# **D-Link**<sup>®</sup>



# **User Manual**

# ADSL2+ Gigabit Cloud Router N300

**DSL-2770L** 

# Preface

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

## **Manual Revisions**

Revision	Date	Description
1.0	January 16, 2013	• Initial release

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# Package Contents



CD-ROM with Installation Wizard and User Manual

If any of the above items are missing, please contact your reseller.

Note: Using a power supply with a different voltage rating than the one included with the DSL-2770L may cause damage and will void the warranty for this product.

# System Requirements

Network Requirements	<ul> <li>A subscription with an Internet Service Provider</li> <li>A computer with 802.11n, g, or b wireless or an available Ethernet port</li> </ul>	
Web-based Configuration Utility Requirements	<ul> <li>Computer with the following: <ul> <li>Windows®, Macintosh, or Linux-based operating system</li> <li>An installed Ethernet adapter</li> </ul> </li> <li>Browser Requirements: <ul> <li>Internet Explorer 7 or higher</li> <li>Firefox 3.5 or higher</li> <li>Safari 4 or higher</li> <li>Chrome 8 or higher</li> </ul> </li> <li>Windows® Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</li> </ul>	
mydlink Requirements	<ul> <li>iPhone/iPad/iPod Touch (iOS 3.0 or higher)</li> <li>Android device (1.6 or higher)</li> <li>Computer with the following browser requirements: <ul> <li>Internet Explorer 7 or higher</li> <li>Firefox 3 or higher</li> <li>Safari 5 or higher</li> <li>Chrome 5 or higher</li> </ul> </li> <li>iPhone, iPad, and iPod touch are registered trademarks of Apple Inc. Android is a trademark of Google, Inc.</li> </ul>	

# Introduction

The D-Link ADSL2+ Gigabit Cloud Router N300 (DSL-2770L) comes equipped with four Gigabit ports to provide speeds up to 10x faster than standard 10/100 ports. It also uses 802.11n technology that significantly outperforms 802.11g devices. With the addition of Intelligent Quality of Service (QoS), data streams are separated which helps organize and prioritize your network traffic so your video streaming, gaming, and VoIP calls run smoother over both your wired and wireless network.

The ADSL2+ Gigabit Cloud Router N300 is also mydlink-enabled, which gives you access to your home network no matter where you go. Now you can monitor and manage your home network right from your laptop, iPhone<sup>®</sup>, iPad<sup>®</sup>, or Android<sup>™</sup> device. mydlink-enabled routers can be configured to send an email to keep you informed anywhere, anytime when new devices are connecting to your network or unwanted access is detected. Monitor in real-time websites that are being visited with recent browser history displayed on the mydlink<sup>™</sup> Lite app – which is great for parents.

SharePort Mobile technology lets you take advantage of the USB 2.0 port found on the back of your DSL-2770L. Plug in a USB storage drive and you can use the SharePort Mobile app for iOS and Android to access files, stream videos, view photos, or listen to music on your laptop or mobile devices. Plug in a printer and you can use SharePort to share access to that printer with your entire network.

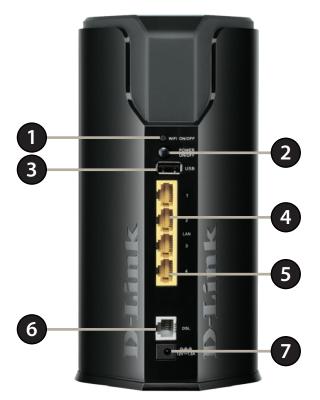
The DSL-2770L ADSL2+ Gigabit Cloud Router N300 provides incredible speeds, fast ports, cloud features, and terrific security features. It also features an innovative design and easy installation options.

# Features

- Fast Wireless Networking The DSL-2770L provides up to a full 300 Mbps\* wireless connection with other 802.11n wireless clients.
- **Cloud Features** The DSL-2770L is mydlink-enabled so you can remotely access and mange your router from a mobile device. SharePort Mobile can be used to share files, stream videos, view photos, and play music, and SharePort lets you share a printer.
- **Compatible with 802.11n/g/b Devices** The DSL-2770L is still fully compatible with the IEEE 802.11g and 802.11b standards, so it can connect with all your existing wireless devices.
- Advanced Firewall Features The Web-based user interface displays a number of advanced network management features including:
  - Content Filtering Easily applied content filtering based on MAC Address, URL, and/or Domain Name.
  - Filter Scheduling These filters can be scheduled to be active on certain days or for a duration of hours or minutes.
  - Secure Multiple/Concurrent Sessions The DSL-2770L can pass through VPN sessions. It supports multiple and concurrent IPSec and PPTP sessions, so users behind the DSL-2770L can securely access corporate networks.
- User-friendly Setup Wizard Through its easy-to-use Web-based user interface, the DSL-2770L lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

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

## Hardware Overview Back



1	Wi-Fi On/Off Button	Turns the wireless network on and off
2	Power Button	Turns the DSL-2770L on and off.
3	USB Port	Connects to a USB flash drive to share content , or connect it to a USB printer to share it on your network.
		Connect to Ethernet devices such as computers, switches, storage (NAS) devices and game consoles.
5	Gigabit LAN/WAN Port (4)	Connects to Ethernet devices, or to another modem or Internet connection when the WAN interface is enabled on the GUI. For more information, refer to "Internet Setup" on page 16.
6	DSL Port	Connects to your DSL phone line.
7	Power Receptor	Receptor for the supplied power adapter.

# Hardware Overview Front/Bottom

1	Status LEDs	<ul> <li>Power: Indicates the router is receiving power</li> <li>Internet: Indicates traffic to and from the Internet</li> <li>DSL: Indicates activity on your DSL connection</li> <li>Wi-Fi (WLAN): Indicates activity on your wireless network</li> <li>LAN (1-4): Indicates activity by a connected device</li> <li>USB: Indicates activity on the USB port</li> </ul>
2	WPS Button	Helps create a secure wireless connection to a device automatically. To connect a device using WPS, press the WPS button on your device, then press the WPS button on the router within 120 seconds.



3	Reset Button	Use an unfolded paperclip to press and hold the reset button for 6 seconds to reset all settings to their factory defaults.
		<b>Note</b> : Resetting your router will delete all settings on it.



# Installation

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

# **Before you Begin**

- Please configure the router with the computer that was last connected directly to your modem.
- Make sure you disable or uninstall any PPPoE software such as WinPoet, Broadjump, or Enternet 300 from your computer or you will not be able to connect to the Internet.

# **Wireless Installation Considerations**

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

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

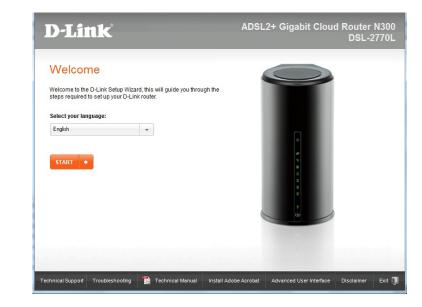
# Setup Wizard (on Installation CD)

The Installation CD included in your package has a Setup Wizard that guides you through the installation and configuration of your DSL-2770L.

#### Note: It is highly recommended that you use this Setup Wizard to install and configure your DSL-2770L.

- 1. Insert the Installation CD into your PC's CD-ROM drive.
- 2. The Setup Wizard should start automatically. Follow the onscreen instructions to set up and configure your DSL-2770L.

**Note**: If the Setup Wizard does not start automatically, go to your CD in Windows and double-click the setup file to start the wizard.



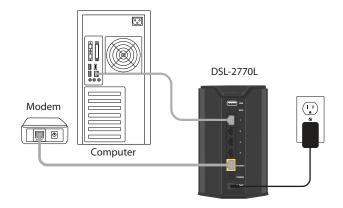
# **Connecting the DSL-2770L**

- 1. Position your router close to your modem and a computer. Place the router in an open area of your intended work area for better wireless coverage.
- 2. Connect your DSL phone line to the DSL port.
- 3. Plug the included Ethernet cable into your PC's Ethernet port. Plug the other end of the cable into one of the four LAN ports on the DSL-2770L.
- 4. Connect the supplied power adapter into the power receptor on the back of the router and then plug it into a power outlet or surge protector. Press the power button and verify that the power LED is lit. Allow 1 minute for the router to boot up.

To continue on to configuring the DSL-2770L, refer to "Web-based Configuration Utility" on page 15.

**Connecting to another modem or Internet line**: If you are connecting the DSL-2770L to another modem or a wired Internet connection, connect the Ethernet cable from your Internet source to port 4 on the DSL-2770L. Refer to "Ethernet/3G WAN Interface" on page 26 for setup details.

**Connecting to a 3G USB adapter**: If you are connecting a 3G USB adapter to use for your Internet connection, plug it into the USB port. Refer to "Ethernet/3G WAN Interface" on page 26 for setup details.



# SharePort Mobile App (iOS, Android)

The SharePort Mobile app will allow you to access files from a USB storage drive that is plugged into your router. You must enable file sharing from the **Setup** > **Storage** page (refer to page 60) for this app to work properly.

1. Plug your USB storage drive into the USB port.

Note: The DSL-2770L supports USB storage drives with up to one terabyte(1 TB) of storage capacity.

2. Use your iOS or Android mobile device to scan the QR code to the right to download the SharePort Mobile app.

You can also search for the SharePort Mobile app directly in the iOS App Store or Google Play.

3. From your iOS or Android mobile device, choose Settings.

**Note:** These steps are for the iOS version of the app. The Android version may differ slightly.









USB port

4. Click **Wi-Fi**, select the Wi-Fi Network Name (SSID) that you created during setup and then enter the default Wi-Fi password located on your Wi-Fi configuration note.

5. Once connected, tap on the SharePort Mobile icon.

6. The following screen will appear.



3:40 PN

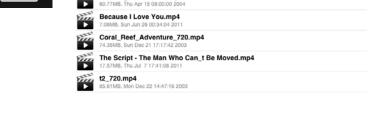


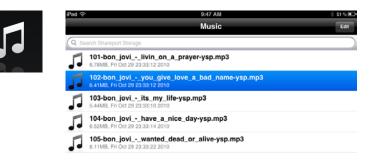
Settings	Wi-Fi Network	rs.
Airplane Mode OFF		
🔄 Wi-Fi dink	WHE	ON O
Notifications	Choose a Network	
Location Services On	7245 6100	A 🕈 🧕
😡 Brightness & Wallpaper	Chocolate	ج 📀
Picture Frame	Cisco_WPS_87366	8 🗢 🧕
General	√ dlink	÷ 0
Cloud	dlink-606L	8 🗢 📀
Mail, Contacts, Calendars	dlink-DIR505	870
Twitter	DSR-500N_1	ii 🕈 🧕
FaceTime	fc75167bb3ab	A 🕈 🧕
Safari	Firefly	A 🕈 🧕
Messages	PW	ê 🕈 🧕
Music	Strawberry	ê 🗢 🧕
Video	TheRack	A 🕈 🧕
Photos	vanilla	a 🗢 🧕

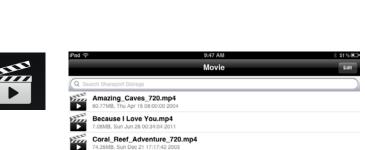
7. Tap on the **Settings** icon located on the right top corner of the screen. Tap **Edit** to enter your User Name and Password (the default username is **admin** and the password field should be left blank). Once you finish, click **Done** to continue.

8. For the Movie section, click the movie icon to play your movie from your USB flash drive.

9. For the Music section, click the music icon to play your music from your USB flash drive.







10. For the Photo section, click the Photo icon to view your photos from your USB flash drive.

11. For the Files section, click on the Files icon to view your files from your USB flash drive.

12. For the Folder section, click the folder icon to view your folders from your USB flash drive.

1MB, Sat Jan 1 00:20:16 2011 20111111\_095006\_1.JPG 1.42MB, Sat Jan 1 00:22:12 2011 0 20111111\_095007\_2.JPG 0 08MB, Sat Jan 1 00:22:16 2011 20111112\_215934\_1.JPG 0 1.22MB, Sat Jan 1 00:04:58 2011 20111114\_113643\_1.JPG 0 1.05MB. Sat Jan 1 01:20:32 2011 tonemapped.jpg 76.26KB, Sun Nov 22 14:24:42 2009 0 0whoooosh.jpg 93.42KB, Sun Nov 22 14:24:42 2009



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# **Web-based Configuration Utility**

To access the configuration utility, open a web-browser such as Internet Explorer and enter http://dlinkrouter.local.

Windows and Mac users may also connect by typing the IP address of the router (http://192.168.1.1) in the address bar.

Enter your password. The password should be left blank by default.

LOGIN				
Log in to the router :				
	User Name :			
	Password :			
	(	submit		

Address 🙆 http://dlinkrouter.local. 💌 🔁 Go

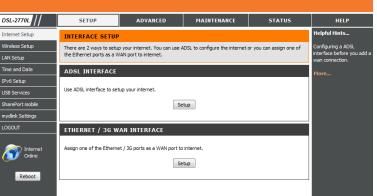
## **Internet Setup**

From this screen, you can set up various settings related to your Internet connection.

ADSL Interface Click the Setup button to see and edit your ADSL settings.

Ethernet/3G WANClick this Setup button to see and edit the WAN settings if you are using<br/>a 3G USB adapter or are using port 4 as a WAN port. This allows you to<br/>use the DSL-2770L as a router for another modem or Internet connection.

#### **D-Link**



## **ADSL Interface**

If you clicked the Setup button for ADSL Interface, you will see the following settings. You can click the **Setup Wizard** button to use a step by step wizard that guides you through configuration of your ADSL settings. See the following pages for how to use the **Setup Wizard**. If you are not sure what settings to use, please contact your Internet Service Provider.

**WAN Interface** Select the WAN interface to configure, and whether to enable or disable it.

**My Internet** Select the WAN connection type for your ISP. Based on which connection **Connection Is:** type you choose, different settings will be displayed below. These settings are described on the following pages after the **Setup Wizard** pages.

- Ethernet Over ATM(RFC1483 Bridged) with NAT
- IP over ATM(RFC 1483 Routed)
- PPP over Ethernet
- PPP over ATM
- RFC 1483 Bridged

Host Name: Enter a host name to use for your connection.

The settings displayed in the middle will vary depending on what you select for the **My Internet Connection Is** setting. See the following pages for details.

**Data** Select VCMux or LLC based on your ISP's recommended settings. **Encapsulation:** 

**Country/ISP** Selecting your country and ISP provider from the dropdown boxes will **Provider:** automatically fill in the VPI and VCI numbers for you.

VPI Number: Enter the VPI number specified by your ISP.

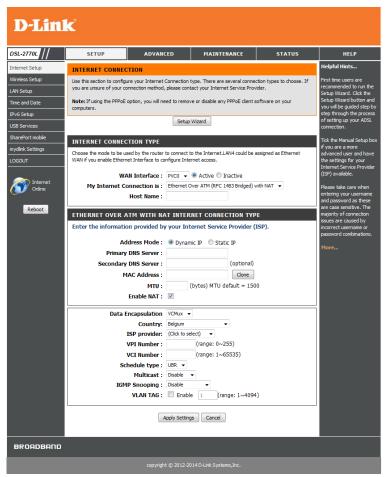
VCI Number: Enter the VCI number specified by your ISP.

