D-LINK *Air*Plus DI-714P+

Enhanced 2.4 GHz
Wireless Router

Manual

D-Link

Building Networks for People

Contents

Package Contents

Contents of Package:

- **D-Link *Air*Plus DI-714P+** 2.4GHz Wireless Router
- Power Adapter – 5V DC
- Manual on CD
- Quick Installation Guide

Note: Using a power supply with a different voltage rating than the one included with the DI-714P+ will cause damage and void the warranty for this product.

If any of the above items are missing, please contact your reseller.

System Requirements For Configuration:

- Ethernet-Based Cable or DSL Modem
- Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter
- Internet Explorer version 5.5 or Netscape Navigator version 4.79 and above, with JavaScript enabled

Introduction

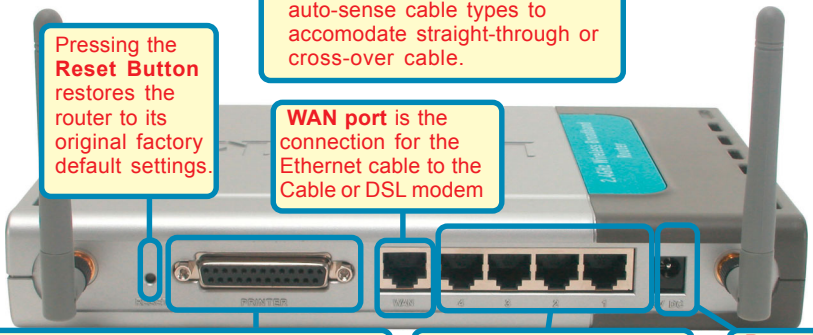
The D-Link *Air*Plus DI-714P+ Wireless Broadband Router is an enhanced 802.11b high-performance, wireless router with a printer port. It is an ideal way to extend the reach and number of computers connected to your wireless network.

Unlike most 802.11b routers, the DI-714P+ is capable of data transfer speeds up to 22 Mbps (compared to the standard 11 Mbps) when used with other D-Link *Air*Plus products such as the DWL-520+ and DWL-650+ Wireless Adapters.

After completing the steps outlined in the *Quick Installation Guide* (included in your package) you will have the ability to share information and resources, as well as share a printer wirelessly on your network.

The DI-714P+ is compatible with most popular operating systems, including Macintosh, Linux and Windows, and can be integrated into a large network. This Manual is designed to help you connect the Router and D-Link *Air*Plus 2.4GHz Wireless Adapters into a network in Infrastructure mode. *Please take a look at the **Getting Started** section in this manual to see an example of an Infrastructure network using the DI-714P+.*

Connections



Features & Benefits

- Connects multiple computers to an Ethernet Broadband (Cable or DSL) modem to share the Internet connection
- Supports VPN pass-through, providing added security
- Advanced Firewall features for added network security
- DHCP server support enables all networked computers to automatically receive IP addresses
- Wireless connection of up to 22Mbps
- Web-based interface for Management
- Access Control to manage users on the network
- Maximum reliability, throughput and connectivity with automatic data rate switching
- Stronger network security with 256-bit encryption
- Printer port enables connection to a network printer
- WAN and LAN ports auto detect cable types (straight-through or cross-over)
- UPnP supported

Note: Please refer to the *Troubleshooting* section in this manual for instructions on how to use the Reset button

LEDS

LED stands for **L**ight-**E**mitting **D**iode. The **DI-714P+** has the following LEDs as described below:

LED	LED Activity
Power	A steady light indicates a connection to a power source
M1 LED	Flashes once per second to indicate an active system
M2 LED	Lights up when the device has an Internet Connection
WAN	A solid light indicates connection on the WAN port. This LED blinks during data transmission
WLAN	A solid light indicates that the wireless segment is ready. This LED blinks during wireless data transmission.
LOCAL NETWORK (Ports 1-4)	A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4. This LED blinks during data transmission.

Wireless Basics

D-Link *Air*Plus wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link *Air*Plus wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless Basics

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

People use wireless LAN technology for many different purposes:

Mobility - Productivity increases when people have access to data in any location within the operating range of the WLAN. Management decisions based on real-time information can significantly improve worker efficiency.

Low Implementation Costs – WLANs (Wireless Local Area Networks) are easy to set up, manage, change and relocate. Networks that frequently change, both physically and logically, can benefit from WLANs ease of implementation. WLANs can operate in locations where installation of wiring may be impractical.

Installation Speed and Simplicity - Installing a wireless LAN system can be fast and easy and can eliminate the need to pull cable through walls and ceilings.

Network Expansion - Wireless technology allows the network to go where wires cannot.

Scalability – Wireless Local Area Networks (WLANs) can be configured in a variety of topologies to meet the needs of specific applications or existing infrastructure. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to larger infrastructure networks to accommodate hundreds or thousands of users, depending on the number of wireless devices deployed.

Wireless Basics

The DI-714P+ is compatible with other ***D-Link Air*****Plus** *802.11b products, which include*:

- Enhanced 2.4GHz Wireless Cardbus Adapters used with laptop computers (DWL-650+)
- Enhanced 2.4GHz Wireless PCI cards used with desktop computers (DWL-520+)

Standards-Based Technology

Based on the IEEE **802.11b** standard, the DI-714P+ is interoperable with existing compatible 2.4GHz wireless technology with data transfer speeds of up to 22Mbps (with the D-Link *Air*Plus family of wireless devices,) as well as standard 802.11b technology (the D-Link *Air* family of wireless devices), with speeds of up to 11Mbps.

Installation Considerations

The D-Link *Air*Plus DI-714P+ lets you access your network, using a wireless connection, from virtually anywhere. Keep in mind, however, that the number, thickness and location of walls, ceilings or other objects that the wireless signals must pass through may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the DI-714P+ and your receiving device (e.g., the DWL-650+) to a minimum-each wall or ceiling can reduce your D-Link *Air*Plus wireless product's range from 3-90 feet (1-30 meters.) Position your receiving devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between routers and computers. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Try to make sure that devices are positioned so that the signal will travel straight through a wall or ceiling for better reception.
3. Building Materials make a difference - a solid metal door or aluminum studs may have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.

Getting Started

With its default settings, the DI-714P+ will connect with other D-Link *Air* or *Air*Plus products, right out of the box.

With a single IP Address from your Broadband Internet Service provider you can share the Internet with all the computers on your local network, without sacrificing speed or security, using D-Link *Air* networking products.

IP ADDRESS

Note: If you are using a DHCP-capable router in your network setup, such as the DI-714P+, you will not need to assign a static IP Address.

If you need to assign IP Addresses to the computers on the network, please remember that the **IP Address for each computer must be in the same IP Address range as all the computers in the network**, and the Subnet Mask must be exactly the same for all the computers in the network.

For example: If the first computer is assigned an IP Address of 192.168.0.2 with a Subnet Mask of 255.255.255.0, then the second computer can be assigned an IP Address of 192.168.0.3 with a Subnet Mask of 255.255.255.0, etc.

IMPORTANT: If computers or other devices are assigned the same IP Address, one or more of the devices may not function properly on the network.

An **Infrastructure** wireless network contains an Access Point. The **Infrastructure Network** example, shown here, contains the following D-Link network devices:

A wireless Broadband Router - **D-Link *Air*Plus DI-714P+**
A laptop computer with a wireless adapter - **D-Link *Air*Plus DWL-650+**
A desktop computer with a wireless adapter - **D-Link *Air*Plus DWL-520+**
A Cable modem - **D-Link DCM-200**

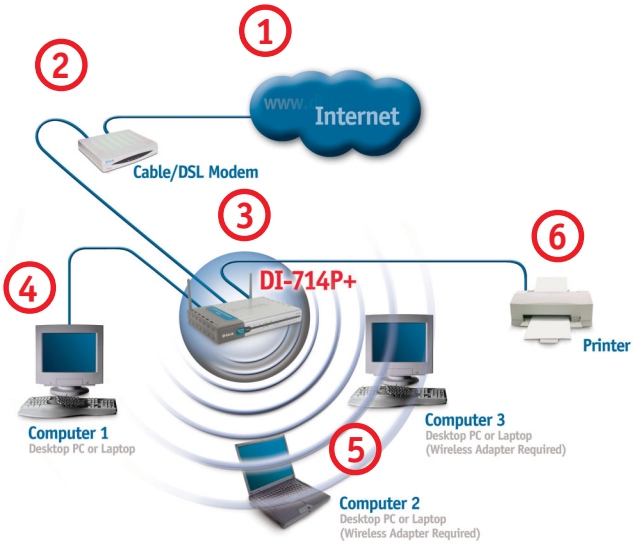
Getting Started

Please refer to the following sections of this manual for additional information about setting up a network:

Networking Basics - learn how to check and assign your IP Address; share printers and files.

Using the Configuration Menu - learn the settings for the DI-714P+, using the web-based interface.

Troubleshooting - learn how to check for common installation issues and other tips for troubleshooting.



