

USER MANUAL

DSL-2730B

VERSION 1.01



D-Link[®]

BROADBAND

Federal Communication Commission Interference Statement

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

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Table of Contents

1	Safety Precautions	1	4.4.11	Routing	67
2	Introduction	1	4.4.12	RIP	70
	2.1 LEDs and Interfaces	2	4.4.13	MultiNat	70
	2.2 System Requirements	4	4.4.14	Schedules	71
	2.3 Features	4	4.4.15	Logout	72
	2.4 Standards Compatibility and Compliance	5	4.5	Maintenance	73
3	Hardware Installation.....	5	4.5.1	System	73
	3.1 Choosing the Best Location for Wireless Operation	5	4.5.2	Firmware Update.....	74
	3.2 Connecting the Router	6	4.5.3	Access Controls	74
4	About the Web Configuration	7	4.5.4	Diagnostics.....	77
	4.1 Preparation Before Login.....	7	4.5.5	System Log	78
	4.2 Logging In to the Router	7	4.5.6	Logout	78
	4.2.1 First-Time Login.....	8	4.6	Status	79
	4.3 Setup	9	4.6.1	Device Info	80
	4.3.1 Wizard	9	4.6.2	Wireless Clients.....	81
	4.3.2 Internet Setup.....	18	4.6.3	DHCP Clients	81
	4.3.3 Wireless Connection.....	24	4.6.4	Logs	82
	4.3.4 Local Network.....	29	4.6.5	Statistics	83
	4.3.5 Time and Date	31	4.6.6	Route info.....	84
	4.3.6 Logout	32	4.6.7	Logout	84
	4.4 Advanced.....	33	5	FAQs	85
	4.4.1 Wireless Settings.....	33			
	4.4.2 Port Forwarding	41			
	4.4.3 Port Triggering.....	43			
	4.4.4 DMZ.....	45			
	4.4.5 Parental Control.....	45			
	4.4.6 Filtering Options	49			
	4.4.7 DNS.....	53			
	4.4.8 Dynamic DNS.....	54			
	4.4.9 Multicast	55			
	4.4.10 Network Tools	56			

1 Safety Precautions

Follow the following instructions to prevent the device from risks and damage caused by fire or electric power:

- Use volume labels to mark the type of power.
- Use the power adapter packed within the device package.
- Pay attention to the power load of the outlet or prolonged lines. An overburden power outlet or damaged lines and plugs may cause electric shock or fire accident. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.
- Do not put this device close to a place where a heat source exists or high temperature occurs. Avoid the device from direct sunshine.
- Do not put this device close to a place where it is over damp or watery. Do not spill any fluid on this device.
- Do not connect this device to any PCs or electronic products, unless our customer engineer or your broadband provider instructs you to do this, because any wrong connection may cause power or fire risk.
- Do not place this device on an unstable surface or support.

2 Introduction

The DSL-2730B is a highly integrated ADSL2/2+ Integrated Access Device. It provides DSL uplink, Ethernet LAN and wireless LAN services. The wireless LAN is complied with the IEEE802.11b/g/n standards. It is usually preferred to provide high access performance applications for the individual users, the SOHO, the small enterprise and so on.

2.1 LEDs and Interfaces

Front Panel

LED	Color	Status	Description
Power	Green	Off	The power is off.
		On	The power is on and the initialization is normal.
	Red	On	The device is initiating.
		Blinks	The firmware is upgrading.
LAN 1/2/3/4	Green	Off	No LAN link.
		Blinks	Data is being transmitted through the LAN interface.
		On	The connection of LAN interface is normal.
WLAN	Green	Blinks	Data is transmitted through the WLAN interface.
		On	The connection of WLAN interface is normal.
		off	The WLAN connection is not established.
DSL	Green	Off	Initial self-test is failed.
		Blinks	The device is detecting itself.
		On	Initial self-test of the unit has passed.
Internet	Green	Off	The device is under the Bridge mode, DSL connection is not present, or the power is off.
		On	IP is connected and no traffic is detected.
	Red	On	The device is attempted to become IP connected, but failed.
WPS (on the side panel)	Green	Blinks	WPS negotiation is enabled, waiting for the clients.
		Off	Device is ready for new WPS to setup.



Rear Panel

Interface/Button	Description
DSL	RJ-11 interface that connects to the telephone set through the telephone cable.
LAN4/3/2/1	Ethernet RJ-45 interfaces that connect to the Ethernet interfaces of computers or Ethernet devices.
WLAN	Button to enable or disable WLAN.
RESET	Reset to the factory defaults. To restore factory defaults, keep the device powered on and push a paper clip into the hole. Press down the button for one second, and then release.
ON/OFF	Power on or off.
POWER	Interface that connects to the power adapter. The power adapter output is: 12 V DC, A.
WPS (on the side panel)	WPS button to setup connection to client.



2.2 System Requirements

Recommended system requirements are as follows:

- An 10 baseT/100BaseT Ethernet card is installed on your PC
- A hub or switch (attached to several PCs through one of Ethernet interfaces on the device)
- Operating system: Windows 98SE, Windows 2000, Windows ME, Windows XP, Windows Vista or Windows 7
- Internet Explorer V5.0 or higher, Netscape V4.0 or higher, or Firefox 1.5 or higher

2.3 Features

The device supports the following features:

- User-friendly GUI for web configuration
- Several pre-configured popular games. Just enable the game and the port settings are automatically configured.
- Compatible with all standard Internet applications
- Industry standard and interoperable DSL interface
- Simple web-based status page displays a snapshot of system configuration, and links to the configuration pages
- Downloadable flash software updates
- Support for up to 8 permanent virtual circuits (PVC)
- Support for up to 8 PPPoE sessions
- Support RIP v1 & RIP v2
- WLAN with high-speed data transfer rates of up to 130 Mbps, compatible with IEEE 802.11b/g/n, 2.4GHz compliant equipment
- Optimized Linux 2.6 Operating System
- IP routing and bridging
- Asynchronous transfer mode (ATM) and digital subscriber line (DSL) support
- Point-to-point protocol (PPP)
- Network/port address translation (NAT/PAT)
- Quality of service (QoS)
- Wireless LAN security: WPA, 802.1x, RADIUS client
- Universal plug-and-play(UPnP)
- File server for network attached storage (NAS) devices
- Web filtering
- Management and control
 - Web-based management (WBM)
 - Command line interface (CLI)
 - TR-069 WAN management protocol
- Remote update
- System statistics and monitoring

2.4 Standards Compatibility and Compliance

- Support application level gateway (ALG)
- ITU G.992.1 (G.dmt)
- ITU G.992.2 (G.lite)
- ITU G.994.1 (G.hs)
- ITU G.992.3 (ADSL2)
- ITU G.992.5 (ADSL2+)
- ANSI T1.413 Issue 2
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.11b
- IEEE 802.11g
- IEEE 802.11n

3 Hardware Installation

3.1 Choosing the Best Location for Wireless Operation

Many environmental factors may affect the effective wireless function of the DSL Router. If this is the first time that you set up a wireless network device, read the following information:

The access point can be placed on a shelf or desktop, ideally you should be able to see the LED indicators in the front, as you may need to view them for troubleshooting.

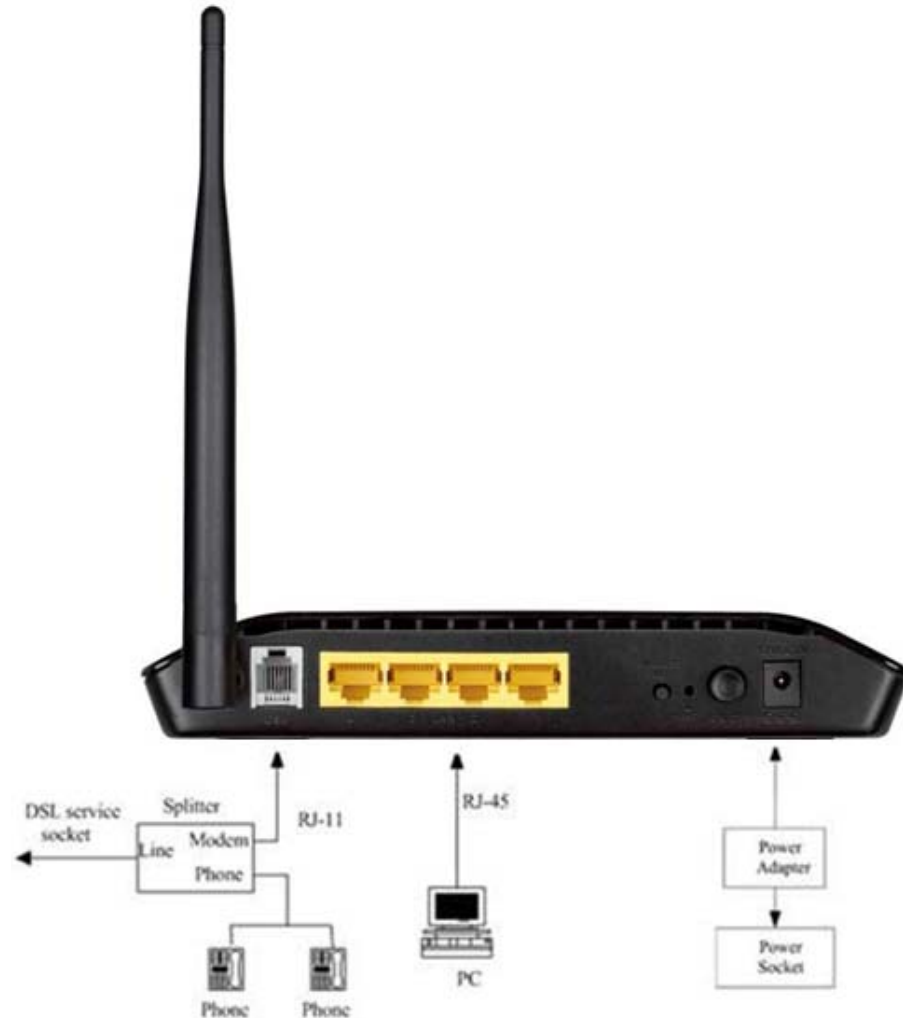
Designed to go up to 100 meters indoors and up to 300 meters outdoors, wireless LAN lets you access your network from anywhere you want. However, the numbers of walls, ceilings, or other objects that the wireless signals must pass through limit signal range. Typical ranges vary depending on types of materials and background RF noise in your home or business.

3.2 Connecting the Router

- (1) Connect the **DSL** port of the router and the Modem port of the splitter with a telephone cable; connect the phone to the phone port of the splitter through a cable; and connect the incoming line to the Line port of the splitter.

The splitter has three ports:

- **LINE**: Connect to a wall phone jack (RJ-11 jack)
 - **Modem**: Connect to the Line interface of the router
 - **PHONE**: Connect to a telephone set
- (2) Connect the **LAN** port of the router to the network interface card (NIC) of the PC through an Ethernet cable (MDI/MDIX).
 - (3) Plug the power adapter to the wall outlet and then connect the other end of it to the **Power** port of the router.



4 About the Web Configuration

The first time you setup the Router. It is recommended that you configure the WAN connection using a single computer, to ensure that both the computer and the Router are not connected to the LAN. Once the WAN connection operates properly, you may continue to make changes to Router configuration, including IP settings and DHCP setup. This chapter is concerned with using your computer to configure the WAN connection. The following chapter describes the various menus used to configure and monitor the Router, including how to change IP settings and DHCP server setup.

4.1 Preparation Before Login

Before accessing the Router the communication between PC and Router is normal. Check the communication as follows.

Configure the IP address of the PC as 192.168.1.X (2~254), net mask as 255.255.255.0, gateway address as 192.168.1.1 (for customized version, configure them according to the actual version).

Enter **arp -a** in the DOS window to check whether the PC can read the MAC address of the Router.

Ping the MAINTENANCE IP address (192.168.1.1 by default) of the Router.

If the PC can read the MAC address of the Router and can ping through the MAINTENANCE IP address of the Router, that means the communication of the PC and the Router is normal.

Note:

When you manage the Router through Web, you must keep the Router power on. Otherwise, the Router may be damaged.

