

VoIP Orderwire Version 2

USER MANUAL



Visit our website at www.dpstelecom.com for the latest PDF manual and FAQs.

Revision History

January 02, 2019	Added firmware improvements
April 22, 2016	Sections updated to included VLAN2 firmware update
February 24, 2016	Update "Edit" to "Provisioning" for latest firmware
August 17, 2015	Initial Release

This document contains proprietary information which is protected by copyright. All rights are reserved. No part of this document may be photocopied without prior written consent of DPS Telecom.

All software and manuals are copyrighted by DPS Telecom. Said software and manuals may not be reproduced, copied, transmitted or used to make a derivative work, by either mechanical, electronic or any other means in whole or in part, without prior written consent from DPS Telecom, except as required by United States copyright laws.

© 2017 DPS Telecom

Notice

The material in this manual is for information purposes and is subject to change without notice. DPS Telecom shall not be liable for errors contained herein or consequential damages in connection with the furnishing, performance, or use of this manual.

Contents

Visit our website at www.dpstelecom.com for the latest PDF manual and FAQs

1	VoIP Orderwire Overview	1
2	Specifications	2
3	Shipping List	3
4	Optional Accessories	4
5	Build Options	5
6	Installation	5
6.1	Tools Needed	5
6.2	Mounting	6
6.3	External Speaker	7
7	VoIP Orderwire Back Panel	7
7.1	Single Amphenol Build Option	7
7.2	Dual Amphenol Build Option	8
7.3	Power Connection (-48 or -24VDC Build Option)	9
7.3.1	Line Connection	10
7.4	LAN Connection	11
7.5	Optional 10/100 Switch	11
7.6	RTU Build Only	12
7.6.1	50-Pin Alarm and Control Relay Connector	12
7.6.2	Discrete Alarms	12
7.6.3	Analogs	13
7.6.3.1	Switching Analog Alarms to Current Operation	13
8	VoIP Orderwire Front Panel	14
8.1	Craft Port	14
9	Quick Start: How to Give the Orderwire an IP Address	15
9.1	...via Craft Port (using TTY interface)	17
9.2	...via LAN	17
10	TTY Interface	18
10.1	Change Ethernet Settings	18
10.2	View Directory	19
10.3	View Hardware Config & Stats	19
11	Three Modes of Operation	20
11.1	Direct Station-to-Station Calling (Option #1)	20
11.2	Hoot 'n Holler (Option #2)	20
11.3	Bridge Party Line (Option #3)	21
12	Web Browser	22
12.1	Logging on to the VoIP Orderwire	22

12.2 Changing the Default Password	23
12.3 System Settings	24
12.3.1 Offnet Settings	26
12.3.2 Alarm Echoing	26
12.4 Ethernet Settings	27
12.5 Notifications	28
12.5.1 SNMP Notification	28
12.5.2 Relay Notification	29
12.5.3 Schedule	29
12.6 Alarms	30
12.7 System Alarms	31
12.8 Controls	32
12.9 Analogs	33
12.9.1 Basic Configuration	33
12.9.2 Detailed Configuration	34
13 How to: Setup Directory Listings	35
14 How To: Navigate the Voice Menus	37
15 How To: Talk to Third-Party SIP Devices	37
16 How To: Upgrade Firmware	38
17 Front and Back Panel LEDs	39
18 Reference Section	40
18.1 Display Mapping	40
18.2 System Alarms Display Map	41
18.3 SNMP Manager Functions	43
18.4 SNMP Granular Trap Packets	44
19 Technical Support	46
20 End User License Agreement	49

1 VoIP Orderwire Overview



Fig. 1.1 VoIP Orderwire delivers fast, convenient communication between sites.

This next-gen orderwire product from DPS Telecom delivers voice communication at all your LAN sites. Using VoIP (Voice over IP) technology, you call another orderwire station, a select group of stations, or use the Hoot 'n Holler "all call" feature to page someone when you're not sure where they are.

Minimum Bandwidth Requirement: 128Kbps for peer to peer calls, or at least two DS0's in a fractional T1 WAN.

Plus, in the same chassis, you have the option of also getting an RTU with 16 discrete alarm inputs, 8 analog inputs, and 2 control relays. Each VoIP OrderWire unit installs easily - just plug into your LAN hub. In just 1 RU of space, you can get rid of all those costly telephone lines and long-distance fees. VoIP communication uses the industry-standard SIP 2.0 protocol and G.711 codec, making this orderwire system even easier to work with if you're already familiar with VoIP.

2 Specifications

Dimensions:	1.72" H x 17.0" W x 6.64" D
Weight:	2.6 lbs
Mounting:	19" or 23" rack or wall mount
Protocol:	SIP 2.0, RTP
Voice Codec:	G.711 Mu-Law
Power Input:	Dual -48 VDC, +24 VDC, or -24 VDC (build options)
Current Draw:	300mA
Fuse:	Dual 3/4 Amp GMT Fuses recommended
Interfaces:	1 RJ45 10/100BaseT Ethernet port 1 DB9 craft port, 9600 Baud serial 1 RJ-11 Telco jack (optional) 1 or 2 50-pin Amphenol connectors (RTU-builds only) 1 2-Wire handset jack * 1 External speaker jack * (Optional) 4 Port 10/100BaseT Switch
Visual Interface:	5 or 6 Front Panel LED 5 Back Panel LEDs
Operating Temperature:	32°–140° F (0°–60° C)
Operating Humidity:	0%–95% non-condensing
RoHS:	5/6
Handset:	Standard 2-Wire telephone (optional)
External Speaker:	Yes (optional)

* *These jacks can be located on the front **or** the back of the unit, specified when you order.*

RTU Build Only:

Alarm Termination:	Via 50-pin Amphenol connector on back panel
Discrete alarms:	16
Analogs:	8
Controls:	2 or 18

**This unit does not contain any operator-serviceable parts.
All servicing is to be performed by DPS Telecom only.**

3 Shipping List

Please make sure all of the following items are included with your VoIP Orderwire. If parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at 1-800-622-3314.



**VoIP Orderwire
D-PK-216OW**



**VoIP OrderWire Resource CD
(Includes Manual, MIBs, & Firmware)**



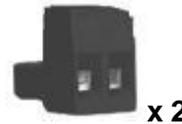
**VoIP Orderwire User Manual
D-UM-216OW**



**14 ft. Ethernet Cable
D-PR-923-10A-14**



**6 ft. DB9M-DB9F Download Cable
D-PR-045-10A-04**



x 2

**2-Pin Connector
2-820-00862-02**



x 2

**19" Rack Ears
D-CS-325-10A-00**



x 2

**23" Rack Ears
D-CS-325-10A-01**



x 2

**Standard Rack Screws
1-000-12500-06**



x 4

**3/8" Ear Screws
1-000-60375-05**



x 2

Metric Rack Screws
2-000-80750-03



x 4

3/4 Amp Fuses
2-741-00750-00



Pads
2-015-00030-00



Small 2-Pin Connector and 6ft of 2 pair wire
(for plugging in External Speaker)
2-820-00812-02

4 Optional Accessories



External Speaker
FDO-1200-10A-00



2-Wire Telephone
D-PR-675-10A-00



Pluggable Back Panel
D-PK-16PAN

The VoIP OrderWire's pluggable back panel allows for screw-in barrier plug connections for the NetGuardian's alarms and control relays. (The Pluggable Back Panel is only for RTU models of the OrderWire.)

5 Build Options

The VoIP OrderWire has the option to be ordered with single or dual Amphenol connectors for adding alarm monitoring capability.



Single Amphenol RTU build option: 16 Discrete alarms, 8 Analogs, 2 Control Relays



Dual Amphenol RTU build option: 16 Discrete alarms, 8 Analogs, 18 Control Relays

6 Installation

6.1 Tools Needed

To install the VoIP Orderwire, you'll need the following tools:



Phillips No. 2 Screwdriver



Small Standard No. 2 Screwdriver



**PC with terminal emulator,
such as HyperTerminal**

6.2 Mounting

Flush mount - Rack ears are installed @ front of the unit, with front panel flush to the rack



Rack mount - Rack ears are installed @ back of the unit



Fig. 6.1 The VoIP Orderwire can be flush or rear-mounted

The Orderwire mounts in a 19" or 23" rack, and can be mounted on the right or left, in the flush-mount or rear mount locations.

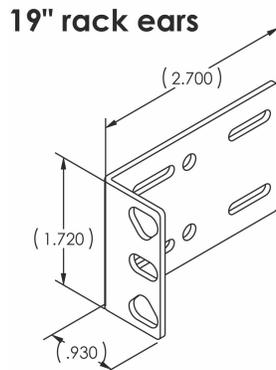


Fig. 6.2

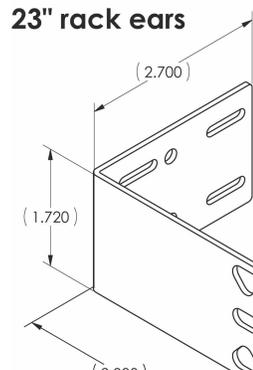


Fig. 6.3

6.3 External Speaker

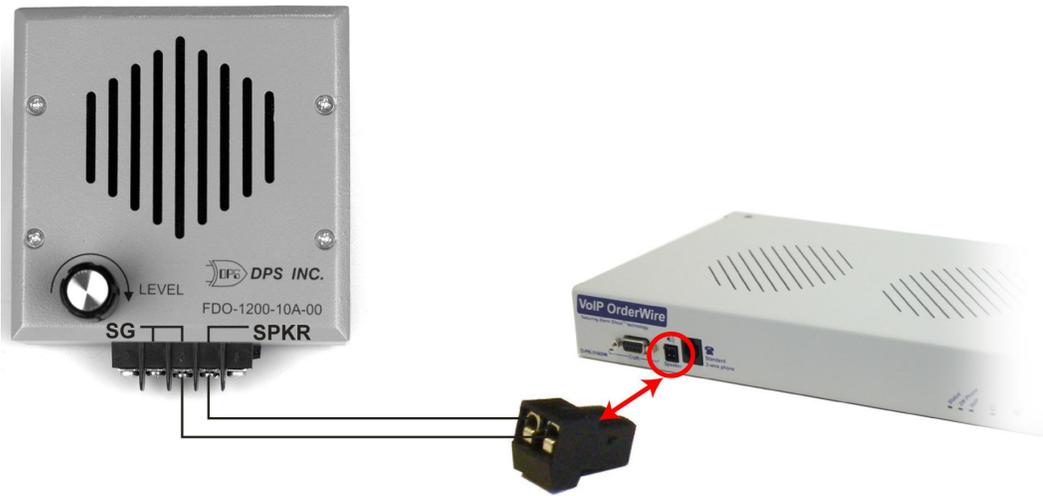


Fig. 6.4 - Connecting the external speaker.

7 VoIP Orderwire Back Panel

7.1 Single Amphenol Build Option

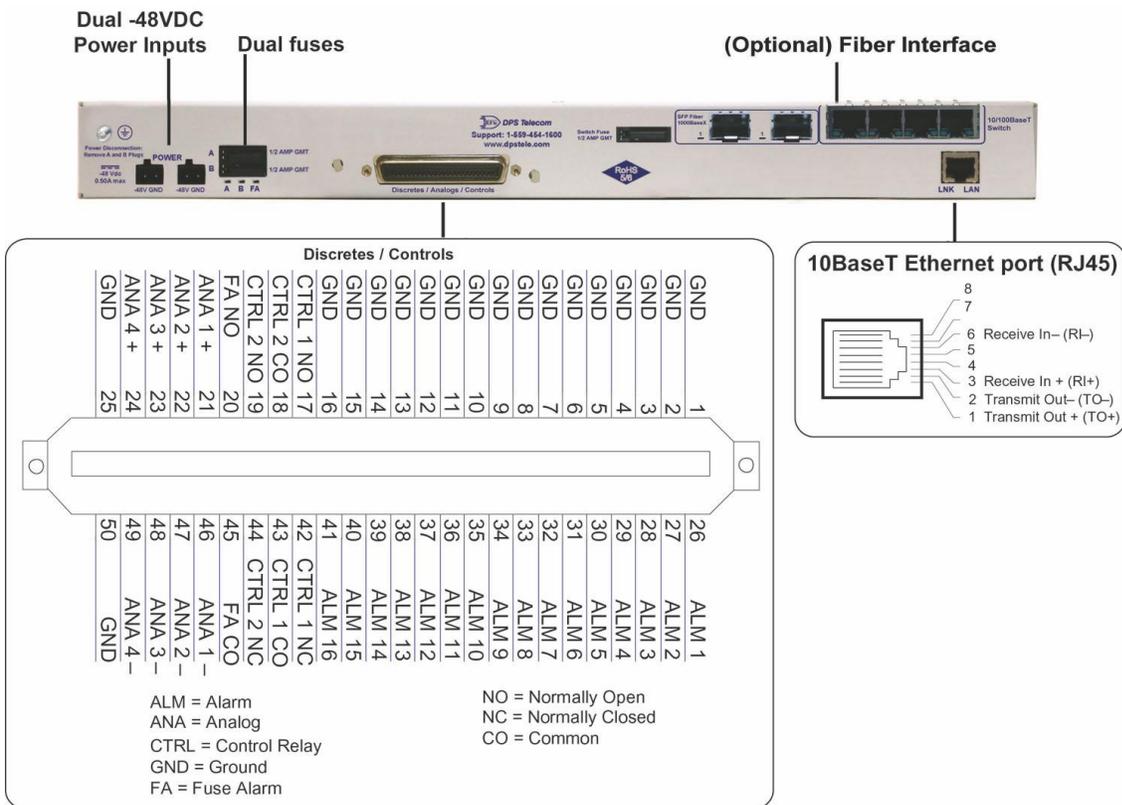


Fig. 7.1 VoIP Orderwire back panel connections. NOTE: 50-pin Amphenol connector is only on the RTU-versions of the VoIP Orderwire.

