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Package Contents

- DSL-2520U ADSL Router
- Power Adapter
- One twisted-pair telephone cable used for ADSL connection
- One straight-through Ethernet cable
- One USB cable
- One Splitter
- One CD

Note: Using a power supply with a different voltage rating than the one included with the DSL-2520U will cause damage and void the warranty for this product.



System Requirements

- ADSL Internet service
- Computer with:
 - 200MHz Processor
 - 64MB Memory
 - CD-ROM Drive
 - Ethernet Adapter with TCP/IP Protocol Installed
 - USB Port
 - Windows win7/vista/XP/2000
 - MAC OS
 - Internet Explorer v6 or later, FireFox v1.5
 - D-Link Click's Connect Utility
 - Computer with Windows 2000/XP

Introduction

HIGH-SPEED ADSL2/2+ INTERNET CONNECTION

Latest ADSL2/2+ standards provide Internet transmission of up to 24Mbps downstream, 1Mbps upstream.

TOTAL SECURITY

Firewall protection from Internet attacks, user access control.

ULTIMATE INTERNET CONNECTION

The DSL-2520U ADSL2+ router is a versatile, high-performance remote router for home and the small office. With integrated ADSL2/2+ supporting up to 24Mbps download speed, firewall protection, Quality of Service (QoS), this router provides all the functions that a home or small office needs to establish a secure and high-speed remote link to the outside world.

FIREWALL PROTECTION & QoS

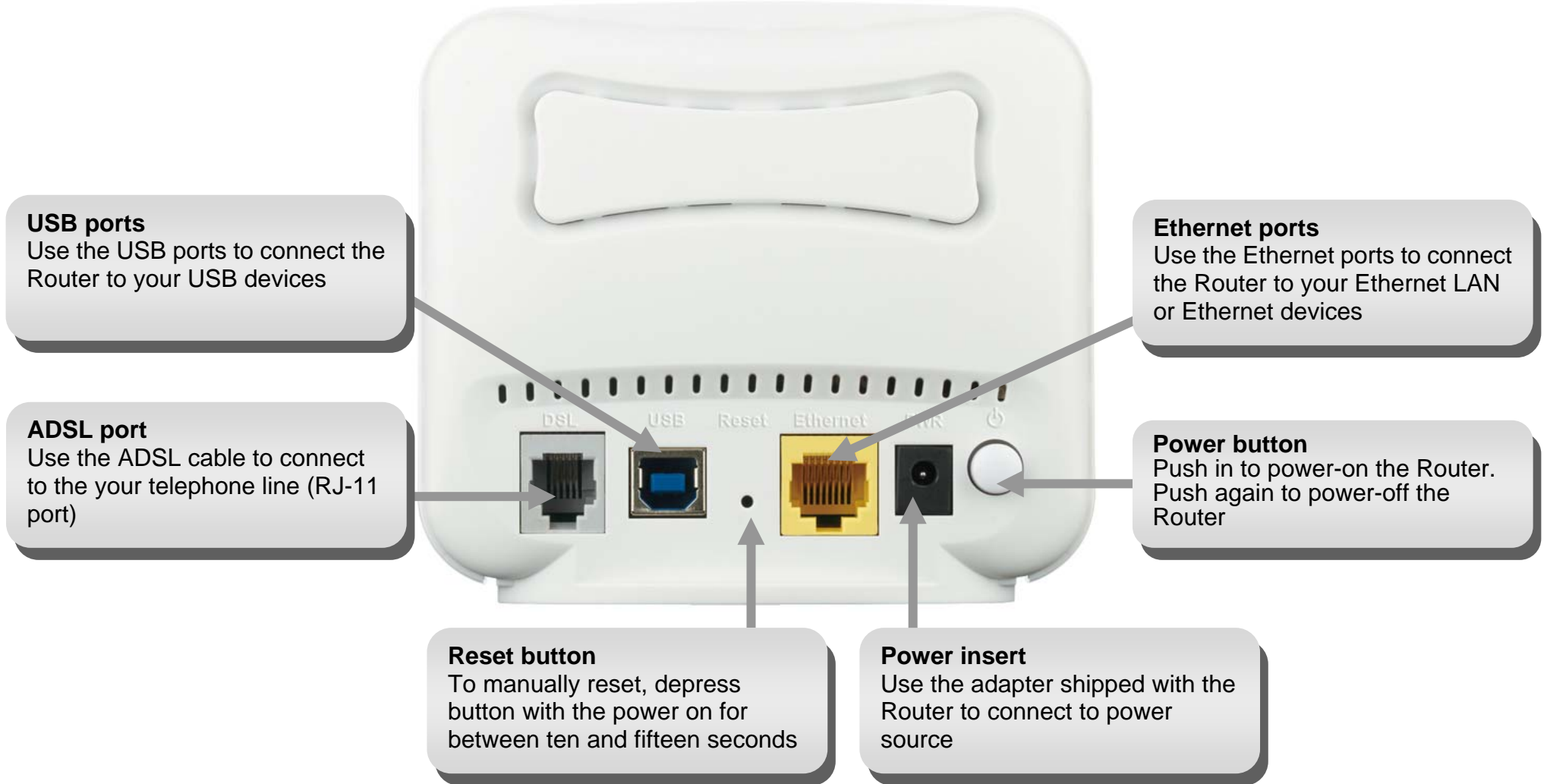
Security features prevents unauthorized access to the home and office network, be it from the LAN devices or from the Internet. The router provides firewall security using Stateful Packet Inspection (SPI) and hacker attack logging for Denial of Service (DoS) attack protection. SPI inspects the contents of all incoming packet headers before deciding what packets are allowed to pass through. Router access control is provided with packet filtering based on port and source/destination IP addresses. For Quality of Service (QoS), the router supports multiple priority queues to enable a group of home or office users to experience the benefit of smooth network connection of inbound and outbound data without concern of traffic congestion. This QoS support allows users to enjoy high ADSL transmission for applications such as VoIP and streaming multimedia over the Internet.

Features

- **DHCP Support** - Dynamic Host Configuration Protocol automatically and dynamically assigns all LAN IP settings to each host on your network. This eliminates the need to reconfigure every host whenever changes in network topology occur.
- **Network Address Translation (NAT)** - For small office environments, the DSL-2520U allows multiple users on the LAN to access the Internet concurrently through a single Internet account. This provides Internet access to everyone in the office for the price of a single user. NAT improves network security in effect by hiding the private network behind one global and visible IP address. NAT address mapping can also be used to link two IP domains via a LAN-to-LAN connection.
- **Precise ATM Traffic Shaping** - Traffic shaping is a method of controlling the flow rate of ATM data cells. This function helps to establish the Quality of Service for ATM data transfer.
- **High Performance** - Very high rates of data transfer are possible with the Router. Up to 24Mbps downstream bit rate using the G.dmt standard. (For ADSL2+)
- **Full Network Management** - The DSL-2520U incorporates network management for web-based management and text-based network management via Telnet connection.
- **Easy Installation** - The DSL-2520U uses a web-based graphical user interface program for convenient management access and easy set up. Any common web browser software can be used to manage the Router.

Hardware Overview

Connections



Hardware Overview

LEDs

Power

Steady green light indicates the unit is powered on. When the device is powered off this remains dark.

DSL

Steady green light indicates a valid ADSL connection. This will light after the ADSL negotiation process has been settled. A blinking green light indicates activity on the WAN (ADSL) interface.

LAN

A solid green light indicates a valid link on startup. These lights blink when there is activity currently passing through the Ethernet port.

USB

A solid green light indicates a valid link on startup. These lights blink when there is activity currently passing through the USB port.

Internet

Steady green light indicates a successful Internet connection. Steady red light indicates failed Internet connection. Dark if no WAN protocol is configured.



Installation

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

Before you Begin

Please read and make sure you understand all the prerequisites for proper installation of your new Router. Have all the necessary information and equipment on hand before beginning the installation.

Installation Notes

In order to establish a connection to the Internet it will be necessary to provide information to the Router that will be stored in its memory. For some users, only their account information (Username and Password) is required. For others, various parameters that control and define the Internet connection will be required. You can print out the two pages below and use the tables to list this information. This way you have a hard copy of all the information needed to setup the Router. If it is necessary to reconfigure the device, all the necessary information can be easily accessed. Be sure to keep this information safe and private.

Low Pass Filters

Since ADSL and telephone services share the same copper wiring to carry their respective signals, a filtering mechanism may be necessary to avoid mutual interference. A low pass filter device can be installed for each telephone that shares the line with the ADSL line. These filters are easy to install passive devices that connect to the ADSL device and/or telephone using standard telephone cable. Ask your service provider for more information about the use of low pass filters with your installation.

Operating Systems

The DSL-2520U uses an HTML-based web interface for setup and management. The web configuration manager may be accessed using any operating system capable of running web browser software, including Windows 2000, Windows XP, Windows Vista, Windows 7 and MAC OS.

Web Browser

Any common web browser can be used to configure the Router using the web configuration management software. The program is designed to work best with more recently released browsers such as Opera, Microsoft Internet Explorer® version 6.0, Netscape Navigator® version 6.2.3, or later versions. The web browser must have JavaScript enabled. JavaScript is enabled by default on many browsers. Make sure JavaScript has not been disabled by other software (such as virus protection or web user security packages) that may be running on your computer.

Ethernet Port (NIC Adapter) and USB Port

Any computer that uses the Router must be able to connect to it through the Ethernet port or the USB Port on the Router. These connections are Ethernet connection and USB device connection and therefore require that your computer be equipped with an Ethernet port or USB Port as well. Most notebook computers are now sold with an Ethernet port and a USB Port already installed. Likewise, most fully assembled desktop computers come with an Ethernet NIC adapter and USB port as standard equipment. If your computer does not have an Ethernet port or a USB Port, you must install an Ethernet NIC adapter or USB driver before you can use the Router. If you must install an adapter, follow the installation instructions that come with the Ethernet NIC adapter.

