

# USER MANUAL

DIR-330

VERSION 1.0



**D-Link**

**WIRELESS**

# Manual Overview

This manual contains the following sections:

Section 1 - “Product Overview” describes what is included with the DIR-330 router, and things to consider before installing.

Section 2 - “Installation” describes how to install the router on your network.

Section 3 - “Configuration” describes how to configure the settings on your DIR-330 router.

Section 4 - “Wireless Security” explains how to setup wireless encryption on your wireless router.

Section 5 - “Connect to a Wireless Network” explains how to configure your wireless clients to connect to your router.

Section 6 - “Troubleshooting” explains how to resolve common issues.

Section 7 - “Appendix” contains wireless and networking basics, technical specifications, technical support information, warranty, GNU general public license, and registration information.

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

<b>Revision</b>	<b>Date</b>	<b>Description</b>
1.0	Jan. 15, 2007	DIR-330 rev. A1 with firmware 1.00.

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# Package Contents

- D-Link DIR-330 Wireless G Broadband Router
- Power Adapter
- CAT5 Ethernet Cable
- CD-ROM with Installation Wizard, User Manual, and Special Offers



**Note:** Using a power supply with a different voltage rating than the one included with the DIR-330 will cause damage and void the warranty for this product.

# 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, Mozilla 1.7.12 (5.0), or Firefox 1.5 and above (for configuration)
- Installation Wizard requires Windows® XP with Service Pack 2

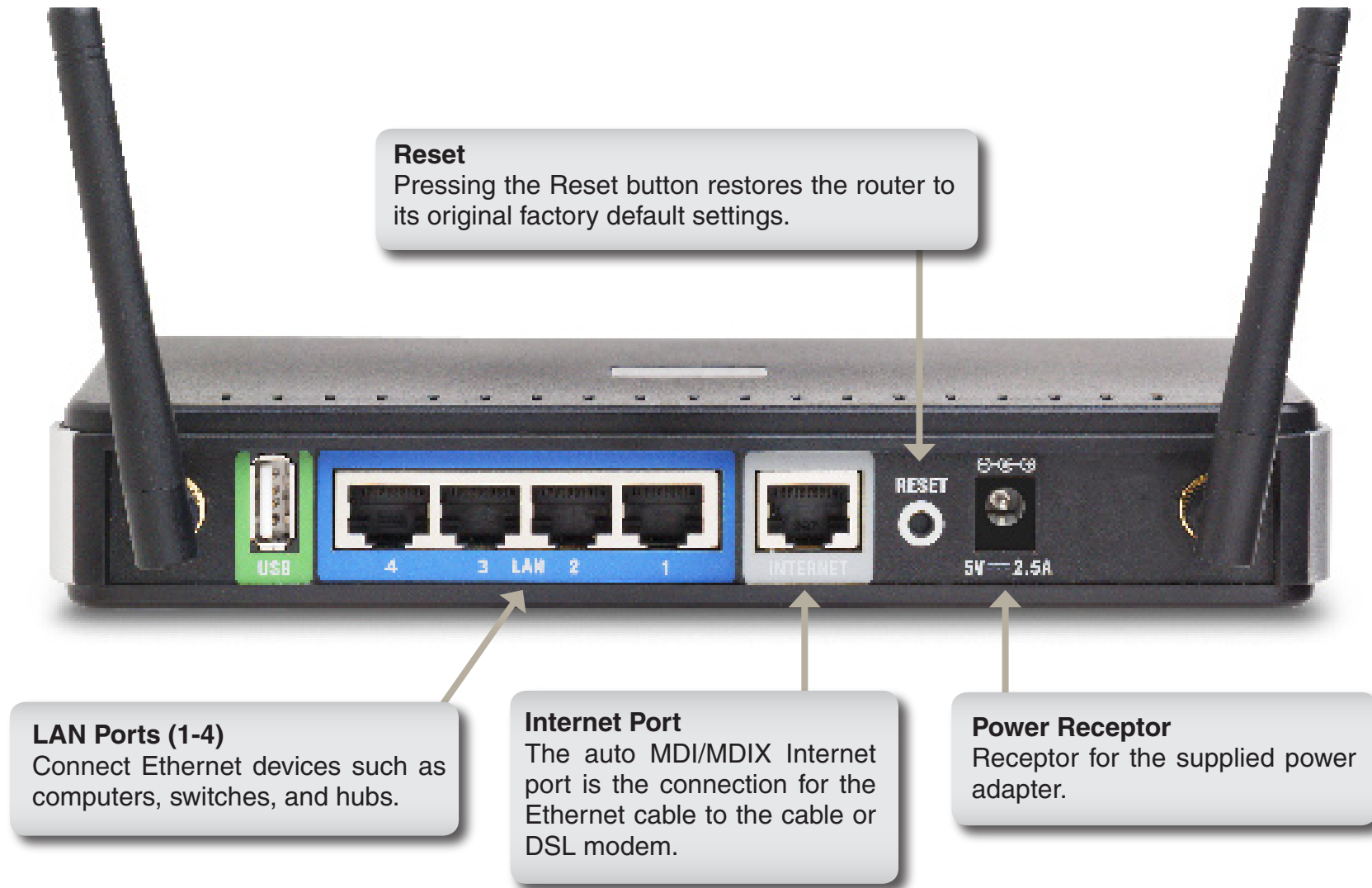
# Features

- **Faster Wireless Networking** - The DIR-330 provides up to 54Mbps\* wireless connection with other 802.11g wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio.
- **Compatible with 802.11b Devices** - The DIR-330 is still fully compatible with the IEEE 802.11b standard, so it can connect with existing 802.11b PCI, USB and Cardbus adapters.
- **Advanced Firewall Features** - The Web-based user interface displays a number of advanced network management features including:
  - **Parental Controls** - 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-330 can pass through VPN sessions. It supports multiple and concurrent IPsec and PPTP sessions, so users behind the DIR-330 can securely access corporate networks.
- **User-friendly Setup Wizard** - Through the easy-to-use Quick Router Setup on the included CD, the DIR-330 allows you to 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 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

