User's Guide

SNMPWEBCARD

Firmware Version 12.04.0045

Documentation Notice: *This User's Guide is a supplement to the printed manual that came with your SNMPWEBCARD or network-enabled PDU. Refer to the printed manual for instructions on hardware installation and basic configuration, including IP address assignment. If you have misplaced your printed manual, refer to the electronic version included on the bundled CD-ROM or download it at www.tripplite.com/support/manuals/.*

TRIPP·LITE

Tripp Lite World Headquarters
1111 West 35th Street, Chicago, IL 60609 USA
+1.773.869.1234 • www.tripplite.com

1. Introduction

SNMPWEBCARD is an optional network card that you can install in the accessory slot of a compatible UPS systems or PDU*. SNMPWEBCARD connects your UPS system or PDU to your Ethernet network as a manageable device that supports remote monitoring, remote control and remote condition reporting. You can manage the device from a PowerAlert network management software, SNMP Network Management Station, Web browser or telnet program, allowing you to reboot, control outlets, shed nonessential loads, monitor load levels and more. The SNMPWEBCARD can also send SNMP traps or e-mail messages to the addresses you specify, alerting you automatically to events such as power failures.

SNMPWEBCARD is preinstalled in Tripp Lite switched PDUs, which can be identified by the presence of "NET" in the model name.

1.1 System Requirements

- Tripp Lite UPS system or PDU with compatible accessory slot

- Ethernet network that supports the TCP/IP protocol

- One of the following options for remote monitoring and control:

  - PowerAlert network management software

  - SNMP-based Network Management Station (such as HP® OpenView®)

  - Web browser that supports frames, forms and Java™ (such as Microsoft® Internet Explorer® 5.0 or later)

  - Standard telnet program

- For "Terminal Mode" configuration only:

  - Terminal emulation software program (such as HyperTerminal)

  - Computer with available DB9 serial port

Warning: Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended. Do not use this equipment in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.

2. Installation and Configuration

For instructions on hardware installation and basic configuration, refer to the printed manual that came with your SNMPWEBCARD or switched PDU. The manual can also be found on the bundled CD-ROM or downloaded from www.tripplite.com/support/manuals/.

2.1 Default UPS System Shutdown Settings

During a power failure, SNMPWEBCARD is pre-configured to shut down the UPS system two minutes after receiving a low battery signal. This allows the UPS system to provide the maximum available runtime to connected equipment. If you want to change the default setting, follow these instructions and refer to Figure 2-1:

1. Use a Web browser to open the PowerAlert console window for your SNMPWEBCARD (see **3.1 Opening the Web Console** for instructions).

2. Click the "Settings" button **A** at the top of the window.

3. Click the "Events" button **B** at the left side of the window.

4. Confirm that "Battery Low" **C** and "Shutdown" **D** are highlighted.

5. Click the "Settings…" button **E** toward the bottom of the window.

6. Enter your preferred shutdown settings in the pop-up window **F**.

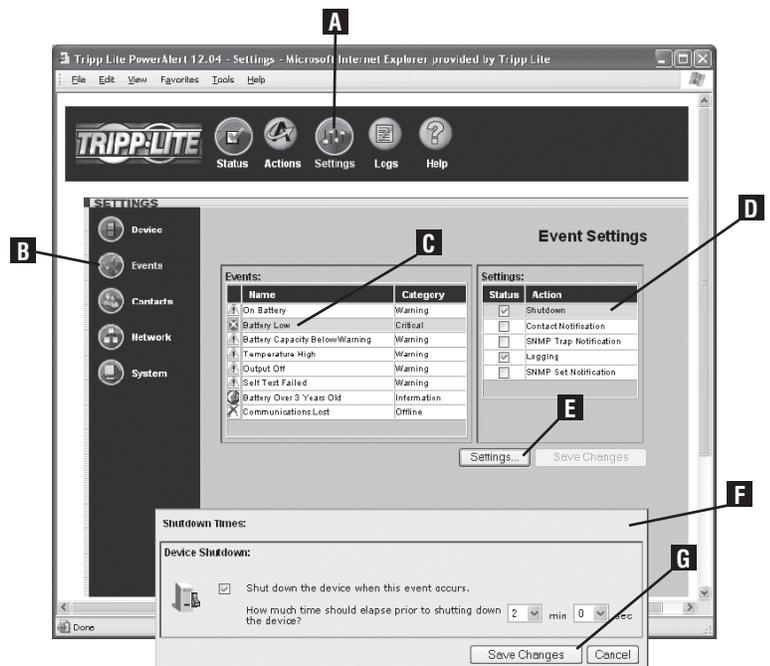7. Click the "Save Changes" button **G** in the pop-up window.

