

# **D-Link**

# **DVG-1402S**

**Broadband Phone Service VoIP Router**

## **Manual**

**D-Link<sup>®</sup>**

**Building Networks for People**

(09/24/04)

# Contents

Package Contents .....	3
Introduction .....	4
Connections .....	5
Features and Benefits .....	6
LEDs .....	7
Getting Started .....	8
Connecting the DVG-1402S Directly to a Modem and Computer .....	8
Configuring the DVG-1402S for DSL Connection .....	10
Connecting the DVG-1402S in Front of a Router .....	13
Configuring the DVG-1402S for DSL Connection .....	15
Connecting the DVG-1402S Behind a Router .....	18
MAC Cloning for Cable Connection .....	21
Web-based Management .....	22
Frequently Asked Questions .....	44
Technical Specifications .....	47
Technical Support .....	50
Warranty .....	51

# Package Contents



## Contents of Package:

- **D-Link DVG-1402S**  
Broadband Phone Service VoIP Router
- 12V DC/1.25A Power Adapter
- CD-ROM with Manual
- Quick Installation Guide
- Ethernet Cable
- Standard (RJ-11) Telephone Cable

*Note: Using a power supply with a different voltage rating than the one included with the DVG-1402S 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:

- A computer with Internet Explorer or Netscape Navigator 6.x or above with Javascript enabled.

# Introduction

The D-LINK DVG-1402S Broadband Phone Service VoIP Router links traditional telephony networks to IP networks with conventional telephony devices such as analog phones or fax machines.

The DVG-1402S includes two RJ-11 telephone jacks that provide voice communication over the IP network, and five Ethernet ports.


One Ethernet port is for a DSL/Cable Modem or other wide area network (WAN) devices, and the others are for connections to create a home or small office local area network (LAN). The built-in DHCP server/client and Network Address Translation (NAT) function automatically assign IP address for LAN users, allowing multiple users to share a single Internet connection. It can be configured/monitored using a Web browser.

By routing calls over the Internet or any IP network, this VoIP router can reduce or eliminate long distance or inter-office phone charges. Corporations can also enjoy the benefits of network consolidation and reduction of leased lines by relying on the Internet service providers to deliver toll-quality voice communications over the IP networks.

# Connections



<b>Phone Ports</b>	Connect to your phones using standard phone cabling.
<b>LAN Port</b>	Connect to your Ethernet enabled computers using Ethernet cabling.
<b>WAN Port</b>	Connects to your broadband modem using an Ethernet cable.
<b>Reset</b>	This is used to reset the unit to the factory default settings.
<b>Power Connector</b>	The power adapter attaches here.

 **Warning!** Using a different power adapter than the one included with your purchase will damage the DVG-1402S and void the warranty.

# Features & Benefits

- Two analog RJ-11 phone connectors
- One 10/100Mbps WAN port for connecting to a DSL/Cable Modem or other WAN devices
- Four 10/100Mbps LAN ports for connecting to a local network
- IP address assignment using DHCP (Dynamic Host Configuration Protocol) or static configuration
- Remote software download/update
- Supports IP sharing to allow multiple users to access the Internet via a single IP address
- Supports Caller ID
- Supports QoS to guarantee voice quality
- Optional features may be supported by your service provider such as call waiting, caller ID, and voicemail.

# LEDS

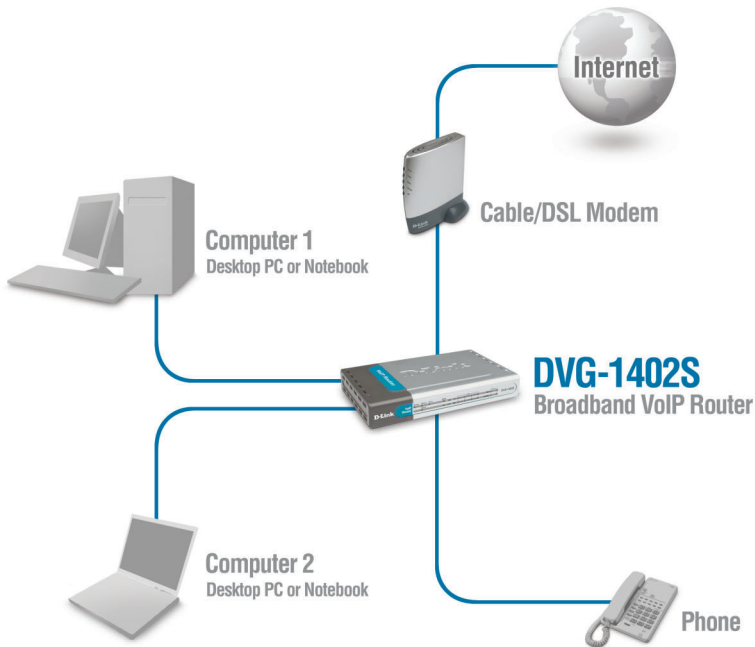


<b>Power LED</b>	Indicates the unit is powered on.
<b>Status/Alarm</b>	The Status LED will flash when performing a self-test/booting up or is registering with the service provider. The Status LED will flash green slowly when the system is connected with the service. The Alarm LED will light solid red if the self-test or bootup fails. The Alarm LED will flash red slowly when the system is ready but cannot receive an acknowledgement from the service.
<b>Prov</b>	This LED flashes when the device has established a connection and received authorization from your service provider.
<b>WAN LED</b>	When a connection is established the 10 or 100 LED will light up solid. The LED will blink to indicate activity. If the 10 or 100 LED does not light up when a cable is connected, verify the cable connection and make sure your device is powered on.
<b>LAN LEDs</b>	When a connection is established the 10 or 100 LED will light up solid on the appropriate port. The LEDs will blink to indicate activity. If the 10 or 100 LED does not light up when a cable is connected, verify the cable connections and make sure your devices are powered on.
<b>Phone LEDs</b>	This LED displays the VoIP status and Hook/Ringing activity on the phone port that is used to connect to your normal telephone(s)/fax machine and regular telephone line. <b>MWI:</b> Lights to indicate a voicemail is waiting. <b>Hook/Ring:</b> If a phone connected to a phone port is off the hook or in use, this LED will light solid. When a phone is ringing, the indicator will blink.

# Getting Started

## Connecting the DVG-1402S Directly to a Modem and Computer

If your computer connects directly to a DSL or Cable modem and does not connect to a router, follow the steps below to install your DVG-1402S. After the steps are completed, your setup should look similar to the diagram below. Note: This is the most common setup configuration for the DVG-1402S. If you do not require the use of more than four LAN ports, you do not need an additional router.





# Getting Started (continued)

## Connecting the DVG-1402S Directly to a Modem and Computer

1. Turn off your Computer.
2. Disconnect the power to your Cable/DSL Modem (unplug or turn off the power switch).
3. Unplug the existing Ethernet cable that is connected to your Cable/DSL Modem's LAN or Ethernet port. Leave the other end of this cable attached to your PC.
4. Plug the Ethernet cable connector that you just removed from the modem into one of the four LAN ports on the back of the DVG-1402S. The other end remains attached to the PC.
5. Attach one end of the Ethernet Cable (blue) provided in this package to the LAN or Ethernet Port on the Cable/DSL Modem.
6. Attach the other end of the provided Ethernet Cable to the WAN Port of the DVG-1402S.



7. Attach one end of the provided phone cable (black) to a standard analog telephone.
8. Attach the other end of the phone cable to the phone port labeled 1 on the rear panel of the DVG-1402S.



9. Reconnect the power to the Cable/DSL Modem (plug in or turn on the power switch).

## Getting Started (continued)

### Connecting the DVG-1402S Directly to a Modem and Computer (No Router)

10. Connect the Power Adapter to the Power Connector on the DVG-1402S.



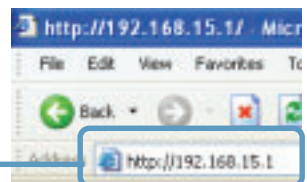
11. Connect the other end of the Power Adapter to an available electrical outlet (Wall Socket or Surge Protector).
12. Restart your PC.

Next you must configure your DVG-1402S. If you are using a DSL Modem with a PPPoE or DHCP connection, you will need to continue on to the following section. If you are using a Cable Modem, and your service provider requires a MAC address, skip this section and refer to the section titled “MAC Cloning for Cable Connection.” Also be sure to change your computer’s IP settings to DHCP (to automatically be assigned an IP address from the DVG-1402S) regardless of what type of internet connection you have. (Please refer to your NIC card’s manual for detailed information.) If your cable service provider does not require a MAC address, setup of the DVG-1402S with a modem and computer is complete.

## Configuring the DVG-1402S for DSL Connection

Some Internet Service providers use PPPoE as their method of connecting clients. If you have a PPPoE connection, you must follow the steps below to complete the configuration of your hardware. If you are unsure of your connection type, please check with your Internet Service Provider.

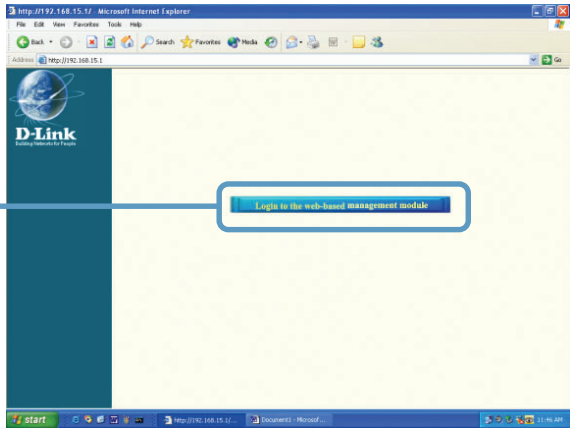
Open your Web browser and type **http://192.168.15.1** into the URL address box. Press the **Enter** or **Return** key.



# Getting Started (continued)

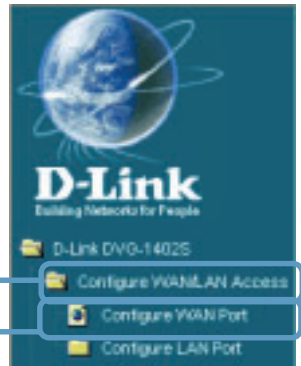
## Connecting the DVG-1402S Directly to a Modem and Computer (No Router)

Click **Login** to the web-based management module.



Click **Configure WAN/LAN Access**.