7.2 Dual Amphenol Build Option

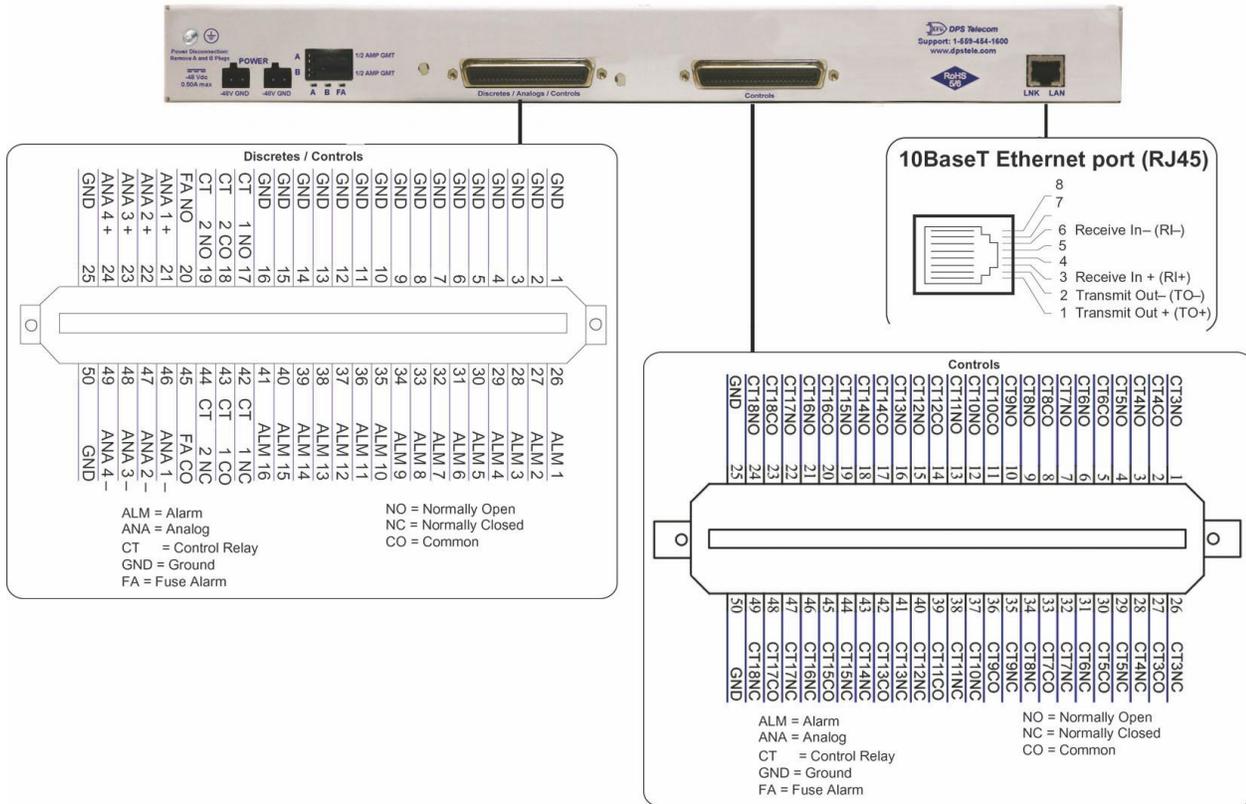


Fig. 7.2 VoIP Orderwire back panel connections. NOTE: 50-pin Amphenol connectors are only on the RTU-versions of the VoIP Orderwire.

7.3 Power Connection (-48 or -24VDC Build Option)

VoIP Orderwire is powered by two screw terminal barrier plug power connectors.



Fig. 7.3 Screw terminal barrier plugs

To connect the VoIP Orderwire to a power supply, follow these steps:

1. Always use safe power practices when making power connections. Be sure to remove fuses from the fuse distribution panel, as well as the back of the VoIP Orderwire, before making your power connections.
2. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the  symbol. Insert the eyelet of the earth ground cable between the two bolts on the grounding lug (Ground cable not included).
3. Insert a battery ground into the power connector plug's right terminal and tighten the screw; then insert a battery line to the plug's left terminal and tighten its screw.
4. Insert a fuse into the fuse distribution panel and measure voltage. The voltmeter should read between -40 and -70VDC (for -48VDC build option) or -18 and -36VDC (-24VDC build option).
5. The power plug can be inserted into the power connector only one way to ensure the correct polarity. Note that the negative voltage terminal is on the left and the GND terminal is on the right.
6. Insert fuse into the Power A fuse slot. The power LED should be lit green. If the LED is red, the power connection is reversed. To confirm that power is correctly connected, the front panel LEDs will flash RED and GREEN, indicating that the firmware is booting up.
7. Repeat steps 1 -6 for Power B connector.

7.3.1 Line Connection

Your VoIP Orderwire unit may include a line connection on the back panel. The line connection provides for Offnet capability, which allows a person can access the Orderwire system via POTS (Plain Old Telephone Service.)

Note: The Orderwire's Offnet feature is not available with alarming features.

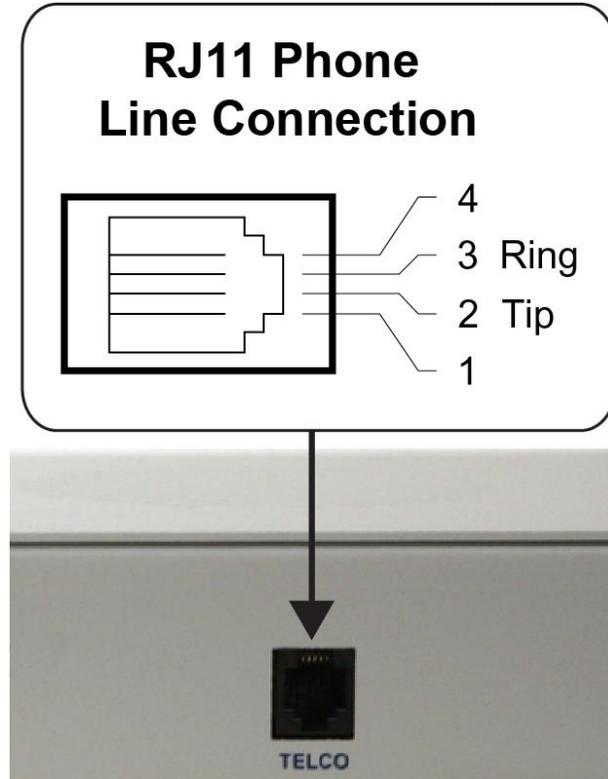


Fig. 7.4

7.4 LAN Connection

To connect the VoIP Orderwire to LAN, insert a standard RJ45 Ethernet cable into the 10/100BaseT Ethernet port on the back of the unit. (See **Fig. 7.1**) If the LAN connection is OK, the LNK LED will light **SOLID GREEN**.

7.5 Optional 10/100 Switch

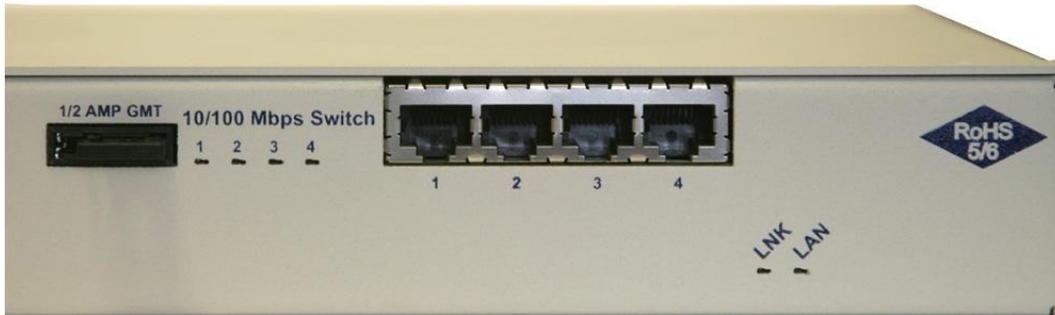


Fig. 7.5 The VoIP Orderwire 10/100BaseT switch option extends LAN access at your site

The VoIP OrderWire can be built with a 10/100 switch replacing the unit's standard ethernet port, allowing you to extend LAN access at your site without installing a separate switch.

Note: The VoIP Orderwire operates at 10BaseT. The switch offers 10/100BaseT speeds to other devices connected to the switch.

To power and activate the integrated ethernet switch, insert a 1/2 amp GMT fuse in the switch's fuse socket.

RJ45 Ethernet Connection

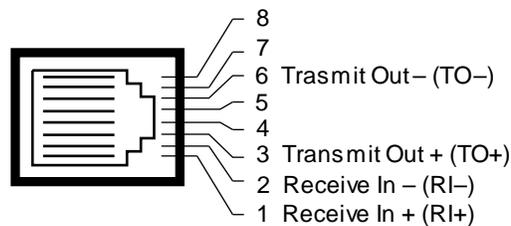


Fig. 7.6 Regular Ethernet port pinout

LED	Status	Description
1-4	Blink Green	Activity over indicated integrated Ethernet Switch port
	Solid Green	Link detected
LNK	Solid Green	Switch is active
	Off	Switch malfunction or switch top board not powered
LAN	Solid Green	LAN activity detected at RTU

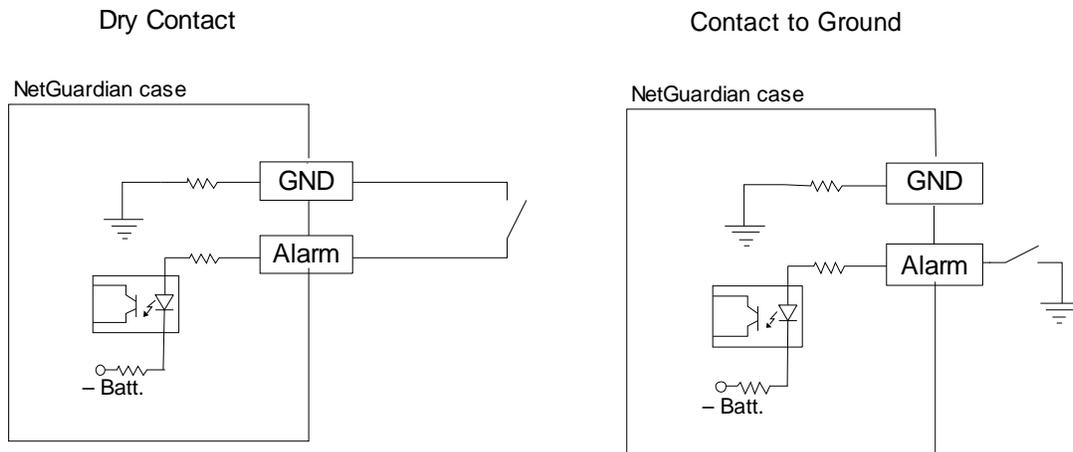
Back panel LED Status message descriptions

7.6 RTU Build Only

7.6.1 50-Pin Alarm and Control Relay Connector

The primary connector for discrete alarms, analog alarms and control relays is the 50-pin connector on the VoIP Orderwire's back panel.

7.6.2 Discrete Alarms



Note: Make sure that grounds have a common reference — this is usually done by tying grounds together.

Fig. 7.7 Discrete alarm points can connect as a dry contact or a contact to ground

The VoIP Orderwire features 16 discrete alarm inputs — also called digital inputs or contact closures. Discrete alarms are either active or inactive, so they're typically used to monitor on/off conditions like power outages, equipment failures, door alarms and so on. The NetGuardian's discrete alarm points are single-lead signals referenced to ground. The ground side of each alarm point is internally wired to ground, so alarm points can connect either as a dry contact or a contact to ground.

- **In a dry contact alarm:** The alarm lead brings a contact to the ground lead, activating the alarm.
- **In a contact to ground alarm:** A single wire brings a contact to an external ground, activating the alarm.

You can reverse the polarity of each individual discrete alarm point, so that the alarm is activated when the contact is open. This is done with a software configuration change.

7.6.3 Analogs

The VoIP Orderwire's 8 analog alarm inputs measure continuous ranges of voltage or current. Analog alarms are typically used to monitor battery voltage, charging current, temperature, humidity, wind speed, or other continuously changing conditions. The measurement range of the analog channels is – 90 to +90 VDC or 4 to 20 mA. To configure the analogs for current sensing (4 - 20mA) please review the next section for jumper position.

You can use analogs 1 through 4 to monitor whatever you like. Analogs 5 through 8 are pre-configured to monitor Battery A and B, Internal Temperature, and External Temperature. Read the following table to see where to connect the analogs.

