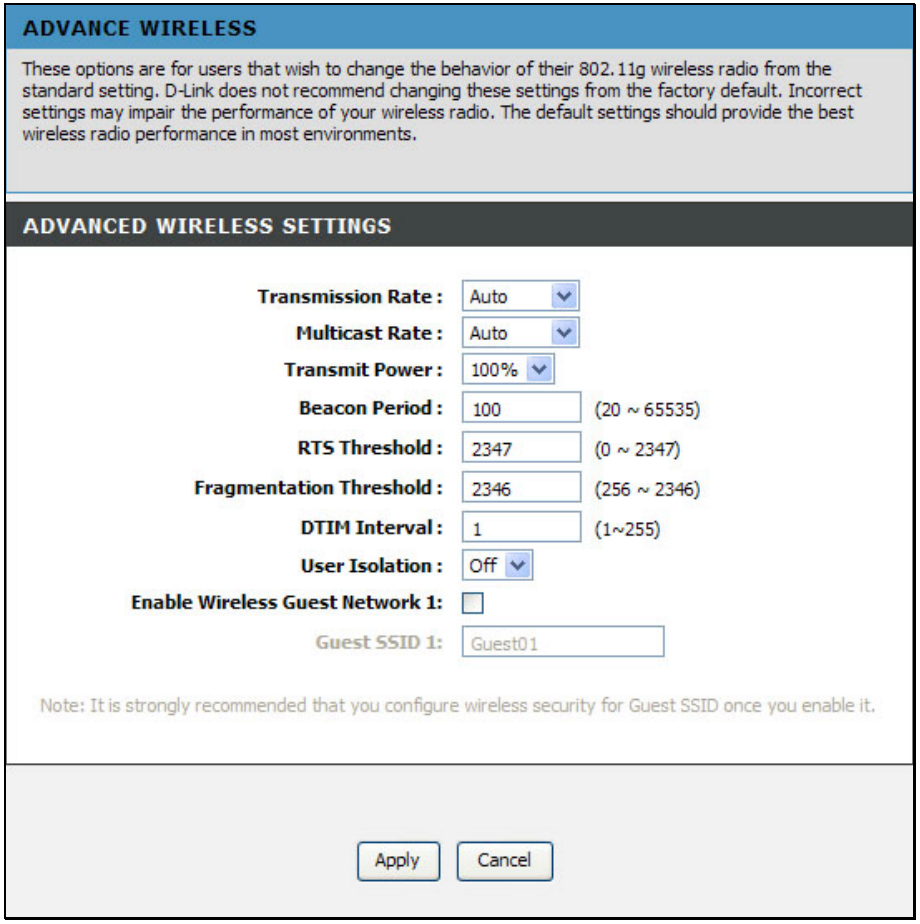
Advanced Wireless – Advanced Settings

To access Advanced Settings, point to the **Advanced Wireless** on the left window and click **Advanced Settings** submenu, or click the **Advanced Settings** button in the Wireless Settings window.

In this page, you can configure more advanced settings of 802.11g wireless radio. However, it is recommended to remain as default unless your ISP requests to change it.

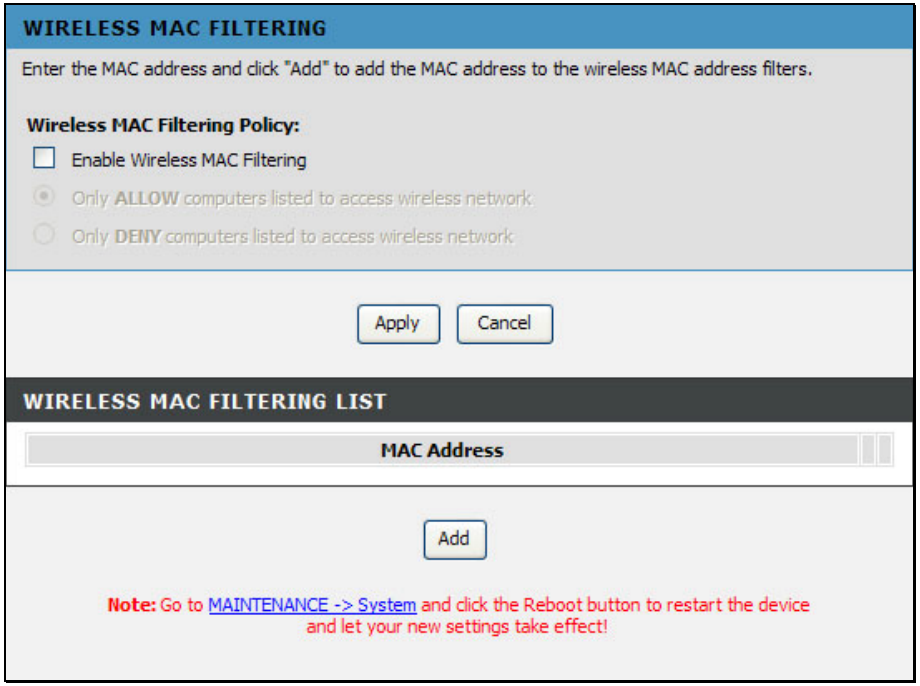


Advanced Wireless – MAC Filtering

To access MAC Filtering, point to the **Advanced Wireless** on the left window and click **MAC Filtering** submenu, or click the **MAC Filtering** button in the Wireless Settings window.

This page can help you to allow or deny certain MAC addresses to pass through or block out.

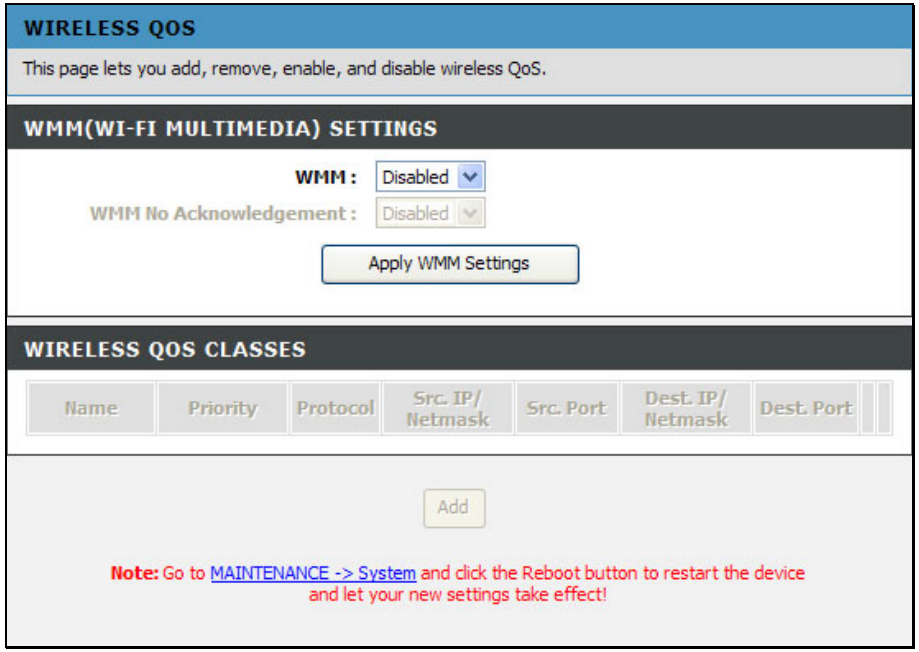
Click **Add** at the bottom of the window to enter MAC address. Click **Apply** at the bottom of the page to add the MAC address to the wireless MAC filtering list.
Select **Enable Wireless MAC Filter** and click the **only ALLOW computers listed to access wireless network** or **only DENY computers listed to access wireless network** of the filtering policy. Click **Apply** to save the settings. Go to **Maintenance** -> **System** and click **Reboot** to restart the device and let the new settings take effect.



