D-Link DVG-1120S

VoIP Residential Gateway with Two Voice Ports

Manual



Building Networks for People

Contents

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Package Contents



Contents of Package:

- D-Link DVG-1120S
 VoIP Residential Gateway with Two Voice Ports
- A/C Power Adapter
- Manual on CD
- Quick Installation Guide

Note: Using a power supply with a different voltage rating than the one included with the DVG-1120S 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:

- Computer with Windows, Macintosh, or Linux-based operating system with an installed Ethernet adapter
- Internet Explorer or Netscape Navigator version 4.0 or above, with JavaScript enabled
- At least 128 MB of memory and a 500 MHz processor

Introduction

The D-Link DVG-1120S VoIP Station Gateway links traditional telephone networks to IP networks with conventional telephone devices such as analog phones or fax machines.

The DVG-1120S includes two Foreign Exchange Subscriber (FXS) interfaces with normal RJ-11 telephone connectors that provide voice/fax communication over the IP network.

Two Ethernet ports are also provided. One Ethernet port is for a DSL/Cable Modem or other WAN device, and the other is for connection to create a home or small office LAN network.

The built-in DHCP server and Network Address Translation (NAT) function automatically assigns IP addresses for LAN users, allowing multiple users to share a single Internet connection. You can configure and monitor the DVG-1120S via the Console or the Web browser. Telnet and SNMP management is also supported.

By routing calls over the Internet or any IP network, the DVG-1120S 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 - Back Panel of Unit



Warning! Using a different power adapter than the one included with your purchase will damage the DVG-1120S and void the warranty.



Features & Benefits

- Two analog FXS interface ports accepting RJ-11 connectors to facilitate two VoIP connections
- One analog POTS interface for PSTN Life Line (standard phone line)
- One 10Mbps WAN port for connecting to a DSL/Cable Modem or other WAN devices
- One 10/100Mbps LAN port for connecting to a local network
- IP address assignment using DHCP (Dynamic Host Configuration Protocol) or static configuration
- IP Routing support (RIP1, RIP2 and Static Routing)
- Remote software download/update
- Supports IP sharing to allow multiple users to access the Internet via a single IP address
- Built-in PPPoE function to support dial-up connection for broadband technology
- Supports Caller ID
- Supports QoS to guarantee voice quality
- Automatic Call Redirection (ACR) function support
 - PSTN or VoIP line automatic selection (e.g. 110, 119)
 - PSTN/ VoIP routing table support
 - Call will automatically redirect to PSTN in case of getting the "4xx, 5xx and 6xx" error message from SIP server.
- Life Line support
 - Automatic fall back to PSTN mode in case of power failure
 - PSTN/VoIP line selection manually (VoIP/PSTN Call alternation via configurable prefix number)
 - Listening of incoming call from PSTN

LEDS - Front Panel of Unit

Power This LED is lit when the device is receiving power; otherwise, it is unlit.

> **Status/Alarm** This LED will remain dark when the CPE is either performing a self-test/booting up or not registered to the SIP server. The LED will remain green when the system is already registered to the SIP server. It will flash slowly during registration, until all ports have been registered.

WAN This LED displays the link status and activity on the 10M Ethernet port that is used to connect to your WAN device (usually a Cable or ADSL Modem). When a good link to a powered-up but idle device is detected on a port, the WAN indicator shines steadily. When packets are received from the device, the indicator blinks off and on.



Ethernet This LED displays the connection speed, link status, and activity on the 10/100 dual-speed Ethernet port that is used to connect to your LAN.

10/100M - This indicator remains unlit when there is no connection, or the port is operating at 10Mbps through a connection to a 10BASE-T device. It is lit when the port is operating at 100Mbps through a connection to a dual-speed or 100BASE-TX Fast Ethernet device.

Link/Act - When a good link to a powered-up but idle device is detected on a port, this indicator shines steadily. When packets are received from the device, the indicator blinks off and on. **Phone 1 to 2** This LED displays the PSTN status and Hook/ Ringing activity on the RJ-11 port that is used to connect to your normal telephone(s)/fax machine and PSTN line.

PSTN/VoIP - Lights when PSTN line is in use. It is dark during VoIP communication.

Hook/Ringing - When an offhook action is detected on a phone port, this indicator shines steadily. When a ringing signal is received from the device, the indicator blinks off and on.

Web-based Management

In order to use a web browser to configure the VoIP gateway, 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.



Setting Up the Connection



Then 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 gateway's WAN port comes with **DHCP** as the default IP setting. If the VoIP gateway cannot get the assigned DHCP IP, it will use the manual IP (default is 10.1.1.1) as it's default IP.

Make sure the PC is in the same IP domain as the VoIP gateway. You can do this by changing the IP Address of the PC as shown here.

| CP/IP Properties | | | | ? : |
|--|---|--|--|--------------------------------------|
| Bindings | Adv | anced | N | etBIOS |
| DNS Configuration | Gateway | WINS Confi | guration | IP Address |
| An IP address ca If your network of your network ad the space below | an be automal oes not autor ninistrator for | ically assigne natically assig an address, a | d to this c n IP addr nd then ty | computer. esses, ask ype it in |
| C <u>O</u> btain an I | P address au | tomatically | | |
| © <u>S</u> pecify an | IP address: | | | |
| <u>I</u> P Addres | s 10 | . 1 . 10 | . 5 | |
| S <u>u</u> bnet M | ask: 255 | . 0 . 0 | . 0 | |
| | | | | |
| | | | | |
| | | r | | |
| | | OK | | Cancel |

More WAN IP Configuration settings include:

Get IP From -Choose the method that the VoIP gateway will use to obtain its IP settings once it is restarted. Choices include:

> Manual - When Manual is

chosen, the

Config IP - Config WAN IP Address

| | Config WAN IP Address | |
|---|-------------------------|-------------------|
| -Link | MAC Address | 00:05:5d:5c:5a:84 |
| Link DVG-1120S | WAN Restart Settings | |
| Config IP | Get IP From | Manual 💌 |
| Config LAN IP Add | IP Address | 10 1 1 1 |
| Device Information | Subnet Mask | 255 0 0 0 |
| Telephony Configuration | Default Gateway | 10 1 1 254 |
| SIP Configuration | Host Name | |
| IP Filter | DNS1 Server IP | |
| Routing Bridge Mode | DNS2 Server IP | |
| DHCP Configuration | Liser Name | |
| NAT Configuration SNMP Trap Configurat | Authentication Password | |
| SNMP IP Managemen | Admentedulorri dasword | |
| Administration Manag | Confirm Password | |

VoIP gateway will obtain its IP settings from the fields located just below.

BOOTP - When *BOOTP* is chosen, the VoIP will attempt to obtain its IP settings from a BOOTP server located on your WAN.

DHCP - When *DHCP* is chosen, the VoIP will attempt to obtain its IP settings from a DCHP server located on your WAN.

PPPoE - When *PPPoE* is chosen, the VoIP will attempt to obtain its IP settings through PPPoE on your WAN.

IP Address - Enter a WAN port IP Address for the VoIP gateway.

Subnet Mask - Enter a WAN port subnet mask for the VoIP gateway.

Default Gateway - Enter the IP Address of the WAN devices you are using to make the WAN connection.

Host Name - This is a user-defined host name for this VoIP Gateway.

DNS1 Server IP - Enter the IP Address of the first DNS Server.

DNS2 Server IP - Enter the IP Address of the second DNS Server.

User Name - Enter the User Name for the PPPoE function.

Authentication Password - Enter the Password for the PPPoE function.

Confirm Password - Enter the Password again for confirmation.

LAN IP Address -

Enter a LAN IP Address for the VoIP gateway.

LAN Netmask -Enter a LAN netmask for the VoIP gateway.

Click **Save** to save the settings.

Device Type - The model name of this device.

MAC Address - The MAC address of this device.

Boot PROM Version - The version number of the device's startup code.

Firmware Version -

The version number of the device's runtime code.

DSP Version - The Digital Signal Processor version, if any.

Serial Number - A user-determined identification number.

System Name - A user-defined name for this device.

Country Code - A user-defined country code for this device. < 0:USA (Default), 1:Japan, 2:Hong Kong, 3:Sweden, 4:China>

Web Port Number- A user-defined web port number. (From 1024 to 29999, and 80)

Click Save to save the settings.

Config IP – Config LAN IP Address

| LAN IP Settings LAN Vermask 255 255 255 0 LAN Netmask 255 255 0 LAN Netmask 255 255 0 LAN MAC Address 00:05:5d:5c:5a:83 LAN IP Adress 192.168.0.1 LAN Netmask 255.255.255.0 Save dms/dt/dt/dt/dt/dt/dt/dt/dt/dt/dt/dt/dt/dt/ | | 微 Config LAN IP Address | |
|---|------------------------|-------------------------|---------------------|
| LAN IP Settings LAN IP Activess codg LAN IP Active Netmask Codg LAN IP Active Differ Outer montation Name Tool State LAN Netmask Codgravation Filter outing Codgravation NUP That Configuration | -Link | | |
| LAN IP Adresss 192 .168 0 .1 Londs MAU P. Adree were unternation in the end of the e | Networks for People | LAN IP Settings | |
| Config LUN P Add Config LUN P Add Were mitimized (NP DATA (NP | nk DVG-1120S | LAN IP Adresss | 192 . 168 . 0 . 1 |
| Condig LAN IP Add Were Turnington Were Turnington Were Turnington Ch Configuration CP Configuration CP Configuration CP Configuration CP Configuration CP Configuration NWP Trac Configurati | Config MAN IR Add | I AN Netmask | 255 255 255 0 |
| Rice information roy DNS Reperturbation roy DNS LAN Current Settings ULAN MAC Address 00:05:5d:5c:5a:83 LAN IP Adress 192.168:0.1 LAN Netmask 255:255:255.0 Save HCP Configuration AC Configuration AC Configuration AC Configuration AC Configuration AC Configuration ANP Than Configuration ANP Than Configuration Amagement amagem | Config LAN IP Add | | 235 . 235 . 235 . 0 |
| rov (DNS whothory Configuration P Configuration P Configuration P There outing NRMC Tag Configuration AT Configur | ence mormation | | |
| elephany configurate IP Configuration GP Configuration Filter outing ringle Noted HCP Configuration NME Trap Configuration NME Trap Configuration NME Transconfiguration NME Transconfigurat | roxy DNS | LAN Current Settings | |
| P Configuration F Configuration F Ref Configuration F Address 192.168.0.1 LAN Netmask 255.255.255.0 Save HD Configuration ATC Configuration ATC Configuration ATC Configuration MND Taps Con | elephony Configuration | LAN MAC Address | 00:05:5d:5c:5a:83 |
| CR Configuration Filter ouding under MRD Trap Configuration AT Configuration MRD Trap Configurat WRD PT Management Immitstration Management | IP Configuration | LAN IP Adresss | 192.168.0.1 |
| P Filter P Filter Voting P Filter Save P P P P P P P P P P P P P P P P P P P | CR Configuration | LAN Netmask | 255 255 255 0 |
| uting tige Mode Save KP Configuration Save Mode Save Mod | Filter | | 2351255125515 |
| dep Mode Sarve Sarve | uting | | C |
| HCP Configuration AT Configuration WMP IP Configurat MMP IP Antogenet dministration Manage onthe | ridge Mode | | Save |
| AT Configuration NMP Trap: Configurat NMP (P Management demaint and | HCP Configuration | | |
| NMO ^P Trap Configurat MNO ^P IP Management dministration Manage onder | IAT Configuration | | |
| NNOP (P Managemen dministration Manag antar | SNMP Trap Configurat | | |
| dministration Manag | NMP IP Managemen | | |
| unitor | Iministration Manag | | |
| | initor | | |