Additional Software

It may be necessary to install software on your computer that enables the computer to access the Internet. Additional software must be installed if you are using the device a simple bridge. For a bridged connection, the information needed to make and maintain the Internet connection is stored on another computer or gateway device, not in the Router itself.

If your ADSL service is delivered through a PPPoE or PPPoA connection, the information needed to establish and maintain the Internet connection can be stored in the Router. In this case, it is not necessary to install software on your computer. It may however be necessary to change some settings in the device, including account information used to identify and verify the connection.

All connections to the Internet require a unique global IP address. For bridged connections, the global IP settings must reside in a TCP/IP enabled device on the LAN side of the bridge, such as a PC, a server, a gateway device such as a router or similar firewall hardware. The IP address can be assigned in a number of ways. Your network service provider will give you instructions about any additional connection software or NIC configuration that may be required.

Information you will need from your ADSL service provider

Username

This is the Username used to log on to your ADSL service provider's network. It is commonly in the form user@isp.co.uk. Your ADSL service provider uses this to identify your account.

Password

This is the Password used, in conjunction with the Username above, to log on to your ADSL service provider's network. This is used to verify the identity of your account.

WAN Setting / Connection Type

These settings describe the method your ADSL service provider uses to transport data between the Internet and your computer. Most users will use the default settings. You may need to specify one of the following WAN Setting and Connection Type configurations (Connection Type settings listed in parenthesis):

- PPPoE/PPoA (PPPoE LLC, PPPoE VC-Mux, PPPoA LLC or PPPoA VC-Mux)
- Bridge Mode (1483 Bridged IP LLC or 1483 Bridged IP VC Mux)
- MER (Static IP Address)/IPoA (1483 Bridged IP LLC, 1483 Bridged IP VC Mux, 1483 Routed IP LLC or 1483 Routed IP VC-Mux)
- MER (Dynamic IP Address) (1483 Bridged IP LLC or 1483 Bridged IP VC-Mux)

Modulation Type

ADSL uses various standardized modulation techniques to transmit data over the allotted signal frequencies. Some users may need to change the type of modulation used for their service. The default DSL modulation (ADSL2+ Multi-Mode) used for the Router automatically detects all types of ADSL, ADSL2, and ADSL2+ modulation. However, if you are instructed to specify the modulation type used for the Router, you may choose among the numerous options available on the Modulation Type drop-down list on the ADSL Configuration window (Advanced > ADSL)

Security Protocol

This is the method your ADSL service provider will use to verify your Username and Password when you log on to their network. Your Router supports the PAP and CHAP protocols.

VPI

Most users will not be required to change this setting. The Virtual Path Identifier (VPI) is used in conjunction with the Virtual Channel Identifier (VCI) to identify the data path between your ADSL service provider's network and your computer. If you are setting up the Router for multiple virtual connections, you will need to configure the VPI and VCI as instructed by your ADSL service provider for the additional connections. This setting can be changed in the WAN Settings window of the web management interface.

VCI

Most users will not be required to change this setting. The Virtual Channel Identifier (VCI) used in conjunction with the VPI to identify the data path between your ADSL service provider's network and your computer. If you are setting up the Router for multiple virtual connections, you will need to configure the VPI and VCI as instructed by your ADSL service provider for the additional connections. This setting can be changed in the WAN Settings window of the web management interface.

Information you will need about DSL-2520U

Username

This is the Username needed access the Router's management interface. When you attempt to connect to the device through a web browser you will be prompted to enter this Username. The default Username for the Router is "admin." The user cannot change this.

Password

This is the Password you will be prompted to enter when you access the Router's management interface. The default Password is "admin." The user may change this.

LAN IP addresses for the DSL-2520U

This is the IP address you will enter into the Address field of your web browser to access the Router's configuration graphical user interface (GUI) using a web browser. The default IP address is 192.168.1.1. This may be changed to suit any IP address scheme the user desires. This address will be the base IP address used for DHCP service on the LAN when DHCP is enabled.

LAN Subnet Mask for the DSL-2520U

This is the subnet mask used by the DSL-2520U, and will be used throughout your LAN. The default subnet mask is 255.255.255.0. This can be changed later.

Information you will need about your LAN or computer:

Ethernet NIC

If your computer has an Ethernet NIC, you can connect the DSL-2520U to this Ethernet port using an Ethernet cable. You can also use the Ethernet ports on the DSL-2520U to connect to other computer or Ethernet devices.

USB port

If your computer has an USB port, you can connect the DSL-2520U to this USB port using an USB cable.

DHCP Client status

Your DSL-2520U ADSL Router is configured, by default, to be a DHCP server. This means that it can assign an IP address, subnet mask, and a default gateway address to computers on your LAN. The default range of IP addresses the DSL-2520 will assign are from 192.168.1.2 to 192.168.1.33. Your computer (or computers) needs to be configured to Obtain an IP address automatically (that is, they need to be configured as DHCP clients.)

It is recommended that you collect and record this information here, or in some other secure place, in case you have to re-configure your ADSL connection in the future.

Once you have the above information, you are ready to setup and configure your DSL-2520U ADSL Router.

Device Installation

The DSL-2520U ADSL Router maintains three separate interfaces, an Ethernet LAN ,an USB interface and an ADSL Internet (WAN) connection. Carefully consider the Router's location suitable for connectivity for your Ethernet devices. You must have a functioning broadband connection via a bridge device such as a Cable or ADSL modem in order to use the Router's WAN function.

Place the Router in a location where it can be connected to the various devices as well as to a power source. The Router should not be located where it will be exposed to moisture, direct sunlight or excessive heat. Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard. As with any electrical appliance, observe common sense safety procedures.

The Router can be placed on a shelf, desktop, or other stable platform. If possible, you should be able to see the LED indicators on the front if you need to view them for troubleshooting.

Power on Router

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

1. Insert the AC Power Adapter cord into the power receptacle located on the rear panel of the Router and plug the adapter into a suitable nearby power source.
2. Push down the Power button, and you should see the Power LED indicator light up and remain lit.
3. If the Ethernet port is connected to a working device, check the Ethernet Link/Act LED indicators to make sure the connection is valid. The Router will attempt to establish the ADSL connection, if the ADSL line is connected and the Router is properly configured this should light up after several seconds. If this is the first time installing the device, some settings may need to be changed before the Router can establish a connection.

Factory Reset Button

The Router may be reset to the original factory default settings by using a ballpoint or paperclip to gently push down the reset button in the following sequence:

1. Press and hold the reset button while the device is powered off.
2. Turn on the power.
3. Wait for 10~15 seconds and then release the reset button.

Remember that this will wipe out any settings stored in flash memory including user account information and LAN IP settings. The device settings will be restored to the factory default IP address **192.168.1.1** and the subnet mask is **255.255.255.0**, the default management Username is “admin” and the default Password is “admin.”

Network Connections

Connect ADSL Line

Use the ADSL cable included with the Router to connect it to a telephone wall socket or receptacle. Plug one end of the cable into the ADSL port (RJ-11 receptacle) on the rear panel of the Router and insert the other end into the RJ-11 wall socket. If you are using a low pass filter device, follow the instructions included with the device or given to you by your service provider. The ADSL connection represents the WAN interface, the connection to the Internet. It is the physical link to the service provider’s network backbone and ultimately to the Internet.

Connect Router to Ethernet

The Router may be connected to a single computer or Ethernet device through the 10/100BASE-TX Ethernet port on the rear panel. Any connection to an Ethernet concentrating device such as a switch or hub must operate at a speed of 10/100 Mbps only. When connecting the Router to any Ethernet device that is capable of operating at speeds higher than 10Mbps, be sure that the device has auto-negotiation (NWay) enabled for the connecting port. Use standard twisted-pair cable with RJ-45 connectors. The RJ-45 port on the Router is a crossed port (MDI-X). Follow standard Ethernet guidelines when deciding what type of cable to use to make this connection. When connecting the Router directly to a PC or server use a normal straight-through cable. You should use a crossed cable when connecting the Router to a normal (MDI-X) port on a switch or hub. Use a normal straight-through cable when connecting it to an uplink (MDI-II) port on a hub or switch. The rules governing Ethernet cable lengths apply to the LAN to Router connection. Be sure that the cable connecting the LAN to the Router does not exceed 100 meters.

Hub or Switch to Router Connection

Connect the Router to an uplink port (MDI-II) on an Ethernet hub or switch with a straight-through cable as shown in this diagram. If you wish to reserve the uplink port on the switch or hub for another device, connect to any on the other MDI-X ports (1x, 2x, etc.) with a crossed cable.

Computer to Router Connection

You can connect the Router directly to a 10/100BASE-TX Ethernet adapter card (NIC) installed on a PC using the Ethernet cable provided as shown in this diagram.

Configuration

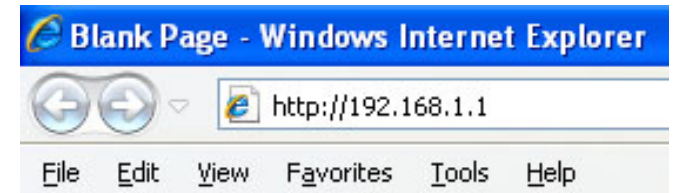
This section will show you how to configure your new D-Link ADSL router using the web-based configuration utility.

Web-based Configuration Utility

Connect to the Router

To configure the WAN connection used by the Router it is first necessary to communicate with the Router through its management interface, which is HTML-based and can be accessed using a web browser. The easiest way to make sure your computer has the correct IP settings is to configure it to use the DHCP server in the Router.

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.1.1).



Type “**admin**” for the User Name and “**admin**” in the Password field. If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.