Advanced Wireless – Wireless QoS

To access Wireless QoS, point to the **Advanced Wireless** on the left window and click **Wireless QoS** submenu, or click the **Quality of Service** button in the Wireless Settings window.

Select WMM to enable can control the transmitting of voice or video over wireless connection in order to provide better connection quality. Select WMM No Acknowledgement to enable could have more efficient throughout but higher error rates in a noisy Radio Frequency (RF) environment.
Click **Add** at the bottom of the window to see the Add Wireless QoS Classes section. Enter information in the section, and click **Apply**. Click **Apply WMM Settings** to save the settings. Go to **Maintenance** -> **System** and click **Reboot** to restart the device and let the new settings take effect.

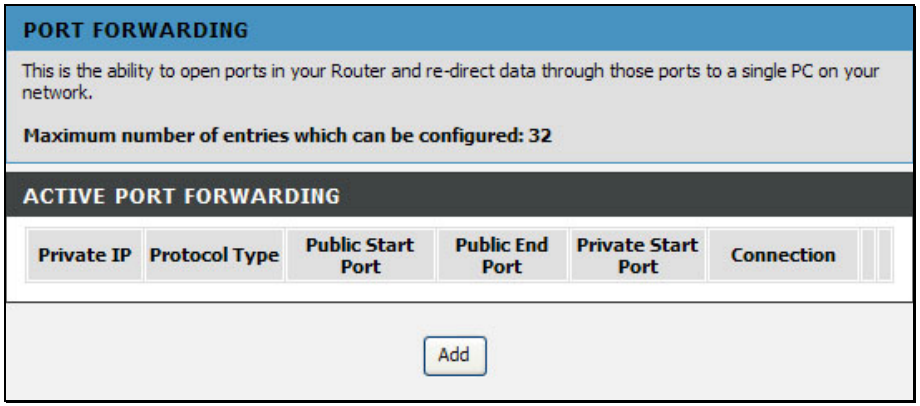


Advanced – Port Forwarding

To access the Port Forwarding window, click the **Port Forwarding** button in the **Advanced** directory. Port Forwarding is used to redirect data to a single PC.

Click the **Add** button to set up a rule as follows.

Enter an IP address in the Private IP field, select a Protocol Type from the drop-down list, enter a range of ports in the Public Start Port and Public End Port fields, and then click the **Apply** button to see the customized rule in the ACTIVE PORT FORWARDING RULES table.



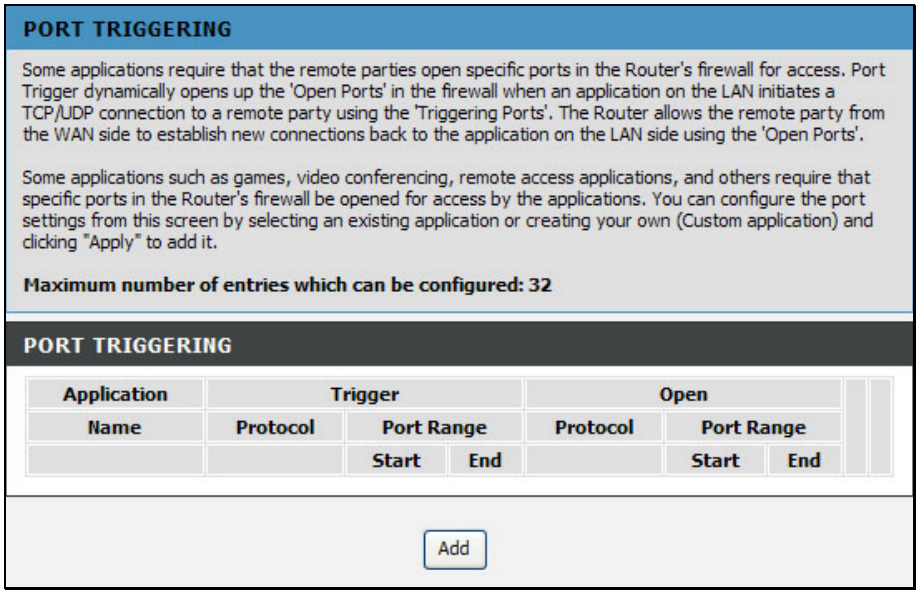
Advanced – Port Triggering

To access the Port Triggering window, click the **Port Triggering** button in the **Advanced** directory.

Some applications require that the remote parties open specific ports in the Router's firewall for access. Port Trigger dynamically opens the Open Ports in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using Trigger Ports. The Router allows the remote party form the WAN side to establish new connections back to the application on the LAN side using the Open Ports.

Applications such as games, video conferencing, and other remote access applications require that specific ports in the Router's firewall be opened for access by applications.

Click **Add** to see the Add Port Triggering section. You can configure the port settings on this window by clicking the **Select an application** radio button and then using the drop-down list to choose an existing application, or by clicking the **Custom application** radio button and entering your own Application Rule in the field provided. Click **Apply** when you are finished with the port setting configuration. The new Application Rule will appear in the Port Triggering table.

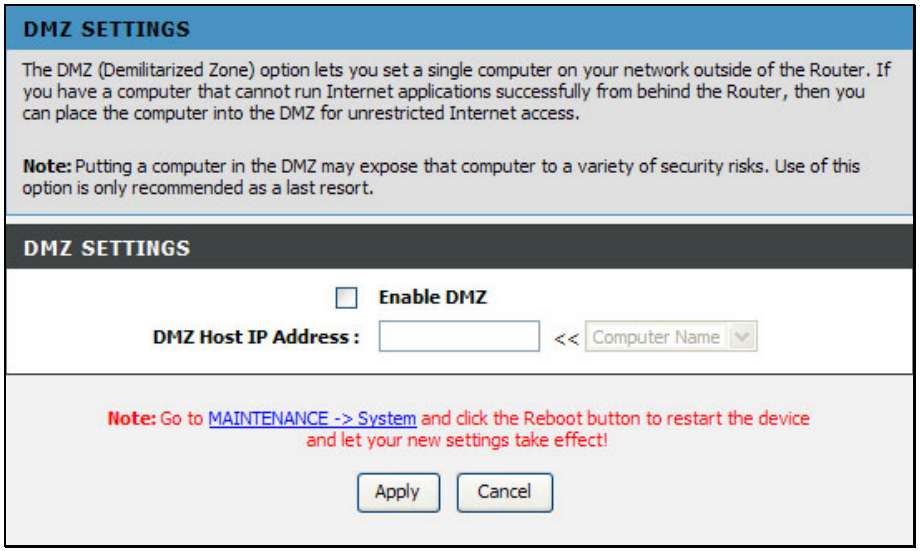


Advanced – DMZ

To access the DMZ (Demilitarized Zone) window, click the **DMZ** button in the **Advanced** directory.

Since some applications are not compatible with NAT, the Router supports use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and will therefore be visible to agents on the Internet with the right type of software. Keep in mind that any client PC in the DMZ will be 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 the DMZ.

