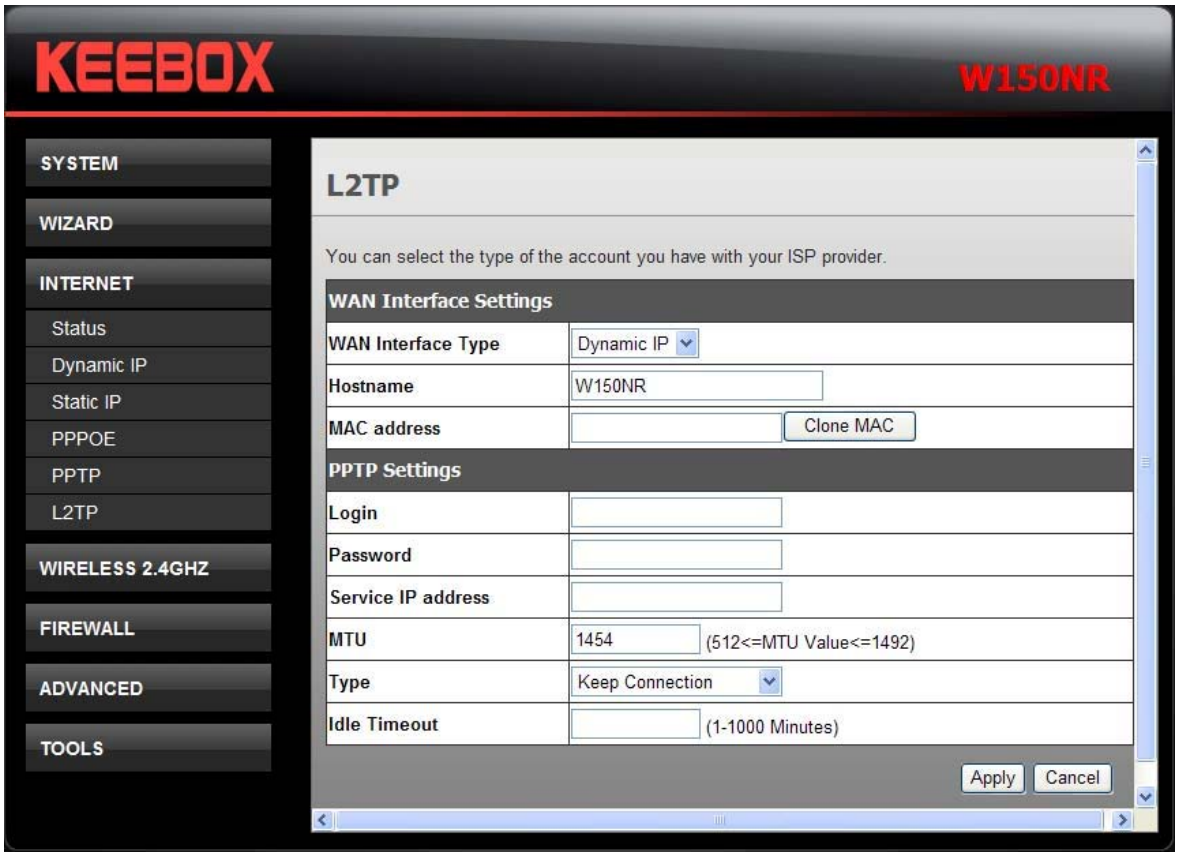
L2TP

Choose L2TP (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.



Fields	Description
WAN Interface Type	Use the drop-down list to choose between *Dynamic IP* and *Static IP*.
Hostname	The selection appears when choosing **Dynamic IP** in **WAN Interface Type**. This field is optional, but may be required by some ISPs. The default host name is the device name of the Router and may be changed.
MAC address	The selection appears when choosing **Dynamic IP** in **WAN Interface Type**. The default MAC address is set to the WAN's physical interface MAC address on the Router. You can use the **Clone MAC** button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the Router. It is not recommended that you change the default MAC address unless required by your ISP.
My IP address	The selection appears when choosing **Static IP** in **WAN Interface Type**. Enter the IP address assigned by your ISP.
My Subnet Mask	Enter the subnet mask assigned by your ISP.
Gateway IP Address	Enter the Gateway assigned by your ISP.
Login	Enter the L2TP login name.
Password	Enter the L2TP password.
Service IP address	Enter the ISP service IP address.
MTU	Maximum Transmission Unit is for optimal performance with some ISPs.
Type	Use the drop-down list to select *Keep Connection*, *Automatic Connection* or *Manual Connection*.

Idle Timeout	This is an age-out value, in minutes, before the Router times out.

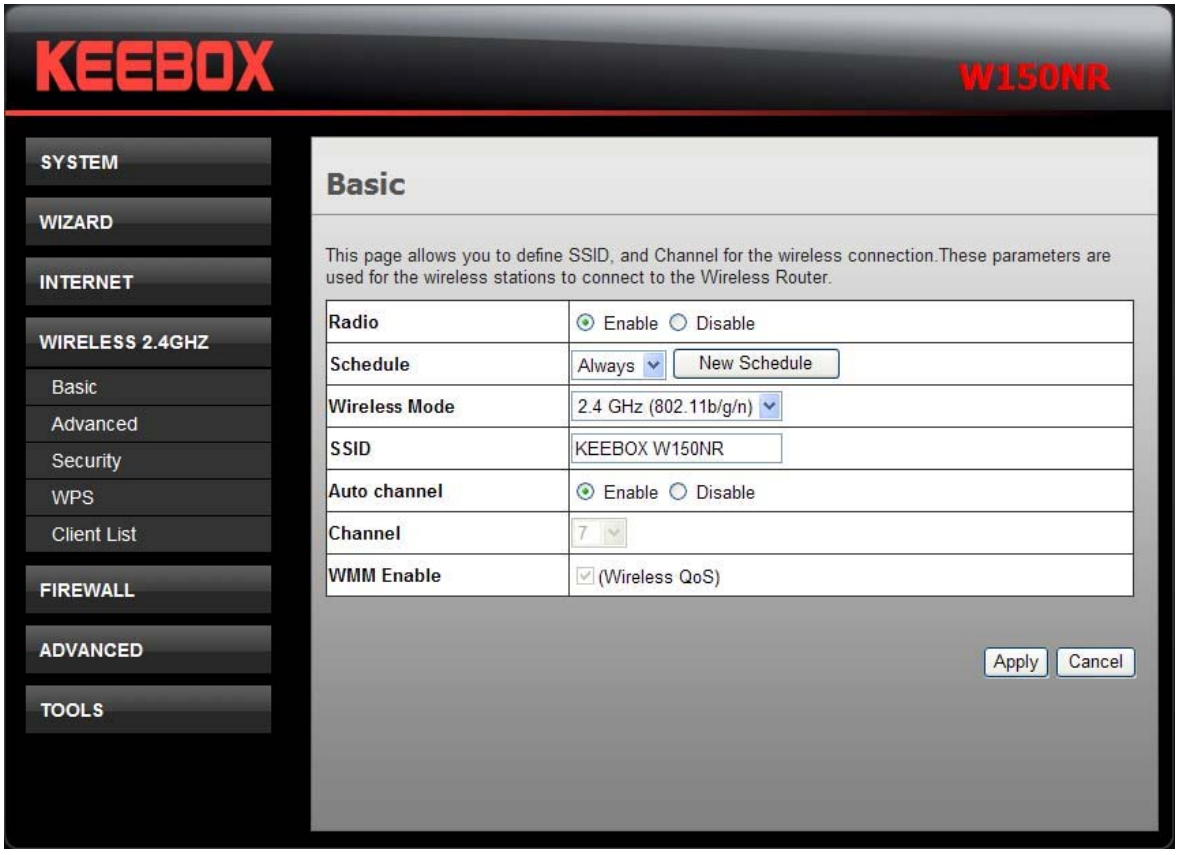
Click **Apply** to save the changes.

Wireless 2.4GHZ

This chapter provides more manual settings about Wireless connection.

Basic

This window allows you to define SSID and the channel for the wireless connection.



Fields	Description
Radio	Use the radio buttons to enable or disable the wireless function.
Schedule	Use the drop-down list to choose the appropriate time to enable the wireless function. Select **Always** to enable the function all the time. To create a new schedule, click **New Schedule** to link to **System** > **Schedule**.
Wireless Mode	Use the drop-down list to choose the type of wireless.
SSID	Service Set Identifier (SSID) is the name of the wireless network.
Auto channel	Click **Enable** to allow the Router to select the channel with the least amount of interference. Click **Disable** to manually select the channel below.
Channel	Use the drop-down list to select the channel of wireless network.
WMM Enable	Tick the check box to enable Wi-Fi Multimedia to enjoy basic quality of service features.

Click **Apply** to save the changes.

Advanced

This window allows you to change the behavior of the 802.11g wireless radio from the standard settings. Be aware that any changes to the factory default settings may adversely affect the behavior of your network.

