

# **D-Link**

## **DI-804**

### **Broadband Router User's Manual**

Rev. 101404

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# Introduction

Congratulations on your purchase of the D-Link Broadband Router. Your Broadband Router enables you to share your DSL or Cable Internet connection with computers on your network. This guide will explain the features and functions of the Broadband Router to help you get the most out of your Internet experience.

D-Link's Broadband Router allows LAN users to share a single Internet Connection while providing the safety and security of port blocking, packet filtering, and a natural firewall. Static address support, integrated DHCP, PPPoE, and device name support will allow it to connect to nearly any broadband provider whether Cable or DSL based, and at the same time simplify local area network settings.

The Broadband Router provides two levels of security support. First, it masks local users' IP addresses from others on the Internet making it much more difficult for a hacker to target a machine on your network. Secondly, it can block and redirect certain ports to limit the services that outside users can access. Specific ports can be opened to ensure that games and other Internet applications will run properly.

The Broadband Router provides special pass through support for common VPN implementations. The Virtual Server feature allows you to expose HTTP, FTP, Game Servers and other local services to be accessible to Internet users located outside of the LAN. The User-Definable Application Sensing Tunnel feature allows you to define the attributes to support special applications requiring multiple connections, such as Internet gaming, video conferencing, and Internet telephony. A DMZ setting can be applied to a single client behind the Broadband Router to expose it to the Internet and ensure complete Internet application compatibility even if specific ports are not known.

Unlike proxy server or NAT software that requires the software server to remain visible on the Internet, no local computers are directly externally visible when using the Broadband Router. Also the Broadband Router, like broadband, is always on, removing the need to constantly boot a software server when access is desired from a client.

Integrated DHCP services allow up to 253 users to get their IP address automatically on boot up from the Broadband Router. Client machines

require no software, simply set them to accept a dynamically assigned IP address and reboot. Each time they are powered up the Broadband Router will recognize them and set their IP address to instantly connect them to the LAN.

## **Package Contents**

The D-Link DI-804 package should include the following items.

- DI-804 Broadband router
- User's Manual
- Quick Install Guide
- Power Adapter
- CAT-5 UTP Cable

## **Introduction to Broadband Router Technology**

A router is a device that forwards data packets from a source to a destination. Routers work on the OSI layer 3, which forwards 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 behind your router because computers from the outside cannot access or send information directly to any computer on your network. The router determines which computer the information should be forwarded to and sends it. If the information is not intended for any computer on your network, the data is discarded. This keeps any unwanted or harmful information from accessing or damaging your network.

## **Introduction to Firewalls**

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

## **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.

## **Introduction to Wireless Networking**

D-Link wireless products are based on industry standards to provide easy to use and compatible high-speed wireless connectivity within your home or business. Strictly adhering to IEEE 802.11b the D-Link wireless family of products will allow you to access the data you want, when and where you want it. No longer will you be tethered to a workstation or forced to run new wiring. You will be able to enjoy the freedom that wireless networking delivers.

## **Standards Based Technology**

Based on IEEE 802.11b, D-Link Air products can throughput data up to 11 Megabits per second. This means you will be able to transfer large files quickly or even watch a Movie in MPEG format over your network without noticeable delays. This technology works by using multiple frequencies in the 2.4GHz range utilizing Direct Sequence Spread Spectrum (DSSS) technology. D-Link Air products will automatically sense the best possible connection speed to ensure the greatest speed and range possible with the technology.



## **Installation Considerations**

Designed to go up to 100 meters indoors and up to 300 meters outdoors, D-Link Air lets you access your network from anywhere you want. Keep in mind, however, that the number of walls, ceilings or other objects that the wireless signals must pass thru will limit range. Typical ranges vary depending on the types of materials and background RF noise in your home or business. The key to maximizing range is to follow these basic principles:

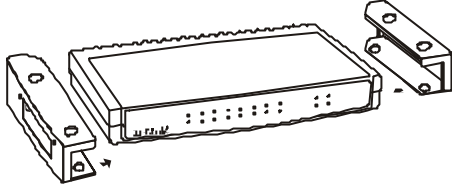
1. Keep the number of walls and ceilings to a minimum - Each wall or ceiling can reduce your D-Link Air Wireless products range from 1-30 meters. Position your Access Points, Residential Gateways, and Computers so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between Access Points, Residential Gateways, and Computers - A wall that is .5 meter thick, at a 45 degree angle appears to be almost 1 meter thick. At a 2 degree angle it looks over 14 meters thick! Try to make sure that the AP and Adapters are positioned so that the signal will travel straight through a wall or ceiling for better reception.
3. Building Materials make a difference - A solid metal door or aluminum studs may have a negative effect on range. Again, try to position Access Points, Residential Gateways, and Computers so that the signal passes through drywall or open doorways and not other materials.
4. Make sure that the antenna is positioned for best reception by using the software signal strength tools included with your product.
5. Keep your product away (at least 1-2 meters) from electrical devices that generate RF noise, like microwaves, Monitors, electric motors, etc.

For the average American 4-bedroom home, range should not be a problem. If you experience low or no signal strength in areas of your home that you wish to access, consider positioning the Access Point in a location directly between the Residential Gateways and/or Computers that will be connected. Additional Access Points can be connected to provide better coverage in rooms where the signal does not appear as strong as desired.

## Instructions for Use of Stacking Brackets

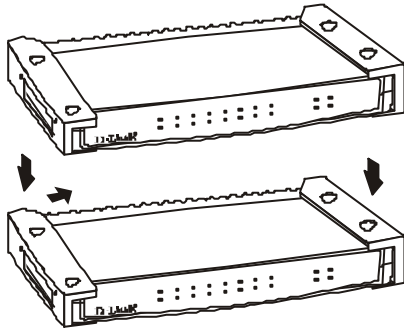
First, make sure you have one pair of stacking brackets for each device.

Next, slide one bracket onto each end of the device as shown in the diagram below. Be sure each bracket is positioned correctly.



Note when clicking each bracket into place, the round feet on the bottom of the device will line up with the round holes on the bracket. The brackets are designed to fit snugly in place. Please do not force them.

The brackets are now ready for stacking devices. See the diagram below.



## Hardware Installation

### Placement

The Broadband Router should be placed in a safe and secure location. To ensure proper operation, please keep the unit away from water and other damaging elements.

## Safety Precautions

- Please read the installation guide thoroughly before you install the DI-804.
- The DI-804 should only be repaired by authorized and qualified personnel.
- Please do not try to open or repair the DI-804 yourself.
- Do not place the DI-804 in a damp or humid location, i.e. a bathroom.
- The DI-804 should be placed in a sheltered and non-slip location within a temperature range of +5 to +40 Celsius degree.
- Please keep the wrap bag of the DI-804 and the clip binding the cable out of reach of children and babies to avoid choking.
- Please do not expose the DI-804 to direct sunlight or other heat sources. The housing and electronic components may be damaged by direct sunlight or heat sources.

## Side Panel

The power port is located on the right-hand side of the DI-804. Connect the AC adapter to this port to supply power.

## Front Panel

The front panel provides LED's for device status. Refer to the following table for the meaning of each feature.

