

Trap 48 RA

USER MANUAL



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

December 16, 2013

D-UM-TRAPR

Firmware Version 1.0A

Revision History	
December 16, 2013	Added play cound and parse to Edit>Audio screen
July 25, 2013	Removed HTTPS
January 21, 2013	Added relay specification option to Edit>Audio menu
December 12, 2012	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.

© 2013 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

1	Trap 4	48 RA Overview	1
2	Speci	fications	3
3	Shipp	ing List	4
4	Install	lation	6
	4.1	Tools Needed	6
	4.2	Mounting	6
5	Trap 4	48 RA Back Panel	7
	5.1	Power Connection	7
	5.2	LAN Connection	8
	5.3	Relay Outputs RJ-45 Connectors	8
	5.4	Audio Output Connectors	10
6	Trap 4	48 RA Front Panel	11
	6.1	RJ-45 Console Port	11
7	Quick	Start: How to Connect to the Trap 48 RA	12
	7.1	via RJ-45 Console Port (using TTY Interface)	12
	7.2	via LAN (First Time Connection to a Unit at Factory Defaults)	13
8	TTY In	nterface	14
9	Trap 4	48 RA Web Browser	15
	9.1	Logging on to the Trap 48 RA	15
	9.	.1.1 Changing the Default Password	16
10	Trap 4	48 RA - Quick Turn Up	17
	10.1	How to Configure Trap Parsers for an Output	17
	10.2	Useful Tools	19
11	Edit M	lenu Field Descriptions	20
	11.1	System	20
	11.2	Ethernet	21
	11.3	Controls	22
	1	1.3.1 Configuring Granular OID	23
	11.4	Audio	25
	11.5	System Alarms	27
	11.6	Ping Targets	28
	11.7	Notifications	29
	1	1.7.1 Notification Settings	30
	1	1.7.2 Schedule	31
	1	1.7.3 How to Send Email Notifications	32
	11.8	Variable Bindings	35

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

11.9	Date and Time	36
11.10	Timers	37
11.11	Reboot	37
12 Monit	oring via the Web Browser	38
12.1	Controls	38
12.2	Audio	39
12.3	Alarms	40
12.4	Ping Targets	40
13 Firmw	vare Upgrade	41
14 Refere	ence Section	42
14.1	Front and Back Panel LEDs	42
14.2	Display Mapping	44
14.3	SNMP Manager Functions	44
14.4	SNMP Granular Trap Packets (Outbound)	45
15 Frequ	ently Asked Questions	47
15.1	General FAQs	47
15.2	SNMP FAQs	48
16 Techr	nical Support	49
17 End U	lser License Agreement	50

1 Trap 48 RA Overview

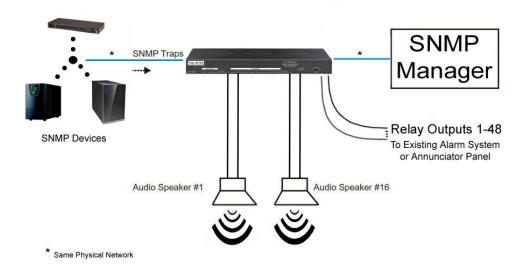


Fig. 1.1 The easy-to-install Trap 48 RA operates up to 48 relays and 16 audio outputs

Overview

The Trap 48 RA is a device that operates up to 48 relays and 16 audio outputs using received SNMP trap information. The user can configure each relay to operate or release based on the enterprise, generic-trap, and specific-trap information of a SNMP v1 trap or the trap OID of a SNMP v2c trap. Each SNMP trap can also be defined by an optional variable binding. This telco-grade remote is housed in a durable aluminum chassis that uses one standard rack units for mounting.

- 48 Relay Outputs
- 16 Audio Outputs
- 64 Ping Targets



Convenient RJ-45 connectors are used to securely terminate relay and audio outputs

On the back panel of the Trap 48 RA, the 28 RJ-45 connectors securely terminate the relay and audio outputs. There are four relays grouped per RJ-45, and one audio per RJ-45 connector.

Visual alarm interface

The front panel LED indicators provide visual indication of relay point and audio output status. Two outputs share one LED (ex. 1/25, 2/26 etc.). LEDs that are on indicate active outputs. LEDs that are off indicate inactive outputs.

Web Browser Interface

From the device's easy-to-use web interface, you do all of the configuration setup tasks like reversing the relay energize state, or selecting audio message, on an individual output basis. Additionally, from the web interface you are able to view the status of all the outputs.

2 Specifications

Control Relay Outputs:	48
Audio Outputs:	16
DB Range:	-25 dBm to 5 dBm Software Selectable
	(-10 dBm default, 600 Ohm balance pair)
Ping Targets:	64
Protocols:	Telnet, ICMP, DCPX, SNMPv1, SNMPv2c*, HTTP
Dimensions:	1.72" H x 17" W x 7.38" D
Weight:	3 lbs 4 oz
Mounting:	19" or 23" rack mount
Power Input	
Voltage Options Include:	Dual Feed +12 VDC
Current Draw:	600 mA @ 12 Vdc
	300 mA @ 24 Vdc
	150mA @ 48 Vdc
GMT Fuse:	1 Amp GMT Fuse (recommended)
Interfaces:	28 RJ-45 Ports for Audio/Relay Outputs
	1 RJ-45 10BaseT half-duplex Ethernet port
	1 RJ-45 Front-panel console RS232 port
Visual Interface:	36 Front Panel LEDs
	5 Back Panel LEDs
Operating Temperature:	32° to 140° F (0° to 60° C)
Operating Humidity:	0% to 95% non-condensing
MTBF:	60 years
Windows Compatibility:	Windows XP, Vista, 7 32/64 bit
RoHS:	5/6

*The Trap 48 RA can only process inbound SNMP v2c traps; it can't send v2c traps, but can send v1 traps.

3 Shipping List

Please make sure all of the following items are included with your Trap 48 RA. 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**.



Trap 48 RA D-PK-TRAPR



Trap 48 RA User Manual D-UM-TRAPR



14 ft. Ethernet Cable D-PR-923-10B-14



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



3/8" Ear Screws and Lock Washers 2-000-60375-05



6 ft. RJ45 to DB9 Cable D-PR-1051-10A-06



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



x4

Rack Screws 1-000-12500-06

4



Alternate Rack Screws 2-820-80750-03



1 Amp GMT Fuses 2-741-01000-00



Keps Nut (on unit) 2-002-01421-00



Pads 2-015-00030-00



Lg. Locking Power Connectors 2-820-35102-00

x 4

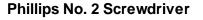
Zip Ties 1-012-00106-00

4 Installation

4.1 Tools Needed

To install the Trap 48 RA, you'll need the following tools:







Small Standard No. 2 Screwdriver



PC with terminal emulator, such as HyperTerminal

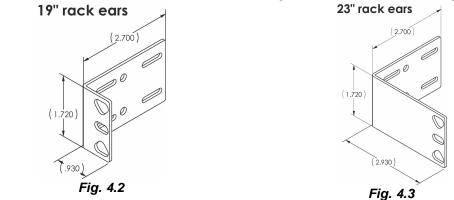
4.2 Mounting



Fig. 4.1 The Trap 48 RA can be flush or rear-mounted

The Trap 48 RA occupies one standard rack unit. The Trap 48 RA mounts in a 19" or 23" rack, and can be mounted on the right or left, in the flush-mount or rear mount locations, as shown in Fig. 4.1.

The rack ears can be rotated 90° for wall mounting or 180° for other mounting options.



5 Trap 48 RA Back Panel

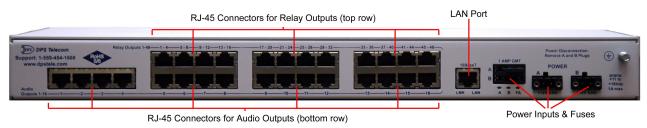


Fig 5.1 Trap 48 RA back panel connections

5.1 Power Connection

The Trap 48 RA is powered by two screw-locking RIA power connectors.



Fig. 5.2 The Trap48 RA's power inputs

Note: 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 unit, before making your power connections.

To connect the unit to a power supply:

- 1. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the symbol \oplus .
- 2. 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.
- 4. Insert a battery lead to the plug's left terminal and tighten its screw.
- 5. Insert fuse into the fuse distribution panel.
- 6. Check the power status LED for polarity. (eg. Green = Good, Off = Bad)
- 7. Measure voltage. Connect the black cable onto the ground connector of your DVM and red cable onto the other connector of your DVM. The voltmeter should read between +12VDC and +18VDC.

Note: The voltage range will depend on build and power input source. If you experience any issues with powering your unit, contact DPS Telecom technical support at 559-454-1600 or support@dpstele.com

8. Insert the local fuse into the power fuse slot. The power plug can be inserted into the power connector only one way to ensure the correct polarity.

Note: The negative voltage terminal is on the left and the GND terminal is on the right.

9. Verify that the 🛠 LED is lit. To confirm that power is correctly connected, the front panel status LED will flash RED and GREEN, indicating that the firmware is booting up.

5.2 LAN Connection



Fig. 5.3 LAN Port

To connect the Trap 48 RA to the LAN, insert a standard RJ45 Ethernet cable into the 10BaseT Ethernet port on the back of the unit. If the LAN connection is OK, the LNK LED will illuminate **SOLID**.