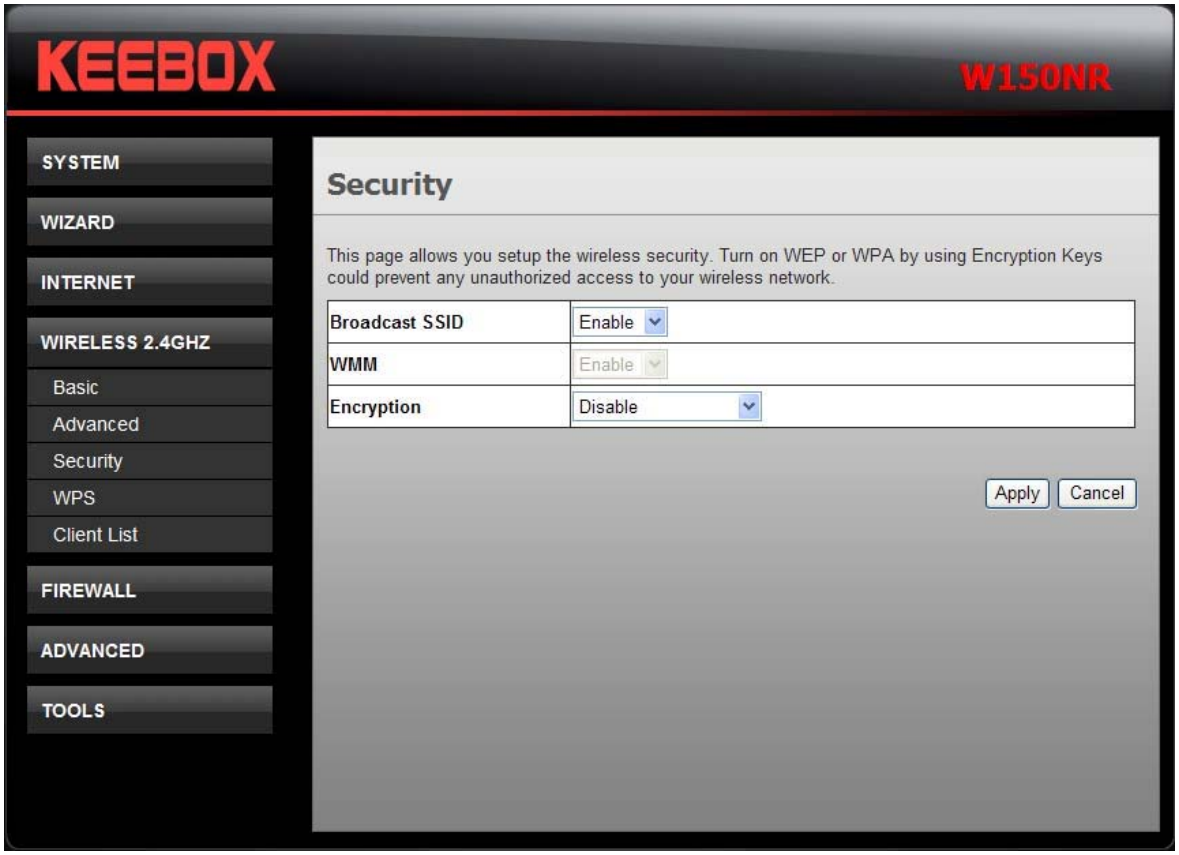
Fields	Description
Fragment Threshold	The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented.
RTS Threshold	This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.
Beacon Interval	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 Period	A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.
Preamble Type	Select Short or Long Preamble. The Preamble defines the length of the CRC block for communication between the wireless router and the roaming wireless network adapters.
CTS Protection	CTS is a function used to minimize collisions among wireless devices on a wireless local area network (LAN). CTS will make sure the wireless network is clear before a wireless client attempts to send wireless data. Enabling CTS will add overhead and may lower wireless through put.
Band Width	Use the drop-down list to select the bandwidth. Select **20/40 MHz (Auto)** if you are using both 802.11n and non-802.11n wireless devices. Select **20 MHz** if you are not using any 802.11n wireless clients.

Tx Power	Use the drop-down list to select the percentage of Tx Power.
Short Guard Interval	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.

Click **Apply** to save the changes.

Security

This window allows you to configure the wireless security settings.



Fields	Description
Broadcast SSID	Use the drop-down list to broadcasting the SSID or not.
WMM	Use the drop-down list to enable or disable Wi-Fi Multimedia.
Encryption	Use the drop-down list to select the wireless security mode. The available choices are *WEP*, *WEA Only*, *WPA2 Only* and *WPA/WPA2 Mixed*.

WEP

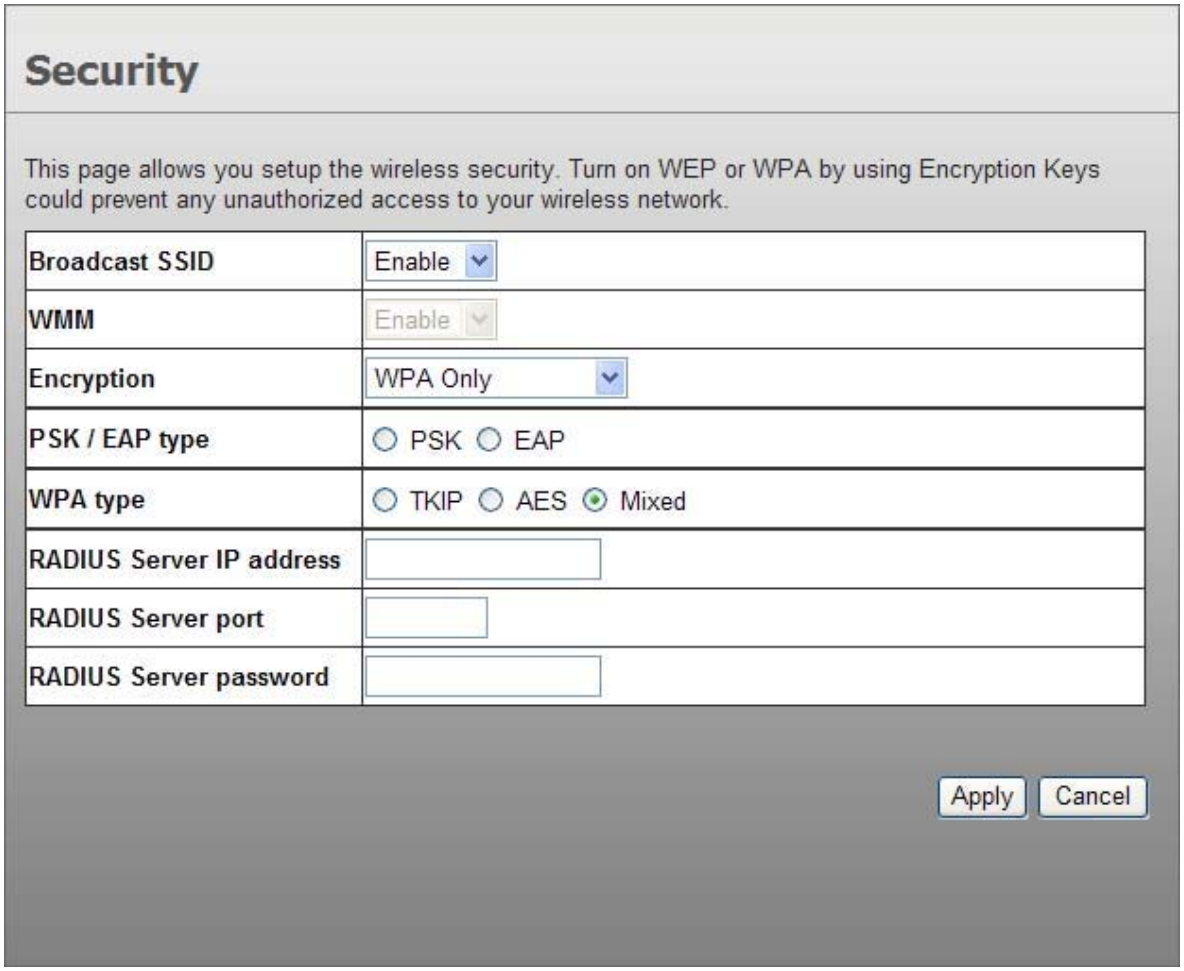
Select **WEP** from the **Encryption** drop-down list to see the following window.

Fields	Description
Authentication type	Click the radio buttons to select **Open System** or **Shared Key**. Shared key provide greater security.
Key Length	Select either **64Bit** or **128Bit** encryption from the drop-down list.
Key type	Select **ASCII (5 characters)** or **ASCII (10 characters)** from the drop-down list.
Default key	Select the default key for the wireless from the drop-down list.
Encryption Key 1 to 4	Enter WEP key here. Make sure you enter this key exactly on all your wireless devices.

Click **Apply** to save the changes.

WPA Only / WPA2 Only / WPA/WPA2 Mixed

Select other types of wireless security modes from the **Encryption** drop-down list to see the following window.

