

USER MANUAL

DIR-100

VERSION 1.0



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Package Contents

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



System Requirements

- Ethernet-based Cable or DSL Modem
- Computers with Windows®, Macintosh®, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer Version 6.0 and above (for configuration)

Note: Using a power supply with a different voltage rating will damage and void the warranty for this product. If any of the above items are missing, please contact your reseller.

Introduction

The D-Link DIR-100 is an Ethernet Broadband Router. The D-Link DIR-100 enables users to quickly and easily share a high speed Internet connection. The D-Link DIR-100 also incorporates many advanced features, traditionally found in more expensive routers. After completing the steps outlined in the Quick Installation Guide (included in your package) you will have the ability to share a single Internet connection as well as sharing information and resources such as files and printers.

The DIR-100 is compatible with most popular operating systems, including Macintosh, Linux and Windows, and can be integrated into an existing network. This Manual is designed to help you connect the D-Link DIR-100 to a high speed Internet connection and four Ethernet PC connections.

This manual provides a quick introduction to Broadband Router Technology, Firewalls, and Local Area Networking. Please take a moment to read through this manual and get acquainted these various technologies.

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, MAC Filtering, 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

Front Panel



Rear Panel

WAN*

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).

Power

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

Reset

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

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

Technology Introduction

Introduction to Broadband Router Technology

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

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

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

Introduction to Firewalls

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

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

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

Introduction to Local Area Networking

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

A LAN consists of multiple computers connected to each other. There are many types of media that can connect computers together. The most common media is CAT5 cable (UTP or STP twisted pair wire.) On the other hand, wireless networks do not use wires; instead they communicate over radio waves. Each computer must have a Network Interface Card (NIC), which communicates the data between computers. 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 ways to configure your network. You may want to take some time to determine the best network set-up for your needs.

Reset

To reset the system settings to factory defaults, please follow these steps:

1. Leave the device powered on, do not disconnect the power
2. Press the reset button and hold (use a paper-clip)
3. Keep the button pressed about 10 seconds
4. Release the button

The DIR-100 will then automatically reboot itself.

Installation

Getting Started

Installation Location

The DIR-100 functions as an Ethernet LAN for your home or office use. The Router can be placed on a shelf or desktop and ideally you should be able to see the LED indicators on the front if you need to view them for troubleshooting. No special wiring or cooling requirements are needed but when you are ready to place the Router, you must take into account the following guidelines:

- Place the DIR-100 on a flat horizontal plane.
- Keep away from any heating devices.
- Do not place in a dusty or wet environment.

The recommended operational specifications of the DIR-100 are:

Temperature	32o F ~ 131o F
Humidity	5 % ~ 90 %

In addition, remember to turn off the power, remove the power cord from the outlet, and keep your hands dry when you install the hardware.

Network Settings

To use the DIR-100 correctly, you have to properly configure the network settings of your computers. The default IP address of the DIR-100 is **192.168.0.1**, and the default subnet mask is **255.255.255.0**. These addresses can be changed as needed, but the default values are used in this manual. If the TCP/IP environment of your computer has not yet been configured, you can refer to **Configuring Your PCs to Connect to the DIR-100** to configure it.

For example:

1. Configure your computer *IP* as 192.168.0.3, *subnet mask* as 255.255.255.0 and *gateway* as 192.168.0.1

Or more conveniently

2. Configure your computers to obtain TCP/IP settings automatically from the DHCP server feature of the DIR-100

Since the IP address of the DIR-100 is 192.168.0.1, the IP address of your computer must be 192.168.0.X (where “X” is a number between 2 and 254.) Each computer on your network must have a different IP address within that range. The default gateway must be 192.168.0.1

(the IP address of the DIR-100).

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®, 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.

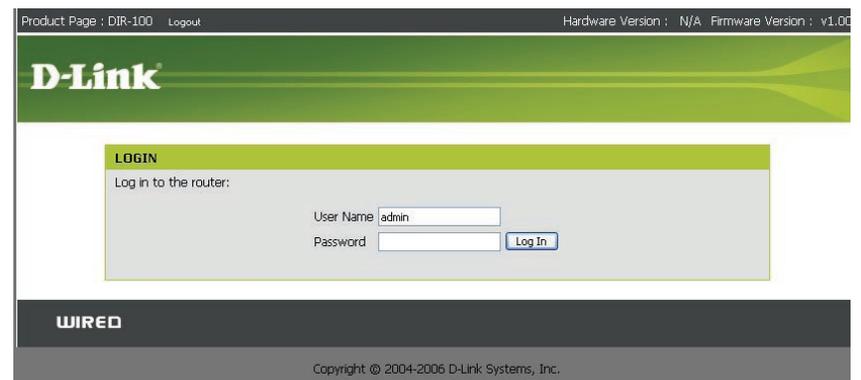
Log in

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**



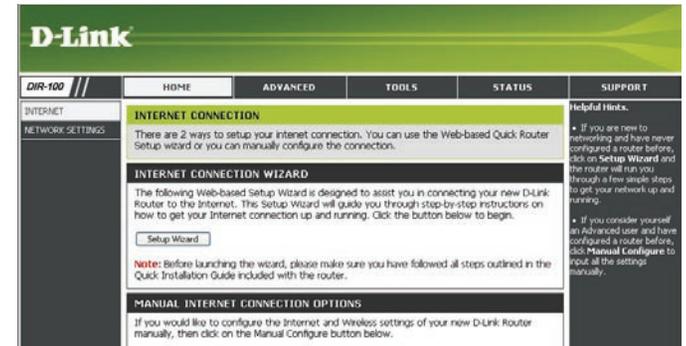
After the connection is established, the logon screen will pop up. To log in as an administrator, enter the username of “**admin**” and the password (there isn’t a default password, leave it blank). Click the **OK** button. If the password is correct, the web-management interface will appear.



Setup Wizard

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

Click **Setup Wizard** to launch the wizard.



Click **Launch Internet Connection Setup Wizard** to begin.