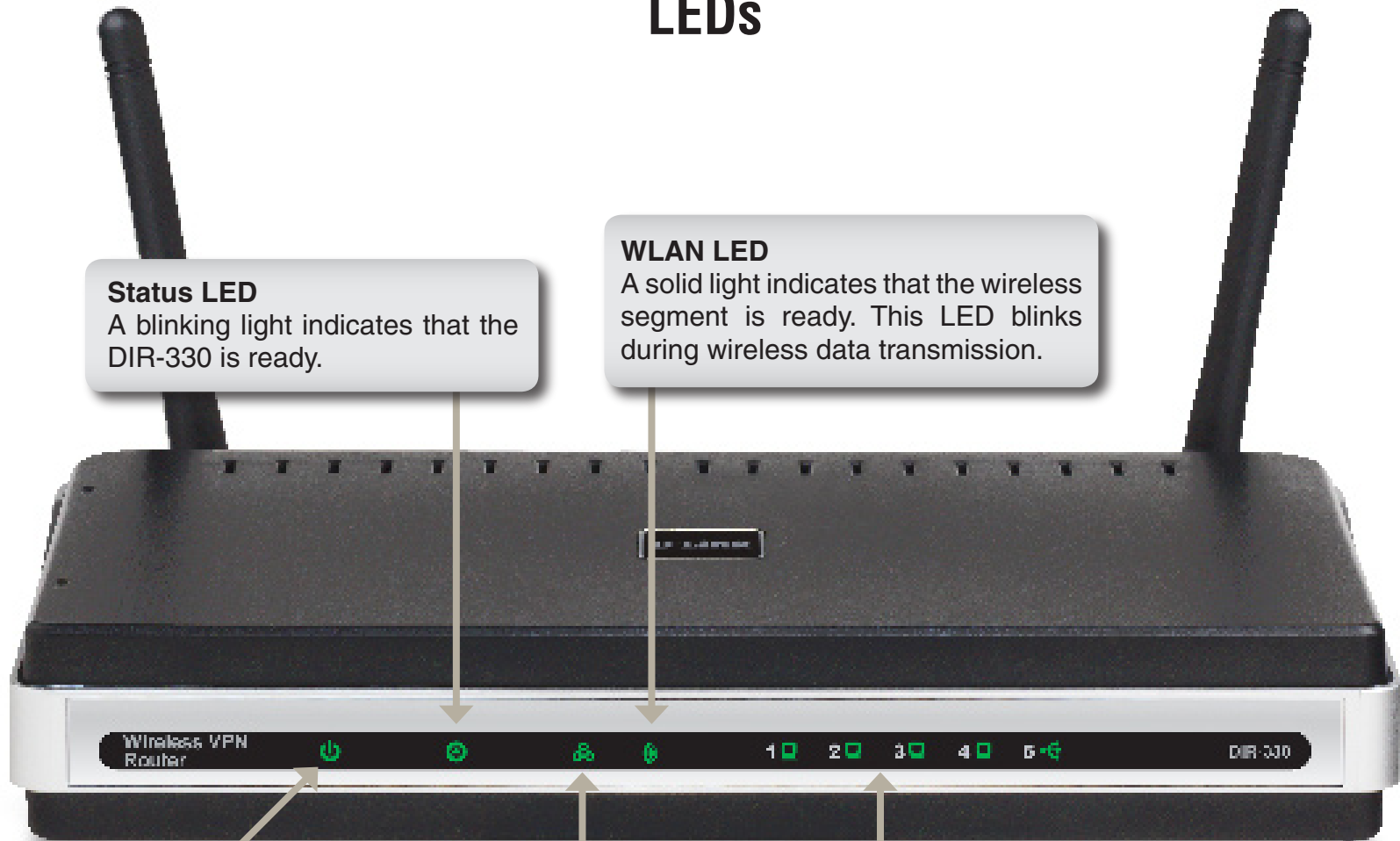


\* The USB port is currently inactive.



# Hardware Overview

## LEDs



### Status LED

A blinking light indicates that the DIR-330 is ready.

### WLAN LED

A solid light indicates that the wireless segment is ready. This LED blinks during wireless data transmission.

### Power LED

A solid light indicates a proper connection to the power supply.

### Internet LED

A solid light indicates connection on the Internet port. This LED blinks during data transmission.

### Local Network LEDs

A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4. This LED blinks during data transmission.

# Installation

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

## Before you Begin

Please configure the router with the computer that was last connected directly to your modem. Also, you can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the 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.

# 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.

# 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. Verify the link lights on the router. The power light, Internet light, and the LAN light (the port that your computer is plugged into) should be lit. If not, make sure your computer, modem, and router are powered on and verify the cable connections are correct.
9. Refer to page 10 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 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.

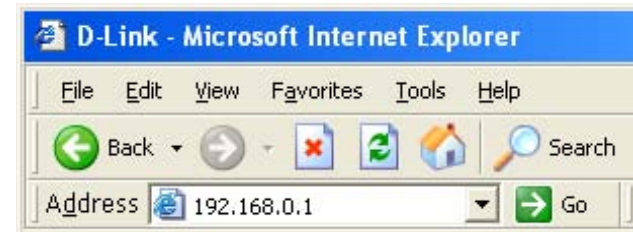
6. Disconnect the Ethernet cable from the router and reconnect your computer to your network.
7. Connect an Ethernet cable in one of the LAN ports of the router and connect it to your other router. Do not plug anything into the Internet port of the D-Link router.
8. You may now use the other 3 LAN ports 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.

# 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).



Enter **admin** as the User name field and enter the password in the Password field. Leave the password blank by default.

