#### **DHCP Reservation**

If you want a computer or device to always have the same IP address assigned, you can create a DHCP reservation. The router will assign the IP address only to that computer or device.

**Note:** This IP address must be within the DHCP IP Address Range.

**Enable:** Check this box to enable the reservation.

**Computer Name:** Enter the computer name or select from the drop-down

menu and click <<.

**IP Address:** Enter the IP address you want to assign to the computer

or device. This IP Address must be within the DHCP

IP Address Range.

MAC Address: Enter the MAC address of the computer or device.

Copy Your PC's If you want to assign an IP address to the computer

MAC Address: you are currently on, click this button to populate the

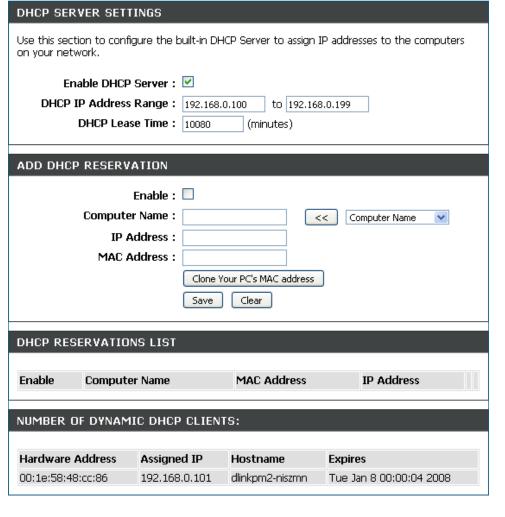
fields.

Save: Click Save to save your entry. You must click Save

**Settings** at the top to activate your reservations.

Number of In this section you can see what LAN devices are **Dynamic DHCP** currently leasing IP addresses.

**Clients:** 



## **USB Settings**

Use this section to configure your USB port. Share Port will be selected.

**Note:** If using the Network USB option, users will need to install the SharePort Utility into the computers to share the USB device through the router.

Network USB: Please set the Network USB Detection interval time.

**Note:** Please see the SharePort Manual on the CD for more information.



#### **Virtual Server**

The DAP-1350 can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The DAP-1350 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DAP-1350 are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling Virtual Server. Depending on the requested service, the DAP-1350 redirects the external service request to the appropriate server within the LAN network.

The DAP-1350 is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

Each virtual service that is created will be listed at the bottom of the screen in the Virtual Servers List. There are pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

For a list of ports for common applications, please visit <a href="http://www.dlink.com/support/faq/?prod\_id=1191">http://www.dlink.com/support/faq/?prod\_id=1191</a>.

This will allow you to open ports (port forwarding).

Name: Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), you computer will be listed in the "Computer Name" drop-down menu. Select your computer

Private Port/ Enter the port that you want to open next to Private Public Port: Port and Public Port. The private and public ports are usually the same. The public port is the port seen from the Internet side, and the private port is the port being used by the application on the computer within your local network.

Protocol Type: Select TCP, UDP, or Both from the drop-down

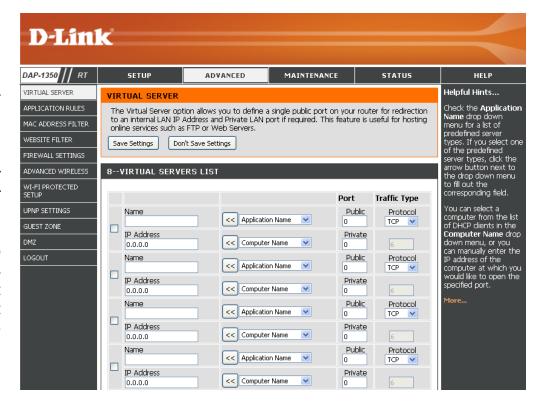
menu.

and click <<.

Inbound Filter: Select Allow All (most common) or a created Inbound filter. You may create your own inbound

filters in the **Advanced > Inbound Filter** page.

Schedule: The schedule of time when the Virtual Server Rule will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in the **Tools** > **Schedules** section.



