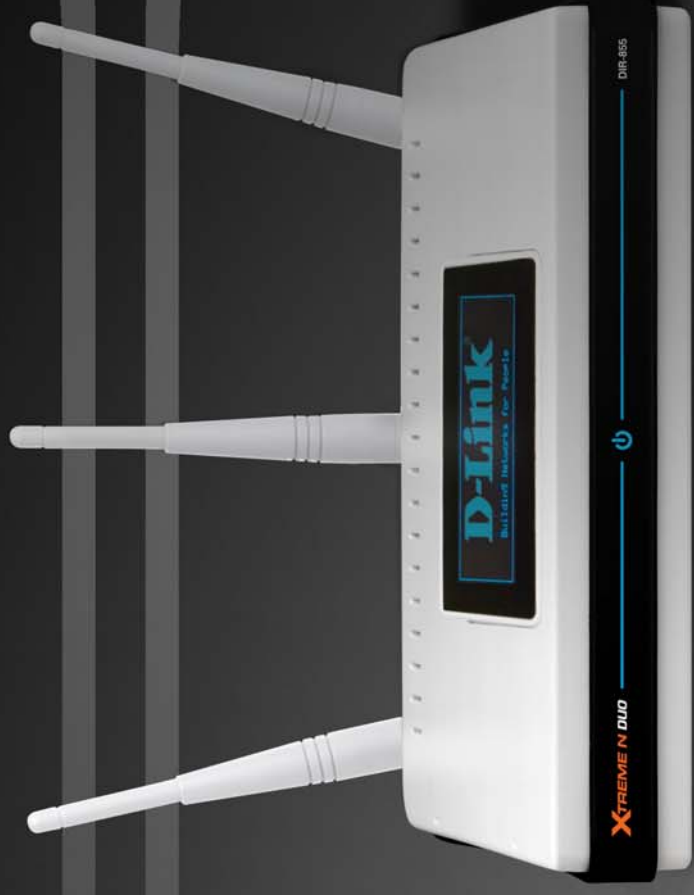


USER MANUAL

DIR-855

VERSION 1.1



D-Link[®]

WIRELESS

Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Manual Revisions

Revision	Date	Description
1.0	November 13, 2007	DIR-855 Revision A1 with Firmware version 1.00
1.1	April 23, 2008	Updated warranty information

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Package Contents

<p>D-Link DIR-855 Xtreme N™ Duo™ Router</p>	
<p>Power Adapter</p>	
<p>Ethernet Cable</p>	
<p>CD-ROM</p>	
<p>Stand</p>	

Note: Using a power supply with a different voltage rating than the one included with the DIR-855 will cause damage and void the warranty for this product.

System Requirements

<p>Network Requirements</p>	<ul style="list-style-type: none"> • An Ethernet-based Cable or DSL modem • IEEE 802.11n-draft or 802.11g wireless clients • IEEE 802.11a wireless clients • 10/100/1000 Ethernet
<p>Web-based Configuration Utility Requirements</p>	<p>Computer with the following:</p> <ul style="list-style-type: none"> • Windows®, Macintosh, or Linux-based operating system • An installed Ethernet adapter <p>Browser Requirements:</p> <ul style="list-style-type: none"> • Internet Explorer 6.0 or higher • Mozilla 1.7.12 or higher • Firefox 1.5 or higher • Safari 1.0 or higher (with Java 1.3.1 or higher) • Flock 0.7.14 or higher • Opera 6.0 or higher <p>Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</p>
<p>CD Installation Wizard Requirements</p>	<p>Computer with the following:</p> <ul style="list-style-type: none"> • Windows® XP with Service Pack 2 or Vista® • An installed Ethernet adapter • CD-ROM drive

Introduction

TOTAL PERFORMANCE

Combines award winning router features and IEEE 802.11a/Draft 802.11n wireless technology to provide the best wireless performance

TOTAL SECURITY

The most complete set of security features including Active Firewall and WPA2 to protect your network against outside intruders

TOTAL COVERAGE

Provides greater wireless signal rates even at farther distances for best-in-class Whole Home Coverage.

ULTIMATE PERFORMANCE

The D-Link Xtreme N™ Duo™ router (DIR-855) is a draft 802.11n/802.11a compliant device that delivers real world performance of up to 14x faster than an 802.11g wireless connection (also faster than a 100Mbps wired Ethernet connection). Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the DIR-855 router to a cable or DSL modem and share your high-speed Internet access with everyone on the network. In addition, this Router includes a Quality of Service (QoS) engine that keeps digital phone calls (VoIP) and online gaming smooth and responsive, providing a better Internet experience.

EXTENDED WHOLE HOME COVERAGE

Powered by Xtreme N™ Duo™ technology, this high performance router provides superior Whole Home Coverage while reducing dead spots. The router is designed for use in bigger homes and for users who demand higher performance networking. Add a Xtreme N™ notebook or desktop adapter and stay connected to your network from virtually anywhere in your home.

TOTAL NETWORK SECURITY

The Xtreme N™ Duo™ router supports all of the latest wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA and WEP standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices. In addition, this router utilizes dual active firewalls (SPI and NAT) to prevent potential attacks from across the Internet.

* Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

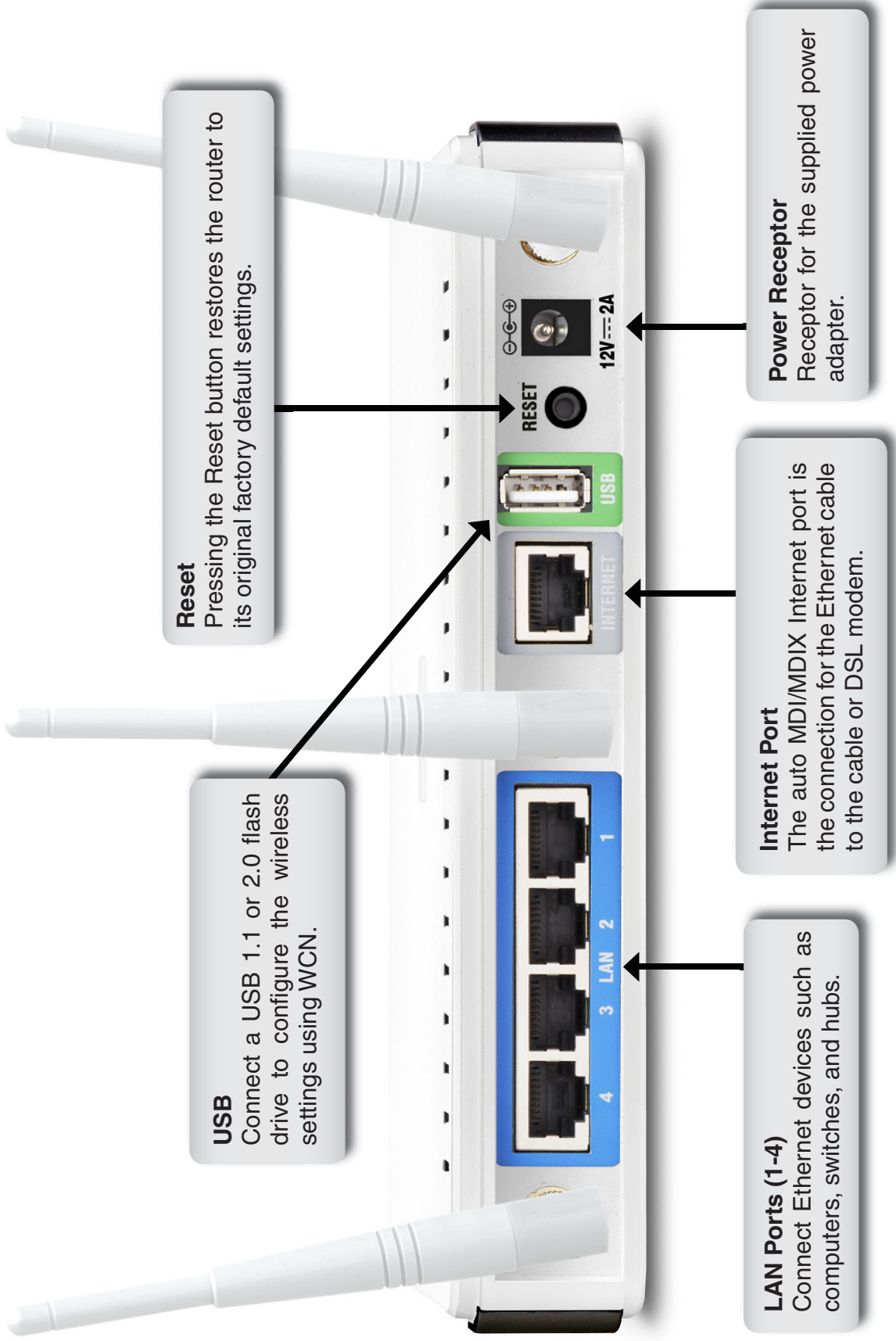
Features

- **Faster Wireless Networking** - The DIR-855 provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11n wireless router gives you the freedom of wireless networking at speeds 650% faster than 802.11g.
- **Compatible with 802.11a/g Devices** - The DIR-855 is still fully compatible with the IEEE 802.11g and 802.11a standards, so it can connect with existing 802.11g and 802.11a PCI, USB, and Cardbus adapters.
- **Advanced Firewall Features** - The Web-based user interface displays a number of advanced network management features including:
 - **Content Filtering** - Easily applied content filtering based on MAC Address, URL, and/or Domain Name.
 - **Filter Scheduling** - These filters can be scheduled to be active on certain days or for a duration of hours or minutes.
 - **Secure Multiple/Concurrent Sessions** - The DIR-855 can pass through VPN sessions. It supports multiple and concurrent IPsec and PPTP sessions, so users behind the DIR-855 can securely access corporate networks.
- **User-friendly Setup Wizard** - Through its easy-to-use Web-based user interface, the DIR-855 lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

* Maximum wireless signal rate derived from IEEE Standard 802.11g, 802.11a, and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

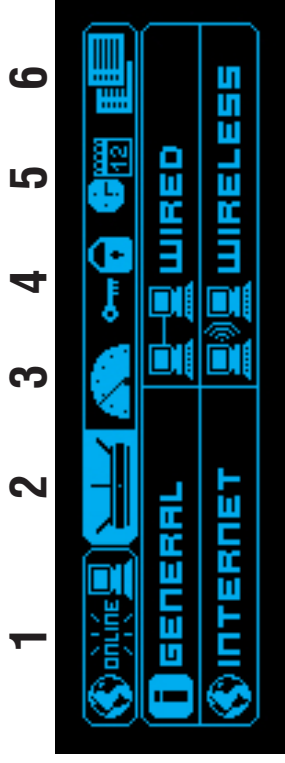
Hardware Overview

Connections



Hardware Overview

LEDs



OLED Screen

1	WAN	Displays Internet connectivity.
2	Menu	Select to display the OLED main menu.
3	Performance	Select to display statistics of the LAN, WAN, and wireless connections.
4	WPS	Displays the WPS status.
5	Date/Time	Displays the routers date and time.
6	DHCP	Displays the DHCP status.

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

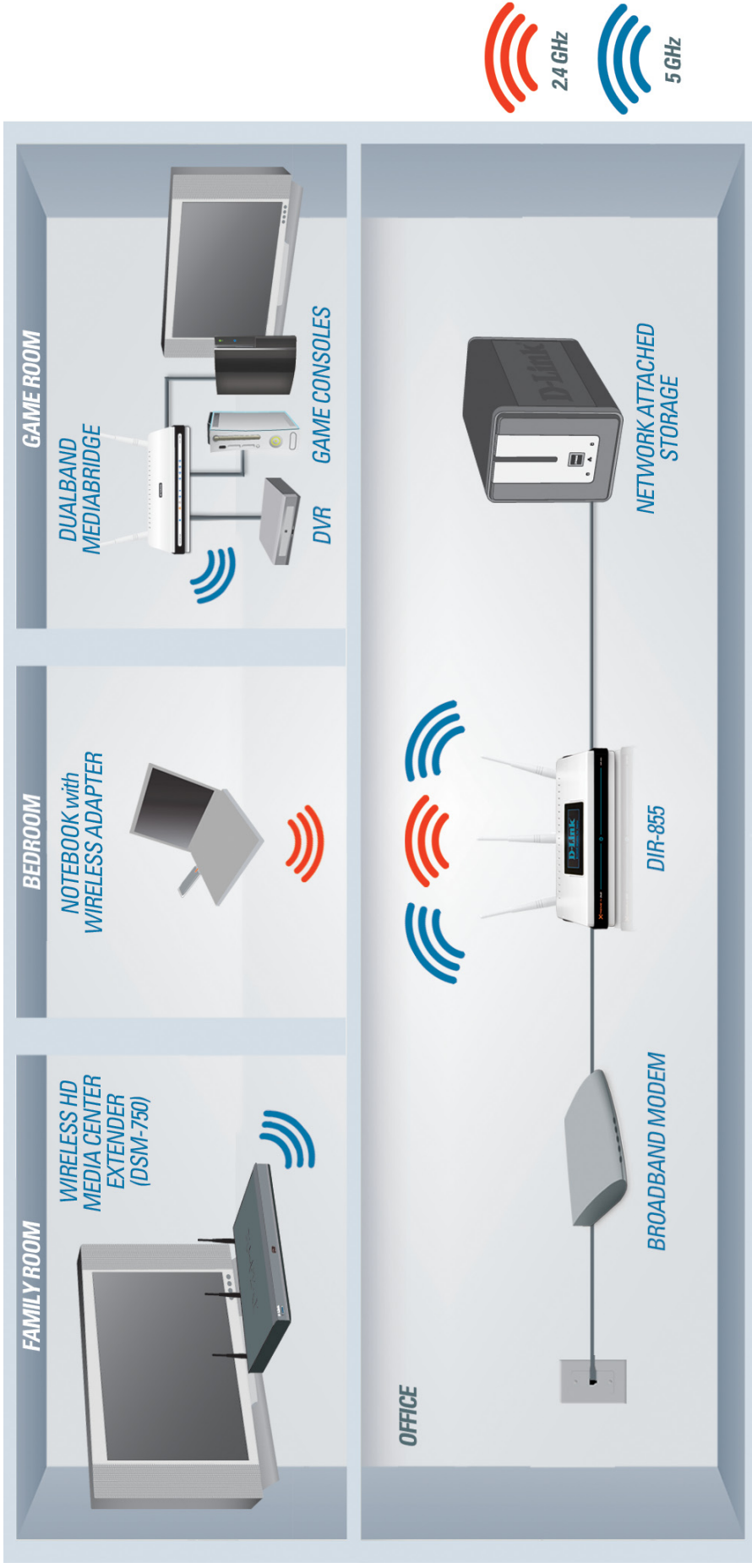
- Please configure the router with the computer that was last connected directly to your modem.
- You can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet 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 Enternet 300 from your computer or you will not be able to connect to the Internet.
- When running the Setup Wizard from the D-Link CD, make sure the computer you are running the CD from is connected to the Internet and online or the wizard will not work. If you have disconnected any hardware, re-connect your computer back to the modem and make sure you are online.

Wireless Installation Considerations

The D-Link wireless router lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the D-Link router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

Network Diagram



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 Internet 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. Refer to page 13 to configure your router.

Connect to Another Router

If you are connecting the D-Link router to another router to use as a wireless access point and/or switch, you will have to do the following before connecting the router to your network:

- Disable UPnP™
- Disable DHCP
- Change the LAN IP address to an available address on your network. The LAN ports on the router cannot accept a DHCP address from your other router.

