## USER MANUAL DIR-100

VERSION 4.0

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D-Link	ሳ		•••	1	2	3	4	DIR-100





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## **Package Contents**

- DIR-100 Ethernet Broadband Router
- Power Adapter
- Ethernet Cable
- Quick Installation Guide
- Manual on CD



**Note:** Using a power supply with a different voltage rating than the one included with the DIR-600 will cause damage and void the warranty for this product.

The product must be used with the power adapter included with the device.

**Note:** Always attach the power cord plug to the power supply, before inserting the power cord and connected power supply to the wall outlet.

# **System Requirements**

- Ethernet-based Cable or DSL Modem
- Computers with Windows<sup>®</sup>, Macintosh<sup>®</sup>, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer 6 or Firefox 2.0 or above (for configuration)

## **Features**

- **Broadband Modem and IP Sharing** Connects multiple computers to a Broadband (Cable or DSL) modem to share the Internet connection.
- Ethernet Switch Allows you to quickly and easily share an Internet connection with multiple computers and devices.
- VPN supported Supports multiple and concurrent IPSec and PPTP pass-through sessions, so multiple users behind the DIR-100 can access corporate networks through various VPN clients more securely.
- Advanced Firewall, Access Control, and WebSite Filtering Features The Web-based user interface displays a number of advanced network management features including:
- Web-Based Management DIR-100 is configurable through any network computer's web browser using Netscape or Internet Explorer.
- **Port Forwarding Supported** Enables you to expose WWW, FTP and other services on your LAN to be accessible to Internet users.
- **Special Application Supported** Special applications requiring multiple connections, like Internet gaming, video conferencing, Internet telephony and so on. The DIR-100 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 feature is insufficient to allow an application to function correctly.

## **Hardware Overview**

### Connections

### INTERNET

This port is where the user is to connect the Ethernet cable from an outside source that is taking the connection from your local ISP.



### LAN PORTS\* 1-4

LAN ports which may be uplinked using a CAT5 Ethernet RJ-45 cable. The corresponding LEDs on the front panel will light green when one of these ports are connected to an end node such as a hub, switch or computer equipped with a network adapter card (NIC).

#### Reset

Used to restore the DIR-100 back to factory default settings.

#### Power

Connect one end of your included power adapter to the power port and the other end into your power outlet.

\*All ports (both LAN & WAN) are Auto-MDIX. All ports auto-sense cable types to accommodate Straight-through or Cross-over cable.

## **Hardware Overview**

### LEDs



# Installation Getting Started

### Installation

This section will walk you through the installation process. Placement of the router is very important. Do not place the router in an enclosed area such as a closet, cabinet, or in the attic or garage.

### **Before you Begin**

Please configure the router with the computer that was last connected directly to your modem. Also, you can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the WAN port on the router, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet). If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoet, Broadjump, or Ethernet 300 from your computer or you will not be able to connect to the Internet.

# **Wall Mounting Your Device**

You can mount the DIR-100 to a wall or a partition for easy and convenient placement of your device.

To wall mount your device,

- A. Screw the provided screws with the equipment to the wall or partition where the device to be placed.
- B. Place the mounting holes on the bottom of the device over the screws to mount it to the wall or partition.
- C. Connect your cables to the device.



Step A

Step B

Step C

## **Connect to Cable/DSL/Satellite Modem**

If you are connecting the router to a cable/DSL/satellite modem, please follow the steps below:

- 1. Place the router in an open and central location. Do not plug the power adapter into the router.
- 2. Turn the power off on your modem. If there is no on/off switch, then unplug the modem's power adapter. Shut down your computer.
- 3. Unplug the Ethernet cable (that connects your computer to your modem) from your computer and place it into the WAN port on the router.
- 4. Plug an Ethernet cable into one of the four LAN ports on the router. Plug the other end into the Ethernet port on your computer.
- 5. Turn on or plug in your modem. Wait for the modem to boot (about 30 seconds).
- 6. Plug the power adapter to the router and connect to an outlet or power strip. Wait about 30 seconds for the router to boot.
- 7. Turn on your computer.
- 8. Verify the link lights on the router. The power light, WAN light, and the LAN light (the port that your computer is plugged into) should be lit. If not, make sure your computer, modem, and router are powered on and verify the cable connections are correct.
- 9. Skip to page 16 to configure your router.

# Configuration

The DIR-100 provides an embedded Web-based management utility making it operating system independent. You can configure your DIR-100 through the Netscape Communicator or Internet Explorer browser in MS Windows<sup>®</sup>, Macintosh, Linux or UNIX based platforms. All that is needed is a web browser such as Internet Explorer or Netscape Navigator with Java Script enabled.

# **Web-based Configuration Utility**

Open your web browser and type in the IP address of the DIR-100 into the Location (for Netscape) or Address (for IE) field and press "Enter." The default IP address of the DIR-100 is 192.168.0.1

For example: http://192.168.0.1

After the connection is established, the logon screen will pop up.

To log in as an administrator, enter the username of "admin" and the password (there isn't a default password, leave it blank). Click the OK button. If the password is correct, the web-management interface will appear.

LOGIN	
Login to the router:	
	Username: admin
	Password: Login

Eile	Edit	⊻iew	Favorites	Tools	Help			
G	Back	• 6	- 🗙	2		Search	Kavorites	e

### **Setup Wizard**

You may run the setup wizard to quickly setup your router.

Click Internet Connection Setup Wizard to launch the wizard.







#### WELCOME TO THE D-LINK SETUP WIZARD

This wizard will guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

- Step 1: Set your Password
- Step 2: Select your Time Zone
   Step 2: Configure your Internet C
- Step 3: Configure your Internet Connection
  Step 4: Save Settings and Connect

Next Cancel

Click **Next** to continue.

Create a new password and then click **Next** to continue.

Select your time zone from the drop-down menu and then click **Next** to continue.