5.3 Relay Outputs RJ-45 Connectors

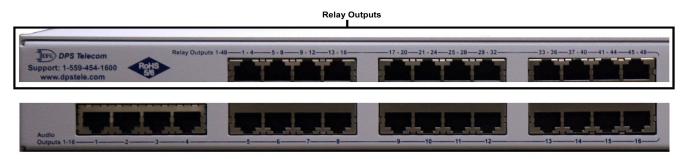
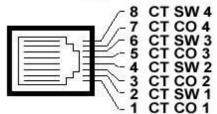


Fig. 5.4 Relay Outputs

On the back panel of the Trap 48 RA, the 12 RJ-45 connectors along the top securely terminate the relay outputs. See pinouts below:

RJ-45 Relay Connection Pinout



Control Relays 1-16				
RLY 1-4	Pin #	RLY 9-12	Pin #	
CT 1 CO	1	CT 9 CO	1	
CT 1 SW	2	CT 9 SW	2	
CT 2 CO	3	CT 10 CO	3	
CT 2 SW	4	CT 10 SW	4	
CT 3 CO	5	CT 11 CO	5	
CT 3 SW	6	CT 11 SW	6	
CT 4 CO	7	CT 12 CO	7	
CT 4 SW	8	CT 12 SW	8	
RLY 5-8	Pin #	RLY 13-16	Pin #	
CT 5 CO	1	CT 13 CO	1	
CT 5 SW	2	CT 13 SW	2	
CT 6 CO	3	CT 14 CO	3	
CT 6 SW	4	CT 14 SW	4	
CT 7 CO	5	CT 15 CO	5	
CT 7 SW	6	CT 15 SW	6	
CT 8 CO	7	CT 16 CO	7	
CT 8 SW	8	CT 16 SW	8	

Control Relays 17-32					
RLY 17-20	Pin #	RLY 25-28	Pin #		
CT 17 CO	1	CT 25 CO	1		
CT 17 SW	2	CT 25 SW	2		
CT 18 CO	3	CT 26 CO	3		
CT 18 SW	4	CT 26 SW	4		
CT 19 CO	5	CT 27 CO	5		
CT 19 SW	6	CT 27 SW	6		
CT 20 CO	7	CT 28 CO	7		
CT 20 SW	8	CT 28 SW	8		
RLY 21-24	Pin #	RLY 29-32	Pin #		
CT 21 CO	1	CT 29 CO	1		
		0. 20 00	1		
CT 21 SW	2	CT 29 SW	2		
CT 21 SW CT 22 CO	2 3				
		CT 29 SW	2		
CT 22 CO	3	CT 29 SW CT 30 CO	2 3		
CT 22 CO CT 22 SW	3 4	CT 29 SW CT 30 CO CT 30 SW	2 3 4		
CT 22 CO CT 22 SW CT 23 CO	3 4 5	CT 29 SW CT 30 CO CT 30 SW CT 31 CO	2 3 4 5		

Control Relays 33-48				
RLY 33-36	Pin #	RLY 41-44	Pin #	
CT 33 CO	1	CT 41 CO	1	
CT 33 SW	2	CT 41 SW	2	
CT 34 CO	3	CT 42 CO	3	
CT 34 SW	4	CT 42 SW	4	
CT 35 CO	5	CT 43 CO	5	
CT 35 SW	6	CT 43 SW	6	
CT 36 CO	7	CT 44 CO	7	
CT 36 SW	8	CT 44 SW	8	
RLY 37-40	Pin #	RLY 45-48	Pin #	
CT 37 CO	1	CT 45 CO	1	
CT 37 SW	2	CT 45 SW	2	
CT 38 CO	3	CT 46 CO	3	
CT 38 SW	4	CT 46 SW	4	
CT 39 CO	5	CT 47 CO	5	
CT 39 SW	6	CT 47 SW	6	
CT 40 CO	7	CT 48 CO	7	
CT 40 SW	8	CT 48 SW	8	

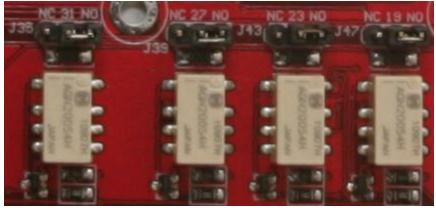


Fig 5.5 Jumpers

The build option determines if jumpers are present. If they are not, the unit will be hand wired for either N/O if N/C on all relays. Check your product number description for your device's configuration.

5.4 Audio Output Connectors

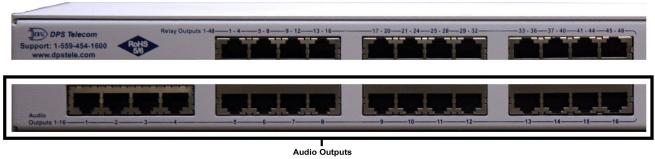
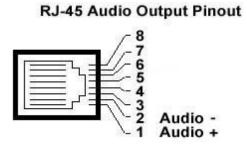


Fig. 5.6 Audio Outputs

On the back panel of the Trap 48 RA, the 16 RJ-45 connectors along the bottom securely terminate the audio outputs. See pinout below:



Note: Only pins 1 & 2 are used for the audio outputs' RJ-45 connections.

6 Trap 48 RA Front Panel



Fig. 6.1 Trap 48 RA front panel

6.1 RJ-45 Console Port

Use the front-panel RJ-45 console port to connect the Trap 48 RA to a PC for onsite unit configuration. To connect via the RJ-45 console port, use the included DB9 to RJ-45 cable. **Note:** The console port is RS232.

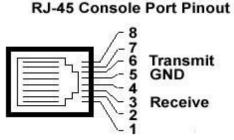


Fig 6.2 RJ-45 Pinouts (Console Port Only)

7 Quick Start: How to Connect to the Trap 48 RA

Most Trap 48 RA users find it easiest to give the unit an IP address, subnet and gateway through the front serial console port (TTY interface) to start. Once these settings are saved and you reboot the unit, you can access it over LAN to do the rest of your databasing via the Web Browser interface.

Alternative option: You can skip the TTY interface by using a LAN crossover cable directly from your PC to the Trap 48 RA and access its Web Browser. See the "...via LAN" section of this chapter.

7.1 ...via RJ-45 Console Port (using TTY Interface)



Fig. 7.1 Trap 48 RA Console Port

The simplest way to connect to the Trap 48 RA is over a physical cable connection between your PC's COM port and the Trap 48 RA's console port.

Select the following COM port options:

- Bits per second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

When a connection is established (sometimes accompanied by receipt of a hex byte), press Enter to activate the configuration menu.

The default username is "admin" and the default password is "dpstelecom".

You can perform basic configuration via the console port - but if you like, you can connect via the console port just to configure the Trap 48 RA's Private LAN IP address, and then do the rest of your configuration via a LAN connection.

7.2 ...via LAN (First Time Connection to a Unit at Factory Defaults)

Trap 48RA

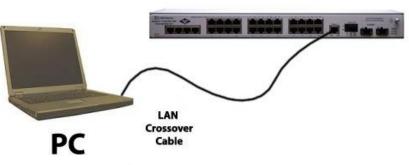


Fig 7.2 Connection through Ethernet port

To connect to the Trap 48 RA 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 Trap 48 RA, 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 Trap 48 RA's factory default IP settings. Follow these steps:

- 1. Get a LAN crossover cable and plug it directly into the Trap 48 RA'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**. Contact your IT department if you are unsure how to do this.
- 4. Reset your PC's subnet mask to **255.255.0.0**. 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 Trap 48 RA via a Telnet session or via Web browser by using the unit's default IP address of **192.168.1.100**.
- 6. Provision the Trap 48 RA with the appropriate information, then **change your computer's IP** address and subnet mask back to their original settings.

Now you're ready to do the rest of your configuration via LAN. Plug your Trap 48 RA into your LAN and see the "Logging On to the Trap 48 RA" section to continue databasing using the Web Browser.

8 TTY Interface

The TTY interface is the Trap 48 RA's built-in interface for basic configuration. From the TTY interface, you can:

- Edit the IPA, subnet, and gateway
- Debug and troubleshoot
- Set unit back to factory defaults
- Ping other devices on the network

Note: 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.

If you're using Windows 7, then you'll need to install telnet before you can use the TTY interface. To install telnet, open up your command line (type "cmd" into the search bar in the **Start Menu**). Select **cmd.exe** to run the command line.

Programs (1) a mise Documents (6) B see, jointy, advantue Multiple constrainty, Bland Files (3) B see, jointy, advantue Multiple constrainty, Bland Files (3) B see, jointy, advantue Multiple constrainty, Bland Files (3) B see, jointy, Madmuch Am Considered way and the second of the		C/Windows/system32/cmd.exe	
Image: Some and S		Microsoft Windows Unersian 6.1.76011 Copyright (c> 2009 Microsoft Corporation. All rights reserved. C:\Users\dps?pkgngr /iu:"TelnetServer"	< (III)
Documents (6)			-
If see is device and the sector with the method of the sector of the		C)
i∰ zoom_indes.js @] secil_device_tuike/handemule.htm SL ContainePro Agent	zoom indexis zoom indexis zooi, devices, rules, headerrule.htm TroonHelpFiles.ht build-inpl.ani HM,Ref.ContestPop_MapFiles.xml		
🖗 akci denken, Judemulahim 🔝 Containerbro Agent	Files (3)		
₽ See more results	ascii_devices_rules_headerrule.htm		
cmd x Shut down >			

From the command line, type in **pkgmgr /iu:"TelnetServer**" then press **enter**. When the command prompt appears again, the installation is complete.

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 Trap 48 RA Web Browser

DPS Telecon		ap 48RA	Upload Logout MyDPS
Ionitor Menus:	System Settings		
Controls	Global System Settings		
Marms		-	
ing Targets	Name	Trap 48RA	
dit Menus:	Location	Fresno, CA	
vstem	Contact	559.454.1600	
thernet			
otifications	"From" E-mail address	traprelay64@dpstele.com	
ariable Bindings	User	admin	
ontrols	Password		
udio Jarms			
ing Targets	SNMP Settings		3
ate and Time	Listening Port	162	
imers	Get Community	dps_public	
eboot	Set Community	dps_public	
	Inbound Trap Community	dps_public	
	DCP Responder Settings Displa	ay Mapping	
	DCP Unit ID	1 DOPx •	
	O Listen DCP over LAN 🔍 D	isable Listening	
	DCP LAN	2001 UDP •	
	System Controls		
	Initialize Configuration	Initialize	
	Backup Configuration	config.bin	Save
	Restore Configuration	Upload	
		Reset Save	

The Trap 48 RA features a built-in Web Browser Interface that allows you to manage outputs and configure the unit through the Internet or your Intranet. You can quickly set up descriptions, view status, issue commands, configure notification information, and more using most commonly used browsers.