*Please remember that **D-Link AirPlus** wireless devices are pre-configured to connect together, right out of the box, with their default settings.*

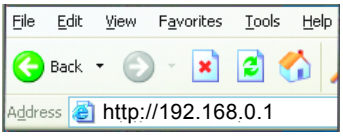
For a typical wireless setup at home (as shown above), please do the following:

1. You will need broadband Internet access (a Cable or DSL subscription line into your home or office)
2. Consult with your Cable or DSL provider for proper installation of the modem
3. Connect the Cable or DSL modem to the DI-714P+ wireless broadband router (*see the Quick Installation Guide included with the DI-714P+.*)
4. If you are connecting a desktop computer to your network, you can install the D-Link *Air*Plus DWL-520+ wireless PCI adapter into an available PCI slot. (See the Quick Installation Guide included with the DWL-520+.)
5. If you are connecting a laptop computer to your network, install the drivers for the wireless cardbus adapter (**e.g., D-Link *Air*Plus DWL-650+**) into a laptop computer.(See the Quick Installation Guide included with the DWL-650+.)
6. Connect your printer to the printer port on the DI-714P+. Please refer to the quick installation guide for loading the print server software.

Using the Configuration Menu

Whenever you want to configure your network or the DI-714P+, you can access the Configuration Menu by opening the web-browser and typing in the IP Address of the DI-714P+. The DI-714P+ default IP Address is shown below:

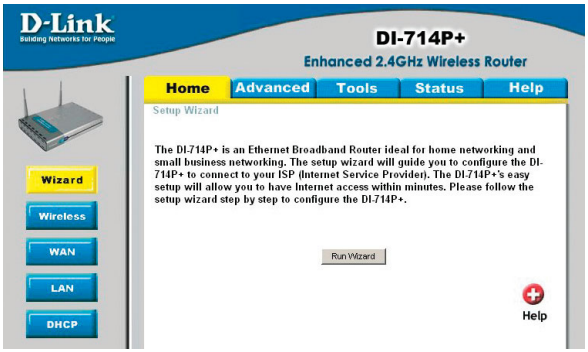
- Open the web browser
- Type in the **IP Address** of the DI-714P+



Note: if you have changed the default IP Address assigned to the DI-714P+, make sure to enter the correct IP Address.

The factory default **User name** is **admin** and the default **Password** is blank (empty). It is recommended that you change the admin password for security purposes. Please refer to T**ools>Admin** to change the admin password.

Home > Wizard



The Home>Wizard screen will appear. Please refer to the *Quick Installation Guide* for more information regarding the Setup Wizard.

Apply Clicking **Apply** will save changes made to the page

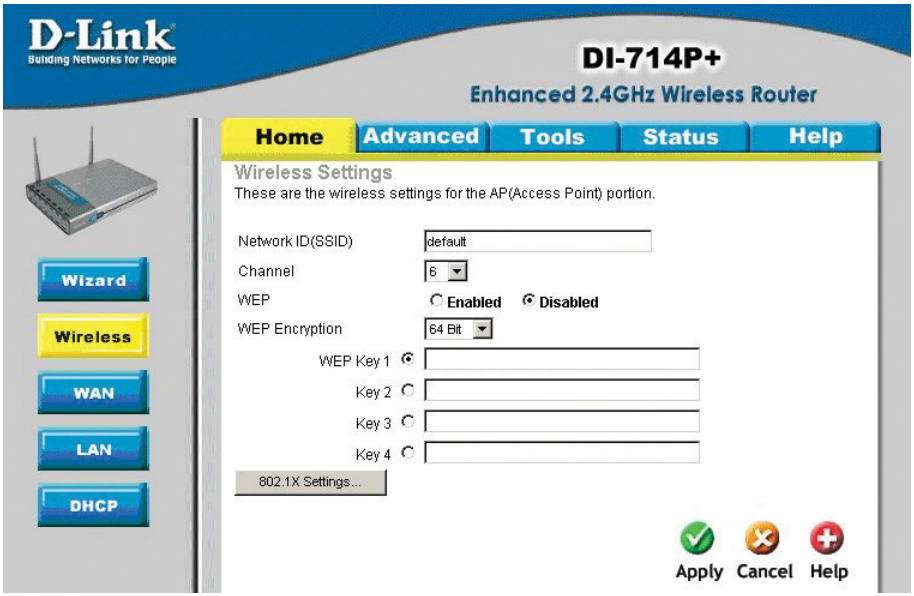
Cancel Clicking **Cancel** will clear changes made to the page

Help Clicking **Help** will bring up helpful information regarding the page

Restart Clicking **Restart** will restart the router. (Necessary for some changes.)

Using the Configuration Menu

Home > Wireless



SSID- **Default** is the default setting. All devices on the network must share the same SSID. If you change the default setting, the SSID may be up to 32 characters long.

Channel- **6** is the default channel. All devices on the network must share the same channel.

WEP- Click *Enabled* or *Disabled (default)*

WEP Encryption- Select the level of encryption desired: 64, 128 or 256-bit

64-bit Requires 10 digits
128-bit Requires 26 digits
256-bit Requires 58 digits

Keys 1-4- Input up to 4 WEP keys using Hexadecimal format; select the one you wish to use.

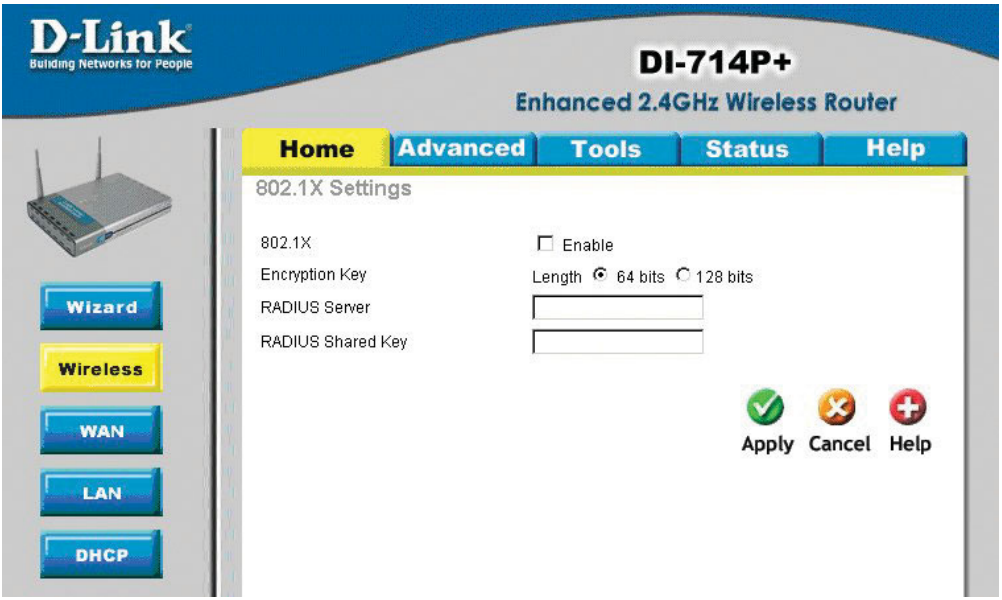
802.1x settings- Click to use 802.1x for an extra-level of security, including client authentication, and the window shown on the next page will appear.

Hexadecimal digits consist of the numbers 0-9 and the letters A-F.

WEP (*Wired Equivalent Privacy*) If you enable encryption on the DI-714P+, make sure to also enable encryption on all 802.11b wireless clients, or wireless connection will not be established.

Using the Configuration Menu

Home > Wireless >802.1x



802.1x- 802.1x Authentication is a first line of defense against intrusion. In the Authentication process the server verifies the identity of the client attempting to connect to the network.Unfamiliar clients are denied access to the network.
If you enable 802.1x for the DI-714P+, all of the devices on your network must be 802.1x compatible and must have the 802.1x feature enabled to communicate. *(Windows 2000 users will find a free download to enable 802.1x clients on the MSN website.)*
Click Enable to enable 802.1x on the DI-714P+.

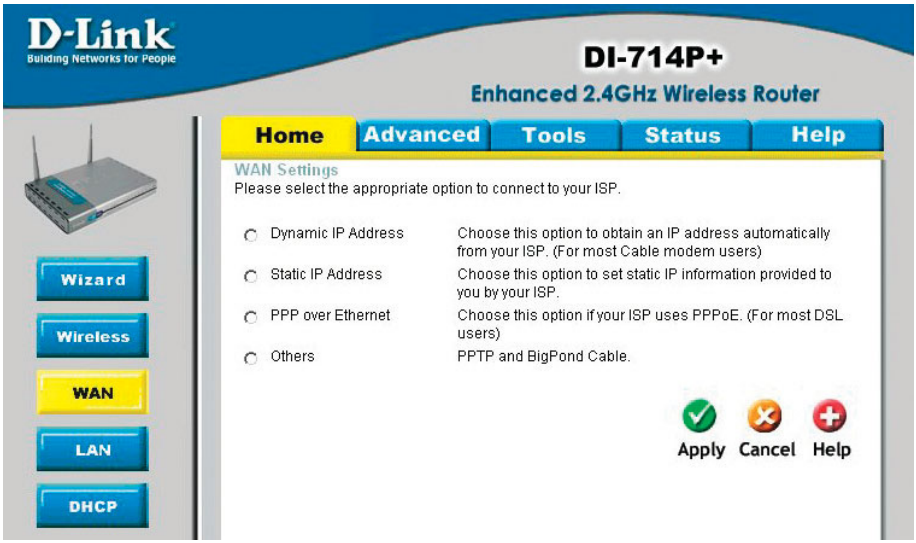
Encryption Key- Select the length: 64 bits or 128 bits for Dynamic Keying

RADIUS Server- Enter the IP address of the RADIUS server that will be used as the 802.1x authenticator.