The image shows two screenshots of a Windows XP command prompt window. The top screenshot shows the output of the 'arp -a' command, displaying the IP address 192.168.1.1 and its corresponding physical address 00-73-07-39-77-cd. The bottom screenshot shows the output of the 'ping 192.168.1.1' command, indicating successful connectivity with 4 packets sent and received, and a 0% loss rate.

```

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

C:\Documents and Settings\user>arp -a

Interface: 192.168.1.2 --- 0x10003
   Internet Address      Physical Address      Type
   192.168.1.1           00-73-07-39-77-cd    dynamic

C:\Documents and Settings\user>

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

C:\Documents and Settings\user>arp -a

Interface: 192.168.1.2 --- 0x10003
   Internet Address      Physical Address      Type
   192.168.1.1           00-73-07-39-77-cd    dynamic

C:\Documents and Settings\user>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

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

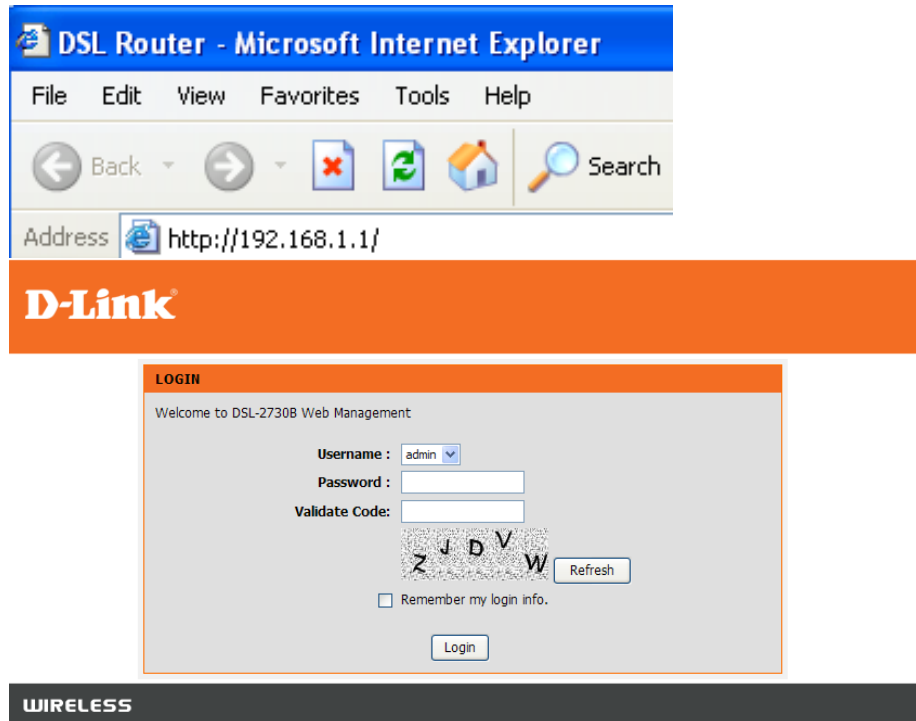
4.2 Logging In to the Router

The following description is a detail “How-To” user guide and is prepared for first time users.

4.2.1 First-Time Login

When you log in to the DSL Router for the first time, the login wizard appears.

- Step 1** Open a Web browser on your computer.
- Step 2** Enter **http://192.168.1.1** (DSL router default IP address) in the address bar. The login page appears.
- Step 3** Enter a user name and the password. The default username and password of the super user are **admin** and **admin**. The username and password of the common user are **user** and **user**. You need not enter the username and password again if you select the option **Remember my password**. It is recommended to change these default values after logging in to the DSL router for the first time.
- Step 4** Click **Login** to log in.



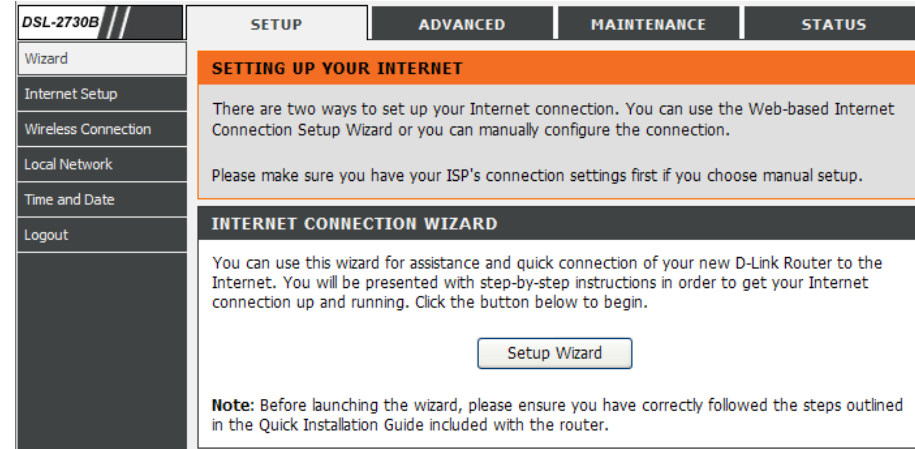
4.3 Setup

4.3.1 Wizard

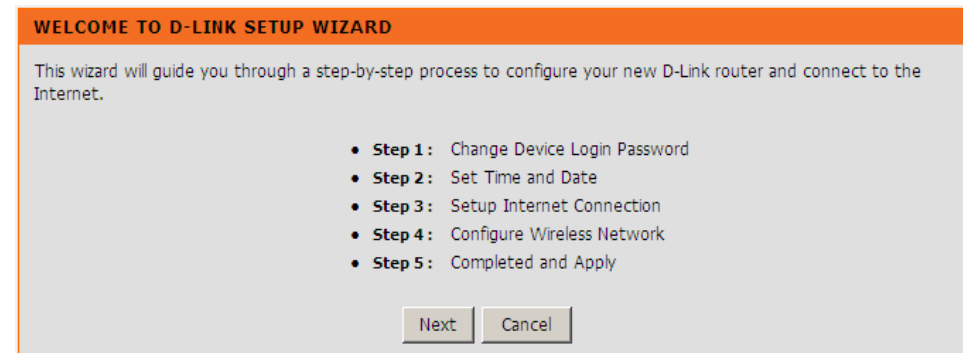
Wizard enables fast and accurate configuration of Internet connection and other important parameters. The following sections describe these various configuration parameters.

When subscribing to a broadband service, you should be aware of the method, by which you are connected to the Internet. Your physical WAN device can be Ethernet, DSL, or both. Technical information about the properties of your Internet connection is provided by your Internet service provider (ISP). For example, your ISP should inform you whether you are connected to the Internet using a static or dynamic IP address, or the protocol, such as PPPoA or PPPoE, that you use to communicate over the Internet.

Choose **Setup > Wizard**. The page shown in the figure appears.



Click **Setup Wizard**. The page shown in the right figure appears.



There are four steps to configure the device. Click **Next** to continue.
Change the password for logging in to the device.
The default password is **admin**. To secure your network, modify the password timely.

Note:

Confirm password must be the same as the new password.

To ignore the step, click **Skip**.

STEP 1: CHANGE DEVICE LOGIN PASSWORD → 2 → 3 → 4 → 5

To help secure your network, D-Link recommends that you should choose a new password. If you do not wish to choose a new password now, just click "Skip" to continue. Click "Next" to proceed to next step.

Current Password :

New Password :

Confirm Password :

Set the time and date.

First NTP time server: Select the domain of the time server to which system time will be synchronized.

1 → STEP 2: SET TIME AND DATE → 3 → 4 → 5

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

TIME SETTINGS

Automatically synchronize with Internet time servers

First NTP time server : ntp1.dlink.com

Second NTP time server : None

TIME CONFIGURATION

Current Router Time : Thu Jan 1 00:41:14 1970

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

Daylight Saving Time rule of US have automatically been applied to this time zone

Enable Daylight Saving, overwrite automatic rule

	Month	Week	Day	Time
Daylight Saving Dates : Start	Jan	1st	Sun	12 am
End	Jan	1st	Sun	12 am

Back Next Cancel

Configure the Internet connection.

Select the country and ISP. Set the VPI and VCI. If you fail to find the country and ISP from the drop-down lists, select **Others**.

- **Protocol:** The protocol connection type of the interface. You can select PPPoE, PPPoA, Dynamic IP, Static IP, or Bridge.
- **Connection Type:** You can select it from the drop-down list according to the uplink equipment. You can select LLC or VC-Mux.
- **VPI:** The virtual path identifier of the WAN interface (provided by your ISP). The range is 0 to 255.
- **VCI:** The virtual channel identifier for the WAN interface. The range is 32 to 65535 (1 to 31 are reserved for known protocols).

1 → 2 → STEP 3: SETUP INTERNET CONNECTION → 4 → 5

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

Country : (Click to Select)

Internet Service Provider : (Click to Select)

Protocol : (Click to Select)

Connection Type : (Click to Select)

VPI : (Enter a number) (0-255)

VCI : (Enter a number) (32-65535)

Back Next Cancel

If the **Protocol** is **PPPoE** or **PPPoA**, the page shown in either of the two figures appears.

1 → 2 → **STEP 3: SETUP INTERNET CONNECTION** → 4 → 5

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

Country :

Internet Service Provider :

Protocol :

Connection Type :

VPI : (0-255)

VCI : (32-65535)

PPPoE

Set the user name and password as provided by your ISP.

1 → 2 → **STEP 3: SETUP INTERNET CONNECTION** → 4 → 5

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

Country :

Internet Service Provider :

Protocol :

Connection Type :

VPI : (0-255)

VCI : (32-65535)

PPPoA

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

Username :

Password :

If the **Protocol** is **Static IP**, the page shown in the figure appears.
Enter the IP Address, Subnet Mask, Default Gateway, and Primary DNS Server.

1 → 2 → **STEP 3: SETUP INTERNET CONNECTION** → 4 → 5

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

Country :

Internet Service Provider :

Protocol :

Connection Type :

VPI : (0-255)

VCI : (32-65535)

STATIC IP

You have selected Static IP Internet connection. Please enter the appropriate information below as provided by your ISP.

The Auto PVC Scan feature will not work in all cases so please enter the VPI/VCI numbers if provided by the ISP.

After proper configuration, click **Next**.

1 → 2 → **STEP 3: SETUP INTERNET CONNECTION** → 4 → 5

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

Country :

Internet Service Provider :

Protocol :

Connection Type :

VPI : (0-255)

VCI : (32-65535)

Configure the wireless network, or keep the default settings. Enter the information and click **Next**.

- **Enable Your Wireless Network:** Enable wireless settings on LAN interface.
- **Wireless Network Name (SSID):** SSID is the name of your wireless network. All wireless-equipped devices share the same SSID to communicate with each other. It must be unique to identify separated wireless network. For security, you should change the default SSID to a special ID.
- **Visibility Status:** You can select visible or invisible.
- **Security Level:** 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.
- **WPA Pre-Shared Key:** Please set it. Then you will need to enter the same key here into your wireless clients in order to enable proper wireless connection.

1 → 2 → 3 → **STEP 4: CONFIGURE WIRELESS NETWORK** → 5

Your wireless network is enabled by default. You can simply uncheck it to disable it and click "Next" to skip configuration of wireless network.

Enable 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.

Wireless Network Name (SSID) : (1~32 characters)

Select "Visible" to publish your wireless network and SSID can be found by wireless clients, or select "Invisible" to hide your wireless network so that users need to manually enter SSID in order to connect to your wireless network.

Visibility Status : Visible Invisible

The page shown in the right figure appears. In this page, you can view the configuration information. You can check whether the configurations match the information provided by your ISP.

1 → 2 → 3 → 4 STEP 5: COMPLETED AND APPLY

Setup complete. Click "Back" to review or modify settings. Click "Apply" to apply current settings.

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

SETUP SUMMARY

Below is a detailed summary of your settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Time Settings :	Disable
VPI / VCI :	0/32
Protocol :	PPPoE
Connection Type :	LLC
Username :	test
Password :	test
Wireless Network :	Enabled
Wireless Network Name (SSID) :	dlink
Visibility Status :	Visible
Encryption :	WPA2-PSK/AES (also known as WPA2 Personal)
Pre-Shared Key :	%Fortress123

Back Apply Cancel

4.3.2 Internet Setup

Choose **Setup > Internet Setup**. The page as shown in the right figure appears. In this page, you can configure the WAN interface of the device.

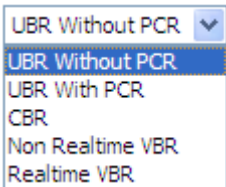
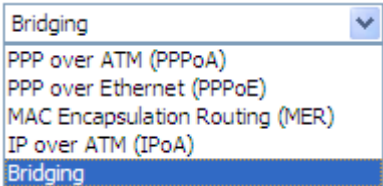
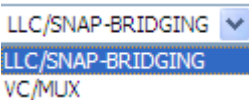
INTERNET SETUP

Choose "Add", "Edit", or "Delete" to configure WAN interfaces. A maximum of 8 entries can be configured.

WAN SETUP

	VPI/VCI	VLAN Mux	Service Name	Protocol	IGMP	QoS	NAT	Status	Action
<input type="checkbox"/>	8/35	N/A	pppoe_0_8_35	PPPoE	Disabled	Disabled	Enable	Unconfigured	

Click **Add** in “INTERNET SETUP”. The page shown in the following figure appears.

Field	Description
PVC Settings	<ul style="list-style-type: none"> The virtual path between two points in an ATM network and its valid value is from 0 to 255. The virtual channel between two points in an ATM network, ranging from 32 to 65535 (0 to 31 is reserved for local management of ATM traffic).
Service Category	<p>You can select from the drop-down list.</p> 
Protocol	<p>You can select from the drop-down list.</p> 
QoS scheduler	You can select one of the item between Strict Priority and Weighted Fair Queuing .
Encapsulation Mode	<p>Select the method of encapsulation provided by your ISP. You can select from the drop-down list.</p> 

INTERNET SETUP

This screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category.

ATM PVC CONFIGURATION

VPI: (0-255)
VCI: (32-65535)
Service Category:
Peak Cell Rate: (cells/s)
Sustainable Cell Rate: (cells/s)
Maximum Burst Size: (cells)

IP QoS SCHEDULER ALGORITHM

Strict Priority
Precedence of queue: (lowest)
 Weighted Fair Queuing
Weight Value of queue: (1-63)
MPAAL Group Precedence:

CONNECTION TYPE

Protocol:
Encapsulation Mode:
Enable Multiple Vlan Over One Connection:
802.1P Priority [0-7]:
802.1Q VLAN ID [0-4094]:

BRIDGE SETTINGS

Service Name:

Click **Next**, the page shown in the following figure appears.

WAN

Make sure that the settings below match the settings provided by your ISP.

Click "Apply" to save these settings. Click "Back" to make any modifications.
NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.

SETUP - SUMMARY

VPI / VCI:	0 / 35
Connection Type:	Bridge
Service Name:	br_0_0_35
Service Category:	UBR
IP Address:	Not Applicable
Service State:	Enabled

If you select the **PPP over Ethernet (PPPoE)** or **PPP over ATM (PPPoA)** as the connection protocol, the following page appears.

- **PPP Username:** The correct user name that your ISP provides to you.
- **PPP Password:** The correct password that your ISP provides to you.
- **Authentication Method:** The value can be AUTO, PAP, CHAP, or MSCHAP. Usually, you can select AUTO.
- **Dial on demand (with idle timeout timer):** If this function is enabled, you need to enter the idle timeout time. Within the preset minutes, if the router does not detect the flow of the user continuously, the router automatically stops the PPPoE connection. Once it detects the flow (like access to a webpage), the router restarts the PPPoE dialup. If this function is disabled, the router performs PPPoE dial-up all the time. The PPPoE connection does not stop, unless the router is powered off and DSLAM or uplink equipment is abnormal.
- **MTU Size:** Maximum Transmission Unit. Sometimes, you must modify this function to access network successfully.
- **PPP IP extension:** If this function is enabled, the WAN IP address obtained by the router through built-in dial-up can be directly assigned to the PC being attached to the router (at this time, the router connects to only one PC). From the aspect of the PC user, the PC dials up to obtain an IP address. But actually, the dial-up is done by the router. If this function is disabled, the router itself obtains the WAN IP address.
- **Use Static IP Address:** If this function is disabled, the router obtains an IP address assigned by an uplink equipment such as BAS, through PPPoE dial-up. If this function is enabled, the router uses this IP address as the WAN IP address.
- **Enable NAT:** Select it to enable the NAT functions of the router. If you do not want to enable NAT and wish the router user to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, NAT should be enabled.
- **Enable Firewall:** Enable or disable IP filtering.
- **Enable IGMP Multicast:** IGMP proxy. For example, if you wish that the PPPoE mode supports IPTV, enable this function.

Protocol: PPP over Ethernet (PPPoE) ▼

Encapsulation Mode: LLC/SNAP-BRIDGING ▼

Enable Multiple Vlan Over One Connection:

802.1P Priority [0-7]: -1

802.1Q VLAN ID [0-4094]: -1

PPP USERNAME AND PASSWORD

PPP Username:

PPP Password:

