DSL-2750U/ DSL-2750B/ DSL-2751U/ DSL-2751B

User Manual

Contents

1 Introduction

The DSL-2750U/ DSL-2750B/ DSL-2751U/ DSL-2751B is a highly integrated ADSL2/2+ Integrated Access Device, which is an advanced gateways incorporating Ethernet Switch and Wireless home networking Access Point ,complied with the IEEE802.11b/g /n standards. It is usually prefered to provide high access performance applications for the individual users,the SOHO,the small enterprise and so on.

1.1 Packing List

- 1 x DSL-2750U/ DSL-2750B/ DSL-2751U/ DSL-2751B
- 1 x external splitter
- 1 x power adapter
- 2 x telephone cables (RJ-11)
- 1x Ethernet cable (RJ-45)
- 1 x USB cable (usb)
- 1 x user manual
- 1 x quality guarantee card
- 1 x certificate of quality

1.2 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.

1.3 LEDs and Interfaces

Front Panel

Figure 1 Front panel

Side Panel

The following table describes the LEDs of the device.

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 being transmitted through the WLAN interface.
		On	The connection of WLAN interface is normal.
		Off	The WLAN connection is not established.
USB	Green	On	The connection of 3G or USB flash disk has been established.
		Blink	Data is being transmitted.
		Off	No signal is detected.
DSL	Green	Off	Initial self-test 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.

LED	Color	Status	Description
		On	IP is connected and no traffic is detected.
	Red	On	The device attempted an IP connection, but failed.
WPS (on the side panel)	Green	Blinks	WPS negotiation is enabled, waiting for clients.
		Off	Device is ready for new WPS to setup.

Rear Panel

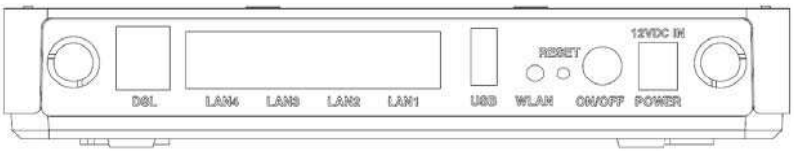


Figure 2 Rear panel The following table describes the interface of the device.

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.
USB	USB port, for connecting the 3G network card or other USB storage 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 over 5 seconds and release.
ON/OFF	Power on or off.
Power	Interface that connects to the power adapter. The power adapter output is: 12 V DC 1A.
WPS (on the side panel)	WPS button to setup connection to Client

1.4 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

1.5 Features

The device supports the following features:

- Various line modes
- External PPPoE dial-up access
- Internal PPPoE and PPPoA dial-up access
- Leased line mode
- 1483B, 1483R, and MER access
- Multiple PVCs (eight at most) and these PVCs can be isolated from each other
- A single PVC with multiple sessions
- Multiple PVCs with multiple sessions
- Binding of ports with PVCs
- 802.1Q and 802.1P protocol
- DHCP server
- NAT and NAPT
- Static route
- Firmware upgrade: Web, TFTP, FTP
- Reset to the factory defaults
- DNS relay
- Virtual server
- DMZ
- Two-level passwords and user names
- Web user interface
- Telnet CLI
- System status display
- PPP session PAP and CHAP
- IP filter
- IP QoS
- Remote access control
- Line connection status test
- Remote management (telnet and HTTP, TR069))
- Backup and restoration of configuration file
- Ethernet interface supports crossover detection, auto-correction and polarity correction
- UPnP
- USB storage
- Printer server

2 Hardware Installation

Step 1 **Connect the DSL port of the device and the Modem port of the splitter with a telephone cable. Connect the phone to the Phone port of the splitter through a telephone cable. Connect the incoming line to the Line port of the splitter. The splitter has three ports:**

- Line: Connect to a wall phone port (RJ-11 jack).
- Modem: Connect to the DSL port of the device.
- Phone: Connectto a telephone set.

Step 2 **Connect the LAN port of the device to the network card of the PC through an Ethernet cable (MDI/MDIX).**

Note:

Use twisted-pair cables to connect with the Hub or switch.

Step 3 **Plug one end of the power adapter to the wall outlet and connect the** other end to the Power port of the device. Connection 1: Figure 3 displays the application diagram for the connection of the device, PC, splitter and telephone sets, when no telephone set is placed before the splitter.

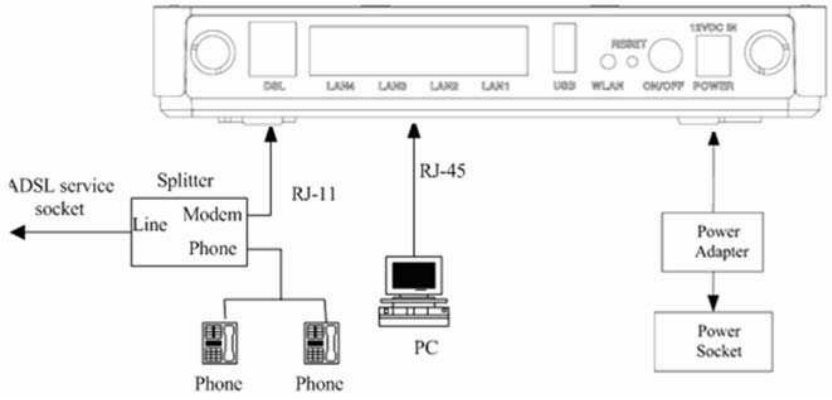


Figure 3 Connection diagram (without telephone sets before the splitter)

Connection 2: Figure 4 displays the application diagram for the connection of the device, PC, splitter and telephone sets when a telephone set is placed before the splitter.As illustrated in the following figure, the splitter is installed close to the device.

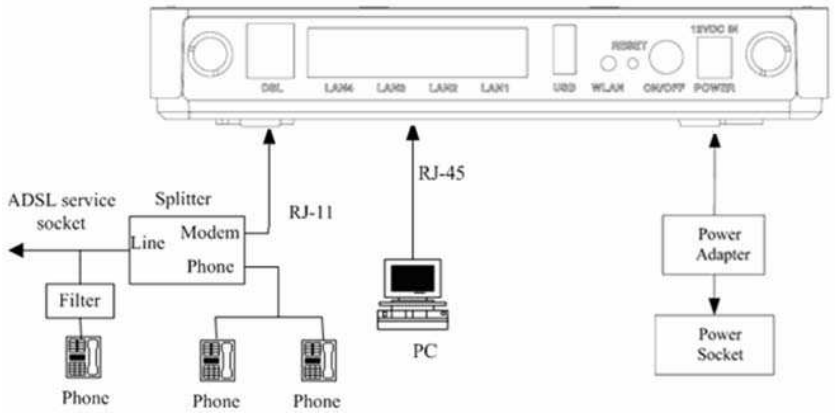


Figure 4 Connection diagram (with a telephone set before the splitter) Connection 1 is recommended.

Note:

When connection 2 is used, the filter must be installed close to the telephone cable. See Figure 4. Do not use the splitter to replace the filter.

Installing a telephone directly before the splitter may lead to failure of connection between the device and the central office, or failure of Internet access, or slow connection speed. If you really need to add a telephone set before the splitter, you must add a microfilter before a telephone set. Do not connect several telephones before the splitter or connect several telephones with the microfilter.

3 About the Web Configurator

This chapter describes how to configure the device by using the Web-based configuration utility.

3.1 Access the Device

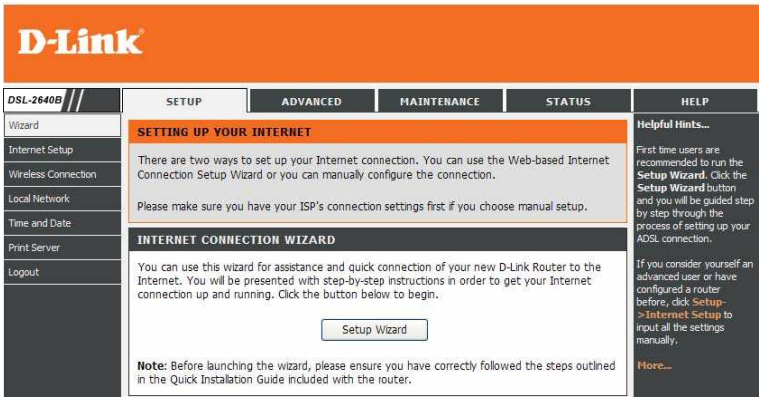
The following is the detailed description of accesing the device for the first time.

Step 4 Open the Internet Explorer (IE) browser and enter **http://192.168.1.1**.

Step 5 The **Login** page shown in the following figure appears. Enter the user name and password.

The user name and password of the super user are **admin** and **admin**.
The user name and password of the normal user are **user** and **user.**

If you log in as the super user successfully, the page shown in the following figure appears.

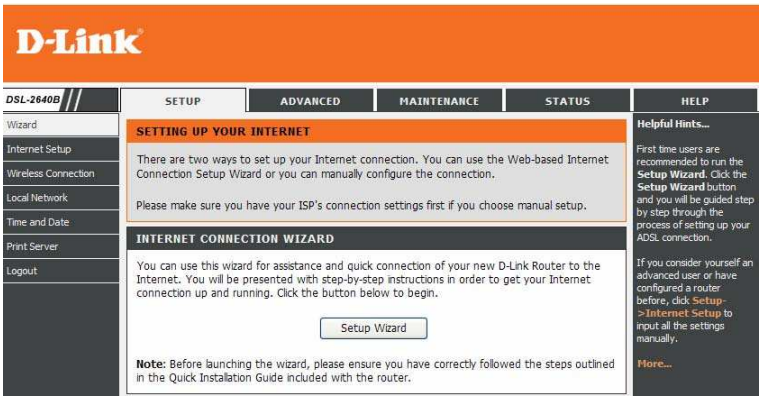


If the login information is incorrect, click **Try Again** in the page that pops up to log in again.

3.2 Setup

3.2.1 Wizard

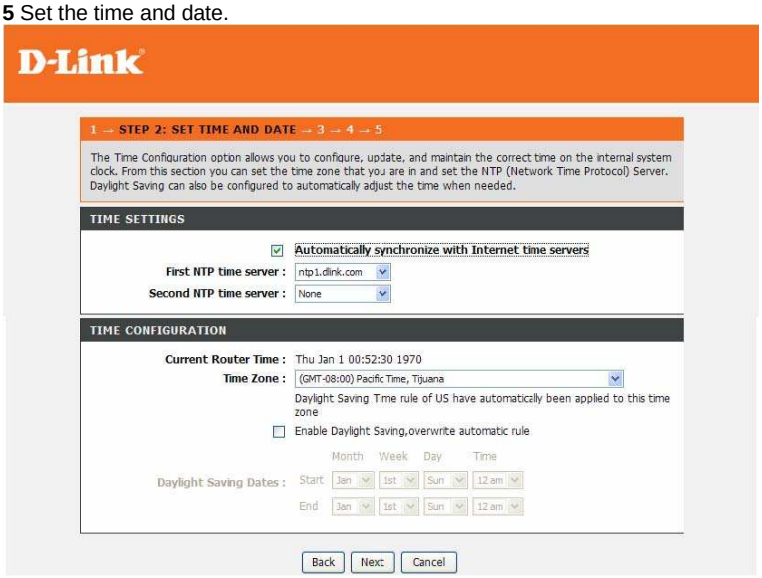
Wizard enables fast and accurate configuration of Internet connection and other important parameters. The following sections describe these various configuration parameters. When subscribing to a broadband service, you should be aware of the method, by which you are connected to the Internet. Your physical 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. **Step 1** Choose **Setup** > **Wizard**. The page shown in the following figure appears.



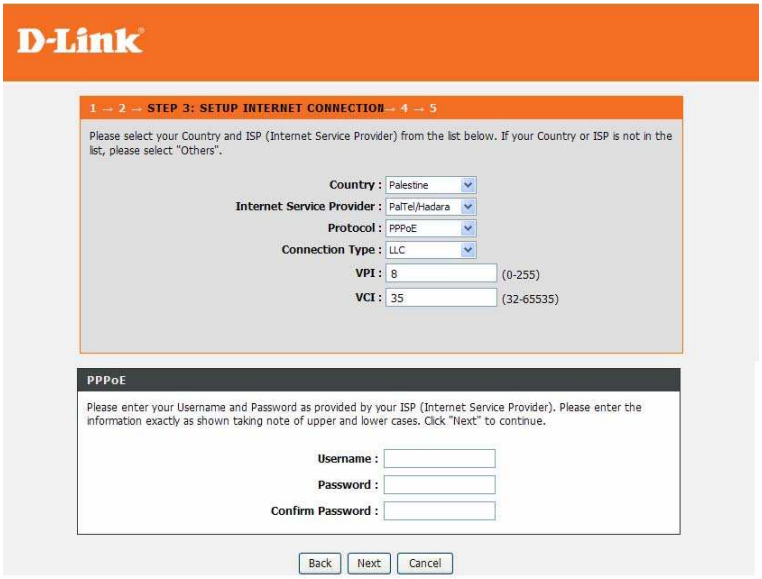
Step 2 Click **Setup Wizard**. The page shown in the following figure appears.

Step 3 There are four steps to configure the device. Click **Next** to continue.**Step 4** Change Device Login Password.The default password is "**admin**", in order to secure your network, please modify the password. Note: Confirm Password must be the same as "**New Password**". Of course, you can click Skip to ignore the step**.**

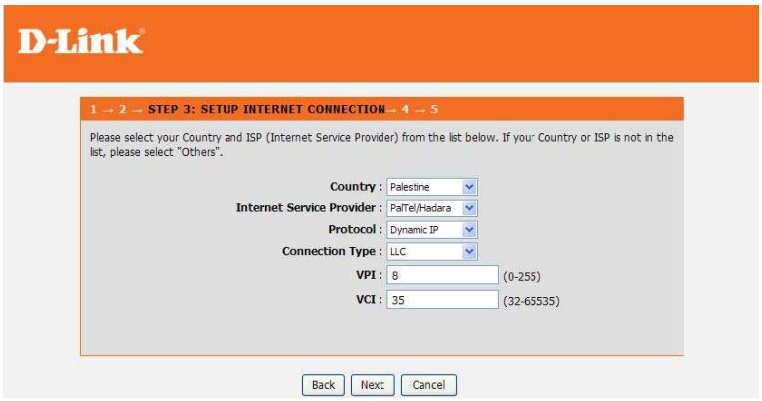
Step 5 Set the time and date.



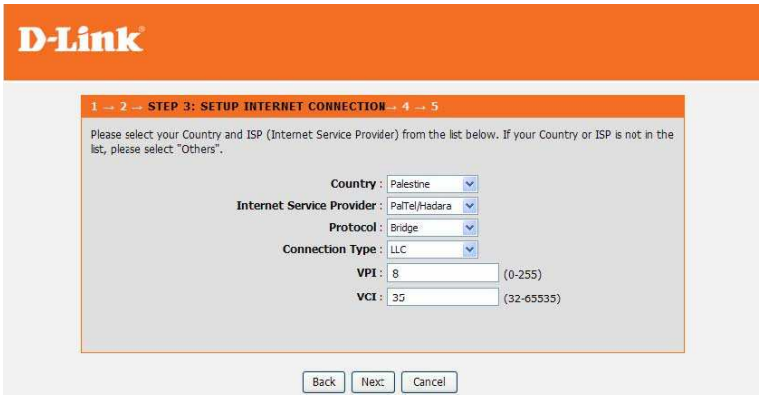
Step 6 Configure the Internet connection. Select the country and ISP. Set the VPI and VCI. If you fail to find the country and ISP from the drop-down lists, select **Others**. Click **Next**. If the **Protocol** is **PPPoE** or **PPPoA,** the page shown in either of the two following figures appears.

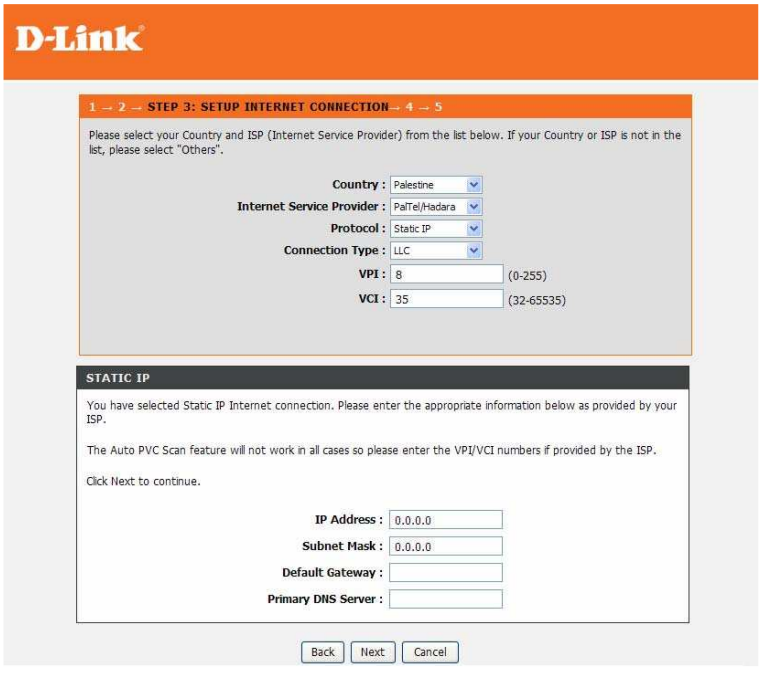


In this page, enter the user name and password. If the Protocol is **Dynamic IP**, the page shown in the following figure appears.

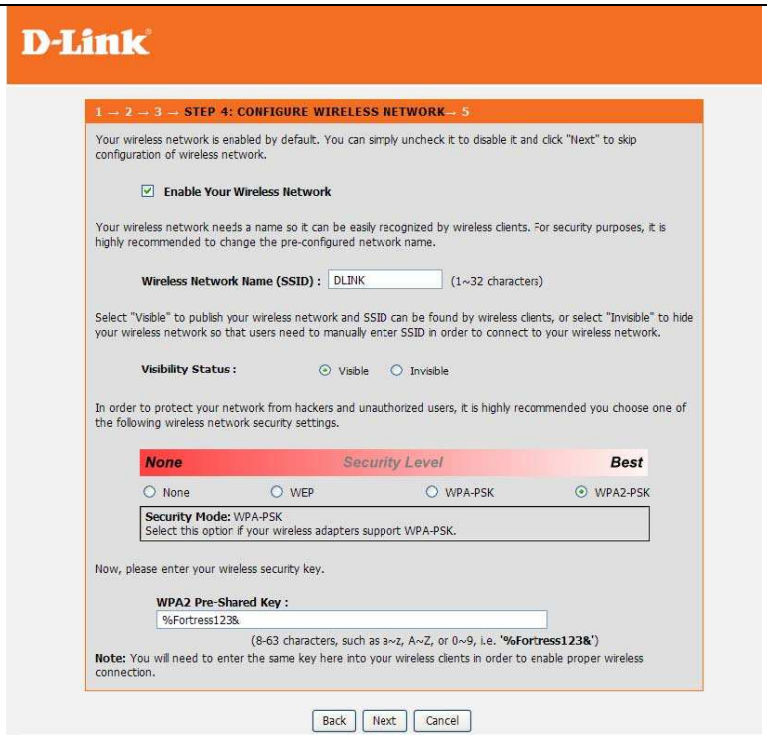


If the Protocol is **Bridge**, the page shown in the following figure appears. If the Protocol is **Static IP**, the page shown in the following figure appears.



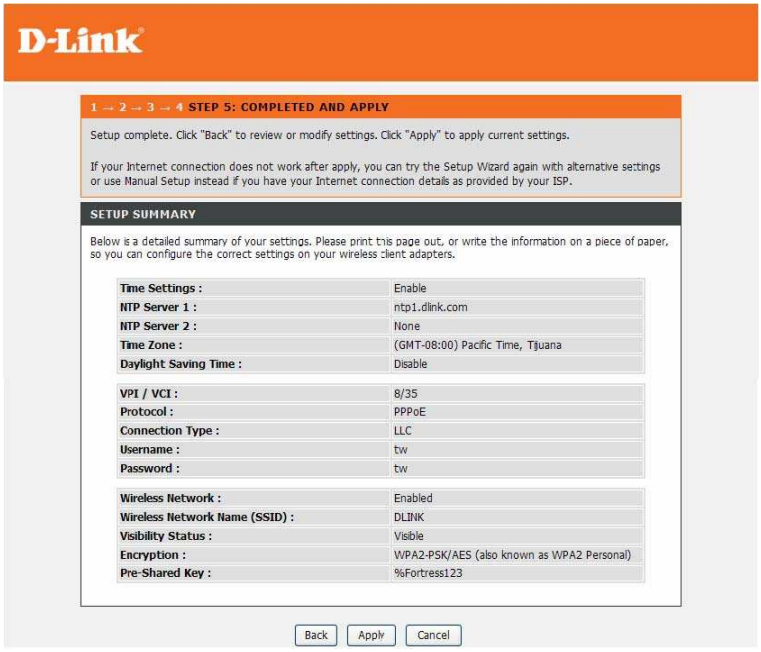


Enter the **IP Address**, **Subnet Mask**, **Default Gateway**, and **Primary DNS Server**. Click **Next**. The page shown in the following page appears.