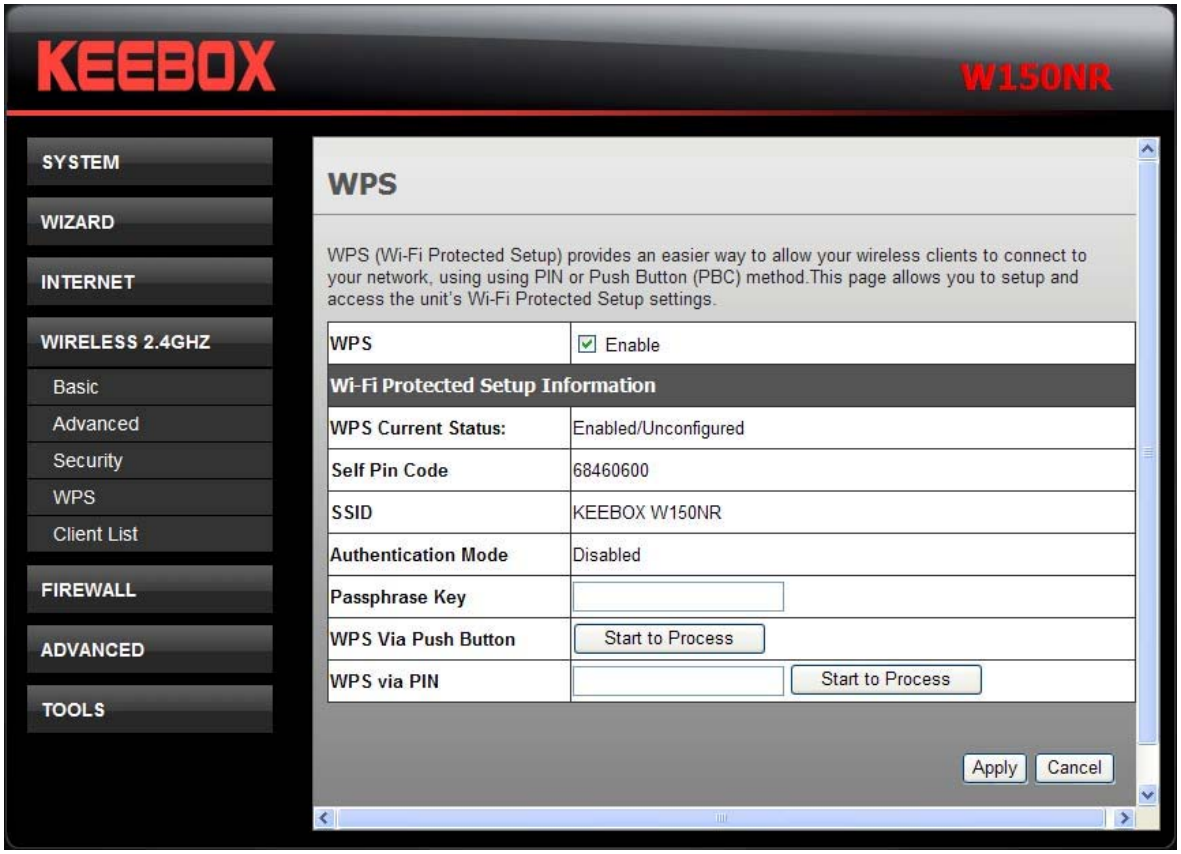


Fields	Description
PSK / EAP type	Use the radio button to select **PSK** or **EAP** type.
WPA type	Use the radio button to select **TKIP**, **AES** or **Mixed** type.
RADIUS Server IP address	Enter the IP address of a RADIUS server.
RADIUS Server port	Enter the port you are using with the RADIUS server.
RADIUS Server password	Enter the passport of the RADIUS server.

Click **Apply** to save the changes.

WPS

Wi-Fi Protected Setup (WPS) provides an easier way to allow your wireless clients to connection to your network, using PIN or Push Button (PBC) method.



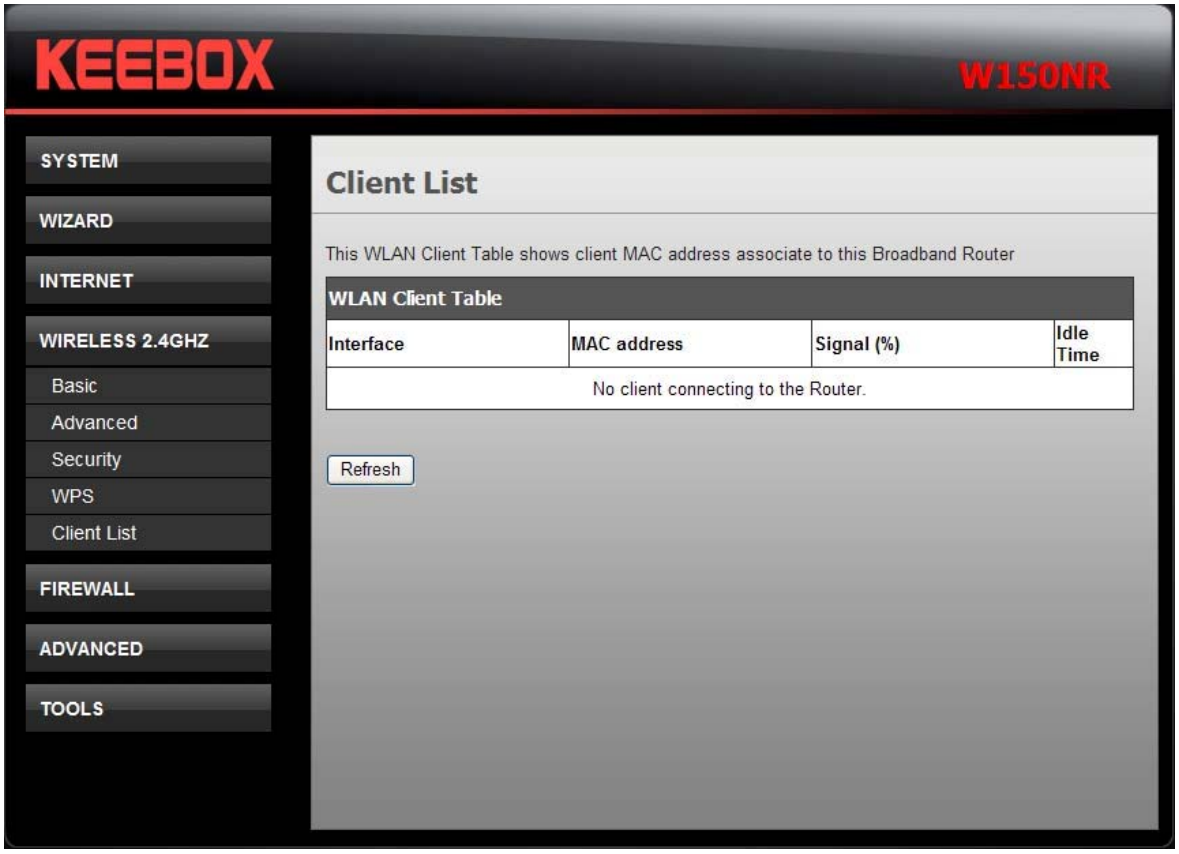
The following fields can be configured:

Fields	Description
WPS	Tick the **Enable** check box to enable the Wi-Fi protected setup function. Deselect to disable the function.
Passphrase Key	Enter a key for connecting the wireless network.
WPS via Push button	This virtual **Start to Process** button has the same function as the physical WPS button on the hardware device. Click to start WPS connection.
WPS via PIN	Enter the password for WPS connection and click **Start to Process** to start WPS connection.

Click **Apply** to save the changes.

Client List

This window displays all the clients of wireless connection.



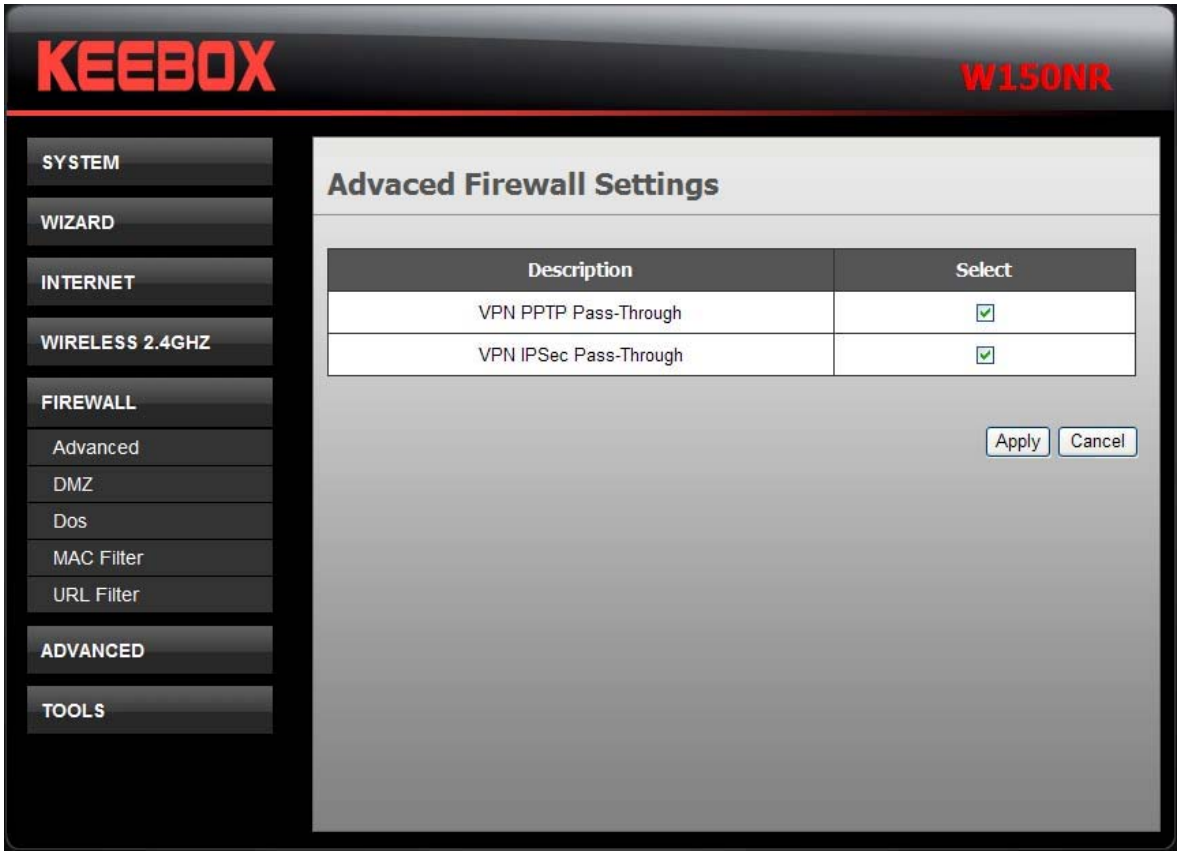
Click the **Refresh** button to update the status.

Firewall

This chapter provides more choices for firewall setup.