To connect to another router, please follow the steps below:

1. Plug the power into the router. Connect one of your computers to the router (LAN port) using an Ethernet cable. Make sure your IP address on the computer is 192.168.0.xxx (where xxx is between 2 and 254). Please see the **Networking Basics** section for more information. If you need to change the settings, write down your existing settings before making any changes. In most cases, your computer should be set to receive an IP address automatically in which case you will not have to do anything to your computer.
2. Open a web browser and enter **http://192.168.0.1** and press **Enter**. When the login window appears, set the user name to **Admin** and leave the password box empty. Click **Log In** to continue.
3. Click on **Advanced** and then click **Advanced Network**. Uncheck the **Enable UPnP** checkbox. Click **Save Settings** to continue.
4. Click **Setup** and then click **Network Settings**. Uncheck the **Enable DHCP Server** checkbox. Click **Save Settings** to continue.
5. Under Router Settings, enter an available IP address and the subnet mask of your network. Click **Save Settings** to save your settings. Use this new IP address to access the configuration utility of the router in the future. Close the browser and change your computer's IP settings back to the original values as in Step 1.

6. Disconnect the Ethernet cable from the router and reconnect your computer to your network.
7. Connect an Ethernet cable in one of the LAN ports of the router and connect it to your other router. Do not plug anything into the Internet port of the D-Link router.
8. You may now use the other 3 LAN ports to connect other Ethernet devices and computers. To configure your wireless network, open a web browser and enter the IP address you assigned to the router. Refer to the **Configuration** and **Wireless Security** sections for more information on setting up your wireless network.

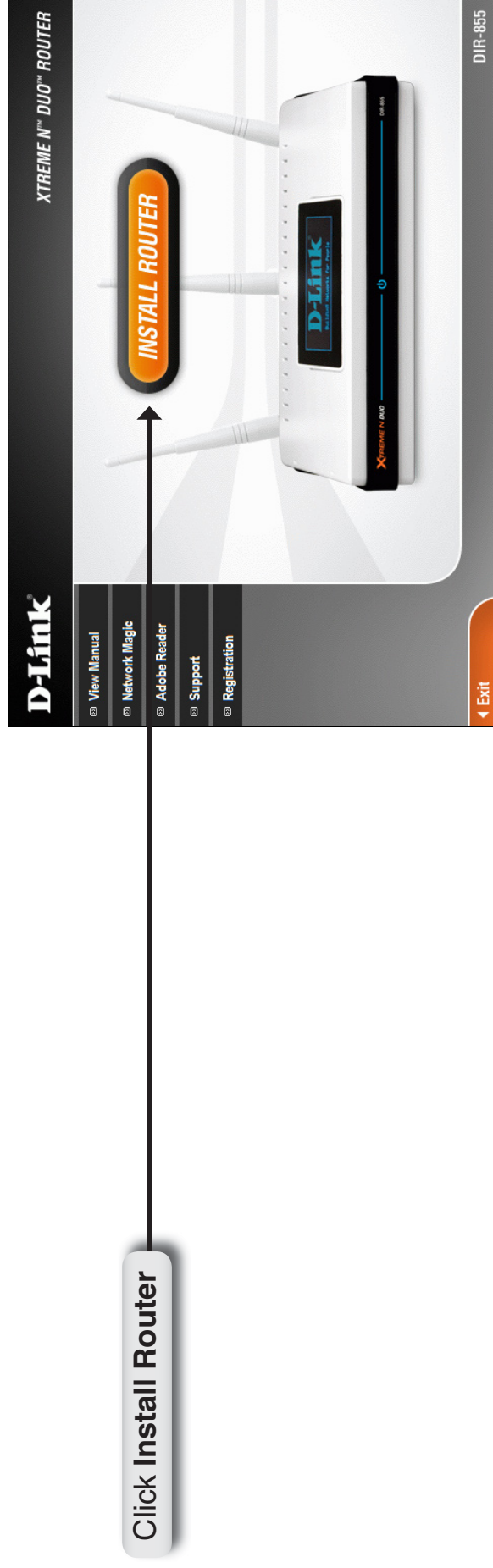
Getting Started

The DIR-855 includes a Quick Router Setup Wizard CD. Follow the simple steps below to run the Setup Wizard to guide you quickly through the installation process.

Insert the **Quick Router Setup Wizard CD** in the CD-ROM drive. The step-by-step instructions that follow are shown in Windows® XP. The steps and screens are similar for the other Windows operating systems.

If the CD Autorun function does not automatically start on your computer, go to **Start > Run**. In the run box type **"D:\DIR855.exe"** (where **D:** represents the drive letter of your CD-ROM drive).

When the autorun screen appears, click **Install Router**.



Note: It is recommended to write down the SSID and Security Key, followed by the login password on the provided CD holder.

Configuration

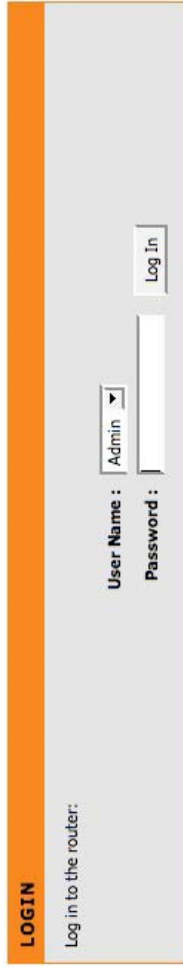
This section will show you how to configure your new D-Link wireless router using the web-based configuration utility.

Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.0.1).



Select **Admin** from the drop-down menu and then enter your password. Leave the password blank by default.



If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.

Setup Wizard

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

If you want to enter your settings without running the wizard, click **Manual Configuration** and skip to page 19.

D-Link

DIR-855

INTERNET

WIRELESS SETTINGS

NETWORK SETTINGS

SETUP

ADVANCED

TOOLS

STATUS

SUPPORT

INTERNET CONNECTION

These are the steps to set up your Internet connection. You can use the Web-based Internet Connection Setup Wizard, or you can manually configure the connection.

INTERNET CONNECTION SETUP WIZARD

If you would like to utilize our easy-to-use Web-based Wizards to assist you in connecting your new D-Link Systems Router to the Internet, click on the button below.

[Internet Connection Setup Wizard](#)

Note: Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

MANUAL INTERNET CONNECTION OPTIONS

If you would like to configure the Internet settings of your new D-Link Systems Router manually, then click on the button below.

[Manual Internet Connection Setup](#)

Helpful hints...

If you are new to advanced routers, you may never configured a router before, click on Internet Connection Setup Wizard. The router will guide you through a few simple steps to get your router up and running.

If you consider yourself an advanced user and have configured a router before, click on Manual Internet Connection Setup to input all the settings manually.

[None...](#)

WIRELESS

Click **Next** to continue.

WELCOME TO THE D-LINK INTERNET CONNECTION 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 3: Configure your Internet Connection
- Step 4: Save Settings and Connect

[Prev](#) [Next](#) [Cancel](#) [Connect](#)

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

STEP 1. SET YOUR PASSWORD

By default, your new D-Link Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below:

Password :

Verify Password :

[Prev](#) [Next](#) [Cancel](#) [Connect](#)

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

STEP 2: SELECT YOUR TIME ZONE

Select the appropriate time zone for your location. This information is required to configure the time-based options for the router.

Time Zone : (GMT-08:00) Pacific Time (US/Canada), Tijuana

Prev Next Cancel Connect

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

STEP 3: CONFIGURE YOUR INTERNET CONNECTION

Your Internet Connection could not be detected, please select your Internet Service Provider (ISP) from the list below. If your ISP is not listed, select the "Not Listed or Don't Know" option to manually configure your connection.

Not Listed or Don't Know

If your Internet Service Provider was not listed or you don't know who it is, 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 if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.
- Username / Password Connection (PPTP)**
PPTP client.
- Username / Password Connection (L2TP)**
L2TP client.
- Static IP Address Connection**
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
- BigPond**
BigPond Cable (Australia)

Prev Next Cancel Connect

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.

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 : 00c0:00:00:00:00:00 (optional)
Clone Your PC's MAC Address

Host Name :

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 Connect

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.

