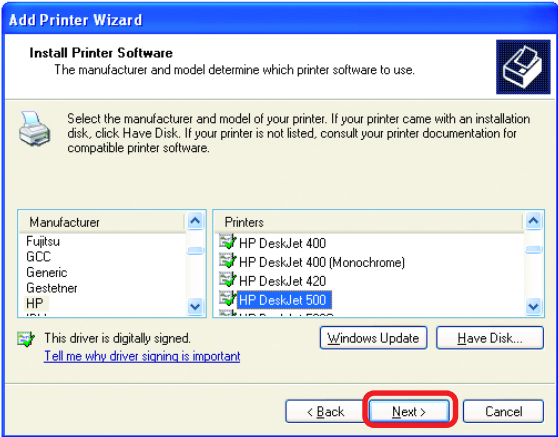
This screen gives you information about your printer.

Add Printer Wizard

Completing the Add Printer Wizard

You have successfully completed the Add Printer Wizard.
You specified the following printer settings:

Name: HP DeskJet 500
Share name: <Not Shared>
Port: LPT1:
Model: HP DeskJet 500
Default: Yes
Test page: Yes

To close this wizard, click Finish.

[< Back] [Finish] [Cancel]
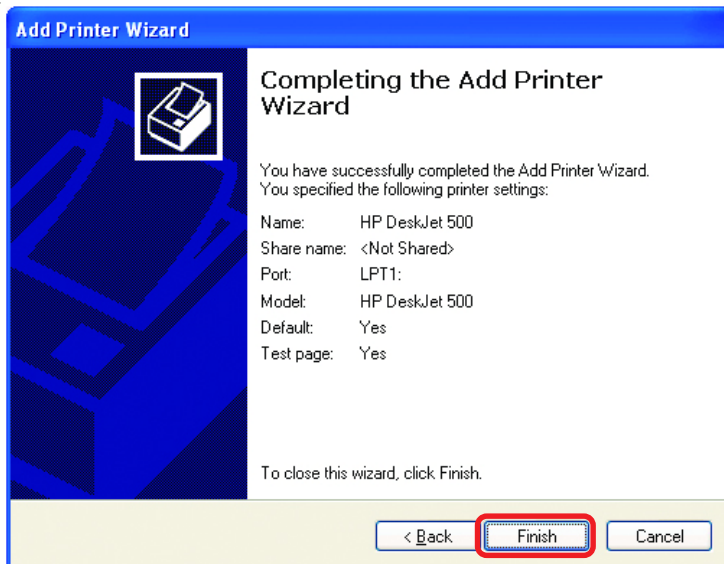
Click **Finish**.

When the test page has printed,

HP DeskJet 500

A test page is now being sent to the printer. Depending on the speed of your printer, it may take a minute or two before the page is printed.

The test page briefly demonstrates the printer's ability to print graphics and text, and it provides technical information about the printer driver.

If the test page printed, click OK.
If the test page did not print, click Troubleshoot.

[OK] [Troubleshoot...]

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.
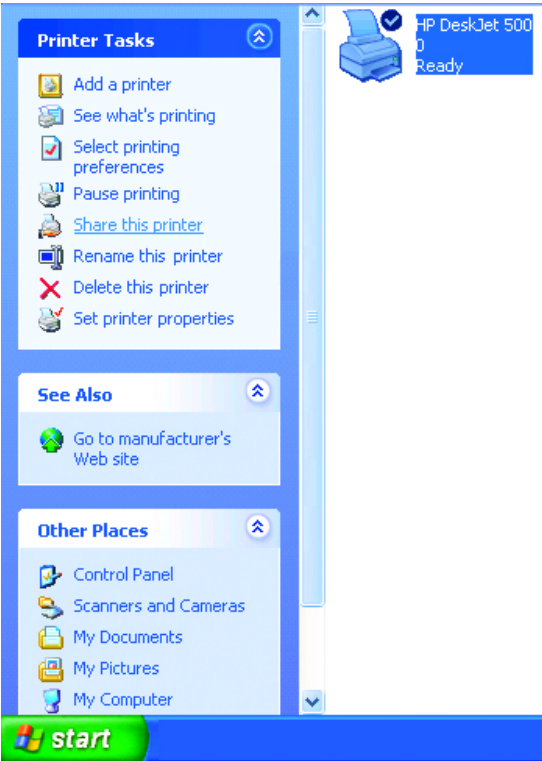
Sharing a network printer

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**.
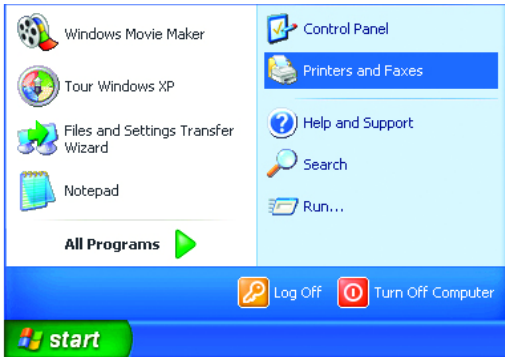
Networking Basics
Sharing a network printer

■ Click on
Add a printer.

Printer Tasks

📄 Add a printer
🖨 Set up faxing

Start the Add Printer Wizard, which helps you install a printer.

Add Printer Wizard

Welcome to the Add Printer Wizard

This wizard helps you install a printer or make printer connections.

ⓘ If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.

To continue, click Next.

< Back   Next >   Cancel

■ Click **Next**.

Add Printer Wizard

Local or Network Printer
The wizard needs to know which type of printer to set up.

■ Select
Network Printer.

Select the option that describes the printer you want to use:

○ Local printer attached to this computer
☐ Automatically detect and install my Plug and Play printer
◉ A network printer, or a printer attached to another computer

ⓘ To set up a network printer that is not attached to a print server, use the "Local printer" option.

< Back   Next >   Cancel

■ Click **Next**.

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Networking Basics
Sharing a network printer

■ Select **Browse for a printer**.

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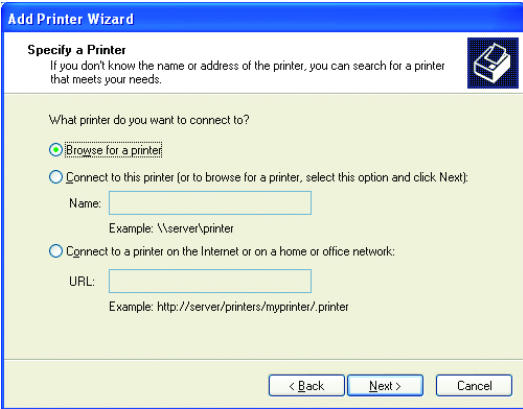
Select the **printer** you would like to share.

■ Click **Next**.
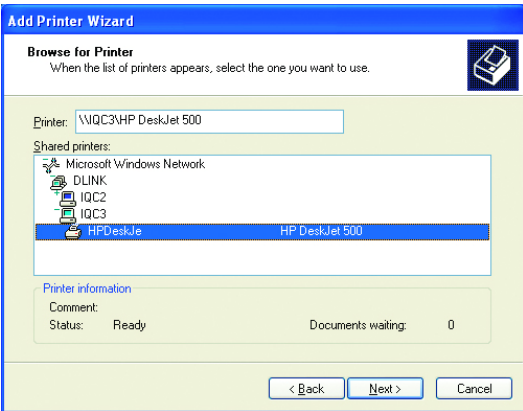
■ Click **Finish**.
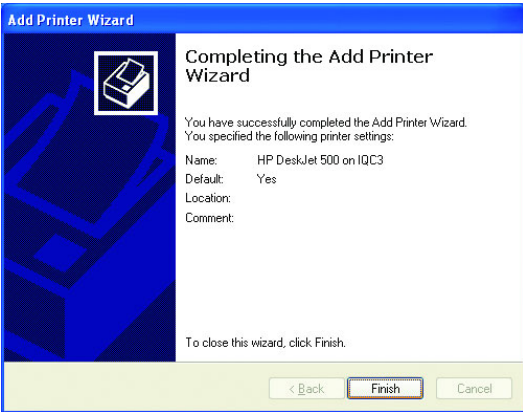
Networking Basics
Sharing a network printer

- To check for proper installation:

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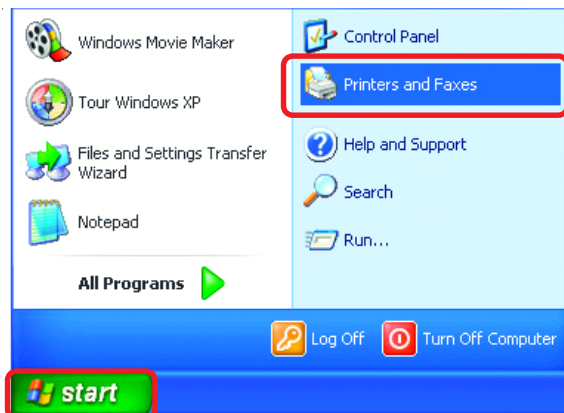
The printer icon will appear at right, indicating proper installation.