SETUP

This chapter is concerned with using your computer to configure the WAN connection. The following chapter describes the various windows used to configure and monitor the Router including how to change IP settings and DHCP server setup.

WIZARD

ADSL SETUP

Click on the **Setup Wizard** button to launch the **Setup Wizard**.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADSL Setup LAN Setup Time and Date Logout Internet Online Reboot	<h3>ADSL SETUP</h3> <p>If you are configuring this device for the first time, D-Link recommends that you click the Setup Wizard button, and follow the instructions on screen. If you wish to modify or configure the ADSL settings manually, tick Manual Setup to enable the ADSL Connection Setup.</p> <p> <input type="button" value="Setup Wizard"/> <input checked="" type="checkbox"/> Manual Setup </p> <h4>WAN CONNECTION</h4> <p>The DSL WAN connection can be separated virtually into multiple channels by assigning different VPI/VCI in each Permanent Virtual Circuit (PVC). In each PVC you can also set the connection protocol to be PPP, Dynamic IP, Static IP or Bridge mode.</p> <p>WAN Connection : <input type="text" value="PVC0"/></p> <h4>CONNECTION IP VERSION</h4> <p>The DSL WAN connection can be IPv4, IPv6 or IPv4/IPv6 mixed mode.</p> <p>IP Version : <input checked="" type="radio"/> IPv4 <input type="radio"/> IPv4/IPv6 <input type="radio"/> IPv6</p> <h4>MANUAL ADSL CONNECTION SETUP</h4> <p>Please select the appropriate option to connect to your ISP.</p> <p> <input type="radio"/> PPPoE/PPPoA Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users) <input type="radio"/> Dynamic IP Address Choose this option if your ISP uses Dynamic IP Address over DSL. <input type="radio"/> Static IP Address Choose this option if your ISP uses Static IP assignments. <input checked="" type="radio"/> Bridge Mode Choose this option if your ISP uses Bridge Mode. </p>				<h4>Helpful Hints...</h4> <p>First time users are recommended to run the Setup Wizard. Click the Setup Wizard button and you will be guided step by step through the process of setting up your ADSL connection.</p> <p>Tick the Manual Setup box if you are a more advanced user and have the settings for your Internet Service Provider (ISP) available.</p> <p>Please take care when entering your username and password as these are case sensitive. The majority of connection issues are caused by incorrect username or password combinations.</p> <p>More...</p>

WELCOME TO D-LINK SETUP WIZARD

There are four steps to configuring your router. Click on the **Next** button to continue.

WELCOME TO 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: Change your DSL-2520U_Z2 router password
- Step 2: Select Internet Connection
- Step 3: Finish

STEP 1: CHANGE YOUR DSL-2520U PASSWORD

The default password is "admin", in order to secure your network, please modify the password. Note: Confirm Password must be same as "New Password". Of course, you can click on the **Skip** to ignore the step.

STEP 1: CHANGE YOUR PASSWORD

The factory default password of this router is 'admin'. To help secure your network, D-Link recommends that you should choose a new password between 1 and 15 characters. If you do not wish to choose a new password now, just click Skip to continue. Click Next to proceed to next step.

Current Password :

New Password :

Confirm Password :

STEP 2: SELECT INTERNET CONNECTION TYPE

Please select your **Country** and **ISP**. The VPI and VCI information Will display Automatically. Of course, you can modify the information.

If, you can not find the country and ISP in the list below; you can select "**Others**", and then input the "**VPI**" and "**VCI**" and Connection Type. Click on the **Next** button to go to the next **Setup Wizard** window.

STEP 2: SELECT INTERNET CONNECTION TYPE

Please select your Country and ISP (Internet Service Provider) from the list below. If your Country or ISP is not in the list, please select "Other".

Country :

ISP Provider :

VPI :

VCI :

Connection Type :

Section 3 - Configuration

STEP 2: Setup Wizard - For PPPoE/PPPoA connection

Type in the **Username** and **Password** (and PPPoE Service Name, if required by your ISP).

Click on the **Next** button to go to the next **Setup Wizard** window.

STEP 3: FINISH

Push the **FINISH** button to use the configuration.

STEP 2: SELECT INTERNET CONNECTION TYPE

Please enter your Username and Password as provided by your ISP (Internet Service Provider). Please enter the information exactly as shown taking note of upper and lower cases. Click Next to continue.

Username :

Password :

Confirm Password :

Back

Next

Cancel

STEP 3: FINISH

Setup complete. Click Back to review or modify settings. Click Finish to apply current settings. If your Internet connection does not work after apply the settings, you can try the Setup Wizard again with alternative settings or use Manual Setup instead if you have your Internet connection details as provided by your ISP.

Back

Finish

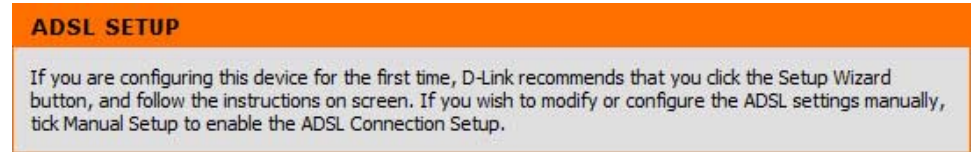
Cancel

ADSL SETUP

To access the **ADSL SETUP** (WAN) settings window, click on the **ADSL Setup** button in the **SETUP** directory and select the **Manual Setup** to configure the MANUAL ADSL interface in this page:

ADSL SETUP

If you want to type connection configuration for various types, please enable the **Manual Setup**.



MANUAL ADSL CONNECTION SETUP

PPPoE/PPPoA

Choose this option if your ISP uses PPPoE/PPPoA.(For most DSL users)

Dynamic IP Address

Choose this option if your ISP uses Dynamic IP Address over DSL.

Static IP Address

Choose this option if your ISP uses Static IP assignments.

Bridge

Choose this option if your ISP uses Bridge.



For PPPoE/PPPoA connection

Type in the **Username** and **Password** (and PPPoE Service Name, if required by your ISP).

Type service name which is from your ISP on the **Servername** option.

Choose **PPPoE LLC**, **PPPoE VC-mux**, **PPPoA LLC** and **PPPoA VC-mux**.

Set MTU value which you want but should be less than 1492 on the **MTU**

Set the time which your data doesn't pass through the connection, it will be disconnected on the **Idle Time Out**. The default time is 0 and it means it is always on.

Set PPP authentication method, it can be **Auto**, **PAP** and **CHAP**. The default authentication method is **Auto** and it means authentication accept PAP and CHAP both.

Set NAT to **Enable** when you want to have WAN and LAN. The default mode is **Disabled**.

Set IGMP mode when you want to let IAD to play as an IGMP proxy who can help proxy server to send IGMP query packets to the IPTV clients, it can be **disable**, **IGMP-V1** and **IGMP-V2**. The default mode is disabled.

Set **Default Route** mode to enable or disable default route, in order to access Internet, suggest enable default route. The default mode is enabled.

PPPOE/PPPOA INTERNET CONNECTION TYPE :

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

Username :

Password :

Service Name :

Connection Type : PPPoE LLC

MTU : (0 means default value 1492bytes)

Idle Time Out : Minutes (0 = Always On)

Authentication : Auto

NAT : Enable

IGMP : disable

Default Route : Enable

Section 3 - Configuration

Set PVC values which are from your ISP on **VPI/VCI**

Set **Virtual Circuit** to enable mode when you want to use this PVC.

For ADSL QoS setup, modify **Service Category** according to your ISP's suggestions.

Click on the **Save Settings** button to use this configuration.

VPI :	<input type="text" value="0"/>
VCI :	<input type="text" value="33"/>
Virtual Circuit :	Enable ▾
Service Category :	UBR ▾
PCR :	<input type="text" value="0"/> cells/second
SCR :	<input type="text" value="0"/> cells/second
MBS :	<input type="text" value="0"/> cells

Save Settings

Connect

Cancel

LAN SETUP

You can configure the LAN IP address to suit your preference. Many users will find it convenient to use the default settings together with DHCP service to manage the IP settings for their private network. The IP address of the Router is the base address used for DHCP. In order to use the Router for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the Router. The IP addresses available in the DHCP IP address pool will change automatically if you change the IP address of the Router.

To access the **LAN Setup** setting window, click on the **LAN Setup** button in the **SETUP** directory.

ROUTER SETTINGS

To change the **Router IP Address** or **Subnet Mask**, type in the desired values.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADSL Setup	LAN SETUP				Helpful Hints... If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, unchecked Enable DHCP Server to disable this feature. If you have devices on your network that should always have fixed IP addresses, add a Static DHCP for each such device.
LAN Setup	This section allows you to configure the local network settings of your router. Please note that this section is optional and you should not need to change any of the settings here to get your network up and running.				
Time and Date	ROUTER SETTINGS				
Logout	Use this section to configure the local network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again.				
Internet Online	Router IP Address : <input type="text" value="192.168.1.1"/> Subnet Mask : <input type="text" value="255.255.255.0"/>				
Reboot					

DHCP SERVER SETTINGS (OPTIONAL)

The **Enable DHCP Server** is selected by default for the Router's Ethernet LAN interface.

Set the **DHCP IP Address Range** and the default is from 192.168.1.2 to 192.168.1.33. The IP address pool can be up to 253 IP addresses.

Set the value hours on the **DHCP Lease Time** and the default is 72 hours.

If you don't want DSL-2520U to be the DHCP server, you can uncheck **Enable DHCP Server** to disable current DHCP server.

DHCP SERVER SETTINGS (OPTIONAL)	
Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.	
Enable DHCP Server :	<input checked="" type="checkbox"/>
DHCP IP Address Range :	<input type="text" value="192.168.1.2"/> to <input type="text" value="192.168.1.33"/>
DHCP Lease Time :	<input type="text" value="259200"/> (seconds)

Section 3 - Configuration

DHCP TABLE

The **Host Name** can help you recognize the PC with the **MAC Address**, such as "Father's Laptop", it's recognized from dynamic assigned IP's host name.

