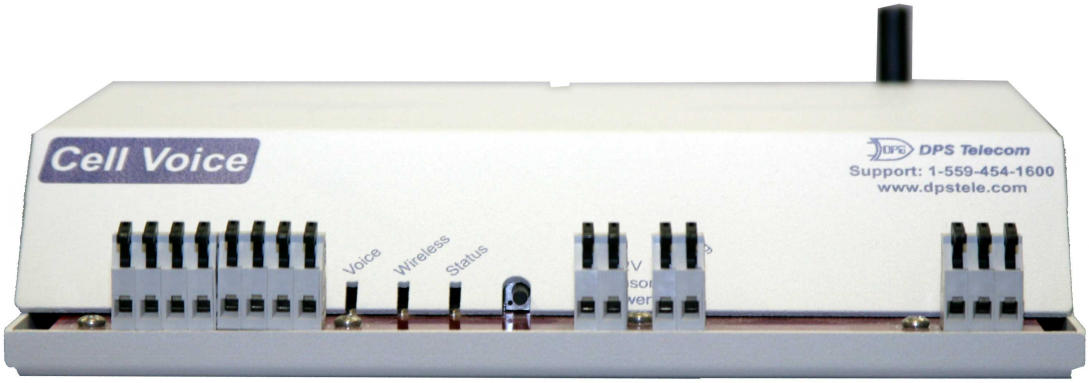
DPS Telecom

"Your Partners in Network Alarm Monitoring"

CellVoice 4 / Trap Relay LT

USER MANUAL

D-PK-CELLV



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Revision History

August 11, 2015	Rapid Response Monitoring Added
Novemeber 10, 2014	Added TrapRelay LT Option
February 28, 2014	Added "Setup" Section
January 2, 2014	Added Provisioning Web Timeout
July 26, 2013	Updated Wireless Modem Activation process
March 12, 2013	Initial Release

Notice

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Contents

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1 CellVoice 4 /Trap Relay LT Overview

Effective, easy-to-install, light-capacity alarm monitoring
This unit is a compact, LAN-based, light-capacity remote telemetry unit. This unit is designed for easy installation at small and medium remote sites, making it cost-effective to deploy alarm monitoring throughout your entire telecom network. This unit features the monitoring capacity (plus voice dialing capabilities on the CellVoice 4) for flexible notifications.

Powerful monitoring for smaller sites
This telco-grade remote is housed in a durable aluminum case that can be rack-mounted. This SNMP remote is scaled to the needs of small sites, such as remote huts, collocation racks, and enclosed cabinets - perfect for any site where a large capacity RTU would be more than you need.

- **4 Discrete Alarm Inputs**
- **1 Control Relay Outputs**
- **2 Analog Alarm Inputs (1 User Available & 1 Pre-set Power Monitoring)**
- **16 D-Wire temperature or humidity sensors**
- **32 Ping Targets**
- **32 SNMP Alarms**
- **Dial-in and out with DTMF acknowledge (CellVoice 4 only)**

SNMP or T/Mon
The device can report alarms to any SNMP manager or to the DPS Telecom T/Mon Remote Alarm Monitoring System. The unit can also report via SNMP and DCPx concurrently to T/Mon.

Easy Alerts via Email or SNMP
Email notification reports alarm events to the e-mail addresses of specified personnel and creates a supplemental record of alarm events in addition to your master via SNMP traps.

Upgraded Web Browser
The overhauled web interface that boasts several new monitoring tools, including new analog gauges. You'll also notice the impressive speed boost. Menus load very quickly, and the alarm status updates automatically without requiring a page refresh.

The unit can monitor other LAN devices at a site before LAN is available to the site.

2 Setup

Setup: Parts List

Please make sure all of the following items are included with your unit. 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**.

Resource Disk

Antenna
(CellVoice 4 only)

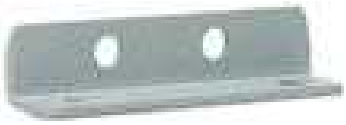
Locking Power Connector

Ethernet Cable

USB Cable

Pads

Short Rack Ear



x 2
Wall Mount Bracket

x 4
Wall Mount Screws

x 2
Rack Screws

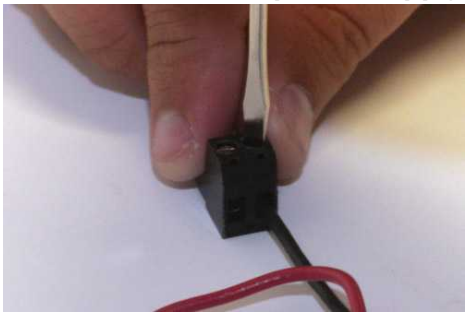
x 2
Metric Rack Screws

x 4
3/8" Ear Screws

Setup: Powering the Device

Note: Always use safe power practices when making power connections. Make sure the power wires are **not active** before making any power connections.

To connect the unit to a power supply:



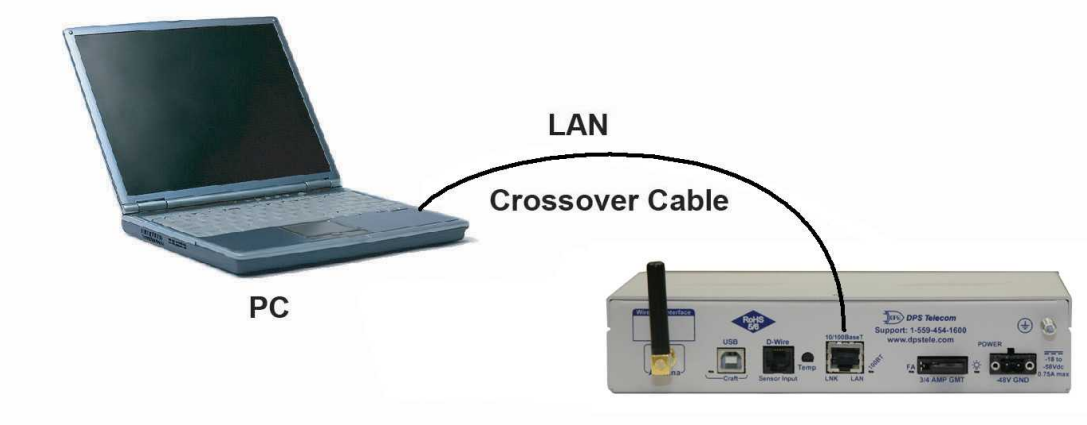
Battery lead left, and Ground right

FA LED Fuse left, power status LED , power plug right

1) Insert a battery *ground* wire into the connector's **right** terminal (Shown above) and battery *lead* into the **left** terminal and tighten the screws. Insert the connector into the power plug. Attach a grounding wire to the grounding lug .
2) Ensure the power status LED is lit up green for correct polarity.
3) Insert the local fuse into the fuse holder.
4) The front panel status LED should flash RED and GREEN to indicate that the unit is operating.

Setup: Connect via LAN

1) Connect PC and the unit to the same network via switch or directly via LAN cable.

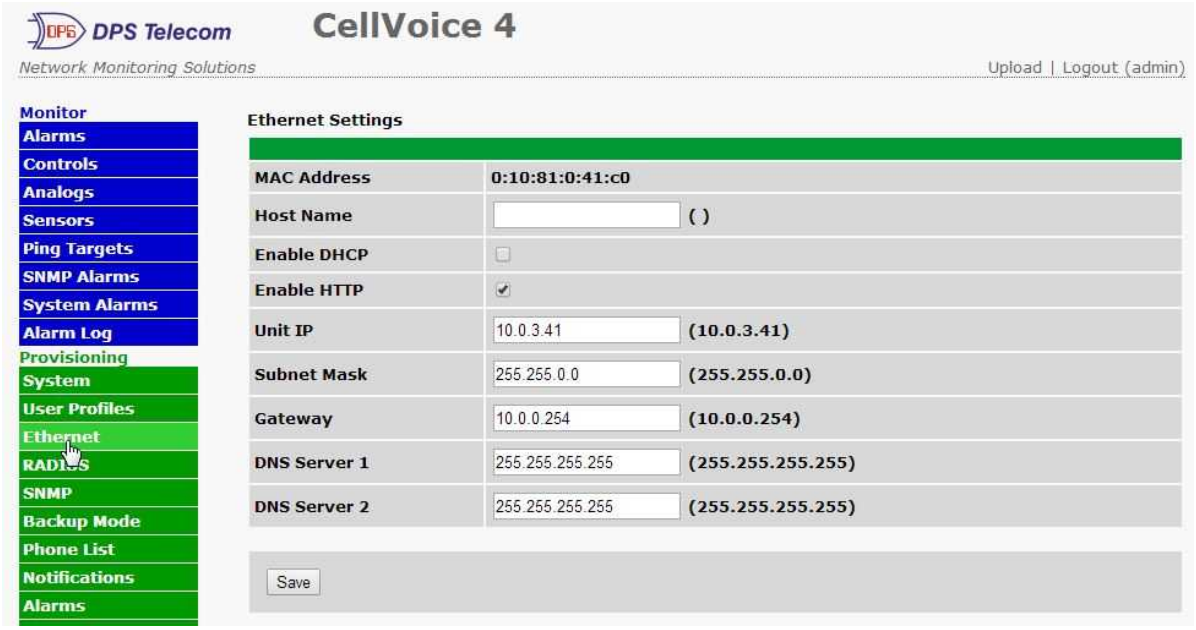


2) Record your PC's current IP configuration (especially if static assignment).

3) Set your PC's IP address to **192.168.1.200** and subnet mask to **255.255.255.0** (Contact your IT department if you are unsure how to do this).

4) Browse to **192.168.1.100** (Compatible with IE8 or greater) on your PC and **log in** with default user:*admin* and password:*dpstelecom*.

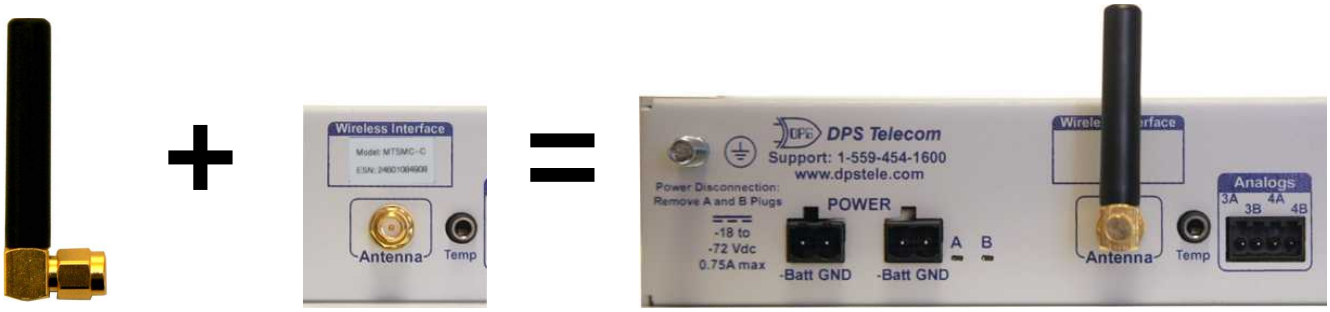
5) Provision the unit with the appropriate IP information for your network and restart the unit. Then restore your computer's IP configuration.



CellVoice Web Interface

Setup: Configuring Cellular Modem (CellVoice 4 Only)

1) Attach the antenna to the device.



The Antenna attaches to the CellVoice's back panel

2) Locate the **Model #** and **ESN/IMEI** number from the sticker on the top of the unit and write them down for reference during cellular account setup and modem activation.

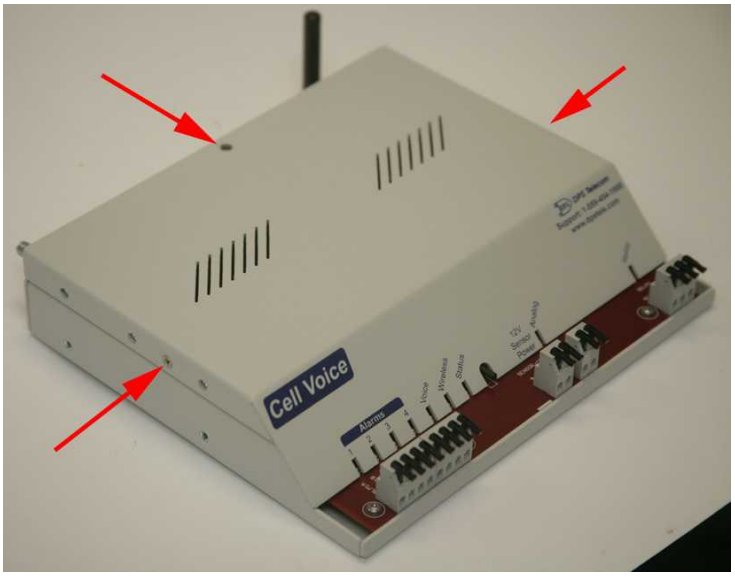
3) Contact Multi-Tech or your cellular provider to set up your account.

4) Go to *www.multitech.com* website and under the "Support" tab click on Cellular Modem Activation. Follow the instructions for activating your modem.

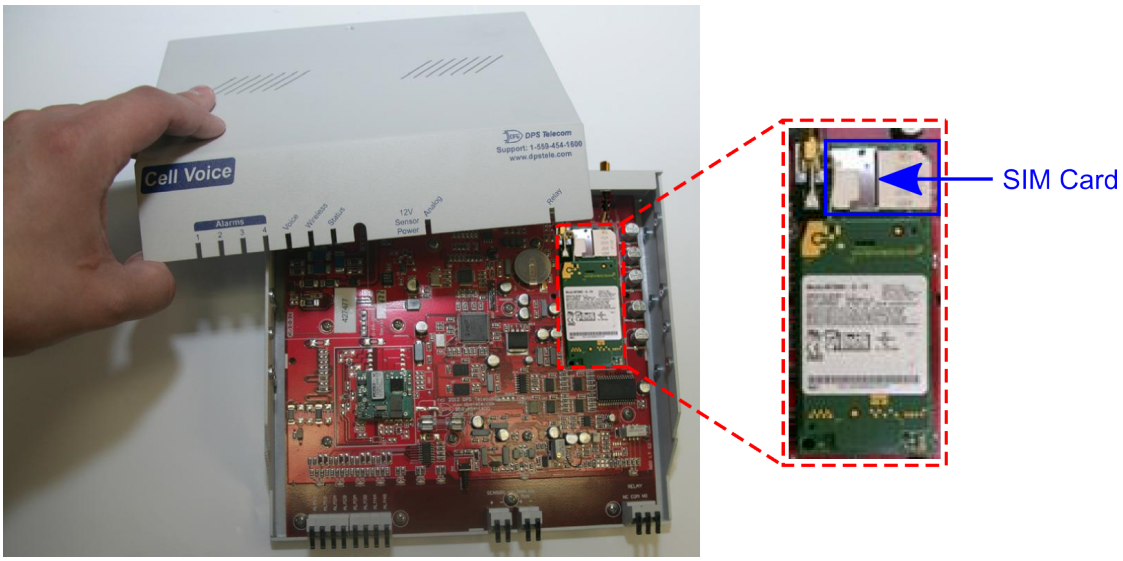
5) **If SIM card insertion is required** (GSM modem only)**:**

a) Remove the power connector from the CellVoice unit.

b) Remove the 3 screws from the top cover of the CellVoice as shown below and remove the cover.



c) Insert SIM card into the modem.

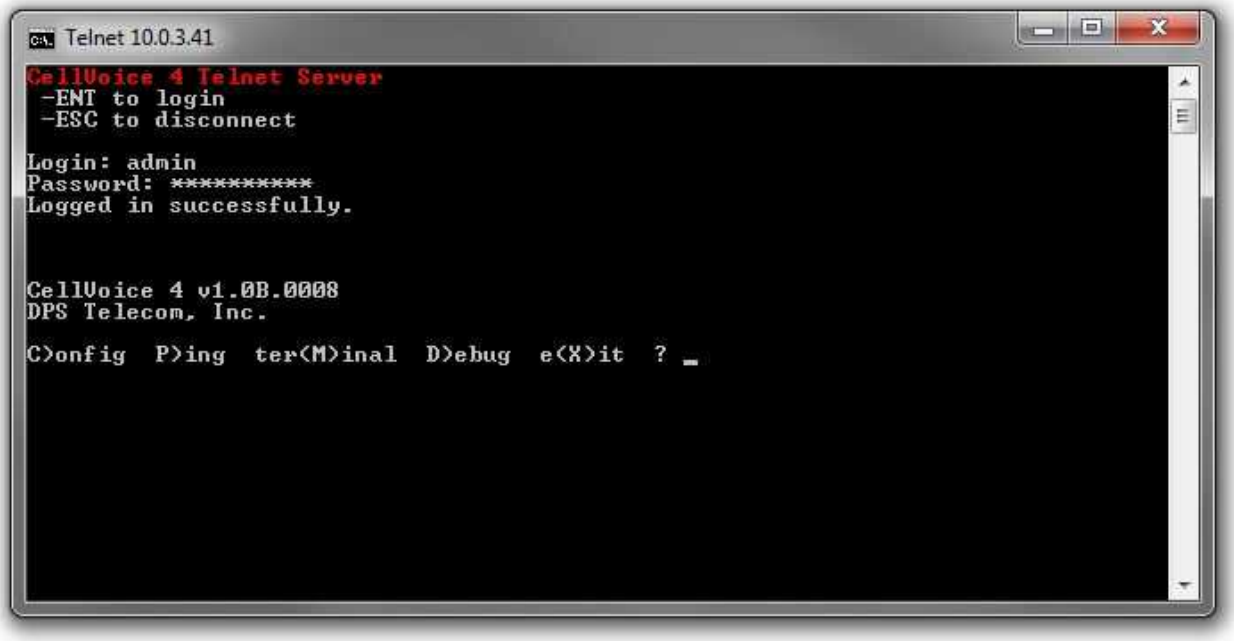


d) Reattach cover and reinstall three screws.

e) Insert the power connector into the CellVoice power plug.

6) **To establish terminal session to modem** (If necessary to program APN):

a) Telnet into the unit at port 2002 and log in with your username and password

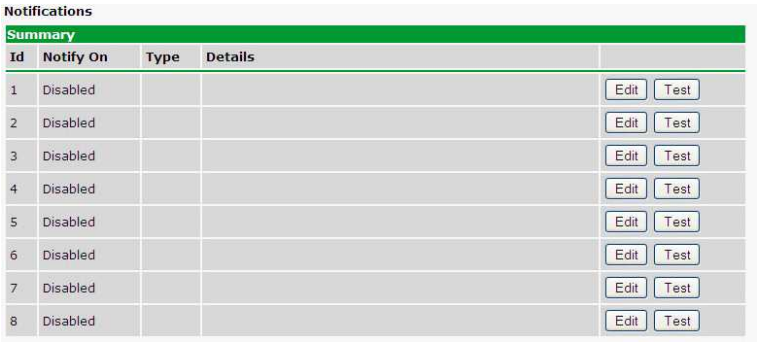


b) Type 'M' to establish a terminal connection to the modem.

c) Follow the instructions on the www.multitech.com website that are associated with your modem model and service provider to program the APN.

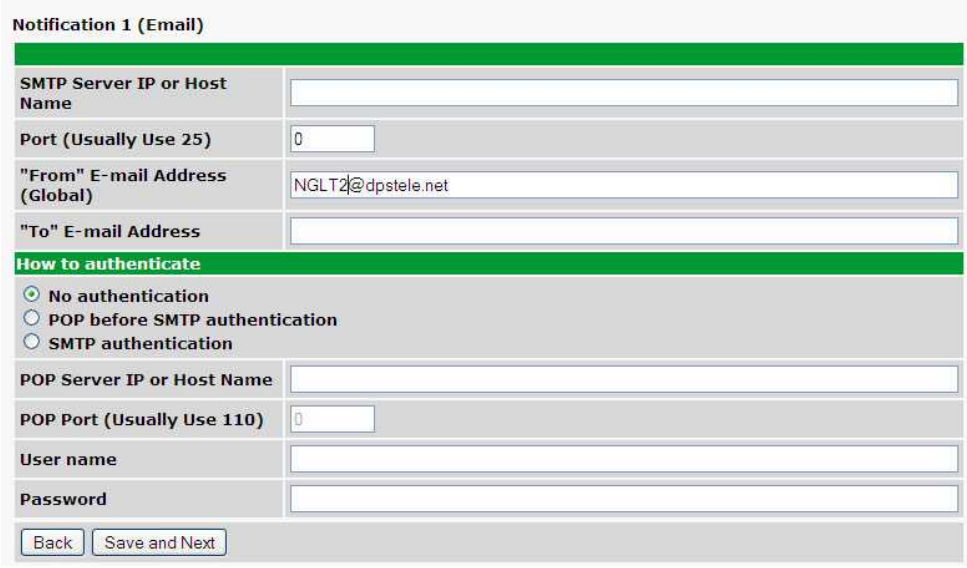
Setup: Test Email Notification

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



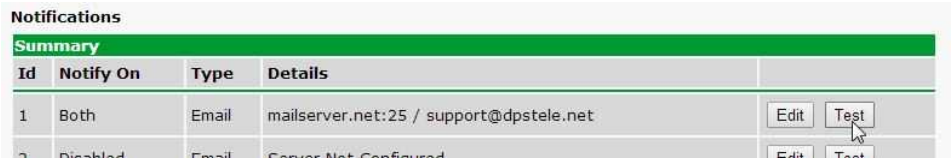
2. At the **Notification Setting** screen, use the drop down box to set what events to use for this notification. Now, select the **Send Email Notification** button and click **Save and Next**.

3. At the **Email Notification** screen, you'll enter your email server settings. Enter the **IP address** or **Host Name** of your email server. Enter the **Port Number** (usually 25) and the **"To" Email Address** of the technician that will receive these emails. If authentication is required, chose the type and fill in the necessary fields. Click **Next**.



4. At the **Schedule** screen accept default values.

6. Use the test button to send yourself an email notification.



Congratulations! Your notification settings are correct and your unit is live.

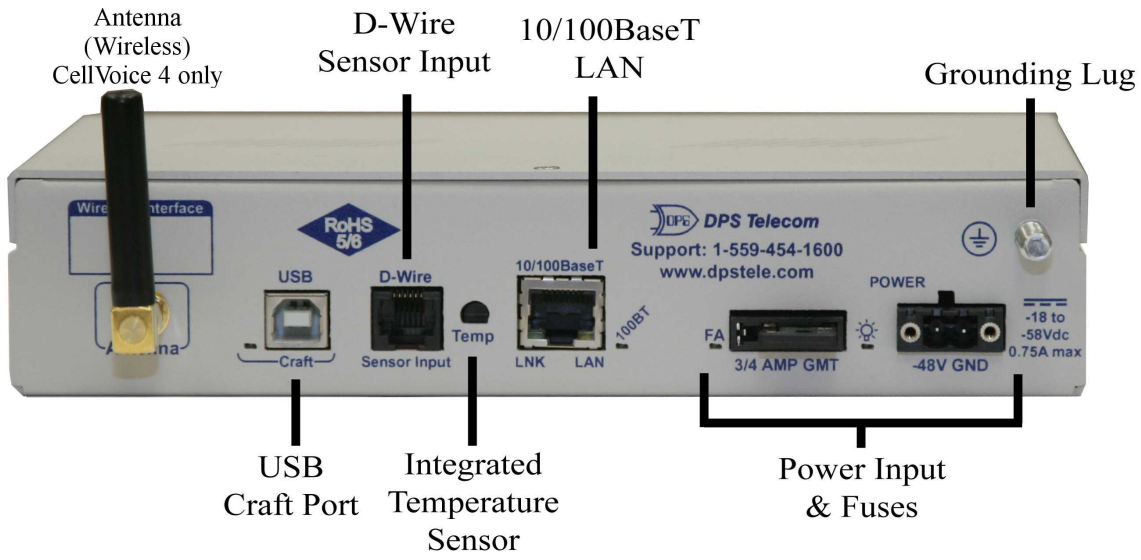
For more detailed configuration and setup, please reference the following sections:

- 6.8 Notifications
- 6.9 Alarms
- 6.10 Controls
- 6.11 Analogs
- 6.12 Sensors
- 9.1 Mounting Instructions

3 Specifications

Discrete Alarm Inputs:	Up to 4
Analog Alarm Inputs:	1 User Available 1 Power Monitoring (Optional)
Analog Accuracy:	+/- of Analog Range (See **Section 5.2**, **"Analog Step Sizes"**)
Temperature Sensors:	1 Integrated Sensor
Temp. Thresholds:	4
Control Relay:	1Form-C
Max Carry Current:	1A
Max Operating Voltage:	110VDC
Max Operating Current:	1A
Max Switching Capacity:	30W
Ping Targets:	32
SNMP Alarms:	32
Sensor Inputs:	Up to 16 D-Wire Sensors
Protocols:	SNMPv1, SNMPv2c, SNMPv3, DCPx, TELNET, HTTP, HTTPS
Dimensions:	1.720" H x 8.126" W x 7.146" D (4.369 cm x 20.641 cm x 18.152 cm)
Weight:	1 lb. 5 oz.
Mounting:	19" or 23" rack
Power Input	
Voltage Options Include:	Wide Range -24/-48VDC (-20 to -56 VDC) +24 VDC nominal via 110VAC wall transformer (20 to 36 VDC) -48VDC nominal (-36 to -72 VDC)
Current Draw:	100 mA @ 48VDC
Fuse:	1/2 Amp GMT Fuse if -48V or -24V
Interfaces:	1 RJ45 10/100BaseT full-duplex Ethernet port 1 USB rear-panel craft port Up to 4 Alarm input connectors (2 inputs per alarm) 1 Relay output connector (NO, NC, CO) 1 Push button switch (Optional) Internal Resettable Fuse if +12V or +24V (Optional) 1 RJ11 for D-Wire (Optional) 1 4-20 mA or 0-5V analog input (Optional) 1 12/24VDC Sensor power output up to 1/2A
Visual Interface:	9 Front Panel LEDs 6 Back Panel LEDs
Operating Temperature:	32°–140° F (0°–60° C)
Operating Humidity:	0%–95% non-condensing
MTBF:	60 years
Windows Compatibility:	Windows XP, 2000, Vista, 7 32/64 bit
RoHS:	5/6

4 Unit Back Panel

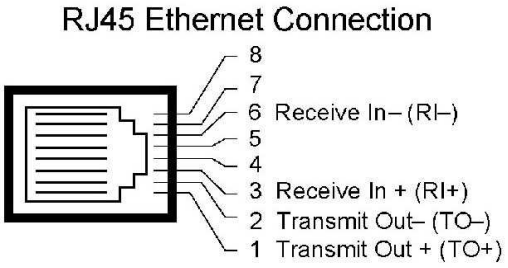


CellVoice 4 back panel connections

4.1 Craft Port

The back panel craft port is primarily used to give the unit an IP address so you can continue the rest of your database configuration over LAN.