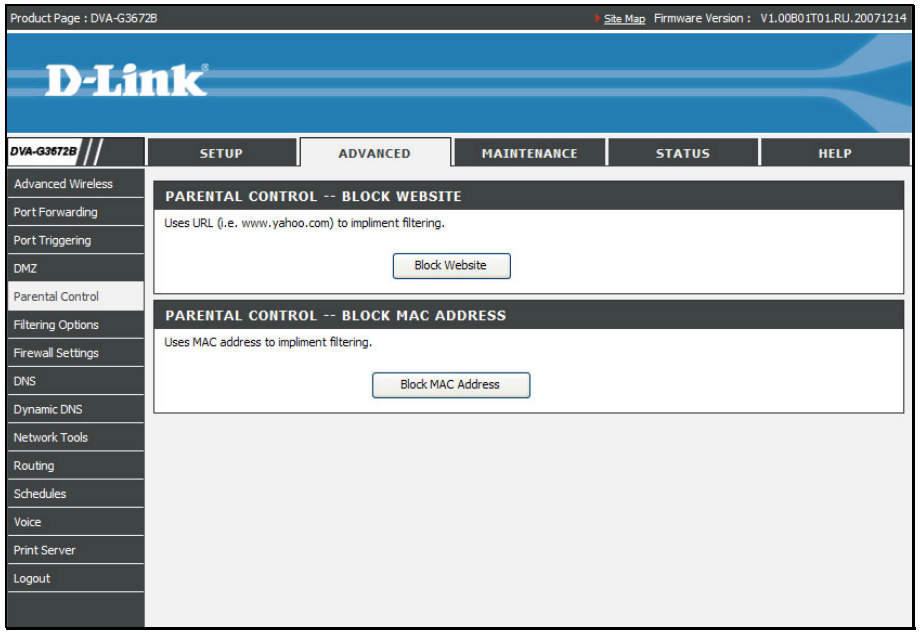
To designate a DMZ IP address, select **Enabled DMZ**, type in the IP Address of the server or device on your LAN, and click the **Apply** button. To remove DMZ status from the designated IP address, deselect the **Enable DMZ** and click **Apply**. It will be necessary to save the settings and reboot the Router before the DMZ is activated.



Advanced – Parental Control

To access the Parent Control window, click the **Parent Control** button in the **Advanced** directory.

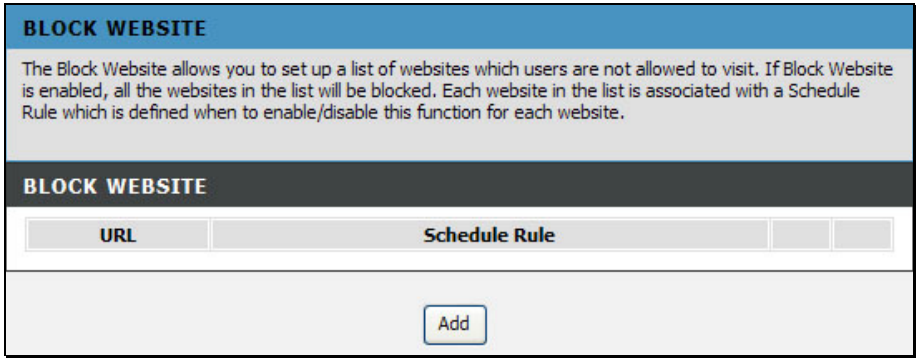
It has two subcategories: **Block Website** and **Block MAC Address**. You can either point to the **Parental Control** on the left window and click one of the submenus, or click one of the buttons in the Parental Control window.



Parental Control – Block Website

To access Block Website, point to the **Parental Control** on the left window and click **Block Website** submenu, or click the **Block Website** button in the Parental Control window.

Use this window to deny access to specified websites.

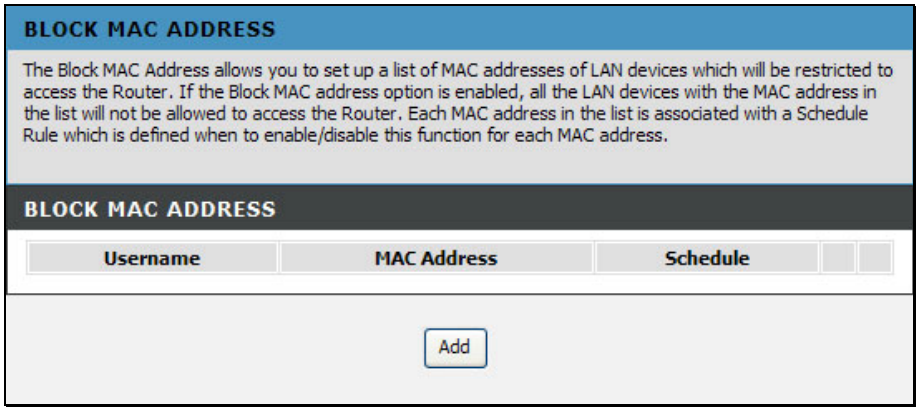


Click **Add** to see the **Add Block Website** section. URL (Uniform Resource Locator) is a specially formatted text string that uniquely defines an Internet website. This section will allow users to block computers on the LAN from accessing certain URLs. This may be accomplished by simply entering the URL to be blocked in the **URL** field.

To configure for URL blocking, enter the website's address into the **URL** field, click **Schedule Rule** or **Manual Schedule** radio button. For Schedule Rule, select a rule in the drop down list. Rules in the list can be configured in **Advanced** -> **Schedules**. For manual Schedule configure as follows. Use the radio buttons to click the desired **Day(s)**, either **All Week** or **Select Day(s)** (in which case you must tick the checkboxes for the desired individual days of the week), select the desired **Start Time** and **End Time** or tick the **All Day – 24 hrs** checkbox, and then click the **Block Website** button. Click the **Apply** button to see the configured URL blocking entry is displayed in the Block Website. To remove a Blocked URL entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.

Parental Control – Block MAC Address

Use this window to deny access to specified MAC address.



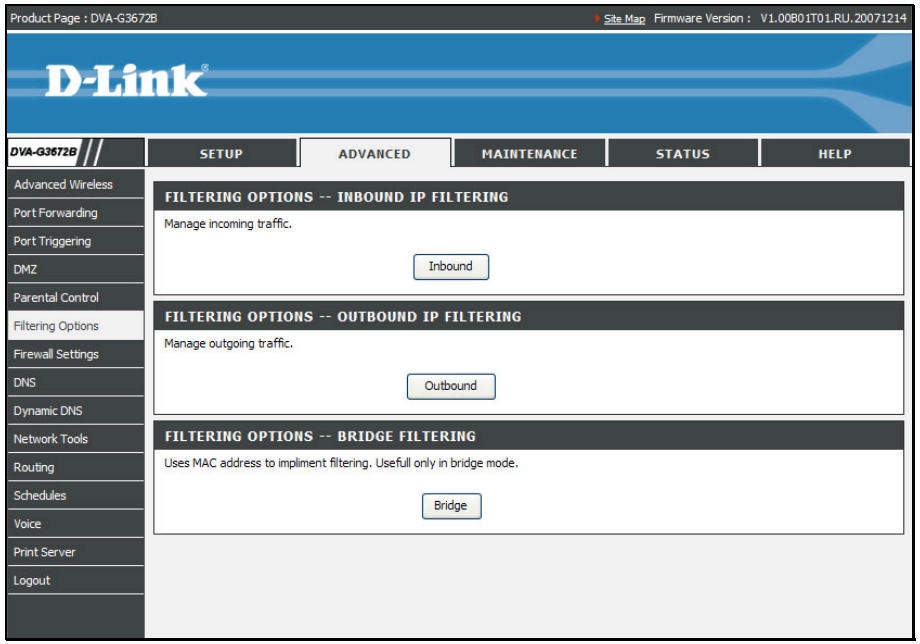
Click **Add** to see the **Add Block MAC Address** section. MAC address is a specially formatted text string (xx:xx:xx:xx:xx:xx) that uniquely identification of a device. This section will allow users to block devices with certain MAC addresses on the LAN.