Device Information

| <u> </u> | | |
|-----------------------------|--|---|
| | · Device Informatio | n . |
| | Series Internatio | |
| Dalimk | Device Type | VoIP Gateway |
| uilding Networks for People | MAC Address | 00:05:5d:5c:5a:84 |
| D-Link DVG-1120S | Boot PROM Version | 0.00-B06 |
| 🗅 Config IP | Firmware Version | 0.00-B24 |
| Device Information | DSP Version | Cap 0xfc12, Rel 8.1.10.1, Build g26, DSP C5402, Platform VPBX/GG6E, C |
| Proxy DNS | Serial Number | |
| SIP Configuration | | |
| ACR Configuration | System Name | VoIP Gateway |
| IP Filter | Country Code | USA |
| Routing | Web Port Number | 80 |
| Bridge Mode | and a second sec | 100 |
| DHCP Configuration | | |
| SNMP Trap Configurat | | |
| SNMP IP Managemen | | |
| Administration Manag | | |
| Monitor | | |
| Firmware Update | | |
| Factory Reset | | |
| Save & Restart Syster | 4 | |
| | 1.1 | |

Proxy DNS

| | 逆 DDNO | |
|------------------------------|----------------------|------------|
| | | |
| D-Link | State | disabled 💌 |
| Building Networks for People | Proxy DNS IP Address | |
| a D-Link DVG-1120S | | |
| 🗖 Config IP | | |
| Device Information | | Save |
| Proxy DNS | | |
| Telephony Configuration | | |
| SIP Configuration | | |
| ACR Configuration | | |
| IP Filter | | |
| E Routing | | |
| Bridge Mode | | |
| DHCP Configuration | | |
| NAT Configuration | | |
| SNMP Trap Configural | | |
| SNMP IP Managemer | | |
| Administration Manag | | |
| i Monitor | | |
| I Firmware Update | | |
| Factory Reset | | |
| 🧉 Save & Restart Syster 💌 | | |
| | | |

State - Enables or disables the Proxy DNS function.

Proxy DNS IP Address - Enter the Proxy DNS IP Address.

Signaling ToS - Set the Type of Service value for VoIP signaling

RTP ToS - Set the *Type of Service* value for RTP packets

Receive Gain - Set the Receive gain of the device. (-14 to +14 dB)

Telephony Configuration

| | | | - |
|---|---------------------------|-----------------|---|
| | R Telephony Configuration | | |
| D-Link Dubling Networks for People | Signaling ToS | 5 - | |
| Config IP | RTP ToS | 5 - | |
| Dence mormation Prove DNS Telephony Configurate | Receive Gain | -2 dB | |
| ACR Configuration | Transmission Gain | -4 dB | |
| IP Filter Routing | DTMF Relay | G.711 💌 | |
| Broge Mode DHCP Configuration INAT Configuration | TEL Dial Signal | | |
| SNMP Trap Configurat SNMP IP Managemer | Echo Cancel | enabled 💌 | |
| Administration Manag Monitor | Digital Timer | disabled 4 sec | |
| Firmware Update Factory Reset | Hook Flash | 700 • ms | |
| | Distantes | | - |

Transmission Gain - Set the Transmit gain of the device. (-14 to +14 dB)

DTMF Relay - Select either G.711 or RFC2833. DTMF is short for *Dual Tone Multi Frequency,* used in touch-tone phones.

TEL Dial Signal - Set the dial signal of telephone.

Echo Cancel - Enable or disable the Echo Canceller function.

VAD - This is used to enable or disable the VAD (Voice Activity Detector) function.

Digital Timer - A user-defined digital interval timer to determine the end of user dialing.

Hook Flash - Set the hook flash timer. (Default: 700 ms)

Dial Pulse - Set the dial pulse value of the analog phone. (Default: 20pps)

Call Waiting Alert Tone - Enable or disable the call waiting alert tone.

Area Code - Automatically insert the area code when a user dials a local number via the VoIP.

Server FQDN - Fully Qualified Domain Name. Enable or disable the FQDN function of the SIP server.

IP Address - Enter the IP Address of the SIP server.

Domain Name -Enter the domain name if you have enabled the Server FQDN function.

SIP Configuration - Server

| | NR | | - |
|---------------------------------------|------------------------------|------------|---|
| | 演 SIP Configuration - Server | | |
| D-Link | Server FQDN | disabled 💌 | |
| Duilding Networks for People | IP Address | 0.0.0 | |
| Config IP | Domain Name | | |
| Device Information | Port | 5060 | |
| Proxy DNS Telephony Configuration | Service Domain | | |
| SIP Configuration | URL Format | TEL-URL | |
| User Agent | User Parameter Phone | enabled 💌 | |
| Peer to Peer ACR Configuration | Timer T2 | 4 💌 sec | |
| IP Filter | | | |
| E Routing | Initial Unregister | disabled 💌 | |
| DHCP Configuration | Register Expiration | 3600 sec | |
| NAT Configuration | Session Expires | 180 sec | |
| SNMP IP Managemer | Min-SE | 180 | |
| Administration Manag | Session Expires Refresher | uac - | |
| | | | - |

Port - Enter the port number of the SIP server. (Default is 5060).

Service Domain - A user-defined service domain for the SIP server.

URL Format - A user-defined URL format for the SIP server.

User Parameter - Enable or disable the "user=phone" parameter in SIP-URL.

Timer T2 - The user-defined T2 timer of SIP protocol. (Range: 4, 8, 16, 32 sec).

Initial Unregister - Enable or disable this function.

Register Expiration - Enter the expiration time.

Session Expires - Enter the session expiration.

Min-SE - Enter the Min-SE time.

Session Expires Refresher - Choose uac or uas.

Click on the Save button at the bottom right of the screen to save the settings.

SIP (Session Initiated Protocol) is the type of call management for VoIP that is used by the DVG-1120S.

Same Phone Number- Enable or disable.

Index - Choose Phone 1 or Phone 2.

Phone Number - A user-defined phone number for each phone port.

Display Name - A user-defined display name for each phone port.

SIP Configuration - User Agent

| Link | Same Phone Number | disa | abled 🔻 | | |
|------------------------|---------------------------|-------|----------|------------|---|
| Networks for People | Index | 1 - | 1 | | |
| ink DVG-1120S | Phone Number | | | | |
| Device Information | Dienlay Nama | | | | |
| Proxy DNS | | | - | | |
| Telephony Configuratio | Caller ID Delivery | YES | ; 💌 | | |
| SIP Contiguration | Display CID | disa | abled 💌 | | |
| User Agent | User Agent Port | 506 | 0 | | |
| Peer to Peer | Authentication Licername | | | | |
| ACR Configuration | Authentication Osername | | | | |
| IP Filter | Authentication Password | | | | |
| Routing Bridge Mode | Confirm Password | | | | |
| DHCP Configuration | | | | | |
| NAT Configuration | | | | Savo | |
| SNMP Trap Configurat | | | | Save | 1 |
| SNMP Trap Configurat | | | | Save | |
| Administration Manag | Query Registeration State | Query | Register | Unregister | |

Caller ID Delivery - Enable or disable this function.

Display CID - Enable or disable the Caller ID display function.

User Agent Port - A user-defined unique port number for each phone port.

Authentication Username - Enter the Username for SIP server authentication.

Authentication Password - Enter the Password for SIP server authentication.

Confirm Password - Enter the Password again for confirmation.

Click on the Save button at the bottom right of the screen to save the settings.

This window displays the Peer to Peer setting for non-SIP server mode. It lists the ten numbers, which support Peer to Peer communication. SIP Configuration - Peer to Peer 谢 SIP - Peer to Peer Index Phone Number Liser IP Address Edit **D**-Link @ 0 0 0 0 12 (P @ 0.0.0.0 0 P @ 0.0.0.0 0 P @ 0.0.0.0 0 1 @ 0.0.0.0 0 P @ 0.0.0.0 0 12 @ 0.0.0.0 0 P @ 0.0.0.0 0 8 P 0 @ 0.0.0.0 0 10 @ 0 0 0 0 0

Click the **Edit** icon to access the second **SIP Configuration-Peer to Peer** window, shown below:

Index - Choose the index number that you would like to edit (From 1 to 10).

Phone Number -

This is a userdefined phone number for the destination endpoint.

User IP Address -

Enter the phone number and IP

2nd SIP Configuration screen - Peer to Peer

| ^ † | 谢 SIP - Peer to Peer | |
|--|--|------------------|
| D-Link Euderg Hitkons for Parets D-Link DVG-1120S | Index Phone Number User IP Address | × • 0 . 0 . 0 |
| Device Information Proxy DNS Telephony Configuratie SIP Configuration | Port | Save |
| Server User Agent Peer to Peer ACR Configuration User Eliver | | |
| IP Filler Routing Bridge Mode DHCP Configuration | | |
| INAL Configuration SNMP Trap Configurat SNMP IP Managemen Administration Manag Monitor | | |

Address of the destination endpoint. (Format: <Destination Phone number>@<Destination IP Address X.X.X.X>

Port - Enter the port number of the destination endpoint.

This is a userdefined ACR (Automatic Call Redirection) table. The user can choose and setup the default line through VoIP or PSTN. If the default is VoIP, the ACR table will be used to redirect to PSTN. And if the default is PSTN, the ACR table will be used to redirect to VoIP.

ACR Configuration - Generic Configuration

| <i></i> | 谢 Generic Configuration | |
|--|---|-------------|
| D-Link | Voice Default Line | VoIP 💌 |
| D-Link DVG-1120S | Condition of VoIP Call Automatic Redire | ect to PSTN |
| Device Information | 4xx,5xx,6xx Error Messages | disabled 💌 |
| Proxy DNS | No Response Against Invite | disabled V |
| Telephony Configuration | No response Against invite | disabled |
| SIP Configuration | | |
| ACR Configuration | Guidnce Tone for Redirect to PSTN | disabled 💌 |
| ACR Configuration | | |
| IP Filter | | Savo |
| Routing | | Jave |
| 3 Bridge Mode | | |
| DHCP Configuration | | |
| NAT Configuration | | |
| SNMP Trap Configural | | |
| SINIMP IP Management Administration Management | | |
| Monitor | | |
| S Firmware Update | | |
| • | | |

The items on this window are described below:

Voice Default Line - Choose and setup the default line through VoIP or PSTN.

Conditions under which a VoIP Call would automatically be redirected to PSTN:

4xx, 5xx, 6xx Error Message - Enable or disable the automatic redirection of a VoIP call to PSTN whenever the "4xx, 5xx, 6xx" error message is received from the SIP server.

No Response Against Invite - Enable or disable the redirection of the call to PSTN when no response is received from the SIP server.

Guidance Tone for Redirect to PSTN - Enable or disable the guidance tone during a redirection to PSTN.

The first ACR Configuration window lists thirty numbers, each supports a maximum of 31 digits in one number. When the first dialed digits match the table, the system will store all the digits and forward them to the non-default line.

| D-Link | Index Number | Del Digit | Edit |
|------------------------|--------------|-----------|----------------|
| ng Networks for People | 1 | 0 | C ² |
| Link DVG-1120S | 2 | 0 | 10 |
| Config IP | 3 | 0 | 10 |
| Proce Information | 4 | 0 | 02 |
| Telephony Configuratio | 5 | 0 | 12 |
| SIP Configuration | | 0 | 100 |
| ACR Configuration | 6 | 0 | |
| Generic Configurati | 7 | 0 | |
| ACR Configuration | 8 | 0 | C ² |
| Printer Routing | 9 | 0 | 1 Con |
| Bridge Mode | 10 | 0 | 10 |
| DHCP Configuration | 11 | 0 | P |
| NAT Configuration | 12 | 0 | 02 |
| SNMP Trap Configurat | 12 | 0 | 132 |
| SNMP IP Managemen | 15 | 0 | 1.0 |
| Administration Manag | 14 | 0 | |
| Firmware Undate | 15 | 0 | 10° |
| | 16 | 0 | |

ACR Configuration - ACR Configuration

Click the **Edit** icon on the window above to access the second **ACR Configuration** window, shown below:

2nd window - ACR Configuration

| I | n | d | е | x | _ |
|---|---|---|---|---|---|
| | | u | C | ~ | - |

Choose the index number that you would like to edit (From 1 to 30).

