

D-Link DI-804HV

**Broadband Hardware TM
VPN Router**

Manual

D-Link

Building Networks for People

02212003

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Package Contents



Contents of Package:

- **D-Link DI-804HV** Broadband Hardware VPN Router
- Power Adapter – 5V DC
- Ethernet (CAT5-UTP/Straight-Through) Cable
- Manual on CD
- Quick Installation Guide

Note: Using a power supply with a different voltage rating than the one included with the DI-804HV will cause damage and void the warranty for this product.

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

System Requirements For Configuration:

- Ethernet-Based Cable or DSL Modem
- Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter
- Internet Explorer version 6.x or Netscape Navigator version 6.x and above, with JavaScript enabled

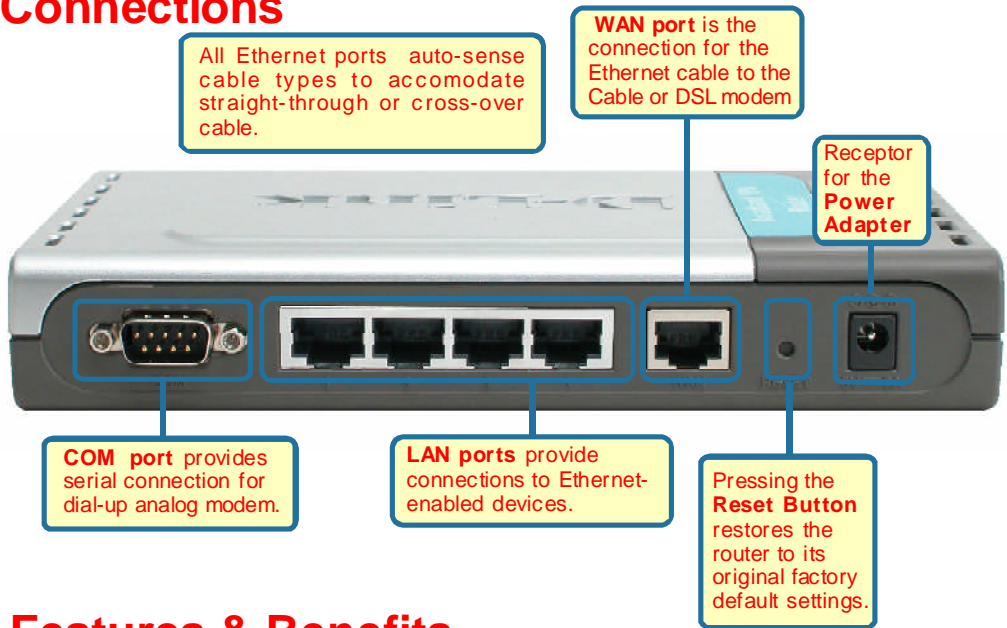
Introduction

The D-LinkDI-804HV is a 4-port Broadband Router with Virtual Private Network (VPN) functionality. It provides a complete solution for Internet surfing and office resources sharing. It is an ideal way to extend the reach and number of computers connected to your network.

After completing the steps outlined in the *Quick Installation Guide* (included in your package) you will have the ability to share information and resources.

The DI-804HV is compatible with most popular operating systems, including Macintosh, Linux and Windows, and can be integrated into a large network.

Connections



Features & Benefits

- **Broadband modem and IP sharing**
Connects multiple computers to a broadband (cable or DSL) modem to surf the Internet
- **Auto-sensing Ethernet Switch**
Equipped with a 4-port auto-sensing Ethernet switch
- **VPN Pass-Through supported**
Supports pass-through VPN sessions and allows you to setup VPN server and VPN clients
- **Firewall**
All unwanted packets from outside intruders are blocked to protect your network
- **DHCP server supported**
All of the networked computers can retrieve TCP/IP settings automatically from the DI-804HV
- **Web-based configuration**
Configurable through any networked computer's web browser using Netscape or Internet Explorer

Features & Benefits continued

- **Access Control supported**
Allows you to assign different access rights for different users
- **Packet filter supported**
Packet Filter allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.
- **Virtual Server supported**
Enables you to expose WWW, FTP and other services on your LAN to be accessible to Internet users.
- **User-Definable Application Sensing Tunnel**
User can define the attributes to support special applications requiring multiple connections, like Internet gaming, video conferencing, Internet telephony and so on. The DI-804HV can sense the application type and open a multi-port tunnel for it.
- **DMZ Host supported**
Allows a networked computer to be fully exposed to the Internet; this function is used when the special “application-sensing tunnel feature” is insufficient to allow an application to function correctly

Introduction to Broadband Router Technology

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

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

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

Introduction to Firewalls

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

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

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

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

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

Introduction to Virtual Private Networking

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

Point-to-Point Tunneling Protocol (PPTP)

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

IP Security (IPSec)

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

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

LEDS

LED stands for **L**ight-**E**mitting **D**iode. The **DI-804HV** has the following LEDs as described below:

LED	LED Activity
Power	A steady light indicates a connection to a power source
M1 LED	Flashes once per second to indicate an active system
M2 LED	Lights up when the device has an Internet connection
WAN	A solid light indicates connection on the WAN port. This LED blinks during data transmission
COM	A solid light indicates a connection to an external dial-up analog modem
LOCAL NETWORK (Ports 1-4)	A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4. This LED blinks during data transmission

Getting Started

With its default settings, the DI-804HV, when activated, will connect with other D-Link Express Ethernet network products, right out of the box.

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

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

Using the Configuration Menu - learn the settings for the DI-804HV, using the web-based interface.



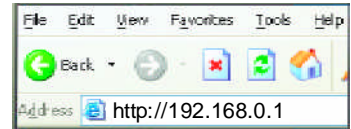
For a typical network setup at home (as shown above), please do the following:

- 1 You will need broadband Internet access (a Cable or DSL subscription line into your home or office)
- 2 Consult with your Cable or DSL provider for proper installation of the modem
- 3 Connect the Cable or DSL modem to the DI-804HV wireless broadband router (see the Quick Installation Guide included with the DI-804HV.)
- 4 If you are connecting a desktop computer to your network, you can install the D-Link DFE-530TX+ ethernet adapter into an available PCI slot. (See the Quick Installation Guide included with the DWL-530TX+.)
- 5 If you are connecting a laptop computer to your network, install the drivers for the Ethernet Cardbus adapter (e.g., D-Link DFE-690TXD) into a laptop computer. (See the Quick Installation Guide included with the DFE-690TXD.)
- 6 The Modem can be used as a dialup backup for xDSL/Cable connection

Using the Configuration Menu

Whenever you want to configure your network or the DI-804HV, you can access the Configuration Menu by opening the web-browser and typing in the IP Address of the DI-804HV. The DI-804HV default IP Address is shown below:

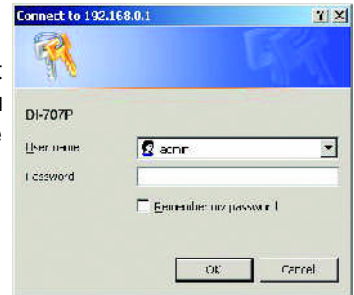
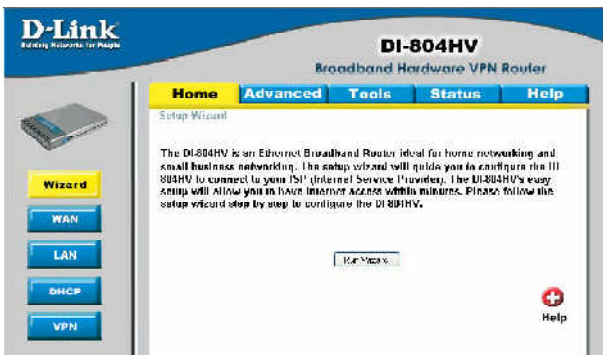
- Open the web browser
- Type in the **IP Address** of the DI-804HV (<http://192.168.0.1>)



Note: If you have changed the default IP Address assigned to the DI-804HV, make sure to enter the correct IP Address.

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

Home > Wizard



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



Apply

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



Cancel

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



Help

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



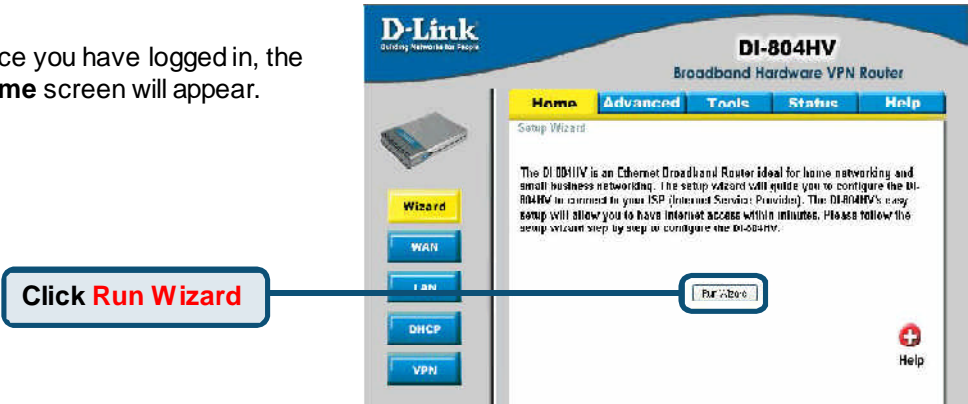
Restart

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

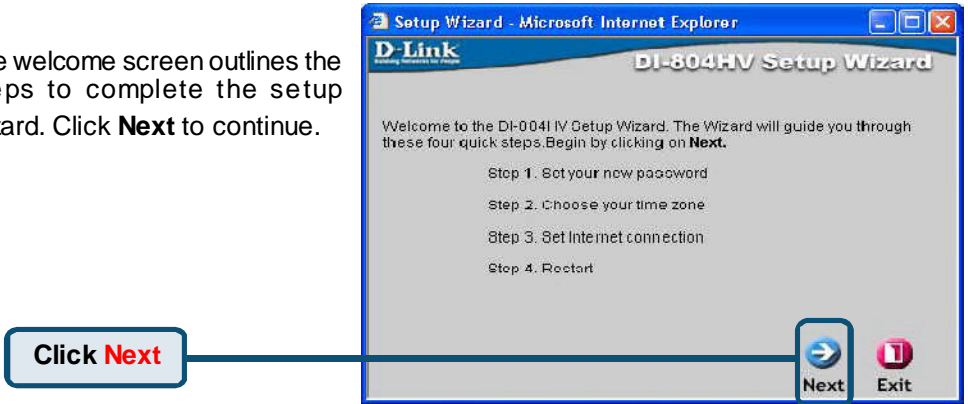
Using the Configuration Menu

Setup Wizard

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

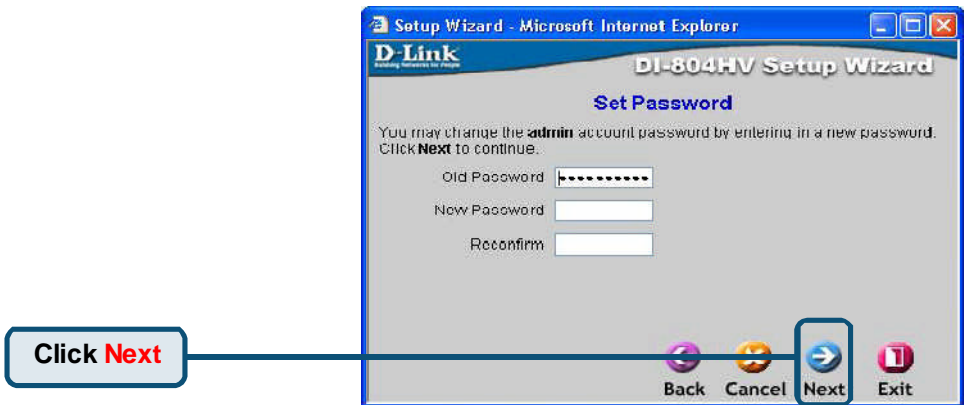


The welcome screen outlines the steps to complete the setup wizard. Click **Next** to continue.



Using the Configuration Menu

Setup Wizard > Set Password



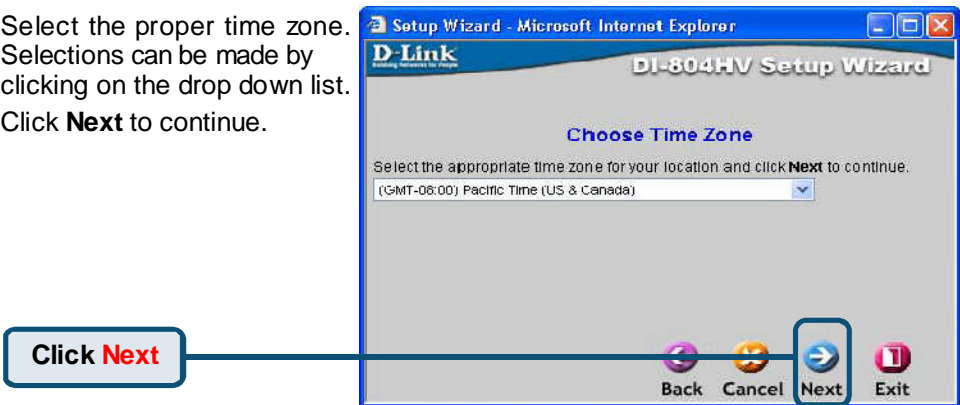
- Old Password-** This information is masked.
- New Password-** Type in the new password for the **admin** account.
- Reconfirm-** Type in the new password again to confirm. Click **Next** to continue with the Setup Wizard.

Using the Configuration Menu

Setup Wizard > Time Zone

Select the appropriate time zone for your location-

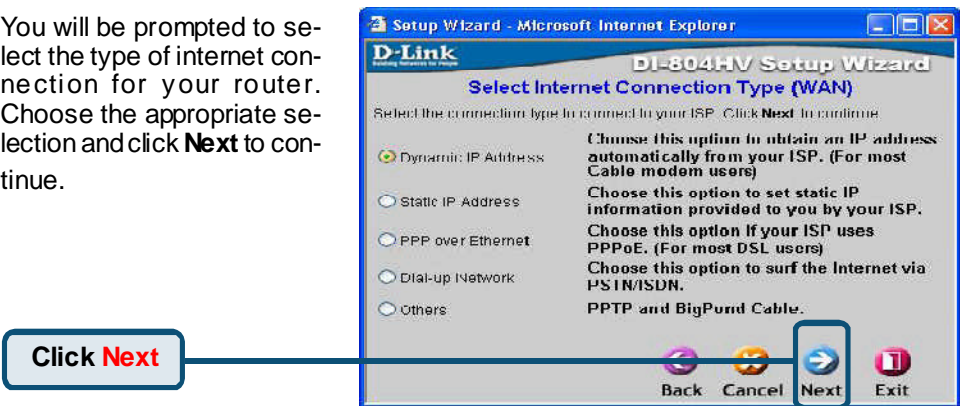
Select the proper time zone. Selections can be made by clicking on the drop down list. Click **Next** to continue.



Setup Wizard > Connection Type (WAN)

Select Your Internet Connection-

You will be prompted to select the type of internet connection for your router. Choose the appropriate selection and click **Next** to continue.



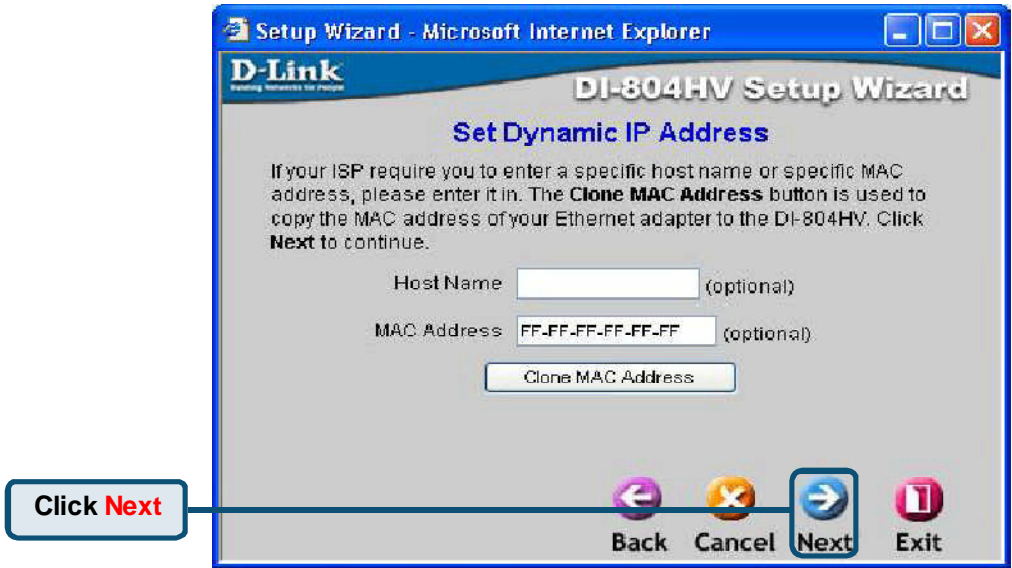
If you are unsure of which setting to select, please contact your Internet Service Provider.



Select **Others** only if you use PPTP in Europe or Big Pond Cable in Australia.

Using the Configuration Menu

Setup Wizard > Set Dynamic IP Address



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

Host Name-

Host name is the section where you input the name of your ISP. This section is optional and is not required to be filled in.

MAC Address-

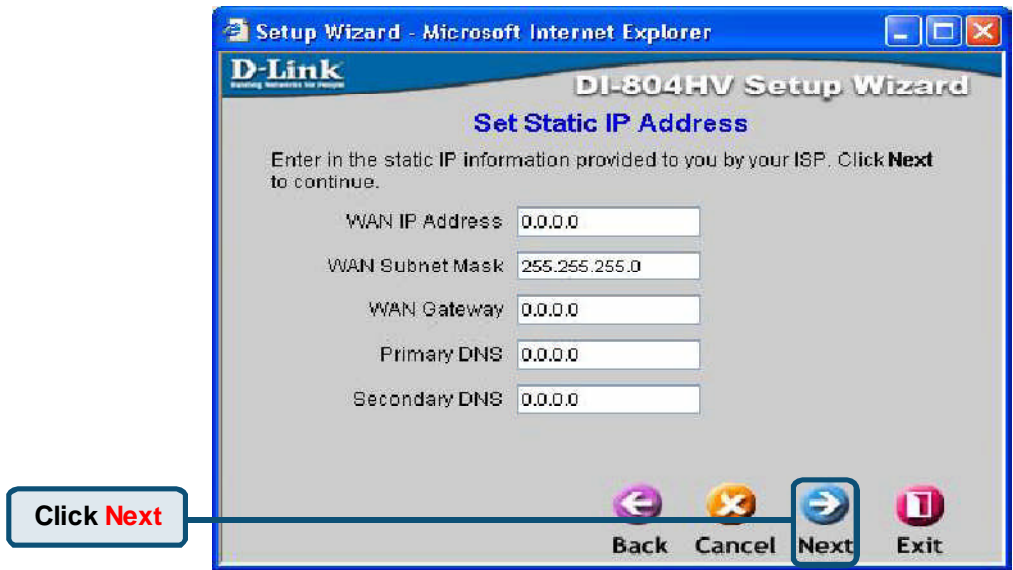
Each network adapter has a discrete Media Access Control (MAC) address. Note that some computer and peripherals may already include built-in network adapter.

Clone MAC Address-

By clicking on Clone MAC Address, the DI-804HV will automatically copy the MAC address of the network adapter in your computer. You can also manually type in the MAC address. Click **Next** to continue.