Select the type of Internet connection you use and then click **Next** to continue.

EP 1: SET YOUR PASSWORD
default, your new D-Lnk Router does not have a password configured for administrator access to the Web-based figuration pages. To secure your new networking device, please set and verify a password below:
Password: •••••• Verify Password: •••••
Prev Next Cancel

STEP 3: CONFIGURE YOUR INTERNET CONNECTION
Please select the internet connection type below:

DHCP Connection (Dynamic IP Address)
 Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this
 type of connection.
 Username / Password Connection (PPPoE)
 Choose this option fyour Internet connection requires a username and password to get online. Most DSL modems
 use this connection type of connection.
 Username / Password Connection (PPTP)

Choose this option if you use Dial-Up Networking connection type of connection.

 $^{\rm C}$  Username / Password Connection (L2TP) Choose this option if you use Dial-Up Networking connection type of connection.

C Static IP Address Connection

Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.

#### C Russia PPPoE (Dual Access)

By o

Choose this option if your Internet connection requires a username and password to get online as well as static route to access Internet service provider's internal network.Certain ISPs in Russia use this type of connection.

#### C Russia PPTP (Dual Access)

Choose this option if your Internet connection requires a username and password to get online as well as static route to access Internet service provider's internal network.Certain ISPs in Russia use this type of connection.

Prev Next Cancel

Section 3 - Configuration

If you selected Dynamic, you may need to enter the MAC address of the computer that was last connected directly to your modem. If you are currently using that computer, click **Clone MAC Address** and then click **Next** to continue.

The Host Name is optional but may be required by some ISPs. The default host name is the device name of the Router and may be changed.

If you selected PPPoE, enter your PPPoE username and password. Click **Next** to continue.

Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses.

**Note:** Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

If you selected PPTP, enter your PPTP username and password. Click **Next** to continue.

CP CONNECTION (DTNAPIIC IF ADDRESS)
et up this connection, please make sure that you are connected to the D-Link Router with the PC that was nally connected to your broadband connection. If you are, then click the Clone MAC button to copy your puter's MAC Address to the D-Link Router.
Host Name: DIR-100 (Optional)
MAC Address: 00 - 32 - 10 - 00 - AD - 02 (Optional)
Clone MAC Address
Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP.
Prev Next Cancel

SET USERNAME AND PASSWORD CONNECTION (PPPOE)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. If you do not have this information, please contact your ISP.
Address Mode: 🙆 Dynamic PPPoE 🕓 Static PPPoE
IP Address: 0.0.0.0
Username:
Password: •••••
Verify Password:
Service Name: (Optional)
Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.
Prev Next Cancel

SET USERNAME AND PASSWORD CONNECTION (PPTP)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need PPTP IP address. If you do not have this information, please contact your ISP.
Address Mode: O Dynamic IP 📀 Static IP
PPTP IP Address: 0.0.0.0
PPTP Subnet Mask: 255.255.255.0
PPTP Gateway IP Address: 0.0.0.0
PPTP Server IP Address(may be same as gateway): 0.0.0.0
PPTP Account:
PPTP Password: •••••
Verify Password: •••••
Prev Next Cancel

If you selected L2TP, enter your L2TP username and password. Click **Next** to continue.

SET USERNAME AND PASSWORD CONNECTION (L2TP)

To : Prov

To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need L2TP IP address. If you do not have this information, please contact your ISP.

Address Mode:	O Dynamic IP 💿 Static IP
IP Address:	0.0.0
Subnet Mask:	255.255.255.0
L2TP Gateway IP Address:	0.0.0
Server IP/Name:	0.0.0.0
L2TP Account:	
L2TP Password:	•••••
Verify Password:	•••••
Prev	Next Cancel

If you selected Static, enter your network settings supplied by your Internet provider. Click **Next** to continue.

STATIC IP ADDRESS CONNECTION
set up this connection you will need to have a complete list of IP information provided by Internet Service vider. If you have a Static IP connection and do not have this information, please contact your ISP.
WAN IP Address: 0.0.0.0
WAN Subnet Mask: 255.255.255.0
WAN Gateway Address: 0.0.0.0
Primary DNS Address:
Secondary DNS Address: (Optional)
Prev Next Cancel

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If you selected Russia PPPoE(Dual Access), enter the information provided by your ISP. Upon your ISP requirement, you may need to set up "routing" function after completed Wizard.

If you selected Russia PPTP(Dual Access), enter the information provided by your ISP. Upon your ISP requirement, you may need to set up "routing" function after completed Wizard.

Click Connect to save your settings. Once the router is finished rebooting, click Continue. Please allow 1-2 minutes to connect.

Close your browser window and reopen it to test your Internet connection. It may take a few tries to initially connect to the Internet.

SET USERNAME AND PASSWORD CONN	ECTION (RUSSIA PPPOE DUAL ACCESS)
To set up this connection you will need to have you do not have this information, please contact	a Username and Password from your Internet Service Provider. If : your ISP.
Address Mode:	Dynamic IP     O Static IP
IP Address:	0.0.0.0
Username:	
Password:	•••••
Verify Password:	•••••
Service Name:	(Optional)
4 H	lote: You may also need to provide a Service Name. If you do not ave or know this information, please contact your ISP.
WAN Physical Setting	
Address Mo	de: O DHCP Mode 💿 Static IP
IP Addre	ess: 0.0.0.0
Subnet Ma	isk: 255.255.255.0
Gatew	ay: 0.0.0.0
Primary DNS Addre	255:
Secondary DNS Addre	(Ontional)
Secondary Diris Addre	Cobround.
Pi	ev Next Cancel

SET USERNAME AND PASSWORD CONNECTION (RUSSIA PPTP DUAL ACCESS)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need PPTP IP address. If you do not have this information, please contact your ISP.
Address Mode:      O Dynamic IP      O Static IP
PPTP IP Address: 0.0.0.0
PPTP Subnet Mask: 255.255.255.0
PPTP Gateway IP Address: 0.0.0.0
PPTP Server IP Address(may be same as gateway): 0.0.0.0
PPTP Account:
PPTP Password: •••••
Verify Password: •••••
Prev Next Cancel