Number-

This is a userdefined telephone number that you would like to call using VoIP or PSTN. There are three kind of number formats that can be used:

| | ₩ ACR Configuration | | |
|---|---------------------|------|--|
| D-Link Building Nieboorks for People | | | |
| C D-Link DVG-1120S | Number | | |
| Config IP | | | |
| Device Information Device DNC | Del Digit 0 | | |
| Telenhony Configuratio | | | |
| SIP Configuration | Den Con | Save | |
| a ACR Configuration | | | |
| Generic Configurati | | 1.00 | |
| ACR Configuration | | | |
| IP Filter | | | |
| 🗀 Routing | | | |
| Bridge Mode | | | |
| DHCP Configuration | | | |
| NAT Configuration | | | |
| SNMP Trap Configurat | | | |
| SNMP IP Managemer | | | |
| Administration Manag | | | |
| Monitor | | | |
| 🧧 Firmware Update 💌 | | | |
| 4 > | | | |

2nd window - ACR Configuration (continued)

- **1.** A full telephone number, e.g., 555-5555: The system will transmit the number to the non-default line, when the user's first dialed digits match the number.
- 2. Any combination of a telephone number and "x" character. "x" means any one digit, e.g. 55xx: The System will transmit all of the numbers with the same first two digits to the non-default line. (Ex: 5511, 5594,...etc.)
- 3. Any combination of a telephone number and "T" character. "T" must be capital and it means a random number, e.g., 55T. The system will transmit all of the numbers that begin with 55 to the non-default line (Ex: 553-5551, 557-5555...etc.)

Del Digit - Enter the number of digits that will be deleted from the front of the number when the system transmits the number above. (Ex: The number is 505-555-5555, Del Digit is 3. System will only transmit 555-5555.)

Click on the **Save** button at the bottom right of the window to save the settings.

Another way to access the non-default line is to input a prefix when dialing. Whenever you use a prefix (Ex: "#", "*," or "0000," ...etc.), the system will automatically revert to the non-default line.

The first IP Filter window lists the eight filtering sets, to edit the filter. click on the edit icon.

IP Filter

| e first IP Filter adow lists the eight ering sets, to edit e filter, click on the it icon. |
|--|
| Click the Edit icon on the window above to access the second IP Filter |

window, shown below:

After you have clicked on an edit icon, this window will appear. Type in an appropriate identifying comment for the IP Filter set.

For more editing options, click the icon once again and the 3rd IP Filter window will appear. When you are finished defining

2nd IP Filter window

| Link | Set Comments | Edit | Delete |
|----------------------|-------------------------|--|--------|
| Networks for People | 1 | 10° | × |
| nk DVG-1120S | 2 | 102 | X |
| oning IP | 4 | 153 | × |
| max DNS | 3 | 1.68 | ~ |
| lephony Configuratio | 4 | 10° | × |
| IP Configuration | 5 | 10° | × |
| CR Configuration | 6 | 13 | × |
| P Filter | - | 100 | N. |
| outing | 7 | L.F | × |
| ridge Mode | 8 | i de la companya de l | × |
| HCP Configuration | 0 | 6 | × |
| AT Configuration | 10 | 100 | × |
| NMP Trap Configurat | 10 | | ~ |
| Idministration Manag | 11 | | X |
| Ionifor | 12 | | X |
| mware Update | | T | |
| ctory Reset | an ann an a dtachtad al | | |
| e & Restart Syster | IP Filter Set disabled | | |
| Þ | D Ent | Save | |

the rules for each set, select enabled or disabled to enable or disable the listed filtering sets.

Click the Edit icon on the window above to access the third IP Filter window, shown on the next page.

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

Pass or Block-Pass or Block the action defined in this filter rule.

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

3rd IP Filter window

| D-Link | Comment | | | |
|---|---|--------------------------|---------------------|----------|
| D-Link DVG-1120S D-Config IP Operice Information | Pass or Block Block 💌 | Direction | Protocol | |
| Proxy DNS Telephony Configuratio SIP Configuration ACR Configuration IP Filter | IP Address Source 0 . | ss 0 . 0 . 0 0 0 0 | Subnet Mask | • |
| Routing Bridge Mode DHCP Configuration NAT Configuration | Source = - Destination = - | Start Port | End Port | |
| SNMP Trap Configurat SNMP IP Managemen Administration Manag Monitor Firmware Update | TCP Flag 0 Urgent Pointer Filter Rule State disate | Acknowledgment | ⊑ Push ⊑ Reset ⊑ SY | N FIN |
| Firmware Update Factory Reset Save & Restart Systex | | | Save | Clear |

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

IP Address Filter Rule

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

3rd IP Filter window (continued)

TCP Flag - This is a decimal number, representing the six flag bits in the TCP header.

Filter Rule State - Enable or disable the filter rule as defined in the menu

Click on the Save button at the bottom right of the window to save the settings.

Click on the Clear button at the bottom right of the window to clear the settings.

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

Click on the **Save** button at the bottom right of the window to save the settings.

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 in this window to access the second **Static Route Configuration** window, shown on the next page:

Routing - RIP

| | 谢 Routing - RIP | | | | |
|------------------------------|-----------------|---------|---------|-------|-------------|
| \sim | | | | | |
| D-Link | | Version | | State | |
| huilding Networks for People | LAN | © RIPv1 | C RIPv2 | C On | Off Off |
| D-Link DVG-1120S | WAN | | C RIPv2 | C On | Off Off |
| 🗀 Config IP | | | | | |
| Device Information | | | | | Save |
| Proxy DNS | | | | | Jave |
| Telephony Configuration | | | | | |
| SIP Configuration | | | | | |
| ACR Configuration | | | | | |
| of IP Filter | | | | | |
| Routing | | | | | |
| I RIP | | | | | |
| Static Route Config | | | | | |
| Bridge Mode | | | | | |
| DHCP Configuration | | | | | |
| NAT Configuration | | | | | |
| SNMP Trap Configural | | | | | |
| SNMP IP Managemer | | | | | |
| Administration Manager | | | | | |
| Monitor | | | | | |
| 🧕 Firmware Update 🛛 💌 | | | | | |
| • • | | | | | |

Routing - Static Route Configuration

| 1. | IP Address | Subnet Mask | Gateway | Interface | Metric | State | Edit Delete |
|--------|------------|-------------|---------|-----------|--------|----------|-------------|
| People | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | 12° X |
| 11205 | 0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | C X |
| nation | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | C × |
| | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | × 🕤 |
| ətid | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | C × |
| | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | C × |
| | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | x 🔊 |
| | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | WAN | 0 | disabled | X |
| | | | | | | | Y |
| - | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

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.

Static Route Configuration-2nd window

| | W Statia Route Config | auration 1 |
|------------------------------|-----------------------|------------|
| | | |
| D-Link | IP Address | |
| Building Networks for People | Subnet Maek | |
| D-Link DVG-1120S | Subriet Mask | |
| 📬 Config IP | Gateway | 0.0.0.0 |
| Device Information | Interface | WAN - |
| Proxy DNS | | |
| I elephony Configuratio | Metric | 0 |
| - SIP Configuration | State | disabled 🔻 |
| DIP Filter | | |
| Routing | Eut | Save Clear |
| I RIP | 4.0 | Jave clear |
| Static Route Config | | |
| Sridge Mode | | |
| DHCP Configuration | | |
| NAT Configuration | | |
| SNMP Trap Configurat | | |
| SNMP IP Managemen | | |
| Administration Manag | | |
| D Firmware Undete | | |
| | | |

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 of disable the route.

Click on the Save button at the bottom right of the window to save the settings.

Click on the **Clear** button at the bottom right of the window to clear the settings.

To enable Bridge Mode, select ON; to disable Bridge Mode, select OFF.

Click on the **Save** button at the bottom right of the window to save the settings.

Bridge Mode

| D-Link | Bridge Mode | off 💌 | |
|-----------------------------|-------------|-------|---|
| Dubling Networks for People | | | |
| Config IP | | Save | |
| Device Information | | ouro | |
| Proxy DNS | | | |
| Telephony Configuratio | | | _ |
| SIP Configuration | | | |
| ACR Configuration | | | |
| IP Filter | | | |
| Routing | | | |
| Bridge Mode | | | |
| DHCP Configuration | | | |
| NAT Configuration | | | |
| SNMP Trap Configurat | | | |
| SNMP IP Managemer | | | |
| Administration Manag | | | |
| - 🖴 Monitor | | | |
| | | | |

Start IP Address -Enter the starting IP Address for the pool of unassigned IP Addresses.

IP Range - This is the range of contiguous, IP Addresses that are available for assignment.

DHCP Configuration - Dynamic IP Assignment

| nk | Start IP Address | 192 . 168 . 0 . 2 |
|-----------------------------|------------------|-------------------|
| sfor People | IP Range | 32 |
| IP | Netmask | 255 255 255 0 |
| Information DNS | Default Gateway | 192 . 168 . 0 . 1 |
| ony Configuratio | Leased Time | 72 bours |
| nfiguration onfiguration | DNS1 Server IP | |
| | DNS2 Server IP | 0.0.0 |
| Mada | WINS Server IP | 0.0.0 |
| Configuration | Domain Name | |
| ic IP Assignme | State | enabled - |
| onfiguration | | |
| Trap Configurat | | Save |

Netmask - Enter the

appropriate Netmask for the environment.

Default Gateway - Enter the IP Address of the Default Gateway

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

DNS1/2 Server IP - This specifies the Domain Name System server, used by the DHCP clients to translate host names 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 on the **Save** button at the bottom right of the window to save the settings.

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 the next screen.

DHCP Configuration - Static IP Assignment

| | M Static IP Assignment | | | | | |
|--------------------------|------------------------|---------|---------|-------------|----------|------|
| | IP Address | Netmask | Gateway | Domain Name | State | Edit |
| ding Networks for People | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | | disabled | 10° |
| 0-Link DVG-1120S | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | | disabled | CP . |
| Config IP | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | | disabled | 12 |
| Device Information | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | | dicablod | |
| Proxy DNS | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | | uisableu | |
| Telephony Configuration | | | | | | _ |
| SIP Configuration | | | | | | |
| ACR Configuration | | | | | | |
| IP Filter | | | | | | |
| Routing | | | | | | |
| Bridge Mode | | | | | | |
| DHCP Configuration | | | | | | |
| of Dynamic IP Assign | | | | | | |
| Static IP Assignme | | | | | | |
| NAT Configuration | | | | | | |
| SNMP Trap Configurat | | | | | | |
| SNMP IP Managemen | | | | | | |
| Administration Manag | | | | | | |
| Monitor | | | | | | |
| Firmware Update 📃 💌 | | | | | | |
| | | | | | | |

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

Static IP Assignment- 2nd window

The items in 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 IP Address.

| Index | 1 - |
|-----------------|--|
| MAC Address | 00:00:00:00:00 |
| IP Address | |
| ation | |
| | |
| guratio Gateway | 0.00.0 |
| DNS1 Server IP | 0.0.0 |
| WINS Server IP | 0.0.0 |
| Domain Name | |
| n State | disciplination of the second sec |
| n State | disabled 📩 |
| nme | |
| Eut | Save |
| urat | |
| gemen | |

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.

Select **enabled** or **disabled** at the **NAT function** pull-down menu.