Using the Configuration Menu

Setup Wizard > Set Static IP Address



If your ISP uses a **Static IP Address**, and this option is selected, then this screen will appear.

- WAN IP Address-** If your ISP requires a Static IP Address, and this option is selected, then this screen appear. Enter the IP address information originally provided to you by your ISP. You will need to complete all the required fields.
- WAN Subnet Mask-** The subnet for the DI-804HV is preconfigured to 255.255.255.0. Configurations can be made in, but not recommended. This feature is for advanced users.
- WAN Gateway-** This information is provided by your ISP.
- Primary DNS-** The Primary DNS can be found by contacting the ISP.
- Secondary DNS-** The Seconday DNS can be found by contacting the ISP.

Using the Configuration Menu

Setup Wizard > PPPoE



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.)

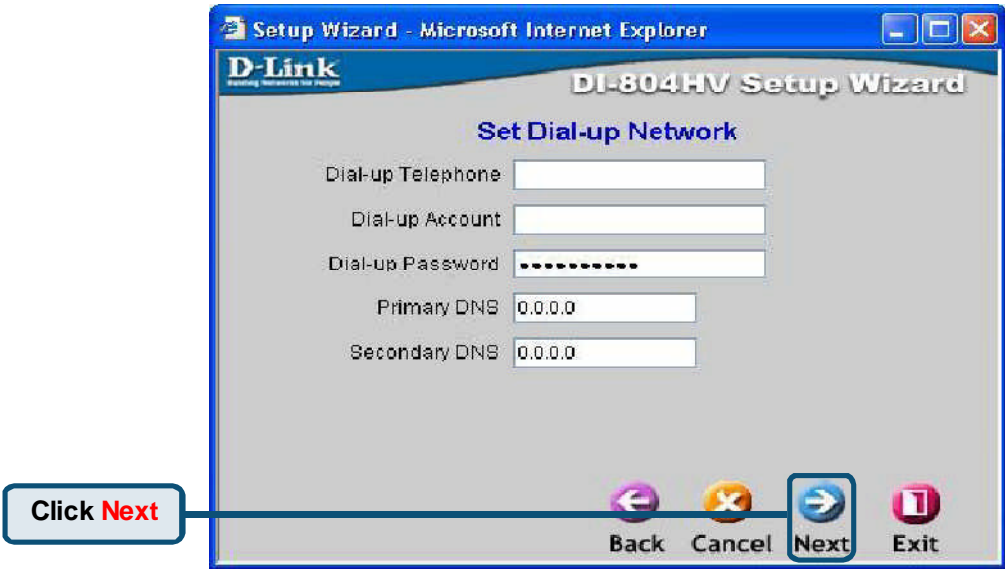
PPPoE Account- Enter in the username provided to you by your ISP.

PPPoE Password- Enter in the password provided to you by your ISP.

PPPoE Service Name- Enter in the name of your service provider. This is an optional field and is not necessary to be filled in.

Using the Configuration Menu

Setup Wizard



Configure this section only if you have an analog dial-up account. Otherwise click **Next** to skip.

- Dial-up Telephone-

Enter the telephone number to connect to your ISP.
- Dial-upAccount-

This information is provided by your ISP. The Dial-up Account is also known as username.
- Dial-up Password-

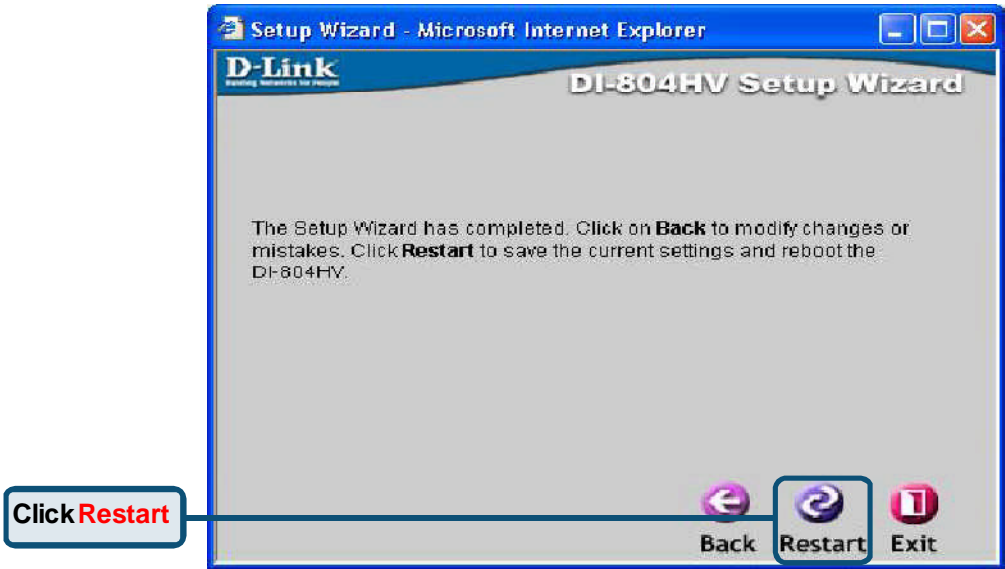
Enter in the password to log into your Dial-up account.
- Primary DNS-

The Primary DNS can be found by contacting the ISP.
- Secondary DNS-

The Secondary DNS can be found by contacting the ISP.

Using the Configuration Menu

Setup Wizard



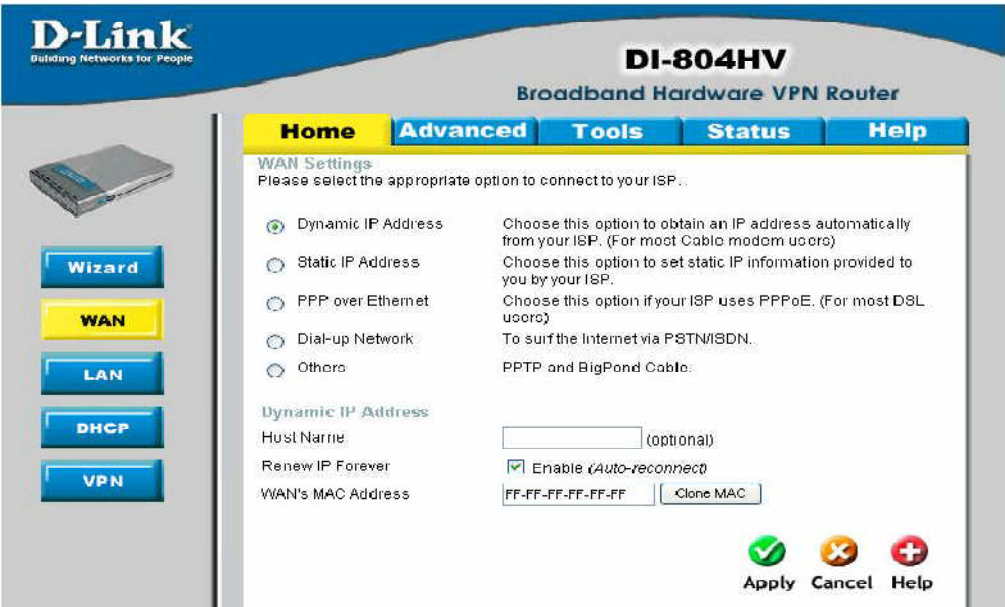
Back- Click on Back button to go back to previous page.

Restart- Click on **Restart** button to finalize the settings made.

Exit- Click on Exit button to end the Setup Wizard without saving any changes.

Using the Configuration Menu

Home > WAN



Choose WAN Type

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

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

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

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

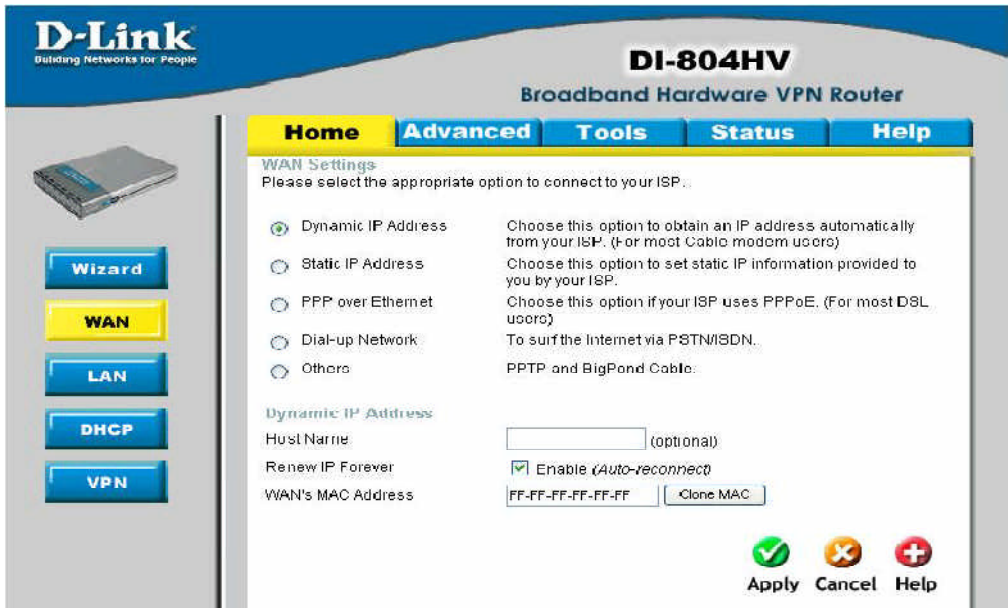
Others-

PPTP- For use in Europe only

Big Pond Cable- For use in Australia only

Using the Configuration Menu

Home > WAN > Dynamic IP Address



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

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

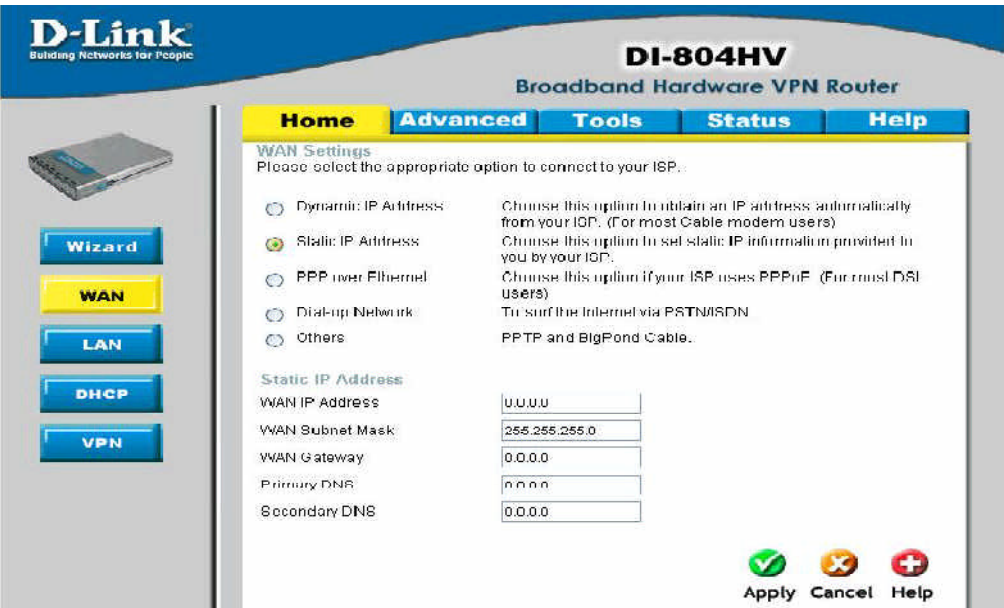
Renew IP Forever- Enable this feature to allow the router to automatically reconnect to the ISP if the connection drops.

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

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

Using the Configuration Menu

Home > WAN > Static IP Address



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

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

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

WAN Gateway- Input the Gateway address provided by your ISP

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

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

Using the Configuration Menu

Home > WAN > PPPoE

The screenshot shows the D-Link DI-804HV Broadband Hardware VPN Router configuration interface. The top navigation bar includes 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Home' tab is selected, and the 'WAN Settings' section is active. A sidebar on the left contains buttons for 'Wizard', 'WAN', 'LAN', 'DMZ', and 'VPN'. The main content area is titled 'WAN Settings' and instructs the user to 'Please select the appropriate option to connect to your ISP'. There are five radio button options: 'Dynamic IP Address', 'Static IP Address', 'PPPoE over Ethernet' (which is selected), 'Dial-up Network', and 'Others'. Below these, the 'PPP over Ethernet' section contains several input fields: 'PPPoE Account', 'PPPoE Password' (masked with asterisks), 'Primary DNS' (0.0.0.0), 'Secondary DNS' (0.0.0.0), 'Maximum Idle Time' (11 seconds, with a checked 'Auto-reconnect' box), 'PPPoE Service Name' (optional), 'Assigned IP Address' (0.0.0.0, optional), and 'MTU' (1492, with a range of 1000-1492). At the bottom right, there are three buttons: 'Apply' (with a green checkmark icon), 'Cancel' (with an orange X icon), and 'Help' (with a red plus icon).

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

PPPoE Account- Your PPPoE username provided by your ISP

PPPoE Password- Your PPPoE password is provided by your ISP

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

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

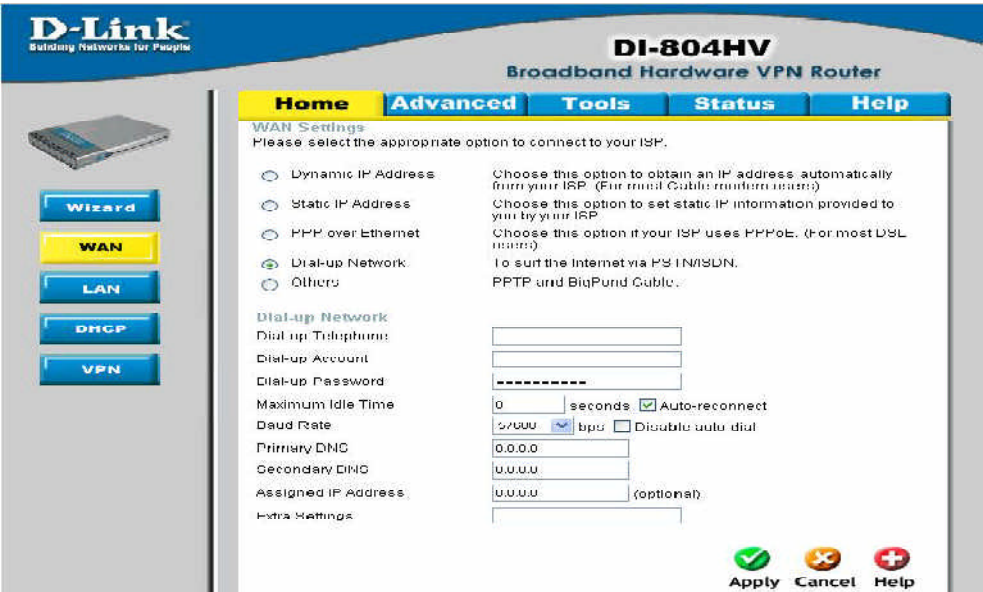
PPPoE Service Name- (Optional) Check with your ISP for more information if they require the use of service name.

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

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

Using the Configuration Menu

Home > WAN > Dial-up Network



Most Dial-up users will select this option to connect to their ISP through an analog dial-up modem. This feature can be used as a back-up when your broadband connectivity is unavailable.

Dial-up Telephone - Telephone number to connect to your ISP

Dial-up Account- Username provided by your ISP

Dial-up Password- Password provided by your ISP

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

Baud Rate- The communication speed between the DI-804HV and your modem.

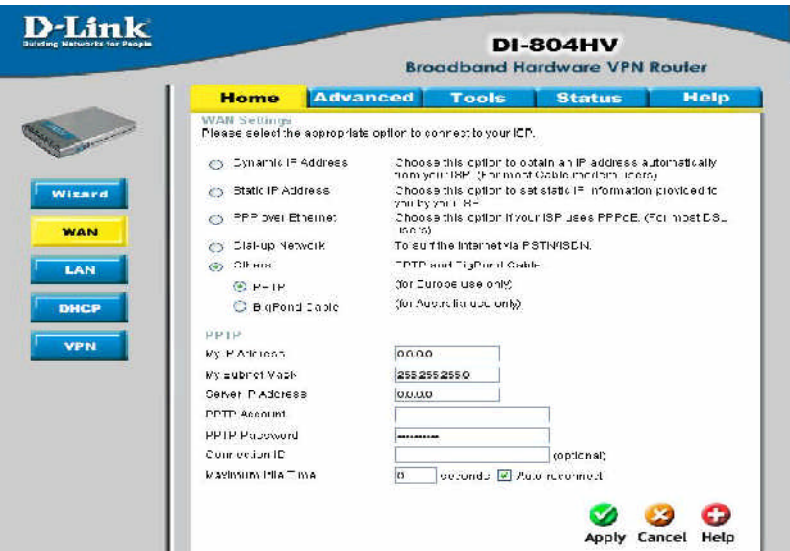
**Primary DNS-
Secondary DNS-** If the settings are configured as “0.0.0.0,” they will be automatically assigned upon connection.

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

Extra Settings- This setting is used to optimize the communication quality between the ISP and your analog dial-up modem. (Initializator string) - optional.

Using the Configuration Menu

Home > WAN > PPTP



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

My IP Address- Enter the IP Address

My Subnet Mask- Enter the Subnet Mask

Server IP Address- Enter the Server IP Address

PPTP Account- Enter the PPTP account name

PPTP Password- Enter the PPTP password

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

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

Using the Configuration Menu

Home > WAN > BigPond Cable

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Broadband Hardware VPN Router

Home Advanced Tools Status Help

WAN Settings
Please select the appropriate option to connect to your ISP.

☐ 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)

☐ Dial-up Network To surf the Internet via PSTN/ISDN

☒ Other: PPTP and BigPond Cable.
(for Europe use only)
(for Australia use only)

☐ PPTP (for Europe use only)

☒ HighPond Cable (for Australia use only)

Dynamic IP Address for BigPond

Account

Password

Login Server (optional)

Renew IP Forever ☒ Enable (Not recommended)

Apply Cancel Help

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

Renew IP forever- 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

Home > LAN

The screenshot shows the D-Link DI-804HV configuration interface. On the left is a sidebar with buttons for Wizard, WAN, LAN (highlighted in yellow), DHCP, and VPN. The main content area has tabs for Home, Advanced, Tools, Status, and Help. Under the Home tab, the 'LAN Settings' section is active. It displays 'The IP address of the LAN interface' and three input fields: 'LAN IP Address' (containing 192.168.0.1), 'Subnet Mask' (containing 255.255.255.0), and 'Domain Name' (empty). At the bottom right of the form are three buttons: a green checkmark for 'Apply', an orange X for 'Cancel', and a red plus sign for 'Help'.

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-804HV. 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.