Step 7 Configure the wireless network. Enter the information and click **Next**.

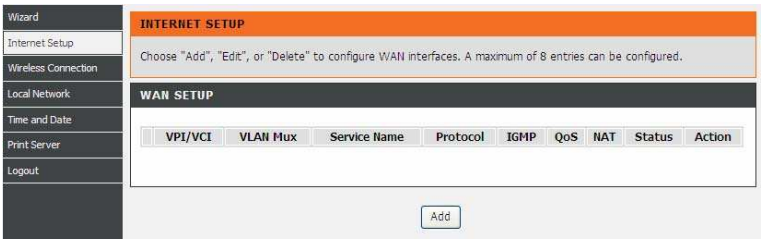
Step 8 Completed And Apply. Click **Apply** to apply current settings and finished the setup of the DSL-2750U/ DSL-2750B/ DSL-2751U/ DSL-2751B router.Click **Back** to review or modify settings.



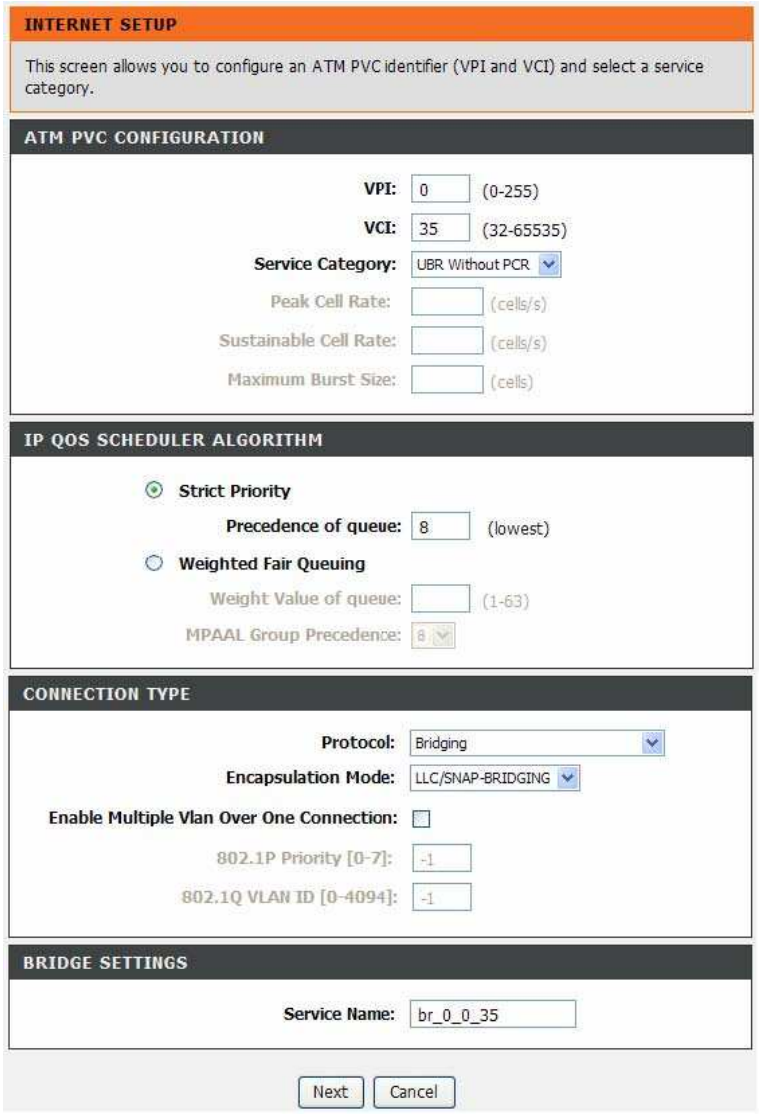
Note: In each step of the Wizard page, you can click **Back** to review or modify the previous settings. Click **Cancel** to exit the wizard page.

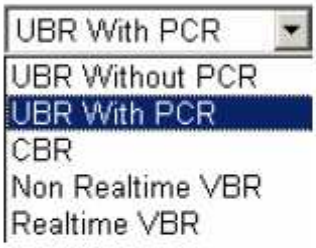
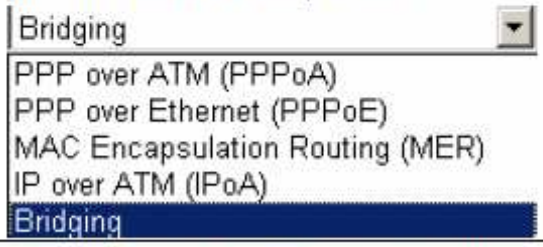
3.2.2 Internet Setup

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

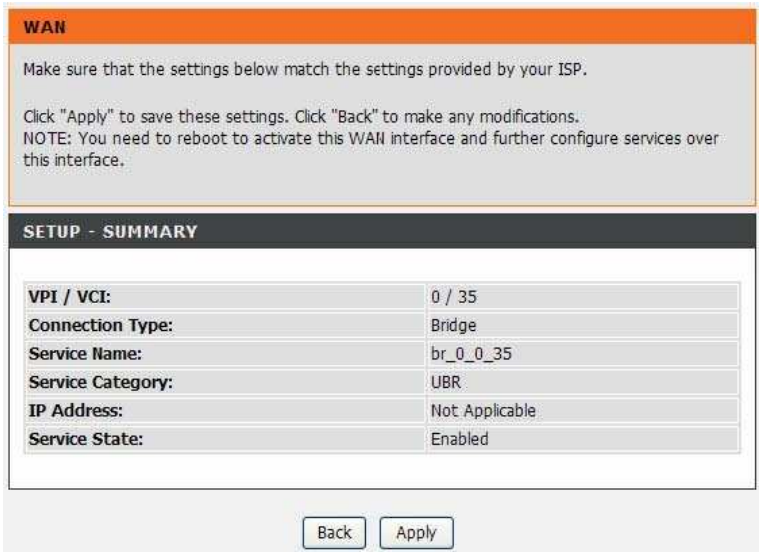


Click **Add in "INTERNET SETUP"**. The page shown in the following figure appears.

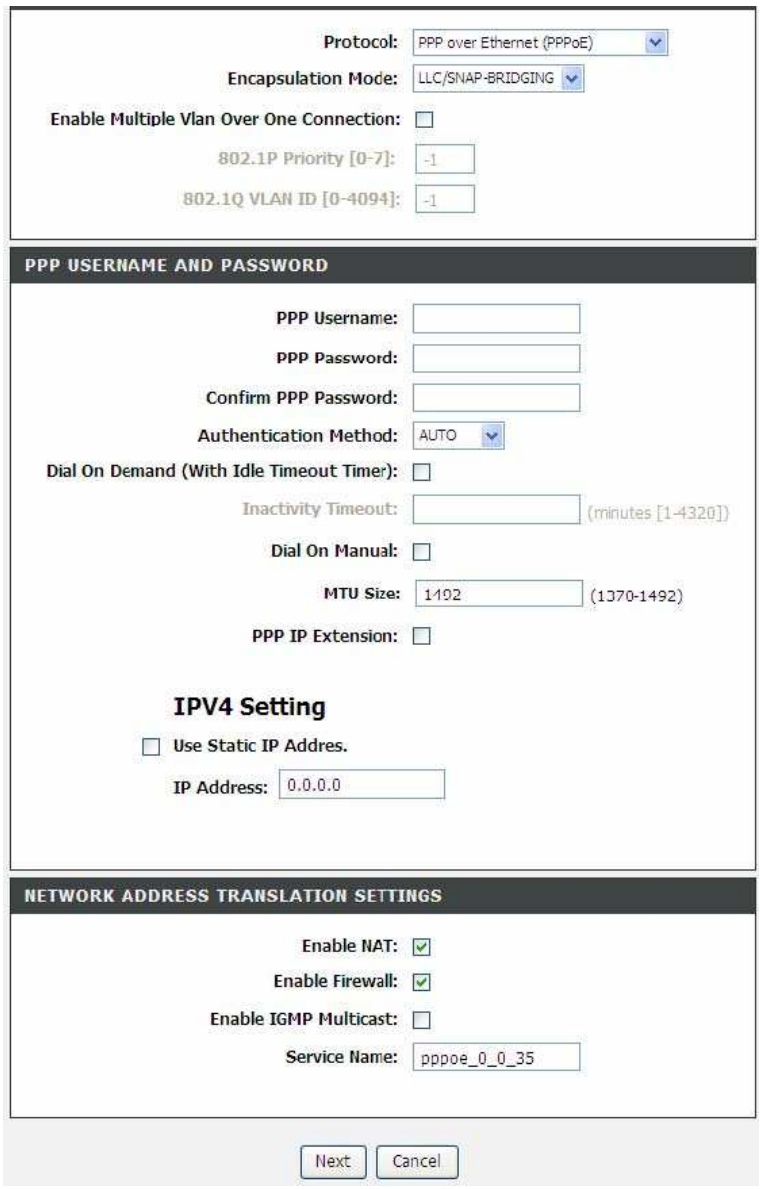

INTERNET SETUP
This screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category.
ATM PVC CONFIGURATION
VPI: 0 (0-255)
VCI: 35 (32-65535)
Service Category: UBR Without PCR
Peak Cell Rate: (cells/s)
Sustainable Cell Rate: (cells/s)
Maximum Burst Size: (cells)
IP QOS SCHEDULER ALGORITHM
Strict Priority
Precedence of queue: 8 (lowest)
Weighted Fair Queuing
Weight Value of queue: (1-63)
MPAAL Group Precedence: 8
CONNECTION TYPE
Protocol: Bridging
Encapsulation Mode: LLC/SNAP-BRIDGING
Enable Multiple Vlan Over One Connection:
802.1P Priority [0-7]: -1
802.1Q VLAN ID [0-4094]: -1
BRIDGE SETTINGS
Service Name: br_0_0_35
Next
Cancel

Field	Description
PVC Settings	• 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	You can select from the drop-down list. 
Protocol	You can select from the drop-down list. 
QoS scheduler	You can select one of the item between **Strict Priority** and **Weighted Fair Queuing**.
Encapsulation Mode	Select the method of encapsulation provided by your ISP. You can select **LLC** or **VCMUX**.

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

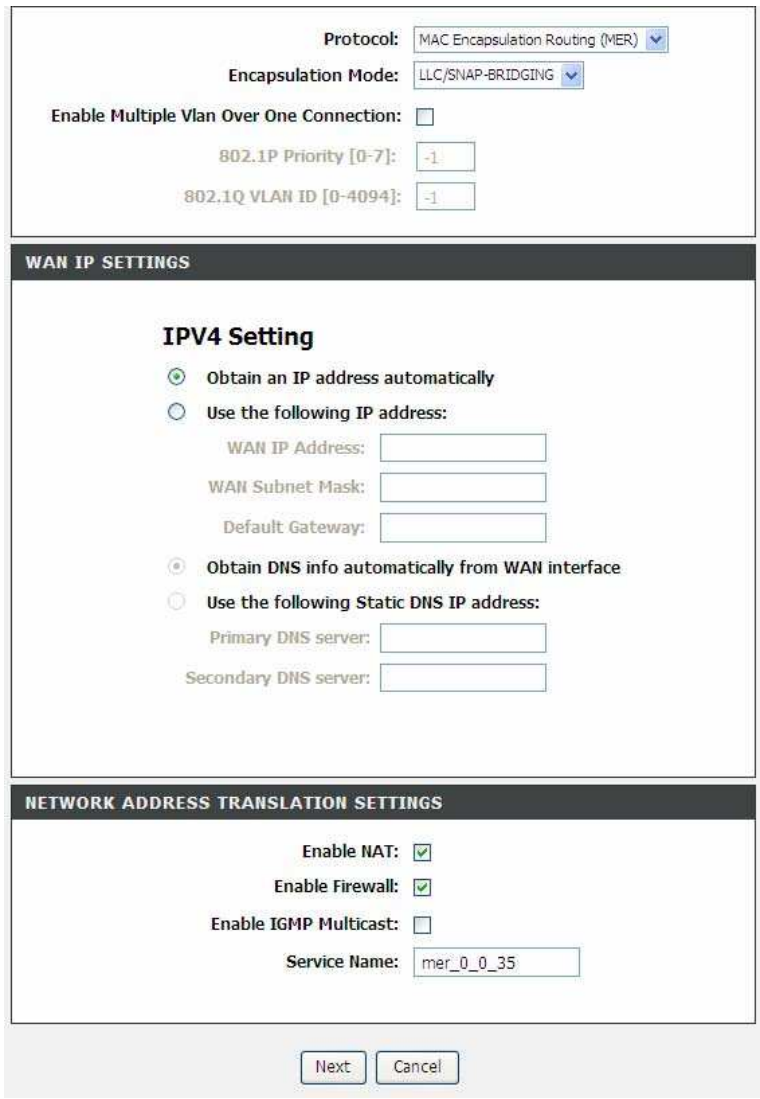


If you select the **PPP over Ethernet (PPPoE)** as the connection protocol, the following page appears.


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 Addres.
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

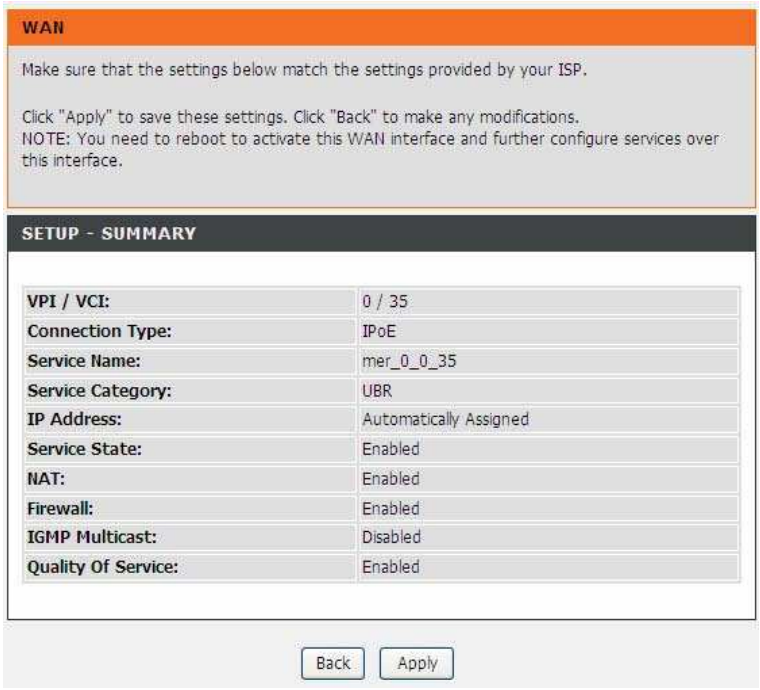
- **PPP Username:** The correct user name that your ISP provides to you.
- **PPP Password:** The correct password that your ISP provides to you.
- **Authentication Method:** The value can be AUTO, PAP, CHAP, or MSCHAP. Usually, you can select AUTO.
- **Dial on demand (with idle timeout timer):** If this function is enabled, you need to enter the idle timeout time. Within the preset minutes, if the modem does not detect the flow of the user continuously, the modem automatically stops the PPPoE connection. Once it detects the flow (like access to a webpage), the modem restarts the PPPoE dialup. If this function is disabled, the modem performs PPPoE dial-up all the time. The PPPoE connnection does not stop, unless the modem 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 modem through built-in dial-up can be directly assigned to the PC being attached to the modem (at this time, the modem connects to only one PC). From the aspect of the PC user, the PC dials up to obtain an IP addres. But actually, the dial-up is done by the modem. If this function is disabled, the modem itself obtains the WAN IP address.
- **Use Static IP Address:** If this function is disabled, the modem obtains an IP address assigned by an uplink equipment such as BAS, through PPPoE dial-up. If this function is enabled, the modem uses this IP address as the WAN IP address.
- **Enable NAT:** Select it to enable the NAT functions of the modem. If you do not want to enable NAT and wish the modem 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.

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


Protocol:
MAC Encapsulation Routing (MER)
Encapsulation Mode:
LLC/SNAP-BRIDGING
Enable Multiple Vlan Over One Connection:
802.1P Priority [0-7]:
-1
802.1Q VLAN ID [0-4094]:
-1
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:
mer_0_0_35
Next
Cancel

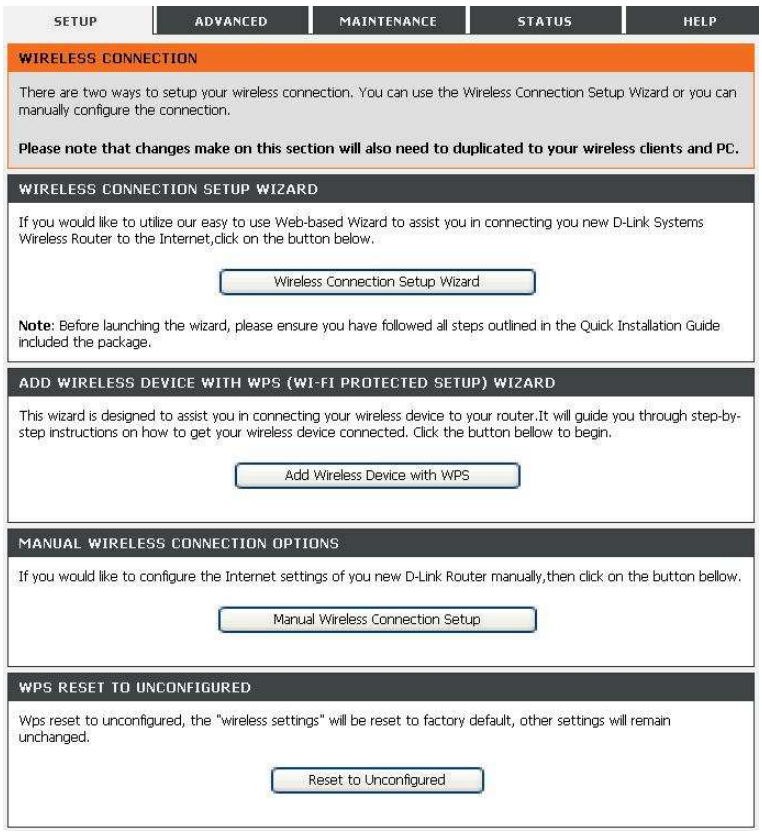
- **Obtain an IP address automatically:** The modem obtains a WAN IP address automatically and at this time it enables DHCP client functions. The WAN IP address is obtained from the uplink equipment like BAS and the uplink equipment is required to enable the DHCP server functions.
- **Use the following 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.

After proper settings, click **Next.**



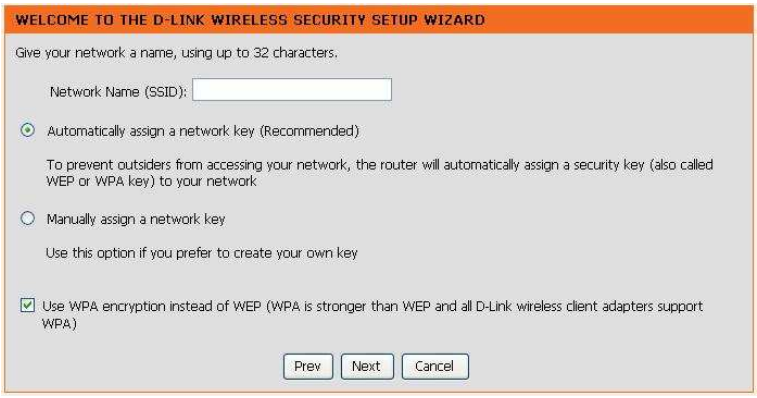
3.2.3 Wireless Connection

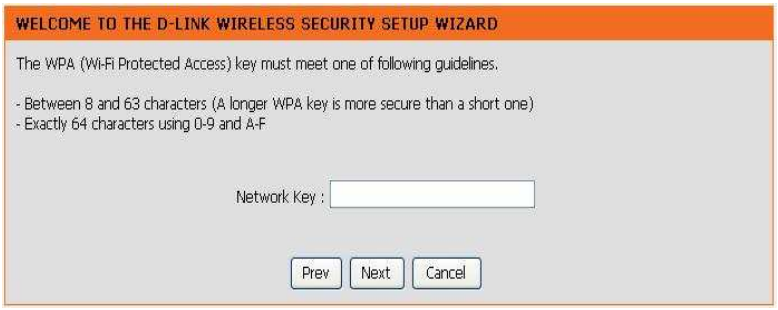
This section includes the wireless connection setup wizard and WPS setup wizard. There are two ways to setup your wireless connection. You can use the **Wireless Connection Setup Wizard** or you can manually configure the connection. Choose **Setup** > **Wireless Connection**. The **Wireless Connection** page shown in the following figure appears.