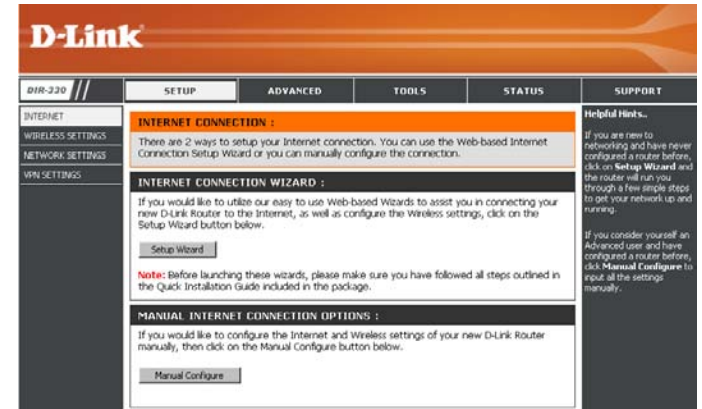
If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.



# Setup Wizard

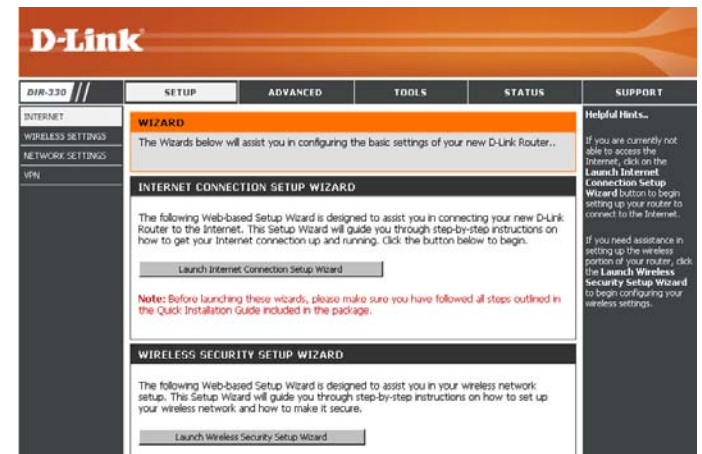
You may click **Setup Wizard** to quickly configure your router.

If you want to enter your settings without running the wizard, click **Manual Configure** and skip to page 15.



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

If you want to configure your wireless settings, click **Launch Wireless Security Setup Wizard** and skip to page 52.





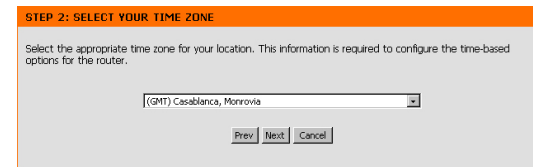
Click **Next** to continue.



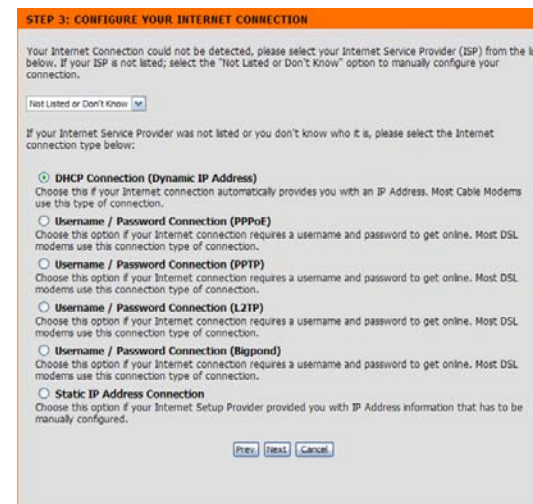
Create a new password and then click **Next** to continue.



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.

#### 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 :  -  -  -  -  -  (Optional)

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.

#### 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 :

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.

#### 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 :

Verify Password :

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

**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 :

L2TP Subnet Mask :

L2TP Gateway IP Address :

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

User Name :

Password :

Verify Password :

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 :

Subnet Mask :

Gateway Address :

Primary DNS Address :

Secondary DNS Address :

If you selected Big Pond, select your authentication server from the drop down menu. You will also need to enter your Big Pond username and password. Click **Next** to continue.

**SET USERNAME AND PASSWORD CONNECTION (BIGPOND)**

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.

Auth Server : sm-server ▾

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

Bigpond User Name :

Bigpond Password :

Bigpond Verify Password :

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 Setup Wizard has completed. Click the Connect button to save your settings and restart the router.

# 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.

**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.

**DNS Addresses:** Enter the Primary and Secondary DNS server IP address(es) 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.

**D-Link**

DIR-330 //

SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET WIRELESS SETTINGS NETWORK SETTINGS VPN

**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 : Dynamic IP (DHCP)

**DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE :**

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.

Host Name :

MAC Address :  -  -  -  -  -  (optional)

Clone MAC Address

Primary DNS Address :

Secondary DNS Address :  (optional)

MTU :  1500

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, please 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 **Internet Service Provider (ISP)** if needed.

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**.

**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).

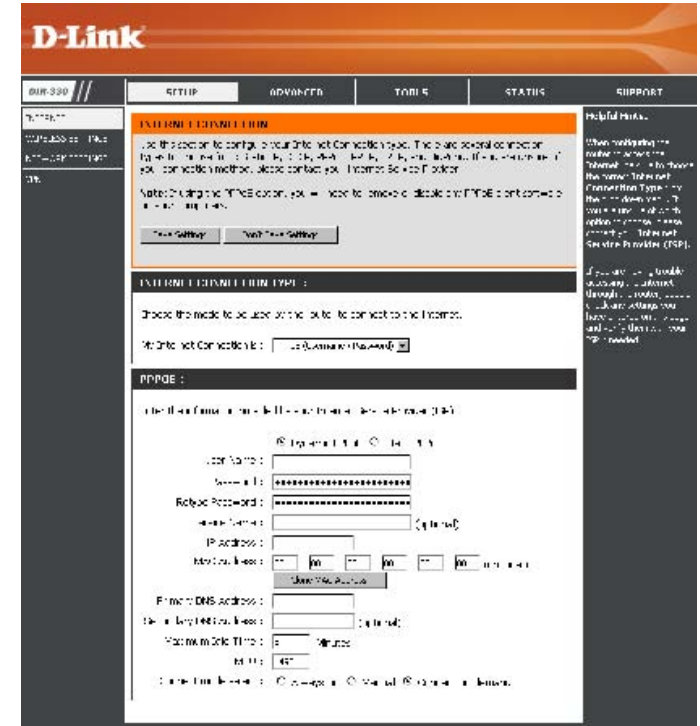
**MAC Address:** The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone MAC Address** button to replace the Internet port's MAC address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