## **Application Rules**

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the DAP-1350. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

The DAP-1350 provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

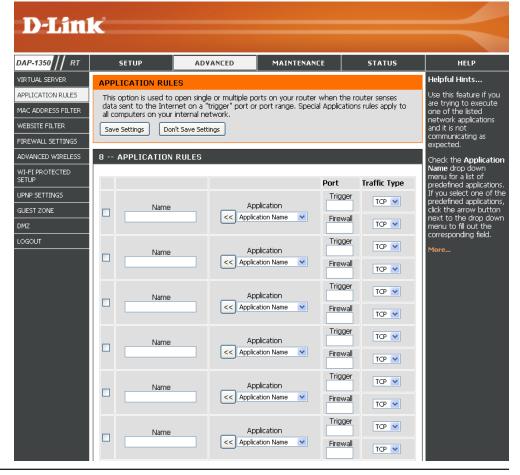
Name: Enter a name for the rule. You may select a pre-defined application from the drop-down menu and click <<.

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

**Traffic Type:** Select the protocol of the trigger port (TCP, UDP, or Both).

Firewall: This is the port number on the Internet side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.

**Traffic Type:** Select the protocol of the firewall port (TCP, UDP, or Both).



#### **MAC Address Filter**

Use MAC (Media Access Control) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the Network. You can either manually add a MAC address or select the MAC address from the list of clients that are currently connected to the Broadband Router.

Configure MAC Select Turn MAC Filtering Off, allow MAC Filtering: addresses listed below, or deny MAC addresses listed below from the drop-down menu.

MAC Address: Enter the MAC address you would like to filter.

To find the MAC address on a computer, please refer to the Networking Basics section in this manual.

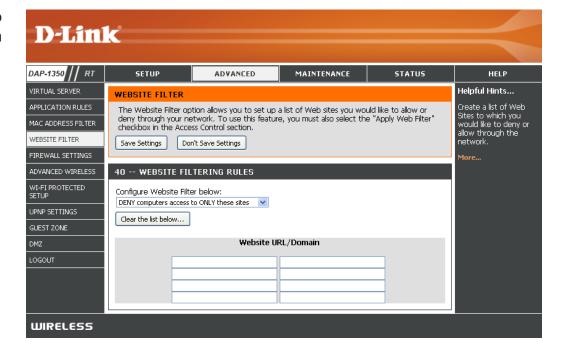
**DHCP Client:** Select a DHCP client from the drop-down menu and click << to copy that MAC Address.



#### **Website Filters**

Website Filters are used to deny LAN computers from accessing specific web sites by the URL or domain. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the blocked word, the site will not be accessible and the web page will not display. To use this feature, enter the text string to be blocked and click **Save Settings**. The text to be blocked will appear in the list. To delete the text, click **Clear the List Below**.

Website URL/ Enter the keywords or URLs that you want to Domain: block (or allow). Any URL with the keyword in it will be blocked.



## **Firewall Settings**

A firewall protects your network from the outside world. The D-Link DAP-1350 offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

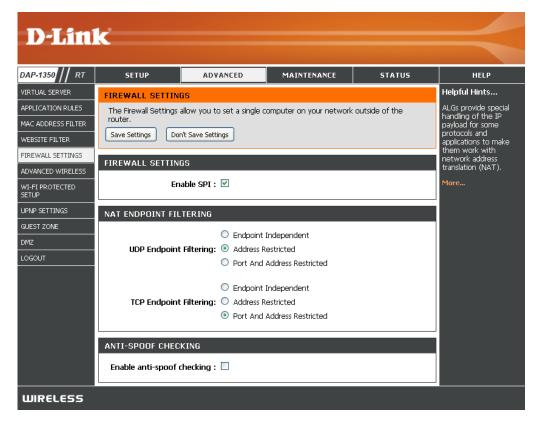
Enable SPI: SPI (Stateful Packet Inspection, also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

NAT Endpoint Select one of the following for TCP and UDP Filtering: ports:

**Endpoint Independent** - Any incoming traffic sent to an open port will be forwarded to the application that opened the port. The port will close if idle for 5 minutes.