SETUP COMPLETE!
The Setup Wizard has completed. Click the Reboot button to save your settings and reboot the router.
Prev Reboot Cancel

### Internet Setup Static (assigned by ISP)

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

**IP Address:** Enter the IP address assigned by your ISP.

- Subnet Mask: Enter the Subnet Mask assigned by your ISP.
- ISP Gateway Enter the Gateway assigned by your ISP. Address:
- MAC Address: The default MAC Address is set to the WAN's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP.
  - Clone MAC The default MAC address is set to the WAN's Address: physical interface MAC address on the Broadband Router. You can use the Clone MAC Address button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the router. It is not recommended that you change the default MAC address unless required by your ISP.
- **Primary DNS** Enter the Primary DNS server IP address assigned **Address:** by your ISP.



Secondary DNS This is optional. Address:

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

### Internet Setup Dynamic (Cable)

- **Dynamic IP** Choose Dynamic IP Address to obtain IP Address **Address:** information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for Cable modem services.
- Host Name: The Host Name is optional but may be required by some ISPs. The default host name is the device name of the Router and may be changed.
- MAC Address: The default MAC Address is set to the WAN's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP.
  - Clone MAC The default MAC address is set to the WAN's physical Address: interface MAC address on the Broadband Router. You can use the "Clone MAC Address" button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the router. It is not recommended that you change the default MAC address unless required by your ISP.



**Primary DNS** Enter the Primary DNS (Domain Name Server) server IP address assigned by your ISP. **Addresses:** 

Secondary This is optional. DNS Address:

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

### Internet Setup PPPoE (DSL)

Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Make sure to remove your PPPoE

software from your computer. The software is no longer needed and will not work through a router.

**PPPoE:** Select **Dynamic** (most common) or **Static**. Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses.

**User Name:** Enter your PPPoE user name.

- **Password:** Enter your PPPoE password and then retype the password in the next box.
- Service Name: Enter the ISP Service Name (optional).
  - **IP Address:** Enter the IP address (Static PPPoE only).
  - **Primary DNS** Enter the Primary and Secondary DNS Server **Addresses:** Addresses (Static PPPoE only).
- Maximum Idle Enter a maximum idle time during which the Internet Time: connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

Maximum Transmission Unit - you may need to MTU: change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

**Connection** Select either Always-on, Manual, or Connect-on **Mode Select:** demand.



### Internet Setup PPTP

Choose PPTP (Point-to-Point-Tunneling Protocol) if your ISP uses a PPTP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

PPTP:	Select <b>Dynamic</b> (most common) or <b>Static</b> . Select <b>Static</b> if your ISP assigned you the IP address, subnet mask,	D-Linl	ĸ				
	gateway, and DNS server addresses.	DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
IP Address:	Enter the IP address (Static PPTP only).	EASY SETUP INTERNET SETUP LAN SETUP LOGOUT	INTERNET CONNE Use this section to co types to choose from you are unsure of you	CTION Infigure your Internet Conr I: Static IP, DHCP, PPPoE, I Ir connection method, plea	nection type. There are so PPTP, L2TP, Russia PPPOE ase contact your Internet	everal connection and Russia PPTP. If Service Provider.	Helpful Hints. • Internet Connection: When configuring the router to access the Internet, be sure to choose the correct Internet Connection
Subnet Mask:	Enter the Primary and Secondary DNS Server Addresses (Static PPTP only).		Note:If using the PPF on your computers. Save Settings Do INTERNET CONNE	PoE option, you will need t	o remove or disable any P	PPoE client software	Type from the drop-down menu. If you are still unsure of which option to choose, please contact your Internet Service Provider(ISP).
Gateway:	Enter the Gateway IP Address provided by your ISP.		Choose the mode to My Internet Connec	be used by the router to o tion is: PPTP (Username / P	connect to the Internet. assword) 💌		<ul> <li>Support: If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and</li> </ul>
DNS:	The DNS server information will be supplied by your ISP (Internet Service Provider.)		PPTP Enter the information Address IP Ac	provided by your Internet Mode: C Dynamic IP @ idress: 0.0.0.0	Service Provider (ISP). Static IP (assigned by your ISP)		verify them with your ISP if needed.
Server IP:	Enter the Server IP provided by your ISP (optional).		Subnet Gat Server IP/	Mask: 255.255.255.0 eway: 0.0.0.0 Name: 0.0.0.0			
PPTP Account:	Enter your PPTP account name.		PPTP AC PPTP Pass Verify Pass	sword: sword: O Always	Add New Sched	ile .	
PPTP Password:	Enter your PPTP password and then retype the password in the next box.		Connect mode : Maximum Idle MAC Ad	Select:         C         Manual         C         Cor           Time:         5         (minutes)         (minutes)	- 00 - 00 - 00	] (Optional)	
Maximum Idle	Enter a maximum idle time during which the Internet			5 1 1 10 5 U	100		

**Time:** connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

**Connect Mode:** Select either Always-on, Manual, or Connect-on demand.

### Internet Setup L2TP

Choose L2TP (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

L2TP: Select Dynamic (most common) or Static. Select Static	-
if your ISP assigned you the IP address, subnet mask,	D
gatoway, and DNS sonver addresses	
galeway, and DNS server addresses.	DIR-1

- IP Address: Enter the IP address (Static L2TP only).
- Subnet Mask: Enter the Primary and Secondary DNS Server Addresses (Static L2TP only).
  - Gateway: Enter the Gateway IP Address provided by your ISP.
    - **DNS:** The DNS server information will be supplied by your ISP (Internet Service Provider.)
  - Server IP: Enter the Server IP provided by your ISP (optional).