Schedule type: Select UBR, CBR, VBR, or GFR based on your ISP's recommended settings.

Multicast: You can set multicast mode to Auto, IGMP v1, IGMP v2, or IGMP v3.

**IGMP Snooping:** You can enable the IGMP snooping function by checking this box.

VLAN TAG: You can enable and specify the VLAN TAG if required by your ISP.



## Setup Wizard

This Wizard will help you set up an ADSL connection.

Click Next to continue.

Enter a password for your network and verify it in the box below, the	n click
Next.	

WELCOME TO THE SETUP WIZARD
It appears that you have already successfully connected your new router to the Internet.
Step 1: Set your Password     Step 2: Select your Time Zone     Step 3: select the Internet connection type     Step 4: Save Settings and Connect     Step 5: Name your Wireless Network     Step 6: Secure your Wireless Network     Step 7: Set your Wireless Security Password     Step 8: SETUP mydlink
Prev Next Cancel Connect

STEP 1: SET YOUR PASSWORD
To secure your new networking device, please set and verify a password below:
Password :
Verify Password :
Prev. Next Cancel Connect

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

STEP 2: SELECT YOUR TIME ZONE
Select the appropriate time zone for your location. This information is required to configure the time- based options for the router.
Time Zone : (GMT +08:00) Beijing, Chongqing, Hong Kong, Urumqi 💌
Prev Next Cancel Connect

Select your Internet connection type from Ethernet Over ATM (RFC1483 Bridged) with NAT, IP over ATM(RFC 1483 Routed), PPP over Ethernet, PPP over ATM, and RFC 1483 Bridged. Click **Next**.

dged) with	Please select the Internet connection type below:
RFC 1483	Ethernet Over ATM (RFC 1483 Bridged) with NAT
	Choose this option if your ISP uses Ethernet Over ATM with NAT.
	IP over ATM (RFC 1483 Routed)
	Choose this option if your ISP uses IP over ATM.
	PPP over Ethernet
	Choose this option if your ISP uses PPP over Ethernet.
	PPP over ATM
	Choose this option if your ISP uses PPP over ATM.
	RFC 1483 Bridged
	Choose this option if your ISP uses RFC 1483 Bridged.
	Prev Next Cancel Connect

Configure some settings for your Internet Connection. See below for the description of each setting. Click **Next** when finished.

**Data** Select VCMux or LLC based on your ISP's recommended settings. **Encapsulation:** 

Country: Select your country.

**ISP Provider:** Select your ISP provider from the dropdown boxes will automatically fill in the VPI and VCI numbers for you.

VPI Number: Enter the VPI number specified by your ISP.

VCI Number: Enter the VCI number specified by your ISP.

MAC Address: Click Clone to have your computer's MAC number automatically input.

Enter a SSID name for your wireless network and click Next.

STEP 4: CONFIGURE YOUR INTERNET CONNECTION		
Data Encapsulation :	VCMux 💌	
Country:	(Click to select)	
ISP provider:	(Click to select)	
VPI Number :	(range: 0~255)	
VCI Number :	(range: 1~65535)	
MAC Address :	Clone	
Prev N	ext Cancel Connect	

STEP 5: NAME YOUR WIRELESS NETWORK	
Your wireless network needs a name so it can be easily recognized by wireless clients.	
Wireless Network Name (SSID): D-Link	
Prev. Next. Cancel Save	

Select a security option for your network from WPA, WPA2, or none. Click **Next**.

# SEEURE YOUR WIRELESS NETWORK In order to protect your network from hackers and unauthorized users, it is highly recommended you choose one of the following wireless network security settings. There are three levels of wireless network security, Etter Security, or Best Security. The level you choose depends on the security features your wireless adapters support. BEST: Image: Ima

NONE : O Select this option if you do not want to activate any security features

For information on which security features your wireless adapters support, please refer to the adapters' documentation.

Note: All wireless adapters currently support WPA.



Set a wireless security password for your network if you have selected a security option in the previous step. Click **Next**.

TEP 6: SECURE YOUR WIRELESS NETWOR						
	TER	<b>c</b> .	SECURE	VOUD	WIDELEGO	NETWORK
	IEP.	υ.	SECORE	YUUK	WINELESS	NEIWOR

in order to protect your network from hackers and unauthorized users, it is highly recommended you choose one of the following wireless network security settings.
There are three levels of wireless security -Good Security, Better Security, or Best Security. The level you choose depends on the security features your wireless adapters support.
BEST: () Select this option if your wireless adapters SUPPORT WPA2
BETTER :  Select this option if your wireless adapters SUPPORT WPA
GOOD: O Select this option if your wireless adapters DO NOT SUPPORT WPA
NONE : O Select this option if you do not want to activate any security features
or information on which security features your wireless adapters support, please refer to the adapters' documentation.
lote: All wireless adapters currently support WPA.
Prev Next Cancel Save

The Internet connection has now been established. Click **Next** to register for a mydlink account or click **Connect** to complete the setup.

Step 8: SETUP mydlink
The Internet connection had been established. If you want to register mydlink account right now, please click Next. Or you can click "Connect" to skip and setup it later.
Prev Next Cancel Connect

## Ethernet Over ATM(RFC1483 Bridged) with NAT

- Address Mode Select Static IP if your ISP assigned you an IP address, subnet mask, gateway, and DNS server address. In most cases, select Dynamic IP.
- **Primary/Secondary** Enter the Primary and secondary DNS server IP addresses assigned by **DNS Server:** your ISP.
  - MAC Address: If your ISP requires you to enter a MAC address, fill it in here. You can click the Clone MAC button to enter your current computer's MAC address.
    - **MTU:** If you experience connection issues, you may need to change the MTU setting for optimal performance with your specific ISP. 1500 is the default MTU.
    - **Enable NAT:** Check this to enable the router to use NAT to assign IP addresses for your devices.

ETHERNET OVER ATM WITH NAT INTERNET CONNECTION TYPE		
Enter the information provided by your Internet Service Provider (ISP).		
Address Mode :	Oynamic IP Static IP	
Primary DNS Server :		
Secondary DNS Server :	(optional)	
MAC Address :	Clone	
MTU :	(bytes) MTU default = 1500	
Enable NAT :	V	

## IP over ATM(RFC 1483 Routed)

- Address Mode Select Static IP if your ISP assigned you an IP address, subnet mask, gateway, and DNS server address. In most cases, select Dynamic IP.
- **Primary/Secondary** Enter the Primary and secondary DNS server IP addresses assigned by **DNS Server:** your ISP.
  - MAC Address: If your ISP requires you to enter a MAC address, fill it in here. You can click the Clone MAC button to enter your current computer's MAC address.
    - **MTU:** If you experience connection issues, you may need to change the MTU setting for optimal performance with your specific ISP. 1500 is the default MTU.
    - **Enable NAT:** Check this to enable the router to use NAT to assign IP addresses for your devices.

#### IP OVER ATM INTERNET CONNECTION TYPE

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

Address Mode : 
Dynamic IP
Static IP
Primary DNS Server :

Secondary DNS Server :

(optional)
MAC Address :

Clone
MTU :
(bytes) MTU default = 1500
Enable NAT :

### **PPP over Ethernet**

IPv6 Dualstack: Check this box to enable IPv6/IPv4 dualstack.

Username: Enter the username for your ADSL account.

- **Password/Verify** Enter the password for your ADSL account, then type it again in the **Password:** Verify Password box.
  - Service Name: You can enter a name for your service here.

IP Address: Enter the IP address assigned to you by your ISP.

- **Primary/Secondary** Enter the Primary and secondary DNS server IP addresses assigned by **DNS Server:** your ISP.
  - **MAC Address:** If your ISP requires you to enter a MAC address, fill it in here. You can click the Clone MAC button to enter your current computer's MAC address.
    - **MTU:** If you experience connection issues, you may need to change the MTU setting for optimal performance with your specific ISP. 1500 is the default MTU.
    - **Enable NAT:** Check this to enable the router to use NAT to assign IP addresses for your devices.

РРРОЕ	
Enter the information provided by	y your Internet Service Provider (ISP).
	_
IPv6 Dualstack :	Enable
Username :	
Password :	
Verify Password :	
Service Name :	(optional)
IP Address :	
Primary DNS Server :	(optional)
Secondary DNS Server :	(optional)
MAC Address :	Clone
MTU :	0 (bytes) MTU default = 1492
Enable NAT :	V

## **PPP over ATM**

**Dualstack:** Check this box to enable IPv6/IPv4 dualstack.

PPPoA Account: Enter the username for your ADSL account.

- PPPoA Password/ Enter the password for your ADSL account, then type it again in the Verify PPPoA Verify PPPoA Password box. Password:
  - Service Name: You can enter a name for your service here.

IP Address: Enter the IP address assigned to you by your ISP.

- **Primary/Secondary** Enter the Primary and secondary DNS server IP addresses assigned by **DNS Server:** your ISP.
  - **MTU:** If you experience connection issues, you may need to change the MTU setting for optimal performance with your specific ISP. 1500 is the default MTU.
  - **Enable NAT:** Check this to enable the router to use NAT to assign IP addresses for your devices.

PPP OVER ATM INTERNET CONNECTION TYPE		
Enter the information provided by your Internet Service Provider (ISP).		
Dualstack :	Enable	
PPPoA Account :		
PPPoA Password :		
Verify PPPoA Password :		
Service Name :	Clear	
IP Address :		
Primary DNS Server :		
Secondary DNS Server :		
MTU :	0 (bytes) MTU default = 1492	
Enable NAT :	V	

## **RFC1483 Bridged**

There are no extra settings to configure when you choose this option. See the ADSL Interface page to configure the settings below.

#### INTERNET CONNECTION TYPE

Choose the mode to be used by the router to connect to the Internet.LAN4 could be assigned as Ethernet WAN if you enable Ethernet Interface to configure Internet access.	
WAN Interface : My Internet Connection is : Host Name :	PVCD  Active Inactive RFC 1483 Bridged
Data Encapsulation	VCMux 💌
Country:	(Click to select)
ISP provider:	×
VPI Number :	(range: 0~255)
VCI Number :	(range: 1~65535)
Schedule type :	UBR 💌
Multicast :	Disable 💌
IGMP Snooping :	Disable
VLAN TAG :	Enable 1 (range: 1~4094)
_	

Apply Settings Cancel

## Ethernet/3G WAN Interface

If you clicked the Setup button for Ethernet/3G WAN Interface, you will see the following settings. You can click the **Setup Wizard** button to use a step-by-step wizard that guides you through configuration of your WAN settings. If you are not sure what settings to use, please contact your Internet Service Provider.

WAN Interface: Select the WAN interface to configure, and whether to enable or disable it.

**My Internet** Select Static IP, DHCP, PPoE, PPTP, L2TP, or 3G(through a USB adapter). **Connection Is:** Based on the setting you choose, the following settings will be different.

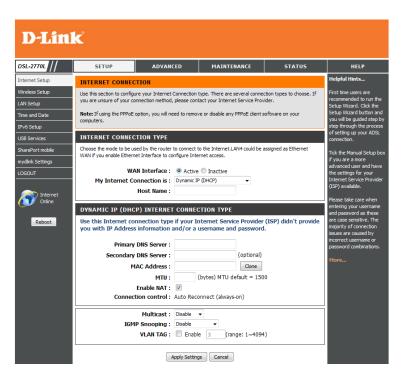
Host Name: Enter a host name to use for your connection.

The settings displayed in the middle will vary depending on what you select for the **My Internet Connection Is** setting. See the following pages for details.

**Multicast:** Select what multicast mode to use (Auto/IGMP v1/IGMP v2/IGMP v3), or if you want to disable it.

IGMP Snooping: Check this box if you want to enable IGMP Snooping.

VLAN TAG: To set a VLAN tag, check this box, then enter the VLAN TAG to use.



## Static IP

Only use Static IP if directed to by your Internet Service Provider.

**My Internet** Select **Static IP** from the drop-down menu. **Connection:** 

IP Address: Enter the IP address assigned to you by your Internet Service Provider.

Subnet Mask: Enter the subnet mask assigned to you by your Internet Service Provider.

**Default** Enter the default gateway assigned to you by your Internet Service **Gateway:** Provider.

Primary/ Enter the Primary and secondary DNS server IP addresses assigned by Secondary DNS your ISP. These addresses are usually obtained automatically from your Server: ISP. Leave at 0.0.0.0 if you did not specifically receive these from 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** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.
  - **MTU:** Maximum Transmission Unit you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU. Enter the ISP Service Name (optional).
  - **Enable NAT:** Check this box if you want the router to use NAT to provide IP addresses for your computers and devices. If this is disabled, your devices will need to get IP addresses from your ISP or configured individually.

INTERNET CONNECTION TYPE	
Choose the mode to be used by the router WAN if you enable Ethernet Interface to co	to connect to the Internet.LAN4 could be assigned as Ethernet nfigure Internet access.
WAN Interface :	Active Inactive
My Internet Connection is :	Static IP 👻
Host Name :	
STATIC IP ADDRESS INTERNET	CONNECTION TYPE
Enter the static address informati	on provided by your Internet Service Provider (ISP).
IP Address :	
Subnet Mask :	
Default Gateway :	
Primary DNS Server :	
Secondary DNS Server :	
MAC Address :	Clone
MTU :	(bytes) MTU default = 1500
Enable NAT :	V

## Dynamic IP (DHCP)

If you are unsure what method you use to connect to the Internet, try this first. Cable modems usually use this type of connection

- My Internet Select Dynamic IP (DHCP) to obtain IP Address information Connection: 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.
- **Primary/Secondary** Enter the Primary and secondary DNS server IP addresses assigned by **DNS Server:** your ISP. These addresses are usually obtained automatically from your ISP. Leave at 0.0.0.0 if you did not specifically receive these from 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** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.
    - **MTU:** Maximum Transmission Unit you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.
  - **Enable NAT:** Check this box if you want the router to use NAT to provide IP addresses for your computers and devices. If this is disabled, your devices will need to get IP addresses from your ISP or configured individually.

INTERNET CONNECTION TYPE		
Choose the mode to be used by the router to connect to the Internet.LAN4 could be assigned as Ethernet WAN if you enable Ethernet Interface to configure Internet access.		
WAN Interface :	Active Inactive	
My Internet Connection is :	Dynamic IP (DHCP) -	
Host Name :		
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.		
Primary DNS Server :		
Secondary DNS Server :	(optional)	
MAC Address :	Clone	
MTU :	(bytes) MTU default = 1500	
Enable NAT : 🗵		

## **PPPoE (Username/Password)**

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

Username: Enter your PPPoE username.

**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 assigned to you by your Internet Service Provider.

Primary/ Enter the Primary and secondary DNS server IP addresses assigned by Secondary DNS your ISP. These addresses are usually obtained automatically from your Server: ISP. Leave at 0.0.0.0 if you did not specifically receive these from 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** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.
  - **MTU:** Maximum Transmission Unit you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.
  - **Enable NAT:** Check this box if you want the router to use NAT to provide IP addresses for your computers and devices. If this is disabled, your devices will need to get IP addresses from your ISP or configured individually.