3.2.3.1 Wireless Wizard

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





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

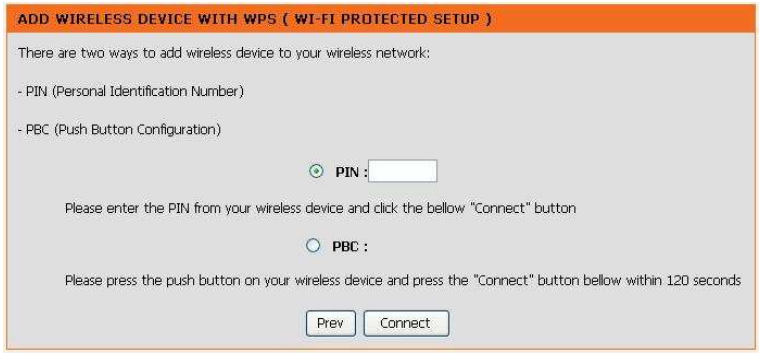
After you enter the network key, the page shown in the following figure appears, you can confirm the wireless settings in this page.

Click **Save** to save the settings.

3.2.3.2 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.

3.2.3.3 Manual Wireless Setup

If you want to configure the Internet settings of you new D-Link Router manually, click **Manual Wireless Connection Setup**. It will redirect to 3.3.1 Wireless Settings.

3.2.3.4 Wireless WPS

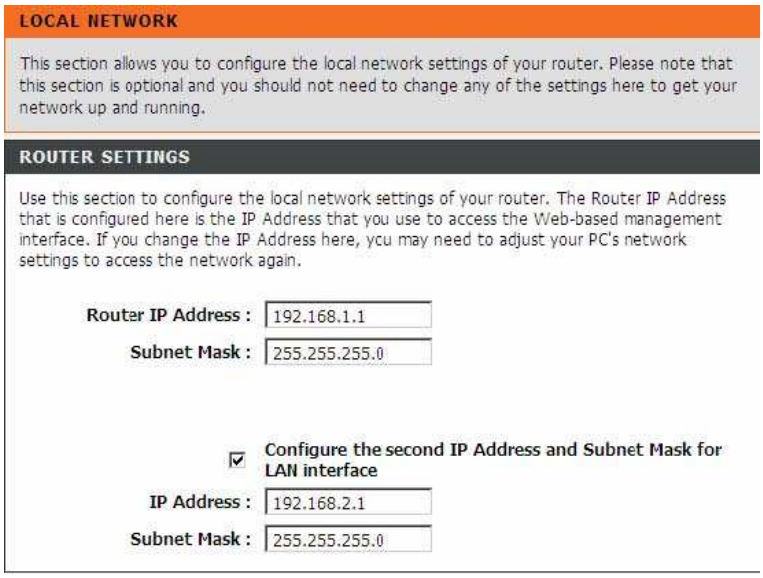
In **Wireless Connection** page, Click **Reset to Unconfigured,** the page shown in the following figure appears.

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

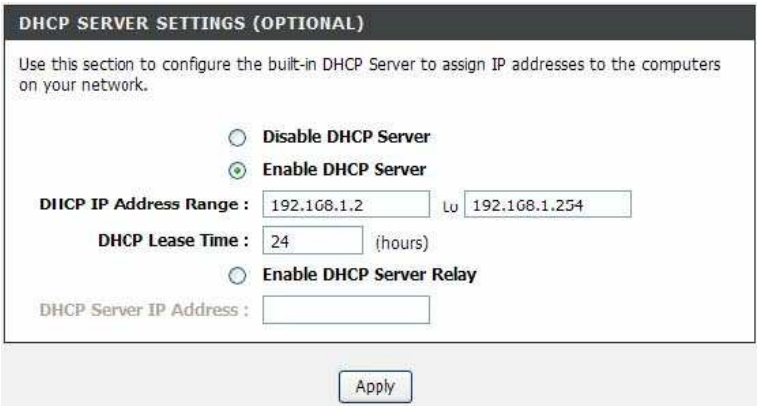
3.2.4 Local Network

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 changesautomatically 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 thefollowing figure appears.

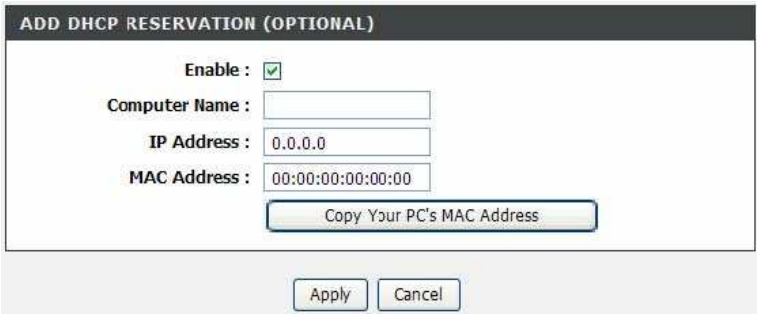


By default, **Enable DHCP Server** is selected for the Ethernet LAN interface of the device. DHCP service supplys IP settings to workstations configured to automatically obtain IP settings that are connected to the device through the Ethernet port. When the device is used for DHCP, it becomes the default 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. In the **Local Network** page, you can assign IP addresses on the LAN to specificindividual computers based on their MAC addresses.

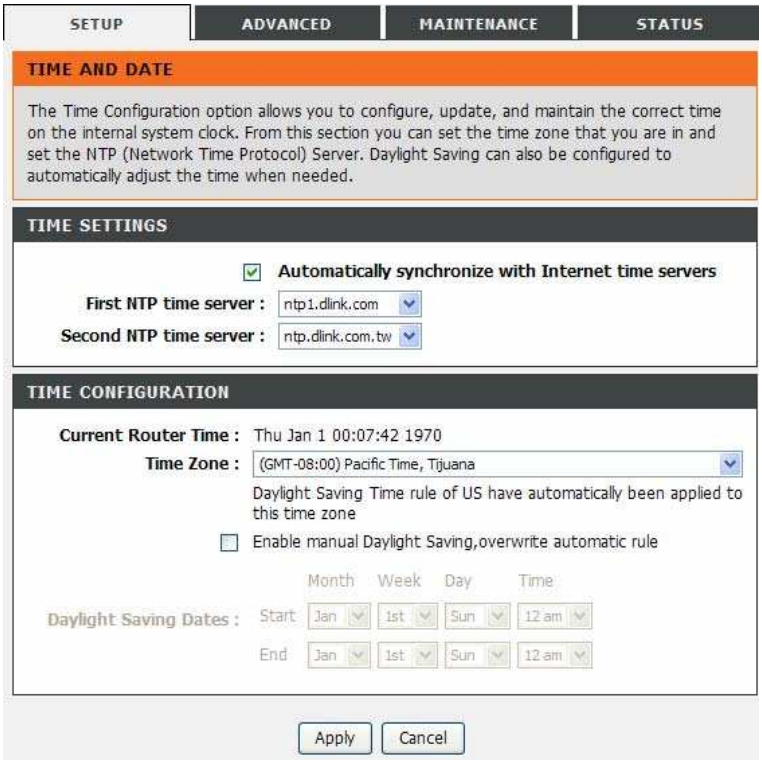
Click **Add** to add static DHCP (optional). The page shown in the following figure appears.



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

3.2.5 Time and Date

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

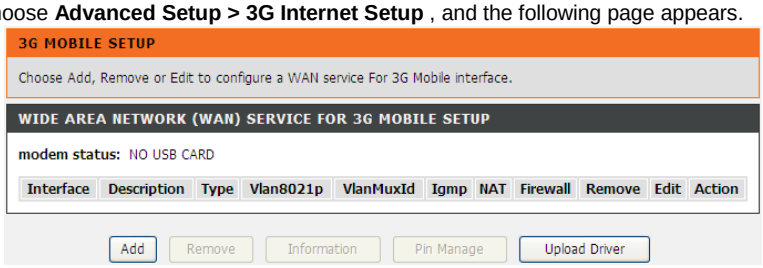


In the **Time and Date** page, you can configure, update, and maintain the correct time on the internal system clock. You can set the time zone that you are in andthe network time protocol (NTP) server. You can also configure daylight saving toautomatically adjust the time when needed. Select **Automatically synchronize with Internet time servers**. Select the specific time server and the time zone from the corresponding drop-down lists. Select **Enable Daylight Saving** if necessary. Set the daylight as you want. Click **Apply** to save the settings.

Note: The country selection mode is for non-US modes only and is not available to the US mode

3.2.6 3G Internet Setup

Choose **Advanced Setup > 3G Internet Setup** , and the following page appears.



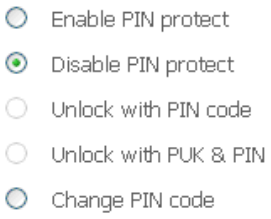
This page is used to configure the 3G connection. If you want to access the Internet through a 3G connection, a 3G network card is required. Connect the 3G network card to the USB interface of the Router.

Note: **(only support DWM-152 & DWM-156 3G network card)**

If the 3G network card is installed, you may click the button on the **Action** column to establish or disconnect the 3G connection.

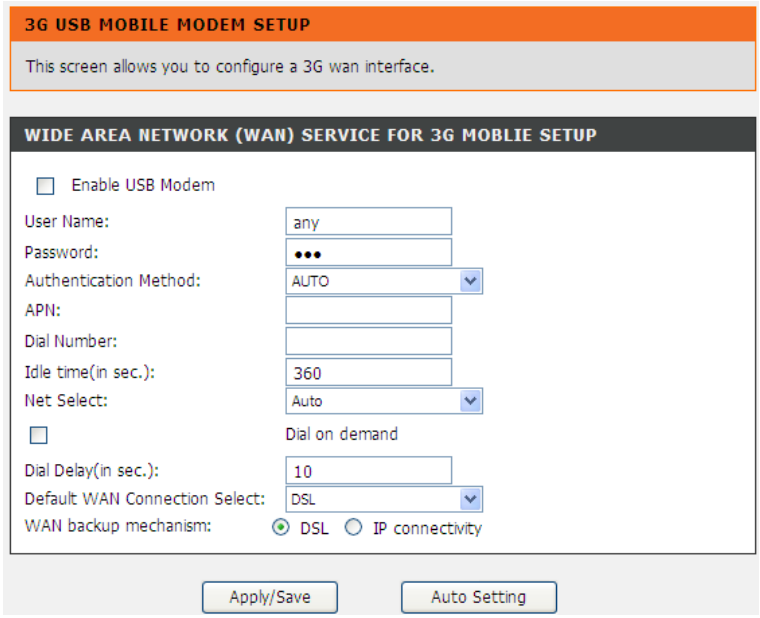
- **Information**: Click this button it to display the information of the 3G network card.
- **Upload Driver**: For an un-supported USB dongle, click this button to upload the new driver for USB support. The driver is a text file.
- **Pin Manage**: Click this button to manage the PIN.

The following modes of PIN management are shown.



- **Enable PIN protect**: If you enable it, you need to enter the PIN code when re-booting or inserting the USB device.
- **Unlock with PIN code**: If you disable it, you need to enter the PIN code when using a 3G device.
- **Unlock with PUK & PIN**: If you disable it, you need to enter the PUK code when failing to enter the correct PIN code 3 times.
- **Change PIN code**: Choose this to change the PIN code.

Click **Add** in the **3G Mobile Setup** to display the following page.



Default settings for Username, Password, Authentication method, APN, and Dial Number are to be set.

In this page, you are allowed to configure the settings of the 3G USB modem.

- **Enable USB Modem:** If you want to access the Internet through the 3G network card, you must enable the USB modem.
- **User Name:** Username provided by your 3G ISP.
- **Password:** Password provided by your 3G ISP.
- **Authentication Method:** Select a proper authentication method from the drop-down list. You can select Auto, PAP, CHAP, or MSCHAP.
- **APN:** APN (Access Point Name) is used to identify the service type. Enter the APN provided by your 3G ISP.
- **Dial Number:** Enter the dial number provided by your 3G ISP.
- **Idle time (in sec.):** If there is no traffic for the preset time, the 3G will disconnect automatically.
- **Net Select:** Select the 3G network that is available.You may select EVDO, WCDMA, CDMA2000, TD-SCDMA, GSM, or Auto.
- **Dial on demand**: Within the preset time, if the modem does not detect data flow , the modem automatically stops the 3G connection. Once it detects data flow (e.g. access to a webpage), the modem restarts the 3G dialup.
- **Dial Delay (in sec.)**: The 3G delays dial after the DSL is disconnected.
- **Default WAN Connection Select**: You can select DSL or 3G from the drop-down list.
- **WAN backup mechanism**: The 3G connection is used as backup for the DSL connection.
  - **DSL**: If the DSL is disconnected, the 3G starts to dial.
  - **IP connectivity**: If the system fails to ping the specified IP address, the 3G starts to dial.

After adding the settings, click the **Apply/Save** button to save the settings.

You may also click the **auto setting** button to automatically configure the 3G connection.

After clicking the **Apply/Save** button, the settings will take effect.

Note:

When there is no DSL WAN connection, insert the 3G network card, and the system will perform a dial-up automatically. If the DSL WAN connection and the 3G connection coexist, the DSL WAN connection takes priority over the 3G connection. When the DSL WAN connection starts to perform a dial-up, the 3G connection will be disconnected. If the DSL WAN connection has been established, you may manually perform a 3G dial-up, and then the DSL WAN connection will be disconnected.

3.2.7 Logout

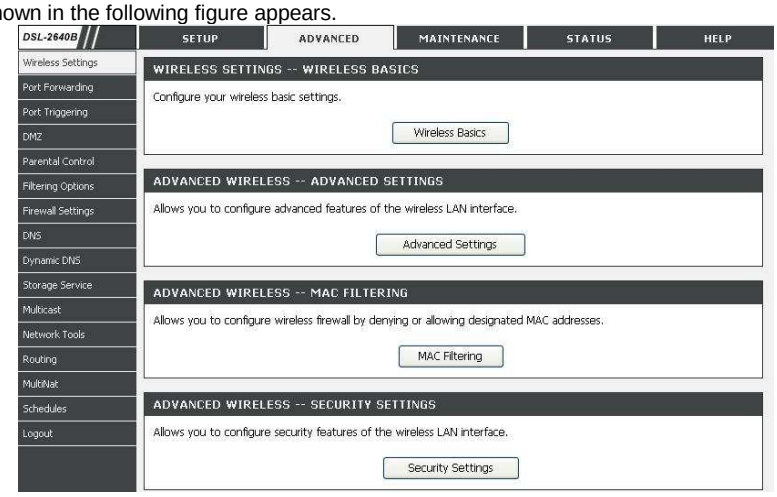
Choose **Setup** > **Logout**. The page shown in the following figure appears. In this page, you can log out of the configuration page.

3.3 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.

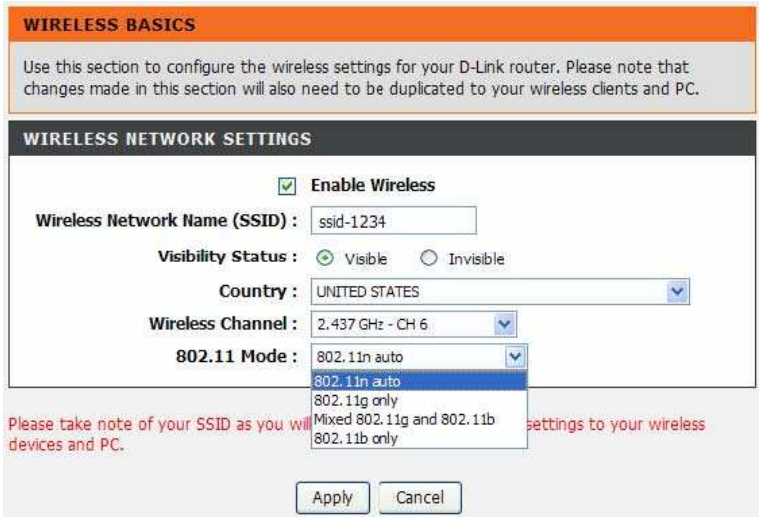
3.3.1 Wireless Settings

This function is used to modify the standard 802.11g wireless radio settings. It is recommend 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.



3.3.1.1 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.

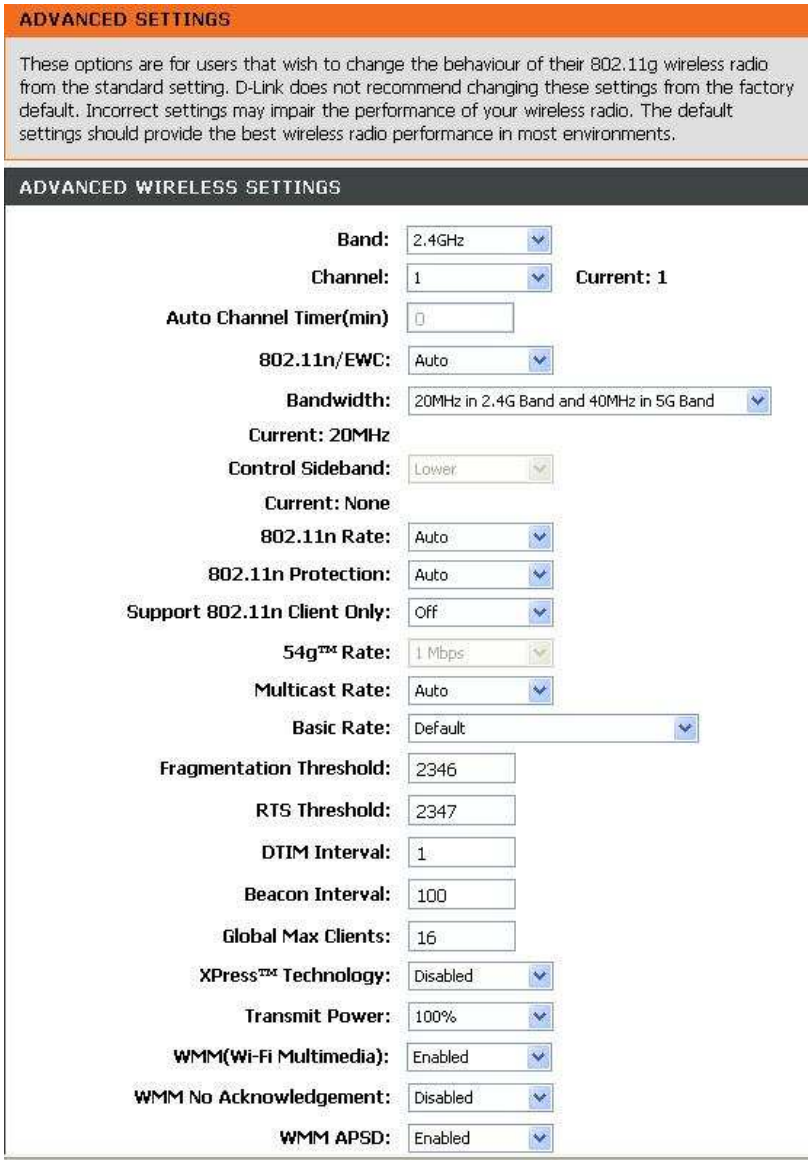


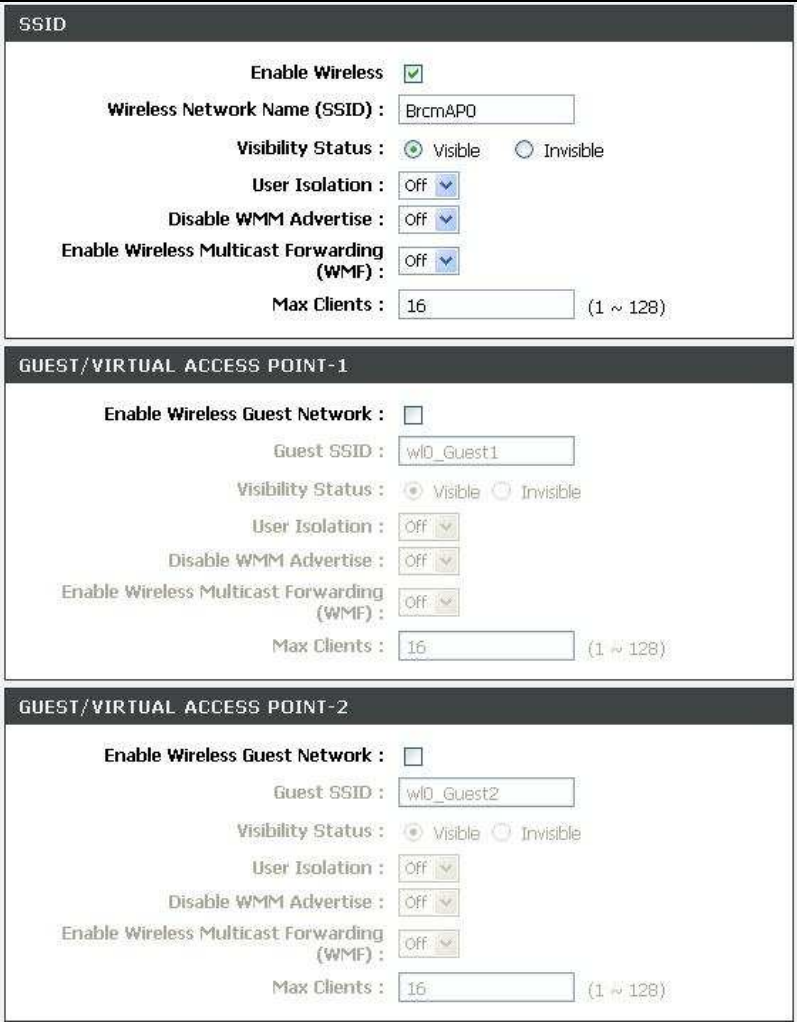
- **Enable Wireless**: Select this to turn Wi-Fi on and off.
- **Wireless Network Name (SSID)**: The Wireless Network Name is a unique name that identifies a network. All devices on a network must share the same wireless network name in order to communicate on the network. If you decide to change the 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.