Select the **IP Address** to let you reserve the **IP Address** for the designated PC with the configured **MAC Address**.

Drop down **Manual Configure** drop-down list to help you get the Mac address from the PC you are using now browsing this web page.

Typing MAC address nearby **Manual Configure** to add/delete MAC address + IP binding manually.

Drop down **Status** drop-down list to help you set static IP address + MAC address binding or delete exist IP address + MAC address binding group. **Static** means add IP address + MAC address binding to DHCP reservation table, **Auto** means delete exist IP address + MAC address binding from DHCP reservation table.

Click on the **Save Settings** button to save the settings.

DHCP TABLE			
Host Name	IP Address	MAC Address	Status
	192.168.1.2 ▼	<input type="text"/>	Manual Config ▼
			Static ▼

Save Settings

TIME

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 automatically adjust the time when needed.

To access the **TIME** setting window, click on the **Time and Date** button in the **SETUP** directory

TIME

Select your operating time zone from the **Time Zone** drop-down list.

If you need to use the daylight saving, just choose the **Enable Daylight Saving**. Daylight saving is a period from late Spring to early Fall.

Configure Daylight Saving Dates, Daylight Saving time starts in the most parts of the **United States** on the second Sunday of March. Each time zone in the United States starts Daylight Saving time at 2 A.M. Thus, in the United States you must use **March, Second, Sunday, at 2:00 A.M.**

Daylight Saving time starts in the **European Union** on the last Sunday of March. Thus, in European Union, you must select **March, Last, Sunday**. The time must depend on your country's time zone. For example, In Germany you must type 2 because Germany's time zone is 1 hour ahead of GMT or UTC (GMT+1). Thus, in Germany you must use **March, Last, Sunday, at 1:00 A.M.**

Daylight Saving time ends in the most parts of the United States on the First Sunday of November. Each time zone in the United States must use Daylight Saving time at 2:00 A.M. Thus, in the

TIME

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 automatically adjust the time when needed.

TIME CONFIGURATION

Current Router Time : Jan 01, 2000 00:03:54

Time Zone : (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London ▼

Enable Daylight Saving :

Month Day

DST Start Jan ▼ 1 ▼

Daylight Saving Dates :

DST End Jan ▼ 1 ▼

AUTOMATIC TIME CONFIGURATION

Automatically Synchronise with Internet Time Servers :

NTP Time Server :

(0.0.0.0: Default Value)

Section 3 - Configuration

United States you must set

November, First, Sunday, at 2:00 A.M.

Daylight Saving time ends in the European Union on the Last Sunday of October. For instance, in Germany you must type 2 because Germany's time zone is 1 hour ahead of GMT (GMT+1). Thus, in Germany you must use **March, Last, Sunday, at 1:00 A.M.**

Check the **Automatically Synchronise with Internet Time Servers.**

Type the specific NTP server name.

SET THE DATE AND TIME MANAULLY

You can also use the **Copy Your Computer's Time Settings** to synchronize the Date and Time to your local PC. Or, you also can adjust **Year/Month/Day/Hour/Minute/Second** manually.

Please click the **Save Settings** button to save the configuration.

SET THE DATE AND TIME MANUALLY

Date: Year: 2007 ▼ Month: 1 ▼ Day: 1 ▼

Time: Hour: 12am ▼ Minute: 4 ▼ Second: 58 ▼

Copy Your Computer's Time Settings

Save Settings

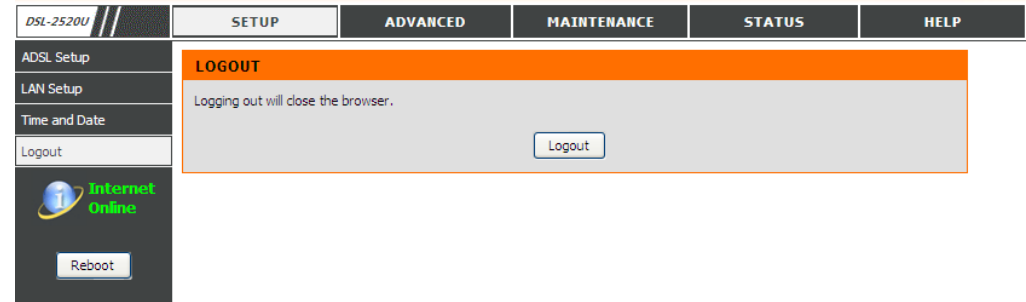
LOGOUT

The **LOGOUT** page enables you to logout of your router configuration and closes the browser.

To access the **LOGOUT** setting window, click on the **Logout** button in the **SETUP** directory

LOGOUT

Click on the **Logout** button to logout of the router configuration settings and close the browser.



ADVANCED

This chapter includes the more advanced features used for network management and security as well as administrative tools to manage the router, view status and other information used to examine performance and for troubleshooting.

PORT FORWARDING

Use the **PORT FORWARDING** window to open ports in your router and re-direct data through those ports to a single PC on your network (WAN-to-LAN traffic). The Port Forwarding function allows remote users to access services on your LAN such as FTP for file transfers or SMTP and POP3 for e-mail. The DSL-2520U will accept remote requests for these services at your Global IP Address, using the specified TCP or UDP protocol and port number, and then redirect these requests to the server on your LAN with the LAN IP address you specify. Remember that the specified Private IP Address must be within the useable range of the subnet occupied by the Router.

To access the **PORT FORWARDING** settings window, click on the **PORT FORWARDING** button in the **ADVANCED** directory

PORT FORWARDING RULES CONFIGURATION

Select an IP address from **Private IP** drop-down list or type an IP address in the **Private IP** input box to appoint the PC to receive the forwarded packets.

Select protocol type of the opened ports from **Protocol Type** drop-down list, it can be **All, TCP, UDP**.

Type external start port from **External Start Port** input box. It shows the start port opened for remote users in the WAN side of the router.

Type external end port from **External End Port** input box. It shows the end port opened for remote users in the WAN side of the router.

Section 3 - Configuration

Type internal start port from **Internal Start Port** input box. It shows the start port opened in the PC with the appointed **Private IP**.

Type internal end port from **Internal End Port** input box. It shows the end port opened in the PC with the appointed **Private IP**.

Select PVC of the port forwarding rule from **Connection** drop-down list.

QOS SETUP

Quality of Service Setup can be used to improve data flow for different applications by prioritizing the network traffic based on selected criteria.

QOS SETUP

You have to define the service ports. For example,

VoIP(RTP) is from 700(**Start Port**) to 900(**End Port**)

H.323 is 1720

FTP is from 20(**Start Port**) to 21(**End Port**)

MSN messenger is from 1863(**Start Port**) to 1864(**End Port**)

QOS SETUP

Quality of Service Setup can be used to improve data flow for different applications by prioritising the network traffic based on selected criteria.

QOS SETUP

VOIP(SIP): Start Port: End Port:
 H.323: Start Port: End Port:
 FTP: Start Port: End Port:
 MSN Messenger: Start Port: End Port:

Save Settings

ADVANCED QOS SETUP

LAN QoS

Helpful Hints...

QoS or Quality of service allows your Router to help prioritise the data packets that flow throughout your network. This is a very useful feature for sensitive applications such as VoIP whereby it will assist in preventing dropped calls. Large amounts of non-critical data can be scaled so that they do not affect sensitive real-time applications such as VoIP or Streaming. The main screen shows some pre-configured rules that are used with common applications such as VoIP, FTP and messaging programs.

More...

LAN QOS RULES CONFIGURATION

Type the policy name on the **Name**

Select the priority value on the **Priority**

Select the **Protocol**, ICMP, TCP and UDP.

Set the **Source IP Range** and the **Destination IP Range**.

Set the **Source Port Range** and the **Destination Port Range**.

Click the **Add/Apply** button to add the policy to the list.

LAN QOS RULES CONFIGURATION

Remaining number of rules that can be created:6

Name <input type="text"/>	Priority Select Priority ▼	Protocol(1..255) <input type="text"/> << Select Protocol ▼
Source IP Range <input type="text"/> Mask <input type="text"/>		Source Port Range <input type="text"/> to <input type="text"/>
Destination IP Range <input type="text"/> Mask <input type="text"/>		Destination Port Range <input type="text"/> to <input type="text"/>

OUTBOUND FILTER

By default, all outgoing IP traffic from the LAN is allowed. The Outbound Filter allows you to create a filter rule to block outgoing IP traffic by specifying a filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

ADD OUTBOUND IP FILTER

Type the filter name on the **Filter Name**.

Choose TCP, UDP or ICMP on the **Protocol**.

Type **Source IP address**, **Source Subnet Mask** and **Source Port**

Type **Destination IP address**, **Destination Subnet Mask** and **Destination Port**

Please click **Add/Apply** button to add the policy in the list.

DSL-2520U // **SETUP** **ADVANCED** **MAINTENANCE** **STATUS** **HELP**

Port Forwarding
QoS Setup
Outbound Filter
Inbound Filter
DNS Setup
VLAN
Firewall & DMZ
Advanced ADSL
Advanced LAN
Remote Management
Network Tools
Logout

OUTBOUND IP FILTER

By default, all outgoing IP traffic from the LAN is allowed.

The Outbound Filter allows you to create a filter rule to block outgoing IP traffic by specifying a filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

ADD OUTBOUND IP FILTER

Filter Name :

Protocol :

Source IP address :

Source Subnet Mask :

Source Port :

Destination IP address :

Destination Subnet Mask :

Destination Port :

ACTIVE OUTBOUND IP FILTER

Name	Protocol	Src. Addr./Mask	Src. Port	Dest. Addr./Mask	Dest. Port	Remove
------	----------	-----------------	-----------	------------------	------------	--------

Helpful Hints...