<b>Power</b>	Power status of the DI-804. A steady LED indicates that the power is on. No LED light indicates lack of power.
<b>WAN</b>	Wide Area Network status. When connected to the Internet, the WAN LED should be on.
<b>Console</b>	Indicates console port status.
<b>LAN 1,2,3,4</b>	Link/ACT = Displays Link Activity. 100/10 = Displays connection speed for each port. A steady LED indicates a speed of 100.

## Rear Panel

The rear panel features a LAN port, WAN port, Console port and

Factory Reset button. Refer to the following table for the meaning of each feature.

<b>Power</b>	Used to connect to the power outlet. Only use the power adapter provided with the DI-804
<b>WAN</b>	The RJ-45 Ethernet port labeled WAN is used to connect your DI-804 to your DSL or Cable modem.
<b>Console</b>	Port used to connect an external analog backup modem.
<b>Reset</b>	Resets the configuration to default settings.
<b>LAN</b>	The RJ-45 Ethernet port used to connect your hub, switch, or PC using Ethernet cables to your DI-804.
<b>Uplink/ Normal</b>	Used to change the operation of Port #1. If uplink is selected, Port 1 should be connected to a hub or switch. Use the Normal setting to connect to a client PC.

# Basic DI-804 Configuration & Main Page

The DI-804 provides a Web Configuration interface that can be accessed using standard web browsers such as Netscape Communicator or Microsoft Internet Explorer. Since the interface is web based (HTTP), the DI-804 can be configured with any java and HTML compliant Internet browser in any operating system. This section will discuss the Web Configuration interface and how to use different options and settings.

Although you can change the IP address of the DI-804 to meet your needs, this manual will assume that the defaults are left in place. This means that the IP address of your DI-804 will be 192.168.0.1. If you have changed the IP address scheme, please substitute 192.168.0.1 with the IP address scheme that you have chosen.

## Start-up and Log in

In order to configure the DI-804, you must use your web browser and manually input 192.168.0.1 into the Address box and press Enter. The Main Page will appear. The Device Information and Device Status screens can be seen without logging into the DI-804. However, when the Setup Wizard, Basic Setup, Advanced Settings and System Tools buttons are pressed, the log in screen will be shown.



Enter Network Password

Please type your user name and password.

Site: 192.168.0.1

Realm: Login as admin or user

User Name: admin

Password:

Save this password in your password list

OK Cancel

In order to configure the DI-804 you must input the user-name into the **User Name** box. Enter the password into the **Password** box and press

the **OK** button. The default User Name is “admin”. There is no default password, leave the Password field blank.

Once you have logged-in as administrator, it is a good idea to change the administrator password to ensure a secure connection to the DI-804. The Advanced Settings section described later in this manual describes how to change the password.

Once you have input the correct password and logged-in, the screen will change to the Main Page screen.

If you are having problems logging in and you are sure that the password you are using is correct, check the top right-hand corner of your keyboard to make sure that the Caps Lock light is not on.

## Main Page

**D-Link** Cable/DSL Residential Router **DI-804**

[DEVICE INFORMATION](#) [DEVICE STATUS](#) [BASIC SETUP](#) [ADVANCED SETTINGS](#) [SYSTEM TOOLS](#) [HELP](#)

**D-Link DI-804 Broadband Router**

**Device Information**  
Displays Device Name, IP Address, MAC Address of ports, and Firmware Version.

**Device Status**  
View current Internet status. View LAN and WAN settings, Release and Renew WAN port connection.

**Basic Setup**  
Direct access to LAN and Internet settings for manual setup or changes.

**Advanced Settings**  
Access the advanced feature of your Broadband Router including DHCP Server settings, Virtual Server settings, and Password settings.

**Help**  
Get help with commonly asked questions about your Broadband Router.

**System Tools**  
Perform System diagnostics, view logs, load default settings, perform firmware upgrade, and reset your Broadband Router.

A step by step wizard to help configure the Cable/DSL Router.

[Start the Setup Wizard](#) ▶

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The Main Page screen provides links to the main sections of the web configuration interface.

## Setup Wizard

The Setup Wizard is a step-by-step guide to configuring the DI-804 to work with your ISP provider. Please refer to the quick install guide for additional instructions.

## Time Settings

The screenshot shows the configuration interface for a D-Link DI-804 Cable/DSL Residential Router. The page title is "Cable/DSL Residential Router" with the model number "DI-804" in a yellow oval. A navigation bar at the top contains buttons for "DEVICE INFORMATION", "DEVICE STATUS", "BASIC SETUP", "ADVANCED SETTINGS", "SYSTEM TOOLS", and "HELP". On the left, a "Main menu" sidebar includes buttons for "TIME SETTINGS" (highlighted in yellow), "DEVICE IP SETTINGS", "CABLE/DSL ISP SETTINGS", "ISP ADDITIONAL SETTINGS", "MODEM SETTINGS", and "SAVE & RESTART". The main content area is titled "TIME ZONE SELECTION" and contains the instruction "Please choose your local time zone:" followed by a dropdown menu showing "(GMT-04:00) Atlantic Time (Canada)". A yellow "NEXT >" button is positioned below the dropdown. Two notes are provided: "NOTE 1: Please click 'Next' to accept the setting." and "NOTE 2: Please remember to click Save & Restart after you have finished the changes to the device settings." The footer of the page reads "Copyright © 2000" and features a yellow circular icon on the right.

Please choose the local time zone. After selecting the correct time zone, click on the **Next** button to continue. You can also click the buttons on the left hand side to reach a specific setting in the configuration.



## Device IP Settings

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | ADVANCED SETTINGS | SYSTEM TOOLS | HELP

Main menu

TIME SETTINGS

**DEVICE IP SETTINGS**

CABLE/DSL ISP SETTINGS

ISP ADDITIONAL SETTINGS

MODEM SETTINGS

SAVE & RESTART

### DEVICE LAN IP SETTINGS

The device LAN IP address and subnet Mask settings

IP Address:  .  .  .

IP Subnet Mask:  .  .  .

< BACK    NEXT >

NOTE: Please click "Next" to accept the settings.

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You have to give your Internet gateway an IP address on your “private” network. This is not the “public” IP address from your ISP but the local internal LAN IP address. The IP address of “192.168.0.1” is the default IP address of the LAN port in the broadband router.

### Device IP Address

The internal LAN IP address of the broadband router.

### Device IP Subnet Mask

The subnet mask can usually be left with the default entry of “255.255.255.0”

# Cable/DSL ISP Settings

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | ADVANCED SETTINGS | SYSTEM TOOLS | HELP

Main menu

- TIME SETTINGS
- DEVICE IP SETTINGS
- CABLE/DSL ISP SETTINGS**
- ISP ADDITIONAL SETTINGS
- MODEM SETTINGS
- SAVE & RESTART

### CABLE/xDSL ISP SETTINGS

Your ISP Dynamically assigns you the WAN IP Address:

IP assigned by your ISP:  .  .  .

IP Subnet Mask:  255 .  255 .  255 .

ISP Gateway Address:  .  .  .

Domain Name Server (DNS) IP Address:  .  .  .

[< BACK](#) [NEXT >](#)

NOTE: Please click 'Next' to accept the settings.