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

NAT Configuration - NAT Configuration

| | ※ NAT Configuration | | |
|--|--------------------------|---------------|------|
| | | | |
| D T See 1 | NAT Interface IP Address | 192.168.0.1 | |
| D-Link Building Networks for People | NAT Interface Netmask | 255 255 255 0 | |
| TLINK DVG 1120S | NAT Fundation | 255.255.255.0 | |
| Config IP | NAT FUNCtion | enabled 💌 | |
| Device Information | | | |
| Proxy DNS | | | Save |
| Telephony Configuration | | | |
| 🗀 SIP Configuration | | | |
| 🗀 ACR Configuration | | | |
| IP Filter | | | |
| - Routing | | | |
| Bridge Mode | | | |
| DHCP Configuration | | | |
| NAT Configuration | | | |
| NAT Configuration | | | |
| Local Server Config | | | |
| | | | |
| Static NAT | | | |
| Shime trap configurat | | | |
| Administration Manan | | | |
| | | | |

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

NAT Configuration - Local Server Configuration

| Purper 0 0 0 0.0.0 disabled Purper 0 0 0 0.0 disabled Purper 0 0 0 0.0 disabled Purper 0 0 0 0.0 disabled P | | Protocol | Global Port | Local Port | Server IP | State | Edit |
|--|--------------------|----------|-------------|------------|-----------|----------|------|
| 11205 UDP 0 0 0.0.0.0 disabled Image: State of the st | forPeople | UDP | 0 | 0 | 0.0.0 | disabled | 10° |
| Invadora Configuration guration Gé dispation guration Revent Configuration Revent | +1120S | UDP | 0 | 0 | 0.0.0.0 | disabled | 10 |
| Invalidos Configurado guration | | UDP | 0 | 0 | 0.0.0.0 | disabled | 10 |
| UDP 0 0 0.0.0.0 disabled UDP 0 0 0.0.0.0 disabled UDP 0 0 0.0.0.0 disabled (2) 0 0 0.0.0.0 disabled (2) 0 0 0 0 0.0.0 disabled (2) 0 0 0 0 0.0.0 disabled (2) 0 0 0 0 0 0 0.0.0 disabled (2) 0 0 0 0 0 0 0 0.0.0 disabled (2) 0 0 0 0 0 0 0 0 0 0.0 disabled (2) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | formation | UDP | 0 | 0 | 0.0.0.0 | disabled | CP 1 |
| UDP 0 0 0.0.0 disabled (| io Configuratio | UDP | 0 | 0 | 0.0.0.0 | disabled | 10 |
| de degration guration event control AAT | suration | UDP | 0 | 0 | 0.0.0.0 | disabled | |
| Se departino apresenta de la constancia de Constancia de la constancia de | guration | | | | | | T |
| Re diguration guration event Config AT | | | | | | | |
| de de figharlan agradian averer (oast) JAT | | | | | | | |
| diguration enterration every Config | fode | | | | | | |
| Juradion Minutena event Catala Art | Configuration | | | | | | |
| enversioner Control e NAT | nfiguration | | | | | | |
| eter Longa La Contra | Contiguration | | | | | | |
| | Server Config | | | | | | |
| | | | | | | | |
| | ALC: N | | | | | | |

Click the **Edit** icon on the window above to access the second **Local Server Configuration** window, shown on the next page:

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

Protocol- Choose either TCP or UDP protocol.

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

Local Server Configuration - 2nd window

| <i></i> | 谢 Local Server Con | figuration 1 | |
|---|---------------------------|---------------|------|
| D-Link Duling Nationals for People | Index Protocol | | |
| Config IP Device Information | Global Port Local Port | | |
| Telephony Configuration SIP Configuration ACR Configuration | Server IP State | 0 . 0 . 0 . 0 | |
| IP Filter Routing Bridge Mode | D an | | Save |
| DHCP Configuration NAT Configuration NAT Configuration NAT Configuration | <u></u> | | |
| Local Server Comp Dynamic NAT Static NAT SNMP Tran Configurat | | | |
| SNMP IP Managemen Administration Manag | | | |

Local Port- 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- Disable or Enable the Local Server Configuration function.

This window allows you to view the current Dynamic NAT settings when Dynamic NAT is chosen. Each entry, in this configuration, can be used to map multiple, contiguous global addresses and local addresses to each other.

NAT Configuration - Dynamic NAT

| | 承 Dynamic NAT | | | | | |
|------------------------------|----------------|---------------|----------------|--------------|-----------------|------|
| | Global IP Star | Global IP End | Local IP Start | Local IP End | State | Edit |
| Building Networks for People | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | disabled | |
| D-Link DVG-1120S | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | disabled | |
| 🚞 Config IP | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | disabled | |
| Device Information | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | disabled | |
| Proxy UNS | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | disabled | 02 |
| SIP Configuration | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | 0.0.0.0 | disabled | |
| ACR Configuration | | | | | Construction of | |
| IP Filter | | | | | | |
| Routing | | | | | | |
| Bridge Mode | | | | | | |
| DHCP Configuration | | | | | | |
| NAT Configuration | | | | | | |
| I Local Server Config | | | | | | |
| Dynamic NAT | | | | | | |
| Static NAT | | | | | | |
| SNMP Trap Configurat | | | | | | |
| SNMP IP Managemen | | | | | | |
| Administration Manag | | | | | | |

Click the **Edit** icon on the window above to access the second **Dynamic NAT** window:

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

Global IP Start- Enter the starting global IP Address.

Global IP End- Enter the ending global IP Address.

Local IP Start- Enter the starting local IP Address.

Dynamic NAT- 2nd window

| | No. | |
|--|-----------------|------------|
| The second secon |) | |
| D-Link | Index | 1 |
| Duilding Networks for People | Global IP Start | |
| D-Link DVG-1120S | | |
| Config IP | Global IP End | 0.0.0 |
| Device Information Provy DNS | Local IP Start | 0.0.0.0 |
| Telephony Configuratio | Local IP End | |
| SIP Configuration | | |
| ACR Configuration | State | disabled 💌 |
| IP Filter | | |
| E Routing | Ean | Save |
| Bridge Mode | 40 | |
| - NAT Configuration | | |
| NAT Configuration | | |
| Local Server Config | | |
| Dynamic NAT | | |
| Static NAT | | |
| SNMP Trap Configurat | | |
| SNMP IP Managemer | | |
| Administration Manag | | |

Local IP End- Enter the ending local IP Address.

State- Select Disable or Enable Dynamic NAT function.

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

NAT Configuration - Static NAT

| D-Limbe | Local IP Address | Global IP Address | State Ed | lit |
|------------------------------|------------------|-------------------|------------|-----|
| Building Networks for People | 0.0.00 | 0.0.00 | disabled 🚺 | 2 |
| S D-Link DVG-1120S | 0.0.00 | 0.0.0 | disabled 🚺 | 7 |
| Config IP | 0.0.0.0 | 0.0.0 | disabled 🚺 | 9 |
| Device Information | 0.0.0.0 | 0.0.0.0 | disabled 🚺 | 2 |
| Proxy UNS | 0.0.0.0 | 0.0.0.0 | disabled 🚺 | 9 |
| SIP Configuration | 0.0.0.0 | 0.0.0.0 | disabled 🚺 | 2 |
| ACR Configuration | | | 4 | |
| IP Filter | | | | |
| Carl Routing | | | | |
| Bridge Mode | | | | |
| DHCP Configuration | | | | |
| NAT Configuration | | | | |
| NAT Configuration | | | | |
| Local Server Config | | | | |
| Dynamic NAT | | | | |
| Static NAT | | | | |
| SNMP Trap Configurat | | | | |
| SNMP IP Managemer | | | | |
| A Administration Manager | | | | |

Click the **Edit** icon on the window above to access the second **Static NAT** window, shown below:

Static NAT - 2nd window

| Index- (| Choose the |
|------------|---------------|
| index num | ber that you |
| would like | to edit (From |
| 1 to 6). | |

Local IP Address-

This is a single, local IP Address that is not valid on the Internet.

Global IP Address-

This is a single, global IP Address that is valid on the Internet, or on the same subnet of the global interface.

| | 谢 Static NAT 1 | | |
|---|-------------------|------------|------|
| D-Link Building Nederatis for People | Index | | |
| D-Link DVG-1120S | Clobel IB Address | | |
| Contig IP Device Information Prove DNS | State | disabled 💌 | |
| Floxy Bits Telephony Configuration | | _ | |
| SIP Configuration ACR Configuration | D | | Save |
| IP Filter | | | |
| Routing | | | |
| DHCP Configuration | | | |
| NAT Configuration | | | |
| NAT Configuration | | | |
| Local Server Config | | | |
| Dynamic NAT | | | |
| Static NAT | | | |
| SNMP Trap Configurat | | | |
| SNMP IP Managemen | | | |
| Administration Manag | | | |

State- Select Disable or Enable Static NAT function.

Trap Manager IP Address - The IP Address of the trap receiving station.

Community Name -A user-defined SNMP community name.

SNMP AuthTrap -Enable or disable the SNMP trap.

Click **Save** to save the settings.

This window supports two SNMP manager IP Addresses for accessing this device, and only these managers can manage this device.

IP Address 1- Enter the first SNMP manager IP Address.

IP Address 2- Enter the Second SNMP manager IP Address.

SNMP Trap Configuration

| | 後 SNMP Trap Configuration | | |
|-----------------------------|--|------------|------|
| D-Link | Trap Manager IP Address | 0.0.0.0 | |
| hulding Networks for People | Community Name | | |
| D-Link DVG-1120S | o official and a second s | | |
| 🖿 Config IP | | | |
| Device Information | SNMP AuthTrap | disabled 💌 | |
| Proxy DNS | | | |
| Telephony Configuration | | | |
| SIP Configuration | | | Save |
| ACR Configuration | | | |
| IP Filter | | | |
| Routing | 1 | | |
| Sridge Mode | | | |
| DHCP Configuration | | | |
| NAT Configuration | | | |
| SNMP Trap Configurat | | | |
| SNMP IP Managemen | | | |
| Administration Manag | | | |
| Monitor | | | |
| Firmware Update | | | |
| Factory Reset | | | |
| 🧕 Save & Restart Syste 💌 | | | |
| • | | | |

SNMP IP Management Address

| | 🕸 SNMP IP Managem | ent Address | |
|------------------------------|-------------------|--------------|------|
| | | | |
| DJink | SNMP IP Manager | ment Address | |
| Building Networks for People | IP Address 1 | 0 0 0 0 | |
| D-Link DVG-1120S | | | |
| 🗀 Config IP | IP Address 2 | 0.0.0 | |
| Device Information | | | |
| Proxy DNS | | | Save |
| Telephony Configuration | | | |
| SIP Configuration | | | |
| ACR Configuration | | | |
| IP Filter | | | |
| E Routing | | | |
| Bridge Mode | | | |
| DHCP Configuration | | | |
| 🗀 NAT Configuration | | | |
| SNMP Trap Configurat | | | |
| SNMP IP Managemen | | | |
| Administration Manag | | | |
| 🗀 Monitor | | | |
| Sirmware Update | | | |
| Sectory Reset | | | |
| 🧧 Save & Restart Syste 💌 | | | |
| • | | | |

To add or change a User Account, fill in the appropriate information in the User Name, Old Password (if applicable), New Password, and Confirm New Password fields.

Click **Save** to save the settings.

Rx Packets- The total number of packets received by the device.

Rx Bytes- The total number of bytes contained in packets received by the device.

Rx Non Ucast Packets- The number of nonunicast packets received by the device.