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.
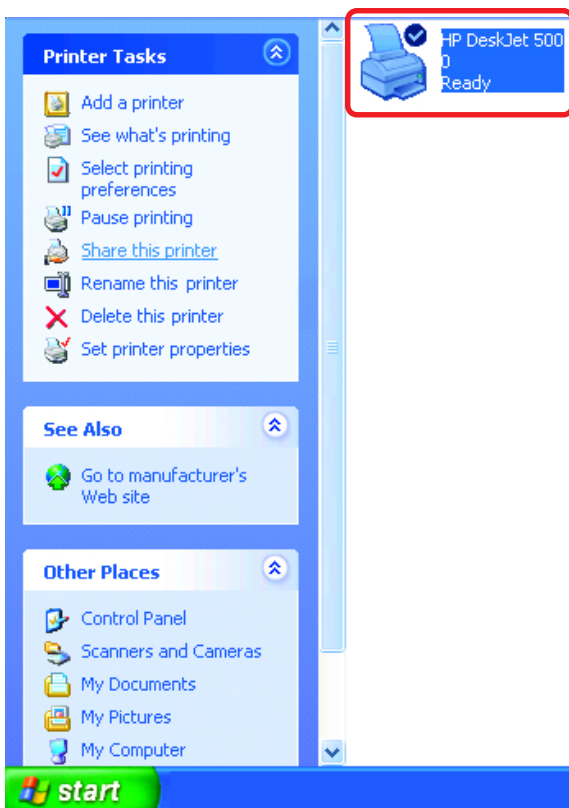
Networking Basics
Sharing an LPR printer

To share an **LPR printer** (using a print server), you will need a Print Server such as the **DI-707P**. 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 appear.

Add Printer Wizard

Welcome to the Add Printer Wizard

This wizard helps you install a printer or make printer connections.

If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.

To continue, click Next.

■ Click **Next**.

< Back   Next >   Cancel

■ Select **Local Printer...**

Add Printer Wizard

Local or Network Printer
The wizard needs to know which type of printer to set up.

Select the option that describes the printer you want to use:

⊙ Local printer attached to this computer
  ☐ Automatically detect and install my Plug and Play printer
○ A network printer, or a printer attached to another computer

To set up a network printer that is not attached to a print server, use the "Local printer" option.

■ Click **Next**.

< Back   Next >   Cancel

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**.

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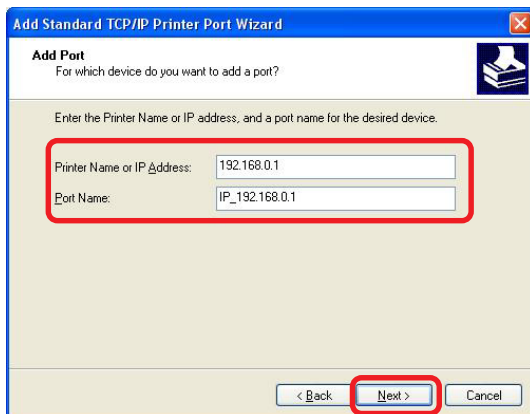
Networking Basics
Sharing an LPR printer

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

- Click **Settings**.

Add Standard TCP/IP Printer Port Wizard

Additional Port Information Required
The device could not be identified.

The detected device is of unknown type. Be sure that:
1. The device is properly configured.
2. The address on the previous page is correct.

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

Device Type
- ○ Standard   Generic Network Card
- ⊙ Custom   Settings...

< Back   Next >   Cancel

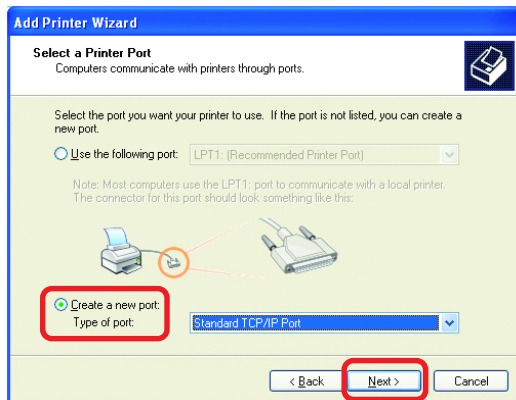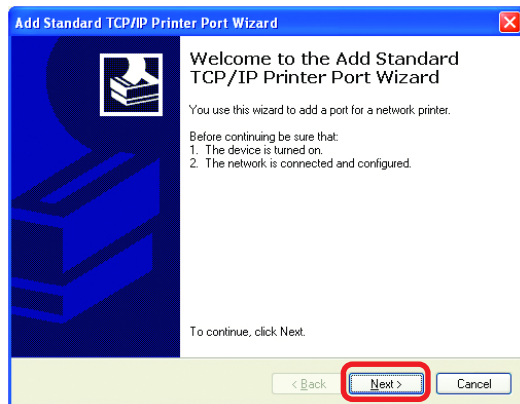- Enter the **Port Name** and the **Printer Name** or **IP Address**.

- Select **LPR**.

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

- Click **LPR Byte Counting Enabled.**

- Click **OK**.

Configure Standard TCP/IP Port Monitor

Port Settings

Port Name: IP_192.168.0.1

Printer Name or IP Address: 192.168.0.1

Protocol
- ○ Raw   ⊙ LPR

Raw Settings
Port Number: 9100

LPR Settings
Queue Name: lp
☑ LPR Byte Counting Enabled

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

OK   Cancel

Networking Basics
Sharing an LPR printer

■ This screen will show you information about your printer.
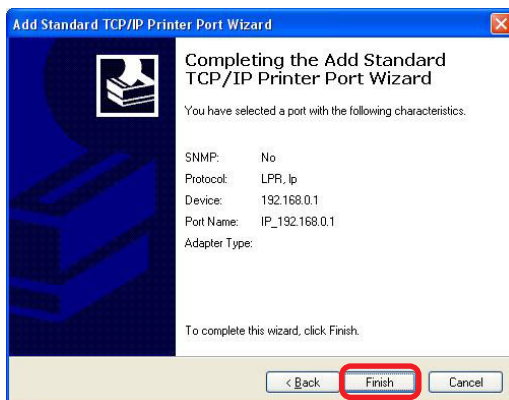
■ Click **Finish**.

■ Select the **printer** you are adding from the list of **Printers**.
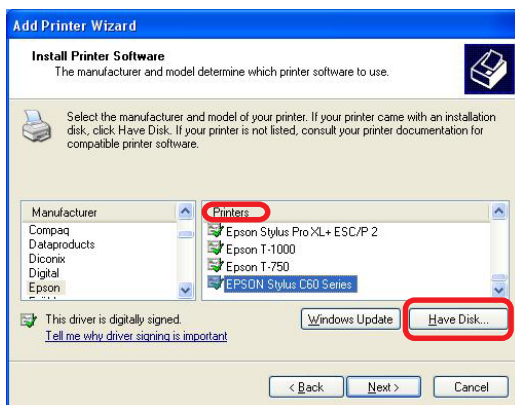
■ Insert the printer driver disk that came with your printer.

■ Click **Have Disk**.

If the printer driver is already installed, do the following:
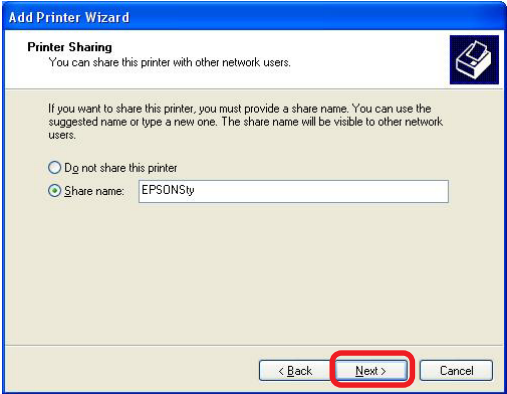
■ Enter in the **Printer Name**. You can choose to use this printer as the default printer.