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The DSL/Cable ISP settings have a default to obtain dynamically the IP address for the WAN port of the broadband router. Some ISP may give you Static IP settings. If this is the case for your ISP then you need to:

- Enter the IP address that is assigned by your ISP
- Enter the IP subnet mask
- Enter the ISP gateway address
- Enter the DNS IP address

## ISP Additional Settings

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | ADVANCED SETTINGS | SYSTEM TOOLS | HELP

Main menu

TIME SETTINGS

DEVICE IP SETTINGS

CABLE/DSL ISP SETTINGS

**ISP ADDITIONAL SETTINGS**

MODEM SETTINGS

SAVE & RESTART

### ISP ADDITIONAL SETTINGS

Your ISP requires you to input the username/password (PPPoE Settings)

User Name:

Password:

Retype Password:

Idle Time:

Your ISP requires you to input the Host Computer Name

Host Name:

Your ISP requires you to input the WAN Ethernet Mac

Mac Address:

NOTE: Please click "Next" to accept the settings.

Copyright © 2000

If you would like to use ISP additional settings you have to enable this function and configure this page. Some ISP use this protocol for authentication purposes; if this is the case, you need to enter:

User name: Enter the user name of your ISP account.

Password: Enter the password of your ISP account.

Retype password: Enter the password of your ISP account again to re-confirm.

**Some ISPs, especially cable modem providers, use the “Host Name” to authenticate the user. If this is the case, you will need to enter:**

Host Name: Enter the host name provided by the ISP.

**Some ISPs require the user to input the Mac address of the original Ethernet adapter. If this is the case, enter:**

Mac Address: Enter the Mac address of the Ethernet adapter.

**NOTE !**

Some ISP may recognize your LAN card Mac address as a legal user; In this case, you have to copy the LAN card Mac address in the Mac address field.

For WIN 95/98 you can run **winipcfg** to see the LAN card Mac address

For WIN 2000/NT you can run **ipconfig /all** to see the LAN card Mac address

# Modem Settings

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | ADVANCED SETTINGS | SYSTEM TOOLS | HELP

Main menu

TIME SETTINGS

DEVICE IP SETTINGS

CABLE/DSL ISP SETTINGS

ISP ADDITIONAL SETTINGS

**MODEM SETTING**

SAVE & RESTART

### MODEM SETTINGS

Backup dial-up modem when the broadband connection is not working

ISP Phone Number:

User Name:

Password:

Retype Password:

Idle Time: 30 minutes

< BACK | NEXT >

NOTE 1: Please click 'Next' to accept the settings.  
NOTE 2: Most dial-up modems are compatible with the standard modem strings. For modems that require special modem strings, please enter the information in Modem String Settings under Advanced Settings.

Copyright © 2000

An analog external modem can be used as a dialup backup to the DSL/Cable connection. If you would like to use a modem backup, you need to enable the modem settings function. Click on “Modem Settings” on the left hand side and input the ISP account settings.

**Note:** If you change the baud rate settings, please check the initial string. (Please refer to the modem’s manual.)

# Device Information

The screenshot shows the web interface of a D-Link DI-804 Cable/DSL Residential Router. At the top left is the D-Link logo. To its right, the text 'Cable/DSL Residential Router' is displayed, followed by a yellow oval containing the model number 'DI-804'. Below this is a navigation bar with six tabs: 'DEVICE INFORMATION' (highlighted in yellow), 'DEVICE STATUS', 'BASIC SETUP', 'ADVANCED SETTINGS', 'SYSTEM TOOLS', and 'HELP'. On the left side, there is a 'Main menu' link. The main content area displays the following information:

- Cable/DSL Residential Gateway
- Device Name: DI804
- IP Address: 192.168.0.1
- Private LAN Mac Address: 00:08:00:c0:1f:4a
- Public WAN (Cable/DSL) Mac Address: 00:08:00:c0:1f:4b
- Firmware Version: V4.48 (2001/04/06)

At the bottom left of the interface, it says 'Copyright © 2000'.

The Device Information screen displays the basic information of your DI-804.

The **Device Name** is the same as the Computer Name that was set in the Setup Wizard.

The **IP Address** is the IP Address assigned to LAN side of your DI-804.

The **Private LAN Mac Address** the Mac Address assigned to the LAN side of your DI-804.

The **Public WAN (Cable/DSL) Mac Address** is the Mac Address assigned to the WAN port of the DI-804. This Mac Address may be used by some cable modem connections.

The **Firmware Version** is the current firmware version used by the DI-804.

# Device Status

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICES INFORMATION **DEVICE STATUS** BASIC SETUP ADVANCED SETTINGS SYSTEM TOOLS HELP

Main menu  
WAN Ethernet  
Cable/xDSL: Not Active

**RELEASE**  
**RENEW**

Modem Backup:  
Modem: Not Active

Device IP:  
IP: 192.168.0.1  
LAN MAC: 00:11:22:33:44:55  
WAN MAC: 15:90:4b:08:02:0e

**DHCP LOG**

**DEVICE STATUS**

Cable/xDSL Modem

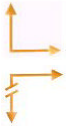
LAN

Modem Backup

**DHCP LOG**  
. LAN IP addr: 192.168.0.100 , MAC addr: 0:80:c8:32:d1:62

Copyright © 2000

The Device Status screen displays a graphical representation of your current configuration. The left side of the screen shows your connection information in regards to WAN and LAN IP Address information. The right side displays the connection status of each device.



This means that there is a connection.

This means that there is not a connection.

The DHCP Log displays information about each IP Address assigned to a computer using the DHCP server built-in to the DI-804.

# Basic Setup

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | ADVANCED SETTINGS | SYSTEM TOOLS | HELP

Main menu

**TIME SETTINGS**

**DEVICE IP SETTINGS**

**CABLE/DSL ISP SETTINGS**

**ISP ADDITIONAL SETTINGS**

**MODEM SETTINGS**

### Basic Setup - Cable/DSL ISP Settings

Computer Name

Domain Name

---

Dynamic IP     Static IP     PPPoE

IP Address

Subnet Mask

Gateway

User Name

Password

---

Dynamic DNS     Static DNS

DNS 1

DNS 2

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The Basic Setup screen enables you to change basic settings related to accessing the Internet. All of the settings covered in the Basic Setup section are covered in the Setup Wizard.

The **Computer Name** is used to give a name to your connection if you are using a Cable modem.

The **Domain Name** (host name) is the name given to you by your ISP provider if you using the @Home cable Internet service.

Choose the Type of Connection you use by selecting Dynamic IP, Static IP, or PPPoE.

Select **Dynamic IP** if your ISP has not given you a unique IP address and you receive an automatic IP address each time you connect to your ISP. The rest of the settings related to your connection are retrieved automatically each time you connect to the Internet.

Select **Static IP** if your ISP assigns you an IP address. This means



that your ISP has given you an IP address that you will use to connect to the Internet through their service. If you select Static IP, you will need to enter the correct values for the IP Address, Subnet Mask and Gateway in the fields provided.

Select **PPPoE** if your ISP uses the Point-to-Point over Ethernet protocol to authenticate a username and password and then automatically assign you an IP Address. PPP over Ethernet (PPPoE) is a non-standard method of connecting to your ISP to obtain an IP address. It relies upon a software client that is provided by the ISP. If you have a broadband connection and login to your ISP like you would do with a dial-in modem, then you are probably using PPPoE. If you are simply connected to the Internet when you turn on your computer, you probably are not. The safest way to check is to call your ISP or read the documentation provided when you signed up for your Internet service. If you select PPPoE, you will need to enter the correct values for your User Name and Password in the fields provided.