Choose the mode to be used by the router to connect to the Internet.LAN4 could be assigned as Ethernet WAN if you enable Ethernet Interface to configure Internet access.		
WAN Interface :	Active	
My Internet Connection is :	PPPoE (Username / Password)	<b>~</b>
Host Name :		
Enter the information provided by	your Internet Service Pr	rovider (ISP).
Enter the information provided by Username :	your Internet Service Pr	rovider (ISP).
	y your Internet Service Pr	rovider (ISP).
Username :	y your Internet Service Pr	rovider (ISP).
Username : Password :		rovider (ISP). optional)
Username : Password : Verify Password :		
Username : Password : Verify Password : Service Name :		
Username : Password : Verify Password : Service Name : IP Address :		optional)
Password : Verify Password : Service Name : IP Address : Primary DNS Server :		optional)

## 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.

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

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

**PPTP IP Address:** Enter the IP address assigned to you by your Internet Service Provider.

**PPTP Subnet Mask:** Enter the subnet mask assigned to you by your Internet Service Provider.

- PPTP Gateway IP Enter the Gateway IP Address provided by your Internet Service Provider. Address:
  - **PPTP Server IP** Enter the Server IP provided by your Internet Service Provider. Address:

**Username:** Enter your PPTP username.

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

INTERNET CONNECTION TYPE	
Choose the mode to be used by the router WAN if you enable Ethernet Interface to co	to connect to the Internet.LAN4 could be assigned as Ethernet nfigure Internet access.
WAN Interface :	Active Inactive
My Internet Connection is :	PPTP (Username / Password) 🔻
Host Name :	
РРТР	
Enter the information provided by	your Internet Service Provider (ISP).
Address Mode :	Oynamic IP Static IP
PPTP IP Address :	
PPTP Subnet Mask :	
PPTP Gateway IP Address :	
PPTP Server IP Address :	
Username :	
Password :	
Verify Password :	

## L2TP

Choose L2TP 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.

**My Internet** Select **L2TP (Username/Password)** from the drop-down menu. **Connection:** 

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

L2TP IP Address: Enter the IP address assigned to you by your Internet Service Provider.

- L2TP Subnet Mask: Enter the subnet mask assigned to you by your Internet Service Provider.
  - L2TP Gateway IP Enter the Gateway IP Address provided by your Internet Service Provider. Address:
    - L2TP Server IP Enter the Server IP provided by your Internet Service Provider. Address:

**Username:** Enter your L2TP username.

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

INTERNET CONNECTION TYPE	
Choose the mode to be used by the router to connect to the Internet.LAN4 could be assigned as Ethernet WAN if you enable Ethernet Interface to configure Internet access.	
WAN Interface :	Active Inactive
My Internet Connection is :	L2TP (Username / Password) 🔻
Host Name :	
L2TP	
Enter the information provided by	your Internet Service Provider (ISP).
Address Mode :	Ovnamic IP Static IP
L2TP IP Address :	
L2TP Subnet Mask :	
L2TP Gateway IP Address :	
L2TP Server IP Address :	
Username :	
Password :	
Verify Password :	

#### **3G**

IN

**3**6

These settings allow you to configure the router to share a mobile Internet connection from a connected 3G USB adapter.

**Dial-Up Profile:** Select whether to try and auto-detect your 3G settings, or to manually set them up. You can click the Auto-Detection button to try and autodetect your current settings.

**Country**/ If you selected **Manual** for **Dial-Up Profile**, you can enter your **Country**, Telecom/3G Telecom, and 3G Network to automatically fill in some of the settings **Network:** for you.

Prefer Service Type: Select whether to use 3G Only Mode, 2G Only Mode, or use Auto Mode to automatically switch between the two.

**Username:** Enter the username for your account (optional).

**Password:** Enter the password for your account (optional).

- **Dialed Number:** Enter the dial number as given to you by your Internet Service Provider.
- Authentication: If you selected Manual for Dial-Up Profile, you can set your authentication to Auto, PAP, or CHAP authentication.

**APN:** If you selected **Manual** for **Dial-Up Profile**, enter your APN here.

**PIN Code:** If you selected **Manual** for **Dial-Up Profile**, enter your PIN code here.

- **Primary/Secondary** Enter the Primary and secondary DNS server IP addresses assigned by **DNS Server:** your ISP. These addresses are usually obtained automatically from your ISP. Leave at 0.0.0.0 if you did not specifically receive these from your ISP.
  - **Keep Alive:** You can select whether you want to use a keep alive method to keep your connection active.

INTERNET CONNECTION TYPE	
Choose the mode to be used by the router to connect to the Internet.LAN4 could be assigned as Ethernet WAN if you enable Ethernet Interface to configure Internet access.	
WAN Interface :	Active Inactive
My Internet Connection is :	3G 🗸
Host Name :	
<b>3G INTERNET CONNECTION TYP</b>	
Enter the information provided by	y your Internet Service Provider (ISP).
Dial-Up Profile :	Auto-Detection
Country :	Albania 👻
Telecom :	Vodafone 👻
3G Network :	WCDMA/HSPA 🗸
Prefer Service Type :	Auto Mode 🗸
Account/Profile Name :	
Username :	(optional)
Password :	(optional)
Verify Password :	(optional)
Dialed Number :	
Authentication :	Auto 👻
APN :	(optional)
Pin Code :	
Primary DNS Server :	
Secondary DNS Server :	
Keep Alive :	Disable O Use Ping O Use LCP Echo Request
PING TEST :	Enable
	Ping Interval : 60 seconds
	Target Host or IP:
	Dackat Size, IC bytes
Facht NAT	Packet Size: 56 bytes
Enable NAT :	×.

If you select **Use Ping**, enter the ping interval and address to ping.

If you select Use LCP Echo Request, enter the lcp echo interval and lcp failure limit.

- **Ping Test:** Checking this box will enable ping testing, and you can set the ping interval, address, and packet size using the corresponding text boxes.
- **Enable NAT:** Check this box if you want the router to use NAT to provide IP addresses for your computers and devices. If this is disabled, your devices will need to get IP addresses from your ISP or configured individually.
- **Country/ISP** You can select your country and Internet Service Provider to **Provider:** automatically fill in the necessary **Multicast** and **IGMP Snooping** settings.

INTERNET CONNECTION TYPE	
Choose the mode to be used by the router WAN if you enable Ethernet Interface to co	to connect to the Internet.LAN4 could be assigned as Ethernet nfigure Internet access.
WAN Interface :	Active Inactive
My Internet Connection is :	3G 🗸
Host Name :	
20 INTERNET CONNECTION TH	
<b>3G INTERNET CONNECTION TYP</b>	-
Enter the information provided by	y your Internet Service Provider (ISP).
Dial-Up Profile :	Auto-Detection      Annual     Annual
Country :	Albania 👻
Telecom :	Vodafone 👻
3G Network :	WCDMA/HSPA -
Prefer Service Type :	Auto Mode 👻
Account/Profile Name :	
Username :	(optional)
Password :	(optional)
Verify Password :	(optional)
Dialed Number :	
Authentication :	Auto 👻
APN :	(optional)
Pin Code :	
Primary DNS Server :	
Secondary DNS Server :	
Keep Alive :	Oisable O Use Ping O Use LCP Echo Request
PING TEST :	Enable
	Ping Interval : 60 seconds
	Target Host or IP:
	Packet Size: 56 bytes
Enable NAT :	
Enable NAT :	M.

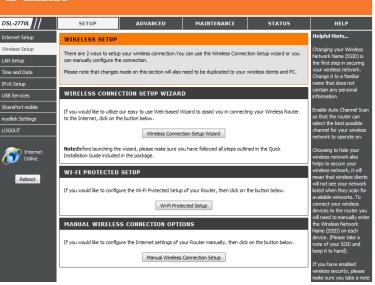
# **Wireless Settings**

If you want to configure the wireless settings on your router using a guided wizard, click **Wireless Connection Setup Wizard**.

Click **Wi-Fi Protected Setup** if you want to add a wireless device using Wi-Fi Protected Setup (WPS).

If you want to manually configure the wireless settings on your router, click **Manual Wireless Connection Setup** and refer to the next page.

#### **D-Link**



#### Wireless Connection Setup Wizard

The Wireless Connection Setup Wizard is designed to guide you through WELCOME TO THE WIRELESS SECURITY SETUP WIZARD This wizard will guide you through a step-by-step process to setup your wireless network and make it a step-by-step process to configure your wireless network. secure. Step 1: Name your Wireless Network Step 2: Secure your Wireless Network Step 3: Set your Wireless Security Password Prev Next Cancel Save Type your desired wireless network name (SSID), then click **Next**. **STEP 1: NAME YOUR WIRELESS NETWORK** Your wireless network needs a name so it can be easily recognized by wireless clients. For security purposes, it is highly recommended to change the pre-configured network name of [default]. Wireless Network Name (SSID) : DSL-2770L Prev Next Cancel Save Choose what level of wireless security you want to use. It is highly **STEP 2: SECURE YOUR WIRELESS NETWORK** In order to protect your network from hackers and unauthorized users, it is highly recommended you recommended that you select **BEST**. Click **Next** to continue. choose one of the following wireless network security settings. There are three levels of wireless security -Good Security, Better Security, or Best Security. The level you choose depends on the security features your wireless adapters support. BEST: () Select this option if your wireless adapters SUPPORT WPA2 BETTER : O Select this option if your wireless adapters SUPPORT WPA GOOD : O Select this option if your wireless adapters DO NOT SUPPORT WPA NONE : O Select this option if you do not want to activate any security features For information on which security features your wireless adapters support, please refer to the adapters' documentation Note: All wireless adapters currently support WPA. Next Cancel Prev Save Based on the level of wireless security you chose, you will need to enter a **STEP 3: SET YOUR WIRELESS SECURITY PASSWORD** Once you have selected your security level - you will need to set a wireless security password. With this password for your wireless network. Click Next to continue. password, a unique security key will be generated. Wireless Security Password : TKIP M 1234567890 Note: You will need to enter the unique security key generated into your wireless clients enable proper wireless communication - not the password you provided to create the security key. Prev Next Cancel Save Wireless setup is now complete. Click Save to save your settings and SETUP COMPLETE! Below is a detailed summary of your wireless security settings. Please print this page out, or write the complete the setup process. information on a piece of paper, so you can configure the correct settings on your wireless client adapters. Wireless Network Name (SSID) : DSL-2770L Prev Next Cancel Save

#### Wi-Fi Protected Setup

If you clicked on the Wi-Fi Protected Setup button on the Wireless Setup page, you will see this screen. The Wi-Fi Protected Setup page allows you to create a wireless connection between your router and a device automatically by simply pushing a button or entering a PIN code.

You can also use Windows 7 to do initial configuration of your router by using the **Connect to a network** wizard in Windows, and entering the WPS PIN/AP PIN of the router when prompted. After modifying any settings, click **Save Settings** to save your changes.

WPS: Select whether you would like to enable or disable WPS features.

- AP PIN (also known as WPS PIN): If you use Windows 7's Connect to a network wizard to do initial configuration of the router, you will need to enter the WPS PIN/AP PIN into the wizard when prompted. The factory default WPS PIN/AP PIN is printed on a label located on the bottom of the router. You can click the Generate New PIN button to change it to a randomly generated PIN.
  - **Config Mode:** Select whether the WPS config mode should be set to **Registrar** or **Enrollee**. In most cases, this should be set to **Registrar** so that you can use WPS to connect new wireless clients.
  - **Config Status:** If this is set to **CONFIGURED**, the router will be marked as "already configured" to computers that try to use WPS configuration, such as Windows 7's **Connect to a network** wizard. You can click the **Release** button to change the status to **UNCONFIGURED** to allow for WPS configuration of the router.
  - **Config Method:** If this is set to **UNCONFIGURED**, you can click the **Set** button to change the status to **CONFIGURED** to block WPS configuration of the router.
    - WPS Status: This lets you choose whether to use the Push Button connection method (PBC) or PIN method to connect to a wireless client when the Trigger button is clicked. If you choose the PIN method, you will need to enter an 8-digit PIN number that the wireless client need to use to connect to your router.

This will show the current WPS connection process status. Click the **Trigger** button to initiate a WPS connection.



#### **Manual Wireless Settings**

If you clicked **Manual Wireless Network Setup** on the **Wireless Settings** page, you will see this screen. Here, you can configure the wireless network settings of your router. After making your changes, click the **Save Settings** button.

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

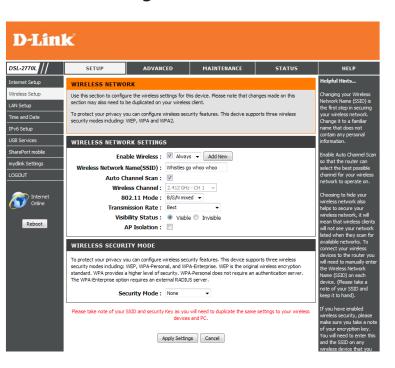
Wireless Service Set Identifier (SSID) is the name of your wireless network. Create Network a name for your wireless network using up to 32 characters. The SSID Name (SSID): is case-sensitive.

Auto Channel The Auto Channel Scan setting can be selected to allow the DSL-2770L Scan: to choose the channel with the least amount of interference.

Wireless Indicates the channel setting for the DSL-2770L. By default the channel **Channel:** is set to 6. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable **Auto Channel Scan**, this option will be greyed out.

802.11 Mode: Select one of the following:

- **B/G Mixed** Select if you are using both 802.11g and 802.11b wireless clients.
- N Only Select only if all of your wireless clients are 802.11n.
- **B/G/N Mixed** Select if you are using a mix of 802.11n, 802.11g, and 802.11b wireless clients.
- **Transmission** Select a transmission rate to use. It is recommended that you leave this **Rate:** at the default setting of **Best**.
  - Visibility Select Invisible if you do not want the SSID of your wireless network to Status: be broadcasted by the DSL-2770L. If Invisible is selected, the SSID of the DSL-2770L will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DSL-2770L in order to connect to it.
- **AP Isolation:** Enabling AP Isolation prevents wireless clients from being able to communicate with one another. This can be useful when providing an Internet connection for many wireless clients, but keeping their traffic and devices private from other users.



Wireless Here, you can select between None, WEP, WPA-Personal, and WPA-Security Enterprise. Refer to the following pages for details on configuring the Mode: different security modes. Please note that using WEP encryption will limit wireless use to 802.11g/b only, as it is incompatible with 802.11n.

#### WIRELESS SECURITY MODE

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

Security Mode : None

If you select **WEP** as your Security Mode:

Authentication: Choose what Authentication type to use.

- **WEP Encryption:** Select an encryption level and key length to use. This will also set the type and length of the key you will need to enter.
  - **Default WEP** Select which WEP key should be used as default. **Key:** 
    - WEP Key: Enter the password(key) for your wireless network. You can use the dropdown box to choose whether you want to create a password using HEX or ASCII characters. It will need to match the requirements for the WEP Key Length as shown.

#### WEP

If you choose the WEP security option this device will ONLY operate in Legacy Wireless mode (802.11B/G). This means you will NOT get 11N performance due to the fact that WEP is not supported by the 11N specification.

WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.

You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal ke using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.