RADIUS shared key- Enter the secret key that has also been entered into the RADIUS server's configuration.

Using the Configuration Menu

Home > WAN



Choose WAN Type

WAN stands for ***Wide Area Network***. In this case WAN represents the mode in which your ISP connects to the Internet. If you are uncertain, please ask your ISP which of the following represents your connection mode to the Internet:

Dynamic IP Address- Obtain an IP address from your ISP automatically (mainly for Cable users)

Static IP Address- Your ISP assigns you a Static IP Address

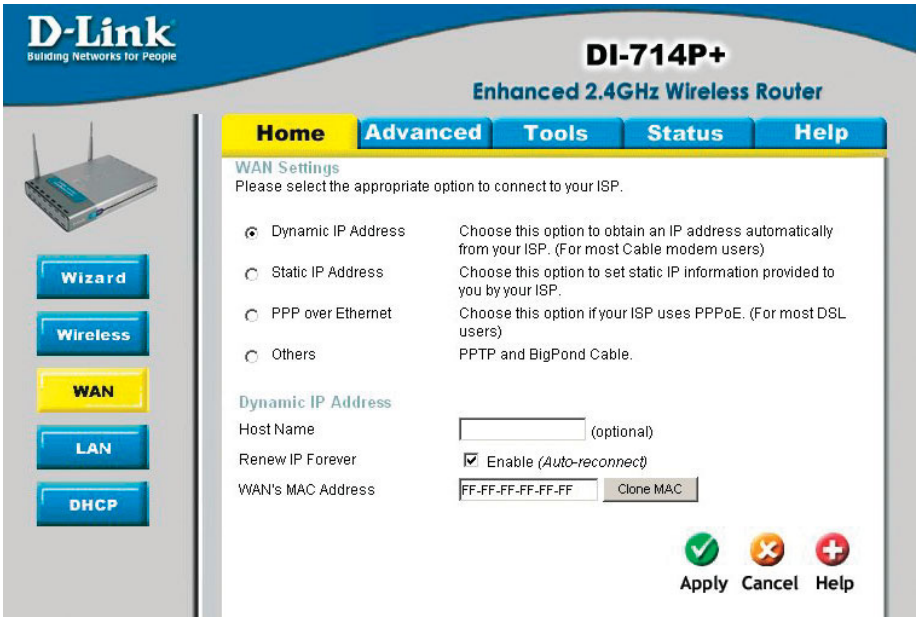
PPP over Ethernet- Some ISPs require the use of PPPoE to connect to their services (mainly for DSL users)

Others-

- **PPTP-** For use in Europe only
- **Big Pond Cable-** For use in Australia only

Using the Configuration Menu

Home > WAN > Dynamic IP Address



Most Cable modem users will select this option to obtain an IP Address automatically from their ISP (Internet Service Provider).

Host Name- This is optional, but may be required by some ISPs. The host name is the device name of the Router.

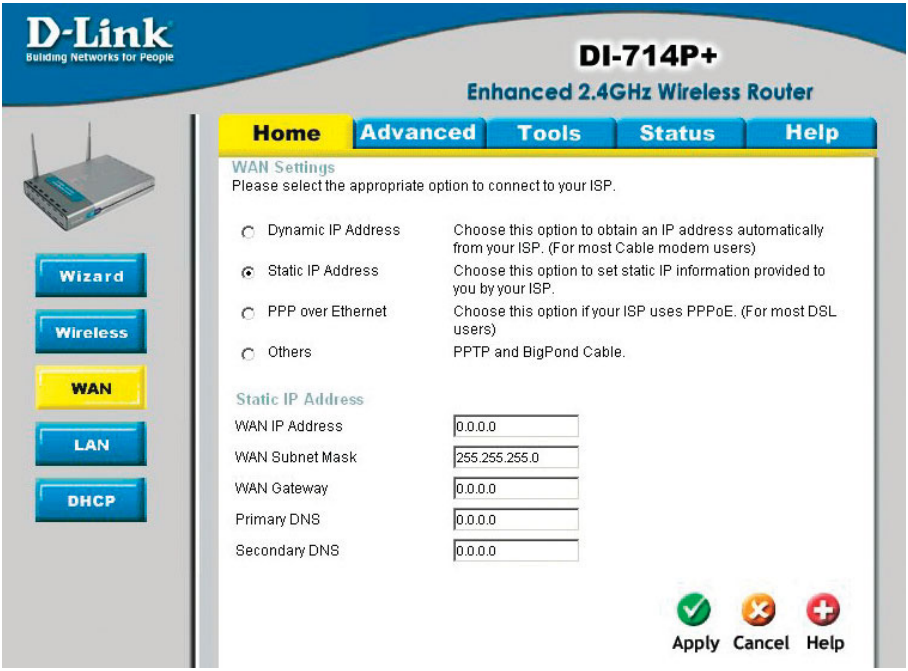
Renew IP Forever- Enable this feature to allow the router to automatically reconnect to the ISP if the connection drops.

MAC Address- The default MAC Address is set to the WAN's physical interface MAC address on the Router.

Clone MAC Address- This feature will copy the MAC address of the Ethernet card, and replace the WAN MAC address of the Router with this Ethernet card MAC address. It is not recommended that you change the default MAC address unless required by your ISP.

Using the Configuration Menu

Home > WAN > Static IP Address



If you use a Static IP Address, you will input information here that your ISP has provided to you.

WAN IP Address- Input the IP Address provided by your ISP

WAN Subnet Mask- Input the Subnet Mask provided by your ISP

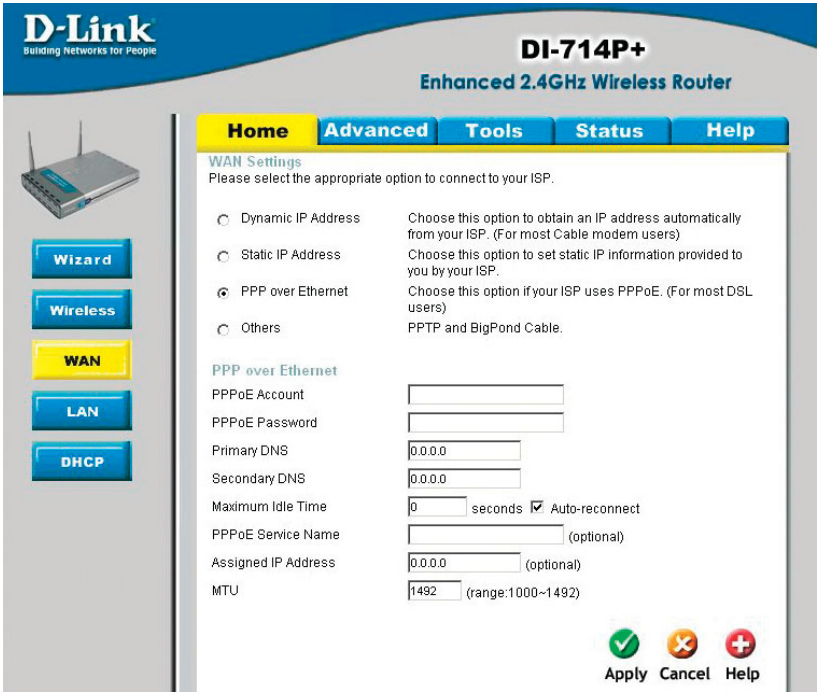
WAN Gateway- Input the Gateway address provided by your ISP

Primary DNS- Input the primary DNS address provided by your ISP

Secondary DNS- (Optional) Input the Secondary DNS address provided by your ISP.

Using the Configuration Menu

Home > WAN > PPPoE



Most DSL users will select this option to obtain an IP address automatically from their ISP through the use of PPPoE.

PPPoE Account- Your PPPoE password provided by your ISP

PPPoE Password- Your PPPoE username is provided by your ISP

Primary DNS- You will get the DNS IP automatically from your ISP but you may enter a specific DNS address that you want to use instead.

Secondary DNS- (Optional) Input the secondary DNS address

Maximum Idle Time- Enter a maximum idle time during which Internet connection is maintained during inactivity. To disable this feature, enable *Auto-reconnect*.

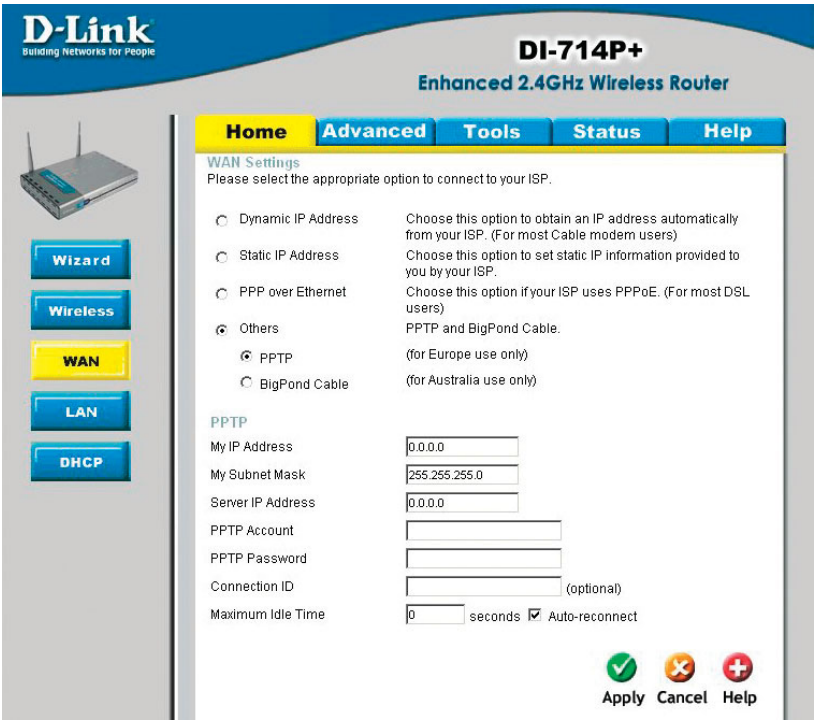
PPPoE Service Name- (Optional) Check with your ISP for more information if they require the use of service name.