■ Click **Next**.
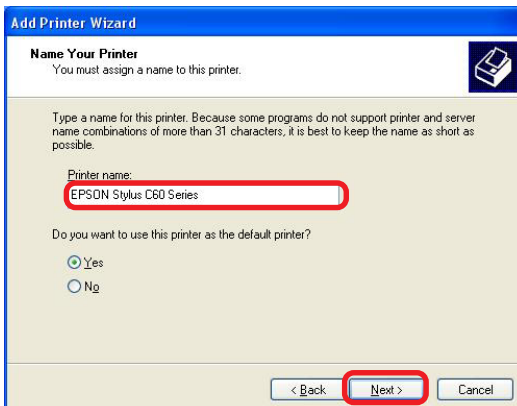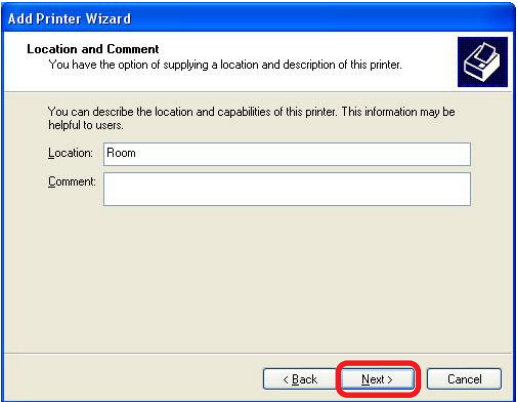
Networking Basics
Sharing an LPR printer

- ▪ You can share this printer with other network users. It is optional.
- ▪ If you want to shre the printer, click **Share name** and enter a name for the printer.
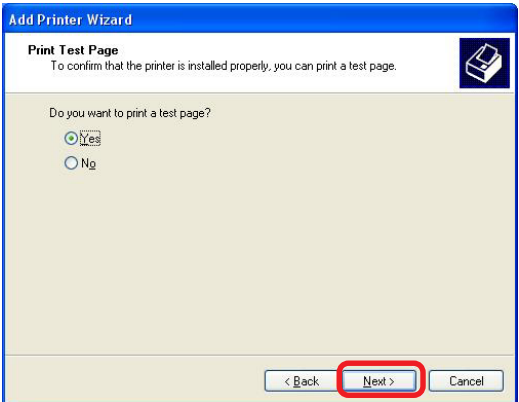
- ▪ Click **Next**.

- ▪ You have the option of supplying a location and description of this printer. Enter the location of the printer and any comments.

- ▪ Click **Next**.

Select **Yes**, to print a test page.

- ▪ Click **Next**.

Networking Basics
Sharing an LPR printer

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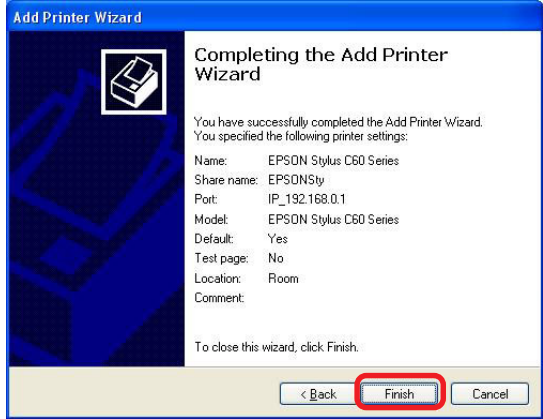
*Note: You must run the **Network Setup Wizard** on all the computers on your network before you run the **Add Printer Wizard**.*

Resetting the DI-707P to the Factory Default Settings

After you have tried other methods for troubleshooting your network, you may choose to **Reset** the DI-707P to the factory default settings.

To hard-reset the D-Link DI-707P to the Factory Default Settings, please do the following:

■ Locate the **Reset** button on the back of the DI-707P.

■ Use a paper clip to press the **Reset** button and power on.

■ Hold for about 5 seconds (don't hold too long) and then release. (Or, release when M1 and M2 flash at the same time.)

■ After you have completed the above steps, the DI-707P will be reset to the factory default settings.

Technical Specifications

Standards

- IEEE 802.3 10BASET-T Ethernet
- IEEE 802.3u 100BASE-TX Fast Ethernet
- IEEE 802.3x Flow Control
- IEEE 802.1p Priority Queue
- ANSI/IEEE 802.3 NWay auto-negotiation

VPN Pass Through Function

- PPTP
- L2TP
- IPSec

Device Management

- Web-Based – Internet Explorer 6x or later; Netscape Navigator 6x or later; or other Java- enabled browsers.

LEDs

- WAN
- LAN
- M1
- M2

Operating Temperature

- 41°F to 131°F (5°C to 55°C)

Humidity

- 10-90%

Power

- AC 5V 2.5A

Dimensions

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

Weight

- ~2.0 lbs. (907g)

Ports

- 7 x NWay 10BASE-T/100BASE-TX Fast Ethernet LAN (Media Auto Sensing)
- 1 x 10BASE-T WAN
- 1 Printer Port (Female DB-25)

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Frequently Asked Questions

> ### Why can´t I access the web based configuration?

When entering the IP Address of the DI-707P (192.168.0.1), you are not connecting to the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

To resolve difficulties accessing a web utility, please follow the steps below.

Step 1 Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.

What type of cable should I be using?

The following connections require a Crossover Cable:
Computer to Computer
Computer to Uplink Port
Computer to Access Point
Computer to Print Server
Computer/XBOX/PS2 to DWL-810
Computer/XBOX/PS2 to DWL-900AP+
Uplink Port to Uplink Port (hub/switch)
Normal Port to Normal Port (hub/switch)

The following connections require a Straight-through Cable:
Computer to Residential Gateway/Router
Computer to Normal Port (hub/switch)
Access Point to Normal Port (hub/switch)
Print Server to Normal Port (hub/switch)
Uplink Port to Normal Port (hub/switch)

Rule of Thumb:
"If there is a link light, the cable is right."

Why can´t I access the web based configuration? (continued)

### *What type of cable should I be using? (continued)*

What´s the difference between a crossover cable and a straight-through cable?

The wiring in crossover and straight-through cables are different. The two types of cable have different purposes for different LAN configurations. EIA/TIA 568A/568B define the wiring standards and allow for two different wiring color codes as illustrated in the following diagram.

The wires with colored backgrounds may have white stripes and may be denoted that way in diagrams found elsewhere.

1	White-Green
2	Green
3	White-Orange
4	Blue
5	White-Blue
6	Orange
7	White-Brown
8	Brown

568A CABLE END

1	White-Orange
2	Orange
3	White-Green
4	Blue
5	White-Blue
6	Green
7	White-Brown
8	Brown

568B CABLE END

How to tell straight-through cable from a crossover cable:

The main way to tell the difference between the two cable types is to compare the wiring order on the ends of the cable. If the wiring is the same on both sides, it is straight-through cable. If one side has opposite wiring, it is a crossover cable.
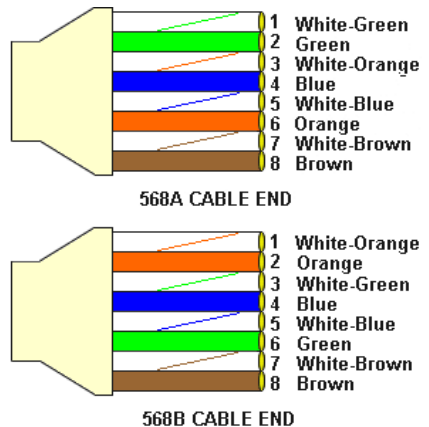
All you need to remember to properly configure the cables is the pinout order of the two cable ends and the following rules:

A straight-through cable has identical ends
A crossover cable has different ends

It makes no functional difference which standard you follow for straight-through cable ends, as long as both ends are the same. You can start a crossover cable with either standard as long as the other end is the other standard. It makes no functional difference which end is which. The order in which you pin the cable is important. Using a pattern other than what is specified in the above diagram could cause connection problems.

When to use a crossover cable and when to use a straight-through cable:

Computer to Computer – Crossover
Computer to an normal port on a Hub/Switch – Straight-through
Computer to an uplink port on a Hub/Switch - Crossover
Hub/Switch uplink port to another Hub/Switch uplink port – Crossover
Hub/Switch uplink port to another Hub/Switch normal port - Straight-through

Frequently Asked Questions (continued)

Step 2 Disable any Internet security software running on the computer. Software firewalls like Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, etc. might block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

Step 3 Configure your Internet settings.

