

# USER MANUAL

DIR-130

VERSION 1.0



# Manual Overview

This manual contains the following sections:

Section 1 - “Product Overview” describes what is included with the DIR-130 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-130 router.

Section 4 - “Troubleshooting” explains how to resolve common issues.

Section 5 - “Appendix” contains 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	Feb. 8, 2007	DIR-130 rev. A1 with firmware 1.00.

## **Trademarks**

D-Link and the D-Link logo are trademarks or registered trademarks of D-Link Corporation or its subsidiaries in the United States or other countries. All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2007 by D-Link Systems, Inc.

All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from D-Link Systems, Inc.

---

# Table of Contents

<b>Manual Overview .....</b>	<b>i</b>	DHCP Reservation .....	20
Manual Revisions .....	ii	VPN Settings .....	21
Trademarks .....	ii	IPSec Settings .....	22
<b>Product Overview .....</b>	<b>1</b>	PPTP/L2TP Settings .....	23
Package Contents .....	1	Virtual Server .....	24
System Requirements .....	1	Port Forwarding .....	26
Features .....	2	Application Rules .....	27
Hardware Overview .....	3	Network Filters .....	28
Connections .....	3	Website Filters .....	29
LEDs .....	4	Firewall Settings .....	30
<b>Installation .....</b>	<b>5</b>	DMZ .....	30
Before you Begin .....	5	VPN Passthrough .....	30
Connect to Cable/DSL/Satellite Modem .....	6	Advanced Network Settings .....	31
<b>Configuration .....</b>	<b>7</b>	UPnP .....	31
Web-based Configuration Utility .....	7	WAN Ping Respond .....	31
Setup Wizard .....	8	WAN Port Speed .....	31
Manual Configuration .....	12	Administrator Settings .....	32
Dynamic (Cable) .....	12	Change Password .....	32
PPPoE (DSL) .....	13	Remote Management .....	32
PPTP .....	14	Time Settings .....	33
L2TP .....	15	System Settings .....	34
Big Pond .....	16	Update Firmware .....	35
Static (assigned by ISP) .....	17	DDNS .....	36
Network Settings .....	18	System Check .....	37
DHCP Server Settings .....	19	Schedules .....	38
		Log Settings .....	39
		Device Information .....	40

Log .....	41
Stats .....	42
LAN Computers .....	42
VPN .....	43
Support .....	44
<b>Troubleshooting.....</b>	<b>45</b>
<b>Networking Basics .....</b>	<b>49</b>
Check your IP address .....	49
Statically Assign an IP address .....	50
<b>Technical Specifications.....</b>	<b>51</b>
<b>Default Factory Settings .....</b>	<b>52</b>
<b>Contacting Technical Support.....</b>	<b>53</b>
<b>Warranty .....</b>	<b>54</b>
<b>GNU/Linux GPL.....</b>	<b>59</b>
GNU General Public License .....	60
<b>Registration.....</b>	<b>66</b>

# Package Contents

- D-Link DIR-130 8-Port 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-130 will cause damage and void the warranty for this product.

# System Requirements

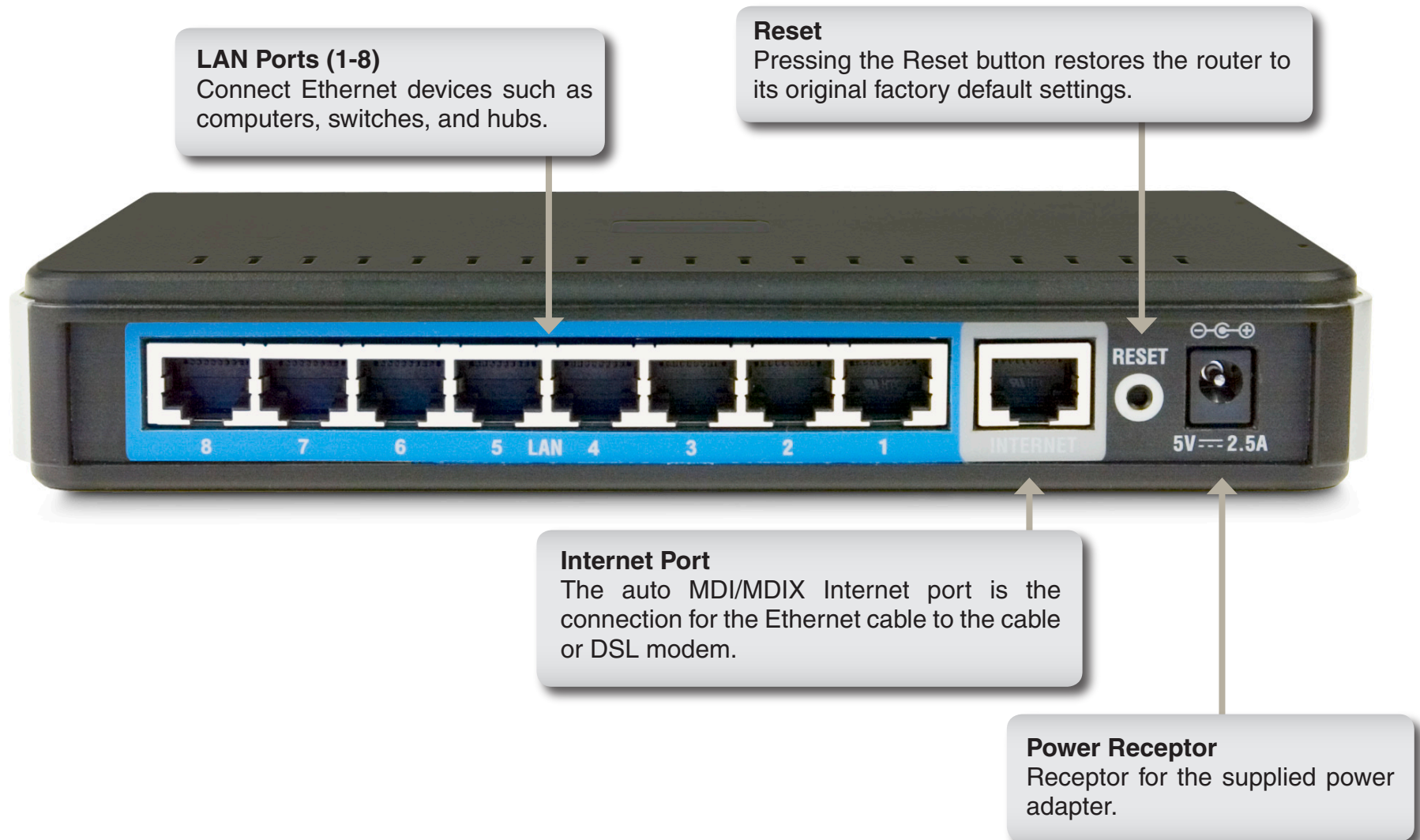
- Ethernet-based Cable or DSL Modem
- Computers with Windows®, Macintosh®, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer Version 6.0, Mozilla 1.7.12 (5.0), or Firefox 1.5 and above (for configuration)
- Installation Wizard requires Windows® XP with Service Pack 2