Advanced

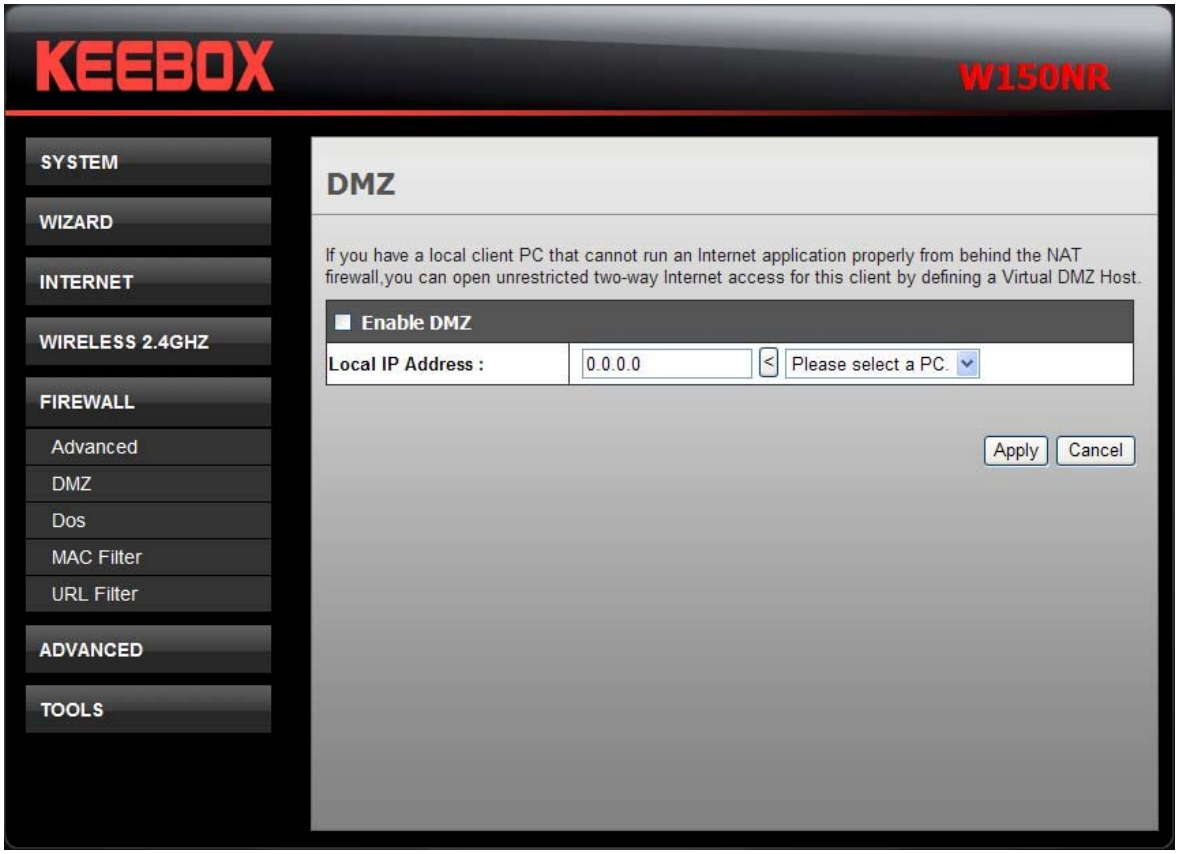
This window allows you to choose more firewall settings.



Tick the check box to select the firewall settings. Click **Apply** to save the changes.

DMZ

This window allows you to set up a DMZ host and to set up firewall rules. If you have a client PC that cannot run Internet applications properly from behind the Router, then you can set the client up for unrestricted Internet access. It allows a computer to be exposed to the Internet. Enter the IP address of the internal computer that will be the DMZ host. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.

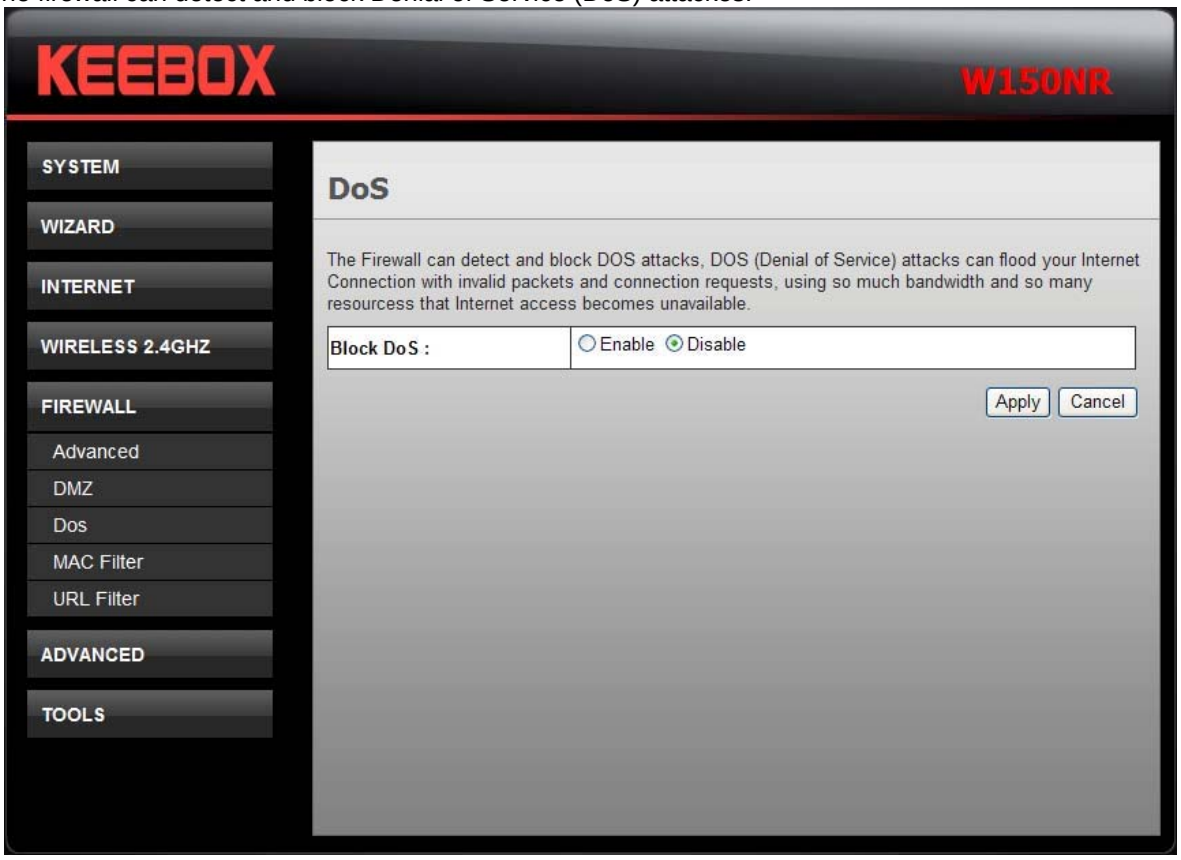


Fields	Description
Enable DMZ	Check this box to enable DMZ.
Local IP Address	Enter the IP address of the computer you would like to open all ports to.

Click **Apply** to save the changes.

DoS

The firewall can detect and block Denial of Service (DoS) attackes.



Click the **Enable** radio button to detect and block the DoS attacks. Click **Apply** to save the changes.

MAC Filter

Use MAC (Media Access Control) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the Network.

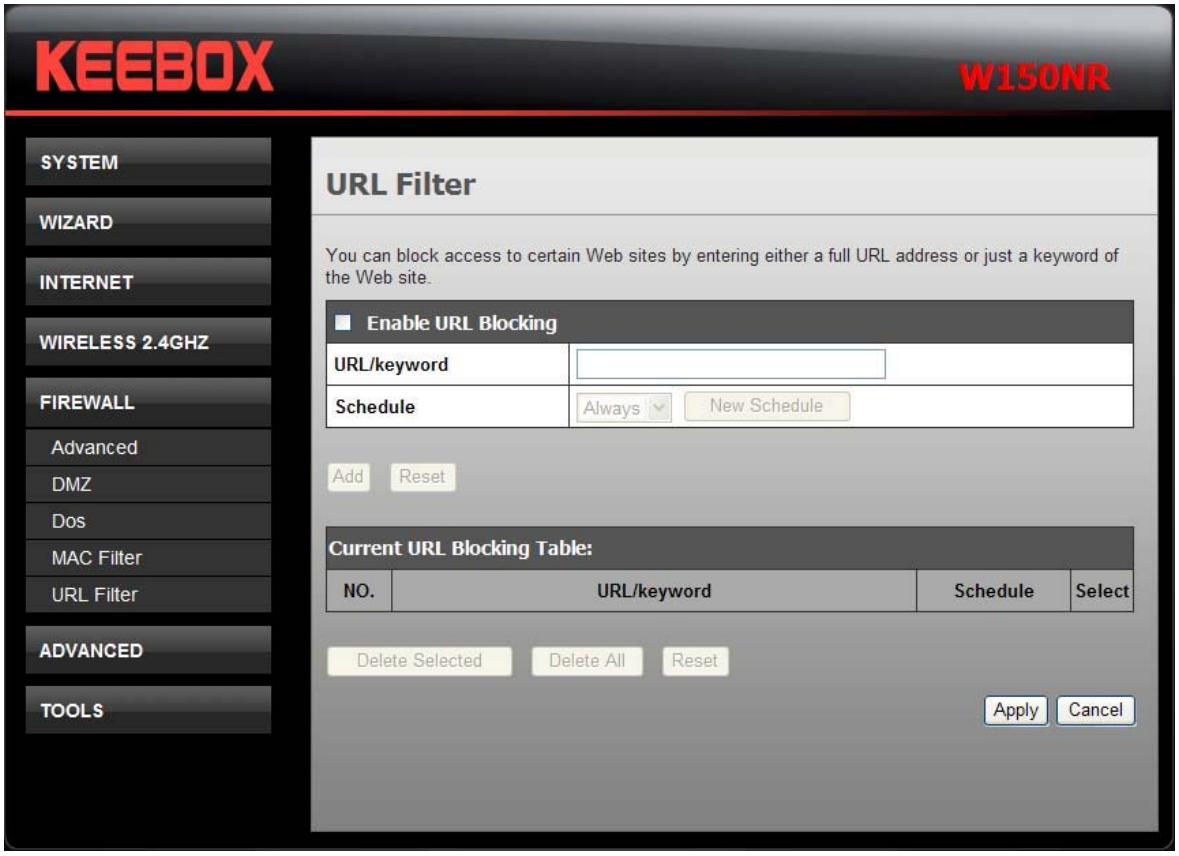
Fields	Description
Enable MAC filtering	Tick **Enable Wireless MAC Filter** check box and click the **Deny all clients with MAC address listed below to access the network**, or **Allow all clients with MAC address listed below to access the network** of the filtering policy.
Description	Enter the description for this MAC filtering rule.
LAN MAC address	Enter the MAC address of LAN to block.
Schedule	Use the drop-down list to choose the appropriate time to enable the MAC filtering function. Select **Always** to enable the function all the time. To create a new schedule, click **New Schedule** to link to **System** > **Schedule**.