L2TP Account: Enter your L2TP account name.

L2TP	Enter your L2TP password and then retype the password	
Password:	in the next box.	



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

Time:

Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the MTU: default MTU.

**Connect Mode:** Select either Always-on, Manual, or Connect-on demand.

### LAN Setup Router Settings

- Router IP The IP address of your router on the local Address: area network. Your local area network settings are based on the address assigned here. For example, 192.168.0.1.
- Subnet Mask: The subnet mask of your router on the local area network.
- Local Domain This entry is optional. Enter a domain name for Name: the local network. The DHCP server will give this domain name to the computers on the LAN. So, for example, if you enter mynetwork.net here, and you have a PC with a name of chris, that PC will be known as chris.mynetwork.net. Note, however, if the router's WAN settings specify Dynamic IP Address, and the ISP's DHCP server assigns a domain name to the router, that domain name will override any name you enter here.
  - DNS Relay: When DNS Relay is enabled, the router plays the role of a DNS server. DNS requests sent to the router are forwarded to the ISP's DNS server. This provides a constant DNS address that LAN computers can use, even when the router obtains a different DNS server address from the ISP upon re-establishing the WAN connection. You should disable DNS relay if you implement a LAN-side DNS server as a virtual server.



### LAN Setup DHCP Server Settings

DHCP Server: Once the router is properly configured and this DHCP Server option is enabled, the DHCP Server will manage the IP addresses and other network configuration information for computers and other devices connected to the Local Area Network. There is no need for you to do this yourself.

> The computers (and other devices) connected to your LAN also need to have their TCP/IP configuration set to "DHCP" or "Obtain an IP address automatically".

DHCP IP These two IP values (from and to) define a range Address of IP addresses that the DHCP Server uses when Range: assigning addresses to computers and devices on your Local Area Network. Any addresses that are outside of this range are not managed by the DHCP Server; these could, therefore, be used for manually configured devices or devices that cannot use DHCP to obtain network address details automatically.

Lease Time: The amount of time that a computer may have an IP address before it is required to renew the lease. The lease functions just as a lease on an apartment would. The initial lease designates the amount of time before the lease expires. If the tenant wishes to retain the address when the lease is expired then a new lease is established. If the lease expires and the address is no longer needed then another tenant may use the address.



### LAN Setup DHCP Client list & reservation

DHCP This is a list of the computers or other Reservations devices for which you have created reserved List: DHCP entries. You can enable and disable entries with the Enabled checkbox. A DHCP Reservation entry can be changed by clicking the Edit icon, or deleted by clicking the Delete icon. When you click the Edit icon, the item is highlighted, and the "DHCP Reservations" section is activated for editing.

Dynamic DHCP In this section you can see what LAN Client List: devices are currently leasing IP addresses.

SETUP	ADVANCED	TOOLS	STATUS	н
NEWWORK SETTIN	IG			Helpful Hint
Use this section to con the built-in DHCP serve that is configured here interface. If you chang settings to access the Please Note that th settings here to get	nfigure the internal network er to assign IP address to the le the IP address that you ge the IP address that you network again. is section is optional and r your network up and r	settings of your router e computers on your ne use to access the Web- may need to adjust you you do not need to c uning.	and also to configure twork. The IP address based management ir PC's network change any of the	<ul> <li>If you alree</li> <li>DHCP server</li> <li>network or a</li> <li>IP addresses</li> <li>devices on you</li> <li>uncheck Ena</li> <li>Server to dia</li> <li>feature.</li> </ul>
Save Settings Do	n't Save Settings			
Use this section to con configured here is the If you change the IP a the network again.	nfigure the internal network IP address that you use to address here, you may need	access the Web-based r access the Web-based r to adjust your PC's net	The IP address that is management interface. work settings to access	
Rou Defaul Local En:	ter IP Address: 192.168.0.1 : Subnet Mask: 255.255.255 Domain Name: router ible DNS Relay: 🔽	0		
DHCP SERVER SE Use this section to co- your network.	ITTINGS nfigure the built-in DHCP se	rver to assign IP address	to the computers on	
Enable DHCP IP A DHC	a DHCP Server: ☑ Address Range: 100 to CP Lease Time: 480 (n	199 (addresses withi ninutes)	n the LAN subnet)	
DHCP CLIENT LIS	IP Address MAC /	Address Expi	red Time	
NUMBER OF DYNA	MIC DHCP CLIENTS			
Host Name	IP Address MAC	Address Expi	red Time	
24 - DHCP RESER	VATIONS			
Remaining number of	clients stat can be configure	ed : 24		
Host Name	IP Address 1	1AC Address		
		<<	Computer Name	

### Tools Time

- Automatic: NTP is short for Network Time Protocol. NTP synchronizes computer clock times in a network of computers. This field is optional.
  - Manual: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second. Click Set Time.
- Time Zone: Select the Time Zone from the drop-down menu.

#### Daylight

Saving: To select Daylight Saving time manually, select enabled or disabled, and enter a start date and an end date for daylight saving time.



### Advanced Port Forwarding Rules

Port Forwarding can be used to open a port or range of ports to a device on your network . To use them, click the checkbox to Enable the entry, select a pre-defined service from the Application Name drop down menu, select a computer from the Computer Name drop down menu, and click Save Settings. The Application, Computer, and Ports can also be filled in manually if your Application or Computer is not listed in the drop down menus.

- Name: The name for the service being provided by the device on your LAN that uses the ports being opened.
- **IP Address:** The server computer on the LAN network that the specified ports will be opened to.
- Application This contains a list of pre-defined services. Name:
  - **Computer** This contains a list of the devices on your **Name:** network which have obtained an IP Address from the router.
    - **Port:** The port number that users on the Internet will use to access the defined service.
- **Protocol Type:** The protocol used by the service the device on your LAN is providing.
  - Schedule: The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in the Tools > Schedules section.



### **Application Rules**

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 DIR-100.