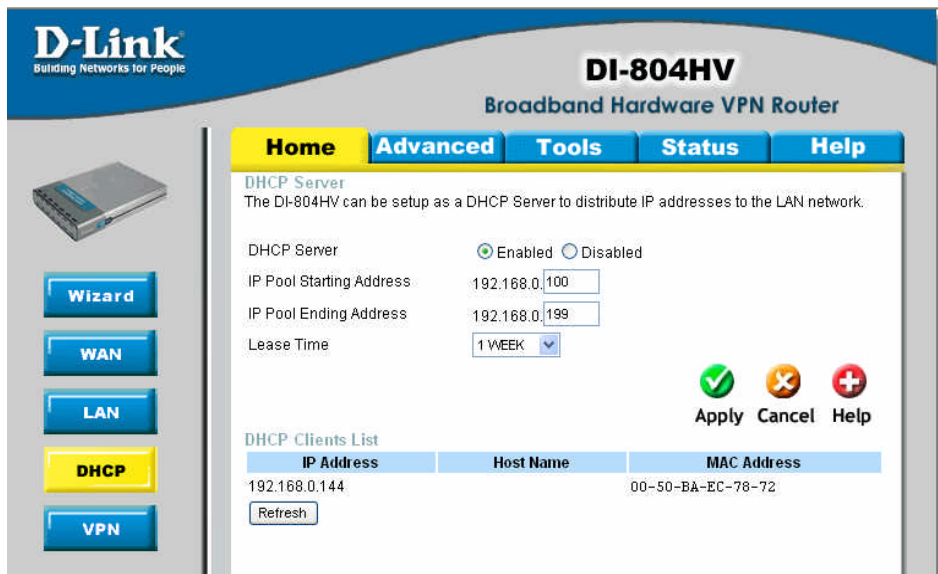
LAN IP Address- The IP address of the LAN interface.
The default IP address is: **192.168.0.1**

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

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

Using the Configuration Menu

Home >DHCP

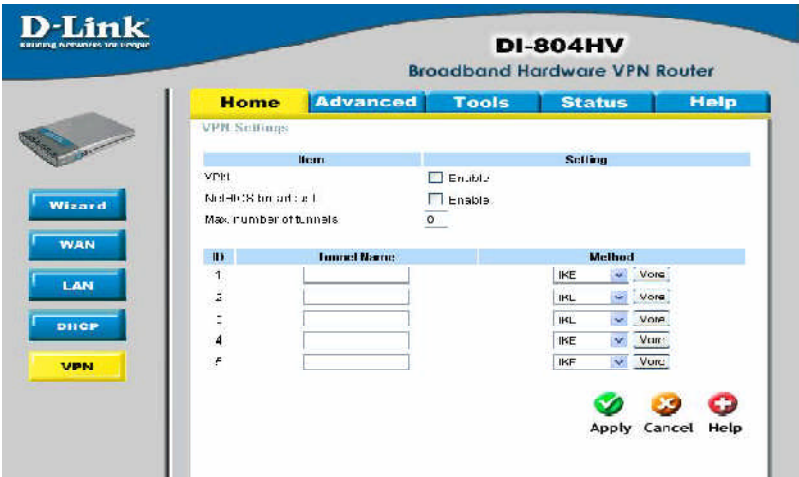


DHCP stands for *Dynamic Host Control Protocol*. The DI-804HV has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to “Obtain an IP Address Automatically.” When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DI-804HV. 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.

- DHCP Server-** Enable or disable the DHCP service.
- IP Pool Starting Address-** The starting IP address for the DHCP server’s IP assignment.
- IP Pool Ending Address-** The ending IP address for the DHCP server’s IP assignment.
- Lease Time-** The length of time for the DHCP lease.
- DHCP Clients List-** Lists the DHCP clients connected to the DI-804HV. Click **Refresh** to update the list. The table will show the Host Name, IP Address, and MAC Address of the DHCP client computer.

Using the Configuration Menu

Home >VPN Settings



VPN Settings are settings that are used to create virtual private tunnels to remote VPN gateways. The tunnel technology supports data confidentiality, data origin, authentication and data integrity of network information by utilizing encapsulation protocols, encryption algorithms, and hashing algorithms.

VPN - Check here to enable VPN tunnels. When you are not using the VPN feature, it is best to keep VPN disabled.

NetBIOS broadcast- Enable this to allow NetBIOS broadcast over the VPN tunnels.

Max. number of tunnels- Select the maximum number of allowable tunnels.

Tunnel Name- Create a name for the tunnel.

Method- IPSec VPN supports two kinds of key-obtained methods: manual key and automatic key exchange. Manual key approach indicates that the two endpoint VPN gateways require setting up authentication and encryption key by the Administrator manually. However, IKE approach will perform automatic Internet key exchange. Admins of both endpoint gateways will only need to set the same pre-shared key.

More- For more indepth configuration to adjust manual key or IKE method settings, click **More**.

Using the Configuration Menu

Home > VPN Settings > Tunnel (IKE)

Item	Setting
Tunnel Name	<input type="text"/>
Aggressive Mode	<input type="checkbox"/> Enable
Local Subnet	<input type="text" value="0.0.0.0"/>
Local Netmask	<input type="text" value="0.0.0.0"/>
Remote Subnet	<input type="text" value="0.0.0.0"/>
Remote Netmask	<input type="text" value="0.0.0.0"/>
Remote Gateway	<input type="text" value="0.0.0.0"/>
Pre-shared Key	<input type="text"/>
IKE Proposal index	<input type="button" value="Select IKE Proposal..."/>
IPsec Proposal index	<input type="button" value="Select IPsec Proposal"/>

Back Apply Cancel Help
No change

VPN Settings - IKE- There are three parts that are necessary to setup the configuration of IKE for the dedicated tunnel: basic setup, IKE proposal setup, and IPsec proposal setup. Basic setup includes the setting of following items: local subnet, local netmask, remote subnet, remote netmask, remote gateway, and pre-shared key. The tunnel name is derived from previous page of VPN setting. IKE proposal setup includes the setting of a set of frequent-used IKE proposals and selecting from the set of IKE proposals.

Tunnel Name- Current tunnel name.

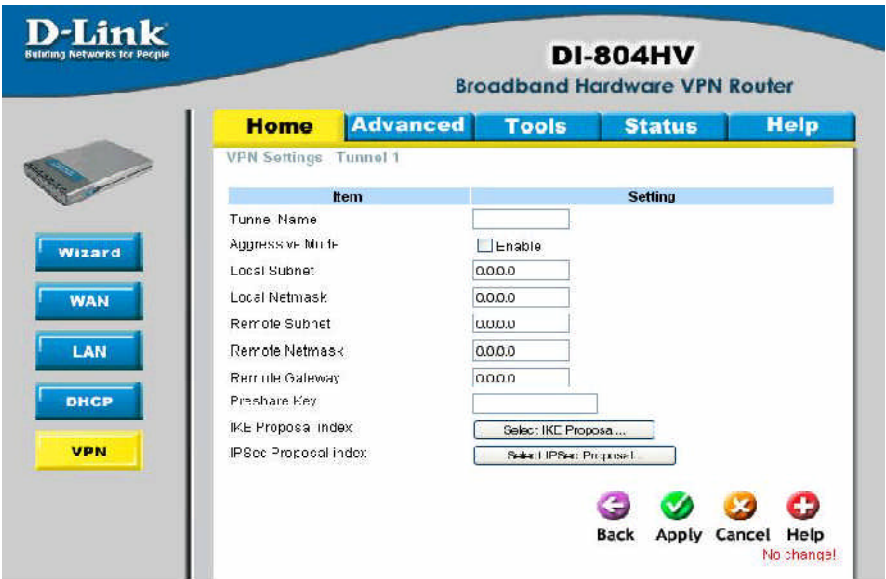
Aggressive Mode- Enabling this mode will accelerate establishing the tunnel, but the device will have less security.

Local Subnet- The subnet of the VPN gateway's local network. It can be a host, a partial subnet or a whole subnet.

Local Netmask- The netmask of the VPN gateway's local network.

Using the Configuration Menu


Home >VPN Settings > Tunnel *Continued...*




- Remote Subnet-** The subnet of the remote VPN gateway's local network. It can be a host, a partial subnet or a whole subnet.
- Remote Netmask-** The subnet of the remote VPN gateway's local network. It can be a host, a partial subnet or a whole subnet. a whole subnet.
- Remote Gateway-** The WAN IP address of remote VPN gateway.
- Preshared Key-** The first key that supports IKE mechanism of both VPN gateways for negotiating further security keys. The pre-shared key must be the same for both endpoint gateways.
- IKE Proposal index-** Click the button to setup a set of frequent-used IKE proposals and select from the set of IKE proposals for the dedicated tunnel.
- IPSec Proposal index-** Click the button to setup a set of frequent-used IPSec proposals and select from the set of IKE proposals for the dedicated tunnel.

Using the Configuration Menu

Home >VPN Settings > Tunnel (Manual)


Building Networks for People



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DHCP

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VPN Settings - Tunnel 1

Item	Setting
Tunnel Name	
Aggressive Mode	<input type="checkbox"/> Enable
Local Subnet	0.0.0.0
Local Netmask	0.0.0.0
Remote Subnet	0.0.0.0
Remote Netmask	0.0.0.0
Remote Gateway	0.0.0.0
Method	MANUAL
Local SPI	0x0000
Remote SPI	0x0000
Encapsulation Protocol	ESP
Encryption Algorithm	3DES
Encryption Key (For ESP Only)	<div></div> <div>(For 3DES ONLY)</div> <div>(For 2DES ONLY)</div>
Authentication Algorithm	NONE
Authentication Key	<div></div>
Life Time	0
Life Time Unit	Seconds

Restart Back Apply Cancel Help

Click Required: save changes

- Tunnel Name-

Current tunnel name.
- Aggressive Mode-

Enabling this mode will accelerate establishing tunnel, but the device will have less security.
- Local Subnet-

The subnet of the VPN gateway's local network. It can be a host, a partial subnet or a whole subnet.
- Local Netmask-

Local netmask combined with local subnet to form a subnet domain.
- Remote Subnet-

The subnet of the remote VPN gateway's local network. It can be a host, a partial subnet or a whole subnet.
- Remote Netmask-

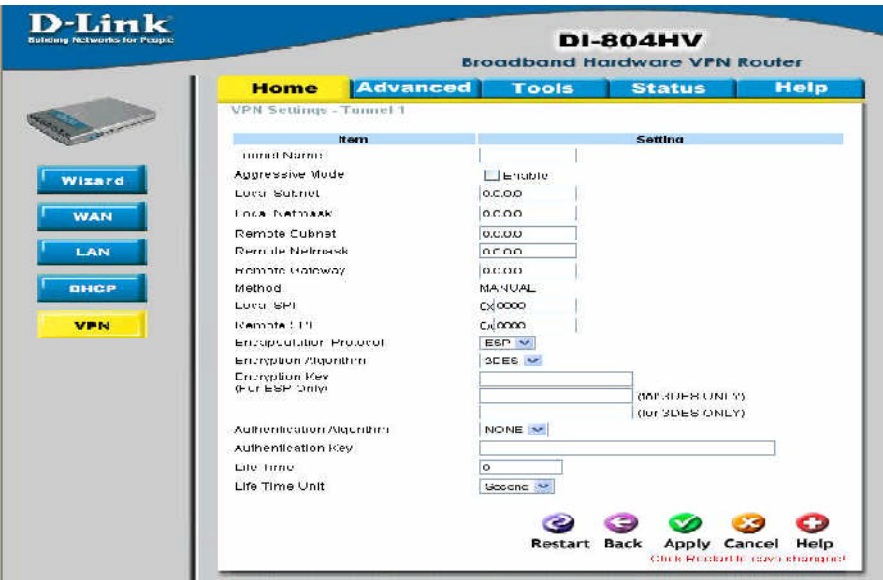
The subnet of the remote VPN gateway's local network. It can be a host, a partial subnet or a whole subnet.
- Remote Gateway-

The WAN IP address of remote VPN gateway.
- Local SPI-

The value of local SPI should be set in hex format.

Using the Configuration Menu

Home >VPN Settings > Tunnel (Manual)



Remote SPI- The value of remote SPI should be set in hex format.

Encapsulation protocol- There are two protocols that can be selected: ESP and AH.

Encryption Algorithm- There are two algorithms that can be selected: 3DES and DES.

Encryption Key- For DES, the encryption key is 8 bytes. (16 Char.)
For 3DES, the encryption key is 24 bytes (48 Char.)

Authentication Algorithm- SHA1 or MD5 algorithm can be selected.

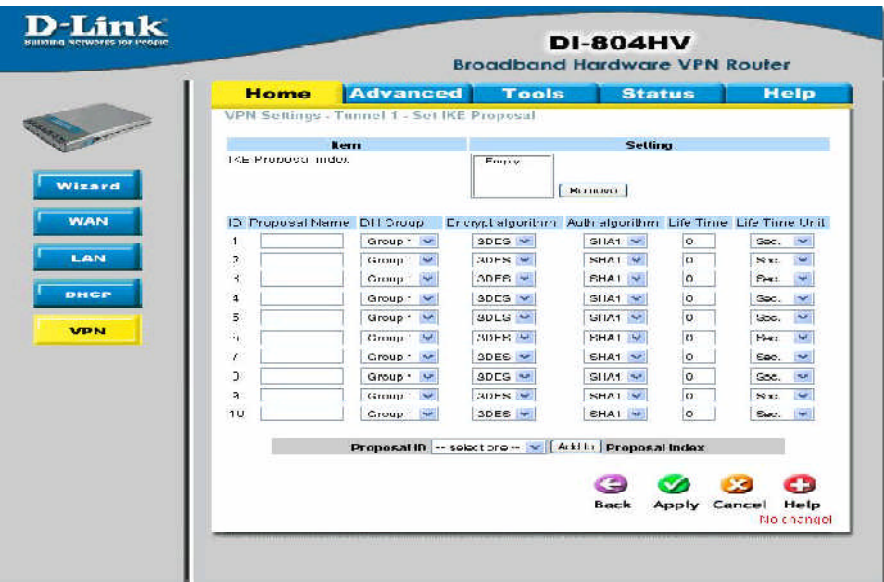
Authentication Key- For MD5, the authentication algorithm is 16 bytes. (32 Char.)
For SHA1, the authentication algorithm is 20 bytes. (40 Char.)

Life Time- Enter in the life time value.

Life Time Unit- There are two units that can be selected: second and KB.

Using the Configuration Menu

Home >VPN Settings > Tunnel > Set IKE Proposal



IKE Proposal index- A list of selected proposal indexes from the IKE proposal pool listed below.

Proposal Name- It indicates which IKE proposal to be focused. First char of the name with 0x00 value stands for the IKE proposal is not available.

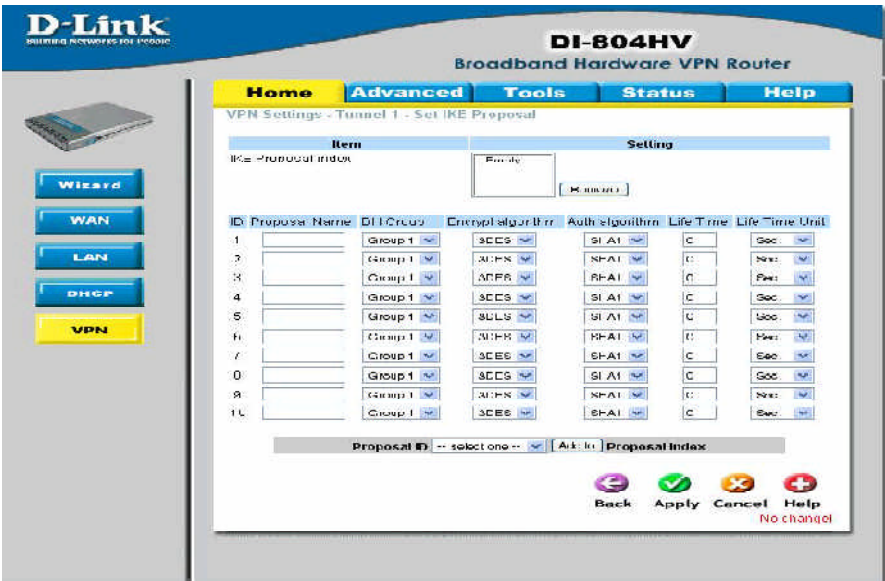
DH Group- There are three groups can be selected: group 1 (MODP768), group 2 (MODP1024), group 5 (MODP1536).

Encrypt algorithm- There are two algorithms that can be selected: 3DES and DES.

Auth algorithm- There are two algorithms that can be selected: SHA1 and MD5.

Using the Configuration Menu

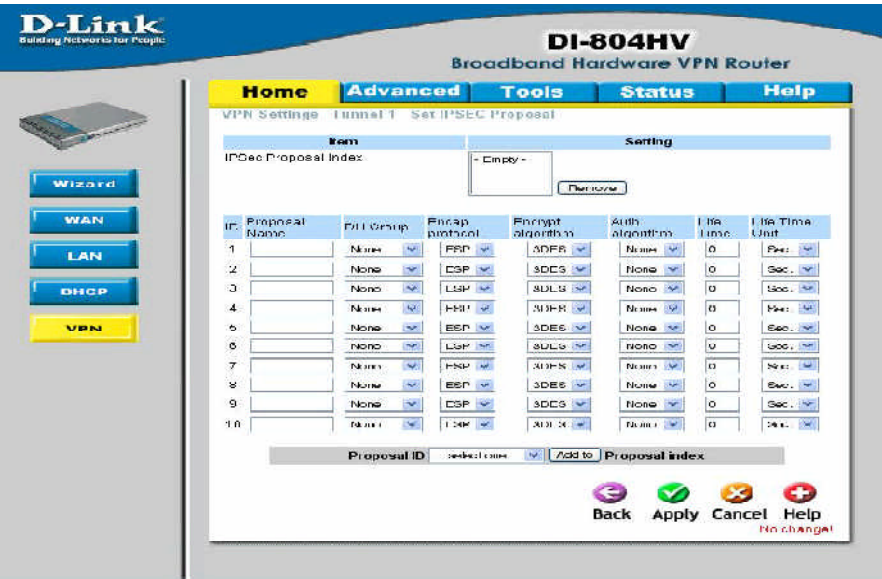
Home >VPN Settings> Tunnel > Set IKE Proposal *Continued...*



- Life Time-** Enter in the life time value.
- Life Time Unit-** There are two units that can be selected: second and KB.
- Proposal ID-** The identifier of IKE proposal can be chosen for adding corresponding proposal to the dedicated tunnel.
- Add to-** Click it to add the chosen proposal indicated by proposal ID to IKE Proposal index list.

Using the Configuration Menu

Home >VPN Settings > Tunnel > Set IPSEC Proposal



IPSec Proposal index-

A list of selected proposal indexes from the IPsec proposal pool listed below.

Proposal Name-

It indicates which IPsec proposal to be focused. First char of the name with 0x00 value stands for the proposal is not available.

DH Group-

There are three groups that can be selected: group 1 (MODP768), group 2 (MODP1024), group 5 (MODP1536).

Encap protocol-

There are two protocols that can be selected: ESP and AH.

Encrypt algorithm-

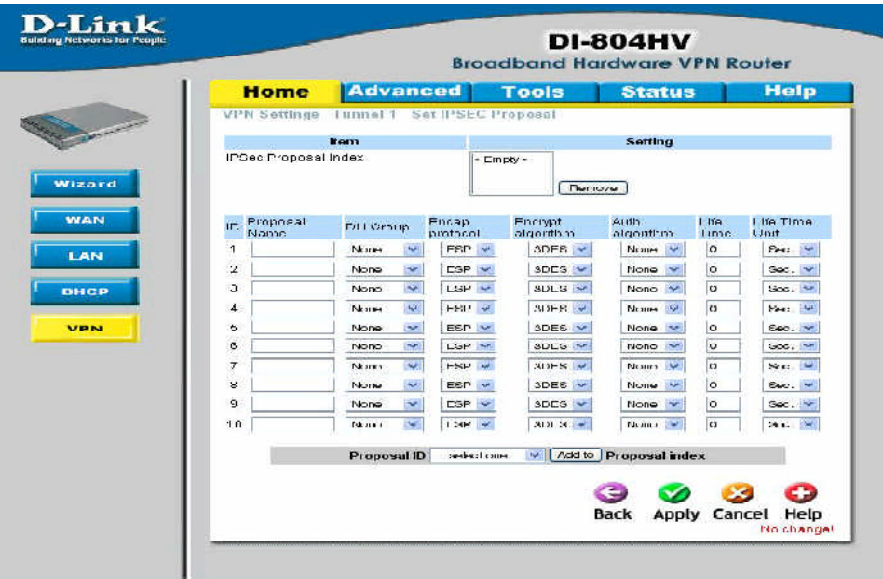
There are two algorithms that can be selected: 3DES and DES.