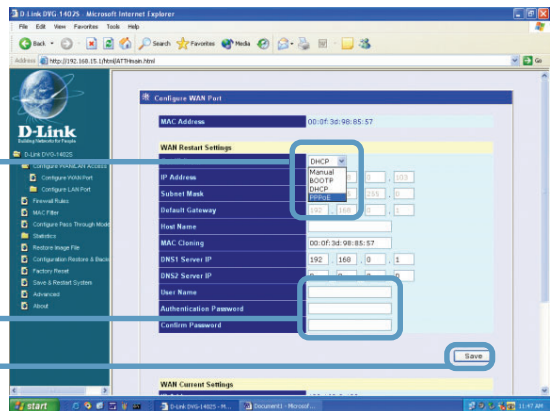
Click **Configure WAN Port**.



Select **PPPoE** from the pull-down menu.

Enter your **User Name** and **Authentication Password** and **Confirm Password**.

Click **Save**.

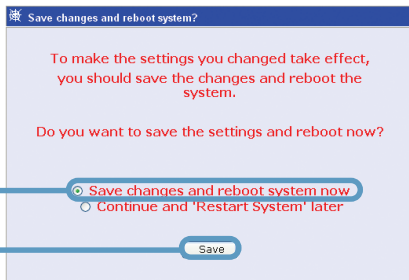


# Getting Started (continued)

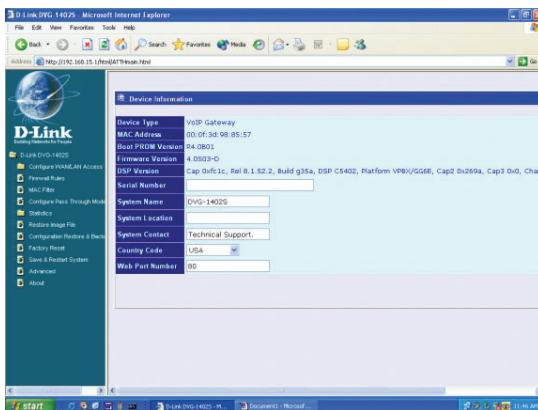
## Connecting the DVG-1402S Directly to a Modem and Computer (No Router)

Select **Save changes and reboot system now**.

Click **Save**.



Once the unit reboots you will be returned to the main screen. Check to see if the status LED light is blinking green on the front panel of the DVG-1402S.

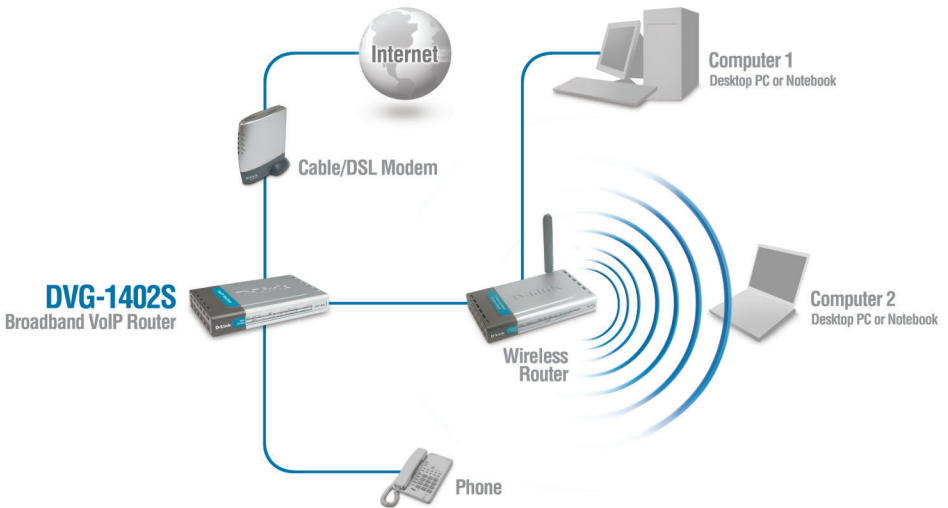


Setup of the DVG-1402S with a DSL modem is now complete.

## Getting Started (continued)

# Connecting the DVG-1402S in Front of a Router

If you wish to connect your DVG-1402S in front of a router, follow the steps below. After the steps are completed, your setup should look similar to the diagram below. This is the recommended method for setting up the DVG-1402S. This set up allows the DVG-1402S to prioritize voice traffic over data traffic, thus providing you with greater consistency and call quality.



1. Turn off your Computer.
2. Disconnect the power to the Cable/DSL Modem (unplug or turn off the power switch).
3. Disconnect the power to your existing router (unplug or turn off the power switch).
4. Unplug the existing Cat 5 Ethernet cable from the “WAN” port of your existing Router.
5. Leave the other end of this cable attached to your Cable/DSL Modem.

## Getting Started (continued)

### Connecting the DVG-1402S in Front of a Router

6. Plug the Cat 5 Ethernet Cable from the Cable/DSL Modem into the “WAN” port of the DVG-1402S.



7. Unpack the Cat 5 Ethernet Cable (blue) that came with the DVG-1402S.
8. Attach one end of this Cat 5 Ethernet Cable (blue) to one of the four “LAN” Ports on the rear of the DVG-1402S.
9. Attach the other end of this Cat 5 Ethernet Cable (blue) to the “WAN” port of your existing router.
10. Be sure that the Cat 5 Ethernet Cable that is plugged into the LAN Port of your existing router is still plugged into your PC.
11. Unpack the Telephone Cable (black) that came with the DVG-1402S.



12. Attach one end of this cable to a standard analog telephone.
13. Attach the other end of this cable to phone port “1” on the rear of the DVG-1402S.
14. Unpack the 12V DC Power Adapter that came with your DVG-1402S.
15. Connect the Power Adapter to the Power Connector on the DVG-1402S.
16. Connect the other end of the Power Adapter to an available electrical outlet (Wall Socket or Surge Protector).



## Getting Started (continued)

### Connecting the DVG-1402S in Front of a Router

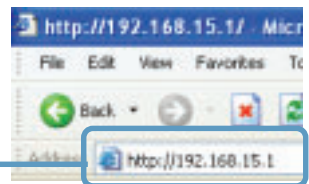
17. Reconnect the power to the Cable/DSL Modem (plug in or turn on the power switch).
18. Reconnect the power to your existing Router (plug in or turn on the power switch).
19. Restart your PC.

Next you must configure your DVG-1402S and PC. If you are using a DSL Modem with a PPPoE or DHCP connection, you will need to continue on to the following section. If you are using a Cable Modem, and your service provider requires a MAC address, skip this section and refer to the section titled “MAC Cloning for Cable Connection.” Also be sure to change your computer’s IP settings to DHCP (to automatically be assigned an IP address from the DVG-1402S) regardless of what type of internet connection you have. (Please refer to your NIC card’s manual for detailed information.) If your cable service provider does not require a MAC address, setup of the DVG-1402S with a modem and computer is complete.

### Configuring the DVG-1402S for DSL Connection

Some Internet Service providers use PPPoE as their method of connecting clients. If you have a PPPoE connection, you must follow the steps below to complete the configuration of your hardware. If you are unsure of your connection type, please check with your Internet Service Provider.

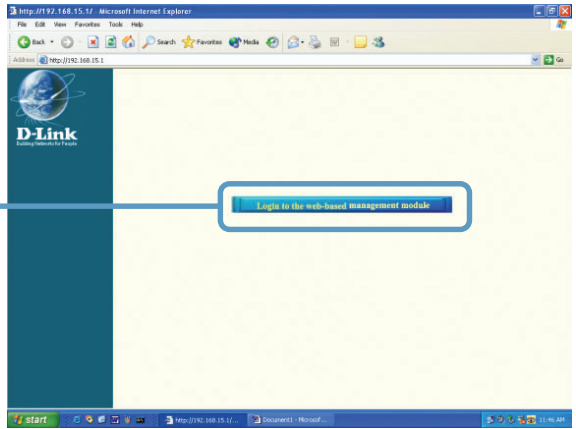
Open your Web browser and type **http://192.168.15.1** into the URL address box. Press the **Enter** or **Return** key.



# Getting Started (continued)

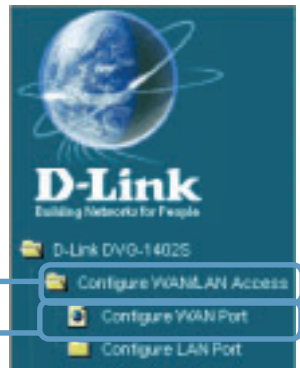
## Connecting the DVG-1402S in Front of a Router

Click **Login** to the web-based management module.



Click **Configure WAN/LAN Access**.

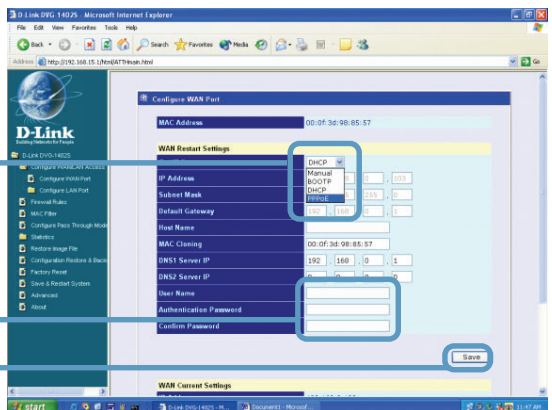
Click **Configure WAN Port**.



Select **PPPoE** from the pull-down menu.

Enter your **User Name** and **Authentication Password** and **Confirm Password**.

Click **Save**.



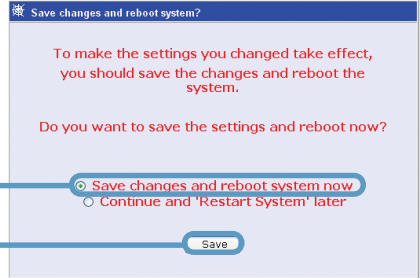


# Getting Started (continued)

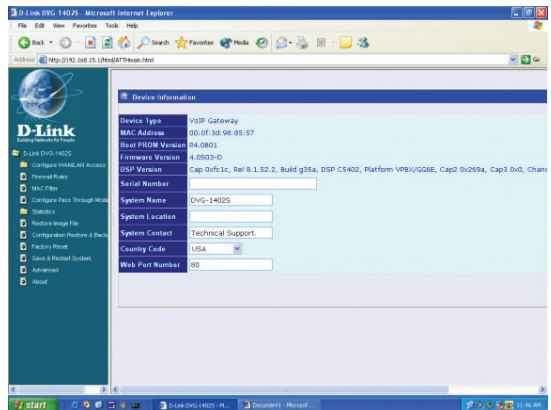
## Connecting the DVG-1402S in Front of a Router

Select **Save changes and reboot system now**.

Click **Save**.



Once the unit reboots you will be returned to the main screen. Check to see if the status LED light is blinking green on the front panel of the DVG-1402S.

