

D-Link

DVG-1402S

2Voice + 4SW VoIP Router

Manual

D-Link[®]

Building Networks for People

Version B.1

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Package Contents

- D-Link DVG-1402S Router
- Power Adapter - AC 12V, 1.2A
- Manual and Warranty on CD
- Quick Installation Guide
- Ethernet Cable (All the Ethernet ports on DVG-1402S are Auto-MDIX)

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
- Ethernet-Based Cable or DSL Modem
- Computers with Windows, Macintosh, or Linux-based operating systems with an installed Ethernet adapter
- Computers with Windows, Macintosh, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer Version 6.0 or Netscape Navigator Version 6.0 and Above

Introduction

The D-Link DVG-1402S High-Speed VoIP Router Links traditional telephony networks to IP networks with conventional telephony devices such as analog phones or fax machines. It can reduce long distance phone charges and deliver toll-quality voice communication over the IP network. This gateway provides two loop start Foreign Exchange Subscriber (FXS) ports and four LAN ports. One Ethernet port for a DSL/Cable Modem or other WAN devices, and the other for connection to create a home or small office LAN networks. 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 via the Console, Web browser, Telnet and HTTPS provisioning is also supported.



Rear Panel Connections

Phone Connections

Connect to your phones using standard phone cabling.

Auto MDI/MDIX LAN Ports

Connect the Ethernet cable from computers on your LAN to these ports.

Factory Reset Button

Pressing this button will restore the router to its factory default settings.



All Ethernet Ports (WAN and LAN) are auto MDI/MDIX, meaning you can use either a straight-through or a crossover Ethernet cable.

WAN Port

Connect the Ethernet cable from your ADSL modem to this port.

Power Adapter

Connect your 12V 1.25A power adapter here.

Front Panel LEDs

Status LED

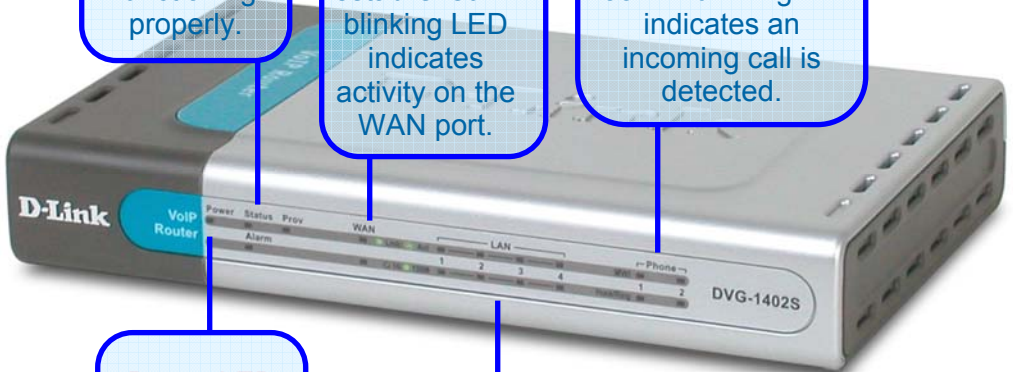
A blinking LED indicates the DVG-1402S is functioning properly.

WAN LED

An active LED indicates a link has been established. A blinking LED indicates activity on the WAN port.

Phone LEDs

The Hook LED will light when a telephone is off the hook. A blinking LED indicates an incoming call is detected.



Power LED

A solid light indicates a valid connection to the power supply.

LAN LEDs

An active LED indicates a link has been established. A blinking LED indicates activity on the LAN port.

Features

- 1 NWay 10/100BASE-TX Fast Ethernet port for WAN-connection
- 4 NWay 10/100BASE-TX Fast Ethernet port for LAN-connection
- 2 Foreign Exchange Subscriber (FXS) POTS ports (RJ-11 Jacks)
- Voice Activity Detection (VAD) /Comfort Noise Generation (CNG)
- Silence suppression to reduce bandwidth consumption.
- Adaptive jitter buffer for a smooth voice reception
- Lost packet recovery ability for improved voice quality
- Support QoS (Quality of Service) for voice quality guarantee.
- Build-in PPPoE function to support dial-up connection for broadband technology.
- IP address assignment using DHCP or static configuration
- RIP1/RIP2 and static routing support
- Support IP sharing to allow multiple users to access the Internet via a single IP address
- Support Caller ID function
- Configuration download using HTTPS and SSL/TLS client certificate encryption and authentication
- Support VPN Pass-Through
- MAC and Packet filter support
- Remote configuration and management over the Internet using web browsers
- Firmware backup support
- Support configuration backup and restore

Installation

For a typical setup at home, please do the following:

- 1.** You will need broadband Internet access (a Cable or DSL-subscriber 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 DVG-1402S VoIP Router (see the printed Quick Installation Guide included with your router.)
- 4.** Install the D-Link DFE-530TX+ adapter into a desktop computer. The four Ethernet LAN ports of the DVG-1402S are Auto MDI/MDIX and will work with both Straight-Through and Cross-over cable.

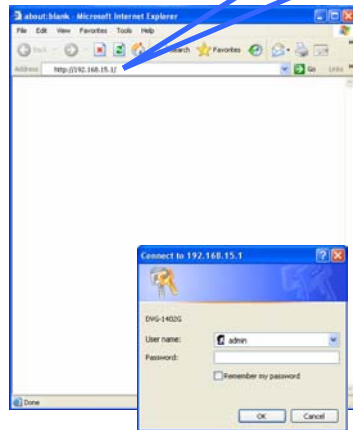
(See the printed Quick Installation Guide included with the DFE-530TX+.)

Using the Configuration Wizard

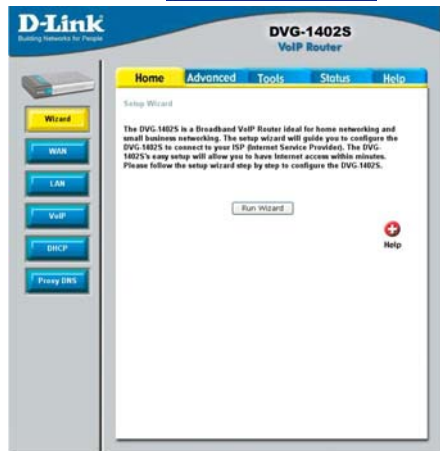
Whenever you want to configure your network or the DVG-1402S, you can access the Configuration Menu by opening the web-browser and typing in the IP Address of the DVG-1402S. The DVG-1402S default IP Address is shown to the right:

192.168.15.1

- Open the web browser
- Type in the IP Address of the Router (<http://192.168.15.1>)
- Type admin in the User Name field
- Type admin in the Password field
- Click OK



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



These buttons appear on most of the configuration screens in this section. Please click on the appropriate button at the bottom of each screen after you have made a configuration change.

Note: if you have changed the default IP Address assigned to the DVG-1402S, make sure to enter the correct IP Address.



Apply

Clicking this button will save configured settings to the router.



Cancel

Clicking Cancel will clear changes made to the current page.



Help

Clicking Help will provide the user with helpful information about the current window.



Refresh

Click refresh will refresh the statistics of the current window.

Dynamic

Choose Dynamic IP Address to obtain IP Address information automatically from your ISP. This option should be selected if your ISP has not supplied you with an IP address. This option is commonly used for Cable modem services.

Host Name

The Host Name is optional but may be required by some ISPs. The default host name is the device name of the Router and may be changed.

MAC Address

The default MAC Address is set to the WAN's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP.

Clone MAC Address

The default MAC address is set to the WAN's physical interface

MAC address on the Broadband Router. You can use the “Clone MAC Address” button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the router. It is not recommended that you change the default MAC address unless required by your ISP.

Enter a DNS Address if you wish not to use the address provided by your ISP.

Upstream Bandwidth

The upstream bandwidth can be set for the data traffic. The bandwidth can be maximized for voice packets and limited for data that requires less throughput.

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VoIP Router

Home Advanced Tools Status Help

WAN Settings

Please select the appropriate option to connect to your ISP.

Dynamic IP Address Choose this option to obtain an IP address automatically from your ISP. (For most Cable modem users)

Static IP Address Choose this option to set static IP information provided to you by your ISP.

PPPoE Choose this option if your ISP uses PPPoE. (For most DSL users)

Static IP

IP Address . . . (assigned by your ISP)

Subnet Mask . . .