Go to **Start>Settings>Control Panel**. Double click the **Internet Options** Icon. From the **Security** tab, click the button to restore the settings to their defaults.
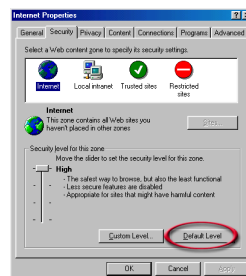
Click to the **Connection** tab and set the dial-up option to **Never Dial a Connection**. Click the **LAN Settings** button
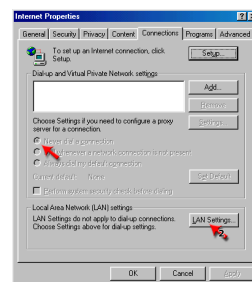
Nothing should be checked. Click **OK**
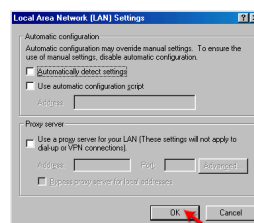
Go to the **Advanced** tab and click the button to restore these settings to their defaults
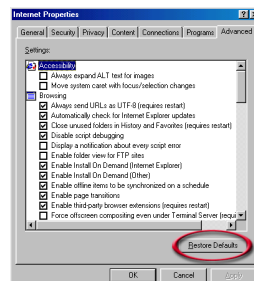
Click **OK**. Go to the desktop and close any open windows

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Why can´t I access the web based configuration? (continued)

Step 4 Check your IP Address. Your computer must have an IP Address in the same range of the device you are attempting to configure. Most D-Link devices use the 192.168.0.X range.

How can I find my IP Address in Windows 95, 98, or ME?

Step 1 Click on **Start**, then click on **Run**.

Step 2 The Run Dialogue Box will appear. Type **winipcfg** in the window as shown then click **OK**.

Step 3 The **IP Configuration** window will appear, displaying your **Ethernet Adapter Information**.

- ■ Select your adapter from the drop down menu.
- ■ If you do not see your adapter in the drop down menu, your adapter is not properly installed.

Step 4 After selecting your adapter, it will display your IP Address, subnet mask, and default gateway.

Step 5 Click **OK** to close the IP Configuration window

Step 4 (continued) Check your IP Address. Your computer must have an IP Address in the same range of the device you are attempting to configure. Most D-Link devices use the 192.168.0.X range.

How can I find my IP Address in Windows 2000/XP?

Step 1 Click on **Start** and select **Run**.

Step 2 Type **cmd** then click **OK**.
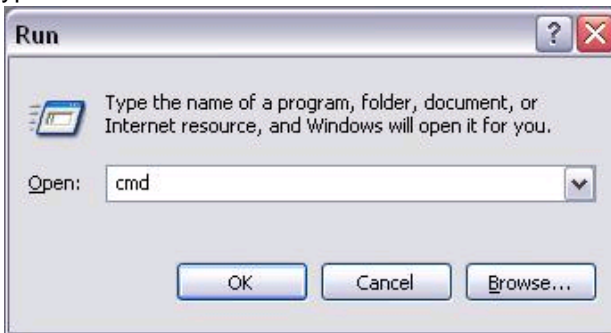
Step 3 From the Command Prompt, enter **ipconfig**. It will return your IP Address, subnet mask, and default gateway

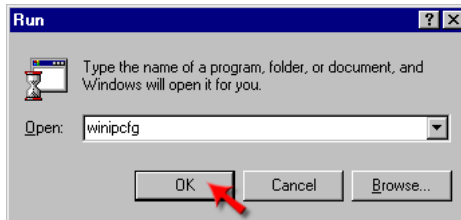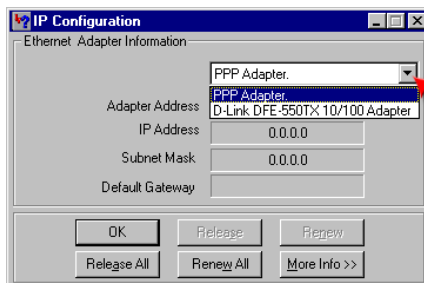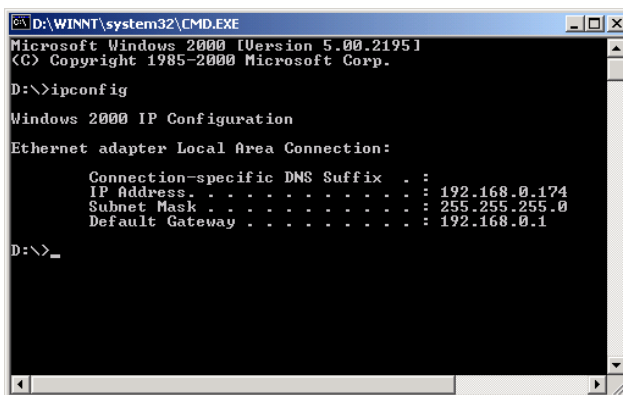*Step 4* Type **exit** to close the command prompt.

Why can´t I access the web based configuration? (continued)

Step 4 (continued) Check your IP Address. Your computer must have an IP Address in the same range of the device you are attempting to configure. Most D-Link devices use the 192.168.0.X range.

Make sure you take note of your computer´s Default Gateway IP Address. The Default Gateway is the IP Address of the D-Link router. By default, it should be 192.168.0.1.

How can I assign a Static IP Address in Windows XP?

Step 1
Click on **Start > Control Panel > Network and Internet Connections > Network connections**.

Step 2 See Step 2 for Windows 2000 and continue from there.

How can I assign a Static IP Address in Windows 2000?

Step 1 Right-click on **My Network Places** and select **Properties**.

Step 2 Right-click on the **Local Area Connection** which represents your network card and select **Properties**.

Highlight **Internet Protocol (TCP/IP)** and click **Properties.**
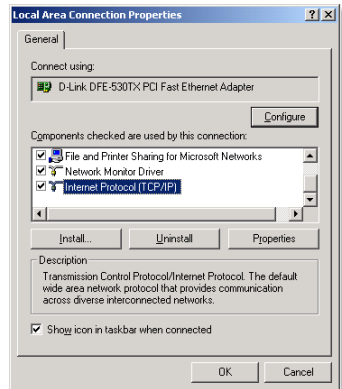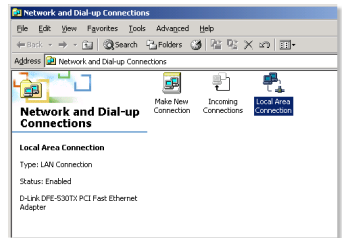
Why can´t I access the web based configuration? (continued)

How can I assign a Static IP Address in Windows 2000? (continued)

Click **Use the following IP Address** and enter an IP Address that is on the same subnet as the LAN IP Address on your router. <u>Example</u>: If the router´s LAN IP Address is 192.168.0.1, make your IP Address 192.168.0.X where X = 2-99. Make sure that the number you choose is not in use on the network.

Set **the Default Gateway** to be the same as the LAN IP Address of your router (192.168.0.1).

Set **the Preferred DNS server** to be the same as the LAN IP address of your router (192.168.0.1).

The Alternate DNS server is not needed or enter a DNS server from your ISP.

Click **OK** twice. You may be asked if you want to reboot your computer. Click **Yes**.

How can I assign a Static IP Address in Windows 98/Me?

Step 1 From the desktop, right-click on the **Network Neigborhood** icon (Win ME - My Network Places) and select **Properties**

Highlight **TCP/IP** and click the **Properties** button. If you have more than 1 adapter, then there will be a TCP/IP "Binding" for each adapter. Highlight **TCP/IP > (your network adapter)** and then click **Properties**.
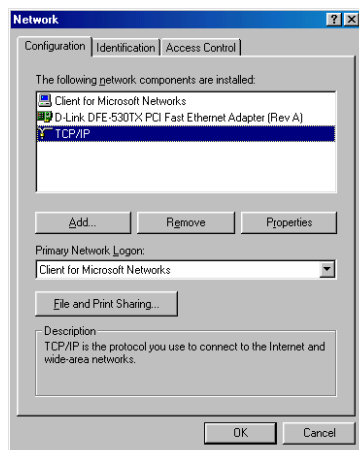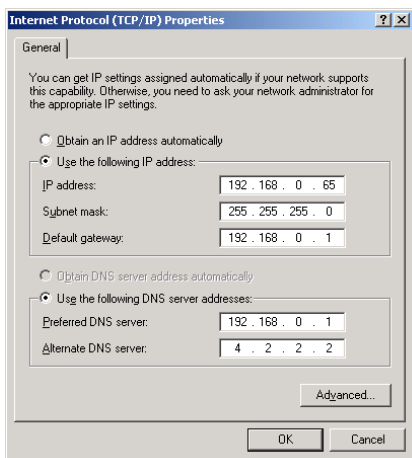
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Why can´t I access the web based configuration? (continued)

How can I assign a Static IP Address in Windows 98/Me? (continued)

Step 2 Click **Specify an IP Address**.