Figure 2-1: UPS System Shutdown Settings

2.2 Other Default Settings

Setting	Default Value	Additional Information
IP Address	Obtain via DHCP	**3.9 Settings > Network**
User Name and Password	User Name: **admin** Password: **admin** (For Version 12.04.0030 and Above) User Name: **admin** Password: **[blank]** (For Versions 12.03.0024 and 12.04.0019)	**3.10 Settings > System**
Telnet Access	Enabled	**3.9 Settings > Network**
Web Access	Enabled	**3.9 Settings > Network**
SNMP Access	Enabled for Version 12.04.0040 and above Disabled for Previous Versions Default Community Values public read only tripplite read/write	**3.9 Settings > Network**
Battery Low Event	Shut Down UPS System 2 Minutes After Event	**3.7 Settings > Events**
E-mail Notification	Not Configured	**3.7 Settings > Events**
SNMP Traps	Not Configured	**3.9 Settings > Network**
Time	Use Onboard Clock (Set Manually)	**3.10 Settings > System**
Event Logging	Enabled	**3.11 Logs > Events**
Data Logging	Disabled	**3.12 Logs > Data**
Ramp/Shed	Remain off / Remain on (not configured)	**5.0 Load Ramping and Shedding**
SYSLOG	Disabled	**3.9 Settings > Network**

Figure 2-2: Default SNMPWEBCARD Settings

2.3 SNMP Configuration

SNMPWEBCARD allows a compatible UPS system or PDU to function as an SNMP-managed device on your network, using the SNMP agent and Management Information Base (MIB). The SNMP agent resides in the SNMPWEBCARD firmware and responds to standard SNMP commands (get, get next and set). It can also generate SNMP traps (messages). The MIB determines which parameters can be monitored and controlled. Two MIB files—*Tripplite.mib* and *RFC1628.mib*—must be loaded on each Network Management Station that will monitor the managed device. (The files are provided on the CD-ROM included with the SNMPWEBCARD or network-enabled PDU. Consult your Network Management Station software documentation for instructions on how to import MIB files.)

3. Web Console

The Web console is the primary graphical user interface for the SNMPWEBCARD.

3.1 Opening the Web Console

1. Open a Web browser that supports frames, forms and Java.

2. Type the IP address assigned to the SNMPWEBCARD or PDU into the address field and press the enter key. (Refer to the printed manual for IP address assignment instructions.)

3. You should be prompted for a user name and password (Figure 3-1). The default administrator user name is **admin** and the default password is **admin**.

4. After you enter the user name and password, the status page (Figure 3-3) will appear in the browser window.

Note: Pages update automatically every 30 seconds. Reload/refresh a page manually to update sooner.
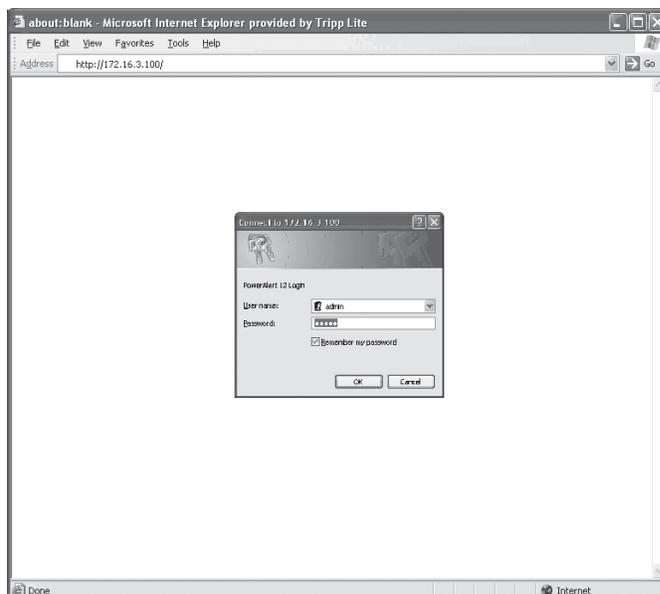

Figure 3-1: Web Console Login

3.2 Web Console Interface

Clicking the Tripp Lite logo **A** in the header opens Tripp Lite's Web site in a new browser window. The header also contains the menu buttons **B**, which are the main navigational icons of the console. Clicking a menu button reveals submenu buttons **C** on the left side of the console that are applicable to the selected menu button. When you click a menu or submenu button, the text changes from white to green.

Each submenu has an information section **D** that appears when the submenu is selected. The information section contains data, settings and/or controls. Several of the information sections are further divided into tabs **E**.