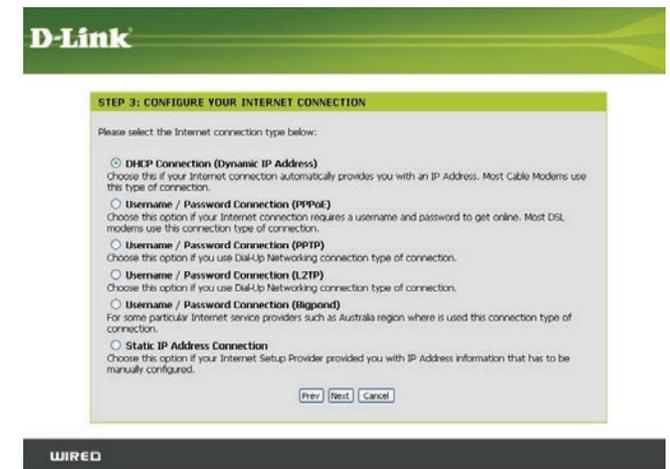
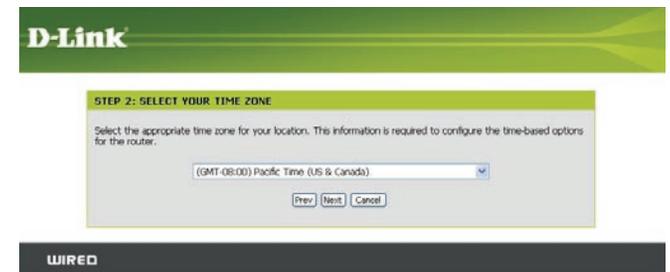
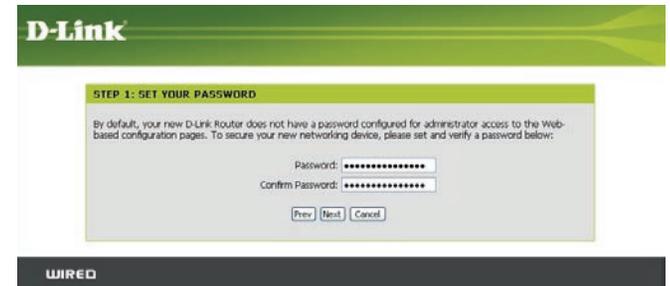
Click **Next** to continue.



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.



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 Your PC's 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.

D-Link

DHCP CONNECTION (DYNAMIC IP ADDRESS)

To set up this connection, please make sure that you are connected to the D-Link Router with the PC that was originally connected to your broadband connection. If you are, then click the Clone MAC button to copy your computer's MAC Address to the D-Link Router.

MAC Address: 00 - 00 - 00 - 00 - 00 - 00 (Optional)

Host Name: DIR-100

Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP.

WIRED

D-Link

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 IP Static IP

User Name:

Password:

Confirm 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.

WIRED

D-Link

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: Dynamic IP Static IP

PPTP IP Address:

PPTP Subnet Mask:

PPTP Gateway IP Address:

PPTP Server IP Address (may be same as gateway):

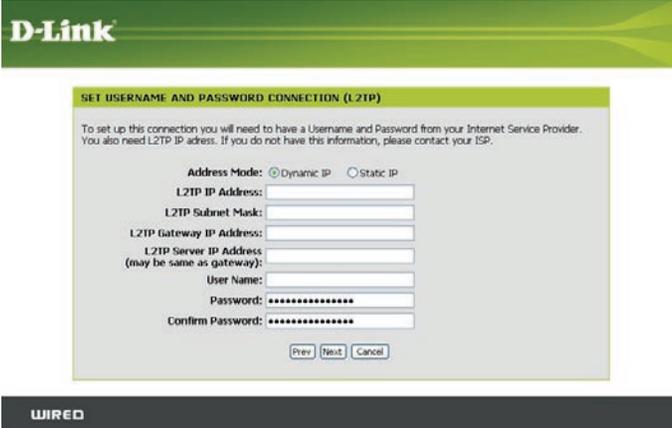
User Name:

Password:

Confirm Password:

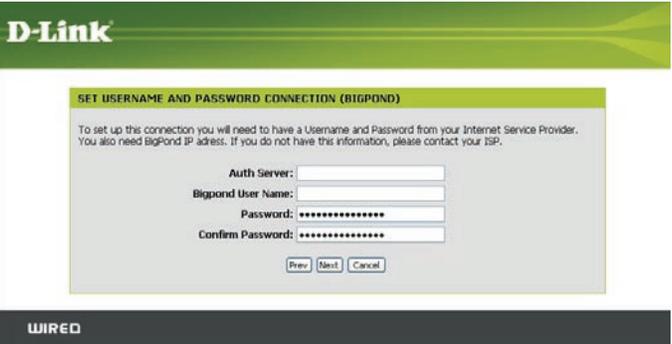
WIRED

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



The image shows the D-Link configuration interface for L2TP. At the top, the D-Link logo is displayed. Below it, the title is "SET USERNAME AND PASSWORD CONNECTION (L2TP)". A note states: "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." The form includes the following fields: "Address Mode" with radio buttons for "Dynamic IP" (selected) and "Static IP"; "L2TP IP Address:"; "L2TP Subnet Mask:"; "L2TP Gateway IP Address:"; "L2TP Server IP Address (may be same as gateway):"; "User Name:"; "Password:" (masked with asterisks); and "Confirm Password:" (masked with asterisks). At the bottom right of the form are buttons for "Prev", "Next", and "Cancel". Below the form is a dark grey bar with the word "WIRED" in white capital letters.

If you selected BigPond, enter your BigPond Auth Server, username and password. Click **Next** to continue.



The image shows the D-Link configuration interface for BigPond. At the top, the D-Link logo is displayed. Below it, the title is "SET USERNAME AND PASSWORD CONNECTION (BIGPOND)". A note states: "To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need BigPond IP address. If you do not have this information, please contact your ISP." The form includes the following fields: "Auth Server:"; "Bigpond User Name:"; "Password:" (masked with asterisks); and "Confirm Password:" (masked with asterisks). At the bottom right of the form are buttons for "Prev", "Next", and "Cancel". Below the form is a dark grey bar with the word "WIRED" in white capital letters.

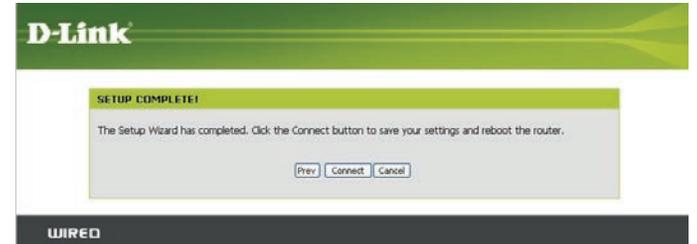
If you selected Static, enter your network settings supplied by your Internet provider. Click **Next** to continue.