Click **Add** to save the changes and see the rule in the MAC Filtering table. To remove a specific entry, tick the corresponding check boxes under **Select**, and click **Delete Selected**. To remove all entries, click **Delete All**. Click **Reset** to clear all the information that has not been saved.

Click **Apply** to save the changes.

URL Filter

Use this window to deny access to specified websites.



Fields	Description
Enable URL Blocking	Tick the check box to enable the function.
URL/keyword	Enter the IP address or keyword to block.
Schedule	Use the drop-down list to choose the appropriate time to enable the MAC filtering function. Select **Always** to enable the function all the time. To create a new schedule, click **New Schedule** to link to **System** > **Schedule**.

Click **Add** to save the changes and see the rule in the MAC Filtering table. To remove a specific entry, tick the corresponding check boxes under **Select**, and click **Delete Selected**. To remove all entries, click **Delete All**. Click **Reset** to clear all the information that has not been saved.

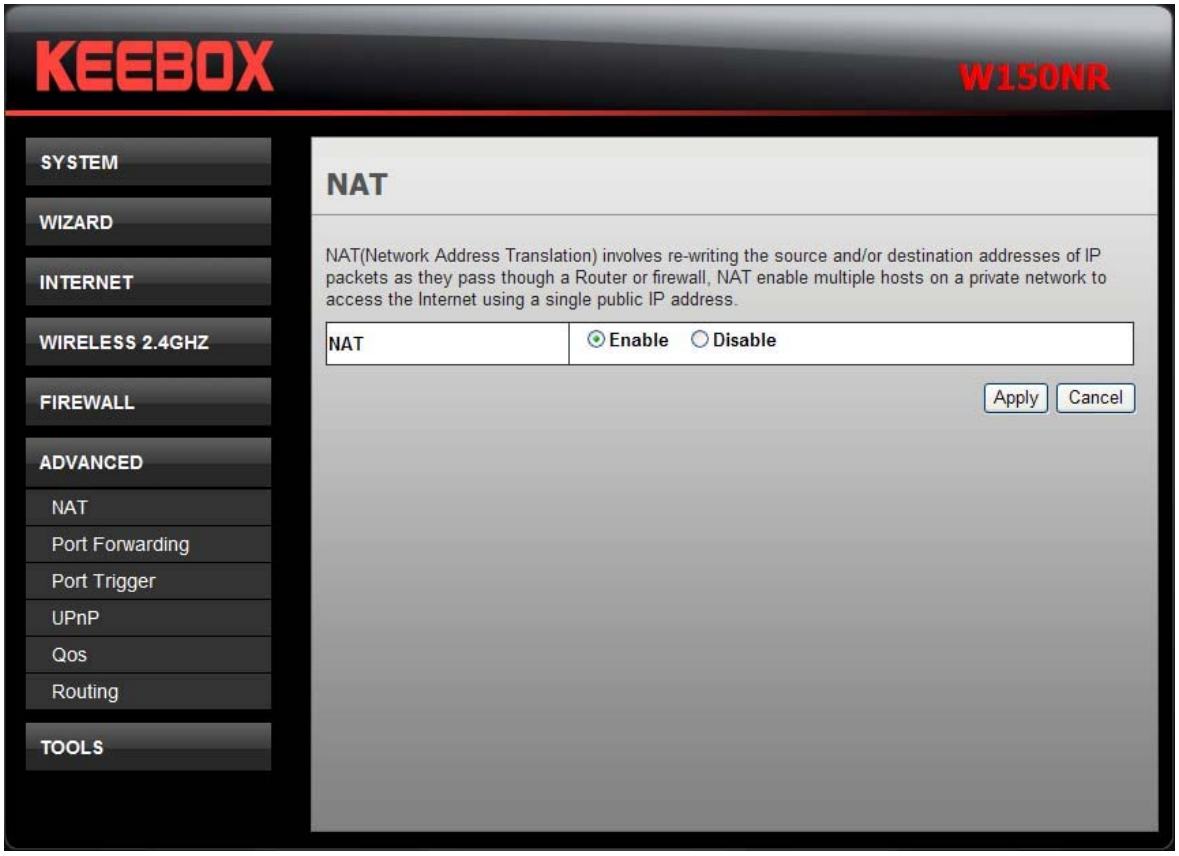
Click **Apply** to save the changes.

Advanced

This chapter include the more advanced features used for network management and security.

NAT

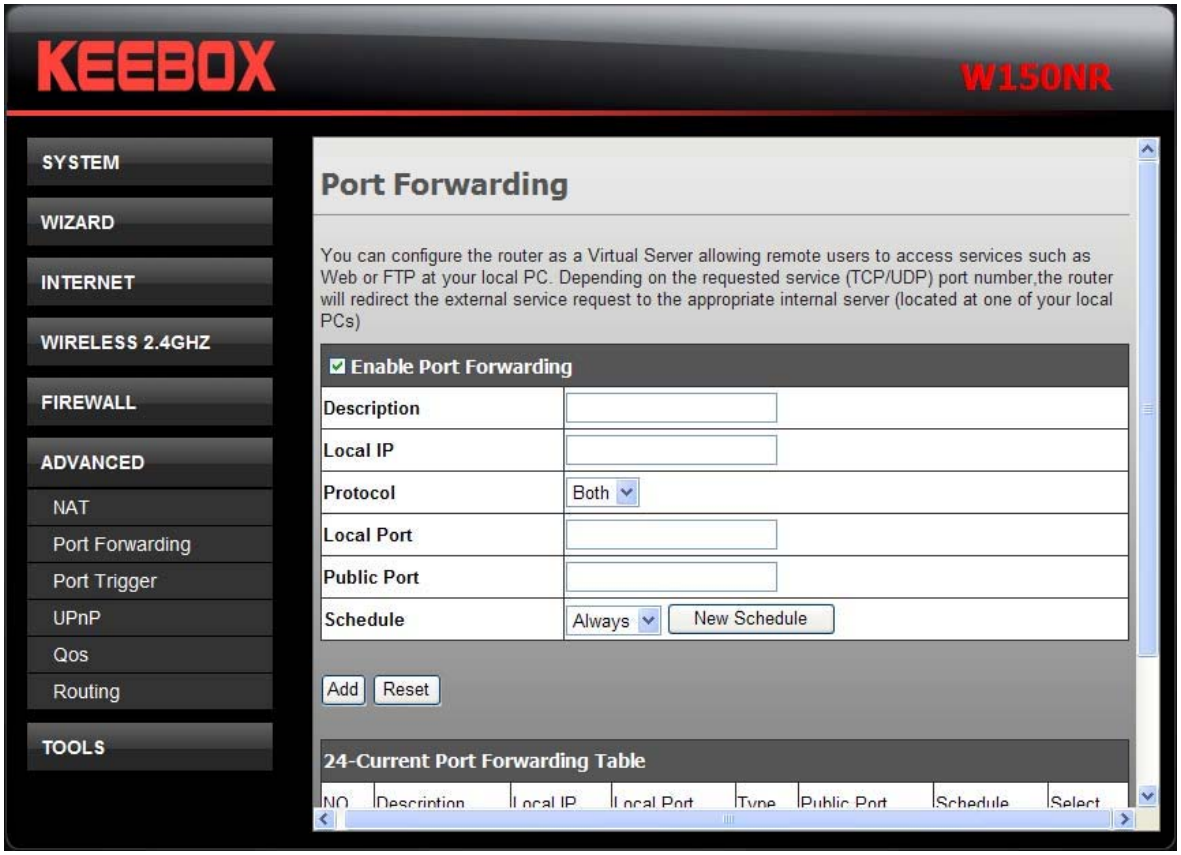
Network Address Translation (NAT) re-writes the source and/or destination addresses of IP packets as they pass through a Router or firewall. NAT enables multiple hosts on a private network to access the Internet using a single public IP address.



Click the **Enable** radio button and the **Apply** button to enable the NAT function.

Port Forwarding

Port Forwarding is used to redirect data to a single PC.