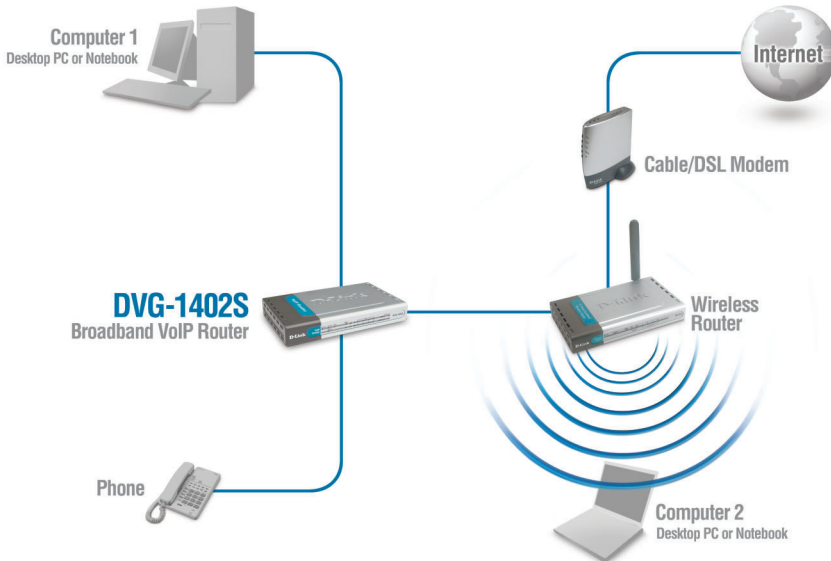


Setup of the DVG-1402S with a DSL modem is now complete.

## Getting Started (continued)

# Connecting the DVG-1402S Behind a Router

If you wish to connect your DVG-1402S behind a router, follow the steps below. After the steps are completed, your setup should look similar to the diagram below.



1. Turn off your Computer.
2. Disconnect the power to the Cable/DSL Modem (unplug or turn off the power switch).
3. Disconnect the power to your existing router (unplug or turn off the power switch).
4. Unplug the existing Cat 5 Ethernet cable from the “LAN” port of your existing Router.
5. Leave the other end of this cable attached to your PC.

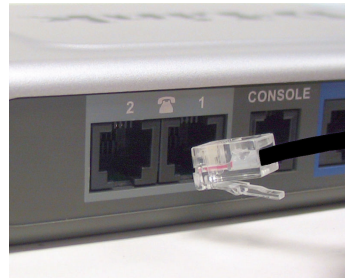
## Getting Started (continued)

### Connecting the DVG-1402S Behind a Router

6. Plug the Cat 5 Ethernet Cable from the PC into the “LAN” port of the DVG-1402S.



7. Unpack the Cat 5 Ethernet Cable (blue) that came with the DVG-1402S.
8. Attach one end of this Cat 5 Ethernet Cable (blue) to the “WAN” Port on the rear of the DVG-1402S.
9. Attach the other end of this Cat 5 Ethernet Cable (blue) to the “LAN” port of your existing router.
10. Be sure that the Cat 5 Ethernet Cable that is plugged into the “WAN” Port of your existing router is still plugged into your Cable/DSL Modem.
11. Unpack the Telephone Cable (black) that came with the DVG-1402S.
12. Attach one end of this cable to a standard analog telephone.
13. Attach the other end of this cable to phone port “1” on the rear of the DVG-1402S.



14. Unpack the 12V DC Power Adapter that came with your DVG-1402S.
15. Connect the Power Adapter to the Power Connector on the DVG-1402S.



## Getting Started (continued)

### Connecting the DVG-1402S Behind a Router

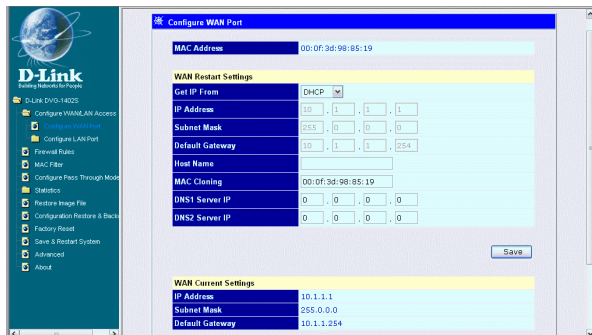
- 16.** Connect the other end of the Power Adapter to an available electrical outlet (Wall Socket or Surge Protector).
- 17.** Reconnect the power to the Cable/DSL Modem (plug in or turn on the power switch).
- 18.** Reconnect the power to your existing Router (plug in or turn on the power switch).
- 19.** Restart your PC.

By default the unit is already configured to work behind a router. Be sure to change your computer's IP settings to DHCP (to automatically be assigned an IP address from the DVG-1402S) regardless of what type of internet connection you have. (Please refer to your NIC card's manual for detailed information.) Installation behind a router is now complete.

# MAC Cloning For Cable Connection

Some cable Internet service providers require that device connected to the cable modem has the MAC address of the PC that was originally registered with the cable Internet provider. If this is required to set up the DVG-1402S, follow the steps below.

1. On the computer that was originally registered with your service provider.  
For Windows 98/Me users: Go to **Start > Run > command**. Type in **ipconfig/all**. The physical address listed is your system's MAC address.  
For Windows 2000/XP users: Go to **Start> Run > cmd**. Type in **ipconfig/all**. The physical address listed is your system's MAC address.  
For Mac users: Click the Apple icon in the upper left hand corner of the screen. Go to **System Preferences > Network** and click on the network device you use to connect to the Internet. Click the **Ethernet** button. The ethernet ID listed is your system's MAC address.
2. Write down the MAC address of your system. This address is written in the following format: 00:aa:bb:11:22:33.
3. Open a Web browser and type in the IP address of the DVG-1402S (default is 192.168.15.1). Log into the Web-based management module (see the next section for more information) and click on **Configure WAN Port**. The following page will appear.



4. Select **DHCP** from the connection type pull down menu.
5. In the **MAC Cloning** field, enter your system's MAC address (from step 2).
6. Click the **Save** button to save your settings.
7. Mac Cloning configuration is now complete.

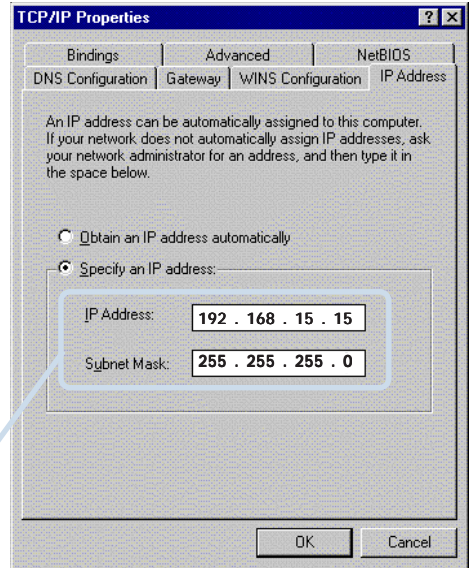
# Web-based Management

Prior to using your Web browser for Web-based management, if DHCP is not enabled on your computer, be sure to assign a static IP address to the VoIP Router.

Go to **Start>Control Panel>Network Connections>Right-click local area connection >select Properties> double click Internet Protocol (TCP/IP)**. The screen at right will appear.

The VoIP Router's LAN port comes with **DHCP** as default IP setting. If the VoIP gateway cannot get the assigned DHCP IP, it will use the manual IP (default is 192.168.15.1 ) as it's default IP.

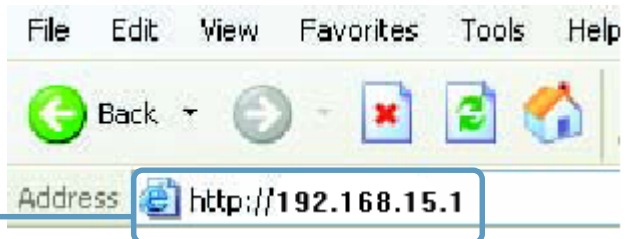
Set your PC's IP address to 192.168.15.15 and the subnet mask to 255.255.255.0.



In order to use a Web browser to configure the VoIP Router you must make sure it has a valid Ethernet connection to a PC or LAN via its LAN port.

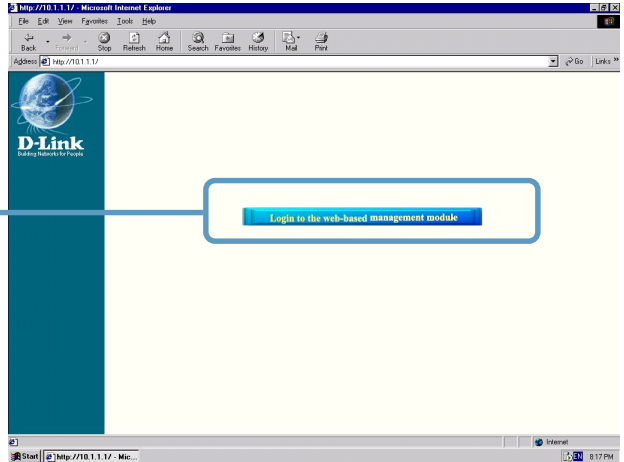
Access the configuration utility to check the LAN port by entering the IP Address into your web browser address field.

Type **192.168.15.1** (the IP Address) into the address field of your browser.



# Web-based Management (continued)

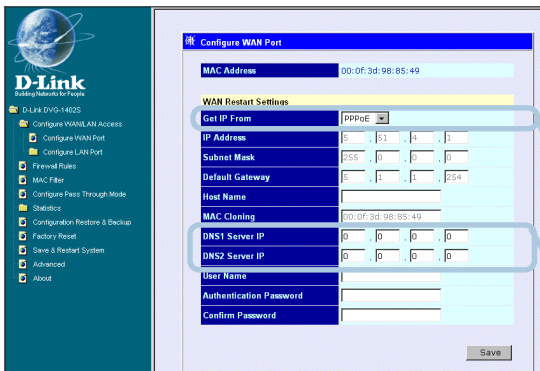
Click on **Login** to the **Web-based Management module**



## Setting Up the Connection

To configure the WAN port, please do the following:

Click on **Configure WAN Port**.