The DNS section needs to be set to the correct option in order for the DI-804 to resolve domain name information in URL s.

Select **Dynamic DNS** if your ISP provides the DNS information much in the same way as you receive an IP Address.

Select **Static DNS** if you were given the DNS server information when you signed with your ISP.

Click on the **Save & Restart** button to save your settings.

# Advanced Settings

## DHCP Server Settings

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION    DEVICE STATUS    BASIC SETUP    **ADVANCED SETTINGS**    SYSTEM TOOLS    HELP

Main menu

**DHCP SERVER SETTINGS**

VIRTUAL SERVER SETTINGS

STATIC ROUTING

DYNAMIC ROUTING

MODEM STRING SETTINGS

PASSWORD SETTINGS

### DHCP SERVER SETTINGS

Enable DHCP Server Functions

IP Address Pool Range

From: 192.168.0 .

To: 192.168.0 .

IP Address Reservation

1. Computer Name:	<input type="text"/>	IP Address:	192.168.0 . <input type="text" value="0"/>
2. Computer Name:	<input type="text"/>	IP Address:	192.168.0 . <input type="text" value="0"/>
3. Computer Name:	<input type="text"/>	IP Address:	192.168.0 . <input type="text" value="0"/>
4. Computer Name:	<input type="text"/>	IP Address:	192.168.0 . <input type="text" value="0"/>

**SUBMIT**

NOTE: Please click '**Submit**' to enter inputted data.

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By default, the Broadband Router has DHCP server enabled to assign an IP address ranging from 192.168.0.100 to 192.168.0.199. In addition, the router is capable of reserving up to four IP addresses within the local network for mail, web, or ftp server.

## Virtual Server Settings

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | **ADVANCED SETTINGS** | SYSTEM TOOLS | HELP

Main menu

- DHCP SERVER SETTINGS
- VIRTUAL SERVER SETTINGS**
- STATIC ROUTING
- DYNAMIC ROUTING
- MODEM STRING SETTINGS
- PASSWORD SETTINGS

### VIRTUAL SERVER SETTINGS

1. Internal IP	192.168.0.	<input type="text" value="100"/>	Service	<input type="text" value="ALL"/>
2. Internal IP	192.168.0.	<input type="text" value="101"/>	Service	<input type="text" value="NONE"/>
3. Internal IP	192.168.0.	<input type="text" value="0"/>	Service	HTTP
4. Internal IP	192.168.0.	<input type="text" value="0"/>	Service	SMTP
5. Internal IP	192.168.0.	<input type="text" value="0"/>	Service	POP3
6. Internal IP	192.168.0.	<input type="text" value="0"/>	Service	FTP
7. Internal IP	192.168.0.	<input type="text" value="0"/>	Service	TELNET
			Service	<b>IRC</b>
			Service	ALL
			Service	NONE

**SUBMIT**

NOTE: Please click 'Submit' to enter inputted data.

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Specific application support is enabled in Virtual Server Settings under Advanced Settings. Click on the arrow to select the common applications such as FTP, Web server, and mail server. The DI-804 Broadband Router will detect and automatically open outgoing ports required by most applications and games. However, some games and applications such as NetMeeting will require that the computer be exposed in the DMZ zone to allow incoming ports required by the application. Click on the “Submit” button to save your settings.

## **DMZ**

The Virtual Server Settings under Advanced Settings also enables one computer to have full access to the Internet without the protection of the firewall. This allows a computer to be exposed to unrestricted two-way communication outside of your network.

To enable DMZ, click the checkbox to the left and select “All”. Then type the IP address of the selected computer in the box provided. Click the “Submit” button to save your changes.

Only one computer can use DMZ at a time. Please note that enabling DMZ removes the protection of the firewall, which exposes the computer to intrusion.

Use DMZ only when needed and not for extended periods of time.

In some circumstances with gaming, enabling DMZ may help the game contact the maximum number of servers, which can improve ping times. Once the game connects to the game server, disable DMZ to ensure proper firewall protection.

# Static Routing

The screenshot shows the web interface of a D-Link Cable/DSL Residential Router (DI-804). The top navigation bar includes tabs for DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, **ADVANCED SETTINGS**, SYSTEM TOOLS, and HELP. A left sidebar contains a 'Main menu' with buttons for DHCP SERVER SETTINGS, VIRTUAL SERVER SETTINGS, **STATIC ROUTING** (highlighted in yellow), DYNAMIC ROUTING, MODEM STRING SETTINGS, and PASSWORD SETTINGS. The main content area is titled 'STATIC ROUTING TABLE' and features three input fields: 'Destination IP Address' (10.2.1.99), 'Subnet Mask' (255.0.0.0), and 'Gateway IP Address' (10.2.1.10). Below these fields is an 'ADD' button. A table below the 'ADD' button lists existing static routes:

Del	Destination LAN IP Address	Subnet Mask	Gateway IP Address
<input type="checkbox"/>	192.152.82.10	255.255.255.0	192.152.82.100

Below the table are 'DEL' and 'SUBMIT' buttons. A note at the bottom states: 'NOTE: Please click **'Submit'** to enter inputted data.'

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In Static Routing, the user has the ability to add a static route to the routing table by simple entering the destination IP, subnet mask, and gateway. Clicking on “Add” and then “Submit” which requires a restart for the IP address to be incorporated into the routing table.

# Dynamic Settings

The screenshot shows the web interface of a D-Link Cable/DSL Residential Router (DI-804). The top navigation bar includes tabs for DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, **ADVANCED SETTINGS** (highlighted), SYSTEM TOOLS, and HELP. A left sidebar menu lists: Main menu, DHCP SERVER SETTINGS, VIRTUAL SERVER SETTINGS, STATIC ROUTING, **DYNAMIC ROUTING** (highlighted), MODEM STRING SETTINGS, and PASSWORD SETTINGS. The main content area is titled "DYNAMIC SETTINGS" and contains two sections: "SEND" and "RECEIVE".

**SEND** options:  Disable,  RIP1,  RIP1 Compatible,  RIP2

**RECEIVE** options:  Disable,  RIP1 Only,  RIP2 Only,  Both RIP1/2

A yellow **SUBMIT** button is located below the options. A note at the bottom states: "NOTE: Please click 'Submit' to enter inputted data."

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By default, the Broadband Router will not send or receive any routing Internet protocols (RIP) to update the routing table. However, the user can enable the Broadband Router to automatically send and receive RIP packets to establish routes for commonly used paths.

# Modem String Settings

The screenshot displays the web interface for a D-Link Cable/DSL Residential Router (model DI-804). The interface features a blue header with the D-Link logo on the left and the router model name on the right. Below the header is a navigation menu with tabs for DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, **ADVANCED SETTINGS** (which is highlighted), SYSTEM TOOLS, and HELP. On the left side, there is a vertical sidebar with a 'Main menu' and several configuration buttons: DHCP SERVER SETTINGS, VIRTUAL SERVER SETTINGS, STATIC ROUTING, DYNAMIC ROUTING, **MODEM STRING ROUTING** (highlighted in yellow), and PASSWORD SETTINGS. The main content area is titled 'MODEM SETTINGS' and contains the following fields:

- Baudrate Settings: A dropdown menu showing '115200bps(28.8K/33/6K/56K modem or ISDN TA)'.
- Pre-Initial String: A text input field containing 'AT'.
- Initial String: A text input field containing 'AT S0=1'.
- Dialup String: A text input field containing 'ATDT'.