Default Gateway . . .

Primary DNS Address . . .

Secondary DNS Address . . . (optional)

Upstream Bandwidth Kbyte

Apply Cancel Help

Static IP Address

Choose Static IP Address if all WAN IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.

IP Address

Input the public IP Address provided by your ISP.

Subnet Mask

Input your Subnet mask. (All devices in the network must have the same subnet mask.)

IP Gateway Address

Input the public IP address of the ISP to which you are connecting.

Primary DNS Address

Input the primary DNS (Domain Name Server) IP address provided by your ISP

This is an optional DNS Address entry to be used if the primary DNS Fails.

The upstream bandwidth can be set for the type of packets that the will be sent. The bandwidth can be maximized for voice packets and limited for data that requires less throughput.

Secondary DNS
Address

Upstream Bandwidth



Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

PPPoE

Choose this option if your ISP uses PPPoE. (Most DSL users will select this option.)

Password

Enter The PPPoE user name Password provided to you by your ISP.

Retype Password

Retype the password entered in the previous field.

Service Name

Enter the Service Name provided by your ISP (optional).

IP Address

This option is only available for Static PPPoE. Enter the static IP Address for the PPPoE connection.

MAC Address

The default MAC Address is set to the WAN's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP.

Primary DNS Address

Input the primary DNS (Domain Name Server) IP address

provided by your ISP

Secondary DNS Address

This is an optional DNS Address entry to be used if the primary DNS fails.

Upstream Bandwidth

The upstream bandwidth can be set to suit the type of packets that the connection will be sending. The bandwidth can be maximized for voice packets and limited for data that requires less throughput.

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 DVG-1402S and 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.



The screenshot shows the web interface of a D-Link DVG-1402S VoIP Router. The top navigation bar includes 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'LAN Settings' page is active, displaying the IP address and subnet mask for the LAN interface. The IP address is set to 192.168.15.1 and the subnet mask is 255.255.255.0. There are 'Apply', 'Cancel', and 'Help' buttons at the bottom right of the settings area.

Field	Value
IP Address	192 . 168 . 15 . 1
Subnet Mask	255 . 255 . 255 . 0

IP Address

The IP address of the LAN interface. The default IP address is 192.168.15.1.

Subnet Mask

The subnet mask of the LAN interface. The default subnet mask is 255.255.255.0.

Home > VoIP

All of the screens necessary to setup and configure the router to handle VoIP traffic are accessed from the screen shown below.

To access any of the individual configuration screens, click on the corresponding radio-button and that screen will appear.

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Home Advanced Tools Status Help

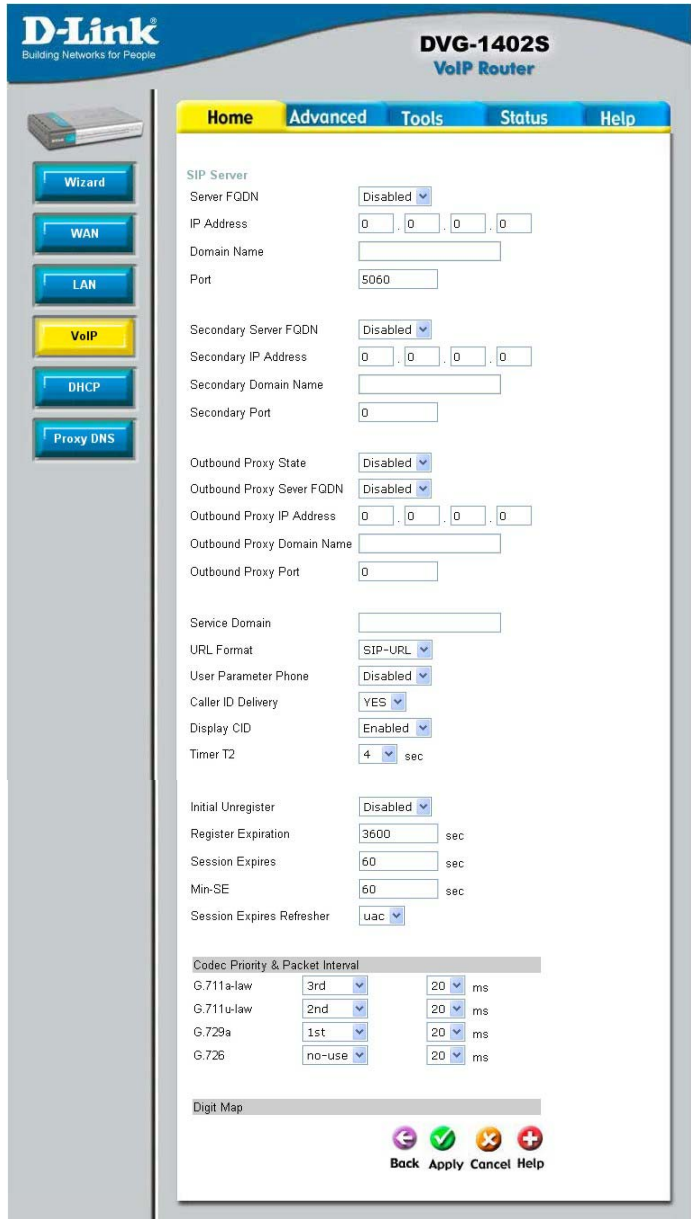
SIP Configuration

- Server Configuration
- Provisioning
- STUN Configuration
- User Agent
- Peer to Peer
- Telephony
- Speed Dial
- Misc.
- Manage Features.

Help

Home > VoIP > Server Configuration

The Router can be configured to handle voice signals over the Internet Protocol (Voice over IP – VoIP). The screen shown to the right, along with those on the following pages are used to configure your router to communicate with the devices that will send and receive telephone calls over the Internet.



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VoIP Router

Home Advanced Tools Status Help

VoIP

Wizard
WAN
LAN
DHCP
Proxy DNS

SIP Server

Server FQDN Disabled

IP Address 0 . 0 . 0 . 0

Domain Name

Port 5060

Secondary Server FQDN Disabled

Secondary IP Address 0 . 0 . 0 . 0

Secondary Domain Name

Secondary Port 0

Outbound Proxy State Disabled

Outbound Proxy Server FQDN Disabled

Outbound Proxy IP Address 0 . 0 . 0 . 0

Outbound Proxy Domain Name

Outbound Proxy Port 0

Service Domain

URL Format SIP-URL

User Parameter Phone Disabled

Caller ID Delivery YES

Display CID Enabled

Timer T2 4 sec

Initial Unregister Disabled

Register Expiration 3600 sec

Session Expires 60 sec

Min-SE 60 sec

Session Expires Refresher uac

Codec Priority & Packet Interval

G.711a-law	3rd	20	ms
G.711u-law	2nd	20	ms
G.729a	1st	20	ms
G.726	no-use	20	ms

Digit Map

Back Apply Cancel Help

Server FQDN	Use this drop-down menu to Enable or Disable the Server Fully Qualified Domain Name (FQDN) function. This is disabled when the SIP URL domain name is different from the SIP proxy server domain name. The phone will then use the domain name in Domain Name field as part of SIP URL but send and receive SIP messages through the SIP proxy server defined in the Service Domain field.
IP Address	Enter the IP address of the SIP Server in this field.
Domain Name	Enter the domain name corresponding to the IP address entered above in this field.
Port	Enter the SIP server's listening port for the SIP in this field. Leave this field set to the default if your VoIP service provider did not give you a server port number for SIP.
Secondary SIP Server	The Secondary Features (FQDN, IP address, domain name and port), act as a backup for the initial connections' settings. In the event that the connection with the SIP server is lost, the backup settings will be used.
Outbound Proxy	The Outbound Proxy is a normal SIP proxy. If instructed to do so by your ISP, enable the Outbound Proxy, and enter its IP address, Domain Name and Port Number in the appropriate fields.
Service Domain	Enter the SIP service domain name in this field.
URL Format	Select SIP-URL to have the router include the domain name with the SIP number in the SIP messages that it sends. Select TEL-URL to have the router use the SIP number without a domain name in the SIP messages that it sends.
User Parameter	You can set this to phone or none . This determines whether or not the phone number is appended to the information forwarded to your SIP server. Your VoIP service provider will instruct you which setting to use.
Caller ID Delivery	Use this pull-down menu to initiate the delivery of the inbound caller ID.
Display CID	Use this pull-down menu to enable or disable the display of the Caller ID.
Timer T2	Set the timer to 4, 8, 16 or 32.
Initial Unregister	Enable or disable the initial unregister.
Register Expiration	Use this field to set how long the router will wait before sending a repeat registration request if a registration attempt fails or there is no response from the registration server.