Assigned IP Address- (Optional) Enter in the IP Address if you are assigned a static PPPoE address.

MTU- *Maximum Transmission Unit*; default is 1492; you may need to change the MTU to conform to your ISP.

Using the Configuration Menu

Home > WAN > PPTP



Point-to-Point Tunneling Protocol (PPTP) is a WAN connection used in Europe.

My IP Address- Enter the IP Address

My Subnet Mask- Enter the Subnet Mask

Server IP Address- Enter the Server IP Address

PPTP Account- Enter the PPTP account name

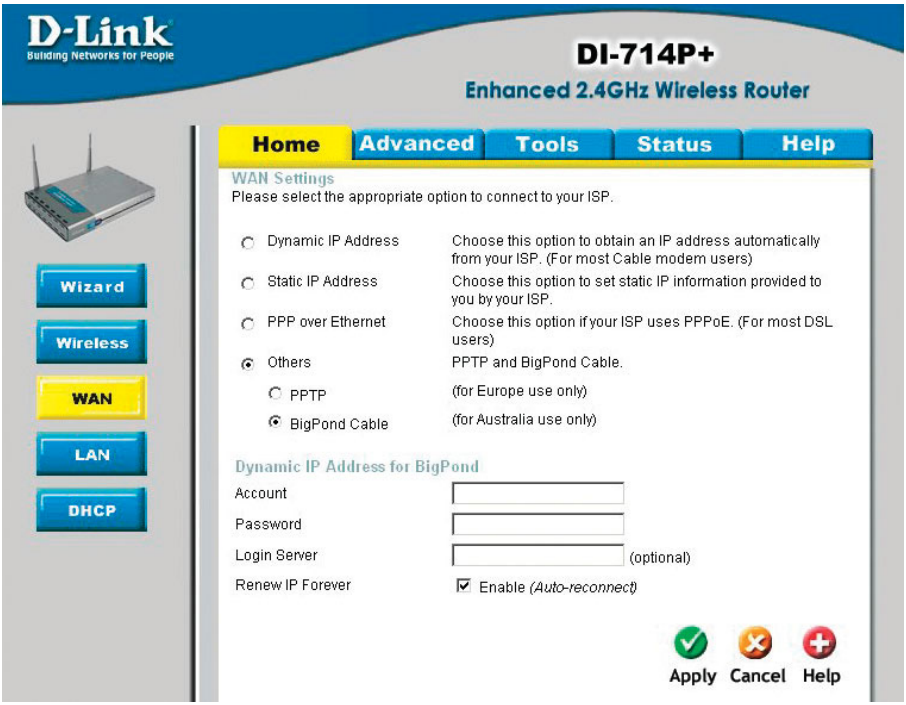
PPTP Password- Enter the PPTP password

Connection ID- (Optional) Enter the connection ID if required by your ISP

Maximum Idle Time- Enter a maximum idle time during which Internet connection is maintained during inactivity. To disable this feature, enable *Auto-reconnect.*

Using the Configuration Menu

Home > WAN > BigPond Cable



Dynamic IP Address for BigPond is a WAN connection used in Australia.

Account- Enter in the username for the BigPond account

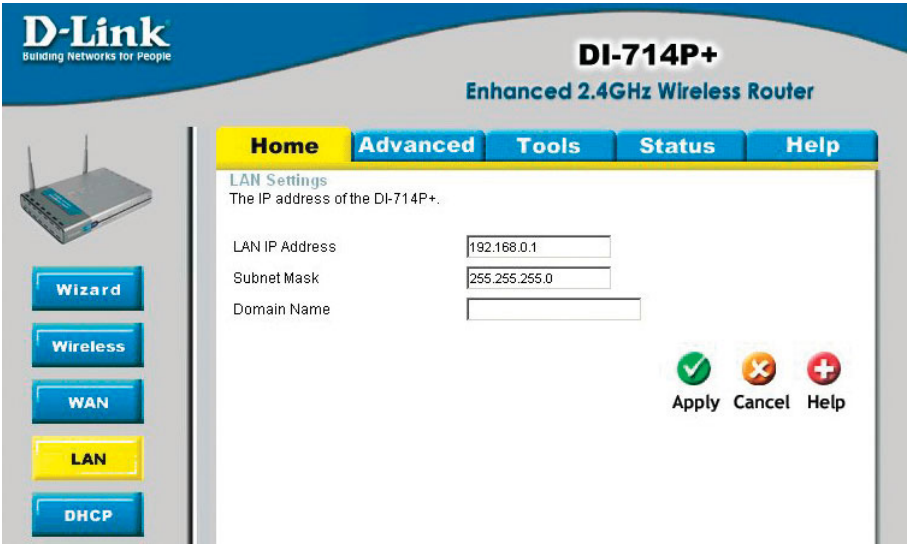
Password- Enter the password for the BigPond account

Login Server- (Optional) enter the Login Server name if required

Renew IP forever- If enabled, the device will automatically connect to your ISP after your unit is restarted or when the connection is dropped.

Using the Configuration Menu

Home > LAN



LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the DI-714P+. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

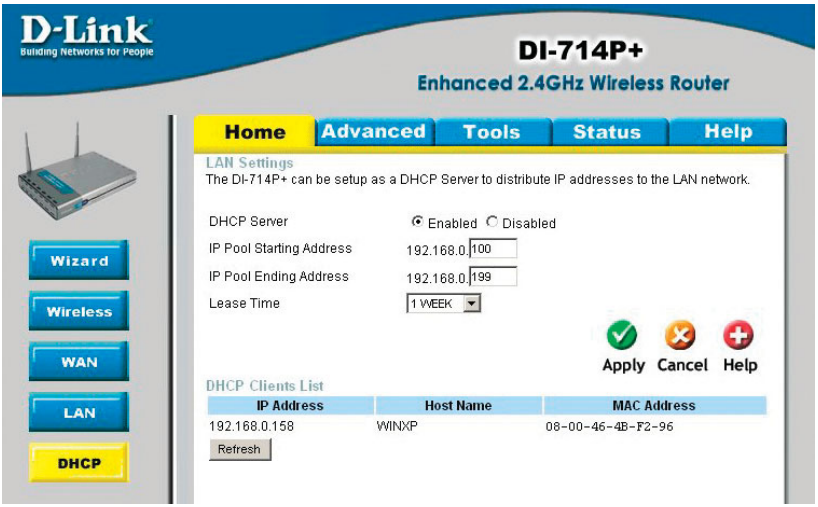
IP Address- The IP address of the LAN interface. The default IP address is: **192.168.0.1**

Subnet Mask- The subnet mask of the LAN interface. The default subnet mask is **255.255.255.0**

Domain Name- (Optional) The name of your local domain

Using the Configuration Menu

Home > DHCP



DHCP stands for *Dynamic Host Control Protocol*. The DI-714P+ has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DI-714P+. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

DHCP Server- Enable or disable the DHCP service

IP Pool Starting Address- The starting IP address for the DHCP server's IP assignment

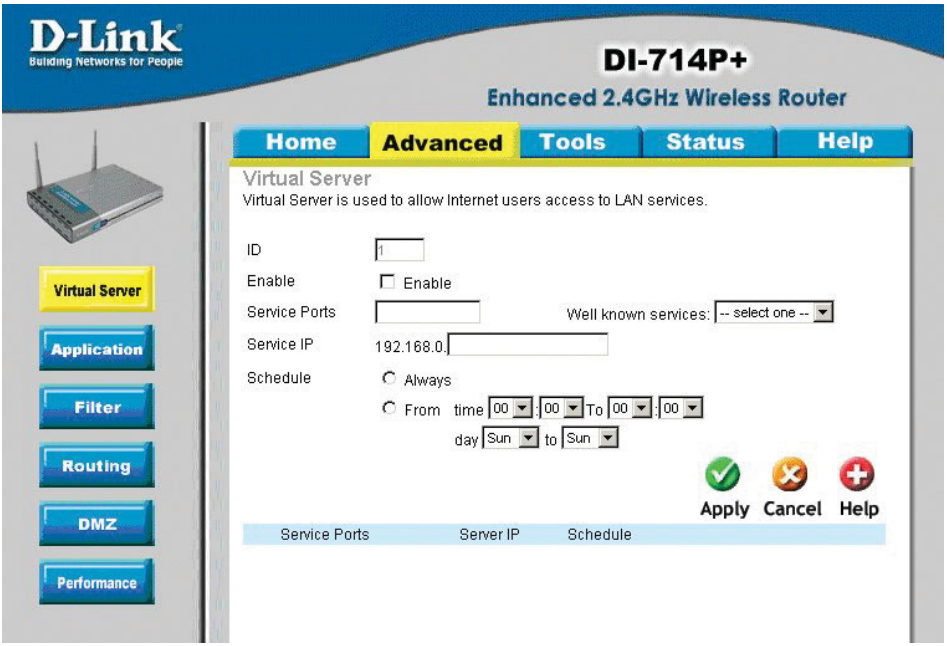
IP Pool Ending Address- The ending IP address for the DHCP server's IP assignment

Lease Time- The length of time for the DHCP lease

DHCP Clients List- Lists the DHCP clients connected to the DI-714P+. Click **Refresh** to update the list. The table will show the Host Name, IP Address, and MAC Address of the DHCP client computer.