Auth algorithm-

There are two algorithms that can be selected: SHA1 and MD5.

Using the Configuration Menu

Home >VPN Settings> Tunnel > Set IPSEC Proposal *Continued...*



Life Time- Enter in a life time value.

Life Time Unit- There are two units that can be selected: second and KB.

Proposal ID- The identifier of IPsec proposal can be chosen for adding the proposal to the dedicated tunnel.

Add to- Click it to add the chosen proposal indicated by proposal ID to IPsec Proposal index list.

Using the Configuration Menu

Advanced > Virtual Server

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Virtual Server

Virtual Server is used to allow Internet users access to LAN services:

ID: 1

Enable: ☐ Enable

Service Ports: Well known services: -- select one --

Service IP: 192.168.0.

Schedule: ☐ Always ☐ From time 00:00 To 00:00 day Sun to Sun

Apply Cancel Help

Service Ports Server IP Schedule

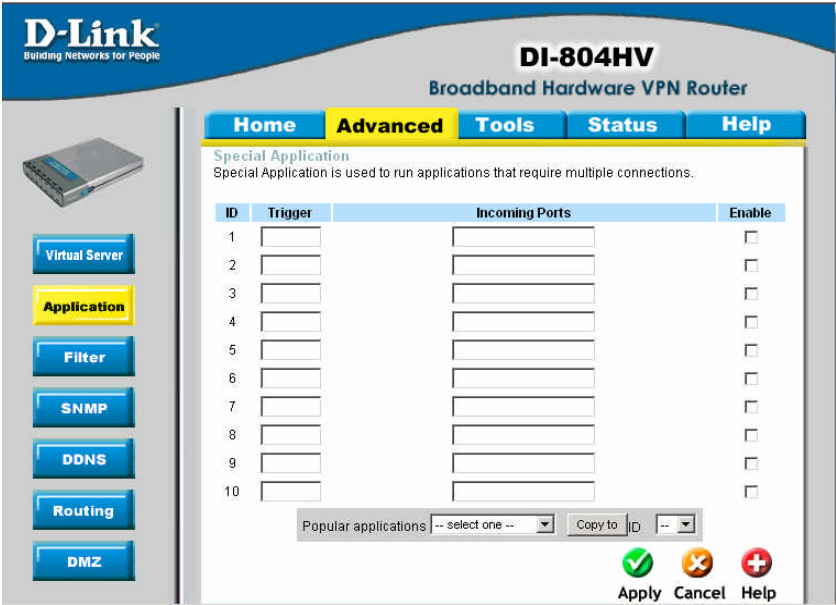
The DI-804HV can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DI-804HV firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DI-804HV are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling *Virtual Server*. Depending on the requested service, the DI-804HV redirects the external service request to the appropriate server within the LAN network.

- ID-** The ID number is automatically assigned
- Enable-** Select to activate the policy
- Service Ports-** Enter in the service port or ports to be used. A range of ports can be specified with a hyphen. (e.g., 20-21)
- Well known services-** Use the pull-down menu to select from a list of well-known virtualservices
- Service IP-** The IP address of the internal computer that will be using the virtualservice
- Schedule-** Select **Always**, or choose **From** and enter the time period during which the virtual service will be available

Using the Configuration Menu

Advanced > Application



Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). **Special Applications** makes some of these applications work with the DI-804HV. If you need to run applications that require multiple connections, specify the port normally associated with an application in the **Trigger** field, then enter the public ports associated with the trigger port into the **Incoming Ports** field.

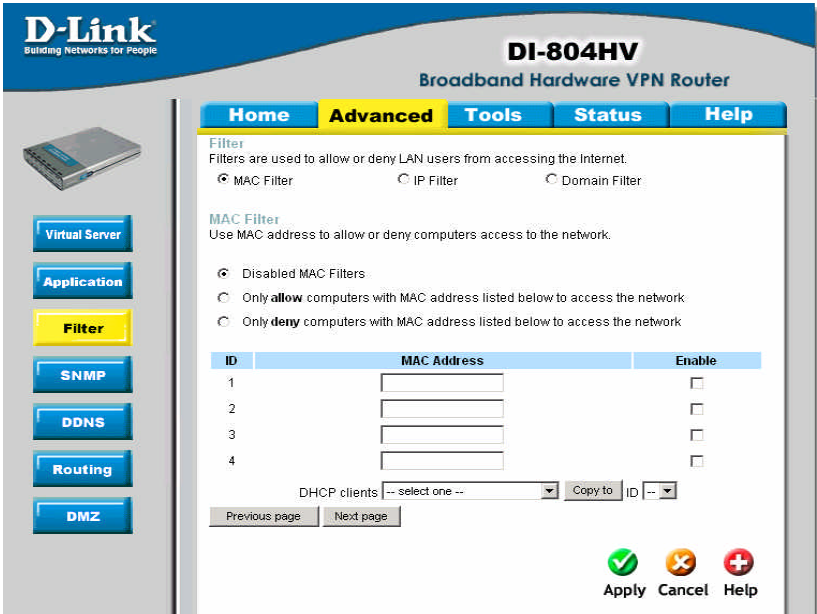
At the bottom of the screen, there are already defined special applications. To use them, select one from the drop down list and select an ID number you want to use. Then click the “Copy to” button and the router will fill in the appropriate information to the list. You will then need to enable the service.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

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

- Trigger-** This is the port used to trigger the application. It can be either a single port or a range of ports.
- Incoming 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.
- Enable-** Select to activate the policy

Using the Configuration Menu

Advanced > MAC Filters



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

At the bottom of the screen, there is a list of MAC addresses from the DHCP client computers connected to the DI-804HV. 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-804HV will fill in the appropriate information to the list.

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

Only allow computers with MAC address listed below to access the network-

Select this option to only allow computers that are in the list to access the network and Internet. All other computers will be denied access to the network and Internet.

Only deny computers with MAC address listed below to access the network-

Select this option to only deny computers that are in the list to access the network and Internet. All other computers will be allowed access to the network and Internet.

MAC Address- Enter the **MAC Address** of the client that will be filtered

Enable- Select this option for the specific IP filter policy to take effect.

Using the Configuration Menu

Advanced > IP Filter

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

The screenshot shows the D-Link DI-804HV configuration interface. On the left is a sidebar with buttons for Virtual Server, Application, Filter (highlighted in yellow), SNMP, DDNS, Routing, and DMZ. The main area has tabs for Home, Advanced (selected), Tools, Status, and Help. Under the Advanced tab, the 'Filter' section is active, showing options for MAC Filter, IP Filter (selected), and Domain Filter. The IP Filter section has a description and two radio button options: 'Disabled IP Filter' (selected) and 'Allow all computers to access the Internet except those listed below.' Below these are fields for IP, Port, and Schedule. The Schedule section has radio buttons for 'Always' and 'From' (selected), with time and day pickers. At the bottom are 'Apply', 'Cancel', and 'Help' buttons.

Disabled IP Filter-

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

Allow all computers to access the Internet except those listed below-

Those in the list will be denied access to the Internet; all other computers will be allowed access to the Internet.

Deny all computers access to the Internet except those listed below-

Select this option to deny all computers access to the Internet except those that are listed below. All other computers will be denied access to the Internet.

Enabled or Disabled-

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

IP-

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-

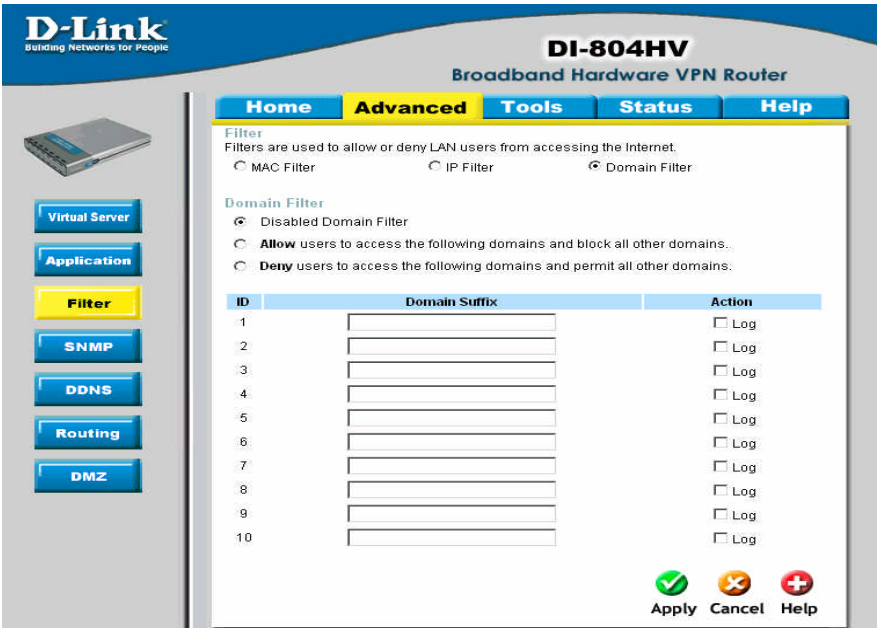
Enter in the port range of the TCP/UDP ports that you want the policy to apply to. If it is only a single port that you want the policy applied to, then enter the port number in the Start Port field and leave the End Port field blank. If you want to use all the ports, you can leave the port range empty.

Schedule-

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

Using the Configuration Menu

Advanced > Domain Filter



Use Domain filters to allow or deny computers access to specific Internet domains whether it is through www, ftp, snmp, etc.

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.

Domain suffix- Enter in the domain suffix of the Internet domain you want to use. (example: shopping.com, sports.net)

Log- Select this option to log usage to the specified domain. The logs can be viewed in Status > Log.

Using the Configuration Menu

Advanced > SNMP

The screenshot shows the D-Link DI-804HV configuration interface. The top navigation bar includes 'Home', 'Advanced' (selected), 'Tools', 'Status', and 'Help'. The left sidebar contains buttons for 'Virtual Server', 'Application', 'Filter', 'SNMP' (highlighted in yellow), 'DDNS', 'Routing', and 'DMZ'. The main content area is titled 'SNMP' and contains the following settings:

- Enable SNMP:** ☒ Local ☐ Remote
- Get Community:**
- Set Community:**

At the bottom right of the configuration area are three buttons: 'Apply' (with a green checkmark icon), 'Cancel' (with an orange 'X' icon), and 'Help' (with a red plus icon).

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-804HV. The DI-804HV supports SNMP v1.

Enable SNMP- (Simple Network Management Protocol)

Local- LAN (Local Area Network)

Remote- WAN (Wide Area Network)

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

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

Using the Configuration Menu

Advanced > DDNS


The screenshot shows the D-Link DI-804HV configuration interface. The top navigation bar includes 'Home', 'Advanced' (selected), 'Tools', 'Status', and 'Help'. The left sidebar contains buttons for 'Virtual Server', 'Application', 'Filter', 'SNMP', 'DDNS' (highlighted in yellow), 'Routing', and 'DMZ'. The main content area is titled 'Dynamic DNS' and includes the instruction 'Use Dynamic DNS if you want to use your DDNS account.' Below this, there are radio buttons for 'DDNS' (Disabled/Enabled), a 'Provider' dropdown menu (set to 'DynDNS.org(Dynamic)'), and input fields for 'Host Name', 'Username / E-mail', and 'Password / Key'. At the bottom right of the form are three buttons: 'Apply' (with a green checkmark icon), 'Cancel' (with an orange X icon), and 'Help' (with a red plus icon).


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-804HV.

- DDNS-** When an IP address is automatically assigned by a DHCP server, DDNS automatically updates the DNS server. Select **Disabled** or **Enabled**
- Provider-** Select from the pull-down menu
- Host Name-** Enter the Host name
- Username/Email-** Enter the username or email address
- Password/Key-** Enter the password or key

Using the Configuration Menu

Advanced > Routing


Building Networks for People



Virtual Server

Application

Filter

SNMP

DDNS

Routing

DMZ

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Routing Table

Use the Routing Table for routing purposes within your local network.

ID	Destination	Subnet Mask	Gateway	Hop	Enable
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

 Apply

 Cancel

 Help

Routing Tables allow you to determine which physical interface address to use for outgoing IP data grams. If you have more than one routers and subnets, you will need to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other.

Dynamic Routing

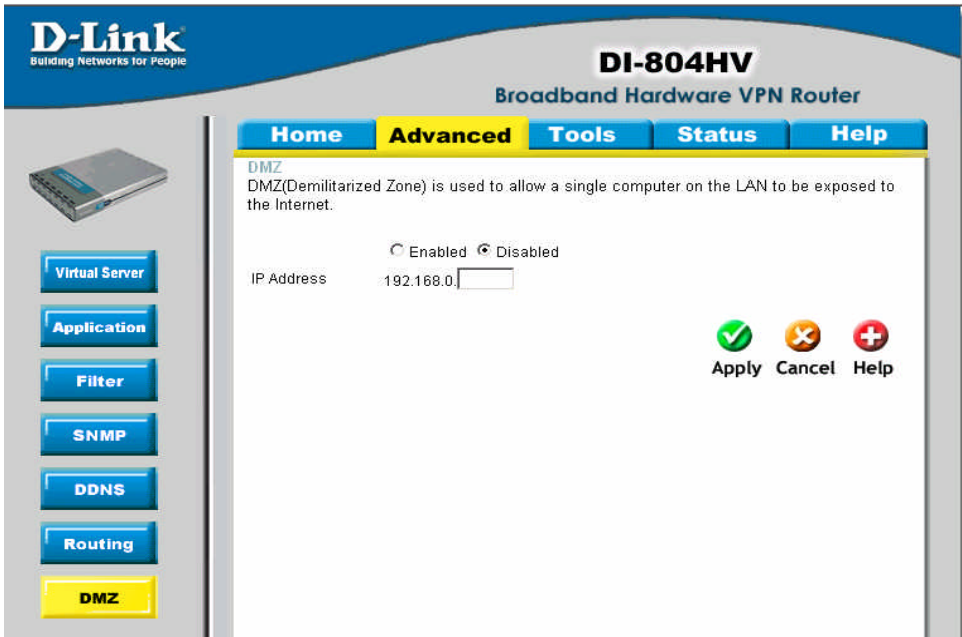
Dynamic Routing Settings allow the VPN Router to route IP packets to another network automatically. The RIP protocol is applied, and broadcasts the routing information to other routers on the network regularly.
By default, it is set to disable. Check to enable (RIPv1 / RIPv2) protocol.

Static Routing

Static routing settings allow the VPN Router to route IP packets to another network. The routing table sorts the routing information so that your network device knows where to redirect the IP packets to the proper network.
By default, it is set to disable. To change this configuration, select enable.

Using the Configuration Menu

Advanced > DMZ



If you have a computer that cannot run Internet applications properly from behind the DI-804HV, then you can allow that computer to have unrestricted Internet access. Enter the IP address of that computer as a DMZ (Demilitarized Zone) host with unrestricted Internet access. Adding a client to the DMZ may expose that computer to a variety of security risks; so only use this option as a last resort.

Using the Configuration Menu

Tools>Admin

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Administrator's Toolbox
Administrators can change their login password.

Old Password

New Password

Reconfirm

☒ Enabled ☐ Disabled

IP Address

Port

Apply Cancel Help

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

Password-

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

Remote Management-

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

IP Address-

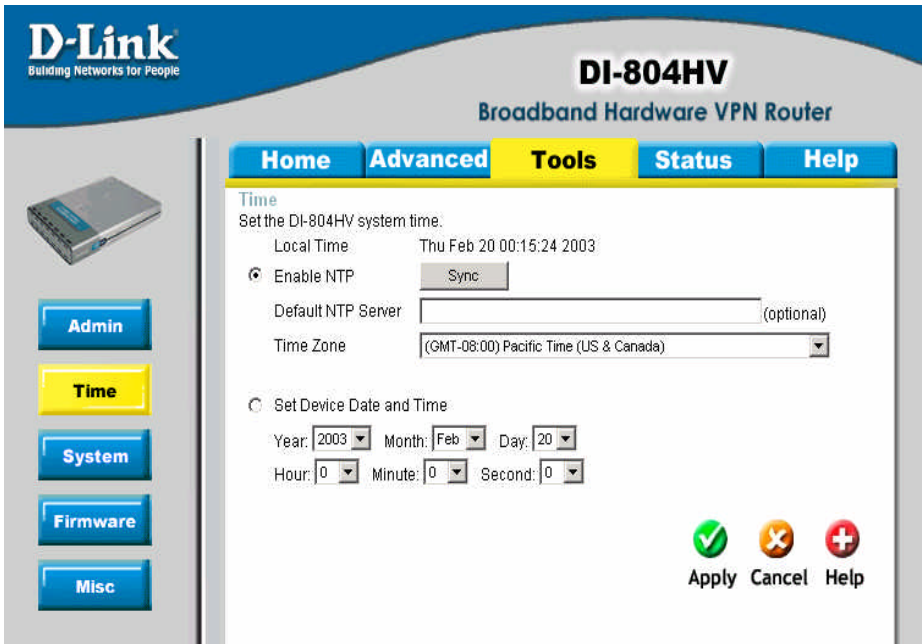
Internet IP Address of the computer that has access to the DI-804HV. If the IP Address is set to 0.0.0.0, this allows all Internet IP addresses to access the DI-804HV.

Port-

The port number used to access the DI-804HV.
E.g., <http://x.x.x.x:8080>, where x.x.x.x. is the WAN IP address of the DI-804HV and 8080 is the port used for the Web Management interface.

Using the Configuration Menu

Tools> Time



The screenshot shows the D-Link DI-804HV configuration interface. The top navigation bar includes 'Home', 'Advanced', 'Tools' (highlighted), 'Status', and 'Help'. On the left, there's a sidebar with 'Admin', 'Time' (highlighted), 'System', 'Firmware', and 'Misc'. The main content area is titled 'Time' and contains the following settings:

- Set the DI-804HV system time.**
 - Local Time: Thu Feb 20 00:15:24 2003
 - ☒ **Enable NTP** (with a 'Sync' button)
 - Default NTP Server: [text input field] (optional)
 - Time Zone: [(GMT-08:00) Pacific Time (US & Canada)]
- ☐ **Set Device Date and Time**
 - Year: [2003] Month: [Feb] Day: [20]
 - Hour: [0] Minute: [0] Second: [0]

At the bottom right, there are three buttons: 'Apply' (with a green checkmark icon), 'Cancel' (with a red X icon), and 'Help' (with a red plus icon).