Home > VoIP > Provisioning

Provisioning is a function that automatically updates your DVG-1402S's VoIP configuration by using a TFTP server located on the Internet. If you have access to such a service, you will need to know the URL and Proxy Address of the Provisioning Server.



The screenshot shows the D-Link DVG-1402S VoIP Router web interface. The top navigation bar includes 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Home' tab is selected. On the left sidebar, there are buttons for 'Wizard', 'WAN', 'LAN', 'VoIP', 'DHCP', and 'Proxy DNS'. The 'VoIP' button is highlighted in yellow. The main content area is titled 'XML Provisioning' and contains the following fields:

- Provisioning Function: A drop-down menu currently set to 'Disabled'.
- Server URL: An empty text input field.
- Proxy Address: An empty text input field.
- Proxy Port Number: A text input field containing '8080'.

At the bottom of the form, there are four icons: a left arrow (Back), a green checkmark (Apply), an orange 'X' (Cancel), and a red plus sign (Help).

Provisioning Function

Use this drop-down menu to Enable or Disable the Provisioning Function on the router.

Server URL

Enter the URL of the Provisioning Server in this field.

Proxy Address

Enter the IP address of the Proxy Server in this field.

Proxy Port Number

Enter the port number the Proxy Server will use to make the connection in this field.

Home > VoIP > STUN Configuration

Simple Traversal of UDP over NAT (STUN) – is a protocol which enables a VoIP device, such as this router or an IP phone, to detect the presence and type of NAT behind which the phone is placed. This router supports STUN and can intelligently modify the private IP address and port in its SIP/SDP message by using the NAT mapped public IP address and port through a series of STUN queries against a STUN server located on the public Internet. This will allow SIP signaling and RTP media to successfully traverse a NAT without requiring any configuration changes on the NAT.

The screenshot shows the D-Link DVG-1402S VoIP Router configuration interface. The page title is "D-Link Building Networks for People" and "DVG-1402S VoIP Router". The navigation tabs are "Home", "Advanced", "Tools", "Status", and "Help". The "Advanced" tab is selected, and the "STUN Configuration" page is displayed. On the left side, there is a vertical menu with buttons for "Wizard", "WAN", "LAN", "VoIP", "DHCP", and "Proxy DNS". The "VoIP" button is highlighted in yellow. The main configuration area contains the following fields:

- STUN State: Disabled (dropdown menu)
- STUN Server FQDN: Disabled (dropdown menu)
- STUN Server IP Address: 0 . 0 . 0 . 0 (text input)
- Stun Server Name: (text input)
- STUN Server Port: 3478 (text input)
- STUN ReqInterval: 60 (text input)
- STUN NAT Type: UnKnown (text input)

At the bottom of the configuration area, there is a "NAT Type Detect" button and a row of four icons: a back arrow, a green checkmark, a red X, and a red plus sign. Below these icons are the labels "Back", "Apply", "Cancel", and "Help".

STUN is useful if you need to use the DVG-1402S behind a modem or router that provides the connection to your ISP and then to the Internet and does not support symmetric NAT. You will need access to a STUN server on the Internet and its IP address to use STUN on the DVG-1402S.

STUN State Use this drop-down menu to Enable or Disable STUN on the router.

STUN Server IP Address Enter the IP address of a STUN server in this field.

STUN Server Port Enter the port number the STUN server will use in this field. If you do not have any information as to the proper port number, leave the default setting here.

STUN ReqInterval This determines the amount of time, in seconds, between STUN requests. If you do not have any information as to the proper interval, leave the default setting here.

STUN NAT Type Displays the result of the STUN NAT examination.

Home > VoIP > User Agent

The Router can be configured to handle voice signals over the Internet Protocol (Voice Over IP – VOIP).



The screenshot shows the D-Link DVG-1402S VoIP Router configuration interface. The top navigation bar includes 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Home' tab is selected. On the left side, there is a vertical menu with buttons for 'Wizard', 'WAN', 'LAN', 'VoIP' (highlighted in yellow), 'DHCP', and 'Proxy DNS'. The main content area is titled 'User Agent' and contains the following fields:

- Same Phone Number: Disabled (dropdown menu)
- Index: 1 (dropdown menu)
- Phone Number: [text input field]
- Display Name: [text input field]
- User Agent Port: 5060 (text input field)
- Authentication Username: [text input field]
- Password: [text input field]
- Retype Password: [text input field]

At the bottom right of the form, there are four icons: a left arrow (Back), a green checkmark (Apply), a red X (Cancel), and a red plus sign (Help).

Same Phone Number Use this field to **Enable** or **Disable** the use of the same telephone number for the User Agent as for the Server Agent.

Index Use this field to assign **line 1** or **line 2** telephone sockets (on the back of the router) to the information entered in the User Agent.

Phone Number The telephone number assigned to the User Agent.

Domain Name The name that will be displayed when the User Agent is in use.

User Agent Port This selects the port number the router will listen to when determining when calls are being made.

Authentication Name The Username used to access your SIP server and your VoIP service provider.

Password The Password used to access your SIP server and your VoIP service provider.

Retype Password Retype your password to confirm.

To query the registration state of click Query. When the server responds you have the option to register or unregister.

Home > VoIP > Peer to Peer

The Router can be configured to handle voice signals over the Internet Protocol (Voice Over IP – VOIP).



The screenshot shows the D-Link DVG-1402S VoIP Router configuration interface. The top navigation bar includes 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The left sidebar contains buttons for 'Wizard', 'WAN', 'LAN', 'VoIP', 'DHCP', and 'Proxy DNS'. The main content area is titled 'Peer to Peer' and contains the following fields:

- Index: 1
- Phone Number:
- User IP Address: @ . . .
- Port:

Below the fields are four icons: a left arrow (Back), a green checkmark (Apply), a red X (Cancel), and a red plus sign (Help).

Below the icons is a table titled 'SIP - Peer to Peer' with the following data:

Index	Phone Number	User IP Address	Port	Edit	Delete
1		@ 0.0.0.0	5060		
2		@ 0.0.0.0	5060		
3		@ 0.0.0.0	5060		

Phone Number

The telephone number assigned to this entry.

User IP Address

Enter the IP address of the remote peer in this field.

Port

Enter the UDP port number the remote peer will use to make the connection in this field. If you do not have any information as to the proper port number, leave the default setting here.

Home > VoIP > Telephony

The Router can be configured to handle voice signals over the Internet Protocol (Voice Over IP – VoIP).



Index

Use this field to assign **line 1** or **line 2** telephone sockets (on the back of the router) to the information entered in the User Agent.

DTMF Method

Out-of band Dual Tone Multi-frequency -The Dual Tone Multi-frequency (DTMF) mode sets how the router will handle the tones that your telephone makes when you push its buttons. It is recommended that you use the same mode that your VoIP service provider uses. Select **RFC 2833** to send the DTMF tones in RTP packets. Select **Inband** to include the DTMF tones in the voice data stream. This method works best when you are using a codec that does not use compression (like G.711). Select **INFO** to transmit DTMF tones out-of-band.

Payload Type

A payload type is a number from 96 through 127 that identifies the type of payload carried in the packet. For example, a payload type of 122 denotes a fax payload. This field is only active when the DTMF method is set to **RFC 2833**.

VAD

Voice Activity Detection (VAD) -detects whether or not speech is present. This reduces the bandwidth that a call uses by not transmitting “silent Packets” when you are not speaking.

Home > VoIP > Speed Dial

The Router can be configured to dial a specified telephone number when you enter a numerical dial code. For example, you could assign 22 to the telephone number 555-1234. Then you can dial that telephone number by entering 22.