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

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

IP Address : 0.0.0.0

User Name : _____

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 Connect

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 : 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

User Name : _____

Password : ••••

Verify Password : ••••

Prev Next Cancel Connect

SET USERNAME AND PASSWORD CONNECTION (L2TP)

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 : Dynamic IP Static IP

L2TP IP Address : 0.0.0.0

L2TP Subnet Mask : 255.255.255.0

L2TP Gateway IP Address : 0.0.0.0

L2TP Server IP Address (may be same as gateway) : 0.0.0.0

User Name : _____

Password : ••••

Verify Password : ••••

Prev Next Cancel Connect

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

SET STATIC IP ADDRESS CONNECTION

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.

IP Address : 0.0.0.0
Subnet Mask : 255.255.255.0
Gateway Address : 0.0.0.0
Primary DNS Address : 0.0.0.0
Secondary DNS Address : 0.0.0.0

Prev Next Cancel Connect

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.

SETUP COMPLETE!

The Internet Connection Setup Wizard has completed. Click the Connect button to save your settings and reboot the router.

Prev Next Cancel Connect

Manual Configuration

Dynamic (Cable)

My Internet Connection: Select **Dynamic IP (DHCP)** 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.

Use Unicasting: Check the box if you are having problems obtaining an IP address from your ISP.

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

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

MAC Address: The default MAC Address is set to the Internet port'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. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows the D-Link DIR-855 Internet Settings page. The 'WAN' tab is selected, and the 'Dynamic IP (DHCP)' option is chosen. The 'My Internet Connection is:' dropdown is set to 'Dynamic IP (DHCP)'. The 'Use Unicasting' checkbox is checked. The Primary DNS Server is 0.0.0.0, the Secondary DNS Server is 0.0.0.0, and the MTU is 1500. The MAC Address is 00:00:00:00:00:00, with a 'Clone Your PC's MAC Address' button next to it. The 'Helpful Hints...' section provides instructions on how to choose the correct Internet Connection Type and how to troubleshoot connection issues.

DIR-855	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
INTERNET	<p>WAN</p> <p>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.</p> <p>Note : If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.</p> <p>Save Settings Don't Save Settings</p>				<p>Helpful Hints...</p> <p>When configuring the router to access the Internet, be sure to choose the correct Internet Connection Type from the drop down menu. If you are unsure of which option to choose, contact your Internet Service Provider (ISP).</p> <p>If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.</p> <p>More...</p>
WIRELESS SETTINGS	<p>INTERNET CONNECTION TYPE</p> <p>Choose the mode to be used by the router to connect to the Internet.</p> <p>My Internet Connection is : Dynamic IP (DHCP) <input type="button" value="v"/></p>				
NETWORK SETTINGS	<p>DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE :</p> <p>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.</p> <p>Host Name : <input type="text"/></p> <p>Use Unicasting : <input checked="" type="checkbox"/> (compatibility for some DHCP Servers)</p> <p>Primary DNS Server : <input type="text" value="0.0.0.0"/></p> <p>Secondary DNS Server : <input type="text" value="0.0.0.0"/></p> <p>MTU : <input type="text" value="1500"/> (bytes) MTU default = 1500</p> <p>MAC Address : <input type="text" value="00:00:00:00:00:00"/> <input type="button" value="Clone Your PC's MAC Address"/></p>				
WIRELESS					

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.

My Internet Connection: Select **PPPoE (Username/Password)** from the drop-down menu.

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

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

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).

Reconnection Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

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

DNS Addresses: 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.

MAC Address: The default MAC Address is set to the Internet port'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. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

WAN

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, L2TP, and Bridged. If you are unsure of your connection method, please contact your Internet Service Provider. Note: If using the Bridged option, you will need to remove or disable any PPPoE client software from your computer.

Save Settings Don't Save Settings

My Internet Connection is: PPPoE (Username / Password)

PPPoE INTERNET CONNECTION TYPE:

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

My Internet Connection is: PPPoE (Username / Password)

PPPoE INTERNET CONNECTION TYPE:

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

Address Mode: Dynamic IP Static IP

IP Address: 0.0.0.0

Username: _____

Password: _____

Verify Password: _____

Service Name: _____ (optional)

Reconnection Mode: Always on On Demand Manual

Maximum Idle Time: 3 (minutes, 0=Infinite)

Primary DNS Server: 0.0.0.0 (optional)

Secondary DNS Server: 0.0.0.0 (optional)

MTU: 1492 (Default) MTU default = 1492

MAC Address: 00:00:00:00:00:00

Clone Your PC's MAC Address

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.

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

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

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

PPTP Gateway: Enter the Gateway IP Address provided by your ISP.

PPTP Server IP: Enter the Server IP provided by your ISP (optional).

Username: Enter your PPTP username.

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

Reconnect Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

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

DIR-855 // **D-Link**

INTERNET | **WIRELESS SETTINGS** | **NETWORK SETTINGS** | **ADVANCED** | **TOOLS** | **STATUS** | **SUPPORT**

WAN

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 : 0.0.0.0
Subnet Mask : 255.255.255.0
Default Gateway : 0.0.0.0
Primary DNS Server : 0.0.0.0
Secondary DNS Server : 0.0.0.0
MTU : 1500 (bytes) MTU default = 1500
MAC Address : 00:00:00:00:00:00
Clone Your PC's MAC Address

WIRELESS

Helpful Hints...

When configuring the router to access the Internet, be sure to choose the correct **Internet Connection type** from the drop down menu. If you are unsure of which option to choose, contact your **Internet Service Provider (ISP)**.

If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.

[More...](#)

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

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1400 is the default MTU.

MAC Address: The default MAC Address is set to the Internet port'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. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

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.

Address Mode: Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

L2TP IP Address: Enter the L2TP IP address supplied by your ISP (Static only).

L2TP Subnet Mask: Enter the Subnet Mask supplied by your ISP (Static only).

L2TP Gateway: Enter the Gateway IP Address provided by your ISP.

L2TP Server IP: Enter the Server IP provided by your ISP (optional).

Username: Enter your L2TP username.

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

Reconnect Mode: Select either **Always-on**, **On-Demand**, or **Manual**.

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

DNS Servers: Enter the Primary and Secondary DNS Server Addresses (Static L2TP only).

DIR-855 // **Internet** // **Network Settings**

WAN

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 : L2TP (Username / Password)

L2TP INTERNET CONNECTION TYPE :

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

Address Mode : Dynamic IP Static IP

L2TP IP Address : 0.0.0.0

L2TP Subnet Mask : 255.255.255.0

L2TP Gateway IP Address : 0.0.0.0

L2TP Server IP Address : 0.0.0.0

Username : _____

Password : _____

Verify Password : _____

Reconnect Mode : Always on On demand Manual

Maximum Idle Time : 5 (minutes, 0=infinite)

Primary DNS Server : 0.0.0.0

Secondary DNS Server : 0.0.0.0

MTU : 1400 (bytes) MTU default = 1400

MAC Address : 00:00:00:00:00:00

Clone Your PC's MAC Address

Helpful Hints...

When configuring the router to access the Internet, be sure to choose the correct Internet Connection Type from the drop down menu. If you are unsure of which option to choose, contact your Internet Service Provider (ISP).

If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.

More...

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1400 is the default MTU.

Clone MAC Address: The default MAC Address is set to the Internet port'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. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Internet Setup Static (assigned by ISP)

Select Static IP Address if all the Internet port's 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.

Default Gateway: Enter the Gateway assigned by your ISP.

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

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

MAC Address: The default MAC Address is set to the Internet port'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. You can use the **Clone Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot displays the 'Internet Setup' page for a D-Link DIR-855 router, specifically the 'Static (assigned by ISP)' configuration. The page is divided into several sections:

- WAN:** Contains the 'Internet Connection' section with instructions on how to choose the correct connection type (Static IP, DHCP, PPPoE, L2TP, and Bigpond). It includes 'Save Settings' and 'Don't Save Settings' buttons.
- INTERNET CONNECTION TYPE:** A dropdown menu currently set to 'Static IP'. Below it, a note states: 'Choose the mode to be used by the router to connect to the Internet.'
- STATIC IP ADDRESS INTERNET CONNECTION TYPE:** This section contains input fields for:
 - IP Address: 0.0.0.0
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 0.0.0.0
 - Primary DNS Server: 0.0.0.0
 - Secondary DNS Server: 0.0.0.0
 - MTU: 1500 (bytes) with a note 'MTU default = 1500'
 - MAC Address: 00:00:00:00:00:00
- WIRELESS:** A button labeled 'Clone Your PC's MAC Address' is located at the bottom right of the configuration area.
- Helpful Hints...:** A sidebar on the right provides additional information, including a note about configuring the router to access the Internet and a link to 'More...'

