DPS Telecom

"Your Partners In Network Alarm Monitoring"

TempDefender IT

USER MANUAL

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June 18,2015 **D-UM-TMPDF** **Firmware Version v1.1C.0049**

Revision History

June 18, 2015	Edit Web Browser Screenshots
August 12, 2013	Updated Current Draw specifications
January 18, 2013	Added Notification override
December 10, 2012	Added VLAN
November 16, 2012	Added regular update status function
October 18, 2012	Added analog gauges
August 22, 2012	Added Ping Targets
April 30, 2012	Updated D-Wire cable info
April 26, 2012	Added email authentication information
March 19, 2012	Updated specifications section
March 9, 2012	Updated D-Wire sensor info
August 24, 2011	Added pinout and additional D-Wire sensor information
August 25, 2010	Added sensor info and ping targets.
August 12, 2010	Initial Release.

Notice

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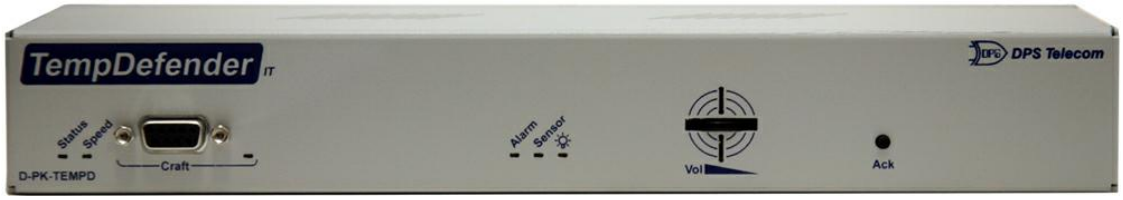
1 TempDefender IT Overview



Your Server Room Guardian.

Could you estimate **how much** money your company has invested in your IT server room or data center? **How much** is your network uptime worth to you? These questions might be difficult to answer, but monitoring your valuable IT equipment certainly doesn't have to be.

You need a compact, simple, and reliable device to monitor basic environmental conditions (like temperature, humidity, smoke...) around your valuable equipment. Without this basic visibility, it's just a matter of time before your investment in your server room is seriously damaged.

- **8 Discrete Alarm Inputs**
- **1 to 4 D-Wire sensor input jacks (Build option), supporting up to 16 sensors (sold separately)**
- **3 Control Relay Outputs (Build option)**
- **Fast, integrated web browser**
- **32 ping targets to monitor other devices on the network**

Meet the TempDefender IT
This small device keeps tabs on all the environmental levels that affect your servers, phone closets, data centers, and other equipment locations. The 8 discrete alarms on the back panel are used to monitor dry contacts, such as motion sensors, UPS, smoke detectors, flood sensors, AC and room entry.

What's the current room temperature? When was the last time someone entered the room? Get all of this information - right from your network PC.

Don't wait until the day your AC unit fails and your server closet **overheats** to start protecting your gear. This small, 1RU device alerts you of changing conditions 24 hours a day, 7 days a week, either to your cell or SNMP manager. The TempDefender IT is the cost-effective way to stay proactive in your monitoring.

2 Specifications

Discrete Alarm Inputs:	8
Control Relays:	Up to 3
Ping Targets:	32
D-Wire Sensor Inputs:	4 (accommodating up to 16 sensors)
Analog Accuracy:	+/- 1% of Analog Range
Protocols:	SNMPv1, SNMPv2c, SMTP, DCPx, TELNET, HTTP, HTTPS, Email, D-Wire, ICMP
Dimensions:	1.720" H x 11.5" W x 4" D
Weight:	1.5 lbs.
Mounting:	19" rack or wall mount
Power Input	
Voltage Options Include:	+24 VDC via 110VAC wall transformer (12 V to 30 VDC) (Optional) -48VDC (-36 to -58VDC) (Optional) -24VDC (-18 to -36 VDC) (Optional) +12VDC (+11 to +30VDC) (Optional) 130VDC
Current Draw:	100mA @ -24VDC 50mA @ -48VDC 200mA @ 12VDC
Fuse:	Resettable Fuse (Internal), if +24V Power Input 1/2 Amp GMT Fuse, if -48V or -24V Power Input
Interfaces:	1 RJ45 10/100BaseT Ethernet full-duplex port 1 DB9 front-panel craft port 1 Ack button 4 RJ12 Digital sensor inputs
Network Security:	Protected port/private VLAN
Visual Interface:	6 Front Panel LEDs 3 Back Panel LEDs
Audible Notification:	Alarm speaker with volume control
Operating Temperature:	32°–140° F (0°–60° C)
Operating Humidity:	0%–95% non-condensing
MTBF:	60 years
Windows Compatibility:	Windows XP, Vista, 7 32/64 bit
RoHS:	5/6

3 Shipping List

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

TempDefender IT
D-PK-TMPDF

TempDefender Resource CD

TempDefender IT User Manual
D-UM-TMPDF

+24V Wall Transformer (AC units)
D-PR-105-10A-02

½-Amp GMT Fuses
2-741-00500-00

Lg. Power Connector (Main Pwr)
2-820-00862-02

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

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

x 1

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

x 2

Wall Mount Bracket
D-CS-532-10A-05

x 4

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

x 2

Two Metric Rack Screws
2-000-80750-03

x 2

Two Standard Rack Screws
1-000-12500-06

Pads
2-015-00030-00

3.1 Optional Shipping Items

Small WAGO connector
2-802-01020-00

Power plug to open end
D-PR-1047-10A-10

Long 19" Rack Ear
D-CS-325-10A-10

Temp Sensor Node
D-PK-DSNSR-12001

Temp/Humidity Sensor Node
D-PK-DSNSR-12002

Telephone Cable
D-PR-045-10A-01

4 Installation

4.1 Tools Needed

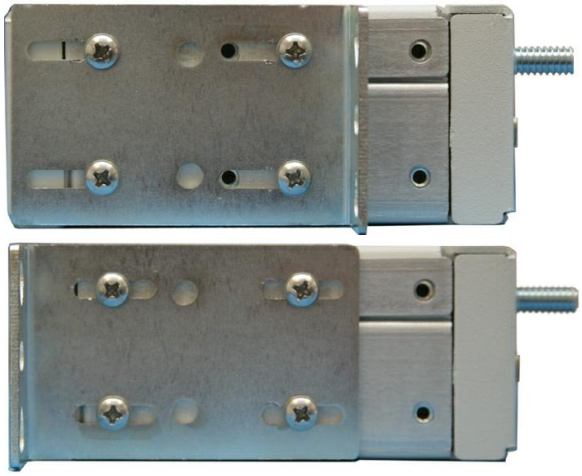
To install the TempDefender, you'll need the following tools:

Phillips No. 2 Screwdriver

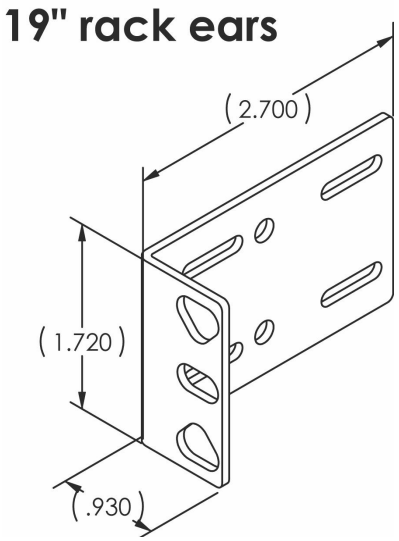
Small Standard No. 2 Screwdriver

PC with terminal emulator, such as HyperTerminal

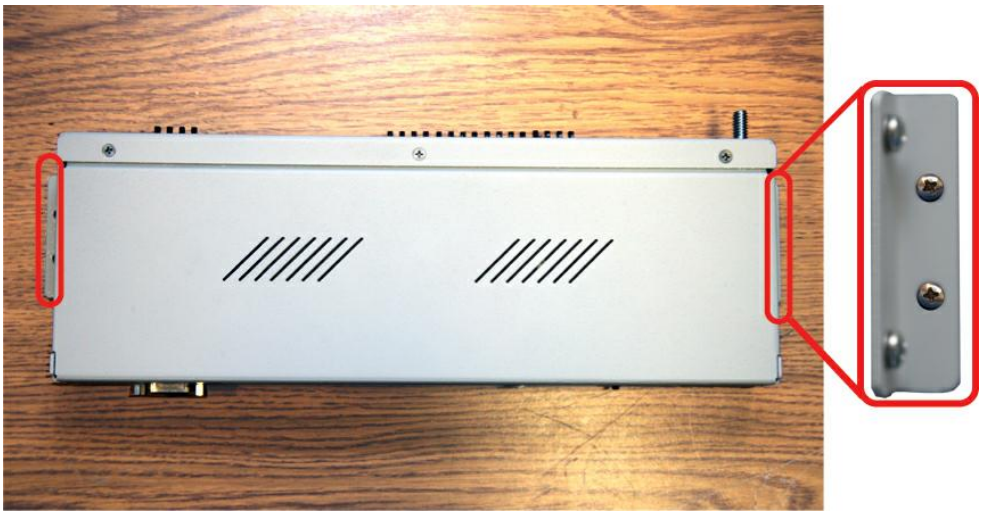
4.2 Mounting



The TempDefender IT can be flush or rear-mounted



The compact TempDefender IT occupies only half the width of a standard rack unit. Only one rack ear is supplied with the TempDefender IT, and the rack ear can be mounted on the left or right side of the unit. The TempDefender IT mounts in a 19" or 23" rack, and can be mounted on the right or left, in the flush-mount or rear mount locations.



Use the included wall mount bracket to mount the TempDefender IT 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).

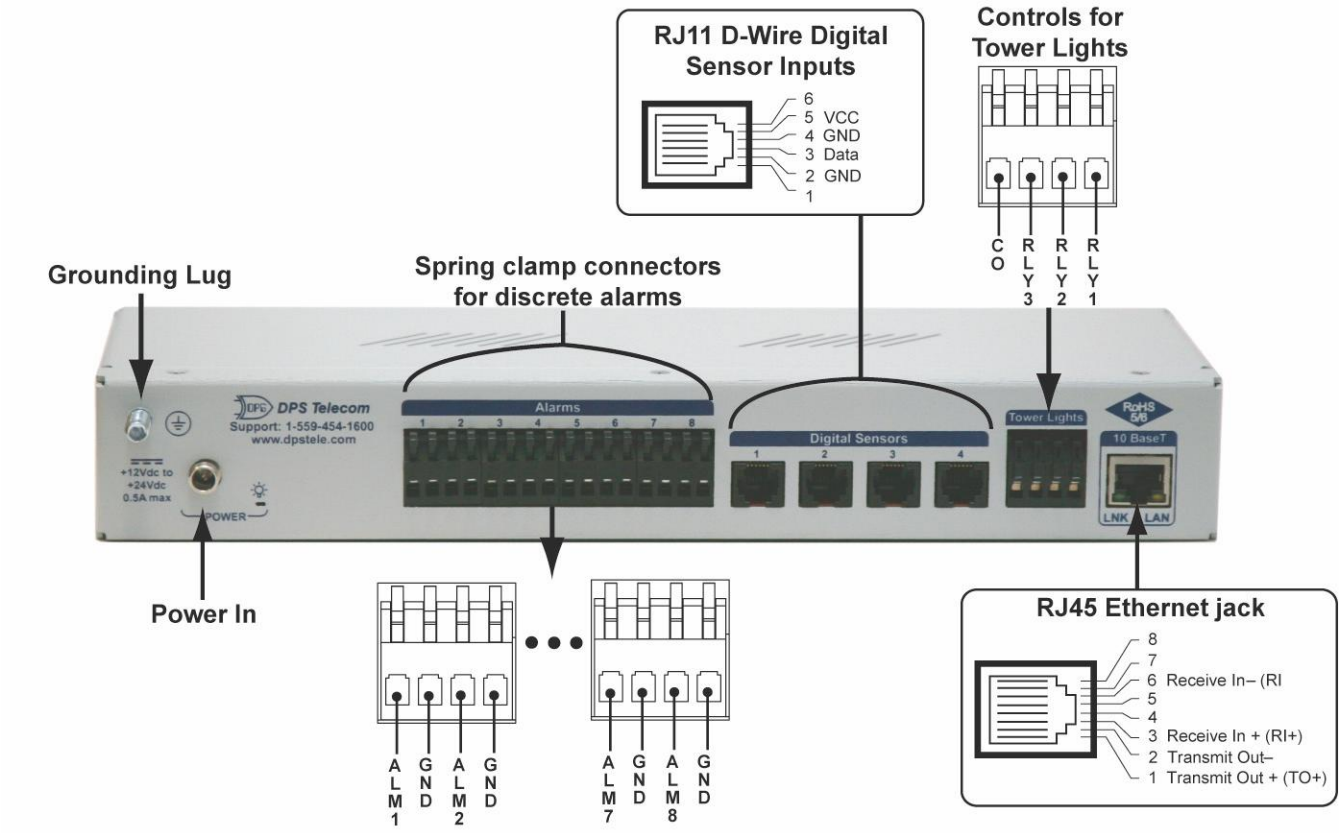
1. Depending on your order options, you will attach wall-mount flanges to both sides of the unit.
   a. Fasten the flange to the TempDefender with two of the 6/32 screws provided. (**NOTE**: Screws longer than those provided may contact the internal components of the unit, adversely affecting its normal operation.)
2. After flanges have been attached to the TempDefender, mount the unit in the desired location with two screws through each flange.

The TempDefender also mounts on your 19" equipment racks.

Rack-Mounting Instructions

The TempDefender 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. If you require an ear for both sides of the TempDefender, a long 19" rack ear is available as a separate ordering option.

5 TempDefender IT Back Panel



TempDefender IT back panel connections

5.1 Power Connection (+12 or +24VDC Build Option)

The TempDefender IT is powered by a screw-on plug, located on the right side of the back panel.

Close-up view of TempDefender's screw-on power connector.

