D-Link DI-704UP

Express EtherNetwork™
Broadband Router with USB Print Server

Manual

D-Link®

Building Networks for People

Contents

Package Contents

Contents of Package:

- **D-Link DI-704UP *Express EtherNetwork*** ™ Broadband Router with USB Print Server
- Manual, Warranty and Print Server Software on CD
- Quick Installation Guide
- Power Adapter - AC 5V, 2A
- CAT5 Ethernet Cable

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

> ⚠️ **WARNING!** *Using a power supply with a different voltage rating than the one included with the DI-704UP will cause damage and void the warranty for this product.*

System Requirements for Configuration:

- Computer with Windows, Macintosh, or Linux-based Operating System with an installed Ethernet adapter

- Internet Explorer version 6.x, Netscape Navigator version 6.x and above, or another Internet Browser application with Javascript enabled

3

Introduction

Thank you for purchasing the DI-704UP Express EtherNetwork Broadband Router with USB Print Server. The DI-704UP is an Ethernet Broadband Router with a built-in 4-port switch. It also features a USB port to share a USB printer on the home or office network and includes a print server application for Windows. As many as four computers can be connected directly to the router's integrated switch, using its four 10/100Mbps AutoMDIX Ethernet ports. More computers can be added to the network by connecting additional switches to the DI-704UP. The DI-704UP package even includes an Ethernet cable to get you started.

The DI-704UP is ideal if you are creating your first home or small business network, or if you are a more advanced user looking for additional management settings.

The DI-704UP includes a new, easy-to-use D-Link web-based graphical user interface (GUI) to configure the router. To prevent unwanted Internet intruders from accessing your private network, the DI-704UP also serves as a feature-rich firewall.

So, whether you are a college student who wants to network with friends and roommates, an executive working at home or in a small office, or a concerned parent who just wants to have more control over how your children access the Internet, then the D-Link DI-704UP Express EtherNetwork Broadband Router with USB Print Server is the networking solution for you.

Features & Benefits

- **Firewall Features**

  - **Filtering -** Easily applied filtering based on Media Access Control (MAC) Addresses, IP Addresses, Port Addresses, and time schedule allows or denies computer on the network access to the Internet.

  - **Network Address Translation** - NAT allows your private network to share a single public IP address. All your computer connected to the DI-704UP will be on a private network shielded from Internet intruders.

- **Built-In 4-Port Switch** - Allows you to quickly and easily share an Internet connection with multiple computers and devices. Each 10/100 Ethernet Port automatically senses and accepts the type of Category (CAT) 5 cable you attach - whether straight through or cross-over. Connect additional switches to allow more computer to access the Internet.

- **Built-In Print Server** - Includes a USB port to connect to a USB printer and includes a Windows-based print server software application, so users on the network can share the printer. The print server is also capable of TCP/IP printing.

- **Ethernet Cable Included** - One Ethernet cable is included with the DI-704UP to get you started.

- **Simple Setup Wizard for Easy Installation** - The D-Link setup wizard simplifies the installation process, getting you up and running in just a few clicks.

LEDs

Status LED   WAN LED   Printer LED

POWER LED   LOCAL NETWORK LEDs
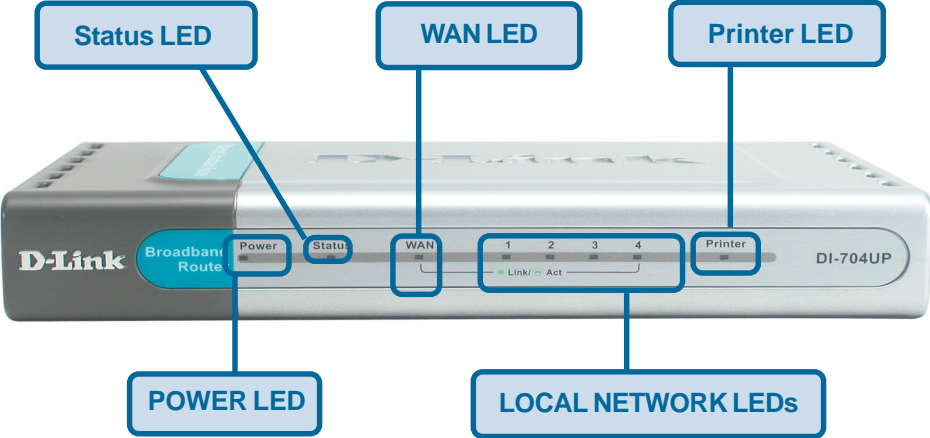
	LED Activity
Power	A solid light indicates a proper connection to the power supply.
Status	Flashes consistently to indicate that the DI-704UP is working properly. A solid light indicates that the unit is not working properly.
WAN	A Solid light indicates connection on the WAN port. This LED blinks during data transmission.
LOCAL NETWORK LEDs (Ports 1-4)	A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4. This LED blinks during data transmission.
Printer	A solid light indicates a proper connection to a printer.

Connections

Printer Port	**WAN Port**	**Reset Button**
LAN Ports	**Receptor for Power Adapter**
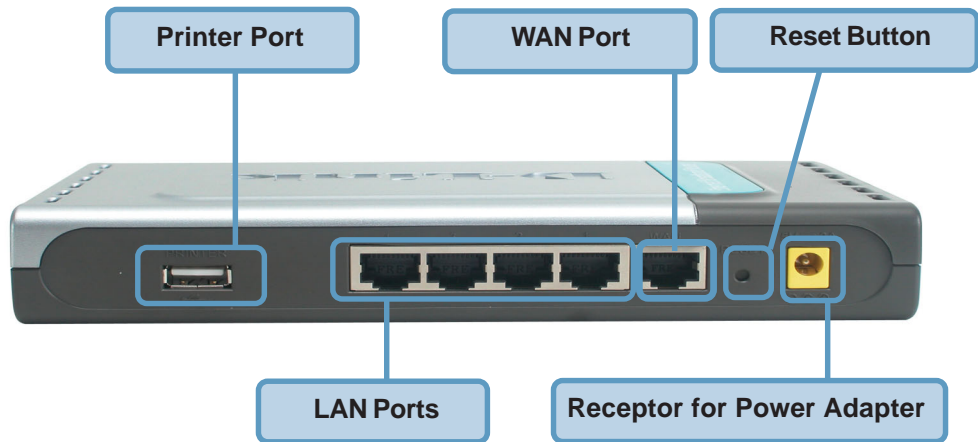
> ⚠️ **WARNING!** *Do not plug anything other than a USB printer into the Printer Port. Doing so may cause damage and void the warranty for this product.*

Receptor for Power Adapter	Connect the supplied power adapter that came with the unit. Using the wrong power adapter will damage the unit.
Reset Button	Reset button is to reset the device to its factory default settings.
Printer Port	Connect to the printer using a USB cable. This feature is used to share the printer on the network.
WAN Port	WAN port is the connection point for your DSL or Cable modem.
Lan Ports	LAN port is where you would connect each computer to your network.

> ⚠️ **WARNING!**
> Using a power supply with a different voltage rating than the one included with the DI-704UP will cause damage and void the warranty for this product.

Introduction to Broadband Router Technology

A router is a device that forwards data packets from a source to a destination. Routers can work on Open System Interconnection (OSI) layer 3, which forwards data packets using an IP address 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 request sent and the information received by 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 behind 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 such as 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, that 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

A Local Area Network (LAN) is typically an Ethernet-based network that connects several computers together over a small area such as a building or group of buildings. LAN's can also be connected over large areas. A collection of LANs connected over a large area is called a Wide Area Network (WAN).

There are many types of media that can connect computers together. The most common media is CAT5 cable; UTP or STP twisted pair wire. Each computer must have a Network Interface Card (NIC), which transfers the data between computers. A NIC is usually a 10/100Mbps Fast Ethernet adapter.

Most networks use hardware devices such as hubs or switches to transfer data between computers. A hub receives data arriving through each port and forwards the data to all other ports. A switch is more sophisticated, in that a switch can determine the port (or corresponding computer) that each packet of data is supposed to be delivered to. A switch minimizes network traffic and speeds up communication over a network.

There are many types of scenarios to consider which could affect the operability of a network. Some of these issues are discussed in the manual under the **Networking Basics** section.

Sample Scenario
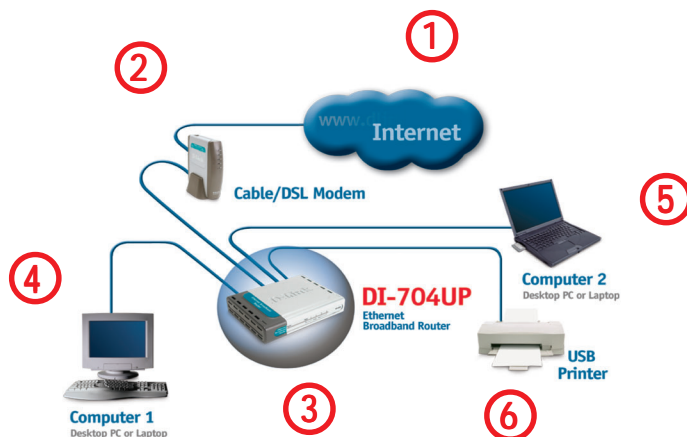
*A typical network setup in a home or small office (as shown above) might contain the following devices. For specific information on setting up your network with the DI-704UP please see the **Network Setup** section on the following page.*

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-704UP wireless broadband router. (*See the Quick Installation Guide included with the DI-704UP.*)

4 If you are connecting a desktop computer that does not already have an available Ethernet port 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 without an available Ethernet port to your network, install an Ethernet Cardbus adapter (*e.g.*, D-Link DFE-690TXD) and its drivers into the laptop computer. (See the Quick Installation Guide included with the DFE-690TXD.)

6 Connect your USB printer to the USB printer port on the DI-704UP. Please refer to the Quick Installation Guide for loading the Windows print server software if on a Windows-based computer.

** Easily upgrade to a wireless network by adding a wireless Access Point (D-Link DWL-900AP+) **

Network Setup
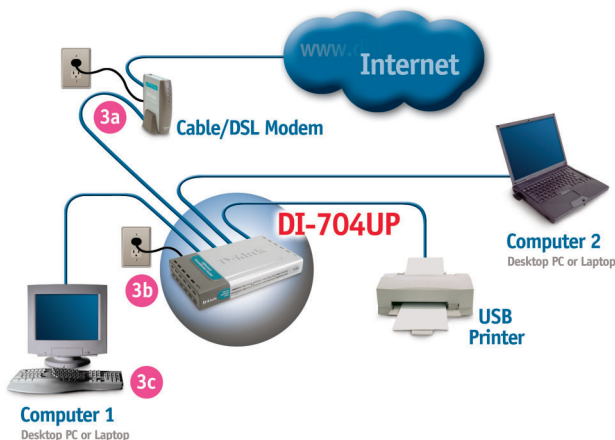
1 **Turn everything off.**
A. Power OFF your Cable or DSL modem. If your modem does not have an on/off switch, disconnect the power cable.
B. Turn OFF your computer.
C. Do **NOT** connect the power adapter to your D-Link router.

2 **Connect the D-Link Router Cables.**
A. Connect the Ethernet (or networking) cable from the Cable or DSL modem to the WAN port of the router.
B. Use the D-Link supplied Ethernet cable to connect the Ethernet port (Network Card) of your computer to one of the LAN ports of the router. The complete setup should look like the image shown above.

3 **Power up the devices in sequence.**
A. Power up the Cable or DSL modem. **Wait** until the modem has made the connection to your Internet Service Provider's (ISP's) network.

Note: *Please see the Manual included with your modem for an explanation of the modem's LEDs.*

B. Power up the D-Link router by connecting the D-Link provided power adapter to the router and to an available power outlet.
C. Turn on your computer.
D. Now, refer to either the *Quick Installation Guide* or continue to follow this manual to complete the installation process.

11

Using the Setup Wizard

Open your Web browser and type **"http://192.168.0.1"** into the URL address box. Then press the **Enter** or **Return** key.

The logon pop-up screen will appear.

Type "admin" for the username and leave the password field blank.

Click OK

Once you have logged in, the **Home** screen will appear.
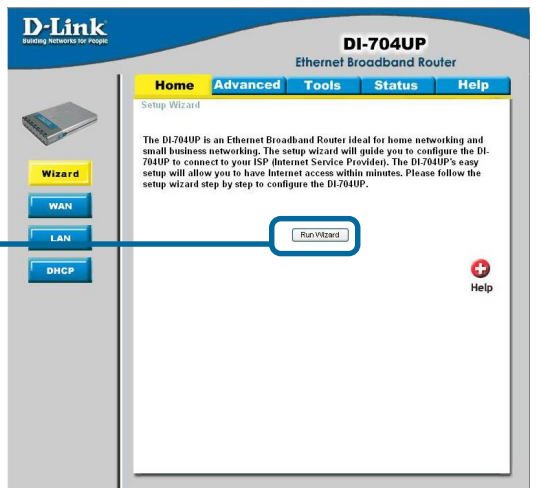
Click Run Wizard

Using the Setup Wizard (continued)

You will see the following screens.