Administration Management

| nk | User Name | admin | |
|---------------|----------------------|-------|------|
| for People | Old Password | | |
| G-1120S | New Password | | |
| Commention . | Confirm New Password | | |
| IS | | | |
| Configuratio | | | Save |
| guration | | | |
| nfiguration | | | |
| | | | |
| | | | |
| Viode | | | |
| onfiguration | | | |
| ifiguration | | | |
| ap Configurat | | | |
| Managemen | | | |
| ration Manag | | | |
| | | | |
| | | | |
| Update | | | |

Monitor - Ethernet Statistics

| | 🕷 Ethernet Statisti | cs | | | |
|------------------------------|------------------------------|---------|--------------------------------|---------|--|
| | | | | | |
| DJink | Rx Packets | 148177 | Tx Packets | 1873 | |
| Building Networks for People | Rx Bytes | 9829206 | Tx Bytes | 1371870 | |
| D-Link DVG-1120S | Rx Non Ucast Packets | 145334 | Tx Non Ucast Packets | 9 | |
| 🗖 Config IP | Rx Discard Packets | 0 | Tx Discard Packets | 0 | |
| Device Information | Rx Frame Too Long | 0 | Tx Heartbeat Errors | 0 | |
| Proxy DNS | Rx Non-Aligned Errors | 0 | Tx Late Collision | 0 | |
| Telephony Configuratio | Rx Collision Errors | 0 | Tx Retransmission Limit | 0 | |
| SIP Configuration | Rx Short Frames | 0 | Tx Underrun Packets | 0 | |
| ACR Configuration | Rx CRC Errors | 0 | Tx Carrier Sense Lost | 0 | |
| IP Filter | Rx Overrun Packets | 0 | | | |
| a Routing | | | | | |
| Sridge Mode | | | | | |
| DHCP Configuration | | | | | |
| 🗀 NAT Configuration | - | | | | |
| SNMP Trap Configurat | | | | | |
| SNMP IP Managemen | | | | | |
| Administration Manag | | | | | |
| 🔄 Monitor | | | | | |
| Ethernet Statistics | | | | | |
| DSP Statistics | | | | | |
| 🧃 Firmware Update 💌 | | | | | |
| < | | | | | |

Rx Discard Packets- The number of packets dropped by the device.

Rx Frame Too Long- The number of packets that are larger than the 1514 Ethernet packet limit.

Rx Non-Aligned Errors- The number of packets that are not aligned properly.

Rx Collision Errors- The number of collision errors.

Rx Short Frames- The number of packets smaller than the 64-octet minimum.

Monitor - Ethernet Statistics (continued)

Rx CRC Errors - The number of packets received that failed the CRC checksum test.

Rx Overrun Packets - The number of packets received that exceed the 1518 octet maximum length imposed on Ethernet packets. (Overrun packets are generated by some proprietary software applications.)

Tx Packets - The total number of valid packets transmitted by the device since the last reset.

Tx Bytes - The total number of bytes transmitted by the device.

Tx Non Ucast Packets - The number of non-unicast packets sent.

Tx Discard Packets - The number of packets dropped by the device.

Tx Heartbeat Errors - The number of heartbeat errors. (This relates to an internal timing function.)

Tx Late Collision - The number of late collisions.

Tx Retransmission Limit - The number of times the device had to retransmit packets.

Tx Underrun Packets - This counter shows the number of runt packets transmitted by the device that are less than the allowed 64-octet minimum length. (Underrun packets occur due to jam signals generated by collisions, backpressure, etc.)

Tx Carrier Sense Lost - The number of times packets were lost due to carrier sense lost.

This window displays a variety of DSP statistics.

Monitor - DSP Statistics

| Total 1 2 Link DVG 1120S 0 0 Link DVG 1120S 0 0 Dunic Information To Online 0 0 Dender Information To Online 0 0 Pray DINS To Online Syme Drugood Passer 0 0 SIP Configuration Re Vace Patelat 0 0 SIP Configuration Re Na Jaffer 0 0 IP Filter Re Man Jaffer 0 0 Rolling Re STP Jack Taffer 0 0 Roll Phares 0 0 0 RACE Configuration Re Xiter 0 0 Roll Phares Roll Phares 0 0 Roll Phares 0 0 0 SMell Trap Configuration Re STD Plackets 0 0 SMell Trap Configuration Lest Eth Peterber 0 0 SMell Trap Configuration Lest Eth Peterber 0 0 SMell Trap Configuration Lest Eth Peterber | <i>@</i> }_ ≜ | 谢 DSP Statistics | | | |
|---|---|--|---|---|--|
| Tar Yane Packte 0 0 Leb KV311303 Tar Guide 0 0 Conde pil Tar Guide Standard 0 0 Decise Information Tar Guide Standard 0 0 Play (NIS) Tar Guide Standard 0 0 SIP Configuration Bar Yate Packte 0 0 SIP Configuration Bar Yate Packte 0 0 SIP Configuration Bar Yate Packte 0 0 ACR Configuration Bar Main Fache 0 0 Parking Dar Main Fache 0 0 Routing Bar Diff Cont | D-Link | Teid | 1 | 2 | |
| Condag P Ts Extence Supported Fixace 0 0 Device Information Ts Out Syze Decouped Fixace 0 0 Pary (NIS) Ts Out Syze Decouped Fixace 0 0 SIP Configuration Ts Out Syze Decouped Fixace 0 0 SIP Configuration Ts Out Syze Decouped Fixace 0 0 SIP Configuration Ts Out Syze Decouped Fixace 0 0 SIP Configuration Ts Data Syze Decouped Fixace 0 0 Part Are Configuration Ts Data Syze Decouped Fixace 0 0 Routing Ts Affinities 0 0 0 Routing Ts Affinities 0 0 0 Affinities Differed Fixace 0 0 0 Affinities Ts Differed Fixace 0 0 0 SIMP Transport Ts Differed Fixace 0 0 0 SIMP Transport Material Mather Conset 0 0 0 Administration Mixing Lond Sta Methr 0 0 | Ming Networks for People D-Link DVG-1120S | Tx Voice Packets Tx Oclets | 0 | 0 | |
| Party (NS) To The Orbito 0 SIP Configuration Bx Yate Plants 0 0 SIP Configuration Bx Yate Plants 0 0 SIP Configuration Bx Max Plants 0 0 Part Are Configuration Bx Max Plants 0 0 Reading Bx Plant Plants 0 0 Reading Bx DTH2 Orbits 0 0 Reading Bx DTH2 Orbits 0 0 SIMP Trap Configuration AL12 Configuration AL22 Configuration 0 SIMP Trap Configuration Maxes Overfree Const 0 0 SIMP Trap Configuration Maxes Overfree Const 0 0 General Statistics Plants of Statistics 0 0 D SIDEs Trap Contigories Plants of Statistics 0 0 | Config IP Device Information | Tx Silence Suppressed Frames Tx Grant Sync Dropped Frames | 0 | 0 | |
| SIP Configuration Bx Octob 0 ACR Configuration Bx Min Jihler 0 IP Fair Bx Min Jihler 0 Delph Mode Bx DTM // Configuration Bx DTM // Configuration 0 ACR Configuration Bx DTM // Configuration 0 0 Direly Configuration ALSI Configuration 0 0 SIMM Trap Configuration ALSI Configuration 0 0 SIMM Trap Configuration Matter Overflow 0 0 SIMM Trap Configuration Matter Overflow 0 0 Administration Mining Monotor Lent Eak Arebith 0 0 Dire Beer Statistics Phalance Stratistics 0 0 Dire Beer Statistics Phalance Stratistics 0 0 | Proxy DNS Telephony Configuration | Tx DTMF Octets Rx Voice Packets | 0 | 0 | |
| Br. Max. Three 0 0 Routing Br. BT. F. Jr. golds 0 0 Routing Br. BT. F. Jr. golds 0 0 Drich Configuration Br. BT. F. Jr. golds 0 0 AltC Configuration Br. BT. F. Jr. golds 0 0 SIMP Trap Compared Alt2 Configuration 0 0 SIMP Trap Compared Inscription Constant 0 0 Administration Minary Monotor Lend Eak Facheth 0 0 Differed Statistics Phila Lost Jr. Merckon 0 0 | SIP Configuration | Rx Octets Rx Min Jitter | 0 | 0 | |
| Bridge Mode Br. DTMP Orefrey 0 0 DPG-D Configuration Br. 2010 Packate 0 0 SNMP Trap Configuration Ax12 Costing Particle Changes 0 0 SNMP Trap Configuration Teaching Particle Changes 0 0 SNMP Trap Configuration Teaching Housing Coast 0 0 Administration Manage Mexico Overflow 0 0 Ownoor Mining Coast Packate 0 0 Difference Statuticio D'Ila Lost y Aveout 0 0 | IP Filter | Rx Max Jitter Rx RTP Avg Jitter | 0 | 0 | |
| IAIC Configuration AL12 Coding Profile Charget 0 Shifter Transport Instant Creat 0 0 Shifter Transport Mession Overflow Coast 0 0 Administration Manage Instant Overflow Coast 0 0 Ownoor Instant Overflow 0 0 Entered Statistics Phal Losity Network 0 0 | Bridge Mode | Rx DTMF Octots Rx SID Packets | 0 | 0 | |
| ShMP IP Management Administrator Manag Montor C Ethernet Statutics O GPS Statutics | NAT Configuration | AAL2 Coding Profile Changes | 0 | 0 | |
| Administration Making Monitor Definition Making Const Patients 0 0 Different Statistics 0 0 DGPS Statistics 0 0 | SNMP IP Managemen | Invalid Header Count Micro Overflow Count | 0 | 0 | |
| Ethemet Statistics Pkts Lost by Network 0 | Administration Manag | Lost Enh. Packets Missing Core Packets | 0 | 0 | |
| | Ethernet Statistics DSP Statistics | Pkts Lost by Network | 0 | 0 | |

Software Update Mode - Image files down through TFTP.

TFTP Server Address - The IP Address of the TFTP server where the runtime or configuration file is located. This entry is used only if the Firmware Update is set to *Enable*.

Firmware Update

| 2- | - | ☞ Firmware Update | |
|------------------------------|---|--|--|
| | | Software Update Mode & TFTP Server Address | |
| Duilding Networks for People | | Software Update Mode TETP | |
| D-Link DVG-1120S Config IP | | TFTP Server Address | |
| Device Information | | | |
| Proxy DNS | | Update Management Module Firmware | |
| Telephony Configurati | | Firmware Update disabled V | |
| SIP Configuration | | File Name | |
| ACR Configuration | | | |
| Denting | | Last Update Status | |
| Bridge Made | | | |
| DHCP Configuration | | Save | |
| NAT Configuration | | | |
| SNMP Trap Configura | | | |
| SNMP IP Managemen | | | |
| Administration Manag | | | |
| 🗀 Monitor | | | |
| 🧃 Firmware Update | | | |
| Factory Reset | | | |
| Save & Restart Syste | | | |

Firmware Update - Determines whether or not the device will try to look for a runtime image file on the TFTP server.

File Name - The complete path and filename of the runtime image file on your TFTP server to be uploaded to the device.

Last Update Status - This is a read-only field that displays the Update Status.

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.

Factory Reset

| D-Link | CAUTION! This function resets the NV-RAM to default values. |
|--------------------------|---|
| king Networks for People | All settings you have changed since purchasing the device will be lost! |
| D-LINK DVG-11205 | new IP settings and then perform a System Restart. |
| Device Information | |
| Proxy DNS | |
| Telephony Configuratio | Reset to Factory Default |
| SIP Configuration | |
| ACR Configuration | |
| IP Filter | |
| Routing | |
| Bridge Mode | |
| DHCP Configuration | |
| NAT Configuration | |
| SNMP Trap Configurat | |
| SNMP IP Managemen | |
| Administration Manag | |
| Monitor | |
| Firmware Update | |
| Eactory Reset | |

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

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

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 them to their initial

Save & Restart System

| | ▲ |
|------------------------------|---|
| | 谢 Save & Restart System |
| | |
| D -Link | |
| Building Networks for People | If you do not save the settings, all changes made in this session will be lost. |
| D-Link DVG-1120S | |
| Config IP | Do you want to save the settings? @ Yes C No |
| Device Information | |
| Proxy DNS | |
| Telephony Configuration | Restart |
| SIP Configuration | |
| 🗀 ACR Configuration | |
| IP Filter | |
| Carl Routing | |
| 📑 Bridge Mode | |
| DHCP Configuration | |
| 🗀 NAT Configuration | |
| SNMP Trap Configuration | |
| SNMP IP Managemer | |
| Administration Manag | |
| 🗀 Monitor | |
| 🧃 Firmware Update | |
| Factory Reset | |
| Save & Restart Syste | • |
| 4 | |

values, which were present when the device was purchased.