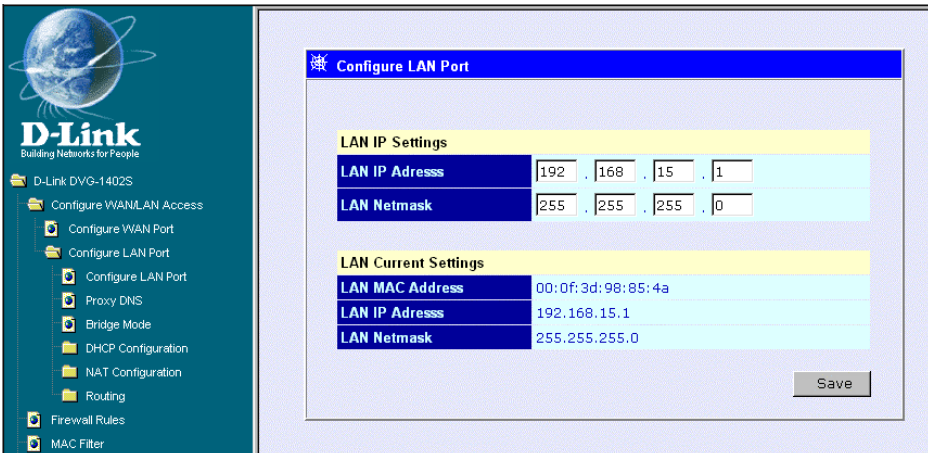
Choose your type of connection.

Manually enter your DNS address (if applicable).

# Web-based Management (continued)

To configure the LAN port for the device, please do the following:

Click on **Configure LAN Port**.



In this configuration menu, users can configure the LAN IP Address. (Recommended for advanced users.)

By default the LAN IP Address is: 192.168.15.1

After you have configured your WAN and LAN ports you can click on **Save and Restart System** in the Configuration menu, or you can continue to configure the VoIP Router. After you have completed configuring the VoIP Router, you must **Save and Restart the System** or your changes will not be saved.

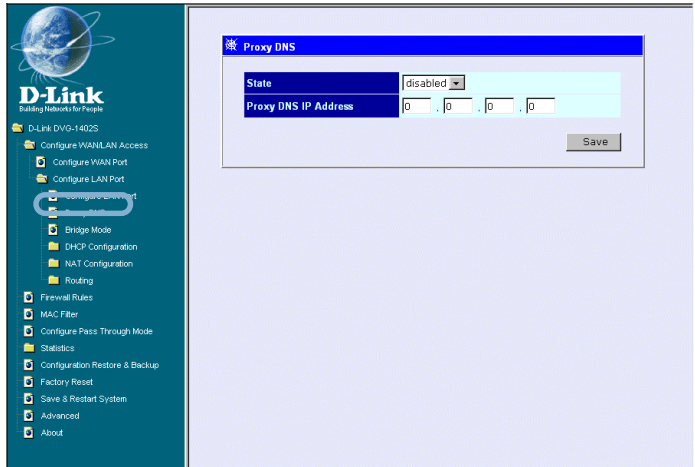


# Web-based Management (continued)

## Configure LAN Port > Proxy DNS

**State** - This toggles Enable and Disable for the Proxy DNS function.

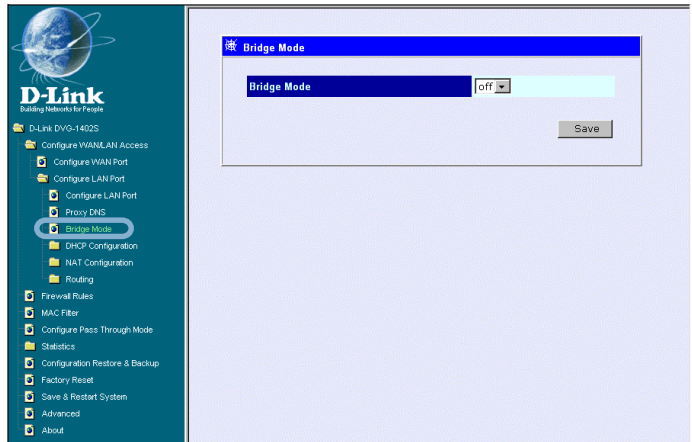
**Proxy DNS IP Address** - Enter the Proxy DNS IP address if instructed by your service provider.



Click **Save** to save the settings.

## Configure LAN Port > Bridge Mode

**Bridge Mode** - This toggles **On** and **Off** to turn NAT on or off for Static Public IP assignment.



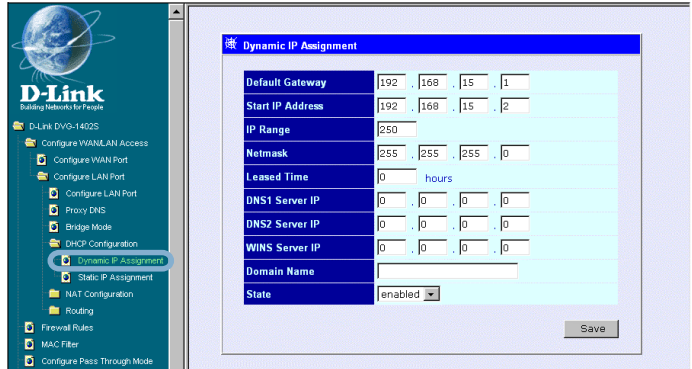
Click **Save** to save the settings.

## Web-based Management (continued)

### Configure LAN Port > DHCP Configuration > Dynamic IP Assignment

Use the **Dynamic IP Assignment** to configure the device to act as a DHCP server for the LAN.

The items on this window are described below:



**Default Gateway** - This specifies the Gateway IP Address that will be assigned to and used by the DHCP clients.

**Start IP Address** - This is the base (starting) address for the IP pool of unassigned IP addresses.

**IP Range** - This is the range of contiguous, IP addresses above the base IP Address above.

**Netmask** - This mask informs the client, how the destination IP address is to be divided into network, subnet, and host parts. The netmask has ones in the bit positions in the 32-bit address which are to be used for the network and subnet parts, and zeros for the host part.

**Leased Time** - This specifies the amount of time (in seconds) a client can lease an IP address, from the dynamically allocated IP pool.

**DNS Server IP** - This specifies the Domain Name System server, used by the DHCP clients using leased IP addresses, to translate hostnames into IP addresses or vice-versa.

**WIN Server IP** - Some LANs may require using WINS servers; enter the IP address of the WINS server or leave blank.

**Domain Name** - Enter a domain name for the network group or leave blank.

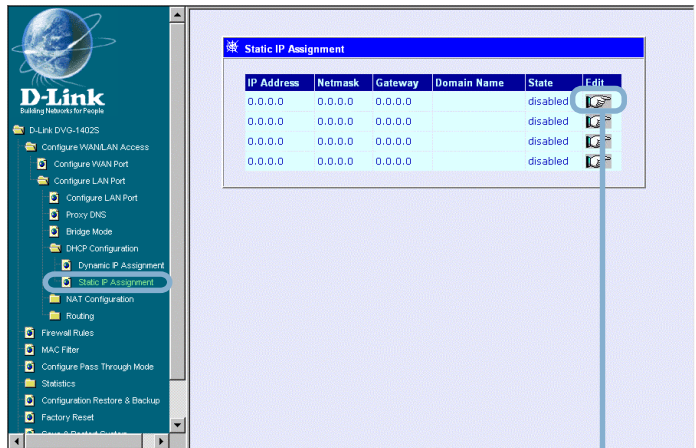
**State** - This toggles **Disable** and **Enable** for the DHCP function.

Click **Save** to save the settings.

## Web-based Management (continued)

### Configure LAN Port > DHCP Configuration > Static IP Assignment

The Static IP Assignment functions in much the same way as the Dynamic IP Assignment. The only difference is that a particular IP address can be assigned to a particular host. The host is identified by the MAC Address of its NIC which must be entered on next screen.



Click the edit icon on the window above to access the second **Static IP Assignment** window:

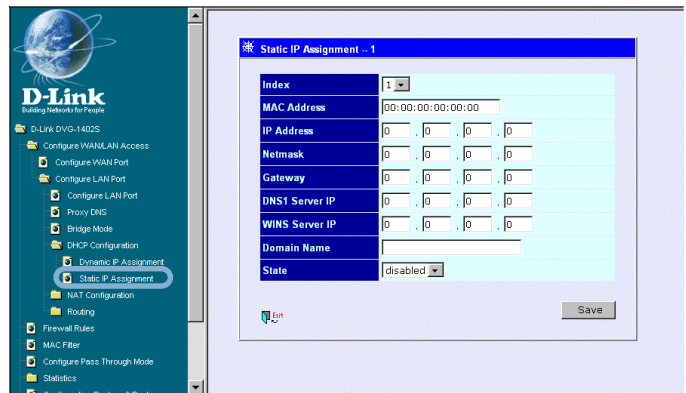
The items on this window are described below:

**Index** - Choose the index number that you would like to edit (From 1 to 4).

**MAC Address** - This specifies the physical address of the particular host that will receive the below IP address.

**IP Address** - This is the static IP address to be assigned.

All other parameters (Netmask, Gateway, DNS Server IP, WINS Server IP, Domain Name and State) are identical to those in the Dynamic IP Assignment, in the previous section.



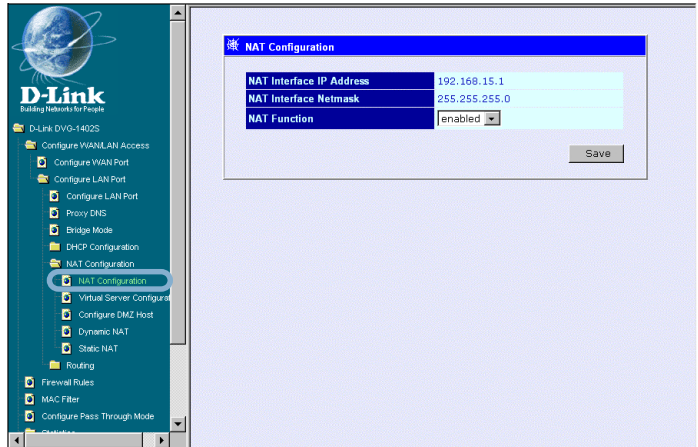
Click **Save** to save the settings.

# Web-based Management (continued)

## Configure LAN Port > NAT Configuration

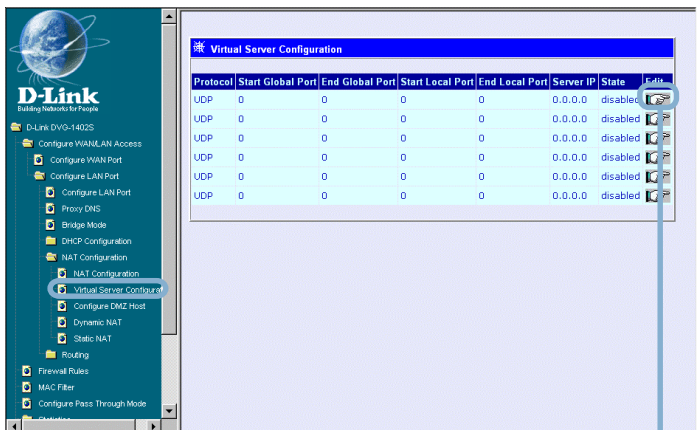
Select **enabled** or **disabled** for the NAT function.