Give each rule a **Name** that is meaningful to you.

Each rule can **Deny** outgoing traffic from the LAN.

The Source IP addresses are LAN-side address and the Destination IP address are WAN-side address

Click the Save button to store a finished rule in the Rules List.

Click the **Remove** checkbox in the Rules List then click on the **Remove** button to permanently remove a rule.

[More...](#)

INBOUND FILTER

By default, all incoming IP traffic from the internet network is allowed. The Inbound Filter allows you to create a filter rule to filter incoming IP traffic by specifying a filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

ADD OUTBOUND IP FILTER

Type the filter name on the **Filter Name**.

Choose TCP, UDP or ICMP on the **Protocol**.

Type **Source IP address**, **Source Subnet Mask** and **Source Port**

Type **Destination IP address**, **Destination Subnet Mask** and **Destination Port**

Please click **Add/Apply** button to add the policy in the list.

The screenshot shows the D-Link DSL-2520U web interface. The main content area is titled "INBOUND IP FILTER" and contains the following configuration options:

- Filter Name:** [Text input field]
- Protocol:** [Dropdown menu]
- Source IP address:** [Text input field, value: 0.0.0.0]
- Source Subnet Mask:** [Text input field, value: 0.0.0.0]
- Source Port:** [Text input field, value: 0]
- Destination IP address:** [Text input field, value: 0.0.0.0]
- Destination Subnet Mask:** [Text input field, value: 0.0.0.0]
- Destination Port:** [Text input field, value: 0]

Below the configuration fields is an "Add/Apply" button. At the bottom of the main content area, there is a section titled "ACTIVE INBOUND FILTER" with a table header:

Name	Protocol	Src. Addr./Mask	Src. Port	Dest. Addr./Mask	Dest. Port	Remove
------	----------	-----------------	-----------	------------------	------------	--------

The right-hand sidebar contains "Helpful Hints..." and "More..." sections.

DNS SETUP

The DNS is used to resolve the DNS name to IPs. You can type or get automatically.

The Dynamic DNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (for example: 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 your host name to connect to your game server and your friends don't mind what your IP address is, and then just type the DDNS name to reach. You can use the D-Link DDNS server, <https://www.dlinkddns.com> to have a free DDNS.

To access the **DNS** setting window, click on the **DNS** button under the **ADVANCED** tab.

DNS SERVER CONFIGURATION

If you are using the Router for DHCP service on the LAN and are using DNS servers on the ISP's network, check **Obtain DNS server address automatically** box.

If you have DNS IP addresses provided by your ISP, enter these IP addresses in the available entry fields for the **Preferred DNS Server** and the **Alternate DNS Server**.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Port Forwarding	DNS SETUP Domain Name Server (DNS) is a server that translates URL/domain names to the corresponding IP address. Most users will not need to change the DNS servers from default unless instructed by your ISP. 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 your host name to connect to your game server no matter what your IP address is.				Helpful Hints... If "Enable Automatic Assigned DNS" checkbox is selected, this router will accept the first received DNS assignment from one of the Internet connection protocols, PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If the checkbox is not selected, enter the preferred and alternate DNS server IP addresses manually. Only do so if you having problems with you DNS servers. More...
QoS Setup					
Outbound Filter					
Inbound Filter					
DNS Setup					
VLAN					
Firewall & DMZ					
Advanced ADSL					
Advanced LAN					
Remote Management					
Network Tools	DNS SERVER CONFIGURATION				
Logout	<input checked="" type="radio"/> Obtain DNS server address automatically				
Internet Online	<input type="radio"/> Use the following DNS server addresses				
	Preferred DNS Server: <input type="text" value="0.0.0.0"/>				
	Alternate DNS Server: <input type="text" value="0.0.0.0"/>				

Section 3 - Configuration

DDNS CONFIGURATION

Please enable the **Enable Dynamic DNS** if you want to use DDNS.

Choose which DDNS web site to use on the **Server Address**.

Type which Host name which you registered with your DDNS service provider. on the **Host Name**.

Type the username/password on the **username/password** for your DDNS account.

After configure the DNS settings as desired, click on the **Apply Settings** button to apply settings.

DDNS CONFIGURATION

Enable Dynamic DNS:

Server Address: <<
 ▼

Host Name: (e.g.: myhost.mydomain.net)

Username:

Password:

Verify Password:

VLAN

The Virtual LAN (VLAN) allows you to configure a group of devices on one or more LANs so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments.

VLAN GROUP SETTING

Select configuring VLAN index from **VLAN Index** drop-down list.

Enable VLAN group on the **Enable VLAN Group**

Set VLAN ID in **VLAN ID** input box

To add **ATM VCs** port to VLAN group, check PVC's **Port**. To tag outbound traffic from **ATM VCs**, check PVC's **Tagged**.

To add **Ethernet** port to VLAN group, check Ethernet's **Port**. To tag outbound traffic from **Ethernet** port, check Ethernet's **Tagged**.

The screenshot shows the 'VLAN' configuration page in the DSL-2520U web interface. The main content area is titled 'VLAN' and contains a note: 'Note: This is VLAN page. The Virtual LAN (VLAN) allows you to configure a group of devices on one or more LANs so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments.'

The 'VLAN GROUP SETTING' section includes the following configuration options:

- VLAN Index:** 1 (dropdown menu)
- Enable VLAN Group:**
- VLAN ID:** 1 (input box)
- ATM VCs:**
 - Tagged:
 - Port #: 0, 1, 2, 3, 4, 5, 6, 7 (checkboxes for 0-7 are all checked)
- Ethernet:**
 - Tagged:
 - Port #: 1 (checkbox is checked)

An 'Add/Apply' button is located at the bottom of the configuration section.

The 'Helpful Hints...' sidebar on the right provides additional information:

- You can choose 1~8 to set group index. The group index will be assigned as a VLAN ID. Each group should have a specific VLAN ID, different from each other.
- The "Enable VLAN Group" checkbox is to choose "Yes" or "No" turn on or off the specific group index, default is on.
- ATM VCs: "Port 0~7" means PVC 0~7, "Tagged" means the traffic on this PVC will take VLAN ID. Each "Port" of "ATM VCs" can only be assigned to one specific group. Ethernet: "Port 1~2" means Ethernet port 1~2, you can choose each one of them. Each "Port" of "Ethernet" can only be assigned to one specific group. VLAN: You can choose VLAN interface. It can only be assigned to one specific group.

Section 3 - Configuration

VLAN GROUP SUMMARY

Present current exist VLAN groups, including **Group**, **ID**, **VLAN Group Ports**, **VLAN Tagged Ports**.

To remove designate VLAN group, tick **Remove** checkbox and click **Remove Selected** to remove selected VLAN group.

VLAN GROUP SUMMARY				
Group	ID	VLAN Group Ports	VLAN Tagged Ports	Remove
1	1	e1,p0,p1,p2,p3,p4,p5,p6,p7		<input type="checkbox"/>

FIREWALL & DMZ

The router already provides a simple firewall by virtue of the way NAT works. By default NAT does not respond to unsolicited incoming requests on any port, thereby making your WAN invisible to Internet cyber attackers.

DMZ means 'Demilitarized Zone'. DMZ allows computers behind the router firewall to be accessible to Internet traffic. Typically, your DMZ would contain Web servers, FTP servers, and others.

FIREWALL SETTING

Enable the Firewall on the **Enable Firewall**.

DMZ SETTING

Please enable the **Enable DMZ** and type the DMZ client IP on the **DMZ IP Address**. Or you also can choose the DMZ host by the up-down menu.

the **SYN attack**, **FIN/URG/PSH attack**, **Ping attack**, **Xmas Tree attack**; **TCP reset attack**, **Null scanning attack**, **Ping of Death attack** and **SYN/RST SYN/FIN attack**.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
<ul style="list-style-type: none"> Port Forwarding QoS Setup Outbound Filter Inbound Filter DNS Setup VLAN Firewall & DMZ Advanced ADSL Advanced LAN Remote Management Network Tools Logout 	<p>FIREWALL & DMZ</p> <p>The router already provides a simple firewall by virtue of the way NAT works. By default NAT does not respond to unsolicited incoming requests on any port, thereby making your LAN invisible to Internet cyberattackers.</p> <p>DMZ means 'Demilitarized Zone'. DMZ allows computers behind the router firewall to be accessible to Internet traffic. Typically, your DMZ would contain Web servers, FTP servers, and others.</p> <p>FIREWALL SETTINGS</p> <p>Enable Firewall: <input type="checkbox"/></p> <p>DMZ SETTINGS</p> <p>The DMZ (Demilitarized Zone) option lets you set a single computer on your network outside of the router. If you have a computer that cannot run Internet applications successfully from behind the router, then you can place the computer into the DMZ for unrestricted Internet access.</p> <p>Note: Putting a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.</p> <p>Enable DMZ: <input type="checkbox"/></p> <p>DMZ IP Address: <input type="text" value="0.0.0.0"/> << <input type="text" value="ORNAME-6303A5D"/></p> <p><input type="button" value="Apply Settings"/> <input type="button" value="Cancel"/></p>				<p>Helpful Hints...</p> <p>D-Link recommends you enable the DMZ option only as a last resort if you are having trouble using an application from a computer behind the router and port forwarding does not rectify your issue. This will place your selected machine and IP address outside of the router's firewall protection. It is recommended that should you select to enable a DMZ zone that you do this as a troubleshooting tool and for a short period of time.</p> <p>Non-UDP/TCP/ICMP LAN Sessions LAN Sessions is normally enabled. It facilitates single VPN connections to a remote host.</p> <p>More...</p>

ADVANCED ADSL

The Advanced ADSL settings allow you to choose which ADSL modulation settings your modem router will support.