**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.

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



# 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**.

**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/Name:** Enter the Server IP provided by your ISP (optional).

**PPTP Account:** Enter your PPTP account (username).

**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. 1450 is the default MTU.

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

The screenshot shows the D-Link DIR-330 web interface. The main navigation bar includes 'DIR-330', 'PPTP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'PPTP' tab is selected. The page title is 'INTERNET CONNECTION'. Below the title, there is a section for 'INTERNET CONNECTION TYPE' with a dropdown menu set to 'PPTP (Remote Network)'. The 'PPTP' section contains the following fields and options:

- IP Address:** [Text input field]
- Subnet Mask:** [Text input field]
- Gateway:** [Text input field]
- DNS:** [Text input field]
- Server IP/Name:** [Text input field]
- PPTP Account:** [Text input field]
- PPTP Password:** [Text input field with masked characters]
- PPTP Repeat Password:** [Text input field with masked characters]
- Maximum Idle Time:** [Text input field]
- MTU:** [Text input field]
- Connect mode to be:**  Always-on  On-Demand  Manual



# 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**.

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

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

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

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

**Server IP/Name:** Enter the Server IP provided by your ISP (optional).

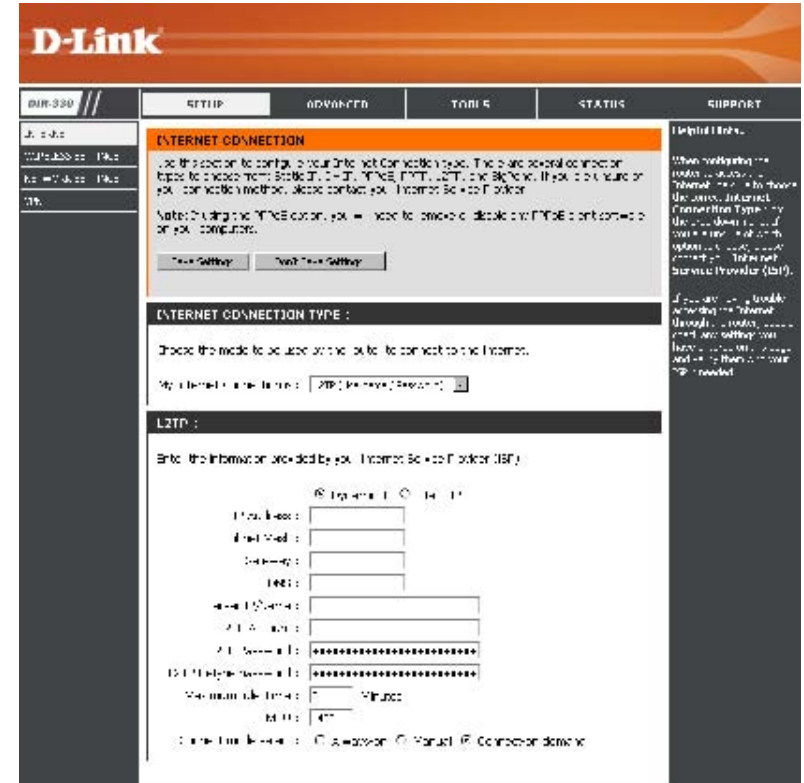
**L2TP Account:** Enter your L2TP account (username).

**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. 1450 is the default MTU.

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



# Internet Setup

## Big Pond

**My Internet Connection:** Select BigPond (Australia) from the drop-down menu.

**Username:** Enter your BigPond username.

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

**Auth Server:** Select the type of authentication server being used from the drop-down menu.

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

**MAC Address:** The default MAC Address is set to the Internet'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-330 web interface. The top navigation bar includes 'DIR-330', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar has 'INTERNET', 'WIRELESS SETTINGS', and 'NETWORK SETTINGS'. The main content area is titled 'WAN' and contains the following sections:

- WAN:** A header section with instructions: "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: "Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers." and two buttons: "Save Settings" and "Don't Save Settings".
- 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 labeled "My Internet Connection is :" with "BigPond (Australia)" selected.
- BIGPOND :** A section with the instruction "Enter the information provided by your Internet Service Provider (ISP)." and several input fields:
  - User Name : [text input]
  - Password : [password input]
  - Retype Password : [password input]
  - Auth Server : [dropdown menu with "sm-server" selected]
  - Login Server IP/Name : [text input] (optional)
  - MAC Address : [00] - [00] - [00] - [00] - [00] - [00] (optional)

At the bottom of the main content area is a button labeled "Clone MAC Address". On the right side of the page, there is a "Helpful Hints.." section with text: "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, please contact your **Internet Service Provider (ISP)**." Below this is another hint: "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."

The footer of the page is labeled "WIRELESS".



# 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.

**ISP Gateway:** Enter the Gateway assigned by your ISP.

**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 MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

**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.

The screenshot shows the D-Link DIR-330 router's web interface. The top navigation bar includes 'DIR-330', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'INTERNET' tab is selected, and the 'WAN' section is active. The page contains the following fields and options:

- INTERNET CONNECTION TYPE :** A dropdown menu set to 'Static IP'.
- STATIC IP ADDRESS INTERNET CONNECTION TYPE :** A section for entering static IP information.
  - IP Address :  (assigned by your ISP)
  - Subnet Mask :
  - ISP Gateway Address :
  - MAC Address :  -  -  -  -  -  (optional)
  - 
  - Primary DNS Address :
  - Secondary DNS Address :  (optional)
  - MTU :

On the right side, there are 'Helpful Hints..' and 'Save Settings' / 'Don't Save Settings' buttons.