To configure for MAC address blocking, enter the username into the **Username** field, click **Current PC's Mac Address** to have MAC address of current computer, or click **Other MAC Address** and enter a MAC address manually. Click **Schedule Rule** or **Manual Schedule** radio button to configure the time schedule. For Schedule Rule, select a rule in the drop down list. Rules in the list can be configured in **Advanced** -> **Schedules**. For manual Schedule configure as follows. Use the radio buttons to click the desired **Day(s)**, either **All Week** or **Select Day(s)** (in which case you must tick the checkboxes for the desired individual days of the week), select the desired **Start Time** and **End Time** or tick the **All Day – 24 hrs** checkbox, and then click the **Block Website** button. Click the **Apply** button to see the configured URL blocking entry is displayed in the Block Website. To remove a Blocked URL entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.

Advanced – Filtering Options

To access the Filtering Options window, click the **Filtering Options** button in the **Advanced** directory.

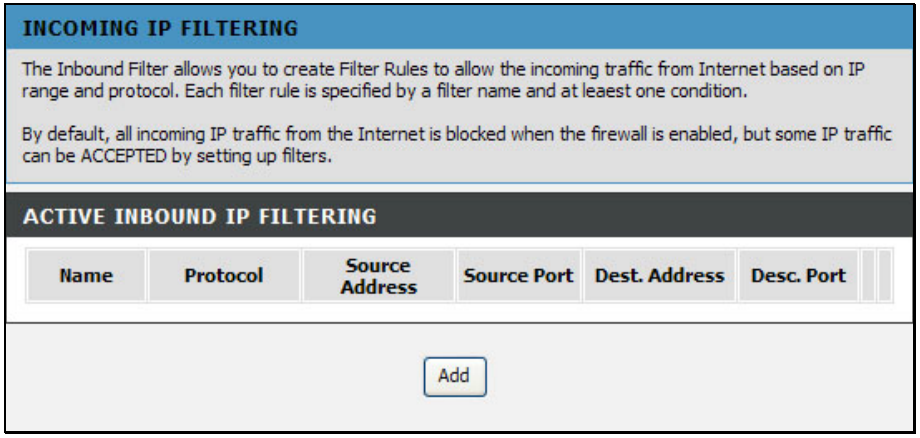
It has three subcategories: **Inbound Filtering**, **Outbound Filtering** and **Bridge Filtering**. You can either point to the **Filtering Options** on the left window and click one of the submenus, or click one of the buttons in the Filtering Options window.



Filtering Options – Inbound Filtering

To access Inbound Filtering, point to the **Filtering Options** on the left window and click **Inbound Filtering** submenu, or click the **Inbound** button in the Filtering Options window.

The Inbound Filter allows you to create a filter rule to allow incoming IP traffic by specifying a filter name and at least one condition on this window. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. By default, all incoming IP traffic from the Internet is blocked when the firewall is enabled.



Click the **Add** button to see the Add Inbound IP Filtering section, enter the information in the section. Explanations of parameters are described below. Click the **Apply** button to add the entry in the Active Inbound IP Filtering table. To remove an entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.

Filters Parameter	Description	
Filter Name	Enter a name for the new filter.	
Protocol	Select the transport protocol (TCP and UDP, TCP, UDP, ICMP or Any) that will be used for the filter rule.	
Select IP Range by	Select either **IP Address** or **Netmask** to show different items.	
	Source IP Address	Enter the start and end IP address for the range of IP addresses which you are creating the filter rule.
	Source IP Address & Source Subnet Mask	This is the IP address and their associated subnets for which you are creating the filter rule.
Source Port	The Source Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.	
Destination Port	The Destination Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.	

Filtering Options – Outbound Filtering

To access Outbound Filtering, point to the **Filtering Options** on the left window and click **Outbound Filtering** submenu, or click the **Outbound** button in the Filtering Options window.

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 on this window. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Filters are used to allow or deny LAN or WAN users from accessing the Internet or your internal network.

Click the **Add** button to see the Add Outbound IP Filtering section, enter the information in the section. Explanations of parameters are described below. Click the **Apply** button to add the entry in the Active Outbound IP Filtering table. To remove an entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.

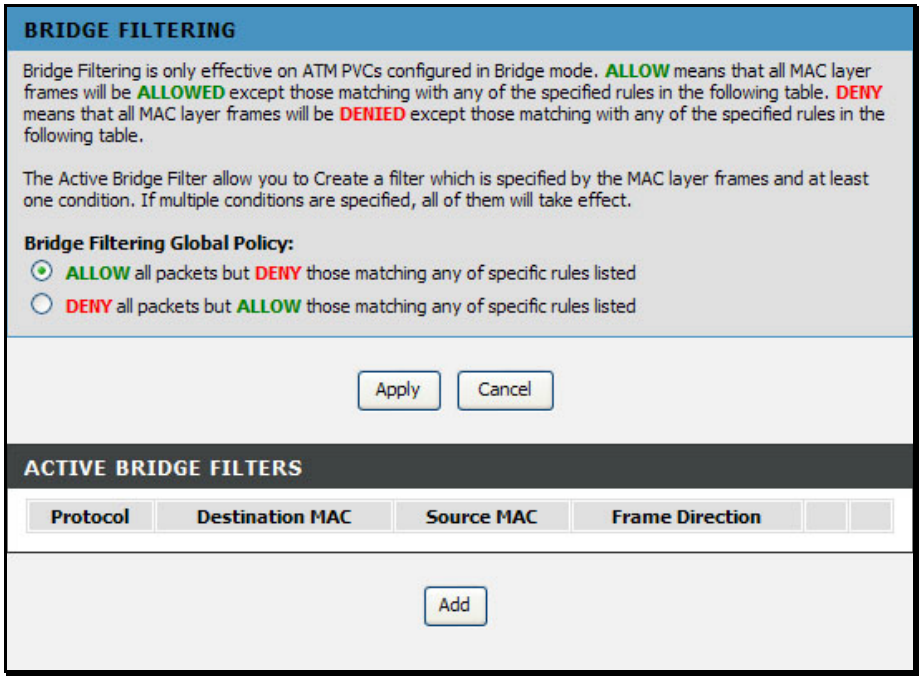
Filters Parameter	Description	
Filter Name	Enter a name for the new filter.	
Protocol	Select the transport protocol (TCP and UDP, TCP, UDP, ICMP or Any) that will be used for the filter rule.	
Select IP Range by	Select either **IP Address** or **Netmask** to show different items.	
	Source IP Address	Enter the start and end IP address for the range of IP addresses which you are creating the filter rule.
	Source IP Address & Source Subnet Mask	This is the IP address and their associated subnets for which you are creating the filter rule.
Source Port	The Source Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.	
Destination Port	The Destination Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.	

Filtering Options – Bridge Filtering

To access Bridge Filtering, point to the **Filtering Options** on the left window and click **Bridge Filtering** submenu, or click the **Bridge** button in the Filtering Options window.

Bridge filters are used to block or allow various types of packets through the WAN/LAN interface. This may be done for security or to improve network efficiency. The rules are configured for individual devices based on MAC address. Filter rules can be set up for source, destination or both. You can set up filter rules and disable the entire set of rules without loosing the rules that have been configured.