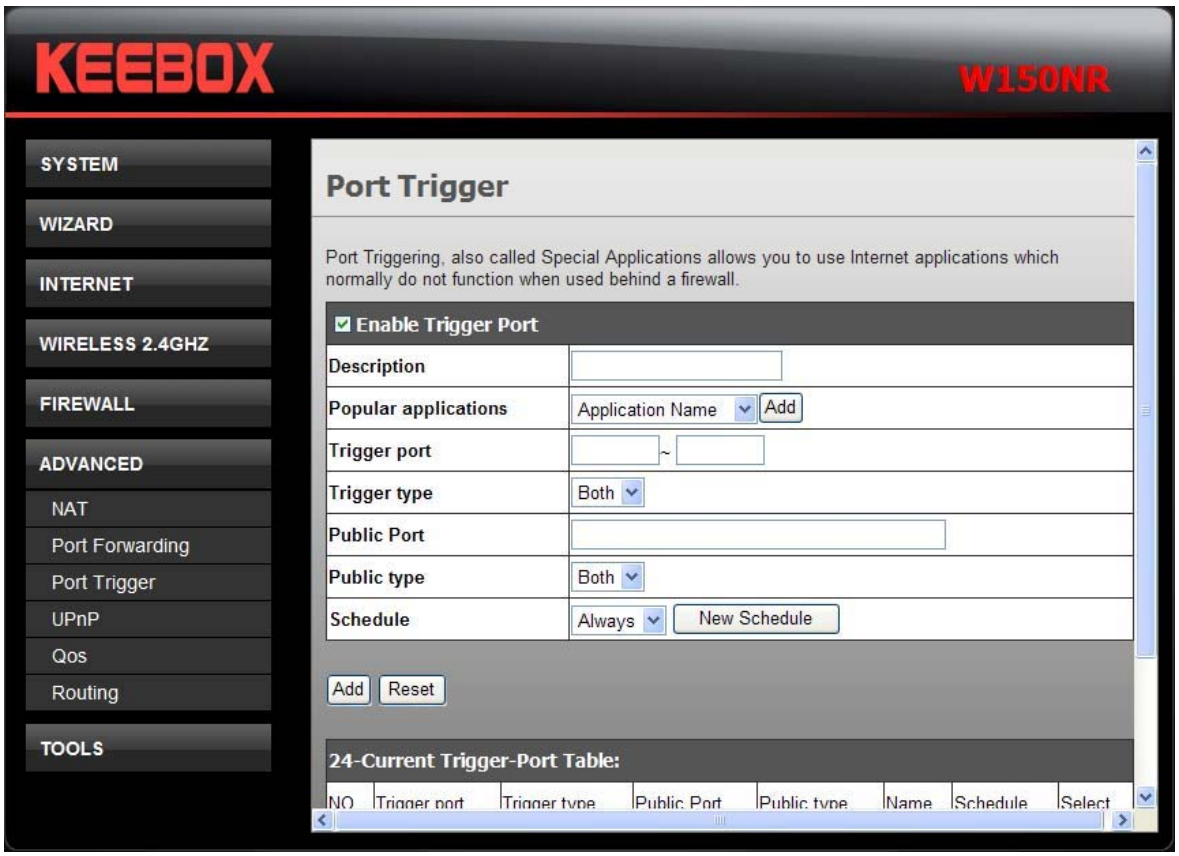
Fields	Description
Enable Port Forwarding	Tick the check box to enable the function.
Description	Enter the description of this rule.
Local IP	Enter a local IP address.
Protocol	Use the drop-down list to select the protocol as *TCP*, *UDP* or *Both*.
Local Port	Enter the local port.
Public Port	Enter a public port.
Schedule	Use the drop-down list to choose the appropriate time to enable the MAC filtering function. Select **Always** to enable the function all the time. To create a new schedule, click **New Schedule** to link to **System** > **Schedule**.

Click **Add** to save the changes and see the rule in the MAC Filtering table. To remove a specific entry, tick the corresponding check boxes under **Select**, and click **Delete Selected**. To remove all entries, click **Delete All**. Click **Reset** to clear all the information that has not been saved.

Click **Apply** to save the changes.

Port Trigger

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 Router.



Fields	Description
Enable Trigger Port	Tick the check box to enable the function.
Description	Enter the description of this rule.
Popular applications	Use the drop-down list to select an application or click **Add** to create a new one.
Trigger port	This is the port used to trigger the application. It can be either a single port or a range of ports.
Trigger type	Use the drop-down list to select the trigger type as *TCP*, *UDP* or *Both*.
Public port	This is the port number on the WAN side that will be used to access the application.
Public type	Use the drop-down list to select the pblic type as *TCP*, *UDP* or *Both*.
Schedule	Use the drop-down list to choose the appropriate time to enable the MAC filtering function. Select **Always** to enable the function all the time. To create a new schedule, click **New Schedule** to link to **System** > **Schedule**.

Click **Add** to save the changes and see the rule in the MAC Filtering table. To remove a specific entry, tick the corresponding check boxes under **Select**, and click **Delete Selected**. To remove all entries, click **Delete All**. Click **Reset** to clear all the information that has not been saved.

Click **Apply** to save the changes.

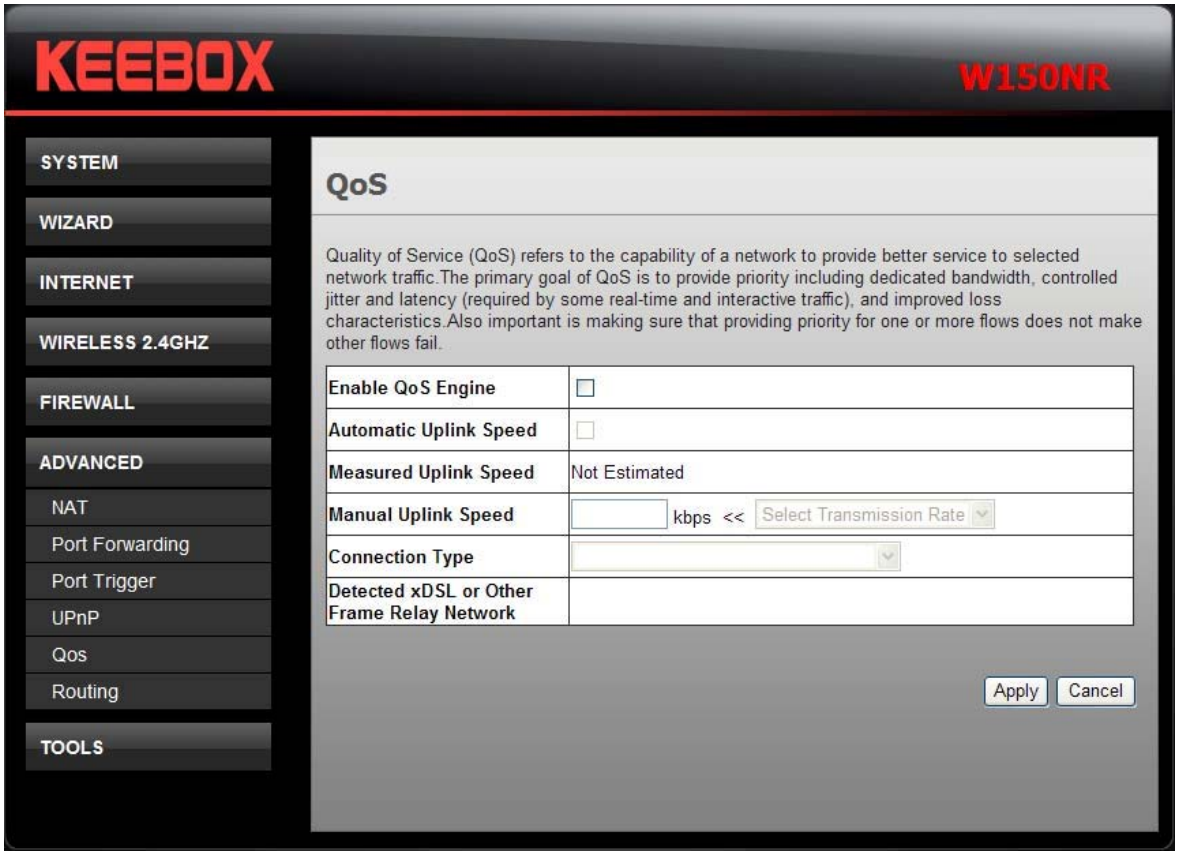
UPnP

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, click the **Enable** radio button, and click the **Apply** button.

QoS

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



Fields	Description
Enable QoS Engine	Tick the check box to enable this option for better performance and experience with online games and other interactive applications, such as VoIP.
Automatic Uplink Speed	Tick the check box to automatically determine the uplink speed of your Internet connection.
Measured Uplink Speed	The speed at which data can be transferred from the Router to your ISP. This is determined by your ISP.
Manual Uplink Speed	Enter the uplink speed.
Connection Type	Use the drop-down menu to select the connection type among Auto-detect, **xDSL Or Other Frame Relay Network** and **Cable or Other Broadband Network**.
Detected xDSL or Other Frame Relay Network	When **Connection Type** is set to **Auto-detect**, the automatically detected connection type is displayed here.

Click **Apply** to save the changes.

Routing

This window allows you to define static routes to defined destinations.

Fields	Description
Static Routing	Tick this checkbox to enable or disable static routes to defined destinations.
Interface	Use the drop-down menu to choose the Interface that the IP packet must use to transit out of the Router.
Destination	The IP address of the packets that will take this route.
Subnet Mask	Enter the subnet mask of the IP address
Gateway	Enter the next hop to be taken if this route is used.