# Features

- **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-130 can pass through VPN sessions. It supports multiple and concurrent IPsec and PPTP sessions, so users behind the DIR-130 can securely access corporate networks.
- **User-friendly Setup Wizard** - Through the easy-to-use web-based user interface, the DIR-130 allows you to control what information is accessible to those on the network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

# Hardware Overview

## Connections

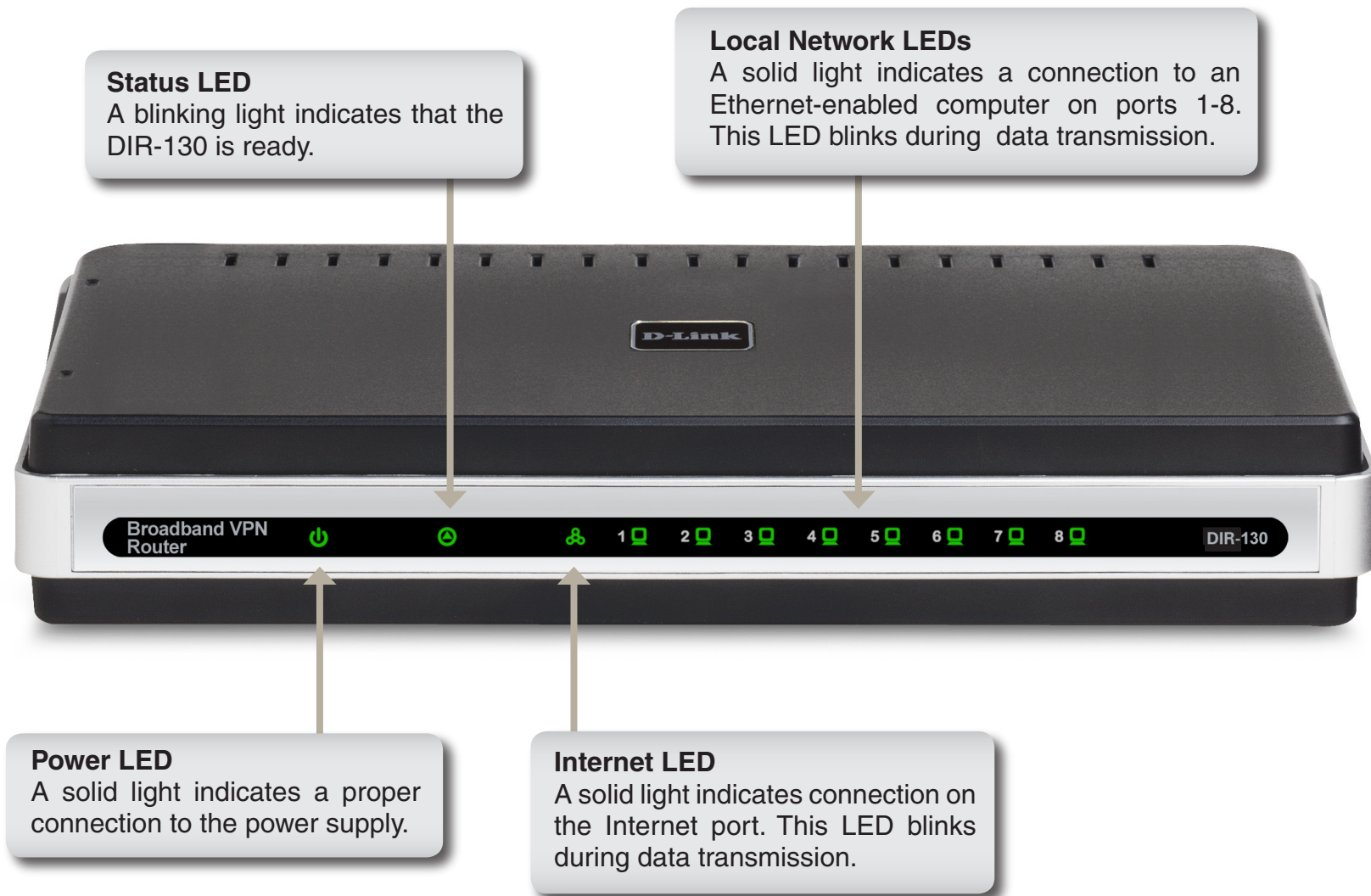


\* The USB port is currently inactive.



# Hardware Overview

## LEDs



# Installation

This section will walk you through the installation process.

## 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.

## Connect to Cable/DSL/Satellite Modem

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

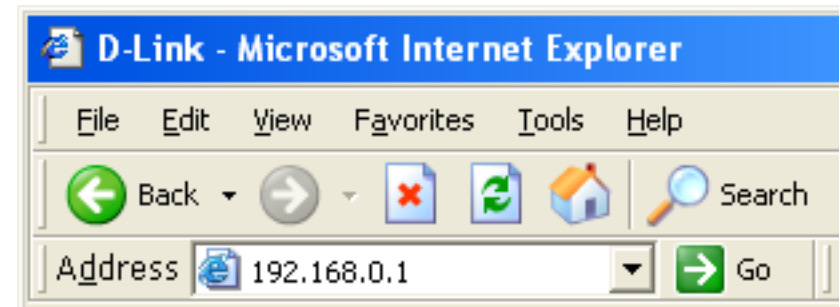
1. Place the router in an open and central location. Do not plug the power adapter into the router.
2. Turn the power off on your modem. If there is no on/off switch, then unplug the modem's power adapter. Shut down your computer.
3. Unplug the Ethernet cable (that connects your computer to your modem) 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 the next page to configure your router.

# Configuration

This section will show you how to configure your new D-Link 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.

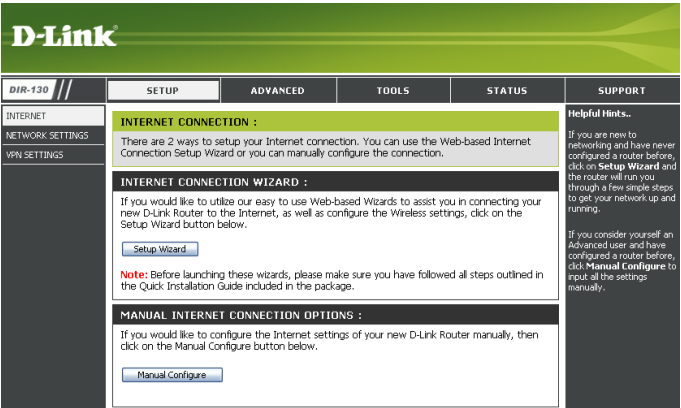
If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.