The screenshot shows the D-Link DVG-1402S VoIP Router configuration interface. On the left is a navigation menu with buttons for Wizard, WAN, LAN, VoIP (highlighted), DHCP, and Proxy DNS. The main content area has tabs for Home, Advanced, Tools, Status, and Help. Under the Home tab, the 'Speed Dial' section includes an 'Index' field with the value '1', and empty input fields for 'Dial Code' and 'Phone Number'. Below these fields are four icons: a left arrow (Back), a green checkmark (Apply), an orange X (Cancel), and a red plus sign (Help). At the bottom, a 'Speed Dial List' table is shown with columns for Index, Dial Code, Phone Number, Edit, and Delete. The table contains six rows, with the first row (Index 1) having a 'Dial Code' of '1' and a 'Phone Number' field.

Index	Dial Code	Phone Number	Edit	Delete
1	1			
2				
3				
4				
5				
6				

[Index](#)

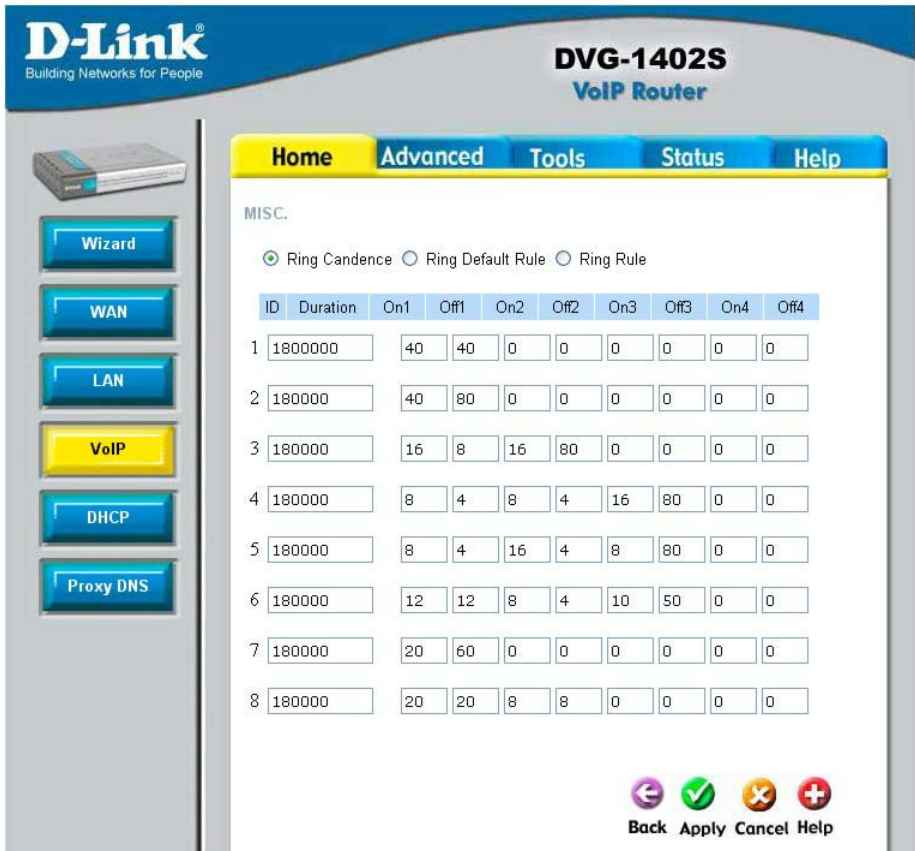
A number used to identify the current speed dial table entry.

[Dial Code](#)

A numerical code that will correspond to the phone number entered in the field below. You will dial this number, and the router will dial the corresponding telephone number.

[Phone Number](#)

Enter the telephone number you want the router to dial when you dial the Dial Code entered in the field above.



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VoIP Router

Home Advanced Tools Status Help

MISC.

Ring Cadence Ring Default Rule Ring Rule

ID	Duration	On1	Off1	On2	Off2	On3	Off3	On4	Off4
1	1800000	40	40	0	0	0	0	0	0
2	180000	40	80	0	0	0	0	0	0
3	180000	16	8	16	80	0	0	0	0
4	180000	8	4	8	4	16	80	0	0
5	180000	8	4	16	4	8	80	0	0
6	180000	12	12	8	4	10	50	0	0
7	180000	20	60	0	0	0	0	0	0
8	180000	20	20	8	8	0	0	0	0

Back Apply Cancel Help

Instead of adding additional lines to handle different telephone numbers, distinctive rings can be set to allow more than one telephone number to reach the same line. Calls coming in on different numbers on the same line can be identified by their distinctive ring pattern. For example, you could set a “short-short” ring for the sales department number, and a regular ring for the technical support number. Use the radio button to select *Ring Cadence*, *Ring Default Rule*, or *Ring Rule*. These three features allow the user to set distinctive rings. To configure distinctive rings, see the descriptions of the three features below.

Home > VoIP > Misc. > Ring Cadence

By using the Ring Cadence window, you can set up to 8 distinct ring patterns. The ring pattern of each distinct ring can be configured by setting the *On* and *Off* time. The amount of times that the ring pattern will repeat itself can also be set.

The screenshot shows the configuration page for the D-Link DVG-1402S VoIP Router. The page has a blue header with the D-Link logo and the text "Building Networks for People". Below the header, there are navigation tabs: "Home" (selected), "Advanced", "Tools", "Status", and "Help". On the left side, there is a vertical menu with buttons for "Wizard", "WAN", "LAN", "VoIP" (highlighted in yellow), "DHCP", and "Proxy DNS". The main content area is titled "MISC." and contains three radio buttons: "Ring Cadence" (selected), "Ring Default Rule", and "Ring Rule". Below this is a table with 8 rows, each representing a ring pattern. The columns are: ID, Duration, On1, Off1, On2, Off2, On3, Off3, On4, and Off4. The values in the table are as follows:

ID	Duration	On1	Off1	On2	Off2	On3	Off3	On4	Off4
1	1800000	40	40	0	0	0	0	0	0
2	180000	40	80	0	0	0	0	0	0
3	180000	16	8	16	80	0	0	0	0
4	180000	8	4	8	4	16	80	0	0
5	180000	8	4	16	4	8	80	0	0
6	180000	12	12	8	4	10	50	0	0
7	180000	20	60	0	0	0	0	0	0
8	180000	20	20	8	8	0	0	0	0

At the bottom right of the page, there are four icons: a left arrow (Back), a green checkmark (Apply), a red X (Cancel), and a red plus sign (Help).

Duration

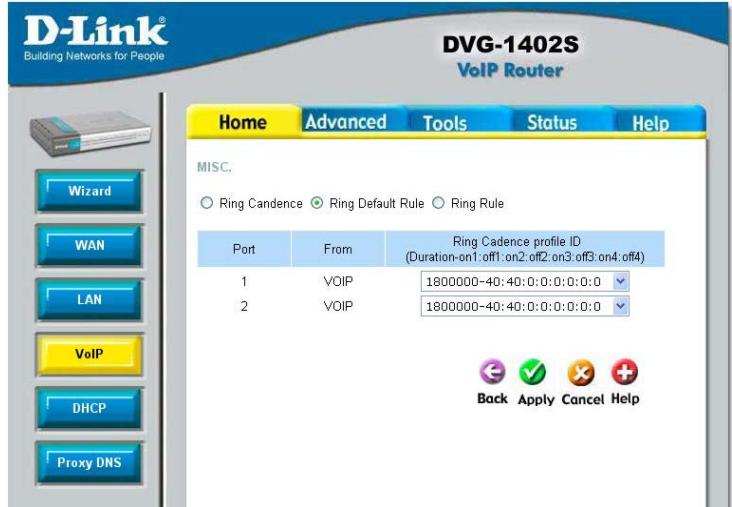
This field is used to limit the amount of times that the ring pattern will repeat itself. For example, if a ring pattern is set for 16 seconds and the duration is set for 60000 ms, then the ring pattern will repeat itself 3 times; then, 3 quarters of the way through the fourth repetition, the ringing will stop. The default value is 180000 ms.

Ring on Ring off

One ring pattern is comprised of four rings and four periods of silence. The *On* field refers to the time of 1 ring. The *Off* time refers to the period of silence between rings. One unit of time in the *On* and *Off* fields is equal to 50 ms; so a value of 40 in the *On* field sets a 2000 ms ring (2 seconds). The sum of all the fields must be less than or equal to 320 ms and must be a multiple of 8. However, individual *On* and *Off* times don't necessarily have to be multiples of 8. A ring pattern could be set at 12, 12, 8, 4, 10, 50, 0, 0. While some of the *On* and *Off* times are not multiples of 8, their sum of 96 meets the requirement so this would be a valid ring pattern.