**Address Restricted** - Incoming traffic must match the IP address of the outgoing connection.

Address + Port Restriction - Incoming traffic must match the IP address and port of the outgoing connection.



## **Advanced Wireless Settings**

**Transmit Power:** Set the transmit power of the antennas.

**Note:** Transmit power is regulated by international standard. Users are forbidden to change its maximum limit.

**Beacon Period:** Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value.

100 is the default setting and is recommended.

DTIM Interval: (Delivery Traffic Indication Message) 1 is the default

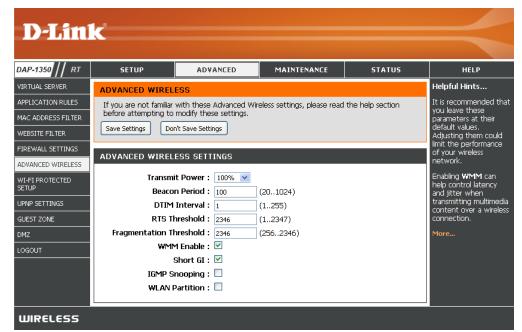
setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and

multicast messages.

RTS Threshold: This value should remain at its default setting of

2346. If inconsistent data flow is a problem, only a

minor modification should be made.



**Fragmentation** The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding **Threshold**: the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.

WMM Function: WMM is QoS for your wireless network. This will improve the quality of video and voice applications for your wireless clients.

**Short GI:** Check this box to reduce the guard interval time therefore increasing the data capacity. However, it's less reliable and may create higher data loss.

### Wi-Fi Protected Setup

Wi-Fi Protected Setup (WPS) System is a simplified method for securing your wireless network during the "Initial setup" as well as the "Add New Device" processes. The Wi-Fi Alliance (WFA) has certified it across different products as well as manufactures. The process is just as easy, as depressing a button for the Push-Button Method or correctly entering the 8-digit code for the Pin-Code Method. The time reduction in setup and ease of use are guite beneficial, while the highest wireless Security setting of WPA2 is automatically used.

**Enable:** Enable the Wi-Fi Protected Setup feature.

**Lock Wireless** Locking the wireless security settings prevents the Security settings from being changed by the Wi-Fi Protected **Settings:** Setup feature of the router. Devices can still be added to the network using Wi-Fi Protected Setup. However, the settings of the network will not change once this option is checked.

PIN Settings: A PIN is a unique number that can be used to add the router to an existing network or to create a new network. The default PIN may be printed on the bottom of the router. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator ("admin" account) can change or reset the PIN.

Current PIN: Shows the current value of the router's PIN.

**Reset PIN to** Restore the default PIN of the router. Default:



Generate New Create a random number that is a valid PIN. This becomes the router's PIN. You can then copy this PIN to the user interface PIN: of the registrar.

# **Station:**

**Add Wireless** This Wizard helps you add wireless devices to the wireless network.

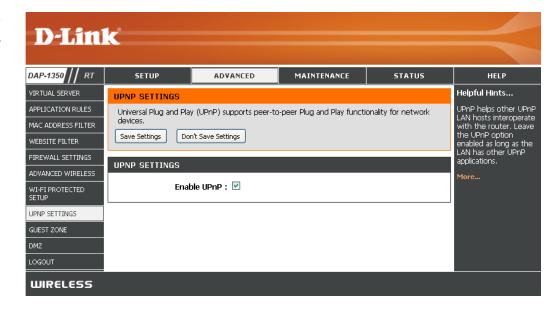
The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports Wi-Fi Protected Setup and has a configuration button, you can add it to the network by pressing the configuration button on the device and then the on the router within 60 seconds. The status LED on the router will flash three times if the device has been successfully added to the network.

There are several ways to add a wireless device to your network. A "registrar" controls access to the wireless network. A registrar only allows devices onto the wireless network if you have entered the PIN, or pressed a special Wi-Fi Protected Setup button on the device. The router acts as a registrar for the network, although other devices may act as a registrar as well.