9.1 Logging on to the Trap 48 RA

For Web Interface functionality, the unit must first be configured with some basic network addresses. If this has not been done yet, refer to the section "Quick Start: How to Connect to the Trap 48 RA" for instructions on initial configuration.

- To connect to the Trap 48 RA 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. Note: The unit requires that it's accessed via HTTPS. The IP address of the unit in your address bar should be prefaced with "https://".
- 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*".

Best Practice: DPS Telecom suggests that you change your password before configuring your unit as seen in section 9.1.1 Changing the Default Password.

3. In the left pane, you will see the Monitor menu (blue) and Edit menu (green) The Monitor menu links are used to view the current status of alarms. The Edit menu is used to change the unit's configuration settings. All the software configuration will occur in the Edit menu. The following sections provide detailed information regarding these functions.

9.1.1 Changing the Default Password

The password can be configured from the **Edit** > **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 Edit 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.

DPS Telecom		ap 48RA	<u>Upload Logout MyD</u>
onitor Menus: ontrols	System Settings		
udio	Global System Settings		
arms	Name	Trap 48RA	
ng Targets	Name	Trap 40KA	
it Menus:	Location	Fresno, CA	
stem	Contact	559-454-1600	
hernet			
otifications	"From" E-mail address	traprelay64@dpstele.com	
ariable Bindings	User	admin	
ontrols			
udio	Password		
arms	SNMP Settings		
ng Targets ate and Time	Listening Port	162	
mers	Get Community	dps_public	
eboot	and the second se		
	Set Community	dps_public	
	Inbound Trap Community	dps_public	
	DCP Responder Settings Displa	ay Mapping	
	DCP Unit ID	1 DCPx -	
	O Listen DCP over LAN 🔍 D	isable Listening	
	DCP LAN	2001 UDP 💌	
	System Controls		
	Initialize Configuration	Initialize	
	Backup Configuration	config.bin Sa	ave
	Restore Configuration	<u>Upload</u>	

Fig. 9.1 - Global System Settings section of the Edit > System menu

10 Trap 48 RA - Quick Turn Up

The next section of this manual will walk you through one of the Trap 48 RA's most common procedures. You will learn how to configure your inbound traps for an audio output - all using the Web browser. For details on entering your settings into each Web browser menu, go to section 11 "Edit Menu Field Descriptions."

10.1 How to Configure Trap Parsers for an Output

1. Click on the **System** button in the **Edit** menu and enter a valid community name for SNMP TRAP requests in the "**Inbound Trap Community**" field. Be sure to **Save** your settings.

DPS Telecom	Tra	ap 48RA	Upload Logout MyDPS
Monitor Menus:			
Controls	System Settings		
Audio	Global System Settings		
Alarms	Name	Trap 48RA	
Ping Targets	Location	Fresno, CA	
dit Menus:	Location	Flesho, CA	
System	Contact	559-454-1600	
thernet	"From" E-mail address	transla Ct@dastals.com	
lotifications	From E-mail address	traprelay64@dpstele.com	
/ariable Bindings	User	admin	
Controls	Password		
Audio	Password		
larms	SNMP Settings		
Ping Targets	Listening Port	162	
Date and Time			
imers	Get Community	dps_public	
teboot	Set Community	dps_public	
	Inbound Trap Community	dps_public	
	DCP Responder Settings Displa	ay Mapping	
	DCP Unit ID	1 DCPx 💌	
	O Listen DCP over LAN 🔍 D	isable Listening	
	DCP LAN	2001 UDP 💌	
	System Controls		i and a second secon
	Initialize Configuration	Initialize	
	Backup Configuration	config.bin	Save
	Restore Configuration	<u>Upload</u>	
		Reset Save	

Fig. 10.1 - "Inbound Trap Community" under SNMP Settings in the Edit > System menu.

2. Next, navigate to the **Edit > Audio** menu.

r Menus:						
ols Audio						
1-16						
5						
argets		Res	at Save			
enus:	Description		Туре	Play Count	Interval	Play Time
	1		100 million (100 m	-		
ations	Tower 1	<u>Advanced>></u>	Site-Trunking 💌	1	5s	5s
le Bindings	Tower 2	Advanced>>	Failsoft 💌	1	5s	5s
ols 3	Tower 3	Advanced>>	Out-of-Range 💌	12	5s	60s
	0.1				40	00
5 4	Door 1	<u>Advanced>></u>	Site-Trunking 💌	6	15s	90s
argets 5	Door 2	Advanced>>	Site-Trunking 💌	13	5s	65s
s 6	Door 3	Advanced>>	Site-Trunking 💌	1	5s	5s
t 7	Server 1	Advanced>>	Site-Trunking •	11	5s	55s
8	Server 2	Advanced>>	Site-Trunking 💌	0	5s	0s
9	Server 3	Advanced>>	Site-Trunking 💌	13	5s	65s
10	Router A	Advanced>>	Site-Trunking 💌	16	5s	80s
11	Router B	Advanced>>	Site-Trunking 💌	15	5s	75s
12	Site 231	Advanced>>	Site-Trunking 💌	234	5s	1170s
13	Site 240	<u>Advanced>></u>	Site-Trunking 💌	65	5s	325s
14	Site 983	Advanced>>	Site-Trunking 💌	43	5s	215s
15	Router C	<u>Advanced>></u>	Site-Trunking 💌	76	5s	380s
16	Back Door	Advanced>>	Site-Trunking 💌	12	5s	60s

Fig. 10.2 - The Edit > Audio menu.

3. Click on the **Advanced**<< tab next to your corresponding output.

		Reset	Sav	/e			
Number	Description			Туре	Play Count	Interva	al Play Time
1	Tower 1	<u>Advanced<<</u>	Site-	Trunking 💌	1	5s	5s
	Enterprise/OID	Generic		Specific	Variable Binding	Va	lue
Set:	1.3.6.1.4.1.2682.1.2	enterpriseSpecific(6)	•	8001	1213.3.6643	. 🔹 23	
Clear:	1.3.6.1.4.1.2682.1.2	enterpriseSpecific(6)	•	9001	1213.3.6643	- 23	
Stop	on clear.						
Volume	:	-10.00 dBm					
2	Tower 2	Advanced>>	Fails	oft 💌	1	5s	5s
3	Door 1	Advanced>>	Out-o	of-Range 💌	1	5s	5s

Fig. 10.3 - The Advanced tab under Edit > Audio

4. Enter the **Enterprise/OID** that matches the Object Identifier of your SNMP device, and select "enterpriseSpecific(6)" from the **Generic** dropdown menu.

5. If using SNMP version 1, make sure that the **Specific** matches the received Specific in your SNMP device's TRAP.

6. For inputs that are not Enterprise-specific, the **Specific** needs to be set to 0 and another **Generic** should be selected.

7. If necessary, configure a **Variable Binding**. For more information, see **Section 10.8, Variable Bindings**. If using a variable binding, make sure **Value** matches the received TRAP variable binding value.

8. Specify the Type of sound, Play Count, and Interval.

9. Scroll to either the top or bottom of the interface window, and click **Save**.

Note: If **Stop on clear** is checked, the audio output will stop when it receives the specified TRAP. This option is left unchecked by default.

10.2 Useful Tools

iReasoning

iReasoning's MIB browser is a useful tool for managing SNMP enabled network devices and applications. The MIB browser allows you to send, receive, and process SNMP traps according to its rule engine. The iReasoning MIB browser runs on Windows, Mac OS X, Linux and other UNIX platforms, and can be a valuable tool to use along with your Trap 48 RA device.

http://www.ireasoning.com/

Wireshark

Wireshark is a network protocol analyzer that lets you capture and interactively browse the traffic running on a computer network. Used in conjunction with your Trap 48 RA, Wireshark can provides useful visibility, allowing you to monitor and troubleshoot your network activity.

http://www.wireshark.org/

11 Edit Menu Field Descriptions

11.1 System

From the **Edit** > **System** menu, you will configure and edit the global system, T/Mon and control settings for the Trap 48 RA.

DPS Telecom		ap 48RA	Upload Logout MyDP:
Monitor Menus:	System Settings		
Controls			
Audio	Global System Settings		
Ping Targets	Name	Trap 48RA	
dit Menus:	Location	Fresno, CA	
System	Contact	559-454-1600	
Ethernet			
Notifications	"From" E-mail address	traprelay64@dpstele.com	
Variable Bindings	User	admin	
Controls			
Audio	Password		
Marms	SNMP Settings		
Ping Targets	Listening Port	162	
Date and Time Timers			
Reboot	Get Community	dps_public	
teboot	Set Community	dps_public	
	Inbound Trap Community	dps_public	
	DCP Responder Settings Displa	ay Mapping	
	DCP Unit ID	1 DCPx •	
	O Listen DCP over LAN 🔍 D	isable Listening	
	DCP LAN	2001 UDP •	
	System Controls		
	Initialize Configuration	Initialize	
	Backup Configuration	config.bin	Save
	Restore Configuration	Upload	

Fig. 11.1 - The Edit > System menu

	Global System Settings			
Name	A name for this Trap 48 RA. (Optional field)			
Location	The location of this Trap 48 RA. (Optional field)			
Contact	Contact telephone number for the person responsible for this Trap 48 RA. (Optional field)			
"From" Email Address A valid email address used by the Trap 48 RA for sending email alarm notifications.				
User	Used to change the username for logging into the unit.			
Password	Used to change the password for logging into the unit (case-sensitive).			
	SNMP Settings			
Listening Port	Enter the port number which traps must be sent to.			
Get Community	Community name for SNMP requests. (case-sensitive).			
Set Community	Community name for SNMP SET requests. (case-sensitive).			
Inbound Trap Community	Community name for SNMP TRAP requests. (case-sensitive).			
	DCP Responder Settings (For use with T/Mon Master Station)			
DCP Unit ID	User-definable ID number for this Trap 48 RA (DCP Address).			
Listen DCP	Choose to listen DCP over LAN. May also be disabled.			
DCP LAN	Enter the DCP port for this Trap 48 RA (UDP/TCP port).			
	System Controls			
Initialize Configuration	Used to restore all factory default settings to the Trap 48 RA. Do not initialize the non-volatile			
	RAM (NVRAM) unless you want to re-enter all of your configuration settings again.			
Backup Configuration	m m m m m m m m m m m m m			
Restore Configuration	Click the "Upload" link and select a .BIN configuration file that you saved previously to your			
Nestore configuration	local PC. This will restore the saved configuration.			