D-Link do not recommend that you change these settings unless directed to do so by your ISP.

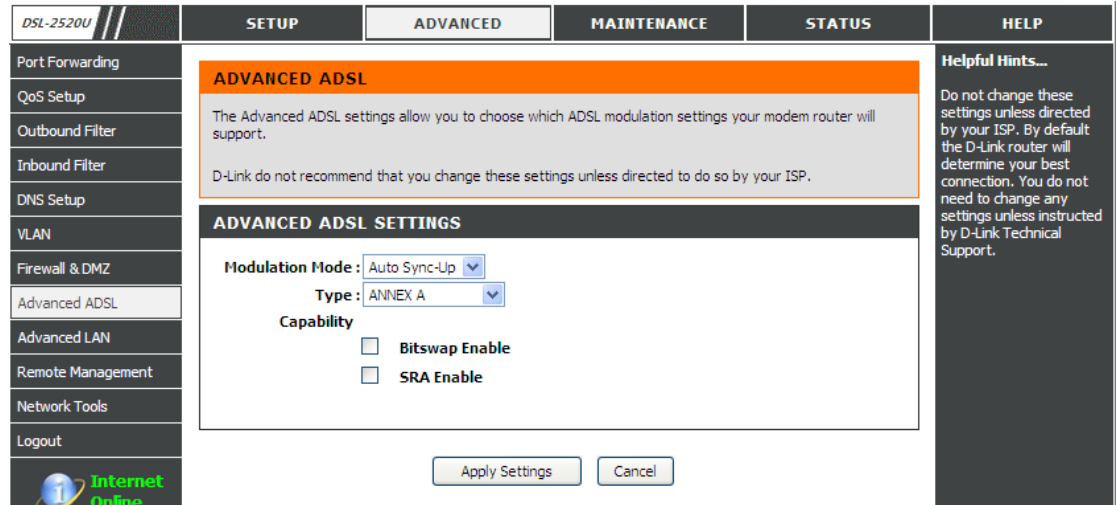
ADVANCED ADSL SETTINGS

Please select following ADSL profile to link.

Modulation Model can be **Auto Sync-Up, ADSL2+, ADSL2, G.DMT, T1.413, G.lite,**

Type can be **Annex A, Annex I, Annex A/L, Annex M, , Annex A/I/J/L/M**

Please select to enable Bitswap and SRA on the Capability.



ADVANCED LAN

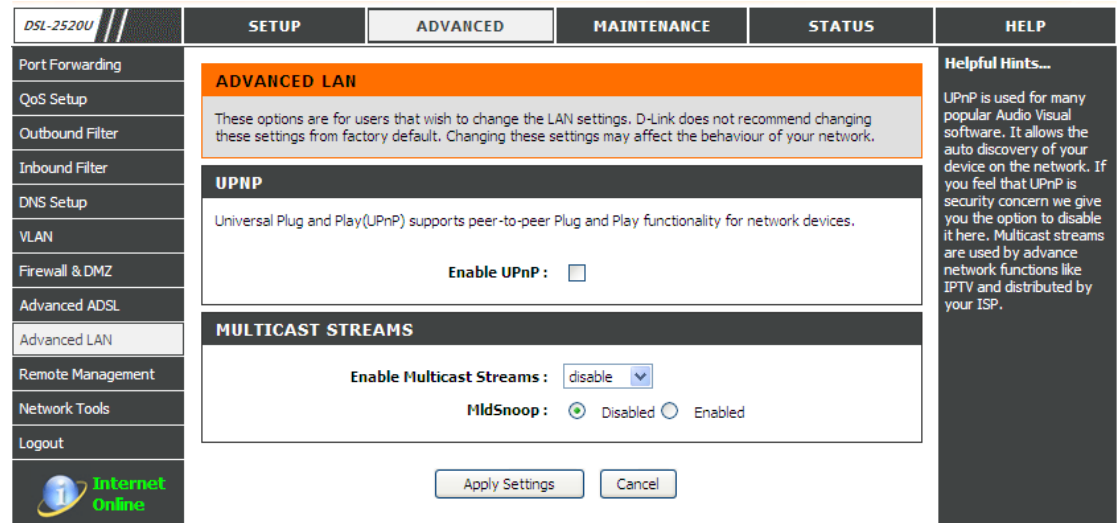
These options are for users that wish to change the LAN settings. D-Link does not recommend changing these settings from factory default. Changing these settings may affect the behavior of your network.

UPNP

Please select the Enable UPnP when you want to have Universal Plug and Play (UPnP) supports peer-to-peer Plug and Play functionality for network devices.

MULTICAST STREAMS

Please select the IGMP-V1 or IGMP-V2 to let IGMP stream can pass through DSL-2520U.



REMOTE MANAGEMENT

This section allows you to enable/disable remote access to the router from the Internet. Advanced access control allows you to configure access via specific services. Most users will not need to change any of these settings.

REMOTE MANAGEMENT SETTINGS

Please enable the **ENABLE Remote Management**

Please type the port number which you want to replace the original port.

Please select **Allow All** or **Deny All** on the **Remote Admin Inbound Filter**

Please type a string to describe the action on the **Details**.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Port Forwarding	REMOTE MANAGEMENT				Helpful Hints... Remote Management by default should be disabled. However if you wish to login and manage your Router from another Internet device then you can enable the router to accept such commands from the Internet port. This option may be useful if your network administrator is not onsite or your technical support requires access to your router.
QoS Setup	This section allows you to enable/disable remote access to the router from the Internet. Remote Access Control allows you to configure access via specific services. Most users will not need to change any of these settings.				
Outbound Filter	REMOTE MANAGEMENT SETTINGS				
Inbound Filter	Enable Remote Management : <input type="checkbox"/>				
DNS Setup	Remote Admin Port : <input type="text" value="80"/>				
VLAN	Remote Admin Inbound Filter : <input type="text" value="Allow All"/>				
Firewall & DMZ	Details : <input type="text" value="Everyone are allowed."/>				
Advanced ADSL					
Advanced LAN					
Remote Management					

REMOTE ACCESS CONTROL

Please select the **Service** to enable on **LAN** or **WAN**.

Please click the **Apply Settings** button to save the configuration.

Service	LAN	WAN
FTP	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
HTTP	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
ICMP (Ping)	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
TELNET	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
TFTP	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled

Apply Settings

Cancel

TR-069

The WAN management protocol **TR-069** allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device.

To access the **TR-069** Configuration window, click on the **Network Tools** button under the **ADVANCED** tab.

TR-069

TR-069 is a WAN management protocol which allows your ISP to perform monitoring, configuration and firmware upgrade on your router remotely.

Inform: Select to enable or disable TR-069 client functionality.

Inform Interval: Interval (seconds) between two **Inform** messages.

ACS URL: Enter the URL of your ISP's ACS

ACS User Name: Enter the authentication user name

ACS Password: Enter the authentication password

Connection Request User Name: Enter the authentication user name for the ACS to login

Connection Request Password: Enter the authentication password for the ACS to login

The screenshot shows the D-Link DSL-2520U web interface. The top navigation bar has tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains a menu with items like Port Forwarding, QoS Setup, Outbound Filter, Inbound Filter, DNS Setup, VLAN, Firewall & DMZ, Advanced ADSL, Advanced LAN, Remote Management, Network Tools, and Logout. The main content area is titled 'TR-069 CLIENT' and contains the following text: 'WAN Management Protocol(TR-069) allows an Auto-Configuration Server(ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Select the desired values and click "Apply" to configure the TR-069 client options.' Below this is the 'TR-069 CLIENT CONFIGURATION' section with the following fields: 'Inform' (radio buttons for Disable and Enable), 'Inform Interval' (text box with '0'), 'ACS URL' (text box), 'ACS User Name' (text box), 'ACS Password' (text box), 'Connection Request User Name' (text box), and 'Connection Request Password' (text box). At the bottom right are 'Apply' and 'Cancel' buttons. A 'Reboot' button is visible in the left sidebar. A 'Helpful Hints...' section on the right provides additional information and a 'More...' link.

MAINTENANCE

Click on the **MAINTENANCE** tab to reveal the window buttons for various functions located in this directory.

PASSWORD

The factory default password of this router is 'admin'. To help secure your network, D-Link recommends that you should choose a new password.

SET PASSWORD (OPTIONAL)

Please type the **Current Password**, **New Password** and **Confirm Password**.

Please click the **Apply Settings** button to save the settings.

The screenshot shows the web interface for a D-Link DSL-2520U router. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE (which is selected), STATUS, and HELP. On the left side, there is a vertical menu with options: Password, Save/Restore Settings, Firmware Update, Diagnostics, System Log, Logout, and a Reboot button. The main content area is titled 'PASSWORD' and contains the following text: 'The factory default password of this router is 'admin'. To help secure your network, D-Link recommends that you should choose a new password between 1 and 15 characters.' Below this is a section titled 'SET PASSWORD (OPTIONAL)' with the instruction: 'To change the router password, please type in the current password, then the new password twice.' There are three input fields labeled 'Current Password:', 'New Password:', and 'Confirm Password:'. At the bottom of the main content area are two buttons: 'Apply Settings' and 'Cancel'. On the right side, there is a 'Helpful Hints...' section with text: 'This page allows you to modify your router password needed to access this Web management interface. For security reasons, it is recommended that you change your device password from the factory default. The password you choose should be between 1 and 15 characters in length. Please make sure to choose a password you can remember or write it down and keep in a safe and separate location for future reference. If you forget your device password, the only'.

SAVE/RESTORE SETTINGS

Once the router is configured and you can save the configuration settings to a configuration file on your hard drive. You also have the option to load configuration settings, or restore the factory default settings.

SAVE/RESTORE CONFIGURATION

Please click the **Save** button on the **Save Settings to Local Hard Drive**.