The image shows the D-Link configuration interface for Static IP. At the top, the D-Link logo is displayed. Below it, the title is "SET STATIC IP ADDRESS CONNECTION". A note states: "To set up this connection you will need to have a complete list of IP information provided by your Internet Service Provider. If you have a Static IP connection and do not have this information, please contact your ISP." The form includes the following fields: "IP Address:"; "Subnet Mask:"; "Gateway Address:"; "Primary DNS Address:"; and "Secondary DNS Address:". At the bottom right of the form are buttons for "Prev", "Next", and "Cancel". Below the form is a dark grey bar with the word "WIRED" in white capital letters.

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.



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.

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

Primary DNS Address: Enter the Primary DNS server IP address assigned by your ISP.

Secondary DNS Address: This is optional.

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

D-Link

DIR-100 // HOME ADVANCED TOOLS STATUS SUPPORT

INTERNET NETWORK SETTINGS

INTERNET CONNECTION

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. If you are unsure of your connection method, please contact your Internet Service Provider.

Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Save Settings Don't Save Settings

INTERNET CONNECTION TYPE

Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is: Static IP

STATIC IP ADDRESS INTERNET CONNECTION TYPE

Enter the static address information provided by your Internet Service Provider (ISP).

IP Address: (assigned by your ISP)

Subnet Mask:

ISP Gateway Address:

MAC Address: - - - - - (optional)

Clone MAC Address

Primary DNS Address:

Secondary DNS Address: (optional)

MTU: 1500

Internet Setup

Dynamic (Cable)

Dynamic IP Address: Choose Dynamic IP Address to obtain IP Address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for Cable modem services.

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

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

Secondary DNS Address: This is optional.

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

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The main content area is titled "INTERNET CONNECTION" and contains the following sections:

- INTERNET CONNECTION:** A text block explaining connection types (Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond) and a note about PPPoE. Below this are "Save Settings" and "Don't Save Settings" buttons.
- INTERNET CONNECTION TYPE:** A section with the instruction "Choose the mode to be used by the router to connect to the Internet." A dropdown menu shows "My Internet Connection is: Dynamic IP (DHCP)".
- DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE:** A section with the instruction "Use this Internet connection type if your Internet Service Provider (ISP) didn't provide you with IP Address information and/or a username and password." It includes input fields for:
 - Host Name: DIR-100
 - MAC Address: 00 - 00 - 00 - 00 - 00 - 00 (optional), with a "Clone MAC Address" button.
 - Primary DNS Address: [empty]
 - Secondary DNS Address: [empty] (optional)
 - MTU: 1500

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 Addresses: Enter the Primary and Secondary DNS Server Addresses (Static PPPoE only).

Maximum Idle Time: Enter a maximum idle time during which the Internet 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.

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

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'INTERNET' section is active, showing 'INTERNET CONNECTION' settings. A note states: 'Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. If you are unsure of your connection method, please contact your Internet Service Provider.' Below this is a 'Note' about removing PPPoE client software. There are 'Save Settings' and 'Don't Save Settings' buttons. The 'INTERNET CONNECTION TYPE' section asks to choose the mode, with a dropdown menu set to 'PPPoE (Username / Password)'. The 'PPPoE' section prompts for ISP information, including radio buttons for 'Dynamic PPPoE' (selected) and 'Static PPPoE', and input fields for 'User Name', 'Password', 'Confirm Password', 'Service Name' (optional), 'IP Address', and 'MAC Address' (optional) with a 'Clone MAC Address' button.

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

IP Address: Enter the IP address (Static PPTP only).

Subnet Mask: Enter the Primary and Secondary DNS Server Addresses (Static PPTP 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).

PPTP Account: Enter your PPTP account name.

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

Maximum Idle Time: Enter a maximum idle time during which the Internet 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.

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is selected, and the 'INTERNET CONNECTION' page is displayed. The page title is 'INTERNET CONNECTION'. Below the title, there is a note: 'Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. If you are unsure of your connection method, please contact your Internet Service Provider.' A 'Note' states: 'If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.' There are two buttons: 'Save Settings' and 'Don't Save Settings'. Below this is the 'INTERNET CONNECTION TYPE' section, which asks to 'Choose the mode to be used by the router to connect to the Internet.' The 'My Internet Connection is:' dropdown menu is set to 'PPTP (Username / Password)'. The 'PPTP' section asks to 'Enter the information provided by your Internet Service Provider (ISP)'. It has two radio buttons: 'Dynamic IP' (selected) and 'Static IP'. Below are input fields for 'Server IP/Name', 'PPTP Account', 'PPTP Password', and 'PPTP Confirm Password'. There are also input fields for 'Maximum Idle Time' (set to 5) and 'MTU' (set to 1400). At the bottom, there are radio buttons for 'Connect mode select': 'Always-on', 'Manual', and 'Connect-on demand' (selected).

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, gateway, and DNS server addresses.

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

Maximum Idle Time: Enter a maximum idle time during which the Internet 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.

The screenshot shows the D-Link DIR-100 web interface. The navigation menu includes HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The current page is 'INTERNET CONNECTION'. The 'INTERNET CONNECTION TYPE' section shows 'My Internet Connection is: L2TP (Username / Password)'. The 'L2TP' section is active, showing 'Dynamic IP' selected. The input fields are: Server IP/Name, L2TP Account, L2TP Password, L2TP Confirm Password, Maximum Idle Time (5 Minutes), and MTU (1400). There are 'Save Settings' and 'Don't Save Settings' buttons. A 'Helpful Hints' sidebar on the right provides additional instructions.

Internet Setup

Big Pond

User Name: Enter your Big Pond user name.

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

Auth Server: Enter the IP address of the login server.

Login Server IP: Enter the IP address of the login server.

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

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar shows 'INTERNET' and 'NETWORK SETTINGS'. The main content area is titled 'INTERNET CONNECTION' and contains the following sections:

- INTERNET CONNECTION:** A text box explaining connection types (Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond) and a note about PPPoE. Below are 'Save Settings' and 'Don't Save Settings' buttons.
- INTERNET CONNECTION TYPE:** A section with the instruction 'Choose the mode to be used by the router to connect to the Internet.' and a dropdown menu set to 'BigPond (Australia)'.
- BIGPOND:** A section with the instruction 'Enter the information provided by your Internet Service Provider (ISP)'. It contains input fields for:
 - User Name: [text input]
 - Password: [password input]
 - Confirm Password: [password input]
 - Auth Server: [dropdown menu, set to 'sm-server']
 - Login Server IP/Name: [text input] (optional)
 - MAC Address: [text input with format '00 - 00 - 00 - 00 - 00 - 00'] (optional), with a 'Clone MAC Address' button below it.