Click Next
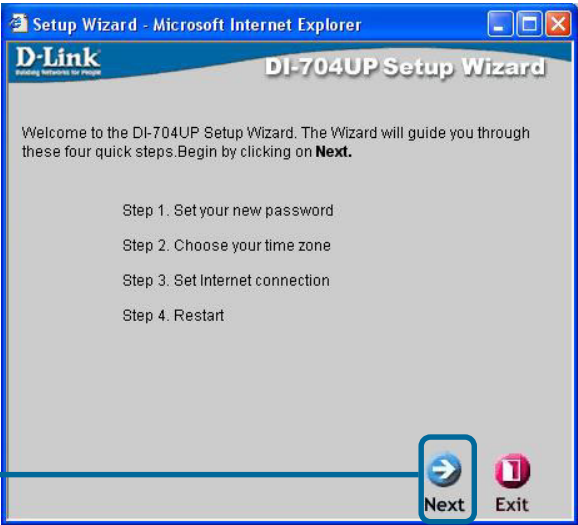
Set up your new password.
You have the option to
establish a password.

Click Next
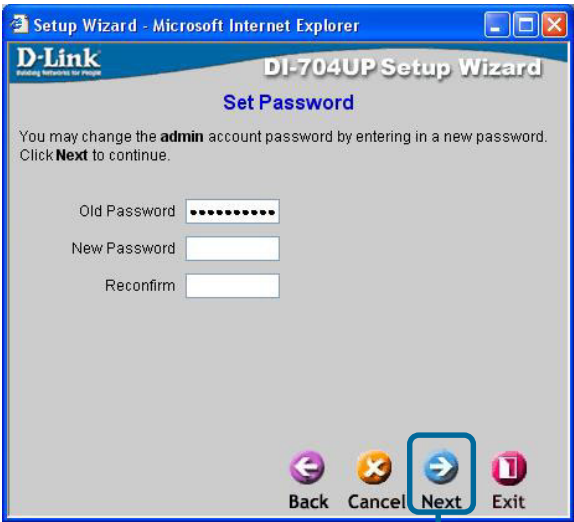
Using the Setup Wizard (continued)

Set up your Time Zone. You
have the option to the set
standard time for your router.
To change the default
selection, select the drop
down arrow and choose the
correct time zone.

Setup Wizard - Microsoft Internet Explorer

D-Link
DI-704UP Setup Wizard

Choose Time Zone

Select the appropriate time zone for your location and click **Next** to continue.

(GMT-08:00)Pacific Time (US & Canada)

Back   Cancel   Next   Exit
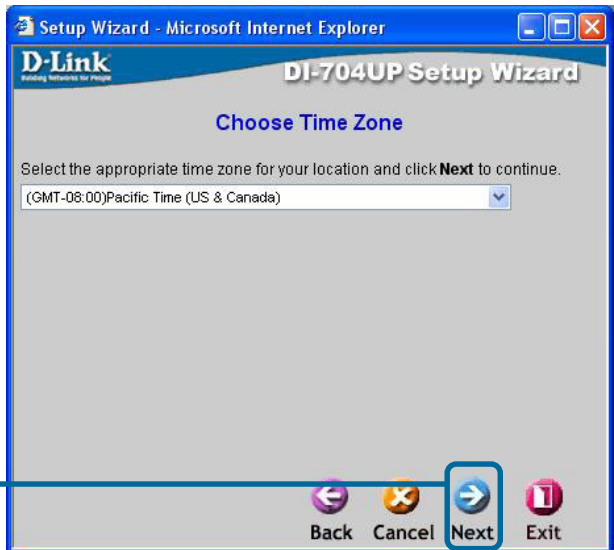
Click Next

**Select your Internet
Connection.** You will be
prompted to select the
type of Internet connection
for your router.

Setup Wizard - Microsoft Internet Explorer

D-Link
DI-704UP Setup Wizard

Select Internet Connection Type (WAN)

Select the connection type to connect to your ISP. Click **Next** to continue.

○ Dynamic IP Address — Choose this option to obtain an IP address automatically from your ISP. (For most Cable modem users)

○ Static IP Address — Choose this option to set static IP information provided to you by your ISP.

○ PPP over Ethernet — Choose this option if your ISP uses PPPoE. (For most DSL users)

○ Others — PPTP and BigPond Cable.

⚠ If you are unsure of which setting to select,
please contact your Internet Service Provider.

Back   Cancel   Next   Exit

Click Next
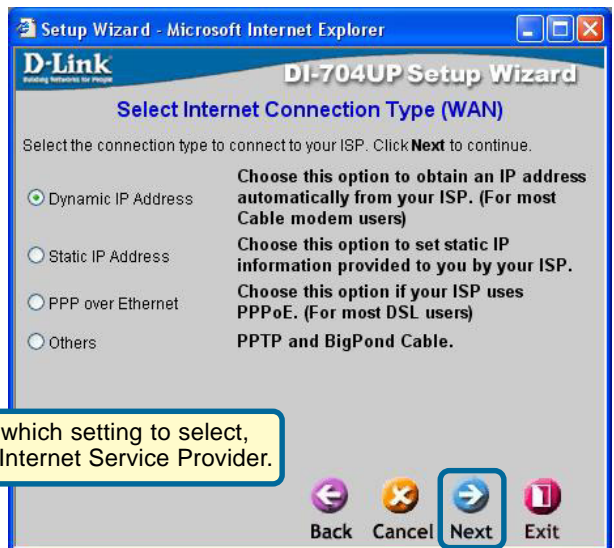
⚠ Select **Others** only if you use PPTP in Europe or
BigPond Cable in Australia.

14

Using the Setup Wizard (continued)

If you selected **Dynamic IP Address**, this screen will appear: (Used mainly for Cable Internet service.)

Click the **"Clone MAC Address"** button to automatically copy the MAC address of the network adapter in your computer. You can also manually type in the MAC address.

What is a MAC address? Each network adapter has a discrete Media Access Control (MAC) address. Note that some computers and peripherals may already include built-in network adapters.

Click Next
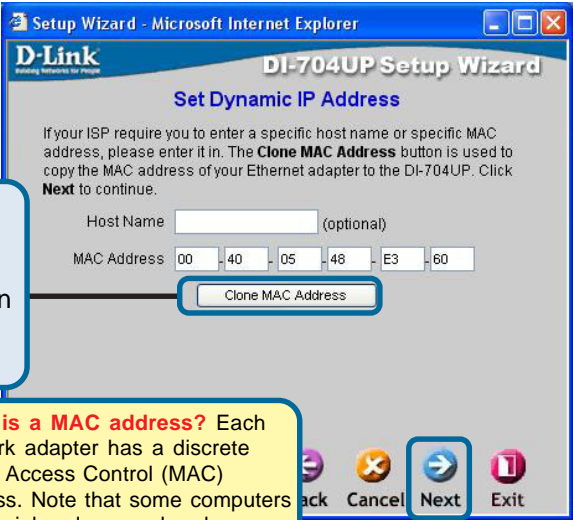
If your ISP requires a **Static IP Address**, and this option is selected, then this screen will appear:

Enter the IP Address information originally provided to you by your ISP. You will need to complete all the listed fields.

Click Next

Using the Setup Wizard (continued)

If your ISP uses **PPPoE** (Point-to-Point Protocol over Ethernet), and this option is selected, then this screen will appear: (Used mainly for DSL Internet service.)

Please be sure to remove any existing PPPoE client software installed on your computers.

Enter in the username and password provided to you by your ISP.

Click Next

Setup Wizard - Microsoft Internet Explorer

D-Link

DI-704UP Setup Wizard

Set PPPoE

The service name is optional but may be required by your ISP. Click **Next** to continue.

PPPoE Account

PPPoE Password ●●●●●●●●●●

Retype Password ●●●●●●●●●●

PPPoE Service Name   (optional)

Back   Cancel   Next   Exit

Click Restart

Setup Wizard - Microsoft Internet Explorer

D-Link

DI-704UP Setup Wizard

Setup Complete

The Setup Wizard has completed. Click on **Back** to modify changes or mistakes. Click **Restart** to save the current settings and reboot the DI-704UP.

Back   Restart   Exit

Using the Configuration Menu

Whenever you want to configure your network or the DI-704UP, you can access the Configuration Menu by opening the web-browser and typing in the IP Address of the DI-704UP. The DI-704UP default IP Address is shown below:

Open the web browser.
Type in the **IP Address** of the DI-704UP.
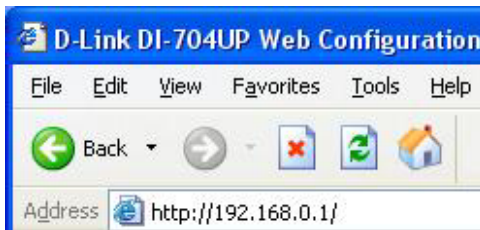
Home > Wizard
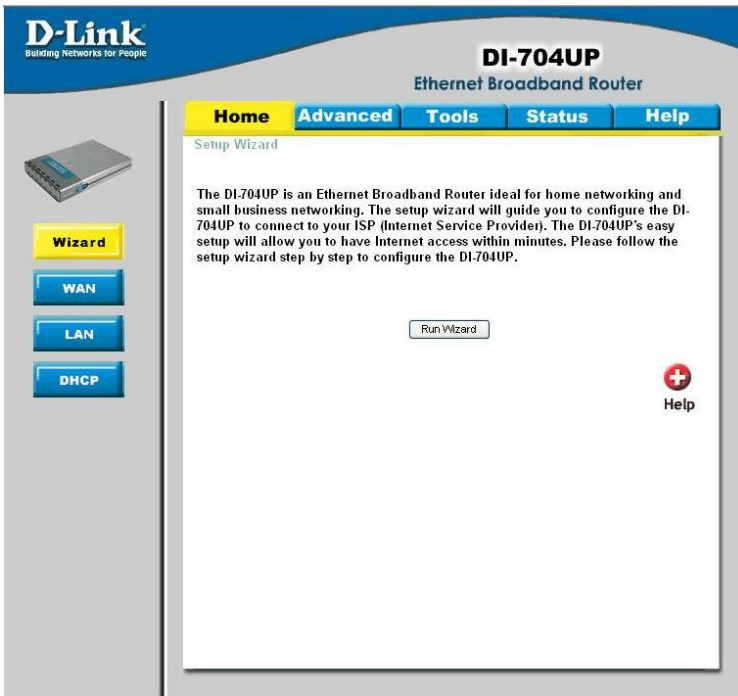
Note: If you have changed the default IP Address assigned to the DI-704UP, make sure to enter the correct IP Address.

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.

Using the Configuration Menu (continued)

Home > Wizard (continued)

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

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

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

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

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

Using the Configuration Menu (continued)

Home > WAN (continued)

WAN is short for Wide Area Network. The WAN settings can be referred to as the Public settings. All IP information in the WAN settings are public IP addresses which are accessible on the Internet. The WAN settings consist of four options: **Dynamic IP Address**, **Static IP Address**, **PPPoE, and Others**. Select the appropriate option and fill in the information needed to connect to your ISP.

Choose **Dynamic IP Address** to obtain IP address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for Cable modem services. **Host Name:** The Host Name field is optional but may be required by some ISPs. The host name is the device name of the Broadband Router.

Using the Configuration Menu (continued)

Home > WAN (continued)

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

Primary/Secondary DNS Address:
Enter a DNS Address if you do not wish to use the one provided by your ISP.

MTU:
Only enter the MTU if it is required by your ISP. Otherwise, leave it at the default setting of 1500.

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 (continued)

Home > WAN > Static IP Address

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

IP Address:
Public IP address provided by your ISP.

Subnet Mask:
Subnet mask provided by your ISP.

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

Primary/Secondary DNS Address:
Enter a DNS Address if you do not wish to use the one provided by your ISP.

MTU:
Enter an MTU value only if required by your ISP. Otherwise, leave it at the default setting of 1500.

21

Using the Configuration Menu (continued)

Home > WAN > PPPoE

Please be sure to remove any Client Software program on your computer before you start your configuration of the DI-704UP Router. Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Select Dynamic PPPoE to obtain an IP address automatically for your PPPoE connection. Select Static PPPoE to use a static IP address for your PPPoE connection.

Using the Configuration Menu (continued)

Home > WAN > PPPoE (continued)

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

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

User Name:
Your PPPoE username provided by your ISP.

Password:
Your PPPoE password provided by your ISP.

Retype Password:
Re-enter PPPoE password.

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

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

Primary DNS Address:
Primary DNS IP provided by your ISP.

Secondary DNS Address:
Optional.

Maximum Idle time:
The amount of time of inactivity before disconnecting your PPPoE session. Enter a Maximum Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the defined Maximum Idle Time, then the connection will be dropped. Either set this to zero or enable Auto-reconnect to disable this feature.

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

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

Using the Configuration Menu (continued)

Home > WAN > PPTP

Dynamic IP Address for PPTP is a WAN connection used in Europe.

My IP Address:
Enter in the IP address for the PPTP connection.

My Subnet Mask:
Enter the subnet mask information.

Server IP:
Enter the Server IP address. By default, its set to 192.168.0.1

Using the Configuration Menu (continued)

Home > WAN > PPTP (continued)

PPTP Account:
Enter in the username for the PPTP account.

PPTP Password:
Enter the password for the PPTP account. Retype in Password to confirm.

Connection ID:
(Optional) Enter the Connection ID if required.

Maximum Idle Time:
The amount of time of inactivity before disconnecting your PPTP session. Enter a Maximum Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the defined Maximum Idle Time, then the connection will be dropped. Either set this to zero or enable Auto-reconnect to disable this feature.