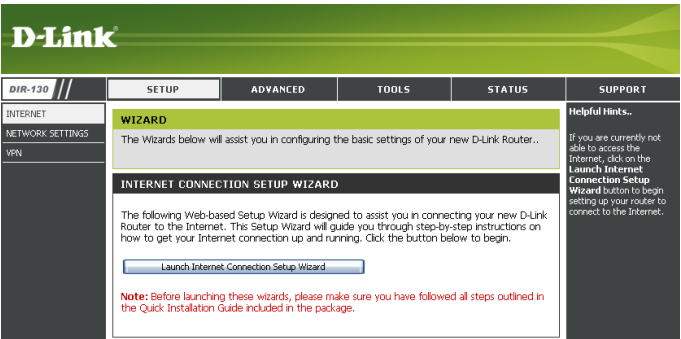
# Setup Wizard

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 12.



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

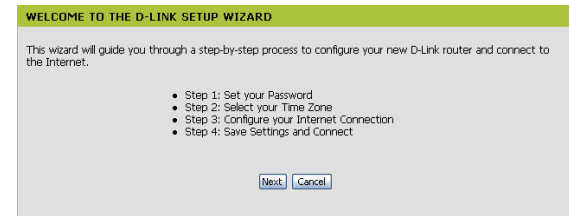


Click **Next** to continue.

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

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

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



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

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

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

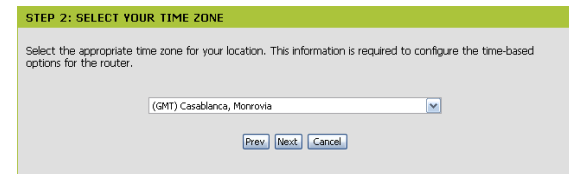


**STEP 1: SET YOUR PASSWORD**

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 :

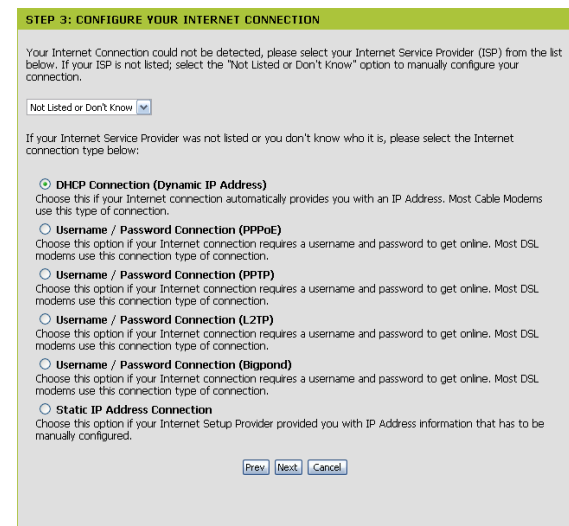
Verify Password :



**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.

(GMT) Casablanca, Monrovia



**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 connection type of connection.
- ☐ **Username / Password Connection (PPtP)**  
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
- ☐ **Username / Password Connection (L2TP)**  
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
- ☐ **Username / Password Connection (Bigpond)**  
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
- ☐ **Static IP Address Connection**  
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.

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 : 00 - 50 - BA - E1 - 16 - F1 (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.

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

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.

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.



# 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-130

SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET  
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.

# 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**.

The screenshot shows the D-Link DIR-130 Web UI. The top navigation bar includes links for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar shows the menu structure: INTERNET, NETWORK SETTINGS, and VPN. The main content area is titled "INTERNET CONNECTION" and contains the following sections:

- INTERNET CONNECTION:** A text box explaining that this section is for configuring the Internet Connection type, with options for Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. A note states that if using PPPoE, any PPPoE client software on the computer must be removed or disabled. Buttons for "Save Settings" and "Don't Save Settings" are present.
- INTERNET CONNECTION TYPE:** A section where the user chooses the mode to be used by the router to connect to the Internet. A dropdown menu shows "PPPoE (Username / Password)" selected.
- PPPoE:** A section for entering information provided by the Internet Service Provider (ISP). It includes:
  - Radio buttons for "Dynamic PPPoE" (selected) and "Static PPPoE".
  - Fields for "User Name", "Password", and "Retype Password" (all masked with dots).
  - A field for "Service Name" with an "(optional)" label.
  - A field for "IP Address".
  - A field for "MAC Address" with a "Clone MAC Address" button and an "(optional)" label.
  - Fields for "Primary DNS Address" and "Secondary DNS Address" (both with "(optional)" labels).
  - A field for "Maximum Idle Time" set to "5 Minutes".
  - A field for "MTU" set to "1492".
  - A "Connect mode select" section with radio buttons for "Always-on", "Manual", and "Connect-on demand" (selected).

On the right side of the page, there is a "Helpful Hints..." section with additional instructions.

# 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. 1400 is the default MTU.

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

**D-Link**

DIR-130

SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET

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 : PPTP (Username / Password)

**PPTP :**

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

☒ Dynamic IP ☐ Static IP

IP Address :

Subnet Mask :

Gateway :

DNS :

Server IP/Name :

PPTP Account :

PPTP Password :

PPTP Retype password :

Maximum Idle Time : 5 Minutes

MTU : 1450

Connect mode select : ☐ Always-on ☐ Manual ☒ Connect-on demand

**WIRED**

**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 ISP if needed.

# 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. 1400 is the default MTU.

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

**D-Link**

DIR-130

SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET

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 : L2TP (Username / Password)

**L2TP :**

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

☒ Dynamic IP ☐ Static IP

IP Address :

Subnet Mask :

Gateway :

DNS :

Server IP/Name :

L2TP Account :

L2TP Password :

L2TP Retype password :

Maximum Idle Time : 5 Minutes

MTU : 1450

Connect mode select : ☐ Always-on ☐ Manual ☒ Connect-on demand

**WIRED**

**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 ISP if needed.

# 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-130 web interface. The top navigation bar includes 'DIR-130', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar has 'INTERNET', 'NETWORK SETTINGS', and 'VPN'. The main content area is titled 'INTERNET CONNECTION' and contains the following sections:

- INTERNET CONNECTION:** A text box explaining that users can choose from Static IP, DHCP, PPPoE, PPTP, L2TP, and BigPond. A note states that PPPoE requires removing or disabling PPPoE client software. There are 'Save Settings' and 'Don't Save Settings' buttons.
- INTERNET CONNECTION TYPE :** A section with the instruction 'Choose the mode to be used by the router to connect to the Internet.' Below it, a dropdown menu shows 'My Internet Connection is : BigPond (Australia)'.
- BIGPOND :** A section titled 'Enter the information provided by your Internet Service Provider (ISP)'. It contains fields for:
  - User Name : [text box]
  - Password : [password box]
  - Retype Password : [password box]
  - Auth Server : sm-server [dropdown menu]
  - Login Server IP/Name : [text box] (optional)
  - MAC Address : [00] - [00] - [00] - [00] - [00] - [00] (optional)
 A 'Clone MAC Address' button is located below the MAC Address field.

On the right side of the interface, there is a 'Helpful Hints..' section with text about configuring the router and contacting the ISP.