△ Best Practice: Always make a copy of your Trap 48 RA's configurations

11.2 Ethernet

Monitor Menus:				
Controls	Ethernet Settings			
Audio				
Alarms	MAC Address :	00:10:81:00:66:0)9	
Ping Targets	Host Name :		()	
Edit Menus:	Enable DHCP :			
System	Unit IP :	10.0.4.200	(10.0.4.200)	
Ethernet	a state and the second			
Notifications	Subnet Mask :	255.255.192.0	(255.255.192.0)	
Variable Bindings	Gateway :	10.0.0.254	(10.0.0.254)	
Controls	DNS Server 1 :	255.255.255.255	(255.255.255.255)	
Audio	DNS Server 1 :	200.200.200.200	(255.255.255.255)	
Alarms	DNS Server 2 :	255.255.255.255	(255.255.255.255)	
Ping Targets				

The **Edit** > **Ethernet** menu allows you to define and configure Ethernet settings.

Fig. 11.2 - The Edit > Ethernet menu

	Ethernet Settings
MAC Address	Hardware address of the Trap 48 RA. (Not editable - For reference only.)
Host Name	Used only for local web browsing. Example: If you don't want to remember this Trap 48 RA's IP address, you can type in a name is this field, such as Trap 48 RA. Once you save and reboot the unit, you can now browse to it locally by simply typing in "Trap 48 RA" in the address bar (no "https://" needed).
Enable DHCP	Used to turn on Dynamic Host Connection Protocol. NOT recommended, because the unit is assigned an IP address from your DHCP server. The IP you've already assigned to the unit becomes inactive. Using DHCP means the unit will NOT operate in a T/Mon environment.
Unit IP	IP address of the Trap 48 RA.
Subnet Mask	A road sign to the Trap 48 RA, telling it whether your packets should stay on your local network or be forwarded somewhere else on a wide-area network.
Gateway	An important parameter if you are connected to a wide-area network. It tells the Trap 48 RA which machine is the gateway out of your local network. Set to 255.255.255.255 if not using. Contact your network administrator for this info.
DNS Server 1	Primary IP address of the domain name server. Set to 255.255.255.255 if not using.
DNS Server 2	Secondary IP address of the domain name server. Set to 255.255.255.255 is not using.

11.3 Controls

A Trap 48 RA relay can be configured in the **Edit** > **Controls** menu. You can enter your own description for this relay and designate it to a notification device(s)



Closeup of Relay Inputs 1-16

DPS Telecom		Tra	ap 48RA				Upload Logout MyDPS
Monitor Menus: Controls Audio Alarms	Controls	3-64					
Ping Targets	Number	Description			Energized State	Echo Ping	Notifications
dit Menus:	1	Server A		Advanced<<			00000000
System Sthernet		Enterprise/OID	Generic	Specific	Variable Bindi	ing	Value
lotifications	Set:	1.3.6.1.4.1.8691.7.15	2	0	1.3.6.1.2.1.2.2.	1.1.*	• 1
ariable Bindings ontrols	Clear:	1.3.6.1.4.1.8691.7.15	3	0	1.3.6.1.2.1.2.2.	1.1.*	• 1
udio	2	Server B		Advanced>>			
larms	3	Server C		Advanced>>			
ing Targets ate and Time	4	Router 1		Advanced>>			
imers	5	Router 2		Advanced>>			
Reboot	6	Tower Lights		Advanced>>			
	7	Media Converter		Advanced>>			

Fig. 11.3 - The Edit > Controls menu

	Editing Control Relays
Description	User-definable description for the Trap 48 RA's control.
Notifications	Check which notification device(s), 1 through 8, you want to send alarm notifications for the control.
Energized State	When the box in the Energize State column is not checked, the relay's normal electrical state is De-energized . Checking this box will set the relay's normal electrical state to Energized .
Echo Ping	Associates the control relay with the ping target of the same ID/Number. When a ping fails, the relay will latch. If the ping is successful, the relay will release. Note : Enabling Echo Ping will prevent the relay from being triggered by trap OIDs.
	Advanced
Set	Enter the Enterprise/OID, Generic Type and Specific Type to operate a relay.
Clear	Enter the Enterprise/OID, Generic Type and Specific Type to release a relay.
Variable Binding	If defined, additional OID (from equipment connected to control relay) to uniquely identify the SNMP trap.
Value	Value of the variable binding. Must be integer or string (when searching for a specific string, the string must be contained within the received trap variable binding value). Note: Using a * in this field is like a "wild card" - any value is accepted.

Note: The **Advanced** tab will only appear only when "Granular" Trap Processing Mode is selected in the **Edit > System** menu. Refer to section 11.6.1 for further detail.

Note: If the **Description** is configured in the following manner:_IP:xxx.xxx.xxx (where "xxx.xxx.xxx xxx" is the desired IP address), the relay will only respond to traps received from the configured IP in the description.

11.3.1 Configuring Granular OID

The Trap 48 RA has a granular mode for processing incoming SNMP traps.

Granular Mode (for any SNMP device):

Each Relay will operate or release based on the trap information of an SNMPv1 trap or the OID of an SNMPv2c trap. Granular Mode can be used with any SNMP device. Other modes are only used with specific SNMP device types to provide specialized functionality. The **Advanced>>** button displays options for inputting the Enterprise/OID, Generic, and Specific information for the **Set** and **Clear** trap commands.

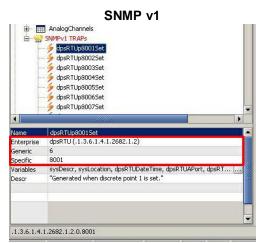


Fig. 11.4 - Location of the OID, Generic Type and Specific Type information for SNMP v1

In your MIB Browser (freeware MIB Browser software available for free trial) navigate to the SNMPv1 TRAPs to obtain the Enterprise, Generic Type and Specific Type as seen in the image above. This information is needed for the **Set** and **Clear** properties in the **Advanced** tab.

SNMP v2c dpsRTUv2AlarmGrid AnalogChannels dpsRTUv2p8001Set dpsRTUv2p80025e dpsRTUv2p8003Set dpsRTUv2p8004Set dpsRTUv2p8005Set dpsRTUv2p8006Set dpsRTUv2p8007Set dpsRTUv2p8001: 1.3.6.1.4.1.2682.1.4.800 DID DESEMICENCIDEVIDEV MIB Synta: Access Status current DefVal sysDescr, sysLocation, dpsRTUv2DateTime, dpsRTUv2APort, d... Objects Descr Generated when discrete point 1 is set .iso.org.dod.internet.private.enterprises.dpsInc.dpsAlarmControl.dpsRTUv2.dpsRTUv2

Fig. 11.5 - Location of the OID information for SNMP v2c

When using a SNMP v2c TRAP, you only need to configure the TRAP OID. The location of the OID in your MIB Browser can be seen in the image above.

In the image below **Control 1** "Relay 1" is configured using a SNMP v1 trap's Enterprise, Generic Type and Specific Type.

DPS Telecom			Trap 48R	A		Uplo	ad Logout MyDPS yDPS
Monitor Menus: Controls Audio	Controls	3-64					
Alarms Ping Targets	Number	Descripti	ion			Energized State	Notifications
Edit Menus:		Relay 1		Advanced<<			
System			Enterprise/OID	Generic	Specific]	
Ethernet	1	Set:	1.3.6.1.4.1.2682.1.2	6	8001		
Notifications					_		
Variable Bindings		Clear:	1.3.6.1.4.1.2682.1.2	6	9001		
Controls	2	Relay 2		Advanced>>			

Granular Mode

Fig. 11.6

NOTE: To use the IP filter feature for the Granular Mode, type "_IP:xxx.xxx.xxx.xxx " (where "xxx.xxx.xxx" is the desired IP address) in the description field followed by the IP of the source SNMP trap (example: 192.168.1.1) and only traps from the specified IP address will be processed.

Energized State

The 'Energized State' checkbox for each Relay may be used to "reverse the polarity" of that relay.

When the 'Energized State' checkbox IS NOT checked, the relay will be "normally open." On startup, the relay will be in a released state. When the specified "Set" SNMP trap is received, the relay will latch. When the specified "Clear" SNMP trap is received, the relay will release. This is the commonly used configuration for 'Energized State.'

When the 'Energized State' checkbox IS checked, the relay will be "normally closed." On startup, the relay will be in a latched state. When the specified "Set" SNMP trap is received, the relay will release. When the specified "Clear" SNMP trap is received, the relay will latch. This is not a common configuration, but it can be very useful in certain situations.

Energized State has no effect on Notification Devices. If you configure a Notification Device to trigger on "Set" events and associate it with a Relay, it will always trigger when the specified "Set" SNMP trap is received. The opposite is true for "Clear" Notification Devices when "Clear" SNMP traps are received. Even if you've reversed the latch/release operation of a Relay using Energized State, associated Notification Devices respond to "Set" and "Clear" SNMP traps in the same way. Of course, this distinction is irrelevant for Notification Devices configured to trigger on "Both" event types, which trigger on both "Set" and "Clear".