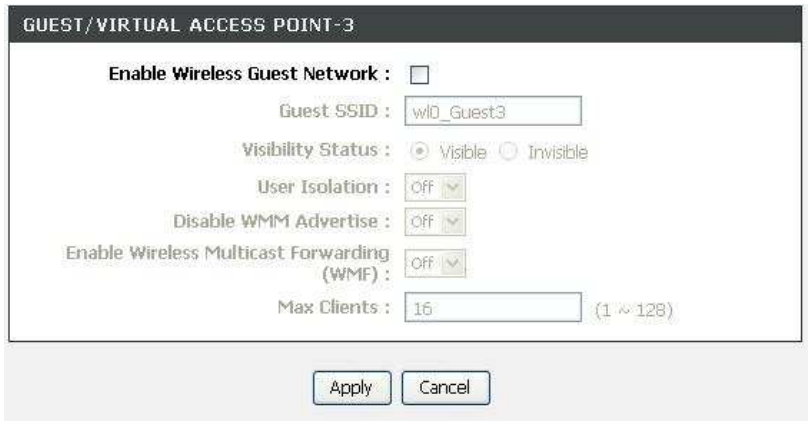
Click **Apply** to save the settings.

3.3.1.2 Advanced Settings

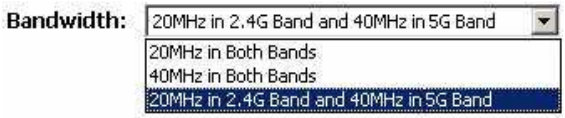
In the **Wireless Settings** page, click **Advanced settings**, the page shown in the following figure appears.


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
Band: 2.4GHz
Channel: 1 Current: 1
Auto Channel Timer(min) 0
802.11n/EWC: Auto
Bandwidth: 20MHz in 2.4G Band and 40MHz in 5G Band
Current: 20MHz
Control Sideband: Lower
Current: None
802.11n Rate: Auto
802.11n Protection: Auto
Support 802.11n Client Only: Off
54g™ Rate: 1 Mbps
Multicast Rate: Auto
Basic Rate: Default
Fragmentation Threshold: 2346
RTS Threshold: 2347
DTIM Interval: 1
Beacon Interval: 100
Global Max Clients: 16
XPress™ Technology: Disabled
Transmit Power: 100%
WMM(Wi-Fi Multimedia): Enabled
WMM No Acknowledgement: Disabled
WMM APSD: Enabled


SSID
Enable Wireless
Wireless Network Name (SSID) :
BrcmAP0
Visibility Status :
Visible
Invisible
User Isolation :
Off
Disable WMM Advertise :
Off
Enable Wireless Multicast Forwarding (WMF) :
Off
Max Clients :
16
(1 ~ 128)
GUEST/VIRTUAL ACCESS POINT-1
Enable Wireless Guest Network :
Guest SSID :
wl0_Guest1
Visibility Status :
Visible
Invisible
User Isolation :
Off
Disable WMM Advertise :
Off
Enable Wireless Multicast Forwarding (WMF) :
Off
Max Clients :
16
(1 ~ 128)
GUEST/VIRTUAL ACCESS POINT-2
Enable Wireless Guest Network :
Guest SSID :
wl0_Guest2
Visibility Status :
Visible
Invisible
User Isolation :
Off
Disable WMM Advertise :
Off
Enable Wireless Multicast Forwarding (WMF) :
Off
Max Clients :
16
(1 ~ 128)



- **Band:** Select using wireless frequency band range. The radio frequency remains at 2.4GHz.



- **Channel:** Enter the appropriate channel to correspond with your network settings. All devices in your wireless network must use the same channel in order to work correctly. This router supports auto channeling functionality.
- **Auto Channel Timer(min):** Specifies the timer of auto channelling.
- **802.11n/EWC:** Select **disable** or **Auto**.
- **Bandwidth:** You can select the bandwidth from the drop-down list.
- **802.11n Rate/54g™ Rate:** Select the 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**.

- **802.11n Protection:** The 802.11n standards provide a protection method ,so 802.11b/g and 802.11n devices can co-exist in the same network without “speaking” at the same time.
- **Support 802.11n Client Only:** Only stations that are onfigured in 802.11n mode can associate.
- **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**.
- **Basic Rate:** Select the basic transmission rate ability for the AP.
- **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.
- **XPress™ Technology:** Select **Enabled** or **Disabled**. This is a special accelerating technology for IEEE802.11g. The defaule is **Disabled**.
- **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.
- **WMM No Acknowledgement:** Select whether ACK in WMM packet. By default, the 'Ack Policy' for each access category is set to Disabled, meaning that an acknowledge packet is returned for every packet received. This provides a more reliable transmission but increases traffic load, which decreases performance. To disable the acknowledgement can be useful for Voice, for example, where speed of transmission is important and packet loss is tolerable to a certain degree.
- **WMM APSD:** APSD is short for automatic power save delivery, Selecting **Enabled** will make it very low power consumption. WMM Power Save is an improvement to the 802.11e amendment adding advanced power management functionality to WMM.
- **Enable Wireless**: Select this to turn Wi-Fi on and off.

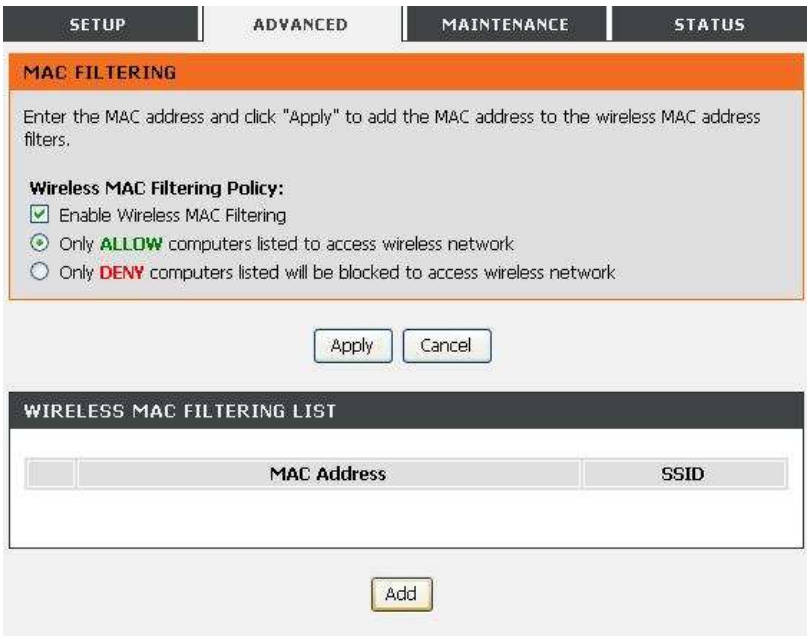
- **Wireless Network Name (SSID)**: The Wireless Network Name is a unique name that identifies a network. All devices on a network must share the same wireless network name in order to communicate on the network. If you decide to change the wireless network name from the default setting, enter your new 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.
- **Max Clients:** Specifies maximum wireless client stations to be enble to link with AP. Once the clients exceed the max vlaue, all other clients will be refused.
- **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.

3.3.1.3 MAC Filtering

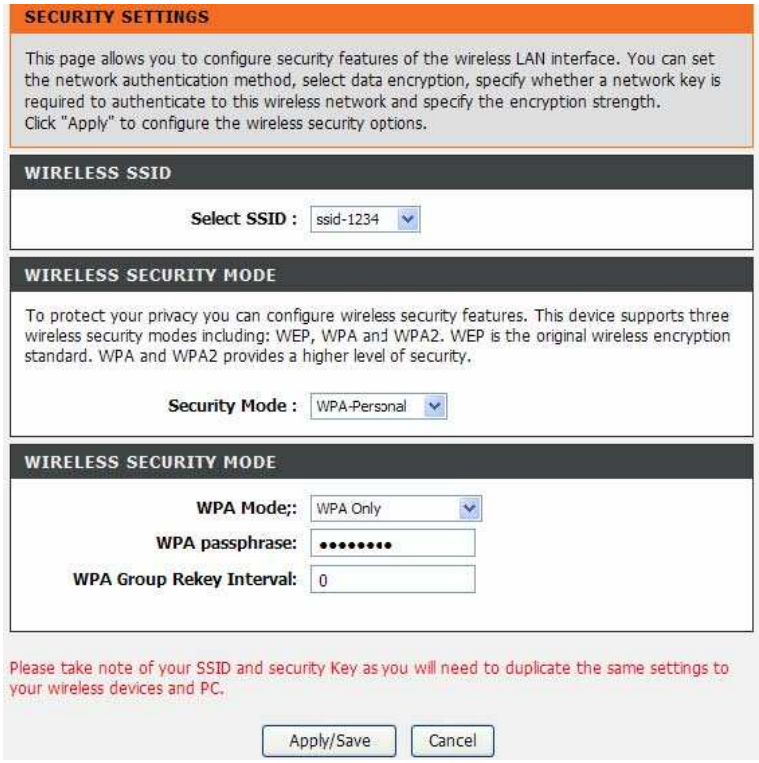
In the **Wireless Settings** page, click **MAC Filtering**, the page shown in thefollowing figure appears. In this page, you can allow or deny users access the wireless router based ontheir MAC address.



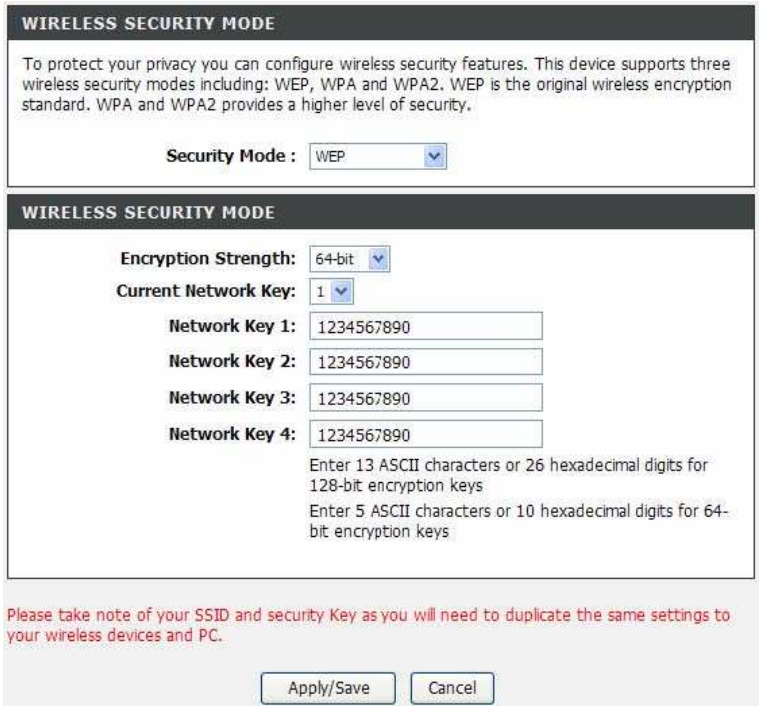
Click **Add**, the page shown in the following figure appears.

3.3.1.4 Security Settings

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

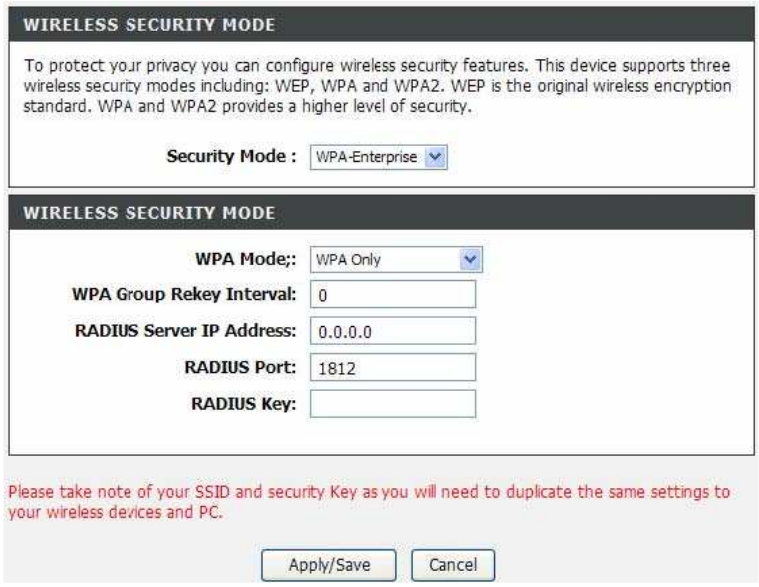


Select the SSID that you want to configure from the drop-down list. Select the encryption type from the **Security Mode** drop-down list.You can select**None**, **WEP**, **WPA-Personal** and **WPA-Enterprise**. If you select **WEP**, the page shown in the following figure appears.



WEP (Wireless Encryption Protocol) encryption can be enabled for securityand privacy. WEP encrypts the data portion of each frame transmitted from thewireless 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 bottomof the window.)Click **Apply/Save** to save the settings. If you select **WPA-Personal**, the page shown in the following figure appears.

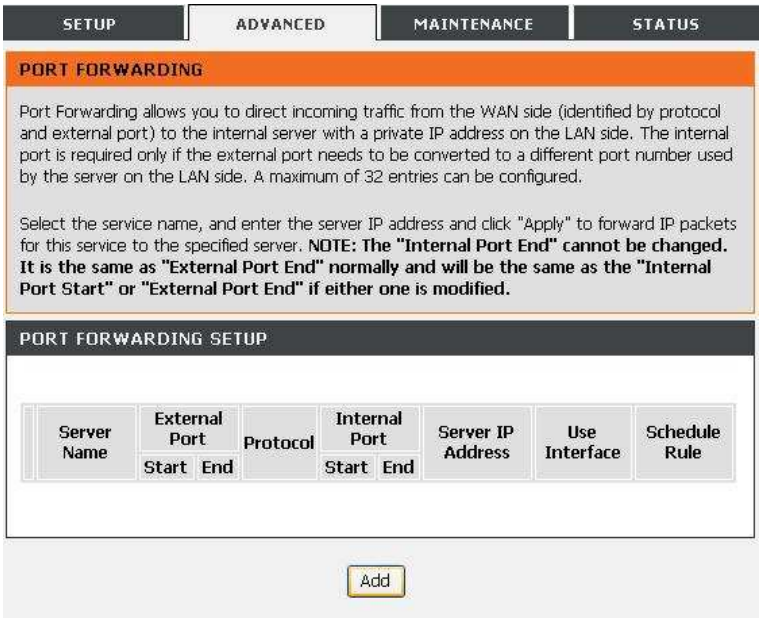
WPA only(WPA-PSK) configuration is similar to WEP. The key length is between 8 to 63 ASCII characters or 64 hexadecimal digits. If you select **WPA-Enterprise**, the page shown in the following figure appears.



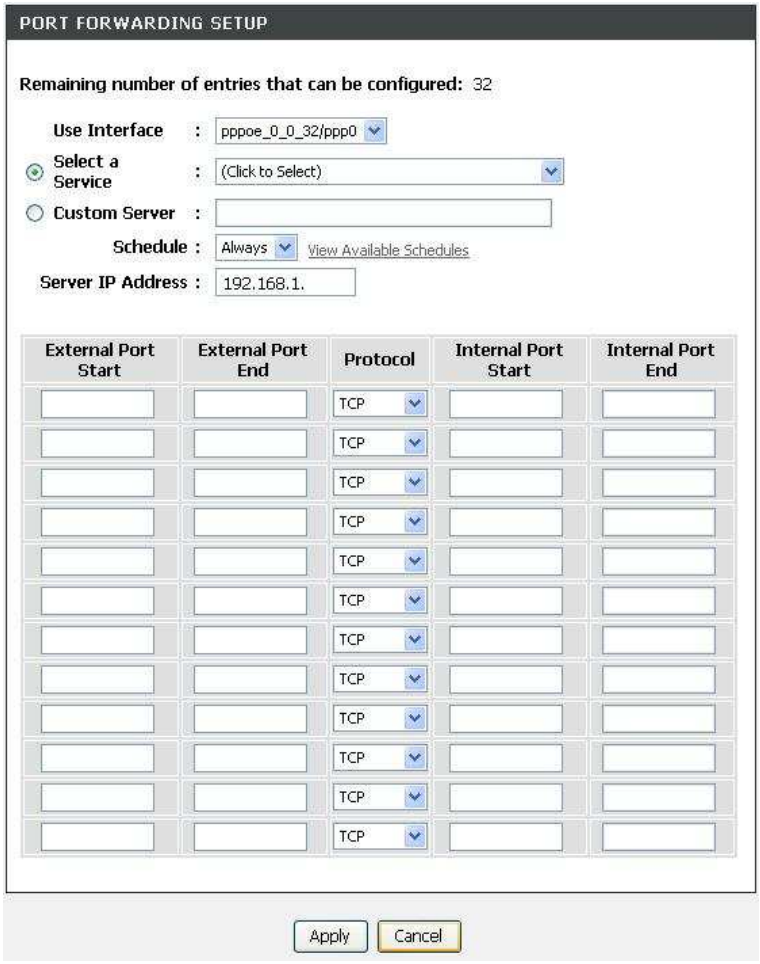
You can only use WPA-enterprise if you have set up RADIUS server. This is the WPA/WPA2 authentication with RADIUS server instead of pre-shared key.

3.3.2 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.

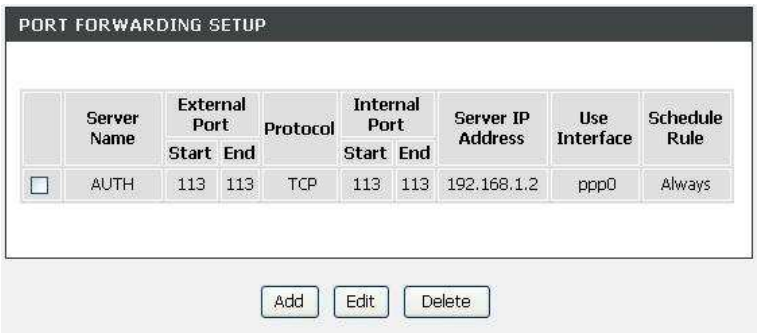


Click **Add** to add a virtual server.