The alarm section **F** appears at the bottom of console window regardless of which submenu is selected. If an alarm or other notification condition occurs, the alarm section will show the severity of the condition, the cause of the condition (such as "UPS on Battery") and the automatic response or recommended user response (such as "Prepare system for shutdown").
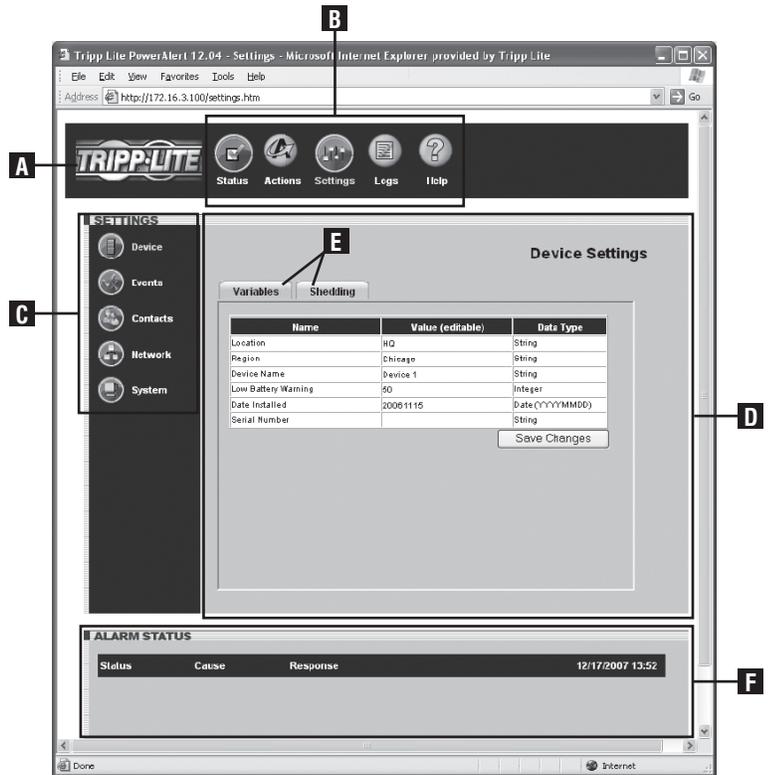

Figure 3-2: Console Interface Overview

3.3 Status

Click the "Status" menu button to display the status page (Figure 3-3), which displays device information, device summary and alarm status. Four additional buttons within the window allow you to select information categories: input information, output information, battery information and miscellaneous information such as additional device information and system information. When you activate an information category, the button for that category changes from white to blue. The status of each information item is indicated by the icon next to the item.
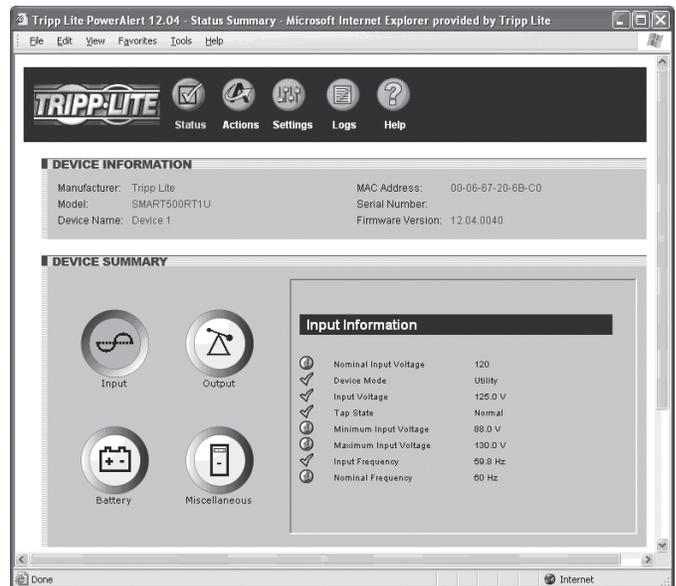

Figure 3-3: Status Page

RSS Feed

The RSS Feed feature was implemented to allow users to subscribe to the SNMPWEBCARD to view current alarm status, as well as event logs in the form of .XML, .TXT and .CVS files. This allows a user to quickly view status on the SNMPWEBCARD without requiring a login to each individual device.
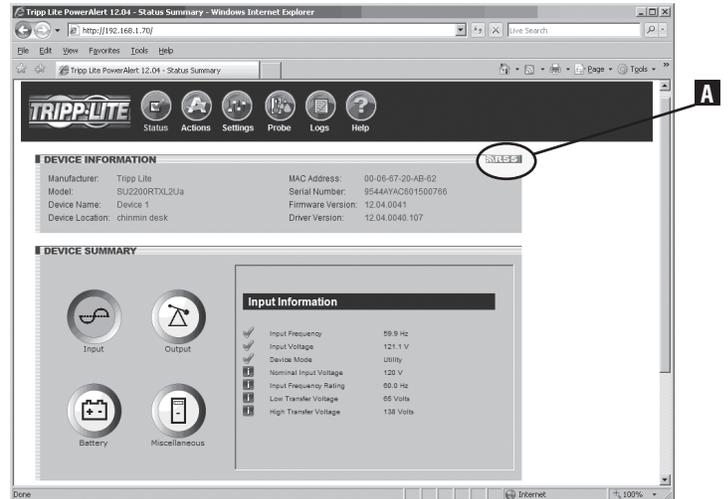
1. Click on the RSS symbol **A**.

Figure 3-4: RSS Feed Screen

2. Add the URL http://x.x.x.x:8080/digest.xml to the RSS reader or aggregator. Note: In the event that the SNMPWEBCARD is configured to SSL mode, enter HTTPS instead of HTTP.