Auto-reconnect:
If enabled, the device will automatically connect to your ISP after your unit is restarted or when the connection is dropped.

Using the Configuration Menu (continued)

Home > WAN > BigPond Cable

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

Account:
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 device will automatically connect to your ISP after your unit is re-started or when the connection is dropped.

Using the Configuration Menu (continued)

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-704UP. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

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

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

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

Using the Configuration Menu (continued)

Home > DHCP

DHCP stands for Dynamic Host Control Protocol. The DI-704UP 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-704UP. 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 (continued)

Home > DHCP

Static DHCP allows computers on the LAN to receive the same DHCP IP address everytime it boots up. You can bind a specific IP address to a specific computer based on the computer's MAC address.

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

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

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

Using the Configuration Menu (continued)

Advanced > Virtual Server

The DI-704UP 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-704UP firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DI-704UP are invisible to the outside world. If public access is desired, you can make some of the LAN computers accessible from the Internet by enabling *Virtual Server.* Depending on the requested service, the DI-704UP redirects the external service request to the appropriate server within the LAN network.

Using the Configuration Menu (continued)

Advanced > Virtual Server

The DI-704UP is also capable of port-redirection meaning incoming traffic to a particular port can be redirected to a different port on the server computer. Each of the virtual services that are created will be listed at the bottom of the screen in the Virtual Servers List. There are already pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

Name:
The name referencing the virtual service.

Private IP:
The server computer in the LAN (Local Area Network) that will be providing the virtual services.

Private Port:
The port number of the service used by the Private IP computer.

Protocol Type:
The protocol used for the virtual service.

Public Port:
The port number on the WAN side that will be used to access the virtual service.

Schedule:
The schedule of time when the virtual service will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. If it is set to Time, select the time frame for the service to be enabled. If the system time is outside of the scheduled time, the service will be disabled.

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

Name: Web Server
Private IP: 192.168.0.25
Protocol Type: TCP
Private Port: 80
Public Port: 80
Schedule: always

Using the Configuration Menu (continued)

Advanced > Virtual Server

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

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

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

Using the Configuration Menu (continued)

Advanced > Application

Some applications require multiple connections, such as Internet gaming, video conferencing, and Internet telephony. These applications have difficulty working through NAT (Network Address Translation). *Special Applications* makes some of these applications work with the DI-704UP. If you need to run applications that require multiple connections, specify the port normally associated with an application in the **Trigger Ports** field, then enter the public ports associated with the trigger port into the **Public Ports** field.

Using the Configuration Menu (continued)

Advanced > Application

At the bottom of the screen, there are 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 / Disable:
Select to activate the policy. To disable the virtual server feature, select disable.

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 change the selection, use the drop down arrow and other choices will be listed.

Public Ports:
Enter in the public port or ports to be used. A range of ports can be specified with a hyphen.

Public Type:
Enter in the protocol type for public ports to access. To change the selection, use the drop down arrow and other choices will be listed.

Special Application List:
In the Special Application List, it will list some of the popular services with its trigger 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.

Using the Configuration Menu (continued)

Advanced > IP Filter

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

Using the Configuration Menu (continued)

Advanced > IP Filter

Enabled / 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 in 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 that computer in the Start Source IP and leave the End Source IP blank.

Port Ranges:
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 type to block certain IP addresses.

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 (continued)

Advanced > MAC Filters

MAC (Media Access Control) Filters are used to allow or deny 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-704UP. 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-704UP will fill in the appropriate information to the list.

Using the Configuration Menu (continued)

Advanced > MAC Filters

Disabled MAC Filter:
Select this option if you do not want to use MAC filters on your Local Area Network (LAN).

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

Name:
Enter the **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.

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

Using the Configuration Menu (continued)

Advanced > URL Blocking
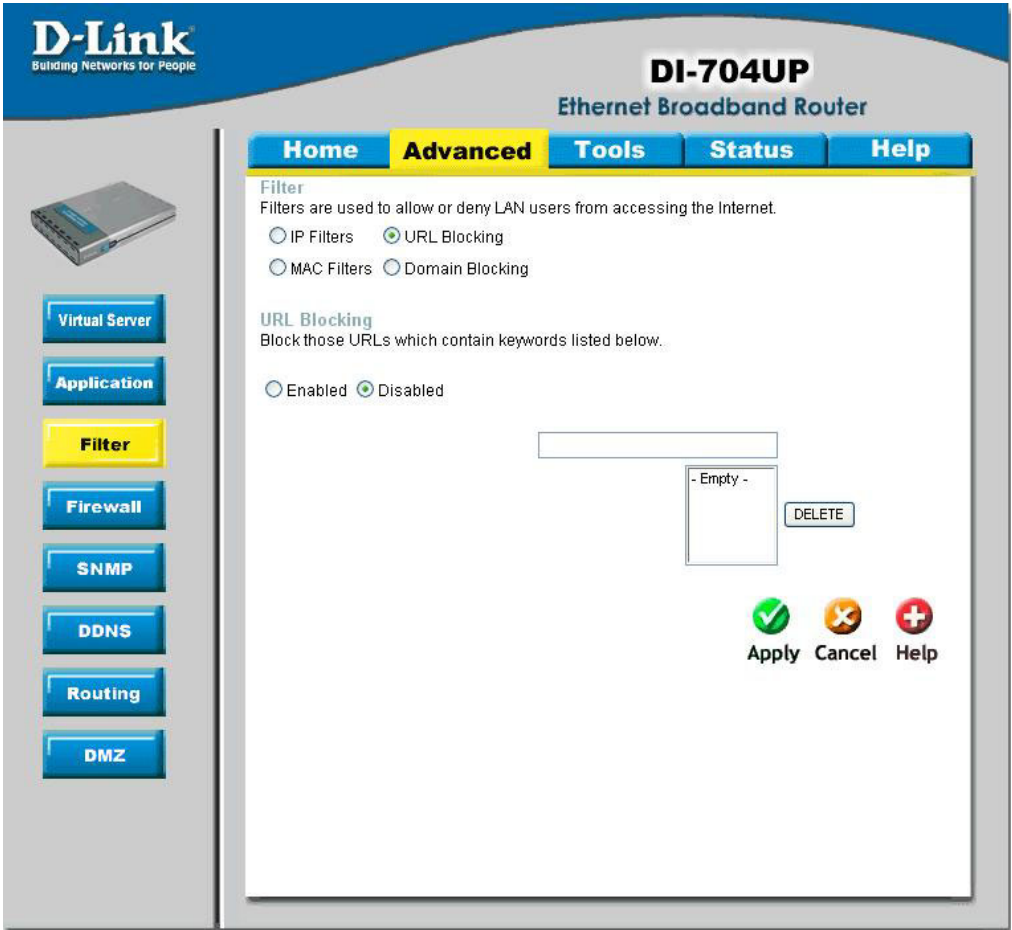
Use URL Blocking filters to disallow computer(s) to access Internet with the following URL keywords entered into the list. The URL Blocking filters are useful features that are similar to parental control. Users can enter keywords that may have adult content, hack, or other materials to prevent computers connected to the Local Area Network (LAN) from accessing those web sites.

Using the Configuration Menu (continued)

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 wired computers connected to one of the four Ethernet LAN ports to the DI-704UP.

Using the Configuration Menu (continued)

Advanced > Domain Filter

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 to access the specified Internet domains listed below. Users will be allowed access to all other Internet domains.

Permitted Domains:
Enter in the domain suffix of the Internet domain you want to use.
 (Example: shopping.com, sports.net.)

Blocked Domains:
Enter in the domain suffix of the Internet domain you want to block.
(Example: shopping.com, sports.net.)

Delete:
Select this option to remove the domain suffix from the Permitted Domains or Blocked Domains list.

Using the Configuration Menu (continued)

Advanced > Firewall

Firewall Rules is an advanced feature used to allow or deny traffic from passing through the Broadband Router. It works in the same way as IP Filters with additional settings. You can create more detailed access rules for the DI-704UP. When virtual services are created and enabled, it will also display in Firewall Rules. Firewall Rules contains all network firewall rules pertaining to IP (Internet Protocol).
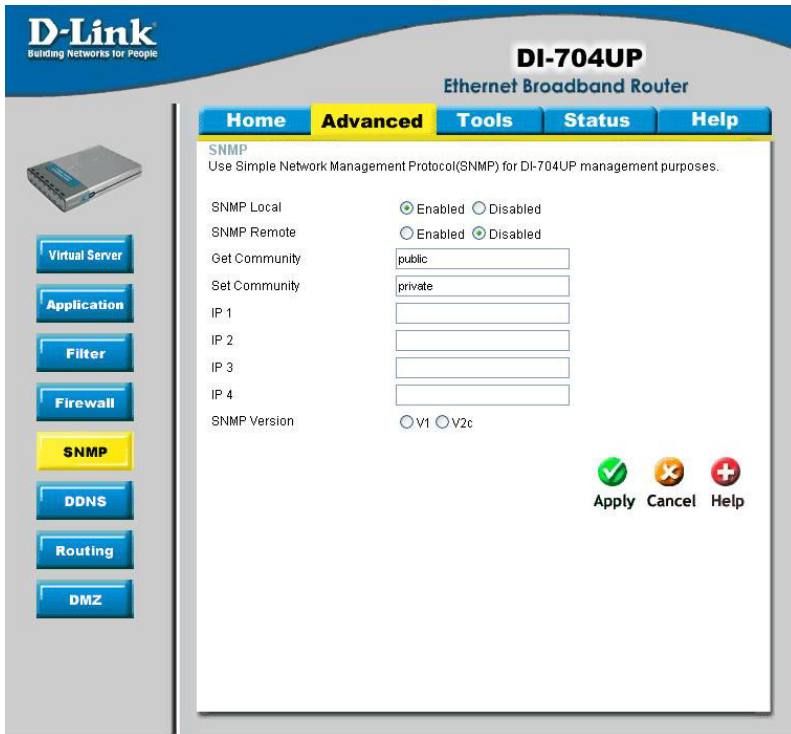
In the **Firewall Rules List** at the bottom of the screen, the priorities of the rules are from top (highest priority) to bottom (lowest priority.)

Note: The DI-704UP MAC Address filtering rules have precedence over the Firewall Rules.

Using the Configuration Menu (continued)

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-704UP. The DI-704UP supports SNMP v1.

Enabled or Disabled:
Click **Enabled** to enable SNMP. Click **Disabled** to de-activate SNMP.

Local:

SNMP services will be available on the Local (LAN) network.

Remote:

SNMP services will be available on the remote (WAN) network.

Get Community:
"Read only" access for network administration using SNMP. You can view the network, but no configuration is possible with this setting.

Set Community:
"Read and Write" access for network administration using SNMP. The administrator can configure the network with this setting.

Using the Configuration Menu (continued)
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-704UP.

DDNS:
When an IP address is automatically assigned by a DHCP server, DDNS automatically updates the DNS server.

Provider:
Select your provider from the pull-down menu.

Host Name:
Enter the Host name.

Username/Email:
Enter the username/email address.

Password/Key:
Enter the password/key.

44

Using the Configuration Menu (continued)

Advanced > Routing
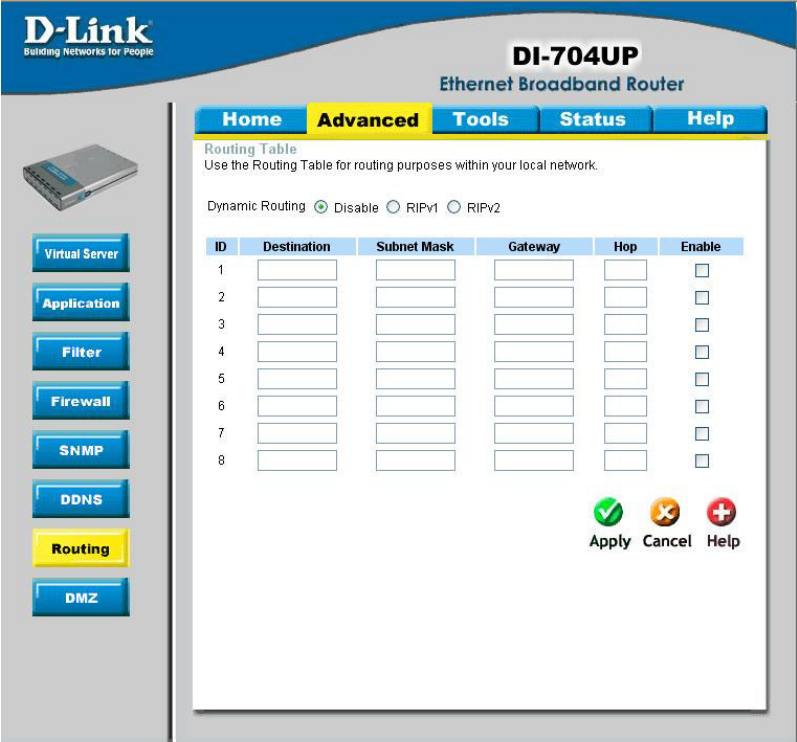
Static routes can be added if you require specific routes within your internal network. These routes will not apply to the WAN network.

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 network.

Gateway:
Enter in the gateway IP address to the specified network.