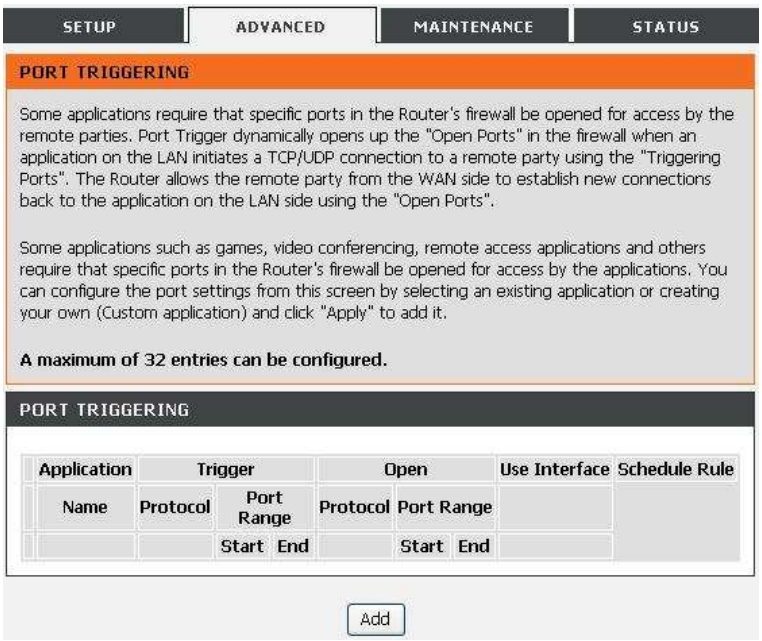
Select a service for a preset application, or enter a name in the **Custom Server**field. Enter an IP address in the **Server IP Address** field, to appoint the correspondingPC to receive forwarded packets. The Ports show the ports that you want to open on the device. The **TCP/UDP**means the protocol type of the opened ports.

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

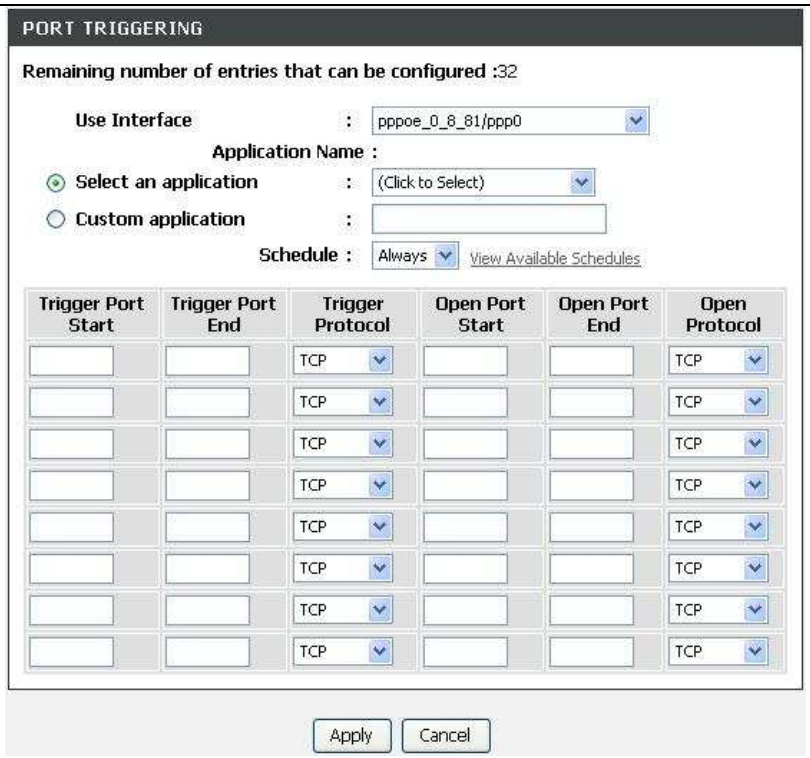


3.3.3 Port Triggering

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.



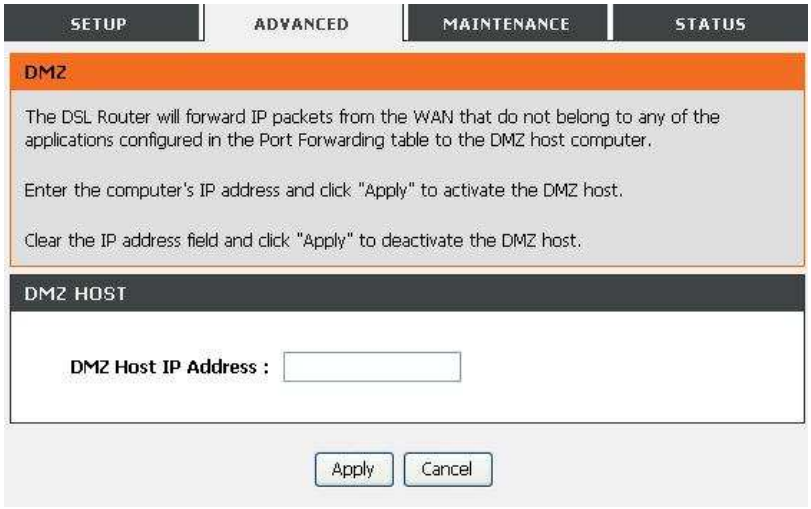
Click **Add** to add a new Port Trigger.



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.

3.3.4 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.

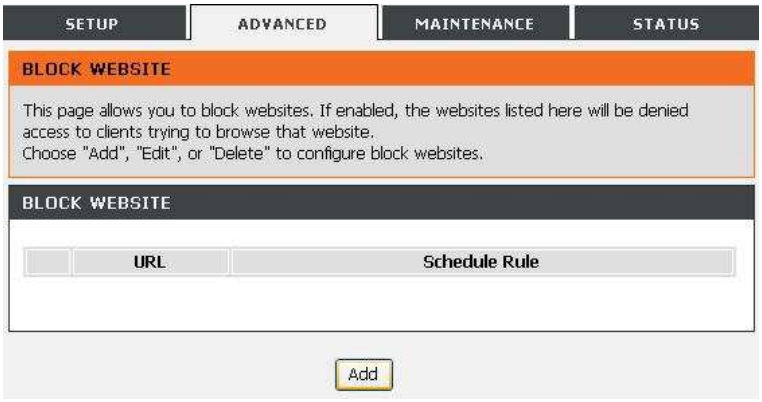
3.3.5 Parental Control

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

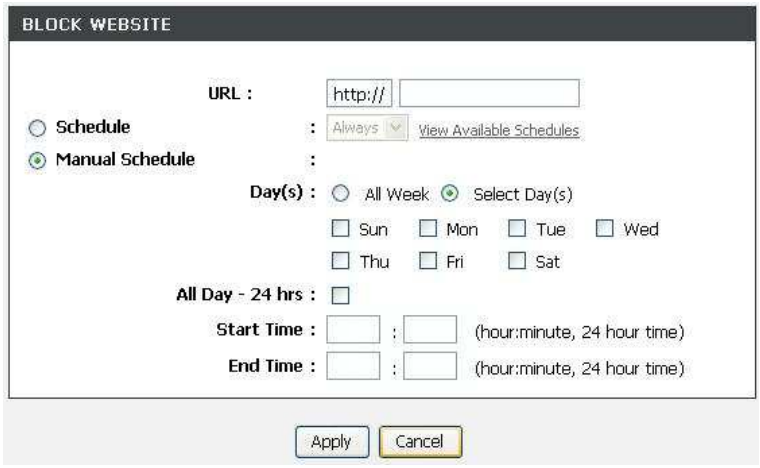
This page provides two useful tools for restricting the Internet access. **Block Websites** allows you to quickly create a list of all websites that you wish to stop users from accessing. **Block MAC Address** allows you to control when clients or PCs connected to the device are allowed to access the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

3.3.5.1 Block Website

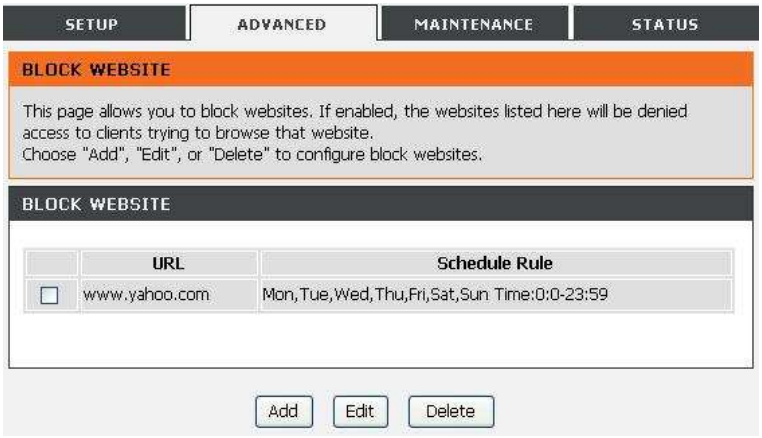
In the **Parent Control** page, click **Block Website**. The page shown in the following figure appears.



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



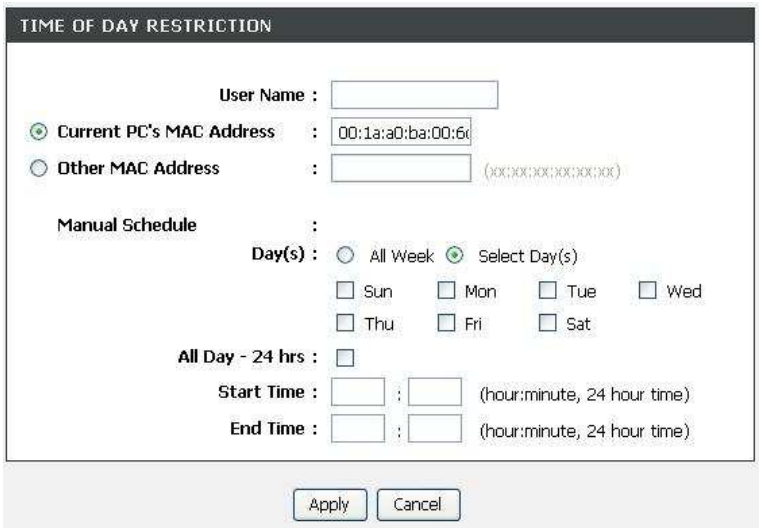
Enter the website in the **URL** field. Select the **Schedule** from drop-down list, or select **Manual Schedule** and select the corresponding time and days. Click **Apply** to add the website to the **BLOCK WEBSITE** table.The page shown in the following figure appears.



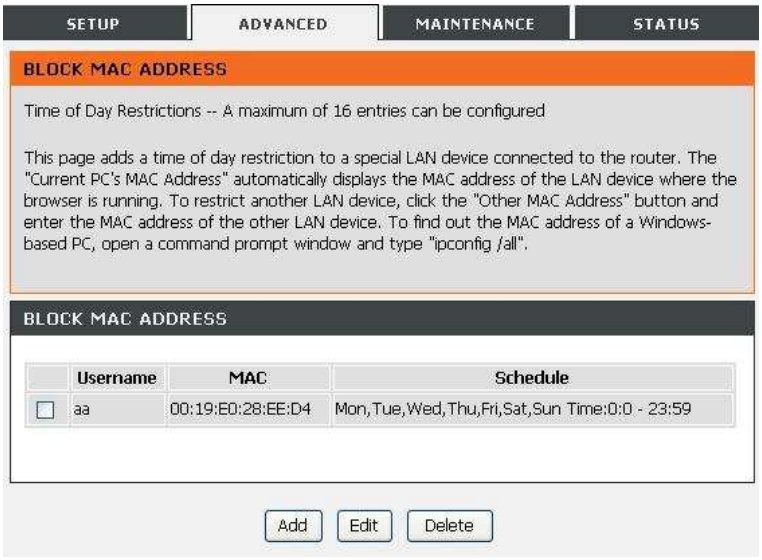
3.3.5.2 Block MAC Address

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

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



Enter the use name and MAC address and select the corresponding time and days. Click **Apply** to add the MAC address to the **BLOCK MAC ADDRESS** table. The page shown in the following figure appears.

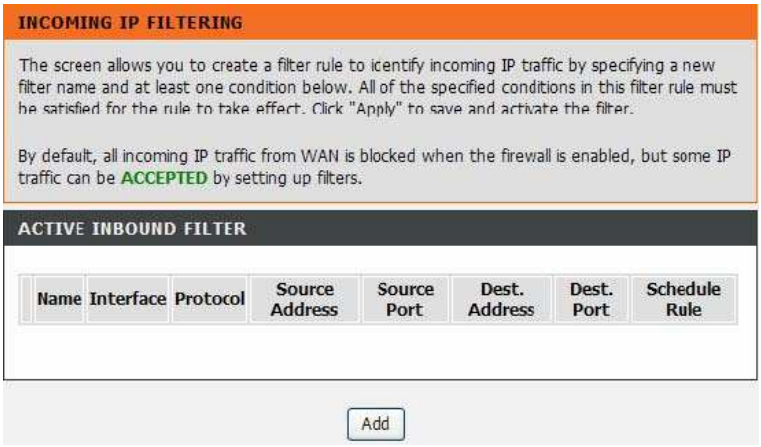


3.3.6 Filtering Options

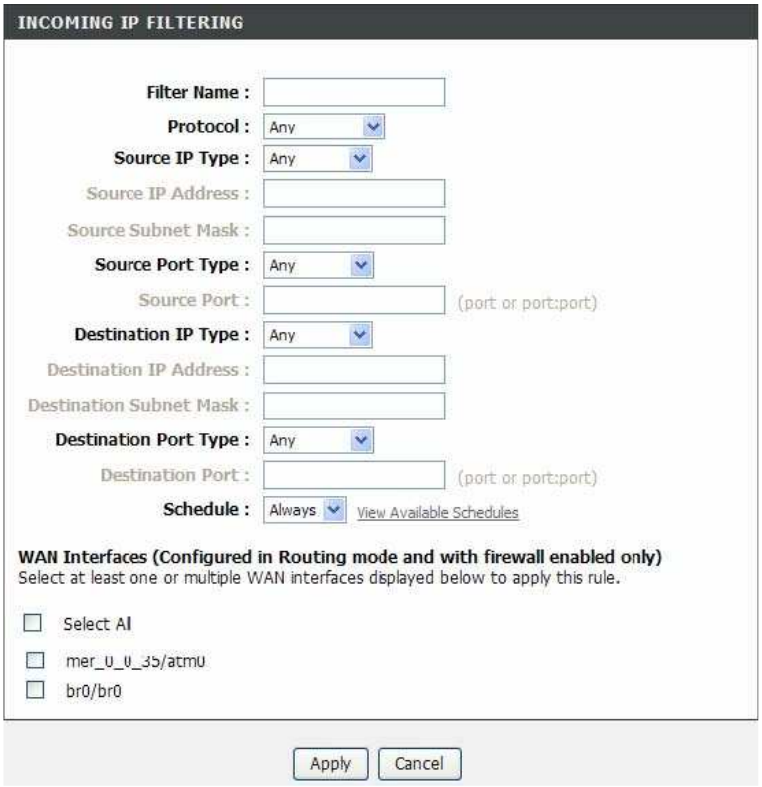
Choose **ADVANCED** > **Filtering Options**. The **Filtering Options** page shown in the following figure appears.

3.3.6.1 Inbound IP Filtering

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



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


INCOMING IP FILTERING
Filter Name :
Protocol : Any
Source IP Type : Any
Source IP Address :
Source Subnet Mask :
Source Port Type : Any
Source Port : (port or port:port)
Destination IP Type : Any
Destination IP Address :
Destination Subnet Mask :
Destination Port Type : Any
Destination Port : (port or port:port)
Schedule : Always 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
Apply
Cancel

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.

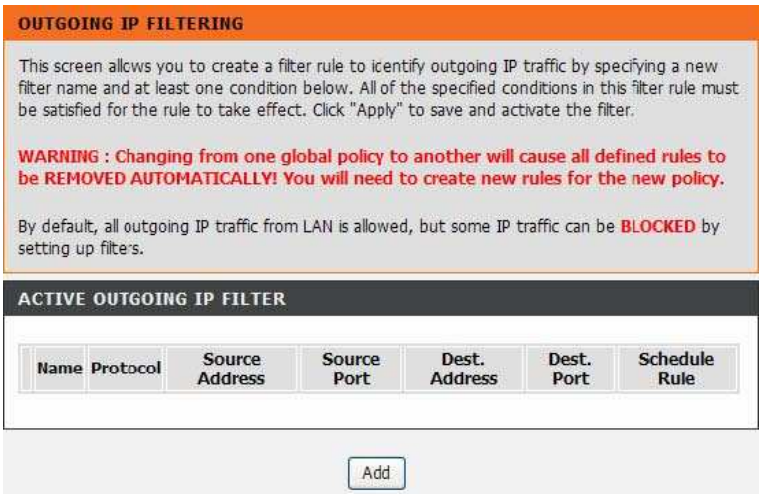
Note:

The settings only apply when the firewall is enabled.

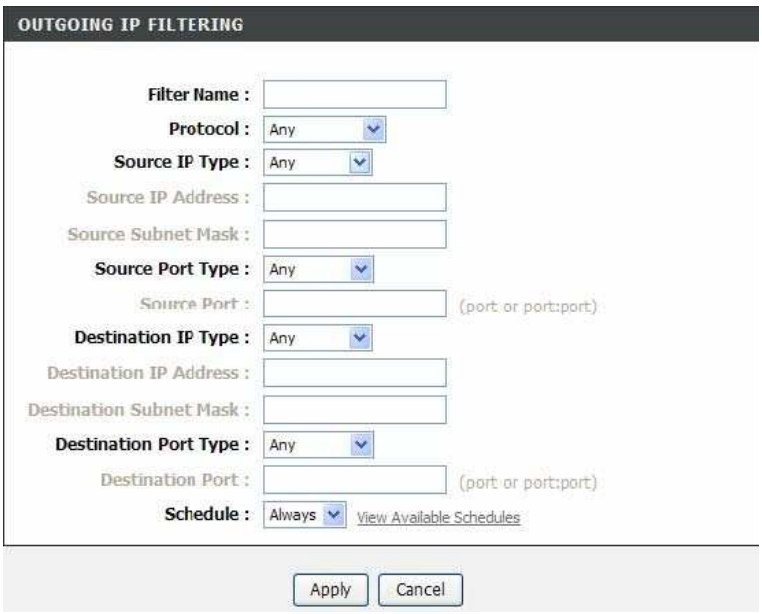
The **ACTIVE INBOUND FILTER** shows detailed information about each created inbound IP filter.

3.3.6.2 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.



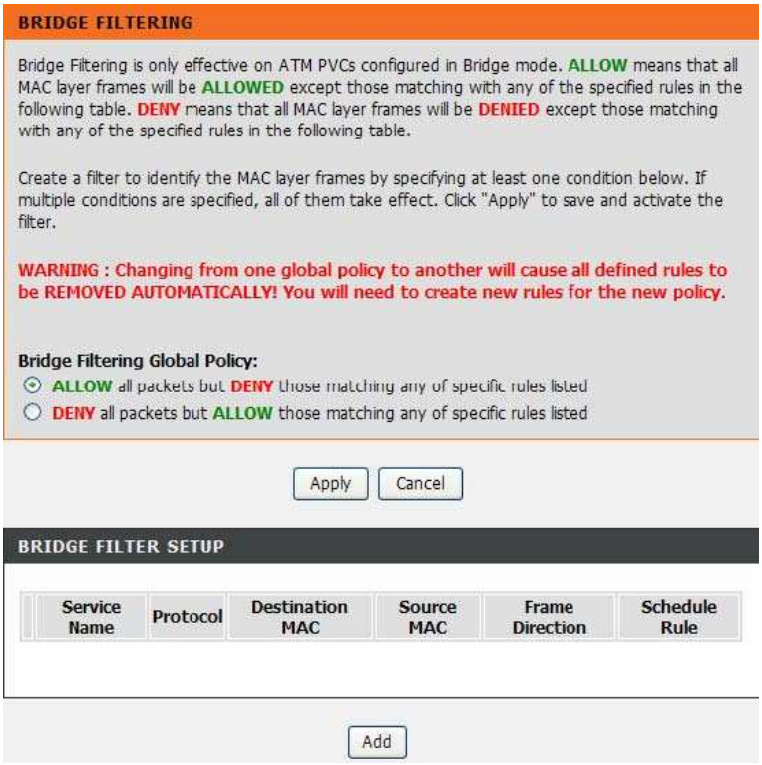
Click **Add** to add an outbound IP filter. The page shown in the following figure appears.