Figure 3-5: RSS Subscription

This is an example of the status screen viewed via the RSS reader:
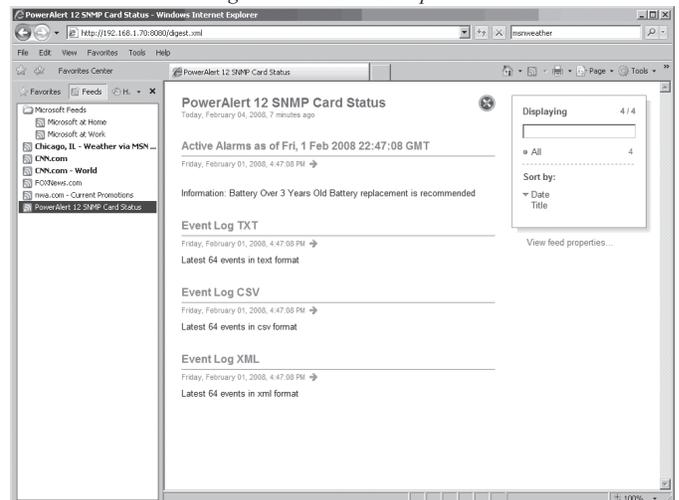

Figure 3-6: Status Screen

Dynamic Generation of Status Report

The SNMPWEBCARD's HTTP Web interface makes it possible to retrieve current alarm status through XML, text (TXT), or comma-delimited CVS file extensions. This feature can be used to integrate status information into proprietary management systems. To retrieve the file, enter the following URL: http://x.x.x.x:8080/status.fileextension. Note: In the event that the SNMPWEBCARD is configured to SSL mode, enter HTTPS instead of HTTP.

3.4   Actions > Control

Click the "Actions" menu button and the "Control" submenu button to display the Actions > Control page. Click the "Control Command" tab (Figure 3-7) to see commands that you can execute immediately or schedule for automatic execution. To execute a command immediately, select it from the drop-down menu and click the "Execute Command" button. To schedule a command, select it from the drop-down menu, set the desired time and frequency parameters and click the "Schedule Command" button.

If the command you select from the drop-down menu has operational parameters that you can modify, they will be shown in the "Parameters" area. You can click the editable variables and type new values to change the settings for the command. If you plan to change the command parameters, you should change them before you execute the command or add it to the command schedule.

Available commands include "Reboot UPS," "Initiate Self-Test," "Cycle All Loads," "Cycle Load," "Turn Load Off," "Turn Load On," "Turn All Loads Off," and "Turn All Loads On". For a complete list of commands available for your device, refer to the drop-down menu.

Click the "Schedules" tab (Figure 3-8) to see a list of scheduled commands. To remove a scheduled command, check the box next to the command and click the "Delete Selections" button.

Figure 3-7: Actions > Control > Controls Tab

Figure 3-8: Actions > Control > Schedules Tab

3.5   Actions > Loads

Click the "Actions" menu button and the "Loads" submenu button to display the Actions > Loads page (Figure 3-9). You can control the outlets of the managed device by clicking the appropriate "On," "Off" or "Cycle" button. The load of connected equipment is displayed as a percentage of maximum capacity, allowing you to see whether additional equipment can be added safely. (Load fluctuates with the power demands of connected equipment. It is prudent to limit the load to approximately 80% of maximum capacity in order to accommodate higher startup power demands and other increased power needs.) *Note: If the control buttons are grayed out, this condition indicates the outlet is non-controllable.*

If your device has switchable load banks, additional buttons allow you to control each load bank. (Each load bank consists of one or more outlets.) You can use the "Description" field to label the banks for easy reference. The main control buttons affect all outlets at once.

Warning: The load controls start or stop the flow of electricity to your device's outlets. Make sure you know which equipment is connected to each load bank before attempting to use these controls. Check the outlet labels and/or test the load banks by plugging a circuit tester or small light into each outlet and observing the effects of the controls.
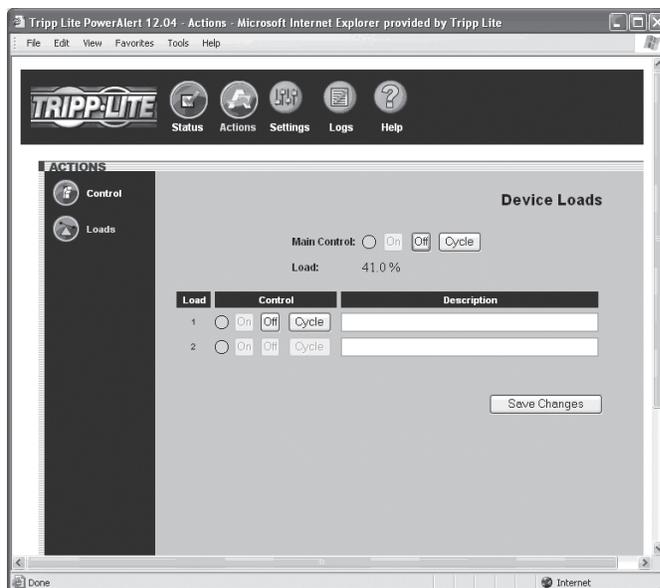

Figure 3-9: Actions > Loads Page

3.6   Settings > Device

Click the "Settings" menu button and the "Device" submenu button to display the Settings > Device page (Figure 3-10). You can edit the device variables for the UPS system.

Note: Some UPS systems have fewer device variables; some have more. Some UPS systems will fill the "Serial Number" field automatically. The "Low Battery Warning" field is tied to the "Battery Capacity Below Warning" event.