# Wireless Settings

**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.

**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.

**Wireless Channel:** Indicates the channel setting for the DIR-330. 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.

**Enable Auto Channel Scan:** The **Auto Channel Scan** setting can be selected to allow the DIR-330 to choose the channel with the least amount of interference. This feature is enabled by default.

**802.11 Mode:** Select one of the following:

**802.11b only** - Select if all of your wireless clients are 802.11b.

**802.11b/g mixed** - Select if you are using both 802.11b and 802.11g wireless clients.

**802.11g only** - Select if all of your wireless clients are 802.11g.

**Visibility Status:** Select Invisible if you do not want the SSID of your wireless network to be broadcasted by the router. If Invisible is selected the SSID will not be seen by site survey utilities so your wireless clients must have the SSID manually entered to connect to the router.

**Wireless Security:** Refer to page 50 for more information regarding wireless security.

The screenshot shows the D-Link DIR-330 wireless settings interface. The main heading is 'WIRELESS NETWORK :'. Below this, there is a section for 'WIRELESS NETWORK SETTINGS :'. The settings are as follows:

- Enable Wireless:
- Wireless Network Name:  (Also called the SSID)
- Wireless Channel:
- Enable Auto Channel Scan:
- 802.11 Mode:
- Visibility Status:  Visible  Invisible

Below the settings is the 'WIRELESS SECURITY MODE :'. The security mode is set to 'None'.

Helpful Hints...: Changing your Wireless Network Name is the first step in securing your wireless network. We recommend that you change it to a familiar name that does not contain any personal information. We recommend that you Enable Auto Channel Scan so that the router can select the best possible channel for your wireless network to operate on. If you have enabled Wireless Security, make sure you write down WEP Key or Passphrase that you have configured. You will need to enter this information on any wireless device that you connect to your wireless network.

# Network Settings

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

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

**Local Domain Name:** 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.

**D-Link**

DIR-330 //

SETUP    ADVANCED    TOOLS    STATUS    SUPPORT

INTERNET  
WIRELESS SETTINGS  
NETWORK SETTINGS  
VPN SETTINGS

**NETWORK SETTINGS :**

Use this section to configure the internal network settings of your router and also to configure the built-in DHCP Server to assign IP addresses to the computers on your network. 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.

Save Settings    Don't Save Settings

**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 :

Default Subnet Mask :

Local Domain Name :

Enable DNS Relay :

**Helpful Hints..**

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.

In order to ensure that devices on your network are always assigned the same IP address, add a **DHCP Reservation** for each device.

## DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DIR-330 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-330. 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.

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

**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  (addresses within the LAN subnet)

DHCP Lease Time :  (minutes)

---

**ADD DHCP RESERVATION :**

Enable :

Computer Name :  <<

IP Address : 192 . 168 . 0 .

MAC Address :

---

**DHCP RESERVATIONS LIST :**

Enable	Computer Name	MAC Address	IP Address

---

**DYNAMIC DHCP CLIENT LIST :**

Host Name	IP Address	MAC Address	Expired Time
192.168.0.130	192.168.0.130	00:13:ce:77:8d:45	Sun Jan 14 01:02:54 2007

## 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 drop-down 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.

**ADD DHCP RESERVATION :**

Enable :

Computer Name :  << Computer Name ▾

IP Address : 192 . 168 . 0.

MAC Address :

**DHCP RESERVATIONS LIST :**

Enable	Computer Name	MAC Address	IP Address

**DYNAMIC DHCP CLIENT LIST :**

Host Name	IP Address	MAC Address	Expired Time
192.168.0.130	192.168.0.130	00:13:ce:77:8d:45	Sun Jan 14 01:02:54 2007

# VPN Settings

The DIR-330 supports IPsec, PPTP, and L2TP VPN as the Server Endpoint.

**Add VPN Profile:** Select **IPSec** or **PPTP/L2TP** from the drop-down menu and then click **Add**.

VPN SETTINGS	
ADD VPN PROFILE :	
Select a type	Add
IPSec	
PPTP/L2TP	
Name	Type

**Helpful Hints..**  
The DIR-330 supports IPsec, PPTP, and L2TP VPN as the Server Endpoint. For more details information about configuring VPN Endpoint Server in your DIR-330, please visit the support menu.

# IPSec Settings

**Enable:** Check this box to enable IPSec.

**Name:** Enter a name for your VPN.

**Encapsulation:** Select **Tunnel**.

**Remote IP:** Select **Site to Site** for LAN-to-LAN configuration and enter the destination gateway IP address in the box.

**Remote Local LAN Net/ Mask:** For LAN-to-LAN configuration, enter the destination Subnet and Mask.

**Authentication:** Enter the pre-shared key. The VPN Servers Endpoint from both ends must use the same key.

**Phase 1- Cipher #1-4 - Select 3DES or AES.**

**IKE Proposal List:** Hash #1-4 - Select **SHA1** or **MD5**.

**Phase 2:** Select PFS if both ends are supported.

**IKE Proposal List:** Cipher #1-4 - Select **3DES** or **AES**.

Hash #1-4 - Select **SHA1** or **MD5**.

Product Page: DIR-330 Hardware Version: A1 Firmware Version: 1.00

## D-Link

DIR-330
SETUP
ADVANCED
TOOLS
STATUS
SUPPORT

INTERNET

WIRELESS SETTINGS

NETWORK SETTINGS

VPN SETTINGS

### VPN - IPSEC

**IPSEC SETTING :**

Enable

Name :

Encapsulation Mode :  Tunnel

Remote IP :  Remote User  Site to Site

Remote Local LAN Net /Mask :  /

Authentication : Pre-shared / Shared Key

---

**PHASE 1 :**

IKE Proposal List :

	Cipher	Hash
#1:	3DES	SHA1
#2:	3DES	SHA1
#3:	3DES	SHA1
#4:	3DES	SHA1

---

**PHASE 2 :**

PFS :  PFS

IPSec Proposal List :

	Cipher	Hash
#1:	3DES	SHA1
#2:	3DES	SHA1
#3:	3DES	SHA1
#4:	3DES	SHA1

**Helpful Hints..**

The DIR-330 supports IPSec as the Server Endpoint. IPSec (Internet Protocol Security) is a set of protocols defined by the IETF (Internet Engineering Task Force) to provide IP security at the network layer.