# 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-130 web interface. The top navigation bar includes 'DIR-130', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar has 'INTERNET', 'NETWORK SETTINGS', and 'VPN'. The main content area is titled 'INTERNET CONNECTION' and contains the following sections:

- INTERNET CONNECTION TYPE :** A dropdown menu set to 'Static IP'. Below it, a text box says 'Choose the mode to be used by the router to connect to the Internet.'
- STATIC IP ADDRESS INTERNET CONNECTION TYPE :** A section for entering static IP information. It includes fields for:
  - IP Address : (assigned by your ISP)
  - Subnet Mask :
  - ISP Gateway Address :
  - MAC Address : (with a 'Clone MAC Address' button)
  - Primary DNS Address :
  - Secondary DNS Address : (optional)
  - MTU : 1500

On the right side, there is a 'Helpful Hints..' section with text about configuring the router and a note about PPPoE.

# 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.

The screenshot displays the D-Link DIR-130 Web-based Management Interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar shows a tree view with INTERNET, NETWORK SETTINGS (selected), and VPN SETTINGS. The main content area is titled 'NETWORK SETTINGS' and contains several sections:

- NETWORK SETTINGS :** A text box explaining the purpose of the section and instructions for changing the IP Address. Below it are 'Save Settings' and 'Don't Save Settings' buttons.
- ROUTER SETTINGS :** A text box explaining the purpose of the section. It includes input fields for Router IP Address (192.168.0.1), Default Subnet Mask (255.255.255.0), and Local Domain Name. The 'Enable DNS Relay' checkbox is checked.
- DHCP SERVER SETTINGS :** A text box explaining the purpose of the section. It includes a checked 'Enable DHCP Server' checkbox, a 'DHCP IP Address Range' of 100 to 150, and a 'DHCP Lease Time' of 86400 minutes.
- ADD DHCP RESERVATION :** A section with an 'Enable' checkbox (unchecked), a 'Computer Name' dropdown menu, an 'IP Address' field (192.168.0.), and a 'MAC Address' field (00:00:00:00:00:00). It includes a 'Copy Your PC's MAC Address' button and 'Save'/'Clear' buttons.
- DHCP RESERVATIONS LIST :** A table with columns: Enable, Computer Name, MAC Address, and IP Address.
- DYNAMIC DHCP CLIENT LIST :** A table with columns: Host Name, IP Address, MAC Address, and Expired Time.

The bottom of the interface shows a 'WIRED' status indicator.



## DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DIR-130 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-130. 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 :  << 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.

**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

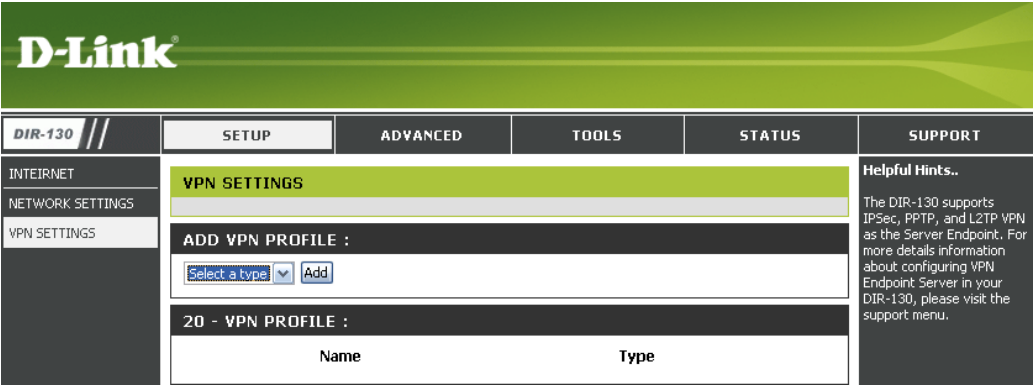
**DYNAMIC DHCP CLIENT LIST :**

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

# VPN Settings

The DIR-130 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**.



## 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**.

**D-Link**

DIR-130 // SETUP ADVANCED TOOLS STATUS SUPPORT

VPN - IPSEC

Save Settings Don't Save Settings

**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-130 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-130, 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-130, please visit the support menu.

**WIRED**

## 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 Setting:** 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-130 (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.

**D-Link**

DIR-130 // SETUP ADVANCED TOOLS STATUS SUPPORT

VPN - PPTP/L2TP SERVER

Save Settings Don't Save Settings

**PPTP/L2TP SETTING :**

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 :

**Helpful Hints..**

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-130, please visit the support menu.

## Virtual Server

The DIR-130 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-130 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DIR-130 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-130 redirects the external service request to the appropriate server within the LAN network.

The DIR-130 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 the next page.

**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.

The screenshot shows the D-Link DIR-130 Advanced Network Setup page. The left sidebar contains navigation links: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, NETWORK FILTER, WEBSITE FILTER, FIREWALL SETTINGS, and ADVANCED NETWORK. The main content area is titled "VIRTUAL SERVER RULES" and includes a description: "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." Below this are "Save Settings" and "Don't Save Settings" buttons. A table titled "24 - VIRTUAL SERVER RULES" lists three rules. Each rule has a checkbox, a Name field with a "<<" button and an "Application Name" dropdown, an IP Address field with a "<<" button and a "Computer Name" dropdown, a Port field (Public/Private), a Traffic Type dropdown (TCP), and a Schedule dropdown (Always). A "Helpful Hints.." sidebar on the right provides additional instructions on selecting applications and schedules.

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

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-130

SETUP ADVANCED TOOLS STATUS SUPPORT

VIRTUAL SERVER  
PORT FORWARDING  
APPLICATION RULES  
NETWORK FILTER  
WEBSITE FILTER  
FIREWALL SETTINGS  
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
<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. To do so, enter the first port in the range you would like to open in the **Start** field and last port of the range in the **End** field.

To open a single port using this feature, simply enter the same number in both the **Start** and **End** fields.

# 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-130. 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-130 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.

**D-Link**

DIR-130 // SETUP ADVANCED TOOLS STATUS SUPPORT

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

**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 an 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"/>		<< Application Name	Trigger Firewall	TCP	Always
<input type="checkbox"/>		<< Application Name	Trigger Firewall	TCP	Always
<input type="checkbox"/>		<< Application Name	Trigger Firewall	TCP	Always
<input type="checkbox"/>		<< Application Name	Trigger Firewall	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.

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.