Network Setting

Router Settings

Router IP Address: The IP address of your router on the local 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 Name: This entry is optional. Enter a domain name for 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.

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is selected, and the 'NETWORK SETTING' page is displayed. The page is divided into several sections:

- NETWORK SETTING:** Contains instructions for configuring internal network settings and the built-in DHCP server. It includes 'Save Settings' and 'Don't Save Settings' buttons.
- ROUTER SETTINGS:** Contains instructions for configuring the internal network settings. It includes input fields for 'Router IP Address' (192.168.0.1), 'Default Subnet Mask' (255.255.255.0), and 'Local Domain Name'. There is a checked checkbox for 'Enable DNS Relay'.
- DHCP SERVER SETTINGS:** Contains instructions for configuring the built-in DHCP server. It includes a checked checkbox for 'Enable DHCP Server', a range for 'DHCP IP Address Range' (100 to 199), and a 'DHCP Lease Time' of 10080 minutes.
- DYNAMIC DHCP CLIENT LIST:** This section is currently empty.
- Helpful Hints:** Located on the right side, it provides additional information about DHCP server configuration and DNS relay.

Network Setting

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”.

These two IP values (from and to) define a range of IP addresses that the DHCP Server uses when 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.

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.

DHCP IP Address Range:

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The main content area is divided into several sections:

- NETWORK SETTING:** A section for configuring internal network settings. It includes a description and two buttons: 'Save Settings' and 'Don't Save Settings'.
- ROUTER SETTINGS:** A section for configuring the router's internal network settings. It includes fields for 'Router IP Address' (192.168.0.1), 'Default Subnet Mask' (255.255.255.0), 'Local Domain Name', and a checked 'Enable DNS Relay' checkbox.
- DHCP SERVER SETTINGS:** A section for configuring the built-in DHCP server. It includes a checked 'Enable DHCP Server' checkbox, a 'DHCP IP Address Range' field set to '100 to 199' (with a note '(addresses within the LAN subnet)'), and a 'DHCP Lease Time' field set to '10080' (with a note '(minutes)').
- DYNAMIC DHCP CLIENT LIST:** A section for viewing the list of dynamically assigned IP addresses.

On the right side, there is a 'Helpful Hints' section with two bullet points:

- If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck **Enable DHCP Server** to disable this feature.
- If you have devices on your network that should always have fixed IP addresses, add a **DHCP Reservation** for each such device.

Network Setting

DHCP Client list & reservation

DHCP Reservations List: This is a list of the computers or other devices for which you have created reserved 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 Client List: In this section you can see what LAN devices are currently leasing IP addresses.

The screenshot displays the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is selected, and the 'NETWORK SETTING' section is active. The interface is divided into several sections:

- NETWORK SETTING:** Contains instructions for configuring internal network settings and a 'Save Settings' button.
- ROUTER SETTINGS:** Includes fields for Router IP Address (192.168.0.1), Default Subnet Mask (255.255.255.0), Local Domain Name, and an 'Enable DNS Relay' checkbox (checked).
- DHCP SERVER SETTINGS:** Includes an 'Enable DHCP Server' checkbox (checked), DHCP IP Address Range (100 to 199), and DHCP Lease Time (10080 minutes).
- DYNAMIC DHCP CLIENT LIST:** A table with columns for Host Name, IP Address, MAC Address, and Expired Time.
- 10 - DHCP RESERVATION:** A table with columns for Host Name, IP Address, MAC Address, and a dropdown menu for Computer Name. There are five rows, each with a checkbox and a '<<' button.

On the right side, there are 'Helpful Hints' regarding DHCP server configuration and DHCP reservations.

Advance Configuration

Port Forwarding Rules

This will allow you to open a single port or a range of ports.

Rule: Check the box to enabled the rule.

Name: Enter a name for the rule.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to.

Start Port/End Port: Enter the port or ports that you want to open. If you want to open 1 port, enter the same port in both boxes.

Traffic Type: Select **TCP**, **UDP**, or **ANY**.

The screenshot shows the D-Link DIR-100 web interface. The main navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists configuration options: 'PORT FORWARDING', 'APPLICATION RULES', 'ACCESS CONTROL', 'WEBSITE FILTER', 'FIREWALL SETTINGS', 'ADVANCED NETWORK', and 'QOS ENGINE'. The main content area is titled 'PORT FORWARDING RULES' and contains the following text: 'The Port Forwarding option is used to open a single port or a range of ports through your firewall and redirect data through those ports to a single PC on your network.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. The '10 - PORT FORWARDING RULES' section contains a table with the following columns: 'Name', 'IP Address', 'Port', and 'Traffic Type'. The table has three rows, each with a checkbox in the first column. The first row has 'Name' and 'IP Address' fields, an 'Application Name' dropdown, a 'Computer Name' dropdown, 'Start' and 'End' port fields, and a 'Traffic Type' dropdown set to 'Any'. The second and third rows have similar fields but with 'Start' and 'End' port fields that are empty. The right sidebar contains 'Helpful Hints' with two bullet points: '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 drop-down menu to fill out the appropriate fields.' and 'You can select your computer from the list of DHCP clients in the Computer Name drop-down menu, or enter the IP address manually of the computer you would like to open the specified port to.' and 'This feature allows you to open a range of ports to a computer on your network. To do so, enter the first port in the range you would like to open in the Start field'.

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 WBR-1310.

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**.

The screenshot shows the D-Link DIR-100 web interface. The main content area is titled "APPLICATION RULES" and contains the following text:

The Application Rules option is used to open single or multiple ports in your firewall when the router senses data sent to the Internet on an outgoing "Trigger" port or port range. Special Applications rules apply to all computers on your internal network.

Below the text are two buttons: "Save Settings" and "Don't Save Settings".

On the right side, there is a "Helpful Hints" section with the following text:

• 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 drop-down menu to fill out the appropriate fields.