Before you connect a power supply to the TempDefender IT:

1. Always use safe power practices when making power connections. Be sure to remove fuses from the back of the TempDefender before making your power connections.
2. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the symbol . Insert the eyelet of the earth ground cable between the two bolts on the grounding lug (Ground cable not included.)
3. Plug in the power connector to the rear panel of the TempDefender. Twist the collar of the plug to lock in place.
4. Plug in the wall transformer to a power outlet. The power LED should be lit green. To confirm that power is correctly connected, the front panel LEDs will flash RED and GREEN, indicating that the firmware is booting up.

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

The TempDefender IT can also be built with a single screw terminal barrier plug or WAGO power connector.

Back panel power options

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

1. Always use safe power practices when making power connections. Be sure to remove fuses from the fuse distribution panel, as well as the back of the TempDefender, before making your power

connections.

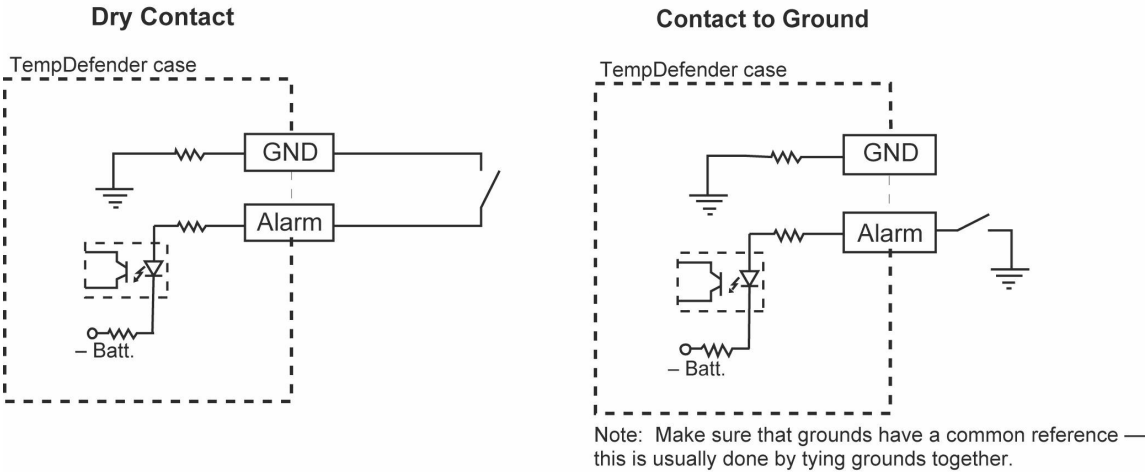
2. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the ⏚ symbol. Insert the eyelet of the earth ground cable between the two bolts on the grounding lug (Ground cable not included).
3. Insert a battery ground into the power connector plug's right terminal and tighten the screw; then insert a battery line to the plug's left terminal and tighten its screw.
4. Insert a fuse into the fuse distribution panel and measure voltage. The voltmeter should read between –40 and –70VDC (for -48VDC build option) or -18 and -30VDC (-24VDC build option).
5. The power plug can be inserted into the power connector only one way to ensure the correct polarity. Note that the negative voltage terminal is on the left and the GND terminal is on the right.
6. Insert fuse into the GMT fuse slot. The power LED should be lit green. If the LED is off, the power connection may be reversed. To confirm that power is correctly connected, the front panel LEDs will flash RED and GREEN, indicating that the firmware is booting up.

5.3 LAN Connection

To connect the TempDefender IT 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**.

To configure VLAN through the web interface, see **Section 10.2, Ethernet**.

5.4 Discrete Alarms



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

The TempDefender IT features 8 discrete alarm inputs - also called digital inputs or contact closures. Discrete alarms are either active or inactive, so they're typically used to monitor on/off conditions like power outages, equipment failures, door alarms and so on. The TempDefender's discrete alarm points are single-lead signals referenced to ground. The ground side of each alarm point is internally wired to ground, so alarm points can connect either as a dry contact or a contact to ground.

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

You can reverse the polarity of each individual discrete alarm point, so that the alarm is activated when the contact is open, via the **polarity** option in the TempDefender's web interface.

5.5 D-Wire Sensor Inputs

The ports on your TempDefender labeled **Digital Sensors** support up to 16 **D-Wire sensors**. Your TempDefender powers and communicates with your D-Wire sensors via simple RJ-11 connections. You can chain your 16 sensors to the 4 ports on the back of the TempDefender in any order or combination; run four sensors from each port or extend a chain of 16 sensors from a single port: it's up to you.

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.

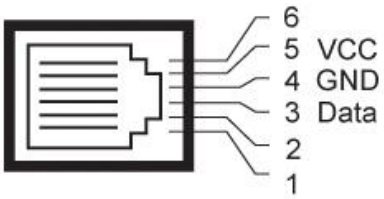
Maximum Cable Lengths			
Number of Nodes	Spec'd Max (ft)	Number of Nodes	Spec'd Max (ft)
1	800	9	150
2	700	10	125
3	475	11	125
4	350	12	100
5	275	13	100
6	225	14	100
7	200	15	75
8	175	16	75

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

Warning: Be sure to only use a **straight-through RJ-11 cable** (part #D-PR-901-10A-XX, pinout below) to connect any digital sensor port on the TempDefender 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 TempDefender 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 through the web interface, see the **Sensors** section of this manual.

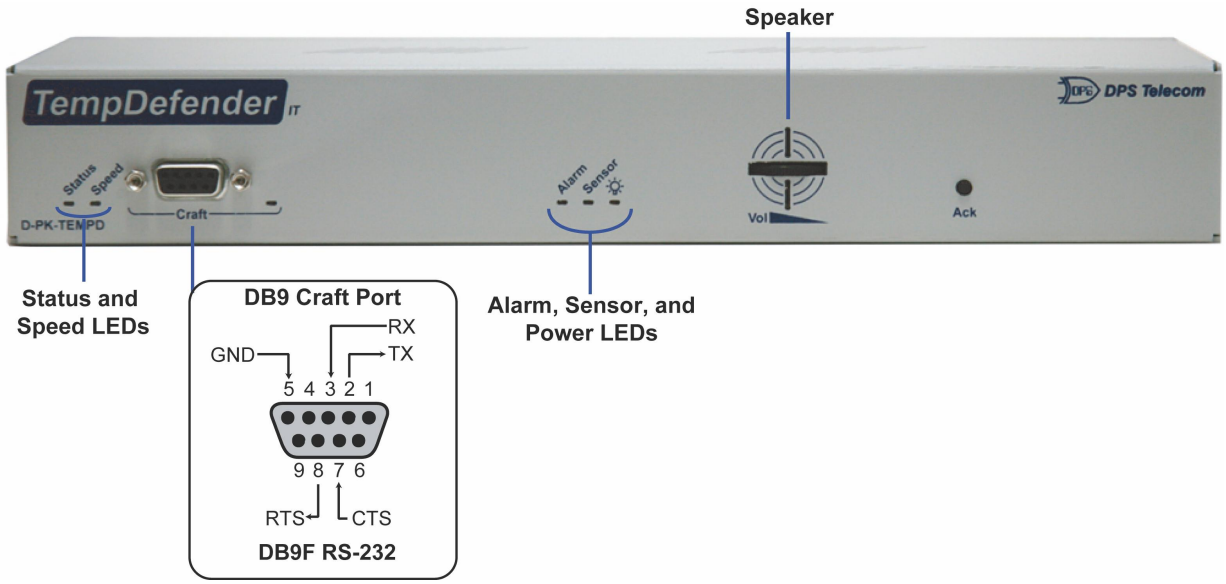
5.5.1 Analog Step Sizes

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

6 TempDefender IT Front Panel



TempDefender IT Front panel connections

6.1 Craft Port

Use the front panel craft port to connect the TempDefender IT to a PC for onsite unit configuration. To use the craft port, connect the included DB9 download cable from your PC's COM port to the craft port. Pinout is shown above for reference, but this is a standard DB9 to DB9.

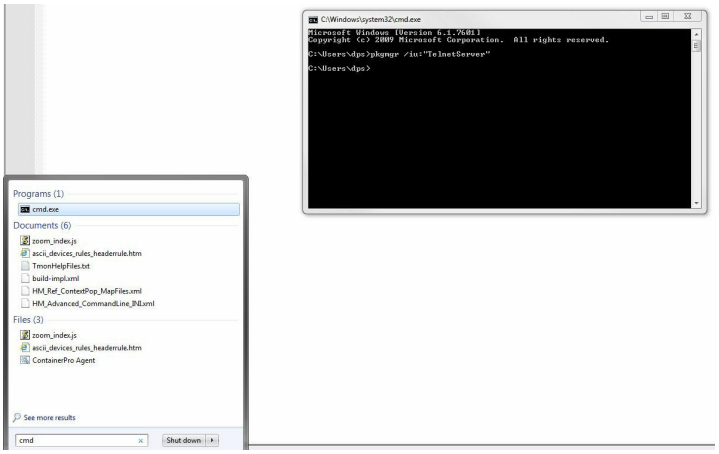
7 Quick Start: How to Connect to the TempDefender IT

Most users find it easiest to give the unit an IP address, subnet and gateway through the front craft port (TTY interface) to start. Once these settings are saved and you reboot the unit, you can access it over LAN to do the rest of your databasing via the Web Browser interface. **Alternative option:** You can skip the TTY interface by using a LAN crossover cable directly from your PC to the TempDefender IT and access its Web Browser.

7.1 TTY Interface

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

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

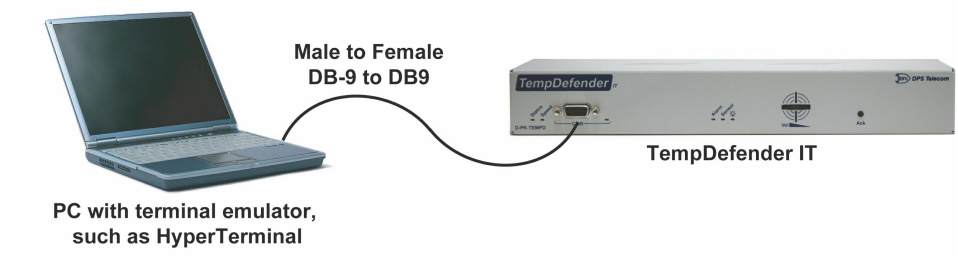


From the command line, type in "pkgmgr /iu:"TelnetServer" then press **enter**. When the command prompt appears again, the installation is complete.

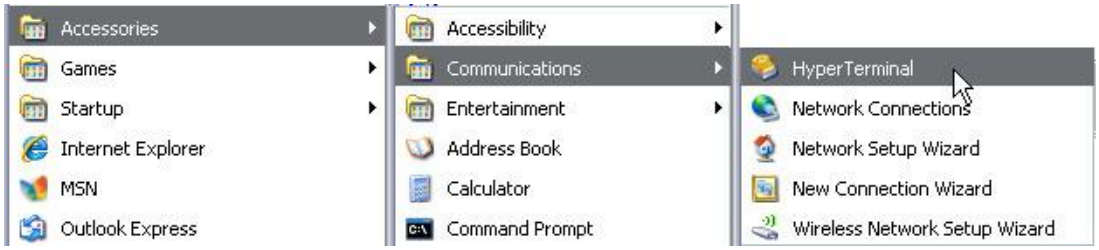
Menu Shortcut Keys
The letters before or enclosed in parentheses () are menu shortcut keys. Press the shortcut key to access that option. Pressing the ESC key will always bring you back to the previous level. Entries are not case sensitive.

7.2 ...via Craft Port (using TTY Interface)

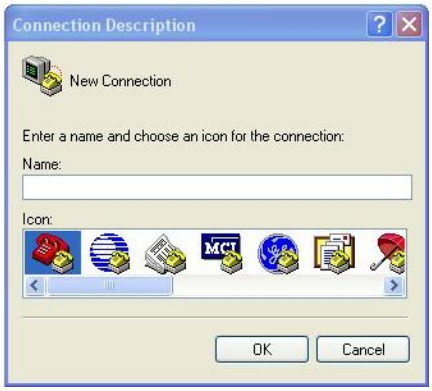
1. The simplest way to connect to the TempDefender IT is over a physical cable connection between your PC's COM port and the unit's craft port. **Note:** You must be connected via craft port or Telnet to use the TTY interface. Make sure you are using the straight through (1 to 1) Male to Female DB9-DB9 download cable provided with your TempDefender IT to make a craft port connection. We'll be using HyperTerminal to connect to the unit in the following example - however, most terminal-emulating programs should work.



To access HyperTerminal using Windows:
2. Click on the **Start** menu **>** select **Programs** > **Accessories** > **Communications** > **HyperTerminal.**



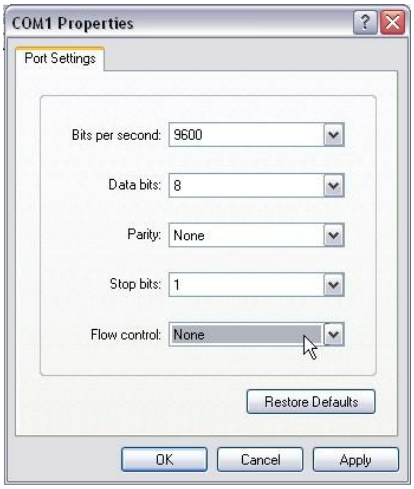
3. At the Connection Description screen, enter a name for this connection. You may also select an icon. The name and icon do not affect your ability to connect to the unit.



4. At the Connect To screen, select Com port you'll be using from the drop down and click OK. (COM1 is the most commonly used.)