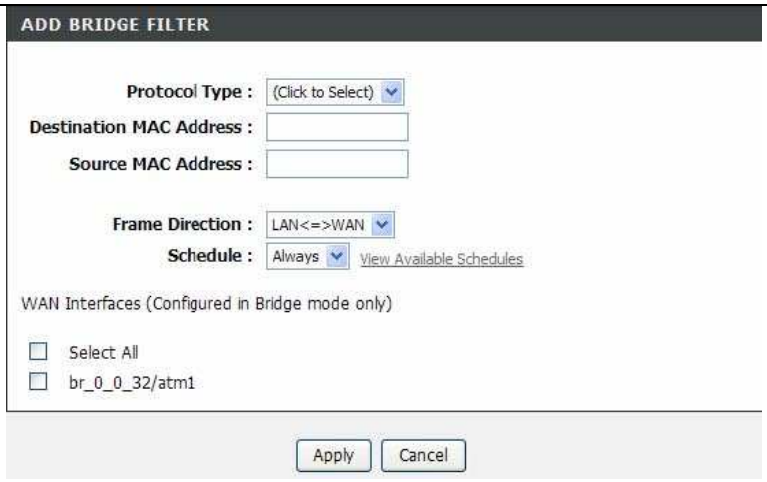
Enter the **Filter Name** and specify at least one of the following criteria: protocol,source/destination IP address, subnet mask, and source/destination port. Click **Apply** to save the settings. The **ACTIVE OUTBOUND IP FILTER** shows detailed information about each created outbound IP filter..

3.3.6.3 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.



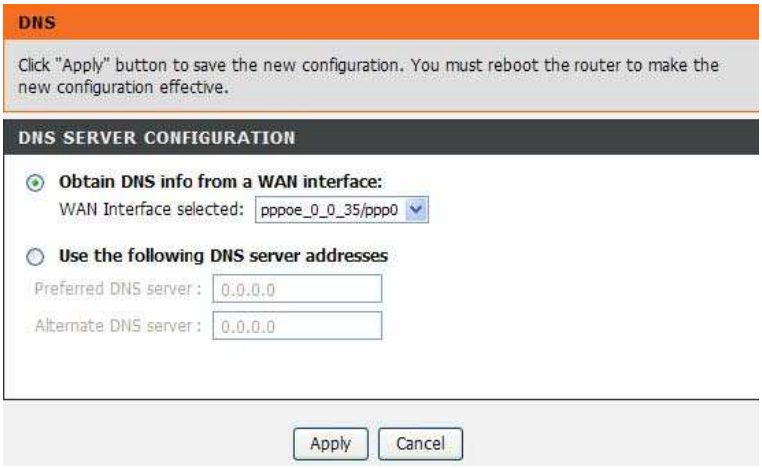
Click **Add** to add a bridge filter. The page shown in the following figure appears.



Click **Apply** to save the settings.

3.3.7 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 folllowin g figure appears.

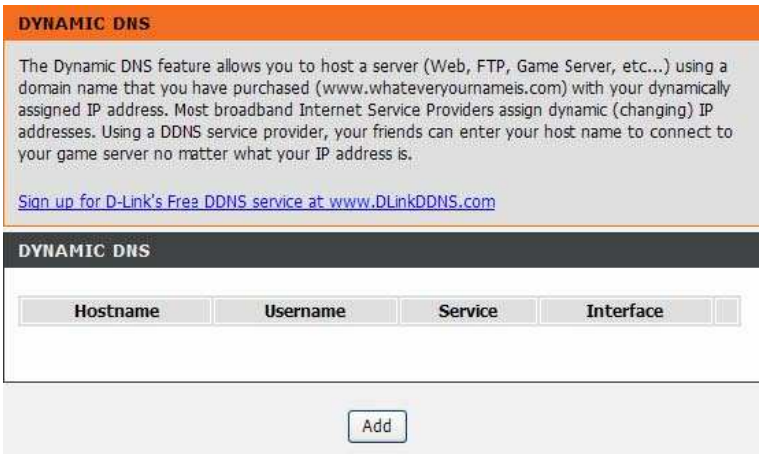


DNS SERVER CONFIGURATION

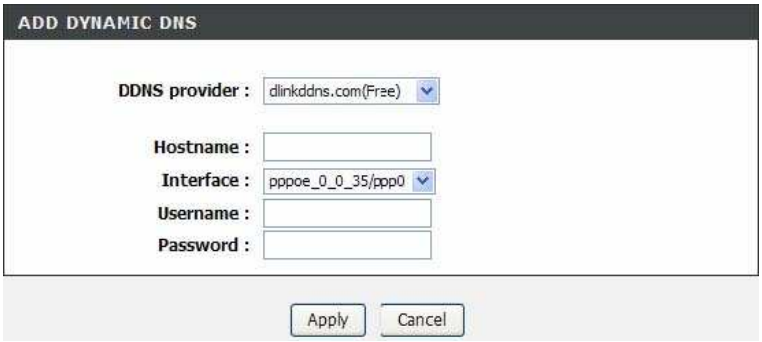
If you are using the device for DHCP service on the LAN or if you are using DNS servers on the ISP network, select **Obtain DNS Info from a WAN interface**. If you have DNS IP addresses provided by your ISP, enter these IP addresses in the available entry fields for the preferred DNS server and the alternate DNS server. Click **Apply** to save the settings.

3.3.8 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 (DyndDNS.org or dlinkddns.com). Choose **ADVANCED** > **Dynamic DNS**. The page shown in the following page appears.



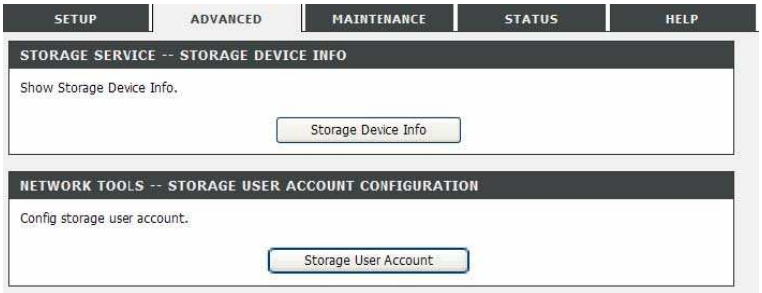
Click **Add** to add dynamic DNS. The page shown in the following figure appears.



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

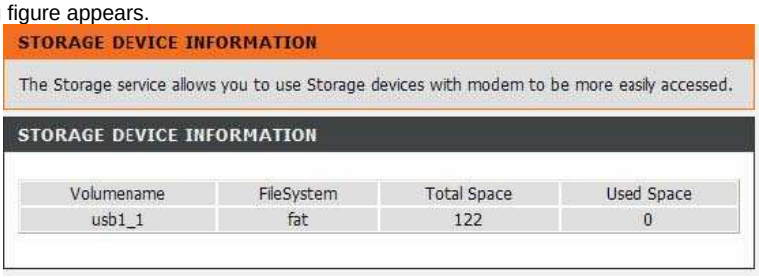
3.3.9 Storage Service

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



3.3.9.1 Storage Device Info

In the **Storage Service** page, click **Storage Device Info**. The page shown in the following figure appears.



When you insert USB storage, this page will show the information of USB storage, such as file system, total space and used space.

3.3.9.2 User Accounts

In the **Storage Service** page, click **User Accounts**. The page shown in the following figure appears.

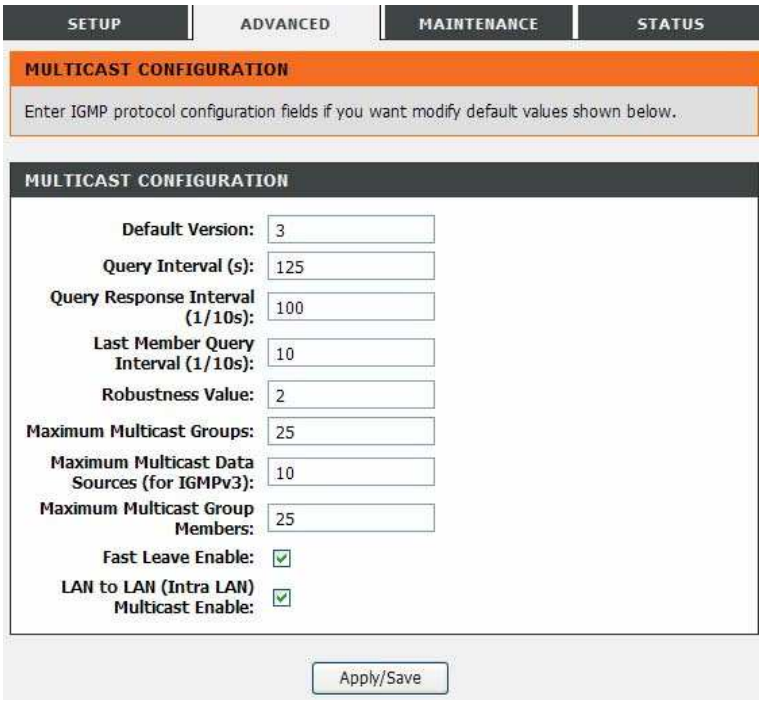
Click **Add** to add a user. The page shown in the following figure appears.

- **Username**:set valid user that access CPE's samba server
- **Password**:user's password

- **Confirm Password**:user's password
- **volumeName**:the directory you want to share

3.3.10 Multicast

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

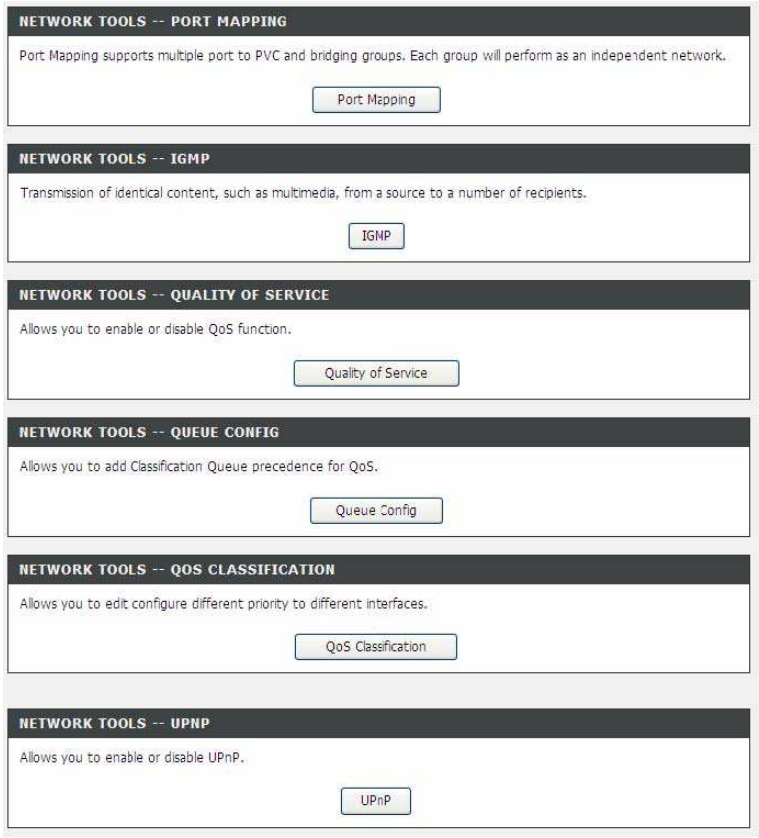


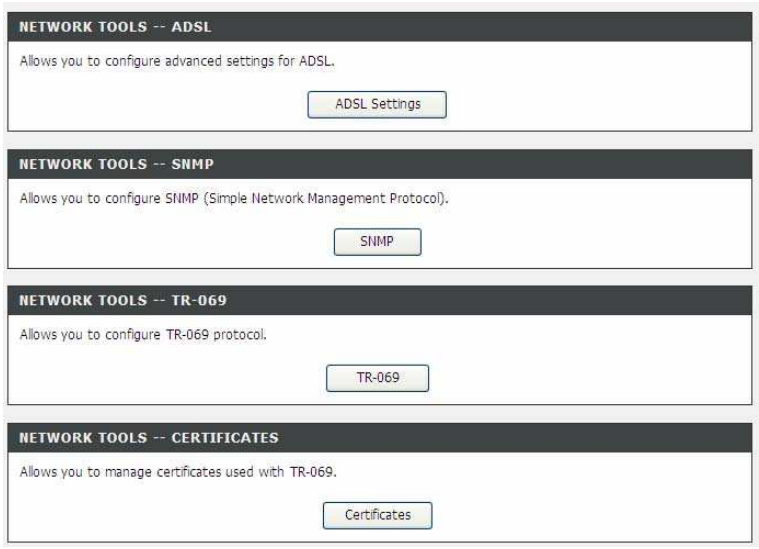
- **Default Version**:IGMP version
- **Query Interval(s)**:The query interval is the amount of time in seconds between IGMP General Query messages sent by the router (if the router is the querier on this sub-net)
- **Query Response Interval (1/10s)**: The query response interval is the maximum amount 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 queryinterval is also the amount of time in seconds between successive Group-Specific Query messages.
- **Robustness Value**: The robustness variable is a way of indicating howsusceptible the subnet is to lost packets. IGMP can recover fromrobustness variable minus 1 lost IGMP packets.
- **Maximum Multicast Groups**:max multicast groups
- **Maximum Multicast Data Sources (for IGMPv3)**: max group datasources 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.

3.3.11 Network Tools

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

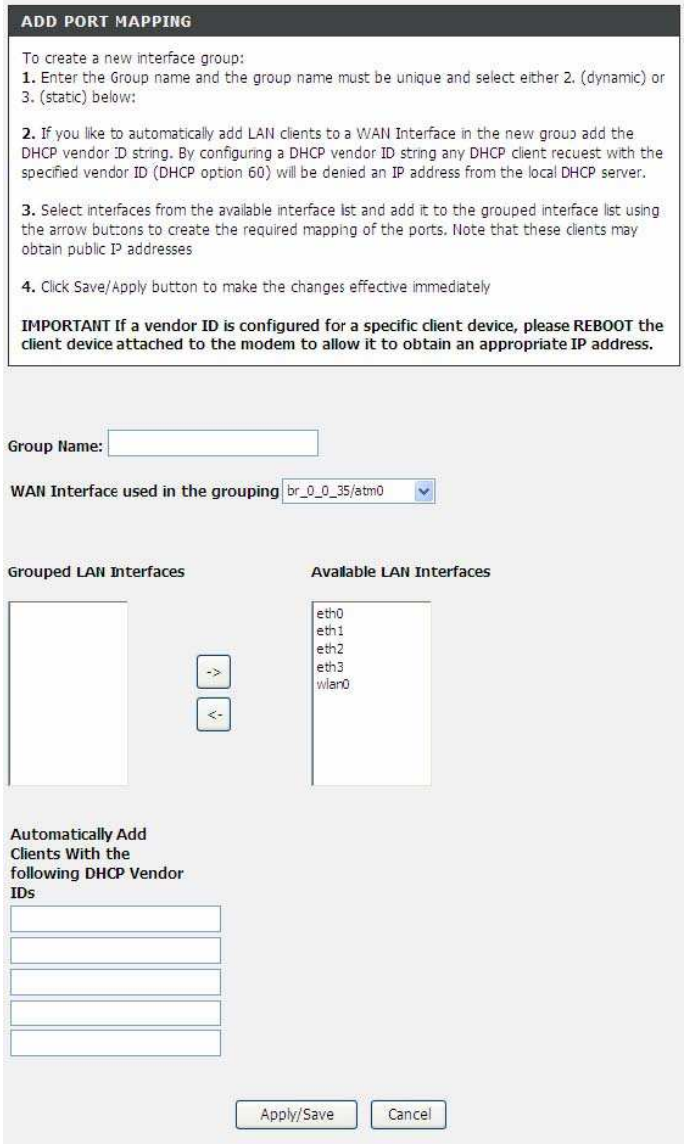

NETWORK TOOLS -- PORT MAPPING
Port Mapping supports multiple port to PVC and bridging groups. Each group will perform as an independent network.
Port Mapping
NETWORK TOOLS -- IGMP
Transmission of identical content, such as multimedia, from a source to a number of recipients.
IGMP
NETWORK TOOLS -- QUALITY 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



3.3.11.1 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.

Click **Add** to add port mapping. The page shown in the following figure appears.

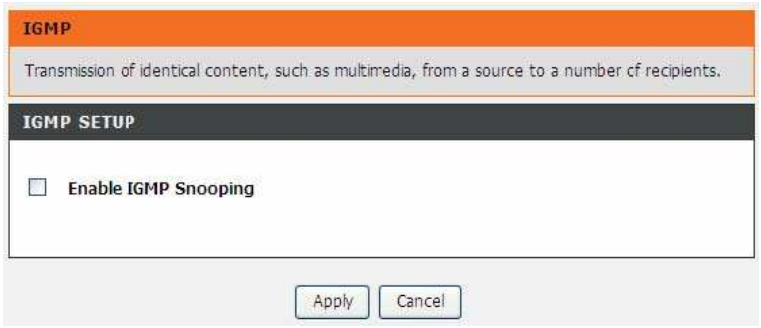

ADD PORT MAPPING
To create a new interface group:
1. Enter the Group name and the group name must be unique and select either 2. (dynamic) or 3. (static) below:
2. If you like to automatically add LAN clients to a WAN Interface in the new group add the DHCP vendor ID string. By configuring a DHCP vendor 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
br_0_0_35/atm0
Grouped LAN Interfaces
Available LAN Interfaces
eth0
eth1
eth2
eth3
wlan0
->
<-
Automatically Add Clients With the following DHCP Vendor IDs
Apply/Save
Cancel

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.**

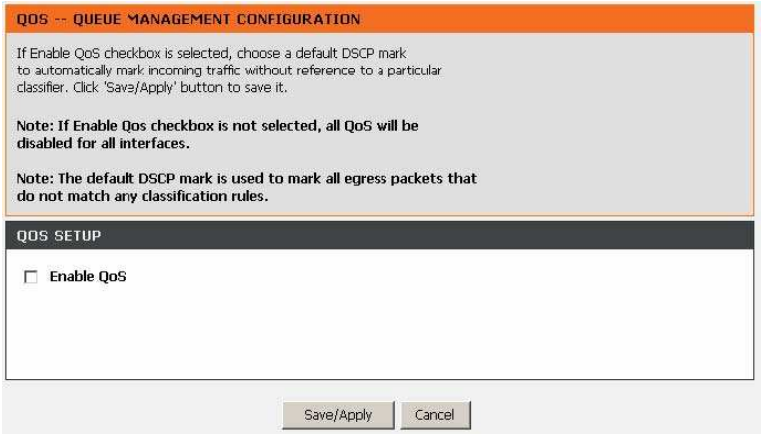
3.3.11.2 IGMP

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.



3.3.11.3 Quality of Service

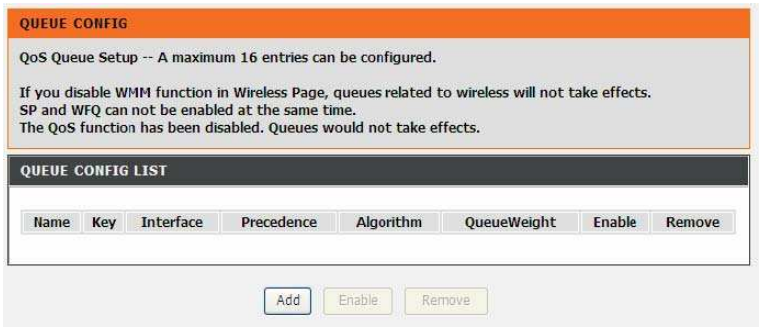
Choose **ADVANCED** > **Network Tools** and click **Quality of Service.** The page shown in the following figure appears.



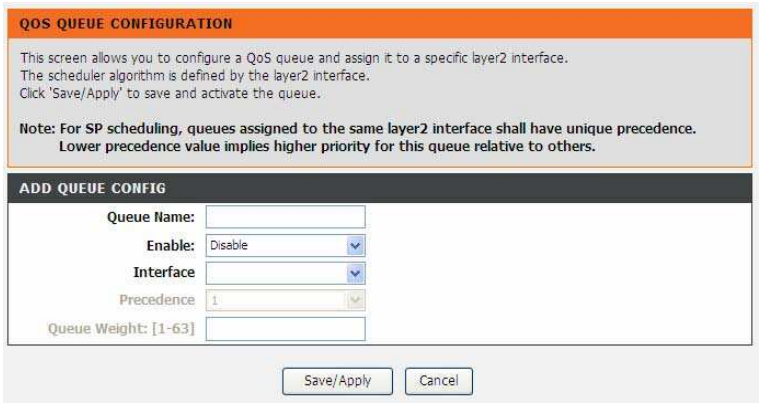
In this page, you can enable/disable the QoS. Click **Save/Apply** to take the setting effect.