## 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.

The screenshot shows the D-Link DIR-130 Advanced Setup interface. The left sidebar contains a menu with options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, NETWORK FILTER, WEBSITE FILTER (selected), FIREWALL SETTINGS, and ADVANCED NETWORK. The main content area is titled 'WEBSITE FILTERING RULES' and includes a description: 'The Website Filter option allows you to set-up a list of Websites that the users on your network will either be allowed or denied access to.' Below this are 'Save Settings' and 'Don't Save Settings' buttons. A section titled '40 - WEBSITE FILTERING RULES' contains a dropdown menu for 'Configure Website Filtering below:' with options: 'Turn Website Filtering OFF', 'Turn Website Filtering ON and ALLOW computers access to ONLY these sites', and 'Turn Website Filtering ON and DENY computers access to ONLY these sites'. The 'Turn Website Filtering ON and ALLOW...' option is selected. Below the dropdown is a table with columns 'Website URL/Domain' and 'Website URL/Domain' (likely a typo for 'Schedule'). The table has four rows, each with a text input field and a dropdown menu set to 'Always'. On the right side of the interface, there is a 'Helpful Hints..' section with instructions on how to use the website filtering feature.

## Firewall Settings

A firewall protects your network from the outside world. The D-Link DIR-130 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.

The screenshot shows the D-Link DIR-130 Advanced Firewall Settings page. The left sidebar contains a menu with options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, NETWORK FILTER, WEBSITE FILTER, FIREWALL SETTINGS (selected), and ADVANCED NETWORK. The main content area is titled 'FIREWALL SETTINGS' and includes a 'DMZ HOST' section and a 'VPN PASSTHROUGH' section. The 'DMZ HOST' section has a 'Save Settings' button, a 'Don't Save Settings' button, and a 'DMZ HOST' label. Below this, there is a text box explaining the DMZ option, a 'Note' about security risks, and a 'DMZ HOST' section with a checkbox for 'Enable DMZ Host', a text field for 'DMZ IP Address' (set to 0.0.0.0), a 'Schedule' dropdown (set to Always), and a 'Computer Name' dropdown. The 'VPN PASSTHROUGH' section has three checkboxes: 'Enable PPTP Passthrough', 'Enable L2TP Passthrough', and 'Enable IPSec Passthrough'. On the right side of the page, there is a 'Helpful Hints...' section with additional information.

# 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-130 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.

**D-Link**

DIR-130

SETUP ADVANCED TOOLS STATUS SUPPORT

**NETWORK SETTINGS :**

If you are not familiar with these Advanced Network settings, please read the help section before attempting to enable or disable them.

Save Settings Don't Save Settings

**UPNP :**

Universal Plug and Play (UPnP) supports peer-to-peer Plug and Play functionality for network devices.

Enable UPnP : ☒

**WAN PING :**

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.

Enable WAN Ping Respond : ☒

**WAN PORT SPEED**

WAN Port Speed : Auto 10/100Mbps

**Helpful Hints..**

For added security, it is recommended that you disable the **WAN Ping Respond** option. Ping is often used by malicious Internet users to locate active networks or PCs.

If you are having trouble receiving multicast streams from the Internet, make sure the Multicast Stream option is enabled.

# 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-130 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-130.

Example: http://x.x.x.x:8080 whereas x.x.x.x is the Internet IP address of the DIR-130 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.

The screenshot shows the D-Link DIR-130 web management interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: ADMIN, TIME, SYSTEM, FIRMWARE, DDNS, SYSTEM CHECK, SCHEDULES, and LOG SETTINGS. The main content area is titled 'ADMINISTRATOR SETTINGS' and contains the following sections:

- ADMINISTRATOR SETTINGS :** A message states, 'There is one account that can access the router's management interface. This accounts is admin.' Below this, it says 'Admin has read/write access.' and provides two buttons: 'Save Settings' and 'Don't Save Settings'.
- ADMINISTRATOR (THE DEFAULT LOGIN NAME IS "ADMIN") :** This section contains two password input fields labeled 'New Password :' and 'Confirm Password :', both masked with asterisks.
- REMOTE MANAGEMENT :** This section includes:
  - 'Enable Remote Management :' with an unchecked checkbox.
  - 'IP Address :' with a text input field containing an asterisk (\*).
  - 'Port :' with a dropdown menu showing '80' and a schedule dropdown menu showing 'Always'.

On the right side of the interface, there is a 'Helpful Hints..' section with security recommendations and a note about enabling Remote Management.

# 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**.

**D-Link**

DIR-130 //

SETUP ADVANCED TOOLS STATUS SUPPORT

ADMIN  
TIME  
SYSTEM  
FIRMWARE  
DDNS  
SYSTEM CHECK  
SCHEDULES  
LOG SETTINGS

**TIME :**

**Time Configuration**

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

Save Settings Don't Save Settings

**TIME CONFIGURATION :**

Time : Nov/15/2006 01:20:21  
Time Zone : ((GMT) Casablanca, Monrovia)

Enable Daylight Saving : ☐

Month Week Day of Week Time

DST Start Jan 1st Mon 1 am

DST End Jan 1st Mon 1 am

**AUTOMATIC TIME CONFIGURATION :**

Enable NTP server : ☐

NTP Server Used : ntp1.dlink.com << Select NTP Server

**SET THE DATE AND TIME MANUALLY :**

Current Gateway Time :

Year 2006 Month Nov Day 15  
Hour 01 Minute 02 Second 03 AM

Copy Your Computer's Time Settings

**Helpful Hints..**

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

# System Settings

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

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

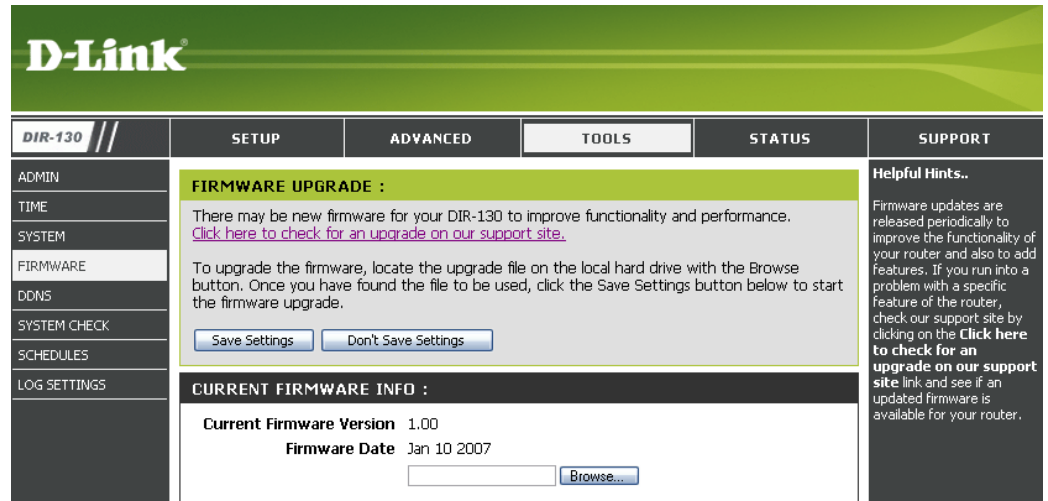
**Reboot Device:** Click to reboot the router.