Using the Configuration Menu

Advanced > Virtual Server



The DI-714P+ 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 DI-714P+ firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the DI-714P+ 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 DI-714P+ redirects the external service request to the appropriate server within the LAN network.

There are already defined well-known virtual services. To use them, select one from the drop down list.You will only need to input the LAN IP address and the Service Ports of the computer running the service, select *Always* or *Schedule* a time during which the virtual server will be in effect, and *Enable* it.

Service Ports- Enter in the service port or ports to be used. A range of ports can be specified with a hyphen. *(e.g., 20-21)*

Service IP- The IP address of the internal computer that will be using the virtual service

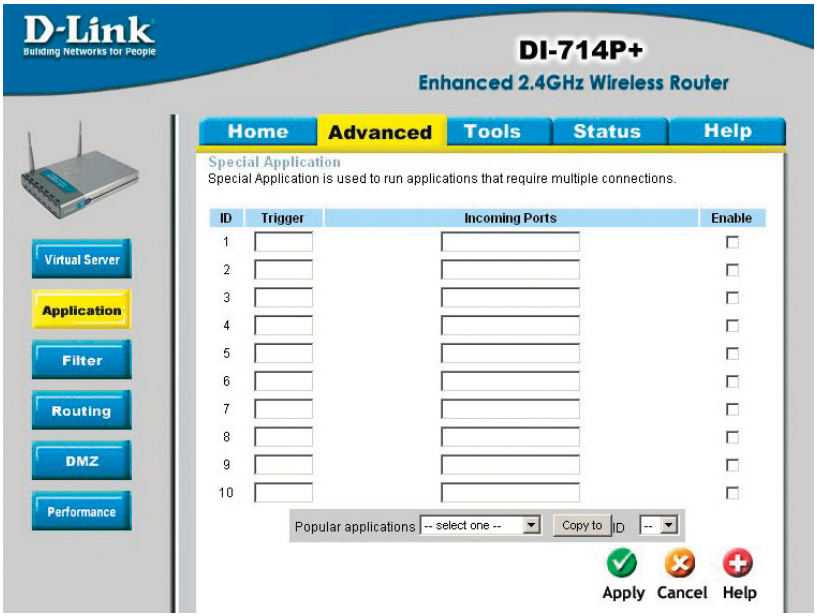
Schedule- Select *Always* or *Schedule* a time during which the service will be in effect

Well known services- Select one of the well-known services from the pull-down list

Enable- Select to activate the policy

Using the Configuration Menu

Advanced > Application



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 DI-714P+. If you need to run applications that require multiple connections, specify the port normally associated with an application in the **Trigger** field, then enter the public ports associated with the trigger port into the **Incoming Ports** field.

At the bottom of the screen, there are already defined special applications. To use them, select one from the drop down list and select an ID number you want to use. Then click the "Copy to" button and the router will fill in the appropriate information to the list. You will then need to enable the service. If the mechanism of Special Applications fails to make an application work, try using DMZ host instead.

Note! *Only one PC can use each Special Application tunnel.*

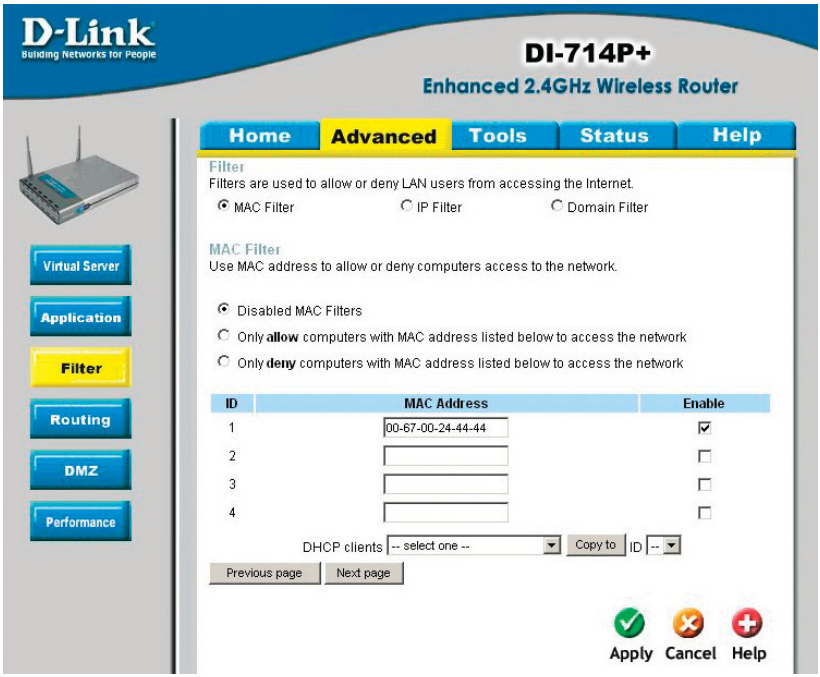
Trigger- This is the port used to trigger the application. It can be either a single port or a range of ports.

Incoming Ports- This is the port number on the WAN 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.

Enable- Select to activate the policy

Using the Configuration Menu

Advanced > MAC Filters



MAC (Media Access Control) Filters are used to deny or allow LAN (Local Area Network) computers from accessing the Internet and network by their MAC address. MAC filters apply both to wired computers connected to one of the four Ethernet LAN ports and also to wireless clients connected wirelessly to the DI-714P+.

At the bottom of the screen, there is a list of MAC addresses from the DHCP client computers connected to the DI-714P+. To use them, select one from the drop down list and select an IP number you want to use. Then click the “Copy to” button and the DI-714P+ will fill in the appropriate information to the list.

Disabled MAC Filter: Select this option if you do not want to use MAC filters.

Only allow computers with MAC address listed below to access the network- Select this option to only allow computers that are in the list to access the network and Internet. All other computers will be denied access to the network and Internet.

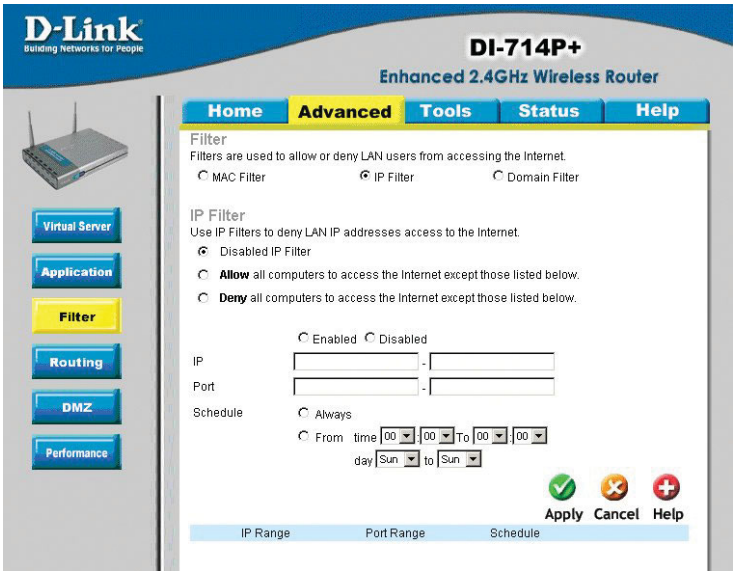
Only deny computers with MAC address listed below to access the network- Select this option to only deny computers that are in the list to access the network and Internet. All other computers will be allowed access to the network and Internet.

MAC Address- Enter the **MAC Address** of the client that will be filtered

Enable- Select this option for the specific IP filter policy to take effect.

Using the Configuration Menu

Advanced > IP Filter



Use IP (Internet Protocol) filters to allow or deny computers access to the Internet based on their IP address. IP filters apply both to wired computers connected to one of the four Ethernet LAN ports and also to wireless clients connected wirelessly to the DI-714P+.

Disabled IP Filter- Select this option if you do not want to use IP filters.

Allow all computers to access the Internet except those listed below-
Select this option to allow computers that are in the list to access the Internet. All other computers will be denied access to the Internet.

Deny all computers access to the Internet except those listed below-
Select this option to deny computers that are in the list to access the Internet. All other computers will be allowed access to the Internet.

IP- Enter in the IP address range of the computers that you want the policy to apply to. If it is only a single computer that you want the policy applied to, then enter the IP address of that computer in the Start Source IP and leave the End Source IP blank.

Port- Enter in the port range of the TCP/UDP ports that you want the policy to apply to. If it is only a single port that you want the policy applied to, then enter the port number in the Start Port field and leave the End Port field blank. If you want to use all the ports, you can leave the port range empty.