Enter in an IP Address that is on the same subnet as the LAN IP Address on your router. Example: If the router´s LAN IP Address is 192.168.0.1, make your IP Address 192.168.0.X where X is between 2-99. Make sure that the number you choose is not in use on the network.

Step 3 Click on the **Gateway** tab.

Enter the LAN IP Address of your router here (192.168.0.1).

Click **Add** when finished.

Step 4 Click on the **DNS Configuration** tab.

Click **Enable DNS**. Type in a **Host** (can be any word). Under DNS server search order, enter the LAN IP Address of your router (192.168.0.1). Click **Add**.

Step 5 Click **OK** twice.

When prompted to reboot your computer, click **Yes**.
After you reboot, the computer will now have a static, private IP Address.

Step 5 Access the web management. Open your web browser and enter the IP Address of your D-Link device in the address bar. This should open the login page for the web management. Follow instructions to login and complete the configuration.
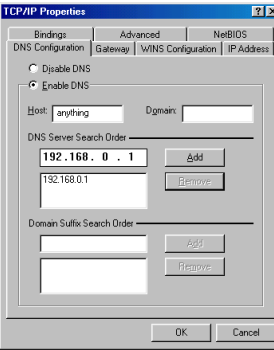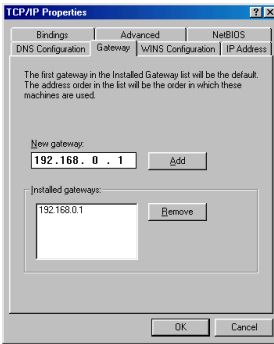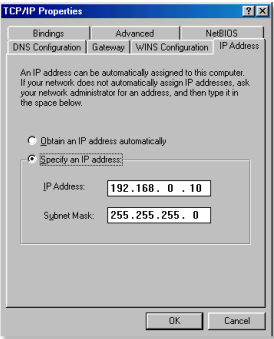
Frequently Asked Questions (continued)

How can I setup my router to work with a Cable modem connection?

Dynamic Cable connection
(IE AT&T-BI, Cox, Adelphia, Rogers, Roadrunner, Charter, and Comcast).

Note: Please configure the router with the computer that was last connected directly to the cable modem.

Step 1 Log into the web based configuration by typing in the IP Address of the router (default:192.168.0.1) in your web browser. The username is **admin** (all lowercase) and the password is **blank** (nothing).

Step 2 Click the **Home** tab and click the **WAN** button. Dynamic IP Address is the default value, however, if Dynamic IP Address is not selected as the WAN type, select Dynamic IP Address by clicking on the radio button. Click **Clone Mac Address**. Click on **Apply** and then **Continue** to save the changes.

Frequently Asked Questions (continued)

How can I setup my router to work with a Cable modem connection? (continued)

Step 3 Power cycle the cable modem and router:

Turn the cable modem off (first) . Turn the router off Leave them off for 2 minutes.** Turn the cable modem on (first). Wait until you get a solid cable light on the cable modem. Turn the router on. Wait 30 seconds.

** If you have a Motorola (Surf Board) modem, leave off for at least 5 minutes.

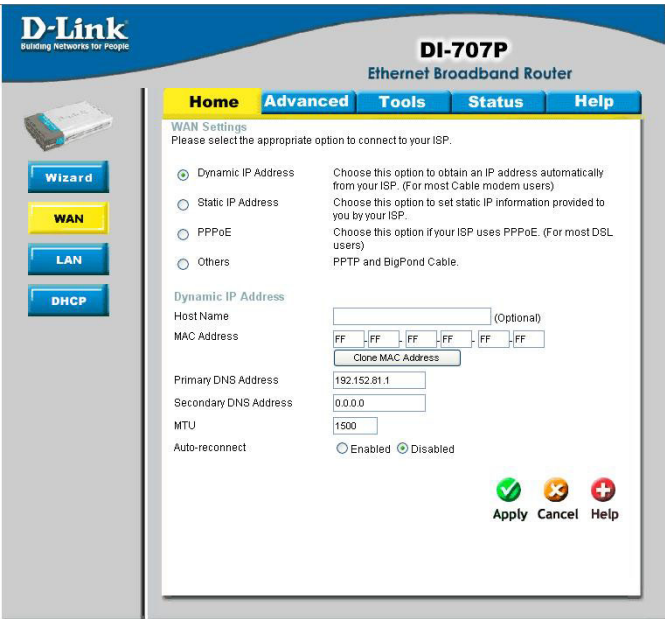**Step 4** Follow step 1 again and log back into the web configuration. Click the **Status** tab and click the **Device Info** button. If you do not already have a public IP Address under the **WAN** heading, click on the **DHCP Renew** and **Continue** buttons.

Static Cable Connection

Step 1 Log into the web based configuration by typing in the IP Address of the router (default:192.168.0.1) in your web browser. The username is **admin** (all lowercase) and the password is **blank** (nothing).

Step 2 Click the **Home** tab and click the **WAN** button. Select **Static IP Address** and enter your static settings obtained from the ISP in the fields provided.

If you do not know your settings, you must contact your ISP.

Step 3 Click on **Apply** and then click **Continue** to save the changes.

Step 4 Click the **Status** tab and click the **Device Info** button. Your IP Address information will be displayed under the **WAN** heading.

Frequently Asked Questions (continued)
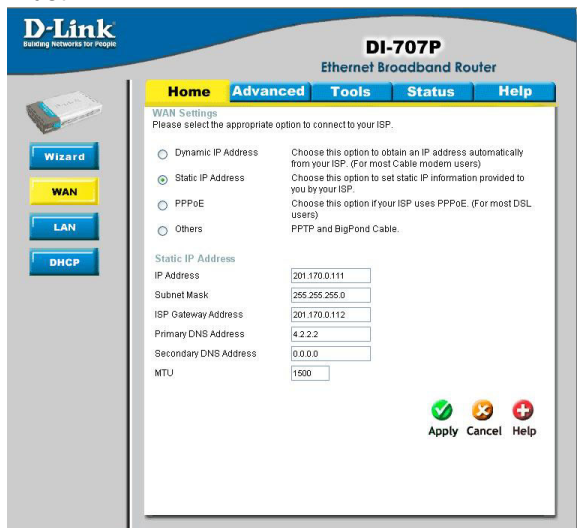
How can I setup my router to work with Earthlink DSL or any PPPoE connection?

Make sure you disable or uninstall any PPPoE software such as WinPoet or Enternet 300 from your computer or you will not be able to connect to the Internet.

Step 1 Upgrade Firmware if needed.

(Please visit the D-Link tech support website at: http://support.dlink.com for the latest firmware upgrade information.)

Step 2 Take a paperclip and perform a hard reset. With the unit on, use a paperclip and hold down the reset button on the back of the unit for 10 seconds. Release it and the router will recycle, the lights will blink, and then stabilize.

Step 3 After the router stabilizes, open your browser and enter 192.168.0.1 into the address window and hit the **Enter** key. When the password dialog box appears, enter the username **admin** and leave the password blank. Click **OK**.

If the password dialog box does not come up repeat **Step 2**.

Note: Do not run Wizard.

Step 4 Click on the **WAN** tab on left-hand side of the screen. Select **PPPoE**.

Step 5 Select **Dynamic PPPoE** (unless your ISP supplied you with a static IP Address).

Step 6 In the username field enter **ELN/username@earthlink.net** and your password, where username is your own username.

For SBC Global users, enter **username@sbcglobal.net**.
For Ameritech users, enter **username@ameritech.net**.
For BellSouth users, enter **username@bellsouth.net**.
For Mindspring users, enter **username@mindspring.com.**
For most other ISPs, enter **username**.

Step 7 **Maximum Idle Time** should be set to zero. Set **MTU** to 1492, unless specified by your ISP, and set **Autoreconnect** to **Enabled**.