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

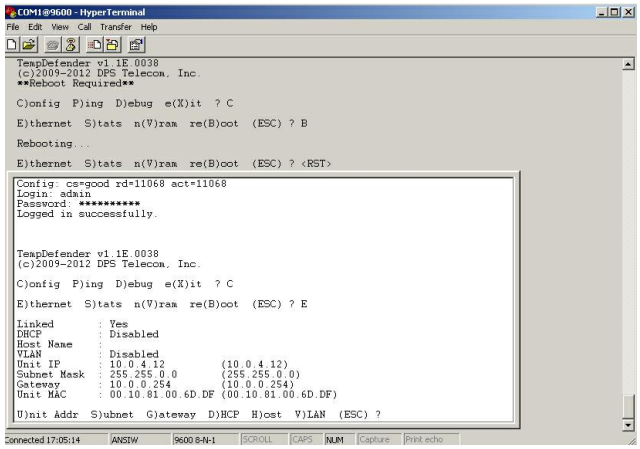
   Once connected, you will see a blank, white HyperTerminal screen. Press Enter to activate the configuration menu.



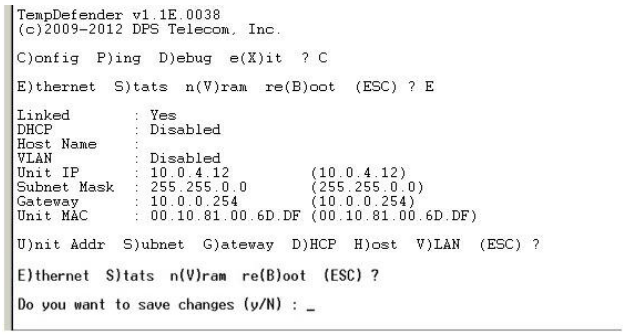
6. When prompted, enter the default user name **admin** and password **dpstelecom**. NOTE**:** If you don't receive a prompt for your user name and password, check the Com port you are using on your PC and make sure you are using the cable provided.

Additional cables can be ordered from DPS Telecom: *Part number* D-PR-045-10A-04

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



8. ESC to the main menu. When asked if you'd like to save your changes, type Y for Y)es. Reboot the TempDefender IT to save its new configuration.



Be sure to change the IP of your computer back to one that operates on your network. ***Now you're ready*** to do the rest of your configuration via LAN. Plug your LAN cable into the TempDefender IT and see Section 9, "Logging On to the TempDefender IT" to continue databasing using the Web Browser.

7.3 ...via LAN

Connection through Ethernet port

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

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

1. Get a LAN crossover cable and plug it directly into the TempDefender IT's LAN port.
2. Look up your PC's current IP address and subnet mask, and write this information down.
3. Reset your PC's IP address to **192.168.1.200**. Contact your IT department if you are unsure how to do this.
4. Reset your PC's subnet mask to **255.255.0.0**. You may have to reboot your PC to apply your changes.
5. Once the IP address and subnet mask of your computer coincide with the unit, you can access the TempDefender IT via a Telnet session or via Web browser by using the unit's default IP address of **192.168.1.100**.
6. Provision the TempDefender IT with the appropriate information, then **change your computer's IP address and subnet mask back to their original settings.**

Now you're ready to do the rest of your configuration via LAN. Plug your LAN cable into the TempDefender IT and see Section 9, "Logging On to the TempDefender IT" to continue databasing using the Web Browser.

Note: To configure advanced VLAN interface options, see **Section 10.2, Ethernet**.

8 TempDefender IT Web Browser

8.1 Introduction

The TempDefender IT features a built-in Web Browser Interface that allows you to manage alarms and configure the unit through the Internet or your Intranet. You can quickly set up alarm point descriptions, view alarm status, issue controls, and configure paging information, and more using most commonly used browsers.

NOTE: Max # of users allowed to simultaneously access the TempDefender IT via the Web is 4.

8.2 Logging on to the TempDefender IT

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

1. To connect to the TempDefender IT from your Web browser, enter its IP address in the address bar of your web browser. It may be helpful to bookmark the logon page to avoid entering this each time.

Note: To establish a secure connection, enter **HTTPS://** then the IP address of your TempDefender.

2. After connecting to the unit's IP address, enter your login information and click OK. **NOTE:** The factory default username is "***admin***" and the password is "***dpstelecom***".

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

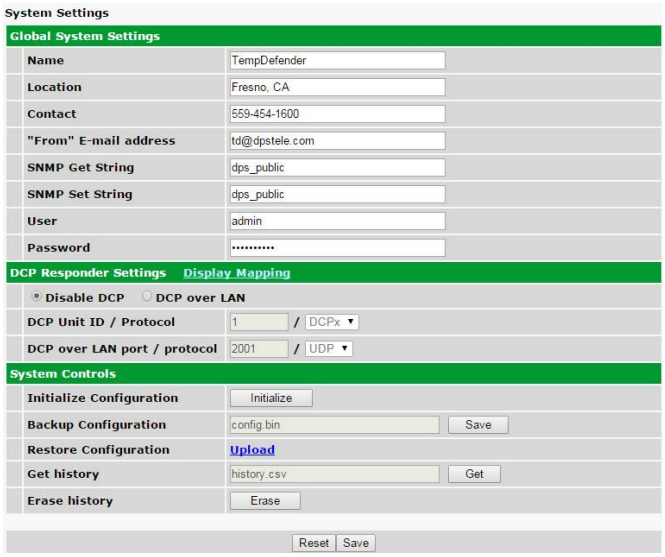
Enter your password to enter the TempDefender IT Web Browser Interface

8.2.1 Changing the Default Password

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

Use the following steps to change the logon password:

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



Global System Settings section of the Edit > System menu

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

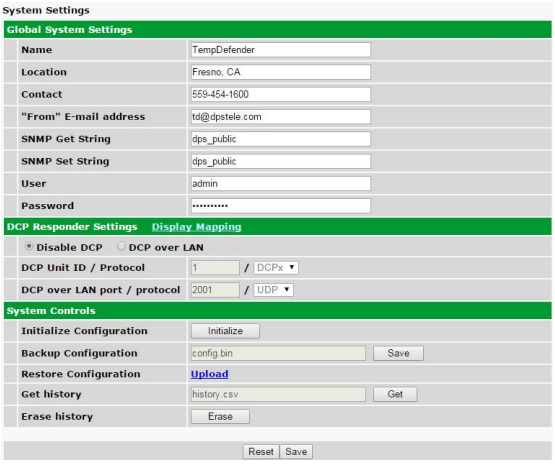
Commit to NVRAM popup

9 TempDefender IT - Most Important How-Tos

The next 3 sections of this manual will walk you through some of the most common tasks for using the TempDefender IT. You will learn how to send email notifications, and send SNMP traps to your alarm master- all using the Web browser. For details on entering your settings into each Web browser menu, the section "Edit Menu Field Descriptions."

9.1 How to Send Email Notifications

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

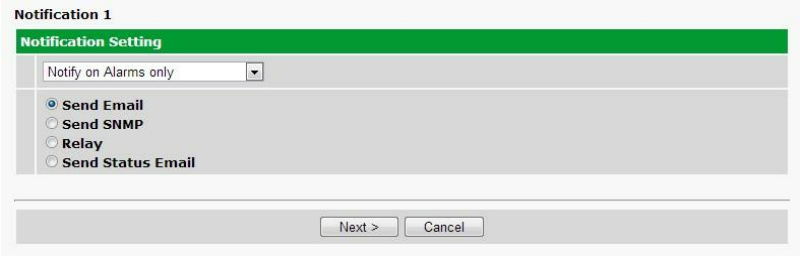


2. Click on the **Notifications** button in the **Edit** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking on a notification number. In this example, we'll setup Notification 1 to send emails.

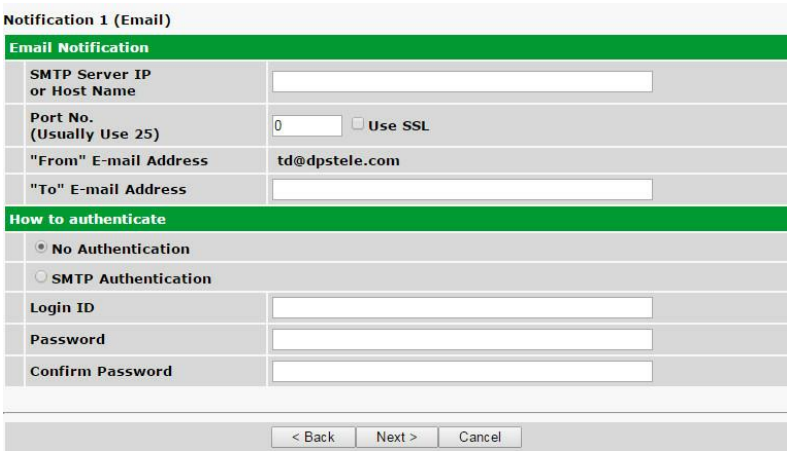
Notifications

No.	Stat.	Type	Server	Time Window 1	Time Window 2
1	OFF	SNMP	126.10.218.220	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
2	OFF	Email	126.10.220.194	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
3	ON	SNMP		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
4	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
5	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
6	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
7	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
8	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time

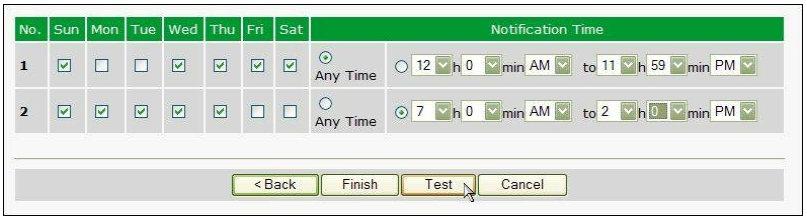
3. At the **Notification Setting** screen, check the **Enable Notification** box to turn "on" Notification 1. You can select between either **Send Email** or **Send Status Email**. Choosing **Send Email** provides you with email alert notifications regarding the specified alarm point. **Status Email** adds additional unit status to the end of email alerts, informing you on the status of all 8 alarm points. Now, select either of the **Email Notification** buttons and click Next.



4. 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 you want to send authenticated emails, click the **SMTP authentication** button and enter a users name and password. Click **Next**.

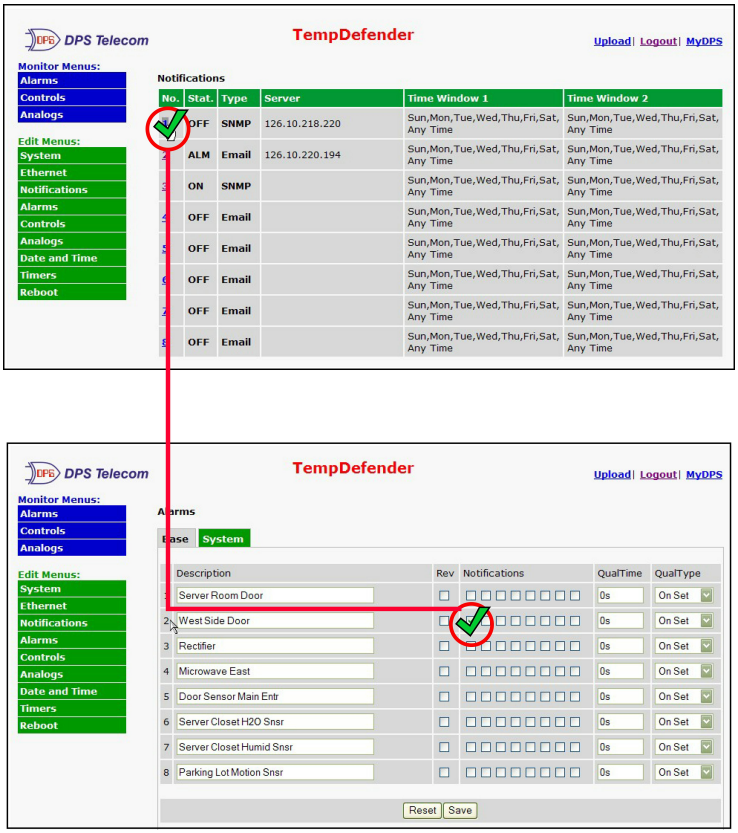


5. At the **Schedule** screen, you'll select the exact days and times you want to receive email notifications. You can set 2 schedules per notification. For example, you may want to receive notifications at certain times during the week, and at different hours on the weekend. Use the check boxes to select 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.)



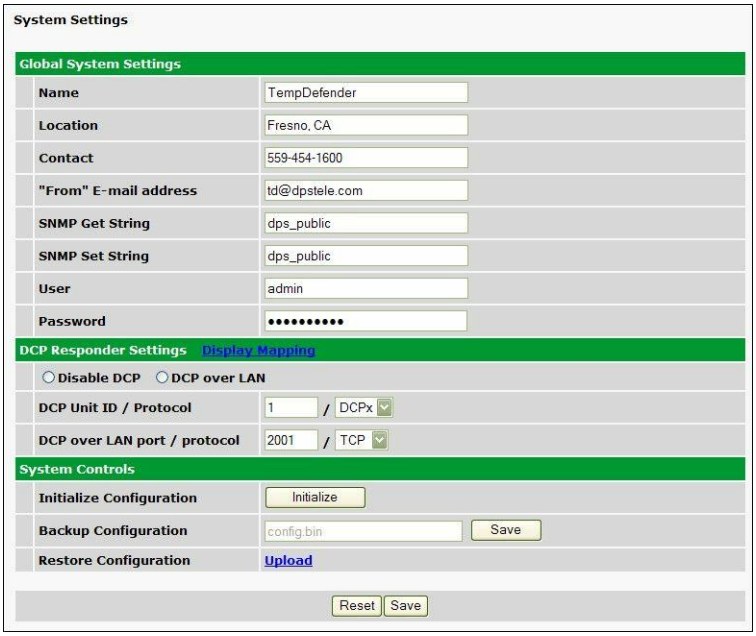
6. If you chose to test the email notification you've just setup, you will see a popup. Click **OK** to send a test email alarm notification. Confirm all your settings by checking your email to see if you've received it. **NOTE:** This test only means that your notification settings are correct, but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

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 **Base Alarm 2**. This means that you would receive an email notification when an alarm for "West Side Door" occurs. Remember that Notification #1 in the Notifications menu is the same as N1 on the alarms page.