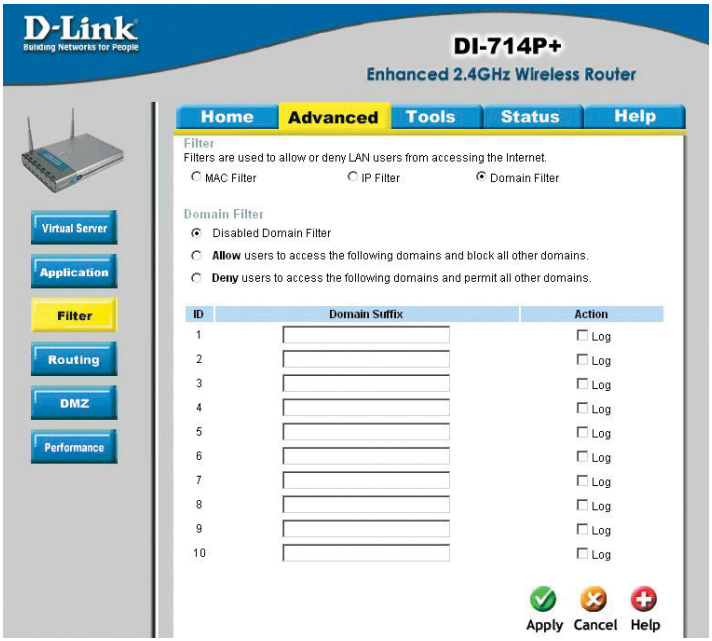
Schedule- Select Always, or input a specific time schedule during which the specific filter will be enabled

Enabled or Disabled-

After you have input all the *IP, Port* and *Schedule* information then clidk *Enabled* or *Disabled*. You can change this setting later by clicking on the *Edit* or *Delete* icon in the list of filters at the bottom of this screen.

Using the Configuration Menu

Advanced > Domain Filter



Use Domain filters to allow or deny computers access to specific Internet domains whether it is through www, ftp, snmp, etc. Domain filters apply both to wired computers connected to one of the four Ethernet LAN ports and also to wireless clients connected wirelessly to the DI-714P+.

Disabled Domain Filter- Select this option if you do not want to use Domain filters.

Allow users to access the following domains and block all other domains- Select this option to allow users to access the specified Internet domains listed below. Users will be denied access to all other Internet domains.

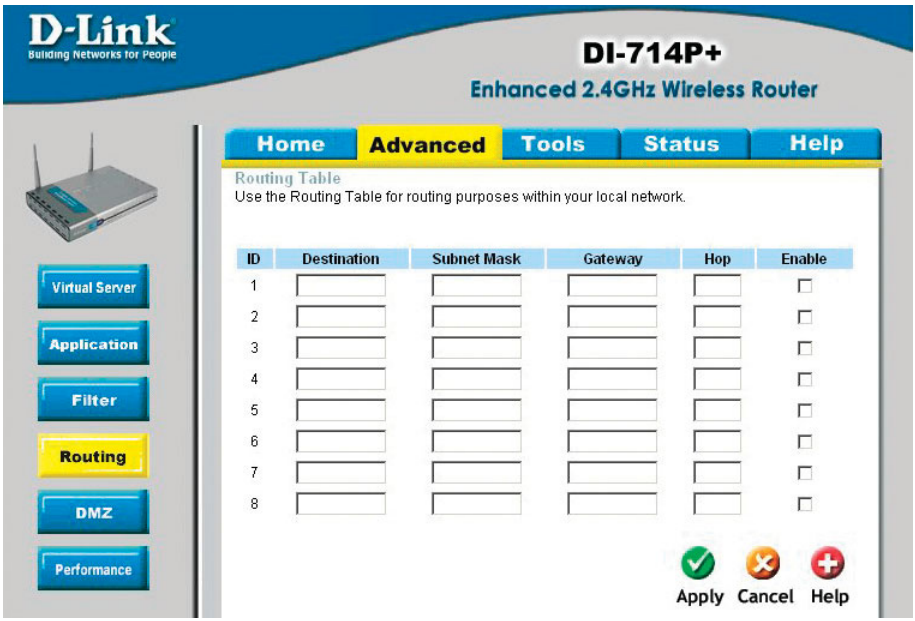
Deny users to access the following domains and permit all other domains- Select this option to deny users to access the specified Internet domains listed below. Users will be allowed access to all other Internet domains.

Domain suffix- Enter in the domain suffix of the Internet domain you want to use. (example: shopping.com, sports.net)

Log- Select this option to log usage to the specified domain. The logs can be viewed in Status > Log.

Using the Configuration Menu

Advanced > Routing



Static routes can be added if you require specific routes within your internal network. These routes will not apply to the WAN (Internet) network.

Destination- Enter in the IP of the specified network that you want to access using the static route

Subnet Mask- Enter in the subnet mask to be used for the specified net work.

Gateway- Enter in the gateway IP address to the specified network.

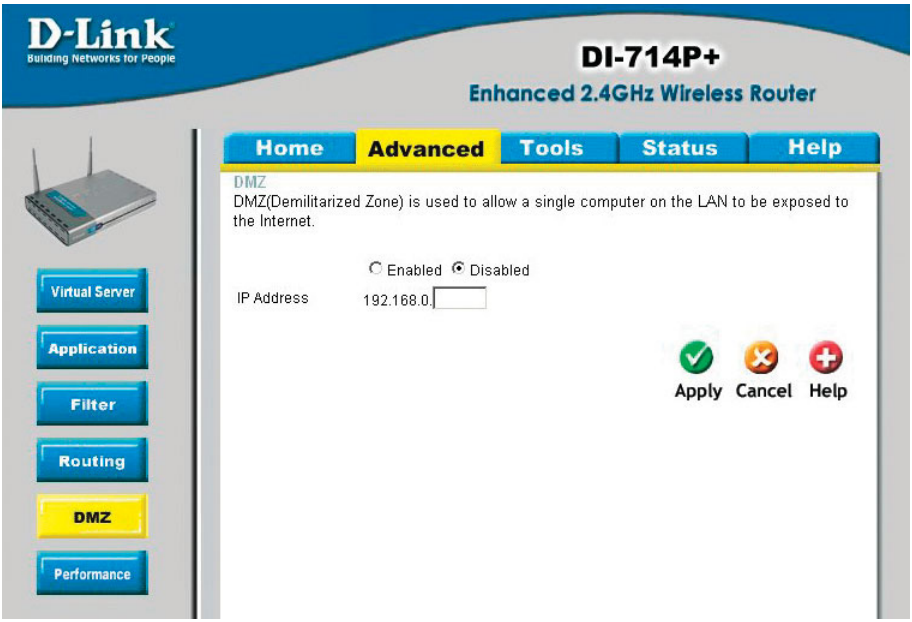
Hop- Enter in the amount of hops it will take to the specified network.

Enable- Select this option for the specified static route to take effect.

Hop Count - *in a transmission path, each link is terminated at a network device such as a router or gateway. The number of hops equals the number of routers or gateways that data must pass through before reaching the destination.*

Using the Configuration Menu

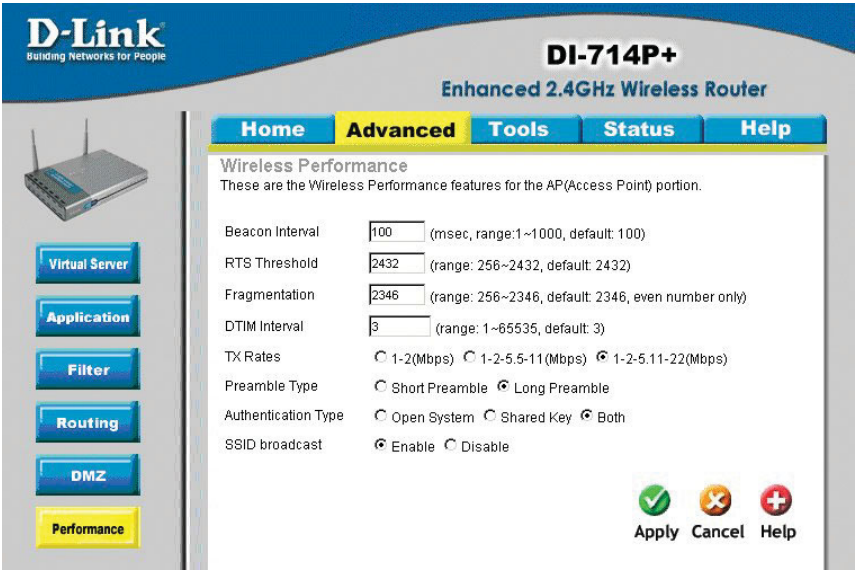
Advanced > DMZ



If you have a computer that cannot run Internet applications properly from behind the DI-714P+, then you can allow that computer to have unrestricted Internet access. Enter the IP address of that computer as a DMZ (Demilitarized Zone) host with unrestricted Internet access. Adding a client to the DMZ may expose that computer to a variety of security risks; so only use this option as a last resort.

Using the Configuration Menu

Advanced > Performance



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.