Add Wireless Start the wizard. **Device Wizard:** 

## **UPnP Settings**

**UPnP Settings:** To use the Universal Plug and Play (UPnP<sup>™</sup>) feature click on **Enabled**. UPNP provides compatibility with networking equipment, software and peripherals.



#### **Guest Zone**

The Guest Zone feature will allow you to create temporary zones that can be used by guests to access the Internet. These zones will be separate from your main wireless network.

**Enable Guest Zone:** Check to enable the Guest Zone feature.

Schedule: The schedule of time when the Guest Zone will be active. The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in

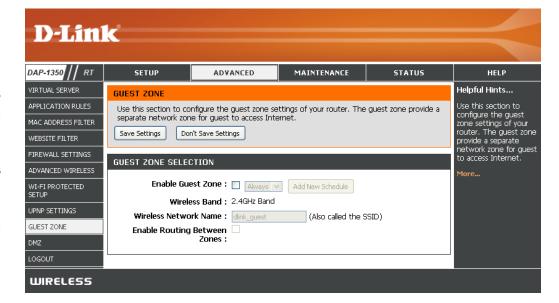
the **Tools** > **Schedules** section.

Wireless Network Enter a wireless network name (SSID) that is Name: different from your main wireless network.

**Enable Routing** Check to allow network connectivity between **Between Zones**: the different zones created.

Security Mode: Select the type of security or encryption you

would like to enable for the guest zone.

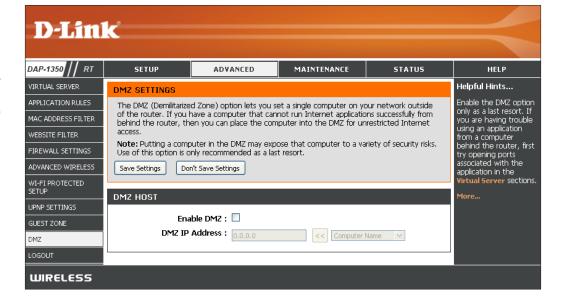


#### **DMZ**

This feature allows you to set up a DMZ (Demilitarized Zone) host. If you have a client PC that cannot run Internet applications properly from behind the DAP-1350, then you can set the client up for unrestricted Internet access. The DMZ allows a computer to be exposed to the Internet. This feature is useful for gaming purposes. Enter the IP address of the computer that will be the DMZ host. Adding a client to the DMZ may expose your local network to a variety of security risks, so only use this option as a last resort.

Enable DMZ: Check this box to enable DMZ.

Address: would like to open all ports to. You can select a computer from the Computer Name drop-down menu and click << to enter the computer name into the DMZ Host IP Address field.



## **Administrator Settings**

This page will allow you to change the Administrator and User passwords. You can also enable Remote Management. There are two accounts that can access the management interface through the web browser. The accounts are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes. Only the admin account has the ability to change both admin and user account passwords.

**Admin Password:** Enter a new password for the Administrator Login Name.

The administrator can make changes to the settings.

User Password: Enter the new password for the User login. If you login

as the User, you can only see the settings, but cannot

change them.

Gateway Name: Enter a name for the DAP-1350 router.

**Enable Graphical** Enables a challenge-response test to require users to type **Authentication**: letters or numbers from a distorted image displayed on the

screen to prevent online hackers and unauthorized users

from gaining access to your router's network settings.

Enable HTTPS Check to enable HTTPS to connect to the router

**Server:** securely.

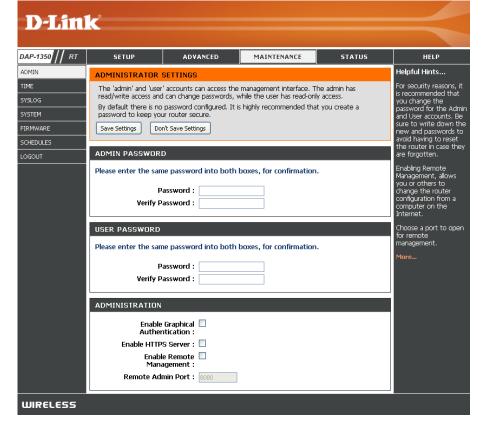
Remote Remote management allows the DAP-1350 to be Management: configured from the Internet by a web browser. A

username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform

Administrator tasks from the remote (Internet) host.