Wireless Settings 802.11n/g (2.4GHz)

Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.

Schedule: Select the time frame that you would like your wireless network enabled. The schedule may be set to **Always**. Any schedule you create will be available in the drop-down menu. Click **Add New** to create a new schedule.

Wireless Network Name: Service Set Identifier (SSID) is the name of your wireless network. Create a name using up to 32 characters. The SSID is case-sensitive.

802.11 Mode: Select one of the following:
802.11g Only - Select if all of your wireless clients are 802.11g.
Mixed 802.11n and 802.11g - Select if you are using both 802.11n and 802.11g wireless clients.
802.11n Only - Select only if all of your wireless clients are 802.11n.

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DIR-855 to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DIR-855. By default the channel is set to 6. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable **Auto Channel Scan**, this option will be greyed out.

Transmission Rate: Select the transmit rate. It is strongly suggested to select **Best (Auto)** for best performance.

WIRELESS NETWORK SETTINGS

Wireless Band : 2.4GHz Band

Enable Wireless : Always Add New

Wireless Network Name : dlink (Also called the SSID)

802.11 Mode : Mixed 802.11n, 802.11g and 802.11b

Enable Auto Channel Scan :

Wireless Channel : 2.437 GHz - CH 6

Transmission Rate : Best (automatic) (Mbit/s)

Channel Width : 20 MHz

Visibility Status : Visible Invisible

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode : None

Channel Width: Select the Channel Width:

Auto 20/40 - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.
20MHz - Select if you are not using any 802.11n wireless clients.

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcasted by the DIR-855. If Invisible is selected, the SSID of the DIR-855 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DIR-855 in order to connect to it.

Wireless Security: Refer to page 67 for more information regarding wireless security.

Wireless Settings 802.11n/a (5GHz)

Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.

Schedule: Select the time frame that you would like your wireless network enabled. The schedule may be set to **Always**. Any schedule you create will be available in the drop-down menu. Click **Add New** to create a new schedule.

Wireless Network Name: Service Set Identifier (SSID) is the name of your wireless network. Create a name using up to 32 characters. The SSID is case-sensitive.

802.11 Mode: Select one of the following:

802.11a Only - Select if all of your wireless clients are 802.11a.

Mixed 802.11n and 802.11a - Select if you are using both 802.11n and 802.11a wireless clients.

802.11n Only - Select only if all of your wireless clients are 802.11n.

Enable Auto Channel Scan: The **Auto Channel Scan** setting can be selected to allow the DIR-855 to choose the channel with the least amount of interference.

Wireless Channel: Indicates the channel setting for the DIR-855. By default the channel is set to 6. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable **Auto Channel Scan**, this option will be greyed out.

Transmission Rate: Select the transmit rate. It is strongly suggested to select **Best (Auto)** for best performance.

WIRELESS NETWORK SETTINGS

Wireless Band : 5GHz Band

Enable Wireless : Always Add New

Wireless Network Name : dlink_media (Also called the SSID)

802.11 Mode : Mixed 802.11n and 802.11a

Enable Auto Channel Scan :

Wireless Channel : 5.200 GHz - CH 40

Transmission Rate : Best (automatic) (Mbit/s)

Channel Width : 20 MHz

Visibility Status : Visible Invisible

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode : None

Channel Width: Select the Channel Width:

Auto 20/40 - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.
20MHz - Select if you are not using any 802.11n wireless clients.

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcasted by the DIR-855. If Invisible is selected, the SSID of the DIR-855 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DIR-855 in order to connect to it.

Wireless Security: Refer to page 67 for more information regarding wireless security.

Network Settings

This section will allow you to change the local network settings of the router and to configure the DHCP settings.

LAN Settings

Router IP Address: Enter the IP address of the router. The default IP address is 192.168.0.1.

If you change the IP address, once you click **Apply**, you will need to enter the new IP address in your browser to get back into the configuration utility.

Subnet Mask: Enter the Subnet Mask. The default subnet mask is 255.255.255.0.

Local Domain: Enter the Domain name (Optional).

Enable DNS Relay: Uncheck the box to transfer the DNS server information from your ISP to your computers. If checked, your computers will use the router for a DNS server.

ROUTER SETTINGS

Use this section to configure the internal network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.

Router IP Address :

Subnet Mask :

Local Domain Name : (optional)

Enable DNS Relay :

DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DIR-855 has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to “Obtain an IP Address Automatically.” When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DIR-855. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

Enable DHCP Server: Check this box to enable the DHCP server on your router. Uncheck to disable this function.

DHCP IP Address Range: Enter the starting and ending IP addresses for the DHCP server’s IP assignment.

Note: If you statically (manually) assign IP addresses to your computers or devices, make sure the IP addresses are outside of this range or you may have an IP conflict.

DHCP Lease Time: The length of time for the IP address lease. Enter the Lease time in minutes.

Always Broadcast: Check to send a “keep alive” which may be required for some DHCP clients.

Add DHCP Reservation: Refer to the next page for the DHCP Reservation function.

DHCP SERVER SETTINGS

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable DHCP Server:

DHCP IP Address Range: to

DHCP Lease Time: (minutes)

Always broadcast: (compatibility for some DHCP Clients)

ADD DHCP RESERVATION

Enable:

Computer Name: << <

IP Address:

MAC Address:

DHCP RESERVATIONS LIST

Enable	Computer Name	MAC Address	IP Address
NUMBER OF DYNAMIC DHCP CLIENTS : 1			
Computer Name	IP Address	MAC Address	Expire Time
prescott	192.168.0.156	00:11:09:2a:94:11	23 Hours 18 Minutes Revoke Reserve

DHCP Reservation

If you want a computer or device to always have the same IP address assigned, you can create a DHCP reservation. The router will assign the IP address only to that computer or device.

Note: This IP address must be within the DHCP IP Address Range.

Enable: Check this box to enable the reservation.

Computer Name: Enter the computer name or select from the dropdown menu and click <<.

IP Address: Enter the IP address you want to assign to the computer or device. This IP Address must be within the DHCP IP Address Range.

MAC Address: Enter the MAC address of the computer or device.

Copy Your PC's MAC Address: If you want to assign an IP address to the computer you are currently on, click this button to populate the fields.

Save: Click **Save** to save your entry. You must click **Save Settings** at the top to activate your reservations.

DHCP SERVER SETTINGS

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

Enable DHCP Server:

DHCP IP Address Range: 192.168.0.100 to 192.168.0.199

DHCP Lease Time: 1440 (minutes)

Always broadcast: (compatibility for some DHCP Clients)

ADD DHCP RESERVATION

Enable:

Computer Name: << Computer Name >>

IP Address: 0.0.0.0

MAC Address: 00:00:00:00:00:00

DHCP RESERVATIONS LIST

Enable	Computer Name	MAC Address	IP Address
NUMBER OF DYNAMIC DHCP CLIENTS : 1			
Computer Name	IP Address	MAC Address	Expire Time
prescott	192.168.0.156	00:11:09:2a:94:11	23 Hours 18 Minutes
			<input type="button" value="Revoke"/> <input type="button" value="Reserve"/>

Virtual Server

The DIR-855 can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DIR-855 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DIR-855 are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling Virtual Server. Depending on the requested service, the DIR-855 redirects the external service request to the appropriate server within the LAN network.

The DIR-855 is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

Each virtual service that is created will be listed at the bottom of the screen in the Virtual Servers List. There are pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

For a list of ports for common applications, please visit http://support.dlink.com/faq/view.asp?prod_id=1191.

This will allow you to open a single port. If you would like to open a range of ports, refer to page 35.