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

Enable NTP-

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

Sync-

Click **Sync** to activate the synchronization with the NTP server that you input in the default NTP server field

Default NTP server-

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

Time Zone-

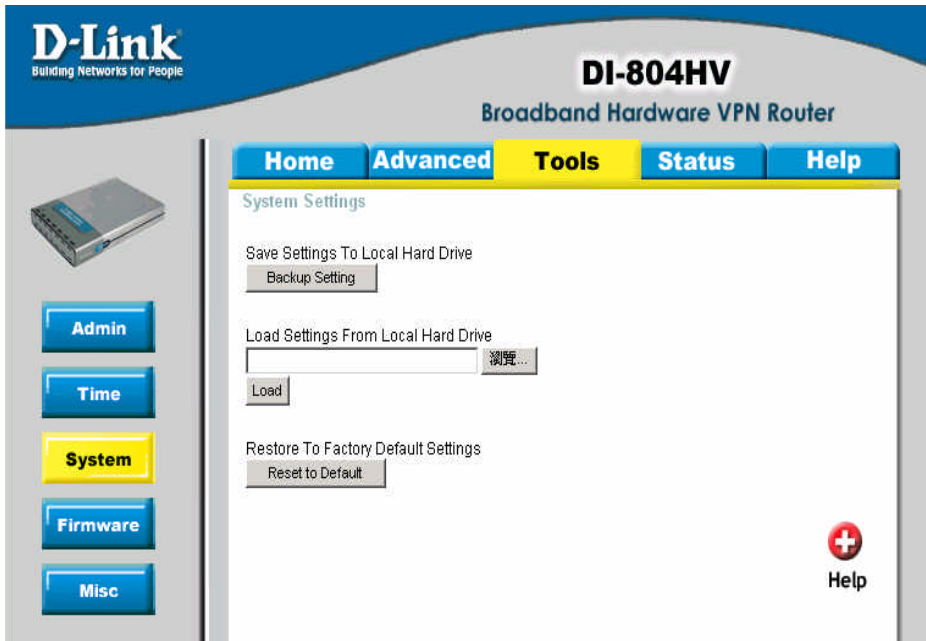
Select your time zone from the pull-down menu

Set Device Date and Time-

If you are entering the time manually, select the correct Year; Month; Day; Hour; Minute and Second

Using the Configuration Menu

Tools > System



The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file created by the DI-804HV 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 **Backup Setting** to save the current settings to the local HardDrive

Load Settings from Local Hard Drive-

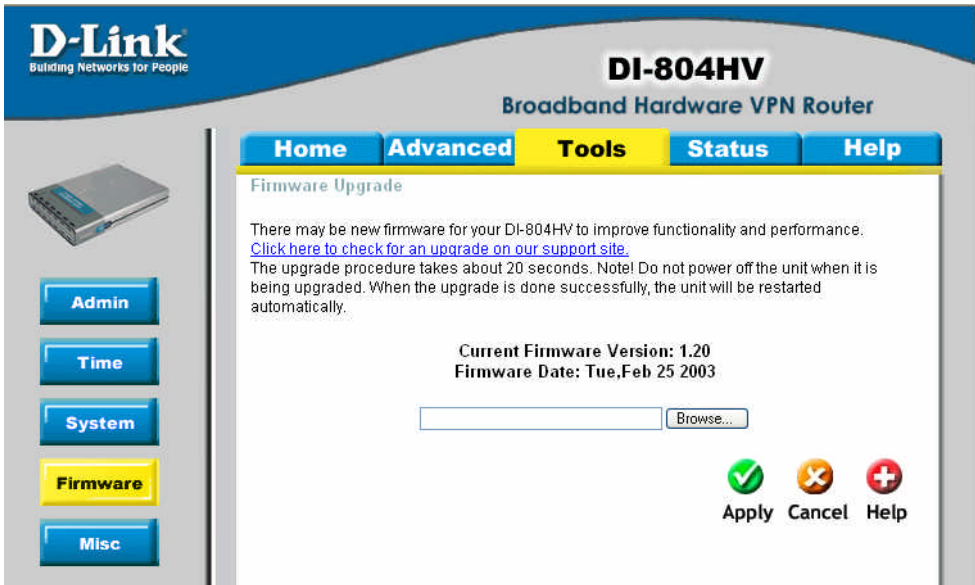
Click **Browse** to find the settings file, then click **Load**

Restore to Factory Default Settings-

Click **Restore to Default** to restore the factory default settings

Using the Configuration Menu

Tools > Firmware



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

Browse-

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



Note! Do not power off the unit when it is being upgraded. When the upgrade is complete, the unit will be restarted automatically.

Using the Configuration Menu

Tools > Misc

The screenshot shows the D-Link DI-804HV configuration interface. The top navigation bar includes 'Home', 'Advanced', 'Tools' (highlighted), 'Status', and 'Help'. On the left, a sidebar contains buttons for 'Admin', 'Time', 'System', 'Firmware', and 'Misc' (highlighted). The main content area is titled 'DI-804HV Broadband Hardware VPN Router'. It contains four sections: 'Ping Test' with a text input for 'Domain Name or IP address' and a 'Ping' button; 'Restart Device' with a 'Reboot' button; 'Block WAN Ping' with a description and radio buttons for 'Enable' and 'Disable' (selected); and 'Non-standard FTP port' with a description and a 'Port' input field. At the bottom right are 'Apply', 'Cancel', and 'Help' buttons.

Ping Test-

In the open box, enter an URL (i.e. www.dlink.com) or an IP address and click on Ping to test your internet connection.

Restart Device-

Click Reboot to restart the unit.

Block WAN Ping-

Click **Enable** to block the WAN ping. Computers on the Internet will not get a reply back from the DI-804HV when it is being “ping”ed. This may help to increase security.

Non-standard FTP port-

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

Using the Configuration Menu

Status > Device Info

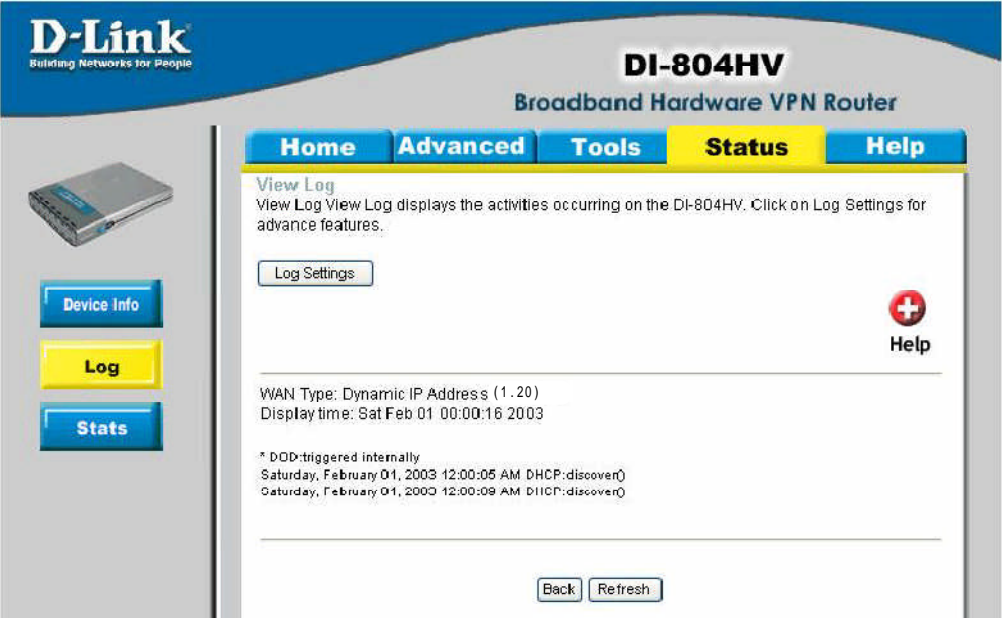


This screen displays information about the DI-804HV

Refresh- Click **Refresh** to update the page.

Using the Configuration Menu

Status > Log

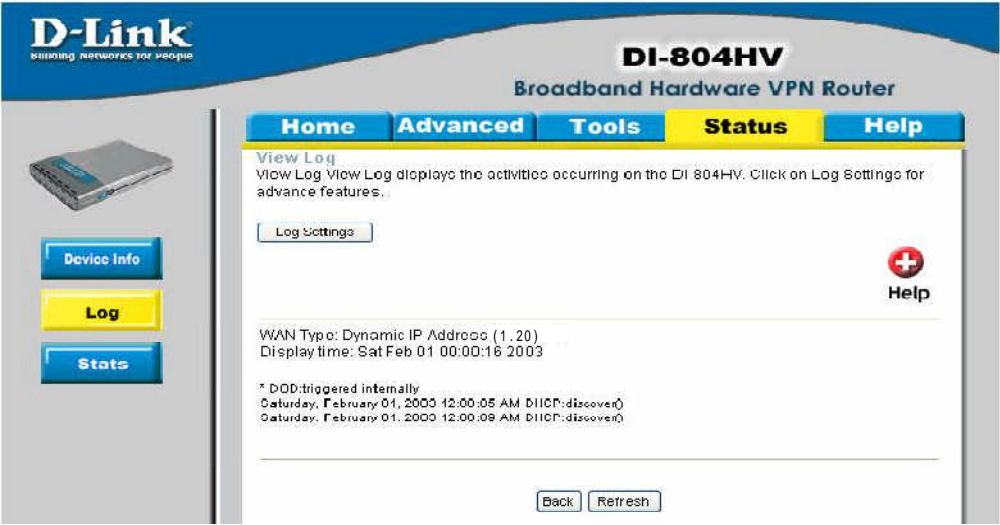


This screen displays activities occurring on the DI-804HV

- Log Settings-** Click for advanced features (see next page.)
- Back-** Click **Back** to return to the top of the log.
- Refresh-** Click **Refresh** to update the log.

Using the Configuration Menu

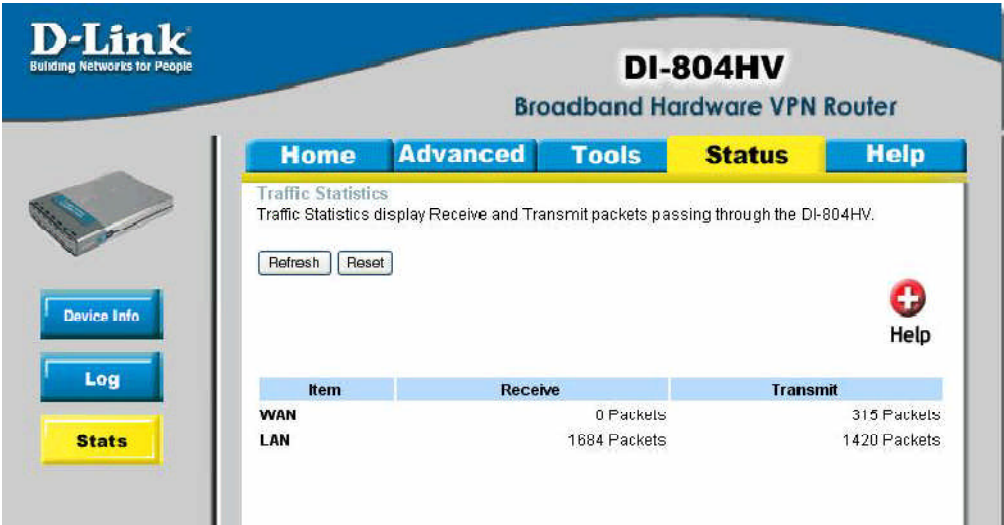
Status > Log Settings



- IP Address of the Syslog Server-** Enter in the IP address of a syslog server within the network. Click **Enable** to activate the policy. The DI-804HV will send all of it's logs to the specified syslog server.
- E-Mail Alert-** The DI-804HV can be set up to send the log files to a specific email address.
- SMTP Server IP-** Enter in the IP address of the mail server.
- 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 immediately.

Using the Configuration Menu

Status > Stats



In Stats section, traffic statistics are displayed.

Refresh- This will update the page.

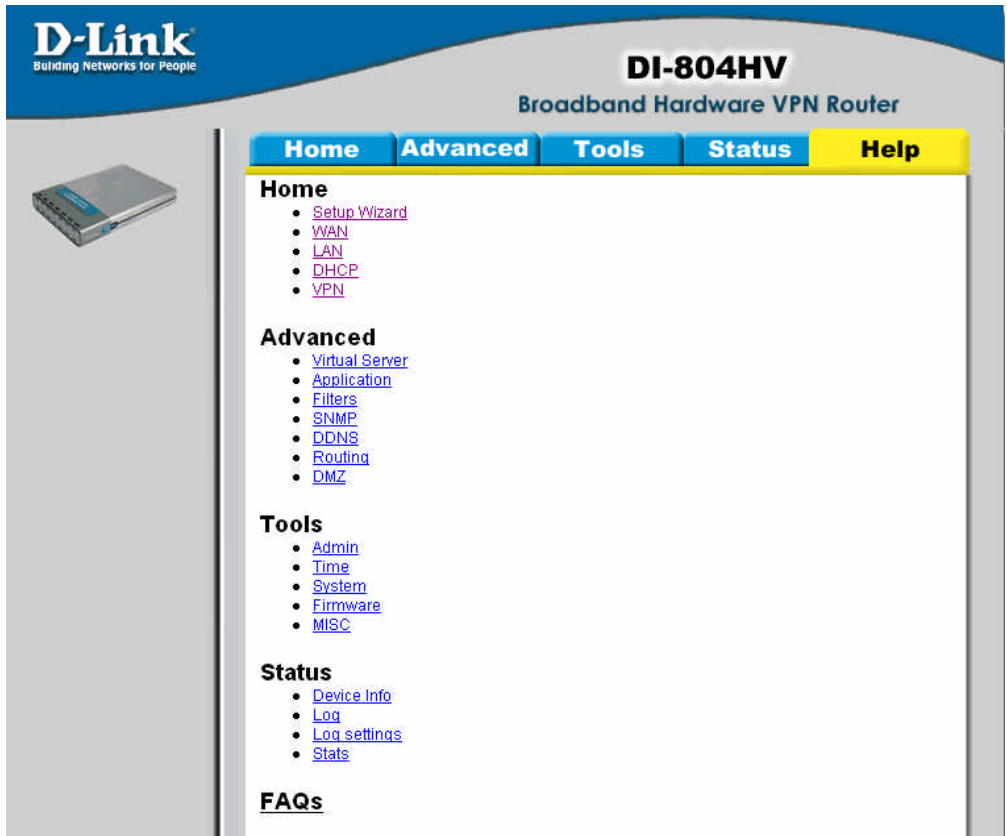
Reset- This will reset the packet counter to zero.

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

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

Using the Configuration Menu

Help



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

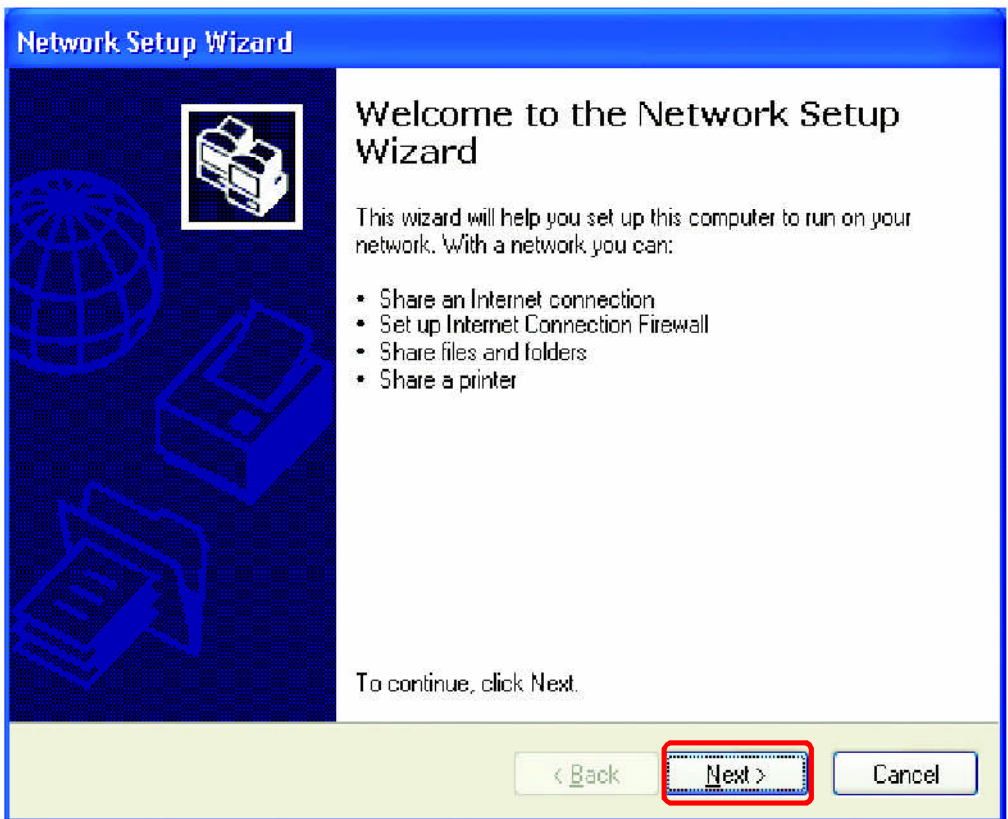
Networking Basics

Using the Network Setup Wizard in Windows XP

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

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

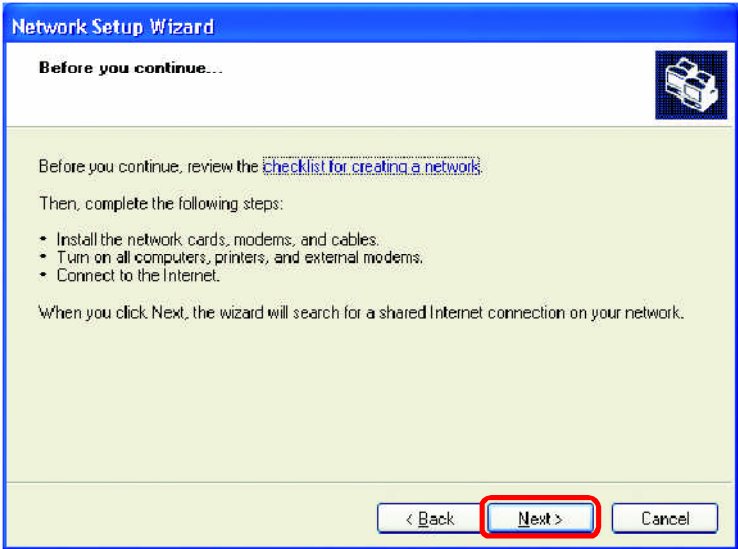
Go to **Start>Control Panel>Network Connections**
Select **Set up a home or small office network**



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

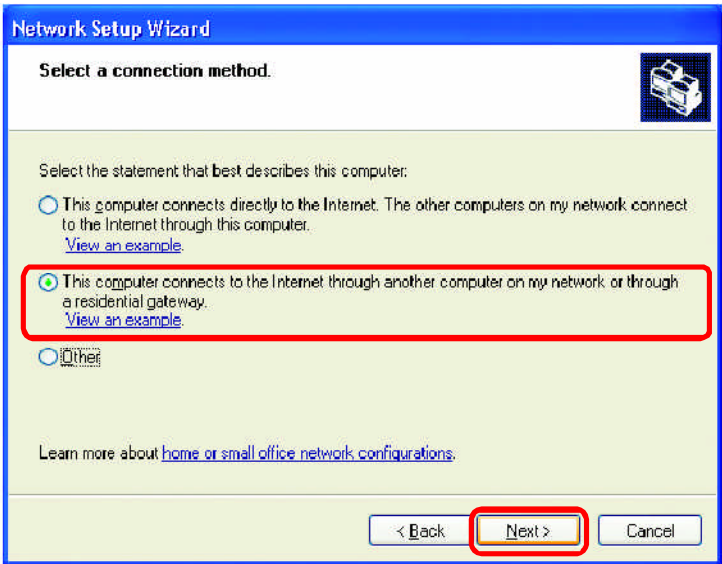
Networking Basics

Please follow all the instructions in this window:



Click **Next**

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



Click **Next**

Networking Basics

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

Network Setup Wizard

Give this computer a description and name.