An IPSec based VPN, such as that of the DIR-330, is made up of two basic parts:

- Internet Key Exchange security protocol (IKE)
- IPSec protocol (AH/ESP/both)

The first part, IKE, is the initial negotiation phase, where the two endpoints agree on which methods will be used to provide security for the underlying IP traffic. Furthermore, IKE is used to manage connections. Each SA is unidirectional, so there will be at least two SA per IPSec connection. The other part is the actual IP data being transferred, using the encryption and authentication methods agreed upon in the IKE negotiation. This can be accomplished in a number of ways by using the IPSec protocol ESP. For more details information about configuring VPN Endpoint Server in your DIR-330, please visit the support menu.



## PPTP/L2TP Settings

PPTP uses TCP port 1723 for its control connection and uses GRE (IP protocol 47) for the PPP data. PPTP supports data encryption by using MPPE.

L2TP uses UDP to transport the PPP data. This is often encapsulated in IPSec for encryption instead of using MPPE.

**Enable Settings:** Check this box to enable.

**Name:** Enter a name for your VPN.

**Connection Type:** Select **PPTP** or **L2TP**.

**VPN Server IP:** Enter the VPN Server IP address which is the LAN IP of the DIR-330 (I.E. 192.168.0.1).

**Remote IP Range:** Assign a range of IP addresses. The assigned IP range should be on the same network but not in the same range as your DHCP IP range. For example, if you network is 192.168.0.xxx and you set the DHCP range to 192.168.0.100-200, the remote IP range cannot be within 192.168.0.100-200.

**Authentication Protocol:** Select the desired authentication protocol (PAP/CHAP/MSCHAP v2).

**MPPE Encryption Mode:** Select the level of encryption (40-bit/128-bit)

**Authentication Sources:** Select **Local**.

**User Name:** Enter your username.

**Password:** Enter your password.

The screenshot shows the D-Link DIR-330 web interface. The top navigation bar includes 'DIR-330 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists 'INTERNET', 'WIRELESS SETTINGS', 'NETWORK SETTINGS', and 'VPN SETTINGS'. The main content area is titled 'VPN - PPTP/L2TP SERVER' and contains a 'Save Settings' button and a 'Don't Save Settings' button. Below this is the 'PPTP/L2TP SETTING' section with the following fields:

- Enable setting:
- Name:
- Connection type:  PPTP  L2TP
- VPN Server IP:
- Remote IP range:  -
- Authentication Protocol:  PAP  CHAP  MSCHAP v2
- MPPE Encryption Mode:  RC4  40 bit  128 bit
- Authentication Sources:  Local
- User Name 1:
- Password 1:
- User Name 2:
- Password 2:
- User Name 3:
- Password 3:

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

PPTP uses TCP port 1723 for its control connection and uses GRE (IP protocol 47) for the PPP data. PPTP supports data encryption by using MPPE.

L2TP uses UDP to transport the PPP data, this is often encapsulated in IPSec for encryption instead of using MPPE.

For more details information about configuring VPN Endpoint Server in your DIR-330, please visit the support menu.



## Virtual Server

The DIR-330 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-330 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DIR-330 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-330 redirects the external service request to the appropriate server within the LAN network.

The DIR-330 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](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 30.

**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.

**Traffic Type:** Select the type of protocol you would like to use for the selected rule.

**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.

**D-Link**

DIR-330 // SETUP ADVANCED TOOLS STATUS SUPPORT

**VIRTUAL SERVER RULES :**

The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Save Settings Don't Save Settings

**24 - VIRTUAL SERVER RULES**

	Name	IP Address	Port	Traffic Type	Schedule
<input type="checkbox"/>	<input type="text"/> << Application Name	<input type="text"/> << Computer Name	Public	TCP	Always
<input type="checkbox"/>	<input type="text"/> << Application Name	<input type="text"/> << Computer Name	Public	TCP	Always
<input type="checkbox"/>	<input type="text"/> << Application Name	<input type="text"/> << Computer Name	Public	TCP	Always

**Helpful Hints..**

Check the **Application Name** drop down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop down menu to fill out the appropriate fields.

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.

In order to apply a schedule to a Virtual Server Rule, you must first define a schedule on the **Tools>Schedules** page.

# 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 <<.

**Start Port/End Port:** Enter the 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

**Traffic Type:** Select the type of protocol you would like to assign to the rule.

**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.

**D-Link**

DIR-330

SETUP ADVANCED TOOLS STATUS SUPPORT

VIRTUAL SERVER  
PORT FORWARDING  
APPLICATION RULES  
NETWORK FILTER  
WEBSITE FILTER  
FIREWALL SETTINGS  
ADVANCED WIRELESS  
ADVANCED NETWORK

**PORT FORWARDING RULES :**  
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.  
Save Settings Don't Save Settings

**24- PORT FORWARDING RULES**

	Name	IP Address	Port	Traffic Type	Schedule
<input type="checkbox"/>	<input type="text"/> << Application Name	<input type="text"/> << Computer Name	Start <input type="text"/> End <input type="text"/>	TCP	Always
<input type="checkbox"/>	<input type="text"/> << Application Name	<input type="text"/> << Computer Name	Start <input type="text"/> End <input type="text"/>	TCP	Always
<input type="checkbox"/>	<input type="text"/> << Application Name	<input type="text"/> << Computer Name	Start <input type="text"/> End <input type="text"/>	TCP	Always

**Helpful Hints..**  
Check the **Application Name** drop down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop down menu to fill out the appropriate fields.  
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.  
In order to apply a schedule to a Port Forwarding Rule, you must first define a schedule on the **Tools > Schedules** page.  
This feature allows you to open a range of ports to a computer on your network.