Hop:
Enter in the amount of hops it will take to reach 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 (continued)
Advanced > DMZ
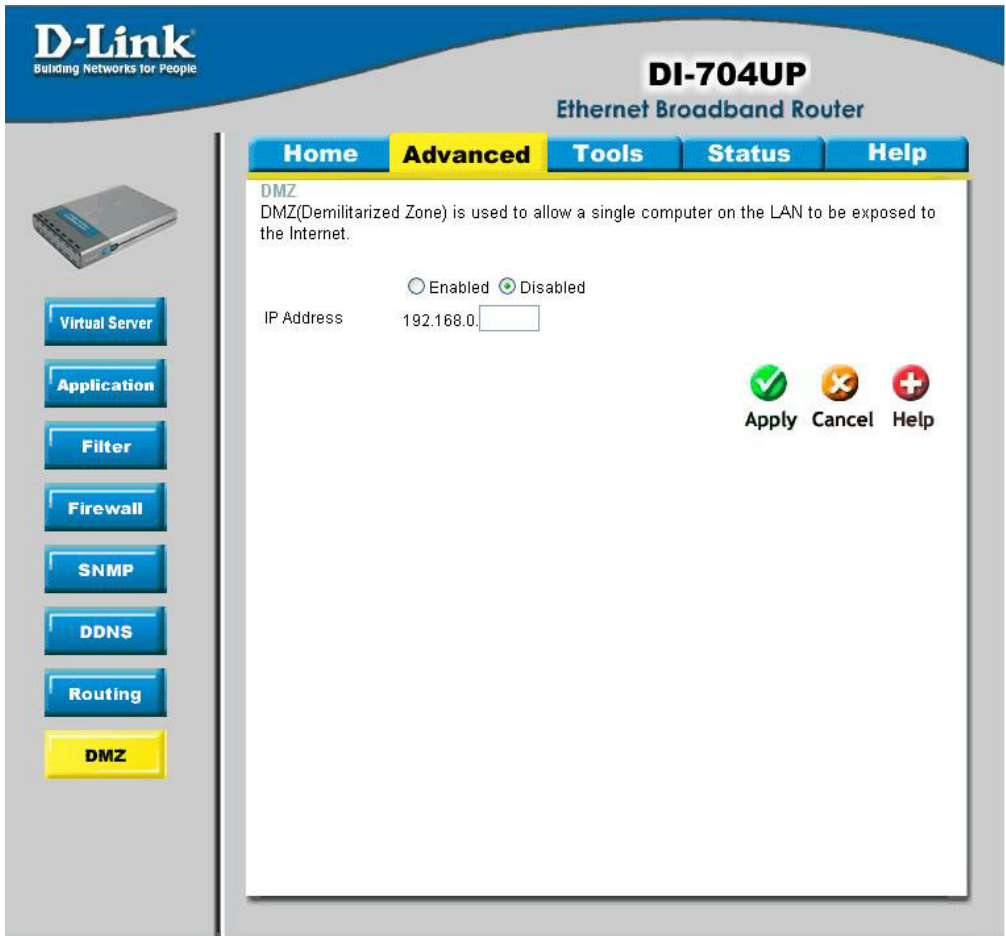
If you have a computer that cannot run Internet applications properly from behind the DI-704UP, then you can allow that computer to have unrestricted Internet access. Enable this feature and enter the IP address of that computer as a DMZ (Demilitarized Zone) host with unrestricted Internet access. Adding 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 (continued)
Tools > Admin

Administrator Settings
At this page, the DI-704UP administrator can change the system password. There are two accounts that can access the Broadband Router's Web-Management interface. They are **admin** and **user**. **Admin** has read/write access while **user** has read-only access. **User** can only view the settings but cannot make any changes.

Tools > Admin

Remote Management:

Remote Management allows the DI-704UP to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform "Administrator" tasks. This feature enables you to perform "Administrator" tasks from the remote (Internet) host.

IP Address:

Internet IP address of the computer that has access to the Broadband Router. *It is not recommended that you set the IP address to 0.0.0.0, because this allows any Internet IP address to access the Broadband Router, which could result in a loss of security for your network.* If you elect to **Enable** Remote Management, enter the IP Address of your remote location.

Port:

Select the port number used to access the Broadband Router.

Example: http://x.x.x.x:8080 whereas x.x.x.x is the WAN IP address of the Broadband Router and 8080 is the port used for the Web-Management interface.

Tools > Time
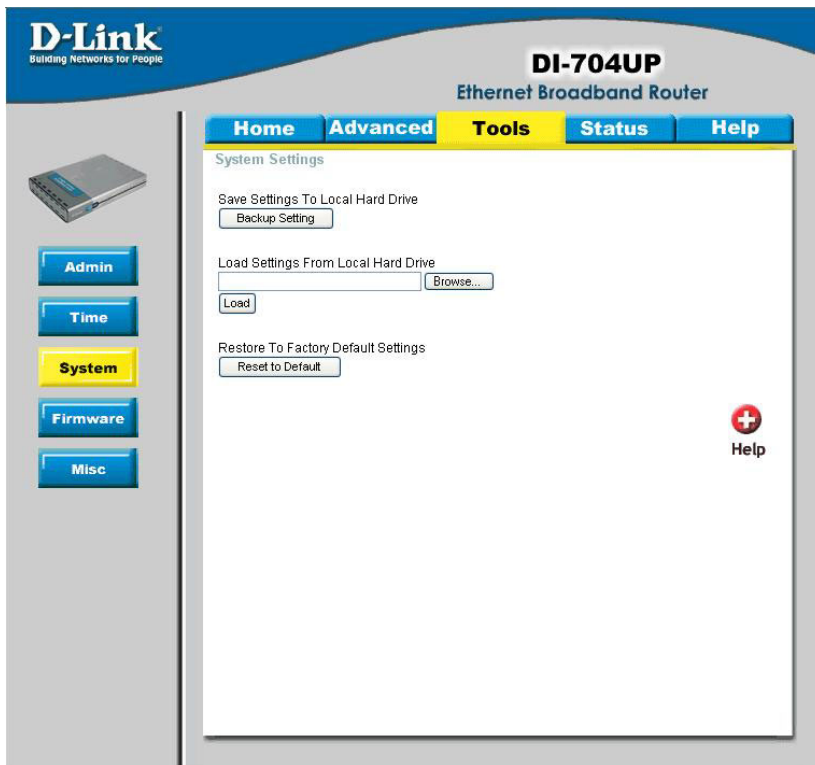
The system time is the time used by the DI-704UP for scheduling services. You can manually set the time or connect to a NTP (Network Time Protocol) server. If an NTP server is set, you will only need to set the time zone.

Using the Configuration Menu (continued)

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-704UP can be uploaded into 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 **Save** 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 (continued)

Tools > Firmware
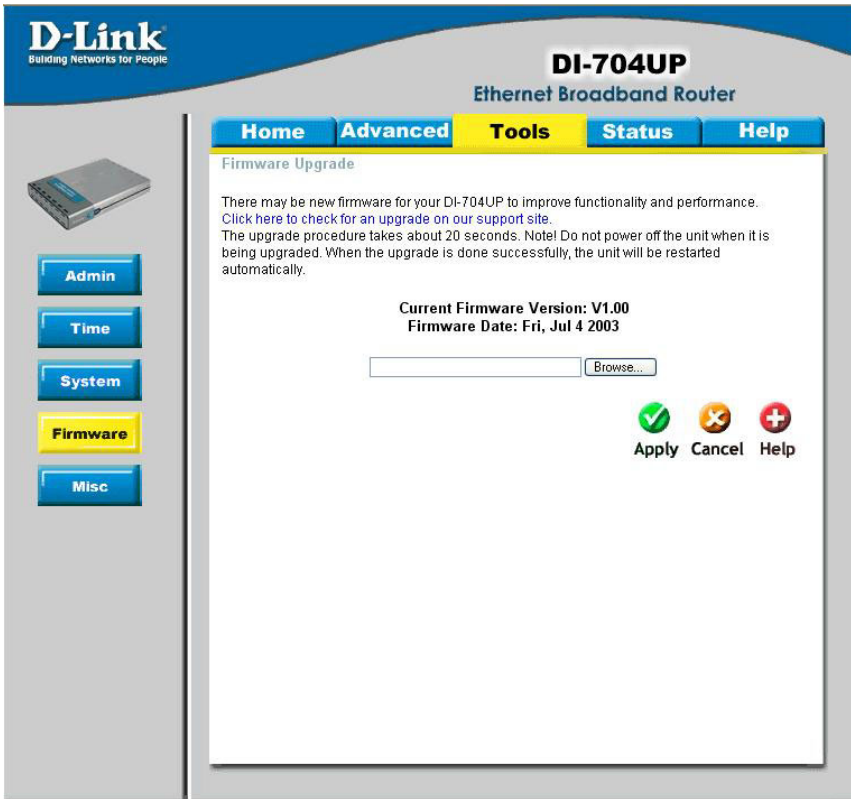
You can upgrade the firmware by using this tool. First, check the D-Link support site for firmware updates at http://support.dlink.com. Make sure that the firmware you want to use is saved on the local hard drive of your computer. Click on **Browse** to search the local hard drive for the firmware that 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 be restarted automatically.

Using the Configuration Menu (continued)
Tools > Misc

D-Link
Building Networks for People

DI-704UP
Ethernet Broadband Router

| Home | Advanced | Tools | Status | Help |

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-704UP.

[Reboot]

Block WAN Ping
When you "Block WAN Ping", you are causing the public WAN IP address on the DI-704UP 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-704UP.

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: [   ]

Apply   Cancel   Help

51

Using the Configuration Menu (continued)

Tools > Misc

Ping Test:
This 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.

Reboot:
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-704UP 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-704UP. It carefully inspects all incoming packets and if the packets contain suspicious 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, theUPnP Setting is set to enable. It is recommended to keep the UPnP Setting on enable.
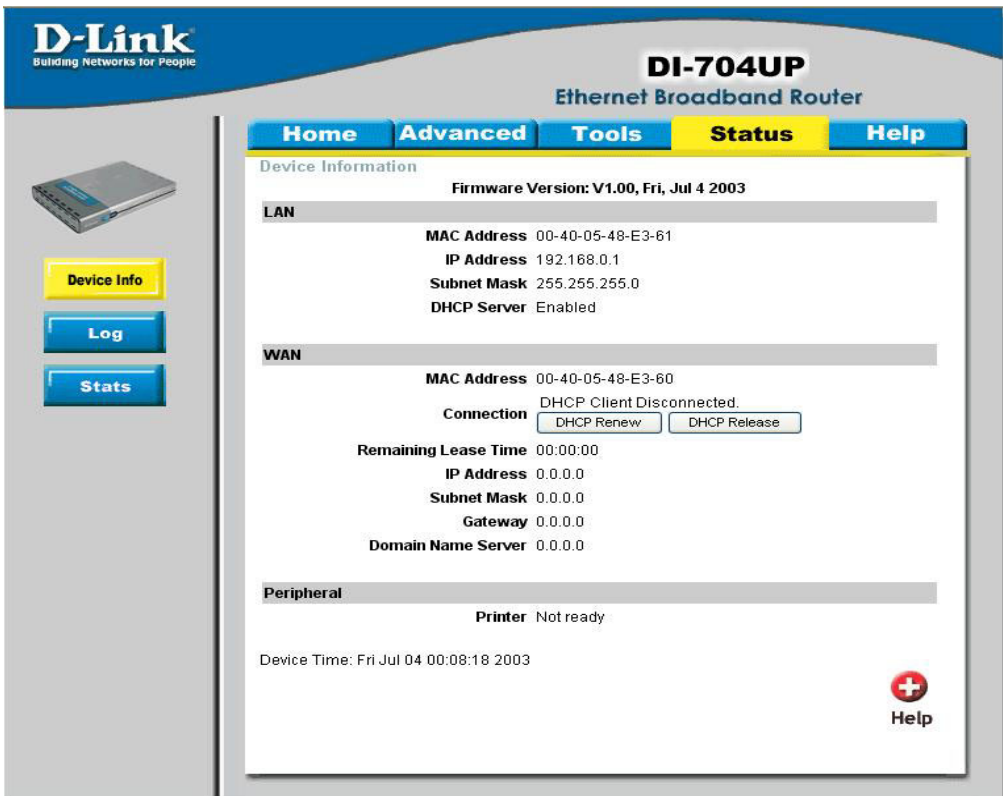
VPN Pass Through:
For users who telecommute or use Virtual Private Network (VPN), you can select PPTP or IPSec to be used with this router.

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 (continued)
Status > Device Info

This page in the Configuration Utility displays the current information for the Broadband Router. It will display the WAN, LAN, and MAC address information. If your WAN connection is set up for **Dynamic IP** address a **Release** button and **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP. If your WAN connection is set up for **PPPoE**, a **Connect** button and **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection. This page allows you to observe the DI-704UP's working status:

Using the Configuration Menu (continued)

Status > Device Info

LAN
LAN MAC Address:
Displays the LAN port MAC/hardware address.

IP Address:
LAN/Private IP Address of the DI-704UP.

Subnet Mask:
LAN/Private Subnet Mask of the DI-704UP.

WAN
WAN MAC Address:
Displays the WAN port MAC/hardware address.

IP Address:
WAN/Public IP Address.

Subnet Mask:
WAN/Public Subnet Mask.