Home > VoIP > Misc. > Ring Default Rule

The Ring Default Rule is set for inbound callers that are not defined by the Ring Rule. One Ring Default Rule can be set for each VoIP port.



The screenshot shows the configuration page for the Ring Default Rule on a D-Link DVG-1402S VoIP Router. The page is titled "D-Link Building Networks for People" and "DVG-1402S VoIP Router". The navigation menu includes "Home", "Advanced", "Tools", "Status", and "Help". The "Home" tab is selected, and the "Misc." section is active. The "Ring Default Rule" option is selected with a radio button. Below this, there is a table with two columns: "Port" and "From". The "From" column contains "VOIP" for both ports. The "Ring Cadence profile ID" column contains a pull-down menu for each port, with the current selection being "1800000-40:40:0:0:0:0:0". Below the table, there are four icons: a left arrow (Back), a green checkmark (Apply), a red X (Cancel), and a red plus sign (Help).

Port	From	Ring Cadence profile ID (Duration-on1: off1: on2: off2: on3: off3: on4: off4)
1	VOIP	1800000-40:40:0:0:0:0:0
2	VOIP	1800000-40:40:0:0:0:0:0

Ring Cadence Profile ID

Use this pull-down menu to select a Ring Cadence for the Ring Default Rule. The 8 different Ring Cadences can be configured on the Ring Cadence window.

Home > VoIP > Misc. > Ring Rule

You can use the Ring Rule window to assign Caller IDs to frequently received inbound calls. Any call that has been assigned a caller ID will have its ID number displayed on the receiver's caller display. This way, the receiver knows which department the inbound call is attempting to reach by the ring cadence, and who the caller is by the caller ID.

The screenshot shows the D-Link DVG-1402S VoIP Router web interface. The top navigation bar includes 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Home' tab is selected. On the left sidebar, there are buttons for 'Wizard', 'WAN', 'LAN', 'VoIP', 'DHCP', and 'Proxy DNS'. The main content area is titled 'MISC.' and contains three radio buttons: 'Ring Candence', 'Ring Default Rule', and 'Ring Rule' (which is selected). Below these are fields for 'From' (set to 'VoIP'), 'Port' (set to 'P1'), 'Cadence Profile' (set to '1800000-40:40:0:0:0:0:0'), and 'Caller ID' (empty). At the bottom right of the form are buttons for 'Back', 'Apply', 'Cancel', and 'Help'. Below the form is a table with the following data:

Index	From	Port	Cadence Profile	Caller ID	Edit	Delete
1	VoIP	P1	1800000-40:40:0:0:0:0:0			
2	VoIP	P1	1800000-40:40:0:0:0:0:0			
3	VoIP	P1	1800000-40:40:0:0:0:0:0			

From

Use the *From* field to select either VoIP or PSTN.

Port

Use the *Port* field to select either Port 1 or Port 2. You can also choose both ports 1 and 2.

**Ring Cadence
Profile ID**

Use this pull-down menu to select a Ring Cadence for the Ring Rule. The 8 different Ring Cadences can be configured on the Ring Cadence window.

Caller ID

Set a numerical *Caller ID* of up to 32 digits. 32 caller IDs can be created and will be listed below the Ring Rule Configuration area. To edit or delete an entry that has already been created, find the entry in the list and click on the appropriate icon.

Home > VoIP > Manage Features > Reject Incoming Call

You can configure the router to reject incoming calls from particular telephone numbers by entering the telephone number in the screen shown below.

The screenshot shows the D-Link VoIP Router configuration interface. At the top left is the D-Link logo with the tagline 'Building Networks for People'. The router model 'DVG-1402S VoIP Router' is displayed at the top right. A navigation bar contains tabs for 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. On the left side, there is a vertical menu with buttons for 'Wizard', 'WAN', 'LAN', 'VoIP', 'DHCP', and 'Proxy DNS'. The 'VoIP' button is highlighted in yellow. The main content area is titled 'Manage Features' and has two radio buttons: 'Reject Incoming Call' (selected) and 'Block Outgoing Call'. Below this, it says 'Call Reject Configuration -- 1'. There are three input fields: 'Name', 'PhoneNum', and 'Status'. At the bottom right of the configuration area are four icons: a purple arrow pointing left (Back), a green checkmark (Apply), an orange 'X' (Cancel), and a red plus sign (Help). Below the configuration area is a table with the following columns: Status, Index, Name, PhoneNum, Edit, and Delete.

Status	Index	Name	PhoneNum	Edit	Delete
<input type="checkbox"/>	1				
<input type="checkbox"/>	2				
<input type="checkbox"/>	3				
<input type="checkbox"/>	4				
<input type="checkbox"/>	5				

Name

Enter a name to identify the current entry.

PhoneNum

Enter the telephone number you want to block incoming calls from.

Home > VoIP > Manage Features > Block Outgoing Call

You can configure the router to reject outgoing calls from particular telephone numbers by entering the telephone number in the screen shown below.

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Manage Features

Reject Incoming Call Block Outgoing Call

Call Block Configuration -- 1

Name

PhoneNum

Status

Back Apply Cancel Help

Status	Index	Name	PhoneNum	Edit	Delete
<input type="checkbox"/>	1				
<input type="checkbox"/>	2				
<input type="checkbox"/>	3				
<input type="checkbox"/>	4				
<input type="checkbox"/>	5				

Name

Enter a name to identify the current entry.

PhoneNum

Enter the telephone number you want to block outgoing calls to.

Dynamic Host Configuration Protocol (DHCP) allows the gateway to automatically obtain the IP address from a DHCP server on the service provider's network. The service provider assigns a global IP address from a pool of addresses available to the service provider. Typically the IP address assigned has a long lease time, so it will likely be the same address each time the Router requests an IP address. If DHCP is not enabled on the Router, it is necessary for the user to assign a static IP address to each computer on your LAN. To setup DHCP for your LAN, first enable the Router as a DHCP server by clicking the corresponding **Enabled** radio button in the window above.

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DHCP Server
The DVG-1402S can be setup as a DHCP Server to distribute IP addresses to the LAN network.

Name:

State: Enabled Disabled

Start IP Address: . . .

IP Range:

Leased Time: hours

Static DHCP
Static DHCP is used to allow DHCP server to assign same IP address to specific MAC address.

Enabled Disabled

Name:

IP: . . .

MAC Address: - - - - -

DHCP Client:

Apply Cancel Help

Static DHCP Configuration List

Host Name	IP Address	MAC Address	Edit	Delete
	192.168.15.0	00:00:00:00:00:00		
	192.168.15.0	00:00:00:00:00:00		
	192.168.15.0	00:00:00:00:00:00		
	192.168.15.0	00:00:00:00:00:00		

Static DHCP Client Pool



NO.	State	IP Address	MAC Address	Status	HostName

Dynamic DHCP Client Pool

NO.	IP Address	MAC Address	Lease Time	Status	HostName
1	192.168.15.18	00:0c:6e:aa:b9:c0	INFINITY	ACK	berert

The next step is to set a range of IP addresses that you wish to allot to the devices on your LAN by entering a **Starting IP Address** and an **Ending IP Address**. This may be in a range from 2 to 254 (192.168.1.2 – 192.168.1.254). Computers on your LAN will have an IP address within this range then automatically assigned to them. Finally, enter the **Lease Time**, which is the time the Server will set for devices using DHCP to re-request an IP Address. Clients authorized for DHCP will be listed in the table at the bottom of the page. Click **Apply** to implement information set in this table. The DHCP Server is enabled by default.

DHCP may also be statically configured as well. This method allows the router to assign the same IP address information to a specific computer on the network, defined by its MAC address. This computer will get the same DHCP implemented IP address information every time the computer is turned on and this IP address will be specific to that computer's IP address on the local network. No other computer can be assigned this address. This is useful for computers on the LAN that are hosting applications such

as HTTP or FTP. First, the user must enable the Static DHCP function by clicking the corresponding Enabled radio button. Next the user must enter the host name and the IP address for that computer by entering the last numbers into the space provided in the **IP Address** field. Next, the user is to enter the MAC address of the computer into the space provided. Click **Apply** to implement these static settings. The **DHCP Client** field will allow users to Clone the settings from their computer that were learned from the DHCP server. Simply use the pull down menu to select the MAC address of the computer to be cloned and then click the Clone button. The settings from this computer will be implemented in the Static DHCP configuration area. Click **Apply** to implement these static settings. The lower portion of the window contains the Static DHCP Configuration List. Click on the  icon to edit an entry and on the  icon to delete an entry.