Below these fields is a yellow 'SUBMIT' button. A note at the bottom of the form reads: 'NOTE: Please click **'Submit'** to enter inputted data.'

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Most dial-up modems are compatible with the standard modem strings. However for modems that require special modem strings, the user can enter the information in this screen.

# Password Settings

The screenshot shows the web interface for a D-Link Cable/DSL Residential Router (DI-804). The page title is "PASSWORD SETTINGS". The navigation menu includes: DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, **ADVANCED SETTINGS** (highlighted), SYSTEM TOOLS, and HELP. The left sidebar menu includes: Main menu, DHCP SERVER SETTINGS, VIRTUAL SERVER SETTINGS, STATIC ROUTING, DYNAMIC ROUTING, MODEM STRING SETTINGS, and **PASSWORD SETTINGS** (highlighted). The main content area contains the following text: "Please input a new password for the device. The new password will be used to authenticate the user when configuring the device. Please write down the new password and save it in a safe place." Below this text are two input fields: "New Password:" and "Retype Password:". A yellow "SUBMIT" button is located below the input fields. A note at the bottom of the page reads: "NOTE: Please click 'Submit' to accept the settings." The footer of the page contains "Copyright © 2000".

You can give your Internet gateway a new password. This password will be required the next time and subsequent times you configure your Internet gateway. To enter a password, type your password in the new password field and type it again in the retype password field.

## NOTE!

It is important to remember your password. If for any reason you lose or forget your password, there is a small reset button located on the back of the device. Pressing this button for 3 seconds will not only reset the password but also the device itself--and all previous configurations will need to be inputted again.



# System Tools

The System Tools section enables you to manage your DI-804 and view information related to unit functions. The following functions are described in this chapter.

**Intruder Detection Log:** View detection logs.

**Display Routing Table:** View routing table list.

**System Diagnostics:** Change remote configuration settings.

**Load Default Settings:** Restore settings to factory default.

**Upgrade Firmware:** Upgrade the firmware to a newer version.

**Reset Device:** Reboot the DI-804.

## Intruder Detection Log

The screenshot shows the web interface of a D-Link Cable/DSL Residential Router (DI-804). The top navigation bar includes tabs for DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, ADVANCED SETTINGS, SYSTEM TOOLS (highlighted), and HELP. A left sidebar contains a 'Main menu' with buttons for INTRUDER DETECTION LOG (highlighted), DISPLAY ROUTING TABLE, SYSTEM DIAGNOSTICS, LOAD DEFAULT SETTINGS, UPGRADE FIRMWARE, and RESET DEVICE. The main content area is titled 'INTRUDER DETECTION LOG' and features a table with the following headers: Index, Time, Protocol, Source IP (Port), Dest IP (Port), and Event.

The Intruder Detection Log displays all information related to intrusion attempts on your network. If any packets are seen as harmful, those packets are blocked and a log is kept about the information related to that packet.

**Index:** (1,2,3 etc.) Refers to the row number.

**Time:** The time that the action was logged.

**Protocol:** (IP, UDP etc.) The type of protocol detected.

**Source IP (Port):** The source IP address of the intruding packet.

**Dest IP (Port):** The IP address assigned to the destination of the intruding packet.

**Event:** The type of intrusion.

## Display Routing Table

The screenshot shows the web interface of a D-Link DI-804 Cable/DSL Residential Router. The top navigation bar includes tabs for DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, ADVANCED SETTINGS, SYSTEM TOOLS, and HELP. The left sidebar contains a 'Main menu' with buttons for INTRUDER DETECTION LOG, DISPLAY ROUTING TABLE (highlighted in yellow), SYSTEM DIAGNOSTICS, LOAD DEFAULT SETTINGS, UPGRADE FIRMWARE, and RESET DEVICE. The main content area displays the 'DISPLAY ROUTING TABLE' with the following data:

Type	Destination LAN IP Address	Subnet Mask	Gateway IP Address	Hop Count
INTF	192.168.0.0	255.255.255.0	192.168.0.1	1

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The Display Routing Table screen displays the routing table that the DI-804 is using. A router uses a routing table to keep track of what IP addresses there are and where the router should forward packets when it receives them.

**Type:** The type of routing protocol used.

**Destination LAN IP Address:** Shows the Destination IP Address on the LAN side.


**Subnet Mask:** Shows the subnet mask assigned to the Destination LAN IP Address.

**Gateway IP Address:** The IP Address of the assigned Gateway.

**Hop Count:** The number of hops between the Destination LAN IP

Address and the Gateway IP Address.

# System Diagnostics

**Cable/DSL Residential Router** **DI-804**

<b>DEVICE INFORMATION</b>	<b>DEVICE STATUS</b>	<b>BASIC SETUP</b>	<b>ADVANCED SETTINGS</b>	<b>SYSTEM TOOLS</b>	<b>HELP</b>
---------------------------	----------------------	--------------------	--------------------------	---------------------	-------------

Main menu

- INTRUDER DETECTION LOG
- DISPLAY ROUTING TABLE
- SYSTEM DIAGNOSTICS**
- LOAD DEFAULT SETTINGS
- UPGRADE FIRMWARE
- RESET DEVICE

## SYSTEM DIAGNOSIS

### Configuration

Firmware Version: V4.4B

#### ISP Settings

IP assigned method: Assigned by ISP DHCP server  
IP address: 0.0.0.0  
Gateway IP address: 0.0.0.0  
DNS Server IP address: 0.0.0.0  
Host Name: DI804  
PPPoE Enable : No  
PPPoE Username:

#### Modem Settings

Telephone Number:  
Dial-up User Name:  
Idle Timeout: 30 minutes  
Pre Initial String: AT  
Initial String: AT S0=1  
Dialup String: ATDT

#### Device Settings

Device IP address as: 192.168.0.1  
Device Network Mask: 255.255.255.0  
DHCP Server: Enabled  
Pool from: 192.168.0.100  
Pool to: 192.168.0.199

### Diagnosis

#### ISP Status

Cable / xDSL IP address:0.0.0.0  
DNS IP address: 168.95.192.1  
Modem (async) IP address: 0.0.0.0

#### Link Status

Cable/xDSL	Disconnected
LAN	Connected
Modem	Modem is Not Ready

#### Current WAN connection

Cable/xDSL	Not Connected
------------	---------------

#### LAN MAC Table

. LAN IP: 192.168.0.100 . MAC: 00:00:b4:5e:b0:30

#### WAN MAC Table

The System Diagnostics screen displays current status and connection information. This screen is similar to the Device Status screen, although both sections can be used to diagnose problems with your Internet connection.

The Configuration section shows important information about your ISP Settings, Modem Settings, and Device Settings as well as the current firmware version the DI-804 is using.

The Diagnosis section shows important information about ISP Status, Link Status, and the current WAN connection.

This information is very useful in troubleshooting connection problems.