Analog #	Connection
ANA 1	User-definable; connects to the 50-pin amphenol.
ANA 2	User-definable; connects to the 50-pin amphenol.
ANA 3	User-definable; connects to the 50-pin amphenol.
ANA 4	User-definable; connects to the 50-pin amphenol.
ANA 5	Pre-configured to monitor Battery A.
ANA 6	Pre-configured to monitor Battery B.
ANA 7	Pre-configured to monitor Internal Temperature. Located in the center or edge of PCB.
ANA 8	Pre-configured to monitor External Temperature via jack to external temperature probe.

7.6.3.1 Switching Analog Alarms to Current Operation

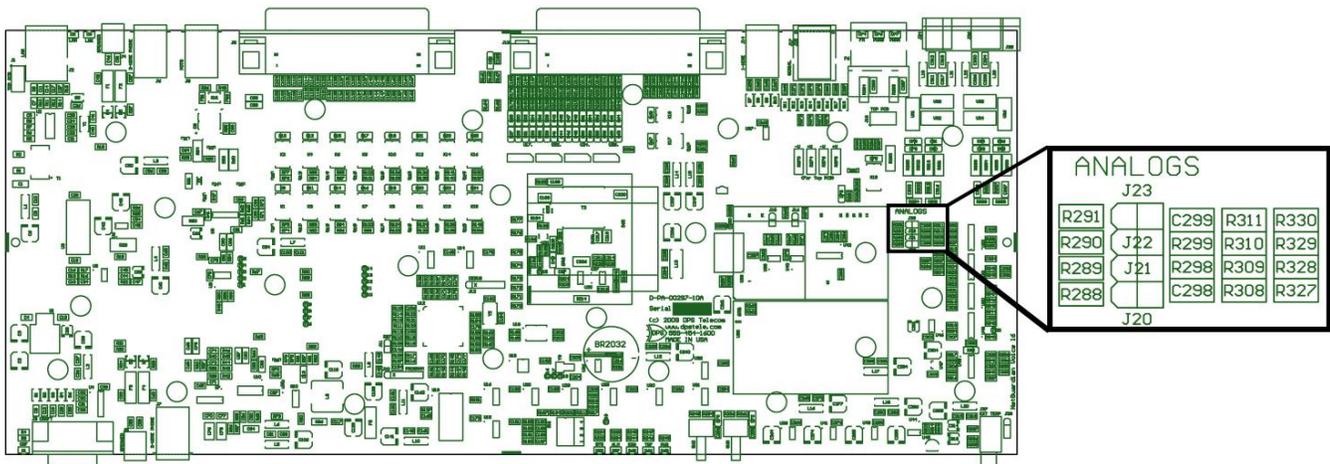


Fig. 7.8. Adjustable jumpers on the VoIP Orderwire circuit board

By default, the analog inputs are configured to measure voltage. You can switch the analog inputs to measure current by resetting jumpers on the VoIP Orderwire's circuit board.

To test the analog alarm voltage/current jumpers, follow these steps:

1. Make sure the VoIP Orderwire is depowered and disconnected from all network connections.
2. Remove the screws from the sides of the VoIP Orderwire case.
3. Slide the top cover of the case off to expose the circuit board.

- The adjustable jumpers are shown above. All alarm inputs can be individually configured for current or voltage operation. Remember that the default jumper position is OPEN for measuring voltage. **Note:** Each jumper inserts a 250-ohm shunt resistor across the input. This must be taken into account when defining the analog input reference scale.

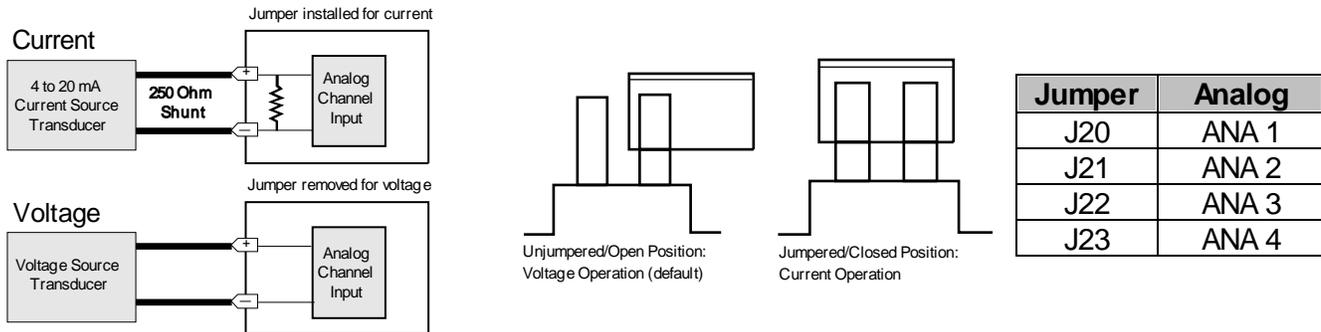


Fig. 7.9. Jumper settings for analog alarms inputs.

- Slide the top cover of the case back into position and replace the screws.
- Reconnect and power up the VoIP Orderwire.

8 VoIP Orderwire Front Panel

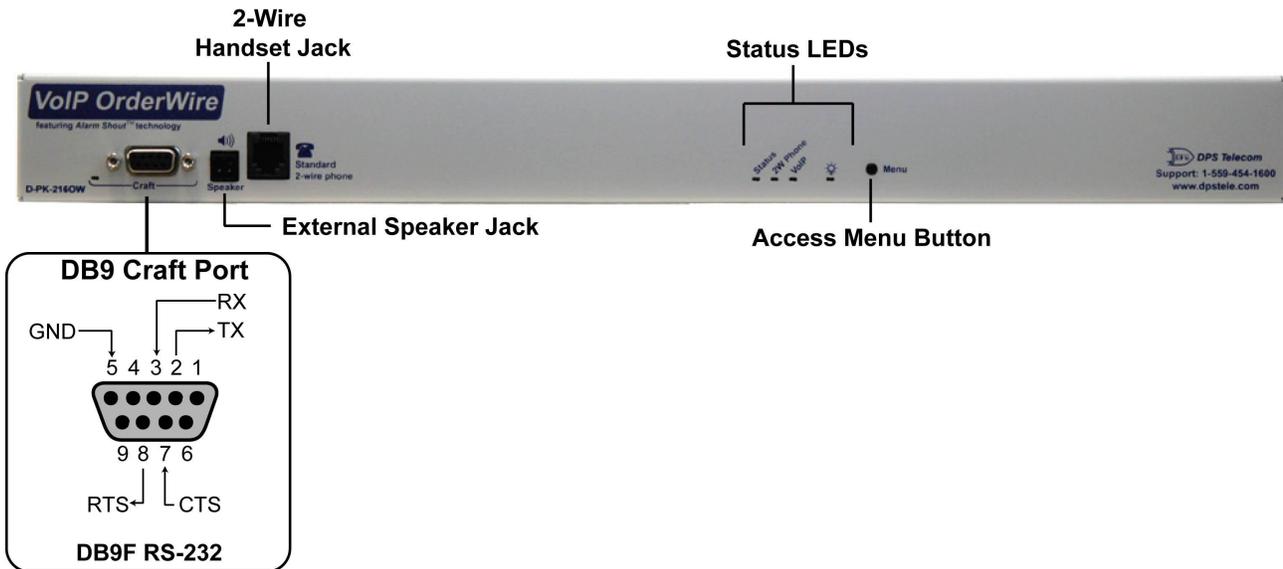


Fig. 8.1. The VoIP Orderwire's front panel connections

8.1 Craft Port

Use the front panel craft port to connect the VoIP Orderwire to a PC for onsite unit configuration. To use the craft port, connect the included DB9 download cable from your PC's COM port to the craft port. Pinout is shown in **Fig. 8.1** for reference, but you will most likely be using a straight-through cable.

9 Quick Start: How to Give the Orderwire an IP Address

1. In this step, we'll use create a physical cable connection between your PC's COM port and the unit's craft port. **Note:** You must be connected via craft port or Telnet to use the TTY interface. Make sure you are using the straight through (1 to 1) Male to Female DB9-DB9 download cable provided with your VoIP Orderwire to make a craft port connection.

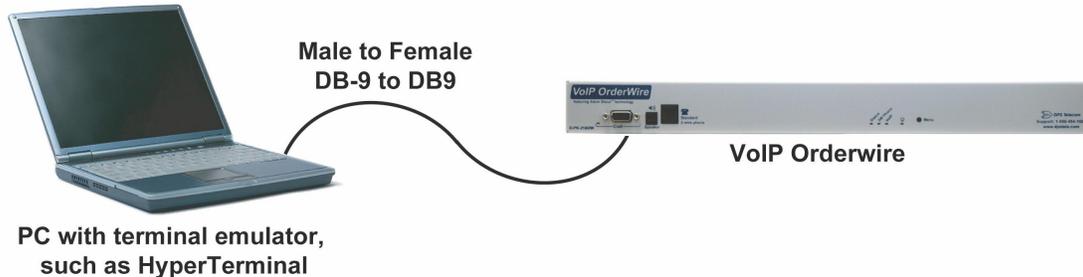


Fig. 9.1 Connection through front Craft Port

To access HyperTerminal using Windows:

2. Click on the **Start** menu > select **Programs > Accessories > Communications > HyperTerminal**.



Fig. 9.2 How to access HyperTerminal.

3. At the Connection Description screen, enter a name for this connection. You may also select an icon. The name and icon do not affect your ability to connect to the unit.
4. At the Connect To screen, select COM1 (most commonly used) from the drop down and click OK.

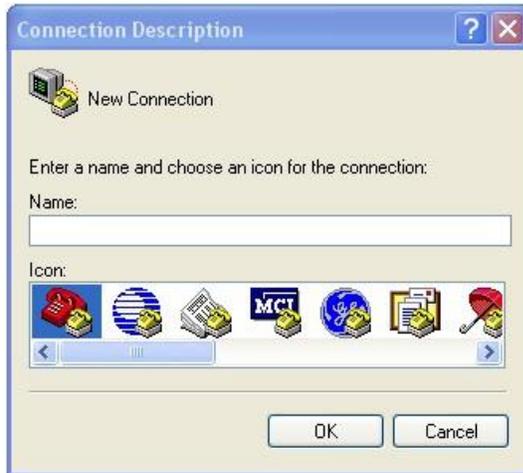


Fig. 9.3



Fig. 9.4

5. Select the following COM port options:
- Connect using COM1 or appropriate COM port
 - Bits per second: 9600
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: **None**

Once connected, you will see a blank, white HyperTerminal screen. Press Enter to activate the configuration menu.

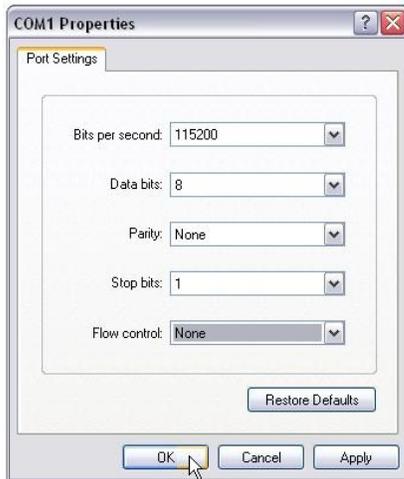


Fig. 9.5

6. When prompted, enter the default user name **admin** and password **dpstelecom**.
NOTE: If you don't receive a prompt for your user name and password, check the port you are using on your PC and make sure you are using the cable provided.



Fig. 9.6

7. The Orderwire's main main menu will appear. Type C for C)onfig, then E for E)thernet. Configure the unit's IP address, subnet mask, and default gateway.

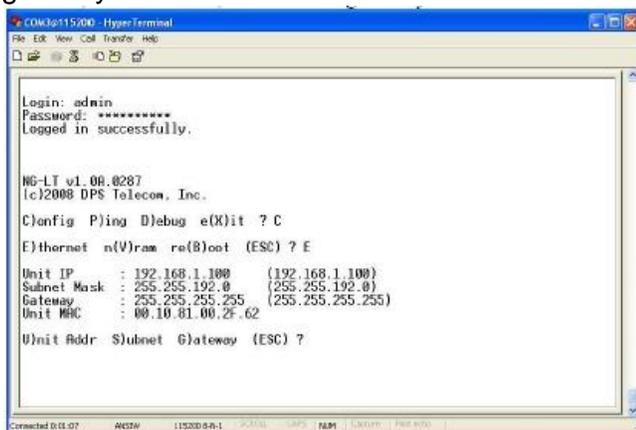


Fig. 9.7

8. ESC to the main menu. When asked if you'd like to save your changes, type Y for Y)es. Reboot the unit to save its IP Address.

When this is complete, you are ready to assign your station a Station ID number.

- See section "How To: Navigate the Voice Menus" to accomplish this via the handset or....
- See section "How To: Setup Directory Listings" to perform this task via the web interface.

9.1 ...via Craft Port (using TTY interface)

The TTY interface is the VoIP Orderwire's built-in interface for basic configuration. You can configure unit's Ethernet port settings and view debug. For more advanced configuration tools, please use the Web Browser Interface.

For Telnet, connect to the IP address at port 2002 to access the configuration menus after initial LAN/WAN setup. **Telnet sessions are established at port 2002, not the standard Telnet port** as an added security measure.