4.2 LAN Connection



LAN Connection Pinnout

LAN is used for web browsing to the unit. You can also do your databasing over LAN, as well as sending email notifications and SNMP traps. To connect the unit to the LAN, insert a standard RJ45 Ethernet cable into the 10/100BaseT Ethernet port on the back of the unit. If the LAN connection is OK, the LNK LED will light **SOLID GREEN**.

4.3 Integrated Temperature Sensor

The unit features one internal temperature sensor, used to monitor the ambient temperature. The internal temperature sensor measures a range of -40° F to 180° F (-40° C to 82.2° C) within an accuracy of about ± 2°.

4.4 D-Wire Sensor Inputs

The ports on your unit labeled **Sensor Input** support up to 16 **D-Wire sensors**. Your unit powers and communicates with your D-Wire sensors via simple RJ-11 connections. You can chain your 16 sensors to the D-Wire port on the back of the unit in any order or combination.

The max cable length depends on the number of sensors daisy chained together. The cable lengths and corresponding number of sensors can be seen in the table below.

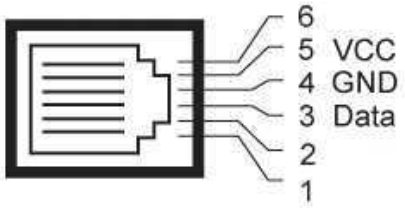
Maximum Cable Lengths							
Number of Nodes	Spec'd Max (ft)	Number of Nodes	Spec'd Max (ft)	Number of Nodes	Spec'd Max (ft)	Number of Nodes	Spec'd Max (ft)
1	800	9	150	17	75	25	50
2	700	10	125	18	75	26	50
3	475	11	125	19	50	27	50
4	350	12	100	20	50	28	50
5	275	13	100	21	50	29	50
6	225	14	100	22	50	30	40
7	200	15	75	23	50	31	40
8	175	16	75	24	50	32	40

Maximum Cable Lengths

Note: Some sensors may consume 2 analog channels (the combined temp/humidity sensor, D-PK-DSNSR-12002, for example).

Connecting D-Wire Sensors

Using a **standard 6P4C, straight-through RJ-11 cable** (part #D-PR-045-10A-01, pinout below), connect any digital sensor port on the unit to the **In** jack on a D-Wire sensor. Chain additional sensors to the D-Wire sensor (using the same straight-through cables) from the **Out** jack on the previous sensor to the **In** jack on the next (i.e. Out on sensor 4 to In on sensor 5).



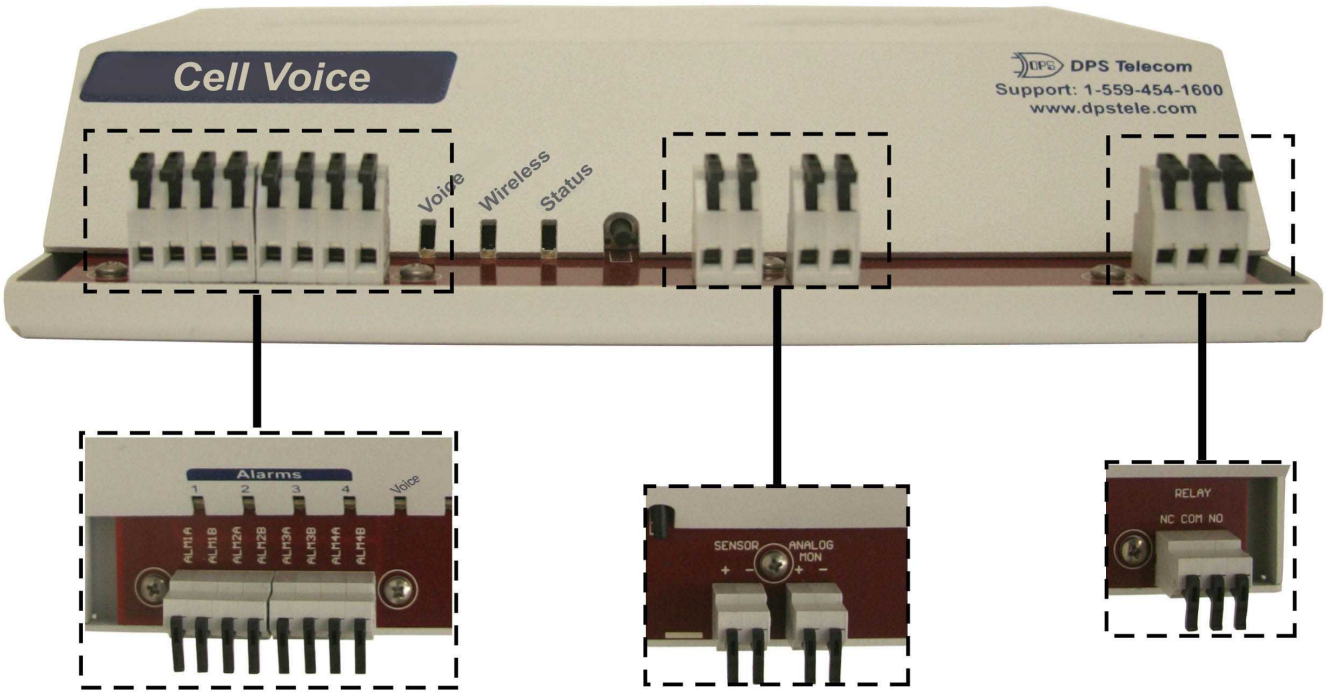
Pinout for the unit and D-Wire Sensor RJ-11 jacks

The D-Wire line of sensors includes temp/humidity, additional analogs, discretes, and more. Contact DPS at 1-800-693-0351 for information about available D-Wire sensors.

For details about configuring your sensors though the web interface, see the **Sensors** section of this manual.

5 Unit Front Panel

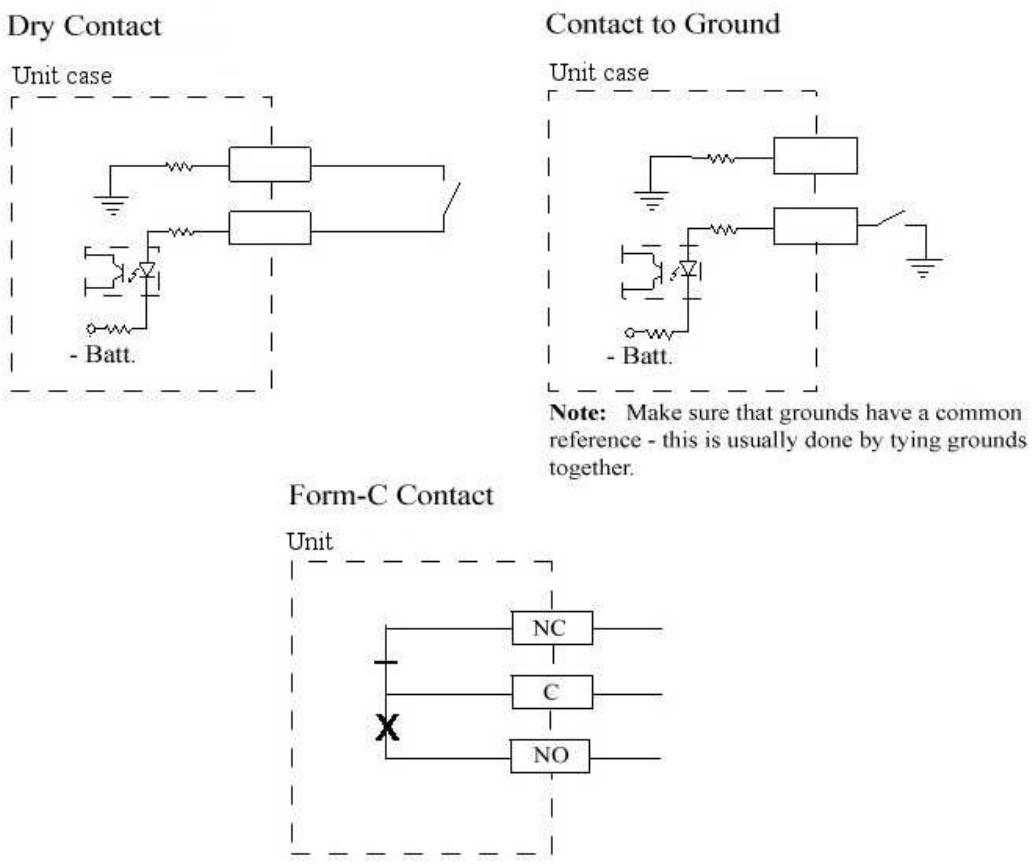
5.1 Discrete Alarms and Relay Connection



Discrete alarm inputs, control relays, and the analog are wired using the spring-clamp terminal block connectors

Latching Terminations
The unit features up to 4 discrete alarm inputs (depending on your build option). There are 2 input poles per alarm. The analog (depending on your build option) is intended for monitoring a single 4-20mA sensor. Your option may also include either 12 or 24VDC power output for power a sensor up to 1/2 AMP. The unit's relay connector has 3 outputs for Normally Open (NO), Normally Closed (NC), and Common (CO).

1. Strip a small piece off the end of the wire.
2. Flip open the connector for the desired alarm input. Lock it down over the wire.
3. Indicator LEDs on the front panel show you the summary status. Check for solid green light to see if power is connected.



Discrete alarm points can connect as a dry contact, a contact to ground, or a Form-C contact

The discrete alarm inputs are also called digital inputs or contact closures. Discrete alarms are either activated or inactive, so they're typically used to monitor on/off conditions like power outages, equipment failures, door alarms and so on.

The unit'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.

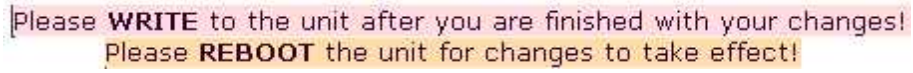
In a dry contact alarm, the alarm lead brings a contact to the ground lead, activating the alarm. In a contact to ground alarm, a single wire brings a contact to an external ground, activating the alarm.

6 Provisioning Menu Field Descriptions

The unit configuration is performed from the **Provisioning** menus (the menu options in green on the left-side of the web interface). The following pages provide a brief description of the options available in each menu.

Saving Configuration Changes to the unit:
At the bottom of each screen you access from the **Provisioning** Menu, you will see a **Save** button. Clicking Save will cache your changes locally. The web interface will then prompt you to either **Write** your changes to the unit or **Reboot** the unit for changes to take effect in the top-left corner of your browser. The relevant options will be highlighted in the **Device Access** options**.**

Note: If the unit prompts you to both Write changes to the unit **and** Reboot, you will Write your changes first. Rebooting before without writing to the unit (if a Write is required) will cause you to lose your configuration changes.

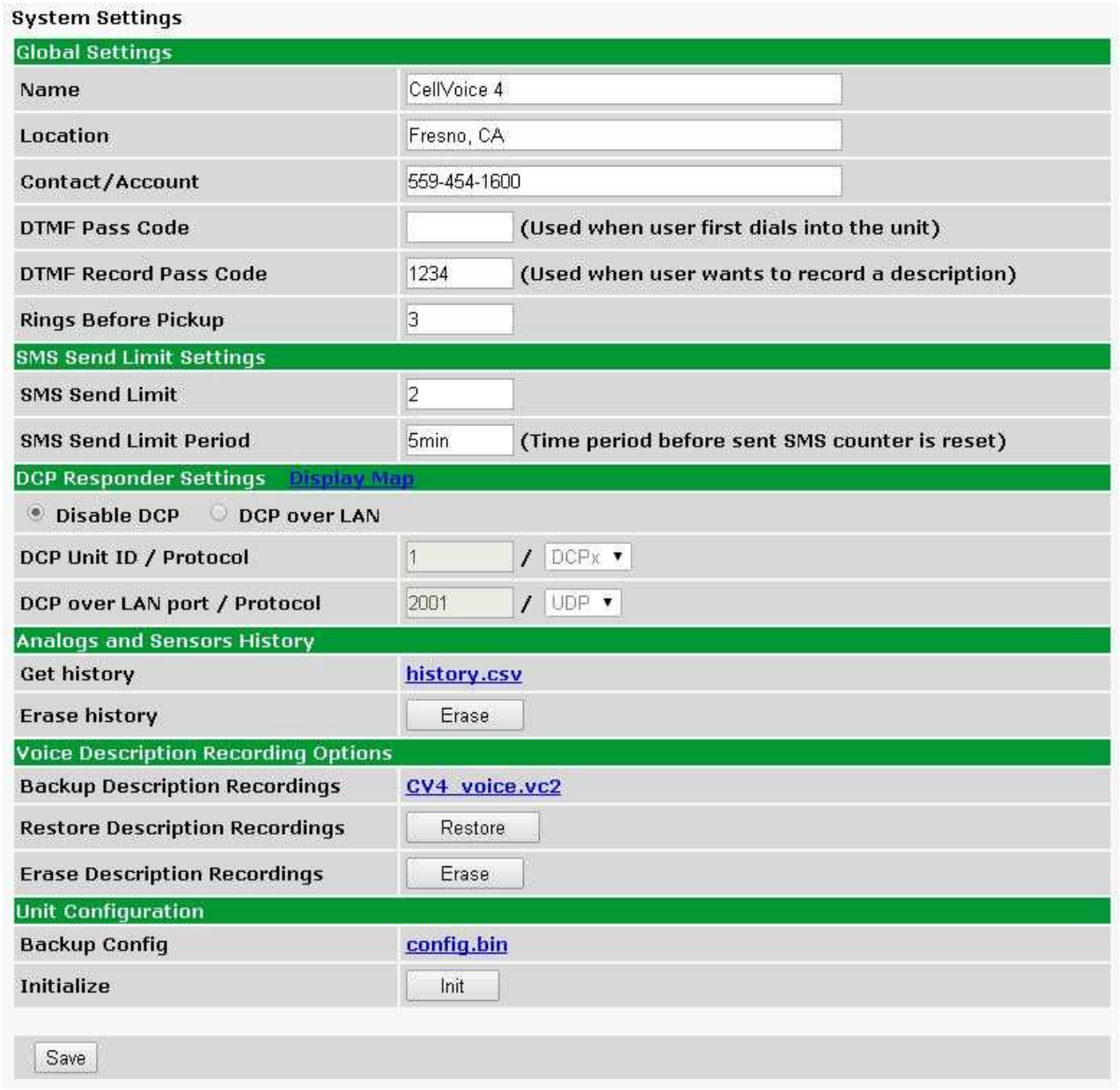


Status messages on the unit Device Access menu, inform you how to implement your changes

The control menu highlights items that must be completed for your changes to take effect

6.1 System

From the **Provisioning** > **System** menu, you will configure and edit the global system, call, T/Mon and control settings for the unit.

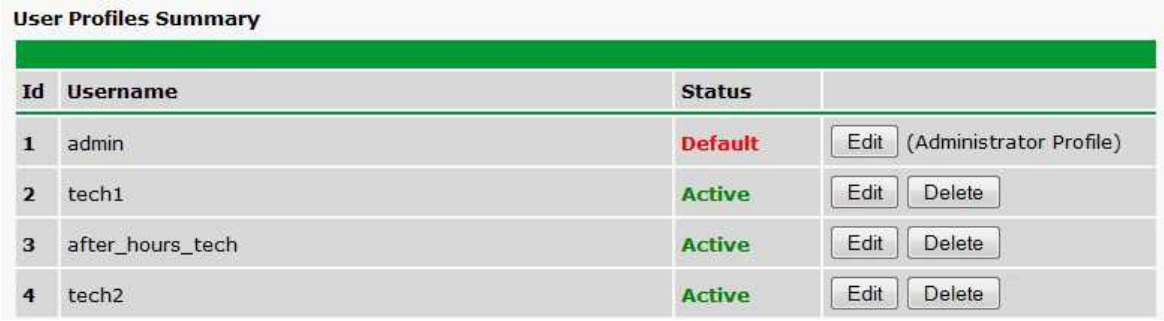


The Provisioning > System menu

Global System Settings	
Name	A name for this unit. (Optional field)
Location	The location of this unit. (Optional field)
Contact	Contact telephone number for the person responsible for this unit. (Optional field)
DTMF Pass Code	Used to login to the unit via telephone to hear alarm notifications. Only number entries are valid. **(CellVoice 4 only)**
DTMF Record Pass Code	Needed to access rights to record or re-record the custom (voice) alarm detail. Only number entries are valid. **(CellVoice 4 only)**
Rings Before Pickup	Used to change the number of rings before the unit picks up when dialing into it. **(CellVoice 4 only)**
SMS Send Limit Settings	
SMS Send Limit	Maximum SMS notifications that may be sent during the configured period. **Note**: This does not effect SMS re-broadcasts.
SMS Send Limit Period	Time period in which the unit retains the number of SMS notifications attempted to be sent.
DCP Responder Settings *(For use with T/Mon)*	
DCP Unit ID / Protocol	User-definable ID number for this unit (DCP Address) and desired protocol.
DCP LAN	Enter the DCP port for this unit (UDP/TCP port) and desired protocol.
Analogs and Sensors History	
Get History	Download a log of all configured analog and sensor values.
Erase History	Erase the log of all configured analog and sensor values.
Voice Description Recording Options	
Backup Description Recordings	Use this option to save your voice description recordings to your computer.
Restore Description Recordings	Use this option to upload your previously saved voice description recordings.
Erase Description Recordings	Use this option to erase all current voice description recordings.

6.2 User Profiles

Clicking **User Profiles** gives you access to modify the default username and password, and to edit the administrator profile and create up to 9 additional unique user profiles, each with different access rights to the unit's web interface.

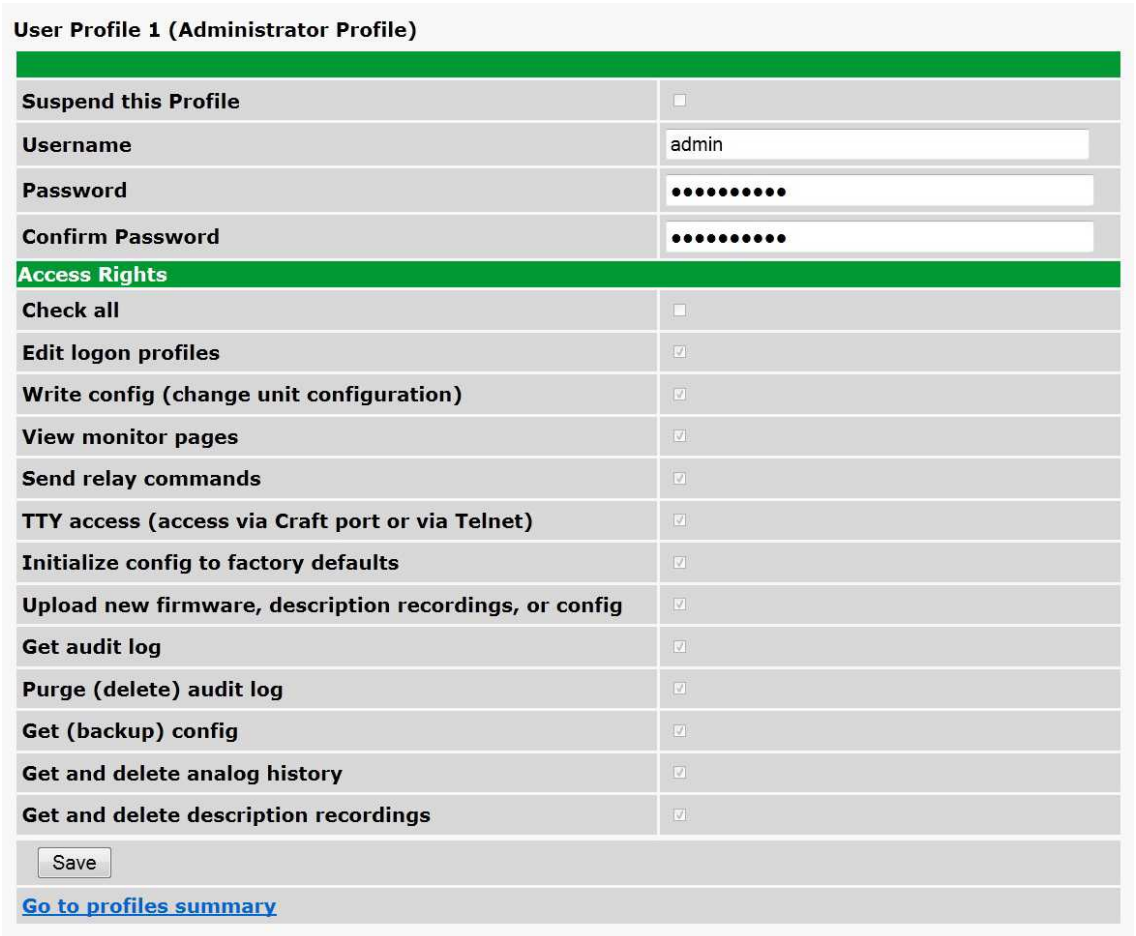


User Profiles Summary

Id	Username	Status	
1	admin	Default	Edit (Administrator Profile)
2	tech1	Active	Edit Delete
3	after_hours_tech	Active	Edit Delete
4	tech2	Active	Edit Delete

Configure access privileges for users in the User Profile screen

Note: The first user profile in the User Profiles menu is the Administrator's Profile. Access rights for the administrator's profile are all enabled and may not be disabled, nor can the profile be deleted or suspended. This is a precaution to prevent a situation in which an access right is disabled for all users. You may still edit the **Username, Password, and Active Days** fields for the Administrator Profile.



User Profile 1 (Administrator Profile)

Suspend this Profile	☐
Username	admin
Password	••••••••••
Confirm Password	••••••••••
Access Rights	
Check all	☐
Edit logon profiles	☑
Write config (change unit configuration)	☑
View monitor pages	☑
Send relay commands	☑
TTY access (access via Craft port or via Telnet)	☑
Initialize config to factory defaults	☑
Upload new firmware, description recordings, or config	☑
Get audit log	☑
Purge (delete) audit log	☑
Get (backup) config	☑
Get and delete analog history	☑
Get and delete description recordings	☑

Save

Go to profiles summary

The User Profiles screen allows you control user functionality

To create or edit any of the 10 user profiles (including the default), click the **Edit** button. From there, you can change all configurable settings for a user profile.

	User Profile
Suspend this Profile	If this box is checked, the profile will not be able to access the unit.
Username	Enter a username or a user description
Password	Enter a unique user password **Note:** All passwords are AES 128 encrypted.
Confirm Password	Re-enter the password.
Access Rights	
Check all	Enables all Access Rights
Edit logon profiles	Enables the user to add/modify user profiles and password information.
Write Config (change unit configuration)	Enables the user to change the unit config by accessing the **Write** feature in the control menu.
View monitor pages	Allows the user to access Monitor menu options.
Send relay commands	Allows the user to send commands to operate the device's control relays.
TTY access (access via Craft port or via Telnet)	Grants the user access to the unit via TTY interface (via craft or telnet).
Initialize config to factory defaults	Allows the user to use the **Initialize** option in the **Device Access** menu, resetting the unit to factory default settings. All user settings will be lost.
Upload new firmware, description recordings, or config	Allows the user to upload firmware or backed-up configuration files.
Get audit log	Allows the user to access the Audit Log (**Get Log** command).
Purge (delete) audit log	Allows the user to deletes the existing audit log.
Get (backup) config	Backs-up all user profile configuration settings.
Get and delete analog history	Allows the user to access and delete the analog and sensor history.
Get and delete description recordings	Allows the user to access and delete the recorded analog and sensor history.