Authentication :	Open 💌
WEP Encryption :	64Bit 💉
Default WEP Key :	WEP Key 1 💌
WEP Key :	HEX M 1234567890
	(5 ASCII or 10 HEX)

If you select WPA-Personal as your Security Mode:

- WPA Mode: Select whether to use WPA, WPA2, or both WPA and WPA2 for your wireless network..
- Cipher Type: Choose whether to use TKIP, AES, or both TKIP and AES ciphers for your wireless network.

**Group Key** You can set the Group Key Update Interval here, if necessary. **Update Interval:** 

Pre-Shared Enter the password(key) for your wireless network. Key:

for legacy clients while maintaining higher se cipher that the client supports will be used. AES(CCMP) cipher and legacy stations are n	ance of strong security and best compatibility. This mode uses WPA scurity with stations that are WPA2 capable. Also the strongest For best security, use <b>WPA2 Only</b> mode. This mode uses to allowed access with <b>WPA security</b> . For maximum compatibility, . Some gaming and legacy devices work only in this mode.
WPA Mode : WPA2 only Cipher Type : TKIP and AES Group Key Update Interval : 0 (seconds)	
PRE-SHARED KEY	
Enter an 8- to 63-character alphanumeric pa should not be a commonly known phrase.	ass-phrase. For good security it should be of ample length and
Pre-Shared Key :	1234567890

#### Section 3 - Configuration

If you select WPA-Enterprise as your Security Mode:

- **WPA Mode:** Select whether to use WPA, WPA2, or both WPA and WPA2 for your wireless network.
- **Cipher Type:** Choose whether to use TKIP, AES, or both TKIP and AES ciphers for your wireless network.

**Group Key** You can set the Group Key Update Interval here, if necessary. **Update Interval:** 

- Authentication Enter the authentication timeout in seconds. TImeout:
- RADIUS Server Enter your RADIUS server IP address. IP Address:
- RADIUS Server Enter your RADIUS server port. Port:

**RADIUS Server** Enter your RADIUS server shared secret. **Shared Secret:** 

#### WPA

Use WPA or WPA2 mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use WPA2 only mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use WPA Only. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode. WPA Mode : WPA2 only MPA

Cipher Type : Group Key Update Interval :		(seconds)	
EAP (802.1X)			
When WPA enterprise is enabled, via a remote RADIUS server.	the router (	ises EAP (80	2.1x) to authenticate clients
Authentication Timeout :		]	
RADIUS Server IP Address :	0.0.0.0		]
<b>RADIUS server Port :</b>	1812		
RADIUS server Shared Secret :			

# LAN Setup

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

#### **Router Settings**

This section will allow you to configure the router settings.

Router IP Address: Enter the IP address of the router. The default IP address is 192.168.1.1.

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

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



## **DHCP Server Settings (Optional)**

DHCP stands for Dynamic Host Control Protocol. The DSL-2770L 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 DSL-2770L. 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** Check this box to enable the DHCP server on your router. Uncheck to **Server:** disable this function.
- DHCP IP Address Enter the starting and ending IP addresses for the DHCP server's IP Range: assignment.

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

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

**DHCP Relay:** Check the box to allow the DSL-2770L to act as a DHCP relay.

DHCP Server IP If DHCP Relay is enabled, enter the IP address of the DHCP server to relay. Address:

DHCP SERVER SETTINGS (OPT	IONAL)
Use this section to configure the built-in DH network.	CP Server to assign IP addresses to the computers on your
Enable DHCP Server :	
DHCP IP Address Range :	50 to 199
DHCP Lease Time :	86400 (Seconds)
DHCP Relay :	
DHCP Server IP Address :	

## **Add 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.

**DHCP** Displays any reservation entries. Displays the host name (name of your **Reservations List:** computer or device), MAC Address, and IP address.

Click **Add** to create a new DHCP reservation. Select an existing reservation and click **Edit** to change its settings, or click **Delete** to remove the reservation.

Enable: After clicking Add or Edit, the following settings are available:

- **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. If you want to assign an IP address to the computer you are currently on, click the **Clone** button to automatically fill in the MAC address.
- **Dynamic DHCP** Displays a list of clients currently using dynamic DHCP and their names, **Clients:** MAC addresses, IP addresses, and reservation time remaining.

DHCP RESERVATIONS LIST			
Enable	2 M	AC Address	IP Address
	Add Edit	Delete	
ADD/EDIT DHCP R	SERVATION (OPTION	IAL)	
	Enable :		
1	P Address : 0.0.0.0		
MA	MAC Address : 00:00:00:00:00:00 Clone		
Apply Cancel			
NUMBER OF DYNAMIC DHCP CLIENTS			
Computer Name	MAC Address	IP Address	Expire Time
06955pcwinxp	00:19:B9:43:71:1E	192.168.1.50	23:56:25

## **Time and Date**

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.

Automatically When enabled, the router will automatically update its time by using synchronize with an Internet time server. Alternatively, you can disable this option and Internet time manually set the time.

- **NTP Server Used:** Enter the IP address of a NTP server or select one from the drop-down menu.
  - **Current Router** Displays the current date and time of the router. **Time:**

Time Zone: Select your Time Zone from the drop-down menu.

- **Enable Daylight** To select Daylight Saving time manually, select enabled or disabled, and **Saving:** enter a start date and an end date for daylight saving time.
- Date and Time: If Automatically synchronize with Internet time server is disabled, You can 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** to sync the date and time with the computer you are currently on.



## **IPv6**

On this page, you can configure the IPv6 Connection type and settings.

IPv6: Enable or disable IPv6 for your router.

IPv6 Connection: If you wish to use IPv6, choose your IPv6 connection type:

- Static IPv6
- DHCPv6
- PPPoE
- 6 to 4
- IPv6 in IPv4 Tunnel
- PPPoA

Based on the connection type you choose, the following settings will change. Refer to the following pages for more details.

D-Lin	k				
DSL-2770L //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Internet Setup	IPV6				Helpful Hints
Wireless Setup LAN Setup Time and Date IPv6 Setup	you are unsure of your co	nnection method, please cont	ype. There are several conne act your Internet Service Prov e or disable any PPPoE client s	rider.	If you are new to networking and have never configured a router before, click on "setup wizard" and the router will run you through a step by
USB Services	IPV6 CONNECTION	түре			step process to successfully connect you
SharePort mobile		IPv6 :   Disable	© Enable		to the internet.
mydlink Settings	IPv6	Connection : Static IPv6	•		If you consider yourself an advanced user or have
LOGOUT Internet Online Reboot	Subnet F Defa Primary Secondary	Pv6 Address : refix Length : ult Gateway : DNS Address : SS SETTINGS Pv6 Address :		/64	avvitacu Jaco V nav configured a notice before, dot. Stoph al the settings manually. More
		ONFIGURATION SETTI	NGS		
	Autoc	onfiguration : O Disab uration Type : Stateless	e  Enable Feconds		

#### Static IPv6

IPv6 Address: Enter the address settings supplied by your Internet provider (ISP).

Subnet Prefix Enter a subnet prefix length. Length:

**Default Gateway:** Enter the default gateway for your IPv6 connection.

Primary/ Enter the primary and secondary DNS server addresses. Secondary DNS Address:

LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.

LAN Link-Local Displays the router's LAN Link-Local Address. Address:

Autoconfiguration: Enable or disable the autoconfiguration feature.

Autoconfiguration Choose either Stateless or Stateful(DHCPv6) from the drop-down Type: menu.

Router Enter the IPv6 Address Lifetime (in minutes). Advertisement Lifetime:

IPV6 CONNECTION TYPE	
IPv6 : IPv6 Connection :	O Disable      Enable     Static IPv6     ▼
WAN IPV6 ADDRESS SETTINGS	
IPv6 Address : Subnet Prefix Length : Default Gateway : Primary DNS Address : Secondary DNS Address :	
LAN IPV6 ADDRESS SETTINGS	
LAN IPv6 Address : LAN IPv6 Link-Local Address :	/64
ADDRESS AUTOCONFIGURATIO	N SETTINGS
Autoconfiguration : Autoconfiguration Type : Router Advertisement Lifetime :	Stateless -

## DHCPv6

- Primary/Secondary Enter the primary and secondary DNS server addresses. DNS Address:
- LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.
  - LAN Link-Local Displays the router's LAN Link-Local Address. Address:
- Autoconfiguration: Enable or disable the autoconfiguration feature.
- Autoconfiguration Choose either Stateless or Stateful(DHCPv6) from the drop-down Type: menu.

Router Enter the IPv6 Address Lifetime (in minutes). Advertisement Lifetime:Link-Local Address:

IPV6 CONNECTION TYPE		
IPv6 :		
IPV6 DNS SETTINGS		
DNS Setting : Primary DNS Address : Secondary DNS Address :	<ul> <li>Obtain DNS Server address Automatically</li> <li>Use the following DNS address</li> </ul>	]
LAN IPV6 ADDRESS SETTINGS		
LAN IPv6 Address : LAN IPv6 Link-Local Address :		/64
ADDRESS AUTOCONFIGURATION	N SETTINGS	
Autoconfiguration : Autoconfiguration Type : Router Advertisement Lifetime :		

## PPPoE

**Username:** Enter your PPPoE user name.

Password: Enter your PPPoE password.

Service Name: Enter the ISP Service Name.

- **MTU:** Maximum Transmission Unit you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.
- LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.
  - LAN Link-Local Displays the router's LAN Link-Local Address. Address:
- Autoconfiguration: Enable or disable the autoconfiguration feature.
- Autoconfiguration Choose either Stateless or Stateful(DHCPv6) from the drop-down Type: menu.

Router Enter the IPv6 Address Lifetime (in minutes). Advertisement Lifetime:Link-Local Address:

IPV6 CONNECTION TYPE	
IPv6 : IPv6 Connection :	Disable      Enable     PPPoE     ✓
PPPOE SETTINGS	
Username : Password : Service Name : MTU :	
LAN IPV6 ADDRESS SETTINGS	
LAN IPv6 Address : LAN IPv6 Link-Local Address :	/64
ADDRESS AUTOCONFIGURATION	ISETTINGS
Autoconfiguration : Autoconfiguration Type : Router Advertisement Lifetime :	Stateless -

## 6 to 4

6 to 4 Address: Your 6 to 4 address will be shown here.

- Primary/Secondary Enter the primary and secondary DNS server addresses. DNS Address:
- LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.
  - LAN Link-Local Displays the router's LAN Link-Local Address. Address:
- Autoconfiguration: Enable or disable the autoconfiguration feature.
- Autoconfiguration Choose either Stateless or Stateful(DHCPv6) from the drop-down Type: menu.

Router Enter the IPv6 Address Lifetime (in minutes). Advertisement Lifetime:Link-Local Address:

IPV6 CONNECTION TYPE	
IPv6 :      Disable      Enable IPv6 Connection : 6 to 4	
6 TO 4 SETTINGS	
6 to 4 Address : Primary DNS Address : Secondary DNS Address :	
LAN IPV6 ADDRESS SETTINGS	
LAN IPv6 Address : LAN IPv6 Link-Local Address :	/64
ADDRESS AUTOCONFIGURATION SETTINGS	
Autoconfiguration : Disable Disable Enable Autoconfiguration Type : Stateless Router Advertisement Lifetime : 200 Seconds	

#### IPv6 in IPv4 Tunneling

**Remote IPv4** Enter the IPv4 remote address you will use. Address:

- Local IPv4 Address: Enter the IPv4 local address you will use.
- Local IPv6 Address: Enter the IPv6 local address you will use.
- Primary/Secondary Enter the primary and secondary DNS server addresses. DNS Address:
- LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.
  - LAN Link-Local Displays the router's LAN Link-Local Address. Address:
- Autoconfiguration: Enable or disable the autoconfiguration feature.
- Autoconfiguration Choose either Stateless or Stateful(DHCPv6) from the drop-down Type: menu.

Router Enter the IPv6 Address Lifetime (in minutes). Advertisement Lifetime:

	sable ◎ Enable n IPv4 Tunnel   ▼
IPV6 IN IPV4 TUNNEL SETTINGS	
Remote IPv4 Address: 0.0.	187.0
Local IPv4 Address : 0.0.	255.3
Local IPv6 Address :	/64
Primary DNS Address :	
Secondary DNS Address :	
LAN IPV6 ADDRESS SETTINGS	
LAN IPv6 Address :	/64
LAN IPv6 Link-Local Address :	
ADDRESS AUTOCONFIGURATION SE	TTINGS
Autoconfiguration : 🔘 [	isable 🖲 Enable
Autoconfiguration Type : Stat	eless 🗸
Router Advertisement Lifetime : 200	Seconds

## PPPoA

Username: Enter your PPPoA user name.

Password: Enter your PPPoA password.

Service Name: Enter the ISP Service Name.

- **MTU:** Maximum Transmission Unit you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.
- LAN IPv6 Address: Enter the LAN (local) IPv6 address for the router.
  - LAN Link-Local Displays the router's LAN Link-Local Address. Address:
- Autoconfiguration: Enable or disable the autoconfiguration feature.
- Autoconfiguration Choose either Stateless or Stateful(DHCPv6) from the drop-down Type: menu.

Router Enter the IPv6 Address Lifetime (in minutes). Advertisement Lifetime:

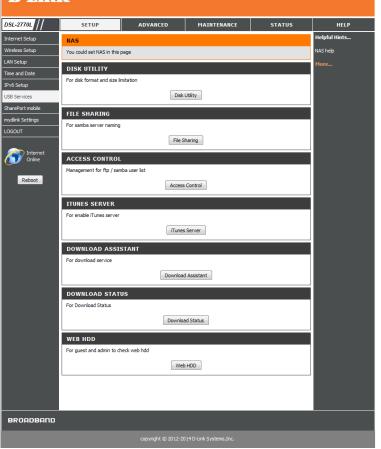
IPV6 CONNECTION TYPE					
	● Disable PPPoA				
PPPOA SETTINGS					
Username : Password : Service Name : MTU :					
LAN IPV6 ADDRESS SETTINGS					
LAN IPv6 Address : LAN IPv6 Link-Local Address :	/64				
ADDRESS AUTOCONFIGURATION	N SETTINGS				
Autoconfiguration : Autoconfiguration Type : Router Advertisement Lifetime :					

# **USB Services**

From this screen, you can set up various settings related to sharing files on a USB storage drive plugged into the DSL-2770L.

- Disk Utility: Click the Disk Utility button for settings on formatting and checking a connected USB storage drive, and to view its current usage and capacity.
- File Sharing: Click the File Sharing button for settings used for sharing a connected USB storage drive on your network through SAMBA.
- Access Control: Click the Access Control button for settings on creating and modifying user accounts to control file access to the attached USB storage drive.
- **iTunes Server:** Click the **iTunes Server** button for settings for the iTunes server function of the DSL-2770L.
  - **Download** Click the **Download Assistant** button to add new automated download **Assistant:** tasks.
- **Download Status:** Click the **Download Status** button to manage your download tasks.
  - Web HDD: Click the Web HDD button to access and manage files stored on your USB storage drive through your web browser.

#### **D-Link**



## **Disk Utility**

If you click Disk Utility on the NAS page, these settings will appear. Here, you can format and check a connected USB storage drive, and view its current usage and capacity.