Remote Admin The port number used to access the DAP-1350.

Port:



## **Time Settings**

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

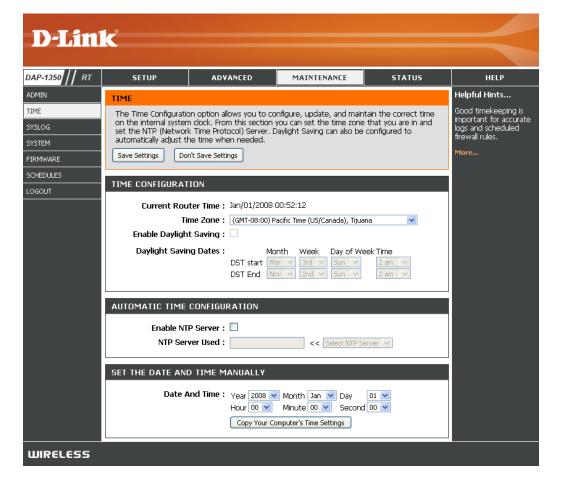
**Time Zone:** Select the Time Zone from the drop-down menu.

**Daylight Saving:** To select Daylight Saving time manually, select enabled or disabled, and enter a start date and an end date for daylight saving time.

**Server:** synchronizes computer clock times in a network of computers. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.

NTP Server Used: Enter the NTP server or select one from the drop-down menu.

Manual: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click Set Time. You can also click Copy Your Computer's Time Settings.

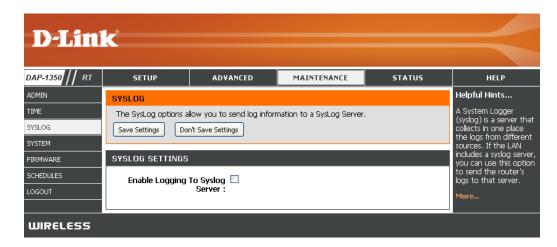


## SysLog

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

**Enable Logging to** Check this box to send the router logs to a **SysLog Server**: SysLog Server.

SysLog Server IP The address of the SysLog server that will be Address: used to send the logs. You may also select your computer from the drop-down menu (only if receiving an IP address from the router via DHCP).



## **System Settings**

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

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

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

**Rehart Device:** Click to reboot the router.



### Firmware Update

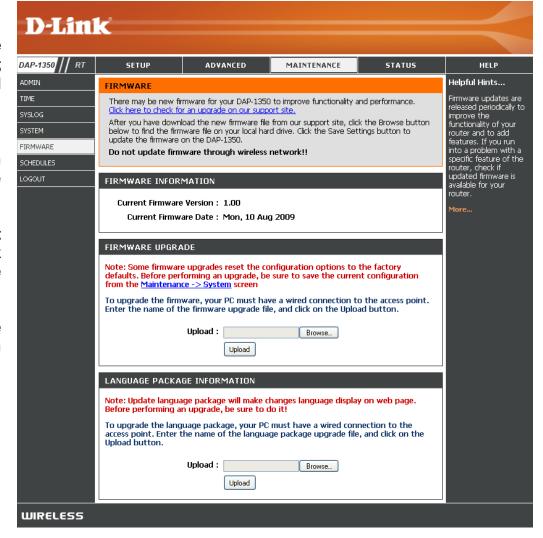
You can upgrade the firmware of the Router here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on **Browse** to locate the firmware file to be used for the update. Please check the D-Link support site for firmware updates at http://www.dlink.com/support. You can download firmware upgrades to your hard drive from the D-Link support site.

Firmware Click on Check Online Now for Latest Firmware **Upgrade: Version** to find out if there is an updated firmware: if so, download the new firmware to your hard drive.

**Browse:** After you have downloaded the new firmware, click Browse to locate the firmware update on your hard drive. Click **Upload** to complete the firmware upgrade.