RTS Threshold- This value should remain at its default setting of **2432**. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation- This value should also remain at its default setting of **2346.** If you experience a high packet error rate, you may slightly increase your Fragmentation Threshold within the value range of 256 to 2,346. Setting the Fragmentation Threshold too low may result in poor performance.

DTIM interval- (**D**elivery **T**raffic **I**ndication **M**essage) **3** is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

TX Rates- Select the data rate. Default is **1-2-5.5-11-22Mbps**.

Preamble Type- **Long preamble** is the default setting. (High traffic networks should use the shorter preamble type.) The preamble defines the length of the CRC block used in communication between the Access Point and the roaming wireless Network adapters. (Cyclic Redundancy Check is a common technique for detecting data transmission errors)

Using the Configuration Menu

Authentication- Select **Open system**, **Shared Key** or **Both**

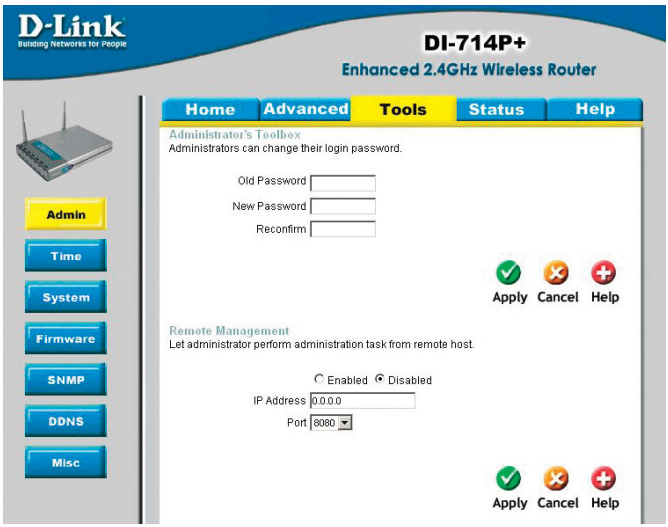
Open System - The DI-714P+ will be visible to all devices on the network. This is the default setting

Shared Key - In this mode, in order to access the DI-714P+ on the network, the device must be listed in the MAC Address Control List

Both - In this mode, all devices on the network can access the DI-714P+

SSID Broadcast- **Enable** is the default setting. Choose **Enable** to broadcast the SSID across the network. All devices on a network must share the same SSID (Service Set Identifier) to establish communication. Choose **Disable** if you do not wish to broadcast the SSID over the network.

Tools> Admin



You can change the **admin password** here. It is recommended that you change the admin password from the default setting.The default password is blank (nothing).

Password- To change the admin password, enter in the old password, and enter the new password twice to confirm

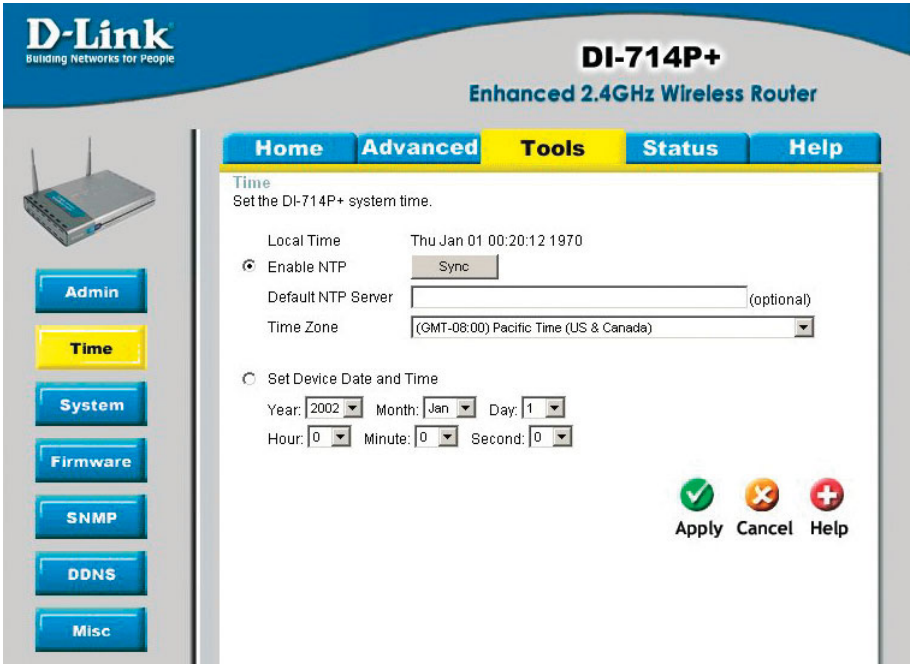
Remote Management- Remote Management allows the device to be configured through the WAN (Wide Area Network) port from the Internet using a web browser. A username and password is still required to access the browser-based management interface.

IP Address- Internet IP Address of the computer that has access to the DI-714P+. If the IP Address is set to 0.0.0.0, this allows all Internet IP addresses to access the DI-714P+.

Port- The port number used to access the DI-714P+.
Example:http://x.x.x.x:8080, where x.x.x.x. is the WAN IP address of the DI-714P+ and 8080 is the port used for the Web Management interface.

Using the Configuration Menu

Tools > Time



You will need to set the time zone corresponding to your location. The time can be set manually or the device can connect to a NTP (Network Time Protocol) server to retrieve the time.

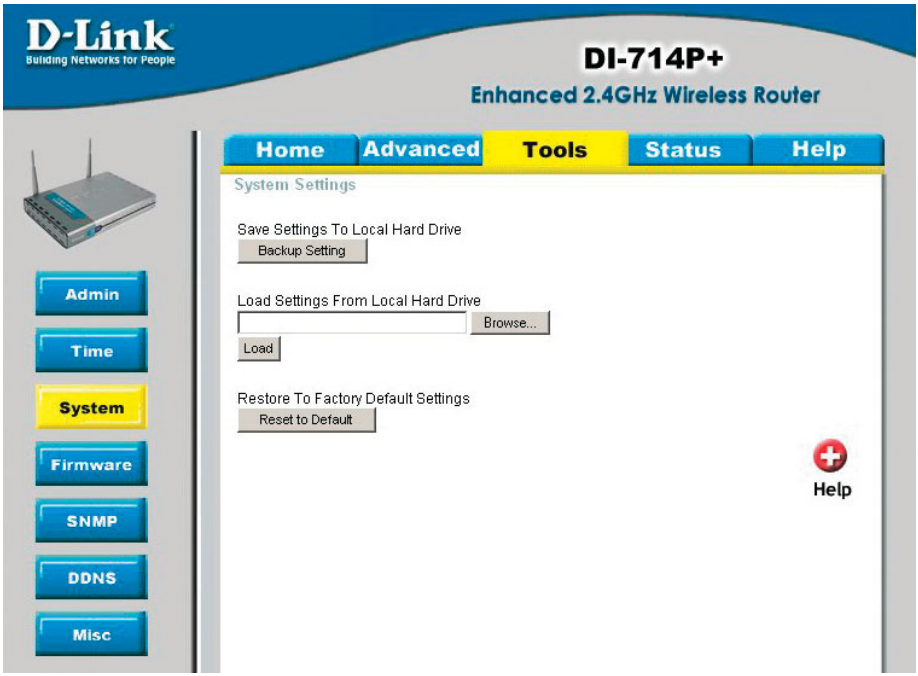
Enable NTP- (Network Time Protocol). Select to synchronize the time on the DI-714P+ to an NTP server.

Set Device Date and Time- You can manually set the time on your network here

NTP is short for **N**etwork **T**ime **P**rotocol, an Internet standard protocol that assures accurate synchronization to the millisecond of computer clock times in a network of computers.

Using the Configuration Menu

Tools > System



The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file created by the DI-714P+ can be uploaded into the unit. To reload a system settings file, click on “Browse” to search the local hard drive for the file to be used. The device can also be reset back to factory default settings by clicking on “Reset to Default” button. Use the restore feature only if necessary. This will erase previously save settings for the unit. Make sure to save your system settings before doing a factory restore.

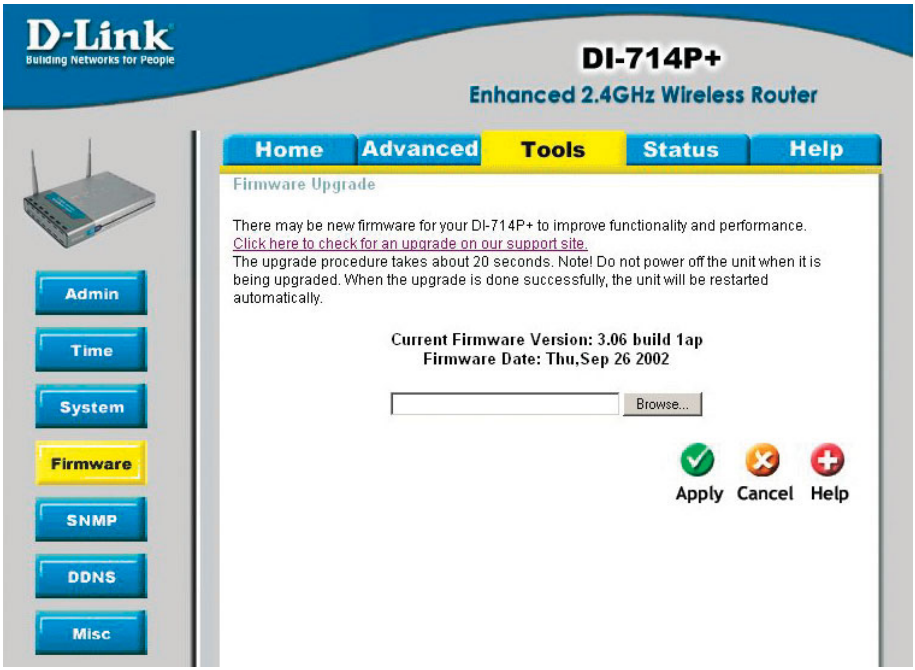
Save Settings to Local Hard Drive- Click **Save** to save the current settings to the local Hard Drive