Name: Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), your computer will be listed in the “Computer Name” drop-down menu. Select your computer and click <<.

Private Port/ Public Port: Enter the port that you want to open next to Private Port and Public Port. The private and public ports are usually the same. The public port is the port seen from the Internet side, and the private port is the port being used by the application on the computer within your local network.

Protocol Type: Select **TCP**, **UDP**, or **Both** from the drop-down menu.

Schedule: The schedule of time when the Virtual Server Rule will be enabled. 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.

Inbound Filter: Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced > Inbound Filter** page.

Helpful Hints...

Check the **Application Name** drop down menu for a list of predefined server types. If you select one of the predefined server types, click the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the computer at which you would like to open the specified port.

Select a schedule for when the virtual server will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools → Schedules** screen and create a new schedule.

Select a filter that restricts the Internet hosts that can access this virtual server to hosts that you trust. If you do not see the filter you need in the list of filters, go to the **Advanced → Inbound Filter** screen and create a new filter.

More...

Port Forwarding

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

Name: Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), your computer will be listed in the “Computer Name” drop-down menu. Select your computer and click <<.

TCP/UDP: Enter the TCP and/or UDP port or ports that you want to open. You can enter a single port or a range of ports. Separate ports with a common.

Example: 24,1009,3000-4000

Schedule: The schedule of time when the Virtual Server Rule will be enabled. 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.

Inbound Filter: Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced > Inbound Filter** page.

DIR-855

VIRTUAL SERVER

PORT FORWARDING

APPLICATION RULES

QOS ENGINE

NETWORK FILTER

ACCESS CONTROL

WEBSITE FILTER

INBOUND FILTER

FIREWALL SETTINGS

ADVANCED WIRELESS

WDSH

ADVANCED NETWORK

SETUP **ADVANCED** **TOOLS** **STATUS** **SUPPORT**

PORT FORWARDING

This option is used to open multiple ports or a range of ports in your router and redirect data through those ports to a single PC on your network. This feature allows you to enter ports in various formats including, Port Ranges (100-150), Individual Ports (80, 8080), or Mixed (1020-5000, 689).

Save Settings Don't Save Settings

24 -- PORT FORWARDING RULES

Name	IP Address	Application Name	Computer Name	Ports to Open	Schedule
<input type="checkbox"/>	0.0.0.0	<<	<<	TCP	Always
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Inbound Filter
<input type="checkbox"/>	0.0.0.0	<<	<<	TCP	Allow All
<input type="checkbox"/>	0.0.0.0	<<	<<	TCP	Always
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Inbound Filter
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Allow All
<input type="checkbox"/>	0.0.0.0	<<	<<	TCP	Always
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Inbound Filter
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Allow All
<input type="checkbox"/>	0.0.0.0	<<	<<	TCP	Always
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Inbound Filter
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Allow All
<input type="checkbox"/>	0.0.0.0	<<	<<	TCP	Always
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Inbound Filter
<input type="checkbox"/>	0.0.0.0	<<	<<	UDP	Allow All

Helpful Hints...

Check the **Application Name** drop-down menu for a list of predefined applications. If you select one of the predefined applications, you can click to the application to open the drop-down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop-down menu, or you can manually enter the IP address of the LAN computer to which you would like to open the specified port.

Select a schedule for when the rule will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools > Schedules** screen and create a new schedule.

You can enter ports in various formats:
 Range (50-100)
 Individual (80, 8080)
 Mixed (1020-5000, 689)
 More...

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-855. If you need to run applications that require multiple connections, specify the port normally associated with an application in the “Trigger Port” field, select the protocol type as TCP or UDP, then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

The DIR-855 provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

Name: Enter a name for the rule. You may select a pre-defined application from the drop-down menu and click <<.

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

Traffic Type: Select the protocol of the trigger port (TCP, UDP, or Both).

Firewall: This is the port number on the Internet 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 the protocol of the firewall port (TCP, UDP, or Both).

Schedule: The schedule of time when the Application Rule will be enabled. 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.

DIR-855 // **SETUP** **ADVANCED** **TOOLS** **STATUS** **SUPPORT**

APPLICATION RULES

This option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a "trigger" port or port range. Special Applications rules apply to all computers on your internal network.

Save Settings Don't Save Settings

24 -- APPLICATION RULES

Name	Application Name	Trigger	Traffic Type	Schedule
<input type="checkbox"/>	Application Name	Firewall	TCP	Always
<input type="checkbox"/>	Application Name	Trigger	TCP	Always
<input type="checkbox"/>	Application Name	Firewall	TCP	Always
<input type="checkbox"/>	Application Name	Trigger	TCP	Always
<input type="checkbox"/>	Application Name	Firewall	TCP	Always
<input type="checkbox"/>	Application Name	Trigger	TCP	Always
<input type="checkbox"/>	Application Name	Firewall	TCP	Always
<input type="checkbox"/>	Application Name	Trigger	TCP	Always
<input type="checkbox"/>	Application Name	Firewall	TCP	Always

Helpful Hints...

Use this feature if you are trying to execute one of the listed network applications and it is not expected.

Check the **Application Name** drop-down menu for a list of predefined applications. If you select one of the predefined applications, click the arrow button next to the drop-down menu to fill out the corresponding field.

Select a schedule for when the service will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools > Schedules** screen and create a new schedule.

[More...](#)

QoS Engine

The QoS Engine option helps improve your network gaming performance by prioritizing applications. By default the QoS Engine settings are disabled and application priority is not classified automatically.

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

Dynamic This option should be enabled when you have a **Fragmentation:** slow Internet uplink. It helps to reduce the impact that large low priority network packets can have on more urgent ones.

Automatic Uplink This option is enabled by default when the QoS **Speed:** Engine option is enabled. This option will allow your router to automatically determine the uplink speed of your Internet connection.

Measured Uplink This displays the detected uplink speed. **Speed:**

Manual Uplink The speed at which data can be transferred from the router to your ISP. This is determined by your ISP. ISP's often speed as **Speed:** a download/upload pair. For example, 1.5Mbps/284Kbits. Using this example, you would enter 284. Alternatively you can test your uplink speed with a service such as www.dslreports.com.

Connection Type: By default, the router automatically determines whether the underlying connection is an xDSL/Frame-relay network or some other connection type (such as cable modem or Ethernet), and it displays the result as Detected xDSL or Frame Relay Network. If you have an unusual network connection in which you are actually connected via xDSL but for which you configure either "Static" or "DHCP" in the Internet settings, setting this option to xDSL or Other Frame Relay Network ensures that the router will recognize that it needs to shape traffic slightly differently in order to give the best performance. Choosing xDSL or Other Frame Relay Network causes the measured uplink speed to be reported slightly lower than before on such connections, but gives much better results.

Detected xDSL: When Connection Type is set to automatic, the automatically detected connection type is displayed here.

The screenshot shows the D-Link DIR-855 configuration interface. The 'QoS ENGINE' tab is selected. The 'QoS ENGINE' section has the following settings:

- Enable StreamEngine:
- Dynamic Fragmentation:
- Automatic Uplink Speed:
- Measured Uplink Speed: 1126 kbps
- Manual Uplink Speed: 128 kbps
- Connection Type: Auto-detect
- Detected xDSL Or Other Frame Relay Network: No

Buttons for 'Save Settings' and 'Don't Save Settings' are visible. A 'Helpful Hints...' section at the bottom provides additional information about the QoS Engine and uplink speed settings.

Network Filters

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 Filtering: Select **Turn MAC Filtering Off, Allow MAC Filtering**, or **Deny MAC Filtering**. addresses listed below, or **Deny MAC Filtering**. addresses listed below from the drop-down menu.

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.