Note: If you experience problems accessing certain websites and/or email issues, please set the MTU to a lower number such as 1472, 1452, etc. Contact your ISP for more information and the proper MTU setting for your connection.

Frequently Asked Questions (continued)

How can I setup my router to work with Earthlink DSL or any PPPoE connection? (continued)

Step 8 Click **Apply**. When prompted, click **Continue**. Once the screen refreshes, unplug the power to the D-Link router.

Step 9 Turn off your DSL modem for 2-3 minutes. Turn back on. Once the modem has established a link to your ISP, plug the power back into the D-Link router. Wait about 30 seconds and log back into the router.

Step 10 Click on the **Status** tab in the web configuration where you can view the device info. Under **WAN**, click **Connect**. Click **Continue** when prompted. You should now see that the device info will show an IP Address, verifying that the device has connected to a server and has been assigned an IP Address.

Can I use my D-Link Broadband Router to share my Internet connection provided by AOL DSL Plus?

In most cases yes. AOL DSL+ may use PPPoE for authentication bypassing the client software. If this is the case, then our routers will work with this service. Please contact AOL if you are not sure.

To set up your router:

Step 1 Log into the web-based configuration (192.168.0.1) and configure the WAN side to use PPPoE.

Step 2 Enter your screen name followed by @aol.com for the user name. Enter your AOL password in the password box.

Step 3 You will have to set the MTU to 1400. AOL DSL does not allow for anything higher than 1400.

Step 4 Apply settings.

Step 5 Recycle the power to the modem for 1 minute and then recycle power to the router. Allow 1 to 2 minutes to connect.

If you connect to the Internet with a different internet service provider and want to use the AOL software, you can do that without configuring the router's firewall settings. You need to configure the AOL software to connect using TCP/IP.

Go to http://www.aol.com for more specific configuration information of their software.

Frequently Asked Questions (continued)

How do I open ports on my router?

To allow traffic from the internet to enter your local network, you will need to open up ports or the router will block the request.

Step 1 Open your web browser and enter the IP Address of your D-Link router (192.168.0.1). Enter username (admin) and your password (blank by default).

Step 2 Click on **Advanced** on top and then click **Virtual Server** on the left

Step 3 Check **Enabled** to activate entry.

Step 4 Enter a name for your virtual server entry.

Step 5 Next to **Private IP**, enter the IP Address of the computer on your local network that you want to allow the incoming service to.

Step 6 Choose **Protocol Type** - either TCP, UDP, or both. If you are not sure, select both.

Step 7 Enter the port information next to **Private Port** and **Public Port**. The private and public ports are usually the same. The public port is the port seen from the WAN side, and the private port is the port being used by the application on the computer within your local network.

Step 8 Enter the **Schedule** information.

Step 9 Click **Apply** and then click **Continue**.

Note: Make sure DMZ host is disabled. If DMZ is enabled, it will disable all Virtual Server entries.

Because our routers use NAT (Network Address Translation), you can only open a specific port to one computer at a time. For example: If you have 2 web servers on your network, you cannot open port 80 to both computers. You will need to configure 1 of the web servers to use port 81. Now you can open port 80 to the first computer

89
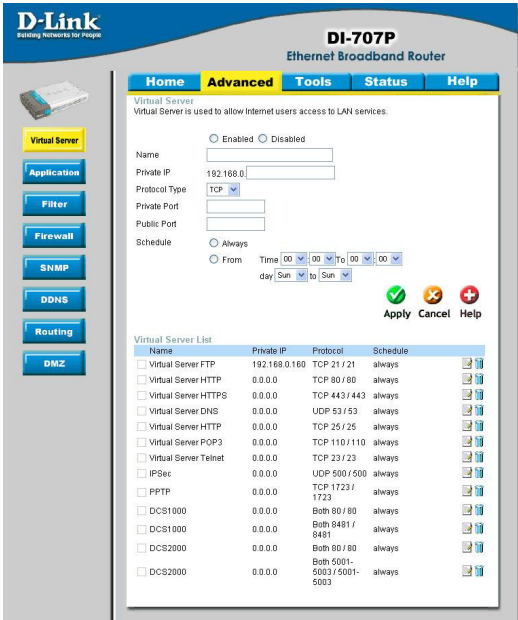
Frequently Asked Questions (continued)

What is DMZ?

Demilitarized Zone:
In computer networks, a DMZ (demilitarized zone) is a computer host or small network inserted as a neutral zone between a company´s private network and the outside public network. It prevents outside users from getting direct access to a server that has company data. (The term comes from the geographic buffer zone that was set up between North Korea and South Korea following the UN police action in the early 1950s.) A DMZ is an optional and more secure approach to a firewall and effectively acts as a proxy server as well.

In a typical DMZ configuration for a small company, a separate computer (or host in network terms) receives requests from users within the private network for access to Web sites or other companies accessible on the public network. The DMZ host then initiates sessions for these requests on the public network. However, the DMZ host is not able to initiate a session back into the private network. It can only forward packets that have already been requested.

Users of the public network outside the company can access only the DMZ host. The DMZ may typically also have the company´s Web pages so these could be served to the outside world. However, the DMZ provides access to no other company data. In the event that an outside user penetrated the DMZ hosts security, the Web pages might be corrupted but no other company information would be exposed. D-Link, a leading maker of routers, is one company that sells products designed for setting up a DMZ

How do I configure the DMZ Host?

The DMZ feature allows you to forward all incoming ports to one computer on the local network. The DMZ, or Demilitarized Zone, will allow the specified computer to be exposed to the Internet. DMZ is useful when a certain application or game does not work through the firewall. The computer that is configured for DMZ will be completely vulnerable on the Internet, so it is suggested that you try opening ports from the Virtual Server or Firewall settings before using DMZ.

Step 1 Find the IP address of the computer you want to use as the DMZ host.

To find out how to locate the IP Address of the computer in Windows XP/2000/ME/9x or Macintosh operating systems please refer to Step 4 of the first question in this section (Frequently Asked Questions).

Frequently Asked Questions (continued)

How do I configure the DMZ Host? (continued)

Step 2 Log into the web based configuration of the router by typing in the IP Address of the router (default:192.168.0.1) in your web browser. The username is **admin** (all lowercase) and the password is **blank** (nothing)

Step 3 Click the **Advanced** tab and then click on the **DMZ** button. Select **Enable** and type in the IP Address you found in step 1.

Step 4 Click **Apply** and then **Continue** to save the changes.

Note: When DMZ is enabled, Virtual Server settings will still be effective. Remember, you cannot forward the same port to multiple IP Addresses, so the Virtual Server settings will take priority over DMZ settings.

Frequently Asked Questions (continued)

How do I open a range of ports on my DI-707P using Firewall rules?

Step 1 Access the router's web configuration by entering the router's IP Address in your web browser. The default IP Address is **192.168.0.1**. Login using your password. The default username is **"admin"** and the password is blank.

If you are having difficulty accessing web management, please see the first question in this section.

Step 2 From the web management Home page, click the **Advanced** tab then click the **Firewall** button.

Step 3 Click on **Enabled** and type in a name for the new rule.

Step 4 Choose **WAN** as the **Source** and enter a range of IP Addresses out on the internet that you would like this rule applied to. If you would like this rule to allow all internet users to be able to access these ports, then put an **Asterisk** in the first box and leave the second box empty.

Step 5 Select **LAN** as the **Destination** and enter the IP Address of the computer on your local network that you want to allow the incoming service to. This will not work with a range of IP Addresses.

Step 6 Enter the port or range of ports that are required to be open for the incoming service.

Step 7 Click **Apply** and then click **Continue**.

Note: Make sure DMZ host is disabled.

Because our routers use NAT (Network Address Translation), you can only open a specific port to one computer at a time. For example: If you have 2 web servers on your network, you cannot open port 80 to both computers. You will need to configure 1 of the web servers to use port 81. Now you can open port 80 to the first computer and then open port 81 to the other computer.

What are virtual servers?

A Virtual Server is defined as a service port, and all requests to this port will be redirected to the computer specified by the server IP. For example, if you have an FTP Server (port 21) at 192.168.0.5, a Web server (port 80) at 192.168.0.6, and a VPN server at 192.168.0.7, then you need to specify the following virtual server mapping table:

Server Port	Server IP	Enable
21	192.168.0.5	X
80	192.168.0.6	X
1723	192.168.0.7	X

How do I use *PC Anywhere* with my DI-707P router?