Rule: Check the box to enabled the rule.

Name: Enter a name for the rule.

- **Trigger Port:** This is the port used to trigger the application. It can be either a single port or a range of ports.
- **Firewall Port:** 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.

Traffic Type: Select TCP, UDP, or ANY.

D-Link	ć				
DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
PORT FORWARDING APPLICATION RULES ACCESS CONTROL WEBSITE FILTER FIREWALL SETTINGS ADVANCED NETWORK	APPLICATION RUL The Application Rules of router senses data sen Applications rules apply Save Settings Dom	Helpful Hints. • Check the Application name drop-down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the			
ROUTING	Remaining number of r	Application Name       <	24 Port Trigger Firewall Firewall Firewall	Traffic Type Any  Any  Any  Any  Any  Any  Any  Any	drop-down menu to till out the appropriate fields.

### **Access Control**

Use MAC (Media Access Control) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the Network. You can either manually add a MAC address or select the MAC address from the list of clients that are currently connected to the Broadband Router.

- **Configure MAC** Select Disable MAC filters, allow MAC addresses **Filter:** listed below, or deny MAC addresses listed below.
- MAC Address: Enter the MAC address you would like to filter. To find the MAC address on a computer, please refer to the Networking Basics section in this manual.
- **DHCP Client:** Select a DHCP client from the drop-down menu and click << to copy that MAC Address.



### **Website Filter**

URL blocking is used to deny LAN computers from accessing specific web sites by the URL or domain. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the blocked word, the site will not be accessible and the web page will not display. To use this feature, enter the text string to be blocked and click **Save Settings**. The text to be blocked will appear in the list. To delete the text, just highlight it and click **Delete** to remove the text.

Configure Select Turn website filtering off, Turn Website Filter: website filtering on and allow access, or Turn website filtering on and deny access.

Website URL: Enter the keywords or URLs that you want to block (or allow). Any URL with the keyword in it will be blocked.



### **Firewall & DMZ**

This section will allow you to setup a DMZ host.

If you have a client PC that cannot run Internet applications properly from behind the DIR-100, then you can set the client up for unrestricted Internet access. It allows a computer to be exposed to the Internet. This feature is useful for gaming purposes. Enter the IP address of the internal computer that will be the DMZ host. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.

Enable DMZ Check this box to enable DMZ. Host:

**DMZ IP** Enter the IP address of the computer you would **Address:** like to open all ports to.



### **Advanced Network Settings**

- **UPnP Settings:** To use the Universal Plug and Play (UPnP<sup>™</sup>) feature click on **Enabled**. UPNP provides compatibility with networking equipment, software and peripherals.
  - WAN Ping: Unchecking the box will not allow the DIR-100 to respond to pings. Blocking the Ping may provide some extra security from hackers. Check the box to allow the WAN port to be "pinged".
- WAN select to You may set the port speed of the WAN port to 10/100 Mbps: 10Mbps, 100Mbps, or auto. Some older cable or DSL modems may require you to set the port speed to 10Mbps.

**Multicast** Check the box to allow multicast traffic to pass **streams:** through the router from the Internet.



### **Routing**

AD

This option allows you to de ne xed routes to de ned destinations.

- Enable: Tick this checkbox to enable or disable fixed routes to de ned destinations.
- Interface: Use the drop-down menu to choose the WAN or WAN (Physical Port) Interface the IP packet must use to transit out of the Router.
- Destination: The IP address of the packets that will take this route.
- Subnet Mask: The subnet of the IP address of the packets that will take this route.
  - Gateway: Species the next hop to be taken if this route is used.

D-Link	Ĉ					
DIR-100		SETUP	ADVANCED	TOOLS	STATUS	HELP
ORT FORWARDING	ROUT	ING:			•	Helpful Hints.
PPLICATION RULES	The R	outing option allov	vs you to define fixed rou	tes to defined destinatio	ons.	<ul> <li>Enable:Specifies v the entry will be enabled</li> </ul>
CCESS CONTROL	Sav	e Settings	on't Save Settings			disabled.
EBSITE FILTER	Jav		John Save Setungs			• interface: Specifies
REWALL SETTINGS	25 -	STATIC ROUTI	NG			interface WAN or Physical that the I
OVANCED NETWORK	Remai	ning number of rul	es that can be created :	25		packet must use to t out of the router, w
DUTING						route is used.
GOUT		Interface	Destination	Subnet Mask	Gateway	• Destination IP:The
		WAN(172.17.5.95]	•			take this route.
		WAN(172.17.5.95)	•			• Subnet Mask:One
		WAN(172.17.5.95)	•			the mask specify wh of the IP address mu
		WAN(172.17.5.95)				match.
		WAN(172.17.5.95)	•	1		Gateway:Specifies next hop to be taken
		WAN(172.17.5.95)	•			0.0.0.0 implies there next hop, and the I
		WAN(172.17.5.95)	•			address matched is connected to the ro
		WAN(172.17.5.95)	-			the interface specifie or WAN Physical.

# MAINTENANCE

### **Device Administration**

Device Administration 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 router's management interface.

- **IP Address:** The remote computer on the WAN network that is allowed to access DIR-100.
  - **Port:** Select the port which will be used to access the DIR-100.
  - Example: http://x.x.x.x8080 whereas x.x.x.x is the WAN IP address of the DIR-100 and 8080 is the port used for the Web-Management interface.

DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP			
ADMIN	ADMINISTRATOR	SETTINGS			Helpful Hints.			
TIME	There is no password	for this router by default.	To help secure your netw	ork, we recommend	<ul> <li>For security reasons, i recommended that you</li> </ul>			
LOG SETTINGS	that you should choos	e a new password.			change the Password for			
EMAIL SETTINGS	Save Settings Dor	Save Settings Don't Save Settings						
SAVE AND RESTORE		Passwords to avoid having to reset the router in the						
FIRMWARE UPDATE	ADMINISTRATOR	ADMINISTRATOR (THE DEFAULT LOGIN NAME IS "admin")						
DDNS SETTING	Please enter the same	e password into both boxe	es, for confirmation.		Torgotten.			
SYSTEM CHECK	News	Deserverde Landaue			<ul> <li>When enabling Remove Management, anyone car</li> </ul>			
SCHEDULES	Verify				have access to your rou			
LOGOUT	Veniy	Passworu.						
	REMOTE MANAGE	MENT						
	Enable Remote Ma	nagment:						
	Enable Kernote Ma							

### **Save and Restore**

Save Settings Use this option to save the current router to Local Hard configuration settings to a file on the hard disk Drive: of the computer you are using. First, click the Save button. You will then see a file dialog, where you can select a location and file name for the settings.

Load Settings Use this option to load previously saved from Local router configuration settings. First, use the Hard Drive: Browse control to find a previously save file of configuration settings. Then, click the Load button to transfer those settings to the router.

Restore to This option will restore all configuration settings Factory Default back to the settings that were in effect at the Settings: time the router was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current router configuration settings, use the Save button above.

D-Link	<b>د</b>				
DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
ADMIN	SAVE AND RESTOR	RE SETTINGS			Helpful Hints.
TIME	Once the router is configured you can save the configuration settings to a configuration file on configured they way you				Once your router is     configured they way you
LOG SETTINGS	your hard drive. You also have the option to load configuration settings, or restore the factory wantit, you can save these default settings.				
EMAIL SETTINGS	deradic settings. settings to a configuration file that can later be loaded				
SAVE AND RESTORE	SAVE AND RESTORE SETTINGS			in the event that the router's default settings are	
FIRMWARE UPDATE	Save settings	to local hard drive: Save			restored. To do this, dick
DDNS SETTING	Load settings fro	m local bard drive:	瀏覽…		where it says Save Settings
SYSTEM CHECK	Load seconds no	Uploa	d Settings		to Eucarnard Drive.
SCHEDULES	Restore to factor	y default settings: Resto	re Device		
LOGOUT		Reboot device: Reboo	ot		
	L				

### **Firmware Update**

You can upgrade the firmware of the Router here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on **Browse** to locate the firmware file to be used for the update. Please check the D-Link support site for firmware updates at http://support.dlink.com. You can download firmware upgrades to your hard drive from the D-Link support site.

- **Firmware** Click on the link in this screen to find out if there **Upgrade:** is an updated firmware; if so, download the new firmware to your hard drive.
- Browse: After you have downloaded the new firmware, click Browse in this window to locate the firmware update on your hard drive. Click **Save Settings** to complete the firmware upgrade.



### **Dynamic DNS**

**Enabled:** Enable this option only if you have purchased your own domain name and registered with a dynamic DNS service provider. The following parameters are active when the option is enabled.

Server Select a dynamic DNS service provider from the Address: pull-down list.

- Host Name: Enter your entire host name; for example: myhost.mydomain.net.
- **Username:** Enter the username or key provided by your service provider. If the Dynamic DNS provider supplies only a key, enter that key in all three fields.
- **Password:** Enter the password or key provided by your service provider. If the Dynamic DNS provider supplies only a key, enter that key in all three fields.

D-Link	°				
DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
ADMIN TIME LOG SETTINGS EMAIL SETTINGS SAVE AND RESTORE FIRMWARE UPDATE DDNS SETTING SYSTEM CHECK SCHEDULES LOGOUT	DYNAMIC DNS The Dynamic DNS feat domain name that you assigned IP addresse. Using a DDI your game server no n Sign up for D-Link's Fre Save Settings Dor DYNAMIC DNS SET Enable D Server Add Host N Usern Passy	ture allows you to host a set have purchased (www.wi lost broadband Internet Set NS service provider, your fr matter what your IP address ee DDNS service at www.D n't Save Settings TTINGS DDNS: DynDns.org (Free) lame: DDNS Account Testing	erver (Web, FTP, Game S hateveryournameis.com) rvice Providers assign dyn iends can enter your host s is. LinkDDNS.com.	erver, etc) using a with your dynamically amic (changing) IP : name to connect to	Helpful Hints. • To use this feature, you must first have a Dynamic DNS account from one of the providers in the drop down menu.

### **System Check**

Virtual Cable VCT is an advanced feature that integrates a Tester (VCT) LAN cable tester on every Ethernet port on the Info: router. Through the graphical user interface (GUI), VCT can be used to remotely diagnose and report cable faults such as opens, shorts, swaps, and impedance mismatch. This feature significantly reduces service calls and returns by allowing users to easily troubleshoot their cable connections.

**Ping Test:** The Ping Test is used to send Ping packets to test if a computer is on the Internet. Enter the IP Address that you wish to Ping, and click **Ping**.

D-Link	Ċ				
DIR-100 //	SETUP	ADVANCED	TOOLS	STATUS	HELP
ADMIN	SYSTEM CHECK				Helpful Hints.
TIME	The System Check too	ol allows you to verify the p	hysical connectivity on bo	oth the LAN and WAN	<ul> <li>"Ping" checks whether a computer on the Internet is</li> </ul>
LOG SETTINGS	interfaces. The Ping T	est tool can be used to ver	ify the status of the Inte	ernet.	running and responding.
EMAIL SETTINGS	VCT INFO				of the target computer or
SAVE AND RESTORE	Dort	Link Status			onter its fully qualified domain name.
FIRMWARE UPDATE		LINK Status	56		
DDNS SETTING	WAN IL.		100Mbps	FULL Duplex	
SYSTEM CHECK			100Mbps	FULL Duplex	
SCHEDULES	LAN2		Disco	onnected	
LOGOUT	LAN3		Disco	onnected	
	LAN4		Disco	onnected	
	PING TEST				
	Ping Test allows you to	o test whether a computer	r is on the Internet by se	nding "Ping" packets.	
	Host Name	e or IP Address:	Pin	ng	

### Schedules

- Name: Give the schedule a name that is meaningful to you, such as "Weekday Rule".
- Day(s): Place a checkmark in the boxes for the desired days, or select the All Week radio button to schedule all seven days of the week.
- All Day 24hrs: Select this option if you want this schedule in effect all day for the selected day(s).
  - Start Time: If you don't use the All Day option, then enter the time here. The start time is entered in two fields. The first box is for the hour and the second box is for the minute. E-mail events are normally triggered only by the start time.
  - End Time: The end time is entered in the same format as the start time. The hour in the first box and the minutes in the second box. The end time is used for most other rules, but is not normally used for e-mail events.