9.2 How to Send SNMP Traps

1. Click on the **System** button in the **Edit** 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, our default is "dps_public".

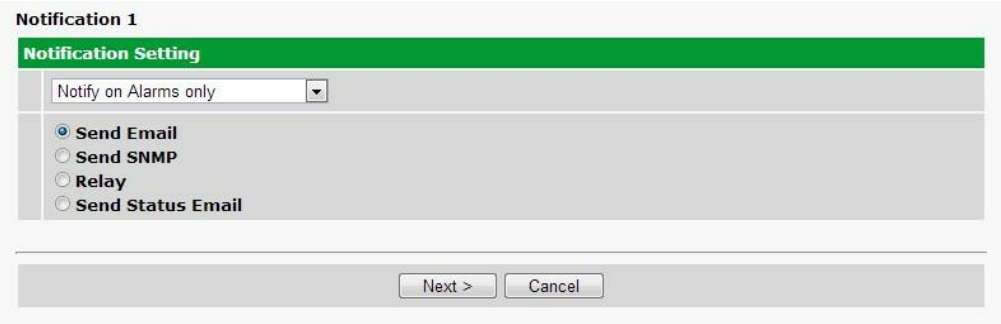


2. Click on the **Notifications** button in the **Edit** menu. You can setup as many as 8 different notifications. Begin the setup "wizard" by clicking on a notification number. In this example, we'll setup Notification 4 to send SNMP traps to your alarm master.

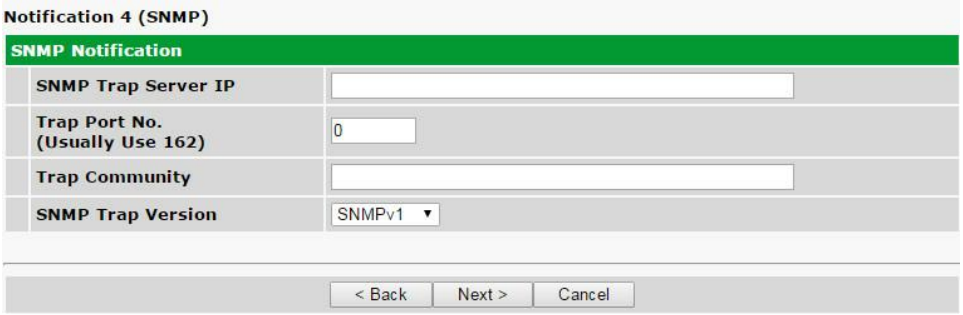
Notifications

No.	Stat.	Type	Server	Time Window 1	Time Window 2
1	OFF	Email		No days selected Any Time	No days selected Any Time
2	ON	Email	123.456.789.00	Mon,Tue,Wed,Thu,Fri, 06:00AM to 06:00PM	Sun,Sat, Any Time
3	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
4	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
5	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
6	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
7	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time
8	OFF	Email		Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time	Sun,Mon,Tue,Wed,Thu,Fri,Sat, Any Time

3. At the **Notification Setting** screen, check the **Enable Notification** box to turn "on" Notification 4. Now, select the **Send SNMP** button and click Next.



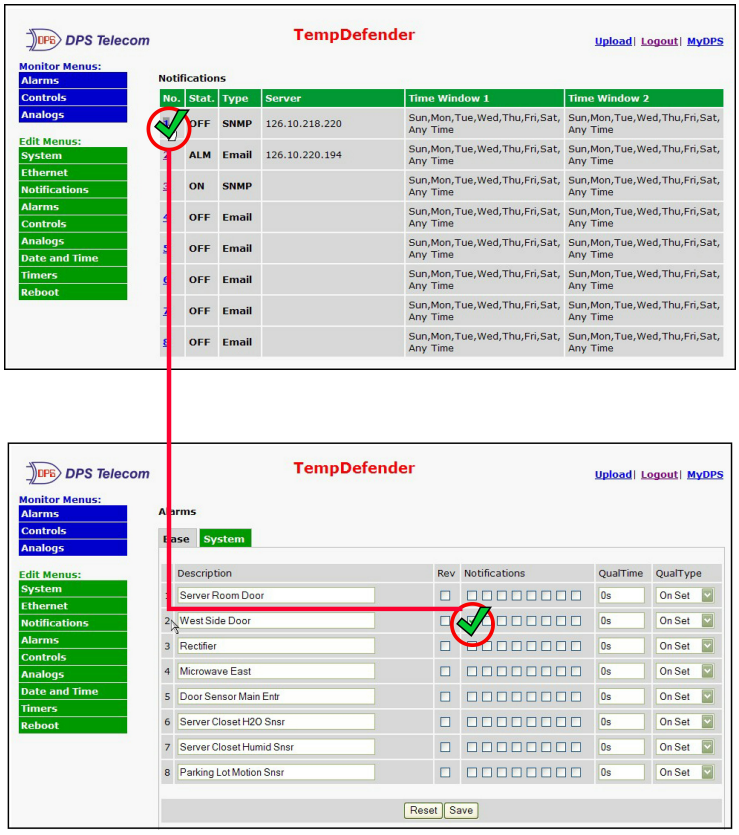
4. At the **SNMP Notification** screen, you'll enter your network's SNMP settings. Enter the **IP address** of your SNMP Trap Server, the **Trap Port Number** (usually 162) and the **Trap Community** password. Choose from SNMPv1 or v2c traps, then click **Next**.



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 **Finish.** To try a test notification, click the **Test** button (See next step.)

6. If you chose to test the SNMP notification, you will see the popup below. Click **OK** to send a test SNMP alarm notification. Confirm your settings by checking your alarm master to see if the SNMP trap was received.

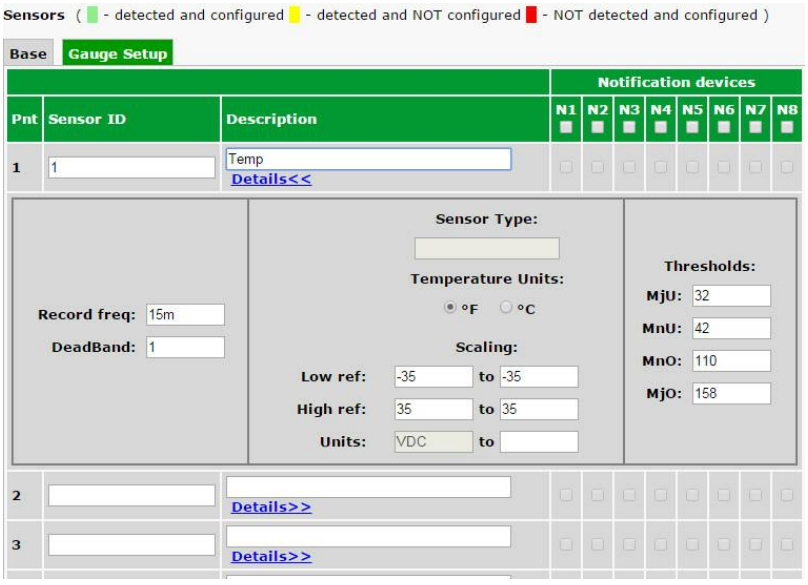
7. Now you will associate this notification to an alarm (system, base, analog, etc.) You have 8 notification devices available to use. In the image below, you might assign **Notification Device 1** to **Base Alarm 2**. This means that you would receive an SNMP notification when an alarm for "West Side Door" occurs. Remember that Notification #1 in the Notifications menu is the same as N1 on the alarms page.



9.3 How to Add Temperature Sensors

1. Plug in sensors node to the RJ12 sensor inputs on the back of the TempDefender.

2. Login to the TempDefender's web browser interface.
3. Navigate to the Edit > Sensors menu.
4. After plugging in the temperature sensor, the Sensor ID field should have auto-populated with the ID number found on the sensor. Confirm that ID number is filled in. It should appear in YELLOW, indicating that your sensor was detected, but not yet configured.
5. Finish configuring the sensor by entering a description. Click the Details button to enter your DeadBand, temperature units, and thresholds.

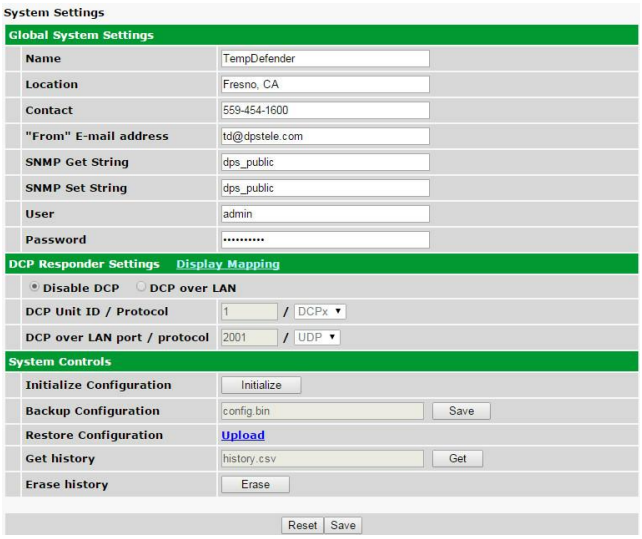


6. Select your notification devices and click Save to finish.

10 Edit Menu Field Descriptions

10.1 System

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

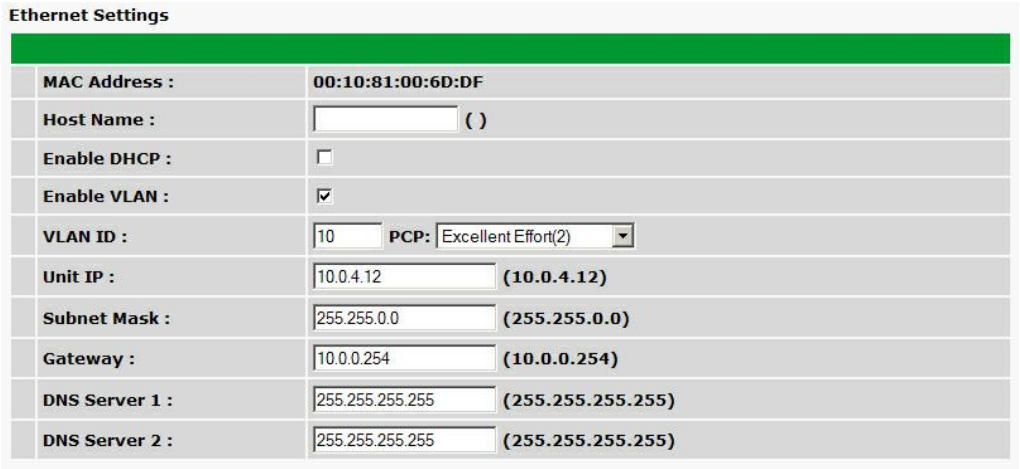


The Edit > System menu

Global System Settings	
Name	A name for this TempDefender IT. (Optional field)
Location	The location of this TempDefender IT. (Optional field)
Contact	Contact telephone number for the person responsible for this TempDefender IT. (Optional field)
"From" Email Address	A valid email address used by the TempDefender IT for sending email alarm notifications.
SNMP GET String	Community name for SNMP requests. (case-sensitive).
SNMP SET String	Community name for SNMP SET requests. (case-sensitive).
User	Used to change the username for logging into the unit.
Password	Used to change the password for logging into the unit (case-sensitive).
DCP Responder Settings *(For use with T/Mon NOC)*	
DCP Unit ID / IP	User-definable ID number for this TempDefender IT (DCP Address).
Listen Port	Choose to listen DCP over LAN or serial. May also be disabled.
IP Protocol	Enter the IP protocol (UDP or TCP).
System Controls	
Initialize Configuration	Used to restore all factory default settings to the TempDefender IT. Do not initialize the non-volatile RAM (NVRAM) unless you want to re-enter all of your configuration settings again.
Upgrade Firmware	Clickable link that takes you to the Firmware Load screen, where you'll browse to the downloaded firmware update saved on your PC.

10.2 Ethernet

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



The Edit > Ethernet menu

Ethernet Settings	
Unit MAC	Hardware address of the TempDefender IT. (Not editable - For reference only.)
Host Name	Used only for web browsing. Example: If you don't want to remember this TempDefender's IP address, you can type in a name is this field, such as "MyRTU". Once you save and reboot the unit, you can now browse to it locally by simply typing in "MyRTU" 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.
Enable VLAN	Used to turn on Virtual LAN. Uncheck to disable VLAN.
VLAN ID	The user-defined ID that represents your distinct broadcast domain. This number can range from 1 - 4,094.
PCP	PCP is the Priority Code Point. Values listed in parentheses are the priority for each class; 0 represents the lowest priority, 7 is the highest. VLAN PCP is placed on 2 by default.
Unit IP	IP address of the TempDefender IT.
Subnet Mask	A road sign to the TempDefender IT, 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 TempDefender 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.
Ethernet Settings	
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.