Confirm PPP Password:

Authentication Method: AUTO ▼

Dial On Demand (With Idle Timeout Timer):

Inactivity Timeout: (minutes [1-4320])

Dial On Manual:

MTU Size: 1492 (1370-1492)

PPP IP Extension:

IPV4 Setting

Use Static IP Address.

IP Address: 0.0.0.0

NETWORK ADDRESS TRANSLATION SETTINGS

Enable NAT:

Enable Firewall:

Enable IGMP Multicast:

Service Name: pppoe_0_0_35

Next
Cancel

If you select the **MAC Encapsulation Routing(MER)** as the connection protocol, the following page appears.

- **Obtain an IP address automatically:** The modem obtains a WAN IP address automatically and at this time it enables DHCP client functions. The WAN IP address is obtained from the uplink equipment like BAS and the uplink equipment is required to enable the DHCP server functions.
- **Use the following IP address:** If you want to manually enter the WAN IP address, select this check box and enter the information in the field.
- **WAN IP Address:** Enter the IP address of the WAN interface provided by your ISP.
- **WAN Subnet Mask:** Enter the subnet mask concerned to the IP address of the WAN interface provided by your ISP.
- **Default Gateway:** Enter the default gateway.
- **Obtain DNS info automatically from WAN interface:** You can get DNS server information from the selected WAN interface
- **Use the following Static DNS IP address:** If you want to manually enter the IP address of the DNS server, select this check box and enter the information in the fields.
- **Primary DNS server:** Enter the IP address of the primary DNS server.
- **Secondary DNS server:** Enter the IP address of the secondary DNS server provided by your ISP.

Protocol:

Encapsulation Mode:

Enable Multiple Vlan Over One Connection:

802.1P Priority [0-7]:

802.1Q VLAN ID [0-4094]:

WAN IP SETTINGS

IPv4 Setting

Obtain an IP address automatically

Use the following IP address:

WAN IP Address:

WAN Subnet Mask:

Default Gateway:

Obtain DNS info automatically from WAN interface

Use the following Static DNS IP address:

Primary DNS server:

Secondary DNS server:

NETWORK ADDRESS TRANSLATION SETTINGS

Enable NAT:

Enable Firewall:

Enable IGMP Multicast:

Service Name:

After proper settings, click **Next**.

WAN

Make sure that the settings below match the settings provided by your ISP.

Click "Apply" to save these settings. Click "Back" to make any modifications.

NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.

SETUP - SUMMARY

VPI / VCI:	0 / 35
Connection Type:	IPoE
Service Name:	mer_0_0_35
Service Category:	UBR
IP Address:	Automatically Assigned
Service State:	Enabled
NAT:	Enabled
Firewall:	Enabled
IGMP Multicast:	Disabled
Quality Of Service:	Enabled

Back

Apply

4.3.3 Wireless Connection

This section includes the wireless connection setup wizard and WPS setup wizard. There are two ways to setup your wireless connection. You can use the **Wireless Connection Setup Wizard** or you can manually configure the connection.

Choose **Setup > Wireless Connection**. The **Wireless Connection** page shown in the following figure appears.

WIRELESS CONNECTION

There are two ways to setup your wireless connection. You can use the Wireless Connection Setup Wizard or you can manually configure the connection.

Please note that changes make on this section will also need to duplicated to your wireless clients and PC.

WIRELESS CONNECTION SETUP WIZARD

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

Wireless Connection Setup Wizard

Note: Before launching the wizard, please ensure you have followed all steps outlined in the Quick Installation Guide included the package.

ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD

This wizard is designed to assist you in connecting your wireless device to your router.It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button bellow to begin.

Add Wireless Device with WPS

MANUAL WIRELESS CONNECTION OPTIONS

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

Manual Wireless Connection Setup

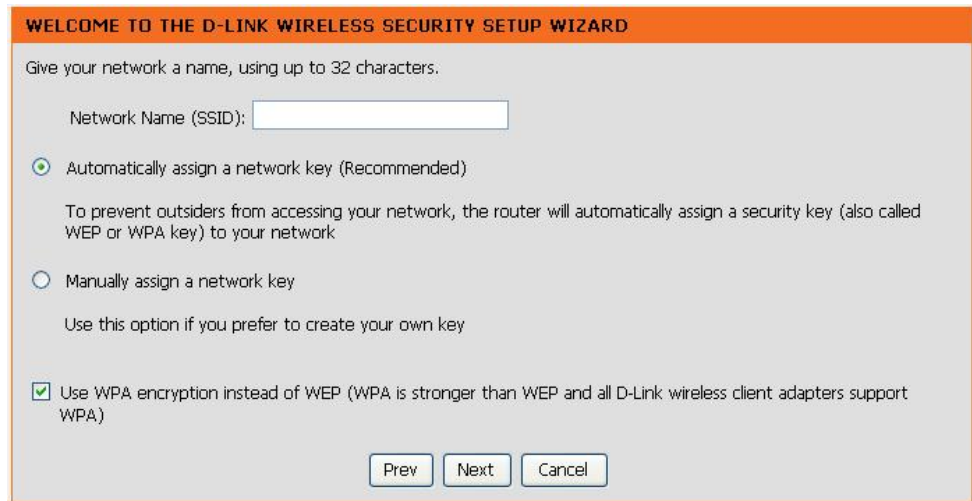
WPS RESET TO UNCONFIGURED

Wps reset to unconfigured, the "wireless settings" will be reset to factory default, other settings will remain unchanged.

Reset to Unconfigured

4.3.3.1 Wireless Wizard

In **Wireless Connection** page, Click **“Wireless Connection Setup Wizard”**, the page shown in the following figure appears.



WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

Give your network a name, using up to 32 characters.

Network Name (SSID):

Automatically assign a network key (Recommended)

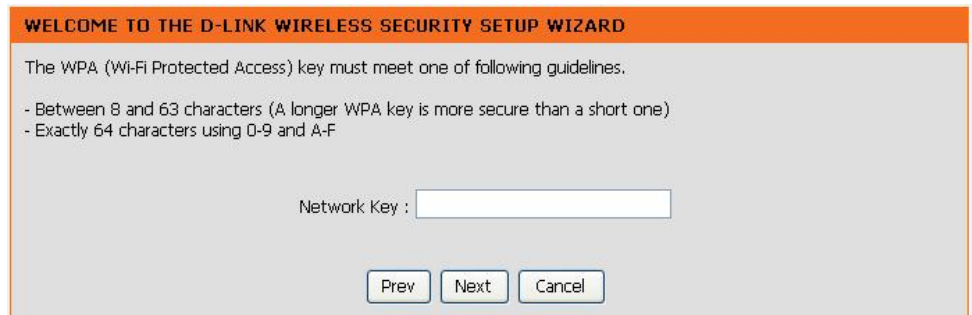
To prevent outsiders from accessing your network, the router will automatically assign a security key (also called WEP or WPA key) to your network.

Manually assign a network key

Use this option if you prefer to create your own key.

Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-Link wireless client adapters support WPA)

If you select **“Use WPA encryption instead of WEP”** and **“Manually assign a network key”**, click **“Next”**, the page shown in the following figure appears.



WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

The WPA (Wi-Fi Protected Access) key must meet one of following guidelines.

- Between 8 and 63 characters (A longer WPA key is more secure than a short one)
- Exactly 64 characters using 0-9 and A-F

Network Key :

If you only select **“Manually assign a network key”**, click **“Next”**, the page shown in the following figure appears.



WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

The WEP (or Wired Equivalent Privacy) key must meet one of following guidelines.

- Exactly 5 or 13 characters
- Exactly 10 or 26 characters using 0-9 and A-F

A longer WEP key is more secure than a short one.

Network Key :

After you enter the network key, the page shown in the following figure appears, you can confirm the wireless settings in this page. Click **Save** to save the settings.



WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD

Please enter the following settings in the wireless device that you are adding to your wireless network and keep a note of it for future reference

Network Name (SSID) : **dlink**

Wireless Security Mode : **WPA-PSK TKIP**

Network Key: **123456789**

4.3.3.2 Wireless Device Add

In **Wireless Connection** page, Click **Add Wireless Device with WPS**, the page shown in the following figure appears.

Select **Auto**, click **Next**, the page shown in the following figure appears. When **PIN** is used, users are only allowed to enter no more than eight digits in the field.

Select **Manual**, click **Next**, the page shown in the following figure appears. It displays the current wireless settings and you can manually enter the settings in the wireless device that's to be added in the wireless network.

ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP)

Please select one of the following configuration methods and click next to continue.

Auto -- Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)

Manual -- Select this option will display the current wireless setting for you to configure the wireless device manually

Prev Next Cancel

ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP)

There are two ways to add wireless device to your wireless network:

- PIN (Personal Identification Number)
- PBC (Push Button Configuration)

PIN :

Please enter the PIN from your wireless device and click the below "Connect" button

PBC :

Please press the push button on your wireless device and press the "Connect" button below within 120 seconds

Prev Connect

ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP)

Please enter the following settings in the wireless device that you are adding to your wireless network and keep a note of it for future reference

Network Name (SSID) : **aaaa**

Wireless Security Mode : **WPA-PSK TKIP+AES**

Network Key: **PNHBbiUCFFceAVq6**

Prev Ok

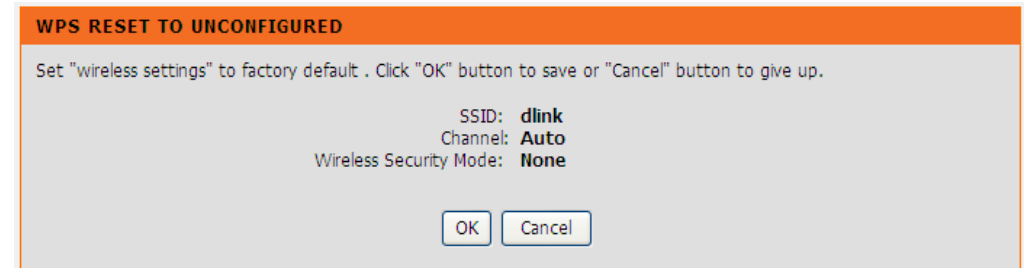
4.3.3.3 Manual Wireless Setup

If you want to configure the Internet settings of your new D-Link Router manually, click **Manual Wireless Connection Setup**. It will redirect to 4.4.1 Wireless Settings.

4.3.3.4 WPS Reset to Unconfigured

In **Wireless Connection** page, Click **Reset to Unconfigured**, the page shown in the following figure appears.

Once the **“Reset to Unconfigured”** button is clicked, the “wireless settings” will be reset to factory default, other settings will remain unchanged.



4.3.4 Local Network

You can configure the LAN IP address according to the actual application. The preset IP address is 192.168.1.1. You can use the default settings and DHCP service to manage the IP settings for the private network. The IP address of the device is the base address used for DHCP. To use the device for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the device. The IP address available in the DHCP IP address pool changes automatically if you change the IP address of the device.

You can also enable the secondary LAN IP address. The two LAN IP addresses must be in different networks.

Choose **Setup > Local Network**. The **Local Network** page shown in the following figure appears.

The screenshot shows a web-based configuration page for the router's local network settings. It is divided into two main sections: 'LOCAL NETWORK' and 'ROUTER SETTINGS'.

LOCAL NETWORK

This section allows you to configure the local network settings of your router. Please note that this section is optional and you should not need to change any of the settings here to get your network up and running.

ROUTER SETTINGS

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

Router IP Address :

Subnet Mask :

Configure the second IP Address and Subnet Mask for LAN interface

IP Address :

Subnet Mask :

By default, **Enable DHCP Server** is selected for the Ethernet LAN interface of the device. DHCP service supplies IP settings to workstations configured to automatically obtain IP settings that are connected to the device through the Ethernet port. When the device is used for DHCP, it becomes the default gateway for DHCP client connected to it. If you change the IP address of the device, you must also change the range of IP addresses in the pool used for DHCP on the LAN. The IP address pool can contain up to 253 IP addresses.

Click **Apply** to save the settings.

DHCP SERVER SETTINGS (OPTIONAL)

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

Disable DHCP Server
 Enable DHCP Server

DHCP IP Address Range : to

DHCP Lease Time : (hours)

In the **Local Network** page, you can assign IP addresses on the LAN to specific individual computers based on their MAC addresses.

DHCP RESERVATIONS LIST

Status	Computer Name	MAC Address	IP Address

Click **Add** to add static DHCP (optional). The page shown in the following figure appears.

Select **Enable** to reserve the IP address for the designated PC with the configured MAC address.

The **Computer Name** helps you to recognize the PC with the MAC address. For example, Father's Laptop.

Click **Apply** to save the settings.

After the DHCP reservation is saved, the DHCP reservations list displays the configuration.

If the DHCP reservations list table is not empty, you can select one or more items and click **Edit** or **Delete**.

ADD DHCP RESERVATION (OPTIONAL)

Enable :

Computer Name :

IP Address :

MAC Address :

4.3.5 Time and Date

Choose **Setup > Time and Date**. The page shown in the following figure appears.

In the **Time and Date** page, you can configure, update, and maintain the correct time on the internal system clock. You can set the time zone that you are in and the network time protocol (NTP) server. You can also configure daylight saving to automatically adjust the time when needed.

Select **Automatically synchronize with Internet time servers**.

Select the specific time server and the time zone from the corresponding drop-down lists.

Select **Enable manual Daylight Saving, overwrite automatic rule** if necessary.

Set the daylight as you want.

Click **Apply** to save the settings.

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 NTP (Network Time Protocol) Server. Daylight Saving can also be configured to automatically adjust the time when needed.

TIME SETTINGS

Automatically synchronize with Internet time servers

First NTP time server :

Second NTP time server :

TIME CONFIGURATION

Current Router Time : Thu Jan 1 00:55:57 1970

Time Zone :

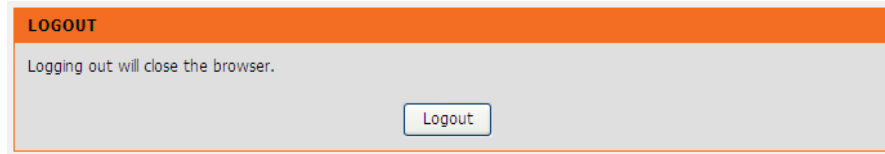
Daylight Saving Time rule of US have automatically been applied to this time zone

Enable manual Daylight Saving, overwrite automatic rule

	Month	Week	Day	Time
Daylight Saving Dates : Start	<input type="text" value="Jan"/>	<input type="text" value="4th"/>	<input type="text" value="Sun"/>	<input type="text" value="12 am"/>
End	<input type="text" value="Jan"/>	<input type="text" value="4th"/>	<input type="text" value="Sun"/>	<input type="text" value="12 am"/>

4.3.6 Logout

Choose **Setup > Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.



4.4 Advanced

This section includes advanced features used for network management, security and administrative tools to manage the device. You can view status and other information that are used to examine performance and troubleshoot.

4.4.1 Wireless Settings

This function is used to modify the standard 802.11 wireless radio settings. It is recommended not to change the default settings, because incorrect settings may impair the performance of your wireless radio. The default settings provide the best wireless radio performance in most environments.