Click **Restart** to save and reboot the system.

Configuration Using a Console

Setting up a Console

First-time configuration can be carried out through a "console," that is, either (a) a VT100-type serial data terminal, or (b) a computer running communications software set to emulate a VT100. The console must be connected to the Diagnostics port. This is an RS-232 port with a 9-socket D-shell connector and DCE-type wiring. Make the connection as follows:

1. Obtain suitable cabling for the connection.

You can use either (a) a "null-modem" RS-232 cable or (b) an ordinary RS-232 cable and a null-modem adapter. One end of the cable (or cable/adapter combination) must have a 9-pin D-shell connector suitable for the Diagnostics port; the other end must have a connector suitable for the console's serial communications port.

- 2. Power down the devices, attach the cable (or cable/adapter combination) to the correct ports, and restore power.
- 3. Set the console to use the following communication parameters for your terminal:
 - 9600 baud
 - VT-100/ANSI compatible
 - No parity checking (sometimes referred to as "no parity")
 - 8 data bits (sometimes called a "word length" of 8 bits)
 - 1 stop bit (sometimes referred to as a 1-bit stop interval)
 - No Flow control
 - Arrow keys enabled

Configuring the VoIP Gateway Using Telnet

Once you have set an IP address for your device, you can use a Telnet program (in a VT-100 compatible terminal mode) to access and configure it. Most of the screens are identical, whether accessed from the console port or from a Telnet interface.

First Time Connecting to the VoIP Gateway

First make the console connection to the device and then power it on. If your terminal (or terminal emulation program) is properly configured according to the specifications defined above, you will see the POST test and the boot up process. After the process is completed, you will see the window shown below.

```
000000307 SIP:
                                             Server Address= 0.0.0.0
                                   (1)
000000307 SIP: (1) Server Address
000000307 SIP: (1) Server Port= 50
000000307 SIP: (1) Phone Number =
000000307 SIP: (1) User Agent Add
000000307 SIP: (1) User Agent Por
000000307 SIP: (1) Display Name =
                                             Server Port= 5060
                                           User Agent Address = 10.1.1.1
                                            User Agent Port = 5061
After Sip create
After ProxyDns create
After gg_app_create
After unlock
After reboot system trap
Start watchdog timer
000000308 SIP network task started.
000000309 SIP main task started.
000000309 S1P main task started.
000000318 SIP User Agent task started.
000000338 NNM: 0, Signaling: xGCP, Protocol: FXS Loop Start
000000338 NNM: 0, Set Channel State Done (SUCCESS)
000000338 NNM: 0, Set Channel State Done (SUCCESS)
000000338 NNM: 0, Set Channel State Done (SUCCESS)
000000338 NNM: 1, Signaling: xGCP, Protocol: FXS Loop Start
000000338 NNM: 1, Set Channel State Done (SUCCESS)
000000338 NNN: 1, Set Channel State Done (SUCCESS)
000000338 NNN: 1, Channel Config Done (SUCCESS)
000000338 NNN: 1, Set Channel State Done (SUCCESS)
Username:
```

Initial Screen, First Time Connecting to the device

Initially, the VoIP gateway has a default Username and Password: admin. To log in, enter "admin" for the usernamd and passowrd and click <Enter>. The following window will be displayed
Configuration Using a Console First Time Connecting to the VoIP Gateway

```
000000307 SIP: (1) User Agent Address = 10.1.1.1

000000307 SIP: (1) User Agent Port = 5061

000000307 SIP: (1) Display Name =

After Sip_create

After proxyDns_create

After unlock

After reboot system trap

Start watchdog timer

000000308 SIP network task started.

000000308 SIP main task started.

000000318 SIP User Agent task started.

000000338 NNN: 0, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 1, Set Channel State Done (SUCCESS)

000000338 NNN
```

Configuration Commands

You can type "**nwdbg**" to see all of the configuration commands. (Shown Below)

```
000000307 SIP: (1) User Agent Address = 10.1.1.1

000000307 SIP: (1) User Agent Port = 5061

000000307 SIP: (1) Display Name =

After Sip_create

After ProxyDns_create

After unlock

After reboot system trap

Start watchdog timer

000000308 SIP network task started.

000000308 SIP main task started.

000000338 NNN: 0, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 1, Set Channel State Done (SUCCESS)

000000038 NNN: 1, Set Channel State Done (SUCCESS)
```

Configuration Using a Console *Configuration Commands*

```
nwdbg ether status
                      - display the current linking status of LAN and WAN
ports.
nwdbg host <STRING OF HOST NAME> - set the host name
nwdbg web port <PORT NUMBER> - set the web port number from 1024 to 29999 and 80
***** reboot the device to make the above setting activate *****
nwdbg ca <NOTIFY ENTITY> - set the notify entity, the format can be :
                                            [domainName|ip]:port
                                            [domainName ip]
nwdbg rgw <STRING OF RGW NAME> - set the gateway raw name
nwdbg dns [DNS IP] - set the dns ip
nwdbg dns [disable|enable] - set the dns state
***** use save-changes command to activate the above setting
nwdbg bridge [on|off] – on/off software br
nwdbg bridge 0 [10 to 60] – 10M rx watermark
nwdbg bridge 1 [26 to 60] – N-way rx watermark

    on/off software bridge

nwdbg [config|mac|ip|...] - show [all|mac|...] configuration
192.168.0.1>
```

This **192.168.0.1>** command line allows you to enter the related commands for the initial configuration of this device.

Configure IP

Type "nwdbg ipgw" to show the IP setting of the device (default is PPoE).

Configuration Using a Console Configure IP

The following commands are use for device's IP setting:

nwdbg ip <dhcp|bootp|manual|pppoe> - set to DHCP, BOOTP, Manual (static IP) or PPPoE mode.

If Manual mode:

- nwdbg ip <IP ADDRESS> set device ip to d.d.d.d
- nwdbg mask <SUBNET MASK> set device subnet mask to d.d.d.d
- **nwdbg gw <GATEWAY IP>** set device default gateway to d.d.d.d
- nwdbg lan_ip <x.x.x.x> set LAN IP Address.
- nwdbg lan_mask <x.x.x.x> set LAN IP MASK.

Type "**nwdbg ip manual**" to setup your device's WAN IP to manual mode. After you have finished, type "**nwdbg save changes**" to save your settings and restart the device. The following window will appear.

Now your device's WAN IP is in the manual mode with a default IP addres of 10.1.1.1.

Using the Console Port

The DVG-1120S VoIP gateway features a Console Port for debugging, which is described in this section.

To access the console mode, you must first make sure the console is connected to the Diagnostics port and the appropriate cabling for the connection is being used. (You need a RJ-14 to RS-232 converter, RJ-14 and RS-232 cable.) Please see the previous section for additional information. Next, power the device on by simply plugging it in. You will see the boot up process. After the process is complete, you will see the window shown below:

```
000000307 SIP:
000000307 SIP:
                             (1)
                                     Server Address= 0.0.0.0
                                     Server Port= 5060
                             (1)
000000307 SIP:
                             (1)
                                     Phone Number =
000000307 SIP:
                                    User Agent Address = 10.1.1.1
                             (1)
000000307 SIP:
                                    User Agent Port = 5061
                             (1)
000000307 SIP: (1) Display Name =
After Sip_create
After ProxyDns_create
After gg_app_create
After unlock
After reboot system trap
Start watchdog timer
000000308 SIP network task started.
000000309 SIP main task started.
000000318 SIP User Agent task started.
000000338 NNN: 0, Signaling: xGCP, Protocol: FXS Loop Start
000000338 NNN: 0, Set Channel State Done (SUCCESS)
000000338 NNN: 0, Set Channel State Done (SUCCESS)
000000338 NNN: 0, Channel Config Done (SUCCESS)
000000338 NNN: 0, Set Channel State Done (SUCCESS)
000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start
000000338 NNN: 1, Set Channel State Done (SUCCESS)
000000338 NNN: 1, Channel Config Done (SUCCESS)
000000338 NNN: 1, Set Channel State Done (SUCCESS)
Username:
```

Initially, the VoIP gateway has a default Username and Password: admin. To log in, enter "admin" for the username and password, and then click on the OK button. The following window will be displayed:

Using the Console Port

```
000000307 SIP:
                                    (1) User Agent Address = 10.1.1.1
000000307 SIP: (1) User Agent Por
000000307 SIP: (1) Display Name =
                                    (1) User Agent Port = 5061
After Sip_create
After ProxyDns_create
After gg_app_create
After unlock
After reboot system trap
Start watchdog timer
000000308 SIP network task started.
000000309 SIP main task started.
000000318 SIP User Agent task started.
UUUUUU01318 SIP User Agent task started.
0000000338 NNM: 0, Signaling: xGCP, Protocol: FXS Loop Start
000000338 NNM: 0, Set Channel State Done (SUCCESS)
000000338 NNM: 0, Channel Config Done (SUCCESS)
000000338 NNM: 0, Set Channel State Done (SUCCESS)
000000338 NNM: 1, Signaling: xGCP, Protocol: FXS Loop Start
000000338 NNM: 1, Set Channel State Done (SUCCESS)
Username: admin
Password:
192.168.0.1>
```

Configuration Commands

You can type "**nwdbg**" and press <Enter> to see all of the configuration commands. (Shown below)

```
000000307 SIP: (1) User Agent Address = 10.1.1.1

000000307 SIP: (1) User Agent Port = 5061

000000307 SIP: (1) Display Name =

After Sip_create

After ProxyDns_create

After reboot system trap

Start watchdog timer

000000308 SIP network task started.

000000308 SIP network task started.

000000338 SIP user Agent task started.

000000338 NNN: 0, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 0, Set Channel State Done (SUCCESS)

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start

000000338 NNN: 1, Set Channel State Done (SUCCESS)

00000038 NNN:
```

Using the Console Port Configuration Commands

nwdbg ether status - display the current linking status of LAN and WAN ports. nwdbg host <STRING OF HOST NAME> - set the host name nwdbg web port <PORT NUMBER> - set the web port number from 1024 to 29999 and 80 ***** reboot the device to make the above setting activate ***** nwdbg ca <NOTIFY ENTITY> - set the notify entity, the format can be : [domainName]ip]:port [domainName ip] nwdbg rgw <STRING OF RGW NAME> - set the gateway raw name nwdbg dns [DNS IP] - set the dns ip nwdbg dns [disable|enable] - set the dns state ***** use save-changes command to activate the above setting nwdbg bridge [on|off] - on/off software bridge nwdbg bridge 0 [10 to 60] - 10M rx watermark nwdbg bridge 1 [26 to 60] - N-way rx watermark nwdbg [config|mac|ip|...] - show [all|mac|...] configuration 192.168.0.1>

The **192.168.0.1**> command line allows you to enter the related commands for the initial configuration of this device.

Configure IP

Type "**nwdbg ipgw**" and press <Enter> to show the IP setting of the device (default is PPPoE).

```
nwdbg ca <NOTIFY ENTITY>
                                    - set the notify entity, the format can be :
                                             [domainName]ip]:port
                                             [domainName]ip]
nwdbg rgw <STRING OF RGW NANE> - set the gateway raw name
nwdbg dns [DNS IP]
nwdbg dns [DNS IP] - set the dns ip
nwdbg dns [disable|enable] - set the dns state
***** use save-changes command to activate the above setting
nwdbg bridge [on|off]
                              - on/off software bridge
nwdbg bridge 0 [10 to 60] - 10N rx watermark
nwdbg bridge 1 [26 to 60] - N-way rx watermark
n#dbg [config|mac|ip|...] - sho# [all|mac|...] configuration
192.168.0.1>nwdbg ipgw
Default gateway: 10.1.1.254
          IP 10.1.1.1, Mask 255.0.0.0
pppoe: 0 (1:PADI, 2:PADO, 3:PADR, 4:SESSION, 5:TERMINATED)
WAN IF:
              ipnep: 0 (0:DOWN, 1:UP)
LAN IF: IP 192.168.0.1. Mask 255.255.255.0
OK
192.168.0.1>
```

Using the Console Port Configure IP

The following commands are use for device's IP setting:

 nwdbg ip <dhcp|bootp|manual|pppoe> - set to DHCP, BOOTP, Manual (static IP) or PPPoE mode.