Gateway:
WAN/Public Gateway IP Address.
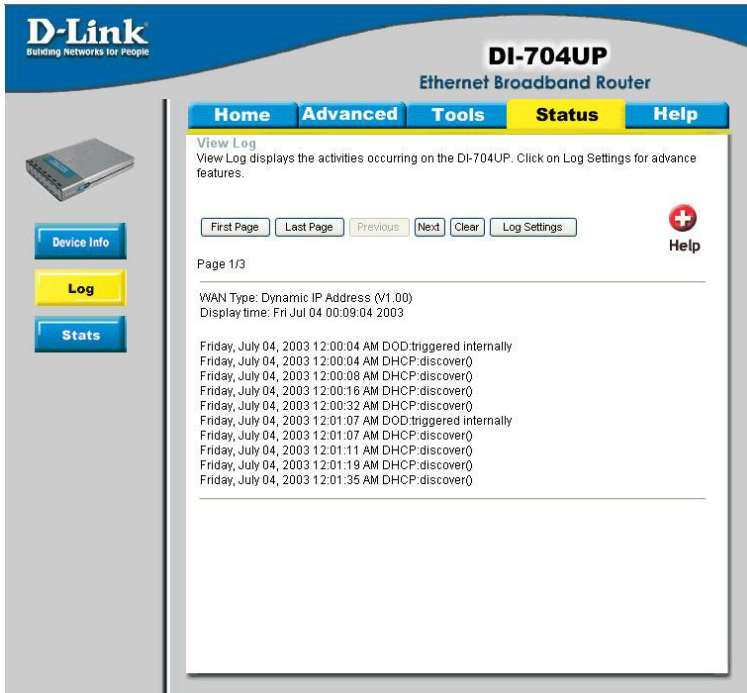
Domain Name Server:
WAN/Public DNS IP Address.

PeripheralPrinter:
Status of the USB print server port.

Using the Configuration Menu (continued)

Status > Log

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

First Page:
The first page of the log.

Last Page:
The last page of the log.

Previous:
Moves back one log page.

Next:
Moves forward one log page.
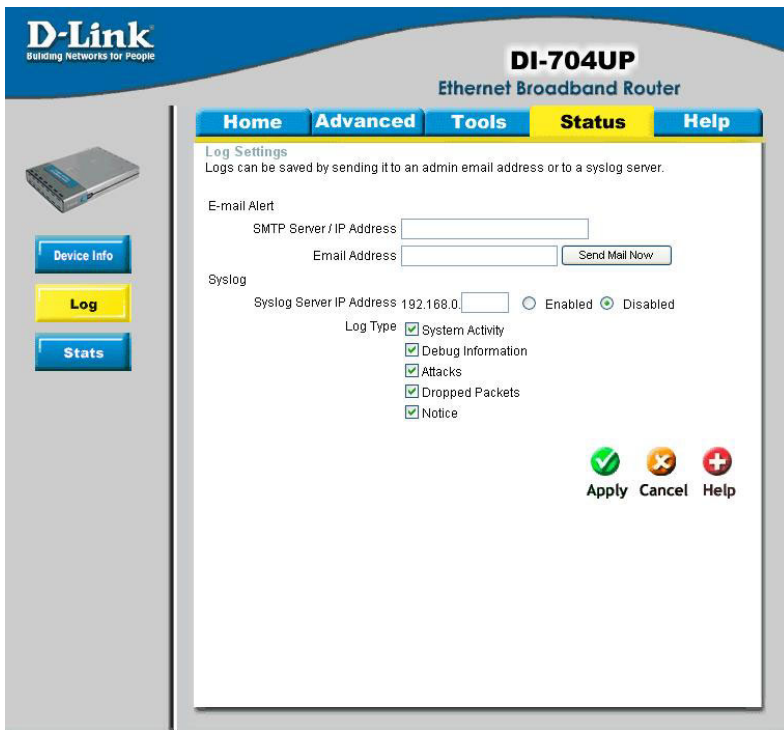
Clear:
Clears the logs completely.

Log Settings:
Brings up the page to configure the logs.

Using the Configuration Menu (continued)

Status > Log Settings

Log Settings
Displays the logs of activities and events, and can be setup to send these logs to another location.

E-Mail Alert:
The DI-704UP can be set up to send the log files to a specific email address.

SMTP Server IP:
Input the SMTP information. Usually, this is provided by your Internet Service Provider (ISP).

Send E-Mail alert to:
Enter in the email address of the recipient who will receive the email log.

Send Mail Now:
Click to send mail now.

Using the Configuration Menu (continued)

Help

D-Link
Building Networks for People

DI-704UP
Ethernet Broadband Router

| Home | Advanced | Tools | Status | Help |

Home
- Setup Wizard
- WAN Settings
- LAN Settings
- DHCP Server
- VPN

Advanced
- Virtual Server
- Special Applications
- Filters
- Firewall Rules
- SNMP
- DDNS
- Routing
- DMZ

Tools
- Administrator Settings
- System Time
- System Settings
- Firmware Upgrade
- Miscellaneous Items

Status
- Device Information
- Log
- Traffic Statistics

FAQs

Help

This menu displays the complete **Help** menu. For help at anytime, click on 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
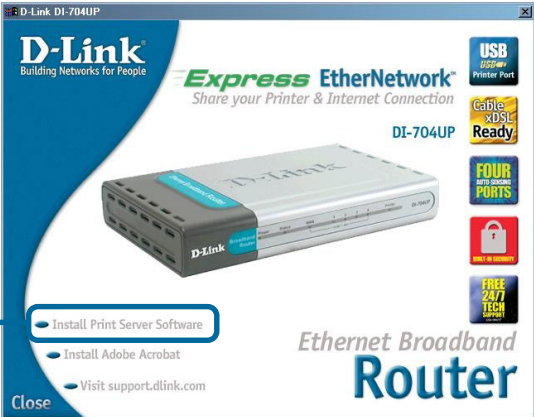
Click to Install Print Server Software for either Windows 98SE/ME or Windows 2000/XP

Click Next

58
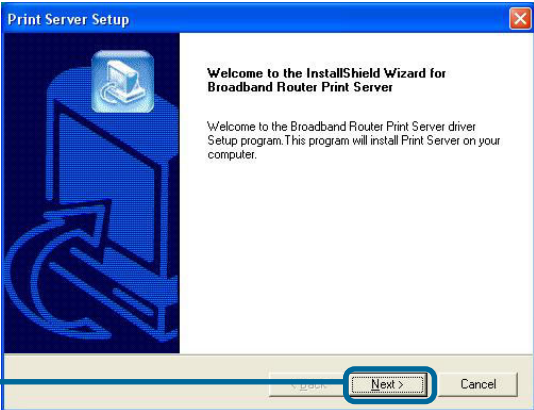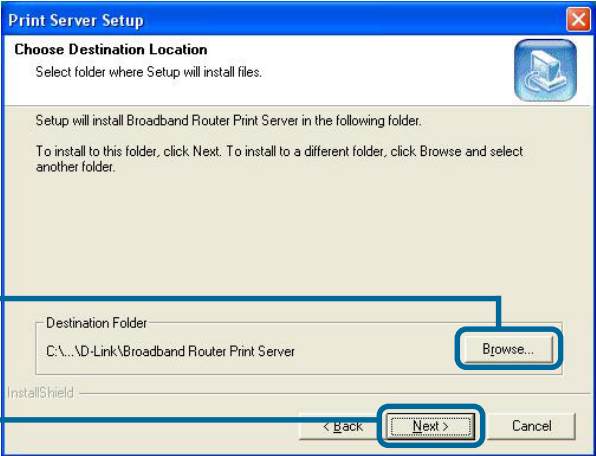
Installing the Print Server Software (continued)

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.
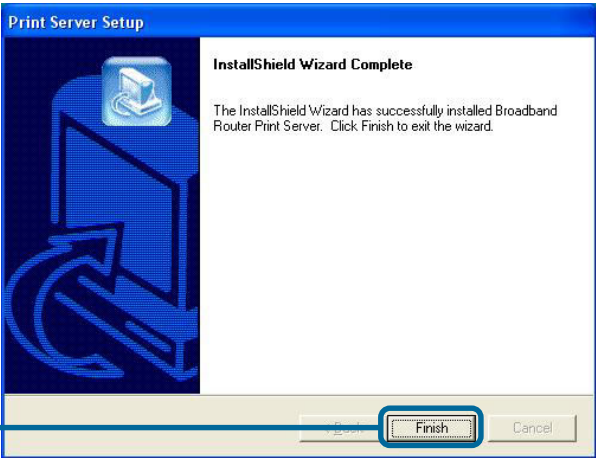
Click Browse to select a destination folder

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

InstallShield

Click Next

< Back   Next >   Cancel
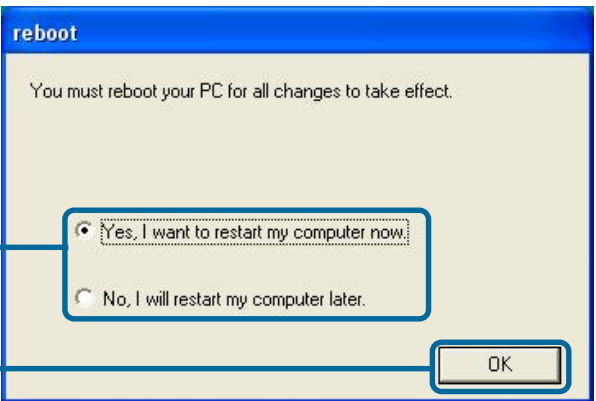
Print Server Setup

InstallShield Wizard Complete

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

Click Finish

< Back   Finish   Cancel

---

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.

Click OK

OK

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

Configuring on Windows 98SE/ME Platforms

After you finish the software installation proce-dure, your computer will be capable of network printing provided by the DI-704UP. On a Win-dows 95/98 platform, open the **Printers** win-dow in the **My Computer** menu.

Now, you can configure the print server of the DI-704UP: Find the corresponding icon for your *printer*, for example, the **Epson Stylus C60 Series**. Right click on that icon, and then select *Properties.*
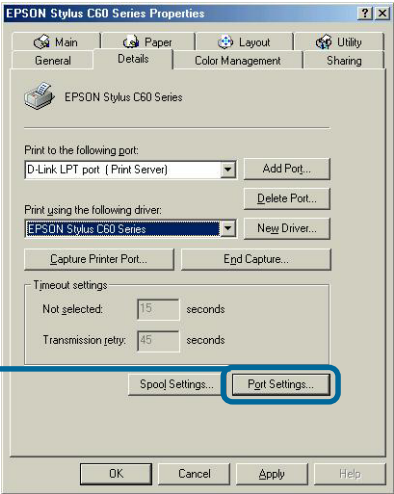
The screen at the right will appear.

> **Click on the Details tab**

Choose the "D-Link LPT port (Print Server)" 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.

> **Click Port Settings**

60

Configuring on Windows XP/2000/NT Platforms

Type in the IP address of the DI-704UP.
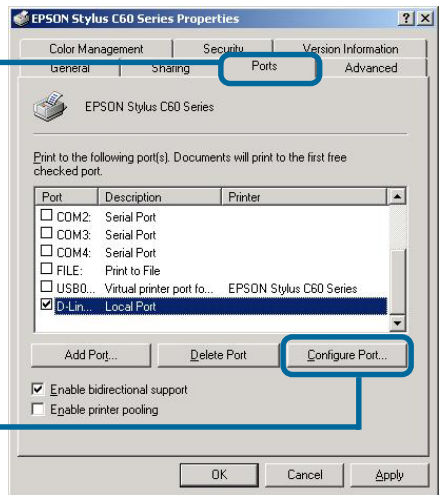
Click OK

Click Port

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

Click Configure Port

Type in the IP address of the DI-704UP.

Click OK

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

61

Networking Basics

Using the Network Setup Wizard in Windows XP

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

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

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

To continue, click **Next.**

Please follow all the instructions in this window:
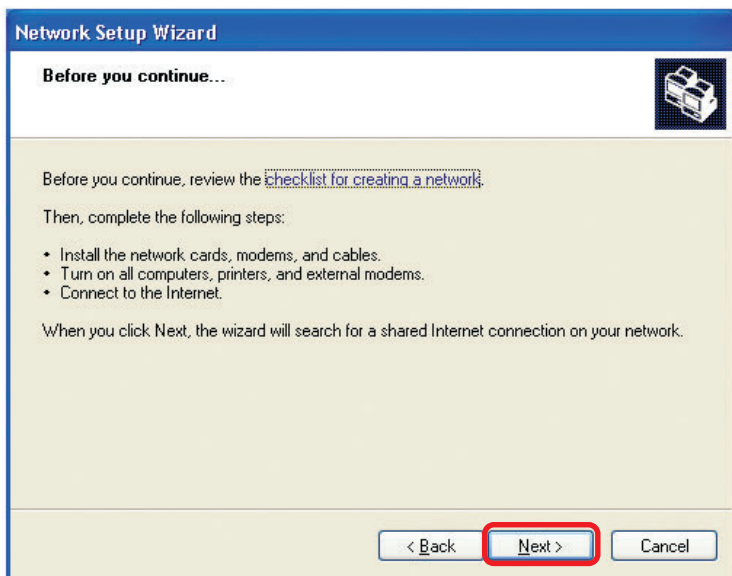
Click **Next**

In the following window, select the best description of your computer. If your computer connects to the Internet through a gateway/router, select the second option as shown.