10.3 Notifications

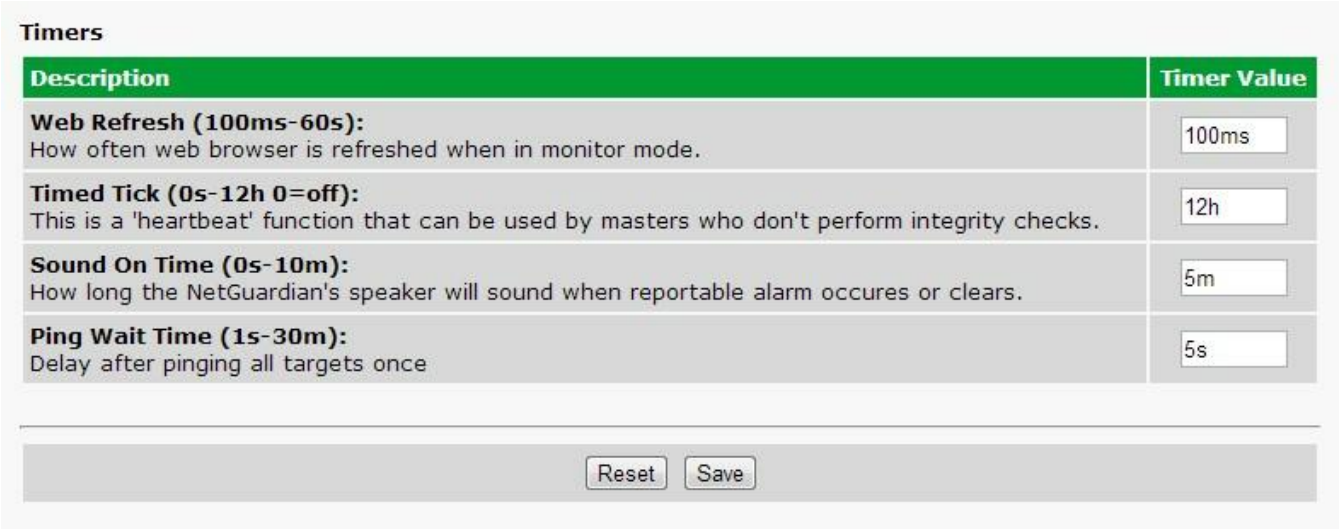
The **Edit > Notifications** menu is used to set up notifications (Email or SNMP) to email addresses or SNMP managers. The use of this menu and its associated "setup wizard" is explained in the earlier chapters of this manual: "How to Send Email Notifications" & "How to Send SNMP Traps."

The Edit > Notifications menu

There are two types of **Email Notifications. Send Email** provides you with alert notifications regarding a specified alarm point. **Send Status Email** adds additional unit information to the end of your emails, informing you on the status of all 8 alarm points and connected analog sensors.

10.3.1 Configuring Regular Status Updates

You can configure your TempDefender to send regular automated notifications by combining the **Timed Tick** system alarm with a **Status Email** notification. **Timed Tick** is a 'heartbeat' function that alternates between alarm and clear. This allows your TempDefender to provide you with regular updates on the status of your alarm points and sensors.



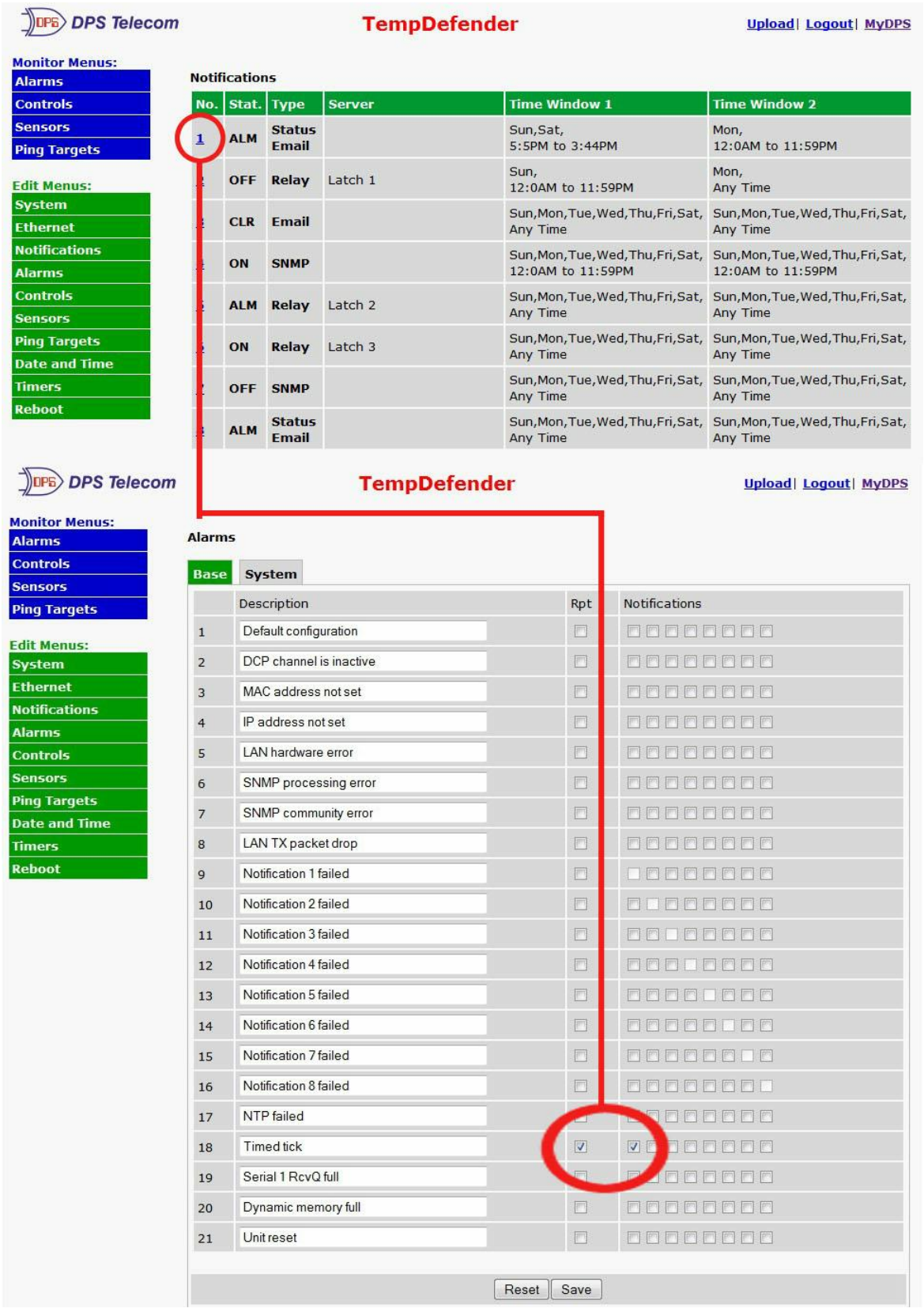
*The 'Timed Tick' function located in the **Timers** menu.*

To Configure:

- Go to **Edit Menu > Timers**. Under the **Timed Tick** 'Timer Value,' enter an interval between 0 seconds and 12 hours to specify how often the TempDefender will alternate between alarm and clear.
- Go to **Edit Menu > Notifications** and select a notification number.
- Set up a **Status Email**. On the drop down box, select whether you want to be notified on alarms, clears, or both. Remember, the 'Timer Value' determines how often the TempDefender will switch between alarm and clear. Depending on your 'Timer Value,' this will determine at what interval you will receive notifications.

For example, selecting 'Notify on both Alarms and Clears' with a 'Timer Value' of 12 hours will produce notifications every 12 hours. Alternatively, if you select either 'Notify on Alarms only' or 'Notify on Clears only' with the same 'Timer Value,' you will receive notifications every 24 hours.

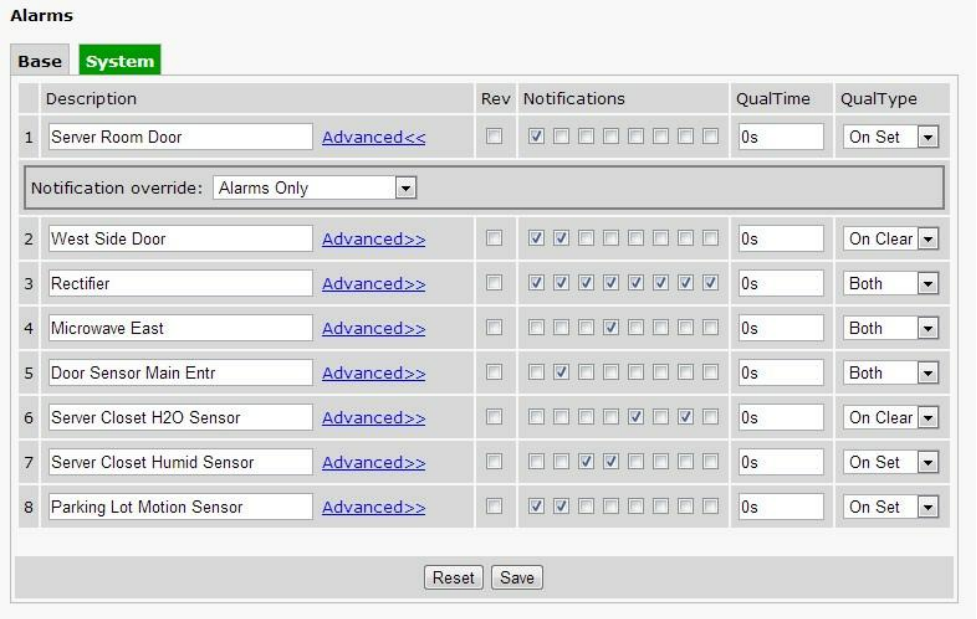
- Click on 'Next >' and fill out your email information.
- Click 'Next >" again and proceed to the notification schedule.
- Select 'Any Time' and save your settings.
- Go to **Edit Menu > Alarms**.
- Click on 'System' to view System Alarms.
- Locate 'Timed Tick.' Check the 'Rpt' box and the corresponding notification for the status email. See the following screenshot for additional reference.
- Save your settings.
- Based on time duration defined under 'Timed Tick,' you will now receive automated email notifications that update you on the status of your TempDefender alarms.



How to configure regular status updates.

10.4 Base Alarms

The TempDefender IT's discrete base alarms are configured from the **Edit** > **Alarms** menu under the **Base** tab. Descriptions for the alarm points, polarity (normal or reversed) and notification type(s) are defined from this menu. You also have the access to an **Advanced** override feature, that can be accessed by clicking on the **Advanced>>** button.

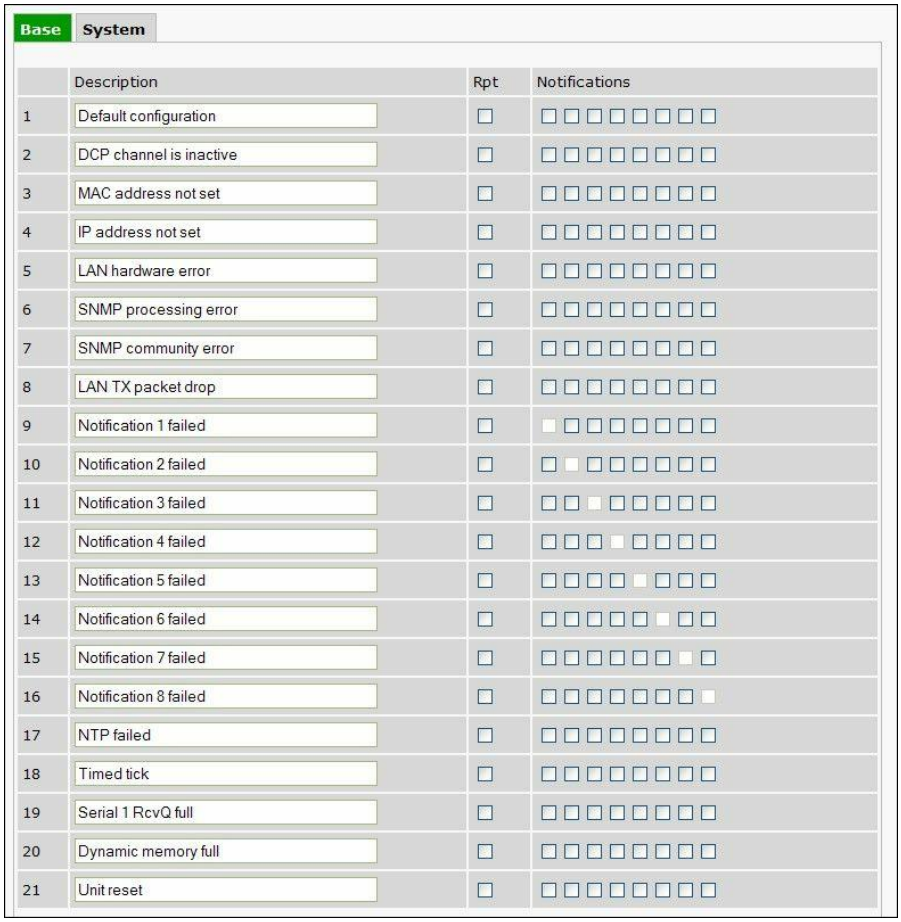


The Edit > Base Alarms screen with alarm 1's override option displayed

Editing Base Alarms - Basic	
Pnt (Point)	Alarm point number (1-8).
Description	User-definable description for the discrete alarm input.
Rev (Reverse)	Reverse: Check this box to reverse the polarity of the alarm point. Left un-checked, this means a normally-open contact closure is a clear condition. When polarity is reversed, a normally-closed alarm point is clear when closed. *Example*: Door with a magnetic door sensor. When the door is closed, the magnetic sensor acts like a closed relay. However, you know this should not trigger an alarm condition. This means you'd want the door alarm reversed in the TempDefender because we are looking for a normally closed condition.
Notification devices	Check which notifications, 1 through 8, you want to send when that alarm point goes off. These notification boxes correspond to one of the 8 notifications you setup on the *Edit* > *Notifications* screen (email, SNMP trap, etc.)
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. *Example*: If you have a loose door contact and you receive a false alarm every time the wind blows, you might want to set a 3-second qualification time. This means the door would have to be in the Alarm state for at least 3 seconds before the alarm is triggered and a notification is sent.

Qual. Type (Qualification Type)	Allows you to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both. (Most people use only Set.)
Advanced>>	
Notification override	Choose "None," "Both Alarms and Clears","Alarms Only," or "Clears Only." The Notification override setting will designate the conditions when the notifications attached to this alarm will send. If "None" is selected for Notification override, the notification settings under *Edit* > *Notifications* will determine when a notification will send. **Note:** If a notification is set to "Notification Disabled" under *Edit* > *Notifications*, then notification override will not work.