Menu Shortcut Keys

The letters before or enclosed in parentheses () are menu shortcut keys. Press the shortcut key to access that option. Pressing the ESC key will always bring you back to the previous level. Entries are not case sensitive.

9.2 ...via LAN

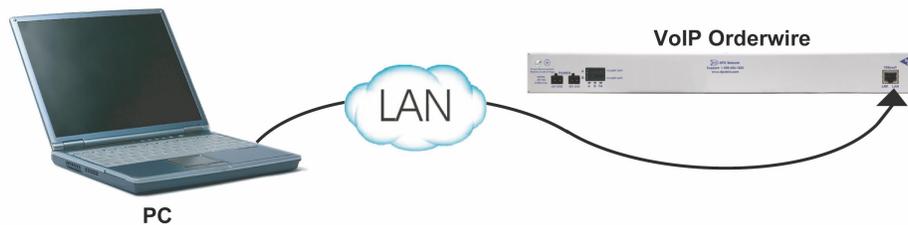


Fig. 9.8 - Connection through Ethernet port

To connect to the Orderwire via LAN, all you need is the unit's IP address (Default IP address is 192.168.1.100).

If you DON'T have LAN, but DO have physical access to the VoIP Orderwire, connect using a LAN crossover cable. **NOTE:** Newer PCs should be able to use a standard straight-through LAN cable and handle the crossover for you. To do this, you will temporarily change your PC's IP address and subnet mask to match the Orderwire's factory-default IP settings. Follow these steps:

1. Get a LAN crossover cable (**not included**) and plug it directly into the VoIP Orderwire's LAN port.
2. Look up your PC's current IP address and subnet mask, and write this information down.
3. Reset your PC's IP address to **192.168.1.200**.
4. Reset your PC's subnet mask to **255.255.192.0**. You may have to reboot your PC to apply your changes.
5. Once the IP address and subnet mask of your computer coincide with the unit, you can access the Orderwire via a Telnet session or via Web browser by using the unit's default IP address of **192.168.1.100**.
6. Provision the unit with the appropriate information, then change your computer's IP address and subnet mask back to their original settings

10 TTY Interface

The TTY interface is the built-in interface for basic configuration. From the TTY interface, you can:

- Edit the IPA, subnet, and gateway
- View hardware config
- Debug and troubleshoot
- Set unit back to factory defaults

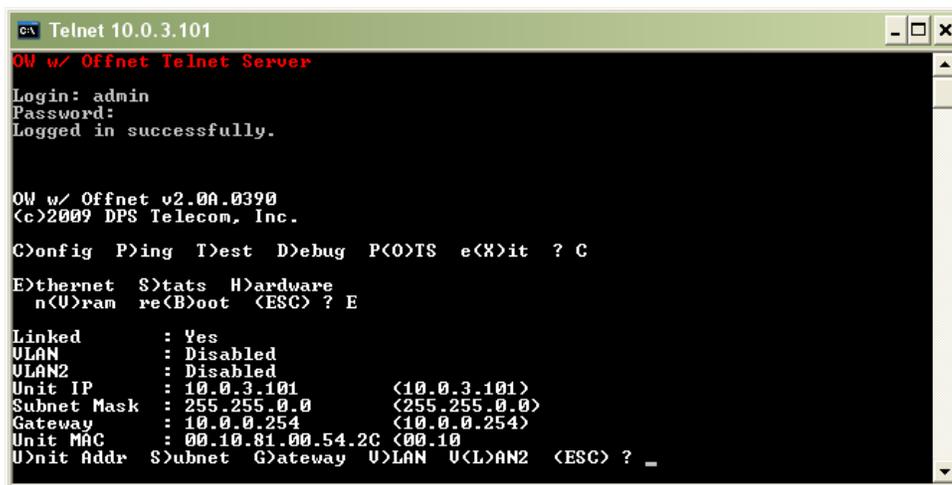
For more advanced configuration tools, please use the Web Browser Interface.

For Telnet, connect to the IP address at port 2002 to access the configuration menus after initial LAN/WAN setup. **Telnet sessions are established at port 2002, not the standard Telnet port** as an added security measure.

Menu Shortcut Keys

The letters before or enclosed in parentheses () are menu shortcut keys. Press the shortcut key to access that option. Pressing the ESC key will always bring you back to the previous level. Entries are not case sensitive.

10.1 Change Ethernet Settings



```

c:\ Telnet 10.0.3.101
OW w/ Offnet Telnet Server
Login: admin
Password:
Logged in successfully.

OW w/ Offnet v2.0A.0390
(c)2009 DPS Telecom, Inc.

C>onfig P>ing T>est D>ebug P<O>TS e<X>it ? C
E>thernet S>tats H>ardware
n<U>ram re<B>oot <ESC> ? E

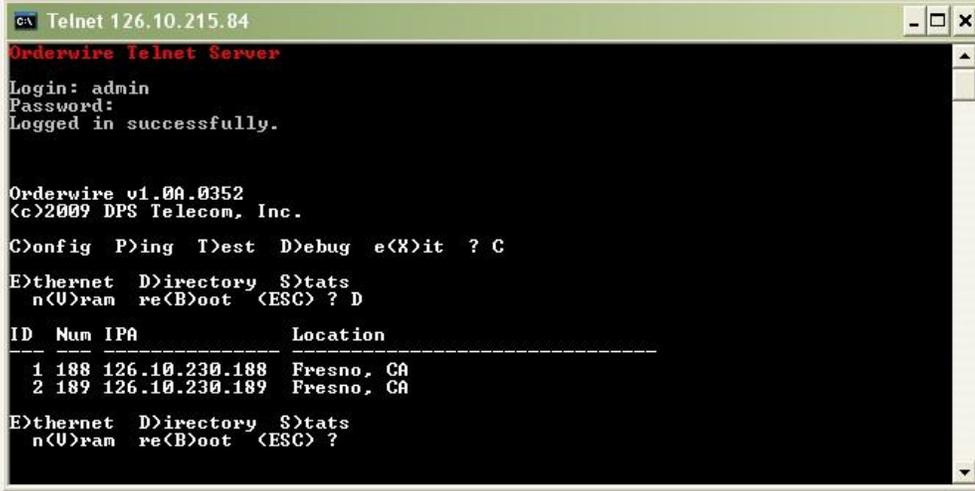
Linked      : Yes
VLAN        : Disabled
VLAN2       : Disabled
Unit IP     : 10.0.3.101      <10.0.3.101>
Subnet Mask : 255.255.0.0    <255.255.0.0>
Gateway     : 10.0.0.254     <10.0.0.254>
Unit MAC    : 00.10.81.00.54.2C <00.10
Unit Addr   S>ubnet G>ateway U>LAN U<L>AN2 <ESC> ? _
  
```

Fig. 10.1 - View and edit network settings.

1. Login to the TTY interface, then press **C)onfig > E)thernet**.
2. From this screen, you have the option to edit the IPA, Subnet, Gateway, VLAN, and VLAN2.

10.2 View Directory

The Directory serves as your internal "phonebook", used when calling other Orderwire stations in your network.



```

c:\ Telnet 126.10.215.84
Orderwire Telnet Server
Login: admin
Password:
Logged in successfully.

Orderwire v1.0A.0352
(c)2009 DPS Telecom, Inc.

C)onfig P)ing T)est D)ebug e(X)it ? C
E)thernet D)irectory S)tats
n(U)ram re(B)oot (ESC) ? D

ID  Num  IP#          Location
-----
1  188  126.10.230.188  Fresno, CA
2  189  126.10.230.189  Fresno, CA

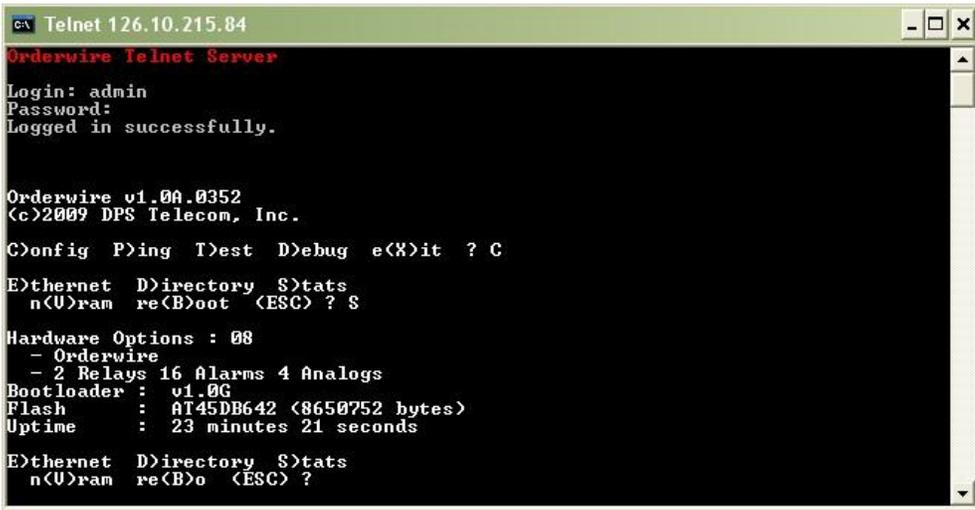
E)thernet D)irectory S)tats
n(U)ram re(B)oot (ESC) ?

```

Fig. 10.2 - See your list of other orderwire stations on the network.

1. Login to the TTY interface, then press **C)onfig > D)irectory**.
2. You will see the Station IDs currently setup in your orderwire system. The TTY interface will display the ID, Station Number, IP address, and Location.

10.3 View Hardware Config & Stats



```

c:\ Telnet 126.10.215.84
Orderwire Telnet Server
Login: admin
Password:
Logged in successfully.

Orderwire v1.0A.0352
(c)2009 DPS Telecom, Inc.

C)onfig P)ing T)est D)ebug e(X)it ? C
E)thernet D)irectory S)tats
n(U)ram re(B)oot (ESC) ? S

Hardware Options : 08
- Orderwire
- 2 Relays 16 Alarms 4 Analogs
Bootloader : v1.0G
Flash : AT45DB642 (8650752 bytes)
Uptime : 23 minutes 21 seconds

E)thernet D)irectory S)tats
n(U)ram re(B)o (ESC) ?

```

Fig. 10.3 - Confirm the build options of your Remote Power Switch.

1. Login to the TTY interface, then press **C)onfig > S)tats**.
2. You will see the hardware options available on your VoIP Orderwire unit, as well as the firmware version, uptime, etc.

11 Three Modes of Operation

11.1 Direct Station-to-Station Calling (Option #1)

How It Works

User picks up the handset and dials another orderwire station directly by dialing the 4-digit "Station ID". The station will "ring" until the party has answered by picking up the handset. This call is considered **private** because other stations will not be able to hear the conversation. If you receive a call while in a private conversation you will hear a beep. Hang up, and wait for the handset to ring to pick up.

NOTE: *The ring time is limited to 2 minutes. After 2 minutes of ringing, if your call is not answered, ringing will stop and you will hear a busy signal. You may hang up and try dialing again at any time. This 2-minute limit prevents a dialing station left off-hook from ringing indefinitely.*

The broadcast time is limited to 2 minutes. After 2 minutes of broadcasting, the broadcast will stop and you will hear a busy signal. You may hang up and try dialing again at any time. This 2-minute limit prevents a broadcasting station left off-hook from broadcasting indefinitely.

These firmwares are useful if you are experiencing unexpected call drops.

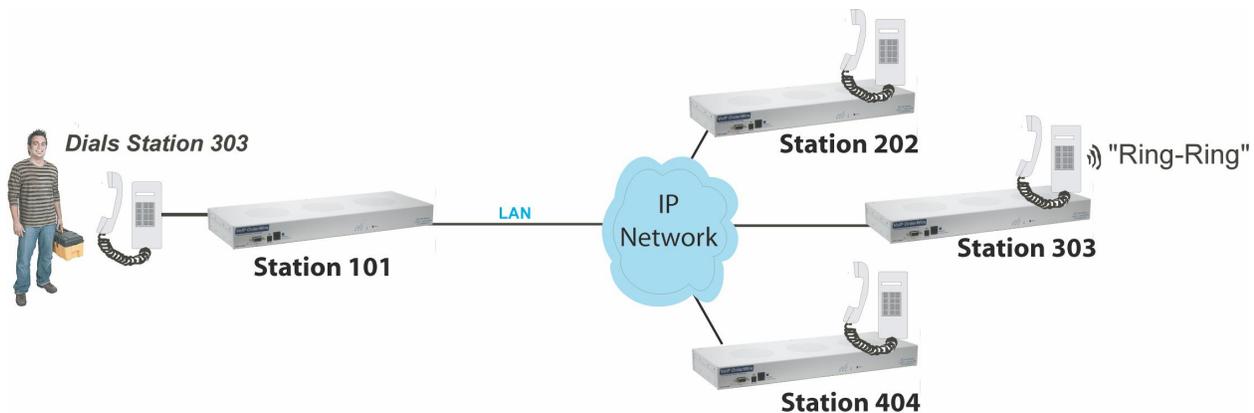


Fig. 11.1. Station-to-station calling topology.

11.2 Hoot 'n Holler (Option #2)

How It Works

Hoot 'n Holler is a **non-private** form of communication. This "all call" type feature allows you to speak to every Orderwire station in the same subnet. Personnel will hear your voice through the speaker at each station - Great if you're trying to locate someone or page all your staff. To join the call, simply pick up the telephone. The conversation is heard by other stations not on the call. If another orderwire station picks up the hand set, a private call will be initiated.