At the bottom, there is a table titled "20 - APPLICATION RULES" with the following columns: "Port" and "Traffic Type". The table contains two rows of configuration options:

			Port	Traffic Type
<input type="checkbox"/>		<< Application Name	Trigger <input type="text"/>	Any
			Firewall <input type="text"/>	Any
<input type="checkbox"/>		<< Application Name	Trigger <input type="text"/>	Any

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 Filter: Select Disable MAC filters, allow MAC addresses listed below, or deny MAC addresses listed below.

Enter the MAC address you would like to filter.

MAC Address: 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.

D-Link

DIR-100 // HOME ADVANCED TOOLS STATUS SUPPORT

PORT FORWARDING
APPLICATION RULES
ACCESS CONTROL
WEBSITE FILTER
FIREWALL SETTINGS
ADVANCED NETWORK
QOS ENGINE

MAC FILTERING

The MAC (Media Access Controller) Address filter option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.

Save Settings Don't Save Settings

20 - MAC FILTERING RULES

Configure MAC Filtering below:
Turn MAC Filtering OFF

MAC Address	DHCP Client List	Schedule	
<input type="text"/>	<< Computer Name	Always On	Add New Clear
<input type="text"/>	<< Computer Name	Always On	Add New Clear

Helpful Hints.

- Create a list of MAC addresses that you would either like to allow or deny access to your network.
- Computers that have obtained an IP address from the router's DHCP server will be in the DHCP Client List. Select a device from the drop-down menu and click the arrow to add that device's MAC to the list.
- Click the **Clear** button to remove the MAC address from the MAC Filtering list.

Website Filter

URL and domain blocking are 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 Website Filter: Select **Turn website filtering off**, **Turn website filtering on and allow access**, or **Turn website filtering on and deny access**.

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

The screenshot displays the D-Link DIR-100 configuration interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists various configuration options, with 'WEBSITE FILTER' selected. The main content area is titled 'WEBSITE FILTERING RULES' and contains the following text: 'The Website Filter option allows you to set-up a list of Websites that the users on your network will either be allowed or denied access to.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. A section titled '20 - WEBSITE FILTERING RULES' contains the instruction 'Configure Website Filtering below:' followed by a dropdown menu set to 'Turn Website Filtering OFF' and a 'Clear the list below...' button. At the bottom, there is a table with two columns labeled 'Website URL' and four empty input rows for entering URLs. On the right side, a 'Helpful Hints.' sidebar provides the following information:

- Create a list of Websites that you would like the devices on your network to be allowed or denied access to.
- Keywords can be entered in this list in order to block any URL containing the keyword entered.

Firewall Settings

This section will allow you to setup a DMZ host and to enable VPN passthrough.

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 Host: Check this box to enable DMZ.

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

Enable PPTP Passthrough: Check this box to allow PPTP VPN traffic to pass through the router to your VPN client.

Enable L2TP Passthrough: Check this box to allow L2TP VPN traffic to pass through the router to your VPN client.

Enable IPSec Passthrough: Check this box to allow IPSec VPN traffic to pass through the router to your VPN client.

The screenshot displays the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is active, and the 'FIREWALL SETTINGS' section is highlighted. Below this, there are buttons for 'Save Settings' and 'Don't Save Settings'. The 'FIREWALL SETTING' section contains 'Enable SPI' (unchecked) and 'Enable DoS Prevention' (checked). The 'DMZ HOST' section is expanded, showing a description of the DMZ feature, a 'Note' about security risks, and the 'Enable DMZ Host' checkbox (unchecked). Below this is the 'DMZ IP Address' field (0.0.0.0) and a 'Computer Name' dropdown menu. The 'FIREWALL RULES' section is also visible, showing 'Enabled' selected and 'Name' and 'Action' fields.

Advanced Network Settings

UPnP Settings: To use the Universal Plug and Play (UPnP™) feature click on **Enabled**. UPnP provides compatibility with networking equipment, software and peripherals.

WAN Ping: Unchecking the box will not allow the WBR-2310 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 10/100 Mbps: You may set the port speed of the WAN port to 10Mbps, 100Mbps, or auto. Some older cable or DSL modems may require you to set the port speed to 10Mbps.

Gaming Mode: Gaming mode allows a form of pass-through for certain Internet Games. If you are using Xbox, Playstation2 or a PC, make sure you are using the latest firmware and Gaming Mode is enabled. To utilize Gaming Mode, click the box. If you are not using a Gaming application, it is recommended that you Disable Gaming Mode.

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

The screenshot displays the D-Link DIR-100 Advanced Network Settings interface. The navigation menu includes HOME, ADVANCED (selected), TOOLS, STATUS, and SUPPORT. The left sidebar lists various settings categories: PORT FORWARDING, APPLICATION RULES, ACCESS CONTROL, WEBSITE FILTER, FIREWALL SETTINGS, ADVANCED NETWORK (selected), and QOS ENGINE. The main content area is titled 'NETWORK SETTINGS' and contains several sections:

- NETWORK SETTINGS :** A warning message states, 'If you are not familiar with these Advanced Network settings, please read the help section before attempting to enable or disable them.' Below this are 'Save Settings' and 'Don't Save Settings' buttons.
- UPNP:** A description states, 'Universal Plug and Play (UPnP) supports peer-to-peer Plug and Play functionality for network devices.' The 'Enable UPnP:' checkbox is checked.
- WAN PING:** A description states, 'If you enable this feature, the WAN port of your router will respond to ping requests from the Internet that are sent to the WAN IP Address.' The 'Enable WAN Ping Respond:' checkbox is checked.
- WAN PORT SPEED:** A dropdown menu is set to '10/100Mbps Auto'.
- GAMING MODE:** A description states, 'If you are having difficulties playing some online games - please enable this mode.' The 'Enable Gaming Mode:' checkbox is unchecked.
- MULTICAST STREAMS:** The 'Enable Multicast Streams:' checkbox is unchecked.

On the right side, the 'Helpful Hints.' section provides additional information:

- For added security, it is recommended that you disable the **WAN Ping Respond** option. Ping is often used by malicious Internet users to locate active networks or PCs.
- Gaming Mode should be used when you are playing games on the Internet from behind the router.
- If you are having trouble receiving multicast streams from the Internet, make sure the **Multicast Stream** option is enabled.

Upstream Bandwidth: Use the QoS WAN Upstream Bandwidth drop-down menu to adjust the upstream bandwidth setting.

QoS: This option is disabled by default. Enable this option for better performance and experience with online games and other interactive applications, such as VoIP.