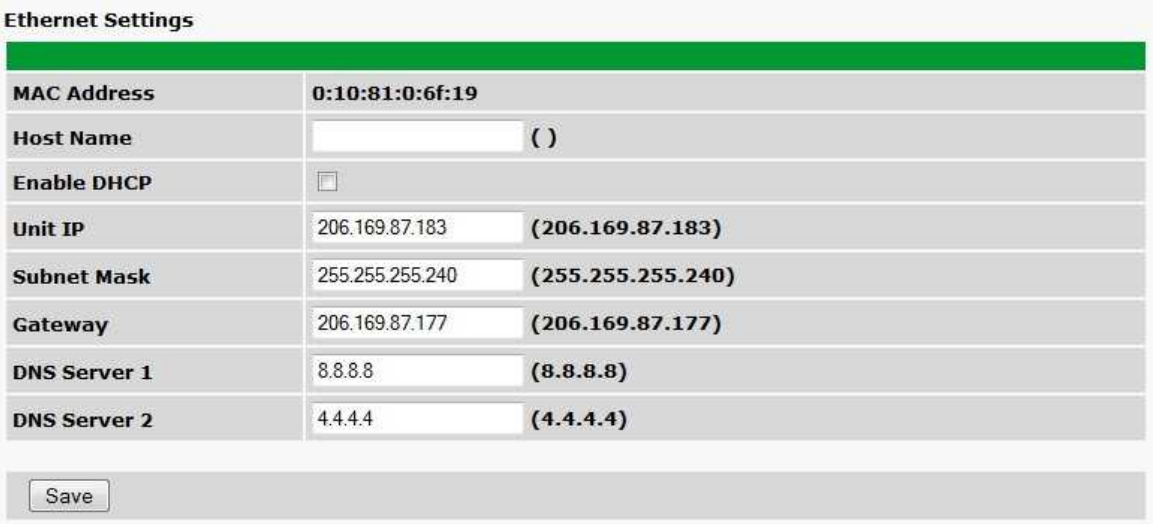
User profile field descriptions

Once you've finished configuring a profile, click **Save** to store your changes locally.

To access another profile, simply click **Go to profiles summary** at the bottom of the page. You may also navigate away from the user profiles screen at any time by clicking any of the menu options on the left side of the screen.

6.3 Ethernet

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



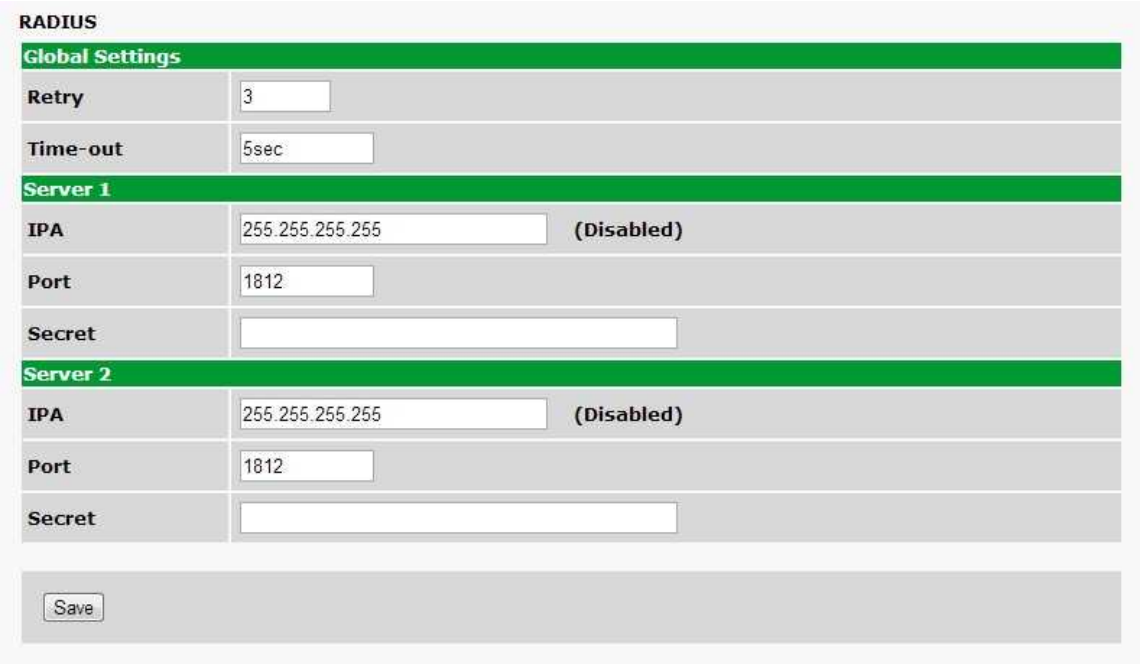
The Provisioning > Ethernet menu

Ethernet Settings	
MAC Address	Hardware address of the unit (Not editable - For reference only).
Host Name	Used only for web browsing. Example: If you don't want to remember this unit's IP address, you can type an alphanumeric name in this field, such as CV4. Once you save and reboot the unit, you can now browse to it locally by simply typing in "CV4" in the address bar (no "http://" 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 unit.
Subnet Mask	A road sign to the unit, 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 unit 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.

Note: DNS Server settings are required if a hostname is being used for ping targets.

6.4 RADIUS

RADIUS (Remote Authentication Dial In User Service) is an industry-standard way to manage logins to many different types of equipment in one central location. The unit connects to your central RADIUS server. Every time a device receives a login attempt (usually a username & password), it requests an authentication from the RADIUS server. If the username & password combination is found in the server's database, an affirmative "access granted" reply is sent back to the unit device, allowing the user to connect.



The Provisioning > RADIUS menu

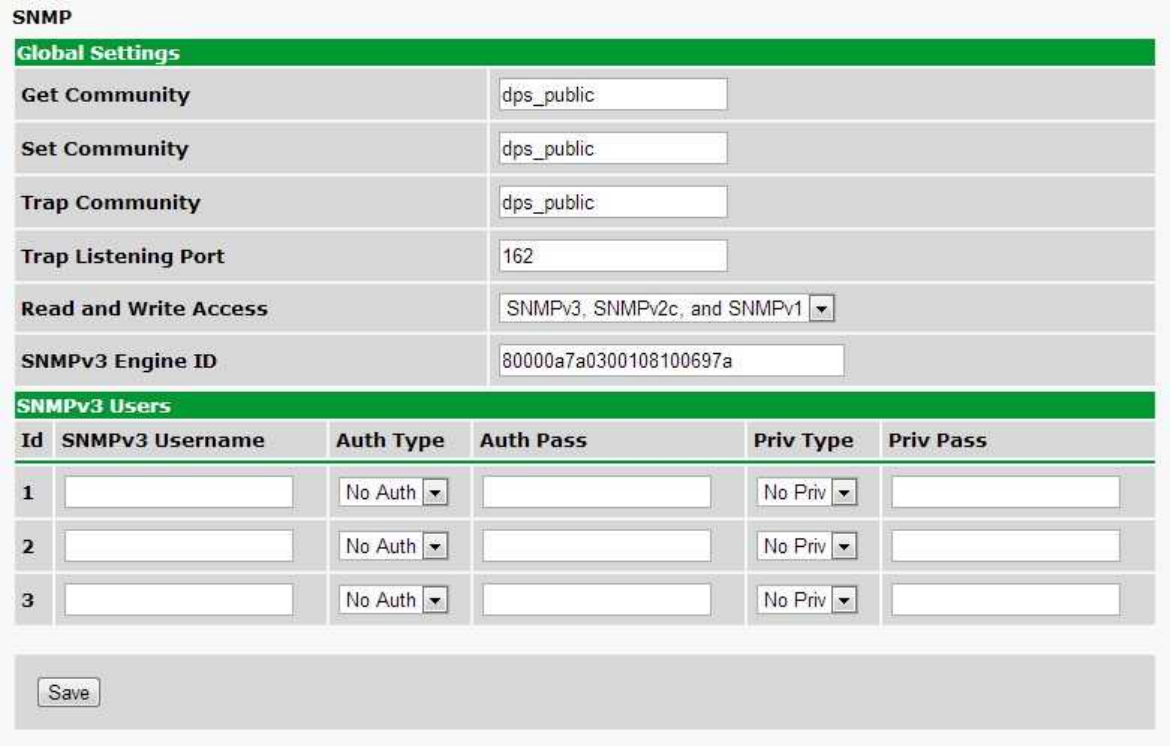
RADIUS Settings	
Retry	Enter the number of times the RADIUS server should retry a logon attempt.
Time-out	Enter the number of seconds before a logon request is timed out.
Server 1/2	
IPA	Enter the IP address of the RADIUS server.
Port	Port 1812 is an industry-standard port for using RADIUS.
Secret	Enter the RADIUS secret in this field.

After successfully entering the settings for the RADIUS server, the unit Web Browser will prompt users for both a Username and Password, which will be verified using the information and access rights stored in the RADIUS database.

RADIUS logins are **case-sensitive**. If the RADIUS server is unavailable or access is denied, the local user profiles will work via craft port access only. Also, the "dictionary.dps" files (included on the Resource Disk) needs to be loaded on the RADIUS server for access-right definition. If RADIUS is enabled on the unit, local authentication will be invalid through the web and can only work via craft port.

6.5 SNMP

The **Provisioning** > **SNMP** menu allows you to define and configure the SNMP settings.

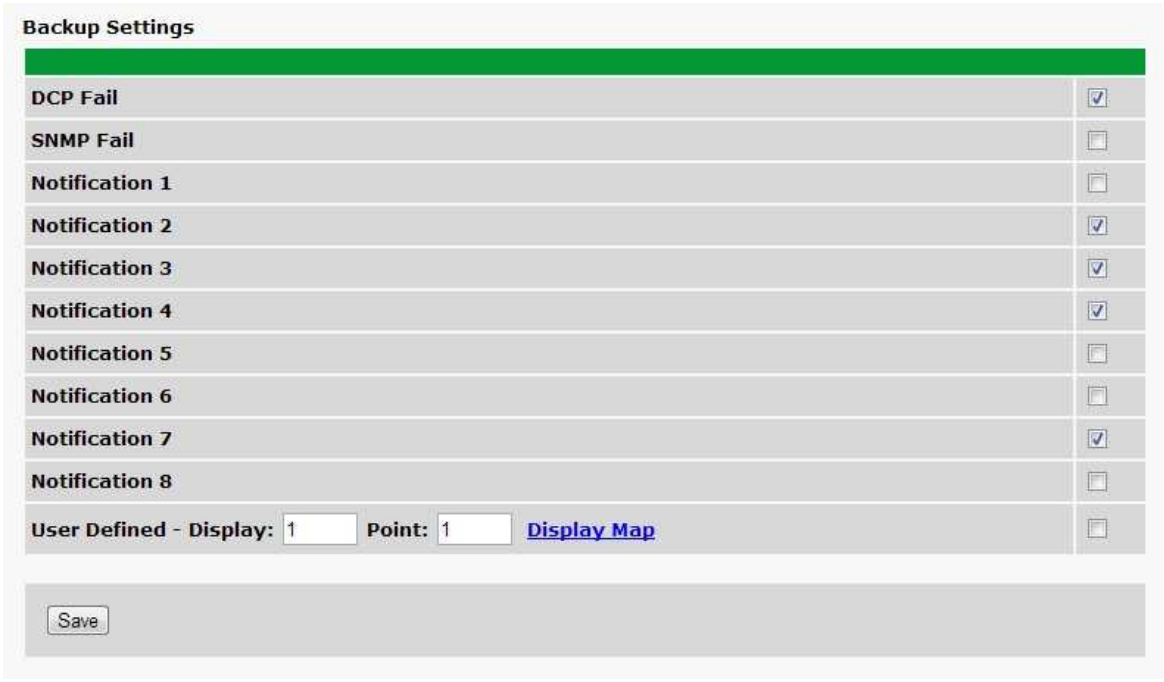


The Provisioning > SNMP menu

Global Settings	
Get Community	Community name for SNMP requests.
Set Community	Community name for SNMP SET requests.
Trap Listening Port	The port through which traps are listened for or received. By default, the trap listening port is 162.
Read and Write Access	This field defines how the unit may be accessed via SNMP. This can be set to the following: • **SNMP v2c and SNMP v1-only**: Allows SNMPv1 and SNMPv2c access **(Default)** • **SNMP v2c only**: Allows SNMPv2c access only • **Access Disabled**: Restricts all access to unit via SNMP
SNMPv3 Engine ID	The engine identification that uniquely identifies the agent in the device.
SNMPv3 Users	
Username	Community name for SNMP requests.
Auth Type	Select the authentication type.
Auth Pass	Specify the authentication password.
Priv Type	Select the privacy type.
Priv Pass	Specify the privacy password.

6.6 Backup Mode

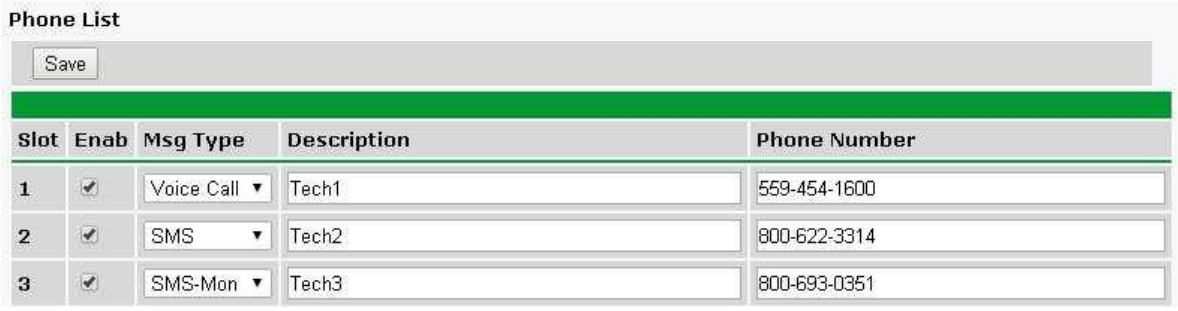
The **Provisioning** > **Backup Mode** menu allows you to define and configure Backup Mode alarms. The Backup Mode menu provides a list of preset alarms, as well as the ability to create user defined alarms from the Display Map. You can also create wireless Backup Mode notifications using Voice and SMS (CellVoice 4 only). For more information, see **Section 10.5** "Setting up Backup Mode."



The Provisioning > Backup Mode menu.

6.7 Phone List (CellVoice 4 only)

Up to 32 phone numbers can be stored for the CellVoice 4 to call with alarm information. This list is unordered and should include all phone numbers for those that need to know and/or respond to alarms. When setting up a voice call notification later, you can designate which of these individuals to call about which alarms, in your desired order.



The Provisioning > Phone List menu

Phone List Settings	
Message Type	Description.
Voice Call	Recipient will receive a phone call with notification of event.
SMS	Recipient will receive a SMS message in standard format.
SMS-Mon	Recipient will receive a SMS message in RRM (Rapid Response Monitoring) format.

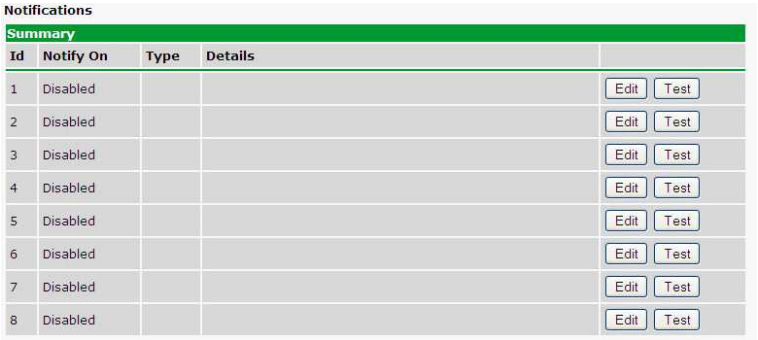
6.8 Notifications

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

Once you've chosen which notification you want to setup, click the **Edit** button on the right-hand side to begin configuration. Then choose a notification method: Email, SNMP, Voice Call, or SMS (voice call and SMS available on CellVoice 4 only). Now click **Save and Next** to continue to a Notification Settings screen.

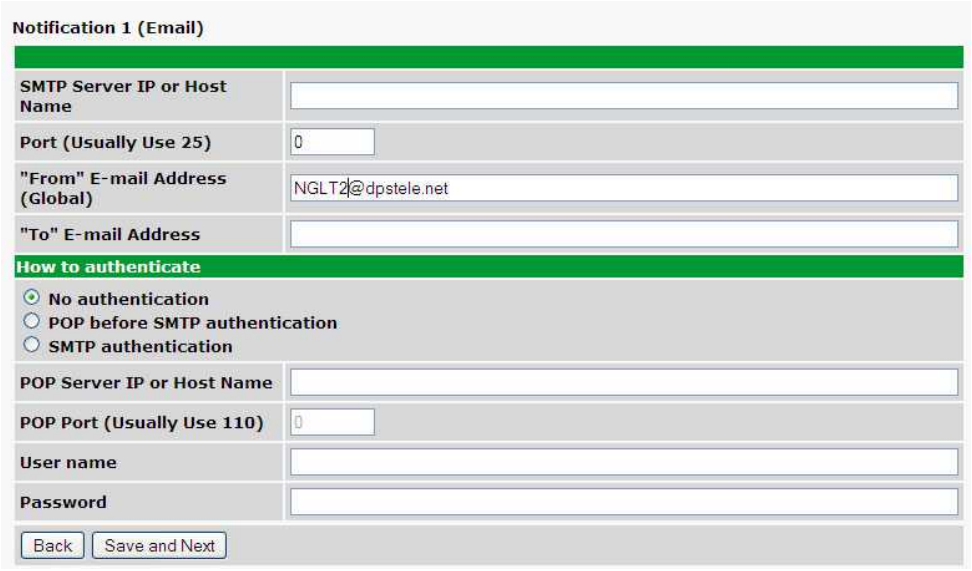
6.8.1 How to Send Email Notifications

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



2. At the **Notification Setting** screen, use the drop down box to set what events to use for this notification. Now, select the **Send Email Notification** button and click **Save and Next**.

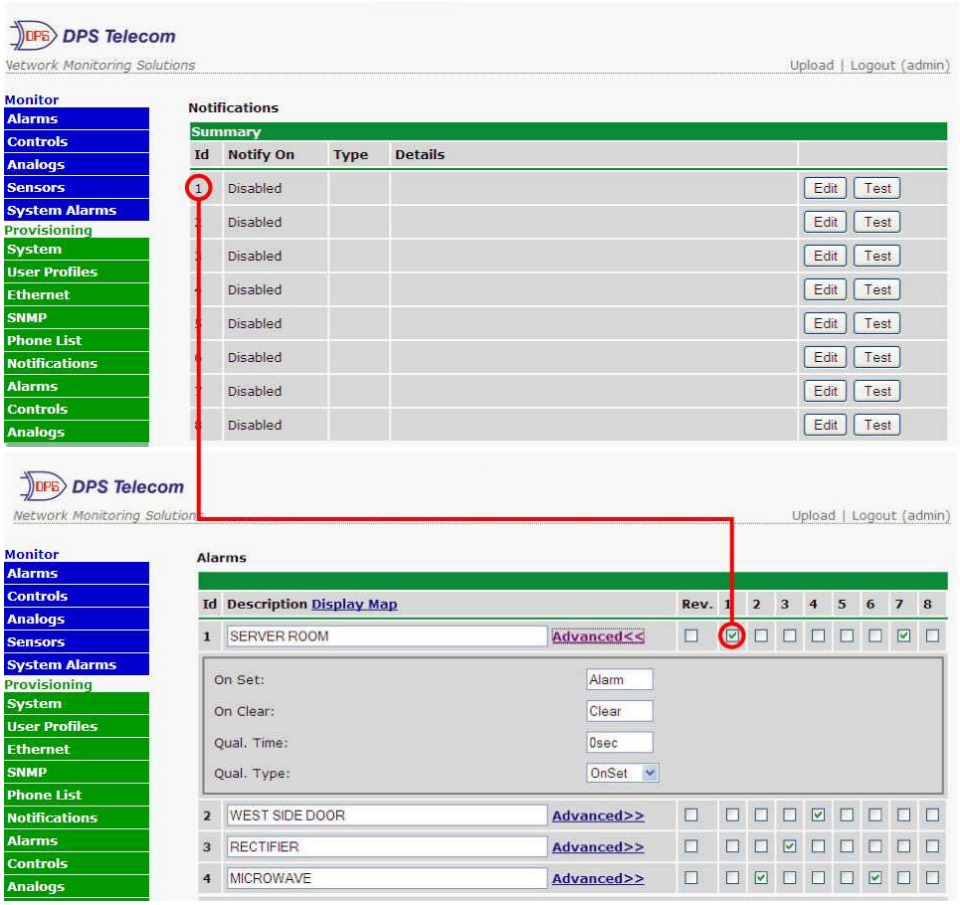
3. At the **Email Notification** screen, you'll enter your email server settings. Enter the **IP address** or **Host Name** of your email server. Enter the **Port Number** (usually 25) and the **"To" Email Address** of the technician that will receive these emails. If authentication is required, chose the type and fill in the necessary fields. Click **Next**.



4. At the **Schedule** screen, you'll select the exact days/times you want to receive email notifications. You can set 2 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.)

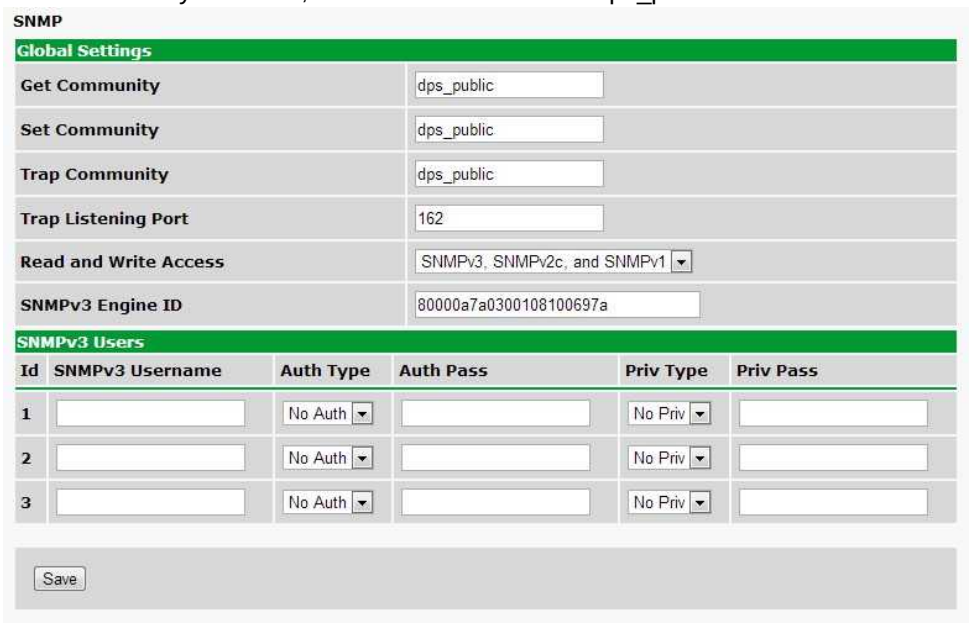
5. If you chose to test the email notification you've just setup, you will prompted with a pop up . Click **OK** to send a test email alarm notification. Confirm all your settings by checking your email to see if you've received it. **NOTE:** This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point. See the next step.

6. Now you will associate this notification to an alarm (system, base, analog, etc.) You have 8 notification devices available to use. In the image below, you might assign **Notification Device 1** to **Alarm 1**. This means that you would receive an email notification when an alarm for **Alarm 1** (SERVER ROOM**)** occurs.

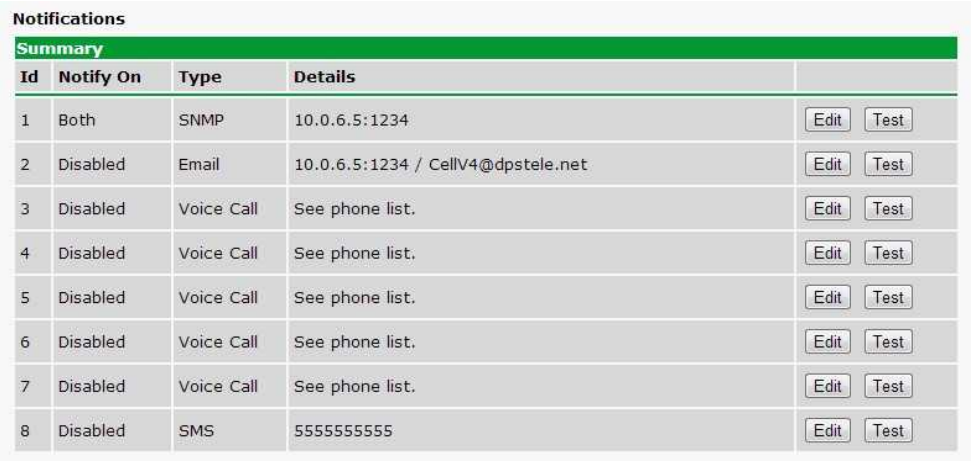

DPS Telecom
Network Monitoring Solutions
Upload | Logout (admin)
Monitor
Alarms
Controls
Analogs
Sensors
System Alarms
Provisioning
System
User Profiles
Ethernet
SNMP
Phone List
Notifications
Alarms
Controls
Analogs
Notifications
Summary
Id
Notify On
Type
Details
1
Disabled
Edit
Test
DPS Telecom
Network Monitoring Solutions
Upload | Logout (admin)
Alarms
Id
Description
Display Map
Rev.
1
2
3
4
5
6
7
8
1
SERVER ROOM
Advanced<<
On Set:
Alarm
On Clear:
Clear
Qual. Time:
0sec
Qual. Type:
OnSet
2
WEST SIDE DOOR
Advanced>>
3
RECTIFIER
Advanced>>
4
MICROWAVE
Advanced>>

6.8.2 How to Send SNMP Traps

1. Click on the **SNMP** button in the **Provisioning** menu. Enter the **SNMP GET** and **SNMP SET** community strings for your network, then click **Save**. The typical SNMP SET and GET community strings for network devices is "public". As an added security measure, we've made our default "dps_public".