NOTE: *Hoot 'n Holler mode only works on stations within the same IP subnet. This mode requires more bandwidth on the subnet for which this station is assigned. (UDP traffic)*

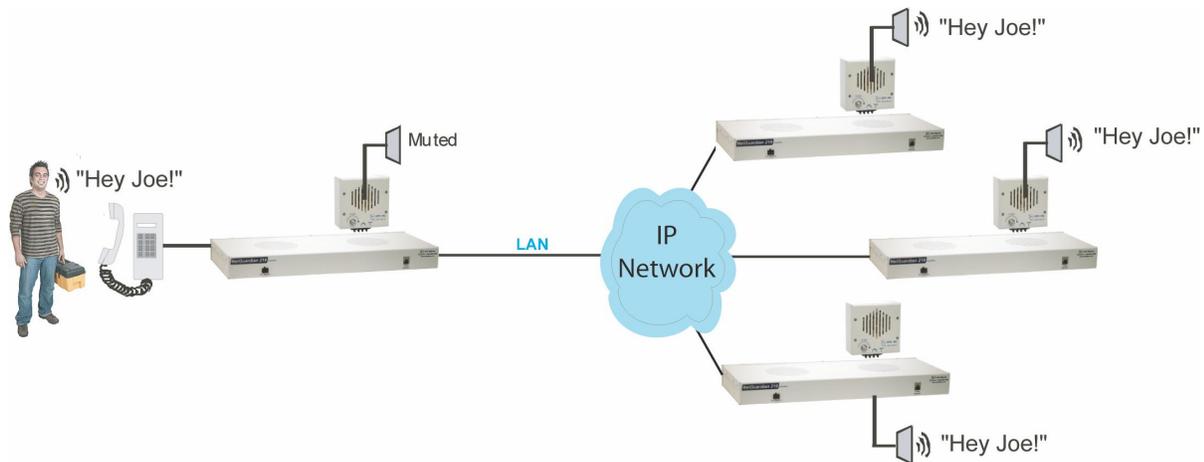


Fig. 11.2. Hoot 'n Holler mode topology.

11.3 Bridge Party Line (Option #3)

How It Works

This mode is similar to Hoot 'n Holler in that up to 5 stations may be joined in a conversation. Multiple stations join a private call where parties dial into a conference bridge to talk at the same time. This allows you to privately conference with two or more Orderwire stations across the network. For added security and privacy, the bridge will give an audible indication when another station joins or exits the call.

To access a conference bridge, dial **3** then the ID of the conference bridge.

NOTE: Bridge Party Line mode only works with a VoIP Bridge Server (D-PK-216ow-12008)

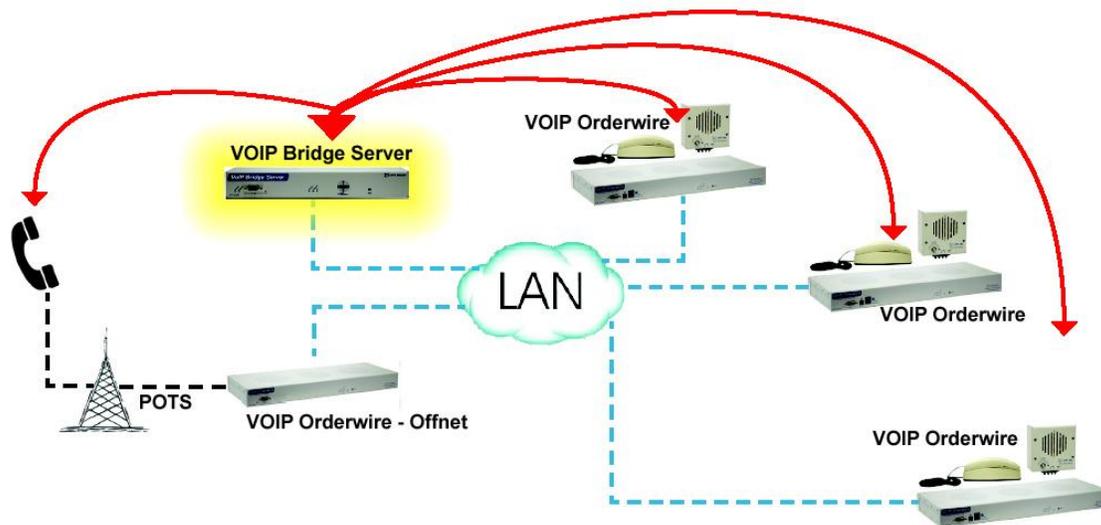


Fig. 11.3. Bridge party line (conference) topology.

12 Web Browser

The VoIP Orderwire unit features a built-in Web Browser Interface that allows you to configure the unit through the Internet / Intranet. You can quickly change the sign-in password, setup your Directory Listings, and reboot the unit using the most commonly used browsers.

NOTE: Max # of users allowed to simultaneously access the VoIP Orderwire via the Web is 2.

12.1 Logging on to the VoIP Orderwire

For Web Interface functionality, the unit must first be configured with some basic network information. If this step has not been done, refer to the section "Quick Start: How to Give the Orderwire an IPA" for instructions on initial configuration setup.

1. To connect to the Orderwire from your Web browser, enter its IP address in the address bar of your web browser. It may be helpful to bookmark the logon page to avoid entering this each time.
2. After connecting to the unit's IP address, enter your login information and click OK. **NOTE:** The factory default username is "admin" and the password is "dpstelecom".



Fig. 12.1. Enter your password to enter the Web Browser Interface

12.2 Changing the Default Password

The password can be configured from the **Provisioning** > **System** screen. The minimum password length is four characters; however, DPS recommends setting the minimum password length to at least five characters.

Use the following steps to change the logon password:

1. From the **Provisioning** menu select **System**.
2. Enter the new user name in the **User** field.
3. Enter the new password in the **Password** field.
4. Click the **Save** button.

The screenshot shows the 'System Settings' interface. The 'Global System Settings' section contains the following fields:

Name	OW w/ Alarming
Location	Fresno, CA
Contact	559-454-1600
SNMP Get String	dps_public
SNMP Set String	dps_public
User	admin
Password	••••••••

The 'Global Call Settings' section has radio buttons for English and Russian.

The 'DCP Responder Settings' section has radio buttons for Disable DCP and DCP over LAN. Below are fields for 'DCP Unit ID / Protocol' (1 / DCPx) and 'DCP over LAN port / protocol' (2001 / UDP).

The 'System Controls' section includes buttons for 'Initialize', 'Save' (next to 'config bin'), and 'Upload' (next to 'Restore Configuration'). At the bottom are 'Reset' and 'Save' buttons.

Fig. 12.2 - Global System Settings section of the Provisioning > System menu

NOTE: You will see the following popup when making changes to the VoIP Orderwire from the **Provisioning** menu. It will appear when confirming your changes to the database, either by clicking **Next** in the setup wizards or the **Save** button.



Fig. 12.3 - Commit to NVRAM popup

12.3 System Settings

System Settings

Global System Settings

Name	OW w/ Alarming
Location	Fresno, CA
Contact	559-454-1600
SNMP Get String	dps_public
SNMP Set String	dps_public
User	admin
Password

Global Call Settings

English Russian
 Voice Over IP Voice Over Serial

Note: When Voice Over Serial feature selected, voice traffic will be routed out the back seial port at 115200bps. Voice over serial feature can be used with anoter OrderWire device running firmware OW v1.0L or newer.

DCP Responder Settings [Display Mapping](#)

Disable DCP DCP over IP DCP over Serial

DCP Unit ID / Protocol	1 / DCPx ▼
DCP over LAN port / protocol	2001 / UDP ▼

Alarm Echo Settings

Disable Alarm Echo Enable Alarm Echo over IP Enable Alarm Echo over Serial

Remote Unit IP / LAN port / Protocol	255.255.255.255 / 2001 / UDP ▼
Remote DCP Unit ID / Protocol	1 / DCPx ▼
Poll delay	5s Time to wait between each poll. (0sec-10min)
Poll Timeout	4s (0sec-10sec)

System Controls

Initialize Configuration	<input type="button" value="Initialize"/>
Backup Configuration	config.bin
Restore Configuration	Upload

Fig. 12.4

Global System Settings	
Name	Enter a name to help you identify this VoIP Orderwire station.
Location	Enter the location of this VoIP Orderwire station. This field will be reported to other stations during the Auto-Discovery process.
Contact	Enter the contact phone number for the person responsible for this unit.
SNMP Get String	Community name for SNMP requests. (case-sensitive).
SNMP Set String	Community name for SNMP SET requests. (case-sensitive).
User	The logon user name used to access this unit via the web

	or TTY interface. Default is "admin"
Password	The logon password used to access this unit via the web or TTY interface. Default is "dpstelecom"
Global Call Settings	
English/Russian	Sets the Language for the Orderwire's Voice Prompts
Voice Over Serial	Using G.726 encoding, sends voice over back serial port. Note: Works with DVF64 G2 Device.
DCP Responder Settings	
DCP Unit ID/Protocol	Set the address identifying this Orderwire unit to T/Mon
DCP over LAN port/protocol	Set the DCP Port address.
DCP over Serial	Listens to DCP requests over back serial port. If Voice over Serial enabled, DCP over Serial can still be used.
Alarm Echo Settings	
Disable/Enable	Enable or Disable the Alarm Echo feature. You need two separate RTUs in order to use Alarm Echoes.
Enable Alarm Echo over Serial*	Sends DCP requests over back serial port. If voice over serial enabled, this feature can still be used.
Remote Unit IP / LAN Port / Protocol	Enter the IP Address of the target unit. You can find this IP in the ethernet settings of the target device. The LAN Port will specify the communication line that will be used to talk to the unit. The Protocol will define the format that data will be sent and received. The LAN Port should match the DCP Unit's LAN Port located in the DCP Responder section above. The Protocol should match the device you are polling.
Remote DCP Unit ID / Protocol	Enter the DCP Unit ID of the device you want to monitor. This should match the DCP Unit ID located in the DCP Responder section above. The Protocol will define the format that data will be sent and received.
Poll delay	How often the Orderwire will poll the DCP Responder unit. The poll delay is the interval of time between polls.
Timeout	How long the Orderwire will wait to receive a response before it times out. If the Orderwire is unable to communicate with the responder unit, and times out three times in a row, a system alarm will become enabled.
System Controls	
Initialize Configuration	Sets the unit's configuration back to all factory defaults. NOTE: Initializing the Orderwire's config means the Directory listings will have to be entered again.
Backup Configuration	Used to backup (save) the current configuration to your PC or on the network.
Restore Configuration	Allows you to browse for a saved configuration file on your PC or on the network.

12.3.1 Offnet Settings

Global Call Settings	
<input checked="" type="radio"/> English <input type="radio"/> Russian	
<input checked="" type="radio"/> Voice Over IP <input type="radio"/> Voice Over Serial	
Note: When Voice Over Serial feature selected, voice traffic will be routed out the back serial port at 115200bps. Voice over serial feature can be used with another OrderWire device running firmware OW v1.0L or newer.	
Ignore Remote Disconnect Interrupt :	<input type="checkbox"/>
Number of Rings (PSTN)	2 <small>(Number of rings before PSTN incoming call is forwarded)</small>
Number of Rings (VOIP)	2 <small>(Number of rings before VOIP incoming call is forwarded)</small>
Country	USA ▼

Certain **Global Call Settings** are only available on Orderwire units equipped **with the Offnet option**.

Setting	Description
Ignore Remote Disconnect Interrupt	When checked, the device will ignore "far-end disconnect interrupt" signals from the other side of a telco connection. You should use this setting if you experience frequent, unexpected disconnections of phone calls. This can be especially common when using a phone-line simulator. This setting is not necessary in most phone networks.
Number of Rings (PTSN)	This setting sets the number of rings before the Orderwire will go off hook and play menu options.
Number of Rings (VOIP)	This setting indicates the number of rings before the Orderwire will forward VoIP incoming calls
Country	Set the country of operation for your phone system. This setting adjusts the Orderwire's POTS settings for compliance with your country's standards

12.3.2 Alarm Echoing

Alarm Echoing allows an OrderWhire device to poll the alarm status of another OrderWire unit. The OrderWire unit can poll and be polled simultaneously. To configure a unit to be polled, enable DCP Responder Settings on the System Provisioning page by selecting "DCP over IP", "DCP over Serial", or "DCP over Serial and IP". Configure a DCP Unit ID and a DCP port (if using DCP over LAN). Once the unit is configured to be polled, browse to the second OrderWire unit's System Provisioning page. Enable the Alarm Echo Settings section by selecting "Enable Alarm Echo over IP" or "Enable Alarm Echo over Serial". Enter the DCP unit ID for the unit to be polled, and enter the IP and port (if using DCP over LAN). Echoed alarm descriptions can be configured in the Echo Description Provisioning page. Echoed alarms can be viewed in the monitor section of the web interface under Alarms Echo.