See **Section 5 – Load Ramping and Shedding** for information about the "Ramping" and "Shedding" tabs. The tabs will only be accessible if the device supports these features.

Figure 3-10: Settings > Device > Variables Tab

3.7   Settings > Events

Click the "Settings" menu button and the "Events" submenu button to access the Settings > Events page (Figure 3-11). The Settings > Events page allows you to configure responses to changes in operating and environmental conditions.

Events are divided into four categories: Critical, Warning, Information and Offline. Each event category has an icon associated with it. The icon will be displayed in the alarm summary section of the console window (with other event information) when an event of that category occurs.

You can configure settings for several event types, including "On Battery" and "Battery Low." (Events vary by device.) You can configure several settings categories that specify actions to be executed when the selected event takes place:

- **"Shutdown"**–Turns the device off after a specified period of time.

- **"Contact Notification"**–Sends an e-mail to an e-mail address in your contact list. (Requires an e-mail contact to be set. See **Figure 3.13 Settings > Contacts**.)

- **"SNMP Trap Notification"**–Sends an SNMP trap to a specified IP address in your SNMP list. (Requires an SNMP contact to be set. See **Figure 3.13 Settings > Contacts**.)

- **"Logging"**–Enables logging for the selected event.

- **"SNMP Set Notification"**–Allows the device to perform an SNMP set on another SNMP-enabled device or application on the network, allowing the device or application to be notified when the event occurs. (Requires an SNMP contact to be set. See **Figure 3.13 > Contacts**.)

Check the "Status" box by the settings category to enable the event setting.

Each settings category has several configurable parameters for the selected event type. For example, to configure the shutdown settings for a "Battery Low" event, first highlight "Battery Low" and then highlight "Shutdown" and click the "Settings…" button. A pop-up window will appear (Figure 3-12) that allows you to determine the "Battery Low" event shutdown settings.
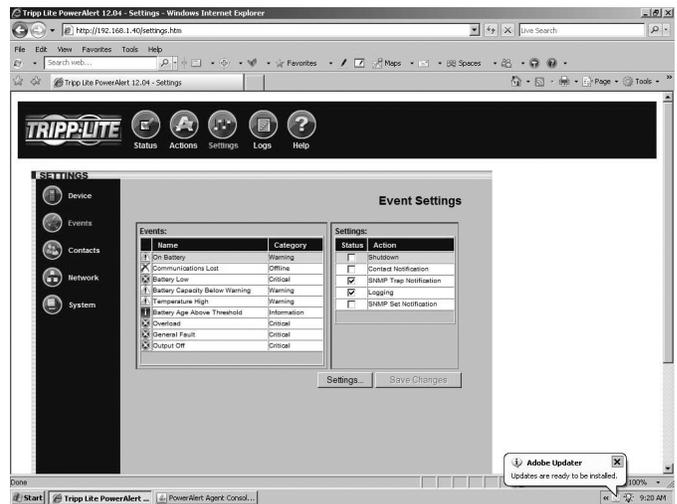

Figure 3-11: Settings > Events Page

Figure 3-12: "Battery Low" Event Shutdown Settings

3.8   Settings > Contacts

Click the "Settings" menu button and the "Contacts" submenu button to display the Settings > Contacts page.

The "Email" tab (Figure 3-13) shows a table of e-mail contacts. Before your SNMPWEBCARD can send e-mail notifications, you must enter e-mail server information and add at least one e-mail contact. Click the "SMTP Settings" button to enter the settings for your mail server. If you do not know the correct settings, contact your network administrator. Add a new e-mail contact by clicking the "New" button and entering the information requested in the pop-up window. Test your settings by clicking the "Send Test Email" button.

Additional requirements for E-mail settings:

1. Enter a valid IP address or DNS name for the SMTP mail server. (Using a DNS name requires valid DNS server settings. See **3.9 Settings > Network**.)

2. The mail server must not require authentication.

3. The mail server must be set up to relay e-mail from the subnet or IP address of the SNMPWEBCARD.

4. The "To" and "From" addresses must be valid.

The "SNMP" tab (Figure 3-14) shows a table of SNMP contacts. Before your SNMPWEBCARD can send an SNMP trap or SNMP set to an IP address, you must add at least one SNMP contact. Add a new contact by clicking the "New" button and entering the information requested in the pop-up window. If you do not know the correct settings, contact your network administrator. (The standard port for SNMP set destinations is port 161. The standard port for SNMP trap recipients is port 162.)