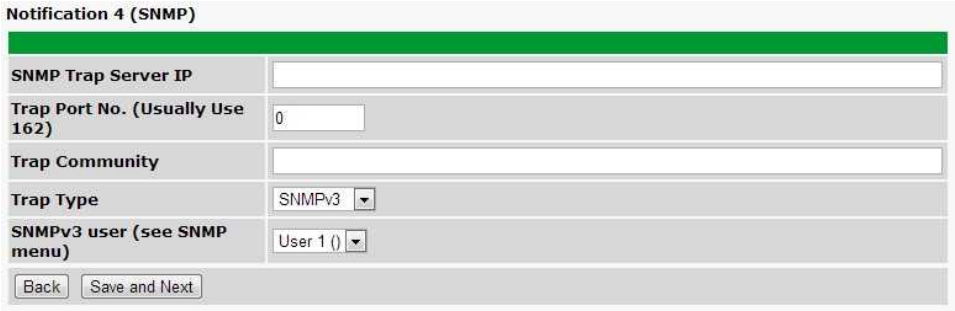
2. Click on the **Notifications** button in the **Provisioning** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking **Edit** for a notification number. In this example, we'll setup Notification 1 to send SNMP traps to your alarm master.



3. At the **Notification Setting** screen, use the drop down box to set which events to use for this notification. Now, select the **Send SNMP Notification** button and click Next.

4. At the **SNMP Notification** screen, you'll enter your network's SNMP settings. Enter the **IP address** of your SNMP Trap Server. Enter the **Trap Port Number** (usually 162) and the **Trap Community** password. Click **Save**

and Next.



5. At the **Schedule** screen, you'll select the exact days/times you want to receive SNMP notifications. You can set 2 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 **Save and Finish.** To try a test notification, click the **Test** button (See next step.)

6. If you chose to test the email notification you've just setup, you will prompted with a pop up . Click **OK** to send a test SNMP alarm notification. Confirm all your settings by checking your alarm master to see if the SNMP trap was received.

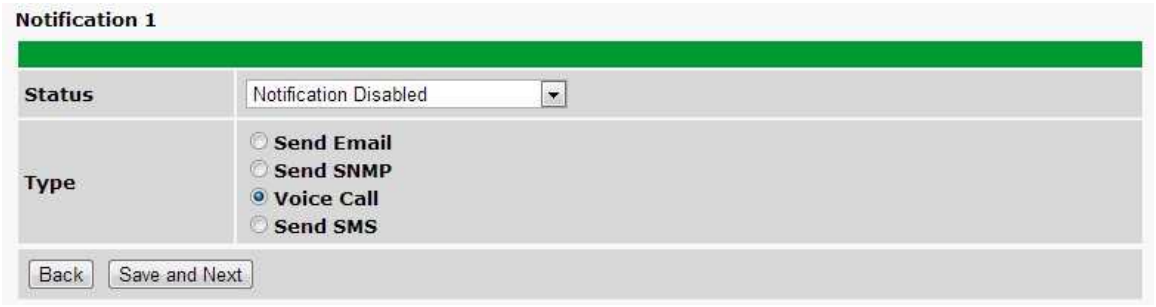
NOTE: This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point. See Step 6 in "How to Send Email Notifications" for more detail.

6.8.3 How to Send Voice Call Notifications (CellVoice 4 only)

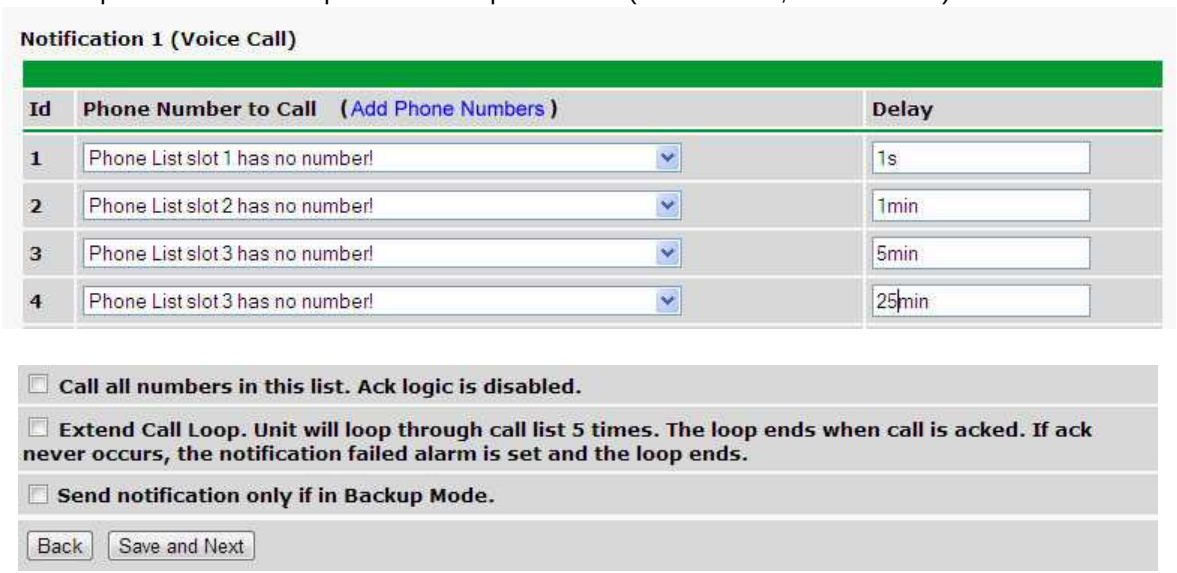
The following instructions will guide you through the process of setting up the unit to call your phone when alarms are triggered. Using your custom call list, the CellVoice 4 will begin the calling tree to notify the correct personnel, according to their schedules.

1. Click on the **Notifications** button in the **Provisioning** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking on **Edit** for a notification number. In this example, we'll setup Notification 6 to send an voice alert.

2. At the **Notification Setting** screen, select the conditions you want to be notified of from the drop down: **Notify on both Alarms and Clears, Notify on Alarms only, Notify on Clears only.** (Selecting Notification Disabled means you will not receive any type of alerts.) Select **Voice Call** and click **Save and Next**.



3. At the next screen, you'll select the phone numbers the CellVoice should call when the alarm that corresponds to this particular notification is triggered. Make your selections, in order, using the drop down lists. These are the phone numbers you entered in the **Provisioning > Phone List** menu. To jump to this menu and add more numbers, click the **Add Phones** link in the title bar. In the **Delay** field, enter the amount of time that should pass before the CellVoice attempts to call the next person on the phone tree. (s = seconds; m = minutes)



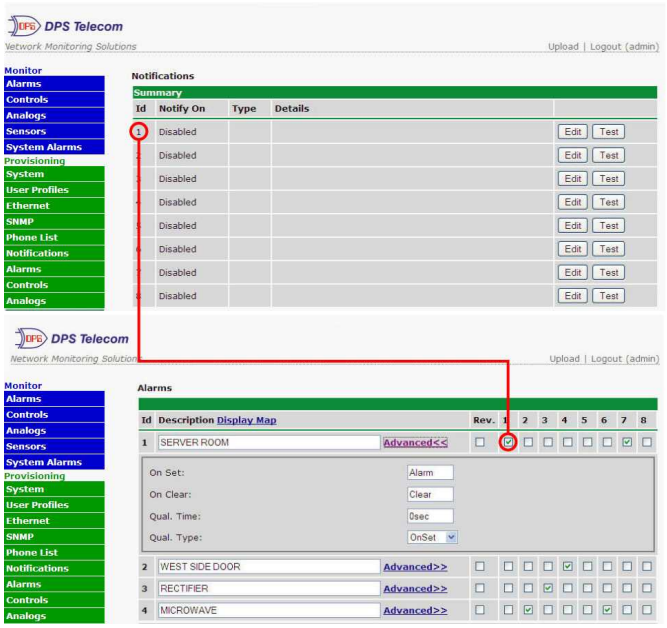
NOTE: At the bottom of this screen, you may choose the "**Call all numbers**" box to disable acking. When checked, the unit will call all numbers in the list, instead of stopping when the alarm or clear is acknowledged. You may also choose to choose whether you want the CellVoice to dial ONLY if a **Backup Mode** Point is set. See **Section 9.5** for more information.

5. At the **Schedule** screen, you'll select the exact days/times you want to receive notifications. You can set 2 schedules per notification. For example, you may want to send after hours or 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 **Save and Finish.** To try a test notification, click the **Test** button (See next step.)

6. If you chose to test the notification, you will see the popup below. Click **OK** to test a voice notification. **NOTE:** This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point.

7. Now you will associate this notification to an alarm {system, base, analog, etc.) You have 8 notification devices available to use. In the image below, you might assign **Notification Device 1** to **Alarm 1**. This means that you would receive an email notification when an alarm for SERVER ROOM occurs. Remember that Notification #1 in the Notifications menu is the same as N1 on the alarms page.



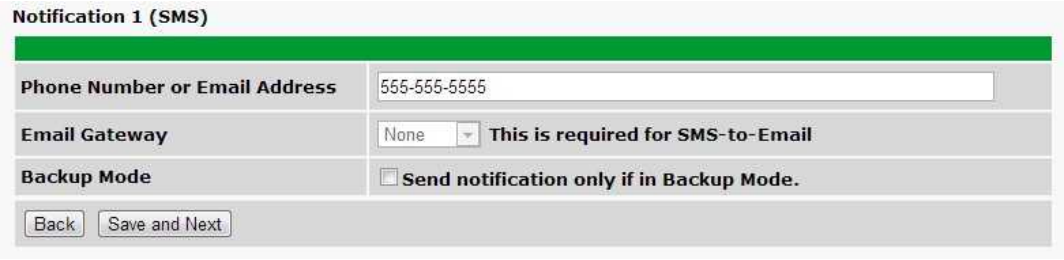
6.8.4 How to Send SMS Notifications (CellVoice 4 only)

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

2. At the **Notification Setting** screen, select the conditions you want to be notified of from the drop down: **Notify on both Alarms and Clears, Notify on Alarms only, Notify on Clears only.** (Selecting Notification Disabled means you will not receive any type of alerts.) Select **Send SMS** and click Save and Next.

3. At the next screen, you'll enter the phone number or email address that the CellVoice should send a message to when the alarm that corresponds to this notification is triggered. Enter the phone number or email address, select an email gateway if necessary, and choose whether you want the CellVoice to dial ONLY if a Backup Mode Point is set. Then click **Save and Next**.

Note: When sending an SMS, you can either use hyphens to separate phone numbers or type the entire number in without hyphens (555-555-5555 or 5555555555). However, if you are sending an SMS using the **Email Gateway**, you must remove all dashes. **Example**: 555-555-5555 becomes 5555555555@txt.att.net

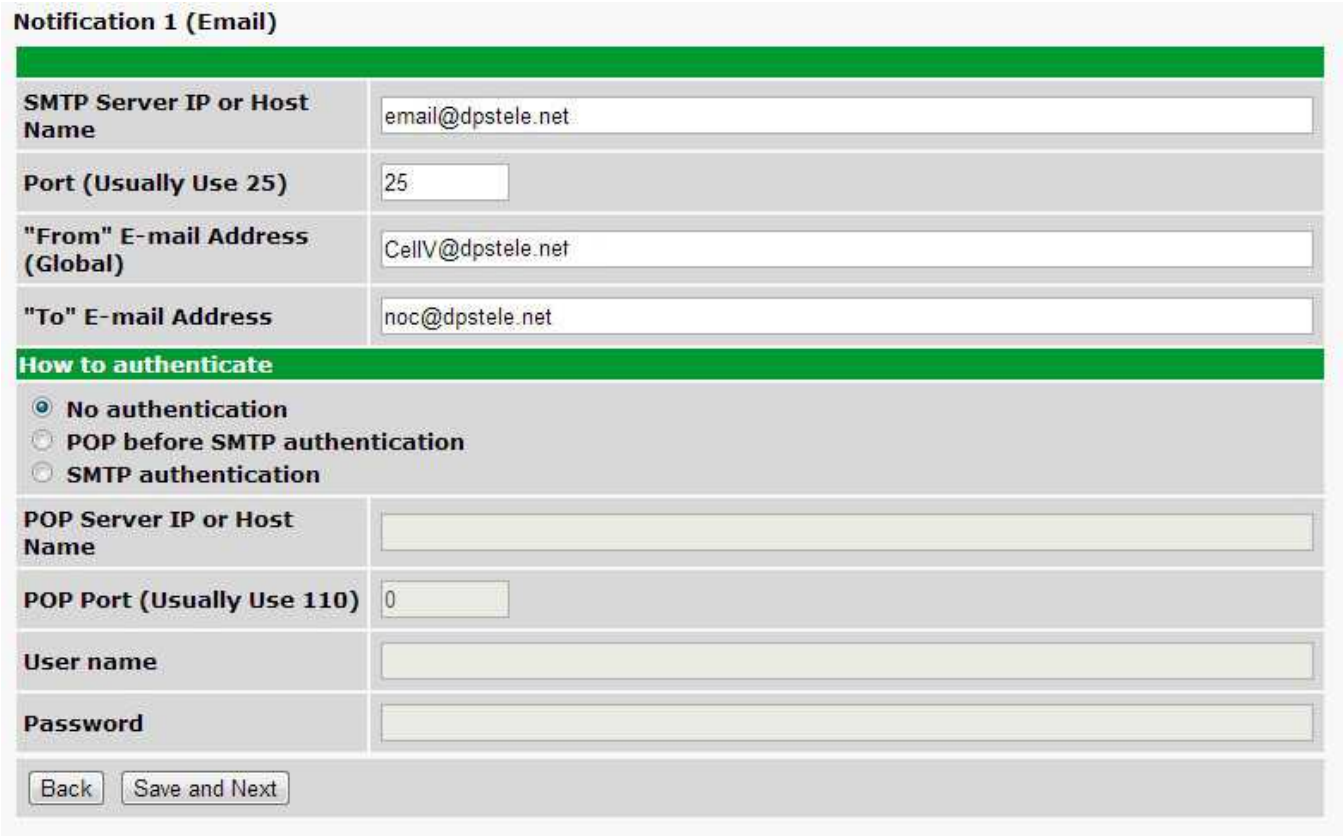


5. At the **Schedule** screen, you'll select the exact days/times you want to receive notifications. You can set 2 schedules per notification. For example, you may want to send after hours or at certain times during the week, and at different hours on the weekend. Use the check boxes to select the days of the week, and select the time from the drop down menus. Click **Save and Finish.** To try a test notification, click the **Test** button (See next step.)

6. Click **Test** to send a test SMS notification. **NOTE:** This test only means that your notification settings are correct, but you still need to assign the notification to an alarm point (See step 6 of the "How to Send Email Notifications" section).

6.8.5 Notification Settings

Email Notification Fields

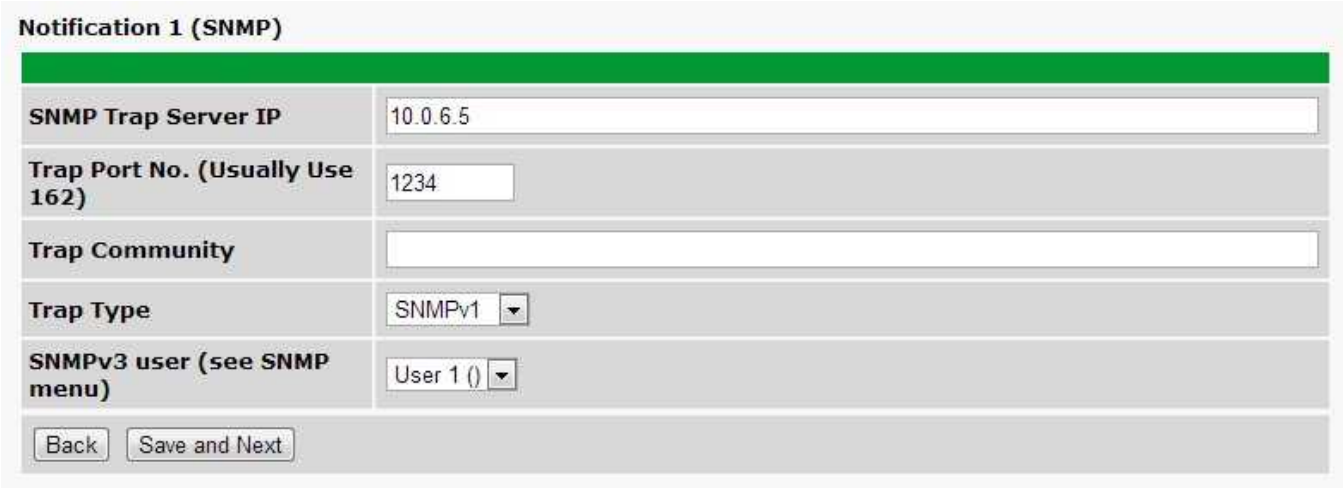


Editing Email Notification Settings

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 unit will send emails from. Not editable from this screen.
"To" E-mail Address	The email address of the person responsible for this unit, who will receive email alarm notifications.

Note: If you want to send authenticated emails, click the appropriate radio button. If you enable POP authentication, you will have to enter the relevant authentication information the fields below.

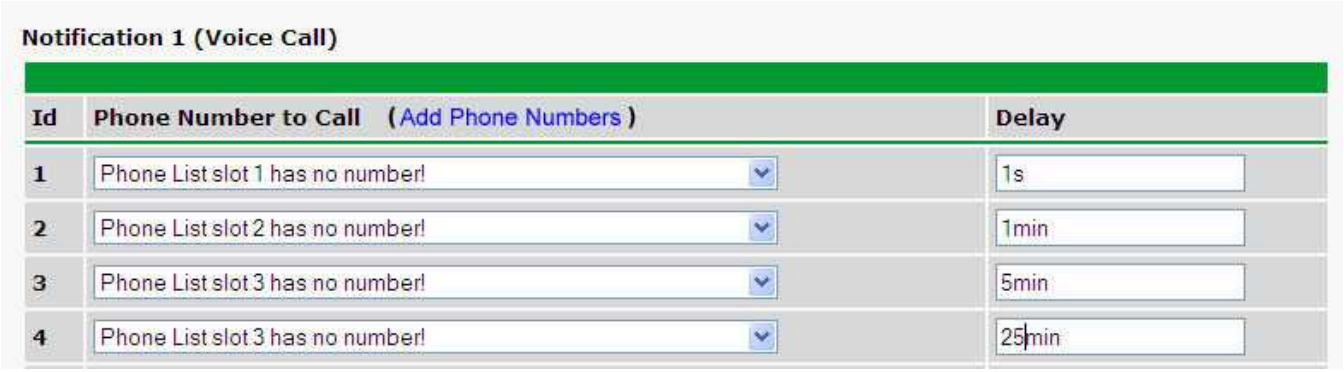
SNMP Notification Fields



Editing SNMP notification settings

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.
Trap Type	Indicate whether you would like to send SNMP v1, v2c, or v3 traps.

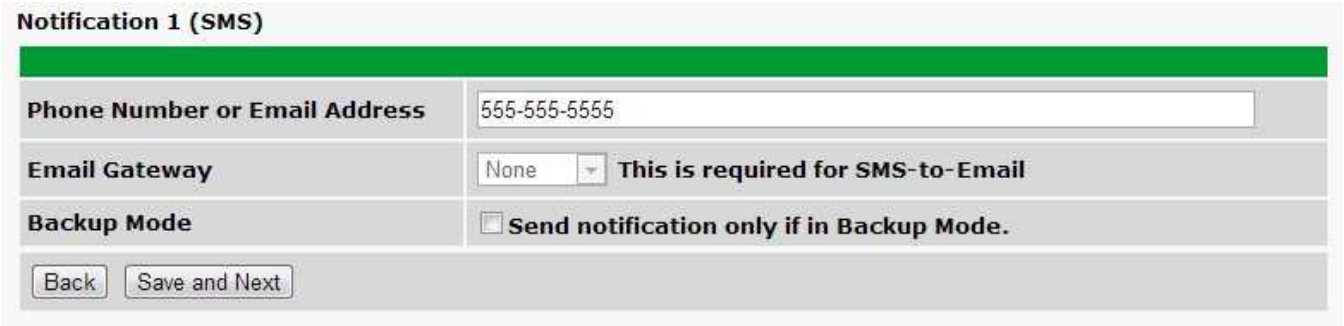
Voice Call Notification Fields (CellVoice 4 only)



Editing voice call notification settings

Voice Call Notification	
Phone number to call	Phone number the CellVoice will call with incoming alarm information.
Delay	The amount of time that will pass before the CellVoice will call the next person on the assigned call list. Enter s for seconds or m for minutes. *Example*: 45s = 45 seconds.
Call all numbers in this list. Ack logic is disabled.	Forces the CellVoice to call everyone on the assigned call list, disabling their ability to ack the alarm and stop the phone tree process.
Extended call loop.	If checked, all configured phone numbers will be dialed (in the order entered) five times or until the alarm is acknowledged.

SMS Notification Fields (CellVoice 4 only)



Editing Call notification settings

Call Notification	
Phone Number or Email Address	Enter the phone number or email address that will receive the SMS.
Email Gateway	The Email Gateway should match your CellVoice's carrier.
Backup Mode	Check this box if you want the CellVoice to only dial if in Backup Mode.

Note: If you are going cross-carrier (eg. Verizon to ATT), you will need to select Verizon for the Email Gateway and use an ATT domain in the email address (e.g. phonenumber@txt.att.net).

6.8.6 Schedule

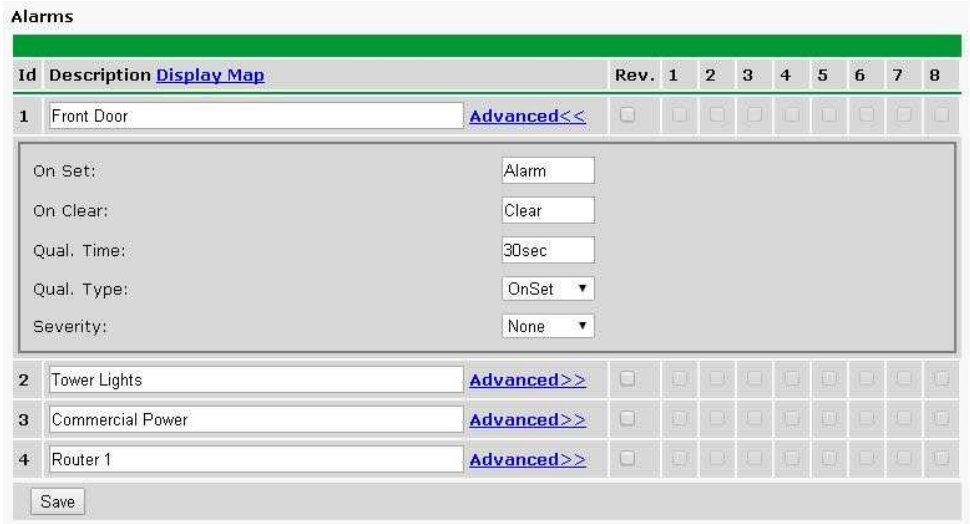
The notifications scheduling menu is where you will tell the unit exactly which days and times you want to receive alarm notifications. You set 2 different schedules for each.

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 this is if you want to receive alarm notifications at any time for the day(s) you've selected.
Notification Time	Tells the unit to only send notifications during certain hours on the day(s) you've selected.

6.9 Alarms (If Available)

Discrete 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. You also have the option to use **Basic** or **Advanced** configuration methods, explained in this section.

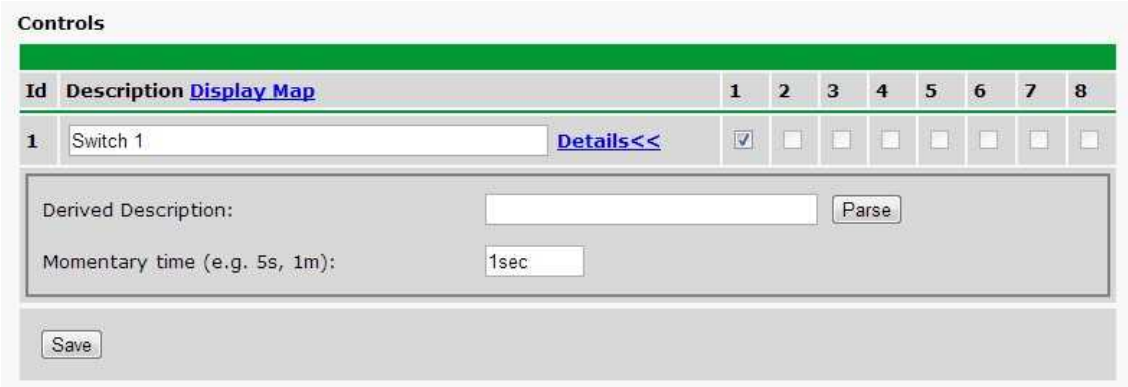


The Provisioning > Alarms menu

Basic Alarm Configuration	
ID	Alarm ID number.
Description	User-definable description for the discrete alarm point.
Rev (Reverse)	Reverse: Check this box to reverse the polarity of the alarm point. Leaving this option un-checked means a normally open contact closure is an alarm. When polarity is reversed, a normally closed alarm point is clear when closed.
Notification Devices	Check which notification device(s), 1 through 8, will send alarm notifications in response to this alarm point.
Advanced Alarm Configuration (Advanced>>)	
On Set	User-definable description (condition) that will appear for the discrete alarm input on Set. Example: "Alarm".
On Clear	User-definable description (condition) that will appear for the discrete alarm input on Clear: "Example: "Alarm Cleared".
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.
Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.
Severity	Allows you to choose the severity of the alarm. Primarily used to display the alarm type when using the "SMS-Mon" notification format for RRM (Rapid Response Monitoring).

6.10 Controls (If Available)

The unit's control relays can be configured in the **Provisioning** > **Controls** menu. You can enter your own description for these relays and designate them to a notification device(s).



The Provisioning > Controls screen

Basic Controls Configuration	
ID	ID number for the control relay.
Description	User-definable description for the unit's control relay.
Momentary Time	Control on time (in milliseconds) when you execute the MOM command. Max limit of 600 seconds.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for the control relay.
Derived Description	Control relays and virtual alarms can be created with a derived formula. See below for more information.