12.4 Ethernet Settings

Ethernet Settings

MAC Address :	00:10:81:00:54:2C	
Enable VLAN :	<input type="checkbox"/>	
VLAN ID :	1	PCP: Excellent Effort(2)
Enable VLAN2 (voice traffic) :	<input type="checkbox"/>	
VLAN2 ID :	2	PCP2: Voice(5)
Unit IP :	10.0.3.101	(10.0.3.101)
Subnet Mask :	255.255.0.0	(255.255.0.0)
Gateway :	10.0.0.254	(10.0.0.254)
DNS Server 1 :	255.255.255.255	(255.255.255.255)
DNS Server 2 :	255.255.255.255	(255.255.255.255)

Reset Save

Fig. 12.5 - Provisioning > Ethernet menu.

Ethernet Settings	
MAC Address	Hardware address of the VoIP Orderwire. (Not editable - For reference only.)
Enable VLAN	Used to turn on Virtual LAN. Uncheck to disable VLAN.
VLAN ID	ID of VLAN.
PCP	PCP is the Priority Code Point. Values listed in parentheses are the priority for each class; 0 represents the lowest priority, 7 is the highest. VLAN PCP is placed on 2 by default.
Enable VLAN2	Used to turn on the second Virtual LAN (VLAN2). Uncheck to disable.
VLAN2 ID	ID of VLAN2.
PCP2	PCP for VLAN2. VLAN2 PCP is placed on 4 by default.
Unit IP	IP address of the VoIP Orderwire station. This field will be reported to other stations during the Auto-Discovery process.
Gateway	An important parameter if you are connected to a wide-area network. It tells the unit which machine is the gateway out of your local network. Set to 255.255.255.255 if not using.
Subnet Mask	A road sign to the VoIP Orderwire, telling it whether your packets should stay on your local network or be forwarded somewhere else on a wide-area network.
DNS Server 1	Primary IP address of the domain name server. Set to 255.255.255.255 if not using. Not currently used by this application - Designed for future use.
DNS Server 2	Secondary IP address of the domain name server. Set to 255.255.255.255 if not using. Not currently used by this application - Designed for future use.

12.5 Notifications

From the initial **Provisioning > Notifications** menu, you will see which of the 8 notifications are enabled, their server, and schedule. Click on the number link for one of the notifications to begin configuration.

Notifications					
No.	Stat.	Type	Server	Time Window 1	Time Window 2
1	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
2	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
3	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
4	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
5	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
6	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
7	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time
8	OFF	SNMP		Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time	Sun, Mon, Tue, Wed, Thu, Fri, Sat, Any Time

Fig. 12.6 - The Provisioning > Notifications menu

Once you've chosen which notification you want to setup, check the **Enable Notification** to turn it "on." Then choose a notification method, either email or SNMP.

12.5.1 SNMP Notification

SNMP Notification Fields

Notification 1 (SNMP)

SNMP Notification

SNMP Trap Server IP	<input style="width: 90%;" type="text"/>
Trap Port No. (Usually Use 162)	<input style="width: 90%;" type="text" value="0"/>
Trap Community	<input style="width: 90%;" type="text"/>

Fig. 12.7

SNMP Notification	
SNMP Trap Server IP	The SNMP trap manager's IP address.
Trap Port No.	The SNMP port (UDP port) set by the SNMP trap manager to receive traps, usually set to 162.
Trap Community	Community name for SNMP TRAP requests.
SNMP Trap Version	Choose between SNMP v1 or v2c

12.5.2 Relay Notification

Relay Notification

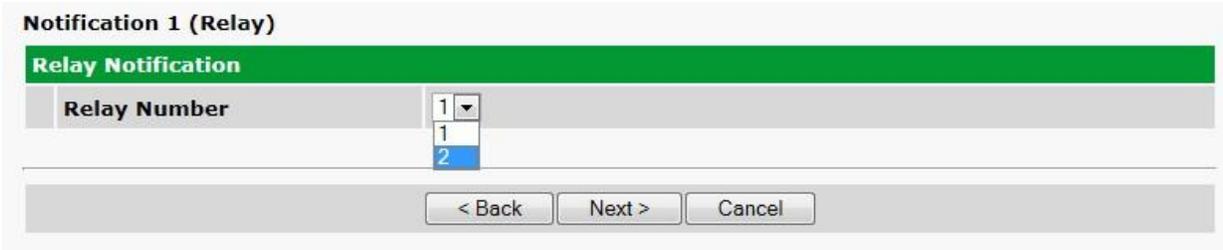


Fig. 12.8

Relay Notification	
Relay Number	Relay to be latched when any alarm assigned to this notification is set.

12.5.3 Schedule

The **Edit > Schedule** menu is where you will tell the VoIP Orderwire exactly which days and times you want to receive alarm notifications. You set 2 different schedules for each discrete base alarm.

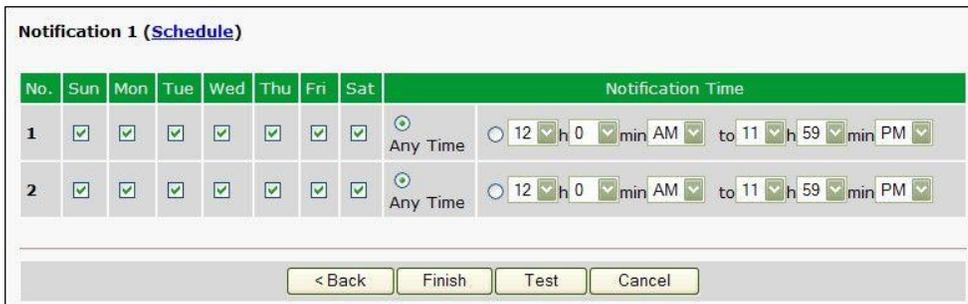


Fig. 12.9 - The Schedule creation screen

Notification Scheduling	
Days of the week	From either Schedule 1 or 2, check which days you want to receive notifications.
Any Time	Select to tell the VoIP Orderwire you want to receive alarm notifications at any time for the day(s) you've selected.
Notification Time	Used to tell the NetGuardian to only send alarm notifications during certain hours on the day(s) you've selected.

12.6 Alarms

The VoIP Orderwire's discrete base alarms are configured from the **Provisioning > Alarms** menu. Descriptions for the alarm points, polarity (normal or reversed) and notification type(s) are defined from this menu.

The screenshot shows the 'Alarms' configuration page with two tabs: 'Base' and 'System'. The 'Base' tab is active. Below the tabs is a table with 16 rows, each representing an alarm point. The columns are: Description, Rev, Notifications, QualTime, and QualType. The 'Notifications' column contains a row of 8 checkboxes. The 'QualTime' column contains a text input field. The 'QualType' column contains a dropdown menu.

	Description	Rev	Notifications	QualTime	QualType
1	Fire Alarm	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	1s	On Set
2	Water Leak	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1s	Both
3	Power Out	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1s	On Clear
4	Beacon Light	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1s	Both
5	Side Light	<input type="checkbox"/>	<input type="checkbox"/>	1s	Both
6	This is test Alarm for point number 06 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	60s	Both
7	This is test Alarm for point number 07 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	1m	On Set
8	This is test Alarm for point number 08 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	1s	On Set
9	This is test Alarm for point number 09 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	2m	On Set
10	This is test Alarm for point number 10 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	1m	On Set
11	This is test Alarm for point number 11 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set
12	This is test Alarm for point number 12 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set
13	This is test Alarm for point number 13 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set
14	This is test Alarm for point number 14 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set
15	This is test Alarm for point number 15 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set
16	This is test Alarm for point number 16 of the 1	<input type="checkbox"/>	<input type="checkbox"/>	0s	On Set

At the bottom of the table are 'Reset' and 'Save' buttons.

Fig. 12.10

Provisioning Base Alarms	
Description	User-definable description for the discrete alarm input.
Rev (Reverse)	Reverse: Check this box to reverse the polarity of the alarm point. Left unchecked, this means a normally-open contact closure is a clear condition. When polarity is reversed, a normally-closed alarm point is clear when closed. <i>Example:</i> Door with a magnetic door sensor. When the door is closed, the magnetic sensor acts like a closed relay. However, you know this should not trigger an alarm condition. This means you'd want the door alarm reversed in the NetGuardian because we are looking for a normally closed condition.
Notification devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point. These notification devices correlate to one of the 8 devices you setup for notification (email, SNMP trap, etc.) Check the box in the green bar (top) to have a notification device send an alarm for all alarm points.
Qual. Time (Qualification Time)	The length of time that must pass, without interruption, in order for the condition to be considered an Alarm or a Clear. <i>Example:</i> If you have a loose door contact and you receive a false alarm every time the wind blows, you might want to set a 3-second qualification time. This means the door would have to be in the Alarm state for at least 3 seconds before the alarm is triggered and a notification is sent.

Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both. (Most people use only Set.)
--	---

12.7 System Alarms

Alarms			
Base System			
	Description	Rpt	Notifications
1	Default configuration	<input type="checkbox"/>	<input type="checkbox"/>
2	DCP channel is inactive	<input type="checkbox"/>	<input type="checkbox"/>
3	MAC address not set	<input type="checkbox"/>	<input type="checkbox"/>
4	IP address not set	<input type="checkbox"/>	<input type="checkbox"/>
5	LAN hardware error	<input type="checkbox"/>	<input type="checkbox"/>
6	SNMP processing error	<input type="checkbox"/>	<input type="checkbox"/>
7	SNMP community error	<input type="checkbox"/>	<input type="checkbox"/>
8	LAN TX packet drop	<input type="checkbox"/>	<input type="checkbox"/>
9	Notification 1 failed	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
10	Notification 2 failed	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
11	Notification 3 failed	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
12	Notification 4 failed	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
13	Notification 5 failed	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
14	Notification 6 failed	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
15	Notification 7 failed	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
16	Notification 8 failed	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
17	NTP failed	<input type="checkbox"/>	<input type="checkbox"/>
18	Timed tick	<input type="checkbox"/>	<input type="checkbox"/>
19	Serial 1 RcvQ full	<input type="checkbox"/>	<input type="checkbox"/>
20	Dynamic memory full	<input type="checkbox"/>	<input type="checkbox"/>

Fig. 12.11 - The Provisioning > System Alarms menu

Provisioning System Alarms	
Pnt (Point)	Alarm point number
Description	Non-editable description for this System (housekeeping) Alarm.
Rpt (Report)	Check this box to choose to report this alarm. Check the box in the green bar (top) to have <u>all</u> System Alarms reported. Leave unchecked to ignore.
Notification devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point. Check the box in the green bar (top) to have that notification device send a notification for <u>all</u> the System Alarms.

12.8 Controls

The VoIP Orderwire's relay can be configured in the **Provisioning > Controls** menu. You can enter your own description for this relay and designate it to a notification device(s).

Number	Description	Momentary time	Notifications
1	Main Power	1s	<input type="checkbox"/>
2	Generator	1s	<input type="checkbox"/>

Reset Save

Fig. 12.12 - The Provisioning > Controls menu. Note: The number of available controls depends on your build option. Refer to the appendix of your Sales quote for specifications.

Provisioning Control Relays	
Description	User-definable description for the VoIP Orderwire's control.
Momentary Time	Stands for "Momentary Time," which is the time (in milli-seconds) when you quick-latch the relay from Monitor Mode, T/Mon or other SNMP manager.
Notification devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for the control.

12.9 Analogs

12.9.1 Basic Configuration

Basic configuration for the VoIP Orderwire's analog channels can be accomplished from the **Provisioning > Analogs** menu. From this screen, you enable or disable the analog channels, select notification devices, and set thresholds.

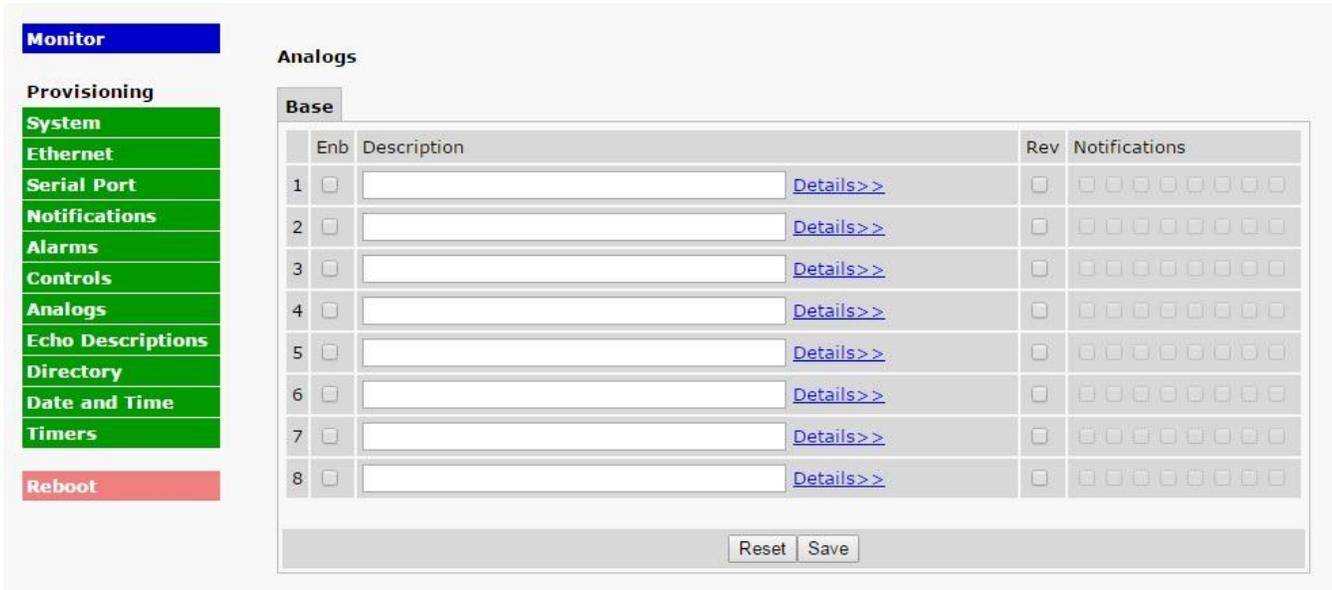


Fig. 12.13 - The basic Provisioning > Analogs menu

Provisioning Analogs - Basic	
Chan (Channel)	Check which analog channel you want to use.
Description	User-definable description for the analog channel
Rev (Reverse)	Check this box to reverse the polarity. <i>(This is not typically used. Reversing polarity is the same as reversing your wiring. Example: -54VDC becomes +54VDC)</i>
Notifications	Check which notification device(s), 1 through 8, you want to send alarm notifications for that analog alarm. Check the box in the green bar (top) to have a notification device send an alarm for all analog channels.
MjU (Major Under) MnU (Minor Under) MnO (Minor Over) MjO (Major Over)	Threshold settings. These user-defined value are used to indicate the severity of the alarm by indicating when the threshold values you've set have been passed.