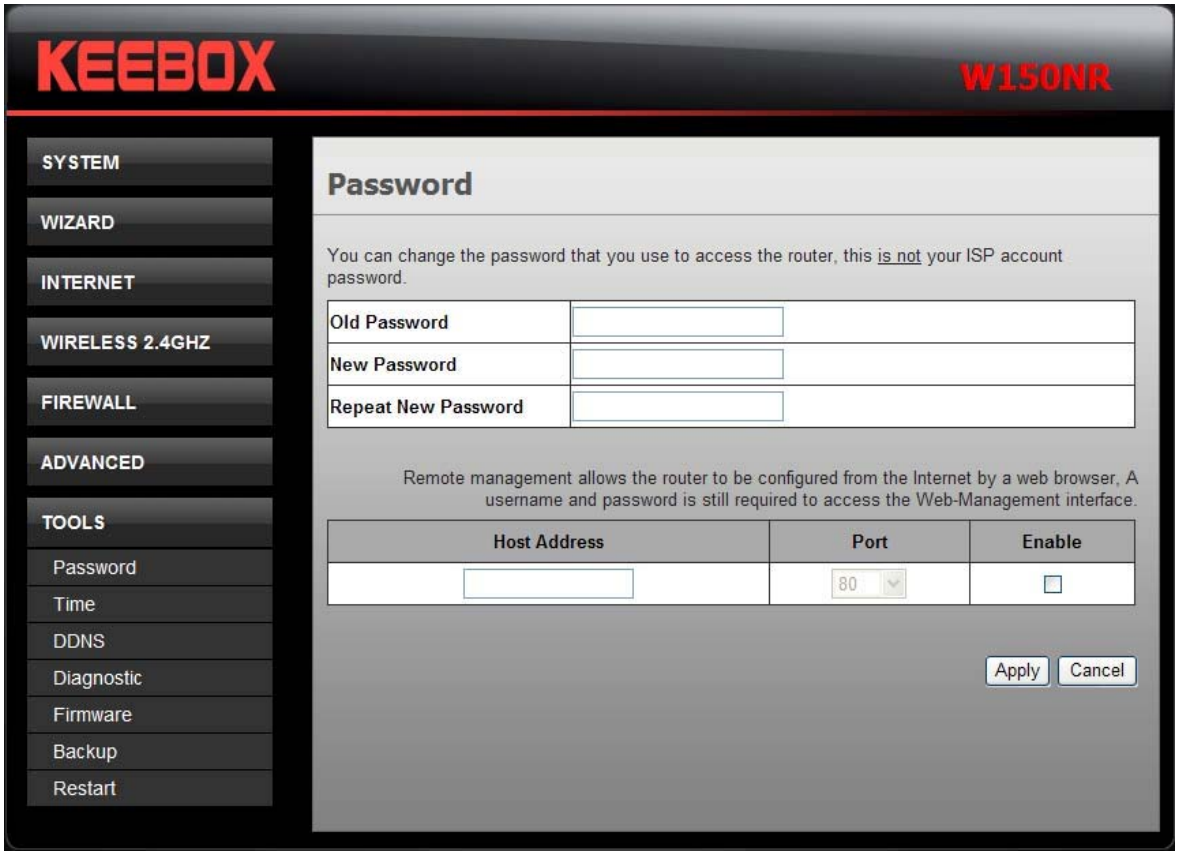
Click **Add** to save the changes and see the rule in the MAC Filtering table. To remove a specific entry, tick the corresponding check boxes under **Select**, and click **Delete Selected**. To remove all entries, click **Delete All**. Click **Reset** to clear all the information that has not been saved.

Click **Apply** to save the changes.

Tools

Password

This window allows you to change the password and default IP address of the Router.

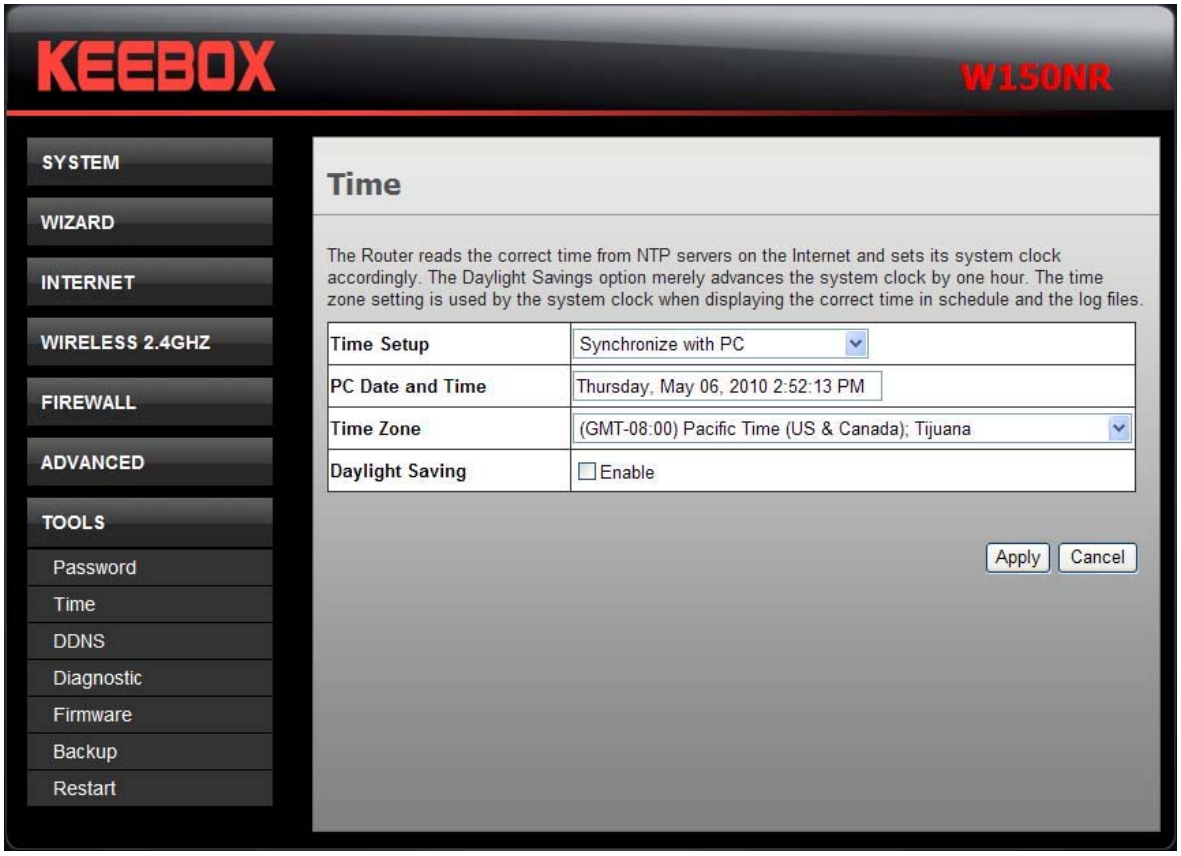


Fields	Description
Old Password	Enter the existing password when log in the Router.
New Password	Enter a new login password.
Repeat New Password	Retype the new login password.
Host Address	Enter the Internet IP address of the computer that has access to the Router.
Port	Enter a port number to access the Router.
Enable	Tick the check box to enable the remote management function.

Click **Apply** to save the changes.

Time

This window allows you to configure time and date of the Router.

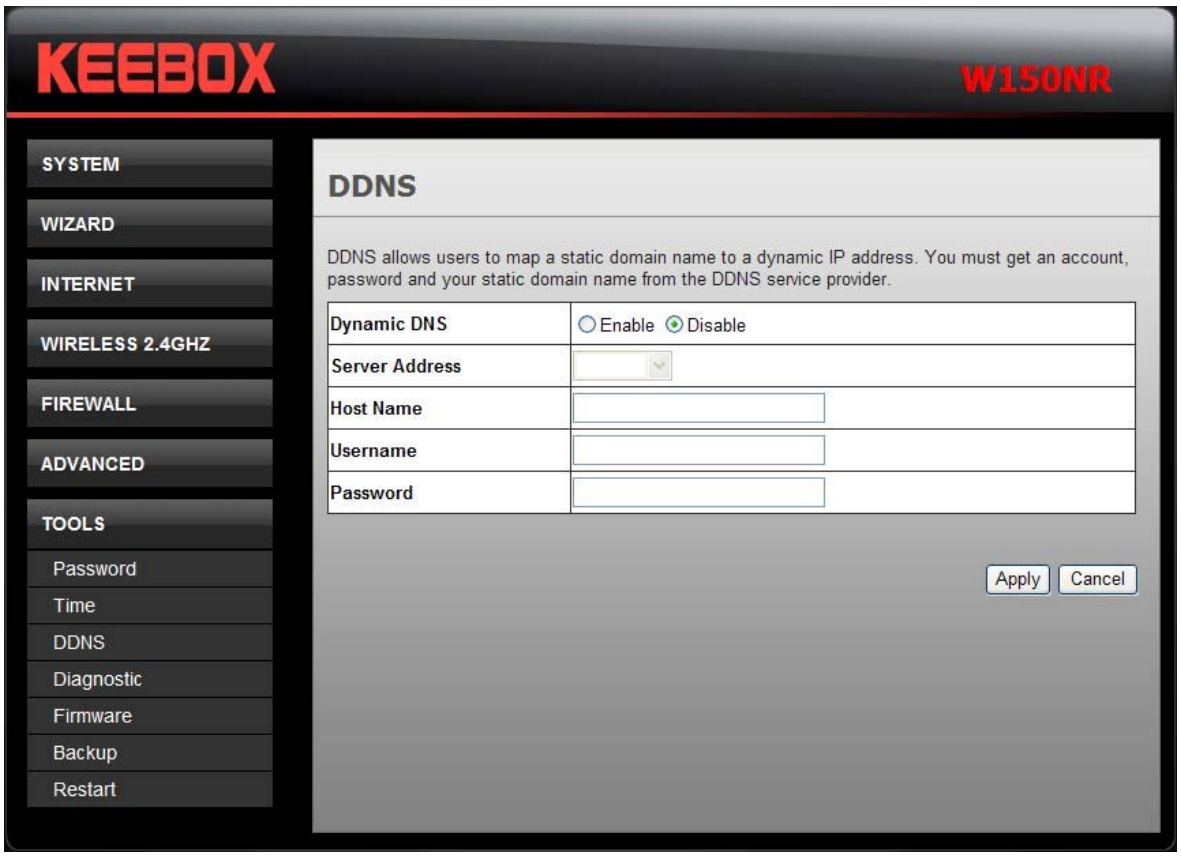


Fields	Description
Time Setup	Use the drop-down list to synchronize the Router's time with your computer or an NTP server.
PC Date and Time	This field appears when selecting **Synchronize with PC** in the **Time Setup** drop-down list. This field displays the current PC time.
NTP Time Server	This field appears when selecting **Synchronize with the NTP Server** in the **Time Setup** drop-down list. Enter the IP address of the NTP server.
Time Zone	Use the drop-down list to select your time zone.
Daylight Saving	Tick the **Enable** check box to enable daylight saving.