Derived Description Coding

_OR : Set the current operation to OR.
_AN : Set the current operation to AND.
_XR : Set the current operation to XOR.
D : Tag to change the active display number.
G : Tag to change the active group number.
. : Used like a comma to delimit numbers.
- : Used to specify a range of points.

Examples:

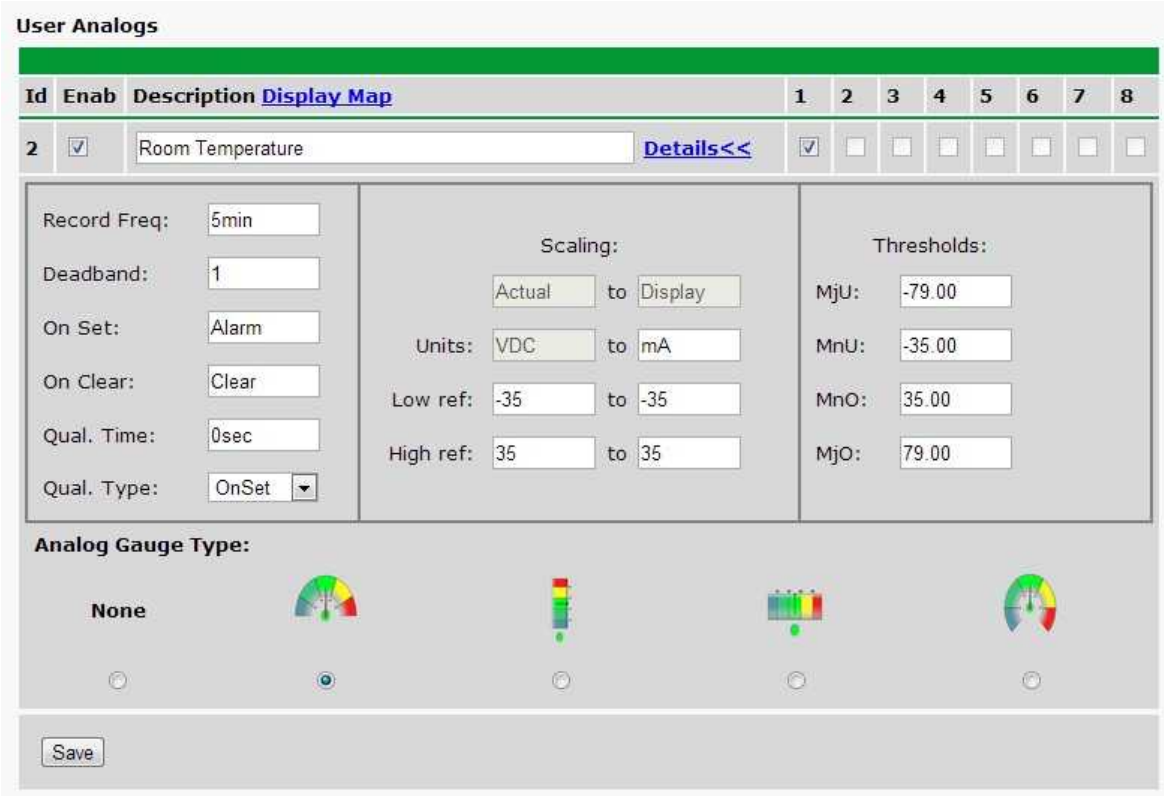
Spaces included in the bolded code below are for readability purposes only.

_OR D1.3-5 is logically equivalent to (1.3 || 1.4 || 1.5)
_AN D 1.3-5 D2.6 _OR D3.7 is logically equivalent to ((1.3 && 1.4 && 1.5 && 2.6) || 3.7)
_OR D01.03-05 D02.06 _AN D02.07 D03.10.-12 is logically equivalent to ((1.3 || 1.4 || 1.5 || 2.6&& (2.7 && 3.10 && 3.12))
_AN D1.3-5D2.6_OR.7D3.10.12 is logically equivalent to ((1.3 && 1.4 && 1.5 && 2.6) || 2.7 || 3.10 || 3.12))
o will not parse
_AN D1-2 : Control will parse
_OR G1 will latch if any alarm in group 1 is active

6.11 Analogs (If Available)

The unit can have up to 2 analog channels. The 1st channel is pre-configured for power monitoring. The 2nd channel is a user-definable analog that supports 0-5V or 5-20mA. Both of these channels support the entire range of power inputs that the units can support. Each channel must be individually configured to monitor data.

Note: Only analogs supported by the units hardware will appear in the unit web browser interface.



The Provisioning > Analogs menu

Basic Analog Configuration	
ID	Analog ID number.
Enab	Check this box to enable the analog.
Description	User-definable description for the analog channel.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.
Advanced Analog Configuration (Details>>)	
Record Freq	The amount of time, in minutes (min) or seconds (s), between each log of each analog value to history.
Deadband	The amount (in volts) that the channel needs to go above or below a threshold in order to cause an alarm.
On Set	User-definable description (condition) that will appear for the temperature alarm on Set. Example: "Alarm".
On Clear	User-definable description (condition) that will appear for the temperature alarm Clear. Example: "Alarm Cleared".
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.
Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.
Units	User-definable display units or optional choice between Fahrenheit and Celsius

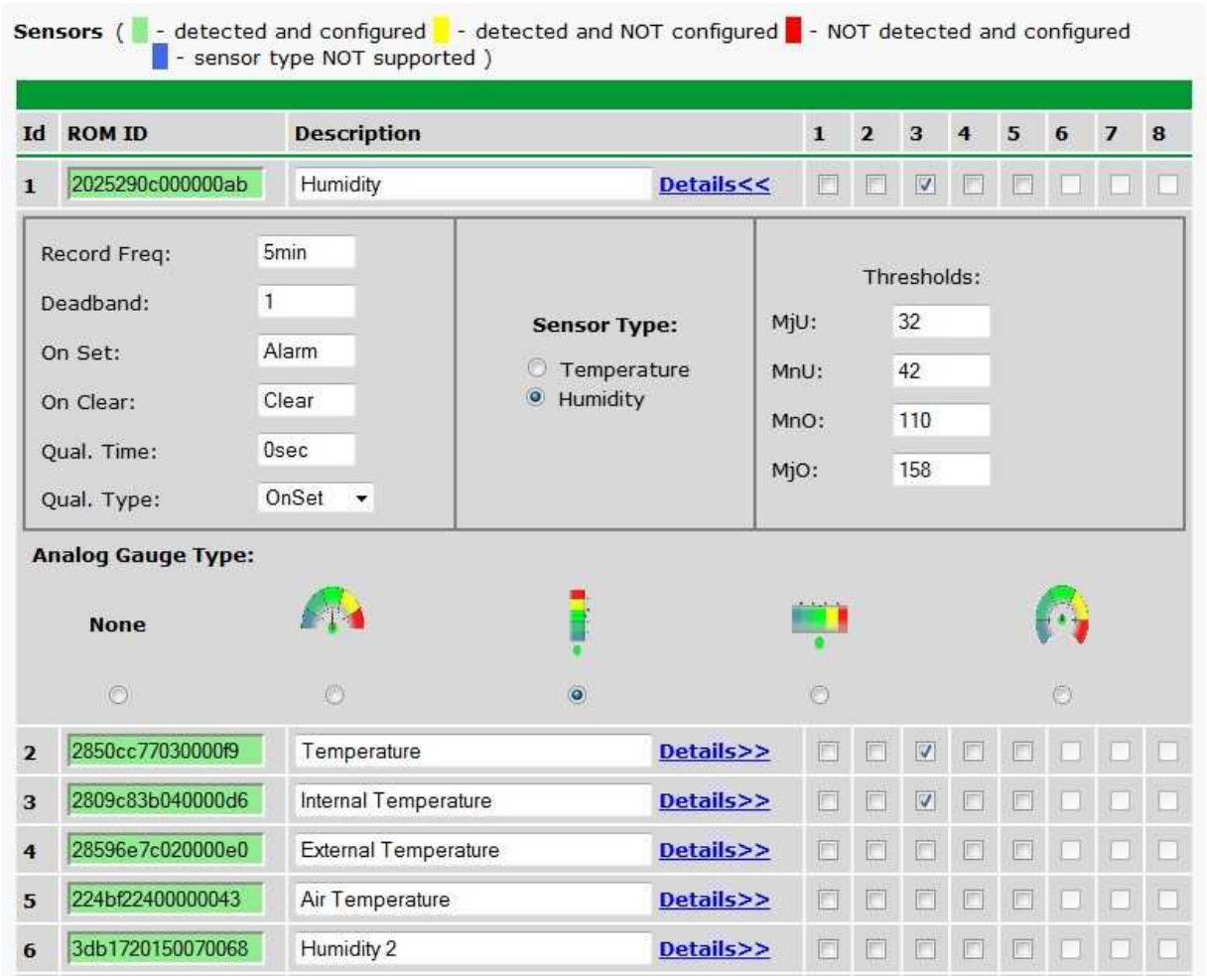
	temperatures. The most common are: VDC = Voltage %H = Humidity F = Fahrenheit C = Celsius
Low Ref	User-definable lower reference/scaling level. This scales the information collected by the sensor (in mA or VDC) to a meaningful unit for the user. For example, for a temperature sensor, the lower input collected by the sensor may be 4mA (for a 4-20mA sensor), which would correspond to a specific temperature you define in this field.
High Ref	User-definable upper reference/scaling level. This scales the information collected by the sensor (in mA or VDC) to a meaningful unit for the user. For example, for a temperature sensor, the upper input collected by the sensor may be 20mA (for a 4-20mA sensor), which would correspond to a specific temperature you define in this field.
Thresholds	These settings are set 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).
Analog Gauge Type	Select the color-coded gauge that best represents your data. Selecting **None** will disable the analog gauge and only a numerical representation of the value will be displayed under **Monitor** > **Analogs**.

6.12 Sensors

The unit supports up to 16 daisy-chained D-Wire sensors via its D-Wire input. Sensors connected to the unit will appear on the unit's web interface. The background color of the ROM field informs the user of the sensor's configuration state.

Also, the unit's first D-Wire sensor is used to monitor the internal temperature. The internal temperature sensor measures a range of -40° F to 180° F (-40° C to 82.2° C) within an accuracy of about ± 2°.

Basic configuration for the unit's D-Wire temperature sensors can be accomplished from the **Provisioning** > **Sensors** menu. From this screen, you can configure D-Wire sensors, select notification devices, and set thresholds.



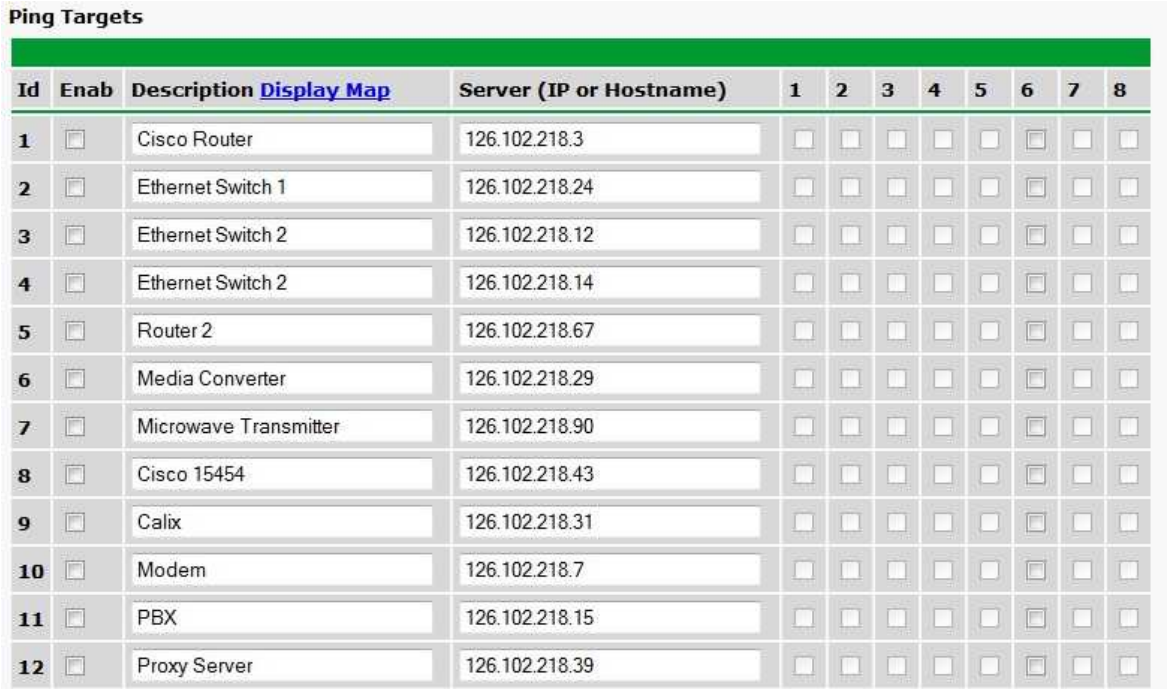
The Provisioning > Sensors menu

Basic Sensor Configuration	
ID	Sensor ID number.
ROM ID	The ID number found on the sticker of the temperature sensor node. Your unit will automatically detect the sensor ID when you plug a sensor into the unit. The color of the sensor ID field will tell you the status of the connected sensor. **Green** - The sensor is connected and properly configured. **Yellow** - The sensor is connected but has not yet been configured (fill in your configuration fields and click **Save** to configure the sensor). **Red** - The sensor is not detected and configured (i.e. a previous configured sensor is no longer connected). **Blue** - The sensor is not supported by the unit. To reconfigure or disable the Sensor ID, simply delete any data in this field and click **Save**. The unit will refresh the sensor ID on that channel.
Description	User-definable description for the sensor channel.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.
Advanced Sensor Configuration (Details>>)	
Record Freq	The amount of time, in minutes (min) or seconds (s), between each recorded sensor value.
Deadband	The amount (in native units) that the channel needs to go above or below a threshold in order to cause an alarm.
On Set	User-definable description (condition) that will appear for the temperature alarm on Set. Example: "Alarm".
On Clear	User-definable description (condition) that will appear for the temperature alarm Clear. Example: "Alarm Cleared".
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.
Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.
Thresholds	These settings are set 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).
Analog Gauge Type	Select the color-coded gauge that best represents your data. Selecting **None** will disable the analog gauge and only a numerical representation of the value will be displayed under **Monitor** > **Sensors**.

Note: Before plugging in any additional D-Wire Sensors, set up the internal sensor.

6.13 Ping Targets

The **Provisioning** > **Ping Targets** menu allows you to configure the Description, IP Address, and Notification Devices for each of your 32 ping targets.

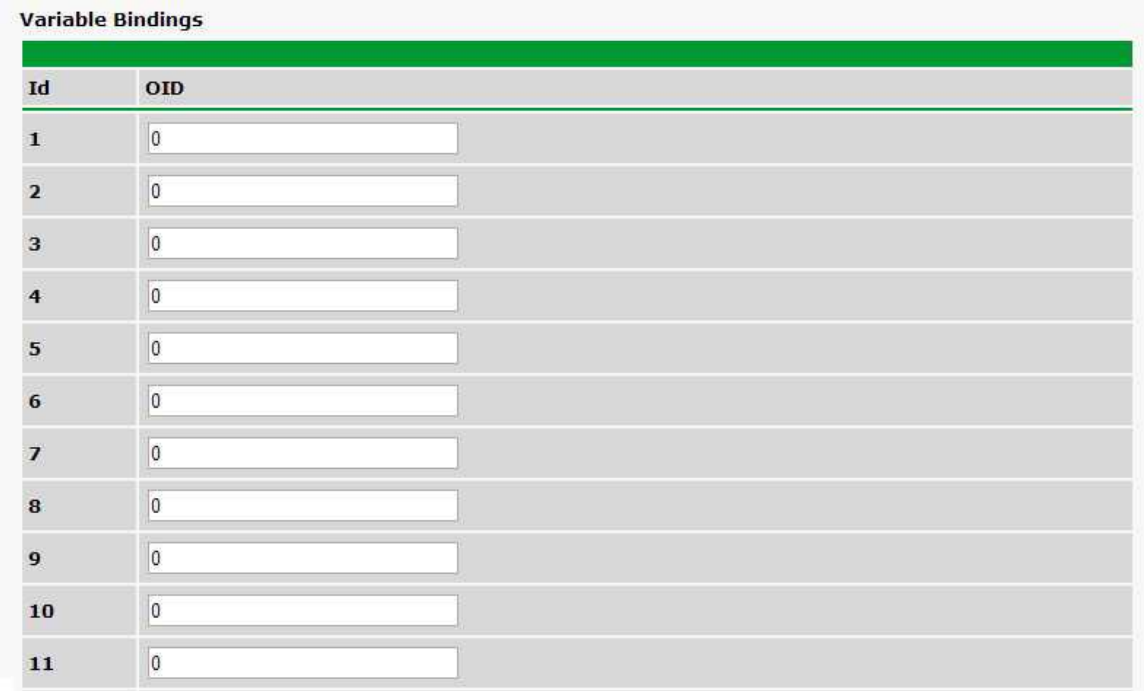


The Provisioning > Ping Targets menu

Provisioning Ping Targets	
ID	ID number for the ping target.
Enab	Check this box to enable the ping target.
Description	User-definable description for the ping target.
Server (IP or Hostname)	IP address or hostname of the device you would like to ping.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for ping target.

6.14 Variable Bindings

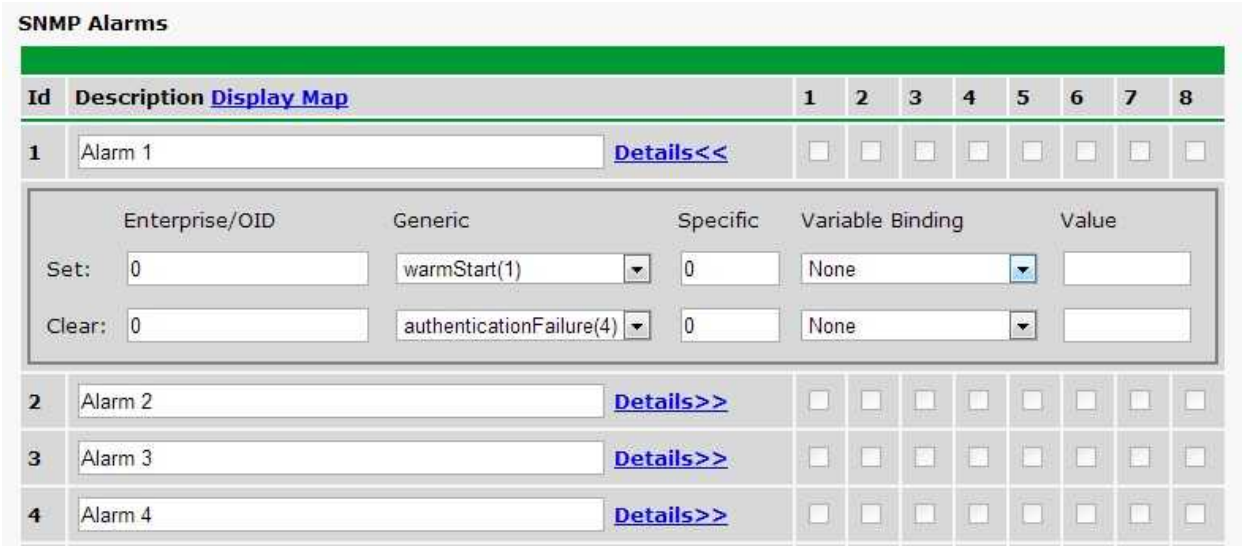
Note: Variable bindings are used when setting up SNMP alarms.



The Provisioning > Variable Bindings menu

Provisioning Variable Bindings	
Id	Identification number for the variable binding.
OID	OID of the variable binding. **Note**: Using a ***** in this field is like a "wild card" - any value is accepted.

6.15 SNMP Alarms



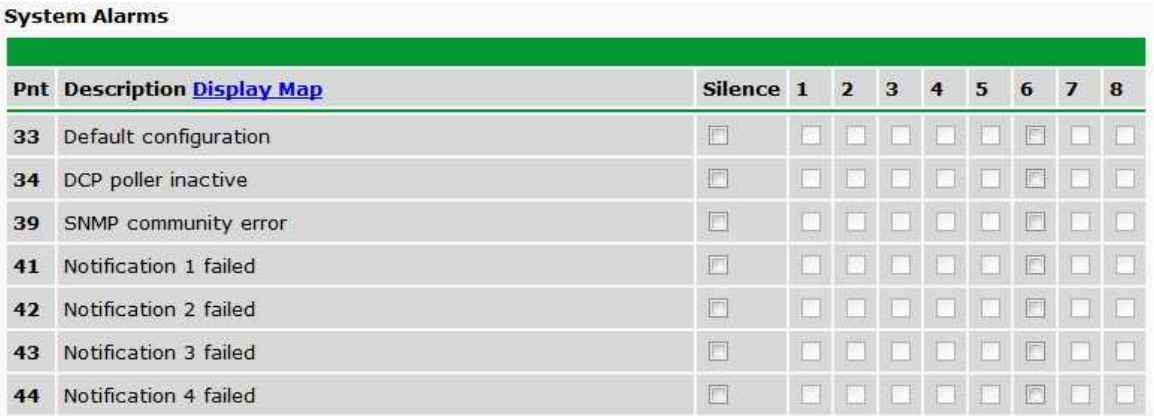
The Provisioning > SNMP Alarms menu

SNMP Alarms Settings	
ID	SNMP Alarm ID number.
Description	User-definable description for the SNMP alarm.
Notification Devices	Check which notification device(s), 1 through 8, will send alarm notifications in response to this SNMP alarm.

Advanced SNMP Alarms Settings (Details>>)	
Enterprise/OID	Enterprise OID for SNMPv1 or Trap OID for SNMPv2c.
Generic	Generic Trap number for **SNMP v1 only.**
Specific	Specific Trap number for **SNMPv1 only.**
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.

6.16 System Alarms

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



Pnt	Description Display Map	Silence	1	2	3	4	5	6	7	8
33	Default configuration	☐	☐	☐	☐	☐	☐	☐	☐	☐
34	DCP poller inactive	☐	☐	☐	☐	☐	☐	☐	☐	☐
39	SNMP community error	☐	☐	☐	☐	☐	☐	☐	☐	☐
41	Notification 1 failed	☐	☐	☐	☐	☐	☐	☐	☐	☐
42	Notification 2 failed	☐	☐	☐	☐	☐	☐	☐	☐	☐
43	Notification 3 failed	☐	☐	☐	☐	☐	☐	☐	☐	☐
44	Notification 4 failed	☐	☐	☐	☐	☐	☐	☐	☐	☐

The Provisioning > System Alarms menu

Editing System Alarms	
Pnt (Point)	The system alarm point number
Description	Non-editable description for this System (housekeeping) Alarm.
Silence	Check this box to choose to silence this alarm.
Notification Devices	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.

6.16.1 SMS Alarm (CellVoice 4 Only)

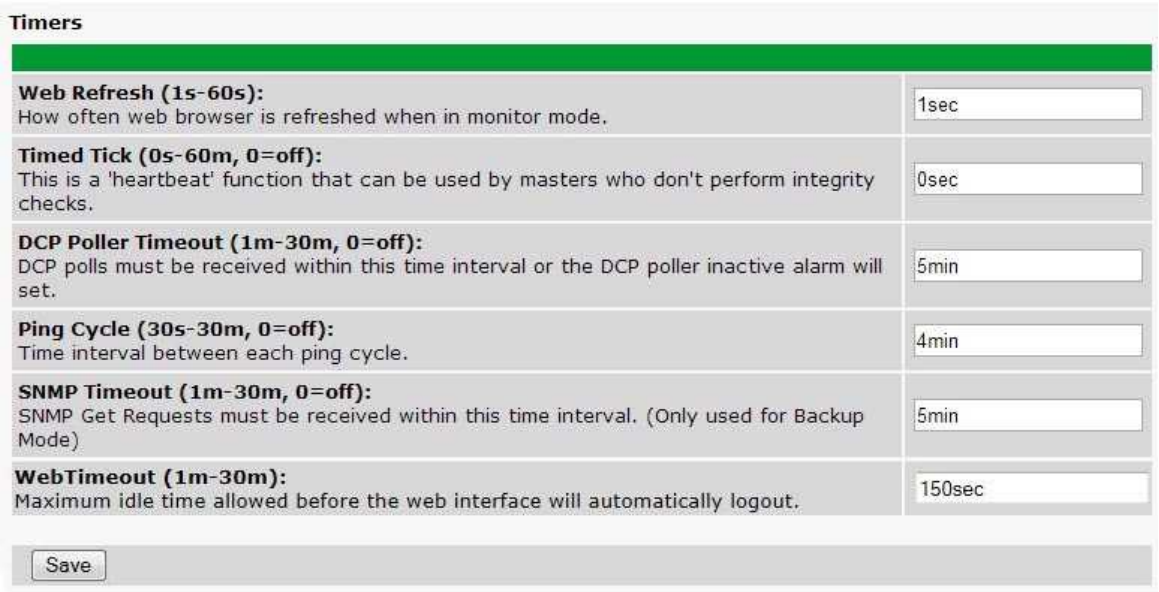
All incoming SMS messages to the device will be parsed. If the phone number of the SMS message matches one of the phone numbers in the "Phone List" menu, then (1) the content of the incoming message will be preserved and (2) the "SMS Alarm" System Alarm will be SET and (once all of the numbers on the "Phone List" have been forwarded the message) CLEARED. Once the device has forwarded the message to the numbers on the "Phone List" and the "SMS Alarm" has cleared, the device will read the next incoming SMS message and repeat the process.