Choose **ADVANCED > Wireless Settings**. The page shown in the following figure appears.

DSL-2730B	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Wireless Settings	WIRELESS SETTINGS -- WIRELESS BASICS				
Port Forwarding	Configure your wireless basic settings.				
Port Triggering	Wireless Basics				
DMZ	ADVANCED WIRELESS -- ADVANCED SETTINGS				
Parental Control	Allows you to configure advanced features of the wireless LAN interface.				
Filtering Options	Advanced Settings				
DNS	ADVANCED WIRELESS -- MAC FILTERING				
Dynamic DNS	Allows you to configure wireless firewall by denying or allowing designated MAC addresses.				
Multicast	MAC Filtering				
Network Tools	ADVANCED WIRELESS -- SECURITY SETTINGS				
Routing	Allows you to configure security features of the wireless LAN interface.				
Schedules	Security Settings				
Logout					

4.4.1.1 Wireless Basics

In the **Wireless Settings** page, click **Wireless Basic**, the page shown in the following figure appears. In this page, you can configure the parameters of wireless LAN clients that may connect to the device.

- **Enable Wireless:** Select this to turn Wi-Fi on and off.
- **Wireless Network Name (SSID):** The Wireless Network Name is a unique name that identifies a network. All devices on a network must share the same wireless network name in order to communicate on the network. If you decide to change the wireless network name from the default setting, enter your new wireless network name in this field.
- **Visibility Status:** You can select **Visible** or **Invisible**.
- **Country:** Select the country from the drop-down list.
- **Wireless Channel:** Select the wireless channel from the pull-down menu. It is different for different countries.
- **802.11 Mode:** Select the appropriate 802.11 mode based on the wireless clients in your network. The drop-down menu options are 802.11n auto, 802.11g only, Mixed 802.11g and 802.11b, or 802.11b only.
- **Bandwidth:** You can select it from the drop-down list:

Click **Apply** to save the settings.

WIRELESS BASICS

Use this section to configure the wireless settings for your D-Link router. Please note that changes made in this section will also need to be duplicated to your wireless clients and PC.

WIRELESS NETWORK SETTINGS

Enable Wireless

Wireless Network Name (SSID) :

Visibility Status : Visible Invisible

Country :

Wireless Channel : (Current: CH 6)

802.11 Mode :

Bandwidth :

Please take note of your SSID as you will need to update the settings to your wireless devices and PC.

4.4.1.2 Advanced Settings

In the **Wireless Settings** page, click **Advanced settings**, the page shown in the following figure appears.

- **Multicast Rate:** Select the multicast transmission rate for the network. The rate of data transmission should be set depending on the speed of your wireless network. You can select from a range of transmission speeds, or you can select **Auto** to have the Router automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the Router and a wireless client. The default value is **Auto**.
- **Fragmentation Threshold:** Packets that are larger than this threshold are fragmented into multiple packets. Try to increase the fragmentation threshold if you encounter high packet error rates. Do not set the threshold too low, since this can result in reducing networking performance.
- **RTS Threshold:** This value should remain at its default setting of 2347. Should you encounter inconsistent data flow, only minor reductions are recommended. Should you encounter inconsistent data flow, only minor reduction of the default value, 2347 is recommended. If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. The Router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. The RTS Threshold value should remain at its default value of 2347.
- **DTIM Interval:** (Delivery Traffic Indication Message) Enter a value between 1 and 255 for the Delivery Traffic Indication Message (DTIM.) A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.
- **Beacon Interval:** A beacon is a packet of information that is sent from a connected device to all other devices where it announces its availability and readiness. A beacon interval is a period of time (sent with the beacon) before sending the beacon again. The beacon interval may be adjusted in milliseconds (ms). Default (100) is recommended.
- **Global Max Clients:** Specifies maximum wireless client stations to be able to link with AP. Once the clients exceed the max value, all other clients will be refused.

ADVANCED SETTINGS

These options are for users that wish to change the behaviour of their 802.11g wireless radio from the standard setting. D-Link does not recommend changing these settings from the factory default. Incorrect settings may impair the performance of your wireless radio. The default settings should provide the best wireless radio performance in most environments.

ADVANCED WIRELESS SETTINGS

Multicast Rate:	Auto	▼
Fragmentation Threshold:	2346	
RTS Threshold:	2347	
DTIM Interval:	1	
Beacon Interval:	100	
Global Max Clients:	16	
Transmit Power:	100%	▼
WMM(Wi-Fi Multimedia):	Enabled	▼

SSID

Enable Wireless	<input checked="" type="checkbox"/>	
Wireless Network Name (SSID) :	dlink	
Visibility Status :	<input checked="" type="radio"/> Visible <input type="radio"/> Invisible	
User Isolation :	Off	▼
Disable WMM Advertise :	Off	▼
Enable Wireless Multicast Forwarding (WMMF) :	On	▼
Max Clients :	16	(1 ~ 128)

- **Transmit Power:** Adjust the transmission range here. This tool can be helpful for security purposes if you wish to limit the transmission range.
- **WMM (Wi-Fi Multimedia):** Select whether WMM is enable or disabled. Before you disable WMM, you should understand that all QoS queues or traffic classes related to wireless do not take effect.
- **Enable Wireless:** Select this to turn Wi-Fi on and off.
- **Wireless Network Name (SSID):** The Wireless Network Name is a unique name that identifies a network. All devices on a network must share the same wireless network name in order to communicate on the network. If you decide to change the wireless network name from the default setting, enter your new wireless network name in this field.
- **Visibility Status:** You can select **Visible** or **Invisible**.
- **User Isolation:** When many clients connect to the same access point, they can access each other. If you want to disable the access between clients which connect the same access point, you can select **On** to enable this service.
- **Disable WMM Advertise:** You can select **On** or **Off** from the drop-down list.
- **Enable Wireless Multicast Forwarding (WMF):** You can select **On** or **Off** from the drop-down list.
- **Max Clients:** Specifies maximum wireless client stations to be enable to link with AP.
- **GUEST/VIRTUAL ACCESS POINT:** If you want to make Guest/Virtual network function be available, you can set the parameters below.

These settings are only for more technically advanced users who have sufficient knowledge about wireless LAN. Do not change these settings unless you know the effect of changes on the device.

Click **Apply** to save the settings.

GUEST/VIRTUAL ACCESS POINT-1

Enable Wireless Guest Network :

Guest SSID :

Visibility Status : Visible Invisible

User Isolation :

Disable WMM Advertise :

Enable Wireless Multicast Forwarding (WMF) :

Max Clients : (1 ~ 128)

GUEST/VIRTUAL ACCESS POINT-2

Enable Wireless Guest Network :

Guest SSID :

Visibility Status : Visible Invisible

User Isolation :

Disable WMM Advertise :

Enable Wireless Multicast Forwarding (WMF) :

Max Clients : (1 ~ 128)

GUEST/VIRTUAL ACCESS POINT-3

Enable Wireless Guest Network :

Guest SSID :

Visibility Status : Visible Invisible

User Isolation :

Disable WMM Advertise :

Enable Wireless Multicast Forwarding (WMF) :

Max Clients : (1 ~ 128)

4.4.1.3 MAC Filtering

In the **Wireless Settings** page, click **MAC Filtering**, the page shown in the following figure appears.

In this page, you can allow or deny users access the wireless router based on their MAC address.

MAC FILTERING

Enter the MAC address and click "Apply" to add the MAC address to the wireless MAC address filters.

Wireless MAC Filtering Policy:

- Enable Wireless MAC Filtering
- Only **ALLOW** computers listed to access wireless network
- Only **DENY** computers listed will be blocked to access wireless network

Apply Cancel

WIRELESS MAC FILTERING LIST

MAC Address	SSID
-------------	------

Add

Click **Add**, the page shown in the following figure appears.

MAC FILTERING

MAC Address : SSID : DLINK ▾

Apply Cancel

4.4.1.4 Security Settings

In the **Wireless Settings** page, click **Security Settings**. The page shown in the following figure appears.

Select the SSID that you want to configure from the drop-down list.

Select the encryption type from the **Security Mode** drop-down list. You can select **None**, **WEP**, **WPA-Personal** and **WPA-Enterprise**.

SECURITY SETTINGS

This page allows you to configure security features of the wireless LAN interface. You can set the network authentication method, select data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply" to configure the wireless security options.

WIRELESS SSID

Select SSID :

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2. WEP is the original wireless encryption standard. WPA and WPA2 provides a higher level of security.

Security Mode :

WIRELESS SECURITY MODE

WPA Mode:

WPA passphrase:

WPA Group Rekey Interval:

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

If you select **WEP**, the page shown in the following figure appears.

WEP (Wireless Encryption Protocol) encryption can be enabled for security and privacy. WEP encrypts the data portion of each frame transmitted from the wireless adapter using one of the predefined keys.

The router offers 64 or 128 bit encryption with four keys available.

Select **Encryption Strength** from the drop-down menu. (128 bit is stronger than 64 bit)

Enter the key into the Network Key field 1~4. (Key length is outlined at the bottom of the window.)

Click **Apply/Save** to save the settings.

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2. WEP is the original wireless encryption standard. WPA and WPA2 provides a higher level of security.

Security Mode :

WIRELESS SECURITY MODE

Encryption Strength:

Current Network Key:

Network Key 1:

Network Key 2:

Network Key 3:

Network Key 4:

Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys
Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

If you select **WPA-Personal**, the page shown in the following figure appears.

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2. WEP is the original wireless encryption standard. WPA and WPA2 provides a higher level of security.

Security Mode :

WIRELESS SECURITY MODE

WPA Mode;:

WPA passphrase:

WPA Group Rekey Interval:

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

If you select **WPA- Enterprise**, the page shown in the following figure appears. You can only use WPA-enterprise if you have set up RADIUS server. This is the WPA/WPA2 authentication with RADIUS server instead of pre-shared key.

WIRELESS SECURITY MODE

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2. WEP is the original wireless encryption standard. WPA and WPA2 provides a higher level of security.

Security Mode :

WIRELESS SECURITY MODE

WPA Mode;:

WPA Group Rekey Interval:

RADIUS Server IP Address:

RADIUS Port:

RADIUS Key:

Please take note of your SSID and security Key as you will need to duplicate the same settings to your wireless devices and PC.

4.4.2 Port Forwarding

This function is used to open ports in your device and re-direct data through those ports to a single PC on your network (WAN-to-LAN traffic). It allows remote users to access services on your LAN, such as FTP for file transfers or SMTP and POP3 for e-mail. The device accepts remote requests for these services at your global IP address. It uses the specified TCP or UDP protocol and port number, and redirects these requests to the server on your LAN with the LAN IP address you specify. Note that the specified private IP address must be within the available range of the subnet where the device is in.

Choose **ADVANCED > Port Forwarding**. The page shown in the following figure appears.

PORT FORWARDING

Port Forwarding allows you to direct incoming traffic from the WAN side (identified by protocol and external port) to the internal server with a private IP address on the LAN side. The internal port is required only if the external port needs to be converted to a different port number used by the server on the LAN side. A maximum of 32 entries can be configured.

Select the service name, and enter the server IP address and click "Apply" to forward IP packets for this service to the specified server. **NOTE: The "Internal Port End" cannot be changed. It is the same as "External Port End" normally and will be the same as the "Internal Port Start" or "External Port End" if either one is modified.**

PORT FORWARDING SETUP

Server Name	External Port		Protocol	Internal Port		Server IP Address	Use Interface	Schedule Rule
	Start	End		Start	End			

Click **Add** to add a virtual server.

Select a service for a preset application, or enter a name in the **Custom Server** field.

Enter an IP address in the **Server IP Address** field, to appoint the corresponding PC to receive forwarded packets.

The Ports show the ports that you want to open on the device. The **TCP/UDP** means the protocol type of the opened ports.

PORT FORWARDING SETUP