Click **Save** to save the settings.



## Configure LAN Port > NAT Configuration > Virtual Server Configuration

This window allows you to view the current virtual server configuration settings.



Click the edit icon on this window to access the second **Virtual Server Configuration** window:

## Web-based Management (continued)

### Configure LAN Port > NAT Configuration > Virtual Server Configuration (continued)

The items on this window are described below:

**Index** - Choose the index number that you would like to edit (Form 1 to 6).

**Protocol** - Choose the protocol either TCP or UDP.

**Global Port Range** -

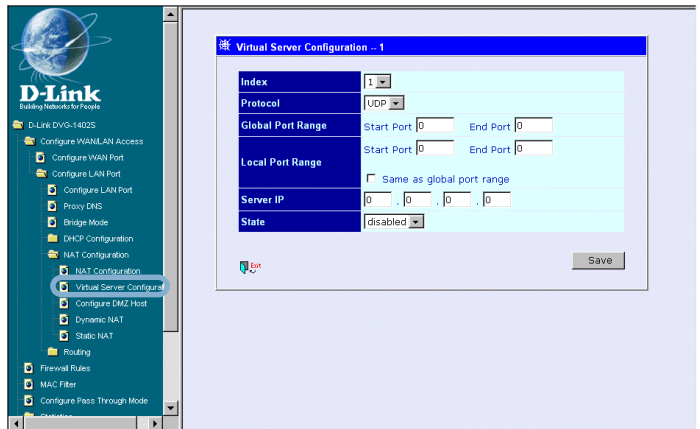
Enter the designated TCP or UDP protocol port number for the particular protocol packet you wish to redirect.

**Local Port Range** - Enter the port number used by the designated host on the LAN or use a well-known port.

**Server IP** - Enter the IP address of the local designated host computer or device.

**State** - This toggles Disable and Enable for the Virtual Server Configuration function.

Click **Save** to save the settings.



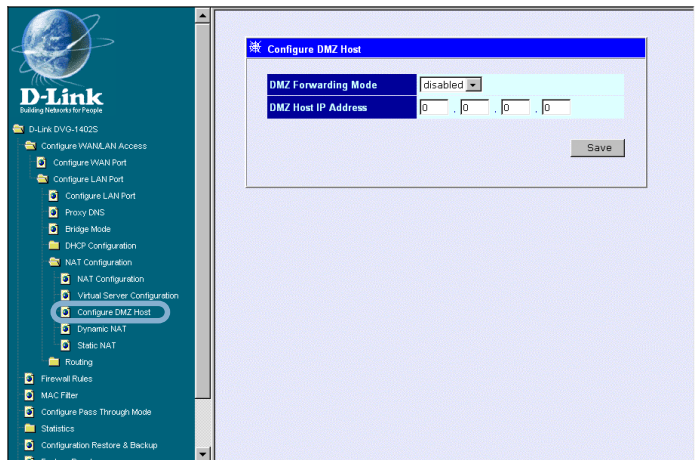


# Web-based Management (continued)

## Configure LAN Port > NAT Configuration > Virtual Server Configuration (continued)

The items on this window are described below:

**DMZ Forwarding Mode** - Select to enable or disable the DMZ. The DMZ (Demilitarized Zone) allows a single computer to be exposed to the internet. By default the DMZ is disabled.

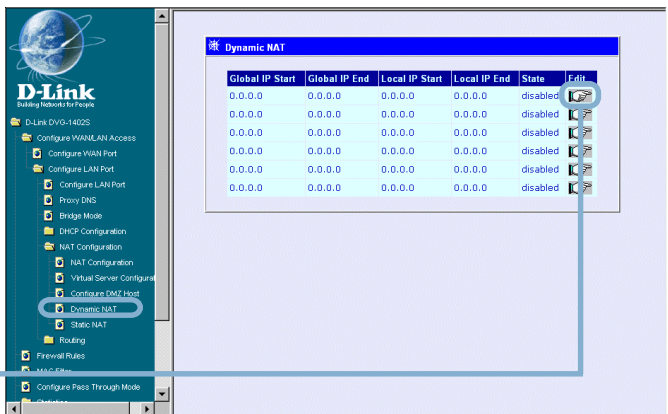


**DMZ Host IP Address** - Enter the IP address of the DMZ host.

Click **Save** to save the settings.

## Configure LAN Port > NAT Configuration > Dynamic NAT

This window allows you to view the current Dynamic NAT settings.



Click the edit icon on this window to access the second **Dynamic NAT** window:

## Web-based Management (continued)

### Configure LAN Port > NAT Configuration > Dynamic NAT (continued)

The items on this window are described below:

**Index** - Choose the index number that you would like to edit (Form 1 to 6).

**Global IP Start** - Enter the beginning designated IP address for the particular range of packets you wish to redirect to local addresses.

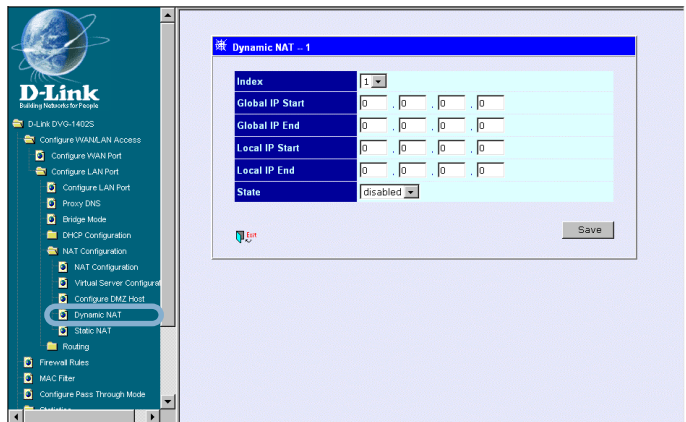
**Global IP End** - Enter the end designated IP address for the particular range of packets you wish to redirect to local addresses.

**Local IP Start** - Enter the beginning designated IP address for the particular range of packets you wish to redirect to Global addresses.

**Local IP End** - Enter the end designated IP address for the particular range of packets you wish to redirect to Global addresses.

**State** - This toggles Disable and Enable for the Dynamic NAT function.

Click **Save** to save the settings.

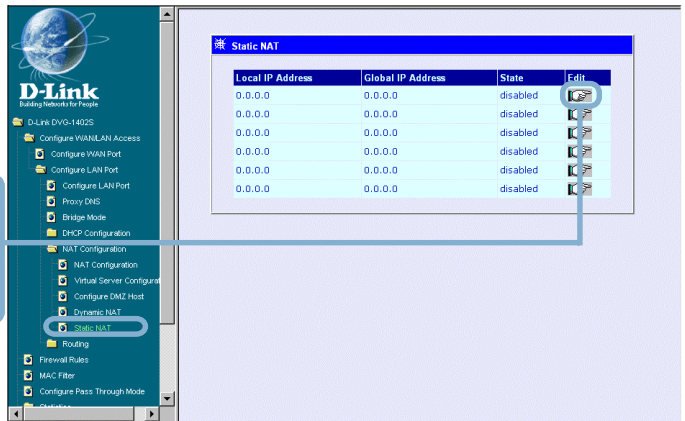


# Web-based Management (continued)

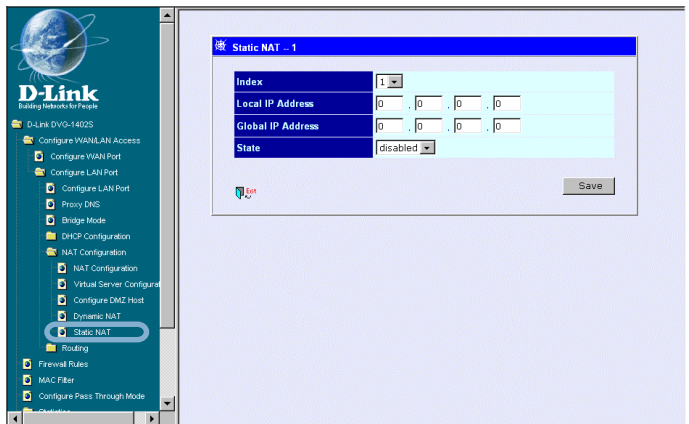
## Configure LAN Port > NAT Configuration > Static NAT

This window allows you to view the current Static NAT settings.

Click the edit icon on this window to access the second **Static NAT** window:



The items on this window are described below:



**Index** - Choose the index number that you would like to edit (Form 1 to 6).

**Local IP Address** - Enter the designated IP address for the packet you wish to redirect to a Global address.

**Global IP Address** - Enter the designated IP address for the packet you wish to redirect to a Local address.

**State** - This toggles Disable and Enable for the Static NAT function for this index.

Click **Save** to save the settings.



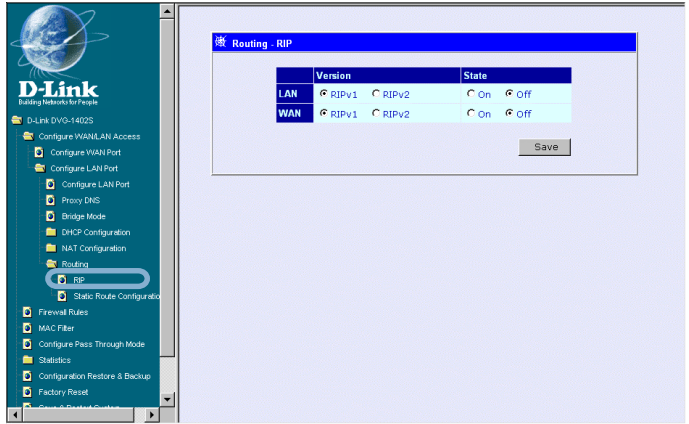
# Web-based Management (continued)

## Configure LAN Port > Routing > RIP

Select to use **RIPv1**, **RIPv2** or **On** (both versions) for the LAN and WAN interface. To disable both versions of RIP select **Off**.

Click **Save** to save the settings.