If Manual mode:

- nwdbg ip <IP ADDRESS> set device ip to d.d.d.d
- nwdbg mask <SUBNET MASK> set device subnet mask to d.d.d.d
- **nwdbg gw <GATEWAY IP>** set device default gateway to d.d.d.d
- nwdbg lan_ip <x.x.x.x> set LAN IP Address.

Type "**nwdbg ip manual**" to setup your device's WAN IP to manual mode. After you have finished, type "**nwdbg save changes**" to save your settings and restart the device. The following window will appear:

Now, your device's WAN IP is in manual mode with a default IP address of 10.1.1.1.

Using the Console Port

Firmware Upgrade

New software can be downloaded from a TFTP server.

You can type **TFTP** to see the TFTP update commands. (Shown below)

000000318 SIP User Agent task started. 000000338 NNN: 0, Signaling: xGCP, Protocol: FXS Loop Start 000000338 NNN: 0, Set Channel State Done (SUCCESS) 000000338 NWM: 0, Channel Config Done (SUCCESS) 000000338 NNN: 0, Set Channel State Done (SUCCESS) 000000338 NNN: 1, Signaling: xGCP, Protocol: FXS Loop Start 0000000338 NNN: 1, Set Channel State Done (SUCCESS) 000000338 NNN: 1, Channel Config Done (SUCCESS) 000000338 NNN: 1, Set Channel State Done (SUCCESS) Username: admin Password: 192.168.0.1>tftp tftp srvip <IP ADDRESS> - set the IP address of TFTP server - get the remote image file tftp get <FILENAME> if <FILENMAE> is not specified, the image file name in EEPROM will be employed. tftp update - update the image in flash Current Settings : TFTP Server IP Address : 0.0.0.0 Image File Name 192.168.0.1>

Console mode--TFTP Update Firmware Commands Screen

The items on this window are described below:

- tftp srvip <IP ADDRESS> set the IP address of TFTP server
- tftp get <FILENAME> get the remote image file, if <FILENMAE> is not specified, the image file name in EEPROM will be employed.
- tftp update update the image in flash

After you have finished the firmware upgrade, type the "**nwdbg system reboot**" command on the **192.168.0.1>** command line and press <Enter>. The following window will appear:

Using the Console Port Firmware Upgrade

Console mode--nwdbg System Reboot Command Screen

After booting complete, type "**nwdbg factory reset**" on the **192.168.0.1**> command line and press <Enter>. The following window will appear:

Console mode--nwdbg Factory Reset Command Screen

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.

The firmware upgrade procedure is complete.

Command Line Interface

The DVG-1120S VoIP Gateway offers a line-at-a-time prompt and response scheme to execute various configuration instructions. The interface displays a single prompt character **192.168.0.1>** when it is ready to accept a command (ex. **192.168.0.1>set** or **192.168.0.1>show**).

Typing a question mark after the **192.168.0.1>** prompt will display a list of helpful user commands. Please note that all characters must be entered in lower case. All command line examples in this chapter are in **bold** type.

Listed below are some of the most commonly used commands, parameter(s), and examples of their usage.

General Setup Commands

nwdbg system reboot

| Example: | nwdba system reboot |
|---------------|---|
| Parameter(s): | None. |
| Definition: | This command is used to restart the device. |

nwdbg save changes

| Definition: | This command is used to save the configuration changes into flash memory and restart the device. |
|---------------|--|
| Parameter(s): | None. |

Example: nwdbg save changes

nwdbg factory reset

| Definition: | This command is used to set the DVG-1120S back to its default settings and then restart the device. |
|---------------|---|
| Parameter(s): | None. |
| Example: | nwdbg factory reset |

nwdbg un <USERNAME>

| Definition: | This command sets the username if there is a username string, or shows the username/password if only nwdbg un is typed. |
|------------------------------|--|
| Parameter(s): characters> | <username, 12<="" is="" length="" maximum="" string="" td=""></username,> |
| Example: | nwdbg un 123456789012 |

nwdbg pw <PASSWORD>

| Definition: | This command sets the password if there is a password string, or shows the username/password if only nwdbg pw is typed. |
|------------------------------|---|
| Parameter(s): characters> | <password, 12<="" is="" length="" maximum="" string="" td=""></password,> |
| Example: | nwdbg pw |
| | |
| nwdbg slic <0 1> | |
| Definition: | This command changes the Subscriber Line Interface Circuit (SLIC) state to standby or active, or shows the SLIC state if only nwdbg slic is typed. |
| Parameter(s): | <slic 0="" 1="" :="" active="" standby,="" state,=""></slic> |
| Example: | nwdbg slic 0 |

nwdbg dtmf_relay <0|1>

| Definition: | This command turns the Dual Tone Multiple Frequency (DTMF) relay function on or off, or shows the DTMF relay state if only nwdbg dtmf_relay is typed. |
|---------------|--|
| Parameter(s): | <0 : off, 1 : on> |
| Example: | nwdbg dtmf_relay 0 |

nwdbg mac <MAC ADDRESS>

| Definition: | This command sets the MAC address of the voice link, or shows the MAC address if only nwdbg mac is typed. |
|---------------|--|
| Parameter(s): | <mac address,="" format="" is="" the="" xx:xx:xx:xx:xx:xx=""></mac> |
| Example: | nwdbg mac 00:50:ba:08:24:56 |

nwdbg ip <dhcp|bootp|manual>

| Definition: | This command sets the software boot mode to DHCP, BOOTP, or Manual mode. If only nwdbg ip is typed, this command shows the IP configuration. |
|---------------|---|
| | DHCP: While the system is booting, the system acts as a DHCP client. |
| | BOOTP: While the system is booting, the system acts as a BOOTP client. This mode is used to set the device's IP address and upgrade the software. |
| | Manual: While the system is booting, the system uses a fixed IP address. The fixed IP address can be set by nwdbg ip <ip address="">.</ip> |
| Parameter(s): | <dhcp bootp manual></dhcp bootp manual> |
| Example: | nwdbg ip dhcp |

nwdbg ip <IP ADDRESS>

| Definition: | This command sets the fixed IP address, which is used |
|-------------|---|
| | as the system's IP address if the software boot mode is |
| | Manual mode. If only nwdbg ip is typed, this command |
| | shows the IP configuration. |
| | |

- Parameter(s): <IP ADDRESS>
- Example: nwdbg ip 10.1.1.120

nwdbg mask <SUBNET MASK>

- Definition: This command sets the fixed subnet mask, which is used as the system's subnet mask if the software boot mode is Manual mode. If only **nwdbg mask** is typed, this command shows the IP configuration.
- Parameter(s): <SUBNET MASK>

Example: nwdbg mask 255.0.0.0

nwdbg gw <GATEWAY IP>

| Definition: | This command sets the fixed GW address, which is used as the system's GW address if the software boot mode is Manual mode. If only nwdbg gw is typed, this command shows the IP configuration. |
|---------------|--|
| Parameter(s): | <gateway ip=""></gateway> |

Example: nwdbg gw 10.1.1.254

nwdbg tftp <0|1>Definition:This command sets the software download link to either
a WAN link or a LAN link. If only nwdbg tftp is typed, this
command shows the download link.Parameter(s):<0:WAN link, 1:LAN link>Example:nwdbg tftp 0

nwdbg lan_ip <IP ADDRESS>

| Definition: | This command sets the LAN IP address. If only |
|-------------|---|
| | nwdbg lan_ip is typed, this command shows the LAN |
| | IP configuration. |

- Parameter(s): <IP ADDRESS>
- Example: nwdbg lan_ip 10.1.1.120

nwdbg lan_mac <MAC ADDRESS>

| Definition: | This command sets the LAN MAC address, or shows the LAN address if only nwdbg lan_mac is typed. |
|---------------|--|
| Parameter(s): | <mac address,="" format="" is="" the="" xx:xx:xx:xx:xx:xx=""></mac> |
| Example: | nwdbg lan_mac 00:50:ba:08:24:56 |

nwdbg dns <DNS IP>

| Definition: | This command sets the Domain Name Server's IP address. If only nwdbg dns is typed, this command shows the DNS IP/STATE. |
|---------------|--|
| Parameter(s): | <dns ip=""></dns> |
| Example: | nwdbg dns 10.1.1.5 |

nwdbg dns <disable|enable>

| Definition: | This command turns on/off the DNS function. If only |
|-------------|---|
| | nwdbg dns is typed, this command shows the DNS |
| | IP/STATE. |
| | |

- Parameter(s): [disable | enable]
- Example: nwdbg dns disable

| nwdbg count | ry <code></code> |
|-------------|------------------|
|-------------|------------------|

| Definition: | This command provides country code setting interface to config the tone frequency for different country. If only nwdbg country is typed, this command shows the COUNTRY CODE. |
|-------------|---|
| | |

Parameter(s): <0:USA (Default), 1:Japan, 2:Hong Kong, 3:Sweden>

Example: nwdbg country 1

nwdbg gain <RX GAIN> <TX GAIN>

Definition: This command sets the receive and transmit gain, or shows the <RXGAIN> <TX GAIN> state if only nwdbg gain is typed.

Parameter(s): <RX|TX GAIN, : Range -14 to +13dB>

Example: nwdbg gain -2-4

| ping <dest ip=""> <options></options></dest> | | |
|--|--|--|
| Definition: | This command lets the user ping an IP address from the device. | |
| Parameter(s): | <dest address="" host="" ip="" ip:="" the=""></dest> | |
| | <options, (type="" -t="" :="" host="" ping="" space).<="" specifed="" stopped="" td="" the="" until=""></options,> | |
| | -n count: Number of echo requests to send. | |
| | -w timeout: Timeout in seconds to wait for each reply. | |
| | -i interval: The interval in half-seconds between two echo requests.> | |
| Example: | ping 10.1.1.6 -n 100 -w 2 -i 1 | |

TFTP Client Setup Commands

When the user enters **tftp**, the screen will show all commands about the TFTP client:

| ggdbg>tftp | |
|---------------------------------|--|
| tftp srvip <ip address=""></ip> | – set the IP address of TFTP server |
| tftp get <filename></filename> | get the remote image file |
| | If <filename> is not specified, the image file name in EEPROM will be employed.</filename> |
| tftp update | update the image in flash |
| Current Settings : | |
| TFTP Server IP Address : | 172.16.6.245 |
| Image File Name : 102nmm | n01.tfp |

Command Line Interface TFTP Client Setup Commands

tftp srvip <IP ADDRESS>

| | IP address is invalid, the message ERROR will be displayed. |
|-------------|--|
| | IP address is invalid, the message ERROR will be displayed. |
| Definition: | This command sets the IP address of the TFTP server. The image must be resident on that TFTP server. If the |

Example: ggdbg>tftp srvip 172.16.6.245 OK

tftp get <FILENAME>

| AIVIE> |
|---------|
| y error |
| |
| tftp |
| |
| |

Example: ggdbg>tftp get c:\102nmm.tfp

Download d:\project\dg102\102nmm.tfp ...\

ΟΚ

tftp update

- Definition: This command updates the image in FLASH. The image is downloaded for storage in DRAM. If any error occurs during the image update, the message **ERROR** will be displayed.
- Example: ggdbg>tftp update
 - .. Erase Runtime Flash Memory ... Done
 - .. Program Runtime Flash Memory ... Done
 - οκ

Networking Basics

Using the Network Setup Wizard in Windows XP

In this section you will learn how to establish a network at home or work, using **Microsoft Windows XP.**

Note: Please refer to websites such as <u>http://www.homenethelp.com</u> and <u>http://www.microsoft.com/windows2000</u> for information about networking computers using Windows 2000, ME or 98.