Remaining number of entries that can be configured: 32

Use Interface : ▼

Select a Service : ▼

Custom Server :

Schedule : ▼ [View Available Schedules](#)

Server IP Address :

External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	TCP ▼	<input type="text"/>	<input type="text"/>

Click **Apply** to save the settings. The page shown in the following figure appears. A virtual server is added.

PORT FORWARDING SETUP									
	Server Name	External Port		Protocol	Internal Port		Server IP Address	Use Interface	Schedule Rule
		Start	End		Start	End			
<input type="checkbox"/>	AUTH	113	113	TCP	113	113	10.0.0.78	ppp0	Always

4.4.3 Port Triggering

Some applications require that specific ports in the firewall of the device are open for the remote parties to access. Application rules dynamically open the firewall ports when an application on the LAN initiates a TCP/UDP connection to a remote party using the trigger ports. The device allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the firewall ports. A maximum of 32 entries can be configured. Choose **ADVANCED > Port Triggering**. The page shown in the following figure appears.

PORT TRIGGERING								
<p>Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Port Trigger dynamically opens up the "Open Ports" in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the "Triggering Ports". The Router allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the "Open Ports".</p> <p>Some applications such as games, video conferencing, remote access applications and others require that specific ports in the Router's firewall be opened for access by the applications. You can configure the port settings from this screen by selecting an existing application or creating your own (Custom application) and click "Apply" to add it.</p> <p>A maximum of 32 entries can be configured.</p>								
PORT TRIGGERING								
	Application	Trigger		Open		Use Interface	Schedule Rule	
	Name	Protocol	Port Range		Protocol			Port Range
			Start	End				

Click **Add** to add a new Port Trigger.

Click the **Select an application** drop-down menu to choose the application you want to setup for port triggering. When you have chosen an application the default Trigger settings will populate the table below.

If the application you want to setup isn't listed, click the **Custom application** radio button and type in a name for the trigger in the Custom application field. Configure the **Trigger Port Start**, **Trigger Port End**, **Trigger Protocol**, **Open Port Start**, **Open Port End** and **Open Protocol** settings for the port trigger you want to configure.

When you have finished click the **Apply** button.

PORT TRIGGERING

Remaining number of entries that can be configured :32

Use Interface : pppoe_0_8_35/ppp0 ▼

Application Name :

Select an application : (Click to Select) ▼

Custom application :

Schedule : Always ▼ [View Available Schedules](#)

Trigger Port Start	Trigger Port End	Trigger Protocol	Open Port Start	Open Port End	Open Protocol
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼
<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>	TCP ▼

Apply
Cancel

4.4.4 DMZ

Since some applications are not compatible with NAT, the device supports the use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and it is visible to agents on the Internet with the correct type of software. Note that any client PC in the DMZ is exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through DMZ.

Choose **ADVANCED** > **DMZ**. The page shown in the following figure appears. Click **Apply** to save the settings.

The screenshot shows the DMZ configuration page. At the top, there is an orange header with the text "DMZ". Below this, a grey box contains the following text: "The DSL Router will forward IP packets from the WAN that do not belong to any of the applications configured in the Port Forwarding table to the DMZ host computer." Below this, there are two instructions: "Enter the computer's IP address and click 'Apply' to activate the DMZ host." and "Clear the IP address field and click 'Apply' to deactivate the DMZ host." Below the instructions, there is a section titled "DMZ HOST" with a white background. It contains a label "DMZ Host IP Address :" followed by an empty text input field. At the bottom of the page, there are two buttons: "Apply" and "Cancel".

4.4.5 Parental Control

Choose **ADVANCED** > **Parental Control**. The **Parent Control** page shown in the following figure appears.

This page provides two useful tools for restricting the Internet access. **Block Websites** allows you to quickly create a list of all websites that you wish to stop users from accessing. **Block MAC Address** allows you to control when clients or PCs connected to the device are allowed to access the Internet.

The screenshot shows the Parental Control configuration page. It has a dark grey header with the text "PARENTAL CONTROL -- BLOCK WEBSITE". Below this, there is a white box with the text "Uses URL (i.e. www.yahoo.com) to implement filtering." and a button labeled "Block Website". Below this, there is another dark grey header with the text "PARENTAL CONTROL -- BLOCK MAC ADDRESS". Below this, there is a white box with the text "Uses MAC address to implement filtering." and a button labeled "Block MAC Address".

4.4.5.1 Block Website

In the **Parent Control** page, click **Block Website**. The page shown in the following figure appears.

BLOCK WEBSITE

This page allows you to block websites. If enabled, the websites listed here will be denied access to clients trying to browse that website. Choose "Add", "Edit", or "Delete" to configure block websites.

URL	Schedule Rule

Add

Click **Add**. The page shown in the following page appears. Enter the website in the **URL** field. Select the **Schedule** from drop-down list, or select **Manual Schedule** and select the corresponding time and days.

BLOCK WEBSITE

URL :

Schedule : [View Available Schedules](#)

Manual Schedule :

Day(s) : All Week Select Day(s)

Sun Mon Tue Wed

Thu Fri Sat

All Day - 24 hrs :

Start Time : : (hour:minute, 24 hour time)

End Time : : (hour:minute, 24 hour time)

Apply Cancel

Click **Apply** to add the website to the **BLOCK WEBSITE** table. The page shown in the following figure appears.

SETUP	ADVANCED	MAINTENANCE	STATUS
BLOCK WEBSITE			
<p>This page allows you to block websites. If enabled, the websites listed here will be denied access to clients trying to browse that website. Choose "Add", "Edit", or "Delete" to configure block websites.</p>			
BLOCK WEBSITE			
<input type="checkbox"/>	URL	Schedule Rule	
<input type="checkbox"/>	www.yahoo.com	Mon,Tue,Wed,Thu,Fri,Sat,Sun Time:0:0-23:59	
<input type="button" value="Add"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>			

4.4.5.2 Block MAC Address

In the **Parent Control** page, click **Block MAC Address**. The page shown in the following figure appears.

BLOCK MAC ADDRESS		
<p>Time of Day Restrictions -- A maximum of 16 entries can be configured</p> <p>This page adds a time of day restriction to a special LAN device connected to the router. The "Current PC's MAC Address" automatically displays the MAC address of the LAN device where the browser is running. To restrict another LAN device, click the "Other MAC Address" button and enter the MAC address of the other LAN device. To find out the MAC address of a Windows-based PC, open a command prompt window and type "ipconfig /all".</p>		
BLOCK MAC ADDRESS		
<input type="text"/>	Username	Schedule
<input type="text"/>	MAC	<input type="text"/>
<input type="button" value="Add"/>		

Click **Add**. The page shown in the following figure appears.
Enter the use name and MAC address and select the corresponding time and days.

TIME OF DAY RESTRICTION

User Name :

Current PC's MAC Address :

Other MAC Address : (xx:xx:xx:xx:xx:xx)

Manual Schedule :

Day(s) : All Week Select Day(s)

Sun Mon Tue Wed

Thu Fri Sat

All Day - 24 hrs :

Start Time : : (hour:minute, 24 hour time)

End Time : : (hour:minute, 24 hour time)

Click **Apply** to add the MAC address to the **BLOCK MAC ADDRESS** table. The page shown in the following figure appears.

SETUP
ADVANCED
MAINTENANCE
STATUS

BLOCK MAC ADDRESS

Time of Day Restrictions -- A maximum of 16 entries can be configured

This page adds a time of day restriction to a special LAN device connected to the router. The "Current PC's MAC Address" automatically displays the MAC address of the LAN device where the browser is running. To restrict another LAN device, click the "Other MAC Address" button and enter the MAC address of the other LAN device. To find out the MAC address of a Windows-based PC, open a command prompt window and type "ipconfig /all".

BLOCK MAC ADDRESS

	Username	MAC	Schedule
<input type="checkbox"/>	aa	00:19:ED:28:EE:D4	Mon, Tue, Wed, Thu, Fri, Sat, Sun Time: 0:0 - 23:59

4.4.6 Filtering Options

Choose **ADVANCED > Filtering Options**. The **Filtering Options** page shown in the following figure appears.

The screenshot shows three distinct sections for filtering options, each with a title bar and a description:

- FILTERING OPTIONS -- INBOUND IP FILTERING**: Manage incoming traffic. Includes an "Inbound IP Filtering" button.
- FILTERING OPTIONS -- OUTBOUND IP FILTERING**: Manage outgoing traffic. Includes an "Outbound IP Filtering" button.
- FILTERING OPTIONS -- BRIDGE FILTERING**: Uses MAC address to implement filtering. Usefull only in bridge mode. Includes a "Bridge Filtering" button.

4.4.6.1 Inbound IP Filtering

In the **Filtering Options** page, click **Inbound IP Filtering**. The page shown in the following figure appears.

The screenshot shows the "INCOMING IP FILTERING" page with the following content:

INCOMING IP FILTERING

The screen allows you to create a filter rule to identify incoming IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click "Apply" to save and activate the filter.

By default, all incoming IP traffic from WAN is blocked when the firewall is enabled, but some IP traffic can be **ACCEPTED** by setting up filters.

ACTIVE INBOUND FILTER

Name	Interface	Protocol	Source Address	Source Port	Dest. Address	Dest. Port	Schedule Rule
Add							

Click **Add** to add an inbound IP filter. The page shown in the following figure appears.

Enter the **Filter Name** and specify at least one of the following criteria: protocol, source/destination IP address, subnet mask, and source/destination port.

Click **Apply** to save the settings.

The **ACTIVE INBOUND FILTER** shows detailed information about each created inbound IP filter.

Note:

The settings only apply when the firewall is enabled.

INCOMING IP FILTERING

Filter Name :	<input type="text"/>
Protocol :	Any <input type="button" value="v"/>
Source IP Type :	Any <input type="button" value="v"/>
Source IP Address :	<input type="text"/>
Source Subnet Mask :	<input type="text"/>
Source Port Type :	Any <input type="button" value="v"/>
Source Port :	<input type="text"/> (port or port:port)
Destination IP Type :	Any <input type="button" value="v"/>
Destination IP Address :	<input type="text"/>
Destination Subnet Mask :	<input type="text"/>
Destination Port Type :	Any <input type="button" value="v"/>
Destination Port :	<input type="text"/> (port or port:port)
Schedule :	Always <input type="button" value="v"/> View Available Schedules

WAN Interfaces (Configured in Routing mode and with firewall enabled only)

Select at least one or multiple WAN interfaces displayed below to apply this rule.

- Select All
- mer_0_0_35/atm0
- br0/br0

4.4.6.2 Outbound IP Filtering

By default, all outgoing IP traffic from the LAN is allowed. The outbound filter allows you to create a filter rule to block outgoing IP traffic by specifying a filter name and at least one condition.

In the **Filtering Options** page, click **Outbound IP Filtering**. The page shown in the following figure appears.

Click **Add** to add an outbound IP filter. The page shown in the following figure appears.

Enter the **Filter Name** and specify at least one of the following criteria: protocol, source/destination IP address, subnet mask, and source/destination port. Click **Apply** to save the settings.

The **ACTIVE OUTGOING IP FILTER** shows detailed information about each created outbound IP filter.

OUTGOING IP FILTERING

This screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click "Apply" to save and activate the filter.

WARNING : Changing from one global policy to another will cause all defined rules to be REMOVED AUTOMATICALLY! You will need to create new rules for the new policy.

By default, all outgoing IP traffic from LAN is allowed, but some IP traffic can be **BLOCKED** by setting up filters.

ACTIVE OUTGOING IP FILTER

Name	Protocol	Source Address	Source Port	Dest. Address	Dest. Port	Schedule Rule
------	----------	----------------	-------------	---------------	------------	---------------

Add

OUTGOING IP FILTERING

Filter Name :

Protocol :

Source IP Type :

Source IP Address :

Source Subnet Mask :

Source Port Type :

Source Port : (port or port:port)

Destination IP Type :

Destination IP Address :

Destination Subnet Mask :

Destination Port Type :

Destination Port : (port or port:port)

Schedule : [View Available Schedules](#)

Apply

Cancel

4.4.6.3 Bridge Filtering

In the **Filtering Options** page, click **Bridge Filtering**. The page shown in the following figure appears. This page is used to configure bridge parameters. In this page, you can change the settings or view some information of the bridge and its attached ports.