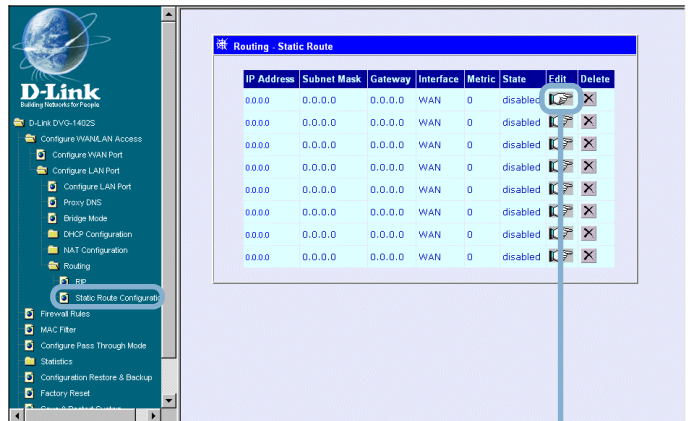
RIP - Routing Information Protocol that specifies how routers exchange information. With RIP, routers periodically exchange entire tables.



## Configure LAN Port > Routing > Static Route Configuration

Use Static Routing to specify a route used for data traffic within your WAN or LAN. This can be used to specify that all packets destined for a particular subnet use a predetermined gateway.

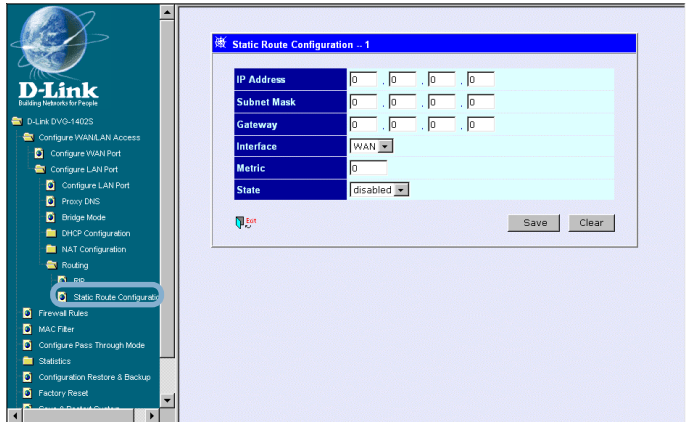
Click the edit icon on the window above to access the second **Static Route Configuration** window:



# Web-based Management (continued)

## Configure LAN Port > RIP > Static Route Configuration (continued)

The items on this window are described below:



**IP Address** - Type in the IP Address of the subnet or device where packets are routed.

**Subnet Mask** - Type in an appropriate subnet mask that allows the static route to function.

**Gateway** - Type in the IP Address of the gateway used for traffic destined for the specified subnet or device.

**Interface** - Select WAN or LAN Interface.

**Metric** - Type in the maximum number of hops allowed for the static route.

**State** - Enable or disable the route.

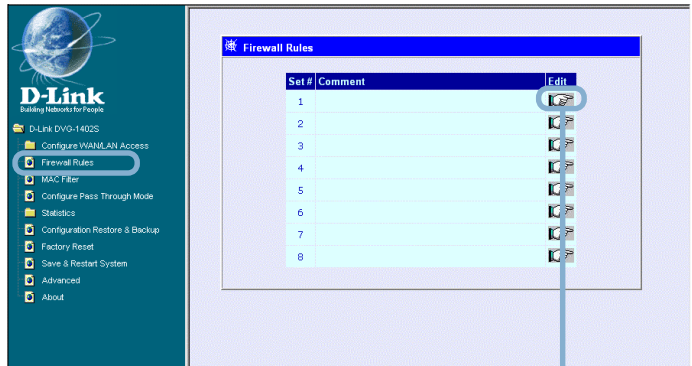
Click **Save** or **Clear** to Save or Clear the settings.

# Web-based Management (continued)

## Firewall Rules

Firewall Rules is an advance feature used to deny or allow traffic from passing through the device. The filtering sets are sets of rules defined in the menus shown below.

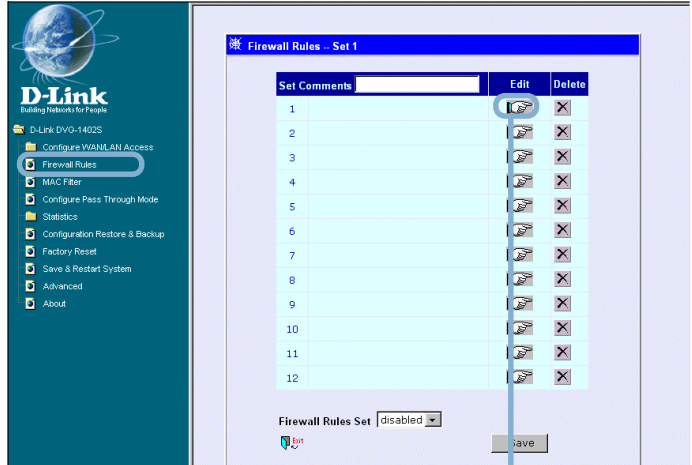
Click the edit icon on the window above to access the **Firewall Rules** window for the first rules set:



Type in an appropriate identifying comment for the Firewall Rules set.

When you are finished defining the rules for each set, select **enabled** or **disabled** to enable or disable the listed Firewall rules sets.

Click **Save** button to save the settings.



Click the edit icon on the window above to access the third **IP Filter** window, shown on the following page:

# Web-based Management (continued)

## Firewall Rules (continued)

**Comment-** Type in an appropriate identifying comment for the rule.

**Pass or Block-** Select **Pass** or **Block** to perform this action on packets as defined below.

**Direction-** Select **In** or **Out** to pass or block packets coming in or going out of the network.

**Protocol-** Select **IGMP**, **TCP**, **UDP** or **All** to pass or block packets of that protocol type.

**Source-** Type in the source IP Address and select the Subnet Mask to pass or block packets from that IP Address.

**Destination-** Type in the destination IP Address and select the Subnet Mask to pass or block packets destined to that IP Address.

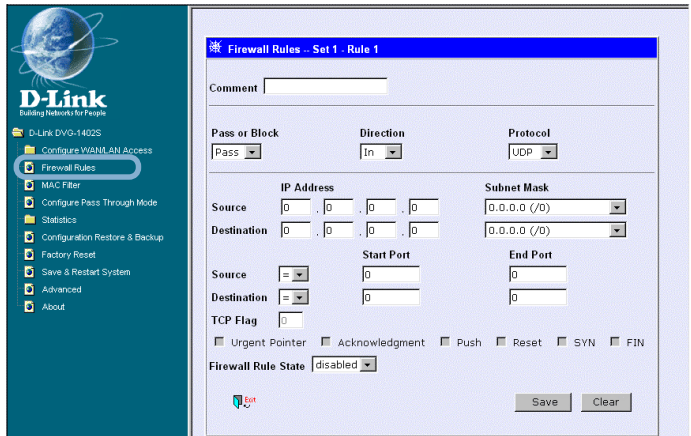
**Port Filter Rule-** UDP and TCP packets only. Select a range of ports to pass or block. Use the following guide to define the port or port range (Start Port and End Port):

< : specifies the port numbers less than and equal to the Start Port number

> : specifies the port numbers greater than and equal to the Start Port number

= : sets the port number equal to the Start Port if there is no End Port specified; if an End Port number is specified, this defines a range of ports to filter. The range is defined as the port numbers between the Start Port and End Port, including the Start and End Port numbers.

≠ : the port number does not equal the Start Port if there is no End Port specified; if an End Port number is specified, this defines a range of ports not to filter. The range is defined as the port numbers between the Start Port and End Port, including the Start and End Port numbers.



# Web-based Management (continued)

## Firewall Rules (continued)

**TCP Flag** - Select enabled or disabled to enable or disable the filter rule as defined in the menu.

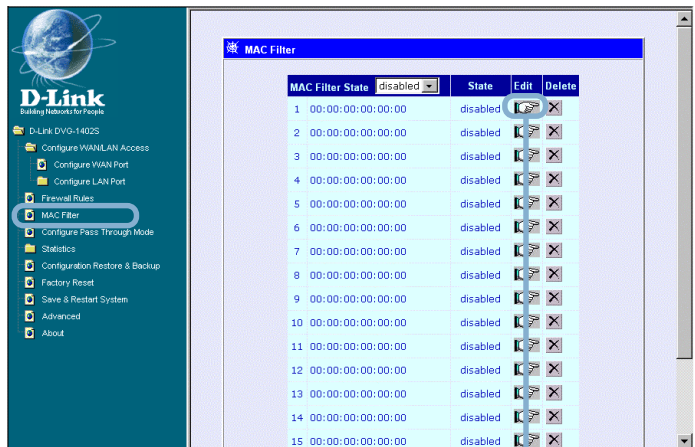
**TCP Packet Options** - Optional TCP packet options include: Acknowledgment, Push, Reset, SYN, and FIN. Consult a certified technician before selecting any of these advanced options.

**Filter Rule State** - Select enabled or disabled to enable or disable the filter rule as defined in the menu.

Click **Save** or click **Clear** to Save or Clear the settings.

## MAC Filter

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.



Click the edit icon on the window above to access the **MAC Filter** window, shown on the following page:



# Web-based Management (continued)

## MAC Filter (continued)

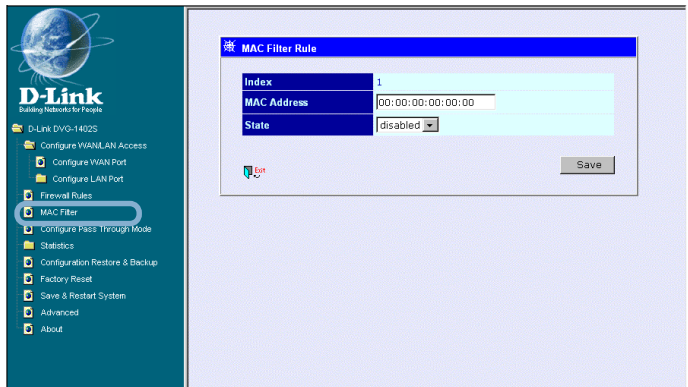
The items on this window are described below:

**Index** - This is the index number that you are editing (1-16).

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

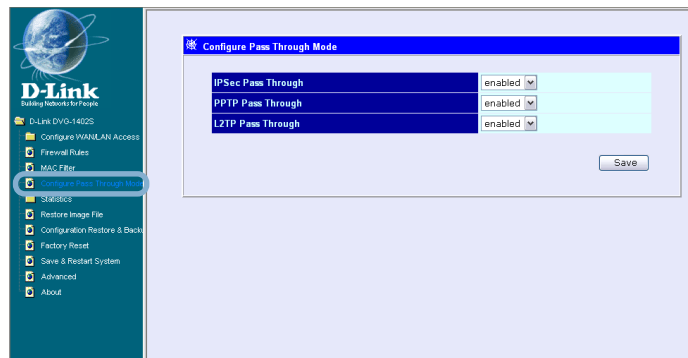
**State** - This toggles Disable and Enable for the MAC address filtering function for this index.