10.5 System Alarms

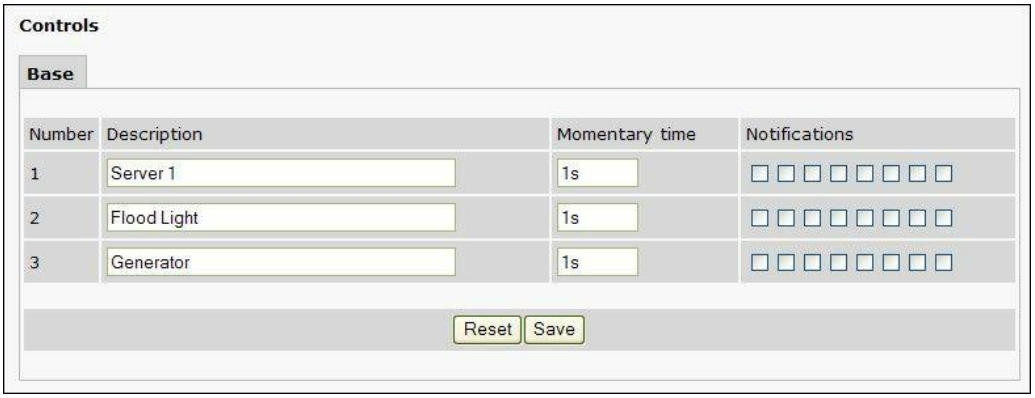


The Edit > System Alarms menu

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

10.6 Controls

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

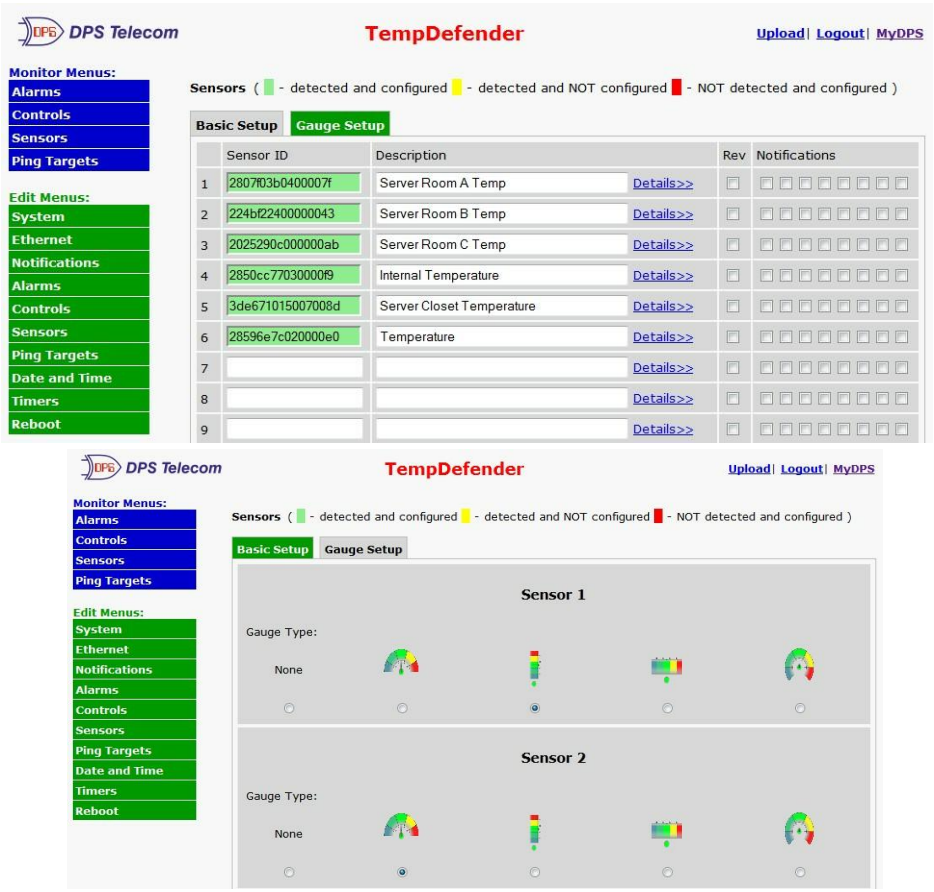


The Edit > Controls menu

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

10.7 Sensors

Sensors connected to the TempDefender will appear the TempDefender's web interface in the order connected, 1-16. Your TempDefender will automatically recognize the sensor type (temperature, humidity, air flow, etc.) and populate the Sensor ID and Unit (shown below as "Temperature Units") fields. To configure a sensor, simply fill in your description, thresholds, and other fields listed below, then click **Save** to configure a sensor. Selecting **Gauge Setup** allows you to configure your analog gauges to best represent your data.



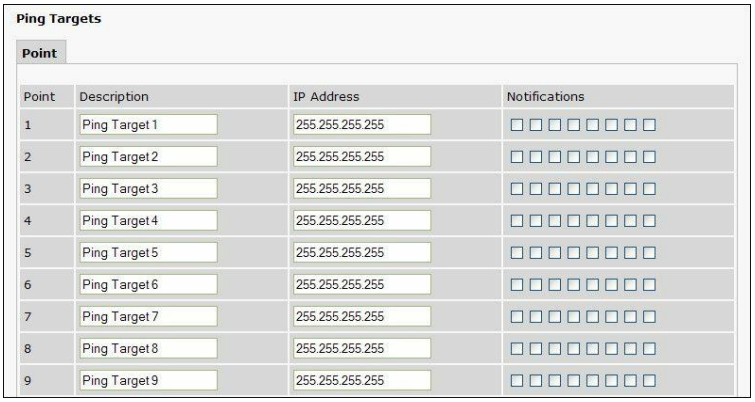
The Sensor configuration and gauge setup screens

Sensors	
Sensor ID	The ID number found on the sticker on the temperature sensor node. Your TempDefender 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/configured (i.e. the previously configured sensor is no longer connected) To reconfigure a sensor, simply delete any data in this field and click **Save**. The unit will refresh the sensor ID on that channel.
Sensor Description	Used to describe the type or location of sensor connected to the TempDefender.

Rev	Checking the reverse button changes negative values to positive, and positive values to negative.
Notifications	Check which notification device(s), 1 through 8, you want to send alarm notifications for this sensor.
Details	
Record Freq	The frequency with which the TempDefender will post sensor readings
Deadband	The additional qualifying value the TempDefender requires above/below your alarm thresholds in order to set an alarm.
Units	The unit(s) of measurement reported by a connected sensor. The field is configurable only if the sensor offers multiple display units (i.e. Fahrenheit or Celsius on a temperature sensor).
MjU (Major Under) **MnU (Minor Under)** **MnO (Minor Over)** **MjO (Major Over)**	Threshold settings that, when crossed, will prompt the TempDefender to set an alarm. Recorded values less than an under value or greater than an over value will cause alarms.
Gauge Setup	
Gauge Type	Select the gauge type that best represents your data.

10.8 Ping Targets

Each of the 32 ping targets can be provisioned with a description and IP address. The TempDefender will notify you of alarms based on the notification method you select here.

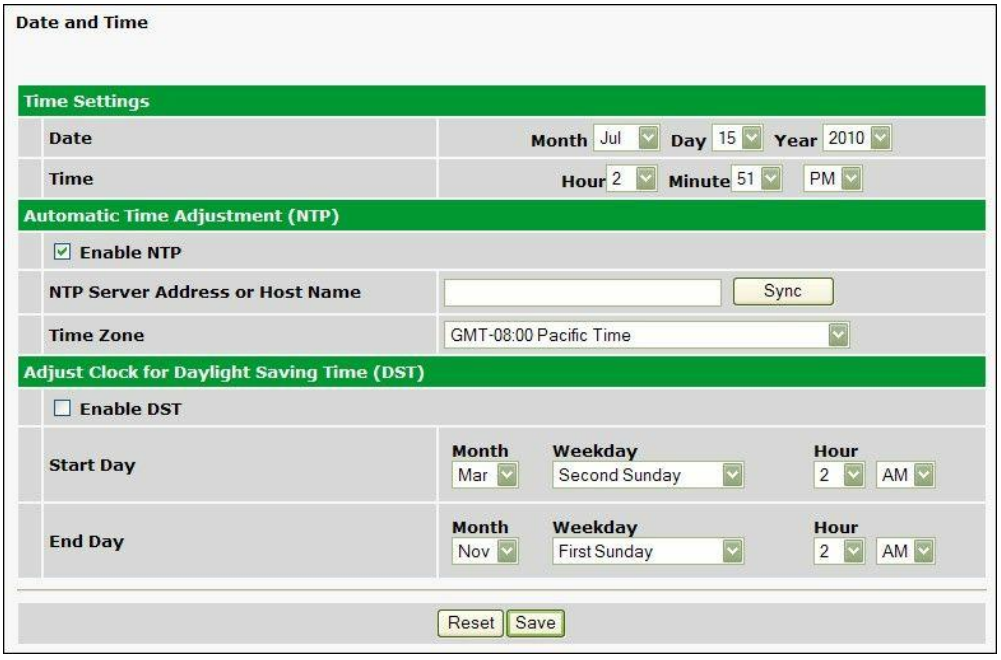


The Ping Targets Menu.

Go to the Edit > Ping Targets menu, then use the following information to configure the ping targets. Click **Submit Data** to save.

Points	
Description	Text description of the device being pinged.
IP Address	IP address of the device being pinged.
Notifications	Check which notification device(s), 1 through 8, you want to send alarm notifications for that alarm point.

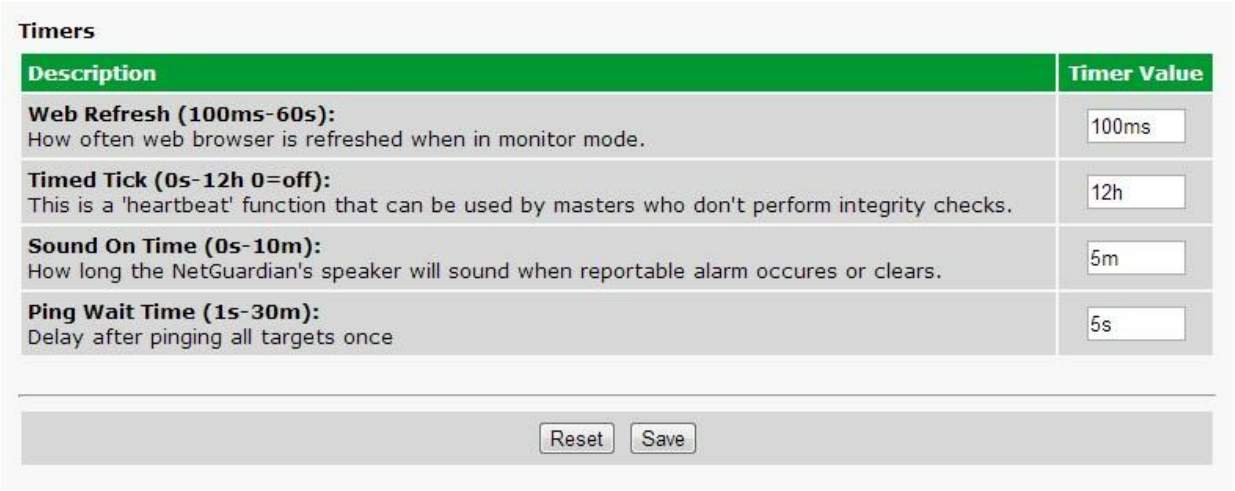
10.9 Date and Time



The Edit > Date and Time menu

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

10.10 Timers



The Edit > Timers menu

10.11 Reboot

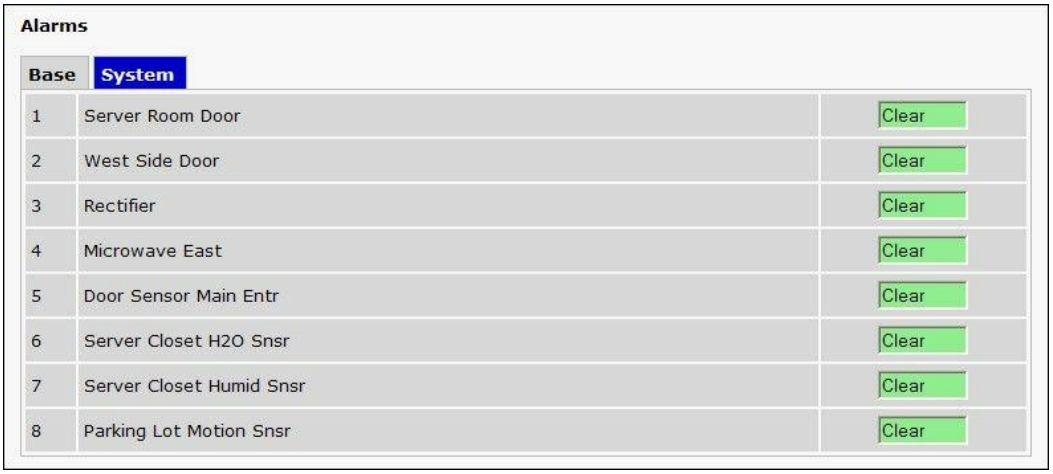
Click on the **Reboot** link from the **Edit** menu will reboot the TempDefender IT after writing all changes to NVRAM.

The Edit > Reboot confirmation popup

11 Monitoring via the Web Browser

11.1 Monitoring Base Alarms

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.