Computer description:

Mary's Computer

Examples: Family Room Computer or Monica's Computer

Computer name:

Office

Examples: FAMILY or MONICA

The current computer name is Office

Learn more about [computer names and descriptions](#).

< Back

Next >

Cancel

Click **Next**

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

Network Setup Wizard

Name your network.

Name your network by specifying a workgroup name below. All computers on your network should have the same workgroup name.

Workgroup name:

Accounting

Examples: HOME or OFFICE

< Back

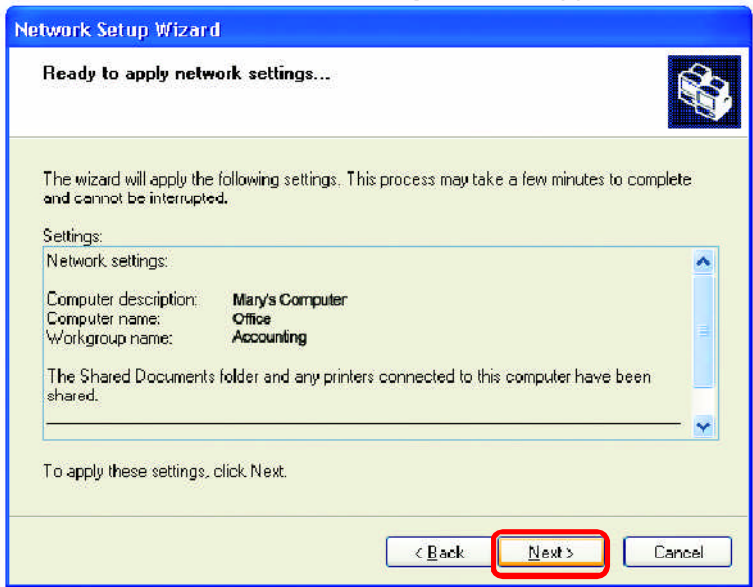
Next >

Cancel

Click **Next**

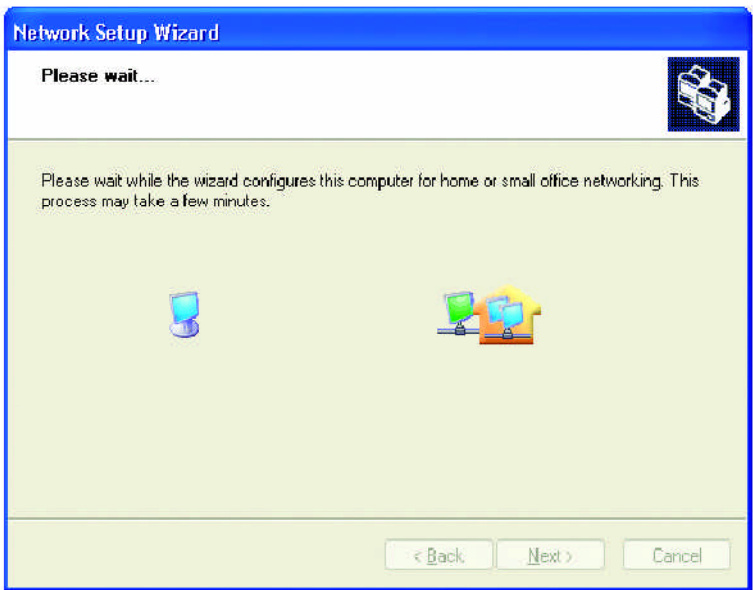
Networking Basics

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



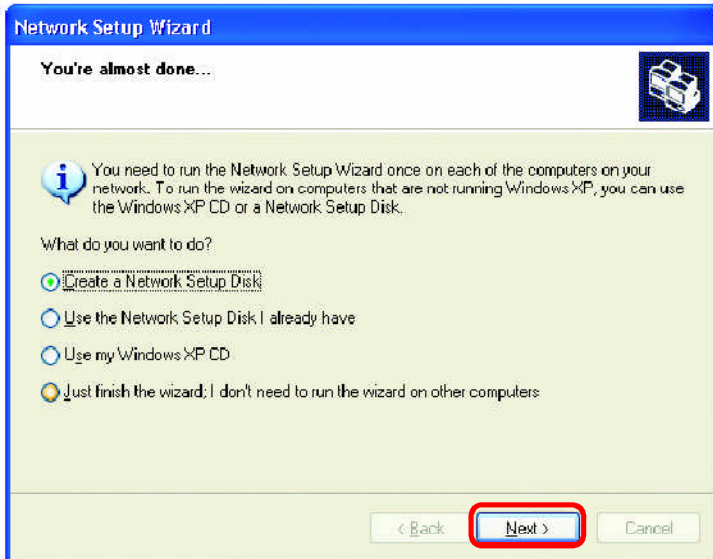
When the changes are complete, click **Next**.

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

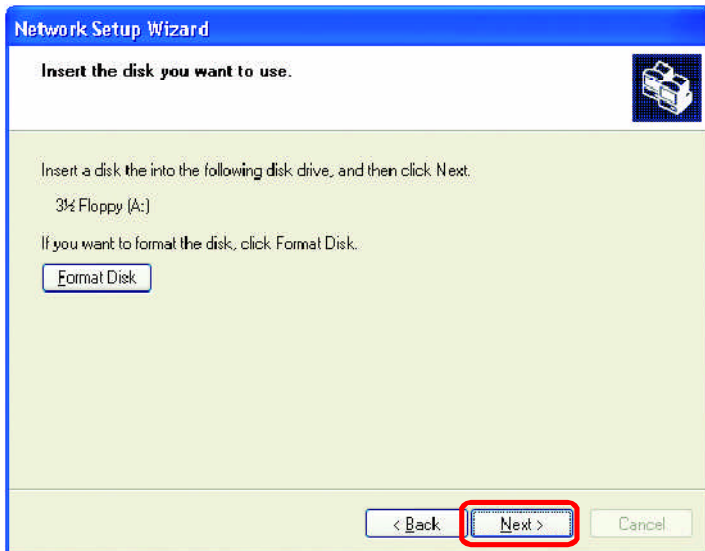


Networking Basics

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

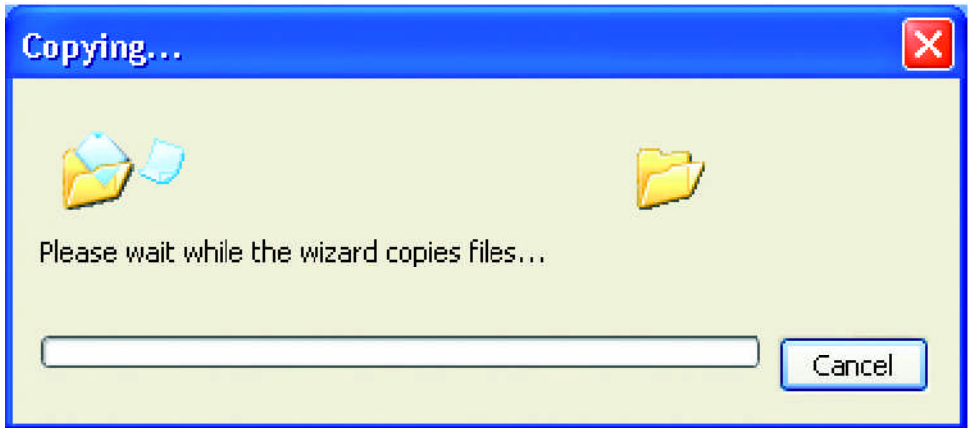


Insert a disk into the Floppy Disk Drive, in this case drive **A**.

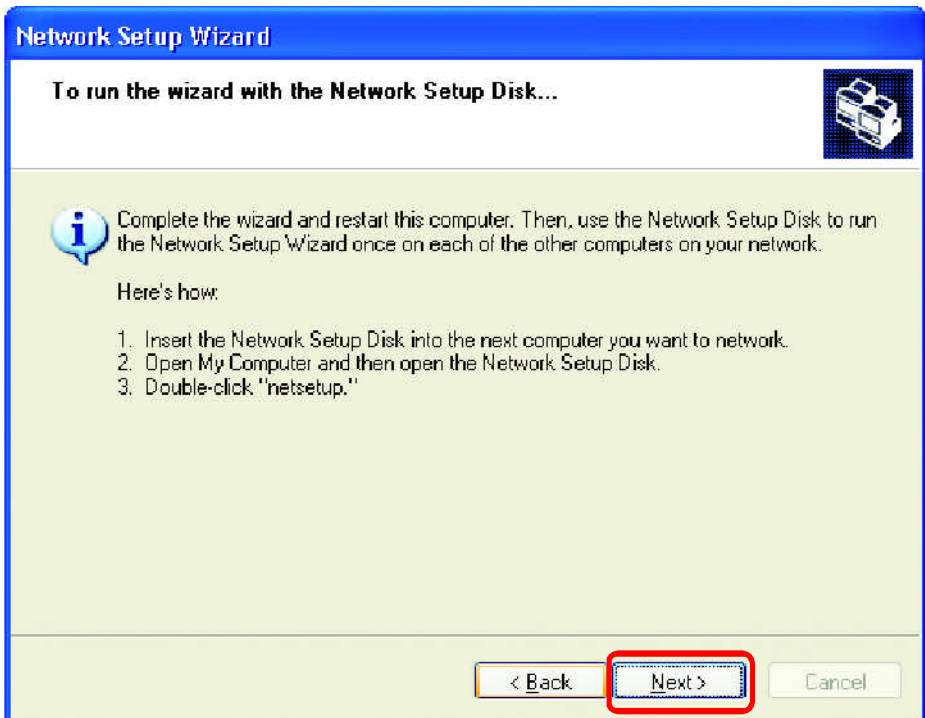


Format the disk if you wish, and click **Next**.

Networking Basics

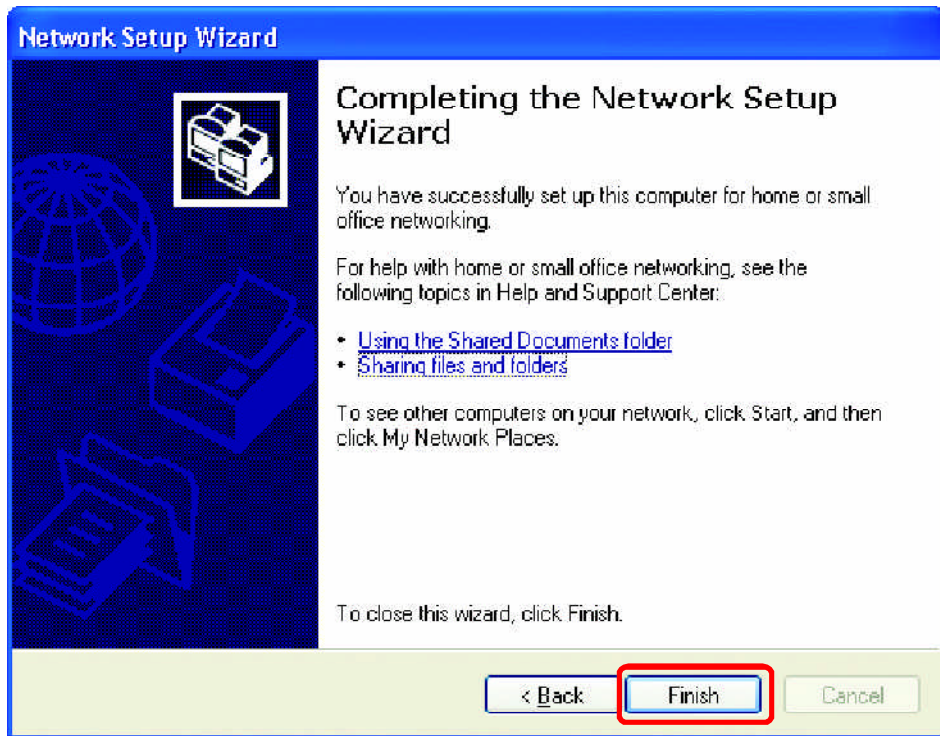


Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.

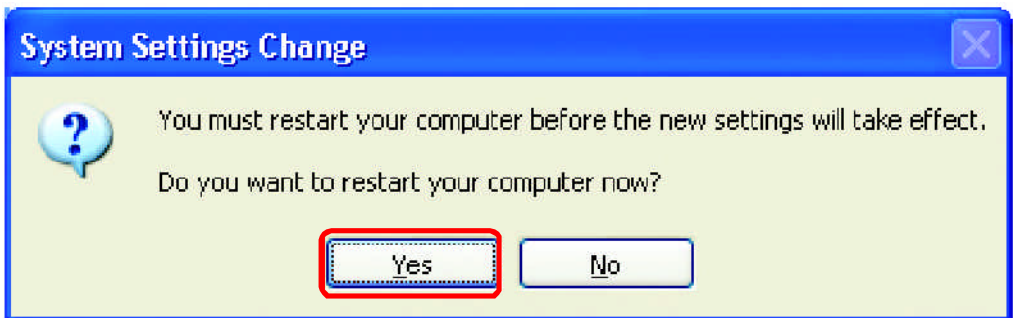


Networking Basics

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



The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.



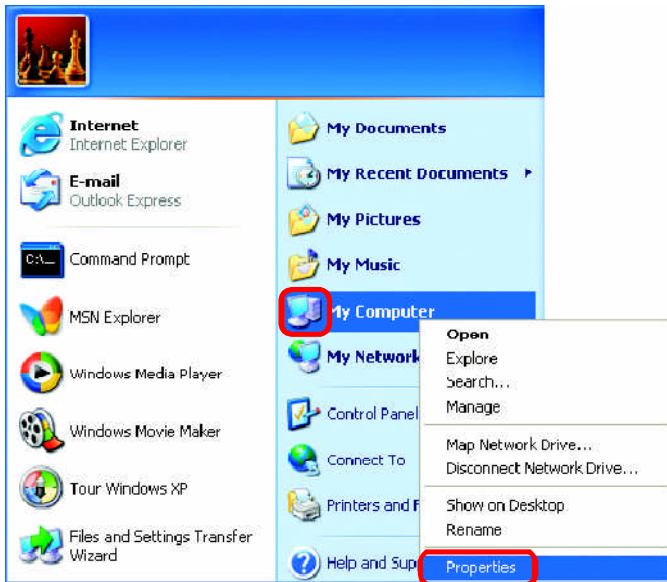
You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

Networking Basics

Naming your Computer

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

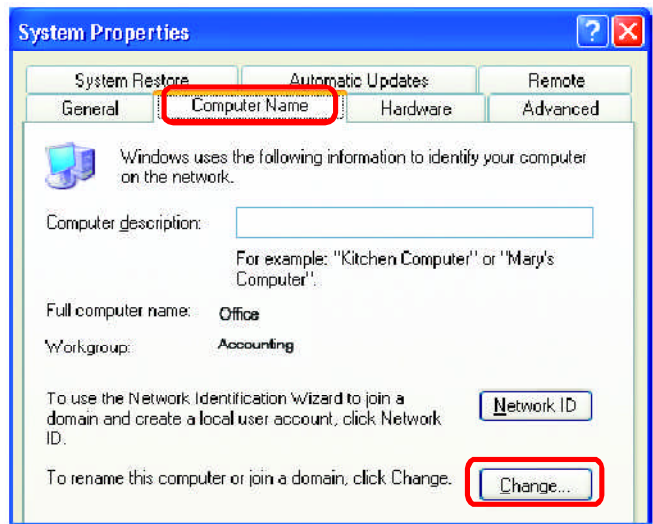
- Click **Start** (in the lower left corner of the screen)
- **Right-click** on **My Computer**
- Select **Properties** and click



- Select the **Computer Name** Tab in the System Properties window.

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

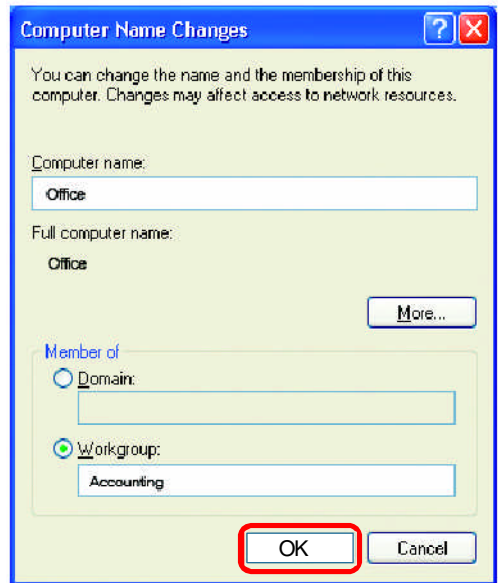
- To rename the computer and join a domain, Click **Change...**



Networking Basics

Naming your Computer

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



Checking the IP Address in Windows XP

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

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



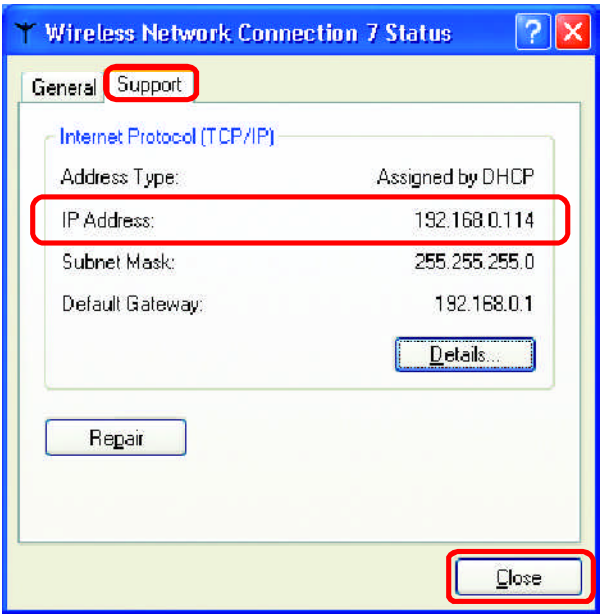
Networking Basics

Checking the IP Address in Windows XP

This window will appear.