**Notifications** Check **Automatically Check Online for Latest** Options: Firmware Version to have the router check automatically to see if there is a new firmware upgrade.

> Check Email Notification of Newer Firmware Version to have the router send an e-mail when there is a new firmware available.



#### **Schedules**

Name: Enter a name for your new schedule.

Days: Select a day, a range of days, or All Week to include every day.

Time: Check All Day - 24hrs or enter a start and end time for your schedule.

**Save:** Click **Save** to save your schedule. You must click Save Settings at the top for your schedules to go into effect.

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



#### **Device Information**

This page displays the current information for the DAP-1350. It will display the LAN, WAN (Internet), and Wireless information.

If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

If your Internet connection is set up for PPPoE, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection.

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

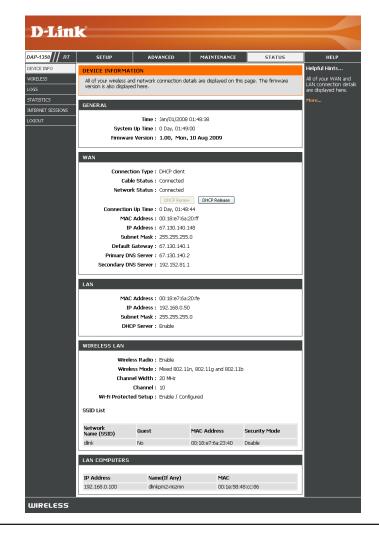
**WAN:** Displays the MAC address and the public IP settings for the router.

LAN: Displays the MAC address and the private (local) IP settings for the router.

**Wireless LAN:** Displays the wireless MAC address and your wireless settings such as SSID and Channel.

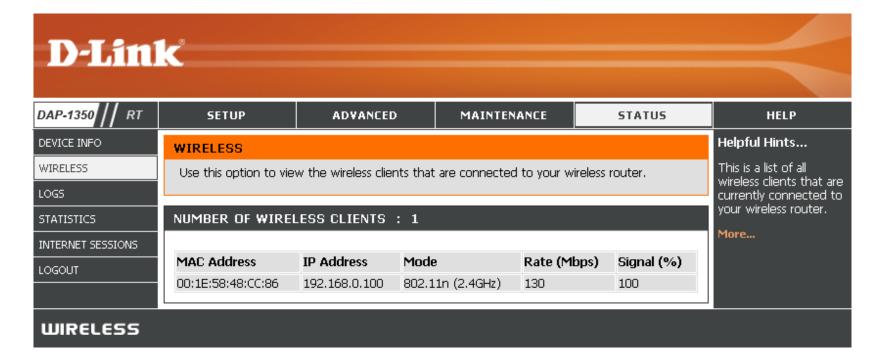
LAN Computers: Displays computers and devices that are connected to the router via Ethernet and that are receiving an IP address assigned by

the router (DHCP).



#### **Wireless**

The wireless client table displays a list of current connected wireless clients. This table also displays the connection rate and MAC address of the connected wireless clients.



## Logs

The router automatically logs (records) events of possible interest in it's internal memory. If there isn't enough internal memory for all events, logs of older events are deleted but logs of the latest events are retained. The Logs option allows you to view the router logs. You can define what types of events you want to view and the level of the events to view. This router also has external Syslog Server support so you can send the log files to a computer on your network that is running a Syslog utility.

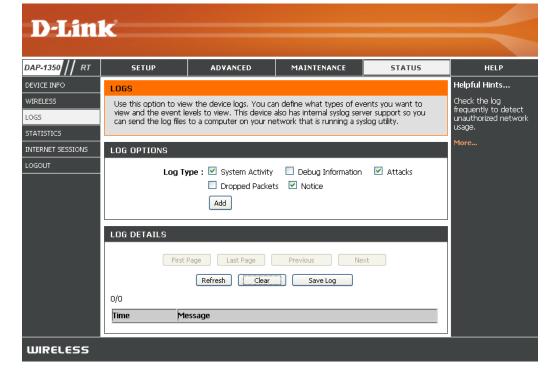
Log Options: You can select the types of messages that you want to display from the log. system activity, debug Information, attacks, dropped packets, and notice messages can be selected.