11.4 Audio

Configuration for the 16 audio alarms can be done from the **Provisioning** > **Audio** window.



Closeup of Audio Inputs 1-4

udio						
L-16						
		Re	eset Save			
Number	Description		Туре	Play Count	Interval	Play Time
1	Server A	Advanced<<	Site-Trunking V	10	1s	10s
	Enterprise/OID	Generic	Specific	Variable Binding	Value	
Set:	1.3.6.1.4.1.2682.1.2	enterpriseSpeci	ific(6) 🗸 0	1.2.5.*	▶ 1	
Clear:	1.3.6.1.4.1.2682.1.2	enterpriseSpeci	ific(6) V 9001	None	~	
Stop	on clear.					
Volume		dBm	Stop			
• Use	Frap OIDs OUse Relay	s				
Relays:		Parse				
2		Advanced>>	Site-Trunking V	1	5s	5s
3		Advanced>>	Site-Trunking V	1	5s	5s
1	[Advanced>>	Site-Trunking V	1	5e	50

Fig. 11.7 The Edit > Audio interface

	Editing Audio			
Number	Audio port number.			
Description	User-definable description for the audio alarm.			
	Type of audio alert: Site-Trunking: Two beeps.			
Туре	Failsoft: Regular beep.			
	Out-of-Range: Constant tone.			
	The number of times the audible alert will be played. Minimum play count value is 0 and			
Play Count	maximum play count value is 255. If Play Count is 0, the audio will play indefinitely until a clear			
	condition occurs.			
Interval	The amount of time (in seconds) between alerts. Minimum interval value is 1s and maximum interval value is 60s.			
Play Time	Display only. The total duration of audible alert.			
	Advanced>>			
Set	Enter the Enterprise/OID, Generic Type and Specific Type for turning on the audio output.			
Clear	Enter the Enterprise/OID, Generic Type and Specific Type for turning off the audio output.			
Variable Binding	If defined, additional OID (from equipment connected to control relay) to uniquely identify the SNMP trap.			
Value	Value of the variable binding. Must be integer or string (when searching for a specific string, the string must be contained within the received trap variable binding value). Note : Using a * in this field is like a "wild card" - any value is accepted.			
Stop on Clear	When checked, stops audible alert upon receiving a clear command.			
Volume	Volume slider that controls the volume of the audible alert.			
Test	Conducts a test of the current settings of the Audio Alert.			
Stop	Stops the test of the Audio Alert.			
Use Trap OIDs	Configure the audio port to use SNMP traps.			
Use Relays	Configure the audio port to use relays.			
	Enter the relay(s) that will trigger the audio. Ex: entering "1-5,7,9-14" would set relays 1 to 5, 7,			
	and 9 to 14 to all trigger audible alert.			
Relays	Note: Each time a listed relay latches, audio will play. Play Count determines the number of			
	times the audio will play for each time a relay latches. A play count of 0 mean the audio will			
	continue to repeat as long as any relay is latched.			

11.5 System Alarms

DPS Telecom	l.	Trap 48RA	Upload Logout MyDPS	
Monitor Menus: Controls Audio	Alarms			
Alarms	System	Description	Rpt	Notifications
Ping Targets	33	Default configuration		
Edit Menus: System	35	MAC address not set		
Ethernet	36	IP address not set		
Notifications	37	LAN hardware error		
Variable Bindings Controls	38	SNMP processing error		
Audio	39	SNMP community error		

Fig. 11.8 - The Edit > System Alarms menu

Choose the "System" tab on the "Edit > Alarms" menu to via the system alarms. These are "software" alarms that are internally generated by the Trap 48 RA to report various events and problems (ex. "Unit has reset" or "NTP server connection has failed").

	Editing System Alarms				
(first column)	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 (to have all 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.				

11.6 Ping Targets

Configuration for the 64 ping targets can be done from the **Edit** > **Ping Targets** window.

Audio Alarms Alarms ID Description IP Address Notifications Ping Targets ID Description IP Address Notifications System 1 Router 1 10.0200.1 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Monitor Menus: Controls	Ping T	argets		
ID Description IP Address Notifications dit Menus: 1 Router 1 10.0200.1 1 System 2 Router 2 10.0200.2 1 2 Router 2 10.0200.2 1 1 Notifications 3 Ethernet Switch 10.0200.3 1 Variable Bindings 4 Media Converter 10.0200.4 1 5 Encoder 10.0200.5 1 1 Audio Server A 1725.143.9 1 1		1-32	33-64		
1 Router 1 10.0200.1 2 Router 2 10.0200.2 2 Router 2 10.0200.3 2 Ethernet Switch 10.0200.3 Notifications 4 Media Converter 10.0200.4 Image: Controls Audio Server A 1725.143.9	(outpaties outpaties)	ID	Description	IP Address	Notifications
System 2 Router 2 10.0200.2 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ing rangets	1	Router 1	10.0.200.1	
3 Ethemet Switch 10.0.200.3 4 Media Converter 10.0.200.4 5 Encoder 10.0.200.5 6 Server A 1725.143.9		2	Router 2	10.0.200.2	
4 Media Converter 10.0200.4 Sontrols 5 Encoder 10.0200.5 sudio 6 Server A 1725.143.9	And the second sec	3	Ethernet Switch	10.0.200.3	
Sontrols 5 Encoder 10.0200.5 10.0200.5 udio 6 Server A 172.5.143.9 172.5.143.9		4	Media Converter	10.0.200.4	
arms		5	Encoder	10.0.200.5	
Jarms Contract Contra		6	Server A	172.5.143.9	
	larms	7	Server B	172.5.143.3	
ing Targets 7 Solid S Preserves ate and Time 8 Server C 172.5.143.15 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	and the second				

Fig. 11.9 The Edit > Ping Targets interface

	Editing Ping Targets					
ID Point number.						
Description	User-definable description for the ping target.					
IP Address IP address of the device (the ping target).						
Notifications	Check which notification device(s), 1 through 8, you want to send alarm notifications for that ping target.					

11.7 Notifications

From the initial **Edit** > **Notifications** menu, you may configure any of eight different notifications for your Trap 48 RA's alarms. Click on the number of the notification in the far left column under **No.** to begin configuring notifications.

DPS Telecom				Trap 48RA		Upload Logout MyDPS
Monitor Menus:	17-11-12-12	23 42.0				
Controls	Notif	ication	15			
Audio	No.	Stat.	Туре	Server	Time Window 1	Time Window 2
Alarms	1	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat,	
Ping Targets	-	0	Lindi		Any Time	Any Time
Edit Menus:	2	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
System	-		Free H		Sun,Mon,Tue,Wed,Thu,Fri,Sat,	Sun,Mon,Tue,Wed,Thu,Fri,Sat,
Ethernet	3	OFF	Email		Any Time	Any Time
Notifications	4	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat,	
Variable Bindings					Any Time	Any Time
Controls	<u>5</u>	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
Audio						
Alarms	<u>6</u>	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
Ping Targets	-	10000	-		Sun,Mon,Tue,Wed,Thu,Fri,Sat,	Sun,Mon,Tue,Wed,Thu,Fri,Sat
Date and Time	Z	OFF	Email		Any Time	Any Time
Timers	8	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat,	
Reboot	-	6.00.60			Any Time	Any Time

Fig. 11.10 - The Edit > Notifications menu

After clicking on a notification, you will tell the Trap 48 RA what sorts of events you'd like to see notifications and what sort of notification to send.

- 1. In the drop-down box, choose whether you'd like to receive notification for alarms, clears, or both. You may also disable the notification by selecting the appropriate option.
- 2. Next, choose the sort of notification you would like sent when an event occurs. You may choose:
 Send Email to have an email sent when events occur
 - Send SNMP to have a trap sent when events occur
- 3. Click **Next** > to continue configuring notifications.

DPS Telecom		Trap 48	RA	Upload Logout MyDPS
Monitor Menus:				
Controls	Notification 1			
Audio	Notification Setting			
Alarms	Notification Disabled	~		
Ping Targets	 Send Email Send SNMP 			
Name and Address of the Owner				
System				
Ethernet			Next> Cancel	
Notifications			INEXL ³ Cancer	J

Fig. 11.11 - The Notification Setting menu

11.7.1 Notification Settings

Email Notification Fields

Monitor Menus:			
	Notification 1 (Email)		
Audio	Email Notification		
Alarms Ping Targets	SMTP Server IP or Host Name	10.2.0.365	
Edit Menus:	Port No. (Usually Use 25)	0	
System	"From" E-mail Address	traprelay64@dpstele.com	
Ethernet	"To" E-mail Address	dps@dpstele.com	
Notifications	To E-mail Address	dps@dpstele.com	
Variable Bindings			
Controls		<back next=""> Cancel</back>	
Audio		Conter Conter	

Fig. 11.12 - Editing Email Notification Settings

4a. Enter the appropriate information for email notifications in the fields of the Email Notification screen. Click **Next >** to continue.

	Email Notification						
SMTP Server IP or Host Name	The IP address of your email server.						
Port Number	The port used by your email server to receive emails, usually set to 25.						
"From" E-mail Address	Displays the email address (defined in the Edit menu > System) that the Trap 48 RA will send email from. Not editable from this screen.						
"To" E-mail Address	The email address of the person responsible for this Trap 48 RA, who will receive email alarm notifications.						

SNMP Outbound Notification Fields

DPS Telecom	ា	rap 48RA Upload Logout MyDPS
Monitor Menus: Controls	Notification 1 (SNMP)	
Audio	SNMP Notification	
Alarms	SNMP Trap Server IP	
Ping Targets	Trap Port No. (Usually Use 162)	0
System	Trap Community	
Ethernet	SNMP Trap Version	⊙v1 ⊖v2C
Notifications		
Variable Bindings		
Controls		<pre><back next=""> Cancel</back></pre>
Audio		

Fig. 11.13 - Editing SNMP notification settings

4b. Enter the appropriate information for SNMP Trap notifications in the fields of the SNMP Notification screen. Click **Next >** to continue.