Note: *If adding a SNMP contact to be used with a SNMP Set Notification, use port 161 or the port number that the remote SNMP device can be accessed on.*
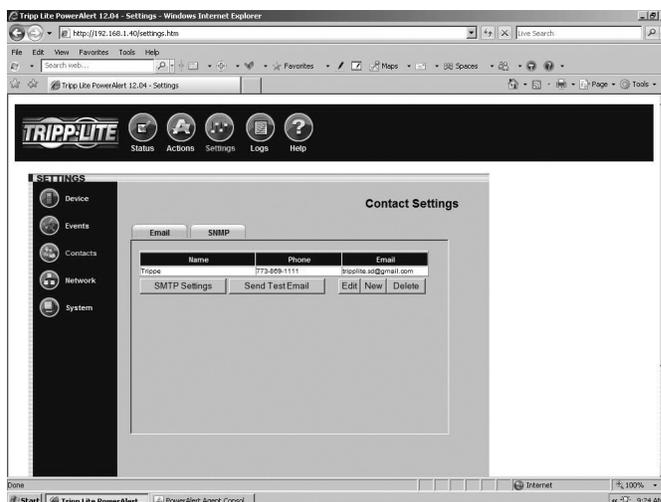

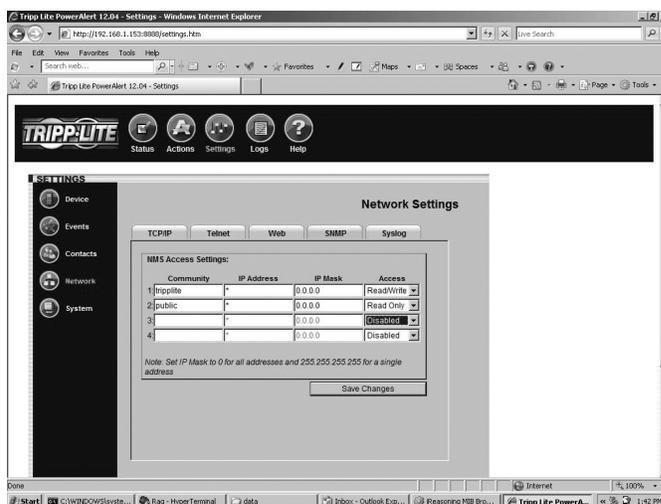*Figure 3-13: Settings > Contacts > Email Tab*

Figure 3-14: Settings > Contacts Window > SNMP Tab

3.9   Settings > Network

Click the "Settings" menu button and the "Network" submenu button to display the Settings > Network page.

Note: Any changes require the card to be rebooted.

The "TCP/IP" tab (Figure 3-15) contains several network settings:

- "MAC Address" is the unique physical address of the SNMPWEBCARD and cannot be changed. The address is also printed on a label on the surface of the card. An extra label may be included.

- "Host Name" is the unique name by which the SNMPWEBCARD is identified on the network Host name is used to identify a particular host in various forms of electronic communication such as the Web or email and is translated into an IP address via the Domain Name System (DNS) resolver for communication between devices over the network. Note: It is necessary to specify a DNS IP Address in the Settings > Network > TCP/IP Tab page and include these descriptions in the configuration of all pertinent Router/Switch networks.

- "Boot Mode" defines whether the card has a static IP address (assigned manually via terminal mode) or a DHCP address (assigned automatically by a DHCP server on your network). DHCP is the default setting. (For instructions on assigning a static IP address via terminal mode, refer to the printed manual that came with your SNMPWEBCARD or PDU.)

- "IP Address," "Network Mask" and "Default Gateway" are IP network settings that will either be assigned automatically or must be entered manually, depending on whether the card is set to use a static IP or DHCP. If you don't know the correct settings, contact your network administrator.

- "Preferred DNS Server" and "Alternate DNS Server" are required only if you want to use domain names (such as mailserver.xyz.com) in addition to numeric addresses (such as 192.168.0.123).

- "Ethernet Port Speed" defines the communication speed of the SNMPWEBCARD Ethernet port. By default, it will auto-negotiate in order to use the fastest speed that's compatible with your network equipment.

The "Telnet" tab (Figure 3-16) determines whether telnet access is enabled or disabled. You can also set the telnet port. (The default enabled telnet port is 23.) *Note: Telnet access requires an admin password. Guest users do not have telnet access. See Section 4.0 – Telnet Console for additional information about telnet access.*

(continued)

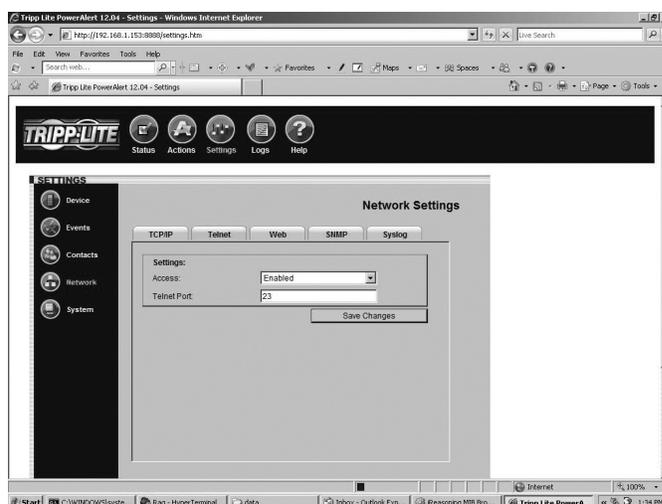
Figure 3-15: Settings > Network > TCP/IP Tab

Figure 3-16: Settings > Network > Telnet Tab

The "Web" tab (Figure 3-17) allows you to enable or disable Web browser access, choose the HTTP and/or HTTPS protocol and set the HTTP port.