**Format This** Click this button to format the attached USB storage drive and prepare **Partition:** it for use. The drive will be formatted using the EXT3 file system.

**Warning**: Formatting your drive will delete all files and folders stored on it.

**Check This** This will check the drive for errors. Please note that the drive must use **Partition:** the EXT3 file system in order to be checked.

**Disk Total** This shows the full capacity of the USB storage drive. **Capacity:** 

D-Linl	K					
DSL-2770L //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
Internet Setup	NAS				Helpful Hints	
Wireless Setup	You could set NAS in this p	age			NAS help	
LAN Setup					More	
Time and Date	DISK DISTRIBUTION					
IPv6 Setup	Format This Partition : Format					
USB Services						
SharePort mobile	Disk Total Capacity = 4057 MB					
mydlink Settings	Partition	Free(MB)	Used(MB)	Total(MB)		
LOGOUT	1 [FAT32]	1636	2220	3857		
Online Reboot		*Warning! Formatting will er	ase all data on this partition.			

## **File Sharing**

If you click File Sharing on the NAS page, these settings will appear. Here you can adjust the settings for sharing your USB storage over a network through SAMBA. If you click the **FTP Service Configuration** button, you can adjust the FTP server settings.

**Computer Name:** Enter the name used to identify the USB drive on the network.

**WorkGroup:** Enter the network workgroup to join for the USB drive.

Server Comment: Enter a comment to identify the USB drive on the network.



**FTP:** Select whether you want to enable or disable the FTP server function.

FTP Port: Set the port you want to use for the FTP server.

**FTP Max** Set the maximum allowable connections per IP. **Connection per IP:** 

**FTP MAX Clients:** Set the maximum number of clients allowed to connect to the FTP server at one time.

Client Support Select whether to support Unicode. UTF8:

**Codepage:** Select which language to use for the FTP server.

FTP Port: 21 FTP Max Connection per IP: 2 • FTP MAX Clients: 5 • Client Support UTF8: O Yes O No Codepage: Arabic(CP864) •	FTP :	🖲 Enable 🔘 Disable
FTP MAX Clients : 5 - Client Support UTF8 : O Yes O No	FTP Port :	21
Client Support UTF8 : O Yes O No	FTP Max Connection per IP :	2 🗸
	FTP MAX Clients :	5 👻
Codepage : Arabic(CP864)	Client Support UTF8 :	🔘 Yes 🖲 No
	Codepage :	Arabic(CP864) 👻

## **Access Control**

If you click Access Control on the NAS page, these settings will appear. Here you can adjust the settings for sharing your USB storage over a network through SAMBA.

Security Level: Selecting Guest mode will allow all users to access files on the USB storage drive. Selecting Authorization mode will require users to enter a username and password in order to access files on the USB drive.

To set up user accounts for Authorization mode, click the **User Configuration** button.

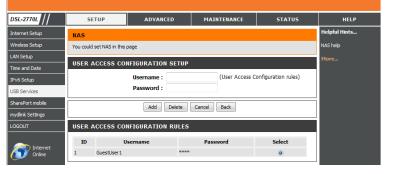


After clicking the User Configuration button, these settings will appear:

**Username**/ Enter a **Username** and **Password** for an account and click the **Add Password:** button to create a new user.

You can also select an existing user and click **Delete** to remove it.

#### D-Link



#### **iTunes Server**

If you click iTunes Server on the NAS page, these settings will appear. Here you can adjust the settings for the iTunes server function.

Service: Select whether to enable or disable the iTunes server feature.

Service Name: Enter a name to identify your iTunes server.

Service Port: Enter which port to use for the service.

Access Password: If you wish to protect access your files with a password, enter it here.



#### **Download Assistant**

If you click Download Assistant on the NAS page, these settings will appear. Here you can set up download tasks for the DSL-2770L to run and download to the USB storage.

**Download Type:** Select which type of download you want to add. If you select **FTP**, you will see these settings.

Job Name: Enter a name to identify the download job.

URL: Enter the full FTP address and port of the file you want to download.

Save To: Enter the path you want to save the file to.

- **Login Method:** Select whether to connect to the FTP server anonymously or to use a login account.
  - **Username**/ If you select **Account** for your **Login Method**, enter the username and **Password**: password for the FTP account.
  - Start Time: You can choose to start the download task immediately by selecting At Once, or you can select Schedule and select a date and time to start the download task.

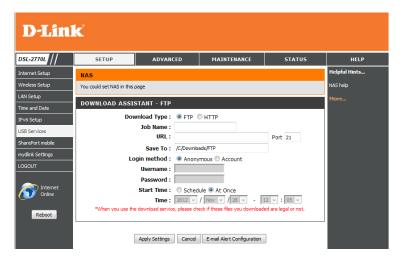
Download Type: If you select HTTP, you will see these settings.

Job Name: Enter a name to identify the download job.

URL: Enter the full FTP address and port of the file you want to download.

Save To: Enter the path you want to save the file to.

Start Time: You can choose to start the download task immediately by selecting At Once, or you can select Schedule and select a date and time to start the download task.



DOWNLOAD ASSISTANT - HTT	P
Download Type : Job Name : URL :	© FTP ® HTTP
Save To :	/C/Downloads/HTTP
Time :	
Apply Settings	Cancel E-mail Alert Configuration

#### Clicking the E-mail Alert Configuration button shows these settings:

**HTTP/FTP** Select whether you want to enable e-mail alerts when a file is transferred **download alert:** over HTTP/FTP.

- **SMTP Server** Enter the SMTP address of the e-mail account you want to send **Address:** notifications from.
- **SMTP Server Port:** Enter the SMTP port of the e-mail account you want to send notifications from.
- **SMTP UserName**/ Enter the username and password for the e-mail account you want to **Password:** send notifications from.

**Email Address:** Enter the e-mail address you want your notifications to be sent to.

Email Subject: Enter the subject to use for your e-mail notifications.

HTTP download alert :	🔘 Enable 🖲 Disable
FTP download alert :	Enable Oisable
SMTP Server Address :	
SMTP Server Port :	
SMTP UserName :	
SMTP Password :	
Email Address :	
Email Subject :	
	Test E-mail

## **Download Status**

If you click Download Status on the NAS page, these settings will appear. Here you can view and manage the download tasks of the DSL-2770L. After selecting a task, you can click **Pause/Resume** to pause and resume a download, or you can click **Start Now** to start the download task.

D-Linl	k				
DSL-2770L //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Internet Setup	NAS				Helpful Hints
Wireless Setup	You could set NAS in this page				NAS help
LAN Setup	DOWNLOAD ASSISTANT - JOB LIST				More
Time and Date					
IPv6 Setup	There are <b>0</b> downlo View Running (0 Job	s) - Download St	tatus		
USB Services					
SharePort mobile					
mydlink Settings	Туре	Name	Status		
LOGOUT					
Internet Online		Pause Resume	Start Now download jobs in t	he list.	

## Web HDD

If you click Web HDD on the NAS page, you can see the folders and files stored on your USB drive. Click on a folder to open it, or click the **Back** button to up a directory. Click **Upload** to upload a file to the current folder, or click a file to select it, then click **Download** to download the file to your computer, or click **Delete** to delete it from the storage drive. Click the **Add Folder** button and enter a folder name to create a new folder in the current folder.

D-Lin	ĸ				
DSL-2770L //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Internet Setup	NAS				Helpful Hints
Wireless Setup	You could set NAS in this p	bage			NAS help
LAN Setup	You can download /u	upload files on Web HD	D.		More
Time and Date	Back Current location	on: /			
IPv6 Setup	SNAPSHOT				
USB Services	D-Link Videos	,			
SharePort mobile		-			
mydlink Settings	Music Music				
LOGOUT	Upload Download	Add Folder Delete	]		

## **SharePort Mobile**

This page will allow you to set up access to files on an external USB storage drive<sup>1</sup> that is plugged into the router. You can do this through local network or from the Internet using either a web browser or an app on your smartphone or tablet. You can create users that can be allowed access to these files through SharePort Mobile services accessible through a web UI or on mobile devices using the SharePort Mobile app available for iOS and Android.

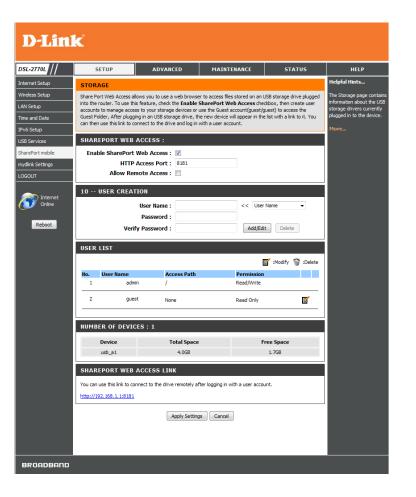
- **Enable SharePort** Check this box if you wish to be able to access SharePort through a **Web Access** browser as well as the mobile app.
- **HTTP Access Port:** Enter the port you want to use when accessing SharePort using a web browser.
  - Allow Remote Check this box if you wish to be able to access SharePort through a web Access: browser over the Internet.
  - **User Creation:** To give a new user access to your SharePort storage, enter a User Name and Password here. You can Add new users or choose existing users from the drop-down menu if you wish to Edit or Delete them.

**Note**: The Admin password is the same as the admin password for the router. The Guest password is **guest** and cannot be changed.

**User List:** This list displays all of the users with access to the SharePort Mobile content, what they can access, and their Read/Write Permissions. Click on the edit icon at the right to change home folder and access rights for the user.

Number of Devices: All devices you have set up for SharePort access will be listed here.

**SharePort Web** This area will display the links to connect to your SharePort drive **Access Link:** through a web browser from a device on your network.



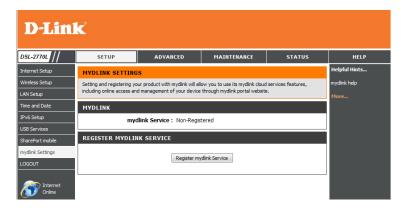
<sup>1</sup> Supports capacities of up to 1 TB for USB storage drives.

# mydlink Settings

Devices that are mydlink-enabled can be accessed and managed through the mydlink website and by using mydlink mobile apps for iOS and Android. You cannot take advantage of these features without a mydlink account. If you have a mydlink account already, you can log in when you first set up the router, or by visitng this setup page.

**mydlink Service:** Displays whether your device is registered with a mydlink account or not.

Register mydlink Click to go to open a wizard that will guide you through the process Service: of registering your device to your mydlink account. If you don't have a mydlink account yet, you will be able to create one.



# Advanced Virtual Server

This will allow you to forward a single port or a range of ports to a specific PC or device on your network.

**D-Link** DSL-2770L SETUP ADVANCED MAINTENANCE STATUS VIRTUAL SERVER VIRTUAL SERVER Application Rules This is the ability to open ports in your router and re-direct data through those ports to a single PC on your eck the App me drop down m st of predefined QoS Setup lications. If not yo Well known services -- select one -- - Copy to ID -- inbound Filter Use schedule rule ---ALWAYS ON--- -/ireless Filter VIRTUAL SERVERS LIST ID Service Ports Server IP : Port Enable Schedule Rule# Advanced Internel Add New Rule... Advanced LAN Add New Rule... SNMP Setup Add New Rule... lemote Manag 4 Add New Rule... Budget Quota 5 Add New Rule... LOGOUT 6 Add New Rule... Interne Online Add New Rule... Reboot 8 Add New Rule..

You can automatically fill information required for some commonly used services by using the **Well known services** dropdown box at the top, selecting a rule **ID** to copy the information to, selecting a schedule rule if desired, then clicking the **Copy to** button.

Service Ports: Enter the external port(s) that you want to forward.

Server IP : Port: Enter the IP address and ports of the computer on your local network that you want to forward the specified (external) Service Ports to.

You can enter a single port or a range of ports. Separate ports with a common. Example: 24,1009,3000-4000

Enable: Check this box to enable the rule.

Schedule Rule#: Enter the schedule rule number that you want to apply to this port forwarding rule. You can create a new schedule by clicking the Add New Rule... button, or you can leave it blank to allow the rule to be always on.

For more details on creating schedule rules, refer to "Schedules" on page 85

# **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 DSL-2770L. 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.

You can automatically fill information required for some commonly used services by using the **Popular applications** dropdown box at the top, selecting a rule **ID** to copy the information to, then clicking the **Copy to** button.

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

Enable: Check this box to enable the rule.

#### **D-Link** DSL-2770L SETUP ADVANCED MATNTENANCE STATUS HELP PLICATION BULES Application Rules This option is used to pre-configure single or multiple trigger ports on your router that will automatically activat when the router senses data sent to the Internet from one of these applications Outbound Filter Popular applications -- select one -- - Copy to ID -- -Inbound Filter APPLICATION RULES Vireless Filter DDNS Setup Enable ID ncoming Port ewall & DMZ 1 Advanced Interne 2 3 dvanced LAN 4 5 SNMP Setup 6 7 8 v6 Firewall 9 10 DGOUT 11 12 Interne Online Apply Settings Cancel

# **QoS Engine**

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

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

WAN Interface: Select which WAN interface to adjust the QoS settings for.

Bandwidth of Enter the upstream bandwidth for your Internet connection. Upstream:

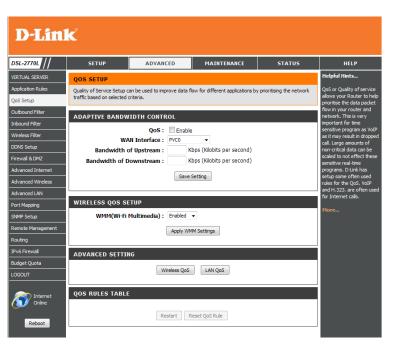
Bandwidth of Enter the downstream bandwidth for your Internet Connection Downstream:

**WMM(Wi-Fi** Select whether you wish to enable the WMM feature, then click the **Multimedia**) **Apply WMM Settings** button.

Wireless QoS: Click on this button to add a Wireless QoS rule.

LAN QoS: Click on this button to add a LAN QoS rule.

**QoS Rules Table:** This shows a list of your current QoS rules. You can check or uncheck a rule to enable or disable it, or you can click on the **X** next to the rule to delete it.



If you clicked on **Wireless QoS** or **LAN QoS**, you will see these settings. If you want to create a compound rule(for TCPPORT, UDPPORT, or TOS only), click the **Add A Conjunction (AND) Rule** button.

Rule: Check the box if you want the rule to be enabled.

**Class/Class Info:** Select what criteria the rule should apply to, and enter the relevant criteria in the **Class Info** text box.

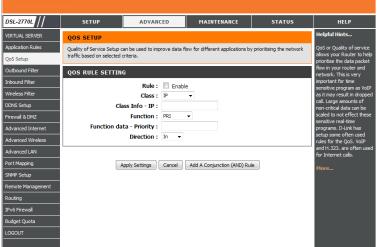
• IP: IP address • TCPPORT: TCP port • UDPPORT: UDP port • MAC: MAC address • DSCP: DSCP name • TOS: Type of service

**Function/Function** Based on the Class selected, enter what you want the rule to apply to **data:** and enter the relevant information in the **Function data** text box. For example, for TCPPORT, you should enter the TCP port the rule should apply to.