## Load Default Settings

The screenshot shows the web interface of a D-Link Cable/DSL Residential Router (DI-804). The top navigation bar includes tabs for DEVICE INFORMATION, DEVICE STATUS, BASIC SETUP, ADVANCED SETTINGS, SYSTEM TOOLS (highlighted), and HELP. A left sidebar menu contains options: INTRUDER DETECTION LOG, DISPLAY ROUTING TABLE, SYSTEM DIAGNOSTICS, LOAD DEFAULT SETTINGS (highlighted), UPGRADE FIRMWARE, and RESET DEVICE. The main content area is titled 'LOAD DEFAULT SETTINGS' and contains the following text: 'Load Default Settings will load the factory default settings for the device. Please click on the START button to proceed.' Below this is a note: 'Note. The Device IP Address will be reset to 192.168.0.1 after loading the default settings.' At the bottom of the main area are two buttons: 'START' and 'CANCEL'. The footer of the interface reads 'Copyright © 2000'.

The Load Default Settings screen enables you to restore the settings that came as default when set by D-Link. Click the Start button to begin the process.

# Upgrade Firmware

**D-Link** Cable/DSL Residential Router **DI-804**

DEVICE INFORMATION | DEVICE STATUS | BASIC SETUP | ADVANCED SETTINGS | **SYSTEM TOOLS** | HELP

Main menu

INTRUDER DETECTION LOG

DISPLAY ROUTING TABLE

SYSTEM DIAGNOSTICS

LOAD DEFAULT SETTINGS

**UPGRADE FIRMWARE**

RESET DEVICE

### FIRMWARE UPGRADE

Browse for the correct path of the firmware and click 'START' to proceed with the new firmware upgrade.

Firmware Upgrade File:  瀏覽...

**START**

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The Upgrade Firmware screen enables you to update the firmware used in the DI-804. Visit D-Link’s product support site to download an updated firmware. Updated firmware usually fix problems encountered by users, but may incorporate new features.

Begin by clicking the “Browse ..” button to browse your computer to select the updated firmware file. Once the firmware file is selected, click the “Start” button to upgrade the firmware.

Note: When upgrading the firmware, do not try to access the Internet and do not turn the power off. Doing so may cause the firmware upgrade process to abort, which may result in a corrupt firmware.

# Reset Device

The screenshot shows the D-Link web interface for a Cable/DSL Residential Router (DI-804). The top navigation bar includes tabs for 'DEVICE INFORMATION', 'DEVICE STATUS', 'BASIC SETUP', 'ADVANCED SETTINGS', 'SYSTEM TOOLS', and 'HELP'. The left sidebar contains a 'Main menu' with buttons for 'INTRUDER DETECTION LOG', 'DISPLAY ROUTING TABLE', 'SYSTEM DIAGNOSTICS', 'LOAD DEFAULT SETTINGS', 'UPGRADE FIRMWARE', and 'RESET DEVICE'. The main content area is titled 'RESET THE DEVICE' and contains the following text: 'Resetting the device will restart it. Please click on the REBOOT button to proceed.' Below this text are two buttons: 'REBOOT' and 'CANCEL'. The footer of the interface displays 'Copyright © 2000'.

The Reset Device screen enables you to reboot the DI-804. If any changes are made and you want them to take effect, you will need to reset the DI-804 to do so. Click the “Reboot” button to reset the DI-804. Click the “Cancel” button to cancel.

When you press the “Reboot” button, the DI-804 will go through its shutdown and boot-up process. The Internet will not be accessible until the DI-804 has finished its reboot process.

# Troubleshooting

In the event that you are unable to connect to or use your Broadband Router, please refer to the following troubleshooting guide. After each problem description, a possible cause and problem resolution is provided. If this section does not help you fix the problem, go to the D-Link web site ([www.dlink.com](http://www.dlink.com)) for additional troubleshooting tips. If neither of these helps, please contact D-Link Technical Support for additional help. The phone numbers for Technical Support are in the appendix of this manual under **D-Link Office Information**.

## Basic Functions

### **My Broadband Router will not turn on. No LED's light up.**

#### Cause:

- The power is not connected [or the power switch is set to "Off"](#).

#### Resolution:

- Connect the power adapter to your Broadband Router and plug it into the power outlet.
- [Make sure that the power switch is set to "On"](#).

Note: Only use the power adapter provided with your Broadband Router. Using any other adapter may damage your Broadband Router.

### **LED's don't follow the correct boot-up sequence as stated in the Quick Install Guide.**

#### Cause:

- The unit's firmware is corrupt.
- The unit is not receiving the correct voltage from the power supply.

#### Resolution:

- Download and upgrade the latest firmware.
- Make sure the correct firmware has been used while upgrading. Use only the firmware provided on D-Link's web or FTP sites.
- Use only the power adapter provided.

### **The Link or Act LED s do not turn on.**

#### Cause:



- The network cable is not connected.
- The network cable is connected but not the right type, whether it is patch or straight-through.

Resolution:

- Make sure that both ends of the cable are connected.
- Try using another cable.
- If you are using a straight-through cable, try a patch cable and vice-versa.

### **Sometimes my Broadband Router stops working or locks up.**

Cause:

- Someone has attempted to hack into someone on your LAN.
- The Broadband Router has detected harmful data trying to access your LAN.
- The NAT table is full.

Resolution:

- Reboot the Broadband Router by turning the power to the unit off and then on again. Some types of hacker tools use very non-standard data streams. Some of these streams may cause the Broadband Router to lock up. When the Broadband Router locks up, it will not affect the computers attached to it. You may need to restart the client computers to regain Internet access.

Although sometimes inconvenient, a lock-up is an indication of an attack. Part of the design of the Broadband Router is to act as a decoy for such traffic. If your computer is locked up instead you may have lost changes to open files, lost data, or corrupted your operating system or hard drive.

If you are currently experiencing frequent lock-ups, you may wish to upgrade the firmware.

## **LAN Connection Problems**

### **I can't access my Broadband Router.**

Cause:

- The unit is not turned on.

- There is not a network connection.
- The computer you are using does not have a compatible IP Address.

Resolution:

- Make sure your Broadband Router is turned on.
- Make sure that there is a physical connection between your computer and the Broadband Router and that the Link light is on.
- Use the WINIPCFG utility described in the appendix to make sure that your computer has a compatible IP Address. If your IP Address is not set correctly and you are using DHCP, use WINIPCFG to renew your IP Address. Otherwise, make correct changes to your Windows network settings. Make sure that the IP Address used on your computer is set to the same subnet as the Broadband Router. For example, if the Broadband Router is set to 192.168.0.1, change the IP address of your computer to 192.168.0.15 or another unique IP Address that corresponds to the 192.168.0.X subnet.
- Use the Reset button located on the front of your Broadband Router to revert to the default settings.

**I can't connect to other computers on my LAN.**

Cause:

- The IP Addresses of the computers are not set correctly.
- Network cables are not connected properly.
- Windows network settings are not set correctly.

Resolution:

- Make sure that each computer has a unique IP Address. If using DHCP through the Broadband Router, make sure that each computer is set to "Obtain an IP Address automatically" and restart the computer. Use the WINIPCFG and PING utilities described in the appendix to make sure that you can connect to each computer.
- Make sure that the Link LED is on. If it is not, try a different network cable.
- Check each computer for correct network settings.

**ISP Connection Problems**

## **I can access the Broadband Router, but I can't connect to my ISP.**

### Cause:

- Your DSL or Cable modem is not functioning correctly.
- The cable is connected from the WAN port of the Broadband Router to your DSL or Cable modem.
- The wrong connection type is used in Setup.
- The username and password is not input correctly.
- If using @Home service, the computer name is not input correctly.
- Your ISP may only allow one MAC address to access the Internet.
- You ISP may only allow one computer to access their service.