BRIDGE FILTERING

Bridge Filtering is only effective on ATM PVCs configured in Bridge mode. **ALLOW** means that all MAC layer frames will be **ALLOWED** except those matching with any of the specified rules in the following table. **DENY** means that all MAC layer frames will be **DENIED** except those matching with any of the specified rules in the following table.

Create a filter to identify the MAC layer frames by specifying at least one condition below. If multiple conditions are specified, all of them take effect. Click "Apply" to save and activate the filter.

WARNING : Changing from one global policy to another will cause all defined rules to be REMOVED AUTOMATICALLY! You will need to create new rules for the new policy.

Bridge Filtering Global Policy:

ALLOW all packets but **DENY** those matching any of specific rules listed

DENY all packets but **ALLOW** those matching any of specific rules listed

BRIDGE FILTER SETUP

Service Name	Protocol	Destination MAC	Source MAC	Frame Direction	Schedule Rule
<input type="button" value="Add"/>					

Click **Add** to add a bridge filter. The page shown in the following figure appears. Click **Apply** to save the settings.

ADD BRIDGE FILTER

Protocol Type : (Click to Select) ▼
 Destination MAC Address :
 Source MAC Address :
 Frame Direction : LAN<=>WAN ▼
 Schedule : Always ▼ [View Available Schedules](#)

WAN Interfaces (Configured in Bridge mode only)

- Select All
 br_0_0_32/atm1

Apply Cancel

4.4.7 DNS

Domain name system (DNS) is an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they are easier to remember. The Internet, however, is actually based on IP addresses. Each time you use a domain name, a DNS service must translate the name into the corresponding IP address. For example, the domain name www.example.com might be translated to 198.105.232.4.

The DNS system is, in fact, its own network. If one DNS server does not know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

Choose **ADVANCED > DNS**. The page shown in the following figure appears.

DNS SERVER CONFIGURATION

If you are using the device for DHCP service on the LAN or if you are using DNS servers on the ISP network, select **Obtain DNS Info from a WAN interface**.

If you have DNS IP addresses provided by your ISP, enter these IP addresses in the available entry fields for the preferred DNS server and the alternate DNS server.

Click **Apply** to save the settings.

DNS

Click "Apply" button to save the new configuration. You must reboot the router to make the new configuration effective.

DNS SERVER CONFIGURATION

Obtain DNS info from a WAN interface:
 WAN Interface selected: pppoe_0_0_35/ppp0 ▼
 Use the following DNS server addresses
 Preferred DNS server : 0.0.0.0
 Alternate DNS server : 0.0.0.0

Apply Cancel

4.4.8 Dynamic DNS

The device supports dynamic domain name service (DDNS). The dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, and allows access to a specified host from various locations on the Internet. Click a hyperlinked URL in the form of `hostname.dyndns.org` and allow remote access to a host. Many ISPs assign public IP addresses using DHCP, so locating a specific host on the LAN using the standard DNS is difficult. For example, if you are running a public web server or VPN server on your LAN, DDNS ensures that the host can be located from the Internet even if the public IP address changes. DDNS requires that an account be set up with one of the supported DDNS service providers (DynDNS.org or dlinkddns.com).

Choose **ADVANCED** > **Dynamic DNS**. The page shown in the following page appears.

Click **Add** to add dynamic DNS. The page shown in the following figure appears.

- **DDNS provider:** Select one of the DDNS registration organizations from the down-list drop.

DDNS provider :

- dlinkddns.com(Free)
- DynDNS.org(Custom)
- DynDNS.org(Free)
- DynDNS.org(Static)

- **Host Name:** Enter the host name that you registered with your DDNS service provider.
- **Interface:** Select the interface you want to use.
- **Username:** Enter the user name for your DDNS account.
- **Password:** Enter the password for your DDNS account.

Click **Apply** to save the settings.

DYNAMIC DNS

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

[Sign up for D-Link's Free DDNS service at www.DLinkDDNS.com](http://www.DLinkDDNS.com)

DYNAMIC DNS

Hostname

Username

Service

Interface

Add

ADD DYNAMIC DNS

DDNS provider :

Hostname :

Interface :

Username :

Password :

Apply

Cancel

4.4.9 Multicast

Choose **ADVANCED > Multicast**. The page shown in the following figure appears.

- **Default Version:**IGMP version
- **Query Interval(s):**The query interval is the amount of time in seconds between IGMP General Query messages sent by the router (if the router is the querier on this subnet)
- **Query Response Interval (1/10s):** The query response interval is the maximum amount of time in seconds that the IGMP router waits to receive a response to a General Query message. The query response interval is the Maximum Response Time field in the IGMP v2 Host Membership Query message header. The default query response interval is 10 seconds and must be less than the query interval
- **Last Member Query Interval (1/10s):** The last member query interval is the amount of time in seconds that the IGMP router waits to receive a response to a Group-Specific Query message. The last member query interval is also the amount of time in seconds between successive Group-Specific Query messages.
- **Robustness Value:** The robustness variable is a way of indicating how susceptible the subnet is to lost packets. IGMP can recover from robustness variable minus 1 lost IGMP packets.
- **Maximum Multicast Groups:** max multicast groups
- **Maximum Multicast Data Sources (for IGMPv3):** max group data sources that want to receive.
- **Maximum Multicast Group Members:**Max member in one group
- **Fast Leave Enable:** Enable or disable fast leave feature.
- **LAN to LAN (Intra LAN) Multicast Enable:** Enable or disable Lan to Lan msulticast.

MULTICAST CONFIGURATION

Enter IGMP protocol configuration fields if you want modify default values shown below.

MULTICAST CONFIGURATION

Default Version:	<input style="width: 80%;" type="text" value="3"/>
Query Interval (s):	<input style="width: 80%;" type="text" value="125"/>
Query Response Interval (1/10s):	<input style="width: 80%;" type="text" value="100"/>
Last Member Query Interval (1/10s):	<input style="width: 80%;" type="text" value="10"/>
Robustness Value:	<input style="width: 80%;" type="text" value="2"/>
Maximum Multicast Groups:	<input style="width: 80%;" type="text" value="25"/>
Maximum Multicast Data Sources (for IGMPv3):	<input style="width: 80%;" type="text" value="10"/>
Maximum Multicast Group Members:	<input style="width: 80%;" type="text" value="25"/>
Fast Leave Enable:	<input checked="" type="checkbox"/>
LAN to LAN (Intra LAN) Multicast Enable:	<input checked="" type="checkbox"/>

4.4.10 Network Tools

Choose **ADVANCED > Network Tools**. The page shown in the following figure appears.

NETWORK TOOLS -- PORT MAPPING
Port Mapping supports multiple port to PVC and bridging groups. Each group will perform as an independent network.
Port Mapping

NETWORK TOOLS -- IGMP
Transmission of identical content, such as multimedia, from a source to a number of recipients.
IGMP

NETWORK TOOLS -- QUALITY OF SERVICE
Allows you to enable or disable QoS function.
Quality of Service

NETWORK TOOLS -- QUEUE CONFIG
Allows you to add Classification Queue precedence for QoS.
Queue Config

NETWORK TOOLS -- QoS CLASSIFICATION
Allows you to edit configure different priority to different interfaces.
QoS Classification

NETWORK TOOLS -- UPnP
Allows you to enable or disable UPnP.
UPnP

In the **NETWORK TOOLS** page, you can configure port mapping, IGMP, quality of service, queue, QoS classification, UPnP, ADSL settings, SNMP, TR-069, and certificates through clicking the navigation.

<p>NETWORK TOOLS -- ADSL</p> <p>Allows you to configure advanced settings for ADSL.</p> <p style="text-align: center;">ADSL Settings</p>
<p>NETWORK TOOLS -- SNMP</p> <p>Allows you to configure SNMP (Simple Network Management Protocol).</p> <p style="text-align: center;">SNMP</p>
<p>NETWORK TOOLS -- TR-069</p> <p>Allows you to configure TR-069 protocol.</p> <p style="text-align: center;">TR-069</p>
<p>NETWORK TOOLS -- CERTIFICATES</p> <p>Allows you to manage certificates used with TR-069.</p> <p style="text-align: center;">Certificates</p>

4.4.10.1 Port Mapping

Choose **ADVANCED > Network Tools** and click **Port Mapping**. The page shown in the following figure appears. In this page, you can bind the WAN interface and the LAN interface to the same group.

PORT MAPPING

Port Mapping -- A maximum **16** entries can be configured

Interface Grouping supports multiple ports to PVC and bridging groups. Each group will perform as an independent network. To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.

PORT MAPPING SETUP

Group Name	Remove	WAN Interface	LAN Interfaces	DHCP Vendor IDs
Default		ppp0	eth0	
		ppp3g0	eth1	
			eth2	
			eth3	
			wlan0	
			w10_Guest1	
			w10_Guest2	
			w10_Guest3	

Click **Add** to add port mapping. The page shown in the following figure appears. The procedure for creating a mapping group is as follows:

- Step 1** Enter the group name.
- Step 2** Select the WAN interface for your new group.
- Step 3** Select LAN interfaces from the **Available Interface** list and click the <- arrow button to add them to the grouped interface list, in order to create the required mapping of the ports. The group name must be unique.
- Step 4** Enter the option information of DHCP vendor IDs.
- Step 5** Click **Apply** to save the settings.

ADD PORT MAPPING

To create a new interface group:

1. Enter the Group name and the group name must be unique and select either 2. (dynamic) or 3. (static) below:
2. If you like to automatically add LAN clients to a WAN Interface in the new group add the DHCP vendor ID string. By configuring a DHCP vendor ID string any DHCP client request with the specified vendor ID (DHCP option 60) will be denied an IP address from the local DHCP server.
3. Select interfaces from the available interface list and add it to the grouped interface list using the arrow buttons to create the required mapping of the ports. Note that these clients may obtain public IP addresses
4. Click Save/Apply button to make the changes effective immediately

IMPORTANT If a vendor ID is configured for a specific client device, please **REBOOT** the client device attached to the modem to allow it to obtain an appropriate IP address.

Group Name:

WAN Interface used in the grouping ▼

Grouped LAN Interfaces		Available LAN Interfaces
	<input style="width: 20px; height: 20px;" type="button" value="->"/> <input style="width: 20px; height: 20px;" type="button" value="<-"/>	eth0 eth1 eth2 eth3 wlan0 wlan0_Guest1 wlan0_Guest2 wlan0_Guest3

Automatically Add Clients With the following DHCP Vendor IDs

4.4.10.2 IGMP

Choose **ADVANCED > Network Tools** and click **IGMP**. The page shown in the following figure appears. When enable IGMP Snooping, the multicast data transmits through the specific LAN port which has received the request report.

IGMP

Transmission of identical content, such as multimedia, from a source to a number of recipients.

IGMP SETUP

Enable IGMP Snooping

Apply Cancel

4.4.10.3 Quality of Service

Choose **ADVANCED > Network Tools** and click **Quality of Service**. The page shown in the following figure appears.

In this page, you can enable/disable the QoS. Click **Save/Apply** to take the setting effect.

QOS -- QUEUE MANAGEMENT CONFIGURATION

If Enable QoS checkbox is selected, choose a default DSCP mark to automatically mark incoming traffic without reference to a particular classifier. Click 'Save/Apply' button to save it.

Note: If Enable QoS checkbox is not selected, all QoS will be disabled for all interfaces.

Note: The default DSCP mark is used to mark all egress packets that do not match any classification rules.

QOS SETUP

Enable QoS

Save/Apply Cancel

4.4.10.4 Queue Config

Choose **ADVANCED > Network Tools** and click **Queue Config**. The page shown in the following figure appears.

Click **Add**. The page shown in the following figure appears.
Click **Save/Apply** to save the settings.

QUEUE CONFIG

QoS Queue Setup -- A maximum 16 entries can be configured.

If you disable WMM function in Wireless Page, queues related to wireless will not take effects.
SP and WFQ can not be enabled at the same time.
The QoS function has been disabled. Queues would not take effects.

QUEUE CONFIG LIST

Name	Key	Interface	Precedence	Algorithm	QueueWeight	Enable	Remove
Default Queue	33	atm0	8	SP		<input type="checkbox"/>	

QOS QUEUE CONFIGURATION

This screen allows you to configure a QoS queue and assign it to a specific layer2 interface.
The scheduler algorithm is defined by the layer2 interface.
Click 'Save/Apply' to save and activate the queue.

**Note: For SP scheduling, queues assigned to the same layer2 interface shall have unique precedence.
Lower precedence value implies higher priority for this queue relative to others.**

ADD QUEUE CONFIG

Queue Name:

Enable:

Interface:

Precedence:

Queue Weight: [1-63]

4.4.10.5 QoS Classification

Choose **ADVANCED > Network Tools**, and click **QoS Classification**, the page shown in the following figure appears. This page allows you to config various classification.

QOS CLASSIFICATION

QoS Classification Setup -- A maximum 32 entries can be configured.