Please click **Browse** button to choose the configurations file and then click the **Update Settings** button to upload.

If necessary, please click the **Restore Device** button to have the default settings.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Password Save/Restore Settings Firmware Update Diagnostics System Log Logout Internet Online Reboot	SAVE/RESTORE SETTINGS Once the router is configured you can save the configuration settings to a configuration file on your hard drive. You also have the option to load configuration settings, or restore the factory default settings.			Helpful Hints... This page allows you to save your router configuration to a file on your computer as a precaution in case you have to reset your router to factory default settings. You will be able to restore your router settings from a previously saved configuration file. There is also a function to allow you to reset your router to factory default settings. Resetting your router to factory default settings will erase your current configuration. More...	
	SAVE/RESTORE CONFIGURATION Save Settings to Local Hard Drive : <input type="button" value="Save"/> Load Settings From Local Hard Drive : <input type="text"/> <input type="button" value="浏览..."/> <input type="button" value="Update Settings"/> Restore To Factory Default Settings : <input type="button" value="Restore Device"/>				

FIRMWARE UPDATE

Use the **FIRMWARE UPDATE** window to load the latest firmware for the device. Note that the device configuration settings may return to the factory default settings, so make sure you first save the configuration settings with the **SAVE/RESTORE SETTINGS** window described above.

To access the **FIRMWARE UPDATE** setting window, click on the **Firmware Update** button under the **MAINTENANCE** tab.

FIRMWARE INFORMATION

It shows **Current Firmware Version** and **Current Firmware Date**

FIRMWARE UPDATE

To update firmware, click on the **Browse...** button to search for the firmware file and then click the **Update Firmware** button to begin copying the file. The Router will load the file and restart automatically.

The screenshot shows the web interface for a D-Link DSL-2520U router. At the top, there is a navigation bar with tabs for 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'MAINTENANCE' tab is selected. On the left side, there is a sidebar menu with options: Password, Save/Restore Settings, Firmware Update, Diagnostics, System Log, and Logout. Below the menu is an 'Internet Online' indicator and a 'Reboot' button. The main content area is divided into three sections:

- UPDATE**: A red header section with a note: "Note: Please do not update the firmware on this router unless instructed to do so by D-Link technical support or your ISP."
- FIRMWARE INFORMATION**: A section showing "Current Firmware Version : v1.00" and "Current Firmware Date : 2013/02/05".
- FIRMWARE UPDATE**: A section with a note: "Note: Some firmware updates reset the configuration options to factory defaults. Before performing an update, be sure to save the current configuration from the Maintenance -> Save/Restore Settings screen." Below this note is a "Backup Now" button. Further down, it says "To update the firmware, your PC must have a wired connection to the router. Enter the name of the firmware update file, and click on the Upload button." This section includes an "Upload:" label, a text input field, a "浏览..." (Browse...) button, and an "Update Firmware" button.

 On the right side, there is a "Helpful Hints..." sidebar with text explaining that the page displays device firmware version and information helpful for technical support, and a "More..." link.

DIAGNOSTICS

Your router is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Re_run Diagnostics Tests" at the bottom of this page to make sure fail status is consistent. If the test continues to fail, click "Help" and follow the troubleshooting procedures.

SYSTEM CHECK

There are **Test your Ethernet Connection** and **Test ADSL Synchronization** and they will show **PASS** or **FAIL**

INTERNET CONNECTIVITY CHECK

There are **Test the assigned IP address**, **Ping ISP Default Gateway** and **Ping Preferred DNS server** and they will show **PASS**, **FAIL** or **N/A**

Please click the **Re_run Diagnostics Tests** button to Diagnostic the above test items.

DSL-2520U	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP						
Password Save/Restore Settings Firmware Update Diagnostics System Log Logout Internet Online Reboot	DIAGNOSTICS Your router is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Re-run Diagnostics Tests" at the bottom of this page to make sure fail status is consistent.				Helpful Hints... This page shows the result of your router's self diagnostic and connection test results. The Internet connectivity status will only show PASS if you have correctly configured your Internet connection and your router is currently online. More...						
	SYSTEM CHECK <table border="1"> <tr> <td>Test your Ethernet(1-2) Connection:</td> <td>PASS</td> </tr> <tr> <td>Test ADSL Synchronization:</td> <td>PASS</td> </tr> </table>				Test your Ethernet(1-2) Connection:	PASS	Test ADSL Synchronization:	PASS			
Test your Ethernet(1-2) Connection:	PASS										
Test ADSL Synchronization:	PASS										
	INTERNET CONNECTIVITY CHECK <table border="1"> <tr> <td>Test the assigned IP address:</td> <td>N/A</td> </tr> <tr> <td>Ping ISP Default Gateway:</td> <td>N/A</td> </tr> <tr> <td>Ping Preferred DNS server:</td> <td>N/A</td> </tr> </table> <p>Re_run Diagnostics Tests</p>				Test the assigned IP address:	N/A	Ping ISP Default Gateway:	N/A	Ping Preferred DNS server:	N/A	
Test the assigned IP address:	N/A										
Ping ISP Default Gateway:	N/A										
Ping Preferred DNS server:	N/A										

SYSTEM LOG

The system Log allows you to view the logs that have been created.

SYSTEM LOG

- Date/Time:** Log date and time
- Message:** All logged events will be displayed.

The screenshot shows the DSL-2520U web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for Password, Save/Restore Settings, Firmware Update, Diagnostics, System Log, and Logout. The main content area displays the SYSTEM LOG page with a table of log entries. The right sidebar contains 'Helpful Hints...' and 'More...' links.

Date/Time	Message
01/01/2000 00:38:14	netMakeChannDial: err=-3000 rn_p=803ccbd4
01/01/2000 00:38:14	Last errorlog repeat 1 Times
01/01/2000 00:38:15	netMakeChannDial: err=-3000 rn_p=803ccbd4
01/01/2000 00:39:18	Last errorlog repeat 60 Times
01/01/2000 00:39:19	netMakeChannDial: err=-3000 rn_p=803ccbd4
01/01/2000 00:39:19	netMakeChannDial: err=-3000 rn_p=803ccbd4
01/01/2000 00:39:19	Last errorlog repeat 1 Times
01/01/2000 00:39:20	netMakeChannDial: err=-3000 rn_p=803ccbd4
01/01/2000 00:39:20	Last errorlog repeat 1 Times
01/01/2000 00:39:20	netMakeChannDial: err=-3000 rn_p=803ccbd4
01/01/2000 00:39:20	Last errorlog repeat 1 Times

STATUS

Click on the **STATUS** tab to reveal the window buttons for various functions located in this directory. The **DEVICE STATUS** window is the first item in the **STATUS** directory. Use these windows to view system information and monitor performance.

DEVICE INFO

The **Device Info** page displays a summary overview of your router status, including: Device firmware version and summary of your Internet configuration (both Internet and Ethernet status).

To access the **DEVICE INFO** window, click on the **Device Info** button in the **STATUS** directory.

GENERAL

This window displays **current system time** and the **firmware version**.

The screenshot shows the D-Link DSL-2520U web interface. At the top, there is a navigation bar with tabs for **DSL-2520U**, **SETUP**, **ADVANCED**, **MAINTENANCE**, **STATUS**, and **HELP**. The **STATUS** tab is selected. On the left side, there is a sidebar menu with options: **Device Info** (selected), **Connected Clients**, **Statistics**, and **Logout**. Below the menu is an **Internet Online** indicator. The main content area is titled **DEVICE INFO** and contains the following text: "The Device Status page allows you to check the status of your Internet connection, LAN and LAN." Below this, under the **GENERAL** section, the following information is displayed: **Time:** 01.01.2000, 00:44:18, Sat and **Firmware Version:** v1.00. On the right side, there is a **Helpful Hints...** section with the text: "This page shows displays a summary overview of your router status, including device software version, summary of your Internet configuration including Ethernet status." and a **More...** link.

Section 3 - Configuration

INTERNET STATUS

This window displays WAN information including ADSL Modulation, Cable Status, Virtual Circuit, Connection Type, Network Status, Connection Up Time, Downstream Line Rate, Upstream Line Rate, MAC address, IP address, Subnet Mask, Default Gateway, and Preferred/Alternate DNS Server.

INTERNET STATUS

ADSL Modulation : Multi-Mode
Cable Status : ADSL Link Down
Virtual Circuit : PVC-0 ▾
Connection Type : Bridge
Network Status : Not Connected
Connection Up Time : N/A
Downstream Line Rate : 0 kbps
Upstream Line Rate : 0 kbps

MAC Address : N/A
IP Address : N/A
Subnet Mask : N/A
Default Gateway : N/A
Perferred DNS Server : N/A
Alternate DNS Server : N/A

LAN

This window displays LAN information including MAC Address, IP Address, Subnet Mask, and DHCP Server.

LAN

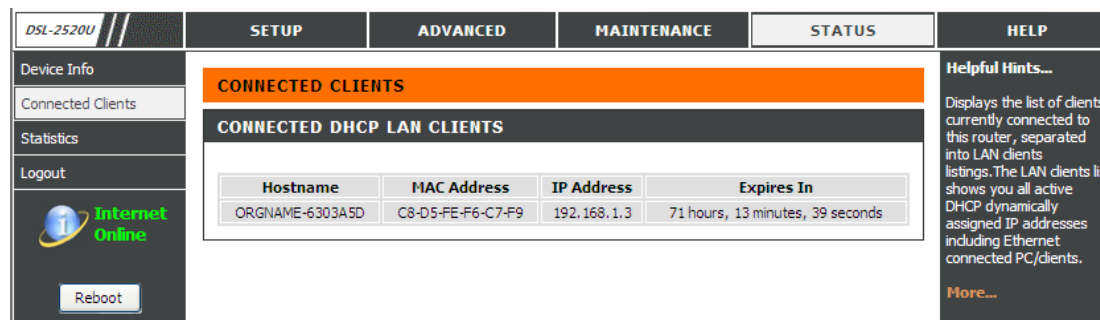
MAC Address : c8:d5:fe:f6:c7:88
IP Address : 192.168.1.1
Subnet Mask : 255.255.255.0
DHCP Server : ON

CONNECTED CLIENTS

This feature shows all the currently connected LAN computers.