### Resolution:

- Make sure that your DSL or Cable modem is running correctly and connected to the WAN port of the Broadband Router.
- Make sure that the right connection type is used in the web configuration.
- Make sure that the username and password used in the connection type is correct.
- If using @Home, make sure that the computer name is input correctly.
- Clone the MAC address using the web configuration interface.
- Some ISP's do not care if you share your broadband connection among multiple users. Other ISP's will explicitly restrict this type of activity in your service contract. It is important that you verify that you are in accordance with your service agreement before sharing Internet access.

## **Internet Application Problems**

### **My online game does not work.**

#### Cause:

- The NAT table has filled up.
- The correct settings have not been used to open the correct ports for your application.
- The unit has stopped working or crashed.

#### Resolution:

- If you are trying to connect to game servers and your connection has stopped working, wait a few minutes or turn the unit off and then on

again. Games send out many requests to many different servers trying to find the best game server for your connection. When this is done, the NAT table used in the Broadband Router can fill up and stop working temporarily. Try using the DMZ host feature while connecting to game servers and then disabling DMZ while playing the game.

- Turn the Broadband Router off and then on again to reset the NAT table.
- Make sure that the correct ports have been opened in order for your specific game to operate correctly behind a firewall. Consult your game documentation or contact technical support for your game to obtain the correct settings for your game.
- Some games just won't operate correctly behind a firewall. In this case, use the DMZ host feature while using the game, then turning DMZ off while the game is not being played to ensure proper firewall protection.

## **My E-Mail program doesn't receive my E-Mail**

### Cause:

- The Domain Suffix is not set correctly.

### Resolution:

- Some email applications require you to enter the Domain Suffix when you configure your network and TCP/IP settings. The Domain Suffix is the unique identifier for your email server.
- The Domain Suffix is the Internet Protocol (TCP/IP) address of the email server you are using. Your cable modem or DSL provider usually lists it somewhere on your invoice. The Domain Suffix address should appear similar to this: dlink.occa.home.com. Find the Domain Suffix on your invoice or call your Internet Service Provider (ISP) to obtain it.

## **Performing a Factory Reset**

Follow these steps to perform a Factory Reset using the Reset button on the back of the DI-804.

1. Press and hold the Reset button with a pen or paper clip for 3 seconds.

A Factory Reset can also be performed through the web configuration interface. Follow these steps to perform a factory reset using the web configuration interface.

1. Log-in to the DI-804 web configuration interface.
2. Click on the System Tools link at the bottom of the screen.
3. Click on **Load Default Settings**.
4. You will be asked if you want to restore to default settings. Click OK to restore settings to default configuration or click Cancel.

## Using the PING Utility in Windows 95/98/Me

In Windows, Microsoft has provided a small utility called PING that can be used to troubleshoot your IP address and connection. The PING utility is used mainly to test the connection between your computer and a client computer. Using the PING utility to check a connection can be helpful in determining where the problem is, whether it be your Broadband Router, your DSL or Cable modem, or your ISP.

Use the following steps to use the WINIPCFG utility:

- Click on the **Start** button and click **Run**.
- Type "command" in the Open box.
- Click "OK" to get to a DOS prompt.
- Type "ping 192.168.0.1", which is the IP address of the Gateway in this case, and hit the **Enter** key. The following screen will be shown.

```
C:\>ping 192.168.0.1
```

```
Pinging 192.168.0.1 with 32 bytes of data:
```

```
Reply from 192.168.0.1: bytes=32 time=130ms TTL=64
```

```
Reply from 192.168.0.1: bytes=32 time=10ms TTL=64
```

```
Reply from 192.168.0.1: bytes=32 time=20ms TTL=64
```

```
Reply from 192.168.0.1: bytes=32 time=10ms TTL=64
```

```
Ping statistics for 192.168.0.1:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 10ms, Maximum = 130ms, Average = 42ms
```

This screen shows a successful connection between you and your Broadband Router. You can use these same steps to ping your DSL or Cable modem and then your ISP provider and Internet website. If any one of these attempts results in an unsuccessful PING, your connection is not complete.

If a PING is unsuccessful between you and your DSL or Cable modem, then your connection is not setup correctly. If it is unsuccessful when PINGing your ISP or an Internet site, then your connection is setup correctly but there is a problem with your ISP or the Internet site you tried to PING is unavailable.

- The screen shown below is an example of an unsuccessful PING.

```
C:\>ping 192.168.0.1
```

```
Pinging 192.168.0.1 with 32 bytes of data:
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Ping statistics for 192.168.0.1:
```

```
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
Approximate round trip times in milli-seconds:
```