12.9.2 Detailed Configuration

To access the **Advanced** configuration screen, click the **Advanced Config** link near the Description. From the **Advanced** configuration screen, you can now select which analog gauges you want to represent the changing values.

The screenshot shows the 'Analog Configuration' interface. At the top, there's a 'Base' tab. Below it is a table with columns: 'Enb', 'Description', 'Rev', and 'Notifications'. The first row is for 'Current Sensor HVAC 1', which is enabled (checked) and has a 'Details' link. Below the table, there are several configuration sections: 'DeadBand' (set to 0), 'Scaling' (Actual to Display), 'Units' (VDC to AMP), 'Low ref' (-35 to 5), 'High ref' (35 to 1), and 'Thresholds' (MjU: 0, MnU: 0.8, MnO: 5, MjO: 10).

Fig. 12.14 - Detailed analog editing options

Provisioning Analogs - Advanced	
DeadBand	The amount (in volts) that the channel needs to go above or below a threshold in order to cause an alarm.
Units	User-definable display units or optional choice between Fahrenheit and Celsius temperatures. The most common are: VDC = Voltage %H = Humidity F = Fahrenheit C = Celsius
Low Reference *	User-definable lower threshold settings
High Reference *	User-definable upper threshold settings
Thresholds	Threshold settings. These temperature settings are used to indicate the severity of the alarm depending on which threshold values have been passed. Enter values for Major Under (MjU), Minor Under (MnU), Minor Over (MnO), and Major Over (MjO).

* These values are gathered from your sensor. Keep in mind that the NetGuardian is trying to build a linear equation to give the most accurate results. See examples below.

Example 1: If you are measuring battery voltage, we want the NetGuardian to show that the input is -54.2 VDC if -54.2 VDC is really being measured. However, if you are measuring temperature, the values are typically not a 1 : 1 ratio.

Example 2: Your X-Type sensor outputs 4 - 20mA. (We use a 250 ohm resistor to convert current to voltage measurement. Ohms Law tells us that 4mA x 250 ohms = 5 VDC. The sensor should tell us what the output current references. In this example, 4mA = 23° F and 20mA = 131° F **OR** 1V = 23° F and 5V = 131° F.

13 How to: Setup Directory Listings

Your Orderwire's directory serves as the unit's internal "phonebook", used when calling other Orderwire stations in your network. From the **Orderwire Config Utility**, you can establish station numbers for your Orderwire units and associate them with IP addresses. You can have up to 512 devices in the Orderwire directory.

Note: Do not attempt to configure the Orderwire's call directory from the Web Interface.

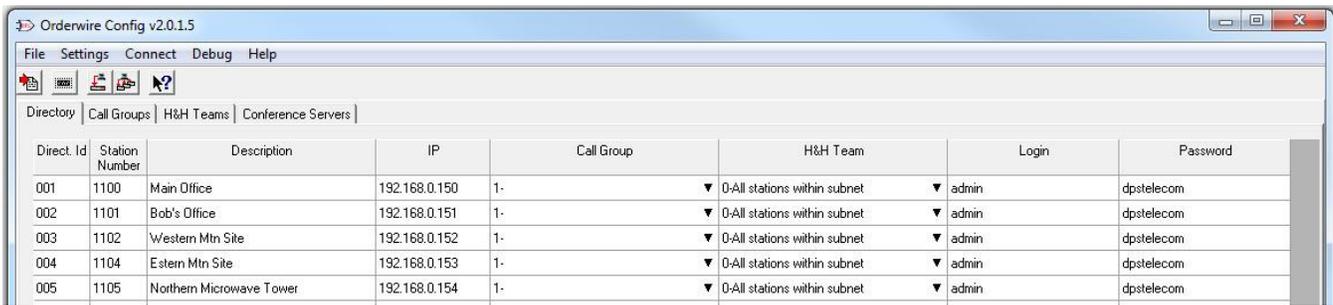
To setup your Directory:

1. Install and run the Orderwire Config utility. You will find the utility on the CD that shipped with your Orderwire unit.
2. In the **Station Number** field, enter a 4-digit station ID number. This is the number you'll dial to call a particular station (Station-to-station calling).
3. Provide a **Description** of up to 32 characters to each station.
4. In the **IP** field, enter the IP address for each station.

Best Practice Tip: Have the IP address correspond to the station ID you want to assign.

5. The station's **Call Group** will determine which stations it can call. You can set restrictions for each call group in the Call Group tab.
6. In the **H&H Team** field, you can decide which stations within the subnet can communicate with each other using the **Hoot N' Holler** feature. By default, all stations are set to H&H Team 0, allowing all station's on the subnet to use and hear Hoot N' Holler calls. You can restrict access to the feature from the H&H Teams tab.
7. Once you have finished configuring the Orderwire Directory, you must upload the directory to the Orderwire. To write the call directory to the currently selected Orderwire unit, click the  button or click **Connect** and select **Write to device**. If you wish to upload the directory to all of the Orderwire units in the call directory, click the  button or click **Connect** and select **Write to all devices**.

Note: The **Login** and **Password** fields are reserved for future implementation. They are currently inconsequential to the Orderwire's calling features.



Direct. Id	Station Number	Description	IP	Call Group	H&H Team	Login	Password
001	1100	Main Office	192.168.0.150	1-	▼ 0-All stations within subnet	▼ admin	dpstelecom
002	1101	Bob's Office	192.168.0.151	1-	▼ 0-All stations within subnet	▼ admin	dpstelecom
003	1102	Western Mtn Site	192.168.0.152	1-	▼ 0-All stations within subnet	▼ admin	dpstelecom
004	1104	Estern Mtn Site	192.168.0.153	1-	▼ 0-All stations within subnet	▼ admin	dpstelecom
005	1105	Northern Microwave Tower	192.168.0.154	1-	▼ 0-All stations within subnet	▼ admin	dpstelecom

Fig. 13.1 - The Orderwire Config Directory

For more information about the Orderwire Config Utility, see the separate Orderwire Config User Manual.

14 How To: Navigate the Voice Menus

Pickup the handset, and the voice prompt will ask you for a menu option. To hear the entire list of menu options, press #.

- **#1: Station-to-station calling**

Call another station directly using the Station ID.

- **#2: Hoot 'n Holler mode**

The conversation will be emitted through the external speakers at other stations.

- **#3: Bridge Party Line**

Join or create a bridge conference call. This call is private and cannot be heard through the external speakers at other stations.

15 How To: Talk to Third-Party SIP Devices

VoIP Orderwire is compatible with most third-party SIP devices. These devices **must run a compatible version of SIP 2.0 protocol**. These devices are compatible only for Station-to-Station (direct) calling. To "talk" to third-party SIP devices, simply define them in the Directory listing. You must know the IP addresses of the third-party devices to associate them to a station number.

See section "How to: Setup Directory Listings" for details.

16 How To: Upgrade Firmware

To upgrade firmware, click on the **Provisioning > System** menu. At the bottom of this screen under **System Controls**, you have the following options:

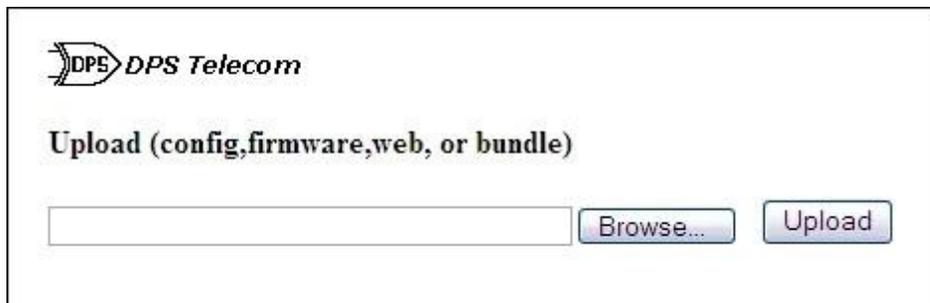
1. **Backup Configuration** - Click Save to backup your current config file to your PC or to the network.
2. **Restore Configuration** - Allows you to browse for a firmware update you have downloaded.



The screenshot shows a web interface with a 'Password' field at the top. Below it is a green header for 'System Controls'. Under this header, there are three rows: 'Initialize Configuration' with an 'Initialize' button; 'Backup Configuration' with a text input field containing 'config.bin' and a 'Save' button; and 'Restore Configuration' with a blue 'Upload' link. At the bottom of the 'System Controls' section, there are 'Reset' and 'Save' buttons.

Fig. 16.1 - The clickable link to upgrade firmware from the Provisioning > System menu

If you choose **Restore Configuration**, click the "Upload" link. This will take you to the **Firmware Load** screen, where you'll browse for the firmware update. Click **Upload** to finish.



The screenshot shows the 'Firmware Load' screen. At the top left is the 'DPS Telecom' logo. Below the logo is the text 'Upload (config, firmware, web, or bundle)'. There is a text input field, a 'Browse...' button, and an 'Upload' button.

Fig. 16.2 Browse for downloaded firmware upgrade

17 Front and Back Panel LEDs



Fig. 17.1. Front panel LEDs

0

LED	Status	Description
Craft	Flashing Green	Unit data transmit over craft port
	Flashing Red	Data receive over craft port
Status	Flashing Green	Application is running
	Flashing Red	Boot Loader is running
2-Wire Phone	Solid Green	The handset is off hook
	Off	The handset is on hook
VoIP	Blinking Green	Transmit voice traffic
	Blinking Red	Receive voice traffic
Power	Green	Power is connected

Front Panel LED Descriptions



Fig. 17.2 - Back panel LEDs

LED	Status	Description
Power A	Solid Green	Polarity is correct on Power Feed A.
	Off	No power, or polarity is reversed on Power Feed A.
Power B	Solid Green	Polarity is correct on Power Feed B.
	Off	No power, or polarity is reversed on Power Feed B.
FA (Fuse Alarm)	Solid Red	Fuse failure on Power Feed A, B, or both.
LNK	Blink Green	Ethernet link OK.
LAN	Solid Green	Transmit or receive activity on Ethernet port.

Back Panel LED Descriptions

18 Reference Section

18.1 Display Mapping

	Description	Port	Address	Point
Display 1	Discrete Alarms	99	1	1-16
	Control Relays	99	1	17-18
	System Alarms	99	1	25-45
Display 2	Analog 1 Minor Under	99	1	1
	Analog 1 Minor Over	99	1	2
	Analog 1 Major Under	99	1	3
	Analog 1 Major Over	99	1	4
	Analog Value	99	1	5-64
Display 3	Analog 2 Minor Under	99	1	1
	Analog 2 Minor Over	99	1	2
	Analog 2 Major Under	99	1	3
	Analog 2 Major Over	99	1	4
	Analog Value	99	1	5-64

18.2 System Alarms Display Map

Display	Points	Alarm Point	Description	Solution
1	25	Default configuration	The internal NVRAM may be damaged. The unit is using default configuration settings.	Login to the NetGuardian's web browser and configure the unit. Power cycle to see if the alarm clears.
	26	DCP Poller Inactive	The NetGuardian is configured to listen for DCP polls but has not received a poll in over 5 minutes	- - - - -
	27	MAC Address not set	The MAC Address is not set.	Call DPS Tech Support: (559) 454-1600
	28	IP Address not set	The IP is not set.	See Section "Quick Start: How to Connect to the NetGuardian 216 G3 via Craft Port." If not using the NetGuardian over LAN, set the IP address to 255.255.255.255
	29	LAN hardware error	The unit does not have a solid LAN link to the hub, switch, or router.	If connecting to a hub you might require a LAN crossover cable.
	30	SNMP processing error	SNMP trap address is not defined and an SNMP trap event occurred.	Define the IP Address where you would like to send SNMP trap events, or configure the event not to trap.
	31	SNMP community error	Community string does not match your SNMP master's community string.	Verify both community strings to make sure they match.
	32	LAN TX packet drop	An error occurred transmitting data over LAN.	Verify that you can ping both devices.
	33	Notification 1 failed	A notification 1 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	34	Notification 2 failed	A notification 2 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	35	Notification 3 failed	A notification 3 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	36	Notification 4 failed	A notification 4 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	37	Notification 5 failed	A notification 5 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	38	Notification 6 failed	A notification 6 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	39	Notification 7 failed	A notification 7 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	40	Notification 8 failed	A notification 8 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.