You will need to open 3 ports in the Virtual Server section of your D-Link router.

Step 1 Open your web browser and enter the IP Address of the router (192.168.0.1).

Step 2 Click on **Advanced** at the top and then click **Virtual Server** on the left side.

Step 3 Enter the information as seen below. The **Private IP** is the IP Address of the computer on your local network that you want to connect to.

Step 4 The first entry will read as shown here:

Step 5 Click **Apply** and then click **Continue**.
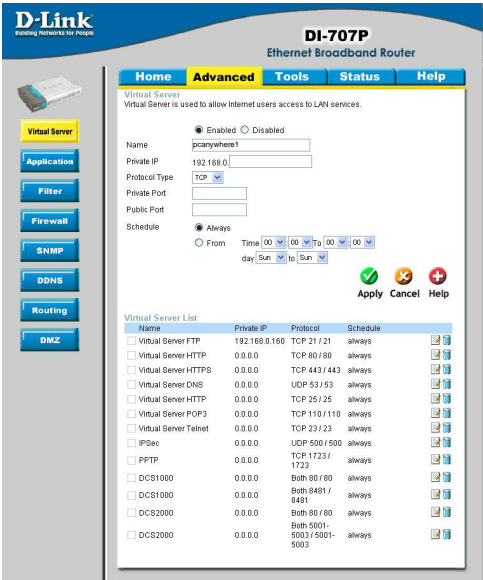
How do I use *PC Anywhere* with my DI-707P router? (continued)
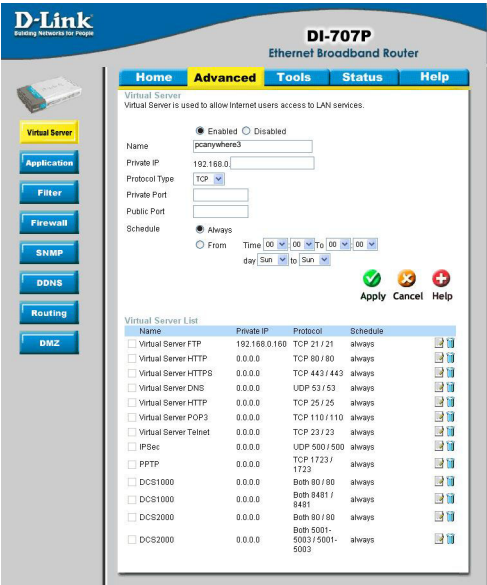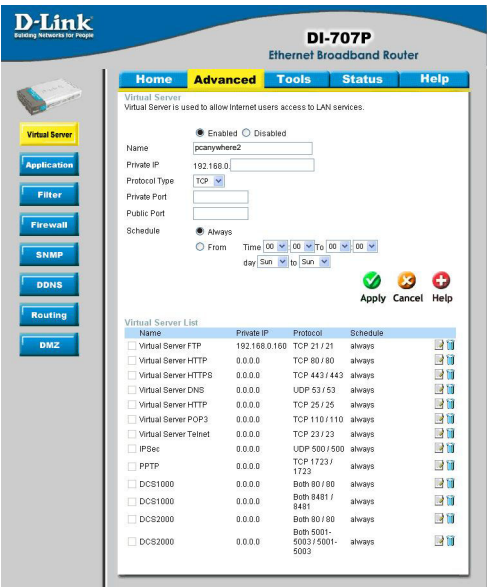
Step 6 Create a second entry as shown here:

Step 7 Click **Apply** and then click **Continue**.

Step 8 Create a third and final entry as shown here:

Step 9 Click **Apply** and then click **Continue**.

Step 10 Run *PCAnywhere* from the remote site and use the WAN IP Address of the router, not your computer´s IP Address.

Frequently Asked Questions (continued)

How can I use *eDonkey* behind my D-Link Router?

You must open ports on your router to allow incoming traffic while using *eDonkey.*

eDonkey uses three ports (4 if using CLI):

4661 (TCP) To connect with a server
4662 (TCP) To connect with other clients
4665 (UDP) To communicate with servers other than the one you are connected to.
4663 (TCP) *Used with the command line (CLI) client when it is configured to allow remote connections. This is the case when using a Graphical Interface (such as the Java Interface) with the client.
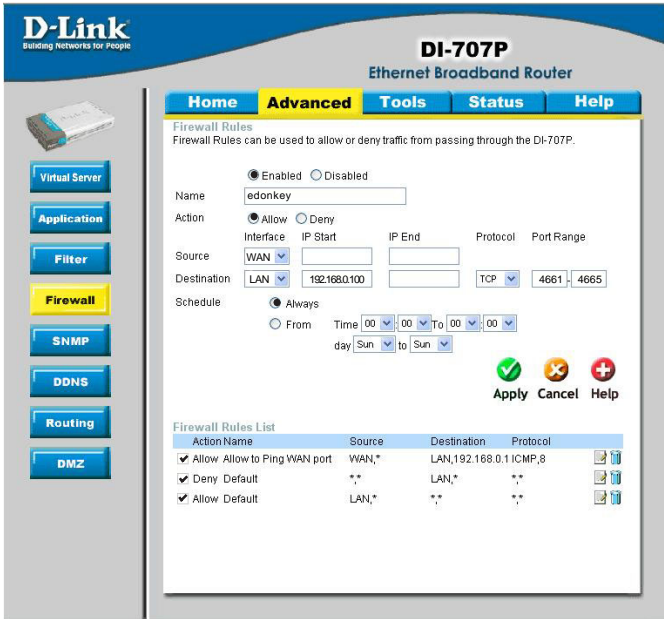
Step 1 Open your web browser and enter the IP Address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).

Step 2 Click on **Advanced** and then click **Firewall**.

Step 3 Create a new firewall rule:
Click **Enabled**.
Enter a name (edonkey).
Click **Allow**. Next to Source, select **WAN** under interface. In the first box, enter an *. Leave the second box empty. Next to Destination, select **LAN** under interface. Enter the IP Address of the computer you are running eDonkey from. Leave the second

box empty. Under Protocol, select *. In the port range boxes, enter **4661** in the first box and then **4665** in the second box. Click **Always** or set a schedule.

Step 4 Click **Apply** and then **Continue**.

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Frequently Asked Questions (continued)

How do I set up my router for SOCOM on my Playstation 2?

To allow you to play SOCOM and hear audio, you must download the latest firmware for the router (if needed), enable Game Mode, and open port 6869 to the IP Address of your Playstation.
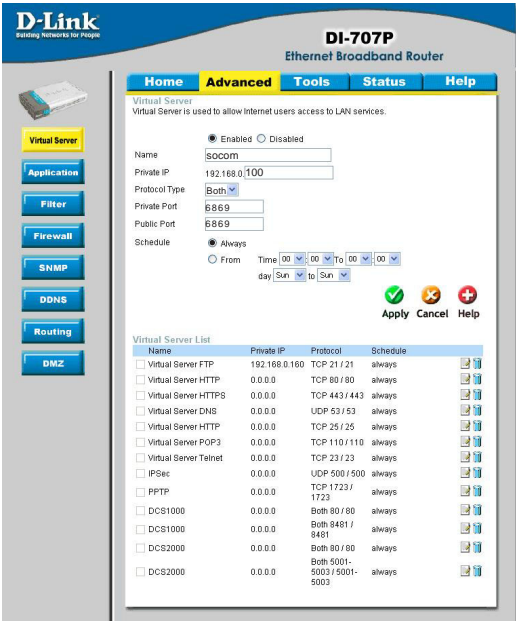
Step 1 Upgrade firmware (follow link above).

Step 2 Open your web browser and enter the IP Address of the router (192.168.0.1). Enter username (admin) and your password (blank by default).

Step 3 Click on the **Advanced** tab and then click on **Virtual Server** on the left side.

Step 4 You will now create a new Virtual Server entry. Click **Enabled** and enter a name (socom). Enter the IP Address of your Playstation for **Private IP**.

Step 5 For **Protocol Type** select Both. Enter **6869** for both the **Private Port** and **Public Port**. Click **Always**. Click **Apply** to save changes and then **Continue**

Step 6 Click on the **Tools** tab and then **Misc** on the left side.

Step 7 Make sure **Gaming Mode** is Enabled. If not, click **Enabled**. Click **Apply** and then **Continue**.

Frequently Asked Questions (continued)

How can I use Gamespy behind my D-Link router?

Step 1 Open your web browser and enter the IP Address of the router (192.168.0.1). Enter admin for the username and your password (blank by default).