The screenshot shows the D-Link DIR-130 web interface. The top navigation bar includes tabs for 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 :'. It contains a text box stating: '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.' Below this, there are four sections with buttons: 'Save Settings To Local Hard Drive' with a 'Save Configuration' button; 'Load Settings From Local Hard Drive' with a text input field and a 'Browse...' button, followed by a 'Restore Configuration from File' button; 'Restore To Factory Default Settings' with a 'Restore Factory Defaults' button; and 'Reboots the DIR-130' with a 'Reboot the Device' button. On the right side, there is a 'Helpful Hints..' section with text explaining that settings can be saved to a file and restored later, and that the 'Save' button next to 'Save Settings to Local Hard Drive' is used for this purpose.

# 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 **Upload** to complete the firmware upgrade.



The screenshot shows the D-Link DIR-130 web interface. The top navigation bar includes links for ADMIN, TIME, SYSTEM, FIRMWARE, DDNS, SYSTEM CHECK, SCHEDULES, and LOG SETTINGS. The FIRMWARE section is active, displaying the 'FIRMWARE UPGRADE' page. This page contains instructions on how to upgrade the firmware, a 'Save Settings' button, and a 'Don't Save Settings' button. Below this, the 'CURRENT FIRMWARE INFO' section shows the current firmware version as 1.00 and the date as Jan 10 2007, with a 'Browse...' button to select a new firmware file. A 'Helpful Hints..' section on the right provides additional information about firmware updates.

DIR-130 //	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
ADMIN					<b>Helpful Hints..</b> 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 <a href="#">Click here to check for an upgrade on our support site</a> link and see if an updated firmware is available for your router.
TIME					
SYSTEM					
<b>FIRMWARE</b>	<b>FIRMWARE UPGRADE :</b> There may be new firmware for your DIR-130 to improve functionality and performance. <a href="#">Click here to check for an upgrade on our support site.</a> 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. <input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/>				
DDNS					
SYSTEM CHECK					
SCHEDULES					
LOG SETTINGS					
<b>CURRENT FIRMWARE INFO :</b> Current Firmware Version 1.00 Firmware Date Jan 10 2007 <input type="text"/> <input type="button" value="Browse..."/>					



## DDNS

The DDNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter in your domain name to connect to your server no matter what your IP address is.

**DDNS:** Dynamic Domain Name System is a method of keeping a domain name linked to a changing IP Address. Check the box to enable DDNS.

**Server Address:** Choose your DDNS provider from the drop down menu.

**Host Name:** Enter the Host Name that you registered with your DDNS service provider.

**Username or Key:** Enter the Username or key for your DDNS account.

**Password or Key:** Enter the Password or key for your DDNS account.

**Verify Password or Key:** Reenter your password or key for your DDNS account.

**Timeout:** Enter the timeout time in hours\*.

**D-Link**

DIR-130 //

SETUP ADVANCED TOOLS STATUS SUPPORT

ADMIN  
TIME  
SYSTEM  
FIRMWARE  
DDNS  
SYSTEM CHECK  
SCHEDULES  
LOG SETTINGS

**DYNAMIC DNS :**

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

With the DIR-130, you can setup your DDNS service and the DIR-130 will automatically update your DDNS server every time it receives a new WAN IP address.

Save Settings Don't Save Settings

**DDNS SETTINGS :**

Enable Dynamic DNS : ☐

Server Address :  << Select Dynamic DNS Server

Host Name :  Select Dynamic DNS Server

Username or Key :  www.dlinkddns.com (Free)

Password or Key :  www.DynDns.org (Custom)

Verify Password or Key :  www.DynDns.org (Static)

Timeout : 240 (hours)

**Helpful Hints..**

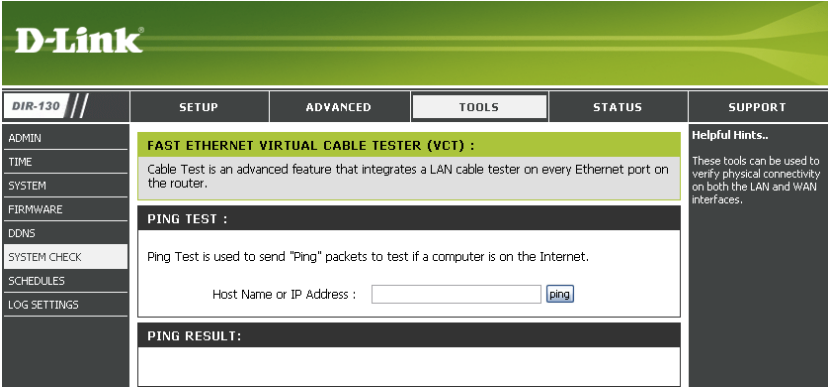
In order to use this feature you must first have a DDNS account from one of the providers in the drop down menu.

\* The Timeout feature currently is not active. This feature will be available with a future firmware upgrade.

# System Check

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

**Ping Results:** The results of your ping attempts will be displayed here.



# Schedules

**Name:** Enter a name for your new schedule.

**Days:** Select a day, a range of days, or All Week to include every day.

**Time:** Check **All Day - 24hrs** or enter a start and end time for your schedule.

**Save:** Click **Save** to save your schedule. You must click Save Settings at the top for your schedules to go into effect.

**Schedule Rules List:** The list of schedules will be listed here. Click the **Edit** icon to make changes or click the **Delete** icon to remove the schedule.

The screenshot shows the D-Link DIR-130 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: ADMIN, TIME, SYSTEM, FIRMWARE, DDNS, SYSTEM CHECK, SCHEDULES (highlighted), and LOG SETTINGS. The main content area is titled 'SCHEDULES :'. It contains a description: 'The Schedule configuration option is used to manage schedule rules for various firewall and parental control features.' Below this are 'Save Settings' and 'Don't Save Settings' buttons. The 'ADD SCHEDULE RULE :' section includes a 'Name' field, a 'Day(s)' section with radio buttons for 'All Week' (selected) and 'Select Day(s)', and checkboxes for each day of the week. There is also an 'All Day - 24 hrs' checkbox. The 'Start Time' and 'End Time' fields are shown with AM/PM dropdowns and a note '(hour:minute, 12 hour time)'. 'Save' and 'Clear' buttons are at the bottom of this section. The 'SCHEDULE RULES LIST :' section is currently empty, showing columns for 'Name', 'Day(s)', and 'Time Frame'. A 'Helpful Hints..' sidebar on the right explains that this page is used to configure global schedules for the router.

# Log Settings

**SMTP Server/IP Address:** The address of the SMTP server that will be used to send the logs.

**Email Address:** The email address to which the logs will be sent. Click on **Send Mail Now** to send the email.

**Save Log File to Local Hard Drive:** Click to save the log to your hard drive.

**Log Type:** Select the type of log you would like to view.

## Device Information

This page displays the current information for the DIR-130. It will display the LAN, WAN (Internet), and the firmware version of the router.

If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

If your Internet connection is set up for PPPoE, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection.