- Click the **Support** tab

- Click **Close**

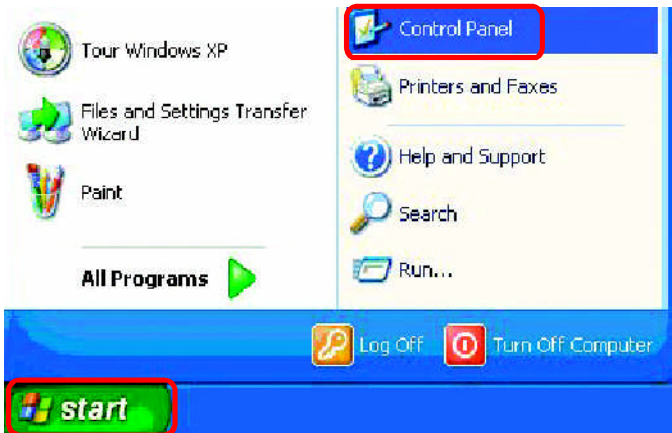


Assigning a Static IP Address in Windows XP/2000

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

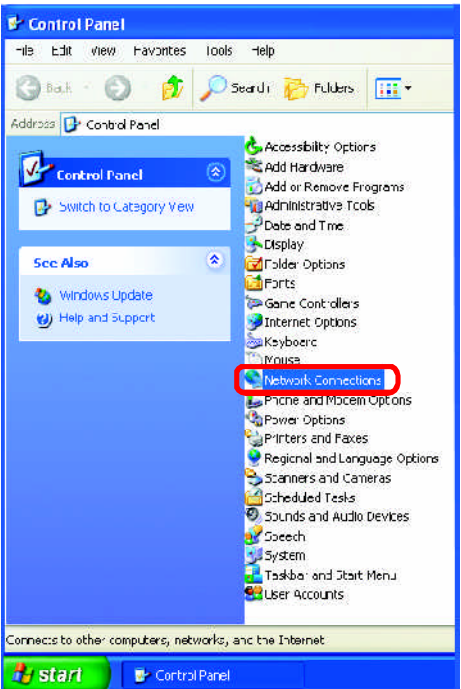
If you are not using a DHCP capable Gateway/Router, or you need to assign a Static IP Address, please follow these instructions:

- Go to **Start**
- Double-click on **Control Panel**

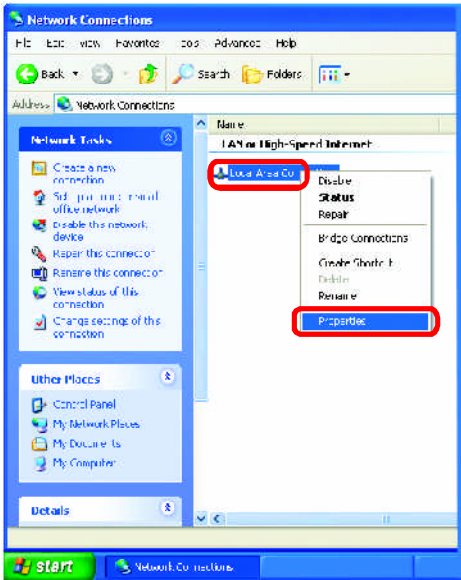


Networking Basics
Assigning a Static IP Address in Windows XP/2000

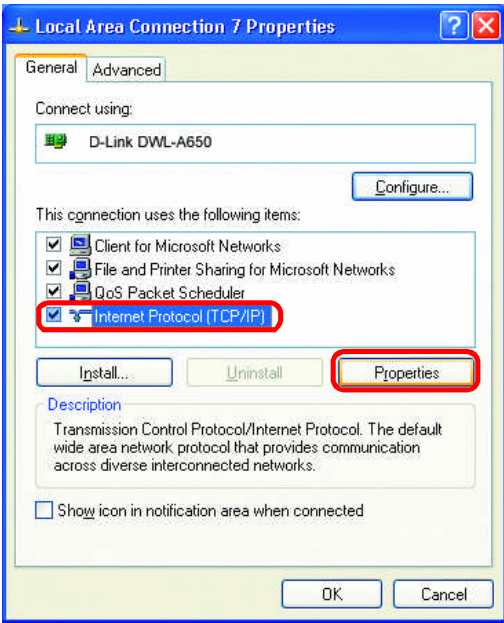
- Double-click on **Network Connections**



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



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



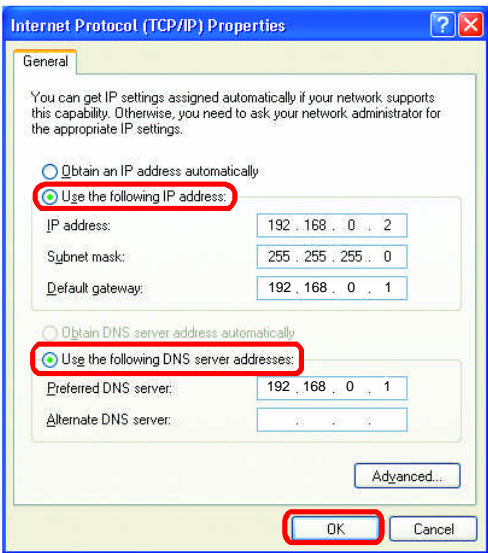
Enter the LAN IP address of the Wireless Router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)



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**

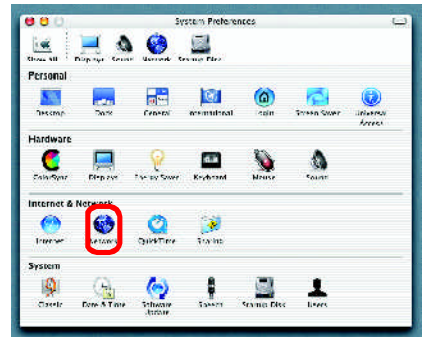


The DNS server information will be supplied by your ISP (Internet Service Provider.)

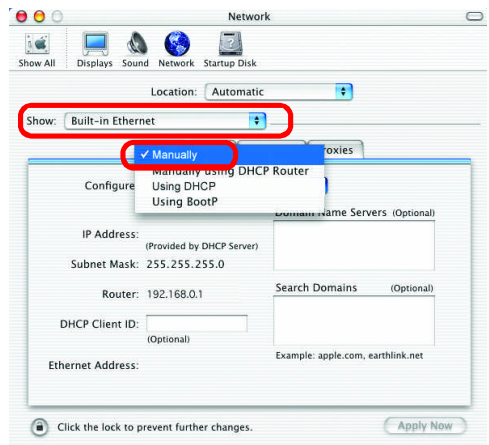
Networking Basics

Assigning a Static IP Address with Macintosh OS X

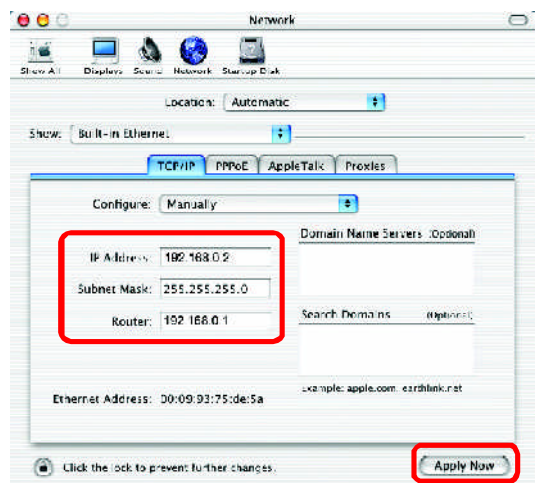
- Go to the **Apple Menu** and select **System Preferences**
- Click on **Network**



- Select **Built-in Ethernet** in the **Show** pull-down menu
- Select **Manually** in the **Configure** pull-down menu



- Input the **Static IP Address**, the **Subnet Mask** and the **Router IP Address** in the appropriate fields



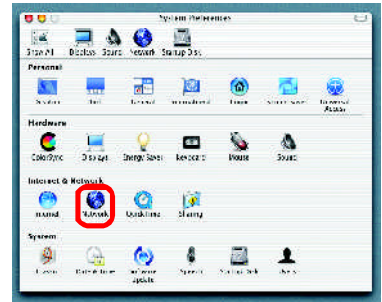
- Click **Apply Now**

Networking Basics

Selecting a Dynamic IP Address with Macintosh OSX

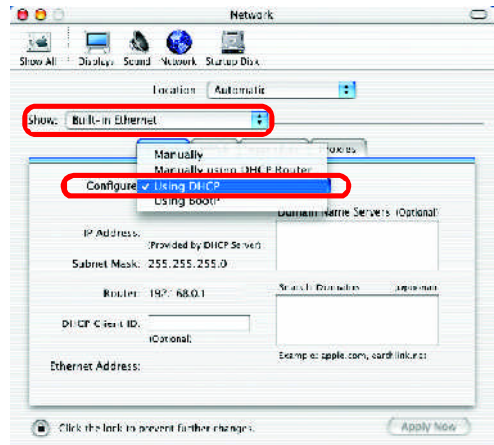
- Go to the **Apple Menu** and select **System Preferences**

- Click on **Network**



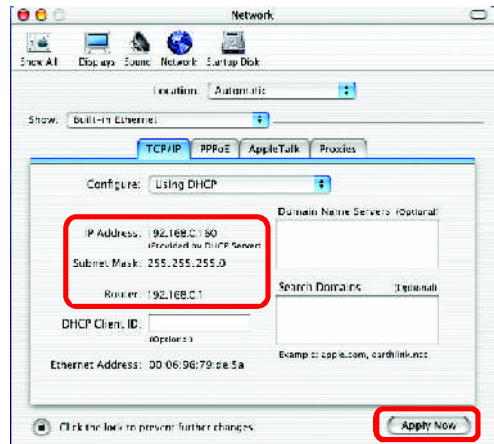
- Select **Built-in Ethernet** in the **Show** pull-down menu

- Select **Using DHCP** in the **Configure** pull-down menu



- Click **Apply Now**

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



Networking Basics

Adding and Sharing Printers in Windows XP

After you have run the **Network Setup Wizard** on all the computers in your network (please see the **Network Setup Wizard** section at the beginning of **Networking Basics**.) you can use the **Add Printer Wizard** to add or share a printer on your network.

Whether you want to add a **local printer** (a printer connected directly to one computer,) share an **LPR printer** (a printer connected to a print server) or share a **network printer** (a printer connected to your network through a Gateway/Router,) use the **Add Printer Wizard**. Please follow the directions below:

First, make sure that you have run the Network Setup Wizard on all of the computers on your network.

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

- 1. Adding a local printer**
- 2. Sharing an network printer**
- 3. Sharing an LPR printer**

(Other Networking Tasks)

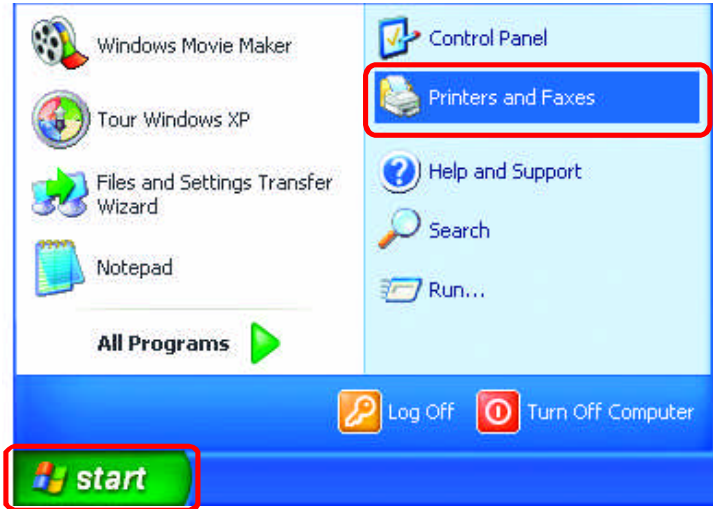
For help with other tasks, that we have not covered here, in home or small office networking, see **Using the Shared Documents** folder and **Sharing files and folders** in the **Help and Support Center** in Microsoft **Windows XP**.

Networking Basics

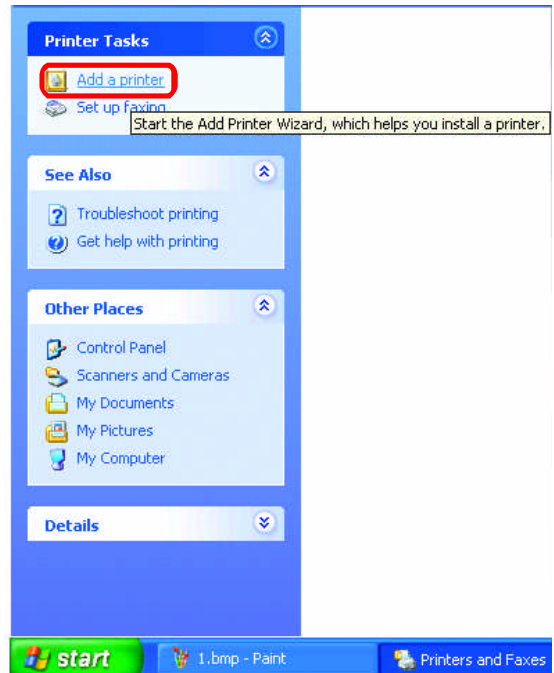
Adding a local printer (a printer connected directly to a computer)

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

- Go to **Start> Printers and Faxes**



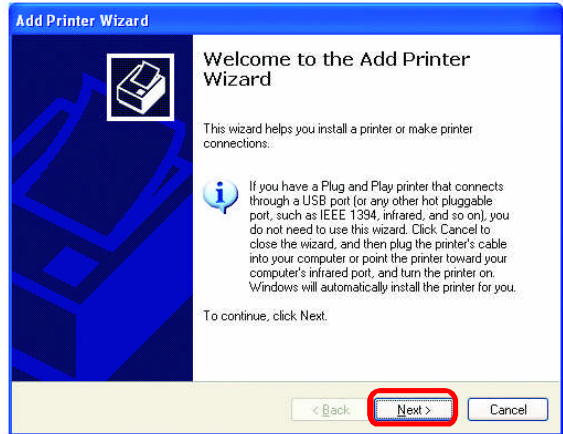
- Click on **Add a printer**



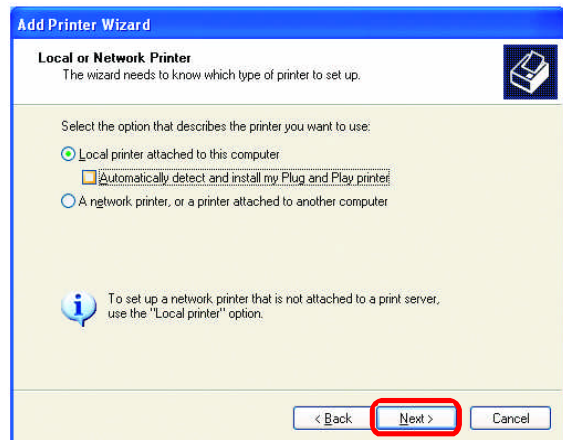
Networking Basics

Adding a local printer

- Click **Next**



- Select **Local printer attached to this computer**
- *(Deselect **Automatically detect and install my Plug and Play printer** if it has been selected.)*

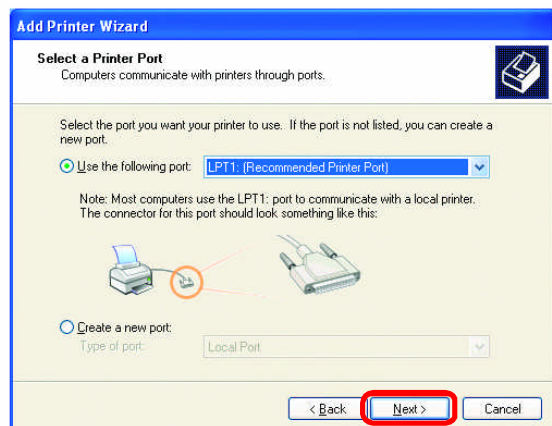


- Click **Next**

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

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

- Click **Next**



Networking Basics

Adding a local printer

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

- Click **Next**

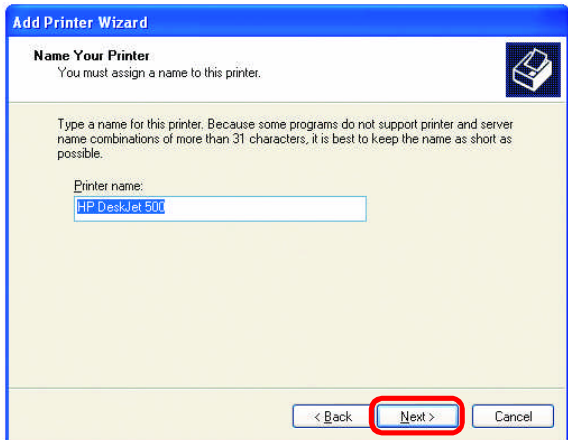
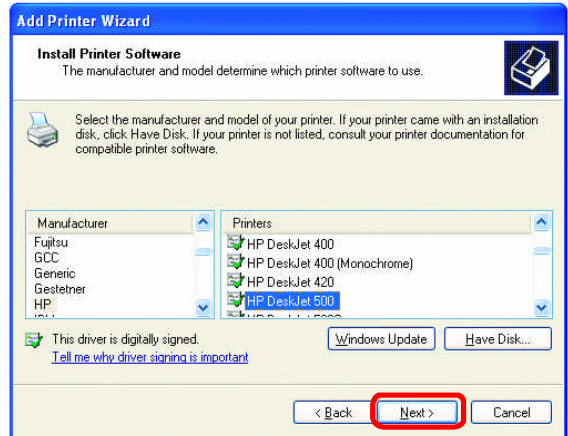
*(If the correct driver is not displayed, insert the CD or floppy disk that came with your printer and click **Have Disk**.)*

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

- Click **Next**

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

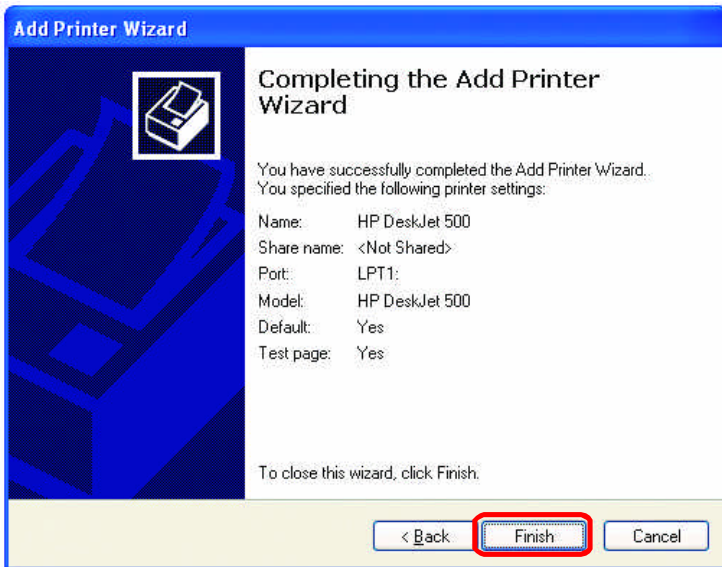
- Click **Next**



Networking Basics

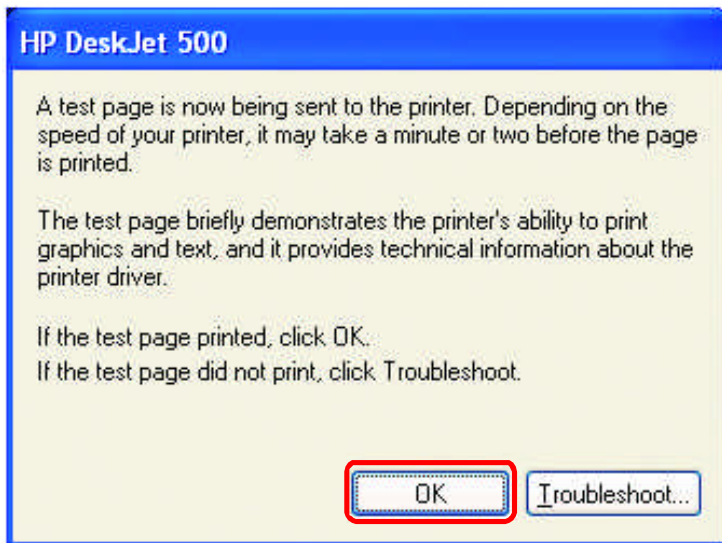
Adding a local printer

This screen gives you information about your printer.