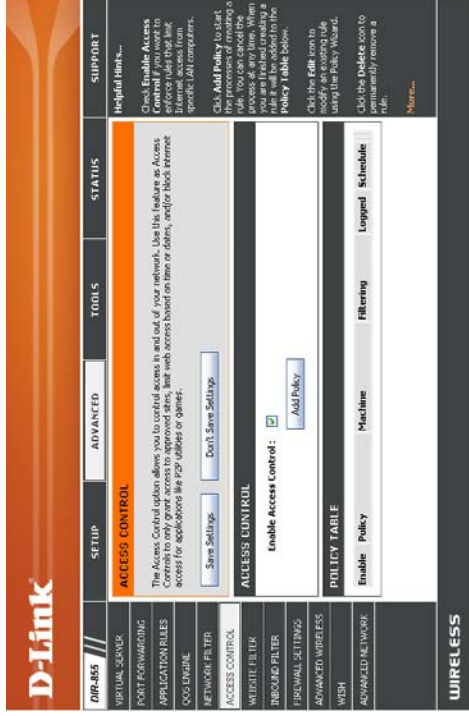
Clear: Click to remove the MAC address.

The screenshot shows the D-Link DIR-855 router's configuration interface. The top navigation bar includes 'DIR-855', 'VIRTUAL SERVER', 'PORT FORWARDING', 'APPLICATION RULES', 'QoS ENGINE', 'NETWORK FILTER', 'ACCESS CONTROL', 'WEBSITE FILTER', 'INBOUND FILTER', 'FIREWALL SETTINGS', 'ADVANCED WIRELESS', 'WiSH', and 'ADVANCED NETWORK'. The 'NETWORK FILTER' section is active, showing 'MAC ADDRESS FILTER' settings. The page title is '24 -- MAC FILTERING RULES'. The main content area includes a 'MAC Address' field with a 'Save Settings' button and a 'Don't Save Settings' button. Below this is a 'DHCP Client List' table with columns for 'MAC Address' and 'Computer Name'. The table contains five entries, each with a 'Clear' button next to it. A 'Helpful Hints...' section at the bottom provides instructions on how to use the MAC Address Filtering feature.

Access Control

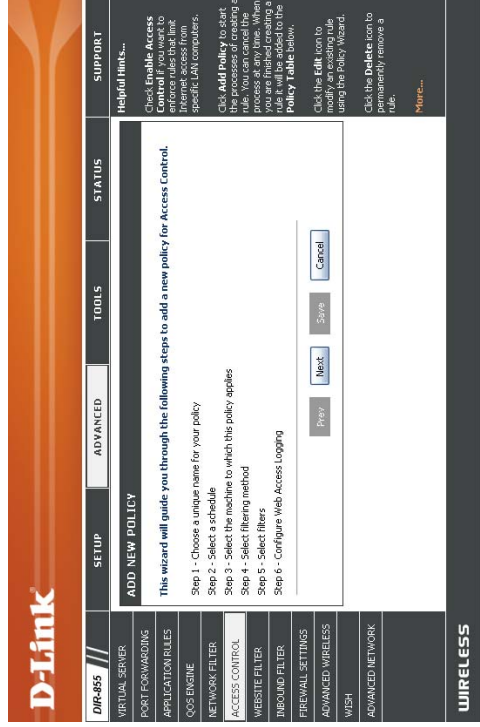
The Access Control section allows you to control access in and out of your network. Use this feature as Parental Controls to only grant access to approved sites, limit web access based on time or dates, and/or block access from applications like P2P utilities or games.

Add Policy: Click the **Add Policy** button to start the Access Control Wizard.



Access Control Wizard

Click **Next** to continue with the wizard.

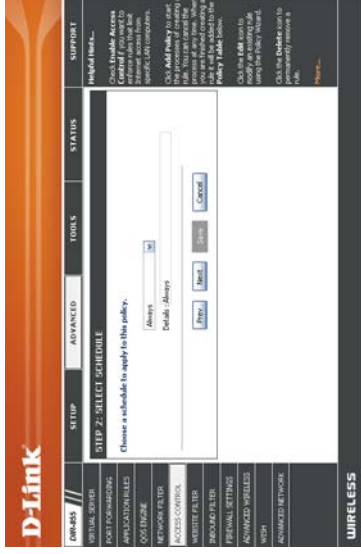


Access Control Wizard (continued)

Enter a name for the policy and then click **Next** to continue.

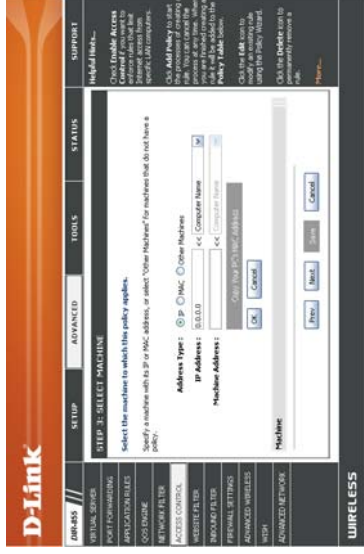


Select a schedule (I.E. Always) from the drop-down menu and then click **Next** to continue.



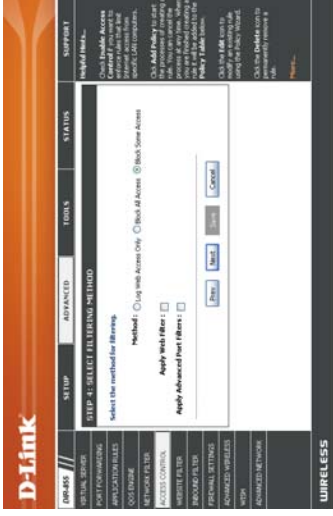
Enter the following information and then click **Next** to continue.

- Address Type - Select IP address, MAC address, or Other Machines.
- IP Address - Enter the IP address of the computer you want to apply the rule to.



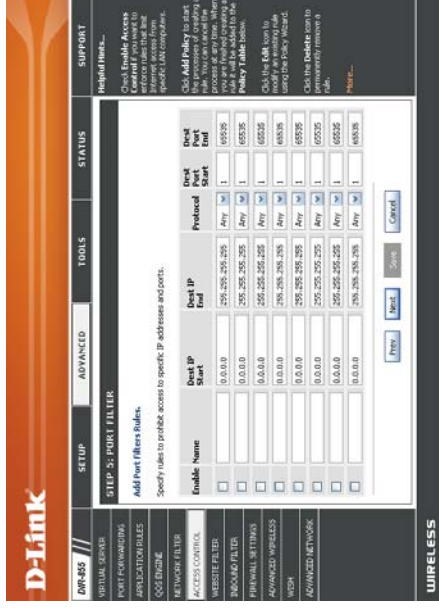
Access Control Wizard (continued)

Select the filtering method and then click **Next** to continue.



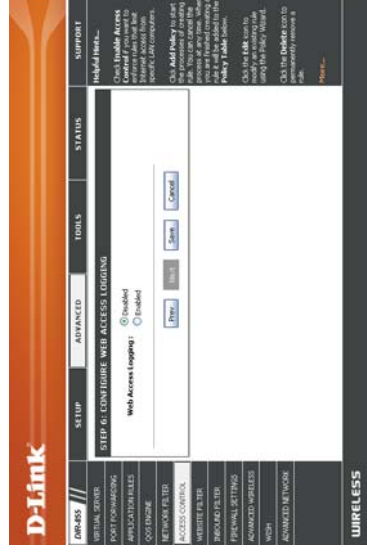
Enter the rule:

- Enable** - Check to enable the rule.
- Name** - Enter a name for your rule.
- Dest IP Start** - Enter the starting IP address.
- Dest IP End** - Enter the ending IP address.
- Protocol** - Select the protocol.
- Dest Port Start** - Enter the starting port number.
- Dest Port End** - Enter the ending port number.



To enable web logging, click **Enable**.

Click **Save** to save the access control rule.



Website Filters

Website Filters are used to allow you to set up a list of allowed Web sites that can be used by multiple users through the network. To use this feature select to **Allow** or **Deny**, enter the domain or website and click **Save Settings**. You must also select **Apply Web Filter** under the *Access Control* section (page 39).

Add Website Filtering Rule: Select **Allow** or **Deny**.

Website URL/ Domain: Enter the keywords or URLs that you want to allow or block. Click **Save Settings**.