Messages being sent to the device should be limited to 111 characters. Messages longer than 111 characters will be truncated to fit this limitation. When a message has been truncated, three dots ("...") will appear at the end of the message.

Note: Make sure that the "Send SMS" or "Voice/SMS" notification that is associated with the "SMS Alarm" is set to "Notify on Alarms only".

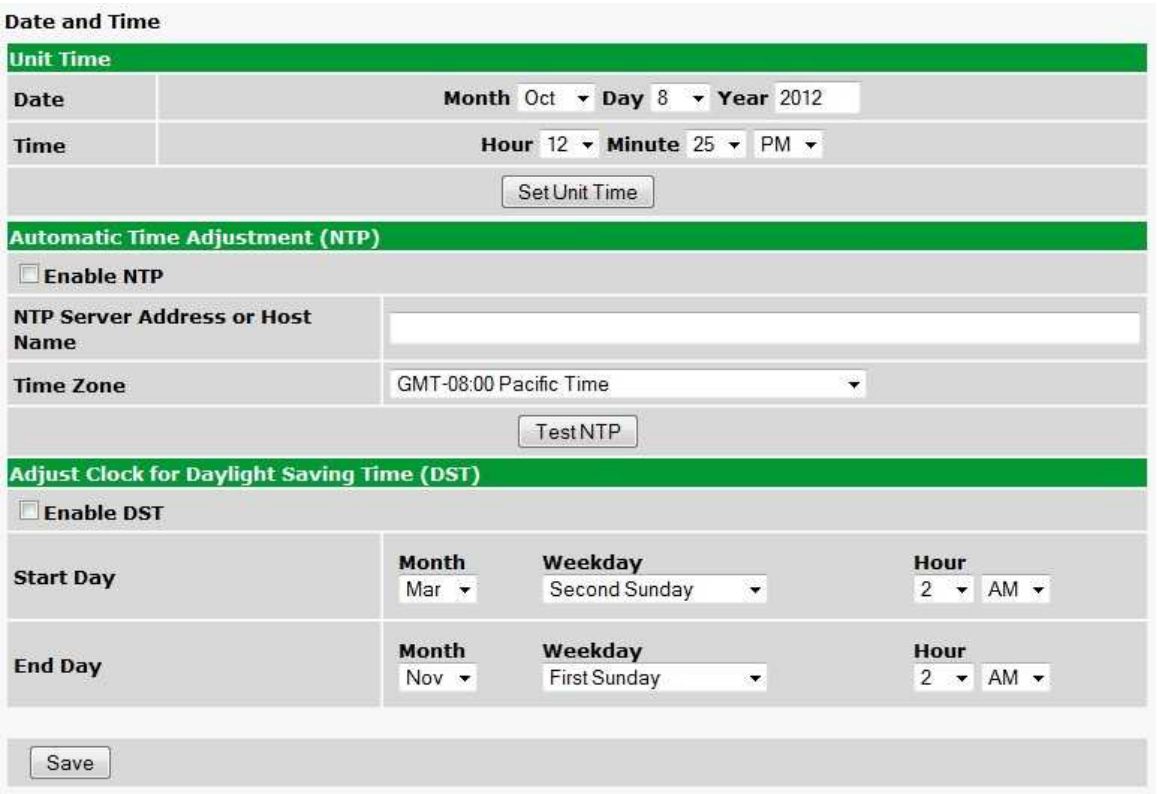
6.17 Timers

The **Timers** are user-definable, and allow you to choose the intervals between **Web Refresh**, **Timed Tick**, **DCP Poller Timeout**, **Ping Cycle**, and **SNMP Timeout.** Enter the amount of time, in seconds (sec) or minutes (m), in the value field and click **Save**.



The Provisioning > Timers menu

6.18 Date and Time



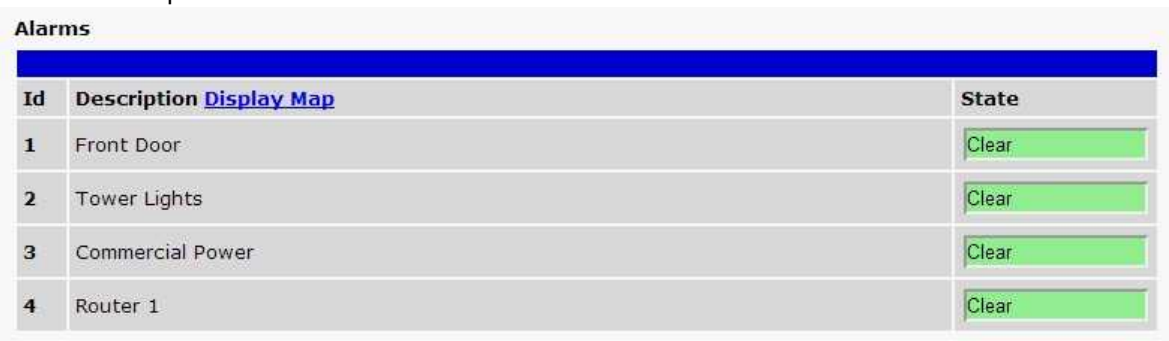
The Provisioning > Date and Time menu

Unit Time	
Date	Set today's date.
Time	Set the current time.
Automatic Time Adjustment (NTP)	
Enable NTP	Check this box to enable Network Time Protocol.
NTP Server Address or Host Name	Enter the NTP server's IP address or host name, then click **Sync**. Example: us.pool.ntp.org. **Note**: Make sure to configure DNS before using host name instead of IP address.
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 unit 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.

7 Monitoring via the Web Browser

7.1 Alarms (If Available)

This selection provides the status of the base 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. The status will be displayed in green when the alarm condition is not present.

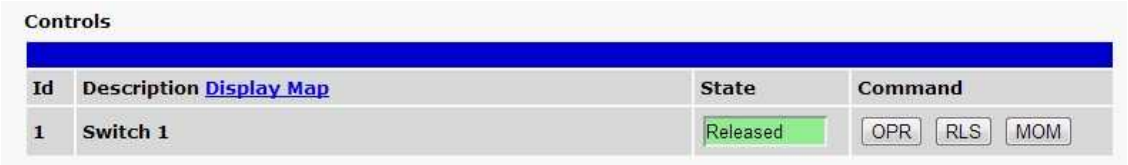


Click on Alarms in the Monitor menu to see if any base alarms have been triggered.

7.2 Controls (If Available)

Use the following rules to operate the unit's control:

1. Select **Controls** from the **Monitor** menu.
2. Under the **State** field, you can see the current condition of the control.
3. To issue the control, click on a command (**OPR** - operate, **RLS** - release, or **MOM** - momentary)



View and operate control relays from the Monitor > Controls menu

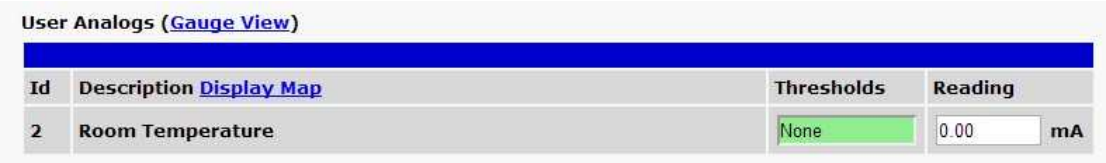
Control Relay Operation	
ID	ID number for the control relay.

Description	Description for the unit's control relay defined in the Provisioning > Controls menu.
State	Status of the control relay. Can either be **Released** or **Latched**.
Command	**OPR** - Latch the relay. **RLS** - Release the relay. **MOM** - Momentarily latch the relay, then automatically release the relay. The duration of the latch is defined in the Provisioning > Controls menu.

Note: The Commands will not appear if the control is derived.

7.3 Analogs (If Available)

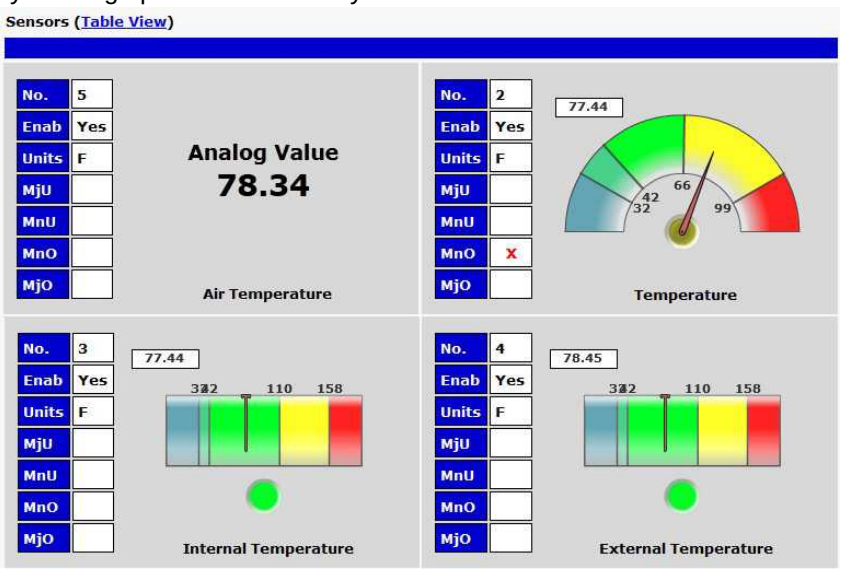
The **Monitor** > **Analogs** screen provides a description of each analog channel, the current reading, the units being read, and alarm conditions (major under, minor under, major over, minor over) according to your temperature settings. If configured under **Provisioning** > **Analogs**, your analog values will be displayed as a graphical gauge. Selecting **Table View** will display a non-graphical interface of your values.



Click on Analogs in the Monitor menu to view the current channel readings.

7.4 Sensors (If Available)

This selection provides the status of the system's analog channels by indicating if an alarm has been triggered. The **Monitor** > **Sensors** screen provides a description of each analog channel, the current reading, the units being read, and alarm conditions (major under, minor under, major over, minor over) according to your temperature settings. If configured under **Provisioning** > **Sensors**, your analog values will be displayed as a graphical gauge. Selecting **Table View** will display a non-graphical interface of your values.



The Monitor > Sensors menu

7.5 Ping Targets

Ping Targets can be viewed by going to **Monitor** > **Ping Targets**. Here you can view the state (either **Clear** or **Alarm**) for each of your configured Ping Targets. Up to 32 ping targets may be configured.

Ping Targets

Id	Description Display Map	State
1	Cisco Router	Clear
2	Ethernet Switch 1	Clear
3	Ethernet Switch 2	Clear
4	Ethernet Switch 2	Clear
5	Router 2	Clear
6	Media Converter	Clear
7	Microwave Transmitter	Clear
8	Cisco 15454	Clear
9	Calix	Clear
10	Modem	Clear
11	PBX	Clear
12	Proxy Server	Clear

View the status of Ping Targets from the Monitor > Ping Targets menu.

7.6 SNMP Alarms

This selection provides the status of the SNMP 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. The status will be displayed in green when the alarm condition is not present.

SNMP Alarms

Id	Description Display Map	State
1		Clear
2		Clear
3		Clear
4		Clear
5		Clear
6		Clear
7		Clear
8		Clear
9		Clear
10		Clear
11		Clear
12		Clear

The Monitor > SNMP Alarms menu

7.7 System Alarms

System alarms are not-editable, housekeeping alarms that are programmed into the unit. The **Monitor** > **System 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. The status will be displayed in green when the alarm condition is not present.

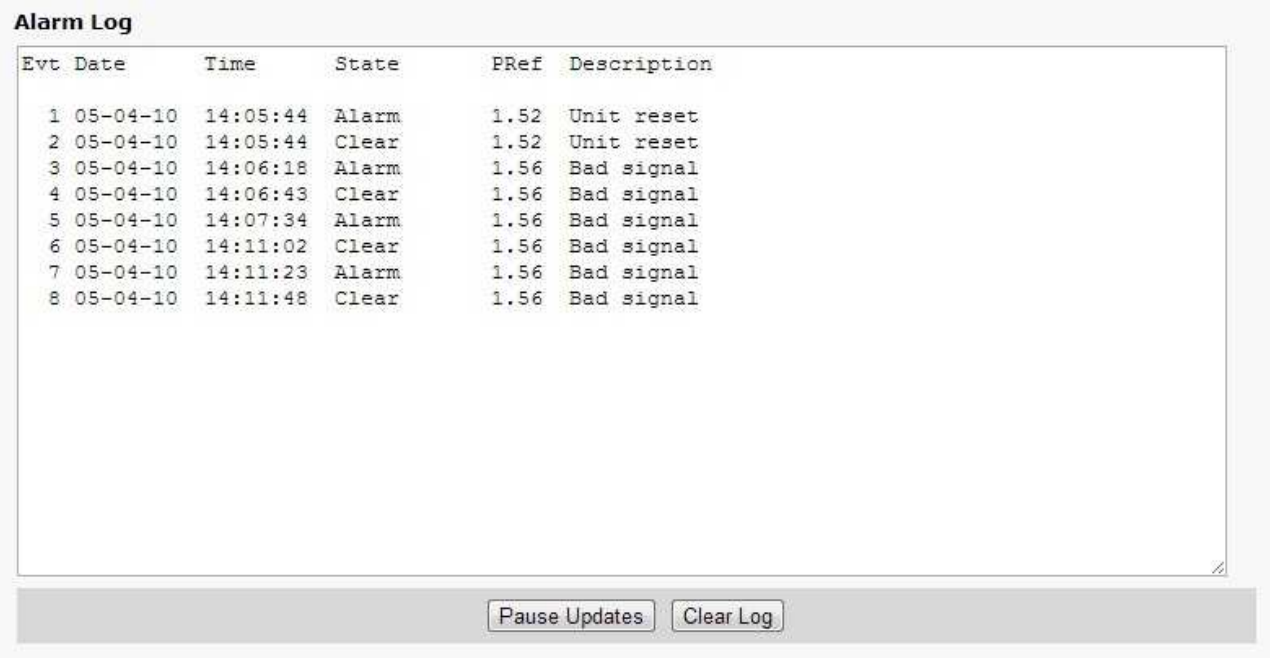
See "Display Mapping" in the Reference Section for a complete description of system alarms.

System Alarms

Pnt	Description Display Map	State
33	Default configuration	Clear
34	DCP poller inactive	Clear
39	SNMP community error	Clear
41	Notification 1 failed	Clear
42	Notification 2 failed	Alarm
43	Notification 3 failed	Clear
44	Notification 4 failed	Clear

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

7.8 Alarm Log

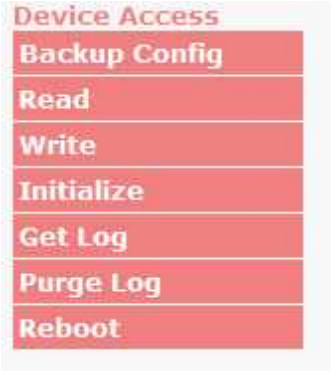


The Monitor > Alarm Log menu

Alarm Log Operation	
Pause Updates	Temporarily prevents the table from updating, however events will continue to be internally logged. **Note:** Once you hit "Resume Updates," all internally logged events will appear.
Clear Log	Removes all visible events from the Alarm Log.

8 Device Access Descriptions

The **Device Access** options, listed in pink on the left side of the web interface, provide options for generating reports, updating the unit's firmware, and rebooting the unit. Click any of the options under **Device Access** to perform the desired action.



The control menu is located in the bottom left of the web interface

Device Access Option	Description
Backup Config	Backs up the units configuration settings
Read	Reads a configuration file from the unit
Write	Commits all changes made in the web interface to the unit's non-volatile memory
Initialize	Sets the unit's configuration to factory default values
Get Log	Opens the unit's event log in Notepad (or another plain text editor).
Purge Log	Deletes the unit's event log history.
Reboot	Reboots the unit.

9 Reference Section

9.1 Mounting Instructions

Tools Needed:

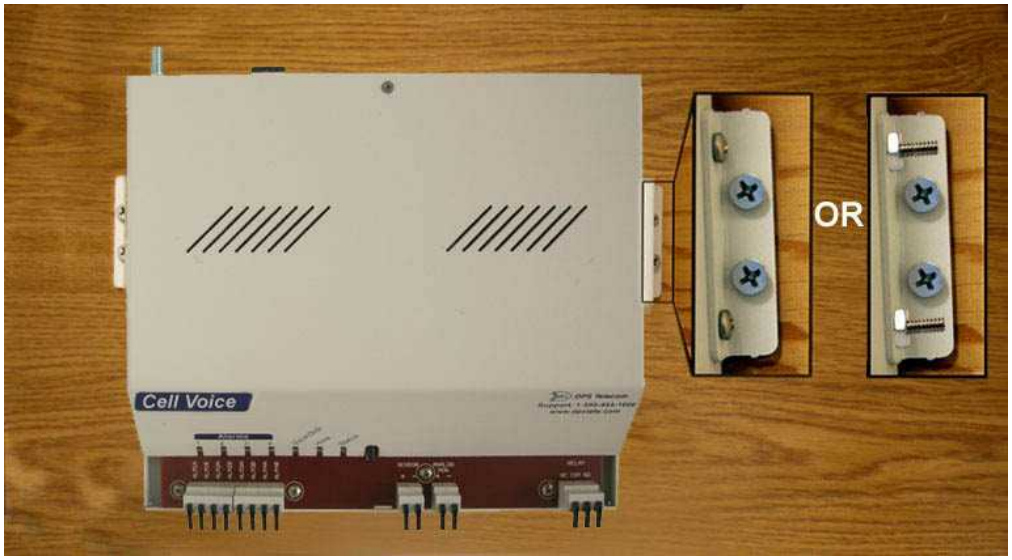
Phillips No. 2 Screwdriver

Small Standard No. 2 Screwdriver

Wire Strippers

PC with terminal emulator, such as HyperTerminal

The compact unit occupies only half the width of a standard rack unit. 19" rack ears are supplied with the unit. The unit mounts in a 19" or 23" rack, and can be mounted on the right or left, or rear mount locations, as shown below.



Use the included wall mount bracket to mount the CellVoice vertically on the wall

Wall-Mounting Instructions

The rack ears can be rotated 90° for wall mounting or 180º for other mounting options (not shown).

1. Depending on your order options, you will can attach wall-mount flanges to both sides of the unit in one of two ways:
   a. Place the flange over the protruding screws and fasten it to the 3/8" hex nuts provided.
   b. OR Fasten the flange to the unit with two of the 6/32 screws provided. (**NOTE**: Screws longer than

those provided may contact the internal components of the unit, adversely affecting its normal operation.)

2. After flanges have been attached to the unit, mount the unit in the desired location with two screws through each flange.

The CellVoice 4 also mounts on your 19" or 23" equipment racks

Rack-Mounting Instructions

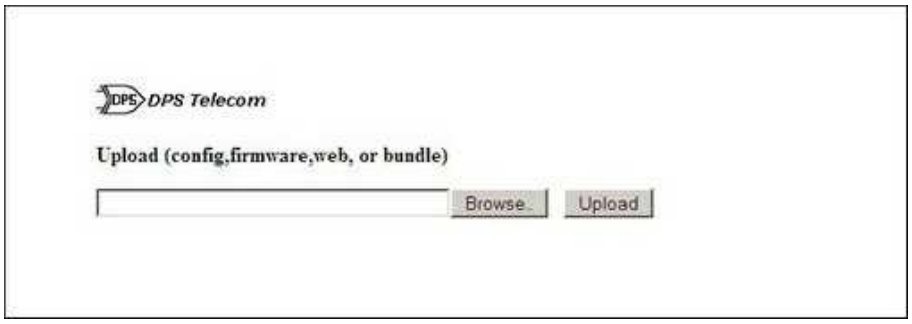
The unit mounts onto one side of a 19" or 23" rack using the provided rack ear for either size. The ear can be rotated 180 degrees during installation to adjust the position of the unit relative to the rack. Attach the appropriate ear to the rack in the desired location.

9.2 Firmware Upgrade

To access the **Firmware Load** screen, click on the **Provisioning** > **System** menu. At the bottom of this screen, click the **Restore Configuration** link located in the **System Controls** section.

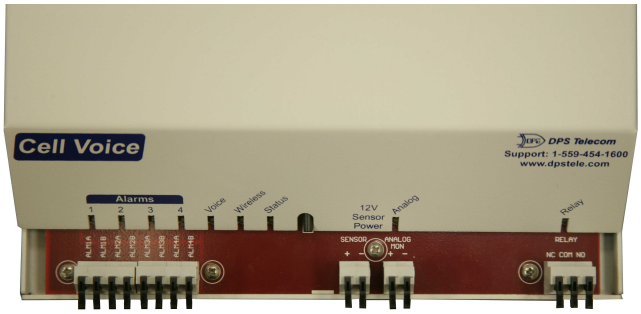
*To upload firmware, click on **Upload** on the top right corner of the web interface*

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



Browse for downloaded firmware upgrade

9.3 Front and Back Panel LED



LED	Status	Description
Relay	Green	When relay is operated (latched)
	Off	When relay is in released state
Status	Flashing Green	Application is running
	Flashing Red	Boot Loader is running
Alarms (1-4)*	Flashing Red	New alarm
	Solid Red	Standing alarm acknowledged
Voice/Data	Flashing Green	Good signal
	Flashing Red	Bad signal
Wireless (Modem)	Flashing Green	Transmitting to the modem
	Flashing Red	Receiving from the modem
Power	Solid Green	Power supply OK
	Off	No voltage or power leads reversed

Front Panel LED Descriptions

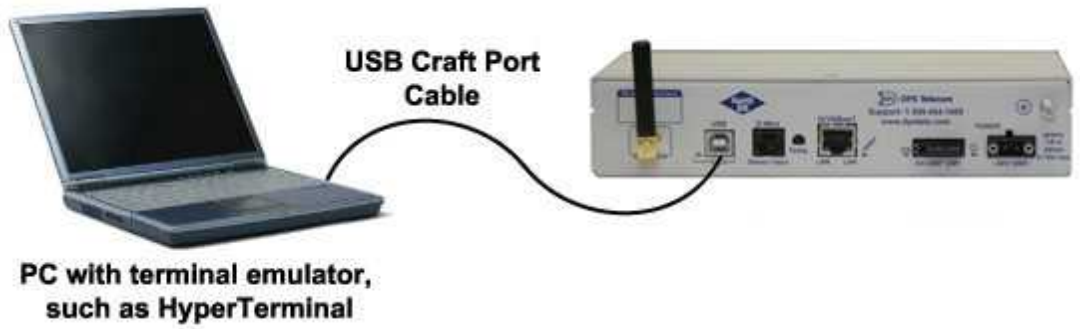
**If DCP is disabled, the Alarm LED will go Solid Red without acknowledgment.*

LED	Status	Description
PWR A/B	Solid Green	Power supply OK
	Off	No voltage or power leads reversed
LNK	Solid Green	LAN Connected
LAN	Flashing Green	Transmit and receive activity over Ethernet port
FA	Solid Red	Blown Fuse
100BT	Solid Green	LAN connection speed is 100BaseT
	Off	LAN connection speed is 10BaseT
Craft	Flashing Green	Transmitting data over craft port
	Flashing Red	Receiving data over craft port
Sensor	Flashing Green	Transmitting
	Flashing Red	Receiving

Back Panel LED Descriptions

9.4 Connecting to the unit via the Craft Port (using TTY Interface)

Another way to access the unit is over a physical cable connection between your PC's USB port and the unit's USB craft port. **Note:** You must be connected via craft port or Telnet to use the TTY interface. Make sure you are using a standard A-B USB cable (this same cable is commonly used for USB printers) to make a USB craft port connection. We'll be using HyperTerminal to connect to the unit in the following example - however, most terminal-emulating programs are also compatible.

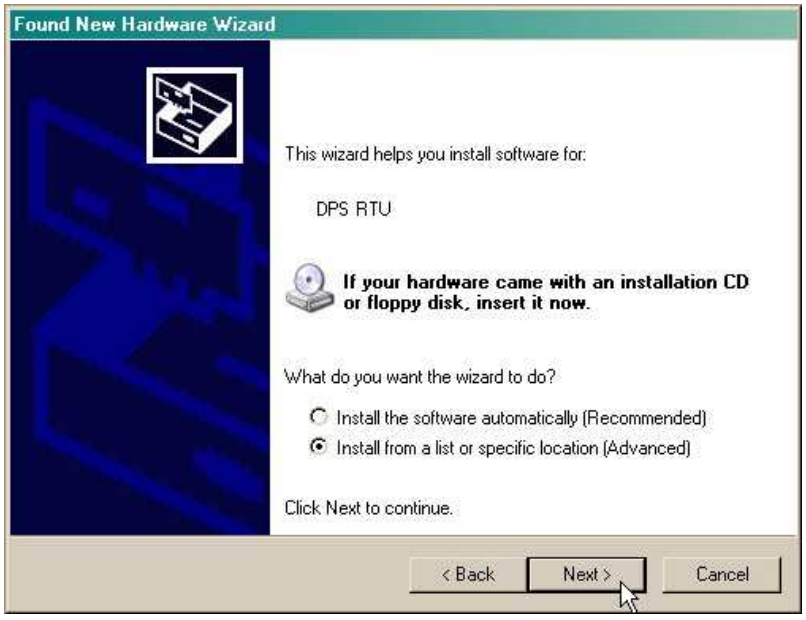


Note: The following images display the setup process done in Windows XP.