# 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-330. 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-330 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.

**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.

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DIR-330 // SETUP ADVANCED TOOLS STATUS SUPPORT

**APPLICATION RULES :**

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 a outgoing "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**

	Port	Traffic Type	Schedule
<input type="checkbox"/>	Trigger [ ]	TCP	Always
<input type="checkbox"/>	Firewall [ ]	TCP	
<input type="checkbox"/>	Trigger [ ]	TCP	Always
<input type="checkbox"/>	Firewall [ ]	TCP	

**Helpful Hints..**

Check the **Application Name** drop down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop down menu to fill out the appropriate fields.

In order to apply a schedule to an Application Rule, you must first define a schedule on the **Tools > Schedules** page.

## 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**, **Turn MAC filtering on and ALLOW computers listed to access the network**, or **Turn MAC filtering on and DENY computers listed to access the network** 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.

**D-Link**

DIR-330

SETUP ADVANCED TOOLS STATUS SUPPORT

VIRTUAL SERVER  
PORT FORWARDING  
APPLICATION RULES  
NETWORK FILTER  
WEBSITE FILTER  
FIREWALL SETTINGS  
ADVANCED WIRELESS  
ADVANCED NETWORK

**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

**24 - MAC FILTERING RULES**

Configure MAC Filtering below:

Turn MAC Filtering OFF  
Turn MAC Filtering ON and ALLOW computers listed to access the network  
Turn MAC Filtering ON and DENY computers listed to access the network

<< Computer Name CLEAR  
<< Computer Name CLEAR  
<< Computer Name CLEAR  
<< Computer Name CLEAR  
<< Computer Name CLEAR  
<< Computer Name 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 Filters

Website Filters 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, click **Clear the List Below**.

**Configure Website Filtering:** Select **Turn Website Filtering Off**, **Turn Website filtering on and ALLOW computers listed to access the network**, or **Turn Website filtering on and DENY computers listed to access the network** from the drop-down menu.

**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.

**Schedule:** The schedule of time when the selected rule will be enabled. The schedule may be set to **Always**, which will allow the filter to always be enabled. You can create your own times in the **Tools > Schedules** section.

**D-Link**

DIR-330 // SETUP ADVANCED TOOLS STATUS SUPPORT

**WEBSITE FILTERING RULES :**

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.

Save Settings Don't Save Settings

**40 - WEBSITE FILTERING RULES**

Configure Website Filtering below:

Turn Website Filtering OFF

Turn Website Filtering ON and ALLOW computers access to ONLY these sites

Turn Website Filtering ON and DENY computers access to ONLY these sites

Website URL/Domain	Website URL/Domain	Website URL/Domain	Website URL/Domain
	Always		Always
	Always		Always
	Always		Always
	Always		Always
	Always		Always
	Always		Always

**Helpful Hints..**

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

A firewall protects your network from the outside world. The D-Link DIR-330 offers a firewall type functionality. 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 DMZ Host:** 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.

**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.

**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.

**D-Link**

DIR-330 // SETUP ADVANCED TOOLS STATUS SUPPORT

**FIREWALL SETTINGS :**

The Web Filter options allows you to set-up a list of allowed Web sites that can be used by multiple users. When Web Filter is enabled, all other Web sites not listed on this page will be blocked.

Save Settings Don't Save Settings

**DMZ HOST :**

The DMZ (Demilitarized Zone) option provides you with an option to set a single computer on your network outside of the router. If you have a computer that cannot run Internet applications successfully from 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 Host :

DMZ IP Address : 0.0.0.0 << Computer Name

Schedule : Always

**VPN PASSTHROUGH :**

Enable PPTP Passthrough :

Enable L2TP Passthrough :

Enable IPSec Passthrough :

**Helpful Hints...**

Only enable the DMZ option as a last resort. If you are having trouble using an application from a computer behind the router, first try opening ports associated with the application in the Virtual Server or Port Forwarding sections.

Make sure VPN passthrough is enabled if you are trying to use a VPN client from behind the router.

VPN Passthrough will only function if the VPN client being used runs on the standard ports associated with the VPN connection type. If you are having problems getting your VPN client connected from behind the router and these VPN passthrough options are enabled, please contact your network administrator to find out if any nonstandard ports or options are being used.

# Advanced Wireless Settings

**Tx Rate:** Select the basic transfer rates based on the speed of wireless adapters on your wireless network. It is strongly recommended to keep this setting to **Auto**.

**Beacon Interval:** Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value. 100 is the default setting and is recommended.

**RTS Threshold:** This value should remain at its default setting of 2432. If inconsistent data flow is a problem, only a minor modification should be made.

**Fragmentation:** The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.

**DTIM Interval:** (Delivery Traffic Indication Message) 3 is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

**Preamble Type:** Select Short or Long Preamble. The Preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) for communication between the wireless router and the roaming wireless network adapters. Auto is the default setting. Note: High network traffic areas should use the shorter preamble type.

**WMM Function:** WMM is QoS for your wireless network. Enable this option to improve the quality of video and voice applications for your wireless clients.

The screenshot shows the D-Link DIR-330 web interface. The 'ADVANCED' tab is selected, and the 'ADVANCED WIRELESS SETTINGS' section is expanded. The settings are as follows:

Setting	Value	Range/Default
TX Rates	Auto	
Beacon interval	100	(msec, range:20~1000, default:100)
RTS Threshold	2346	(range: 256~2346, default:2346)
Fragmentation	2346	(range: 1500~2346, default:2346, even number)
DTIM interval	3	(range: 1~5, default:1)
Preamble Type	Long Preamble	Short Preamble / Long Preamble
WMM Function	Disable	Enable / Disable

Helpful Hints: It is recommended that you leave these options at their default values. Adjusting them could negatively impact the performance of your wireless network.