Select Bridge Filtering Global Policy: **ALLOW all packets but DENY those matching any of the specific rules listed** or **DENY all packets but ALLOW those matching any of the specific rules listed** for the rules that configured below. Click the **Add** button to see the Add Bridge Filter section. Select a protocol (PPPoE, IPv4, IPv6, Apple Talk, IPX or IGMP) in the **Protocol Type** list, type in a Source MAC, a Destination MAC or both in the entry fields. Select a direction (LAN=>WAN, WAN=>LAN, or LAN<=>WAN) in the **Frame Direction** list. Click the **Apply** button to add the entry in the Active Bridge Filters table. To remove an entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.

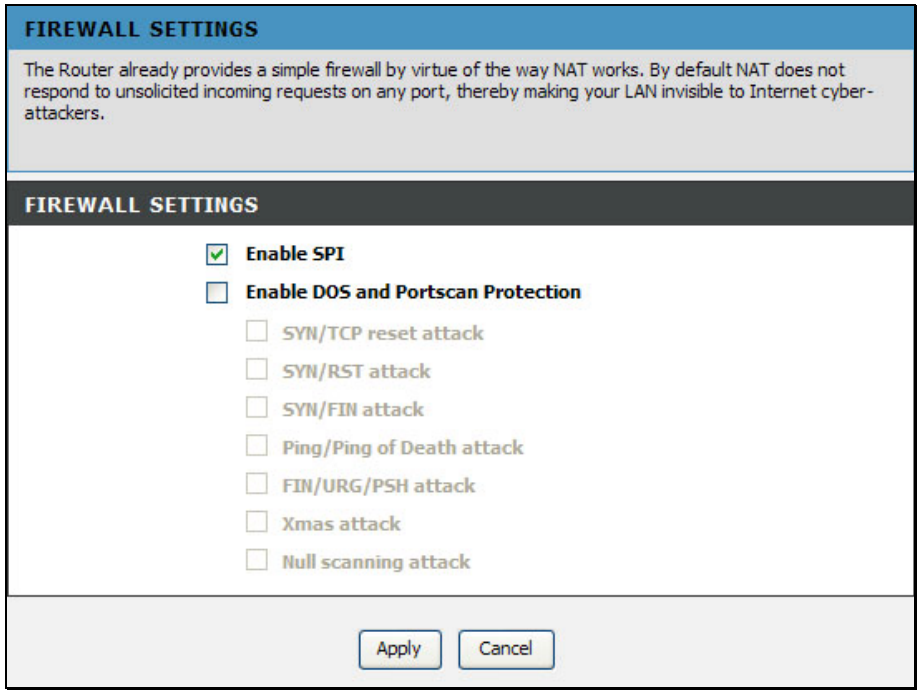


Advanced – Firewall Settings

To access the Firewall Settings window, click the **Firewall Settings** button in the **Advanced** directory.

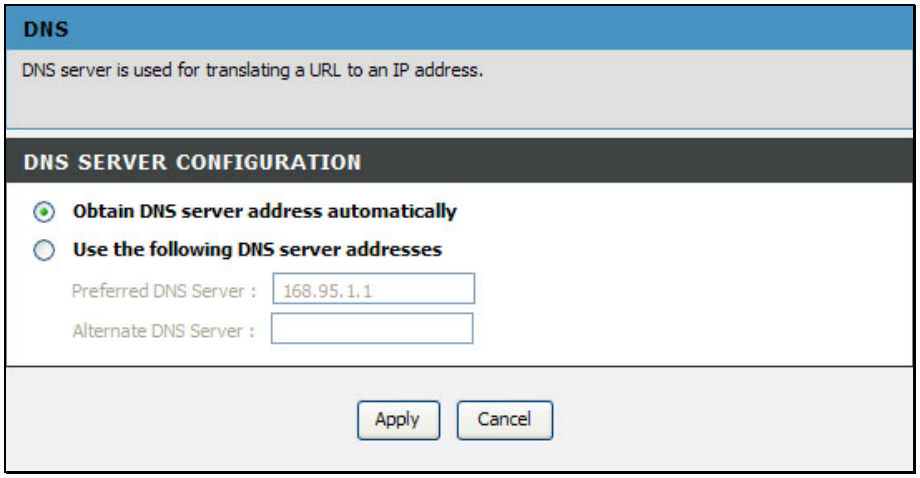
This page allows the Router to enforce specific predefined policies intended to protect against certain common types of attacks. Stateful Packet Inspection (SPI) is a packet inspection process that blocks unwanted and unrequested packets trying to reach PCs on your LAN. A DoS "denial-of-service" attack is characterized by an explicit attempt by attackers to prevent legitimate users of a service from using that service. Examples include: attempts to "flood" a network, thereby preventing legitimate network traffic, attempts to disrupt connections between two machines, thereby preventing access to a service, attempts to prevent a particular individual from accessing a service, or, attempts to disrupt service to a specific system or person. Port scan protection is designed to block attempts to discover vulnerable ports or services that might be exploited in an attack from the WAN.

When you have selected the desired Firewall settings by ticking the corresponding check boxes for the various types of protection offered on this window, click **Apply**.



Advanced – DNS

To access the DNS window, click the **DNS** button in the **Advanced** directory.



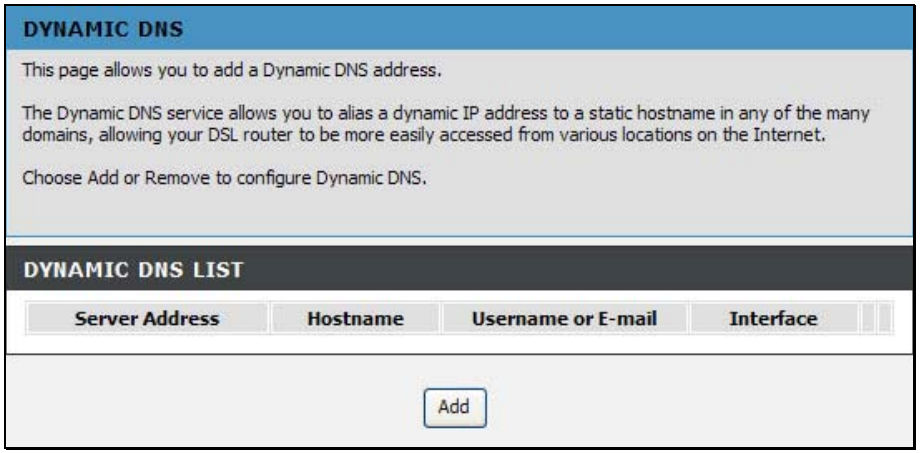
The Router can be configured to relay DNS settings from your ISP or another available service to workstations on your LAN. When using DNS relay, the Router will accept DNS requests from hosts on the LAN and forward them to the ISP's, or alternative DNS servers. DNS relay can use auto discovery or the DNS IP address can be manually entered by the user. Alternatively, you may also disable the DNS relay and configure hosts on your LAN to use DNS servers directly. Most users who are using the Router for DHCP service on the LAN and are using DNS servers on the ISP's network, will leave DNS relay enabled (either auto discovery or user configured).

If you have not been given specific DNS server IP addresses or if the Router is not pre-configured with DNS server information, select the **Obtain DNS server address automatically** option. Auto discovery DNS instructs the Router to automatically obtain the DNS IP address from the ISP through DHCP. If your WAN connection uses a Static IP address, auto discovery for DNS cannot be used.

If you have DNS IP addresses provided by your ISP, click the **Use the following DNS server addresses** radio button and enter these IP addresses in the available entry fields for the Preferred DNS Server and the Alternative DNS Server. When you have configured the DNS settings as desired, click the **Apply** button.

Advanced – Dynamic DNS

To access the Dynamic DNS window, click the **Dynamic DNS** button in the **Advanced** directory.