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.				

11.7.2 Schedule

Set a schedule for when you'd like the Trap 48 RA to send the notification configured in the previous steps. All schedule settings default to full-time notification, 24 hours a day, 7 days a week.

DPS Telecom						Tr	ар	48	RA	<u>Upload</u> <u>Logout MyDPS</u>
Monitor Menus: Controls	Noti	ficatio	on 1 (Schee	iule)					
Audio	No.	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Notification Time
Alarms Ping Targets	1	>			•		>	•	⊙ Any Time	○ 12 • h 0 • min AM • to 11 • h 59 • min PM •
dit Menus:	2								⊙ Any Time	○ 12 • h 0 • min AM • to 11 • h 59 • min PM •
System Ethernet Notifications	_						< [3ack	Finish	Test Cancel

Fig. 11.14 - 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 Trap 48 RA you want to receive alarm notifications at any time for the day(s) you've selected.					
Notification Time	Instead of "Any Time", use these fields to only send alarm notifications during certain hours on the day(s) you've selected.					

When finished, click **Test** to test the notification or **Finish** to save the notification.

11.7.3 How to Send Email Notifications

1. Click on the **System** button in the **Edit** menu and enter a valid email address in the "**From**" **Email Address** field. (You may need to check with your IT department to have one created for the unit.) This is the address that will appear in your email as the sender.

DPS Telecom	Tr	ap 48RA	Upload Logout MyD			
Ionitor Menus:	ystem Settings					
	Global System Settings					
Alarms	Name	Trap Relay 64				
Ping Targets	Location	Fresno, CA				
dit Menus:	Contact	559-454-1600				
ystem						
thernet	"From" E-mail address	traprelay64@dpstele.com				
lotifications	User	admin				
/ariable Bindings	Password					
Controls	SNMP Settings					
larms	Listening Port	162				
ing Targets						
ate and Time	Get Community	dps_public				
imers	Set Community	dps_public				
eboot	Inbound Trap Community	dps_public				
	Trap Processing Mode	Cisco-VMS 💌				
	Global Momentary Timer	10s (Only applies in Cisco-VI	MS mode)			
	DCP Responder Settings Displa	iy Mapping				
	DCP Unit ID	1 DCPx V				
	O Listen DCP over LAN OD	sable Listening				
	DCP LAN	2001 UDP 💌				
	System Controls					
	Initialize Configuration	Initialize				
	Backup Configuration	config.bin	Save			
	Restore Configuration	Upload				

Fig. 11.15

2. Click on the **Notifications** button in the **Edit** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking on a notification number. In this example, we'll setup Notification 1 to send emails.

DPS Telecom				Trap 48RA		Upload Logout MyDPS
Monitor Menus:						
Controls	Noti	fication	IS			
Audio	No.	Stat.	Туре	Server	Time Window 1	Time Window 2
Marms Ping Targets	1	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
dit Menus:	2	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
system Sthernet	3	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
lotifications /ariable Bindings	4	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
controls	<u>5</u>	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
larms	<u>6</u>	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
Ping Targets Date and Time	z	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
limers Reboot	<u>8</u>	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time

Fig. 11.16

3. At the **Notification Setting** screen, use the drop-down menu to choose whether you want notifications for alarms, clears, or both. Now, select the **Send Email** button and click Next.

DPS Telecom	Trap 48RA	Upload Logout MyDPS
Monitor Menus: Controls	Notification 1	
Audio	Notification Setting	
Alarms	Notification Disabled	
Ping Targets	⊙ Send Email ○ Send SNMP	
System		
Ethernet		
Notifications	Next> Cancel	
	Fig. 11.17	

4. At the **Email Notification** screen, you'll enter your email server settings. Enter the **IP address** or **Host Name** of your email server (If using **Host Name**, DNS servers must be configured under the ethernet settings). Enter the **Port Number** (usually 25) and the **"To" Email Address** of the technician that will receive these emails. The "From" E-mail address is set on the "Edit > System" menu, and cannot be modified from this menu. Click **Next**.

DPS Telecom	т	rap 48RA Upload	Logout MyDPS
Monitor Menus:			
Controls	Notification 1 (Email)		
Audio	Email Notification		
Alarms	SMTP Server IP	10.00007	
Ping Targets	or Host Name	10.2.0.365	
Edit Menus:	Port No. (Usually Use 25)	0	
System	"From" E-mail Address	traprelay64@dpstele.com	
Ethernet			
Notifications	"To" E-mail Address	dps@dpstele.com	
Variable Bindings			
Controls		<back next=""> Cancel</back>	
Audio		Calcel	

Fig. 11.18

5. At the **Schedule** screen, you'll select the exact days and times you want to receive email notifications. You can set two schedules per notification. For example, you may want to receive notifications at certain times during the week, and at different hours on the weekend. Use the check boxes to select the days of the week, and select the time from the drop down menus. Click **Finish.** To try a test notification, click the **Test** button (See next step.)

	Trap 48RA				Upload Logout MyDPS				
Notif	ficatio	on 1 (Schee	lule)					
No.	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Notification Time
1						•		⊙ Any Time	0 12 • h 0 • min AM • to 11 • h 59 • min PM •
2		•		V				⊙ Any Time	○ 12 • h 0 • min AM • to 11 • h 59 • min PM •
						<	Back	Finish	Test Cancel
	No. 1	No. Sun 1	No. Sun Mon 1 🗹 🗹	No. Sun Mon Tue 1 V V V	1 🗹 🗹 🗹	Notification 1 (Schedule)No.SunMonTueWedThu1VVVV	Notification I (Schedule)No.SunMonTueWedThuFri1VVVVVV2VVVVVV	Notification 1 (Schedule) No. Sun Mon Tue Wed Thu Fri Sat 1 V V V V V V	Notification 1 (Schedule) No. Sun Mon Tue Wed Thu Fri Sat 1 Image: Signal structure Image: Signal structure

33

Fig. 11.19

6. If you chose to test the email notification you've just setup, you will see a popup. Click **OK** to send a test email notification. Confirm all your settings by checking your email to see if you've received it.

NOTE: This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point. See the next step.



Fig. 11.20

7. Now you will associate this notification to a control. You have 8 notification devices available to use. In the image below, you might assign **Notification Device 1** to **Control 1**. This means that you would receive an email notification when "Relay 1" (Control 1) changes state. Remember that Notification #1 in the Notifications menu corresponds to the first "Notifications" column of check boxes. (Notification #2 is the second column, and so on until Notification #8)

DPS Telecom			Tra	p 48RA					Upload	Logout MyD
nitor Menus: ntrols No	tificatio	ons								
dio No		. Type	Server		Time Wind	low	1	Tin	ne Windo	w 2
irms		Email	206.169.87.18	8	Sun,Mon,T Any Time	ue,W	ed,Thu,Fri,S		n,Mon,Tu / Time	e,Wed,Thu,Fri,Sa
ig Targets	OFF	Email			1	ue,W	ed, Thu, Fri, S	Sat, Sur		e,Wed,Thu,Fri,Sa
t Menus: stem	OFF	Email			the second	ue,W	ed, Thu, Fri, S	Sat, Sur		e,Wed,Thu,Fri,Sa
tifications	ON	SNMP	126.10.230.17	1	Sun,Mon,T	ue,W	ed,Thu,Fri,S	Sat, Sur	,Mon,Tu	e,Wed,Thu,Fri,Sa
riable Bindings					Any Time			Any	Time	
DPS Telecom			Tra	p 48RA					Upload	i <u>Logout</u> <u>MyD</u>
DPS Telecom nitor Menus: ntrols	ontrols		Tra	p 48RA					Upload	i <u>Logout</u> MyD
DPS Telecom nitor Menus: ntrols dio 1 rms		5-48	Tra	19 48RA	Reset S	ave			Upload	i Logout MyC
DPS Telecom nitor Menus: ntrols dio 1		5-48	Tra	19 48RA	Reset S	зvе]		Upload	l Logout MyD
DPS Telecom nitor Menus: ntrols dio 1 rms g Targets t Menus:	-24 2	5-48 Descriptio		p 48RA	Reset S	ave	Energized State	Echo Ping	<u>Upload</u> Notifica	
DPS Telecom nitor Menus: ntrols dio 1 rms Ig Targets t Menus:	-24 2			p 48RA [Reset S]	
DPS Telecom nitor Menus: ntrols dio 1 rrms g Targets t Menus: stem ternet tifications	- 24 2 Number	Descriptic Server A	n	•		<<	State	Ping	Notifica	itions
DPS Telecom nitor Menus: ntrols dio 1 rrms g Targets t Menus: stem bernet tifications riable Bindings	- 24 2 Number 1	Descriptic Server A Enterprise	on /OID	Generic	Advanced	≤≤ Sp	State	Ping	Notifica	itions Value
DPS Telecom nitor Menus: ntrols dio 1 rms g Targets t Menus: stem hernet tifications riable Bindings	- 24 2 Number 1	Descriptic Server A	on /OID	•	Advanced	≤≤ Sp	State	Ping	Notifica	itions

Fig. 11.21 Associating Controls to the Notifications Table

11.8 Variable Bindings

Variable bindings for the Trap Relay can be added using the **Edit** > **Variable Bindings** menu. Variable bindings are additional OIDs (supplied by the manufacturer of the product connected to the control relay) used to uniquely identify the SNMP trap. Variable bindings are used as an additional method of identifying SNMP traps. Up to one variable binding can be used per relay or audio output.