The screenshot shows the configuration interface for the Proxy DNS feature on a D-Link DVG-1402S VoIP Router. The interface includes a navigation menu with 'Home', 'Advanced', 'Tools', 'Status', and 'Help'. The 'Proxy DNS Configuration' section contains a 'State' dropdown menu set to 'Disabled' and a 'Proxy DNS IP Address' field with four input boxes containing '0'. On the left, a sidebar contains buttons for 'Wizard', 'WAN', 'LAN', 'VoIP', 'DHCP', and 'Proxy DNS'. On the right, there are three action buttons: 'Apply' (green checkmark), 'Cancel' (orange X), and 'Help' (red plus sign).

[State](#) Use this drop down menu to enable or disable the Proxy DNS.

[Proxy DNS IP Address](#) Enter the IP Address of the Proxy DNS.

Advanced > Virtual Server



Virtual Server

Filters

Firewall

Routing

NAT

Misc.

Home

Advanced

Tools

Status

Help

Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

Enabled Disabled

Name

Private IP . . .





















Protocol Type

Public Port

Private Port

  
Apply Cancel Help

Virtual Server List


State	Name	Private IP	Protocol Type	Edit	Delete
<input type="checkbox"/>	Server FTP	0.0.0.0	21/21		
<input type="checkbox"/>	Server HTTP	0.0.0.0	80/80		
<input type="checkbox"/>	Server HTTPS	0.0.0.0	443/443		
<input type="checkbox"/>	Server DNS	0.0.0.0	53/53		
<input type="checkbox"/>	Server SMTP	0.0.0.0	25/25		
<input type="checkbox"/>	Server POP3	0.0.0.0	110/110		
<input type="checkbox"/>	Server Telnet	0.0.0.0	23/23		
<input type="checkbox"/>		0.0.0.0	0/0		
<input type="checkbox"/>		0.0.0.0	0/0		
<input type="checkbox"/>		0.0.0.0	0/0		

To view the following window, click on the **Advanced** tab at the top of the window and then click the **Virtual Server** button to the left. The **Virtual Server** will allow remote users access to various services outside of their LAN through a public IP address, such as FTP (File Transfer Protocol) or HTTPS (Secure Web). After configuring the Router for these features, the Router will redirect these external services to an appropriate server on the user's LAN.

These external services may be modified by clicking its corresponding edit icon, or they may be deleted by clicking the corresponding delete icon. Though there are seven fields available to configure the Virtual Server, in most cases, only the IP address of the Virtual Server will be needed for implementation. To enable an already existing Virtual Server, click its corresponding edit button, configure the appropriate fields listed below and set the **Status** fields to **Enabled** by clicking the radio button. To configure other virtual servers for the Router, configure the following fields and click **Apply**.

Index	This is an index number used to identify the Virtual Server entry.
Private IP	Enter the IP address of the Virtual Server.
Protocol Type	The protocol type used for the Virtual Server. The user may select TCP , UDP or Both , depending on the type of Virtual Server implemented.
Start/End Global Port	Enter a range of ports on the device on the WAN side of the network that will be accessing the Virtual Server currently being configured. Commonly, this range of ports is identical to the local range of ports. Existing Virtual Servers may already have their well-known port ranges listed but this may need to be changed in certain circumstances.
Start/End Local Port	Enter the range of ports of the Virtual Server's computer. Existing Virtual Servers may already have their well-known port ranges listed but this may need to be changed in certain circumstances.

Advanced > Filters



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Virtual Server
Filters
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Filter

Filters are used to allow or deny LAN users from accessing the Internet.

IP Filter MAC Filter

IP Filters

Use IP Filters to deny LAN IP addresses access to the Internet.

Rule 1

State Enabled Disabled

Protocol

IP Range . . . - . . .

Port Range -











Schedule

Days every day Sun Mon Tue Wed
 Thu Fri Sat

Times 24Hours From : AM
To : AM

Apply Cancel Help

IP Filter List

State	Source IP Range	Port Range	Protocol	
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	 
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	 
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	 
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	 
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	 

Packet filtering is a basic security measure that should be used on any network that is exposed to a security risk. A packet filter system examines data packets and scrutinizes them in order to control network access. Filtering rules determine whether packets are

passed through the Router from either side of the gateway. The rules are created and controlled by the network administrator and can be precisely defined. These rules are used to block access to the LAN from outside the network and/or to deny access to the WAN from within the network. The Router uses filtering rules to examine data packet headers for specific information. Packets passing through the Router that do not meet the criteria specified by the rule set are dropped.

Effective implementation of packet filtering requires detailed knowledge of network services and communication protocols. An overly complicated filtering scheme can adversely affect the Router's performance, while an inadequate set of rules may needlessly compromise security.

This Router has two fields to configure for filtering which are **IP Filters** and **MAC Filters**.

Advanced > Filters > IP Filters

This window will aid the use in configuring filters for IP addresses. This will deny specified LAN IP addresses or specific ports associated with these LAN IP address from accessing the Internet. Well known ports have already been previously set in the **IP Filters List** and can be modified by clicking their corresponding edit icon, and simple adding an IP address to the configuration.

The screenshot shows the D-Link VoIP Router configuration page for the DVG-1402S model. The interface is divided into several sections:

- Navigation:** A vertical sidebar on the left contains buttons for Virtual Server, Filters (highlighted in yellow), Firewall, Routing, NAT, and Misc. The top navigation bar includes Home, Advanced (highlighted in yellow), Tools, Status, and Help.
- Filter Configuration:**
 - Filter Type:** Radio buttons for IP Filter (selected) and MAC Filter.
 - IP Filters:** A sub-section titled "Use IP Filters to deny LAN IP addresses access to the Internet." containing "Rule 1" configuration.
 - State:** Radio buttons for Enabled and Disabled (selected).
 - Protocol:** A dropdown menu set to UDP.
 - IP Range:** Input fields for source IP range, currently set to 0.0.0.0-0.0.0.0.
 - Port Range:** Input fields for port range, currently set to 0-0.
 - Schedule:**
 - Days:** Checkboxes for every day, Sun, Mon, Tue, Wed, Thu, Fri, Sat.
 - Times:** Radio buttons for 24Hours (selected) and From/To time selection (From: 00:00 AM, To: 00:00 AM).
- IP Filter List:** A table at the bottom showing existing filter rules.

State	Source IP Range	Port Range	Protocol	Actions
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	[Edit] [Delete]
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	[Edit] [Delete]
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	[Edit] [Delete]
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	[Edit] [Delete]
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	UDP	[Edit] [Delete]

To access this screen, click the **Advanced** tab along the top of the configuration window and then the **Filters** tab to the left hand side.

Protocol

The protocol associated with this IP filter. The user may choose between **TCP**, **UDP** or **Both**.

IP Address

An IP address or range of IP addresses that will be denied access to the Internet.

Subnet Mask

The subnet mask that corresponds to the IP address above.

Start Port/End Port

A port or range of ports that will be denied access to the Internet. If no port is entered, all ports in this IP range will be denied access to the Internet.

Advanced > Filters > MAC Filters

All computers are uniquely identified by their MAC (Media Access Control) address. The following window will allow users to deny computers access to the Internet or only allow certain computers access to the Internet, based on their MAC address. To access this screen, click the **Advanced** tab along the top of the configuration window, then the **Filters** tab to the left hand side and finally click the corresponding radio button for **MAC Filters**.



Index

A number used to identify this MAC address filter setting.

MAC Address

Enter the MAC address to be filtered.

State

This field allows you to enable or disable this MAC address filter setting.

Advanced > Firewall

This Router comes equipped with a firewall. The **Firewall** configuration screen allows the Router to enforce specific predefined policies intended to protect against certain common types of attacks. To configure the Router's firewall, click the **Advanced** tab at the top of the screen and then the **Firewall** tab to the left.

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Firewall Rules
Firewall Rules can be used to allow or deny traffic from WAN passing through the DVG-1402S.