Go to Start>Control Panel>Network Connections Select Set up a home or small office network



When this screen appears, Click Next.

Please follow all the instructions in this window:



Click Next

In the following window, select the best description of your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.



Enter a Computer description and a Computer name (optional.)



Click Next

Enter a **Workgroup** name. All computers on your network should have the same **Workgroup** name.

| Network Setup Wizard | |
|--|--|
| Name your network. | |
| Name your network by sp should have the same wo | ecifying a workgroup name below. All computers on your network Irkgroup name. |
| Workgroup name: | Accounting |
| | |
| | |
| | |
| | |
| | |
| | < <u>B</u> ack <u>N</u> ext> Cancel |

Click Next

Please wait while the Network Setup Wizard applies the changes.



When the changes are complete, click Next.

Please wait while the **Network Setup Wizard** configures the computer. This may take a few minutes.



In the window below, select the option that fits your needs. In this example, **Create a Network Setup Disk** has been selected. You will run this disk on each of the computers on your network. Click **Next**.



Insert a disk into the Floppy Disk Drive, in this case drive A.



Format the disk if you wish, and click Next.

Please wait while the Network Setup Wizard copies the files.

| Copying | × |
|---|--------|
| Please wait while the wizard copies files | 6 |
| | Cancel |

Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.

| Network Setup Wizard | |
|---|--|
| To run the wizard with the Network Setup Disk | |
| Complete the wizard and restart this computer. Then, use the Network Setup Disk to run the Network Setup Wizard once on each of the other computers on your network. Here's how: 1. Insert the Network Setup Disk into the next computer you want to network. 2. Open My Computer and then open the Network Setup Disk. 3. Double-click "netsetup." | |
| < <u>B</u> ack Next > Cancel | |

Please read the information on this screen, then click **Finish** to complete the **Network Setup Wizard**.

| Network Setup Wizard | |
|------------------------------|--|
| | Completing the Network Setup Wizard |
| | You have successfully set up this computer for home or small office networking. |
| 山の | For help with home or small office networking, see the following topics in Help and Support Center: |
| | Using the Shared Documents folder Sharing files and folders |
| | To see other computers on your network, click Start, and then click My Network Places. |
| | |
| | To close this wizard, click Finish. |
| < <u>B</u> ack Finish Cancel | |

The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.

| System | Settings Change |
|--------|---|
| ? | You must restart your computer before the new settings will take effect. Do you want to restart your computer now? |
| | |

You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

Networking Basics (continued) Naming your Computer

To name your computer, in **Windows XP**, please follow these directions:

- Click Start (in the lower left corner of the screen)
- Right-click on My Computer
- Select Properties and click



- Select the Computer Name Tab in the System Properties window.
- You may enter a Computer Description if you wish; this field is optional.
- To rename the computer and join a domain, Click Change.



Networking Basics (continued) Naming your Computer

| In this window, enter the Computer name | Computer Name Changes |
|--|-----------------------|
| Select Workgroup and enter the name of the Workgroup | Computer name: |
| All computers on your network must have the same Workgroup name. | Office |
| Click OK | Member of O Domain: |
| | |

Checking the IP Address in Windows XP

The wireless adapter-equipped computers in your network must be in the same IP Address range (see Getting Started in this manual for a definition of IP Address Range).

To check on the IP Address of the adapter, please do the following:

| Right-click on the | Disable | |
|--|----------------------------------|------|
| Local Area | Status | 64 B |
| <i>Connection</i> <i>icon</i> in the task | Repair | |
| bar | View Available Wireless Networks | |
| | Open Network Connections | |
| Click on Status | 3:05 F | M |

Networking Basics (continued) Checking the IP Address in <u>Windows XP</u>

| This window will appear. | ↑ Wireless Network Connec | tion 7 Status 🛛 🛛 🛛 🛛 |
|--------------------------|---|--|
| Click the Support tab | General Support Internet Protocol (TCP/IP) Address Type: IP Address: Subnet Mask: Default Gateway: | Assigned by DHCP 192.168.0.114 255.255.255.0 192.168.0.1 Details |
| Click Close | Repair | Flore |
| | | |

Assigning a Static IP Address in Windows XP/2000

Note: Residential Gateways/Broadband Routers will automatically assign IP Addresses to the computers on the network, using DHCP (Dynamic Host Configuration Protocol) technology. If you are using a DHCP-capable Gateway/Router you will not need to assign Static IP Addresses.

If you are not using a DHCP capable Gateway/Router, or you need to assign a Static IP Address, please follow these instructions:



Networking Basics (continued) Assigning a Static IP Address in <u>Windows XP/2000</u>

Double-click on Network Connections





Right-click on Local Area Connections

Double-click on Properties

Networking Basics (continued) Assigning a Static IP Address in <u>Windows XP/2000</u>

- Click on Internet Protocol (TCP/IP)
- Click Properties
- In the window below, select Use the following IP address. Input your IP address and subnet mask. (The IP Addresses on your network must be within the same range. For example, if one computer has an IP Address of 192.168.0.2, the other

| 🕹 Local Area Connection 7 Properties 🛛 🛛 🛛 🔀 |
|--|
| General Advanced |
| Connect using: |
| B D-Link DWL-A650 |
| <u>C</u> onfigure |
| This connection uses the following items: |
| Client for Microsoft Networks Ise and Printer Sharing for Microsoft Networks |
| Install Uninstall Properties Description |
| Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. |
| Sho <u>w</u> icon in notification area when connected |
| OK Cancel |

computers should have IP Addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The subnet mask must be the same for all the computers on the network).

IP Address:

e.g., 192.168.0.2

Subnet Mask: 255.255.255.0

Default Gateway:

Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)

Select Use the following DNS server addresses. Enter the LAN IP address of th Wireless Router. (D-Link wireless routers have a LAN IF address of 192.168.0.1)



Click OK

You have completed the assignment of a Static IP Address. (You do not need to assign a Static IP Address if you have a DHCP-capable Gateway/Router). 65

Networking Basics (continued) Assigning a Static IP Address with <u>Macintosh OSX</u>

Go to the Apple Menu and select System Preferences



Click on Network

- Select Built-in Ethernet in the Show pull-down menu
- Select Manually in the Configure pull-down menu

| | Location: Automatic | + |
|-------------------|--|-----------------------------------|
| v: Built-in Ether | net 🗧 | |
| (| ✓ Manually | oxies |
| Configure | Manually using DHCI Using DHCP Using BootP | P Router |
| IP Address: | (Provided by DHCP Server) | |
| Subnet Mask: | 255.255.255.0 | |
| Router: | 192.168.0.1 | Search Domains (Optional) |
| DHCP Client ID: | (Optional) | |
| Ethernet Address: | | Example: apple.com, earthlink.net |

- Input the Static IP Address, the Subnet Mask and the Router IP Address in the appropriate fields
 - Click Apply Now

| 00 | Netwo | ork C |
|----------|--|-----------------------------------|
| iei | | |
| Show All | Displays Sound Network Startup Disk | |
| | Location: Automati | ic 🕴 |
| Show: | Built-in Ethernet | |
| | TCP/IP PPPoE Ap | opleTalk Proxies |
| | Configure: Manually | • |
| | | Domain Name Servers (Optional) |
| | IP Address: 192.168.0.2 | |
| | Subnet Mask: 255.255.255.0 | |
| | Router: 192.168.0.1 | Search Domains (Optional) |
| | | |
| Ethe | ernet Address: 00:09:93:75:de:5a | Example: apple.com, earthlink.net |
| | | |
| _ | | |
| CI | ick the lock to prevent further changes. | Apply Now |

Networking Basics (continued) Selecting a Dynamic IP Address with <u>Macintosh OSX</u>

Go to the Apple Menu and select System Preferences



Click on Network



- Select Built-in Ethernet in the Show pull-down menu
- Select Using DHCP in the Configure pull-down menu

| w All Displays Sou | nd Network Startup Disk | |
|---------------------------|--|-----------------------------------|
| | Location: Automatic | • |
| Show: Built-in Ethe | net 😫 | |
| Configure | Manually Manually using DHC V Using DHCP | PRouter |
| | Using BOOTP | Domain Name Servers (Optional) |
| IP Address Subnet Mask | (Provided by DHCP Server) 255.255.255.0 | |
| Router | : 192.168.0.1 | Search Domains (Optional) |
| DHCP Client ID | (Optional) | |
| Ethernet Address | | Example: apple.com, earthlink.net |

- Click Apply Now
- The IP Address, Subnet mask, and the Router's IP Address will appear in a few seconds



Checking the Wireless Connection by <u>Pinging in Windows XP and 2000</u>

Go to Start > Run > type cmd. A window similar to this one will appear. Type ping xxx.xxx.xxx, where xxx is the IP Address of the Wireless Router or



Access Point. A good wireless connection will show four replies from the Wireless Router or Access Point, as shown.

Checking the Wireless Connection by <u>Pinging in Windows Me and 98</u>

Go to Start > Run > type command. A window similar to this will appear. Type ping xxx.xxx.xxx.xxx where xxx is the IP Address of the Wireless Router or



Access Point. A good wireless connection will show four replies from the wireless router or access point, as shown.

Technical Specifications

Call Control Protocols Compliance:

SIP

Voice Compression:

G.711 (A-law and u-law), G.723.1, 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.165/G.168

Ethernet Ports:

- WAN: 10BASE-T Ethernet port (MDI-II)
- LAN: NWay 10/100BASE-TX Fast Ethernet ports (MDI-X)
 - 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

FAX support:

V.21, V.27ter, V.29, V.17 Modulation/Demodulation

Network Protocols:

- TCP/IP, UDP, ARP, ICMP, TFTP, Telnet, SNMP, HTTP, RIP1/ RIP2
- DHCP: Dynamic Host Configuration Protocol server and client
- NAT: Network Address Translation
- PPP over Ethernet Client

Technical Specifications (continued)

Network Management:

- SNMP management agent base MIB II
- Telnet provisioning
- Manage functions through an intuitive web-based graphical user interface
- TFTP: The built-in Trivial File Transfer Protocol provides firmware upgrade

Security:

- Password Authentication Protocol/Challenge Handshake Authentication Protocol (PAP/CHAP)
- Administrative password through Web, Telnet and SNMP
- Packet filter by IP Address, port number and protocol

LEDs:

General: Power

Status/Alarm

- Ethernet:
 - WAN: Link/Act LAN: 10/100M, Link/Act
- Phone 1 to 2: PSTN/VoIP Hook/Ringing

Dimensions:

6.78" (W) x 6.165" (D) x 1.339" (H) (172mm x 156.6mm x 34mm)

Number of Ports:

- One 10BASE-T Ethernet port (WAN)
- One 10/100BASE-TX Fast Ethernet port (LAN)
- Two loop-start FXS RJ-11 ports
- One PSTN POTS RJ-11 port for Life Line
- One RJ-14 Console port

Technical Specifications (continued)



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 12:00am EST

D-Link Technical Support over the Internet:

http://support.dlink.ca email:support@dlink.ca
Warranty (USA only)

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 (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 or 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 nonconforming 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. 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.
- Return Merchandise Ship-To Address

USA: 17595 Mt. Herrmann, Fountain valley, CA 92708

Canada: 2180 Winston Park Drive, Oakville, ON, L6H 5W1 (Visit <u>http://www.dlink.ca</u> for detailed warranty information within Canada)

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.

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FCC Statement: This equipment has been tested and found to comply with part 68 of the FCC Rules.

For a detailed warranty outside the United States, please contact the corresponding local D-Link office.

Registration

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