### **Log Settings**

Save Log file: Save log file to local hard drive.

Syslog Server: click the checkbox to save the log in the log server in the LAN side.



### Status Device Info

This window displays the current information for the DIR-100. It will display the LAN, WAN, and Wireless information.

If your WAN connection is set up for a Dynamic IP address then a DHCP Release button and a DHCP Renew button will be displayed. Use DHCP Release to disconnect from your ISP and use DHCP Renew to connect to your ISP. If your WAN connection is set up for PPPoE, a Connect button and a Disconnect button will be displayed. Use Disconnect to drop the PPPoE connection and use Connect to establish the PP

- LAN: Displays the MAC address and the private (local) IP settings for the router.
- **WAN:** Displays the MAC address and the public IP settings for the router.



### Log

This window allows you to view a log of activities on the Router. This is especially helpful detecting unauthorized network usage.

First Page: View the first page of the log.

Last Page: View the last page of the log.

**Previous:** View the previous page.

Next: View the next page.

Clear: Clear the log.

Link to Log Click this button to go directly to the Log Settings: Settings window (Tools > Log Settings).



### **Statistics**

This window will allow users to view transmitted and received packets occuring on the Router. To refresh the window, click Refresh. To restart the packet count, click Reset.

D.I ini	ink				
DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
DEVICE INFO	TRAFFIC STATIS	TICS :			Helpful Hints.
LOG	Traffic Statistics display Receive and Transmit packets passing through the DIR-100.				
STATISTICS	number of packets that have passed between the				
ACTIVE SESSION					WAN and the LAN since the router was last initialized.
ROUTING TABLE		Refresh	Reset		
LOGOUT		Receive		Transmit	
	WAN	245448	Packets	11899668 Packets	
				DODTODC Durlingto	

### **Active Session**

This window displays the Source and Destination packets passing through DIR-100. To refresh the window, click the **Refresh** button.

D-Link	Ċ				
DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
DEVICE INFO	ACTIVE SESSION				Helpful Hints.
LOG	Active Session display S	ource and Destination pa	ckets passing through the	e DIR-100.	<ul> <li>This is a list of all active conversations between</li> </ul>
STATISTICS	Refresh				WAN computers and LAN computers
ACTIVE SESSION					compared of
ROUTING TABLE	NAPT SESSION				
LOGOUT		TCP Session: 11			
		UDP Session: 0 Total: 11			
		1000. 11			
	NAPT ACTIVE SESS	SION			
	IP Address	TCP Session	UDP Session		
	192.168.0.140	11	0	detail	

### **Routing Table**

This window display the routing details configured for your router.

D-Lin	ĸ				
DIR-100 //	SETUP	ADVANCED	TOOLS	STATUS	HELP
EVICE INFO	ROUTING TABLE		1	n.	Helpful Hints.
OG TATISTICS	This page displays th	e routing details configured	for your router.		This is a list of all activ conversations betwee WAN computers and L
ACTIVE SESSION	- ROUTING TABLE				computers.
	Dest IP	Subnet Mask	Gateway	Interface	
OUTING TABLE					
	0.0.0.0	0.0.0.0	172.17.5.254	LAN	
OGOUT	0.0.0.0	0.0.0.0 255.255.255.0	172.17.5.254 172.17.5.0	LAN	

**HELP** 

D-Link	Č				
DIR-100	SETUP	ADVANCED	TOOLS	STATUS	HELP
MENU	SUPPORT MENU				
SETUP	• Setup				
ADVANCED	Advanced				
TOOLS	<u>I ools</u> <u>Status</u>				
STATUS					
LOGOUT					
	SETUP				
	<ul> <li><u>Easy Setup</u></li> <li><u>Internet Setup</u></li> <li><u>LAN Setup</u></li> </ul>	2			
	ADVANCED				
	<ul> <li>Port Forwardin</li> <li>Application Rule</li> <li>Access Control</li> <li>Website Filter</li> <li>Firewall Setting</li> <li>Advanced Netv</li> <li>Routing</li> <li>Traffic Control</li> </ul>	g es Is Nork			
	TOOLS				
	• <u>Admin</u> • <u>Time</u>				

# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-100. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows<sup>®</sup> XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

#### 1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (192.168.0.1 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

• Make sure you have an updated Java-enabled web browser. We recommend the following:

- Internet Explorer 6.0 or higher
- Firefox 2.0 or higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows<sup>®</sup> XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:
  - Go to Start > Settings > Control Panel. Double-click the Internet Options Icon. From the Security tab, click the button to restore the settings to their defaults.
  - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
  - Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.
  - Close your web browser (if open) and open it.
- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your the web management.
- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

### 2. What can I do if I forgot my password?

If you forgot your password, you must reset your router. Unfortunately this process will change all your settings back to the factory defaults.

To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait about 30 seconds to access the router. The default IP address is 192.168.0.1. When logging in, the username is **admin** and leave the password box empty.

#### 3. Why can't I connect to certain sites or send and receive emails when connecting through my router?

If you are having a problem sending or receiving email, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

To find the proper MTU Size, you'll have to do a special ping of the destination you're trying to go to. A destination could be another computer, or a URL.