Rule 1

State Enabled Disabled

Action **Pass**

Protocol **UDP**

IP Range 0 . 0 . 0 . 0 . 0 . 0 . 0 . 0

Port Range 0 . 0

Schedule

Days every day Sun Mon Tue Wed
 Thu Fri Sat

Times 24Hours From 00 : 00 AM To 00 : 00 AM

Apply Cancel Help

Firewall Rules List

State	Source IP Range	Port Range	Action	Protocol		
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	Pass	UDP		
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	Pass	UDP		
<input type="checkbox"/>	0.0.0.0-0.0.0.0	0-0	Pass	UDP		

Pass or Block

Select the action you want the filter to take when it finds a packet that meets the criteria entered below.

Protocol

The protocol associated with this IP filter. The user may choose between **TCP**, **UDP** or **Both**.

Source

Enter the IP address or range of IP addresses that you wish to block or allow to pass through the router. The Source may be identified on the LAN side, the WAN side or both by using the pull-down menu for the Interface heading.

Destination

Enter the IP address or range of IP addresses that you wish to deny or allow access to the Internet. The **Destination** may be identified on the **LAN** side, the **WAN** side or **Both** by using the pull-down menu for the Interface heading. The type of protocol may also be chosen by using the pull-down menu. The user may choose between **TCP**, **UDP**, **ICMP** or (*) **Any**. The user may also select a range of ports of the destination IP addresses by entering the range under the **Port Range** heading.

Subnet Mask

The subnet mask that corresponds to the IP address above.

Advanced > Routing > RIP Configuration

RIP – Routing Information Protocol – specifies how routers exchange information. With RIP, routers occasionally exchange entire routing tables.

You can select **RIPv1** or **RIPv2** by clicking the radio button under the **Version** heading, and then **select On** or **Off** by clicking the radio button under the **State** heading.



[LAN RIPv1](#)

Select RIPv1 or RIPv2 for use by the router on your LAN.

[LAN RIPv2](#)

Select RIPv1 or RIPv2 for use by the router on your LAN.

[WAN RIPv1](#)

Select RIPv1 or RIPv2 for use by the router on the WAN.

[WAN RIPv2](#)

Select RIPv1 or RIPv2 for use by the router on the WAN.

[State](#)

Select On or Off to enable or disable RIP on either the LAN or the WAN

Advanced > Routing > Static Route

The Routing table, shown to the right, allows you to enter static routes between computers on both the WAN (Internet) and your LAN.

The screenshot shows the D-Link DVG-1402S VoIP Router web interface. The main content area is titled "Static Route Configuration - 1" and contains the following configuration fields:

- IP Address: 0 . 0 . 0 . 0
- Subnet Mask: 0 . 0 . 0 . 0
- Gateway: 0 . 0 . 0 . 0
- Interface: WAN (selected)
- Metric: 0
- State: Disabled

Below the configuration fields is a table of existing static routes:

State	id	IP Address	Subnet Mask	Gateway	Interface	Metric	Edit	Delete
<input type="checkbox"/>	1	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	2	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	3	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	4	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	5	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	6	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	7	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		
<input type="checkbox"/>	8	0.0.0.0	0.0.0.0	0.0.0.0	WAN	0		

IP Address

Enter the IP Address of the subnet or device where packets are to be routed.

Subnet Mask

Enter the subnet mask corresponding to the IP address entered above.

Gateway

Enter the IP address of the gateway used for packets that are to be routed to the IP address entered above.

Interface

Select the WAN (Internet) or LAN interface.

Metric

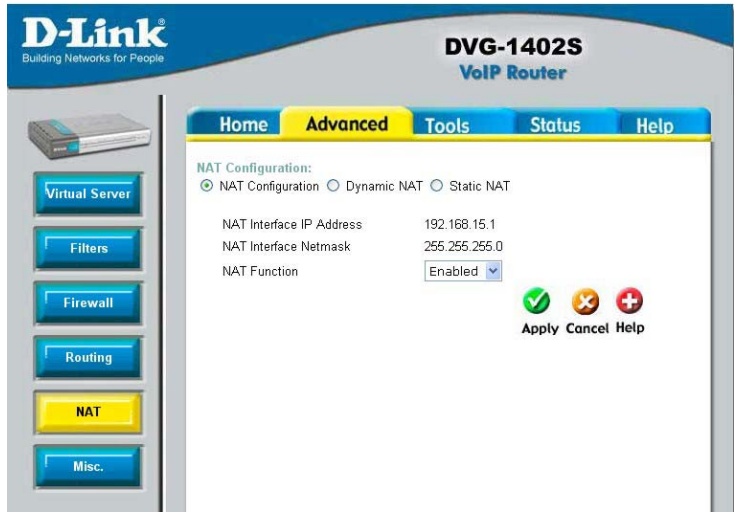
Enter the number of hops (the number of routers) that packets will be allowed to cross when being routed to the IP address entered above.

State

Use this drop-down menu to **Enable** or **Disable** this route.

Advanced > NAT > NAT Configuration

Network Address Translation (NAT) is a method by which the router translates between the IP address your ISP assigns to your account and the IP addresses assigned to the PCs on your LAN.



NAT Interface IP Address This field displays the current IP address of the LAN side of the router. All IP address that are translated by the router will be in the same range as this IP address.

NAT Interface Netmask This field displays the subnet mask corresponding to the IP address displayed above.

NAT Function Use this pull-down menu to enable or disable NAT on the router.

Advanced > NAT > Dynamic NAT

Network Address Translation (NAT) is a method by which the router translates between the IP address your ISP assigns to your account and the IP addresses assigned to the PCs on your LAN. The Dynamic NAT entries are displayed below the Dynamic NAT configuration fields. To edit or delete an entry, find it on the list and click either the edit or delete icon.

The screenshot shows the D-Link DVG-1402S VoIP Router web interface. The main configuration area is titled "NAT Configuration" and has three radio buttons: "NAT Configuration", "Dynamic NAT" (selected), and "Static NAT". Below this, the "Dynamic NAT" section has two radio buttons: "Enabled" and "Disabled" (selected). The "Index" is set to 1. There are four input fields for IP addresses: "Global IP Start", "Global IP End", "Local IP Start", and "Local IP End", all set to 0.0.0.0. At the bottom, there is a table of NAT entries with columns for State, Index, Global IP Start, Global IP End, Local IP Start, Local IP End, Edit, and Delete. The table contains three entries, all with State checkboxes and Index values 1, 2, and 3.

State	Index	Global IP Start	Global IP End	Local IP Start	Local IP End	Edit	Delete
<input type="checkbox"/>	1	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	2	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	3	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0		

[Index](#)

This is an index number used to identify this NAT table entry.

[Global IP Start/End](#)

Enter the range of IP addresses that will be assigned to your Internet account by your ISP.

[Local IP Start/End](#)

Enter the range of IP addresses that you will assign to PCs on your LAN.

Advanced > NAT > Static NAT

Network Address Translation (NAT) is a method by which the router translates between the IP address your ISP assigns to your account and the IP addresses assigned to the PCs on your LAN.

The screenshot shows the D-Link DVG-1402S VoIP Router web interface. The left sidebar contains navigation buttons: Virtual Server, Filters, Firewall, Routing, NAT (highlighted in yellow), and Misc. The main content area is titled 'NAT Configuration' and has tabs for Home, Advanced, Tools, Status, and Help. Under 'NAT Configuration', there are radio buttons for 'NAT Configuration', 'Dynamic NAT', and 'Static NAT' (which is selected). Below this, there are radio buttons for 'Enabled' and 'Disabled' (which is selected). The 'Index' is set to 1. The 'Local IP Address' and 'Global IP Address' fields are both set to 0.0.0.0. At the bottom, there is a table with columns for State, Index, Local IP Address, Global IP Address, Edit, and Delete. The table contains six rows, all with 0.0.0.0 for both IP addresses.

State	Index	Local IP Address	Global IP Address	Edit	Delete
<input type="checkbox"/>	1	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	2	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	3	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	4	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	5	0.0.0.0	0.0.0.0		
<input type="checkbox"/>	6	0.0.0.0	0.0.0.0		

[Index](#)

This is an index number that will be used to identify this NAT table entry.

[Local IP Address](#)

Enter the IP address of the PC on your LAN.

[Global IP Address](#)

Enter the IP address assigned to your Internet account by your ISP.

Tools > Admin

At this page, the DVG-1402S administrator can change the system password. There are two accounts that can access the Broadband Router's Web-Management interface. They are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes.