DPS Telecom			Trap	48RA		Upload Logout MyDPS
Monitor Menus: Controls	Variab	le Bindings				
Audio	1-32					
Alarms				Reset	-	
Ping Targets				Reset	•	
Edit Menus:	1	1.3.6.1.2.1.2.2.4.1.*				
System	2	1.3.6.1.2.6.1.2.7.1.*				
Ethernet	2					
Notifications	3	1.3.6.1.2.4.4.2.3.1.*				
Variable Bindings	4	1.3.6.1.2.9.3.2.1.1.*				
Controls	5	1.3.6.1.2.8.5.2.5.1.*				
Audio	8 9 0					
Alarms	6	1.3.6.1.2.7.1.2.6.1.*				
Ping Targets	7	1.3.6.1.2.1.1.3.8.1.*				
Date and Time		12610146 01*				

Fig. 11.22 - The Edit > Variable Bindings menu

	Editing Variable Bindings						
ld	Index number of the relay for the binding.						
OID	OID of the variable binding. Note : Using a * in this field is like a "wild card" - any value is accepted.						

11.9 Date and Time

DPS Telecom	Trap 48R	Α		Uţ	oload Log	jout My
nitor Menus: ontrols	Date and Time					
idio						
arms	Time Settings					
ng Targets	Date		Month Jan 👻 Day	1 - Y	fear 2000	•
it Menus:	Time		Hour 3 👻 Minu	ite 27 🔻	PM 🔻	
stem	Automatic Time Adjustment (NTP)					
hernet	Enable NTP					
otifications	NTP Server Address or Host Name			Syn		
riable Bindings	NTP Server Address of Host Name			Jyn	<u> </u>	
ontrols	Time Zone	GMT-08:00) Pacific Time		•	
ıdio	Adjust Clock for Daylight Saving Time (DS	т)				
arms	Enable DST					
ng Targets		Month	1999 (P. 1999)			
ite and Time	Start Day	Mar -	Weekday Second Sunday	•	Hour	AM 👻
ners		ind.	cocond canady		-	
eboot	End David	Month	Weekday		Hour	
5 M M	End Day	Nov 🔻	First Sunday	-	2 🔻	AM 👻

Fig. 11.23 - The Edit > Date and Time menu

	Time Settings					
Date	Select the current month, day, and year from the drop-down menus.					
Time	Time Select the current hour, minutes, and time of day fro the drop-down menus.					
	Automatic Time Adjustment (NTP)					
Enable NTP	Check this box to enable Network Time Protocol.					
NTP Server Address or	Enter the NTP server's IP address or host name, then click Sync.					
Host Name	Example: north-america.pool.ntp.org					
Time Zone	Select your time zone from the drop-down menu.					
	Adjust Clock for Daylight Savings Time (DST)					
Enable DST	Check this box to have the Trap Relay 64 observe Daylight Savings.					
Start Day	Select the month, weekday, and time when Daylight Savings will begin.					
End Day	Select the month, weekday, and time when Daylight Savings will end.					

11.10 Timers

The Timers Menu allows configuration of various intervals, such as delays between pings, audible alarm tone length, and web refresh delay. Each timer is fully explained within the Timers Menu, as shown below:

DPS Telecom	Trap 48RA Uploa	<mark>d Logout MyDPS</mark>
Monitor Menus: Controls	Timers	
Audio	Description	Timer Value
Marms Ping Targets	Web Refresh (100ms-60s): How often web browser is refreshed when in monitor mode.	1s
dit Menus:	Timed Tick (0s-60m 0=off): This is a 'heartbeat' function that can be used by masters who don't perform integrity checks	Os
System Ethernet	Ping Cycle (0s-30m): Time interval between each ping cycle (0 disables, 30 seconds minimum)	60s
Notifications		
ariable Bindings	Reset	
Controls	Reset	
Audio		
larms		
Ping Targets		
)ate and Time		
imers		
And a state of the		

Fig. 11.24- The Edit > Timers menu

11.11 Reboot

Click on the **Reboot** link from the **Edit** menu will reboot the Trap 48 RA after writing all changes to NVRAM.



Fig. 11.25- The Edit > Reboot confirmation popup

12 Monitoring via the Web Browser

12.1 Controls

From the Monitor > Controls menu, you can manually operate and release the relay outputs. This is useful for manually testing your relay connections and verifying that your system works.

Use the following rules to operate the Trap 48 RA's control:

- 1. Select Controls from the Monitor menu.
- 2. Under the **State** field, you can see the current condition of the control.
- 3. Use the **OPR** and **RLS** buttons to operate and release the relays. You can use these buttons to: a. Test the relays
 - b. To manually force the SNMP alarm in a known state and/or synchronize it

ontrols			
L-24 2	5-48		
Number	Description	Commands	Status
1	Server A	OPR RLS	Released
2	Server B	OPR RLS	Released
3	Ethernet Switch	OPR RLS	Released
4		OPR RLS	Released
c			Determent

Fig 12.1 View the state of the control relays in the Monitor > Controls menu

12.2 Audio

From the Monitor > Audio menu, you can verify the status, as well as control the stopping and starting, of your audio outputs. You can use this menu to emit and adjust sound levels, as well as test your audio outputs and verify their connections.

Use the following rules to operate the Trap 48 RA's audio alarms:

- 1. Select Audio from the Monitor menu.
- 2. Under the **Status** field, you can see the current condition of the audio alarm.
- 3. Use the **On**, **Off**, and **Disable** buttons to control the audio outputs. Pressing **Disable** will prevent that particular audio output from working. **Note**: You must click **Save** at the bottom in order for the **Disable** setting to remember beyond a unit reboot.

DPS Telecom		Trap 48RA	<u>Upload</u> <u>Logout</u> <u>MyDPS</u>			
Monitor Menus: Controls	Audio					
Audio	[careeral]					
Alarms	1-16					
Ping Targets	Number	Description	Commands	Status		
dit Menus:	1	Server A	On Off Disable	Stopped		
System	2	Server B	On Off Disable	Stopped		
thernet						
lotifications	3	Ethernet Switch	On Off Disable	Stopped		
/ariable Bindings	4	Commercial Power	On Off Disable	Stopped		
Controls				level be a second s		
Audio	5	Rectifier	On Off Disable	Stopped		
larms	6	Modem 1	On Off Disable	Stopped		
ing Targets	0	Modelli 1		Stopped		
)ate and Time	7	Modem 2	On Off Disable	Stopped		
imers						
teboot	8	Tower 1	On Off Disable	Stopped		
	9	Tower 2	On Off Disable	Stopped		

Fig 12.2 View the state of the audio relays in the Monitor > Audio menu

12.3 Alarms

System alarms are non-editable alarms that are programmed into Trap 48 RA. The "System" tab of the **Monitor** > **Alarms** screen provides the status of the system alarms by indicating if an alarm has been triggered. Under the **State** column, the status will appear in red if an alarm has been activated, or green if it has not been activated. The status will be displayed in green when the alarm condition is not present.

See "Display Mapping" in the Reference Section for a complete description of system alarms.

DPS Telecom		Trap 48RA	Upload Logout MyDPS
Aonitor Menus:	Alarn		
Controls Audio	Alarn	15	
Alarms	Syst	em	
Ping Targets		Description	Status
dit Menus:	33	Default configuration	Clear
an Menus: System	35	MAC address not set	Clear
thernet	36	IP address not set	Clear
otifications			
ariable Bindings	37	LAN hardware error	Clear
ontrols	38	SNMP processing error	Clear
Audio	20	SNMD community arror	Close

Fig 12.3 View the status of System Alarms from the Monitor > Alarms menu.

12.4 Ping Targets

The Trap 48 RA can support up to 64 ping targets. You can view each the configured ping targets by browsing to the **Monitor** > **Ping Targets** window.

DPS DPS Telecom		Trap 48RA		Upload Logout MyDPS
Ionitor Menus: Controls Audio	Ping Ta	argets		
larms	1-32	33-64		
Ping Targets	ID	Description	IP Address	Status
dit Menus:	1	Router 1	10.0.200.1	Clear
System	2	Router 2	10.0.200.2	Clear
thernet	3	Ethernet Switch	10.0.200.3	Clear
otifications	4	Media Converter	10.0.200.4	Clear
/ariable Bindings	-	media Converter	10.0.200.4	loiear
ontrols	5	Encoder	10.0.200.5	Clear
udio	6	Server A	172.5.143.9	Clear
larms	-			
ing Targets	7	Server B	172.5.143.3	Clear
Date and Time	8	Server C	172.5.143.15	Clear

Fig 12.4 The Monitor > Ping Targets interface

13 Firmware Upgrade

Before upgrading the firmware, DPS Telecom suggests that you go to **System Settings >> Backup Configuration** and save your configuration settings. To access the **Firmware Load** screen, click on the upload link at the top right of the browser.

To be notified every time a new firmware is released for your device, login to your My DPS account and navigate to the **Notifications** page. At this page check the box that corresponds to the device that you want firmware notifications for.

DPS Telecom	т	rap 48RA	Upload Logout MyDPS
Monitor Menus: Controls	System Settings		<u> </u>
Audio	Global System Settings		
Alarms	Name	Trap Relay 64	
Ping Targets	Location	Fresno, CA	
Edit Menus: System	Contact	559-454-1600	
Ethernet	"From" E-mail address	APD32@dpstele.com	
Notifications	SNMP Get String	dps_public	
Variable Bindings	SNMP Set String	dps_public	
Controls	SNMP Trap String	dps_public	
Audio			
Alarms	User	admin	
Ping Targets	Password	•••••	
Date and Time	DCP Responder Settings Dis	play Mapping	
Timers Reboot	DCP Unit ID	1 DCPx 💌	
REDUCT	OListen DCP over LAN ③	Disable Listening	
	DCP LAN	2001 UDP 💌	
	System Controls		
	Initialize Configuration	Initialize	
	Backup Configuration	config.bin	Save
	Restore Configuration	<u>Upload</u>	
		Reset Save	

Fig. 13.1 The clickable link to upgrade firmware from the Edit > System menu

At the **Firmware Load** screen, simply browse for the firmware update you've downloaded from <u>www.</u> <u>dpstele.com</u> and click **Load**.