Click the **Save** button to save the settings.



## Configure Pass Through Mode

The device supports VPN (Virtual Private Network) pass-through for both PPTP (Point-to-Point Tunneling Protocol), IPsec (IP Security), and L2TP (Layer 2 Tunneling Protocol). Once VPN pass-through is enabled, there is no need to open up virtual services. Multiple VPN connections can be made through the device. This is useful when you have many VPN clients on the LAN.



**PPTP Pass Through / IPsec Pass Through / L2TP Pass Through** - This toggles Disable and Enable for the Pass Through function.

Click the **Save** button to save the settings.

# Web-based Management (continued)

## Statistics > WAN Internet Connection Statistics

This window displays a variety of WAN Connection statistics.

The screenshot shows the D-Link web-based management interface. On the left is a navigation menu with the following items: D-Link Building Networks for People, D-Link DVG-1402S, Configure WAN/LAN Access, Firewall Rules, MAC Filter, Configure Pass Through Mode, Statistics (highlighted), WAN Internet Connection Statistics (highlighted), Phone Port Statistics, Configuration Restore & Backup, Factory Reset, Save & Restart System, Advanced, and About. The main content area displays the 'WAN Internet Connection Statistics' window, which contains two tables of statistics.

WAN Internet Connection Statistics	
Rx Packets	0
Rx Bytes	0
Rx Non Usart Packets	0
Rx Discard Packets	0
Rx Frame Too Long	0
Rx Non-Aligned Errors	0
Rx Collision Errors	0
Rx Short Frames	0
Rx CRC Errors	0
Rx Overrun Packets	0
Tx Packets	122
Tx Bytes	7808
Tx Non Usart Packets	0
Tx Discard Packets	0
Tx Heartbeat Errors	0
Tx Late Collision	0
Tx Retransmission Limit	0
Tx Underrun Packets	0
Tx Carrier Sense Lost	0

## Statistics > Phone Port Statistics

This window displays a variety of Phone Port statistics.

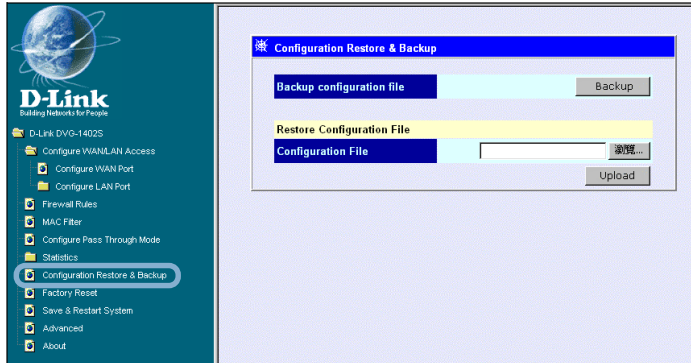
The screenshot shows the D-Link web-based management interface. On the left is a navigation menu with the following items: D-Link Building Networks for People, D-Link DVG-1402S, Configure WAN/LAN Access, Firewall Rules, MAC Filter, Configure Pass Through Mode, Statistics (highlighted), WAN Internet Connection Statistics, Phone Port Statistics (highlighted), Configuration Restore & Backup, Factory Reset, Save & Restart System, Advanced, and About. The main content area displays the 'Phone Port Statistics' window, which contains a table of statistics for two phone ports.

Phone Port	1	2
Tx Voice Packets	206	152
Tx Octets	4000	36016
Tx Silence-Suppressed Frames	549476	546634
Tx Grant Sync Dropped Frames	0	0
Tx DTMF Octets	0	0
Rx Voice Packets	0	0
Rx Octets	0	0
Rx Min Jitter	-1	-1
Rx Max Jitter	0	0
Rx RTP Avg Jitter	0	0
Rx DTMF Octets	0	0
Rx SID Packets	0	0
AAAL2 Coding Profile Changes	0	0
Invalid Header Count	0	0
Micro Overflow Count	0	0
Lost Enh. Packets	0	0
Missing Core Packets	0	0

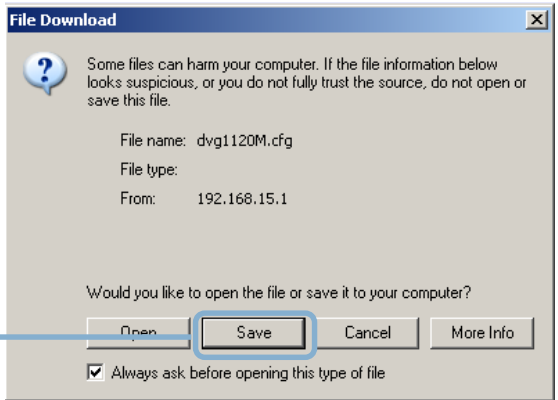
# Web-based Management (continued)

## Configuration Restore and Backup

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 DVG-1402S can be uploaded into the unit. To restore a system settings file, click on **Browse** to search the local hard drive for the file to be used.



To backup the current system settings, click on **Backup** and the following window will appear:

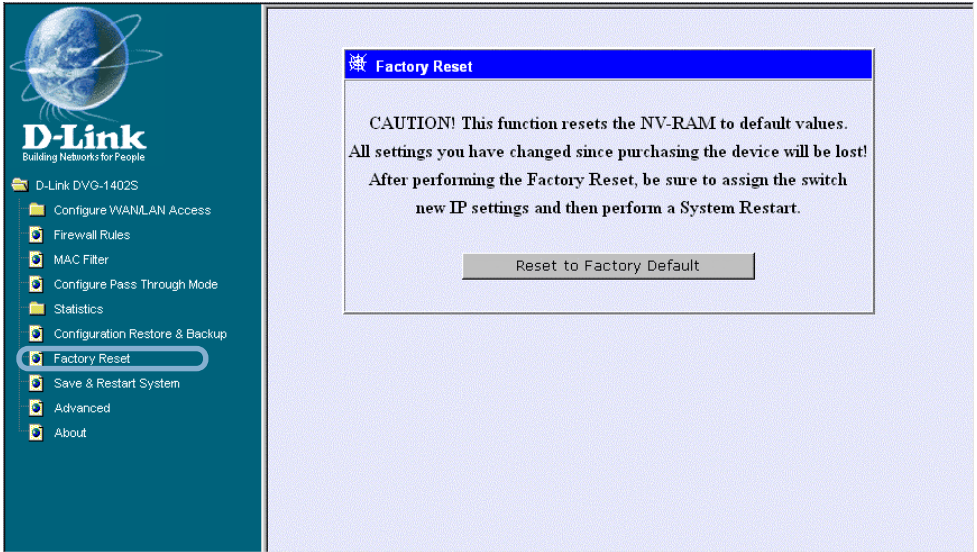


Click on the **Save** button and select the location on your hard drive to save the file to.



# Web-based Management (continued)

## Factory Reset



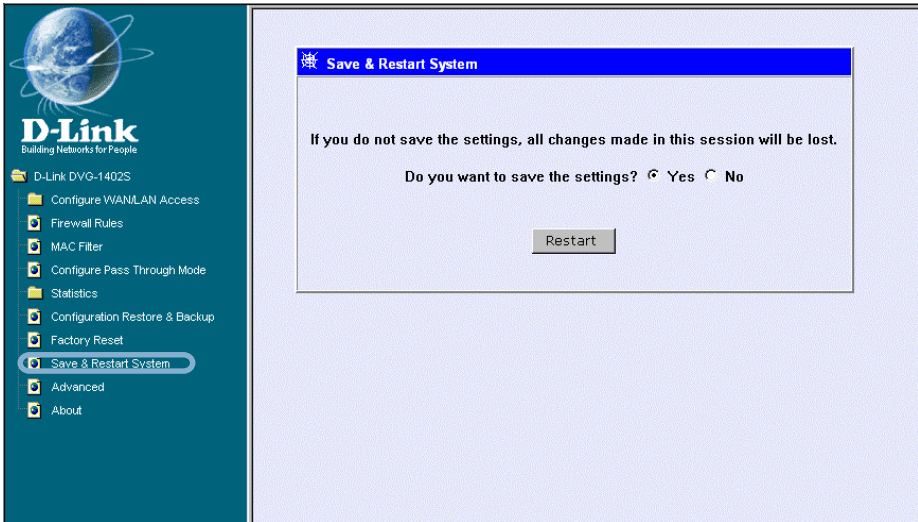
Before performing a Factory Reset, be absolutely certain that this is what you want to do. Once the reset is done, all of the device's settings stored in NV-RAM will be erased and restored to values present when the device was purchased.

Click on **Reset to Factory Default** to reset the NV-RAM to the default values that were present when you purchased the device.

**Note:** After performing the Factory Reset, make sure to redefine the IP settings for the device in the **IP Configuration** menu. Then perform a Restart System on the device. After these three procedures are performed, your Factory Reset is complete.

# Web-based Management (continued)

## Save and Restart System



After the settings have been saved to NV-RAM, they will become the default settings for the device, and they will be used every time it is powered on, reset or rebooted. The only exception to this is a factory reset, which will clear all settings and restore the unit's settings back to their initial values, which were present when the device was purchased.

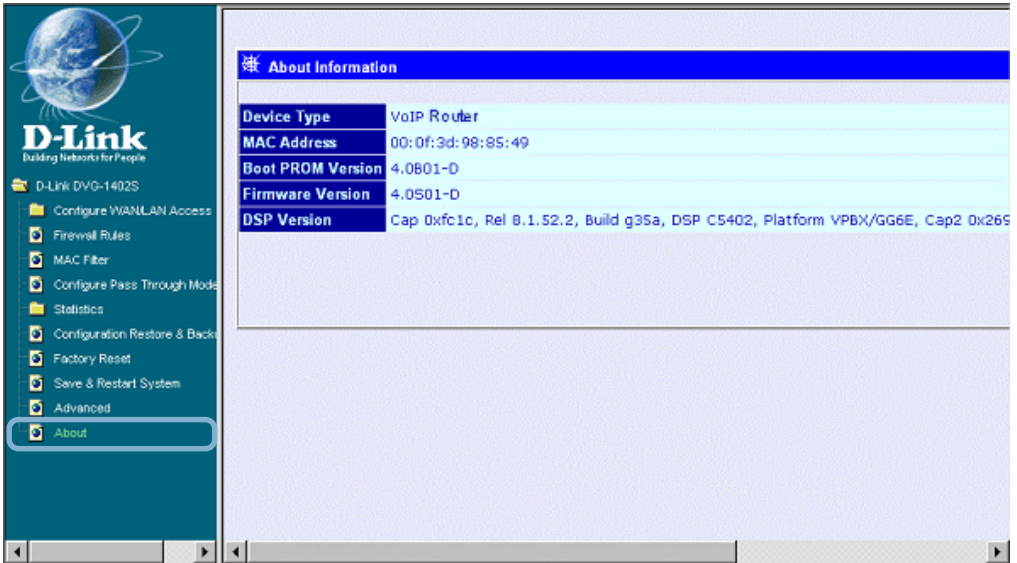
Click on **Save Configuration** at the bottom of the window to save the system settings to NV-RAM.