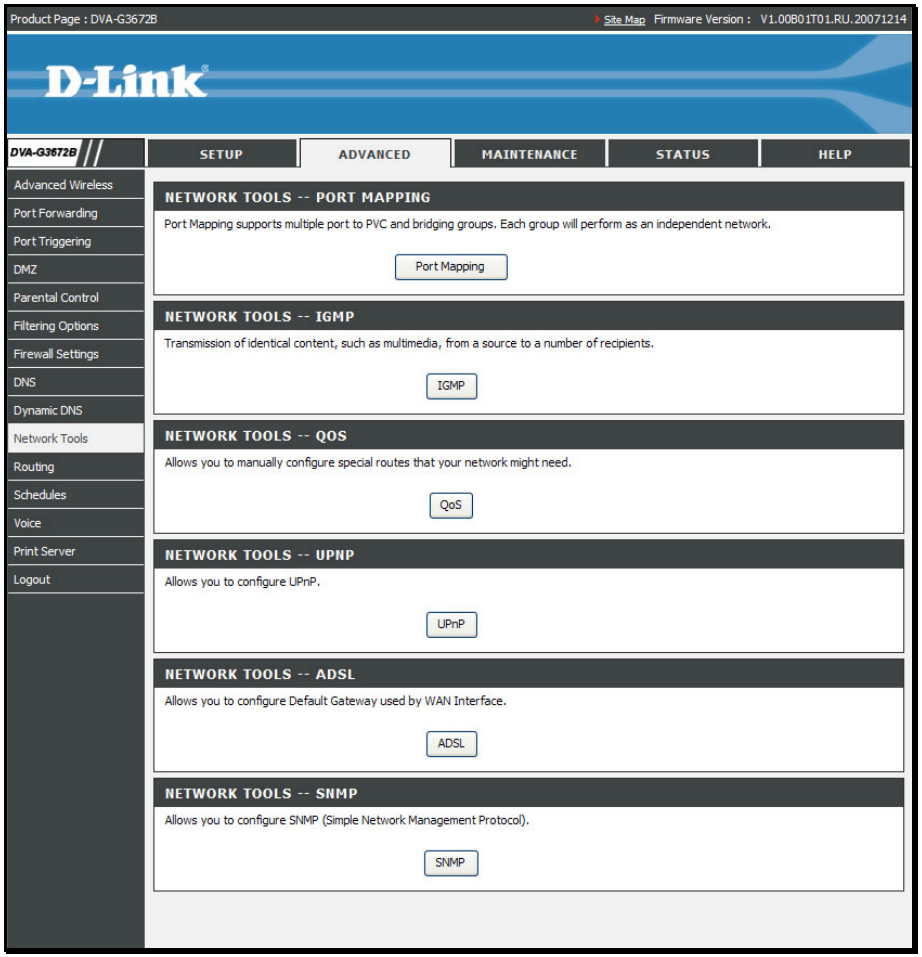
The Router supports DDNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form hostname.dyndns.org, Many ISPs assign public IP addresses using DHCP, this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.

Click **Add** to see the Add DDNS Settings section. Enter the required DDNS information, click the **Apply** button to see the entry in the Dynamic DNS List table. To remove an entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.

Advanced – Network Tools

To access the Network Tools window, click the **Network Tools** button in the **Advanced** directory. It has six subcategories: **Port Mapping**, **IGMP**, **QoS**, **UPnP**, **ADSL** and **SNMP**.

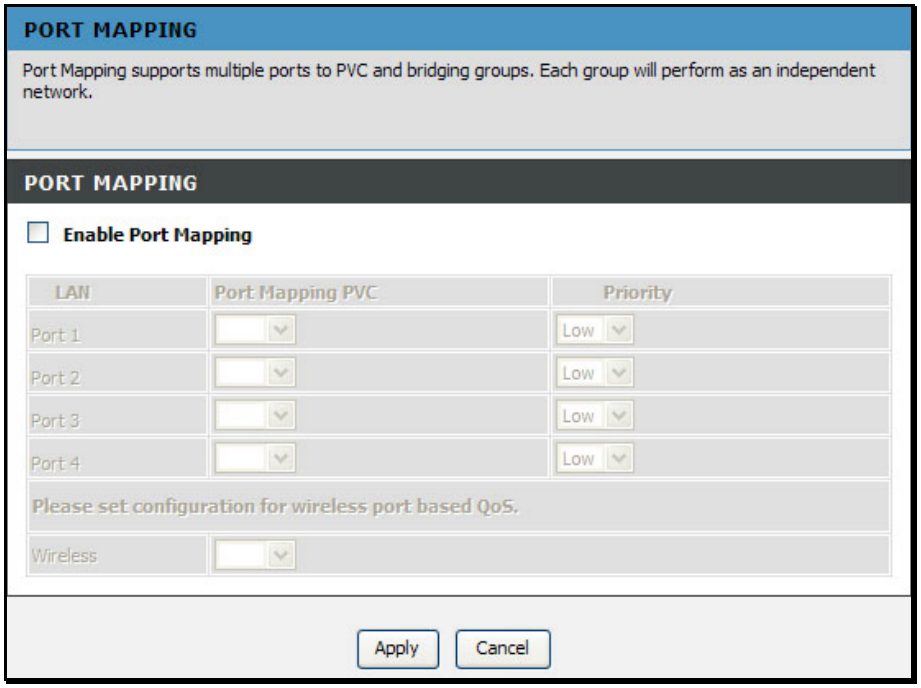
You can either point to the **Network Tools** on the left window and click one of the submenus, or click one of the buttons in the Network Tools window.



Network Tools – Port Mapping

To access Port Mapping, point to the **Network Tools** on the left window and click **Port Mapping** submenu, or click the **Port Mapping** button in the Network Tools window.

Tick the **Enable Port Mapping** check box and select a PVC and its Priority assigning to the specific LAN port or wireless LAN. Click **Apply** to take effect.

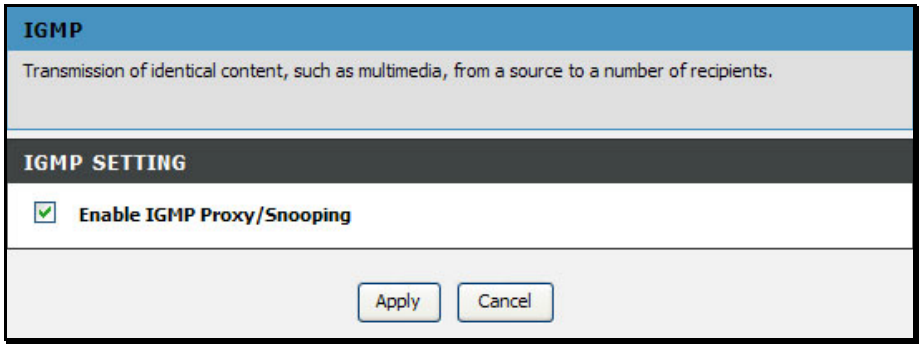


Network Tools – IGMP

To access IGMP, point to the **Network Tools** on the left window and click **IGMP** submenu, or click the **IGMP** button in the Network Tools window.

IGMP (Internet Group Management Protocol) page is for identical content transmission.

When the **Enable IGMP Proxy/Snooping** check box is selected, Multicast packets are allowed to pass in both directions on the WAN interface. Most users will want to leave this on.