Click **Finish**

When the test page has printed,



Click **OK**

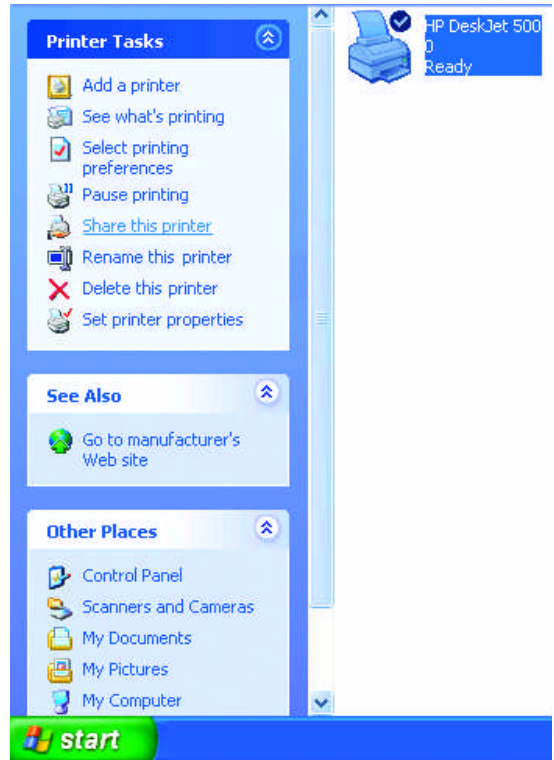
Networking Basics

Adding a local printer

- Go to **Start> Printers and Faxes**

A successful installation will display the printer icon as shown at right.

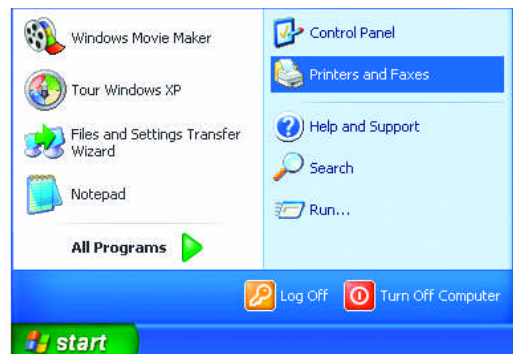
You have successfully added a local printer.



Sharing a network printer

After you have run the **Network Setup Wizard** on all the computers on your network, you can run the **Add Printer Wizard** on all the computers on your network. Please follow these directions to use the **Add Printer Wizard** to share a printer on your network:

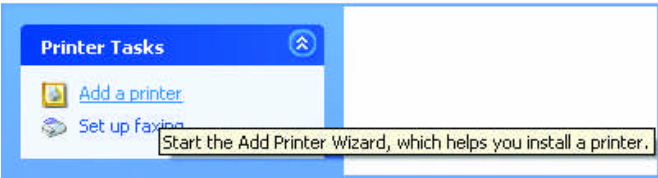
- Go to **Start> Printers and Faxes**



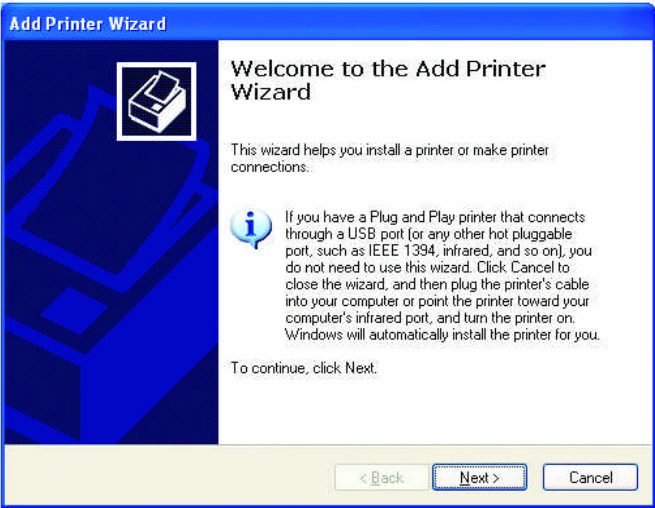
Networking Basics

Sharing a network printer

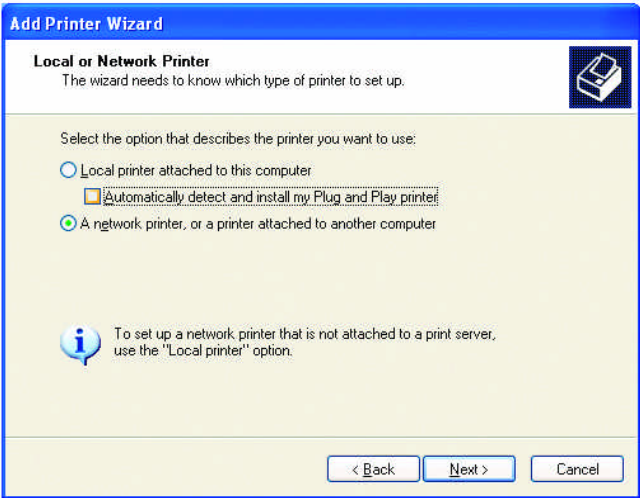
- Click on
Add a printer



- Click Next



- Select
Network Printer

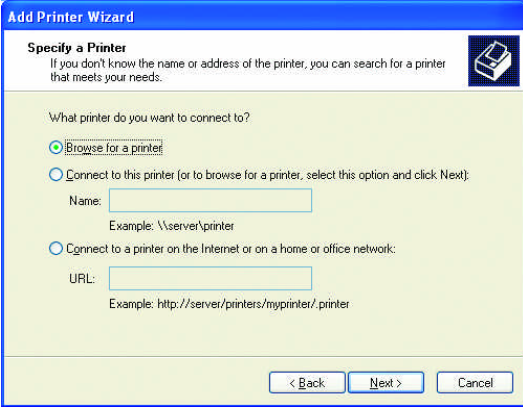


- Click Next

Networking Basics

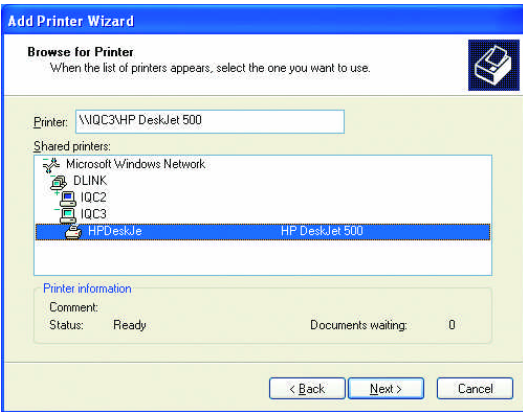
Sharing a network printer

- Select **Browse for a printer**

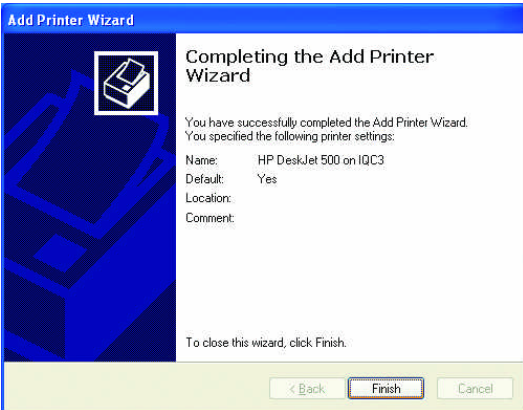


- Click **Next**

Select the **printer** you would like to share



- Click **Next**

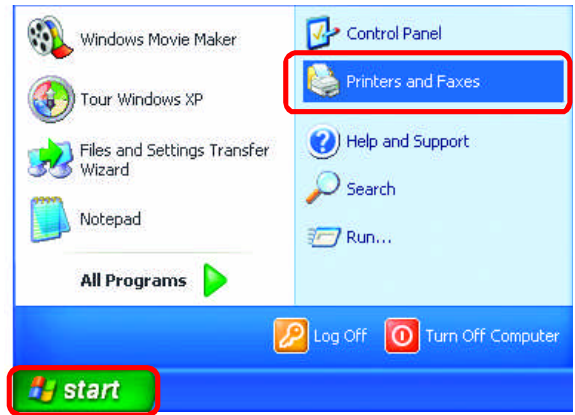


- Click **Finish**

Networking Basics

Sharing a network printer

- To check for proper installation:
- Go to **Start > Printers and Faxes**



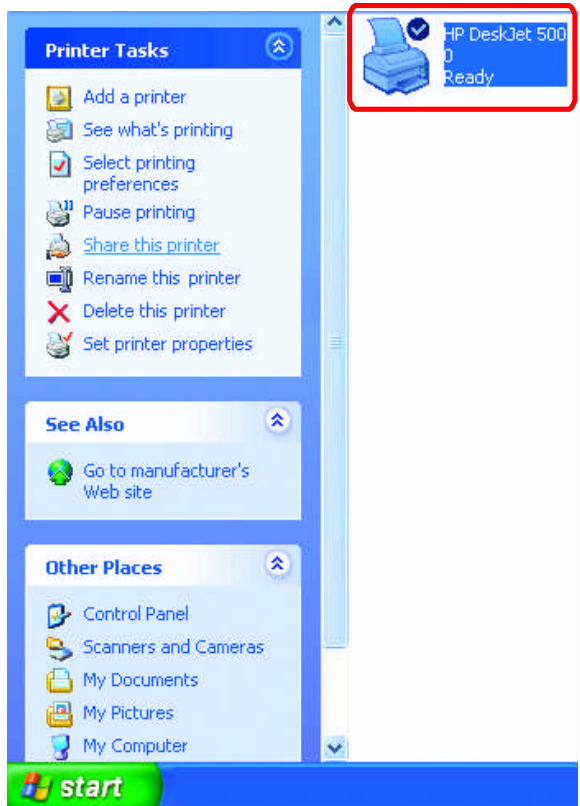
The printer icon will appear at right, indicating proper installation.

You have completed adding the printer.

To share this printer on your network:

- Remember the **printer name**
- Run the **Add Printer Wizard** on all the computers on your network
- Make sure you have already run the **Network Setup Wizard** on all the network computers

After you run the **Add Printer Wizard** on all the computers in the network, you can share the printer.



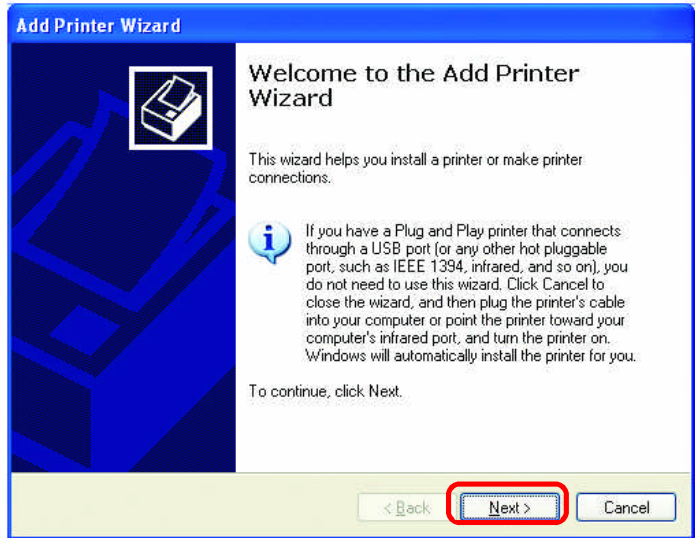
Networking Basics

Sharing an LPR printer

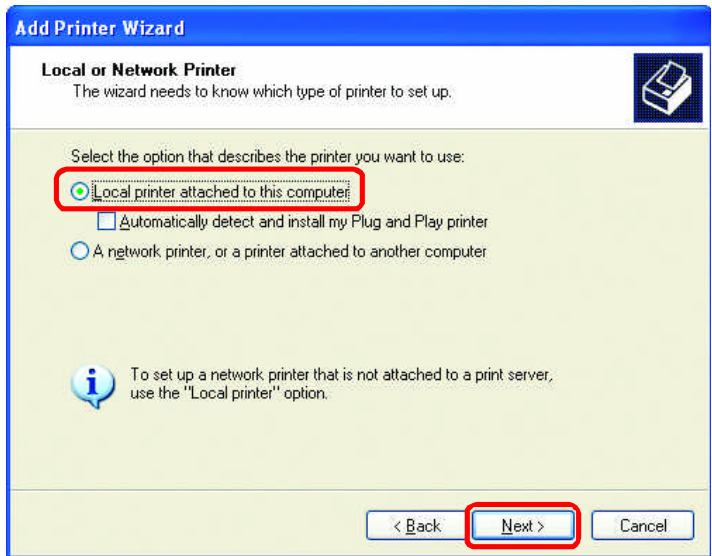
To share an **LPR printer** (using a print server,) you will need a Print Server such as the **DP-101P+**. Please make sure that you have run the **Network Setup Wizard** on all the computers on your network. To share an **LPR printer**, please follow these directions:

- Go to **Start > Printers and Faxes**
- Click on **Add a Printer**

The screen to the right will appear



- Click **Next**



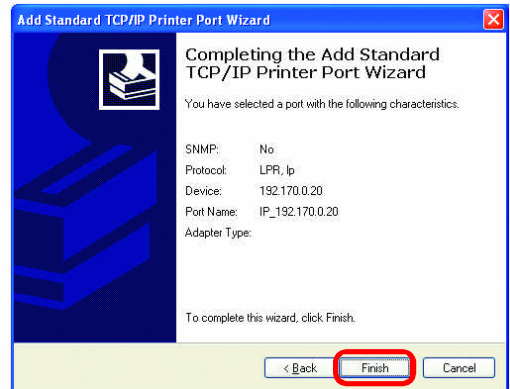
- Select **Local Printer...**

- Click **Next**

Networking Basics

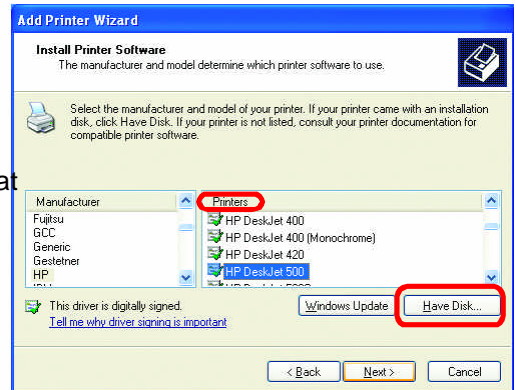
Sharing an LPR printer

- This screen will show you information about your printer.



- Click **Finish**

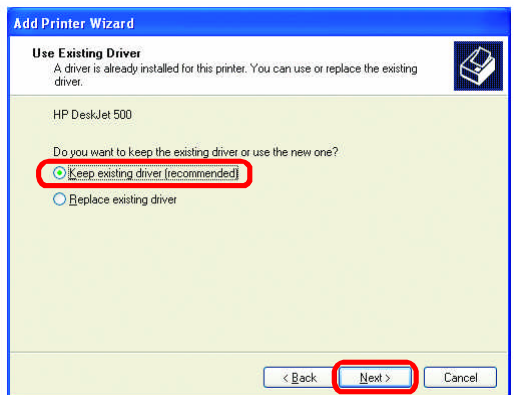
- Select the **printer** you are adding from the list of **Printers**.
- Insert the printer driver disk that came with your printer.



- Click **Have Disk**

If the printer driver is already installed, do the following:

- Select **Keep existing driver**

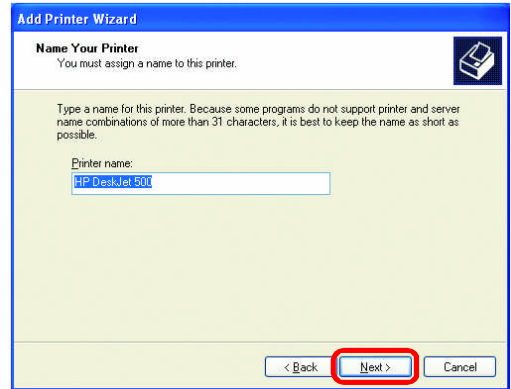


- Click **Next**

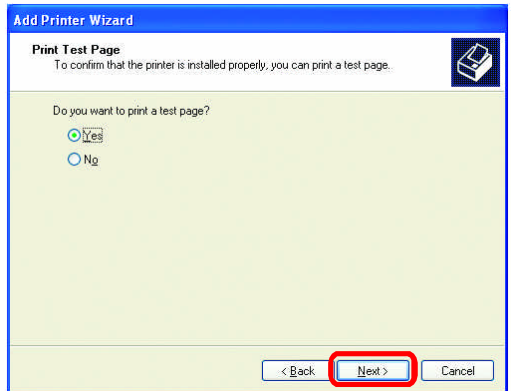
Networking Basics

Sharing an LPR printer

- You can rename your printer if you choose. It is optional.
- *Please remember the name of your printer. You will need this information when you use the **Add Printer Wizard** on the other computers on your network.*
- Click **Next**



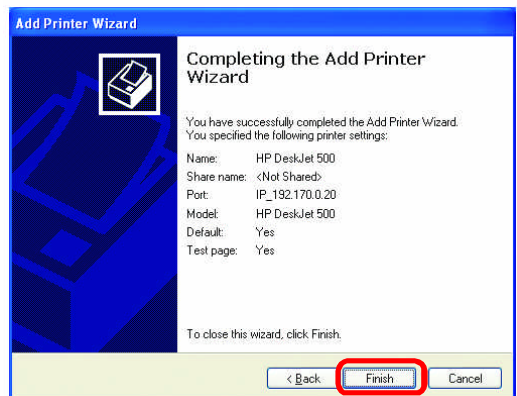
- Select **Yes**, to print a test page.



- Click **Next**

This screen will display information about your printer.

- Click **Finish** to complete the addition of the printer.
- Please run the **Add Printer Wizard** on all the computers on your network in order to share the printer.



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

Resetting the DI-804HV to the Factory Default Settings

After you have tried other methods for troubleshooting your network, you may choose to **Reset** the DI-804HV to the factory default settings.



To hard-reset the D-Link DI-804HV to the Factory Default Settings, please do the following:

- Turn off the DI-804HV
- Locate the **Reset** button on the back of the DI-804HV
- Use a paper clip to press the **Reset** button and power on.
- Hold for about 5 seconds (don't hold too long) and then release. (Or, release when M1 and M2 flash at the same time.)
- After you have completed the above steps, the DI-804HV will be reset to the factory default settings

Technical Specifications

Standards

- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX Fast Ethernet
- IEEE 802.3x Flow Control
- ANSI/IEEE 802.3 NWay auto-negotiation

VPN Pass Through Function

- PPTP
- L2TP
- IPSec

Device Management

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

LEDs

- WAN
- LAN
- M1
- M2
- COM

Operating Temperature

- 41°F to 131°F (5°C to 55°C)

Humidity

- 10-90%

Power

- DC 5V

Dimensions

- L = 7.56 inches (192mm)
- W = 4.65 inches (48mm)
- H = 1.22 inches (31mm)

Weight

- ~10.8 oz. (0.3 kg)

Ports

- 4 x NWay 10BASE-T/100BASE-TX Fast Ethernet LAN (Media Auto Sensing)
- 1 x NWay 10BASE-T/100BASE-TX Fast Ethernet WAN (Media Auto Sensing)
- 1 Com Port (Dial-Up Modem)

Contacting Technical Support

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

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

U.S. customers can contact D-Link technical support through our web site, or by phone.

D-Link Technical Support over the Telephone:

(877)453-5465

24 hours a day, seven days a week.

D-Link Technical Support over the Internet:

<http://support.dlink.com>

When contacting technical support, you will need the information below. (Please look on the back side of the unit.)

- *Serial number of the unit*
- *Model number or product name*
- *Software type and version number*

Warranty and Registration

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 of original retail purchase. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

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

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

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

- The original product owner must obtain a Return Material Authorization ("RMA") number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 53 Discovery Drive, Irvine, CA 92618**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

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

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

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

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

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

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

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

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

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

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