- PRI: Set priority level
- MAXR: Set maximum bandwidth rate
- MINR: Set minimum bandwidth rate
- **SESSION**: Set connection session
- **DROP**: Drop the packet
- LOG: Log the event
- ALERT: Create an alert event

**Direction:** Set which traffic direction the rule should apply to.

#### **D**-Link



## **Outbound Filters**

The Outbound Filter option is an advanced method of controlling data sent out to the Internet. With this feature you can configure outbound data filtering rules that control data based on an IP address range. Select whether to **Allow** all traffic specified by your rules to pass, or to **Deny** all traffic specified by your rules.

**Source IP:Ports:** Enter the starting IP address and ports from your network. Enter 0.0.0.0 if you do not want to specify an IP range.

**Destination** Enter the ending IP address and ports outside your network. Enter IP:Ports: 255.255.255.255 if you do not want to specify and IP range.

Enable: Check this box to enable the rule.

Schedule Rule#: Enter the schedule rule number that you want to apply to this port forwarding rule. You can create a new schedule by clicking the Add New Rule... button, or you can leave it blank to allow the rule to be always on.

For more details on creating schedule rules, refer to "Schedules" on page 85



## **Inbound Filters**

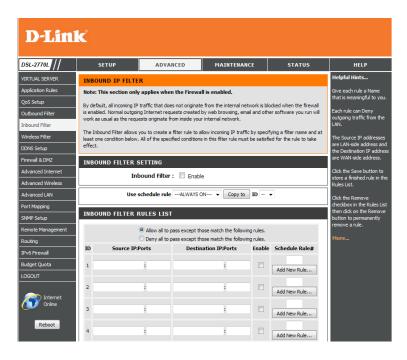
The Inbound Filter option is an advanced method of controlling data received from the Internet. With this feature you can configure inbound data filtering rules that control data based on an IP address range. Select whether to **Allow** all traffic specified by your rules to pass, or to **Deny** all traffic specified by your rules.

- **Source IP:Ports:** Enter the starting IP address and ports from outside your network. Enter 0.0.0.0 if you do not want to specify an IP range.
  - **Destination** Enter the ending IP address and ports inside your network. Enter IP:Ports: 255.255.255.255 if you do not want to specify and IP range.

Enable: Check this box to enable the rule.

Schedule Rule#: Enter the schedule rule number that you want to apply to this port forwarding rule. You can create a new schedule by clicking the Add New Rule... button, or you can leave it blank to allow the rule to be always on.

For more details on creating schedule rules, refer to "Schedules" on page 85



## **Wireless Filter**

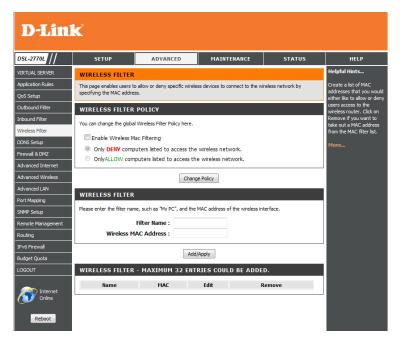
The Wireless Filter feature allows you to limit wireless access to your network based on a device's MAC address.

**Enable Wireless** Check this box to enable wireless filtering by MAC address. Select **Mac Filtering:** whether to **Allow** access to all computers specified, or to **Deny** access to all computers specified.

Filter Name: Enter a name for the filter rule.

Wireless MAC Enter the MAC address of the wireless device you want to filter. Address:

Click the **Add/Apply** button to save your changes and apply your settings.



## **DNS Setup**

The DDNS feature allows you to host a server (Web, FTP, or Game Server) using a domain name that you have purchased (such as www.exampledomain.com) with your dynamically assigned IP address. You can use one of the listed DDNS service, or you can sign up for D-Link's free DDNS service at **www.dlinkddns.com**. After modifying any settings, click **Save Settings** to save your changes.

**DDNS:** Tick this checkbox to enable the DDNS feature.

Provider: Select a DDNS service provider to use.

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

Username / E-mail: Enter the Username for your DDNS account.

Password / Key: Enter the Password for your DDNS account.

## **Firewall & DMZ**

A firewall protects your network from the outside world. The DSL-2770L offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

- **Enable SPI:** SPI (Stateful Packet Inspection, also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.
- **Enable DMZ:** If an application has trouble working from behind the router, you can expose one computer to the Internet and run the application on that computer.

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

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



#### **Advanced Internet**

This screen lets you add or remove PVC settings and select your ADSL mode. It is recommended that you only change settings on this page as directed by your service provider.

Multiple PVC This shows you your current PVC settings. You can click the Add button Settings: to add a new PVC setting, click the Edit button for a PVC setting to edit it, or tick the checkbox next to a setting and click Delete to remove it.

Advanced ADSL Select which ADSL mode to use. Settings:



#### **Advanced Wireless**

This page allows you to change some of the advanced wireless settings of the DSL-2770L. It is recommended that you only change these settings if you are familiar with their functions and proper settings, or are instructed to do so.

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

Transmit Power: Set the transmit power of the antennas.

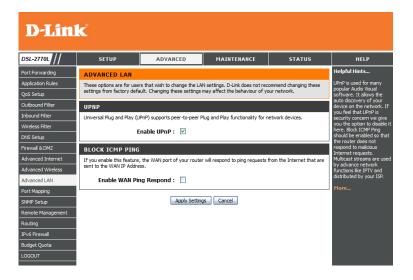
- **RTS Threshold:** This value should remain at its default setting of 2347. If inconsistent data flow is a problem, only a minor modification should be made.
- **Fragmentation:** The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.
- **DTIM Interval:** Set the interval for DTIM. A Delivery Traffic Indication Message (DTIM) is a countdown informing clients of the next window for listening to broadcast and multicast messages. The default interval is 3.
- **WMM Capable:** WMM (Wi-Fi Multimedia) is a QoS (Quality of Service) system for your wireless network. Enable this option to improve the quality of video and voice applications for your wireless clients.
  - **TX Rates:** Select the basic transfer rates based on the speed of wireless adapters on your wireless network. It is strongly recommended to keep this setting to Auto.
- Guest Wireless Here, you can set up a Wireless Guest Network, which will provide access Settings: to the Internet, but not to your network devices. To use this feature, tick the Enable Wireless Guest Network checkbox. For more details, refer to "Wireless Settings" on page 34.

SL-2770L	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
IRTUAL SERVER	ADVANCE WIRELE	ss			Helpful Hints
pplication Rules			haviour of their 802.11g wirele		By default these options
loS Setup			these settings from the factor adio. The default settings shou		need not to be changed for this router to operate
Outbound Filter	wireless radio performanc	e in most environments.			with Wireless.For the option Transmit Power is
nbound Filter	ADVANCED WIREL	ESS SETTINGS			the radio signal strength. You will need to decrease
Vireless Filter		on Interval : 100	(msec, range:1~1000, de	fult: 100)	the power if you add a
DNS Setup		smit Power : 100% -	(insec, lange.1.º1000, de	aut. 100)	new high gain antenna, a this will exceed operating
irewall & DMZ		S Threshold : 2347	(1~2347)		limits.
dvanced Internet	Fra	gmentation : 2346	(256~2346, default 2346,	even number only)	More
dvanced Wireless	DI	IM Interval : 1	(range: 1~255)		
dvanced LAN	v	/MM Capable 💿 Enab	le 🔘 Disable		
ort Mapping		TX Rates :			
NMP Setup	GUEST WIRELESS	SETTINGS			
emote Management	Enable Wireless Gue	st Notwork : 🕅			
outing		ame (SSID) : D-Link DSL	-2770L Gues		
Pv6 Firewall		ility Status :  Visible			
udget Quota		AP Isolation : Off -			
DGOUT					
0.00	WIRELESS SECUR				
Internet Online		ou can configure wireless sec WEP, WPA, WPA2 and Auto.	urity features. This device sup	ports three wireless	
	The WEP mode is the orig	inal wireless encryption stand	lard.WPA provides a higher lev	el of security.	
Reboot	The WEP mode is the original wireless encryption standard./WPA provides a higher level of security. For maximum compatibility, use WPA.This mode uses TICP coher.Some gaming and legacy devices work only in this mode. For best security, use WPA2 mode. This mode uses ASE(CONE) opher and legacy stations are not allowed access with WPA security. Use Auto(WPA or WPA2) mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 agabe. Also the strongest cipher that the ident supports will be used				
	To achieve better wireless	performance use WPA2 sec	urity mode (or in other words	AES cipher).	
	Se	curity Mode : None	•		
		Apply Setting	gs Cancel		

#### **Advanced LAN**

Advanced LAN contains settings which can change the way the router handles certain types of traffic. We recommend that you do not change any of these settings unless you are already familiar with them or have been instructed to make the change by one of our support personnel. After modifying any settings, click **Save Settings** to save your changes.

- **Enable UPnP:** Tick this checkbox to use the Universal Plug and Play (UPnP<sup>™</sup>) feature. UPNP provides compatibility with various networking equipment, software, and peripherals.
- **Enable WAN Ping** Select the box to allow the WAN port to be "pinged." Blocking WAN **Respond:** pings may provide some extra security from hackers.



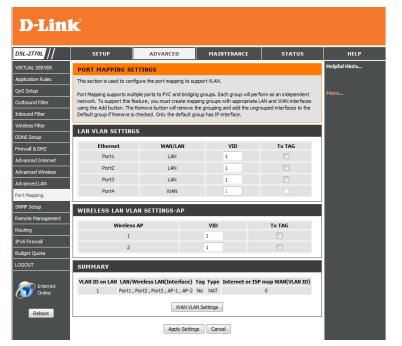
#### **Port Mapping**

This page allows you to configure port mapping settings for both the Ethernet ports and wireless APs.

LAN VLAN Settings: Enter the VID you want to use for each Ethernet port, as well as whether you want to apply Tx tagging for the port.

Wireless LAN VLAN Enter the VID you want to use for each wireless AP, as well as whether Settings-AP: you want to apply Tx tagging for the port.

WAN VLAN Click this button to configure settings for each VID. Settings:



If you click on <sup>·</sup>	the <b>WAN</b>	VLAN S	<b>Settings</b>	button,	these	settings w	/ill
appear:							

VID: Enter the VID you want to edit.

Routing Type: Select what routing type to use, NAT or Bridge.

DHCP Setting: If you select NAT, this will be DHCP by default.

WAN Type: If you select Bridge, select which WAN to use.

WAN Map VLAN ID: If you select Bridge, enter the VLAN ID to use.

VLAN SETTINGS :				
VID :	1 -			
Routing Type :	Bridge 🖵			
WAN type :	Ethernet 👻			
WAN Map VLAN ID :	0 (0 is untag)			
4	Apply Settings Cancel			

#### **SNMP Setup**

This page allows you to configure the SNMP settings for remote management of this device.

SNMP Local: Set whether you want to enable local SNMP access for the router.

**SNMP Remote:** Set whether you want to enable remote SNMP access for the router.

Get Community: Enter the community that the router will respond to for GetRequests.

Set Community: Enter the community that the router will accept for SetRequests.

IP 1/2/3/4: Enter the IP addresses of the PCs you will use for SNMP management.

**SNMP Version:** Enter the SNMP version to use.

WAN Access IP If you want to limit SNMP access to a specific PC/IP address only, enter Address: the IP address here. By default, this is set to 0.0.0.0 and allows any computer to have SNMP access.

#### **D-Link**

DSL-2770L //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
VIRTUAL SERVER	SNMP				Helpful Hints
Application Rules	Simple Network Managem	ieve statistics and status	Provides a means to		
QoS Setup	from the SNMP agent in t	monitor status and performance as well as set			
Outbound Filter	Select the desired values	configuration parameters.			
Inbound Filter	SNMP		More		
Wireless Filter		SNMP Local :   Enabl	ad   Displad		
DDNS Setup		MP Remote :   Finable			
Firewall & DMZ	Get	Community :			
Advanced Internet	Set	Community :			
Advanced Wireless		IP 1:			
Advanced LAN		IP 2 :			
Port Mapping		IP 3 :			
SNMP Setup		IP 4 :			
Remote Management		IMP Version :   V1	V2c		
Routing	WAN Access	IP Address :			
IPv6 Firewall		Apply Setting	IS Cancel		
Budget Quota		Apply Setung	Lancer		
LOGOUT					

#### **Remote Management**

This page allows you to configure the remote management settings of this device.

**Enable Remote** Tick this box to enable remote management. This will allow you to **Management:** access the web configuration interface remotely through the Internet. This may require you to know your IP address or set up DDNS.

IP Allowed to Enter the IP address you want to allow remote access from. By default, Access: this is set to 0.0.0.0, which will allow access any computer on the Internet.

**Port:** Set which port you want to use for remote access.

#### **D-Link** DSL-2770L SETUP ADVANCED MAINTENANCE STATUS HELP REMOTE MANAGEMENT Application Rules 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 settinas. Dutbound Filter **REMOTE MANAGEMENT** Enable Remote Management : 🔲 Enabled Wireless Filter IP Allowed to Access : DDNS Setup Port : Manual 🕚 Firewall & DMZ Advanced Wir Apply Settings Cancel dvanced LAN ort Mapping MP Setup /6 Firewal daet Ount

### Routing

The Routing page allows you to specify custom routes that determine how data is moved around your network. After modifying any settings, click **Save Settings** to save your changes.

- **RIP:** Select this box to enable routing, then select which routing protocol to use:
  - **RIPv1**: Protocol in which the IP address is routed through the internet.
  - **RIPv2**: Enhanced version of RIPv1 with added features such as Authentication, Routing Domain, Next Hop Forwarding, and Subnet-mask Exchange.
- ID: This identifies the rule.
- **Destination:** Enter in the IP of the specified network that you want to access using the static route.
- Subnet Mask: Enter in the subnet mask to be used for the specified network.

Gateway: Enter in the gateway IP address for the specified network.

Hop: Enter in the amount of hops it will take to reach the specified network.

Note: In a transmission path, each link is terminated at a network device such as a router or gateway. The number of hops equals the number of routers or gateways that data must pass through before reaching the destination.

Enable: Select this box to enable the rule.