HTTP (default setting) is the standard protocol used by Web browsers. HTTPS is a secure protocol that encrypts and decrypts data passed between the user and the SNMPWEBCARD. If HTTPS is selected, users can access the SNMPWEBCARD securely with HTTPS (https://x.x.x.x) and cannot use HTTP. If HTTP/HTTPS is selected, users can access the SNMPWEBCARD with either protocol.

Port 80 is the default HTTP port. The port can be changed in HTTP mode, but cannot be changed in HTTP/HTTPS mode. Port 443 is the HTTPS port and cannot be changed.

Note: Enabling HTTPS requires the card to reboot. This process may take several minutes.

The "SNMP" tab (Figure 3-18) allows up to four community names to be defined. SNMP-enabled devices and applications with the correct community name and IP address can access the SNMPWEBCARD via SNMP gets (read-only or read/write access) and sets (read/write access). If the IP address is "*," any device or application with the defined community name will be granted the defined access level, regardless of IP address.

*Note: The default community names for SNMPWEBCARD firmware 12.04.0040 and above are **tripplite** (read/write) and **public** (read only).*

Access to the SNMPWEBCARD via SNMP can be configured to allow SNMP access (via a defined community string) to everyone, a range or a single IP by defining the appropriate subnet mask.

Address	Subnet	Community	Access
192.168.1.1 (single)	255.255.255.255	User-Defined	User-Defined
192.168.1.0 (range)	255.255.255.0	User-Defined	User-Defined
192.168.0.0	255.255.0.0	User-Defined	User-Defined
192.0.0.0	255.0.0.0	User-Defined	User-Defined
* (everyone)	0.0.0.0	User-Defined	User-Defined

SYSLOG

SYSLOG is a protocol that allows a machine to send event notification messages across IP networks to event message collectors – also known as SYSLOG servers. Up to 4 SYSLOG servers may be defined by either IP address or hostname (Figure 3-21). Hostnames require that a DNS (Domain Name System) server be configured on the TCP/IP tab. Once configured, any event will trigger a message to be sent to the SYSLOG server for logging.
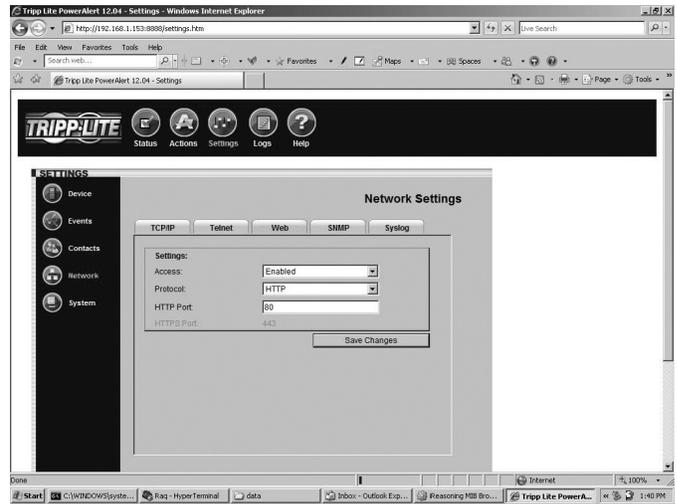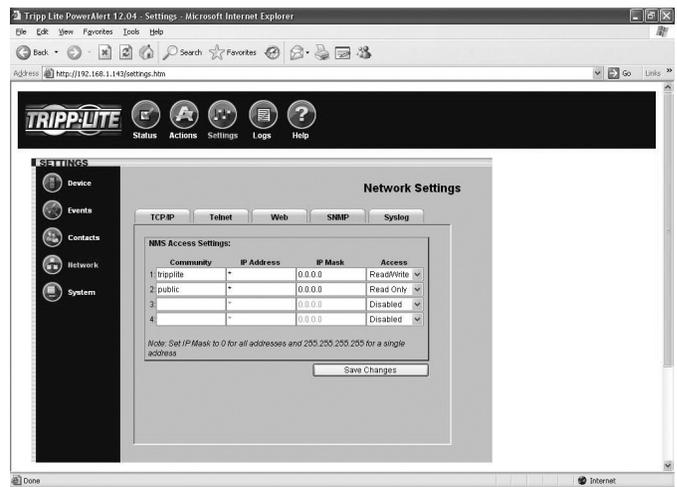

Figure 3-17: Settings > Network > Web Tab

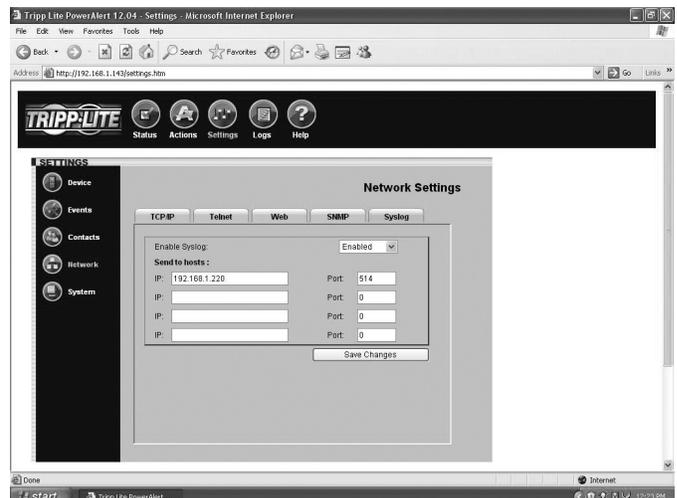*Figure 3-18: Settings > Network > SNMP Tab*

Figure 3-19: SYSLOG

3.10   Settings > System

Click the "Settings" menu button and the "System" submenu button to display the Settings > System page.