Web Port Number

The port number used to access the Broadband Router. The default port number for web management is 80.

WAN Access Control

WAN access control allows remote management via the [DI-624](#) to be configured from the Internet by a web browser. A username and password are still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform **Administrator** tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host. Click the radio button to *Enabled* to activate this feature.

Administrator Password

Enter the password, admin, here and the same password in the Confirm Password field. This will be the password that the administrator will use to gain access to the configuration menu of the device. There is no default password for this device.

Tools > System



Backup

Click **Backup** to backup the configuration file to your local hard drive.

Restore Configuration File

To restore the configuration file click on *Browse* to search the local hard drive and locate the configuration file to be used for the configuration restoration. Once the file has been located, click **Open** in the browser window and then **Upload** on the System window.

Restore Factory Default Settings

Click **Reset Factory Default Settings** to restore the factory default settings.

Tools > Firmware

The screenshot shows the D-Link DVG-1402S VoIP Router configuration interface. The top navigation bar includes 'Home', 'Advanced', 'Tools' (selected), 'Status', and 'Help'. On the left, there is a sidebar with buttons for 'Admin', 'System', 'Firmware' (highlighted), 'SNMP', 'Time', and 'Reboot'. The main content area is titled 'Firmware Configuration' and contains two sections: 'Software Update Mode & TFTP Server Address' and 'Update Firmware'. In the first section, 'Software Update Mode' is set to 'TFTP', and the 'TFTP Server Address' is '0.0.0.0'. In the second section, 'Firmware Update' is set to 'Disabled', and the 'File Name' field is empty. At the bottom right, there are three icons: a green checkmark for 'Apply', a red 'X' for 'Cancel', and a red plus sign for 'Help'.

You can update both the software and firmware of the Router. Please check the D-Link Support site for firmware updates at <http://support.dlink.com>. You can download firmware upgrades to your hard drive from the D-Link support site.

Software Update Enter the TFTP server address.

Firmware Update Click Enabled to begin the firmware update.

File Name Enter the firmware file name and DOS path in this field. For example, C:\firmware.had

Tools > SNMP

This menu can be accessed directly by clicking on the **SNMP** button or hyperlink in the **Tools** setup menu. Simple Network Management Protocol (SNMP) is an OSI Layer 7 Application designed specifically for managing and monitoring network devices. SNMP enables network management stations to read and modify the settings of gateways, routers, switches, and other network devices.



Use SNMP to configure system features for proper operation, performance monitoring, and detection of potential problems in the Router or network.

SNMP IP Management Address

The SNMP IP Management Address is the address of the PC running the SNMP software from the DVG-1402S device. A defined set of variables (managed objects) is maintained by the SNMP agent and used to manage the device. Enter the IP address of PC that you want to use to manage the network. You may also enter a backup address of another PC that can manage the network.

SNMP Trap Management

Traps are messages that alert network personnel of events that occur on the Switch. The events can be as serious as a reboot (someone accidentally turned OFF the Switch), or less serious like a port status change. The Router generates traps and sends them to the trap management server. Typical traps include trap messages for Authentication Failure, Topology Change and Broadcast/Multicast Storms. Use the pull-down menu to enable or disable the SNMP on the device. Enter the **Trap Manager IP** and **Trap Community Name** of the trap management server.

Tools > Time

The system time is the time used by the DVG-1402S for scheduling services. You can manually set the time, connect to a NTP (network time protocol) server or synchronize the time on the router with your PC. If an NTP server is set, you will only need to set the time zone (in the set up wizard).



Status > Device Info

This page displays the current information for the DVG-1402S. It will display the LAN, WAN, Disk Information statistics.

This window will show the DVG-1402S's working status:



The screenshot shows the D-Link DVG-1402S VoIP Router web interface. The 'Status' tab is selected, displaying the following information:

Device Information	
Device Type	VoIP Gateway
MAC Address	00:01:3c:a8:88:9f
Boot PROM Version	1.00.00f
Firmware Version	1.00.009BZ
DSP Version	0.11.8.0
SIP Version	1.0.3
Current Mode	Router

WAN	
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Default Gateway	10.1.1.254

LAN	
LAN MAC Address	00:01:3c:a8:00:a0
IP Address	192.168.15.1
Subnet Mask	255.255.255.0

WAN

IP Address: WAN/Public IP Address

Subnet Mask: WAN/Public Subnet Mask

Default Gateway: WAN/Public Gateway IP Address

LAN

LAN MAC Address: MAC address of the DVG-1402S

IP Address: LAN/Private IP Address of the DVG-1402S

Subnet Mask: LAN/Private Subnet Mask of the DVG-1402S

Status > Stats

D-Link
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DVG-1402S
VoIP Router

Home Advanced Tools **Status** Help

Traffic Statistics

Traffic Statistics display Receive and Transmit packets passing through the DVG-1402S.

WAN Receive		Transmit	
packets	0	packets	17
bytes	0	bytes	1020
NonUcastPackets	0	NonUcastPackets	17
DiscardPackets	0	DiscardPackets	0
FrameTooLong	0	HeartbeatErrors	0
NonAlignedErrors	0	LateCollision	0
CollisionErrors	0	RetransmissionLimit	0
ShortFrames	0	UnderrunPackets	0
CRCErrors	0	CarrierSenseLast	0
OverrunPackets	0		

Phone Port Statistics

Phone Port	1	3	2	4
Channel	1			
RxVoicePackets	0	0	0	0
RxMinJitter	0	0	0	0
RxMaxJitter	0	0	0	0
RxRTPAvgJitter	0	0	0	0
RxDTMFPackets	0	0	0	0
TxVoicePackets	0	0	0	0
TxGrantReSyncCount	0	0	0	0
TxDTMFPackets	0	0	0	0
MicroOverflowCount	0	0	0	0
PktsLostByNetwork	0	0	0	0
TxHoldDropCount	0	0	0	0
RxHoldDropCount	0	0	0	0

The Broadband Router keeps a running log of events and activities occurring on the Router. If the device is rebooted, the logs are automatically cleared. You may save the log files under Log Settings. The screen above displays the Traffic Statistics. Here you can view the amount of packets that pass through the DVG-1402S on both the WAN and the LAN ports. The traffic counter will reset if the device is rebooted or can be reset by clicking the **Reset** button. To refresh current statistics, click the **Refresh** button.

Status > Diagnostics



The Diagnostics window allows users to test the functionality of the router by executing a ping test. Enter the IP address of the Ping Target and then click **Test**.

Help

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VoIP Router

Home Advanced Tools Status **Help**

Home

- Wizard
- WAN
- LAN
- DHCP

Advanced

- Virtual Server
- Filters
- Firewall
- RIP
- Routing
- VoIP
- NAT
- Misc.

Tools

- Admin
- System
- Firmware
- SNMP
- Time
- Reboot

Status

- Device Info.
- Stats
- Diagnostics

The **Help** tab will give basic information referring to various screens located in the Router. To view a specific section, click on its hyperlinked name. A new window of information will appear.

Technical Specifications

Standards

- IEEE 802.3
- IEEE 802.3u

VPN Pass Through/ Multi-Sessions

- PPTP
- L2TP
- IPsec

Device Management

- Web-Based- Internet Explorer v6 or later; Netscape Navigator v6 or later; or other Java-enabled browsers
- DHCP Server and Client

Advanced Firewall Features

- NAT with VPN Passthrough (Network Address Translation)
- MAC Filtering
- IP Filtering
- URL Filtering
- Domain Blocking
- Scheduling

Operating Temperature

- 32°F to 131 °F (0°C to 55°C)

Humidity:

- 95% maximum (non-condensing)

Safety and Emissions:

- FCC

Technical Specifications

LEDs:

- Power
- WAN
- LAN (10/100)
- Phone
- Status

Physical

Dimensions:

- L = 7.56 inches (192mm)
- W = 4.65 inches (118mm)
- H = 1.22 inches (31 mm)

Power Input:

- Ext. Power Supply DC 12V, 1.5A
- Weight: 10.8 oz. (0.3kg)

Warranty:

- 3 year (depends on D-Link global warranty policy)

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

Tech Support for customers within Canada:

D-Link Technical Support over the Telephone:

(800) 361-5265

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

D-Link Technical Support over the Internet:

<http://support.dlink.ca>

email:support@dlink.ca