L-2770L / / /	S	SETUP	ADVANCED	MAINTENANCE	5	TATUS	HELP
TUAL SERVER	ROUT	ING STATIC	ROUTE				Helpful Hints
ication Rules				teway AND/OR available W	AN interface	then click	You can select whi gateway to use, b
Setup		"Apply" to add the entry to the routing table.					interface or by spe
ound Filter	A maxi	imum 32 entries ca	an be configured				a gateway.
und Filter				on Protocol) in case wan abled' radio button for Global			Enabling RIP provie protocol that deter
less Filter	individua	al interface, select the	e desired RIP version and o	peration, followed by placing	g a check in t	he 'Enabled'	the best path to a by estimating the o
S Setup		al RIP mode selected		we the configuration, and to	start or stop	RIP based on	in number of hops intermediate route
		intern					
wali & DMZ							
	RIP S	ETTING					More
anced Internet	RIP S	ETTING	RIP : Enable	© RIPv1	NPv2		
wall & DMZ anced Internet anced Wireless anced LAN			RIP : 🔲 Enable	© RIPv1	RIPv2		
anced Internet		ETTING ING RULES	RIP : Enable	© RIPv1	RIPv2		
anced Internet anced Wireless anced LAN Mapping P Setup			RIP : Enable	© RIPv1 ○ F Gateway	RIPv2 Hop	Enable	
anced Internet anced Wireless anced LAN Mapping	ROUT	ING RULES	10			Enable	
anced Internet anced Wireless anced LAN Mapping P Setup ote Management ing	ROUT	ING RULES	10			Enable	
anced Internet anced Wireless anced LAN Mapping P Setup ote Management ing Frewal	ROUTI ID 1 2 3	ING RULES	10			Enable	
anced Internet anced Wireless anced LAN Mapping P Setup P Setup ote Management ing Firewall jet Quota	<b>ROUT</b> 1D 1 2 3 4	ING RULES	10			Enable	
anced Internet anced Wireless anced LAN Mapping P Setup P Setup ote Management ing Firewall jet Quota	ROUTI ID 1 2 3	ING RULES	10			Enable	
anced Internet anced Wireless anced LAN Mapping P Setup	<b>ROUT</b> 1D 1 2 3 4	ING RULES	10			Enable	

## **IPv6 Firewall**

This page lets you adjust the IPv6 firewall settings to control IPv6 traffic allowed in and out of your network. After modifying any settings, click **Save Settings** to save your changes.

#### Configure IPv6 Select whether to

#### Filtering Below: • Turn IPv6 Filtering OFF

 Turn IPv6 Filtering ON and ALLOW computers listed to access the network (all computers not specified will be denied access)
 Turn IPv6 Filtering ON and DENY computers listed to access the network (all computers not specified will be allowed access)

For each rule, tick the checkbox on the left to enable the rule.

Name: Enter a name for the rule.

- Schedule: Select whether to have the rule active Always, Never, or according to a schedule you have created. For more about creating schedules, refer to page 85.
  - Source: Enter the starting IP address of the traffic you want to filter.

Dest: Enter the ending IP address of the traffic you want to filter.

Protocol: Enter which protocol you want to filter.

Port Range: Enter the port range of the traffic you want to filter.

DSL-2770L //		SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
VIRTUAL SERVER	IPV6	FIREWA	LL			Helpful Hints
Application Rules	The Fir					
QoS Setup	device. It works in the same way as ip filters with additional settings. You can create more detail rules for the device.					More
Outbound Filter	device.					
Inbound Filter	IPV6	FIREWA	LL RULES			
Wireless Filter		-	Filtering below :			
DDNS Setup	Turn	IPV6 Filterin	g OFF	•		
Firewall & DMZ		Name		Schedule		
Advanced Internet			IP Address	Protocol		
Advanced Wireless		Source		TCP -		
Advanced LAN		Dest	IP Address	Port Range		
Port Mapping				-		
SNMP Setup		Name		Schedule Always 👻		
Remote Management			IP Address	Protocol		
Routing		Source		TCP 💌		
IPv6 Firewall		Dest	IP Address	Port Range		
Budget Quota		Name		Schedule		
LOGOUT				Always 👻		
9478		Source	IP Address	Protocol		
			IP Address	TCP -		
Unine Onine		Dest	IP Address	Port Range		
Reboot		Name		Schedule		
			IP Address	Always -		
		Source	IF HUUIESS	TCP -		
			IP Address	Port Range		
		Dest		~		

#### **Budget Quota**

This page lets you set quotas for how much traffic is allowed to pass through the network. This may be useful to control usage if there is a bandwidth cap in place.

- Enable Limitation Tick this box to enable quotas. Quota:
- Select Interface: Select which interface to apply the budget quota to.
- Limit Time(Days): Enter the period of time to apply the budget quota to. After the time limit has passed, the quota will reset.
- Enable Download Tick this box to enable download quotas. Quota:
- **Download Quota:** Set the maximum allowed download amount in megabytes for the period of time specified in **Limit Time**.
  - Enable Upload Tick this box to enable upload quotas. Quota:
  - Upload Quota: Set the maximum allowed upload amount in megabytes for the period of time specified in Limit Time.
- **Traffic Information:** This shows your current received and transmitted traffic totals so far. You can click the **Refresh** button to update the totals. Please note that the totals update every three minutes.



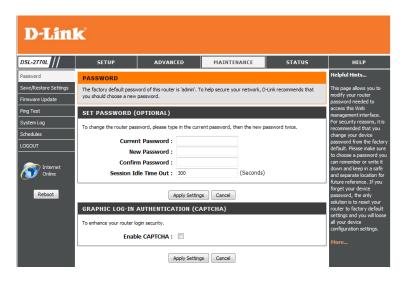
## **Tools** Password

This page will allow you to change the password used to log in to the web configuration interface.

Current/ To change the password, enter the current password, then the new New/Confirm password you want to use, then enter it again to confirm it, then click Password: Apply Settings to save your changes.

**Session Idle** Set the idle time in seconds that are allowed before the web **Time Out:** configuration interface automatically logs out the user.

**Enable** Enables a challenge-response test to require users to type letters or **CAPTCHA:** numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.



#### Save/Restore Settings

This section allows you to manage the router's configuration settings, reboot the router, and restore the router to the factory default settings. Restoring the unit to the factory default settings will erase all settings, including any rules that you've created.

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

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

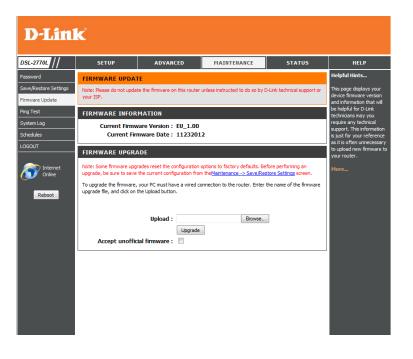
Restore to This option will restore all configuration settings back to the settings
Factory Default that were in effect at the time the router was shipped from the factory. Settings: Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current router configuration settings, use the Save button above.



#### **Firmware Update**

You can upgrade the firmware of the access point here. Make sure the firmware you want to use is on the local hard drive of the computer. Please check the D-Link support website for firmware updates at **http://support.dlink.com**. You can download firmware upgrades to your hard drive from this site.

- **Upload:** 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.
- Accept Unofficial Tick this box to allow unofficial firmware to be loaded onto the device. Firmware: Please note that this is not recommended, and any damage caused by an unofficial firmware may invalidate your product warranty.



### **Ping Test**

**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.

D-Link							
DSL-2770L	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP		
Password	PING TEST				Helpful Hints		
Save/Restore Settings	Ping Test sends "ping" pa	Ping Test sends "ping" packets to test a computer on the Internet.					
Firmware Update	PING TEST				be used to verify whether or not your router is working correctly. If you		
Ping Test System Log	Ping Test is used to send	"Ping" packets to test if a com	puter is on the Internet.		have rerun the tests and consulted the help file and		
Schedules	Host Name o	r IP address :		Ping	you are still experiencing difficulties, please contact		
LOGOUT	-				D-link or visit our support website at		
	PING RESULT	support.dlink.com.au					
Internet Online	Enter a host name or IP a	More					
Reboot		Apply Setting	S Cancel				

## System Log

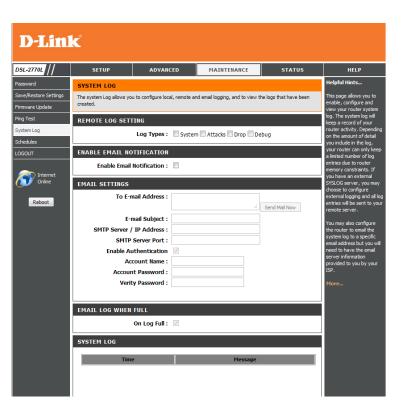
The router keeps a running log of events and activities occurring on the router. You may send these logs to a SysLog server on your network.

- Log Types: Tick the checkboxes to indicate whether you want to log events related to the System, Attacks, Dropped packets or connections, or Debug information.
- **Enable E-mail** Tick this box if you want to send event notifications to your e-mail **Notification:** address.
- To E-mail Address: Enter the e-mail address you want to send notifications to.
  - E-mail Subject: Enter the e-mail subject to be used for the e-mail notifications.
  - **SMTP Server/IP** Enter the SMTP server to use, or the IP address of the SMTP server. Address:
- SMTP Server Port: Enter the port of the SMTP server to use.

**Enable** If your SMTP server requires authentication, tick this checkbox. **Authentication:** 

Account Name: Enter your SMTP account name.

Account/Verify Enter your SMTP account password, then enter it again to verify it. Password:



#### Schedules

Schedules can be created for use with enforcing rules. For example, if you want to restrict web access to Mon-Fri from 3pm to 8pm, you could create a schedule selecting Mon, Tue, Wed, Thu, and Fri and enter a Start Time of 3pm and End Time of 8pm.

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

Name: Enter a name for your new schedule.

**Day(s):** Select a day, a range of days, or All Week to include every day.

Time Format: Choose a 24 hour or 12 hour clock-style.

Start Time: Enter a start time for your schedule.

End Time: Enter an end time for your schedule.

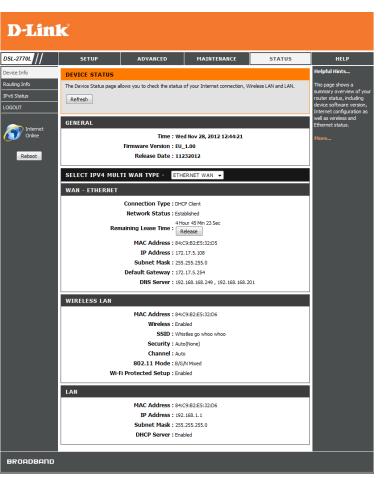


## **Status** Device Info

This page displays the current information for the DSL-2770L. It will display the LAN, WAN (Internet), and Wireless information. 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.

**General:** Displays the router's time and firmware version.

- Select IPv4 Multi Use this dropdown box to select a connection to show information WAN Type: about.
  - **WAN:** Displays the MAC address and the public IP settings of the currently selected WAN type.
  - **Wireless LAN:** Displays the wireless MAC address and your wireless settings such as SSID and Channel.
    - LAN: Displays the MAC address and the private (local) IP settings for the router.



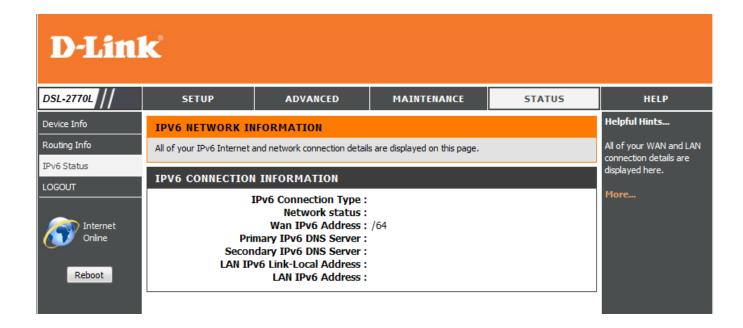
### **Routing Info**

This page will display your current routing table.

DSL-2770L	SETUP	ADVANCED	MAINTENANCE		STATUS	HELP
Device Info	ROUTING TABLE LI	ST				Helpful Hints
Routing Info						The routing info shows
Pv6 Status	ROUTING STATIO	C ROUTE				static routing table wh include destination, su
LOGOUT						mask and gateway.
	Destination	Netmask	Gateway	Flags	Interface	
	192.168.1.0	255.255.255.0	0.0.0.0		br0	More
Internet	172.17.5.0	255.255.255.0	0.0.0.0		eth0.3	
Online	239.0.0.0	255.0.0.0	0.0.0.0		br0	
	127.0.0.0	255.0.0.0	0.0.0.0		lo	
Reboot	0.0.0.0	0.0.0.0	172.17.5.254	G	eth0.3	

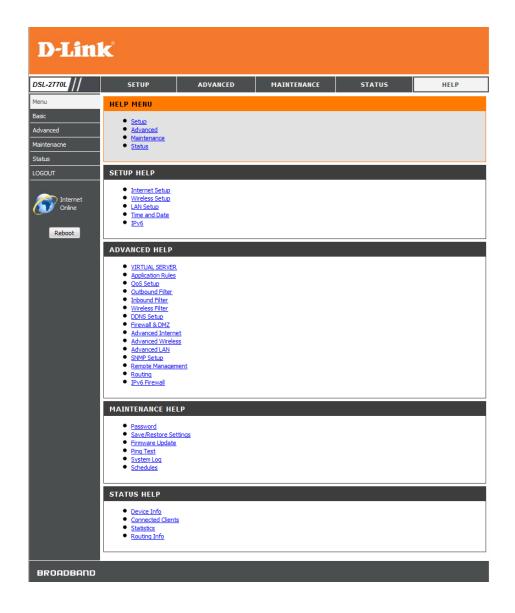
#### IPv6 Status

The IPv6 page displays a summary of the Router's IPv6 settings and lists the IPv6 address and host name of any IPv6 clients.



# Support

The Support pages let you jump to descriptions of the settings and their functions.



# **D-Link SharePort**

D-Link SharePort<sup>™</sup> allows you to share a USB multifunction printer with other users across your network by simply connecting the device to select D-Link routers. This allows you to use a printer located across your network as if it were connected to your local PC.

#### **System Requirements**

- Windows 7 32-bit, 64-bit/ Vista/ XP/ 2003/ 2000
- Pentium 3 800 MHz or better
- 256 MB RAM or higher
- CD-ROM drive
- Compatible D-Link router

#### Installation

- 1. Insert the CD-ROM into your computer.
- 2. Follow the on-screen instructions.
- 3. The 🏟 icon should appear in the System Tray at the lower-right corner on your desktop.

#### Set Up the D-Link Router

- 1. Connect the D-Link Router to the network.
- 2. Power on the D-Link Router.
- 3. Double-click on the 🏟 icon to open D-Link SharePort.
- 4. Right-click on the 🌍 icon in the System Tray at the lower-right corner on your Windows Desktop. A window will pop up to display the D-Link Router.

#### **Enable Network USB on the D-Link Router**

- 1. Click on the D-Link Router in D-Link SharePort.
- 2. Click Enable.
- 3. The 🏟 icon in the Windows System Tray should change to a 🚱 icon.

#### **Connect a USB Printer to the D-Link Router**

D-Link SharePort automatically detects each connected USB device. A window will pop up for each detected USB device.

- 1. Right-click the 🔮 icon.
- 2. Click Open SharePort.

D-Link SharePort will display the connected USB printer on the network.

- 3. Move your mouse cursor cursor to Waiting to Connect and click **Manage Device**.
- 4. Click Yes for the question "Do you want to install the printer software or MFP utility?"
- 5. Insert the printer's CD-ROM and follow the instructions to install the printer's driver. When the installation process prompts you to connect the multifunction printer to your PC, click **Next**.
- 6. D-Link SharePort will virtually connect to the printer. Click Next.
- 7. Choose the printer's driver that you want D-Link SharePort to auto-connect to when you print.

# Connect a Wireless Client to your Router WPS Button

The easiest and most secure way to connect your wireless devices to the router is WPS (Wi-Fi Protected Setup). Most wireless devices such as wireless adapters, media players, Blu-ray DVD players, wireless printers and cameras will have a WPS button (or a software utility with WPS) that you can press to connect to the DSL-2770L router. Please refer to your user manual for the wireless device you want to connect to make sure you understand how to enable WPS. Once you know, follow the steps below:

Step 1 - Press the WPS button on the DSL-2770L for about 1 second. The Internet LED on the front will start to blink.