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

**WAN:** Displays the MAC address and the public IP settings for the router.

The screenshot shows the D-Link DIR-130 web interface. The top navigation bar includes links for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: DEVICE INFO, LOG, STATS, LAN COMPUTERS, and VPN. The main content area is titled 'DEVICE INFORMATION' and displays the following details:

- DEVICE INFORMATION :** All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here. **Firmware Version: 1.00**
- LAN :**
  - MAC Address : 00:90:4C:4E:00:0C
  - IP Address : 192.168.0.1
  - Subnet Mask : 255.255.255.0
  - DHCP Server : Enabled
- WAN :**
  - MAC Address : 00:90:4c:4f:00:0c
  - Connection : DHCP Client Connecting
  - Buttons: **DHCP Release** and **DHCP Renew**
  - IP Address :
  - Subnt Mask :
  - Default Gateway :
  - DNS :

A 'Helpful Hints...' section on the right side of the main content area states: 'All of your Internet and network connection details are displayed on the Device Info page. The firmware version is also displayed here.'

# Log

This page displays the log events of the DIR-130. Here you can view the logs of the router.

**First Page:** This option will direct you to the current first page of the logs.

**Last Page:** This option will direct you to the current last page of the logs.

**Previous:** Click to view the previous page.

**Next:** Click to view the next page.

**Clear:** Clears all current log content.

The screenshot shows the D-Link DIR-130 web interface. The top navigation bar includes links for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for DEVICE INFO, LOG, STATS, LAN COMPUTERS, and VPN. The main content area is titled 'VIEW LOG : View Log displays the activities occurring on the DIR-130.' Below this, there is a section for 'LOG FILES :'. It includes navigation buttons: First Page, Last Page, Previous, Next, and Clear. The log entry shows 1/1 entries. The table below displays the log data:

Time	Type	Message
Jan 17 11:52:18	System Activity	SSI parse Finished

On the right side, there is a 'Helpful Hints..' section with the text: 'Display the captured log messages of the router activities, these captured log messages might be useful for trouble shooting and monitoring.'

## Stats

The screen below displays the current statistics of the DIR-130. Here you can view the amount of packets that pass through the router.

**D-Link**

DIR-130 // SETUP ADVANCED TOOLS **STATUS** SUPPORT

DEVICE INFO  
LOG  
STATS  
LAN COMPUTERS  
VPN

**TRAFFIC STATISTICS :**  
Traffic Statistics display Receive and Transmit packets passing through the DIR-130.

Refresh Reset

	Receive	Transmit
WAN	0 Packets	70 Packets
LAN	413 Packets	695 Packets

**Helpful Hints..**  
Show the traffic statistics receive and transmit packets passing through the router.

## LAN Computers

The LAN computers table displays a list of current connected wired clients. This table also displays the connection time and MAC address of the connected wired clients.

**D-Link**

DIR-130 // SETUP ADVANCED TOOLS **STATUS** SUPPORT

DEVICE INFO  
LOG  
STATS  
LAN COMPUTERS  
VPN

**LAN COMPUTERS LIST**  
While Dynamic DHCP and DHCP reservation client computers connected to the unit will have their information display in the LAN COMPUTER.

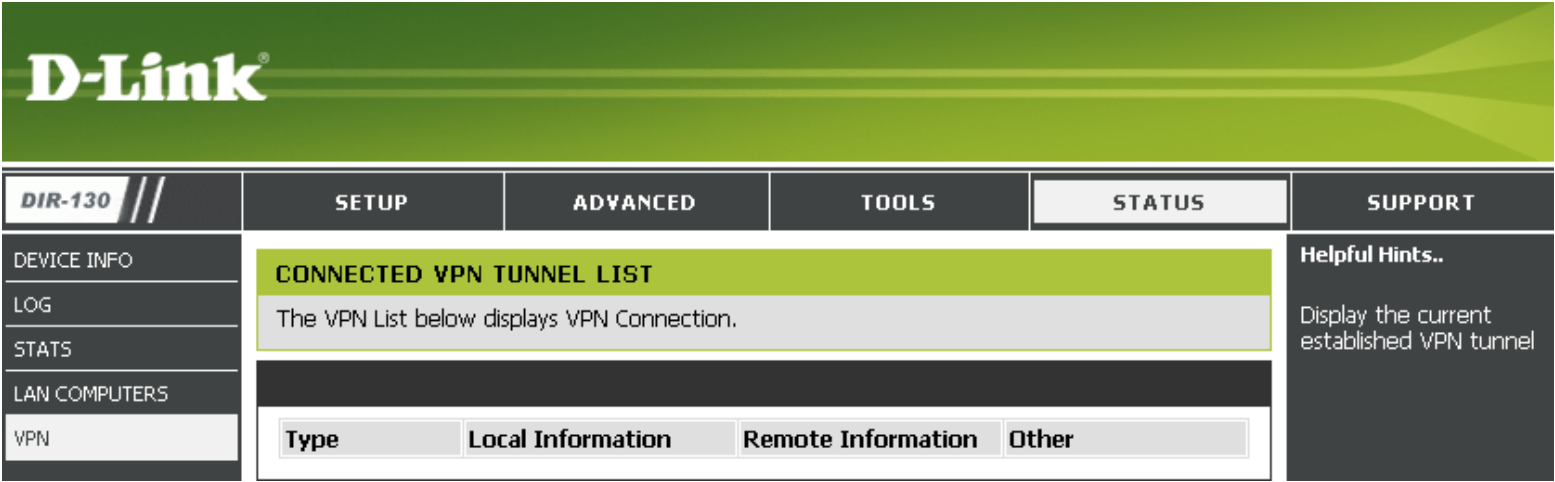
**LAN COMPUTERS**

IP Address	Name	MAC Address
------------	------	-------------

**Helpful Hints..**  
Display the current wire clients connecting to the router


# VPN

The VPN table displays a list of current VPN sessions.





# Support



DIR-130

///

MENU

SETUP

ADVANCED

TOOLS

STATUS

SUPPORT MENU

- [Setup](#)
- [Advanced](#)
- [Tools](#)
- [Status](#)

SETUP

- [Internet](#)
- [Network settings](#)
- [VPN settings](#)

ADVANCED

- [Virtual Server](#)
- [Port Forwarding](#)
- [Application Rules](#)
- [Network Filter](#)
- [Website Filter](#)
- [Firewall Settings](#)
- [Advanced Network](#)

TOOLS

- [Admin](#)
- [Time](#)
- [System](#)
- [Firmware Upgrade](#)
- [DDNS](#)
- [System Check](#)
- [Schedules](#)
- [Log settings](#)

STATUS

- [Device Info](#)
- [Log](#)
- [Stats](#)

# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-130. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

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

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

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Internet Explorer 6.0 or higher
  - Firefox 1.5 or higher
  - Netscape 8 or higher
  - Mozilla 1.7.12 (5.0) or higher
  - Opera 8.5 or higher
  - Safari 1.2 or higher (with Java 1.3.1 or higher)
  - Camino 0.8.4 or higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any Internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:

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

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

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

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

A list of the default settings can be found on page 52.