DPS Telecom		
Upload (config,firmware,web,	or bundle)	
	Brow	se Upload

Fig. 13.2 Browse for downloaded firmware upgrade

If you experience any difficulty updating the firmware of your device, contact DPS tech support at 559-454-1600 or at <u>support@dpstele.com</u> for assistance.

Note: The firmware upgrade page is only available using HTTP web browse. HTTPS is not supported.

14 Reference Section

14.1 Front and Back Panel LEDs



LED	Status	Description
Config	Solid Red	The unit has been configured and needs to be rebooted.
Status	Flashing Green	Trap 48 RA application running.
Status	Flashing Red	Boot Loader is running.
Link	Solid Green	LAN connected.
Link	Solid Red	LAN not detected.
	Solid Red	Relay is active on relay labeled 1-24.
Relay	Flashing Red	Relay is active on relay labeled 25-48.
Outputs	Alternating Solid Red and Flashing Red	Relays are active on points labeled 1/25, 2/26 etc.
	Solid Red	Audio outputs are active on channels labeled 1-8.
Audio Outputs	Flashing Red	Audio outputs are active on channels labeled 9-16.
	Alternating Solid Red and Flashing Red	Audio outputs are active on points labeled 1/9, 2/10, etc.
Console	Flashing Green	Trap 48 RA data transmitted over console port.
	Flashing Red	Trap 48 RA data received over console port.

Fig. 14.1 Front panel LEDs

Table 14.1 Front Panel LED Descriptions



Fig. 14.2 Back panel LEDs

LED	Status	Description
	Solid Green	Power supply A OK.
A	Off	No voltage, low voltage or incorrect polarity on Power supply A.
В	Solid Green	Power supply B OK.
	Off	No voltage, low voltage or incorrect polarity on Power supply B.
FA	Solid Red	Blown Fuse.
LNK	Solid Green	LAN connected.
LAN	Flashing Yellow	LAN Activity.

Table 14.2 Back Panel LED Descriptions

Description Port Address Point Default configuration MAC address not set IP address not set LAN hardware error SNMP processing error SNMP community error LAN TX packet drop Notification 1 failed Display 1 Notification 2 failed Notification 3 failed Notification 4 failed NTP failed Timed Tick Dynamic memory full Unit Reset Controls 1-48 1-48 **Display 2** Audio Alarms 1-16 49-64 Display 3 Ping Targets 1-64 1-64

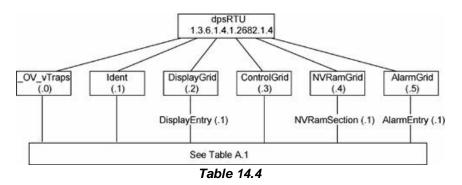
14.2 Display Mapping

Table 14.3 Display Mapping

14.3 SNMP Manager Functions

Note: The Trap 48 RA appears like an SNMP Agent to other managers. Use this section for interfacing the Trap 48 RA to other managers.

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 14.3 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).



Tbl. B1 (O.)_OV_Traps points	Tbl. B2 (.1) Identity points	Tbl. B3 (.2) DisplayGrid points
_OV_vTraps (1.3.6.1.4.1.2682.1.4.0)	Ident (1.3.6.1.4.1.2682.1.4.1)	DisplayEntry (1.3.6.1.4.1.2682.1.4.2.1)
PointSet (.20)	Manufacturer (.1)	Port (.1)
PointClr (.21)	Model (.2)	Address (.2)
SumPSet (.101)	Firmware Version (.3)	Display (.3)
SumPCIr (.102)	DateTime (.4)	DispDesc (.4)*
ComFailed (.103)	ResyncReq (.5)*	PntMap (.5)*
ComRestored (.014)	* Must be set to "1" to perform the resync	
P0001Set (.10001) through P0064Set (.10064)	request which will resend TRAPs for any standing alarm.	
P0001Clr (.20001) through P0064Clr (.20064)		
Tbl. B3 (.3) ControlGrid		Tbl. B5 (.5) AlarmEntry points
points ControlGrid		AlarmEntry (1.3.6.4.1.2682.1.4.5.1)
(1.3.6.1.4.1.2682.1.4.3)		Aport (.1)
Port (.1)		AAddress (.2)
Address (.2)		ADisplay (.3)
Display (.3)		APoint (.4)
Point (.4)		APntDesc (.5)*
Action (.5)		AState (.6)
		* For specific alarm points, see

Table 14.5

The Trap Relay 64 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.

14.4 SNMP Granular Trap Packets (Outbound)

Tables 14.5 and 14.6 provide a list of the information contained in the SNMP Trap packets sent by the Trap 48 RA.

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

- 1. Granular traps (not necessary to define point descriptions for the Trap 48 RA) OR
- 2. The SNMP manager reads the description from the Trap.

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

Table 14.6 UDP Headers and descriptions

SNMP Header	Description
0	Version
Public	Request
Тгар	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

Table 14.7 SNMP Headers and descriptions

15 Frequently Asked Questions

Here are answers to some common questions from Trap 48 RA users. The latest FAQs can be found on the Trap 48 RA support web page, **http://www.dpstele.com.**

If you have a question about the Trap 48 RA, please call us at **(559) 454-1600** or e-mail us at **support@dpstele.com**

15.1 General FAQs

Q. How do I telnet to the Trap 48 RA?

A You must use Port 2002 to connect to the Trap 48 RA. Configure your Telnet client to connect using TCP/IP (not "Telnet," or any other port options). For connection information, enter the IP address of the Trap 48 RA and Port 2002. For example, to connect to the Trap 48 RA using the standard Windows Telnet client, click Start, click Run, and type "telnet <Trap 48 RA IP address> 2002."

Q. How do I connect my Trap 48 RA to the LAN?

- A. To connect your Trap 48 RA to your LAN, you need to configure the unit IP address, the subnet mask and the default gateway. A sample configuration could look like this:
 Unit Address: 192.168.1.100
 subnet mask: 255.255.255.0
 Default Gateway: 192.168.1.1
 Save your changes by writing to NVRAM and reboot. Any change to the unit's IP configuration requires a reboot.
- Q. When I connect to the Trap 48 RA through the craft port on the front panel it either doesn't work right or it doesn't work at all. What's going on?
- A Make sure your using the right COM port settings. Your COM port settings should read: Bits per second: 9600 (9600 baud)
 Data bits: 8

Parity: None Stop bits: 1

Flow control: None

Important! Flow control **must** be set to **none**. Flow control normally defaults to hardware in most terminal programs, and this will not work correctly with the Trap 48 RA.

Q. The LAN link LED is green on my Trap 48 RA, but I can't poll it from my T/Mon.

- A Some routers will not forward packets to an IP address until the MAC address of the destination device has been registered on the router's Address Resolution Protocol (ARP) table. Enter the IP address of your gateway and your T/Mon system to the ARP table.
- Q. I'm unsure if the voltage of my power supply is within the specified range. How do I test the voltage?
- A Connect the black common lead of a voltmeter to the ground terminal of the battery. Connect the red lead of the voltmeter to the batter's VCD terminal. The voltmeter should read between +12 and +24VDC for +12VDC build.

15.2 SNMP FAQs

Q. Which version of SNMP is supported by the SNMP agent on the Trap 48 RA?

- **A** SNMP v1 and SNMPv2c.
- Q. How do I configure the Trap 48 RA to send traps to an SNMP manager? Is there a separate MIB for the Trap 48 RA? How many SNMP managers can the agent send traps to? And how do I set the IP address of the SNMP manager and the community string to be used when sending traps?
- A The Trap 48 RA begins sending traps as soon as the SNMP managers are defined. The Trap 48 RA MIB is included on the Trap 48 RA Resource CD. The MIB should be compiled on your SNMP manager. (Note: MIB versions may change in the future.) The unit supports 2 SNMP managers, which are configured by entering its IP address in the Trap Address field of Ethernet Port Setup. To configure the community strings, choose SNMP from the Edit menu, and enter appropriate values in the Get, Set, and Trap fields.
- Q. Does the Trap 48 RA support MIB-2 and/or any other standard MIBs?
- A. The Trap 48 RA supports the bulk of MIB-2.
- Q. Does the Trap 48 RA SNMP agent support both Trap 48 RA and T/MonXM variables?
- A The Trap 48 RA SNMP agent manages an embedded MIB that supports only the Trap 48 RA's RTU variables. The T/MonXM variables are included in the distributed MIB only to provide SNMP managers with a single MIB for all DPS Telecom products.
- Q. How many traps are triggered when a single point is set or cleared? The MIB defines traps like "major alarm set/cleared," "RTU point set," and a lot of granular traps, which could imply that more than one trap is sent when a change of state occurs on one point.
- **A** Generally, a single change of state generates a single trap.

Q. What does "point map" mean?

- A A point map is a single MIB leaf that presents the current status of a 64-alarm-point display in an ASCII-readable form, where a "." represents a clear and an "x" represents an alarm.
- Q. The Trap 48 RA manual talks about control relay outputs. How do I control these from my SNMP manager?
- A The control relays are operated by issuing the appropriate set commands, which are contained in the DPS Telecom MIB.

Q. How can I associate descriptive information with a point for the RTU granular traps?

A The Trap 48 RA control point descriptions are individually defined using the Web Browser.

Q. My SNMP traps aren't getting through. What should I try?

A. Try these three steps:

- 1. Make sure that the Trap Address (IP address of the SNMP manager) is defined. (If you changed the Trap Address, make sure you saved the change to NVRAM and rebooted.)
- 2. Make sure all alarm points are configured to send SNMP traps.
- 3. Make sure the Trap 48 RA and the SNMP manager are both on the network. Use the unit's ping command to ping the SNMP manager.

16 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.

17 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.

<u>NOTES</u>

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 promply 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!



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