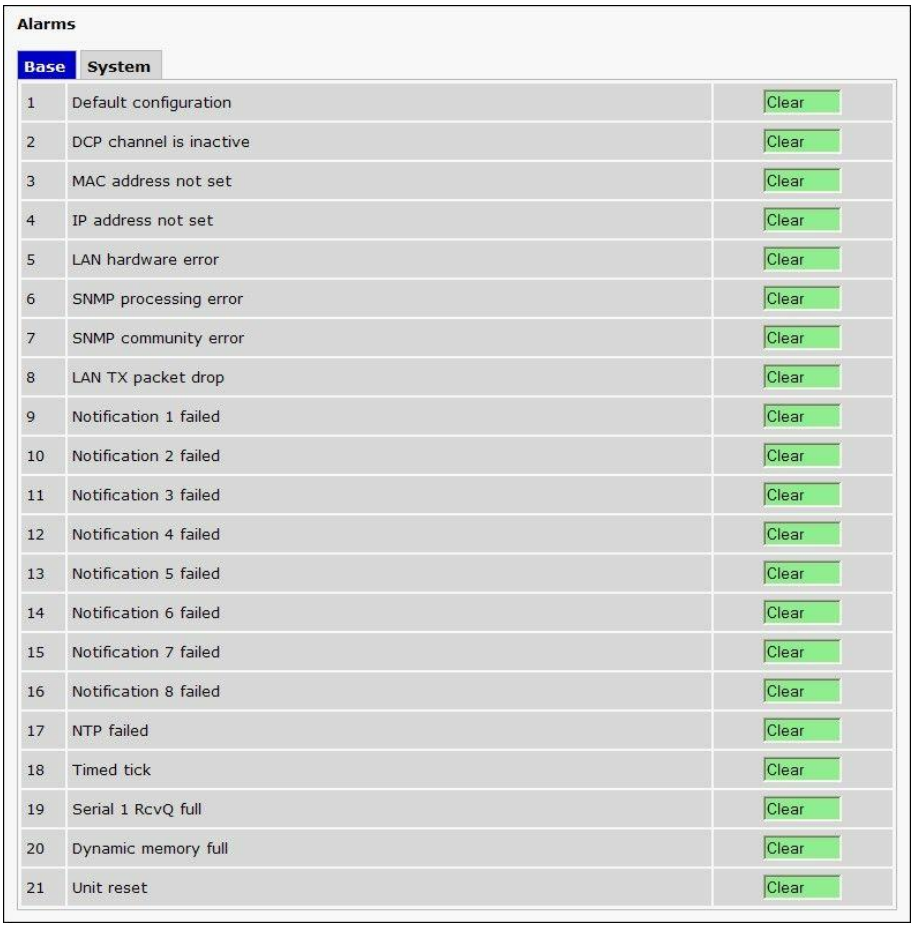


Click on Base Alarms in the Monitor menu to see if any base alarms have been triggered.

11.2 Monitoring System Alarms

System alarms are not-editable, housekeeping alarms that are programmed into TempDefender IT. 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.

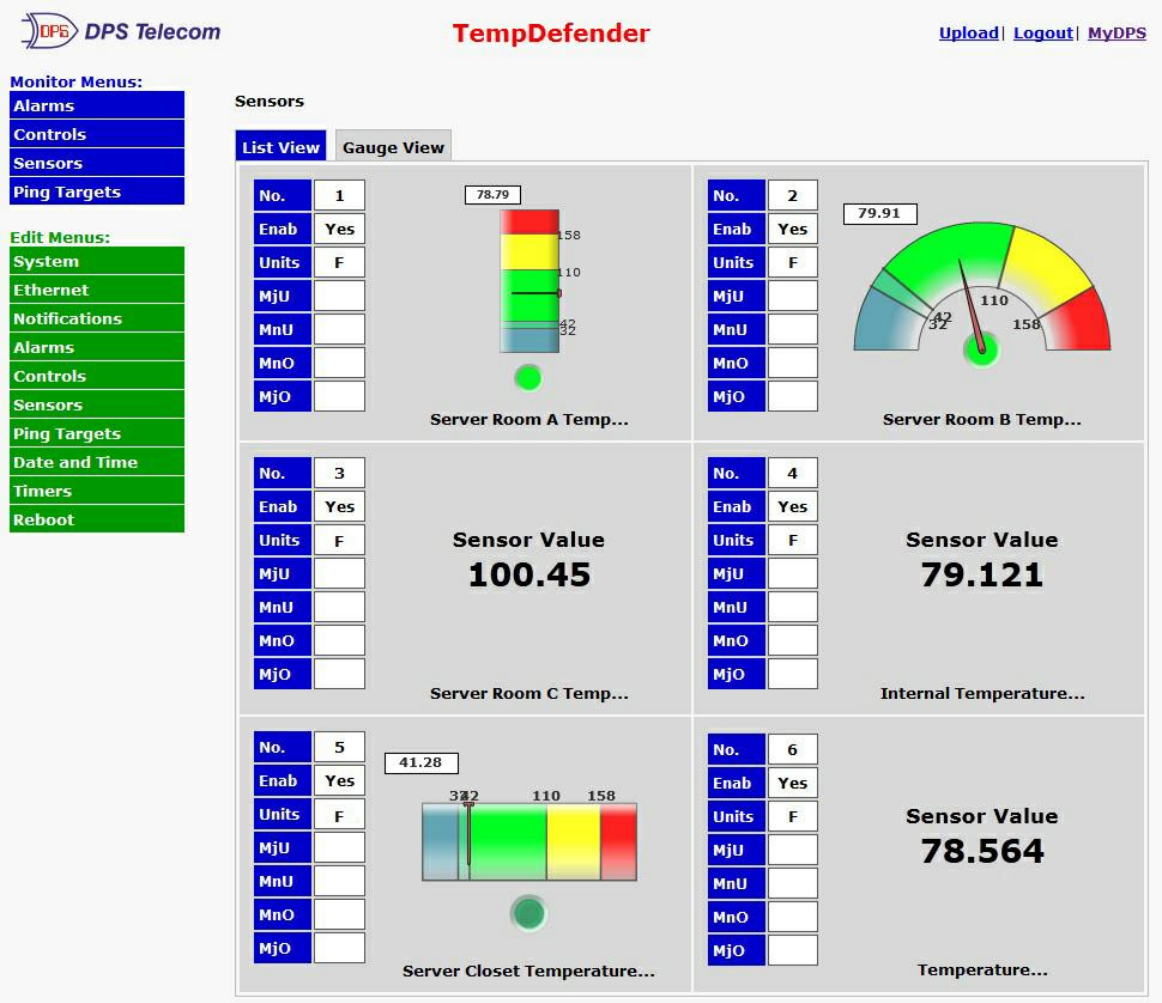
See "Display Mapping" in the Reference Section for a complete description of system alarms.



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

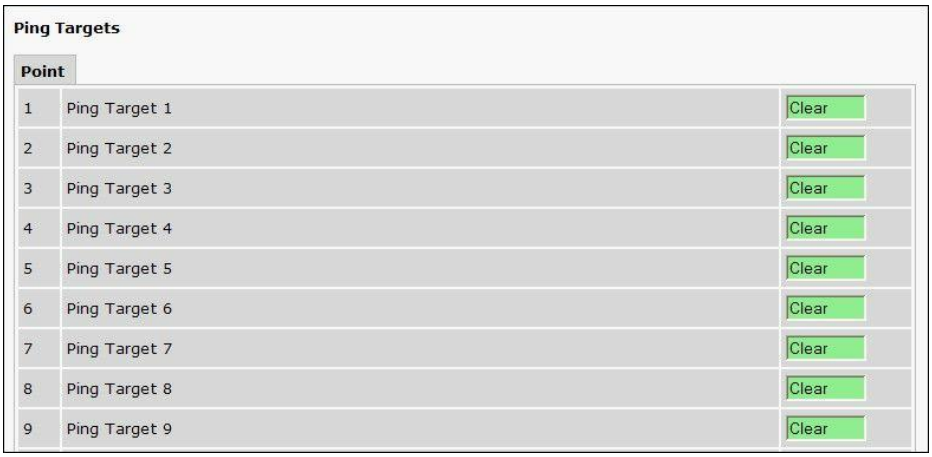
11.3 Monitoring Sensors

From the Monitor > Sensors menu, you can view your current temperature readings and see if any of your custom temperature thresholds have been crossed. Select **Gauge View** to view your values as analog gauges. Selecting **List View** will display them as a traditional list.



11.4 Monitoring Ping Targets

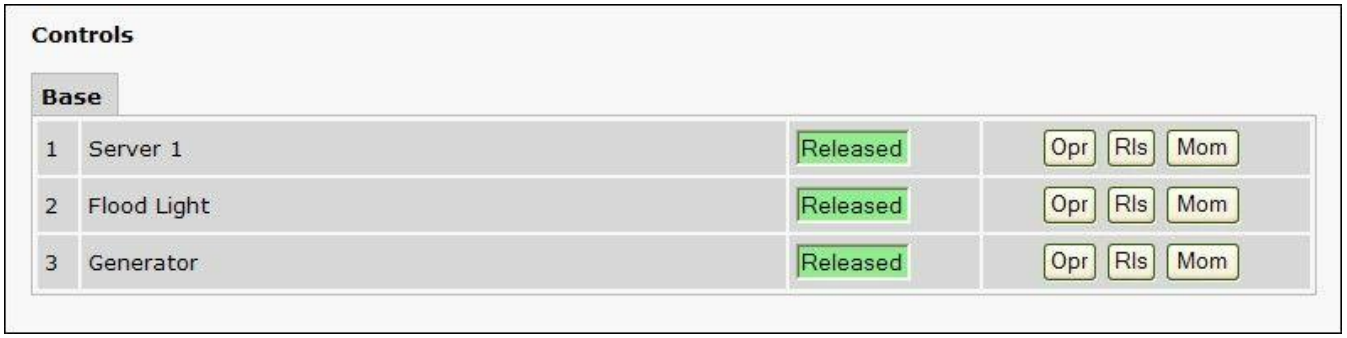
This selection provides the status of the system's ping targets by indicating if an alarm has been triggered. Under the **State** column, the description defined in **Edit** menu > **Ping Targets** will appear in red if an alarm has been activated. The description defined in **Edit** menu > **Ping Targets** will be displayed in green when the alarm condition is not present.



11.5 Operating Controls

Use the following rules to operate the TempDefender IT'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)



Operate the control relay by clicking on one of the actions in the Commands field.

12 Firmware Upgrade

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

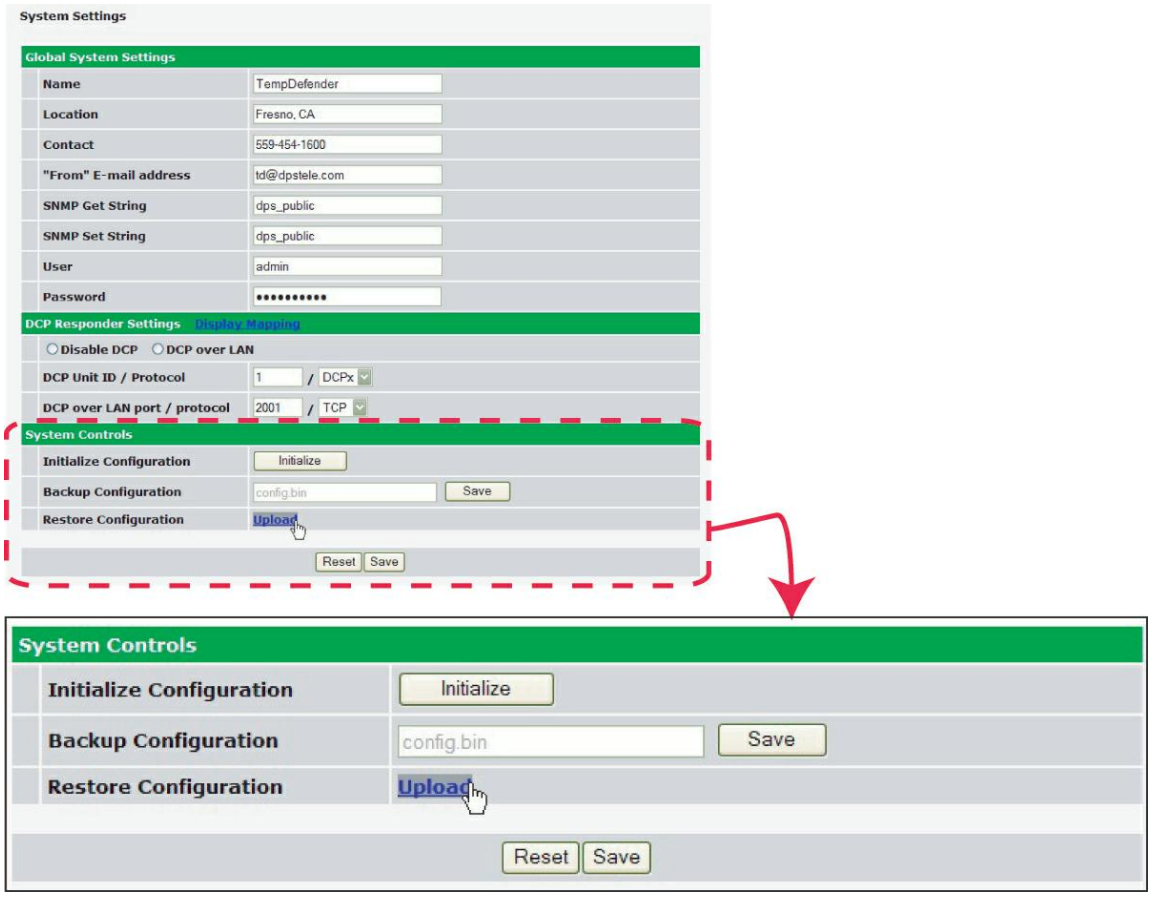


Fig. 11.1 *- The clickable link to upgrade firmware from the Edit > System menu*

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

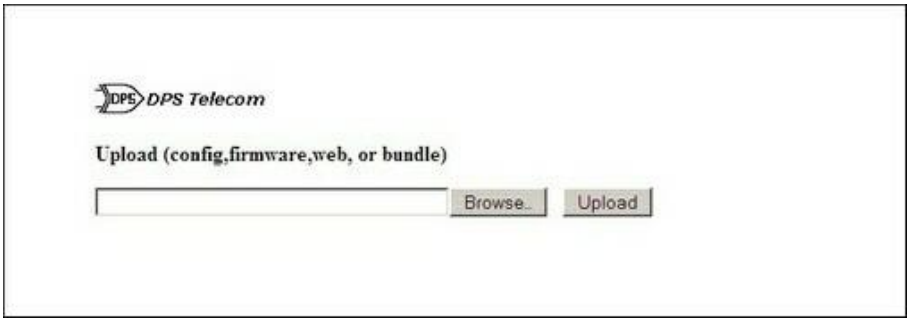


Fig. 11.2 **-** *Browse for downloaded firmware upgrade*

13 Reference Section

13.1 Display Mapping

	Point	Description
Display 1	1-8	Discrete Alarms 1-8
	9-16	Undefined
	17-19	Controls 1-3
	20-24	Undefined
Display 2	1-32	Ping targets 1-32
	33-64	Undefined
Display 3	1	Digital Temp Sensor 1 Minor Under
	2	Digital Temp Sensor 1 Minor Over
	3	Digital Temp Sensor 1 Major Under
	4	Digital Temp Sensor 1 Major Over
	5	Digital Temp Sensor 1 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 4	1	Digital Temp Sensor 2 Minor Under
	2	Digital Temp Sensor 2 Minor Over
	3	Digital Temp Sensor 2 Major Under
	4	Digital Temp Sensor 2 Major Over
	5	Digital Temp Sensor 2 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 5	1	Digital Temp Sensor 3 Minor Under