3.3.11.4 Queue Config

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



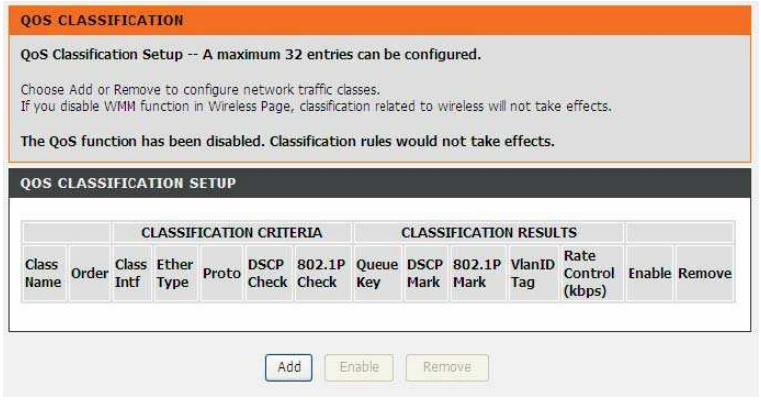
Click **Add**. The page shown in the following figure appears.



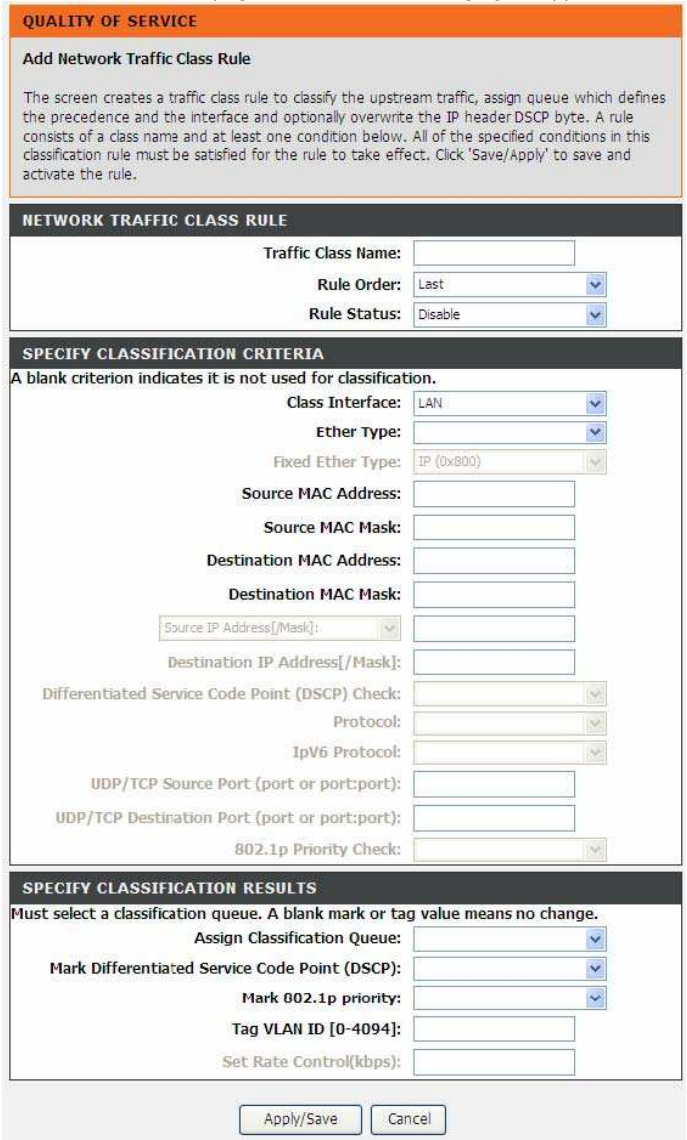
Click **Save**/**Apply** to save the settings.

3.3.11.5 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.



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



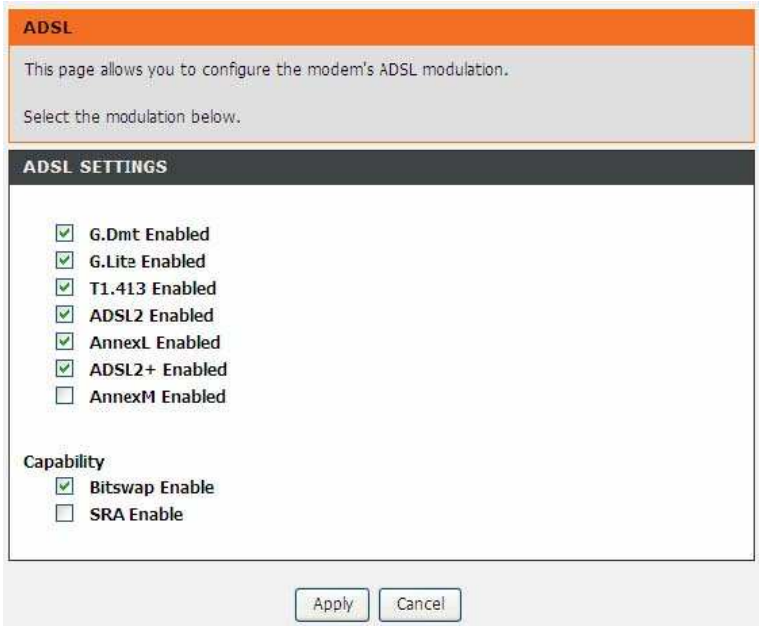
3.3.11.6 UPnP

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.

3.3.11.7 ADSL

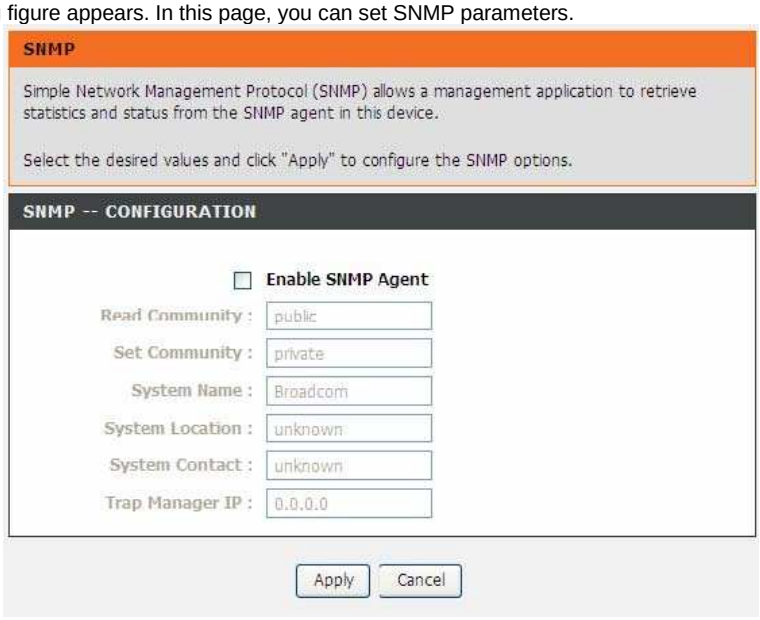
Choose **ADVANCED** > **Network Tools** and click **ADSL**. The page shown in the following figure appears.



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.

3.3.11.8 SNMP

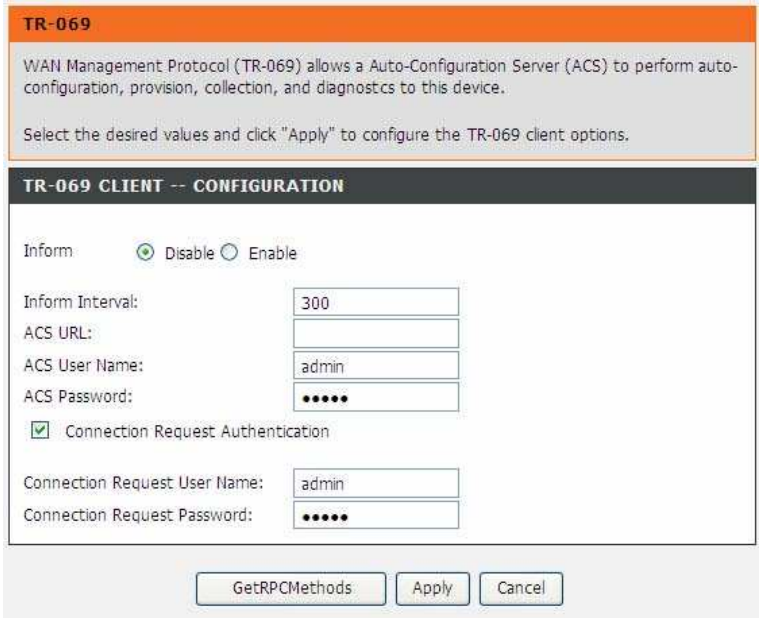
Choose **ADVANCED** > **Network Tools** and click **SNMP**. The page shown in the following figure appears. In this page, you can set SNMP parameters.



Click **Apply** to save the settings.

3.3.11.9 TR-069

Choose **ADVANCED** > **Network Tools** and click **TR069**. The page shown in the following figure appears. In this page, you can configure the TR069 CPE.



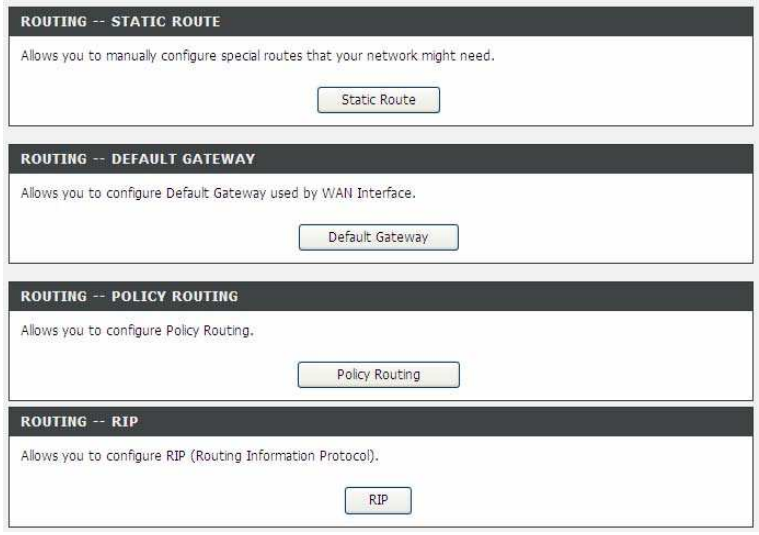
WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS)to perform auto-configuration, provision, collection, and diagnostics to this device. In this page, you may configure the parameters such as the ACS URL, ACSpassword, and connection request user name. After finishing setting, click **Apply** to save and apply the settings.

3.3.11.10 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.

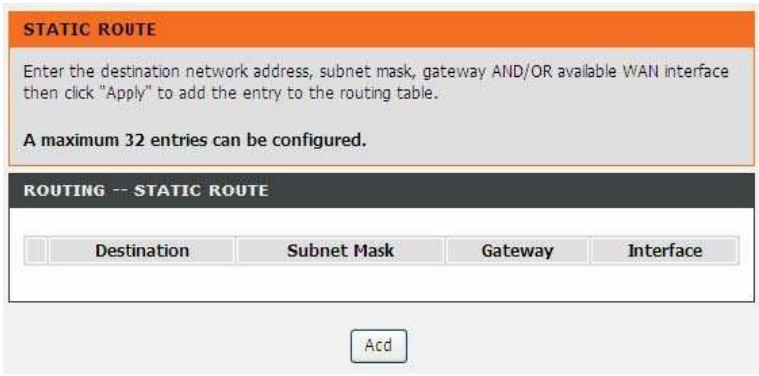
3.3.12 Routing Choose **ADVANCED** > **Routing**.

The page shown in the following page appears.

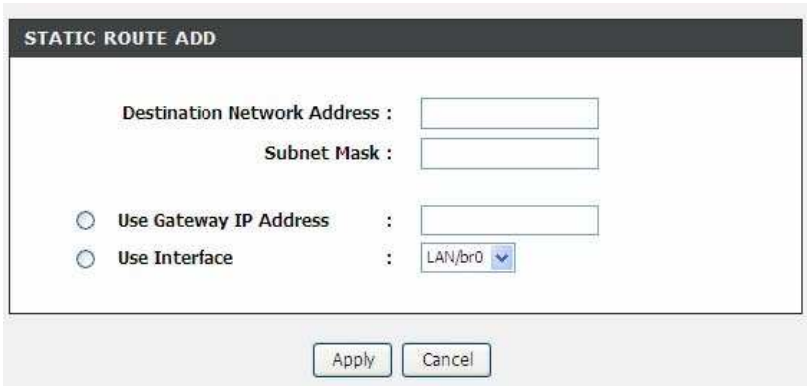


3.3.12.1 Static Route

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.



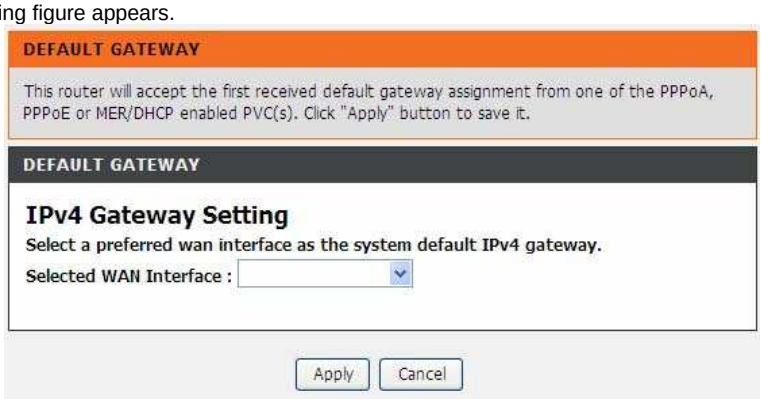
Click **Add** to add a static route. The page shown in the following figure appears.



- **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.

3.3.12.2 Default Gateway

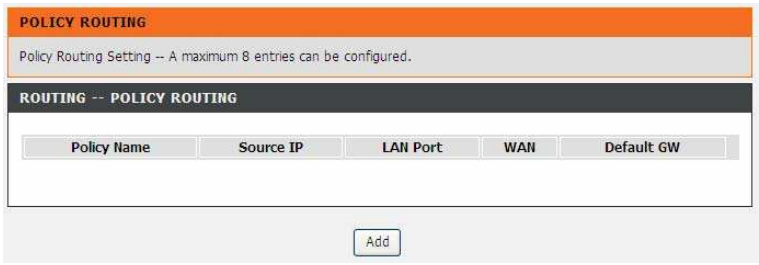
Choose **ADVANCED** > **Routing** and click **Default Gateway**. The page shown in the following figure appears.



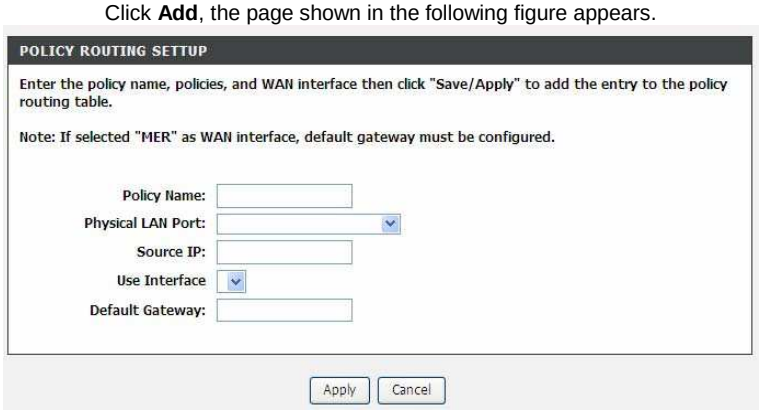
Select the WAN interface as your default gateway. Click **Apply** to save the settings.

3.3.12.3 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.

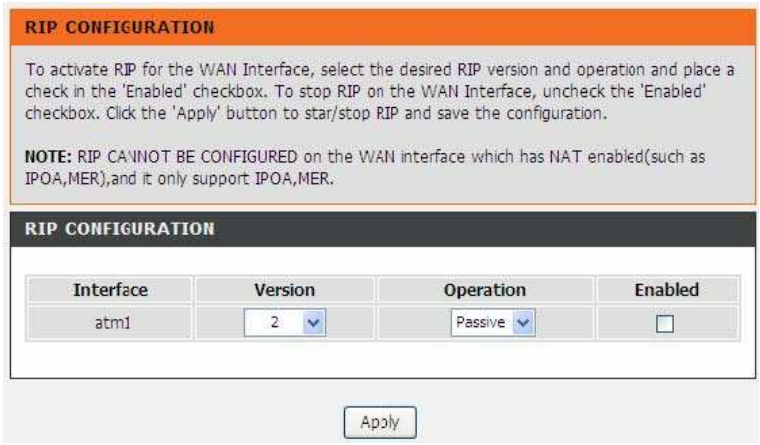


Click **Add**, the page shown in the following figure appears.



3.3.13 RIP

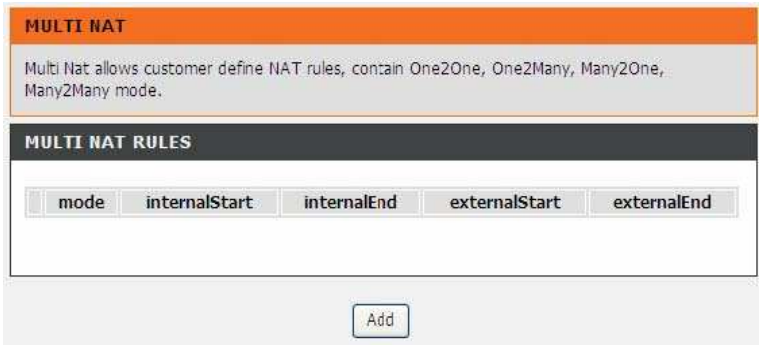
Choose **ADVANCED** > **Routing** and click **RIP**. The page shown in the following figure appears. This page is used to select the interfaces on your device that use RIP and the version of the protocol used.



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.

3.3.14 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.

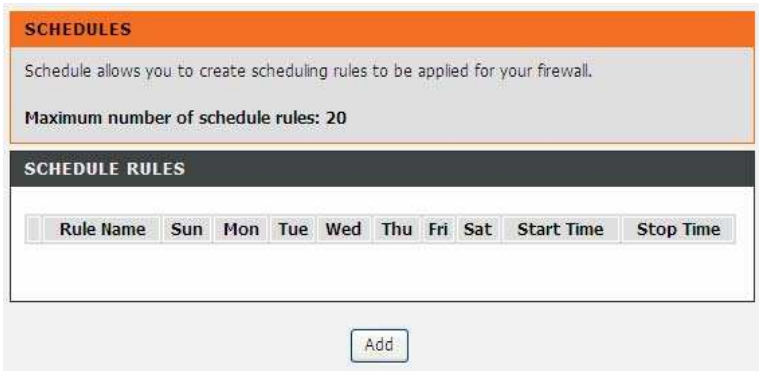


Click **Add**, the page shown in the following figure appears.

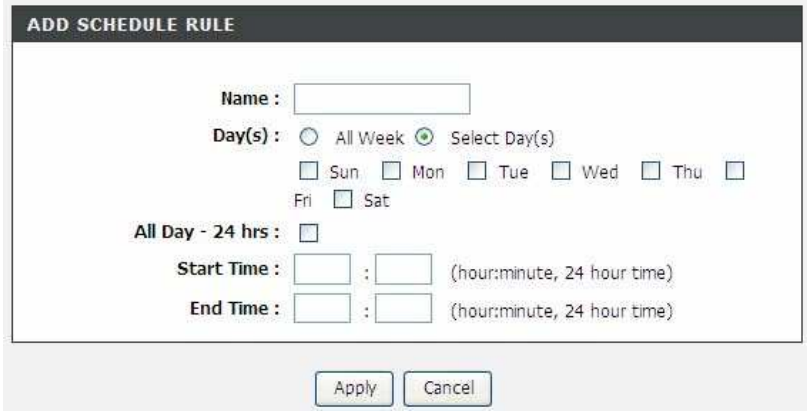
In this page, please select the proper type; select the proper **Use interface**, and configure the other parameters in this page. After finishing setting, click **Apply** to save the settings.

3.3.15 Schedules

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



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



Click **Apply** to save the settings.