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

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

**Note: AOL DSL+ users must use MTU of 1400.**

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

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

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

Example: **ping yahoo.com -f -l 1472**

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 203ms, Average = 132ms

C:\>
```

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

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

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

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

#### 4. Why is the date on the logs incorrect?

The router has not successfully connected to a Network Time (NTP) server. Check that your Internet connection settings are correct. If you have connected for the first time, allow up to 10 minutes to connect.

If the time is off by 1 hour, make sure you have selected the correct time zone and that Daylight Savings is selected.

Refer to **Section 3 - Configuration > Time Settings** for more information.

# Networking Basics

## Check your IP address

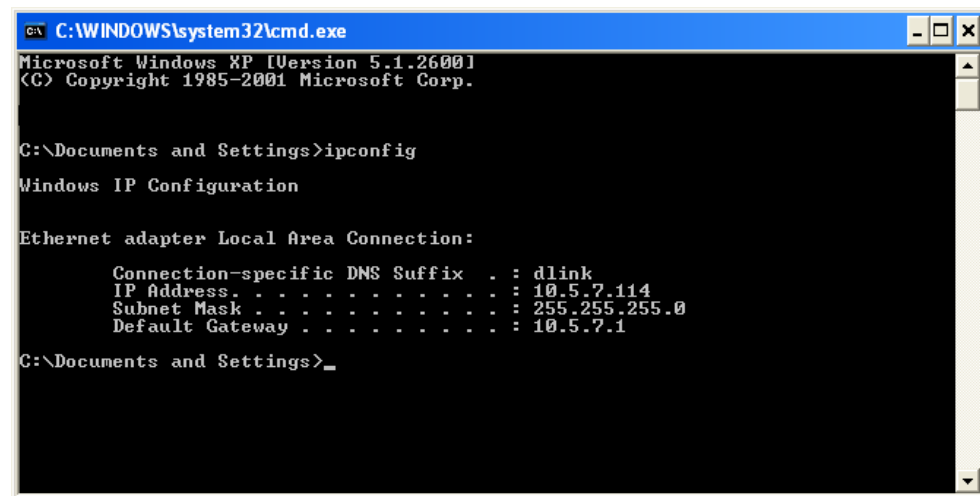
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. router) automatically. To verify your IP address, please follow the steps below.

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

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

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

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



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

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

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

C:\Documents and Settings>
```

## Statically Assign an IP address

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

### Step 1

Windows® XP - Click on **Start > Control Panel > Network Connections**.

Windows® 2000 - From the desktop, right-click **My Network Places > Properties**.

### Step 2

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

### Step 3

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

### Step 4

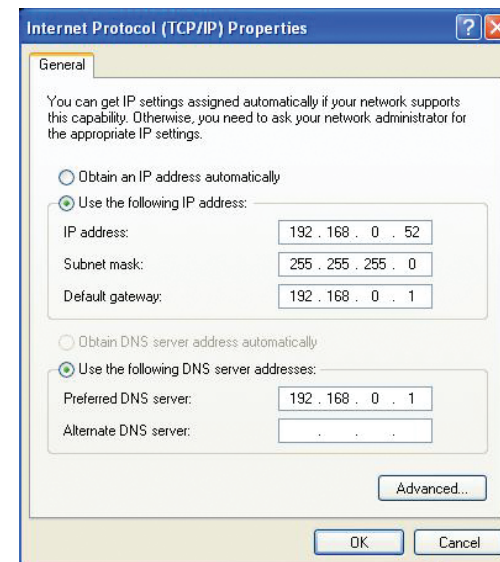
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

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

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

### Step 5

Click **OK** twice to save your settings.



# Technical Specifications

## Standards

- IEEE 802.3
- IEEE 802.3u

## LEDs

- Power
- Status
- WAN
- LAN (1-8)

## Operating Temperature

- 32°F to 131°F ( 0°C to 40°C)

## Humidity

- 95% maximum (non-condensing)

## Safety & Emissions

- FCC
- CE
- IC

## Dimensions

- L = 7.6 inches
- W = 4.6 inches
- H = 1.2inches

## Warranty

- 1 Year



# Default Factory Settings

When you receive your router, the default factory settings are in effect as listed in the table below. You may change any of the network settings. If you perform a reset (hold the reset button on the back of the unit), the router will reset with the following settings:

Setting	Default Value
Username	admin
Password	(leave blank)
LAN IP Address	192.168.0.1
DHCP Server	Enabled
DHCP IP Range	192.168.0.100 - 192.168.0.200
Filtering / Virtual Server / DMZ / Applications	Disabled

# Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DIR-130)
- Hardware Revision (located on the label on the bottom of the router (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the router).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

## For customers within the United States:

### Phone Support:

(877) 453-5465

### Internet Support:

<http://support.dlink.com>

## For customers within Canada:

### Phone Support:

(800) 361-5265

### Internet Support:

<http://support.dlink.com>

# Warranty

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

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

## **Limited Warranty:**

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

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

The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

### **Limited Software Warranty:**

D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Software Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by DLink in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

### **Non-Applicability of Warranty:**

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link’s products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold “As-Is” without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

### **Submitting A Claim:**

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow DLink to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. DLink will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

### **What Is Not Covered:**

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

Products that, in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

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

### **Disclaimer of Other Warranties:**

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

**Limitation of Liability:**

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

**Governing Law:**

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

**Trademarks:**

D-Link is a registered trademark of D-Link Corporation/D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective owners.

**Copyright Statement:**

No part of this publication or documentation accompanying this product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976 and any amendments thereto. Contents are subject to change without prior notice.

Copyright © 2007 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

### **CE Mark Warning:**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

### **FCC Statement:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

### **IC statement**

This Class B digital apparatus complies with Canadian ICES-003.

The use of this device in a system operating either partially or completely outdoors may require the user to obtain a license for the system according to the Canadian regulations.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

L'utilisation de cet appareil au sein d'un ensemble qui fonctionne entièrement ou partiellement à l'extérieur peut obliger l'utilisateur à obtenir un permis pour le système selon les termes de la réglementation canadienne.

# GNU/Linux GPL

- “GPL Software” means GPL software licensed to you under the GNU General Public License as published by the Free Software Foundation (GPL). A copy of the GPL is included below.
- “Open Source Software” means various open source software components licensed under the terms of applicable open source license agreements included in the materials relating to such software. Open Source Software is composed of individual software components, each of which has its own copyright and its own applicable license conditions. The Open Source Software licenses can be found in the **gpl.pdf** file, other materials accompanying the software package, the documentation or corresponding source files available from <http://support.dlink.com/GPL.asp>.



# GNU General Public License

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,  
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

## Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps:

- (1) copyright the software, and
- (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

## GNU GENERAL PUBLIC LICENSE

### TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program).

Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
  - a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

- 3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
  - a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
  - b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
  - c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

## NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

**END OF TERMS AND CONDITIONS**



# Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 1.0  
February 8, 2007