- Step 2 Within 2 minutes, press the WPS button on your wireless client (or launch the software utility and start the WPS process).
- **Step 3** Allow up to 1 minute while your connection is configured. Once the Internet light stops blinking, you will be connected and your wireless connection will be secure with WPA2.

## Windows<sup>®</sup> 7 WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



2. The utility will display any available wireless networks in your area.



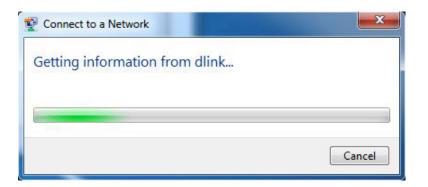
D-Link DSL-2770L User Manual

Section 4 - Security

3. Highlight the wireless connection with Wi-Fi name (SSID) you would like to connect to and click the **Connect** button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.

- 4. The following window appears while your computer tries to connect to the router.
- Wireless Network Connection ^ -1 dlink Connect automatically Connect kay2690\_24 james2690g ALPHA dlink 888 SD6 WLAN DAP-2690g Open Network and Sharing Center





Section 4 - Security

5. Enter the same security key or passphrase (Wi-Fi password) that is on your router and click **Connect**. You can also connect by pushing the WPS button on the router.

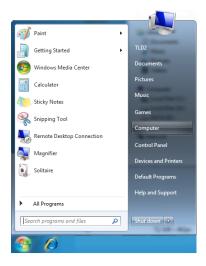
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.

Connect to a Netwo	rk	x
Type the network	security key	
Security key:	1	
	Hide characters	
	'ou can also connect by pushing the outton on the router.	
	ОК	Cancel

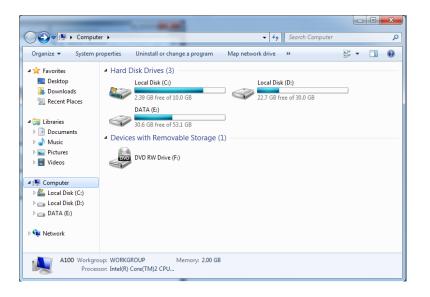
#### WPS

The WPS feature of the DSL-2770L can be configured using Windows<sup>®</sup> 7. Carry out the following steps to use Windows<sup>®</sup> 7 to configure the WPS feature:

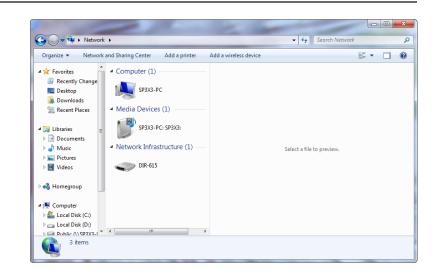
1. Click the **Start** button and select **Computer** from the Start menu.



2. Click Network on the left side.



3. Double-click the DSL-2770L.



 Input the WPS PIN number (displayed in the WPS window on the Router's LCD screen or in the Setup > Wireless Setup menu in the Router's Web UI) and click Next.

Set Up a Network
To set up a network, type the 8-digit PIN from the router label
You can find the numeric PIN on a label attached to the manufacturer.  PIN:
Next Cancel

5. Type a name to identify the network.

🕒 👰 Set Up a Network Give your network a name Your network needs a unique name so that it can be easily identified. It is best to keep the name short (25 characters or less) and recognizable. Security-enabled network Type your network name: Your network is being set up using WPA2-Personal. D-Link\_Net Change passphrase, security level and encryption type (advanced):  $\checkmark$ Opprade or replace the router using the network settings stored on this computer <u>N</u>ext Cancel

6. To configure advanced settings, click the  $\bigcirc$  icon.

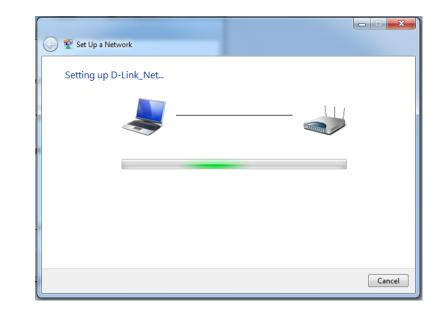
Click Next to continue.

G	💱 Set Up a Network		
	Give your network a name		
	Your network needs a unique name so characters or less) and recognizable.	that it can	be easily identified. It is best to keep the name short (25
	Type your network name:		Security-enabled network
	D-Link_Net	1	Your network is being set up using WPA2-Personal.
	Change passphrase, security level and e Security key:	encryptior	type (advanced): 💽
	f6mm-gizb-9vmv	]	WPA2-Personal (Recommended)
	Connect automatically		Encryption type: AES (Recommended)
	Pupgrade or replace the router using	the netwo	ork settings stored on this computer
			Next Cancel

X

7. The following window appears while the Router is being configured.

Wait for the configuration to complete.



8. The following window informs you that WPS on the router has been setup successfully.

Make a note of the security key as you may need to provide this security key if adding an older wireless device to the network in the future.

9. Click **Close** to complete WPS setup.

9	😰 Set Up a Network	x		
	D-Link_Net has been successfully set up To add an older wireless device to this network, you might need to provide this security key			
	894g-eyd5-g5wb			
	You can <u>print these network settings</u> for future reference.			
	For gaming consoles or computers running Windows XP, <u>copy the network profile to a USB drive</u> for easier set up.			
	Close			

# Windows Vista®

Windows Vista<sup>®</sup> users may use the built-in wireless utility. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows Vista<sup>®</sup> utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.

The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check you TCP/ IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



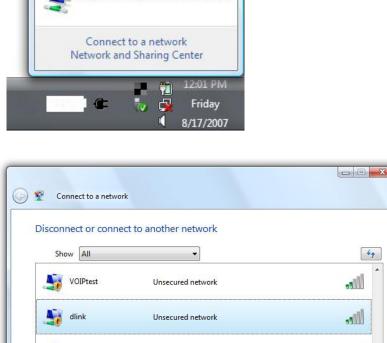


## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista<sup>®</sup> Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select Connect to a network.

2. Highlight the Wi-Fi name (SSID) you would like to connect to and click Connect.



Security-enabled network

Wireless networks are available.

Not Connected

tuesday

Set up a connection or network Open Network and Sharing Center 44

. Ille

. Il

Connect

III

Cancel

3. Enter the same security key or passphrase (Wi-Fi password) that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.

Туре	the network security key or passphrase for Candy
The p	erson who setup the network can give you the key or passphrase.
Securi	ity key or passphrase:
Dis Dis	play characters
-	If you have a <mark>USB flash drive</mark> with network settings for Candy, insert it now.

## WPS/WCN 2.0

The router supports Wi-Fi protection, referred to as WCN 2.0 in Windows Vista<sup>®</sup>. The following instructions for setting this up depends on whether you are using Windows Vista<sup>®</sup> to configure the router or third party software.

When you first set up the router, Wi-Fi protection is disabled and unconfigured. To enjoy the benefits of Wi-Fi protection, the router must be both enabled and configured. There are three basic methods to accomplish this: use Windows Vista's built-in support for WCN 2.0, use software provided by a third party, or manually configure.

If you are running Windows Vista<sup>®</sup>, log into the router and click the **Enable** checkbox in the **Basic** > **Wireless** section. Use the Current PIN that is displayed on the **Advanced** > **Wi-Fi Protected Setup** section or choose to click the **Generate New PIN** button or **Reset PIN to Default** button.

PIN SETTINGS					
Current	PIN: 53468734				
	Reset PIN to Default Generate New PIN				

If you are using third party software to set up Wi-Fi Protection, carefully follow the directions. When you are finished, proceed to the next section to set up the newly-configured router.

# Windows® XP

Windows<sup>®</sup> XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows<sup>®</sup> XP utility as seen below.

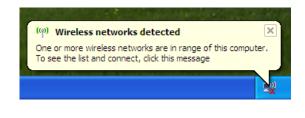
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

or

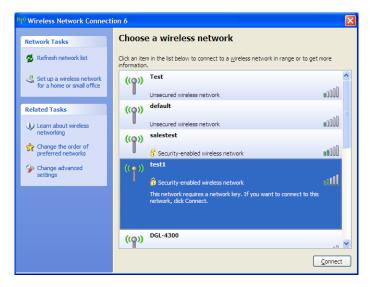
Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.

The utility will display any available wireless networks in your area. Click on a Wi-Fi network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check you TCP/ IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.







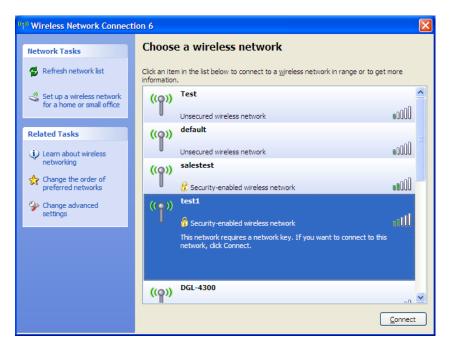
# WPA/WPA2

It is recommended to enable WPA on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA key being used.

1. Open the Windows<sup>®</sup> XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.

2. Highlight the Wi-Fi network (SSID) you would like to connect to and click **Connect**.





Section 5 - Connecting to a Wireless Network

3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK Wi-Fi password and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The Wi-Fi password must be exactly the same as on the wireless router.

Wireless Network Connection				
The network 'test1' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.				
Type the key, and then click Connect.				
Network <u>k</u> ey:	1			
Confirm network key:				
	<u>C</u> onnect Cancel			

# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DSL-2770L. Read the following descriptions if you are having problems. The examples below are illustrated in Windows<sup>®</sup> 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 nor do you 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:
  - Microsoft Internet Explorer<sup>®</sup> 7 and higher
  - Mozilla Firefox 3.5 and higher
  - Google<sup>™</sup> Chrome 8 and higher
  - Apple Safari 4 and 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<sup>®</sup> 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 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, the username is **admin** and leave the password box empty.

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

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

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

- Click on **Start** and then click **Run**.
- Windows<sup>®</sup> 95, 98, and Me users type in **command** (Windows<sup>®</sup> NT, 2000, XP, Vista<sup>®</sup>, and 7 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]	[-I] [MTU	J value]
--------	----------	-----------	----------

Example: ping yahoo.com -f -l 1472

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Ping statistics for 66.94.234.13:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss)
Approximate round trip times in milli-seconds:
      Minimum = Oms, Maximum = Oms, Average = Oms
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:
                                                                     132ms
     Minimum = 93ms, Maximum = 203ms, Average
C:∖>
```

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

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

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

- Open your browser, enter the IP address of your router (192.168.1.1) 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.

# **Wireless Basics**

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

# What is Wireless?

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

# Why D-Link Wireless?

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

## How does wireless work?

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

### Wireless Local Area Network (WLAN)

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

## Wireless Personal Area Network (WPAN)

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

## Who uses wireless?

Wireless technology as become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

### Home

- Gives everyone at home broadband access
- Surf the web, check email, instant message, etc.
- Gets rid of the cables around the house
- Simple and easy to use

## **Small Office and Home Office**

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

# Where is wireless used?

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

## Tips

Here are a few things to keep in mind, when you install a wireless network.

### **Centralize your router or Access Point**

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

### **Eliminate Interference**

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

## Security

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the router. Refer to product manual for detail information on how to set it up.

# **Wireless Modes**

There are basically two modes of networking:

- Infrastructure All wireless clients will connect to an access point or wireless router.
- Ad-Hoc Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DSL-2770L wireless network Cardbus adapters.

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

# **Networking Basics**

# **Check your IP address**

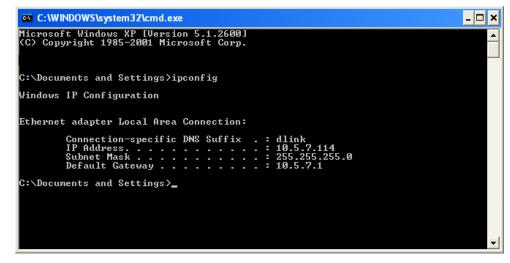
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start** > **Run**. In the run box type *cmd* and click **OK**. (Windows<sup>®</sup> 7/Vista<sup>®</sup> users type *cmd* in the **Start Search** box.)

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.



# 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<sup>®</sup> 7 - Click on Start > Control Panel > Network and Internet > Network and Sharing Center.

Windows Vista<sup>®</sup> - Click on Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.

- Windows<sup>®</sup> XP Click on **Start** > **Control Panel** > **Network Connections**.
- Windows<sup>®</sup> 2000 From the desktop, right-click **My Network Places** > **Properties**.

### Step 2

Right-click on the Local Area Connection which represents your 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 192.168.1.1, 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 the Default Gateway the same as the LAN IP address of your router (I.E. 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 **OK** twice to save your settings.

General	
	automatically if your network support ed to ask your network administrator
🔘 Obtain an IP address autom	atically
• Use the following IP address	
IP address:	192.168.1.2
Subnet mask:	255.255.255.0
Default gateway:	192.168.1.1
Obtain DNS server address and the server address addre	automatically
Ouse the following DNS serve	r addresses:
Preferred DNS server:	192.168.1.1
Alternate DNS server:	
Validate settings upon exit	Advanced.

# **Technical Specifications**

#### Standards

- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3ab

### Wireless Signal Rates<sup>1</sup>

### IEEE 802.11n 2.4GHz(HT20/40):

• 144.4 Mbps (300)	· 130 Mbps (270)
• 115.6 Mbps (240)	· 86.7 Mbps (180)
• 72.2 Mbps (150)	· 65 Mbps (135)
• 57.8 Mbps (120)	· 43.3 Mbps (90)
• 28.9 Mbps (60)	· 21.7 Mbps (45)
•14.4 Mbps (30)	· 7.2 Mbps (15)

### IEEE 802.11g:

<ul> <li>54 Mbps</li> </ul>	<ul> <li>48 Mbps</li> </ul>	• 36 Mbps
<ul> <li>24 Mbps</li> </ul>	<ul> <li>18 Mbps</li> </ul>	• 12 Mbps
• 11 Mbps	• 9 Mbps	<ul> <li>6 Mbps</li> </ul>
• 5.5 Mbps	• 2 Mbps	<ul> <li>1 Mbps</li> </ul>

#### Security

• WPA<sup>™</sup> - Personal/Enterprise

• WPA2<sup>™</sup> - Personal/Enterprise

### **Frequency Range<sup>2</sup>**

• 2.412 GHz to 2.462 GHz (802.11g/n)

• 2.4 GHz to 2.483 GHz

### **Power Consumption**

• 12 V/1.5 A

### **Operating Temperature**

• 32 °F to 104 °F (0 °C to 40 °C)

### Humidity

• 95% maximum (non-condensing)

### **Safety & Emissions**

- CE
- C-Tick
- UL

#### Dimensions

- L: 11.1 cm (4.37 inches)
- W: 9.3 cm (3.66 inches) • H: 14.5 cm (5.71 inches)

<sup>1</sup> Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g, and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range. <sup>2</sup> Frequency Range varies depending on each country's regulations.