Choose Add or Remove to configure network traffic classes.
If you disable WMM function in Wireless Page, classification related to wireless will not take effects.

The QoS function has been disabled. Classification rules would not take effects.

QOS CLASSIFICATION SETUP

		CLASSIFICATION CRITERIA					CLASSIFICATION RESULTS						
Class Name	Order	Class Intf	Ether Type	Proto	DSCP Check	802.1P Check	Queue Key	DSCP Mark	802.1P Mark	VlanID Tag	Rate Control (kbps)	Enable	Remove

Click **Add**. The page shown in the following figure appears.

QUALITY OF SERVICE

Add Network Traffic Class Rule

The screen creates a traffic class rule to classify the upstream traffic, assign queue which defines the precedence and the interface and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition below. All of the specified conditions in this classification rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the rule.

NETWORK TRAFFIC CLASS RULE

Traffic Class Name:

Rule Order: Last

Rule Status: Disable

SPECIFY CLASSIFICATION CRITERIA

A blank criterion indicates it is not used for classification.

Class Interface: LAN

Ether Type:

Fixed Ether Type: IP (0x800)

Source MAC Address:

Source MAC Mask:

Destination MAC Address:

Destination MAC Mask:

Source IP Address[/Mask]:

Destination IP Address[/Mask]:

Differentiated Service Code Point (DSCP) Check:

Protocol:

IPv6 Protocol:

UDP/TCP Source Port (port or port:port):

UDP/TCP Destination Port (port or port:port):

802.1p Priority Check:

SPECIFY CLASSIFICATION RESULTS

Must select a classification queue. A blank mark or tag value means no change.

Assign Classification Queue:

Mark Differentiated Service Code Point (DSCP):

Mark 802.1p priority:

Tag VLAN ID [0-4094]:

Set Rate Control(kbps):

4.4.10.6 UPnP

Choose **ADVANCED > Network Tools** and click **UPnP**. The page shown in the following figure appears.

In this page, you can configure universal plug and play (UPnP). The system acts as a daemon after you enable UPnP.

UPnP is used for popular audio visual software. It allows automatic discovery of your device in the network. If you are concerned about UPnP security, you can disable it. Block ICMP ping should be enabled so that the device does not respond to malicious Internet requests.

Click **Apply** to save the settings.

UPNP

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

UPNP SETUP

Enable UPnP

Apply Cancel

4.4.10.7 ADSL

Choose **ADVANCED > Network Tools** and click **ADSL Settings**. The page shown in the following figure appears.

In this page, you can select the DSL modulation. Normally, you can keep the factory default setting. The device negotiates the modulation mode with DSLAM.

Click **Apply** to save the settings.

ADSL

This page allows you to configure the modem's ADSL modulation.
Select the modulation below.

ADSL SETTINGS

G.Dmt Enabled
 G.Lite Enabled
 T1.413 Enabled
 ADSL2 Enabled
 AnnexL Enabled
 ADSL2+ Enabled
 AnnexM Enabled

Capability

Bitswap Enable
 SRA Enable

Apply Cancel

4.4.10.8 SNMP

Choose **ADVANCED > Network Tools** and click **SNMP**. The page shown in the right figure appears. In this page, you can set SNMP parameters.

- **Read Community:** The network administrator must use this password to read the information of this device.
- **Set Community:** The network administrator must use this password to configure the information of this device.
- **Trap Manager IP:** The trap information is sent to this host.

Click **Apply** to save the settings.

SNMP

Simple Network Management Protocol (SNMP) allows a management application to retrieve statistics and status from the SNMP agent in this device.

Select the desired values and click "Apply" to configure the SNMP options.

SNMP -- CONFIGURATION

Enable SNMP Agent

Read Community :

Set Community :

System Name :

System Location :

System Contact :

Trap Manager IP :

4.4.10.9 TR-069

Choose **ADVANCED > Network Tools** and click **TR-069**. The page shown in the following figure appears. In this page, you can configure the TR-069 CPE.

WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device.

In this page, you may configure the parameters such as the ACS URL, ACS password, and connection request user name.

After finishing setting, click **Apply** to save and apply the settings.

TR-069

WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device.

Select the desired values and click "Apply" to configure the TR-069 client options.

TR-069 CLIENT -- CONFIGURATION

Inform Disable Enable

Inform Interval:

ACS URL:

ACS User Name:

ACS Password:

Connection Request Authentication

Connection Request User Name:

Connection Request Password:

4.4.10.10 Certificates

Choose **ADVANCED > Network Tools** and click **Certificates**. The **Certificates** page shown in the following figure appears. In this page, you can configure local certificate and trusted certificate.

CERTIFICATES -- LOCAL

Local certificates are used by peers to verify your identity.

CERTIFICATES -- TRUSTED CA

Trusted CA certificates are used by you to verify peers' certificates.

4.4.11 Routing

Choose **ADVANCED** > **Routing**. The page shown in the following page appears.

The screenshot shows a web interface for routing configuration. It consists of four vertically stacked panels, each with a dark header and a light body. Each panel contains a descriptive sentence and a button.

- ROUTING -- STATIC ROUTE**: Allows you to manually configure special routes that your network might need. Button: Static Route
- ROUTING -- DEFAULT GATEWAY**: Allows you to configure Default Gateway used by WAN Interface. Button: Default Gateway
- ROUTING -- POLICY ROUTING**: Allows you to configure Policy Routing. Button: Policy Routing
- ROUTING -- RIP**: Allows you to configure RIP (Routing Information Protocol). Button: RIP

4.4.11.1 Static Route

Choose **ADVANCED** > **Routing** and click **Static Route**. The page shown in the following figure appears. This page is used to configure the routing information. In this page, you can add or delete IP routes.

The screenshot shows the 'Static Route' configuration page. It has an orange header with the text 'STATIC ROUTE'. Below the header, there is a grey box with instructions: 'Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Apply" to add the entry to the routing table.' Below this, it states 'A maximum 32 entries can be configured.' The main content area has a dark header 'ROUTING -- STATIC ROUTE' and a table with four columns: Destination, Subnet Mask, Gateway, and Interface. Below the table is an 'Add' button.

Destination	Subnet Mask	Gateway	Interface

Add

Click **Add** to add a static route. The page shown in the following figure appears.

- **Destination Network Address:** The destination IP address of the router.
- **Subnet Mask:** The subnet mask of the destination IP address.
- **Use Gateway IP Address:** The gateway IP address of the router.
- **Use Interface:** The interface name of the router output port.

You can click **Use Gateway IP Address** or **Use Interface**.

Click **Apply** to save the settings.

4.4.11.2 Default Gateway

Choose **ADVANCED > Routing** and click **Default Gateway**. The page shown in the following figure appears.

Select the WAN interface as your default gateway. Click **Apply** to save the settings.

4.4.11.3 Policy Routing

Choose **ADVANCED > Routing** and click **policy Routing**. The page shown in the following figure appears.

The policy route binds one WAN connection and one LAN interface.

Policy Name	Source IP	LAN Port	WAN	Default GW	Remove
-------------	-----------	----------	-----	------------	--------

Click **Add**, the page shown in the following figure appears.

POLICY ROUTING SETUP

Enter the policy name, policies, and WAN interface then click "Save/Apply" to add the entry to the policy routing table.

Note: If selected "MER" as WAN interface, default gateway must be configured.

Policy Name:

Physical LAN Port:

Source IP:

Use Interface:

Default Gateway:

4.4.12 RIP

Choose **ADVANCED > Routing** and click **RIP**. The page shown in the following figure appears. This page is used to select the interfaces on your device that use RIP and the version of the protocol used.

If you are using this device as a RIP-enabled device to communicate with others using the routing information protocol, enable RIP and click **Apply** to save the settings.

RIP CONFIGURATION

To activate RIP for the WAN Interface, select the desired RIP version and operation and place a check in the 'Enabled' checkbox. To stop RIP on the WAN Interface, uncheck the 'Enabled' checkbox. Click the 'Apply' button to star/stop RIP and save the configuration.

NOTE: RIP CANNOT BE CONFIGURED on the WAN interface which has NAT enabled(such as IPOA,MER),and it only support IPOA,MER.

RIP CONFIGURATION

Interface	Version	Operation	Enabled
atm1	2 ▼	Passive ▼	<input type="checkbox"/>

4.4.13 MultiNat

Network address translation (NAT) is the process of modifying network address information in IP packet headers while in transit across a traffic routing device for the purpose of remapping a given address space into another. The packets which source IP address match between “internalStart” and “internalEnd” in the NAT table come to the router, the router changes source IP of this packet by the IP address that set between “externalStart” and “externalEnd”, then transmit the packet into Internet.

Choose **ADVANCED > MultiNat**. The page shown in the following figure appears.

MULTI NAT

Multi Nat allows customer define NAT rules, contain One2One, One2Many, Many2One, Many2Many mode.

MULTI NAT RULES

mode	internalStart	internalEnd	externalStart	externalEnd

Click **Add**, the page shown in the following figure appears.
In this page, please select the proper type; select the proper **Use interface**, and configure the other parameters in this page.
After finishing setting, click **Apply** to save the settings.

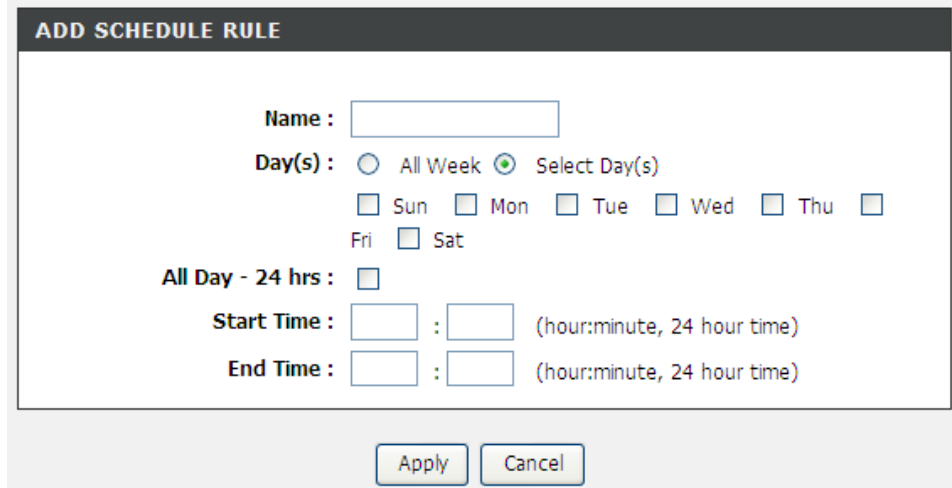
internalAddrStart	internalAddrEnd	externalAddrStart	externalAddrEnd
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

4.4.14 Schedules

Choose **ADVANCED > Schedules**. The page shown in the following figure appears.

Rule Name	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Start Time	Stop Time
-----------	-----	-----	-----	-----	-----	-----	-----	------------	-----------

Click **Add** to add schedule rule. The page shown in the following figure appears.
Click **Apply** to save the settings.



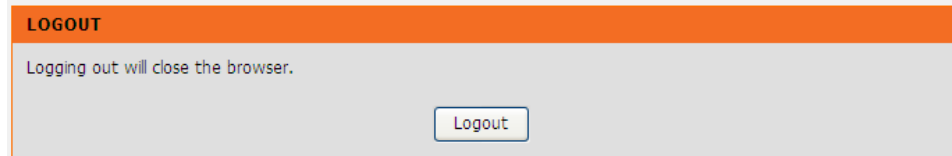
The screenshot shows a web form titled "ADD SCHEDULE RULE". It contains the following fields and options:

- Name :** A text input field.
- Day(s) :** Radio buttons for "All Week" and "Select Day(s)".
- Days:** Checkboxes for Sun, Mon, Tue, Wed, Thu, Fri, and Sat.
- All Day - 24 hrs :** A checkbox.
- Start Time :** Two input fields for hour and minute, followed by the text "(hour:minute, 24 hour time)".
- End Time :** Two input fields for hour and minute, followed by the text "(hour:minute, 24 hour time)".

At the bottom of the form are two buttons: "Apply" and "Cancel".

4.4.15 Logout

Choose **ADVANCED** > **Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.



The screenshot shows a page with an orange header bar containing the word "LOGOUT". Below the header, the text "Logging out will close the browser." is displayed. At the bottom center of the page is a button labeled "Logout".

4.5 Maintenance

4.5.1 System

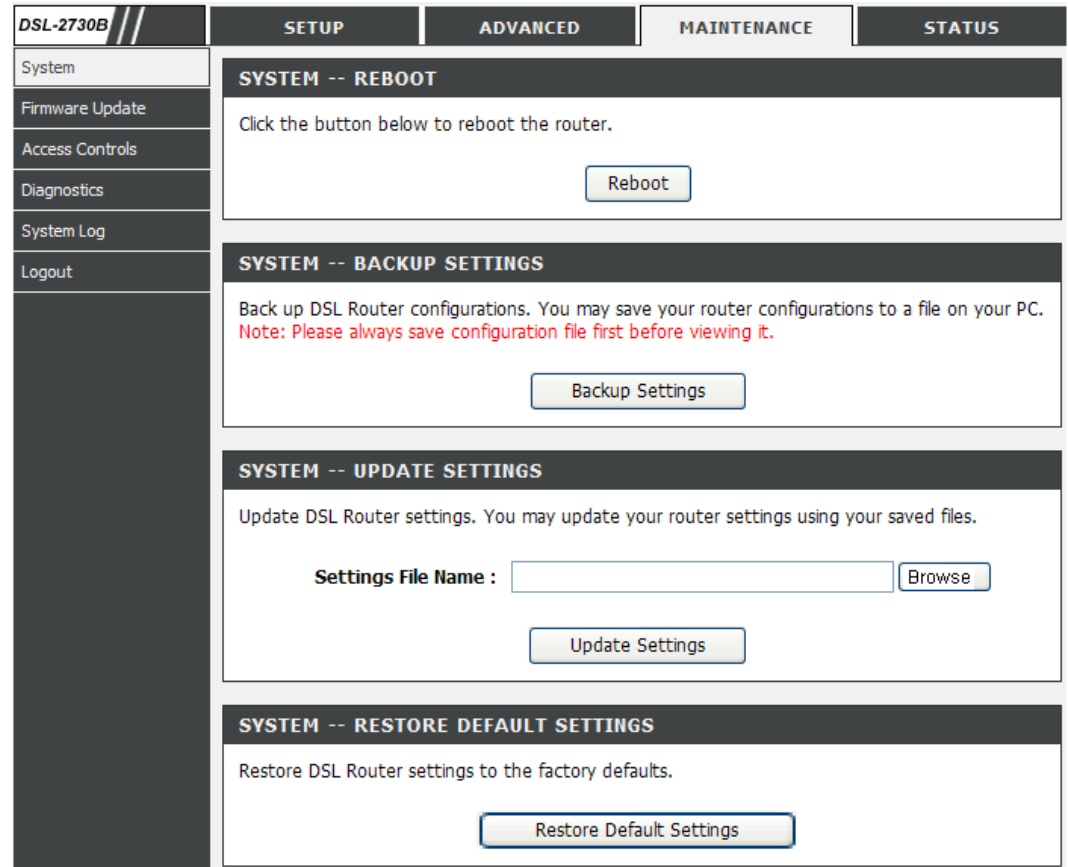
Choose **MAINTENANCE > System**. The **System** page shown in the following figure appears.

In this page, you can reboot device, back up the current settings to a file, restore the settings from the file saved previously, and restore the factory default settings.

The buttons in this page are described as follows:

- **Reboot:** Reboot the device.
- **Backup Settings:** Save the settings to the local hard drive. Select a location on your computer to back up the file. You can name the configuration file.
- **Update settings:** Click **Browse** to select the configuration file of device and click **Update Settings** to begin restoring the device configuration..
- **Restore Default Settings:** Reset the device to default settings.

Notice: Do not turn off your device or press the **Reset** button while an operation in this page is in progress.



DSL-2730B	SETUP	ADVANCED	MAINTENANCE	STATUS
System	SYSTEM -- REBOOT			
Firmware Update	Click the button below to reboot the router.			
Access Controls	<input type="button" value="Reboot"/>			
Diagnostics	SYSTEM -- BACKUP SETTINGS			
System Log	Back up DSL Router configurations. You may save your router configurations to a file on your PC. <i>Note: Please always save configuration file first before viewing it.</i>			
Logout	<input type="button" value="Backup Settings"/>			
	SYSTEM -- UPDATE SETTINGS			
	Update DSL Router settings. You may update your router settings using your saved files.			
	Settings File Name : <input type="text"/> <input type="button" value="Browse"/>			
	<input type="button" value="Update Settings"/>			
	SYSTEM -- RESTORE DEFAULT SETTINGS			
	Restore DSL Router settings to the factory defaults.			
	<input type="button" value="Restore Default Settings"/>			

4.5.2 Firmware Update

Choose **MAINTENANCE > Firmware Update**. The page shown in the following figure appears. In this page, you can upgrade the firmware of the device.

The procedure for updating the firmware is as follows:

Step 1 Click **Browse...** to search the file.

Step 2 Click **Update Firmware** to update the configuration file.