	41	NTP failed	Communication with Network Time Server has failed.	Try pinging the Network Time Server's IP Address as it is configured. If the ping test is successful, then check the port setting and verify the port is not being blocked on your network.
	42	Timed Tick	Toggles state at constant rate as configured by the Timed Tick timer variable. Useful in testing integrity of SNMP trap alarm reporting.	To turn the feature off, set the Timed Tick timer to 0.
	43	Serial 1 RcvQ full	Serial port 1 (or appropriate serial port number) receiver filled with 8 K of data (4 K if BAC active).	Check proxy connection. The serial port data may not be getting collected as expected.
	44	Dynamic memory full	Not expected to occur.	Call DPS Tech Support (559) 454-1600
	45	Unit reset	Unit has rebooted.	If unintentional, call DPS Tech Support: (559) 454-1600.

18.3 SNMP Manager Functions

The SNMP Manager allows the user to view alarm status, set date/time, issue controls, and perform a resync. The display and tables below outline the MIB object identifiers. Table 14.2 begins with dpsRTU; however, the MIB object identifier tree has several levels above it. The full English name is as follows: root.iso.org.dod.internet.private.enterprises.dps-Inc.dpsAlarmControl.dpsRTU. Therefore, dpsRTU's full object identifier is 1.3.6.1.4.1.2682.1.4. Each level beyond dpsRTU adds another object identifying number. For example, the object identifier of the Display portion of the Control Grid is 1.3.6.1.4.1.2682.1.4.3.3 because the object identifier of dpsRTU is 1.3.6.1.4.1.2682.1.4 + the Control Grid (.3) + the Display (.3).

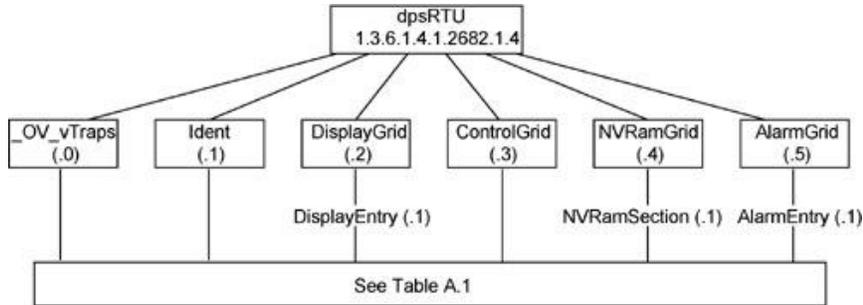


Fig. 18.1

Tbl. B1 (0.)_OV_Traps points
_OV_vTraps (1.3.6.1.4.1.2682.1.4.0)
PointSet (.20)
PointClr (.21)
SumPSet (.101)
SumPClr (.102)
ComFailed (.103)
ComRestored (.014)
P0001Set (.10001) through P0064Set (.10064)
P0001Clr (.20001) through P0064Clr (.20064)
Tbl. B3 (.3) ControlGrid points
ControlGrid (1.3.6.1.4.1.2682.1.4.3)
Port (.1)
Address (.2)
Display (.3)
Point (.4)
Action (.5)

Tbl. B2 (.1) Identity points
Ident (1.3.6.1.4.1.2682.1.4.1)
Manufacturer (.1)
Model (.2)
Firmware Version (.3)
DateTime (.4)
ResyncReq (.5)*
* Must be set to "1" to perform the resync request which will resend TRAPs for any standing alarm.

Tbl. B3 (.2) DisplayGrid points
DisplayEntry (1.3.6.1.4.1.2682.1.4.2.1)
Port (.1)
Address (.2)
Display (.3)
DispDesc (.4)*
PntMap (.5)*

Tbl. B5 (.5) AlarmEntry points
AlarmEntry (1.3.6.4.1.2682.1.4.5.1)
Aport (.1)
AAddress (.2)
ADisplay (.3)
APoint (.4)
APntDesc (.5)*

AState (.6)

* For specific alarm points,
see Table B6

The NetGuardian OID has changed from 1.3.6.1.4.1.2682.1.2 to 1.3.6.1.4.1.2682.1.4 Updated MIB files are available on the Resource CD or upon request.

18.4 SNMP Granular Trap Packets

The tables: *UDP Headers and descriptions* and *SNMP Headers and descriptions*, provide a list of the information contained in the SNMP Trap packets sent by the NetGuardian.

SNMP Trap managers can use one of two methods to get alarm information:

1. Granular traps (not necessary to define point descriptions for the unit) **OR**
2. The SNMP manager reads the description from the Trap.

UDP Header	Description
1238	Source port
162	Destination port
303	Length
0xBAB0	Checksum

UDP Headers and descriptions

SNMP Header	Description
0	Version
Public	Request
Trap	Request
1.3.6.1.4.1.2682.1.4	Enterprise
126.10.230.181	Agent address
Enterprise Specific	Generic Trap
8001	Specific Trap
617077	Time stamp
1.3.7.1.2.1.1.1.0	Object
NetGuardian v1.0K	Value
1.3.6.1.2.1.1.6.0	Object
1-800-622-3314	Value
1.3.6.1.4.1.2682.1.4.4.1.0	Object
01-02-1995 05:08:27.760	Value
1.3.6.1.4.1.2682.1.4.5.1.1.99.1.1 .1	Object
99	Value
1.3.6.1.4.1.2682.1.4.5.1.2.99.1.1 .1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.3.99.1.1 .1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.4.99.1.1 .1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.5.99.1.1 .1	Object
Rectifier Failure	Value
1.3.6.1.4.1.2682.1.4.5.1.6.99.1.1 .1	Object
Alarm	Value

SNMP Headers and descriptions

19 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

1. Check the DPS Telecom website.

You will find answers to many common questions on the DPS Telecom website, at <http://www.dpstele.com/support/>. Look here first for a fast solution to your problem.

2. Prepare relevant information.

Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

3. Have access to troubled equipment.

Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

4. Call during Customer Support hours.

Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

Emergency Assistance: *Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.*

20 End User License Agreement

All Software and firmware used in, for, or in connection with the Product, parts, subsystems, or derivatives thereof, in whatever form, including, without limitation, source code, object code and microcode, including any computer programs and any documentation relating to or describing such Software is furnished to the End User only under a non-exclusive perpetual license solely for End User's use with the Product.

The Software may not be copied or modified, in whole or in part, for any purpose whatsoever. The Software may not be reverse engineered, compiled, or disassembled. No title to or ownership of the Software or any of its parts is transferred to the End User. Title to all patents, copyrights, trade secrets, and any other applicable rights shall remain with the DPS Telecom.

DPS Telecom's warranty and limitation on its liability for the Software is as described in the warranty information provided to End User in the Product Manual.

End User shall indemnify DPS Telecom and hold it harmless for and against any and all claims, damages, losses, costs, expenses, obligations, liabilities, fees and costs and all amounts paid in settlement of any claim, action or suit which may be asserted against DPS Telecom which arise out of or are related to the non-fulfillment of any covenant or obligation of End User in connection with this Agreement.

This Agreement shall be construed and enforced in accordance with the laws of the State of California, without regard to choice of law principles and excluding the provisions of the UN Convention on Contracts for the International Sale of Goods. Any dispute arising out of the Agreement shall be commenced and maintained only in Fresno County, California. In the event suit is brought or an attorney is retained by any party to this Agreement to seek interpretation or construction of any term or provision of this Agreement, to enforce the terms of this Agreement, to collect any money due, or to obtain any money damages or equitable relief for breach, the prevailing party shall be entitled to recover, in addition to any other available remedy, reimbursement for reasonable attorneys' fees, court costs, costs of investigation, and other related expenses.

Warranty

DPS Telecom warrants, to the original purchaser only, that its products a) substantially conform to DPS' published specifications and b) are substantially free from defects in material and workmanship. This warranty expires two years from the date of product delivery with respect to hardware and ninety days from the date of product delivery with respect to software. If the purchaser discovers within these periods a failure of the product to substantially conform to the specifications or that the product is not substantially free from defects in material and workmanship, the purchaser must promptly notify DPS. Within reasonable time after notification, DPS will endeavor to correct any substantial non-conformance with the specifications or substantial defects in material and workmanship, with new or used replacement parts. All warranty service will be performed at the company's office in Fresno, California, at no charge to the purchaser, other than the cost of shipping to and from DPS, which shall be the responsibility of the purchaser. If DPS is unable to repair the product to conform to the warranty, DPS will provide at its option one of the following: a replacement product or a refund of the purchase price for the non-conforming product. These remedies are the purchaser's only remedies for breach of warranty. Prior to initial use the purchaser shall have determined the suitability of the product for its intended use. DPS does not warrant a) any product, components or parts not manufactured by DPS, b) defects caused by the purchaser's failure to provide a suitable installation environment for the product, c) damage caused by use of the product for purposes other than those for which it was designed, d) damage caused by disasters such as fire, flood, wind or lightning unless and to the extent that the product specification provides for resistance to a defined disaster, e) damage caused by unauthorized attachments or modifications, f) damage during shipment from the purchaser to DPS, or g) any abuse or misuse by the purchaser.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In no event will DPS be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Damages that DPS will not be responsible for include but are not limited to, loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities or services; downtime; claims of third parties including customers; and injury to property.

The purchaser shall fill out the requested information on the Product Warranty Card and mail the card to DPS. This card provides information that helps DPS make product improvements and develop new products.

For an additional fee DPS may, at its option, make available by written agreement only an extended warranty providing an additional period of time for the applicability of the standard warranty.

Technical Support
If a purchaser believes that a product is not operating in substantial conformance with DPS' published specifications or there appear to be defects in material and workmanship, the purchaser should contact our technical support representatives. If the problem cannot be corrected over the telephone and the product and problem are covered by the warranty, the technical support representative will authorize the return of the product for service and provide shipping information. If the product is out of warranty, repair charges will be quoted. All non-warranty repairs receive a 90-day warranty.

Free Tech Support is Only a Click Away

Need help with your alarm monitoring? DPS Information Services are ready to serve you ... in your email or over the Web!

www.DpsTele.com



Free Tech Support in Your Email: The Protocol Alarm Monitoring Ezine

The Protocol Alarm Monitoring Ezine is your free email tech support alert, delivered directly to your in-box every two weeks. Every issue has news you can use right away:

- Expert tips on using your alarm monitoring equipment — advanced techniques that will save you hours of work
- Educational White Papers deliver fast informal tutorials on SNMP, ASCII processing, TL1 and other alarm monitoring technologies
- New product and upgrade announcements keep you up to date with the latest technology
- Exclusive access to special offers for DPS Telecom Factory Training, product upgrade offers and discounts

To get your free subscription to The Protocol register online at www.TheProtocol.com/register

Free Tech Support on the Web: MyDPS

MyDPS is your personalized, members-only online resource. Registering for MyDPS is fast, free, and gives you exclusive access to:

- Firmware and software downloads and upgrades
- Product manuals
- Product datasheets
- Exclusive user forms

Register for MyDPS online at www.DpsTele.com/register

The Protocol Alarm Monitoring Ezine
May 10, 2005 Call: 1-888-393-1060 DPS Telecom

White Paper: 5 Steps to Intelligent SNMP-Legacy Integration
Learn how to make your current alarm monitoring equipment compatible with any SNMP manager — without losing time, money or functionality. [Download White Paper](#)

Turbocharge Your NetGuardian With SNMP v2c
The new NetGuardian 4.0 firmware adds SNMP v2c support, robust message delivery via SNMP INFORM command, customizable alarm severity levels and alarm point grouping, plus a whole lot more. Get the full details on everything that's new and how you can upgrade to NetGuardian 4.0. [Read Full Story](#)

Creative Solution: Convert Your LEDs to Contact Closures
Ted Van Tuyl of Click! Network created a unique monitoring application that converts LEDs to contact closures, using DPS equipment. [Read Full Story](#)

DPS Telecom Call: 1-800-693-0351

Network Alarm Monitoring Fundamentals
Alarm Monitoring — Where Do You Start?

You've just been put in charge of purchasing, selecting or recommending a new network alarm system for your company. Where do you start? What alarm equipment do you need? What monitoring features are essential, and which can you live without? How can you make sure your network is fully protected, without spending too much on equipment you won't use?

This White Paper is a quick guide to how you can answer these questions for yourself. This paper will NOT tell you, "Just buy this system and everything will be fine." Every network is different. A one-size fits-all system won't provide the specific coverage you need and may cost more money than you really need to spend.

[Download This White Paper Now!](#)

Name:
Email: [Give It To Me!](#)

Remember that we'll NEVER sell your email address to anybody, and that's a promise! We will also send you our informative eMagazine.

About DPS Telecom
Industries Served
News & Press Releases
Contact Information
DPS Departments
Sales Representatives
Trade Shows & Events
Factory Training Events
Client Testimonials
Client Success Stories
Career Opportunities

Magazine Sign-up
Name:
E-mail:
[Subscribe](#)
[View past issues](#)
[Subscription options](#)