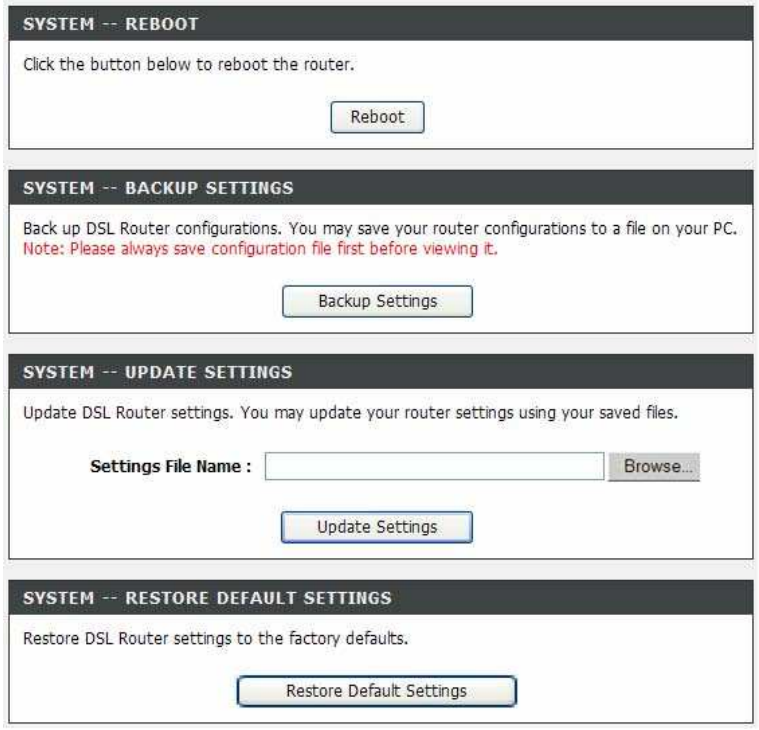
3.3.16 Logout

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

3.4 Maintenance

3.4.1 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 defaultsettings. 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

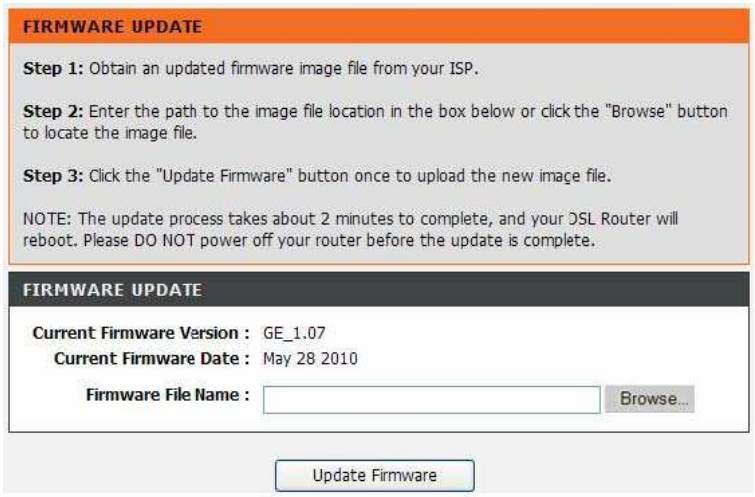
Update Settings to begin restoring the device configuration..

- **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.*

3.4.2 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.

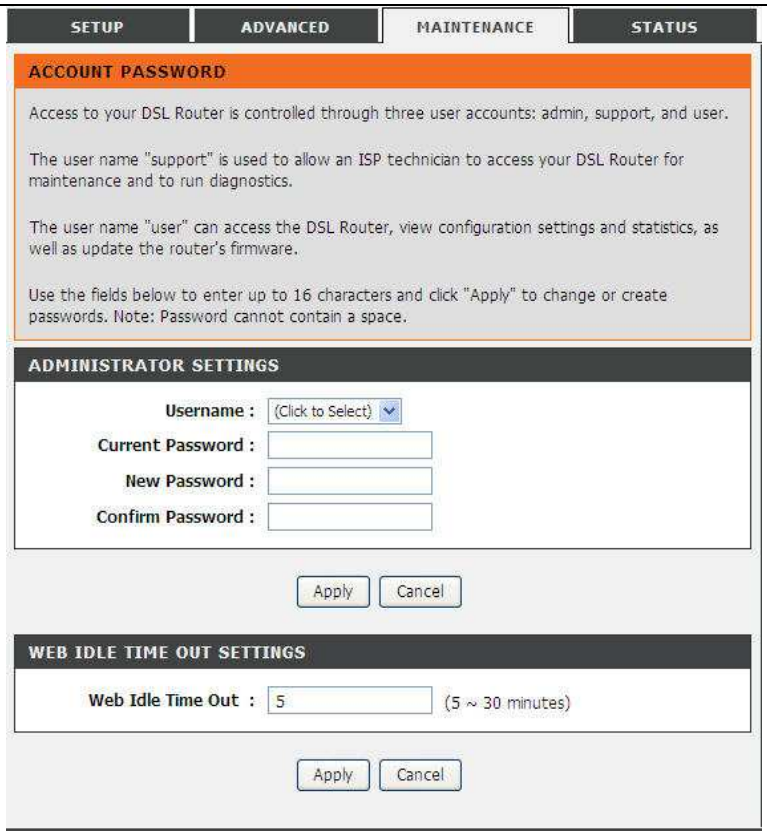
***Notice**: Do not turn off your device or press the reset button while this procedure is in progress.*

3.4.3 Access Controls

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

3.4.3.1 Account Password

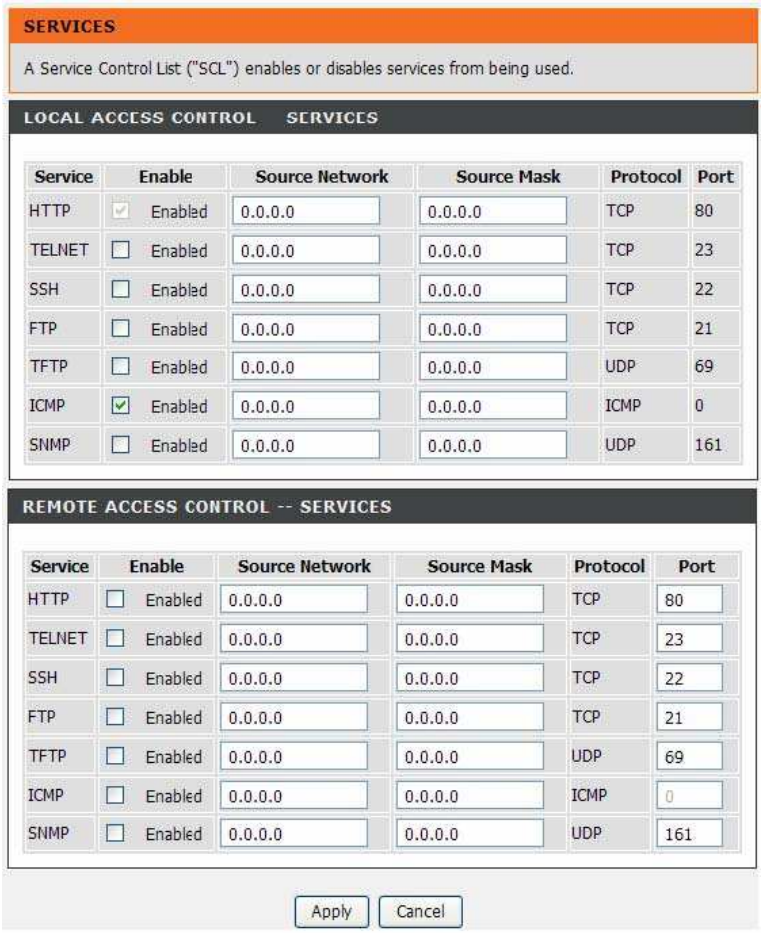
In the **Access Controls** page, click **Account Password**. The page shown in the following figure appears. In this page, you can change the password of the user and set time for automatic logout.



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.

3.4.3.2 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.

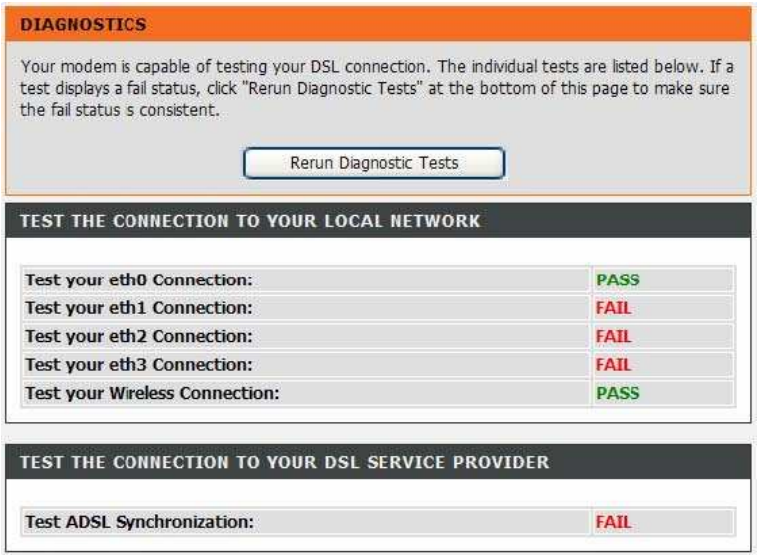
Click **Apply** to apply the settings.

Note:

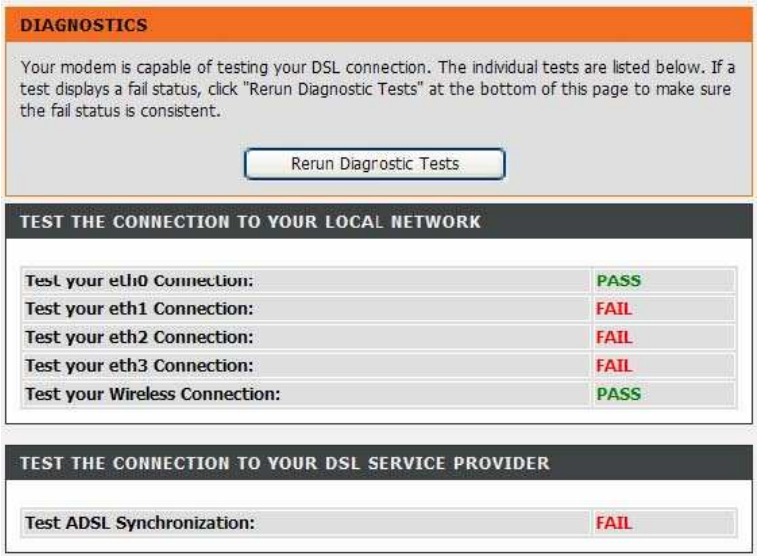
If you disable HTTP service, you cannot access the configuration page of the device any more.

3.4.4 Diagnostics

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

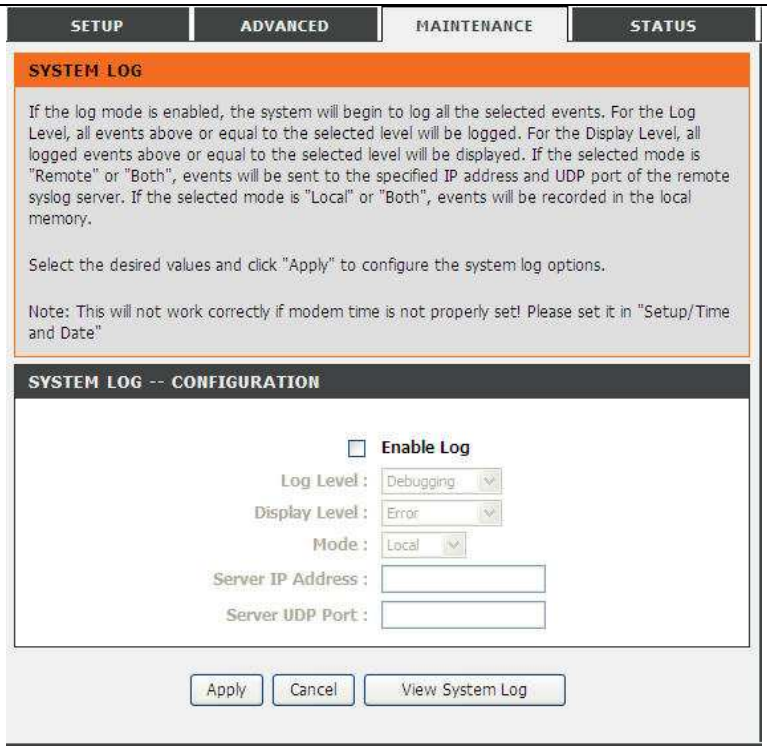


Click **Return Diagnostics Test** to run diagnostics. The page shown in the following figure appears.



3.4.5 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 theevent log from the local host or send it to a system log server. Available eventseverity levels are as follows: Emergency, Alert, Critical, Error, Warning, Notice, Informational and Debugging. In this page, you can enable or disable the systemlog 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.

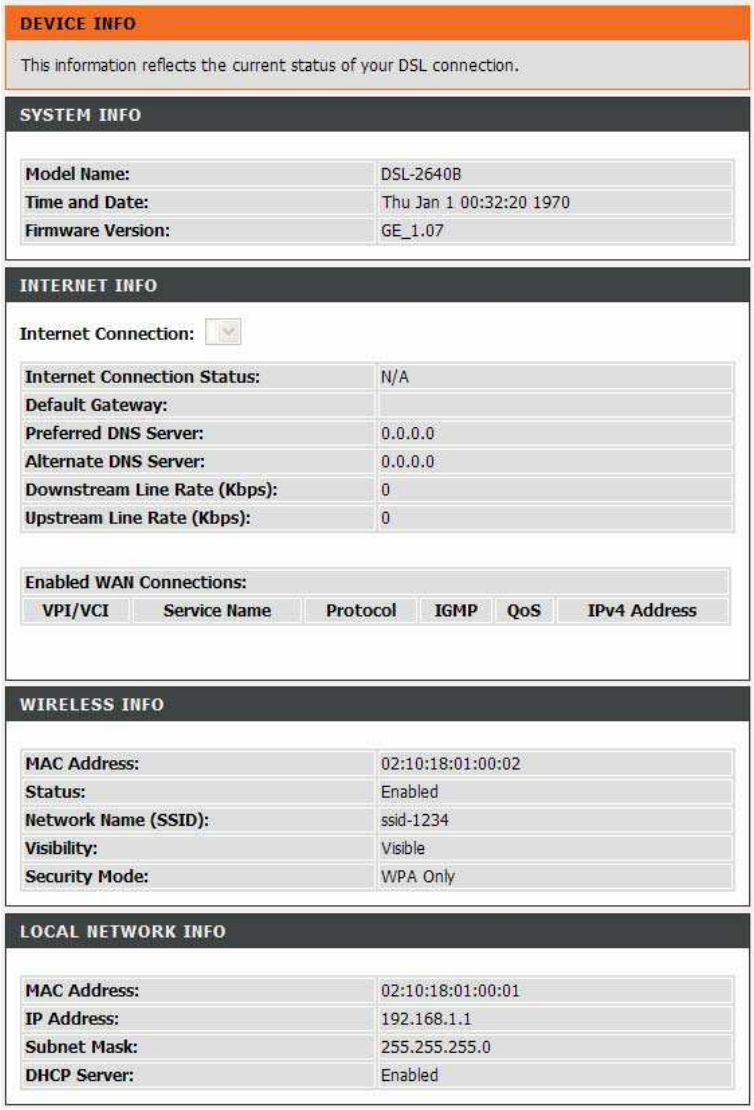
3.4.6 Logout

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

3.5 Status

You can view the system information and monitor performance.

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



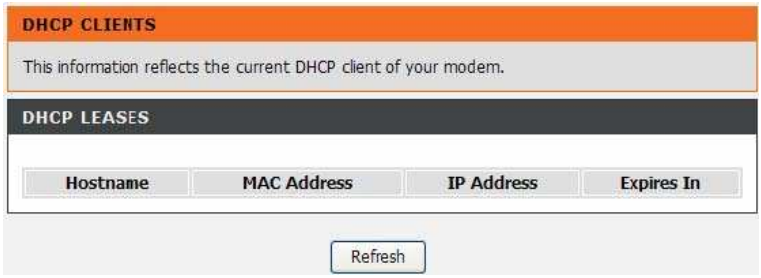
The page displays the summary of the device status, including the system information, WAN connection information, and local network information.

3.5.2 Wireless Clients

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

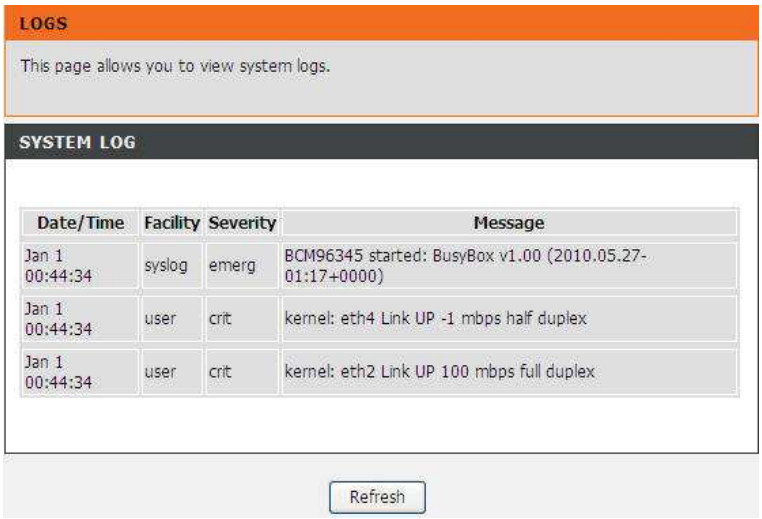
3.5.3 DHCP Clients

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



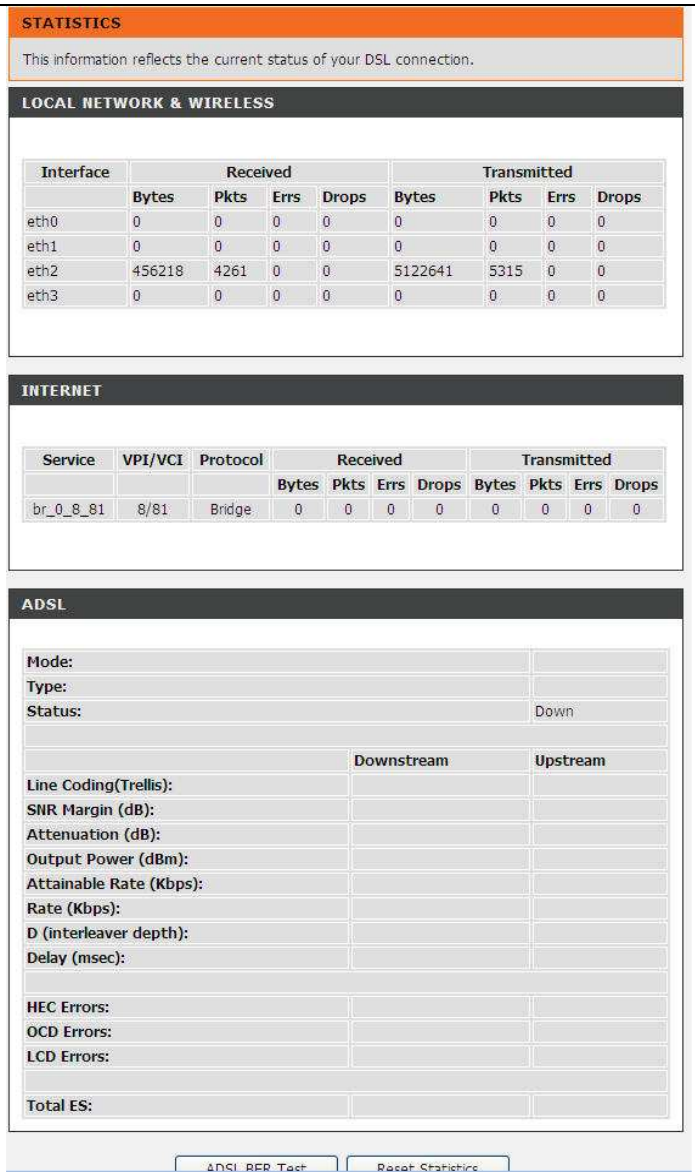
This page displays all client devices that obtain IP addresses from the device. You can view the host name, IP address, MAC address and time expired(s).

3.5.4 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.

3.5.5 Statistics Choose **STATUS** > **Statistics**. The page shown in the following figure appears.



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	0	0	0	0	0	0	0	0
eth2	456218	4261	0	0	5122641	5315	0	0
eth3	0	0	0	0	0	0	0	0

INTERNET

Service	VPI/VCI	Protocol	Received				Transmitted			
			Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
br_0_8_81	8/81	Bridge	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

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.

3.5.6 Route info

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

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

The table shows a list of destination routes commonly accessed by the network.

3.5.7 Logout

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

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.

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.

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.

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.

Note: The country selection mode is for non-US models only and is not available to the US model(s).

Part 68 Statement

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US: 3P7DL01BSL2750UT1,.If requested, this number must be provided to the telephone company.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US: 3P7DL01BSL2750UT1. The digits represented by 01 are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If your equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a

complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact the following address and phone number for information on obtaining service or repairs.

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

Company: D-Link Corporation
Address: 17595 Mt. Herrmann, Fountain Valley, CA 92708 U.S.A
Tel no.: 1.877.943.5465