QoS

D-Link

DIR-100 //

HOME ADVANCED TOOLS STATUS SUPPORT

PORT FORWARDING APPLICATION RULES ACCESS CONTROL WEBSITE FILTER FIREWALL SETTINGS ADVANCED NETWORK QoS ENGINE

QoS(QUALITY OF SERVICE)

Use this section to configure D-Link's QoS Engine. This QoS Engine improves your VoIP voice quality or streaming by ensuring that your VoIP or streaming traffic is prioritized over other network traffic, such as FTP or Web. For best performance, please tick the "lag eliminated" option to automatically set the priority for your applications.

Save Settings Don't Save Settings

UPSTREAM BANDWIDTH

QoS WAN Upstream Bandwidth: 64(Kbps) ▼

Please contact with your Internet Service Provider to make sure your xDSL or cable upstream bandwidth, the accurately upstream bandwidth setting is allowed QoS engine operates smoothly and efficiency.

QoS

Lag eliminated (VoIP, Streaming)

Helpful Hints.

- The QoS Engine™ feature helps improve your network VoIP and streaming performance by prioritizing the data flows of network applications.

Tools

Administrator Settings

This page will allow you to change the Administrator and User passwords. You can also enable Remote Management. There are two accounts that can access the management interface through the web browser. The accounts are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes. Only the admin account has the ability to change both admin and user account passwords.

Administrator Password: Enter the new password for the Administrator login. The administrator can make changes to the settings.

Remote Management: Remote management allows the DIR-100 to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.

Port: The port number used to access the DIR-100. Example: `http://x.x.x.x:8080` 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.

The screenshot displays the D-Link DIR-100 web management interface. At the top, the D-Link logo is visible. Below it, a navigation bar contains tabs for HOME, ADVANCED, TOOLS (selected), STATUS, and SUPPORT. A sidebar on the left lists various system settings: ADMIN, TIME, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, SCHEDULES, and LOG SETTINGS. The main content area is titled 'ADMINISTRATOR SETTINGS' and includes a sub-header 'ADMINISTRATOR (THE DEFAULT LOGIN NAME IS "ADMIN")'. This section contains three input fields: 'Login Name' (pre-filled with 'admin'), 'New Password', and 'Confirm Password'. Below these fields are two buttons: 'Save Settings' and 'Don't Save Settings'. A second section, 'REMOTE MANAGEMENT', features a checkbox for 'Enable Remote Management' and a dropdown menu for 'Port' currently set to '8080'. On the right side, a 'Helpful Hints' sidebar provides security recommendations, such as changing login names and passwords, and enabling remote management for remote access.

Time Settings

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.

D-Link

DIR-100 // HOME ADVANCED TOOLS STATUS SUPPORT

TIME

Time Configuration

The Time Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to adjust the time when needed.

Save Settings Don't Save Settings

TIME CONFIGURATION

Time: 1999/12/31 17:6:53
Time Zone: (GMT-08:00) Pacific Time (US & Canada)

Enable Daylight Saving: Sync your computer's time settings

AUTOMATIC TIME CONFIGURATION

Automatically synchronize with Internet time server
Server: ntp1.dlink.com Update Now
synchronizing.....

SET THE DATE AND TIME MANUALLY

Year: 2006 Month: Aug Day: 10
Hour: 10 Minute: 58 Second: 23

Helpful Hints.

- If you plan on using the scheduling feature of this router, then making sure the time is correct is extremely important. Either enter the time manually by clicking the **Sync your computer's time settings** button, or use the **Automatic Time Configuration** option to have your router synchronize with a time server on the Internet.

System Settings

Save Settings to Local Hard Drive: Use this option to save the current router configuration settings to a file on the hard disk 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 from Local Hard Drive: Use this option to load previously saved router configuration settings. First, use the 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 Factory Default Settings: This option will restore all configuration settings back to the settings that were in effect at the 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.

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists menu items: ADMIN, TIME, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, SCHEDULES, and LOG SETTINGS. The main content area is titled 'SYSTEM SETTINGS' and contains the following text and controls:

The current system settings can be saved as a file on to the local hard drive. The saved file or any other saved setting file created by device can be uploaded into the unit.

Save Settings To Local Hard Drive:

Load Settings From Local Hard Drive:

Restore To Factory Default Settings:

Reboots the Device:

On the right side, there is a 'Helpful Hints' section with the following text:

• Once your router is configured they way you want it, you can save these settings to a configuration file that can later be loaded in the event that the router's default settings are restored. To do this, click the **Save** button next to where it says Save Settings to Local Hard Drive.

Firmware Upgrade

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 Upgrade: Click on the link in this screen to find out if there 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.

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists various settings categories: ADMIN, TIME, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, SCHEDULES, and LOG SETTINGS. The main content area is titled 'FIRMWARE UPGRADE' and contains the following text:

There may be new firmware for your DIR-100 to improve functionality and performance. [Click here to check for an upgrade on our support site.](#)

To upgrade the firmware, locate the upgrade file on the local hard drive with the **Browse** button. Once you have found the file to be used, click the **Update Now** below to start the firmware upgrade.

CURRENT FIRMWARE INFO

Current Firmware Version: v1.00
Firmware Date: Wed Aug 9 01:30:25 CST 2006

Check Online Now for Latest Firmware Version

UPGRADE SETTING

Update:

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 Address: Select a dynamic DNS service provider from the 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 // HOME ADVANCED TOOLS STATUS SUPPORT

ADMIN
TIME
SYSTEM
FIRMWARE
DYNAMIC DNS
SYSTEM CHECK
SCHEDULES
LOG SETTINGS

DYNAMIC DNS

Dynamic DNS (Domain Name Service) is a method of keeping a domain name linked to a changing (dynamic) IP address. With most Cable and DSL connections, you are assigned a dynamic IP address and that address is used only for the duration of that specific connection.

With the DIR-100, you can set up your DDNS service and the DIR-100 will automatically update your DDNS server every time it receives a new WAN IP address.

Save Settings Don't Save Settings

DDNS SETTINGS

Enable DDNS:

Server Address: DynDns.org ▼

Host Name:

Username:

Password:

DDNS Account Testing

Helpful Hints.

- In order to use this feature you must first have a DDNS account from one of the providers in the drop-down menu.

System Check

Virtual Cable Tester (VCT) Info: VCT is an advanced feature that integrates a LAN cable tester on every Ethernet port on the 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**.