Step 2 Click on the Advanced tab and then click Virtual Server on the left side.

Step 3 You will create 2 entries.

Step 4 Click Enabled and enter Settings:

NAME - Gamespy1

PRIVATE IP - The IP Address of your computer that you are running Gamespy from.

PROTOCOL TYPE - Both

PRIVATE PORT - 3783

PUBLIC PORT - 3783

SCHEDULE - Always.

Click **Apply** and then **continue**

Step 5 Enter 2nd entry:
Click Enabled

NAME - Gamespy2

PRIVATE IP - The IP Address of your computer that you are running Gamespy from.

PROTOCOL TYPE - Both

PRIVATE PORT - 6500

PUBLIC PORT - 6500

SCHEDULE - Always.

Click **Apply** and then **continue**.

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Frequently Asked Questions (continued)

How do I configure my router for KaZaA and Grokster?

The following is for KaZaA, Grokster, and others using the FastTrack P2P file sharing system.

In most cases, you do not have to configure anything on the router or on the Kazaa software. If you are having problems, please follow steps below:

Step 1 Enter the IP Address of your router in a web browser (192.168.0.1).

Step 2 Enter your username (admin) and your password (blank by default).

Step 3 Click on Advanced and then click Virtual Server.

Step 4 Click Enabled and then enter a Name (kazaa for example).

Step 5 Enter the IP Address of the computer you are running KaZaA from in the Private IP box. Select TCP for the Protocol Type.

Step 6 Enter 1214 in the Private and Public Port boxes. Click Always under schedule or set a time range. Click Apply.

Make sure that you did not enable proxy/firewall in the KaZaA software.

Frequently Asked Questions (continued)

How do I configure my router to play Warcraft 3?

You must open ports on your router to allow incoming traffic while <u>hosting</u> a game in Warcraft 3. To play a game, you do not have to configure your router.

Warcraft 3 (Battlenet) uses port 6112.

For the DI-707P:

Step 1 Open your web browser and enter the IP Address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).

Step 2 Click on **Advanced** and then click **Virtual Server**.

Step 3 Create a new entry: Click **Enabled**. Enter a name (warcraft3). Private IP - Enter the IP Address of the computer you want to host the game. Select **Both** for Protocol Type Enter **6112** for both Private Port and Public Port Click **Always** or set a schedule.

Step 4 Click **Apply** and then **Continue**.

Note: If you want multiple computers from you LAN to play in the same game that you are hosting, then repeat the steps above and enter the IP Addresses of the other computers. You will need to change ports. Computer #2 can use port 6113, computer #3 can use 6114, and so on.

You will need to change the port information within the Warcraft 3 software for computers #2 and up.

Configure the Game Port information on each computer:
Start Warcraft 3 on each computer, click **Options** > **Gameplay**. Scroll down and you should see **Game Port**. Enter the port number as you entered in the above steps.

Frequently Asked Questions (continued)

How do I use NetMeeting with my D-Link Router?

Unlike most TCP/IP applications, NetMeeting uses **DYNAMIC PORTS** instead of STATIC PORTS. That means that each NetMeeting connection is somewhat different than the last. For instance, the HTTP web site application uses port 80. NetMeeting can use any of over 60,000 different ports.

All broadband routers using (only) standard NAT and all internet sharing programs like Microsoft ICS that use (only) standard NAT will NOT work with NetMeeting or other h.323 software packages.

The solution is to put the router in DMZ.

Note: A few hardware manufacturers have taken it on themselves to actually provide H.323 compatibility. This is not an easy task since the router must search each incoming packet for signs that it might be a netmeeting packet. This is a whole lot more work than a router normally does and may actually be a **weak point in the firewall**. D-Link is not one of the manufacturers.

To read more on this visit http://www.HomenetHelp.com

How do I set up my router to use iChat? -for Macintosh users-

You must open ports on your router to allow incoming traffic while using iChat.

iChat uses the following ports: 5060 (UDP) 5190 (TCP) File Sharing 16384-16403 (UDP) To video conference with other clients

Step 1 Open your web browser and enter the IP Address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).

Step 2 Click on **Advanced** and then click **Firewall**.

Frequently Asked Questions (continued)

How do I set up my router to use iChat? -for Macintosh users- (continued)

Step 3 Create a new firewall rule:

Click **Enabled**.
Enter a name (ichat1).
Click **Allow**.
Next to Source, select **WAN** under interface.
In the first box, enter an *****.
Leave the second box empty.
Next to Destination, select **LAN** under interface.
Enter the IP Address of the computer you are running iChat from.

Leave the second box empty. Under Protocol, select **UDP**. In the port range boxes, enter **5060** in the first box and leave the second box empty.
Click **Always** or set a schedule.

Step 4 Click **Apply** and then **Continue**.

Step 5
Repeat steps 3 and 4 enter **ichat2** and open ports **16384-16403** (UDP).

Frequently Asked Questions (continued)

How do I set up my router to use iChat? -for Macintosh users-

For File Sharing:
Step 1 Click on **Advanced** and then **Virtual Server**.

Step 2 Check **Enabled** to activate entry.

Step 3 Enter a name for your virtual server entry (ichat3).

Step 4 Next to Private IP, enter the IP Address of the computer on your local network that you want to allow the incoming service to.

Step 5 Select **TCP** for Protocol Type.

Step 6 Enter **5190** next to Private Port and Public Port.

Step 7 Click **Always** or configure a schedule.

Step 8 Click **Apply** and then **Continue**.

If using Mac OS X Firewall, you may need to temporarily turn off the firewall in the Sharing preference pane on both computers.
To use the Mac OS X Firewall, you must open the same ports as in the router:

Step 1 Choose **Apple menu** > **System Preferences**.
Step 2 Choose **View** > **Sharing**.
Step 3 Click the **Firewall** tab.
Step 4 Click **New**.
Step 5 Choose **Other** from the Port Name pop-up menu.
Step 6 In the Port Number, Range or Series field, type in: **5060**, **16384-16403**.
Step 7 In the Description field type in: **iChat AV**
Step 8 Click **OK**.

Frequently Asked Questions (continued)

How do I send or receive a file via iChat when the Mac OSX firewall is active? -for Macintosh users- Mac OS X 10.2 and later

The following information is from the online Macintosh AppleCare knowledge base:

"iChat cannot send or receive a file when the Mac OS X firewall is active in its default state. If you have opened the AIM port, you may be able to receive a file but not send them.

In its default state, the Mac OS X firewall blocks file transfers using iChat or America Online AIM software. If either the sender or receiver has turned on the Mac OS X firewall, the transfer may be blocked.

The simplest workaround is to temporarily turn off the firewall in the Sharing preference pane on both computers. This is required for the sender. However, the receiver may keep the firewall on if the AIM port is open. To open the AIM port:

Step 1 Choose Apple menu > System Preferences.

Step 2 Choose View > Sharing.

Step 3 Click the Firewall tab.

Step 4 Click New.

Step 5 Choose AOL IM from the Port Name pop-up menu. The number 5190 should already be filled in for you.

Step 6 Click OK.

If you do not want to turn off the firewall at the sending computer, a different file sharing service may be used instead of iChat. The types of file sharing available in Mac OS X are outlined in technical document 106461, "Mac OS X: File Sharing" in the *AppleCare Knowledge base* online.

Note: If you use a file sharing service when the firewall is turned on, be sure to click the Firewall tab and select the service you have chosen in the "Allow" list. If you do not do this, the firewall will also block the file sharing service. "

Frequently Asked Questions (continued)

What is NAT?

NAT stands for **Network Address Translator**. It is proposed and described in RFC-1631 and is used for solving the IP Address depletion problem. Basically, each NAT box has a table consisting of pairs of local IP Addresses and globally unique addresses, by which the box can "translate" the local IP Addresses to global address and vice versa. Simply put, it is a method of connecting multiple computers to the Internet (or any other IP network) using one IP Address.

D-Link´s broadband routers (ie: DI-707P) support NAT. With proper configuration, multiple users can access the Internet using a single account via the NAT device.

For more information on RFC-1631: The IP Network Address Translator (NAT), visit http://www.faqs.org/rfcs/rfc1631.html

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 7:30am to 12:00am EST

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

Warranty

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.

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

- Hardware (excluding power supplies and fans) One (1) Year
- 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 and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain valley, CA 92708**. 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

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

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

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

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

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

IMPORTANT NOTE:
FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of about eight inches (20cm) between the radiator and your body.

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

Registration

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