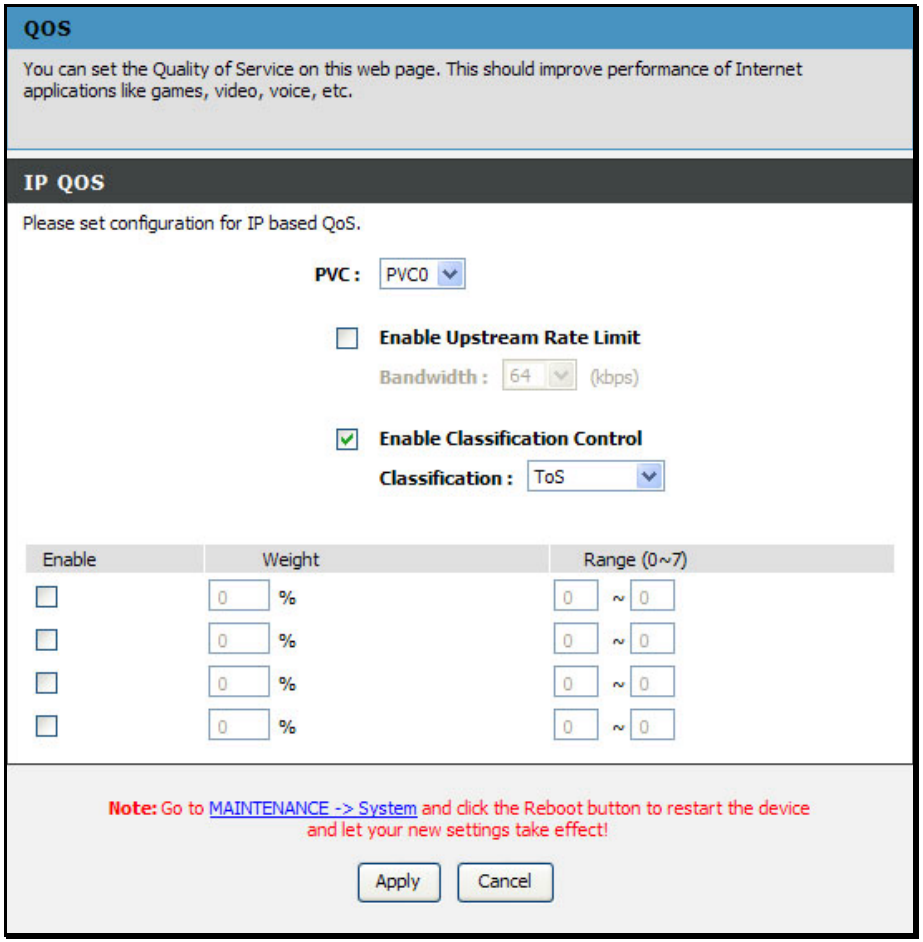


Network Tools – QoS

To access QoS, point to the **Network Tools** on the left window and click **QoS** submenu, or click the **QoS** button in the Network Tools window.

QoS or Quality of Service allows your Router to help prioritize the data packet flow in your Router and network. This is very important for time sensitive applications such as VoIP where it may help prevent dropped calls. Large amounts of non-critical data can be scaled so as not to affect these prioritized sensitive real-time programs.

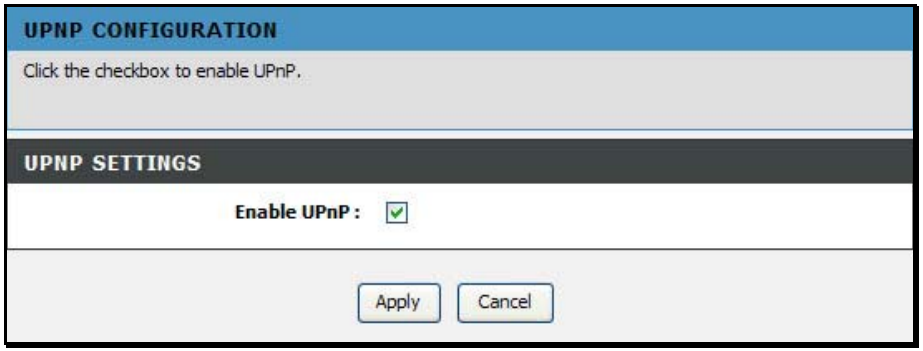
Select one of the PVC connections for QoS. The Router allows you to manually configure Upstream Rate Limit or Classification Control. Tick **Enable Upstream Rate Limit** and select a number in the **Bandwidth** list to control the transmission rate. Tick the **Enable Classification Control** check box and you can choose ToS, Application or User Define classifications. The information in the table below the selection differs based on the classifications you select.
Tick the **Enable** check box for each queue configured and enter information in the corresponding fields. Some experimentation may be necessary to achieve the optimum results with your particular ISP's connection. When you are finished, click **Apply**. Go to **Maintenance** -> **System**, and click the **Reboot** button to let your new settings take effect.



Network Tools – UPnP

To access UPnP, point to the **Network Tools** on the left window and click **UPnP** submenu, or click the **UPnP** button in the Network Tools window.

UPnP supports zero-configuration networking and automatic discovery for many types of networked devices. When enabled, it allows other devices that support UPnP to dynamically join a network, obtain an IP address, convey its capabilities, and learn about the presence and capabilities of other devices. DHCP and DNS service can also be used if available on the network. UPnP also allows supported devices to leave a network automatically without adverse effects to the device or other devices on the network. UPnP is a protocol supported by diverse networking media including Ethernet, Firewire, phone line, and power line networking.



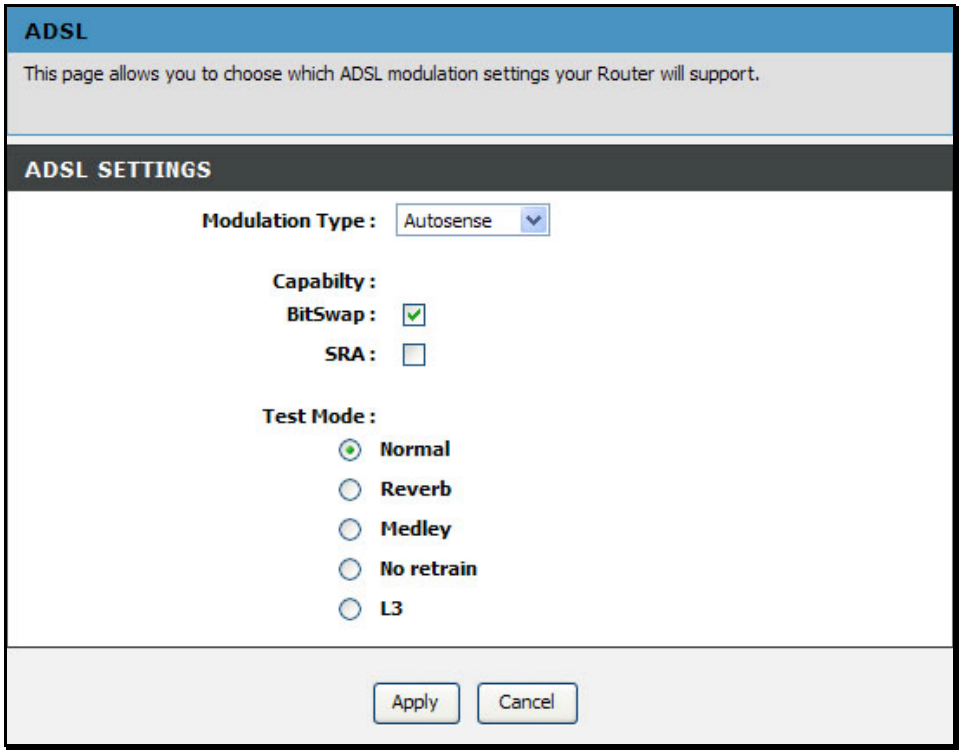
To enable UPnP for any available connection, tick the Enable UPnP check box, and click the **Apply** button.