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists various system settings like 'ADMIN', 'TIME', 'SYSTEM', 'FIRMWARE', 'DYNAMIC DNS', 'SYSTEM CHECK', 'SCHEDULES', and 'LOG SETTINGS'. The main content area is titled 'FAST ETHERNET VIRTUAL CABLE TESTER (VCT)' and contains the following information:

VCT INFO

Ports	Link Status		
WAN		Disconnected	More Info
LAN1		100Mbps FULL Duplex	More Info
LAN2		Disconnected	More Info
LAN3		Disconnected	More Info
LAN4		Disconnected	More Info

PING TEST

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

Host Name or IP Address: [Ping](#)

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.

D-Link

DIR-100 // HOME ADVANCED TOOLS STATUS SUPPORT

SCHEDULES

The Schedule configuration option is used to manage schedule rules for various firewall and parental control features.

Save Settings Don't Save Settings

ADD SCHEDULE RULE

Name :

Day(s) : All Week
 Sun to Sun

All Day - 24 hrs :

Start Time : : AM (hour:minute, 12 hour time)

End Time : : AM (hour:minute, 12 hour time)

SCHEDULE RULES LIST

Name	Day(s)	Time Frame
------	--------	------------

Helpful Hints.

- Schedules are used with a number of other features to define when those features are in effect.
- Give each schedule a name that is meaningful to you. For example, a schedule for Monday through Friday from 3:00pm to 9:00pm, might be called "After School".
- Click **Save settings** to add a completed schedule to the list below.
- Click the **Edit** icon to change an existing schedule.
- Click the **Delete** icon to permanently delete a schedule.

Log Settings

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

Log Type: Select the kinds of types that you want to log.

The screenshot shows the D-Link DIR-100 web interface for Log Settings. The interface has a green header with the D-Link logo and a navigation menu with tabs for HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The TOOLS tab is selected. On the left, a sidebar menu lists various settings categories, with LOG SETTINGS highlighted. The main content area is divided into three sections: LOG SETTINGS, SAVE LOG FILE, and LOG TYPE. The LOG SETTINGS section includes a text box for an admin email address and two buttons: Save Settings and Don't Save Settings. The SAVE LOG FILE section has a text box for the save location and a Save button. The LOG TYPE section contains a table with checkboxes for System Activity, Debug Information, Attacks, Dropped Packets, and Notice. A Helpful Hints sidebar on the right provides additional information.

DIR-100	HOME	ADVANCED	TOOLS	STATUS	SUPPORT
ADMIN	LOG SETTINGS				Helpful Hints. <ul style="list-style-type: none">You can select the type of activities that you want the DIR-100 to log.
TIME	Logs can be saved by sending it to an admin email address.				
SYSTEM	<input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/>				
FIRMWARE	SAVE LOG FILE				
DYNAMIC DNS	Save Log File To Local Hard Drive <input type="button" value="Save"/>				
SYSTEM CHECK	LOG TYPE				
SCHEDULES	Log Type				
LOG SETTINGS	<input checked="" type="checkbox"/> System Activity				
	<input type="checkbox"/> Debug Information				
	<input checked="" type="checkbox"/> Attacks				
	<input checked="" type="checkbox"/> Dropped Packets				
	<input checked="" type="checkbox"/> Notice				

Status

Device Information

This window, located under the Status tab will allow users to view information regarding the settings of the Router, both on the LAN side and WAN side of the connection.

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.

The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes 'HOME', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'STATUS' tab is selected. On the left, a sidebar menu lists 'DEVICE INFO', 'LOG', 'STATS', and 'ACTIVE SESSION'. The main content area is titled 'DEVICE INFO' and contains the following information:

Device Information
All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here.

GENERAL
Time: 1999/12/31 17:12:47
Firmware Version: v1.00 Wed Aug 9 01:30:25 CST 2006

WAN
MAC Address: 00:11:95:95:BE:5A
Connection: DHCP client Disconnected
DHCP Renew [button] DHCP Release [button]
IP Address: 0.0.0.0
Subnet Mask: 0.0.0.0
Default Gateway: 0.0.0.0
DNS: 0.0.0.0
0.0.0.0

LAN
MAC Address: 00:11:95:95:BE:59
IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0
DHCP Server: Enabled

Log

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.



The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes links for HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for DEVICE INFO, LOG, STATS, and ACTIVE SESSION. The main content area is titled "VIEW LOG" and contains the following text: "View Log displays the activities occurring on the DIR-100." Below this is a section titled "LOG FILES" with navigation buttons: First Page, Last Page, Previous, Next, Clear, and Refresh. The log entries are as follows:

Time	Message
Dec 31 16:00:08	DHCP disconnected
Dec 31 16:00:06	syslogd started ! Log on system activity,attack,drop packet,notice.

Stats

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



The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes the D-Link logo and menu items: DIR-100, HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for DEVICE INFO, LOG, STATS, and ACTIVE SESSION. The main content area is titled "TRAFFIC STATISTICS :" and includes a description: "Traffic Statistics display Receive and Transmit packets passing through the DIR-100." Below this, there are "Refresh" and "Reset" buttons. A table displays the following data:

	Receive	Transmit
WAN	0Packets	0Packets
LAN	2191Packets	2007Packets

Active Session

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



The screenshot shows the D-Link DIR-100 web interface. The top navigation bar includes the D-Link logo and menu items: DIR-100, HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for DEVICE INFO, LOG, STATS, and ACTIVE SESSION. The main content area is titled "TRAFFIC STATISTICS :" and contains the text "Traffic Statistics display Receive and Transmit packets passing through the DIR-100." Below this text are two buttons: "Refresh" and "Reset". A table displays the traffic statistics for WAN and LAN interfaces.