Load Settings from Local Hard Drive- Click **Browse** to find the settings file, then click **Load**

Restore to Factory Default Settings- Click **Restore** to restore the factory default settings

Using the Configuration Menu

Tools > Firmware



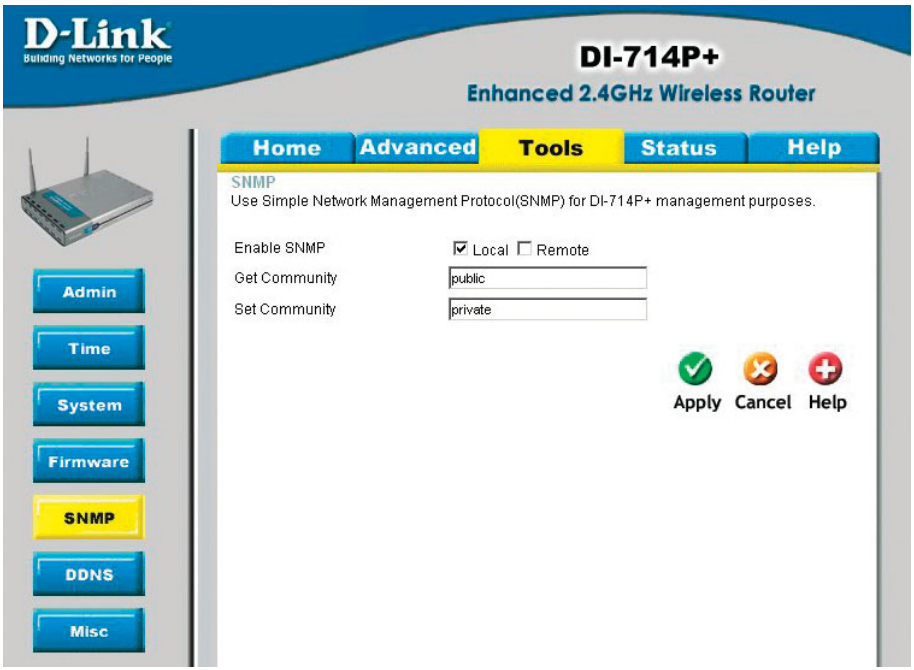
You can upgrade the firmware of the device using this tool. Make sure that the firmware you want to use is saved on the local hard drive of the computer. Click on “Browse” to search the local hard drive for the firmware to be used for the update. Upgrading the firmware will not change any of your system settings but it is recommended that you save your system settings before doing a firmware upgrade. Please check the D-Link support site for firmware updates at http://support.dlink.com.

Browse- After you have downloaded the new firmware, click **Browse** in this window to locate the firmware update on your hard drive. Click **Apply** to complete the firmware upgrade.

Note! Do not power off the unit when it is being upgraded. When the upgrade is complete, the unit will be restarted automatically.

Using the Configuration Menu

Tools > SNMP



SNMP (Simple Network Management Protocol) is a widely used network monitoring and control protocol that reports activity on each network device to the administrator of the network. SNMP can be used to monitor traffic and statistics of the DI-714P+. The DI-714P+ supports SNMP v1.

Enable SNMP- (Simple Network Management Protocol)

Local- LAN (Local Area Network)

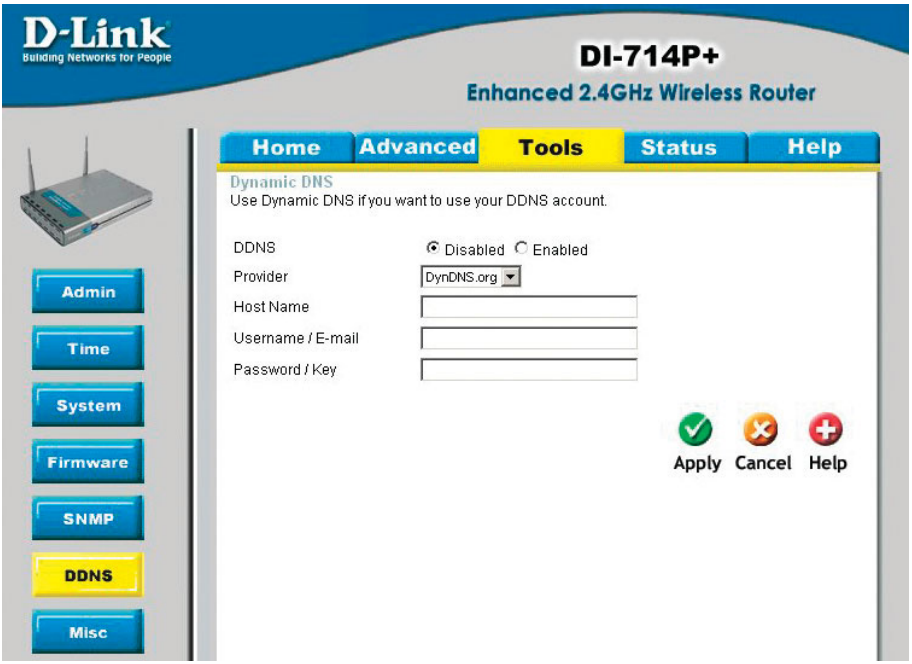
Remote- WAN (Wide Area Network)

Get Community- Enter the password **public** in this field to allow "Read only" access to network administration using SNMP. You can view the network, but no configuration is possible wth this setting.

Set Community- Enter the password **private** in this field to gain "Read and Write" access to the network using SNMP software. The administrator can configure the network with this setting.

Using the Configuration Menu

Tools > DDNS



Users who have a Dynamic DNS account may use this feature on the DI-714P+ itself.

DDNS- (Dynamic DNS) when an IP address is automatically assigned by a DHCP server, DDNS automaticaly updates the DNS server. Select **Disabled** or **Enabled**

Provider- Select from the pull-down menu

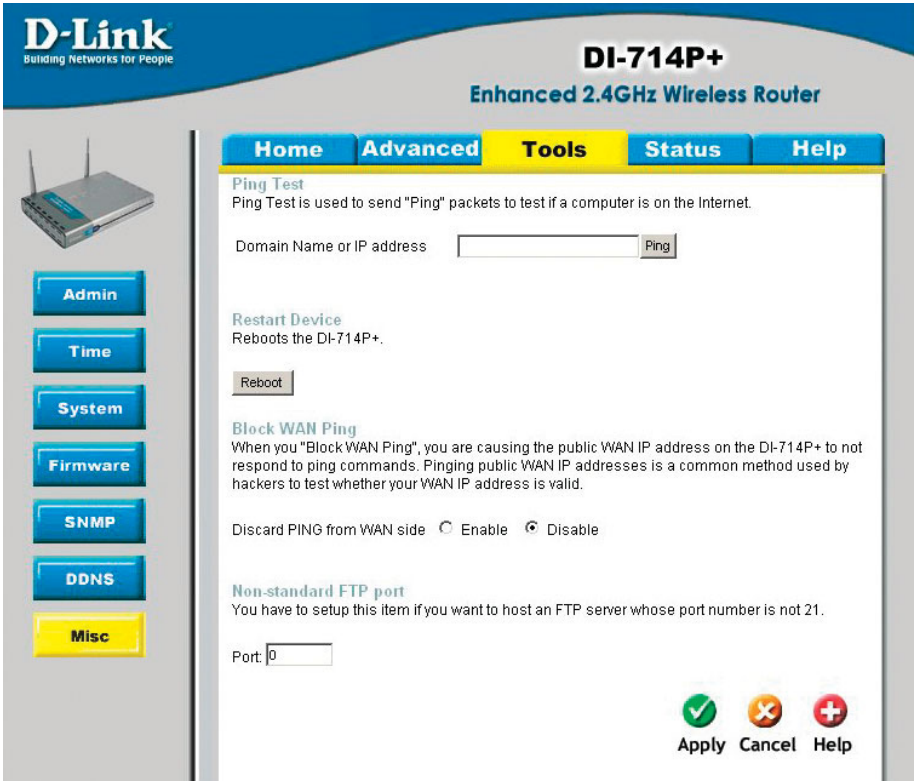
Host Name- Enter the Host name

Username/Email- Enter the username/email address

Password/Key- Enter the password/key

Using the Configuration Menu

Tools > Misc



Ping Test- Use the Ping test to send ping packets (ICMP) to test if a computer (host) is on the Internet.

Restart Device- Click reboot to restart the unit.

Block WAN Ping- Click **Enabled** to block the WAN ping. Computers on the Internet will not get a reply back from the DI-714P+ when it is being "ping"ed. This may help to increase security.

Non-standard FTP port- If an FTP server you want to access is not using the standard port 21, then enter in the port number that the FTP server is using instead.