Network Tools – ADSL

To access ADSL, point to the **Network Tools** on the left window and click **ADSL** submenu, or click the **ADSL** button in the Network Tools window.

This window allows the user to set the configuration for ADSL protocols. For most ADSL accounts the default settings *Autosense* will work. This configuration works with all ADSL implementations. If you have been given instructions to change the Modulation method used, select the desired option from the **Modulation Type** drop-down list and click the **Apply** button.

Leave the Capability and Test Mode settings unchanged unless otherwise instructed by your ISP. Both Bitswap Enable and Seemless Rate Adaption (SRA) Enable deal with tests that determine the line condition between your Router and the ISP's Central office.

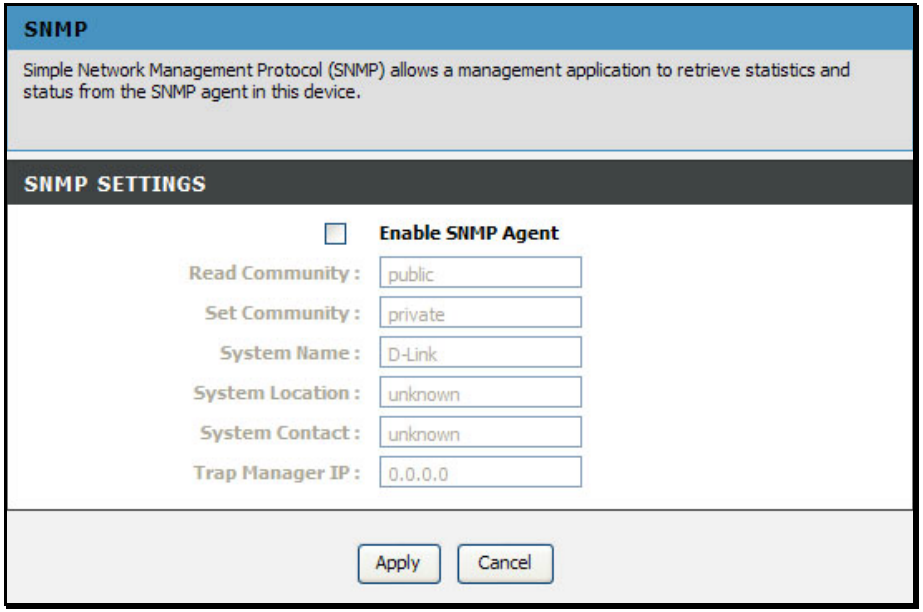


Network Tools – SNMP

To access SNMP, point to the **Network Tools** on the left window and click **SNMP** submenu, or click the **SNMP** button in the Network Tools window.

Simple Network Management Protocol is a standard for internetwork and intranetwork management.

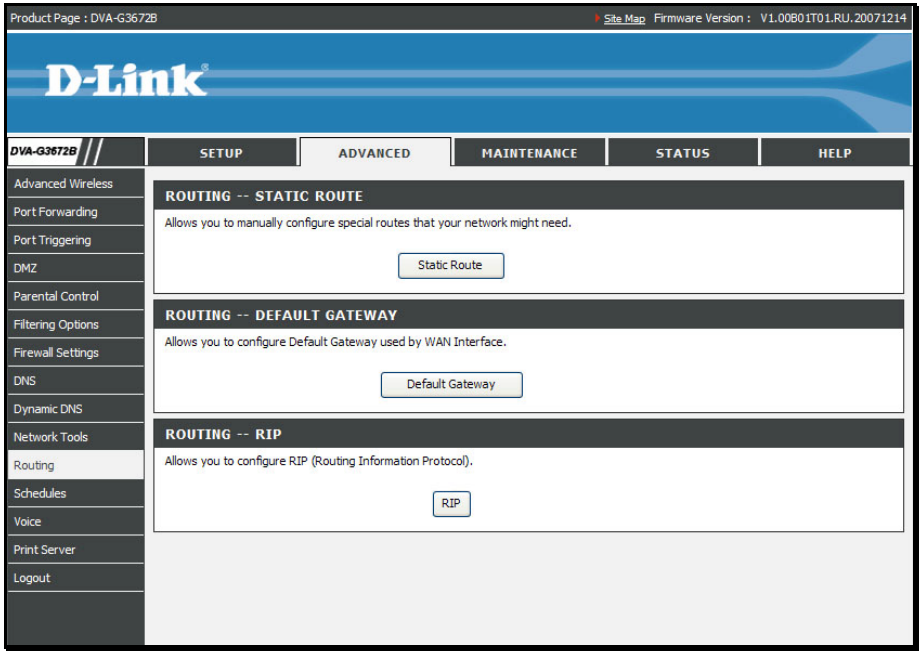
Tick the **Enable SNMP Agent** check box and configure the parameters for SNMP on this window and then click the **Apply** button.



Advanced –Routing

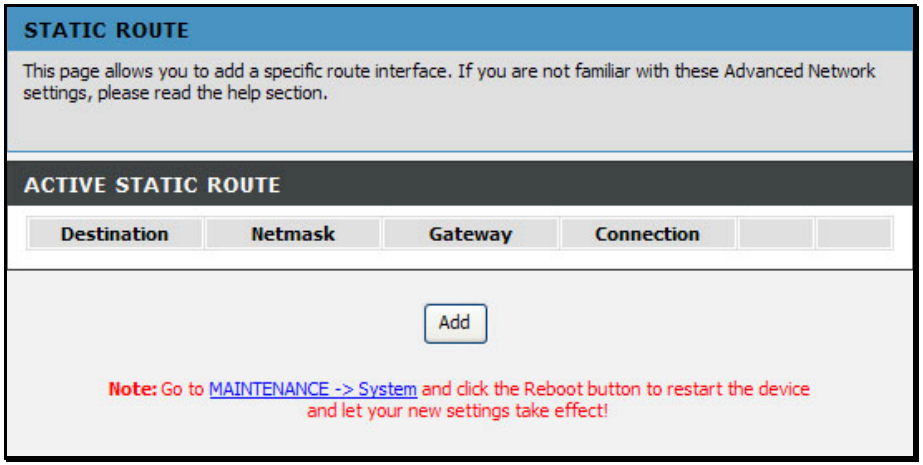
To access the Routing window, click the **Routing** button in the **Advanced** directory.

It has three subcategories: **Static Route**, **Default Gateway** and **RIP**. You can either point to the **Routing** on the left window and click one of the submenus, or click one of the buttons in the Routing window.



Routing – Static Route

To access Static Route, point to the **Routing** on the left window and click **Static Route** submenu, or click the **Static Route** button in the Routing window.



The page allows you to manually enter the routing table.

To define a gateway and hop to route data traffic, complete the fields in the Add Static Route section. Click **Apply** to see the entry in the Active Static Route table. Go to **Maintenance** -> **System** and click **Reboot** to restart the device and let your changes take effect.

To add a static route to a specific destination IP, click **Add** to see the Add Static Route section. Enter a **Destination** IP address, **Netmask** and Gateway's IP address. Select a PVC in the **Connection** drop-down list. Click **Apply** to see the entry in the Active Static Route table. Go to **Maintenance** -> **System** and click **Reboot** to restart the device and let your changes take effect. To remove an entry in the table, click the corresponding button. To modify a table entry, click the corresponding button, make the desired changes, and then click the **Apply** button.