## Advanced

This section contains advanced configuration settings for the DVG-1402S VoIP Router. Please consult a certified technician before making any changes to the **Advanced** menu.

# Web-based Management (continued)

## About



About Information	
Device Type	VoIP Router
MAC Address	00:0f:3d:98:85:49
Boot PROM Version	4.0B01-D
Firmware Version	4.0S01-D
DSP Version	Cap 0xfc1c, Rel 8.1.52.2, Build g35a, DSP C5402, Platform VPBX/GG6E, Cap2 0x269

This read-only window displays information about the DVG-1402S VoIP such as: Device Type, MAC Address, Boot PROM Firmware, Firmware Version, and DSP Version. The DSP Version will list “Not yet loaded” until you initialize your unit.

# Frequently Asked Questions

Q: I have completed the installation of my D-Link DVG-1402S, but do not hear a dial tone.

A: Be sure that the unit is properly plugged into the AC outlet, the analog phone is properly plugged into the RJ11 jack behind the unit, and the power connector is plugged in. Verify that status lights are lit/blinking.

- 1) Verify the Power light is on.
- 2) Initially the Alarm light will blink.
- 3) The provision (prov.) Light will also blink during the boot up.
- 4) When Provisioning is complete, the Status light will blink continuously.
- 5) Verify that the WAN light is lit along with the corresponding LAN port light and that the PC is plugged into on the back of the DVG-1402S. At this point, the “Power” light, “Status” light, “WAN” light, and “LAN” light (if the PC or another device is plugged in to the LAN port) should be lit green.

A: Confirm that your service has been activated by your VoIP service provider.

Q: I get a dial tone, but when I dial any phone number I receive a busy signal.

A: The unit may not have been properly configured with the correct account information in the Web GUI utility.

- 1) Access the Web GUI by entering the IP address: 192.168.15.1 in the Address bar.
- 2) Select the Advanced setting link.
- 3) Select SIP Configuration.
- 4) In the Server link, enter the correct information (server address, Port Number, Outbound Proxy server info [if applicable], Domain Name [if applicable], etc.)
- 5) Select User Agent link and enter the account information provided by your VoIP service provider, i.e. Phone Number, Display name, User agent

## Frequently Asked Questions (continued)

port, Authentication User Name, Authentication Password, and Confirm Password.

Q: After setting up the DVG-1402S, I cannot surf the internet.

A: Re-check all the cabling installations. Make sure that the Ethernet cable from the PC is plugged into one of the LAN ports of the DVG-1402S and the Ethernet cable from the cable modem is plugged into the WAN port of the DVG-1402S. Once this is verified but you still cannot access the Internet, then verify the configurations via the Web GUI.

- 1) Access the Web GUI by entering the IP address: 192.168.15.1 in the Address bar.
- 2) Select Configure WAN/LAN Access.
- 3) Select Configure WAN Port.
- 4) In the WAN Restart settings – Get IP from one of the following:
  - a. **If using a cable modem** - Choose DHCP and fill in the available information and click “Save”. User will be prompted to either **“Save changes and reboot system now”** or **“Continue and ‘Restart System’ later”**. Choose **“Save changes and reboot system now”** and wait for the unit to reboot (not the PC).
  - b. **If using a DSL modem** – Choose PPPoE and fill in the available information and click “Save”. User will be prompted to either **“Save changes and reboot system now”** or **“Continue and ‘Restart System’ later”**. Choose **“Save changes and reboot system now”** and wait for the unit to reboot (not the PC).
  - c. **If the service provider gives a specific IP address** – Choose Manual and enter the given information in the fields.
- 5) Once the DVG-1420S has rebooted, select Configure LAN Port.
- 6) Select Dynamic IP assignment.
- 7) In the “State” field, make sure that “Enabled” is selected.
- 8) Select “Save” and choose to reboot the DVG-1402S (not the PC).
- 9) Verify that the IP address on the PC has an address of 192.168.15.x , where “x” is a number assigned by the DVG-1420S.

## Frequently Asked Questions (continued)

10) Verify that the WAN port for Public IP is NOT 10.1.1.1. (It must be an IP address given by your Internet Service Provider (ISP) through the Cable or DSL modem.)

Q: Can I use my DVG-1402S on a MGCP network?

A: No, DVG-1402S is a SIP device and uses the SIP protocol in handling all of the telephony elements.

Q: I need to open certain ports, where do I go to make this configuration change?

A: This can be done in the “Firewall Rules”.

- 1) Select Firewall Rules in the Web GUI menu.
- 2) Select “Edit” in Set# 1.
- 3) In line # 1, select “Edit.”
- 4) Make the necessary modifications on this screen.
- 5) Be sure to select “Enable” in the Firewall Rule State drop down menu.
- 6) Click “Save”.
  - a. Click “Exit.”
  - b. If you are entering more than 1 rule, click “Edit” in the next line and repeat the previous steps. If not, Click “Exit” again on the lower left side.
- 7) If no more changes need to be made, click “Save Changes and Reboot.”

# Technical Specifications

## Call Control Protocols Compliance:

- SIP2 (RFC3261)
- SIP1 (RFC2543)

## Voice Compression:

- G.711 (A-law and u-law), G.723.1, G.726, G.729a

## Analog Voice Ports:

- Type: Loop-Start FXS interfaces
- DTMF tone detection/generation
- V.21/V.25 Modem/Fax tone detection
- Echo Cancellation: G.168

## Ethernet Ports:

- WAN/LAN: 10/100 Auto MDI/MDI-X Ethernet ports
- IEEE 802.3 10BASE-T Ethernet compliance
- IEEE 802.3u 100BASE-TX Fast Ethernet compliant

## Quality of Service:

- Voice service is prioritized over the data traffic (When unit is connected directly to the modem)

## Network Protocols:

- Will route all standard protocols
- DHCP: Dynamic Host Configuration Protocol server and client
- NAT: Network Address Translation
- PPP over Ethernet Client

## Network Management:

- Manage functions through an intuitive Web-based graphical user interface

## Technical Specifications (continued)

### LEDs:

- **General:**  
Power  
Status/Alarm
- **Ethernet:**  
WAN: 10/100M, Link/Act  
LAN: 10/100M, Link/Act
- **Phone 1 to 2:**  
MWI  
Hook/Ringing
- **Provision Light**

### Dimensions:

- W = 6.77 inches (172mm)
- D = 6.16 inches (156.6 mm)
- H = 1.34 inches (34mm)

### Number of Ports:

- One 10/100BASE-T Ethernet port (WAN)
- Four 10/100BASE-TX Fast Ethernet port (LAN)
- Two loop-start FXS RJ-11 ports

### Power Supply:

- AC-to-DC power adapter (provided)
- DC Input: 12VDC/1.2A

### Operating Temperature:

- 0-50°C

### Storage Temperature:

- -10-55°C

### Humidity:

- 5% - 95% non-condensing



## Technical Specifications (continued)

### Safety:

- UL/CUL

### Emission (EMI):

- FCC Class B
- CE Class B

**For Technical Support regarding your phone service, please contact the service provider.**

If you experience any hardware problems with the DVG-1402S, please contact D-Link Technical Support.

## Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product.

U.S. and Canadian customers can contact D-Link technical support through our website, or by phone.

### **Tech Support for customers within the United States:**

***D-Link Technical Support over the Telephone:***

(877) 453-5465

24 hours a day, seven days a week.

***D-Link Technical Support over the Internet:***

<http://support.dlink.com>

email:[support@dlink.com](mailto:support@dlink.com)

### **Tech Support for customers within Canada:**

***D-Link Technical Support over the Telephone:***

(800) 361-5265

Monday to Friday 7:30am to 12:00am EST

***D-Link Technical Support over the Internet:***

<http://support.dlink.ca>

email:[support@dlink.ca](mailto:support@dlink.ca)

# Warranty and Registration

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this Limited warranty for its product only to the person or entity that originally purchased the product from:

- D-Link or its authorized reseller or distributor and
- Products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, addresses with an APO or FPO.

**Limited Warranty:** D-Link warrants that the hardware portion of the D-Link products described below will be free from material defects in workmanship and materials from the date of original retail purchase of the product, for the period set forth below applicable to the product type (“Warranty Period”), except as otherwise stated herein.

1-Year Limited Warranty for the Product(s) is defined as follows:

- Hardware (excluding power supplies and fans) One (1) Year
- Power Supplies and Fans One (1) Year
- Spare parts and spare kits Ninety (90) days

D-Link’s sole obligation shall be to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund at D-Link’s sole discretion. Such repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement Hardware need not be new or have an identical make, model or part. D-Link may in its sole discretion replace the defective Hardware (or any part thereof) with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement Hardware will be warranted for the remainder of the original Warranty Period from the date of original retail purchase. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware (or part thereof) that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

**Limited Software Warranty:** D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. D-Link’s sole obligation shall be to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund at D-Link’s sole discretion. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Software will be warranted for the remainder of the original Warranty Period from the date of original retail purchase. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

**Non-Applicability of Warranty:** The Limited Warranty provided hereunder for hardware and software of D-Link’s products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold “As-Is” without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

**Submitting A Claim:** The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same.

- The original product owner must obtain a Return Material Authorization (“RMA”) number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann St., Fountain Valley, CA 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

**What Is Not Covered:** This limited warranty provided by D-Link does not cover: Products, if in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this Warranty.

**Disclaimer of Other Warranties:** EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

**Limitation of Liability:** TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK’S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY

**Governing Law:** This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This limited warranty provides specific legal rights and the product owner may also have other rights which vary from state to state.

**Trademarks:** D-Link is a registered trademark of D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective manufacturers or owners.

**Copyright Statement:** No part of this publication or documentation accompanying this Product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976. Contents are subject to change without prior notice. Copyright© 2002 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

**CE Mark Warning:** This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

**FCC Statement:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. 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.

**FCC Caution:**

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment; such modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**IMPORTANT NOTE:**

**FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Register online your D-Link product at <http://support.dlink.com/register/>