- Click on Start and then click Run.
- Windows<sup>®</sup> 95, 98, and ME users type in **command** (Windows<sup>®</sup> NT, 2000, and XP users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

ping [url] [-f] [-l] [MTU value]

Example: ping yahoo.com -f -l 1472

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss)
Approximate round trip times in milli-seconds:
    Minimum = Oms, Maximum = Oms, Average =
C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52
Ping statistics for 66.94.234.13:
     Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 93ms, Maximum = 203ms, Average = 132ms
C:\>
```

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, lets say that 1452 was the proper value, the actual MTU size would be 1480, which is the optimum for the network we're working with (1452+28=1480).

Once you find your MTU, you can now configure your router with the proper MTU size.

To change the MTU rate on your router follow the steps below:

- Open your browser, enter the IP address of your router (192.168.0.1) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on the INTERNET SETUP tab and click the Manual Internet Connection Setup button.
- To change the MTU enter the number in the MTU field and click the **Apply** button to save your settings.
- Test your email. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

### Assigning a Static IP Address (for Windows® 2000/XP)

Note: 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

• Double-click on Network Connections



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

- Highlight Internet Protocol(TCP/IP)
- Click Properties
- Select Use the following IP address in the Internet Protocol (TCP/IP) Properties window (shown below.)



🗕 Local Area Connection 7 Properties 🛛 💽 🔀
General Advanced
Connect using:
P-Link DWL-A650
Configure
This connection uses the following items:
Client for Microsoft Networks     File and Printer Sharing for Microsoft Networks     GoS Packet Scheduler     Internet Protocol (TCP/IP)
Install Uninstall Properties
Description     Transmission Control Protocol/Internet Protocol. The default     wide area network protocol that provides communication     across diverse interconnected networks.     Show icon in notification area when connected
OK Cancel

• Input your **IP address and subnet mask.** (The IP Addresses on your network must be within the same range. For example, if one computer has an IP Address of 192.168.0.2, the other computers should have IP Addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The subnet mask must be the same for all the computers on the network.)

#### • Input your DNS server addresses.

(Note: If you are entering a DNS server, you must enter the IP Address of the Default Gateway.)

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

u can get IP settings assigned	automaticallu if usur naturark supporte			
is capability. Otherwise, you ne e appropriate IP settings.	ed to ask your network administrator fo			
Obtain an IP address autom	natically			
Use the following IP addres	S:			
IP address:	192.168.0.2			
Sybnet mask:	255 . 255 . 255 . 0			
Default gateway:				
O Obtain DNS server address	automatically			
Use the following DNS serv	er addresses:			
Preferred DNS server:				
Alternate DNS server:				
	Ad <u>v</u> anced.			

# **Networking Basics**

### **Check your IP address**

After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on Start > Run. In the run box type *cmd* and click OK.

At the prompt, type *ipconfig* and press Enter.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please

contact an employee or administrator to verify their wireless network settings.



### **Statically Assign an IP address**

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

#### Step 1

Windows<sup>®</sup> XP - Click on **Start** > **Control Panel** > **Network Connections**. Windows<sup>®</sup> 2000 - From the desktop, right-click **My Network Places** > **Properties**.

#### Step 2

Right-click on the Local Area Connection which represents your D-Link network adapter and select Properties.

#### Step 3

Highlight Internet Protocol (TCP/IP) and click Properties.

#### Step 4

Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

You can get IP settings assigned this capability. Otherwise, you ne the appropriate IP settings.	automatically if your network support: ed to ask your network administrator f
Obtain an IP address autom	natically
Subsethe following IP addres	s:
IP address:	192.168.0.52
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.0.1
Obtain DNS server address	automatically
💿 Use the following DNS serv	er addresses:
Preferred DNS server:	192.168.0.1
Alternate DNS server:	
	C

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

#### Step 5

Click OK twice to save your settings.

# **Technical Specifications**

#### Standards

- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x

#### **VPN Pass Through/ Multi-Sessions**

- PPTP
- L2TP
- IPSec

#### **Device Management**

- Web-based Internet Explorer v6 or later; Firefox v2.0 or later
- DHCP Server and Client

#### **Advanced Firewall Features**

- NAT with VPN Pass-through (Network Address Translation)
- Access Control
- URL Filtering
- Scheduling

#### **Operating Temperature**

32°F to 129 °F ( 0°C to 40°C)

#### Humidity

95% maximum (non-condensing)

#### Safety and Emissions

FCC Part 15B/ 15C/ MPE IC RSS-210 NCC LP0002

#### LEDs

- Power
- Status
- Internet
- LAN (10/100)

#### Dimensions

- L = 135mm
- W = 99.8mm
- H = 31.5mm

#### Weight

0.246kg

#### Warranty

1 Year

# Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for 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, or addresses with an APO or FPO.

#### **Limited Warranty:**

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

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any 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, at its option, 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 or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace 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 ("Software 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 Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, 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 the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by DLink 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. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. 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 portions 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 DLink to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at https://rma.dlink.com/.
- 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. DLink will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via

UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. 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:

The Limited Warranty provided herein by D-Link does not cover:

Products that, 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; and 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.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited 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 NONINFRINGEMENT.

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 THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. 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 NONCONFORMING 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 you may also have other rights which vary from state to state.

#### **Trademarks:**

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### **Copyright Statement:**

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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.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

#### **Industry Canada Statement**

Operation is subject to the following two conditions:

- 1) this device may not cause interference and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device

This device has been designed to operate with an antenna having a maximum gain of 2dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the EIRP is not more than required for successful communication.

#### **CSA Statement:**

The Router must be used with the power adapter included with the device.Caution - To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

### 低功率電波幅性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機,非經許可,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。 第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使 用。前項合法通信,指依電信法規定作業之無線電通信。低功率射頻電 機須忍受合法通信或工業、科學及醫療用電波輻射性電 機設備之干擾。