	2	Digital Temp Sensor 3 Minor Over
	3	Digital Temp Sensor 3 Major Under
	4	Digital Temp Sensor 3 Major Over
	5	Digital Temp Sensor 3 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 6	1	Digital Temp Sensor 4 Minor Under
	2	Digital Temp Sensor 4 Minor Over
	3	Digital Temp Sensor 4 Major Under
	4	Digital Temp Sensor 4 Major Over
	5	Digital Temp Sensor 4 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 7	1	Digital Temp Sensor 5 Minor Under
	2	Digital Temp Sensor 5 Minor Over
	3	Digital Temp Sensor 5 Major Under
	4	Digital Temp Sensor 5 Major Over
	5	Digital Temp Sensor 5 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 8	1	Digital Temp Sensor 6 Minor Under
	2	Digital Temp Sensor 6 Minor Over
	3	Digital Temp Sensor 6 Major Under
	4	Digital Temp Sensor 6 Major Over

	5	Digital Temp Sensor 6 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 9	1	Digital Temp Sensor 7 Minor Under
	2	Digital Temp Sensor 7 Minor Over
	3	Digital Temp Sensor 7 Major Under
	4	Digital Temp Sensor 7 Major Over
	5	Digital Temp Sensor 7 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 10	1	Digital Temp Sensor 8 Minor Under
	2	Digital Temp Sensor 8 Minor Over
	3	Digital Temp Sensor 8 Major Under
	4	Digital Temp Sensor 8 Major Over
	5	Digital Temp Sensor 8 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 11	1	Digital Temp Sensor 9 Minor Under
	2	Digital Temp Sensor 9 Minor Over
	3	Digital Temp Sensor 9 Major Under
	4	Digital Temp Sensor 9 Major Over
	5	Digital Temp Sensor 9 Sensor not detected
	6-8	Undefined
	9-16	Control

	17-32	Value
	33-64	Undefined
Display 12	1	Digital Temp Sensor 10 Minor Under
	2	Digital Temp Sensor 10 Minor Over
	3	Digital Temp Sensor 10 Major Under
	4	Digital Temp Sensor 10 Major Over
	5	Digital Temp Sensor 10 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 13	1	Digital Temp Sensor 11 Minor Under
	2	Digital Temp Sensor 11 Minor Over
	3	Digital Temp Sensor 11 Major Under
	4	Digital Temp Sensor 11 Major Over
	5	Digital Temp Sensor 11 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 14	1	Digital Temp Sensor 12 Minor Under
	2	Digital Temp Sensor 12 Minor Over
	3	Digital Temp Sensor 12 Major Under
	4	Digital Temp Sensor 12 Major Over
	5	Digital Temp Sensor 12 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 15	1	Digital Temp Sensor 13 Minor Under

	2	Digital Temp Sensor 13 Minor Over
	3	Digital Temp Sensor 13 Major Under
	4	Digital Temp Sensor 13 Major Over
	5	Digital Temp Sensor 13 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 16	1	Digital Temp Sensor 14 Minor Under
	2	Digital Temp Sensor 14 Minor Over
	3	Digital Temp Sensor 14 Major Under
	4	Digital Temp Sensor 14 Major Over
	5	Digital Temp Sensor 14 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 17	1	Digital Temp Sensor 15 Minor Under
	2	Digital Temp Sensor 15 Minor Over
	3	Digital Temp Sensor 15 Major Under
	4	Digital Temp Sensor 15 Major Over
	5	Digital Temp Sensor 15 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined
Display 18	1	Digital Temp Sensor 16 Minor Under
	2	Digital Temp Sensor 16 Minor Over
	3	Digital Temp Sensor 16 Major Under
	4	Digital Temp Sensor 16 Major Over

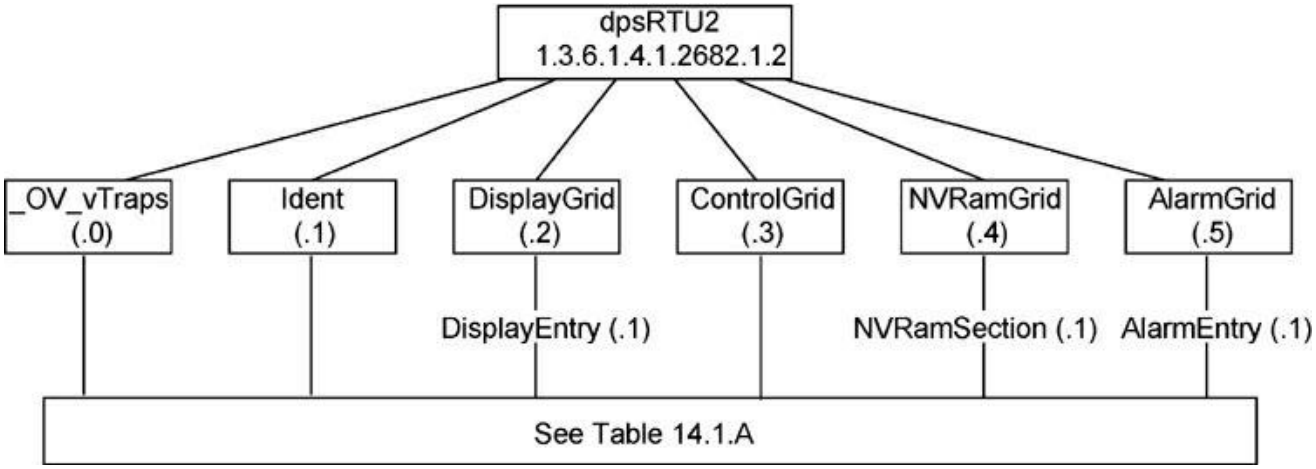
	5	Digital Temp Sensor 16 Sensor not detected
	6-8	Undefined
	9-16	Control
	17-32	Value
	33-64	Undefined

13.2 System Alarms Display Map

Display	Point	Description
1	25	Default configuration
	26	DCP channel is inactive
	27	MAC address not set
	28	IP address not set
	29	LAN hardware error
	30	SNMP processing error
	31	SNMP community error
	32	LAN TX packet drop
	33	Notification 1 failed
	34	Notification 2 failed
	35	Notification 3 failed
	36	Notification 4 failed
	37	Notification 5 failed
	38	Notification 6 failed
	39	Notification 7 failed
	40	Notification 8 failed
	41	NTP failed
	42	Timed tick
	43	Serial 1 RcvQ full
	44	Dynamic memory full
	45	Unit reset
	46-64	Undefined

13.3 SNMP Manager Functions

The SNMP Manager allows the user to view alarm status, set date/time, issue controls, and perform a resync. The display and tables below outline the MIB object identifiers. Begin 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. B1 (O.)_OV_Traps points
_OV_vTraps (1.3.6.1.4.1.2682.1.2.0)
PointSet (.20)
PointClr (.21)
SumPSet (.101)
SumPClr (.102)
ComFailed (.103)
ComRestored (.014)
P0001Set (.10001) through P0064Set (.10064)
P0001Clr (.20001) through P0064Clr (.20064)

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

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

13.4 SNMP Granular Trap Packets

The following tables provide a list of the information contained in the SNMP Trap packets sent by the TempDefender IT

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

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

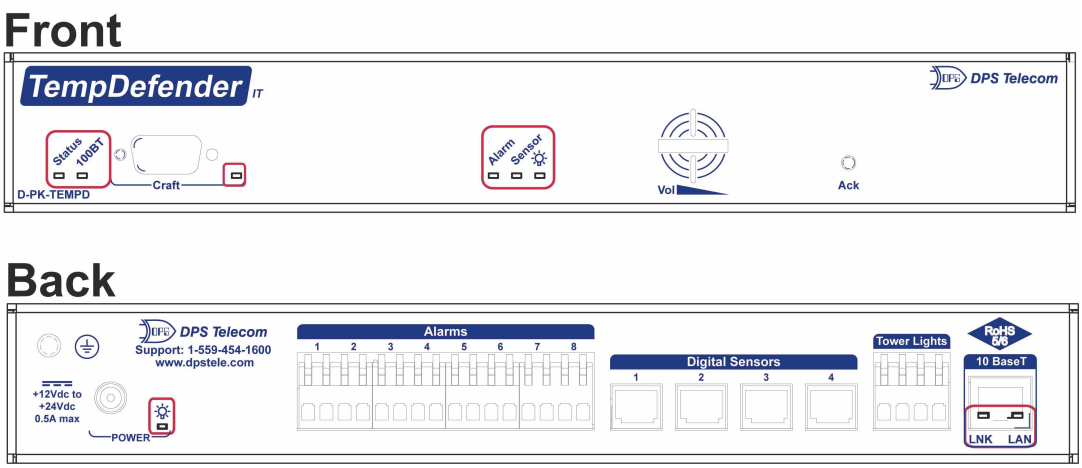
UDP Header	Description
1238	Source port
162	Destination port
303	Length
0xBAB0	Checksum

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
TempDefender 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

13.5 Front and Back Panel LED



TempDefender LEDs

Front Panel LED Descriptions

LED	Status	Description
Status	Flashing Green	Application is running
	Flashing Red	Boot Loader is running.
100BT	Solid Green	LAN is 100 Mb/s
	Off	LAN is 10 Mb/s
Craft	Flashing Green	Data transmit over craft port
	Flashing Red	Data receive over craft port
Alarm (When DCP is disabled)	Solid Red	Alarm condition detected
	Off	No alarms present
Alarm (When DCP is enabled)	Flashing Red	Unacknowledged event (Change of state)
	Solid Red	Acknowledged alarms present
	Off	No alarms present
Sensor	Solid Green	Digital Sensor connected
	Off	No digital sensor connected
Power	Solid Green	Power supply OK
	Off	No voltage or leads reversed

Back Panel LED Descriptions

LED	Status	Description
PWR	Solid Green	Power supply OK
	Off	No voltage leads reversed
LNK	Solid Green	Ethernet link detected
LAN	Flashing Green	Transmit traffic over LAN
	Flashing Red	Receive traffic over LAN

Back Panel LED Descriptions

14 Frequently Asked Questions

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

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

14.1 General FAQs

Q. How do I telnet to the TempDefender IT?

A. You must use **Port 2002** to connect to the TempDefender IT. 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 TempDefender IT and Port 2002. For example, to connect to the TempDefender IT using the standard Windows Telnet client, click Start, click Run, and type "telnet <TempDefender IT IP address> 2002."

Q. How do I connect my TempDefender IT to the LAN?

A. To connect your TempDefender IT 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 TempDefender IT 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 TempDefender IT.

Q. The LAN link LED is green on my TempDefender IT, 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 TempDefender IT. Ordering TTL points for your TempDefender IT 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 TempDefender IT 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 TempDefender IT 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 battery's VDC terminal. For +24 VDC models, the voltmeter should read between +12 and +30VDC, for -48VDC models, the voltmeter should read between -40 and -70VDC, and for -24 VDC models, the voldmeter should read between -18 and -30VDC. If unsure of your TempDefender's power input, reference your unit's model number (D-PK-TMPDF-...) and contact DPS Support at 559-454-1600

15 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.*

16 End User License Agreement

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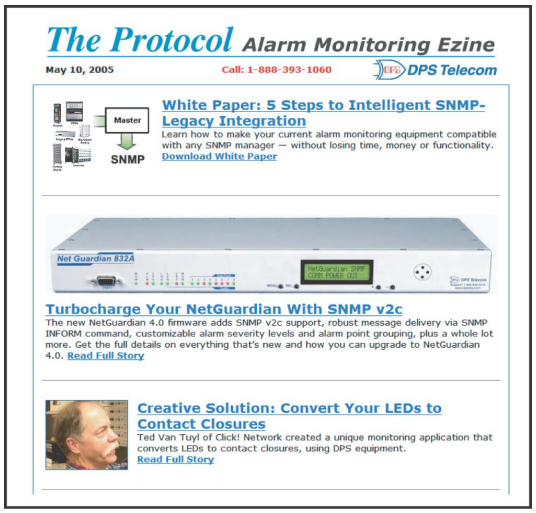

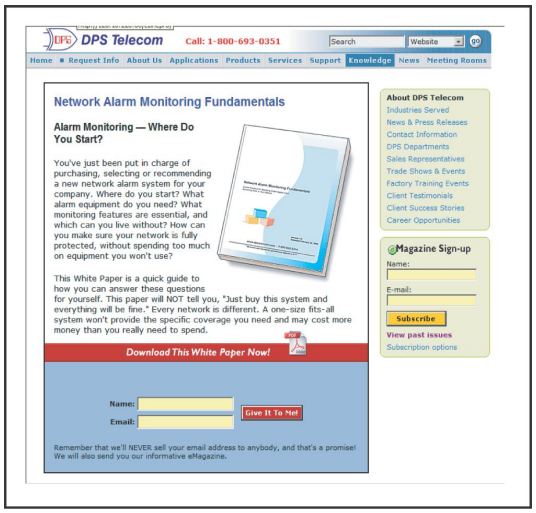

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