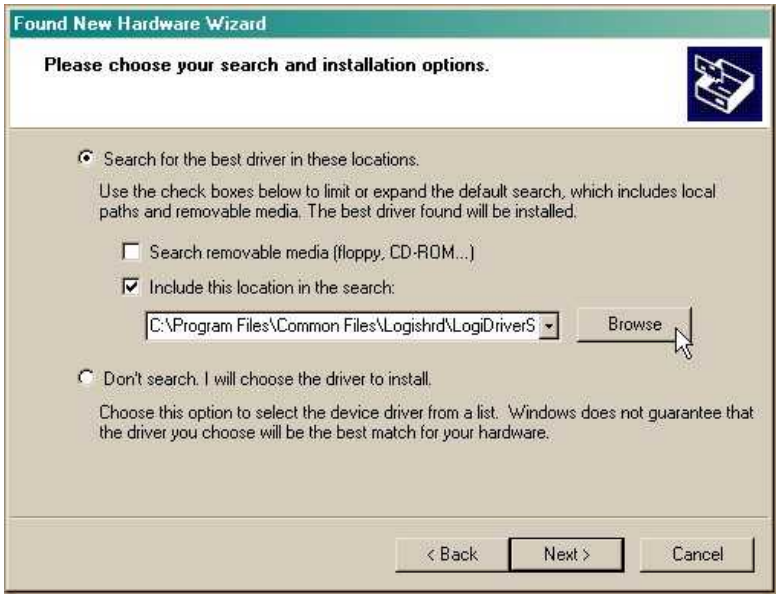
The following steps will occur the first time any DPS USB equipment is used on this PC. If you've used a different DPS USB device before and have installed the DPS USB drivers, then **skip to Step 9**.

When you first connect the unit to your PC via USB, a "Found New Hardware" message will appear:

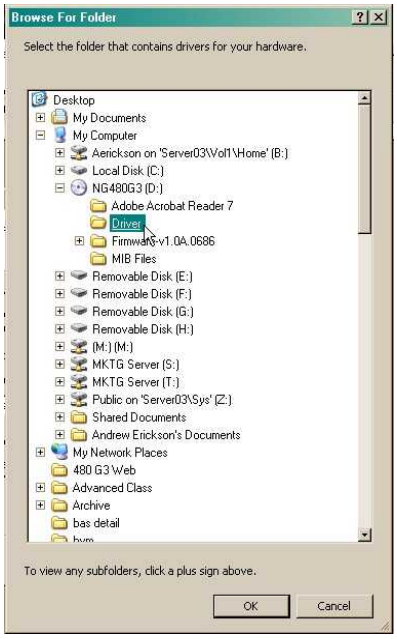
1. Click the "Found New Hardware" message/icon to launch the "Found New Hardware Wizard".



2. Select "Install from a list or specific location (Advanced)"
3. Click "Next >"



4. Select "Search for the best driver in these locations."
5. Insert CellVoice Resource Disc (CD) into your PC.
6. Click "Browse"

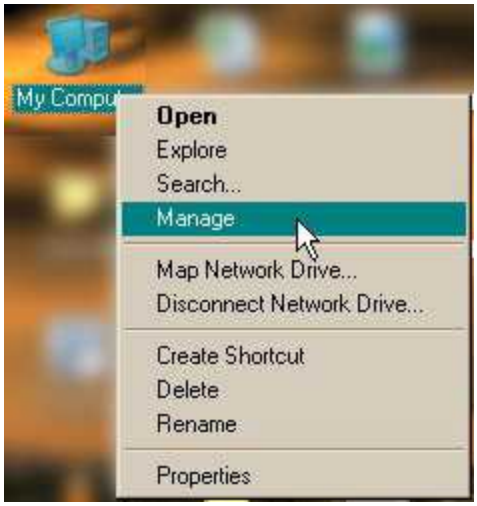


7. Select the "Driver" folder of your unit Resource Disc Disc (CD) and click "OK"

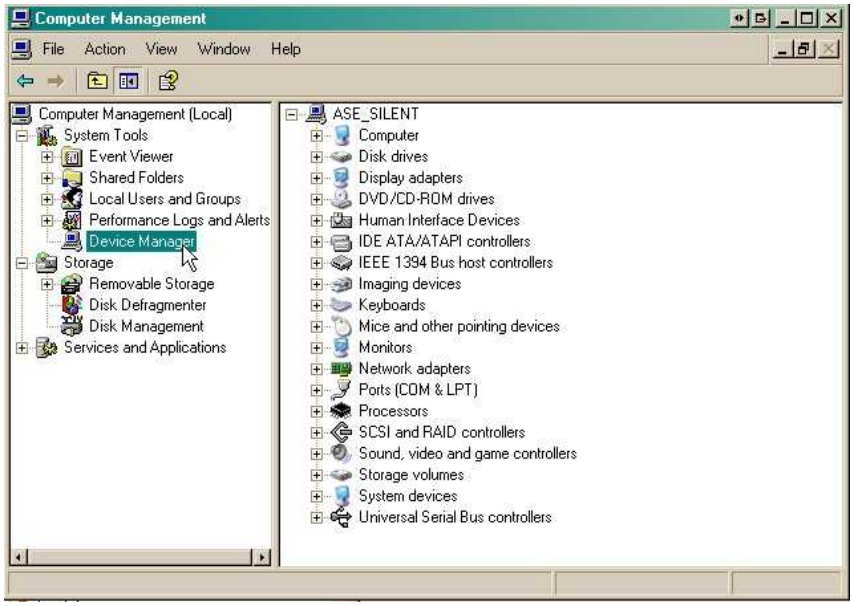
The following message will confirm installation of a new "USB Communications Port"

8. Click "Finish" to close the Wizard.

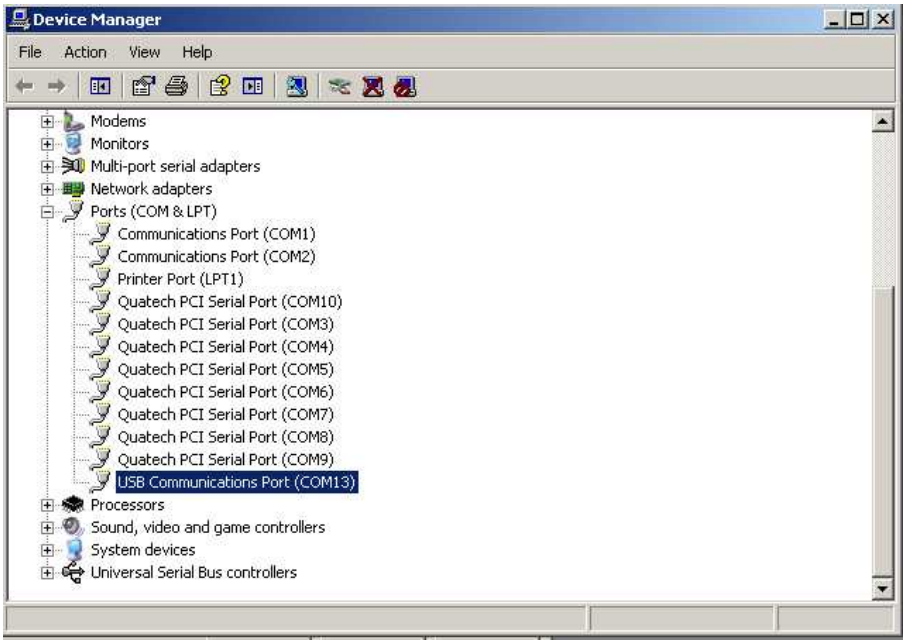
Now that the driver has been installed, a new COM port is being emulated on your PC. Before using hyperterminal, you must confirm the identity of that new COM port (COM1, COM2, COM3...) in the Windows Device Manager.



9. Right-click the "My Computer" icon on your desktop, then click "Manage"



10.Click "Device Manager" in the left pane.



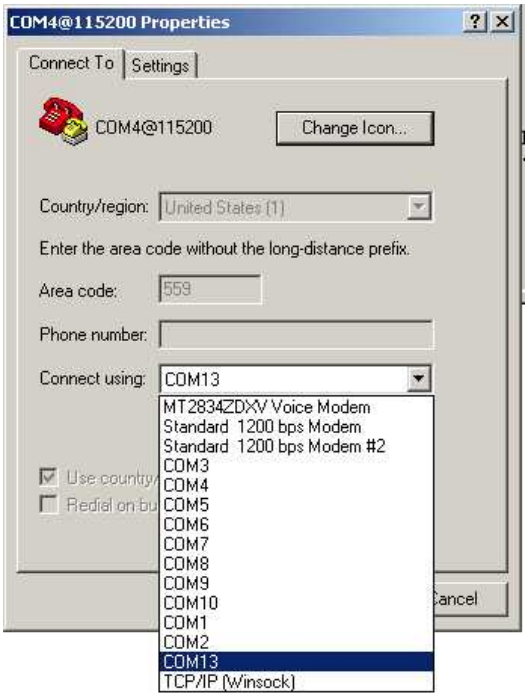
11. Expand the "Ports (COM & LPT)" section in the right pane. Look for "USB Communications Port (COMx)". Note the number of the COM port ("COM3" in the example above).

Now that you know which COM port to use, it's time to launch HyperTerminal (or other terminal software):

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

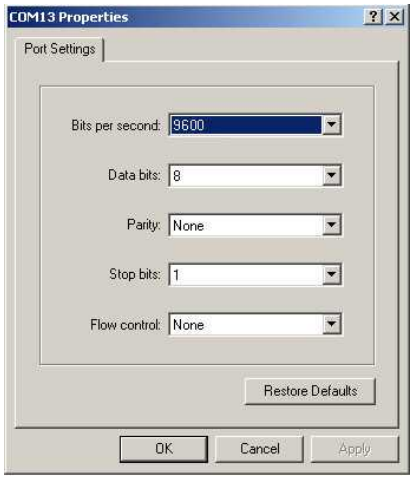
13. At the Connection Description screen, enter a name for this connection. You may also select an icon. The name and icon do not affect your ability to connect to the unit.

14. At the Connect To screen, use the drop-down menu to select the COM port you found earlier in the Device Manager.



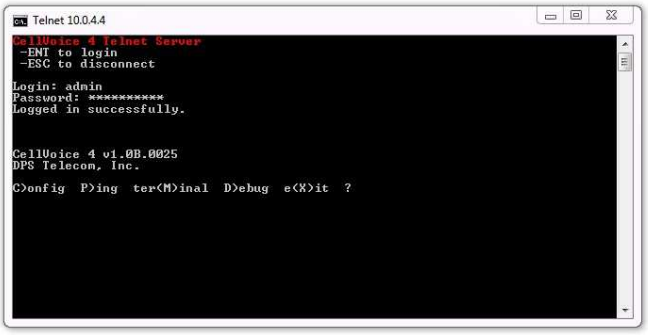
15. Select the following COM port options:
    - Bits per second: 9600
    - Data bits: 8
    - Parity: None
    - Stop bits: 1
    - Flow control: **None**

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

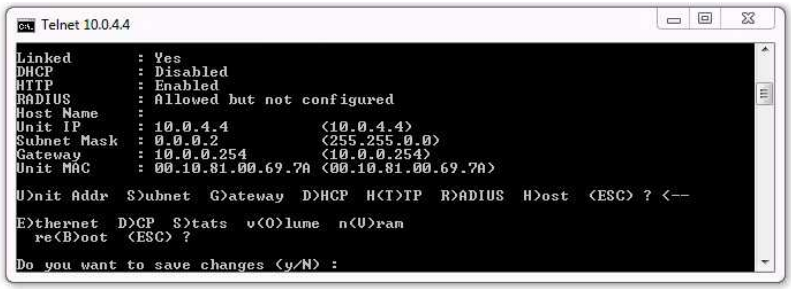


16. When prompted, enter the default user name **admin** and password **dpstelecom**. NOTE**:** If you don't receive a prompt for your user name and password, check the Com port you are using on your PC and make sure you are using the cable provided. Additional cables can be ordered from DPS Telecom.

17. The unit's 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.



18. 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 new configuration.



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

9.4.1 TTY Interface

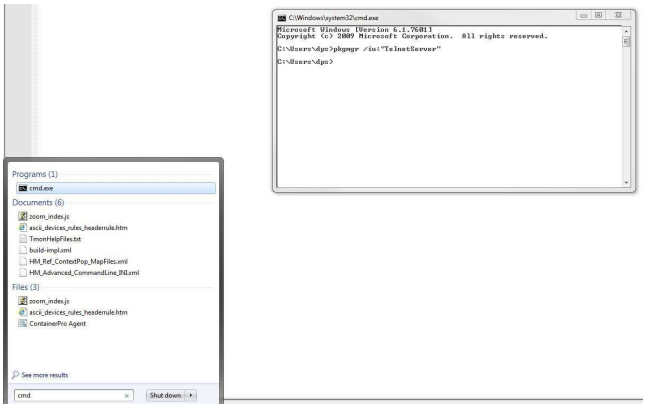
The TTY interface is the unit's built-in interface for basic configuration. From the TTY interface, you can:

- Edit the IPA, subnet, and gateway
- Set unit back to factory defaults
- Disable RADIUS
- Communicate with Modem
- Set DCP info for T/Mon polling
- Ping other devices on the network
- Debug and troubleshoot

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**.

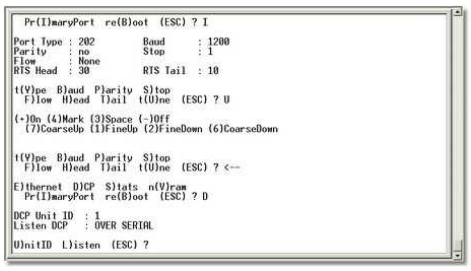
If you're using Windows 7, then you'll need to install telnet before you can use the TTY interface. To install telnet, open up your command line (type "cmd" into the search bar in the **Start Menu**). Select **cmd.exe** to run the command line.



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.

9.4.2 Set DCP Parameters



Setting DCP Parameters

1. Login to the TTY interface and press C)onfig > D)CP.
2. Set the DCP Address (Unit ID).
3. Set the DCP listening type (toggle through the options). Choose over LAN*, or disabled.

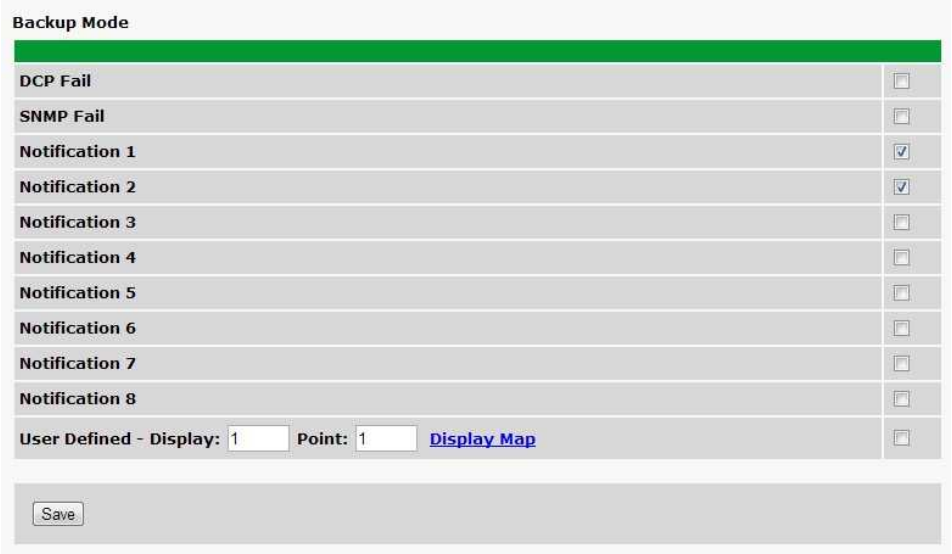
Note: If not using DCP to communicate with a DPS master, set the address to 0 and disable listening.

9.5 Setting up Backup Mode

This section will guide you through the process of setting up Backup Mode. Backup Mode is a system alarm feature capable of alerting you in the instance that DCP, SNMP, or a Notification fails. Even in instances LAN failure, Backup Mode works wirelessly with Voice and SMS notifications to make sure that you receive an alert (CellVoice 4 only)

To setup Backup Mode:

1. Set the conditions for Backup Mode in the **Provisioning > Backup Mode** menu. Backup Mode will remain inactive until a checked condition fails. Once a checked condition fails, the Backup Mode alarm will be activated.



Backup Mode is a System Alarm and its status can be viewed from the **Monitor > System Alarms** menu.

9.5.1 How to Setup Voice Call or SMS Notifications in Backup Mode Only (CellVoice 4 only)

You can choose to have the CellVoice send you an SMS or Voice notification in the instance that a condition fails and Backup Mode becomes active. After choosing the conditions of Backup Mode, as outlined in **Section 10.5**, proceed to the steps below.

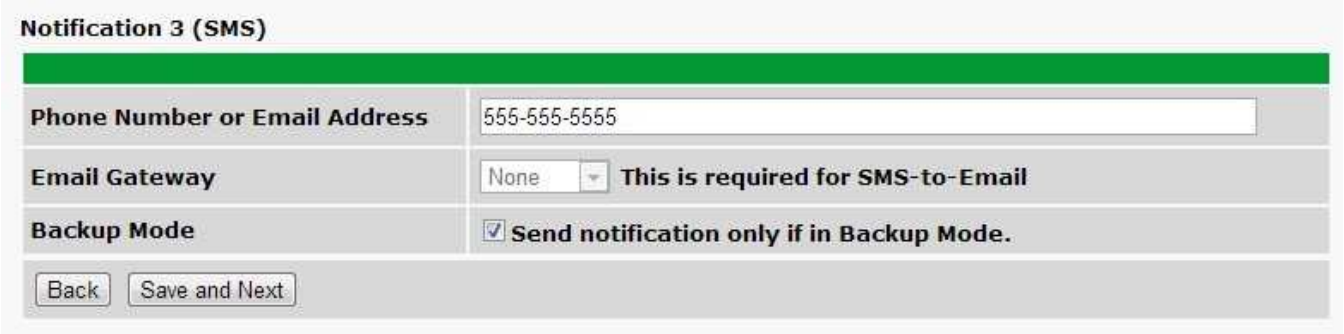
To setup Voice Call or SMS Notifications in Backup Mode Only:

You can choose to have the CellVoice send you an SMS or Voice notification in the instance that a condition fails and Backup Mode becomes active. In order to do this, you will need to create a Backup Mode notification. After choosing the conditions of Backup Mode, as outlined in **Section 10.5** "Setting up Backup Mode," proceed to the steps below.

1. Navigate to **Provisoning > Notifications**.

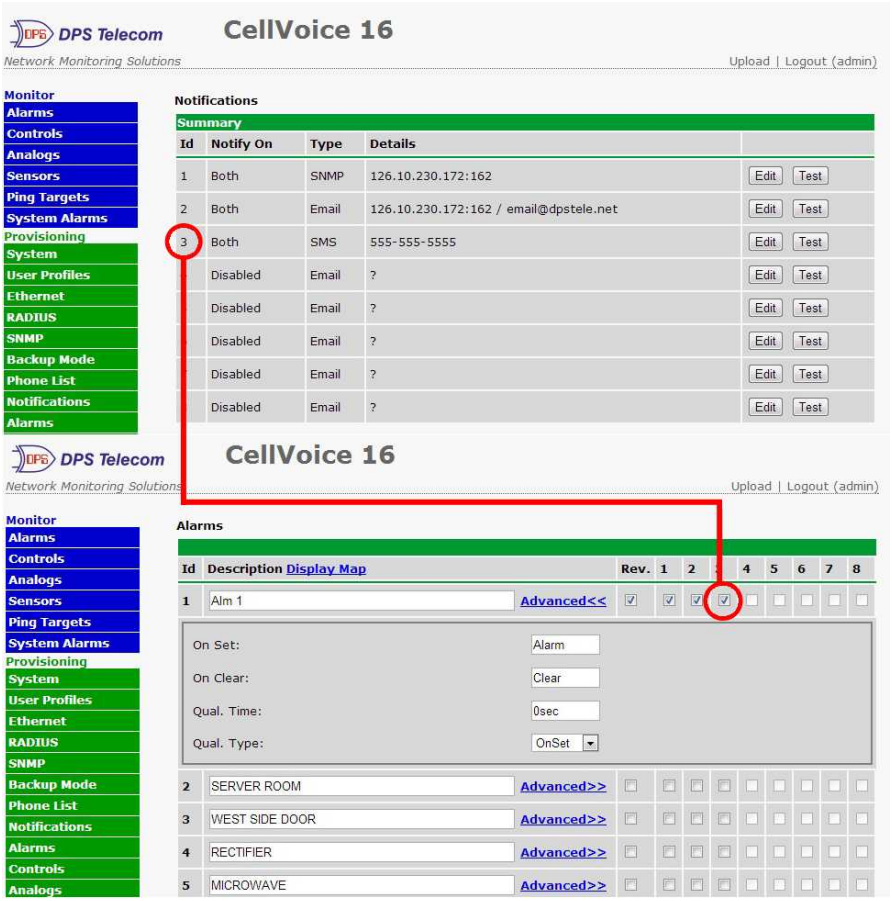
2. Choose a notification and click "Edit." Backup Mode is configured to use wireless Voice and SMS notifications, so select either **Voice Call or Send SMS**. Fill out the information and check the box next to **Send notification only if in Backup Mode**. By checking this box, this notification will not be sent unless Backup Mode becomes active.

3. Click **Save and Next**, and finish configuring the notification.



Note: For more detailed information on configuring notifications, see sections **11.7.1** "Notification Settings," **10.3** "How to Send Voice Call Notifications," or **10.4** "How to Send SMS Notifications."

4. After setting up your Backup Mode notification, you will need to assign that notification to an alarm. Backup Mode notifications are typically used to alert you in instances that LAN-based notifications fail to deliver. You can assign your Backup Mode to an alarm by checking the notification number on the **Provisioning > Alarms** menu.



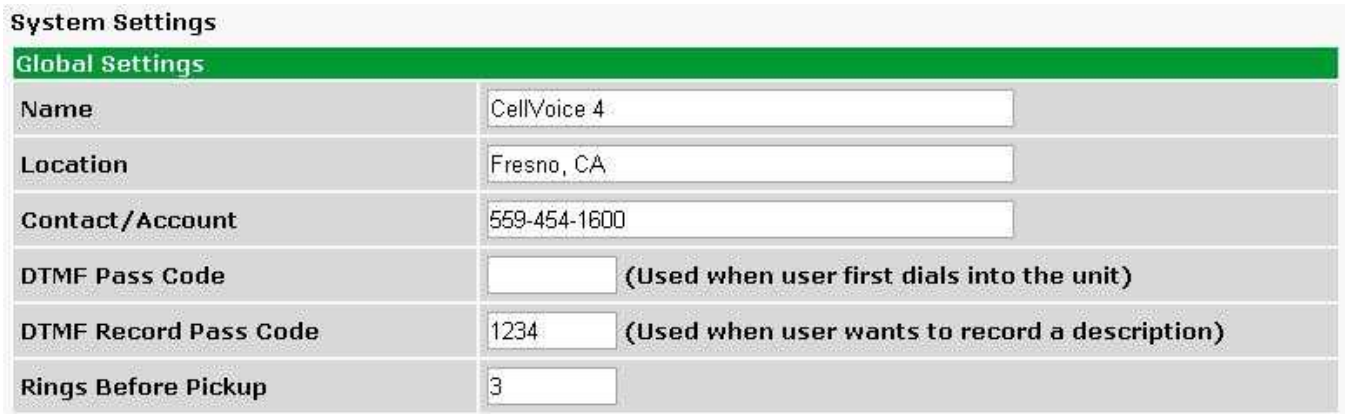
Note: The CellVoice cycles through alarm notifications in numerical order. This means that Backup Mode notifications should be placed last, behind all other alarms to ensure that they are delivered after all other notifications have failed.

9.6 Setting Up SMS for RRM (Rapid Response Monitoring)

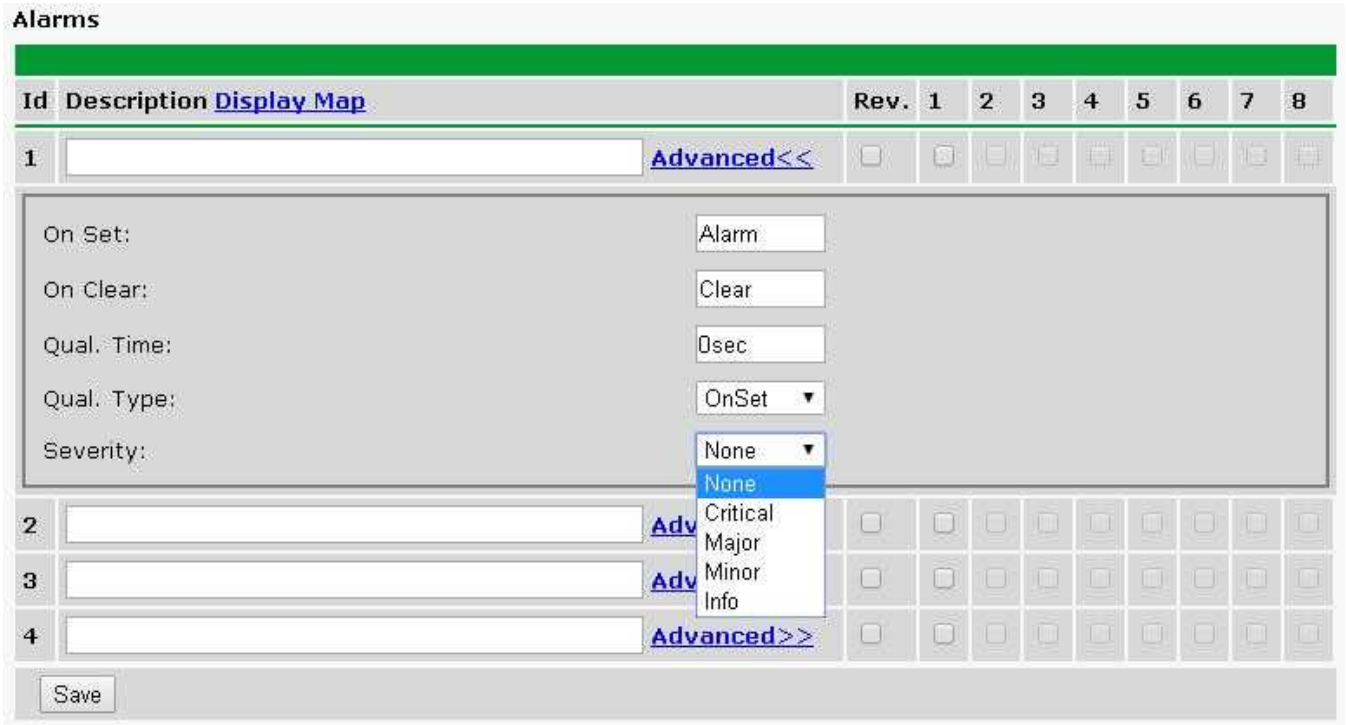
This section will guide you through the process of setting up SMS notification to send to the RRM (Rapid Response Monitoring) service.