Click **Next**

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

Click **Next**

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

Click **Next**

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

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

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

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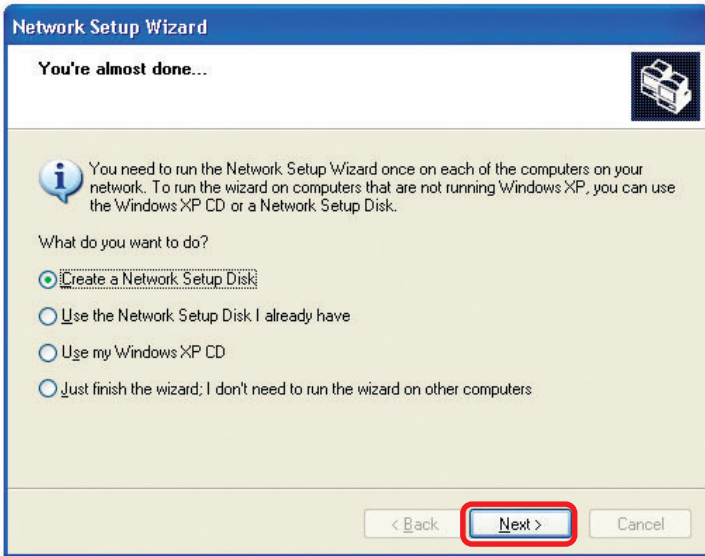
Insert a disk into the Floppy Disk Drive, in this case, drive **A.**

Format the disk if you wish, and click **Next.**

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

Copying...

Please wait while the wizard copies files...

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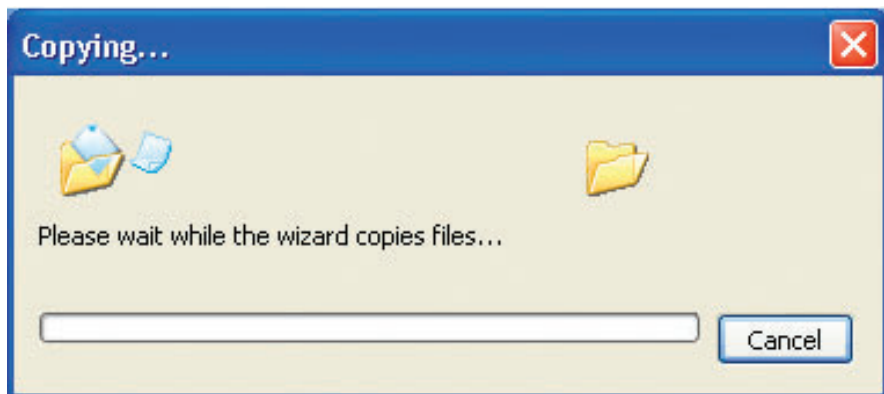
Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network.
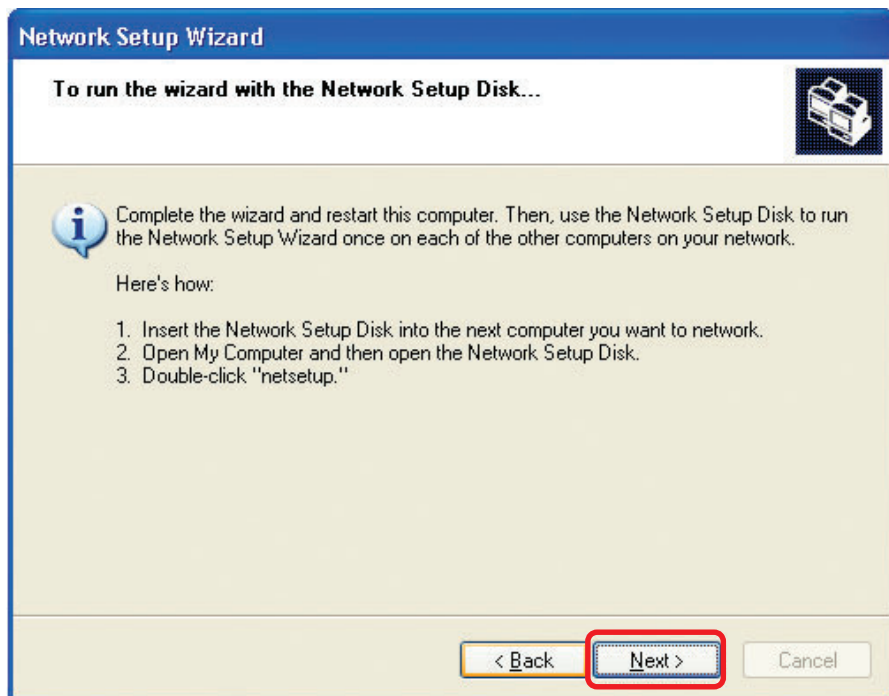
Network Setup Wizard

To run the wizard with the Network Setup Disk...

Complete the wizard and restart this computer. Then, use the Network Setup Disk to run the Network Setup Wizard once on each of the other computers on your network.

Here's how:

1. Insert the Network Setup Disk into the next computer you want to network.
2. Open My Computer and then open the Network Setup Disk.
3. Double-click "netsetup."

< Back   Next >   Cancel

To continue, click **Next**.

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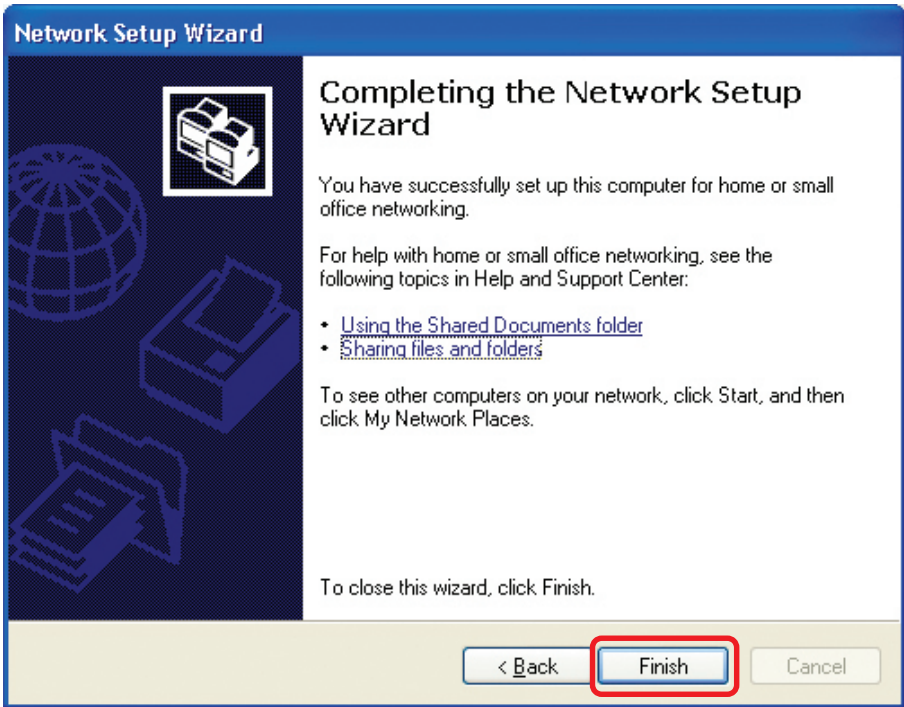
The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.
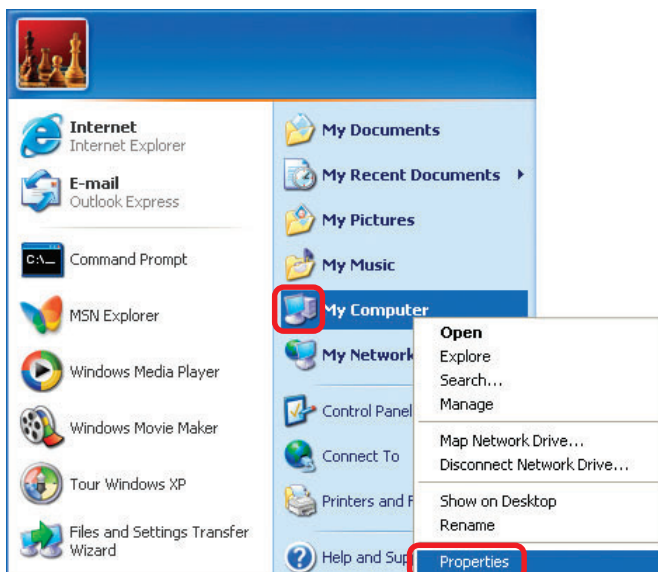
You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new network will be ready to use.

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**

■ Select the **Computer Name Tab** in the System Properties window.
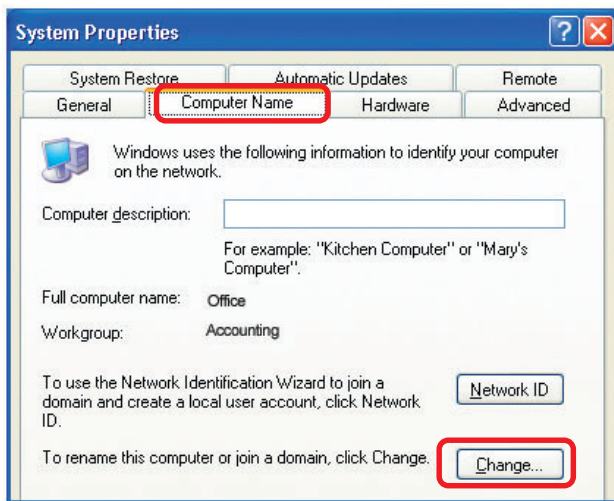
■ Enter a **Computer Description**; this field is optional.

■ To rename the computer or join a domain, Click **Change**.

■ 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
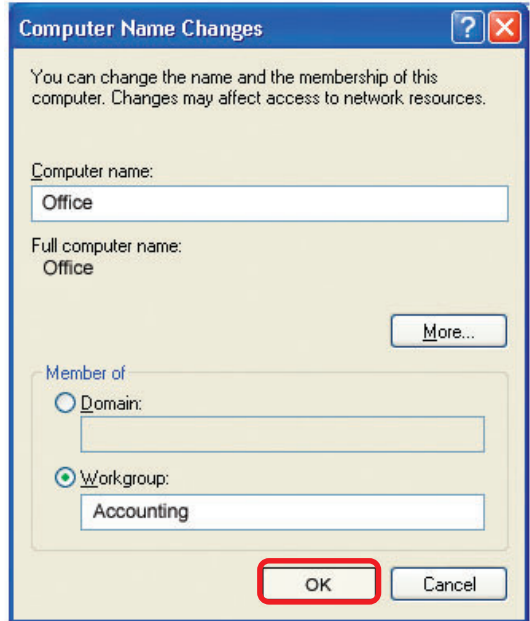
Assigning a Static IP Address in Windows XP/2000

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**.

Tour Windows XP

Files and Settings Transfer Wizard

Paint

Control Panel

Printers and Faxes

Help and Support

Search

Run...

■ Double-click on **Control Panel**.
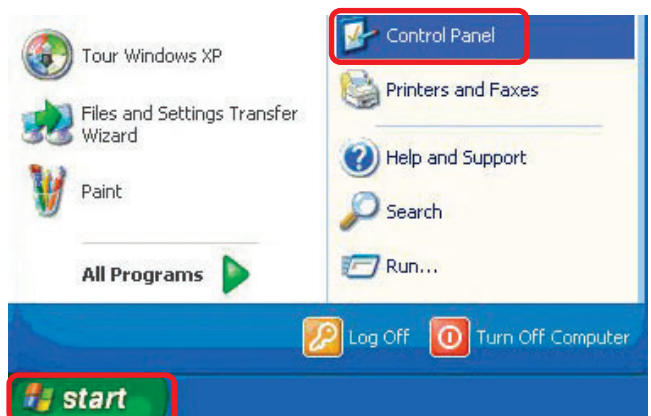
All Programs ▶

Log Off   Turn Off Computer

start

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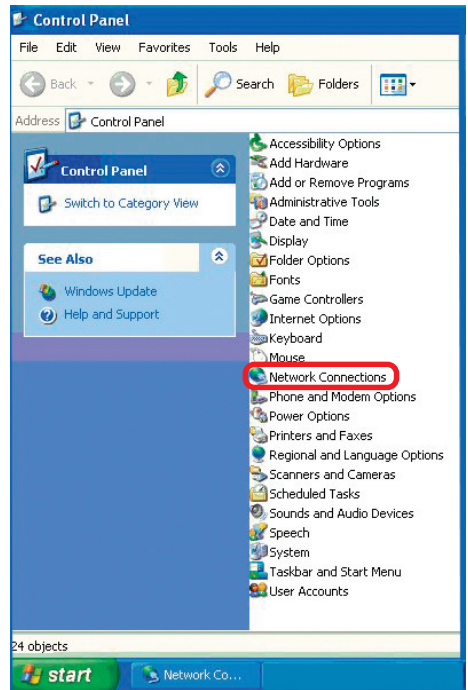
■ Right-click on **Local Area Connections**.