	Receive	Transmit
WAN	0Packets	0Packets
LAN	2191Packets	2007Packets

Support

The screenshot displays the D-Link DIR-100 web interface. At the top left is the D-Link logo. Below it is a navigation bar with tabs for HOME, ADVANCED, TOOLS, STATUS, and SUPPORT. The SUPPORT tab is selected. On the left side, there is a 'MENU' sidebar. The main content area is titled 'SUPPORT MENU' and contains the following sections:

- Setup**
 - [Internet](#)
 - [Network settings](#)
- Advanced**
 - [Port Forwarding](#)
 - [Application Rules](#)
 - [Access Control](#)
 - [Website Filter](#)
 - [Firewall Settings](#)
 - [Advanced Wireless](#)
 - [Advanced Network](#)
 - [QoS Engine](#)
- Tools**
 - [Admin](#)
 - [Time](#)
 - [System](#)
 - [Firmware Upgrade](#)
 - [System Check](#)
 - [Schedules](#)
- Status**
 - [Device Info](#)
 - [Log](#)
 - [Stats](#)

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® 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 1.5 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® 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® 95, 98, and ME users type in **command** (Windows® 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 = 0ms, Maximum = 0ms, Average = 0ms

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:

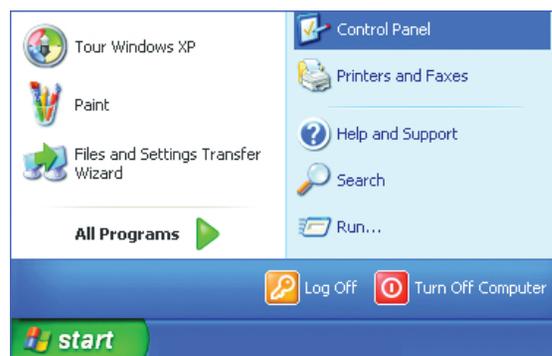
- Open your browser, enter the IP address of your router (192.168.0.1) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on the **Home** tab and click the **WAN** button.
- To change the MTU enter 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:

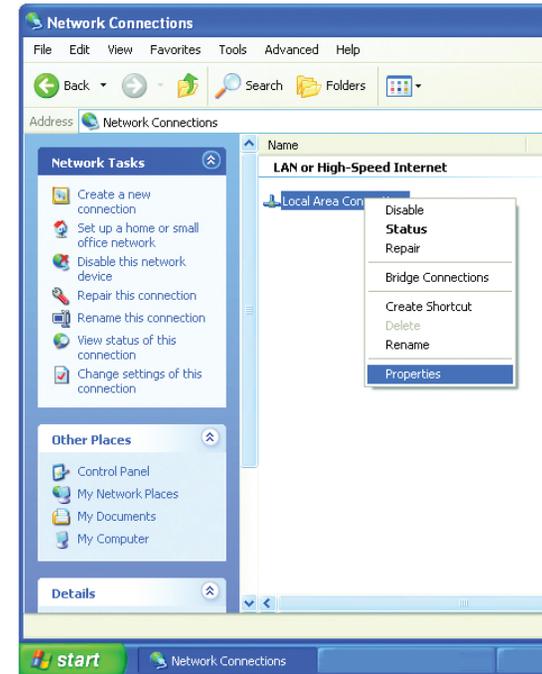
- Go to **Start**
- **Double-click** on **Control Panel**



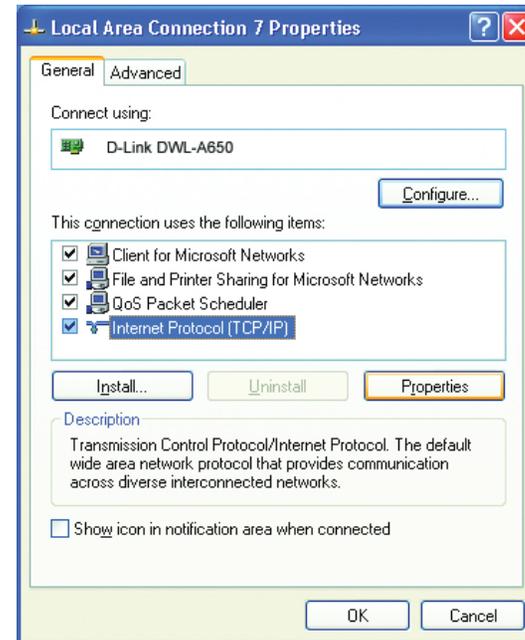
- **Double-click** on **Network Connections**



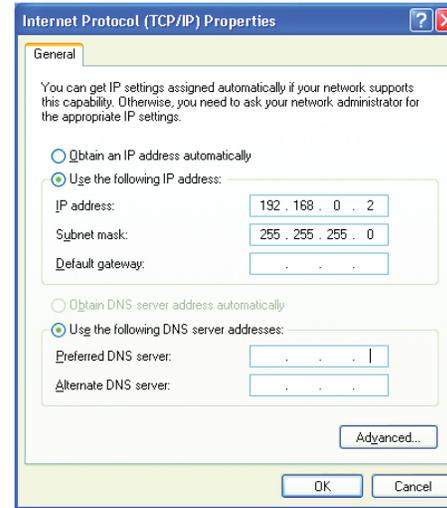
- **Right-click** on **Local Area Connections**.
- **Double-click Properties**



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



- 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.)

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.

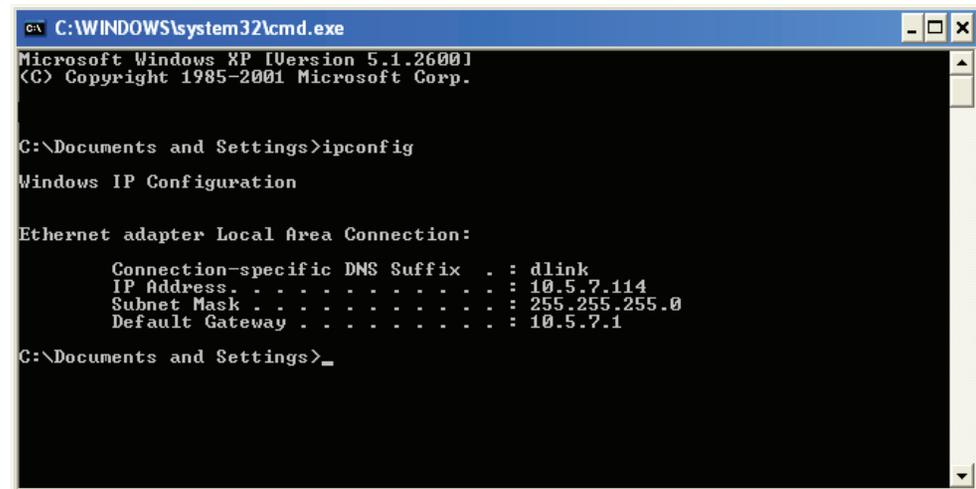
Click on **Start > Run**. In the run box type **cmd** and click **OK**.

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.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address . . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and 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® XP - Click on **Start > Control Panel > Network Connections**.

Windows® 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.

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.