The screenshot shows the D-Link DIR-855 configuration page. The navigation menu includes: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, QOS ENGINE, NETWORK FILTER, ACCESS CONTROL, WEBSITE FILTER (selected), INBOUND FILTER, FIREWALL SETTINGS, ROUTING, ADVANCED WIRELESS, WISH, WFT PROTECTED SETUP, and ADVANCED NETWORK. The main content area is titled 'WEBSITE FILTER' and contains the following text: 'The Website Filter option allows you to set up a list of Web sites you would like to allow or deny through your network. To use this feature, you must also select the "Apply Web Filter" checkbox in the Access Control section.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. A sub-section titled '64 -- WEBSITE FILTERING RULES' contains a dropdown menu labeled 'Configure Website Filter below:' with 'DENY' selected, and a 'Clear the list below...' button. Below these are three input fields for 'Website URL/Domain'. A 'SUPPORT' section at the bottom right provides helpful hints: 'Create a list of Web Sites to which you would like to deny or allow through the network.' and 'Use with Advanced Access Control.' with a 'More...' link.

Inbound Filters

The Inbound Filter option is an advanced method of controlling data received from the Internet. With this feature you can configure inbound data filtering rules that control data based on an IP address range. Inbound Filters can be used with Virtual Server, Port Forwarding, or Remote Administration features.

Name: Enter a name for the inbound filter rule.

Action: Select **Allow** or **Deny**.

Enable: Check to enable rule.

Remote IP Start: Enter the starting IP address. Enter 0.0.0.0 if you do not want to specify an IP range.

Remote IP End: Enter the ending IP address. Enter 255.255.255.255 if you do not want to specify and IP range.

Add: Click the **Add** button to apply your settings. You must click **Save Settings** at the top to save the settings.

Inbound Filter Rules List: This section will list any rules that are created. You may click the **Edit** icon to change the settings or enable/disable the rule, or click the **Delete** icon to remove the rule.

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DIR-855

VIRTUAL SERVER
PORT FORWARDING
APPLICATION RULES
QOS ENGINE
NETWORK FILTER
ACCESS CONTROL
WEBSITE FILTER
INBOUND FILTER
FIREWALL SETTINGS
ROUTING
ADVANCED WIRELESS
WISH
WI-FI PROTECTED SETUP
ADVANCED NETWORK

SETUP **ADVANCED** **TOOLS** **STATUS** **SUPPORT**

INBOUND FILTER
 The Inbound Filter option is an advanced method of controlling data received from the Internet. With this feature you can configure inbound data filtering rules that control data based on an IP address range.
 Inbound Filters can be used for limiting access to a server on your network to a system or group of systems. Filter rules can be used with Virtual Server, Port Forwarding, or Remote Administration features.

Helpful Hints...
 Give each rule a Name that is meaningful to you.
 Each rule can either Allow or Deny access from the WAN.
 Up to eight ranges of WAN IP addresses can be controlled by each rule. The checkbox by each IP range can be used to disable ranges already defined.
 The starting and ending IP addresses are WAN-side address.
 Click the **Add** or **Update** button to store a finished rule in the Rules List below.
 Click the **Edit** icon in the Rules List to change a rule.
 Click the **Delete** icon in the Rules List to permanently remove a rule.
 More...

ADD INBOUND FILTER RULE

Name :
 Action :
 Remote IP Range : Enable Remote IP Start Remote IP End

0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255
 0.0.0.0 255.255.255.255

INBOUND FILTER RULES LIST

Name	Action	Remote IP Range
255.255.255.255		

WIRELESS

Firewall Settings

A firewall protects your network from the outside world. The DIR-855 offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

Enable SPI: SPI (Stateful Packet Inspection, also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

NAT Endpoint Select one of the following for TCP and UDP ports:

Filtering: **Endpoint Independent** - Any incoming traffic sent to an open port will be forwarded to the application that opened the port. The port will close if idle for 5 minutes.

Address Restricted - Incoming traffic must match the IP address of the outgoing connection.

Address + Port Restriction - Incoming traffic must match the IP address and port of the outgoing connection.

Anti-Spoof Check: Enable this feature to protect your network from certain kinds of “spoofing” attacks.

Enable DMZ: If an application has trouble working from behind the router, you can expose one computer to the Internet and run the application on that computer.

Note: Placing a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.

DMZ IP Address: Specify the IP address of the computer on the LAN that you want to have unrestricted Internet communication. If this computer obtains its IP address automatically using DHCP, be sure to make a static reservation on the **Basic > DHCP** page so that the IP address of the DMZ machine does not change.

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DIR-855 // SETUP ADVANCED TOOLS STATUS SUPPORT

FIREWALL SETTINGS
The Firewall Settings allow you to set a single computer on your network outside of the router.
Save Settings Don't Save Settings

FIREWALL SETTINGS
Enable SPI:

NAT ENDPOINT FILTERING
UDP Endpoint Filtering: Endpoint Independent Address Restricted Port And Address Restricted
TCP Endpoint Filtering: Endpoint Independent Address Restricted Port And Address Restricted

ANTI-SPOOF CHECKING
Enable anti-spoof checking:

DMZ HOST
The DMZ (Demilitarized Zone) option lets you set a single computer on your network outside of your firewall. If you have a computer on your network behind the router, then you can place the computer into the DMZ for unrestricted Internet access.
Note: Putting a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.
Enable DMZ:
DMZ IP Address: 0.0.0.0 Computer Name

APPLICATION LEVEL GATEWAY (ALG) CONFIGURATION
PPTP:
IPSec (VPN):
RDP:
SIP:

WIRELESS

Helpful links...
Enable the DMZ option only as a last resort. If you are having trouble with a computer on your network behind the router, first try opening ports by application on the application on the Virtual Server or Port Forwarding sections.
None...

Application Level Gateway (ALG) Configuration

Here you can enable or disable ALG's. Some protocols and applications require special handling of the IP payload to make them work with network address translation (NAT). Each ALG provides special handling for a specific protocol or application. A number of ALGs for common applications are enabled by default.

PPTP: Allows multiple machines on the LAN to connect to their corporate network using PPTP protocol.

IPSEC (VPN): Allows multiple VPN clients to connect to their corporate network using IPsec. Some VPN clients support traversal of IPsec through NAT. This ALG may interfere with the operation of such VPN clients. If you are having trouble connecting with your corporate network, try turning this ALG off. Please check with the system administrator of your corporate network whether your VPN client supports NAT traversal.

RTSP: Allows application that uses Real Time Streaming Protocol to receive streaming media from the Internet. QuickTime and Real Player are some of the common applications using this protocol.

SIP: Allows devices and applications using VoIP (Voice over IP) to communicate across NAT. Some VoIP applications and devices have the ability to discover NAT devices and work around them. This ALG may interfere with the operation of such devices. If you are having trouble making VoIP calls, try turning this ALG off.

Routing

The Routing option is an advanced method of customizing specific routes of data through your network.

Destination IP: Enter the IP address of packets that will take this route.

Netmask: Enter the netmask of the route, please note that the octets must match your destination IP address.

Gateway: Enter your next hop gateway to be taken if this route is used.

Metric: The route metric is a value from 1 to 16 that indicates the cost of using this route. A value 1 is the lowest cost and 15 is the highest cost.

Interface: Select the interface that the IP packet must use to transit out of the router when this route is used.

Product Page: DIR-855
Hardware Version: Ax
Firmware Version: 1.00

D-Link

DIR-855
SETUP
ADVANCED
TOOLS
STATUS
SUPPORT

ROUTING

This Routing page allows you to specify custom routes that determine how data is moved around your network.

Save Settings
Don't Save Settings

32 --ROUTE LIST

Name	Destination IP	Gateway	Metric	Interface
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN
<input type="checkbox"/>	0.0.0.0	0.0.0.0	1	WAN

Helpful Hints...

Each route has a check box next to it. Check the box if you want the route to be enabled.

The name field allows you to specify a name for identification of this route, e.g. 'Network 2'.

The destination IP address is the address of the host or network you wish to reach.

The netmask field identifies the portion of the destination IP in use.

The gateway IP address is the IP address of the router, if any, used to reach the specified destination.

[More...](#)