■ Single-click on **Properties**.
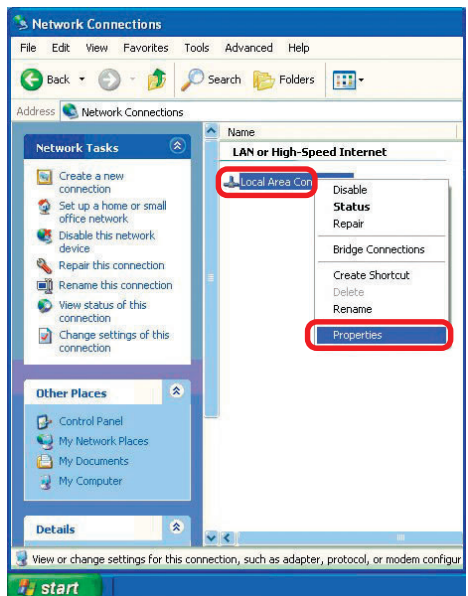
Networking Basics
Assigning a Static IP Address in Windows XP/2000

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

■ Click **Properties**.

■ Select **Use the following IP address** in the **Internet Protocol (TCP/IP) Properties** window (shown below).
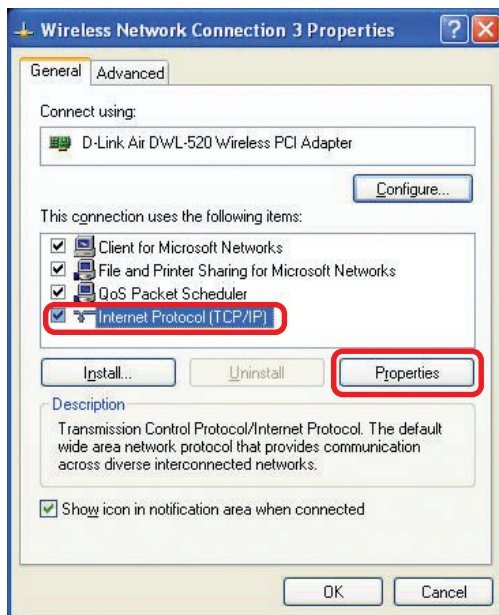
■ In the window below, select **Use the following IP address**. Input your **IP address and subnet mask**. (The IP Addresses on your network must be within the same range. For example, if one computer has an IP Address of 192.168.0.2, the other computers should have IP addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The Subnet mask must be the same for all the computers on the network.)

IP address:
e.g., 192.168.0.2
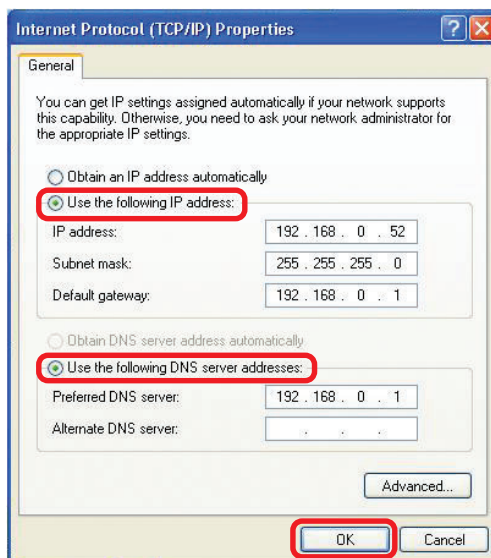
Subnet mask:
255.255.255.0

Default gateway:
Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)

■ Select **Use the following DNS server addresses**. Enter the LAN IP address of the Wireless Router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)

■ Click **OK**.

You have successfully assigned a Static IP Address.

72

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

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

- Double-click on **Network**.
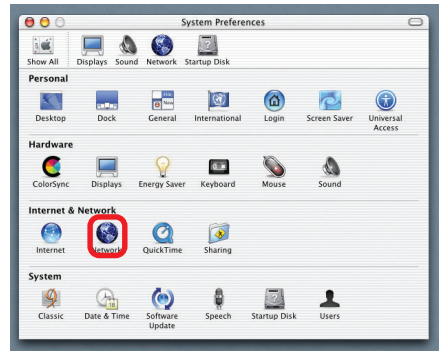
- Select **Built-in Ethernet** in the **Show** pull-down menu.

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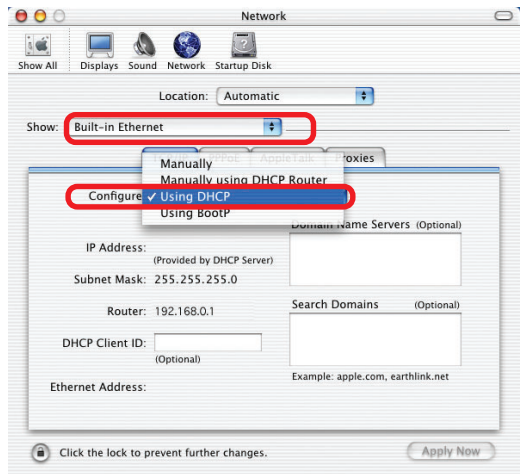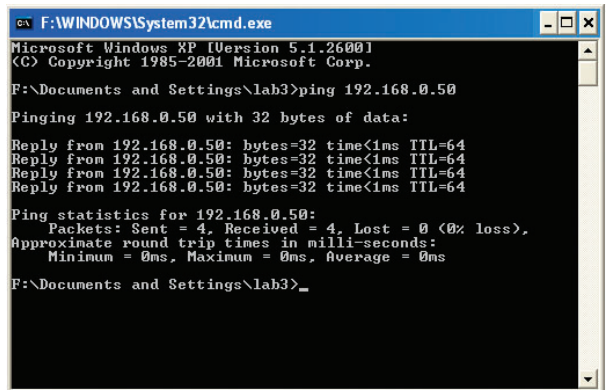
- Click **Apply Now**.

- The **IP Address, Subnet mask**, and the **Router's IP Address** will appear in a few seconds.

73
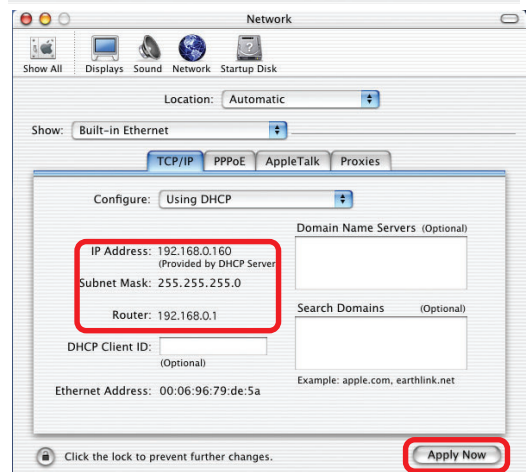
Checking the Connection by _Pinging in Windows XP and 2000_

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

```
F:\WINDOWS\System32\cmd.exe                                    _ □ ✕

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

F:\Documents and Settings\lab3>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

F:\Documents and Settings\lab3>_
```

Checking the Connection by _Pinging in Windows Me and 98_

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

```
F:\WINDOWS\System32\cmd.exe                                    _ □ ✕

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

F:\Documents and Settings\lab3>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64
Reply from 192.168.0.50: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

F:\Documents and Settings\lab3>_
```

Resetting the DI-704UP
to the Factory Default Settings

After you have tried other methods for troubleshooting your network, you may choose to **Reset** the DI-704UP to the factory default settings.
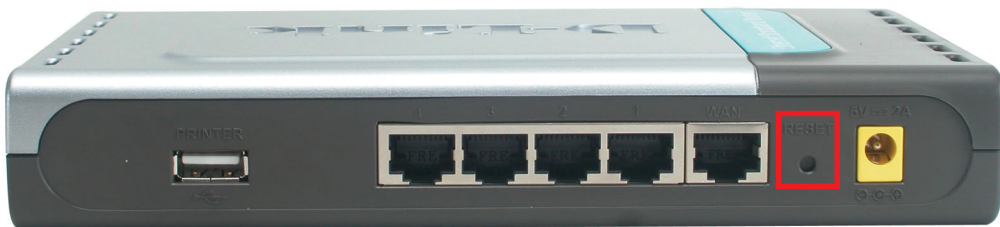
To hard-reset the D-Link DI-704UP to the Factory Default Settings, please do the following:

■ Locate the **Reset** button on the back of the DI-704UP.

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

■ Hold for about 5 seconds and then release. (Or release when the status LED flashes.)

■ After you have completed the above steps, the DI-704UP will be reset to the factory default settings.

Technical Specifications

Standard
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3 NWay Auto-Negotiation
USB 1.1

VPN Pass Through
PPTP
L2TP
IPSec

Ports
One WAN
Four LAN

LEDs
Power
WAN
Printer
Local Network - 10/100

Operating Temperature
32ºF to 131ºF (0ºC to 55ºC)

Humidity
95% maximum (non-condensing)

Power
External Power Supply
AC 5V, 2A

Dimensions
L = 7.56 inches (192mm)
W = 4.64 inches (118mm)
H = 1.22 inches (31mm)

Weight
0.68 lbs (0.31kg)

Warranty
One Year

Frequently Asked Questions

Why can´t I access the web based configuration?

When entering the IP Address of the DI-704UP (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 will 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

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.

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

568B CABLE END
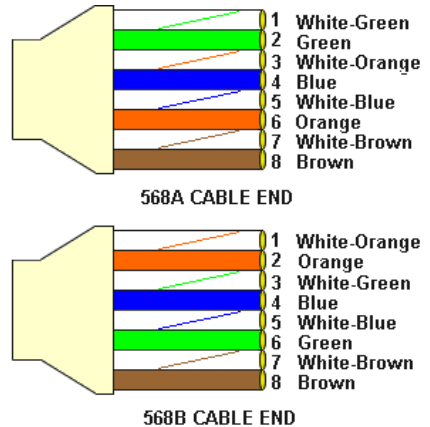
All you need to remember to properly configure the cables is the pinout order of the two cable ends and the following rules:
A straight-through cable has identical ends
A crossover cable has different ends

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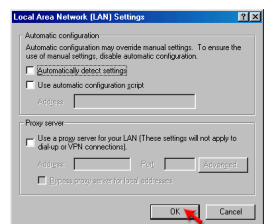
Go to **Start>Settings>Control Panel**. Double click the **Internet Options** Icon. From the **Security** tab, click the **Default Level** button to restore the settings to their defaults.
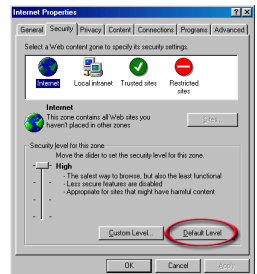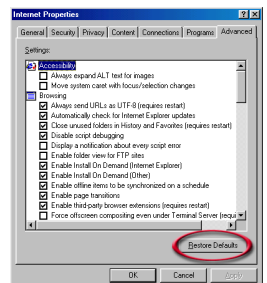
Click to the **Connection** tab and set the dial-up option to **Never Dial a Connection**. Click the **LAN Settings** button
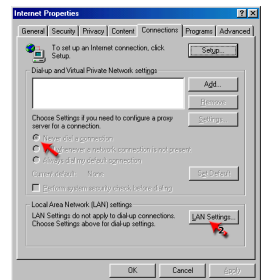
Nothing should be checked. Click **OK**

Go to the **Advanced** tab and click the **Restore Defaults** button to restore these settings to their defaults.

Click **OK**. Go to the desktop and close any open windows
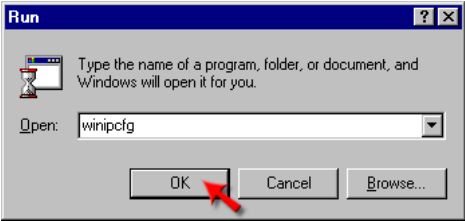
Frequently Asked Questions (continued)

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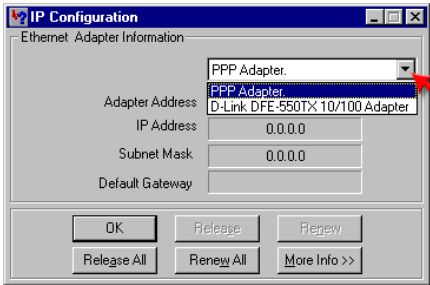
Step 1 Click on **Start**, then click on **Run**.

Step 2 The Run Dialogue Box will appear. Type **winipcfg** in the text field and 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.

Frequently Asked Questions (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.