To setup SMS notification for RRM:

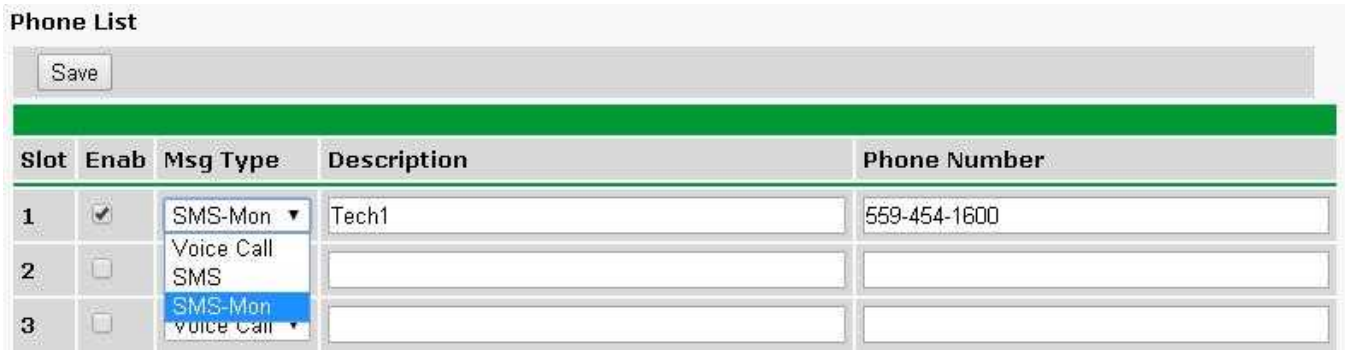
1. In the "Provisioning > System" menu:
    a. Add the correct account number in the "Contact/Account" section.
        1.This will add the correct Account to the SMS message.



2. In the "Provisioning > Alarms" menu:
    a. Click on the "Advanced" link for one of the alarms.
    b. Using the "Severity" drop-down menu, select one of the choices (Critical = "Panic", Major = "NoiseDet", Minor = "Motion", Info = "AreaDet")
        1.This will add the correct Code to the SMS message.



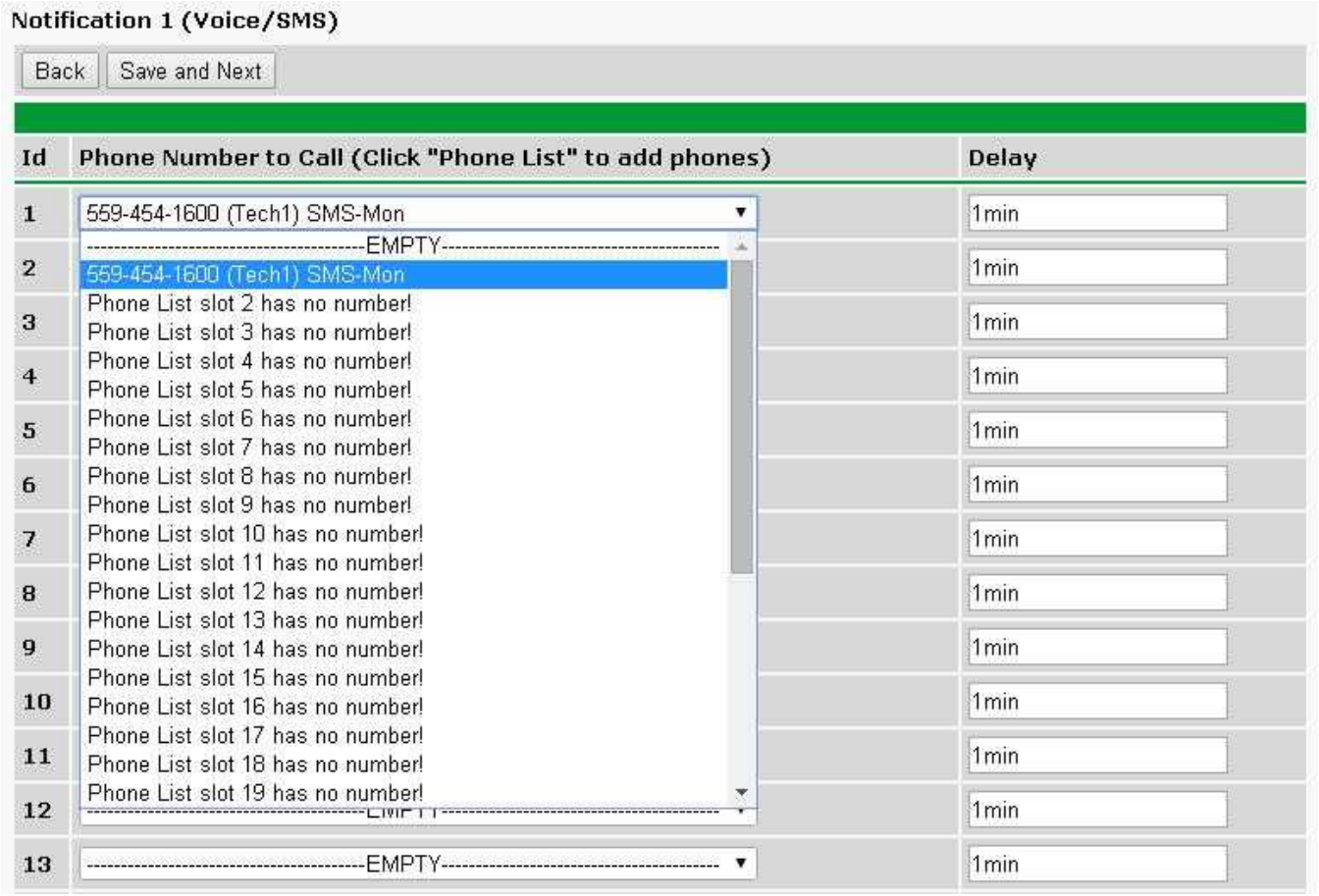
3. In the "Provisioning > Phone List" menu:
    a. Add the description and phone number for the RRM service.
    b. Select "SMS-Mon" in the "Msg Type" column and enable the phone number.



4. In the "Provisioning > Notifications" menu:
    a. Click "Edit" for one of the notifications.

    b. Edit on of the notifications as a "Voice /SMS" type notification.

    c.Select the phone number set-up in Step 1 as one of the Phone Numbers.



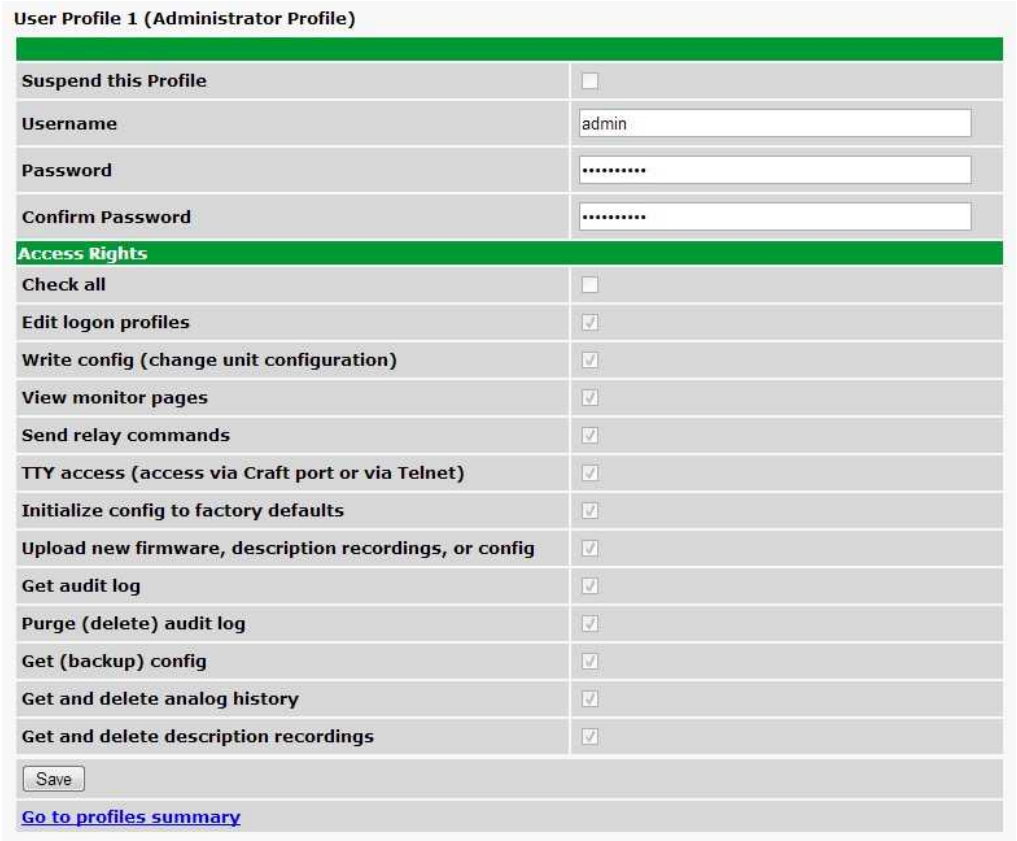
5. Set this notification for the alarms of your choice.

9.7 Changing the Default Password

The password can be configured from the **Provisioning** > **User Profiles** 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.



Edit User Profile section of the Provisioning > User Profiles menu

9.8 Analog Step Sizes

Analog Step Sizes:
Your Analogs are accurate to within +/- 1% of the analog range.

Analog Step Sizes and Accuracy		
Input Voltage Range	**Resolution (Step Size)**	**Accuracy**
0-5 V	.0015 V	+/- .05V
5-14 V	.0038 V	+/- .14V
14-30 V	.0081 V	+/- .30V
30-70 V	.0182 V	+/-.70V
70-90 V	.0231 V	+/-.90V

Analog step sizes and accuracy

9.9 Display Mapping & System Alarms

	Description	Port	Address	Point
Display 1	Discrete Alarms	99	1	1-4
	Default Configuration	99	1	33
	DCP Poller Inactive	99	1	34
	SNMP Community Error	99	1	39
	Notification 1 Failed	99	1	41
	Notification 2 Failed	99	1	42
	Notification 3 Failed	99	1	43
	Notification 4 Failed	99	1	44
	Notification 5 Failed	99	1	45
	Notification 6 Failed	99	1	46
	Notification 7 Failed	99	1	47
	Notification 8 Failed	99	1	48
	NTP Failed	99	1	49
	Timed Tick	99	1	50
	Dynamic Memory Full	99	1	51
	Unit Reset	99	1	52
	Modem Failed	99	1	55
	Bad signal	99	1	56
	Backup Mode	99	1	57
	SMS Alarm	99	1	58
Display 2	Controls	99	1	1
	Ping Targets	99	1	33-64
Display 3	Power A Minor Under	99	1	1
	Power A Minor Over	99	1	2
	Power A Major Under	99	1	3
	Power A Major Over	99	1	4
	Control	99	1	9-16
	Value	99	1	17-32
	User Analog Minor Under	99	1	33
	User Analog Minor Over	99	1	34
	User Analog Major Under	99	1	35
	User Analog Major Over	99	1	36
	Control	99	1	41-48
	Value	99	1	49-64

Display 4	Digital sensor 1 Minor Under	99	1	1
	Digital sensor 1 Minor Over	99	1	2
	Digital sensor 1 Major Under	99	1	3
	Digital sensor 1 Major Over	99	1	4
	Digital sensor 1 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 2 Minor Under	99	1	33
	Digital sensor 2 Minor Over	99	1	34
	Digital sensor 2 Major Under	99	1	35
	Digital sensor 2 Major Over	99	1	36
	Digital sensor 2 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64

Display	Description	Port	Address	Point
Display 5	Digital sensor 3 Minor Under	99	1	1
	Digital sensor 3 Minor Over	99	1	2
	Digital sensor 3 Major Under	99	1	3
	Digital sensor 3 Major Over	99	1	4
	Digital sensor 3 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 4 Minor Under	99	1	33
	Digital sensor 4 Minor Over	99	1	34
	Digital sensor 4 Major Under	99	1	35
	Digital sensor 4 Major Over	99	1	36
	Digital sensor 4 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 6	Digital sensor 5 Minor Under	99	1	1
	Digital sensor 5 Minor Over	99	1	2
	Digital sensor 5 Major Under	99	1	3
	Digital sensor 5 Major Over	99	1	4
	Digital sensor 5 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 6 Minor Under	99	1	33
	Digital sensor 6 Minor Over	99	1	34
	Digital sensor 6 Major Under	99	1	35
	Digital sensor 6 Major Over	99	1	36
	Digital sensor 6 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 7	Digital sensor 7 Minor Under	99	1	1
	Digital sensor 7 Minor Over	99	1	2
	Digital sensor 7 Major Under	99	1	3
	Digital sensor 7 Major Over	99	1	4
	Digital sensor 7 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 8 Minor Under	99	1	33
	Digital sensor 8 Minor Over	99	1	34
	Digital sensor 8 Major Under	99	1	35
	Digital sensor 8 Major Over	99	1	36
	Digital sensor 8 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64

Display Mapping (continued..)

Display	Description	Port	Address	Point
Display 8	Digital sensor 9 Minor Under	99	1	1
	Digital sensor 9 Minor Over	99	1	2
	Digital sensor 9 Major Under	99	1	3
	Digital sensor 9 Major Over	99	1	4
	Digital sensor 9 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 10 Minor Under	99	1	33
	Digital sensor 10 Minor Over	99	1	34
	Digital sensor 10 Major Under	99	1	35
	Digital sensor 10 Major Over	99	1	36
	Digital sensor 10 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 9	Digital sensor 11 Minor Under	99	1	1
	Digital sensor 11 Minor Over	99	1	2
	Digital sensor 11 Major Under	99	1	3
	Digital sensor 11 Major Over	99	1	4
	Digital sensor 11 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 12 Minor Under	99	1	33
	Digital sensor 12 Minor Over	99	1	34
	Digital sensor 12 Major Under	99	1	35
	Digital sensor 12 Major Over	99	1	36
	Digital sensor 12 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 10	Digital sensor 13 Minor Under	99	1	1
	Digital sensor 13 Minor Over	99	1	2
	Digital sensor 13 Major Under	99	1	3
	Digital sensor 13 Major Over	99	1	4
	Digital sensor 13 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 14 Minor Under	99	1	33
	Digital sensor 14 Minor Over	99	1	34
	Digital sensor 14 Major Under	99	1	35
	Digital sensor 14 Major Over	99	1	36
	Digital sensor 14 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64

Display Mapping (continued..)

Display	Description	Port	Address	Point
Display 11	Digital sensor 15 Minor Under	99	1	1
	Digital sensor 15 Minor Over	99	1	2
	Digital sensor 1 Major Under	99	1	3
	Digital sensor 15 Major Over	99	1	4
	Digital sensor 15 Sensor not detected	99	1	5
	Control	99	1	9-16
	Value	99	1	17-32
	Digital sensor 16 Minor Under	99	1	33
	Digital sensor 16 Minor Over	99	1	34
	Digital sensor 16 Major Under	99	1	35
	Digital sensor 16 Major Over	99	1	36
	Digital sensor 16 Sensor not detected	99	1	37
	Control	99	1	41-48
	Value	99	1	49-64
Display 12	SNMP Alarms	99	1	1-32
	Undefined	99	1	33-64

Display Mapping (continued..)

Display	Points	Alarm Point	Description	Solution
1	33	Default configuration	The internal NVRAM may be damaged. The unit is using default configuration settings.	Login to the unit's web browser and configure the unit. Power cycle to see is the alarm clears.
	34	DCP poller inactive	The unit is configured to listen for DCP polls but has not received a poll in over 5 minutes.	Check if unit can ping T/Mon or disable if not in use.
	41	Notification 1 failed	A notification 1 event, such as a page or email, was unsuccessful.	Verify that you can ping both devices.
	42	Notification 2 failed	A notification 2 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	43	Notification 3 failed	A notification 3 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	44	Notification 4 failed	A notification 4 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	45	Notification 5 failed	A notification 5 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	46	Notification 6 failed	A notification 6 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	47	Notification 7 failed	A notification 7 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	48	Notification 8 failed	A notification 8 event, such as a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	49	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.
	50	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.
	51	Dynamic memory full	Not expected to occur.	Call DPS Tech Support (559) 454-1600.
	52	Unit reset	Unit has rebooted.	If unintentional, call DPS Tech Support: (559) 454-1600.
	55	Modem failed	The Modem component to the unit has stopped responding.	Check if Modem is properly placed in socket. Contact DPS Tech Support (559) 454-1600.
	56	Bad signal	The Wireless Modem does not detect a cellular signal. (CellVoice 4 only)	Ensure that the cellular antenna is properly connected to the CellVoice. If possible, reposition the CellVoice to find a cellular signal. If unsuccessful, contact DPS.
	57	Backup Mode	See Section 10.5, "Backup Mode."	Alarm specific.

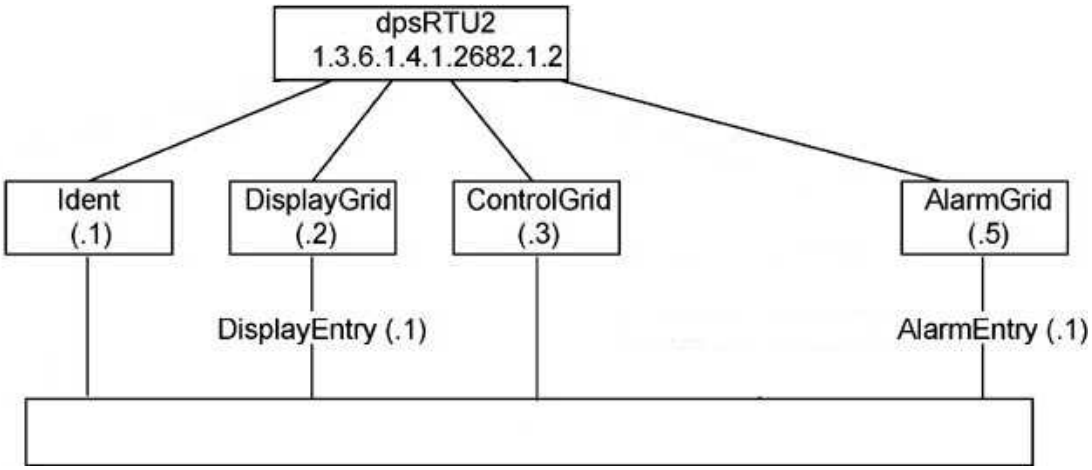
System Alarms Display Map

9.10 Voice Notification Flow Chart (CellVoice 4 only)

	Press 1	Press 2	Press 3	Press 4	Press 5	Press 6	Press 7	Press *	Press #
Main Menu	List Events	Acknowledge all Events	List Standing Alarms	Go to **Operate Relays**	-	-	-	Go to **More Options**	-
More Options	Record Descriptions, go to **Select Descriptions**	Report Analog Values	-	-	-	-	-	-	Return to **Main Menu**
Select Description	Select alarm description, go to **Record Description**	Select analog description, go to **Record Description**	Select relay description, go to **Record Description**	Select other descriptions, go to **Record Description**	Select alarm set description, go to **Record Description**	Select alarm clear description, go to **Record Description**	Select ping target description, go to **Record Description**	-	Return to **Main Menu**
Record Description	Play user description	Record user description	Delete user description	-	-	-	-	-	Return to **Select Description**
Operate Relays	*Operate Relay	*Release Relay	Momentary Operate Relay	-	-	-	-	-	Return to **More Options**

9.11 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 1.3.6.1.4.1.2682.1.2. Each level beyond dpsRTU adds another object identifying number. For example, the object identifier of the Display portion of the Control Grid is 1.3.6.1.4.1.2682.1.2.3.3 because the object identifier of dpsRTU is 1.3.6.1.4.1.2682.1.4 + the Control Grid (.3) + the Display (.3).



Tbl. B2 (.1) Identity points
Ident (1.3.6.1.4.1.2682.1.2.1)
Manufacturer (.1)
Model (.2)
Firmware Version (.3)
DateTime (.4)
ResyncReq (.5)*

Tbl. B3 (.2) DisplayGrid points
DisplayEntry (1.3.6.1.4.1.2682.1.2.2.1)
Port (.1)
Address (.2)
Display (.3)
DispDesc (.4)*

* Must be set to "1" to perform the resync request which will resend TRAPs for any standing alarm.

PntMap (.5)*

Tbl. B3 (.3) ControlGrid points
ControlGrid (1.3.6.1.4.1.2682.1.2.3)
Port (.1)
Address (.2)
Display (.3)
Point (.4)
Action (.5)

Tbl. B5 (.5) AlarmEntry points
AlarmEntry (1.3.6.4.1.2682.1.2.5.1)
Aport (.1)
AAddress (.2)
ADisplay (.3)
APoint (.4)
APntDesc (.5)*
AState (.6)
* For specific alarm points, see Table B6

Tbl. B6 (.6) Analog Channels
Channel Entry (1.3.6.1.4.1.2682.1.4.6.1)
Channel Number (.1)
Enabled (.2)
Description (.3)
Value (.4)
Thresholds (.5)*
*If Mj, Mn is assumed

9.12 SNMP Granular Trap Packets

The tables below provide a list of the information contained in the SNMP Trap packets sent by the unit.

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
CellVoice 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

10 Frequently Asked Questions

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

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

10.1 General FAQs

Q. How do I telnet to the unit?
A. You must use **Port 2002** to connect to the unit. 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 unit and Port 2002. For example, to connect to the unit using the standard Windows Telnet client, click Start, click Run, and type "telnet <unit IP address> 2002."

Q. How do I connect my unit to the LAN?
A. To connect your unit 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 unit 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 unit.

Q. The LAN link LED is green on my unit, 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. What characteristics of an alarm point can be configured through software? For instance, can point 4 be used to sense an active-low signal, or point 5 to sense a level or an edge?
A. The unit's standard configuration is for all alarm points to be level-sensed. You **cannot** use configuration software to convert alarm points to TTL (edge-sensed) operation. TTL alarm points are a hardware option that must be specified when you order your unit. Ordering TTL points for your unit does not add to the cost of the unit. What you can do with the configuration software is change any alarm point from "Normal" to "Reversed" operation. Switching to Reversed operation has different effects, depending on the kind of input connected to the alarm point:

- **If the alarm input generates an active-high signal,** switching to Reversed operation means the unit will declare an alarm in the absence of the active-high signal, creating the practical equivalent of an active-low alarm.
- **If the alarm input generates an active-low signal,** switching to Reversed operation means the unit will declare an alarm in the absence of the active-low signal, creating the practical equivalent of an active-high alarm.

- **If the alarm input is normally open,** switching to Reversed operation converts it to a normally closed alarm point.
- **If the alarm input is normally closed,** switching to Reversed operation converts it to a normally open alarm point.

Q. I'm unsure if the voltage of my power supply is within the specified range. How to 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 +30VDC.

10.2 SNMP FAQs

Q. Which version of SNMP is supported by the SNMP agent on the unit?
A. SNMP v1, SNMP v2c, and SNMP v3.

Q. How do I configure the unit to send traps to an SNMP manager? Is there a separate MIB for the unit? 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 unit begins sending traps as soon as the SNMP managers are defined. The unit MIB can be found on the DPS Telecom website. 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 unit support MIB-2 and/or any other standard MIBs?
A. The unit supports the bulk of MIB-2.

Q. Does the unit SNMP agent support both unit variables and T/MonXM variables?
A. The unit SNMP agent manages an embedded MIB that supports only the unit'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 unit 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 unit alarm 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 unit and the SNMP manager are both on the network. Use the unit's ping command to ping the SNMP manager.

11 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.*

12 End User License Agreement

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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.

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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.

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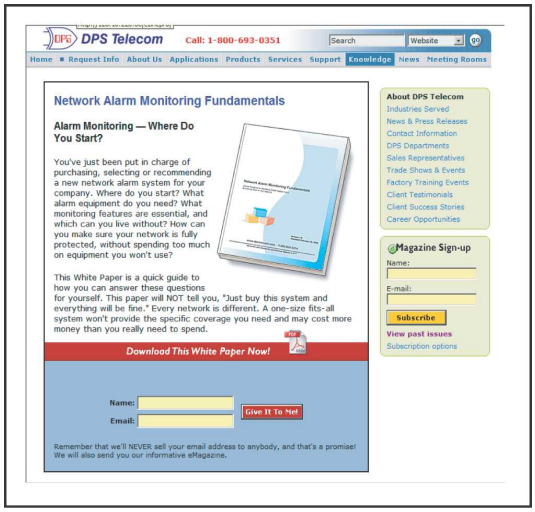

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