**Add:** Will filter the log results so that only the selected options appear.

**Refresh:** Updates the log details on the screen so it displays any recent activity.

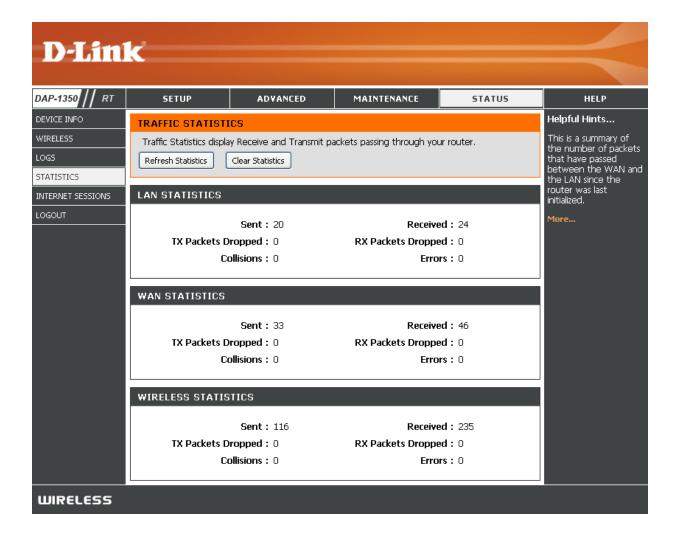
**Clear:** Clears all of the log contents.

**Save Log:** This option will save the router to a log file on your computer.



### **Statistics**

The screen below displays the Traffic Statistics. Here you can view the amount of packets that pass through the DAP-1350 on the Internet, wireless, and the LAN ports. The traffic counter will reset if the device is rebooted.



#### **Internet Sessions**

The Internet Sessions page displays full details of active Internet sessions through your router. An Internet session is a conversation between a program or application on a LAN-side computer and a program or application on a WAN-side computer.

**Local:** The IP address and, where appropriate, port number of the local application.

**NAT:** The port number of the LAN-side application as viewed by the WAN-side application.

**Internet:** The IP address and, where appropriate, port number of the application on the Internet.

**Protocol:** The communications protocol used for the conversation.

**State:** State for sessions that use the TCP protocol:

**NO:** None -- This entry is used as a placeholder for a future connection that may occur.

**SS:** SYN Sent -- One of the systems is attempting to start a connection.

**EST:** Established -- the connection is passing data.

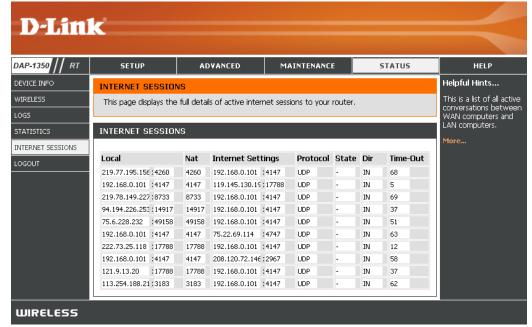
**FW:** FIN Wait -- The client system has requested that the connection be stopped.

CW: Close Wait -- The server system has requested that the connection be stopped.

TW: Time Wait -- Waiting for a short time while a connection that was in FIN Wait is fully closed.

LA: Last ACK -- Waiting for a short time while a connection that was in Close Wait is fully closed.

**CL:** Closed -- The connection is no longer active but the session is being tracked in case there are any retransmitted packets still pending.



**Dir:** The direction of initiation of the conversation:

Out - Initiated from LAN to WAN.

In - Initiated from WAN to LAN.

**Priority:** The preference given to outbound packets of this conversation by the QoS Engine logic. Smaller numbers represent higher priority.

**Time Out:** The number of seconds of idle time until the router considers the session terminated. The initial value of Time Out depends on the type and state of the connection.

300 seconds - UDP connections.

**240 seconds** - Reset or closed TCP connections. The connection does not close instantly so that lingering packets can pass or the connection can be re-established.

7800 seconds - Established or closing TCP connections.