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**.
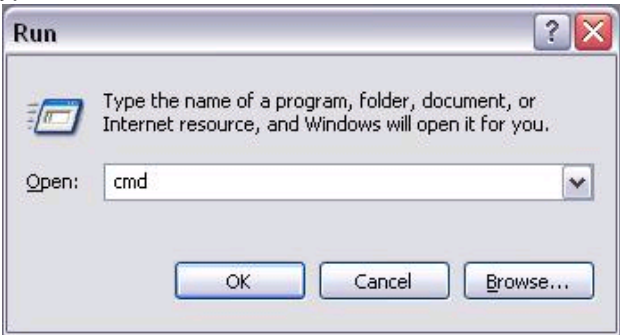
Step 3 From the Command Prompt, enter **ipconfig**. It will return your IP Address, subnet mask, and default gateway

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

Frequently Asked Questions (continued)

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. Example: 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**.
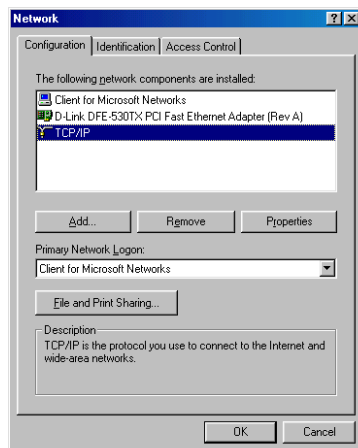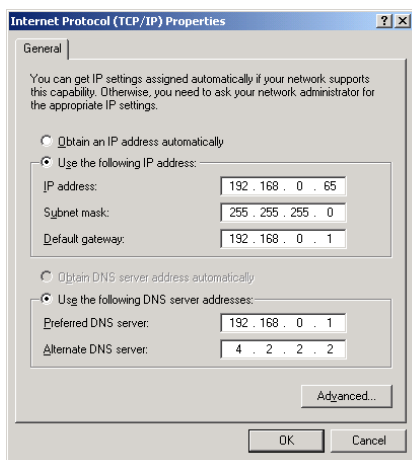
83

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.
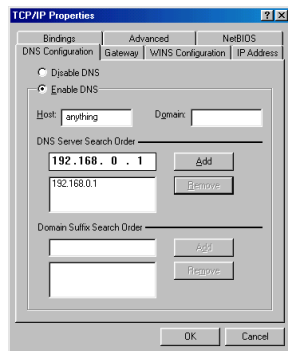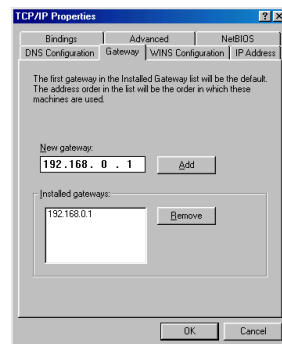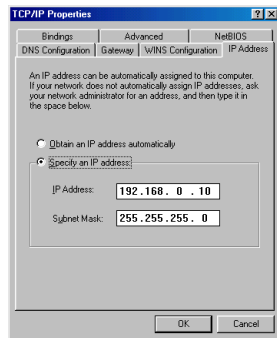
Frequently Asked Questions (continued)

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

Dynamic Cable connection
(*i.e.* 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 (empty).
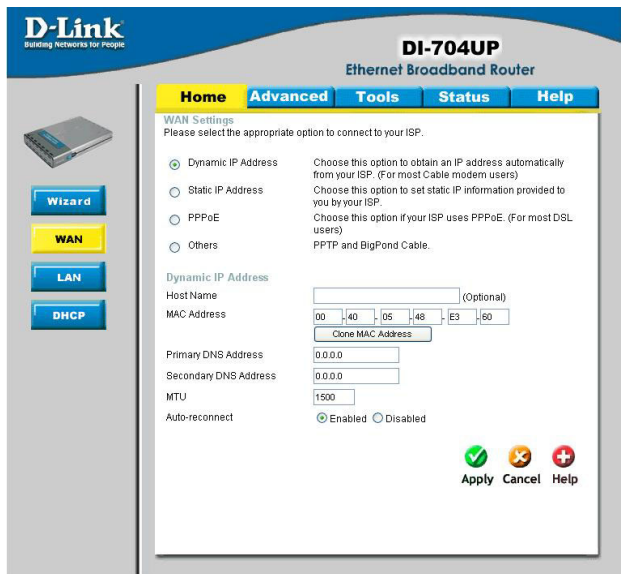
Step 2 Click the **Home** tab and click the **WAN** button.

By default, Dynamic IP Address is the selected option.

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:

First turn the cable modem off. Next, turn the router off Leave them off for 2 minutes**. After 2 minutes**, turn the cable modem on. Wait until you get a solid cable light on the cable modem, and then 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 (empty).

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.

86

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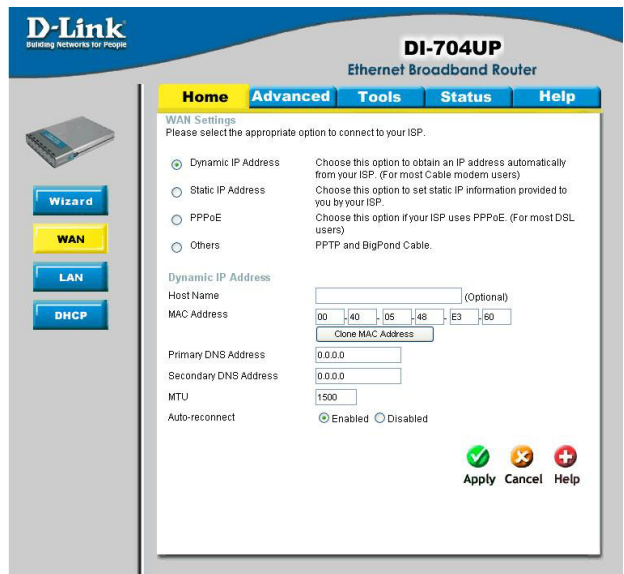
Step 2 Enter your screen name followed by @aol.com for the user name. Enter your AOL password in the password box.

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

Step 4 Click **Apply**.

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 ISP 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.
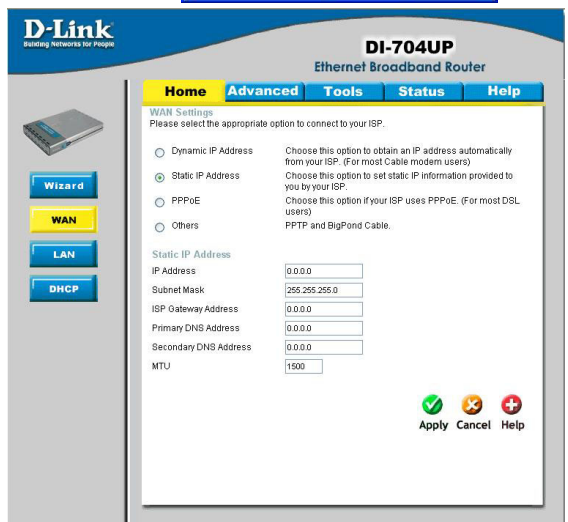
Step 1 Log into the web based configuration by typing in the IP Address of the router (default:192.168.0.1) in your web browser. The username is **admin** (all lowercase) and the password is blank (empty).

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 Set 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 one 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 (empty).

Step 3 Click the **Advanced** tab and then click on the **DMZ** button. Select **Enable** and type in the IP Address from 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-704UP using Firewall rules?
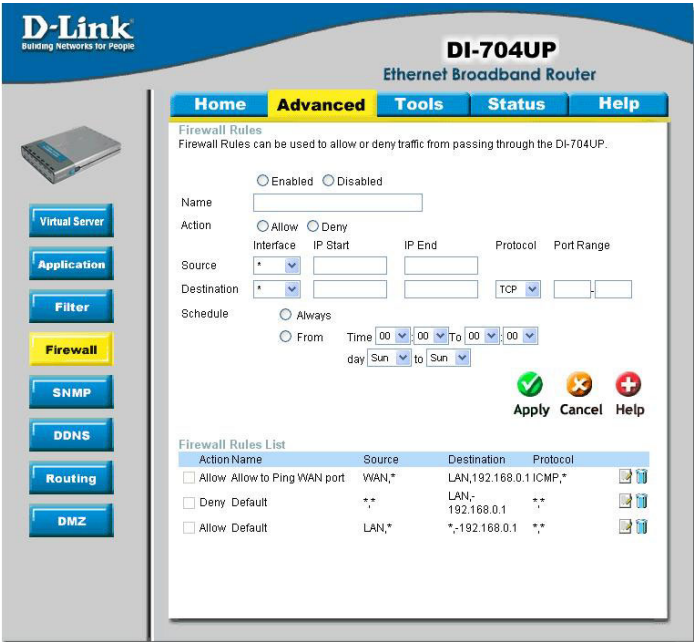
Step 1 Log into the web based configuration by typing in the IP Address of the router (default:192.168.0.1) in your web browser. The username is **admin** (all lowercase) and the password is blank (empty).

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.

92

Frequently Asked Questions (continued)

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 (port 1723) 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-704UP router?

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

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 (empty).

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**.
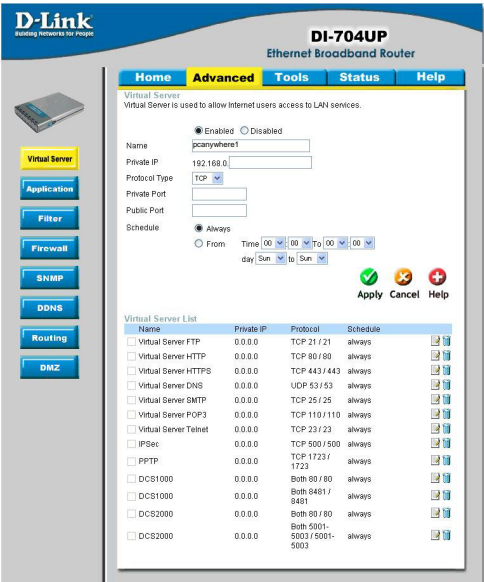
How do I use *PC Anywhere* with my DI-704UP router? (continued)
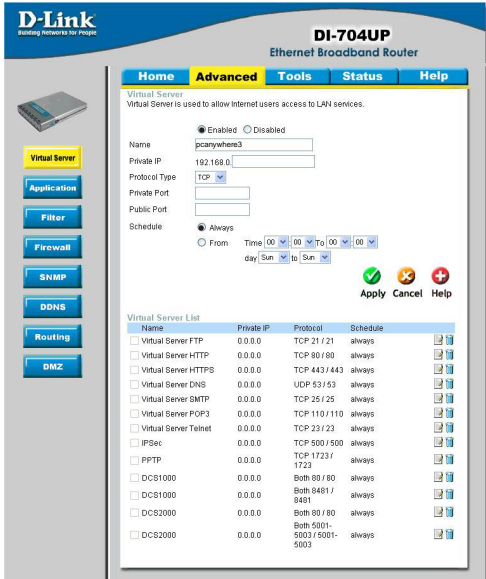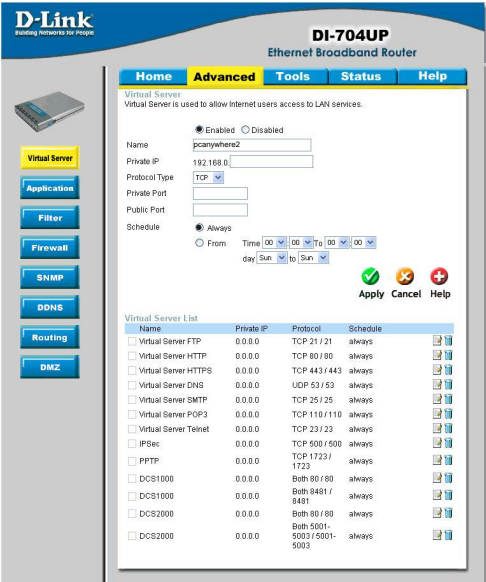
Step 6 Create a second entry as shown.

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 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 (empty).

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**.

Frequently Asked Questions (continued)

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

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.
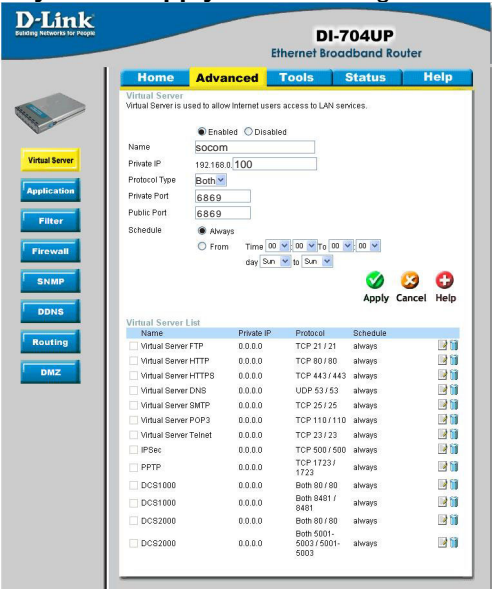
Step 1 Upgrade the firmware.

Step 2 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 (empty).

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**.

96

Frequently Asked Questions (continued)

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

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 (empty).

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 Click Enabled and enter settings:

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**.

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 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 (empty).

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

Step 3 Click **Enabled** and then enter a **Name** (kazaa for example).

Step 4 Enter the IP Address of the computer you are running KaZaA from in the Private IP box. Select TCP for the Protocol Type.

Step 5 Enter 1214 in the Private and Public Port boxes. Click **Always** under schedule or set a time range. Click **Apply**.

Note: 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?

To host a Warcraft 3 game, you must open ports on your router to allow incoming traffic. To play a game, you do not have to configure your router.

Warcraft 3 (Battlenet) uses port 6112.

For the DI-704UP:

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 (empty).

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 does NetMeeting work 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.

In order to use NetMeeting with your D-LInk router, you need 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 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 (empty).

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- (continued)

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. 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, NAT 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-704UP) 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 (USA only)

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

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

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

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. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

- Return Merchandise Ship-To Address
  USA: 17595 Mt. Herrmann, Fountain Valley, CA 92708
  Canada: 2180 Winston Park Drive, Oakville, ON, L6H 5W1 (Visit http://www.dlink.ca for detailed warranty information within Canada)

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

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

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

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

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

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

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

Registration

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