# Advanced Network Settings

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

**Enable WAN Ping Respond:** Unchecking the box will not allow the DIR-330 to respond to pings. Blocking the Ping may provide some extra security from hackers. Check the box to allow the Internet port to be “pinged”.

**WAN Port Speed:** You may set the port speed of the Internet port to **10Mbps**, **100Mbps**, or **Auto**. Some older cable or DSL modems may require you to set the port speed to 10Mbps.

The screenshot shows the D-Link DIR-330 web interface. The top navigation bar includes 'DIR-330', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is active, displaying the 'NETWORK SETTINGS' page. The page is divided into 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: "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: "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 for 'WAN Port Speed' is open, showing options: '100Mbps', '10Mbps', '100Mbps', and 'Auto 10/100Mbps'. The 'Auto 10/100Mbps' option is selected.

On the right side, there is a 'Helpful Hints..' section with two paragraphs of text providing security and troubleshooting advice.

# Administrator Settings

This page will allow you to change the Administrator password. You can also enable Remote Management.

**Admin Password:** Enter a new password for the administrator login. Only the administrator can make changes to the settings.

**Enable Remote Management:** Remote management allows the DIR-330 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.

**IP Address:** Enter the IP address of the remote computer. You may enter \* to allow a connection from any Internet address.

**Port:** The port number used to access the DIR-330.

Example: `http://x.x.x.x:8080` whereas x.x.x.x is the Internet IP address of the DIR-330 and 8080 is the port used for the Web Management interface. The schedule may be set to **Always**, which will allow the filter to always be enabled. You can create your own times in the **Tools > Schedules** section.

**D-Link**

DIR-330 // SETUP ADVANCED TOOLS STATUS SUPPORT

**ADMINISTRATOR SETTINGS :**

There is one account that can access the router's management interface. This accounts is **admin**.

**Admin** has read/write access.

Save Settings Don't Save Settings

**ADMINISTRATOR (THE DEFAULT LOGIN NAME IS "ADMIN") :**

New Password : [masked]

Confirm Password : [masked]

**REMOTE MANAGEMENT :**

Enable Remote Management :

IP Address : \*

Port : 80 Always

**Helpful Hints..**

For security reasons, it is recommended that you change the Login Name and Password for the Administrator and User accounts. Be sure to write down the new Login Names and Passwords to avoid having to reset the router in the event that they are forgotten.

When enabling Remote Management, you can specify the IP address of the computer on the Internet that you want to have access to your router, or you can enter an asterisk (\*) to allow access to any computer on the Internet.

# Time Settings

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 Time Server. Daylight Saving can also be configured to automatically adjust the time when needed.

**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.

**Enable NTP Server:** NTP is short for Network Time Protocol. NTP synchronizes computer clock times in a network of computers. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.

**NTP Server Used:** Enter the NTP server or select one from the drop-down menu.

**Manual:** To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click **Set Time**. You can also click **Copy Your Computer's Time Settings**.

The screenshot shows the D-Link DIR-330 web interface. The top navigation bar includes 'DIR-330', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'TOOLS' tab is selected, and the 'TIME' sub-tab is active. The main content area is titled 'TIME : Time Configuration'. It contains a description of the Time Configuration page and two buttons: 'Copy Settings' and 'Set Time Settings'. Below this is the 'TIME CONFIGURATION :' section, which includes a dropdown menu for 'Time Zone' (set to 'New York/Ohio/Indiana'), a text field for 'NTP Server Used' (set to 'ntp.cern.ch'), and a checkbox for 'Enable Daylight Saving' (unchecked). There are also fields for 'DST Start' (Sun, Dec, 1st) and 'DST End' (Sun, Oct, 1st). The 'AUTOMATIC TIME CONFIGURATION :' section has a checkbox for 'Enable NTP Server' (unchecked) and a text field for 'NTP Server Used' (set to 'ntp.cern.ch'). The 'SET THE DATE AND TIME MANUALLY :' section has fields for 'Start Gateway Time' (Year: 2006, Month: Nov, Day: 1, Hour: 1, Minute: 0, Second: 0) and a 'Copy Your Computer's Time Settings' button. The bottom of the page has a 'WIRELESS' logo.

# 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 **Restore Configuration from File** 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 Configuration** button above.

**Reboot Device:** Click to reboot the router.

The screenshot shows the D-Link DIR-330 web interface. The top navigation bar includes 'DIR-330 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists menu items: ADMIN, TIME, SYSTEM, FIRMWARE, DDNS, SYSTEM CHECK, SCHEDULES, and LOG SETTINGS. The main content area is titled 'SYSTEM SETTINGS' and contains the following text and buttons:

**SYSTEM SETTINGS :**  
The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file created by device can be uploaded into the unit.

**SYSTEM SETTINGS :**

- Save Settings To Local Hard Drive :
- Load Settings From Local Hard Drive :
- Restore To Factory Default Settings :
- Reboots the DIR-330 :

The right sidebar is titled 'Helpful Hints..' and contains the following text:

Once your router is configured the 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.

# Update Firmware

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.

**Browse:** After you have downloaded the new firmware, click **Browse** to locate the firmware update on your hard drive. Click **Save Settings** to complete the firmware upgrade.

The screenshot shows the D-Link DIR-330 web interface. The top navigation bar includes 'DIR-330 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'TOOLS' tab is selected. On the left sidebar, 'FIRMWARE' is highlighted. The main content area is titled 'FIRMWARE UPGRADE :'. It contains the following text: 'There may be new firmware for your DIR-330 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 Save Settings button below to start the firmware upgrade.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. Underneath is a section titled 'CURRENT FIRMWARE INFO :'. It displays 'Current Firmware Version 1.00' and 'Firmware Date Dec 21 2006'. There is an empty text input field followed by a 'Browse...' button. On the right side of the interface, there is a 'Helpful Hints..' section with text: 'Firmware updates are released periodically to improve the functionality of your router and also to add features. If you run into a problem with a specific feature of the router, check our support site by clicking on the [Click here to check for an upgrade on our support site](#) link and see if an updated firmware is available for your router.'