Click **Apply** to save the changes.

DDNS

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.



Fields	Description
Dynamic DNS	Click the **Enable** radio button to enable supporting for DDNS.
Server Address	Select one of the DDNS registration organizations form those listed in the pull-down menu.
Host Name	Enter the host name of the DDNS server.
Username	Enter the username given to you by your DDNS server.
Password	Enter the password or key given to you by your DDNS server.

Click **Apply** to save the changes.

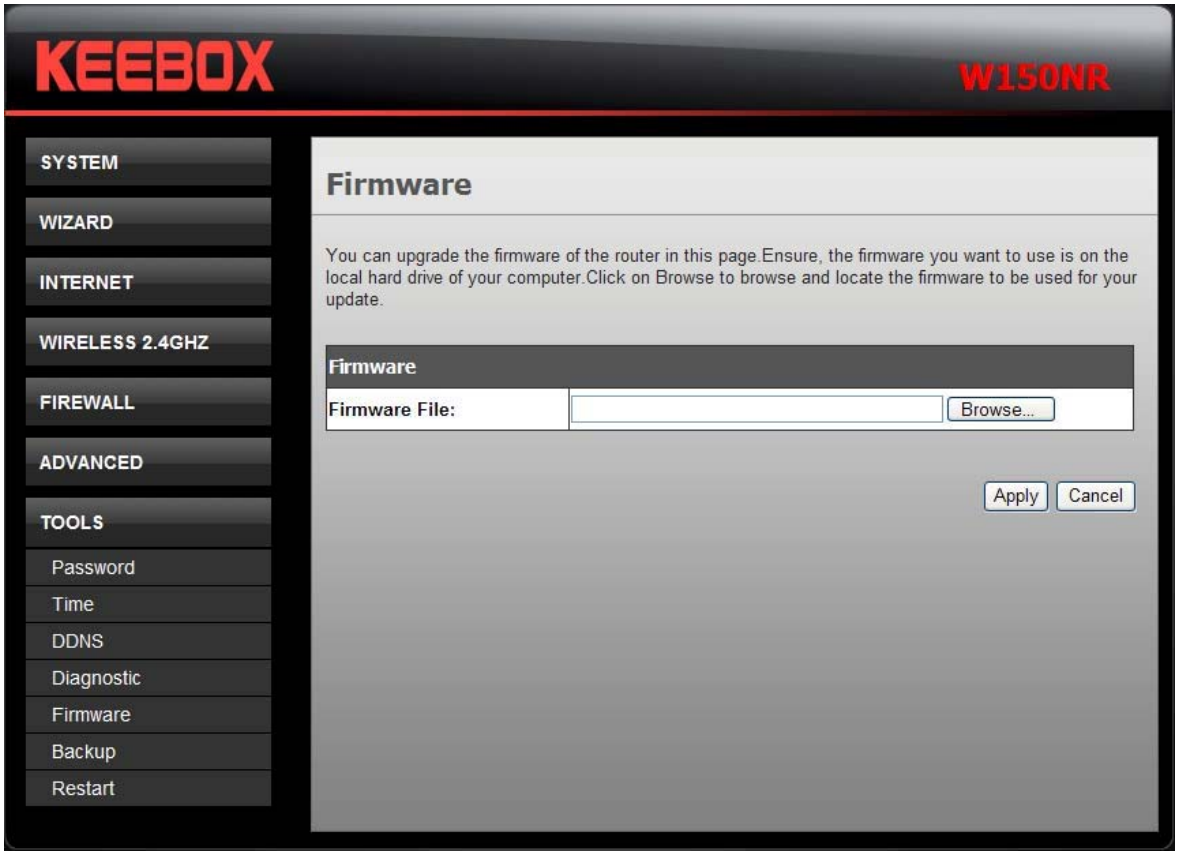
Diagnostic

This window is used to test connectivity of the Router.

Fields	Description
Address to Ping	Enter the IP Address that you wish to Ping, and click **Start**.
Ping Result	The field displays the result after pinging.

Firmware

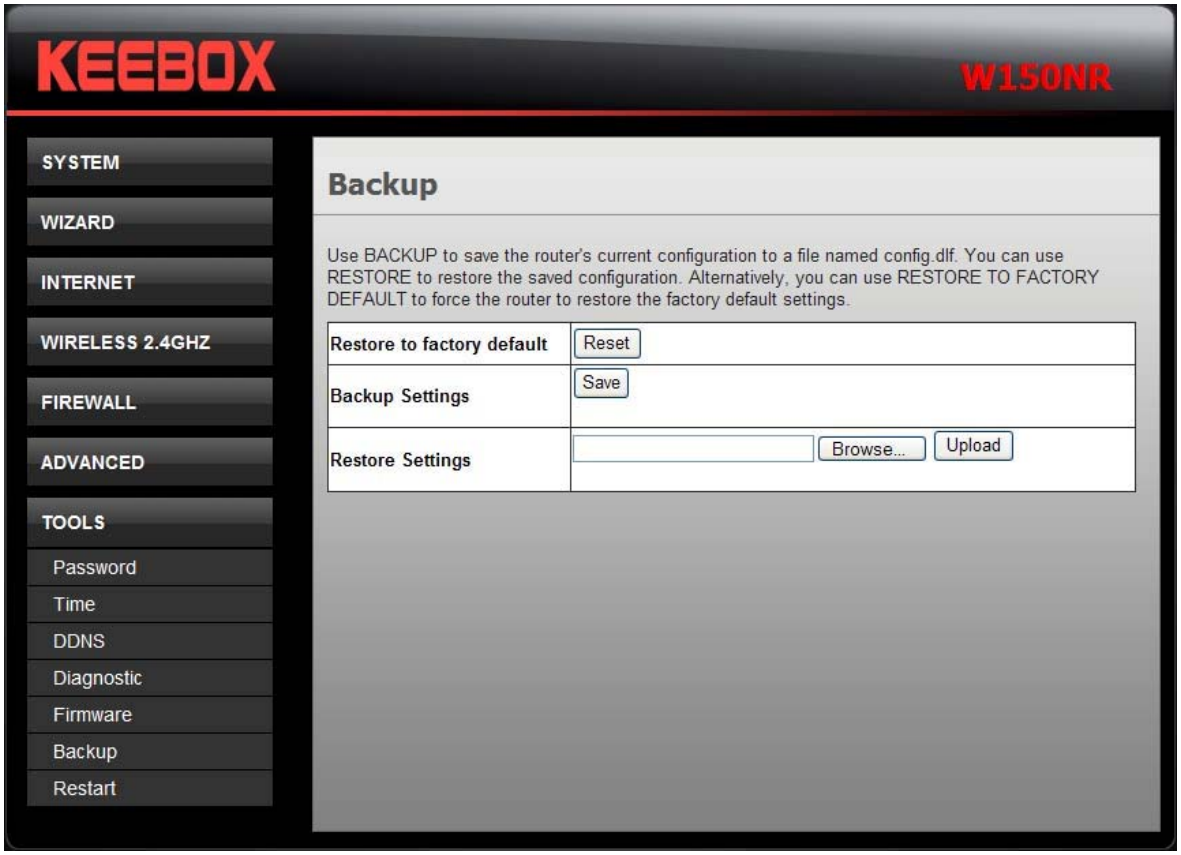
This window is for upgrading firmware of the Router.



Click **Browse** to locate the new firmware and click **Apply** to start firmware upgrade.

Backup

This window allows you to set the Route to original factory default setting, back up the configurations and restore the configuration you saved in the local computer.



Fields	Description
Restore to factory default	Click the **Reset** button to restore all configuration settings back to its factory default settings. The Router will reboot with the factory default settings including IP settings (192.168.10.1) and administrator password.
Backup Settings	Click the **Save** button to save the current Router configuration settings to a file on the hard disk of the computer.
Restore Settings	Click **Browse** to locate the configuration file you saved for the Router and click the **Upload** button to transfer the settings to the Router.

Restart

This window is for you to restart the Router.

Click **Apply** to restart the Router.

Limited Warranty

KEEBOX warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

W150NR – 1 Year Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

If a product does not operate as warranted during the applicable warranty period, KEEBOX shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original date of purchase. All products that are replaced become the property of KEEBOX. Replacement products may be new or reconditioned. KEEBOX does not issue refunds or credit. Please contact the point-of-purchase for their return policies.

KEEBOX shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to KEEBOX pursuant to any warranty.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product by any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting KEEBOX within the applicable warranty period and providing a copy of the dated proof of the purchase. Upon proper submission of required documentation a Return Material Authorization (RMA) number will be issued. An RMA number is required in order to initiate warranty service support for all KEEBOX products. Products that are sent to KEEBOX for RMA service must have the RMA number marked on the outside of return packages and sent to KEEBOX prepaid, insured and packaged appropriately for safe shipment. Customers shipping from outside of the USA and Canada are responsible for return shipping fees. Customers shipping from outside of the USA are responsible for custom charges, including but not limited to, duty, tax, and other fees.

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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.

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 or more 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.

Prohibition of Co-location

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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