The device loads the file and reboots automatically.

Notice: Do not turn off your device or press the reset button while this procedure is in progress.

FIRMWARE UPDATE

Step 1: Obtain an updated firmware image file from your ISP.

Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file.

Step 3: Click the "Update Firmware" button once to upload the new image file.

NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot. Please DO NOT power off your router before the update is complete.

FIRMWARE UPDATE

Current Firmware Version : GE_1.00
 Current Firmware Date : Mar 7 2011

Firmware File Name :

4.5.3 Access Controls

Choose **MAINTENANCE > Access Controls**. The **Access Controls** page shown in the following figure appears. The page contains **Account Password**, **Services**.

ACCESS CONTROLS -- ACCOUNT PASSWORD

Manage DSL Router user accounts.

ACCESS CONTROLS -- SERVICES

A Service Control List ("SCL") enables or disables services from being used.

4.5.3.1 Account Password

In the **Access Controls** page, click **Account Password**. The page shown in the following figure appears. In this page, you can change the password of the user and set time for automatic logout.

You should change the default password to secure your network. Ensure that you remember the new password or write it down and keep it in a safe and separate location for future reference. If you forget the password, you need to reset the device to the factory default settings and all configuration settings of the device are lost.

Select the **Username** from the drop-down list. You can select **admin**, **support**, or **user**.

Enter the current and new passwords and confirm the new password, to change the password.

Click **Apply** to apply the settings.

ACCOUNT PASSWORD

Access to your DSL Router is controlled through three user accounts: admin, support, and user.

The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.

The user name "user" can access the DSL Router, view configuration settings and statistics, as well as update the router's firmware.

Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords. Note: Password cannot contain a space.

ADMINISTRATOR SETTINGS

Username :

Current Password :

New Password :

Confirm Password :

WEB IDLE TIME OUT SETTINGS

Web Idle Time Out : (5 ~ 30 minutes)

4.5.3.2 Services

In the **Access Controls** page, click **Services**. The page shown in the following figure appears.

In this page, you can enable or disable the services that are used by the remote host. For example, if telnet service is enabled and port is 23, the remote host can access the device by telnet through port 23. Normally, you need not change the settings.

Select the management services that you want to enable or disable on the LAN or WAN interface.

Click **Apply** to apply the settings.

Note:

If you disable HTTP service, you cannot access the configuration page of the device any more.

SERVICES

A Service Control List ("SCL") enables or disables services from being used.

LOCAL ACCESS CONTROL -- SERVICES

Service	Enable	Source Network	Source Mask	Protocol	Port
HTTP	<input checked="" type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	80
TELNET	<input checked="" type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	23
SSH	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	22
FTP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	21
TFTP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	UDP	69
ICMP	<input checked="" type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	ICMP	0
SNMP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	UDP	161

REMOTE ACCESS CONTROL -- SERVICES

Service	Enable	Source Network	Source Mask	Protocol	Port
HTTP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	80
TELNET	<input checked="" type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	23
SSH	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	22
FTP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	TCP	21
TFTP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	UDP	69
ICMP	<input checked="" type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	ICMP	0
SNMP	<input type="checkbox"/> Enabled	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>	UDP	161

4.5.4 Diagnostics

Choose **MAINTENANCE > Diagnostic**. The page shown in the following figure appears. In this page, you can test the device.

This page is used to test the connection to your local network, the connection to your DSL service provider, and the connection to your Internet service provider. Click **Rerun Diagnostics Test** to run diagnostics.

DIAGNOSTICS

Your modem is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Rerun Diagnostic Tests" at the bottom of this page to make sure the fail status is consistent.

WAN Connection : PPPoE/ppp0 Rerun Diagnostic Tests

TEST THE CONNECTION TO YOUR LOCAL NETWORK

Test your eth0 Connection:	FAIL
Test your eth1 Connection:	PASS
Test your eth2 Connection:	FAIL
Test your eth3 Connection:	FAIL
Test your Wireless Connection:	PASSFAILFAILFAIL

TEST THE CONNECTION TO YOUR DSL SERVICE PROVIDER

Test ADSL Synchronization:	FAIL
Test ATM OAM F5 segment ping:	DISABLED
Test ATM OAM F5 end-to-end ping:	DISABLED

TEST THE CONNECTION TO YOUR INTERNET SERVICE PROVIDER

Ping default gateway:	FAIL
Ping primary Domain Name Server:	FAIL

Test With OAM F5
Test With OAM F4

4.5.5 System Log

Choose **MAINTENANCE > System Log**. The **System Log** page shown in the following figure appears.

This page displays event log data in the chronological manner. You can read the event log from the local host or send it to a system log server. Available event severity levels are as follows: Emergency, Alert, Critical, Error, Warning, Notice, Informational and Debugging. In this page, you can enable or disable the system log function.

The procedure for logging the events is as follows:

- Step 1** Select **Enable Log** check box.
- Step 2** Select the display mode from the **Mode** drop-down list.
- Step 3** Enter the **Server IP Address** and **Server UDP Port** if the **Mode** is set to **Both** or **Remote**.
- Step 4** Click **Apply** to apply the settings.
- Step 5** Click **View System Log** to view the detail information of system log.

SYSTEM LOG

If the log mode is enabled, the system will begin to log all the selected events. For the Log Level, all events above or equal to the selected level will be logged. For the Display Level, all logged events above or equal to the selected level will be displayed. If the selected mode is "Remote" or "Both", events will be sent to the specified IP address and UDP port of the remote syslog server. If the selected mode is "Local" or "Both", events will be recorded in the local memory.

Select the desired values and click "Apply" to configure the system log options.

Note: This will not work correctly if modem time is not properly set! Please set it in "Setup/Time and Date"

SYSTEM LOG -- CONFIGURATION

Enable Log

Log Level :

Display Level :

Mode :

Server IP Address :

Server UDP Port :

4.5.6 Logout

Choose **MAINTENANCE > Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.

LOGOUT

Logging out will close the browser.

4.6 Status

You can view the system information and monitor performance.

4.6.1 Device Info

Choose **STATUS** > **Device Info**. The page shown in the following figure appears.

The page displays the summary of the device status, including the system information, Internet information, wireless information and local network information.

The screenshot shows the DSL-2730B web interface. The top navigation bar includes tabs for SETUP, ADVANCED, MAINTENANCE, and STATUS. The left sidebar contains a menu with options: Device Info, Wireless Clients, DHCP Clients, Logs, Statistics, Route Info, and Logout. The main content area is titled "DEVICE INFO" and contains the following sections:

DEVICE INFO
This information reflects the current status of your DSL connection.

SYSTEM INFO

Model Name:	DSL-2730B
Time and Date:	Thu Jan 1 00:01:02 1970
Firmware Version:	AU_1.00
Hardware Version:	T1

INTERNET INFO

Internet Connection:

Internet Connection Status:	Unconfigured
Connection Up Time:	0 day,0 hour,0 min,0 sec
Downstream Line Rate (Kbps):	0
Upstream Line Rate (Kbps):	0

Enabled WAN Connections:

VPI/VCI	Service Name	Protocol	IGMP	QoS	IPv4 Address
8/35	br_0_8_35	Bridge	Disabled	Enable	0.0.0.0

WIRELESS INFO

Select SSID:

MAC Address:	02:10:18:01:00:02
Status:	Enabled
Network Name (SSID):	Broadcom1
Visibility:	Visible
Security Mode:	None

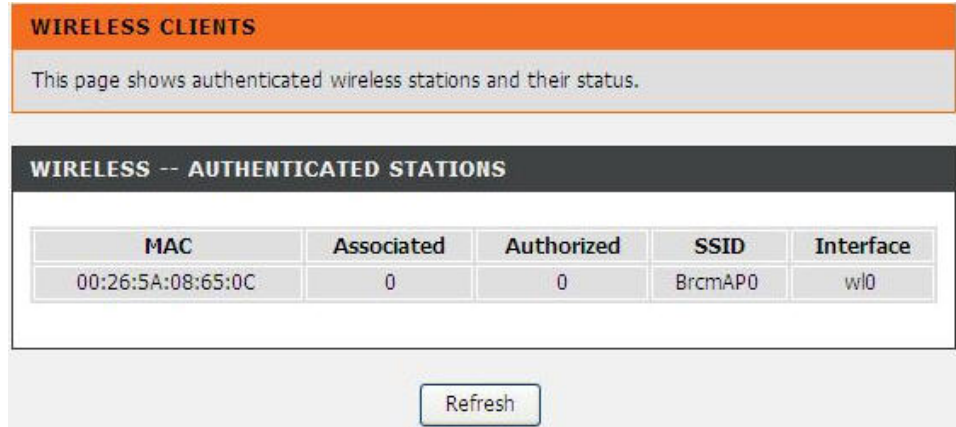
LOCAL NETWORK INFO

MAC Address:	02:10:18:01:00:01
IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0
DHCP Server:	Enabled

WIRELESS

4.6.2 Wireless Clients

Choose **STATUS > Wireless Clients**. The page shown in the following figure appears. The page displays authenticated wireless stations and their statuses.



WIRELESS CLIENTS

This page shows authenticated wireless stations and their status.

WIRELESS -- AUTHENTICATED STATIONS

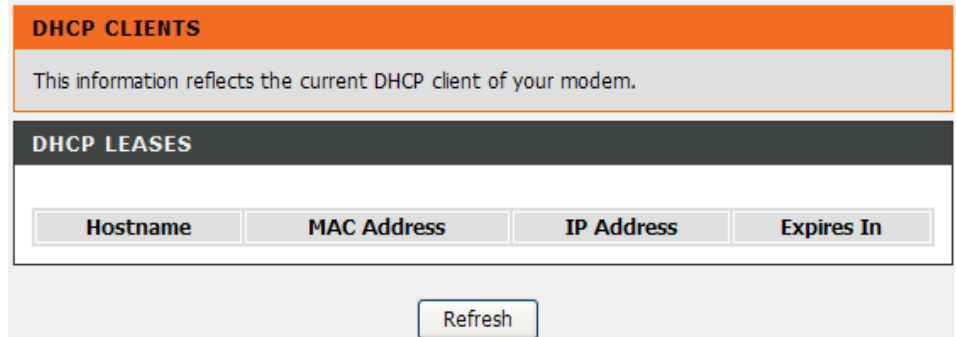
MAC	Associated	Authorized	SSID	Interface
00:26:5A:08:65:0C	0	0	BrcmAP0	wl0

Refresh

4.6.3 DHCP Clients

Choose **STATUS > DHCP Clients**. The page shown in the following page appears.

This page displays all client devices that obtain IP addresses from the device. You can view the host name, IP address, MAC address and time expired(s).



DHCP CLIENTS

This information reflects the current DHCP client of your modem.

DHCP LEASES

Hostname	MAC Address	IP Address	Expires In
----------	-------------	------------	------------

Refresh

4.6.4 Logs

Choose **STATUS > Logs**. The page shown in the following figure appears. This page lists the system log. Click **Refresh** to refresh the system log shown in the table.

LOGS

This page allows you to view system logs.

SYSTEM LOG

Date/Time	Facility	Severity	Message
Jan 1 01:17:22	syslog	emerg	BCM96345 started: BusyBox v1.00 (2010.12.14-11:20+0000)

Refresh

4.6.5 Statistics

Choose **STATUS > Statistics**. The page shown in the following figure appears. This page displays the statistics of the network and data transfer. This information helps technicians to identify if the device is functioning properly. The information does not affect the function of the device.

STATISTICS

This information reflects the current status of your DSL connection.

LOCAL NETWORK & WIRELESS

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
eth0	0	0	0	0	0	0	0	0
eth1	887053	9524	0	0	11762848	12261	0	0
eth2	0	0	0	0	0	0	0	0
eth3	0	0	0	0	0	0	0	0
wl0	0	0	0	0	0	0	1	0

INTERNET

Service	VPI/VCI	Protocol	Received				Transmitted				
			Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops	
PPPoE_0_0_32	0/32		0	0	0	0	0	0	0	0	0

ADSL

Mode:		
Type:		
Status:		Down
	Downstream	Upstream
Line Coding(Trellis):		
SNR Margin (dB):		
Attenuation (dB):		
Output Power (dBm):		
Attainable Rate (Kbps):		
Rate (Kbps):		
D (interleaver depth):		
Delay (msec):		
HEC Errors:		
OCD Errors:		
LCD Errors:		
Total ES:		

ADSL BER Test
Reset Statistics

4.6.6 Route info

Choose **STATUS > Route Info**. The page shown in the following figure appears. The table shows a list of destination routes commonly accessed by the network.

ROUTE INFO

Flags: U - up, ! - reject, G - gateway, H - host, R - reinstate
D - dynamic (redirect), M - modified (redirect).

DEVICE INFO -- ROUTE

Destination	Gateway	Subnet Mask	Flags	Metric	Service	Interface
192.168.1.0	0.0.0.0	255.255.255.0	U	0		br0

4.6.7 Logout

Choose **STATUS > Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.

LOGOUT

Logging out will close the browser.

[Logout](#)

5 FAQs

Question	Answer
Why are all the indicators off?	<ul style="list-style-type: none"> ● Check the connection between the power adapter and the power socket. ● Check whether the power switch is turned on.
Why is the LAN indicator not on?	<p>Check the following:</p> <ul style="list-style-type: none"> ● The connection between the device and the PC, the hub, or the switch. ● The running status of the computer, hub, or switch. ● The cables that connects the device and other devices: <ul style="list-style-type: none"> – If the device connects to a computer, use the cross over cable. – If the device connects to a hub or a switch, use the straight-through cable.
Why is the DSL indicator not on?	Check the connection between the DSL interface of the device and the socket.
Why does the Internet access fail when the DSL indicator is on?	<p>Ensure that the following information is entered correctly:</p> <ul style="list-style-type: none"> ● User name and password
Why does the web configuration page of the device fail to be accessed?	<p>Choose start > Run from the desktop. Enter Ping 192.168.1.1 (the default IP address of the device) in the DOS window.</p> <p>If the web configuration page still cannot be accessed, check the following configuration:</p> <ul style="list-style-type: none"> ● The type of the network cable ● The connection between the device and the computer ● The TCP/IP properties of the network card of the computer
How to restore the default configuration after incorrect configuration?	<p>Keep the device powered on and press the RESET button for 1 second. Then, the device automatically reboots and is restored to the factory default configuration.</p> <p>The default configuration of the device is as follows:</p> <ul style="list-style-type: none"> ● IP address: 192.168.1.1 ● Subnet mask: 255.255.255.0. ● User name and password of super account: admin/admin ● User name and password of common account: admin/admin