CONNECTED DHCP LAN CLIENTS

This window displays all the entities which link to the LAN interface and obtained IP address from DHCP server successfully.



The screenshot shows the web interface for a D-Link DSL-2520U router. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The left sidebar contains links for Device Info, Connected Clients, Statistics, and Logout, along with an Internet Online status indicator and a Reboot button. The main content area displays the 'CONNECTED DHCP LAN CLIENTS' section, which contains a table with the following data:

Hostname	MAC Address	IP Address	Expires In
ORGNAME-6303A5D	C8-D5-FE-F6-C7-F9	192.168.1.3	71 hours, 13 minutes, 39 seconds

On the right side, the 'Helpful Hints...' section provides information about the list of clients and includes a 'More...' link.

STATISTICS

This information reflects the current status of your router.

WAN STATISTICS

This window displays all the **Received** and **Transmitted** packet status on the WAN interface.

LAN STATISTICS

This window displays all the **Received** and **Transmitted** packet status on the LAN interface.

The screenshot displays the 'STATISTICS' page of the D-Link DSL-2520U web interface. The page is divided into several sections:

- Navigation:** SETUP, ADVANCED, MAINTENANCE, STATUS, HELP
- Left Sidebar:** Device Info, Connected Clients, Statistics, Logout, Internet Online (with a Reboot button)
- STATISTICS:** This information reflects the current status of your router.
- WAN STATISTICS:**

Service	VPI/VCI	Protocol	Received			Transmitted		
			Pkts	Errs	Drops	Pkts	Errs	Drops
-	0/35	RFC 1483	0	0	0	446	0	0
- LAN STATISTICS:**

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
Ethernet	24763	280	0	0	47607	6	0	0
- Helpful Hints...:** This page displays your router network and data transfer statistics that is helpful for D-Link technicians to identify if your router is functioning properly. The information provided is mostly just for information and does not affect the function of your router. [More...](#)

ADSL STATISTICS

This window displays all the **ADSL status**

ADSL STATISTICS

Mode:	Multi-Mode	
Type:	ANNEX_A	
Status:	Down	
	Downstream	Upstream
Rate (Kbps):	0 kbps	0 kbps
SNR Margin (dB):	N/A	N/A
Attenuation (dB):	N/A	N/A
Output Power (dBm):	N/A	N/A
Super Frames:	0	0
RS Correctable Errors:	0	0
RS Uncorrectable Errors:	0	0
HEC Errors:	0	0
Total Cells:	0	0
Data Cells:	0	0
Bit Errors:	0	0

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DSL-2520U. 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 (192.168.1.1 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
 - Internet Explorer 6.0 or higher
 - Firefox 1.5 or higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable 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.

Section 4 - Troubleshooting

- Configure your Internet settings:
 - Go to **Start > Settings > Control Panel**. Double-click on the **Internet Options** icon. From the **Security** tab, click on the button to restore the settings to their defaults.
 - Click on the **Connection** tab and set the dial-up option to Never Dial a Connection. Click on the LAN Settings button. Make sure nothing is checked. Click on the **OK**.
 - Go to the **Advanced** tab and click on the button to restore these settings to their defaults. Click on the **OK** button 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 the web management.
- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

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

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

To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process.

Wait about 30 seconds to access the router. The default IP address is 192.168.1.1. When logging in, type in the default User Name “admin,” and the default Password “admin” then click on the OK button to access the web-based manager.

Networking Basics

Check your IP address

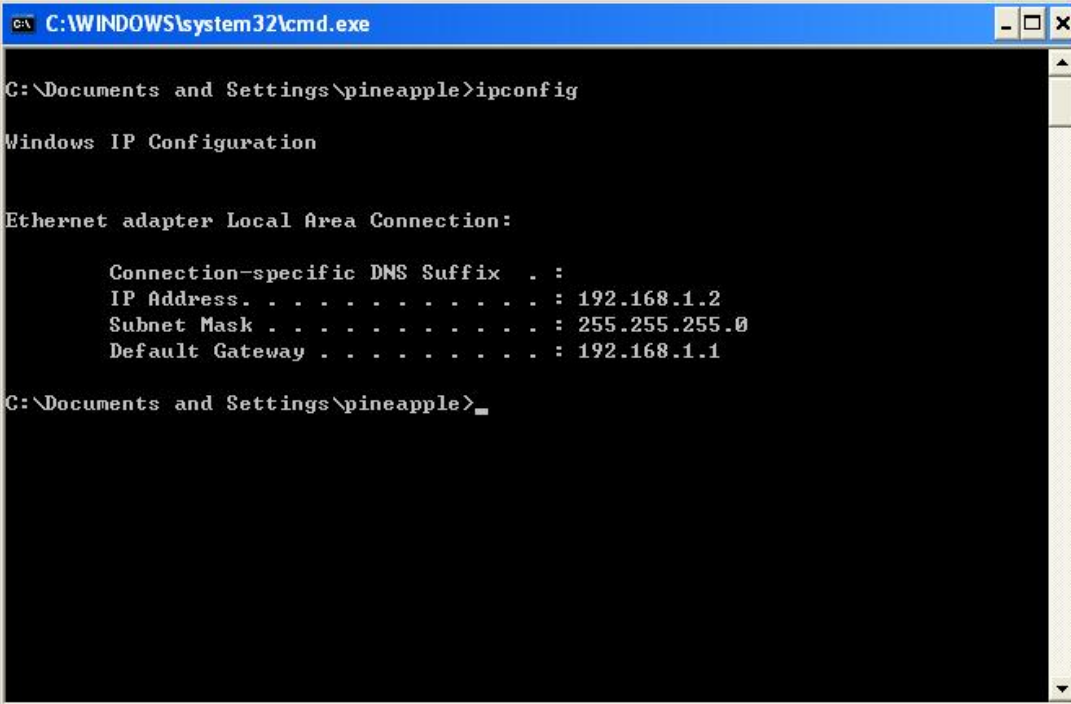
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server automatically. To verify your IP address, please follow the steps below.

Click on **Start > Run**. In the run box type **cmd** and click on the **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
C:\Documents and Settings\pineapple>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . :
    IP Address . . . . . : 192.168.1.2
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\Documents and Settings\pineapple>
```

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 on the **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 on the **Properties**.

Step 4

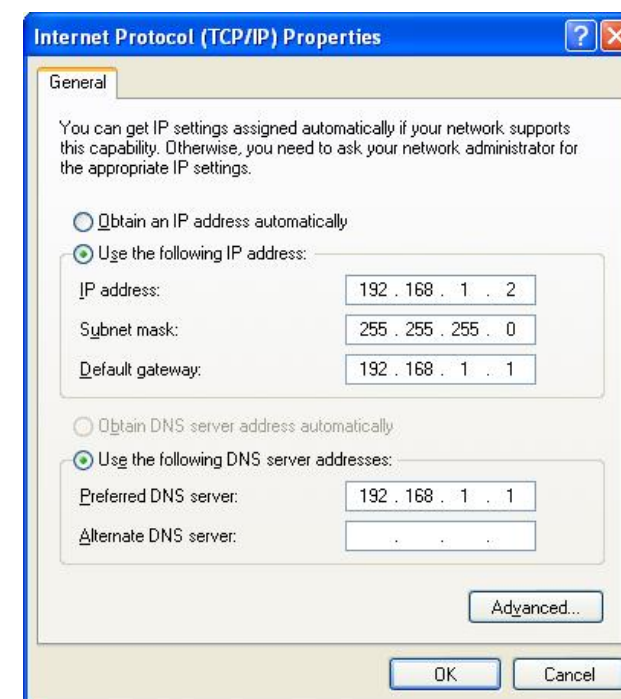
Click on the **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.1.1, make your IP address 192.168.1.X where X is a number between 2 and 254. 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 (192.168.1.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.1.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5

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



Technical Specifications

ADSL Standards

- ANSI T1.413 Issue 2
- ITU G.992.1 (G.dmt) AnnexA
- ITU G.992.2 (G.lite) Annex A
- ITU G.994.1 (G.hs)
- ITU G.992.5 Annex A

ADSL2 Standards

- ITU G.992.3 (G.dmt.bis) Annex A
- ITU G.992.4 (G.lite.bis) Annex A

Protocols

- IEEE 802.1d Spanning Tree
- TCP/UDP
- ARP
- RARP
- ICMP
- RFC1058 RIP v1
- RFC1213 SNMP v1 & v2c
- RFC1334 PAP
- RFC1389 RIP v2
- RFC1577 Classical IP over ATM
- RFC1483/2684 Multiprotocol Encapsulation over ATM Adaptation Layer 5 (AAL5)
- RFC1661 Point to Point Protocol
- RFC1994 CHAP
- RFC2131 DHCP Client / DHCP Server
- RFC2364 PPP over ATM
- RFC2516 PPP over Ethernet

Data Transfer Rate

- G.dmt full rate downstream: up to 8 Mbps / upstream: up to 1 Mbps
- G.lite: ADSL downstream up to 1.5 Mbps / upstream up to 512 Kbps
- G.dmt.bis full rate downstream: up to 12 Mbps / upstream: up to 12 Mbps
- ADSL full rate downstream: up to 24 Mbps / upstream: up to 1 Mbps

Media Interface

- ADSL interface: RJ-11 connector for connection to 24/26 AWG twisted pair telephone line
- LAN interface: RJ-45 port for 10/100BASE-T Ethernet connection