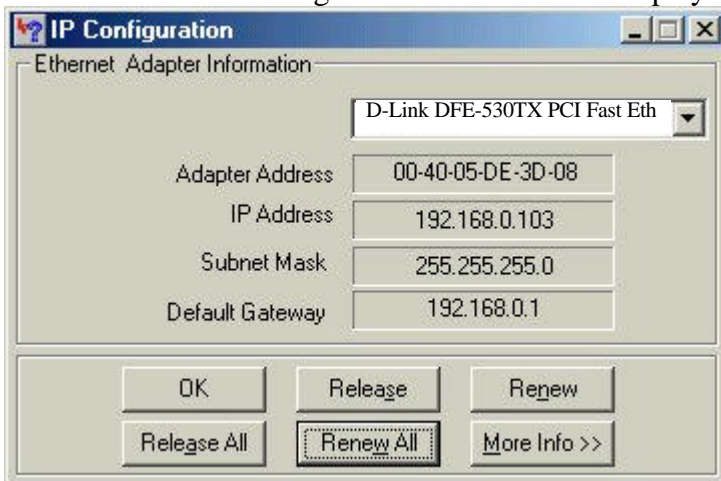
```
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

## Using the WINIPCFG Utility in Windows 95/98/Me

In Microsoft Windows versions 95 through Me, Microsoft has provided a small utility called WINIPCFG that can be used to troubleshoot your IP address and connection. The WINIPCFG utility is used mainly to view, release and renew your IP Address configuration. Windows NT (including Windows 2000) has a similar utility called IPCONFIG that can be used to perform similar tasks.

Use the following steps to use the WINIPCFG utility:

- Click on the **Start** button and click **Run**
- Type "winipcfg" in the Open box.
- Click **OK**. The IP Configuration screen will be displayed.



The IP address will be displayed in the IP Address box. If you have more than one network card, make sure that the network card that you are using is displayed in the white dropdown box.

Make sure that the Default Gateway is the IP Address of your Broadband router. If it is not, you will not be able to connect to the Internet. If you are using DHCP, click the **Release** and then the **Renew** buttons to receive the correct settings. If you manually set your network settings, make sure that the IP Address of your Broadband Router is set in the Gateway portion of the TCP/IP settings in your network settings.

- Click on "More Info" to display additional IP information.



Host Information	
Host Name	PMLAPTOP1.us
DNS Servers	192.168.0.1
Node Type	Hybrid
NetBIOS Scope Id	
IP Routing Enabled	<input type="checkbox"/>
WINS Proxy Enabled	<input type="checkbox"/>
NetBIOS Resolution Uses DNS	<input type="checkbox"/>
Ethernet Adapter Information	
Adapter	D-Link DFE-530TX PCI Fast E
Adapter Address	00-40-05-DE-3D-08
IP Address	192.168.0.103
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
DHCP Server	192.168.0.1
Primary WINS Server	
Secondary WINS Server	
Lease Obtained	12/14/00 2:37:25 PM
Lease Expires	01/25/01 6:37:25 AM

Buttons: OK, Release, Renew, Release All, Renew All

The important settings to watch for in this screen are in the **Host Information** box. Make sure that the DNS Servers box has the correct DNS information.

Also check the DHCP server box to make sure that you are connected to the right DHCP server.

# Technical Specifications

## Standards:

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

## Protocols Supported:

- TCP
- IP
- NAT
- UDP
- PPPoE
- DHCP (Client and Server)

## Management:

- Web-Based

## Ports:

- LAN: NWay 10BASE-T/100BASE-TX Fast Ethernet
- WAN: 10BASE-T
- RS-232 (DB-9) Console

Additional details available at D-Link's web site ([www.dlink.com](http://www.dlink.com)).

# Contacting Technical Support

D-Link provides free technical support for customers within the United States. U.S. customers can contact D-Link technical support through our web site, e-mail, or by phone.

United States technical support is available Monday through Friday from 6:00 a.m. to 6:00 p.m. (PST).

Web: <http://www.dlink.com>

Email: [support@dlink.com](mailto:support@dlink.com)

Phone: 949-788-0805 (option #4)

**If you are a customer residing outside of the United States, please refer to the list of D-Link offices that is included in this manual.**

Thank you for purchasing this product. We like to receive feedback from our customers concerning our products. Please take a moment to visit our web site. You can register your purchase on-line, learn more about the newest networking products, and let us know the things your new network has empowered you to do.

# D-Link Offices

<b>AUSTRALIA</b>	<b>D-LINK AUSTRALASIA</b> Unit 16, 390 Eastern Valley Way, Roseville, NSW 2069, Australia TEL: 61-2-94177100 FAX: 61-2-9417-1077 TOLL FREE: 1800-177-100 (Australia), 0800-900900 (New Zealand) URL: www.dlink.com.au E-MAIL: support@dlink.com.au, info@dlink.com.au
<b>CANADA</b>	<b>D-LINK CANADA</b> 2180 Winston Park Drive, Oakville, Ontario L6H 5W1 Canada TEL: 1-905-829-5033 FAX: 1-905-829-5095 BBS: 1-965-279-8732 FREE CALL: 1-800-354-6522 URL: www.dlink.ca E-MAIL: techsup@dlink.ca
<b>CHILE</b>	<b>D-LINK SOUTH AMERICA</b> Isidora Goyenechea #2934 of.702, Las Condes, Santiago, Chile TEL: 56-2-232-3185 FAX: 56-2-2320923 URL: www.dlink.cl
<b>CHINA</b>	<b>D-LINK CHINA</b> 2F., Sigma Building, 49 Zhichun Road, Haidian District, 100080 Beijing, China TEL: 86-10-88097777 FAX: 86-10-88096789 URL: www.dlink.com.cn
<b>DENMARK</b>	<b>D-LINK DENMARK</b> Naverland 2, DK-2600 Glostrup, Copenhagen, Denmark TEL: 45-43-969040 FAX: 45-43-424347 URL: www.dlink.dk E-MAIL: info@dlink.dk
<b>EGYPT</b>	<b>D-LINK MIDDLE EAST</b> 7 Assem EbnSabet Street, Heliopolis Cairo, Egypt TEL: 2022456176 FAX: 202-2456192 URL: www.dlink-me.com E-MAIL: support@dlink-me.com
<b>FRANCE</b>	<b>D-LINK FRANCE</b> Le Florilege #2, Allée de la Fresnerie 78330 Fontenay Le Fleury France TEL: 33-1-30258688 FAX: 33-1-3023-8689 URL: www.dlink-france.fr E-MAIL: info@dlink-france.fr
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<b>UK</b>	<b>D-LINK EUROPE</b> 4th Floor, Merit House, Edgware Road, Colindale, London, NW9 5AB, U.K. TEL: 44-20-87318555 FAX: 44-20-8731-5511 URL: www.dlink.co.uk E-MAIL: info@dlink.co.uk
<b>U.S.A.</b>	<b>D-LINK U.S.A.</b> 53 Discovery Drive, Irvine, CA 92618 USA TEL: 1-949-788-0805 FAX: 1-949-753-7033 INFO LINE: 1-800-326-1688 BBS: 1-949-455-1779, 1-949-455-9616 URL: www.dlink.com E-MAIL: tech@dlink.com, support@dlink.com Tech Support Hours: 6 A.M. to 6 P.M. Pacific Standard Time. Monday through Friday

# Limited Warranty

D-Link Systems, Inc. (“D-Link”) provides this limited warranty for its product only to the person or entity who originally purchased the product from D-Link or its authorized reseller or distributor.

**Limited Hardware Warranty:** D-Link warrants that the hardware portion of the D-Link products described below (“Hardware”) will be free from material defects in workmanship and materials from the date of original retail purchase of the Hardware, for the period set forth below applicable to the product type (“Warranty Period”) if the Hardware is used and serviced in accordance with applicable documentation.

<b>Product Type</b>	<b>Warranty Period</b>
Product (excluding power supplies and fans), if purchased and delivered in the fifty (50) United States, or the District of Columbia (“USA”)	One (1) Year
Product purchased or delivered outside the USA	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 at no charge to the original owner. 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 of an identical make, model or part; D-Link in its discretion may 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. The Warranty Period shall extend for an additional ninety (90) days after any repaired or replaced Hardware is delivered. 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 delivery of the Software for a period of ninety (90) days (“Warranty Period”), if 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. 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. The Warranty Period shall extend for an additional ninety (90) days after any replacement Software is delivered. 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.

### ***What You Must Do For Warranty Service:***

Submitting A Claim. Any claim under this limited warranty must be submitted in writing before the end of the Warranty Period to an Authorized D-Link Service Office. The claim must include 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. The packaged product shall be insured and shipped to D-Link, 17595 Mt. Herrmann, Fountain Valley, CA 92708, with all shipping costs prepaid. 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 that 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; and

Any hardware, software, firmware or other products or services provided by anyone other than D-Link.

***Disclaimer of Other Warranties:*** EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND 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, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, 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.**

**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

### **Warnung!**

Dies ist in Produkt der Klasse B. Im Wohnbereich kann dieses Produkt Funkstoerungen verursachen. In diesem Fall kann vom Benutzer verlangt werden, angemessene Massnahmen zu ergreifen.

### **Advertencia de Marca de la CE**

Este es un producto de Clase B. En un entorno doméstico, puede causar

interferencias de radio, en cuyo case, puede requerirse al usuario para que adopte las medidas adecuadas.

### **Attention!**

Ceci est un produit de classe B. Dans un environnement domestique, ce produit pourrait causer des interférences radio, auquel cas l'utilisateur devrait prendre les mesures adéquates.

### **Attenzione!**

Il presente prodotto appartiene alla classe B. Se utilizzato in ambiente domestico il prodotto può causare interferenze radio, nel cui caso è possibile che l'utente debba assumere provvedimenti adeguati.

### **FCC Warning**

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 communications. 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.

### **VCCI Warning**

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。