The SNMPWEBCARD has a real-time clock with a backup battery that keeps the clock running when the card is powered off. The "Date/Time" tab (Figure 3-20) allows you to set the date and time manually or to define a Network Time Protocol server for periodic network time synchronization. The time zone can also be specified. If you don't know the correct Network Time Protocol server settings, contact your network administrator.

The "Security" tab (Figure 3-21) allows you to set passwords for two user levels: guest and administrator (admin). Guest users have read-only access and do not have telnet access. Admin users have read/write access, which means that they can control the SNMPWEBCARD and change its settings. Tripp Lite recommends defining passwords for both user levels.

*Note: For firmware version 12.04.0019 and 12.03.0024, the default admin password is blank. For firmware version 12.04.0030 and above, the default admin password is **admin**.*

Write Configuration/View Configuration

The SNMPWEBCARD can maintain a copy of its current configuration as a backup in the event of system problems or to configure other SNMPWEBCARDs via FTP.

To generate a configuration file (paconfig.ini), select the "Write Config" button at the bottom of the page. This file can also be viewed and saved to your computer **A** by clicking the "view" button. You will be prompted with a login screen, at which time you may enter Admin and your assigned password.

To distribute the configuration file to other SNMPWEBCARDs (12.04.0040 or above), FTP to the SNMPWEBCARD's IP address. In binary mode, "PUT" the configuration file (paconfig.ini) to the SNMPWEBCARD, then close the FTP session. When the SNMPWEBCARD reboots, it will operate according to the new configuration file. *Note: The admin password will be required to view or download the configuration file.*
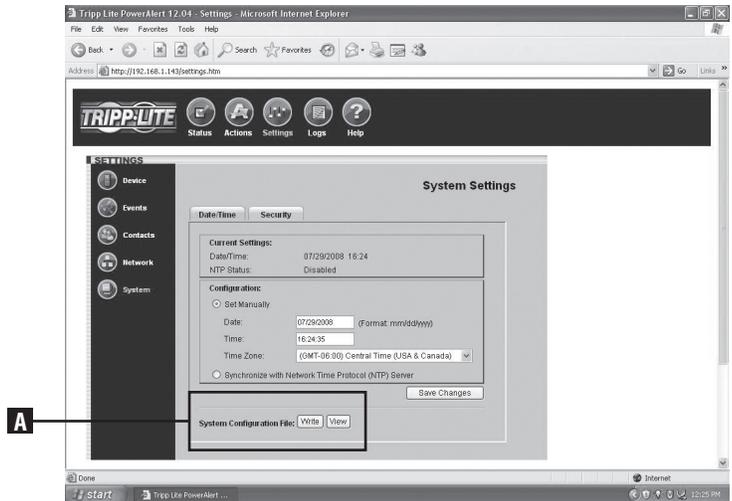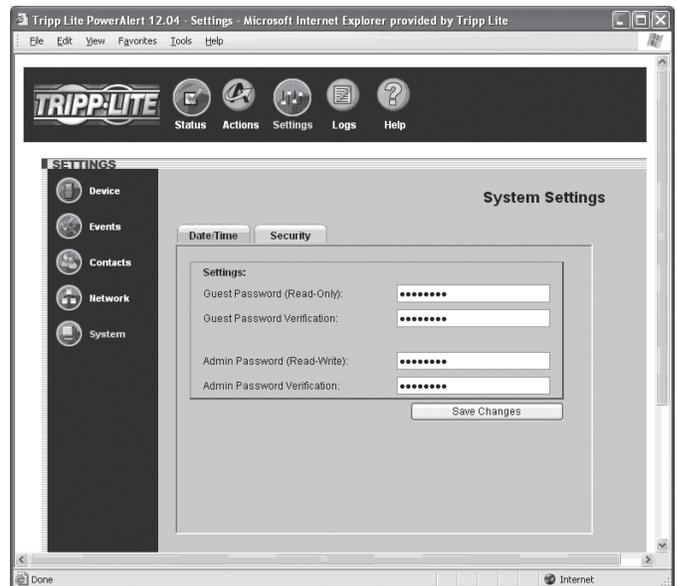

Figure 3-20: Settings > System > Date/Time Tab

Figure 3-21: Settings > System > Security Tab

3.11   Logs > Events

Click the "Logs" menu button and the "Events" submenu button to display the Logs > Events page (Figure 3-22). All events are logged here with a date, time and description. Each event also displays an icon that identifies its status: normal, critical, warning, information or offline.
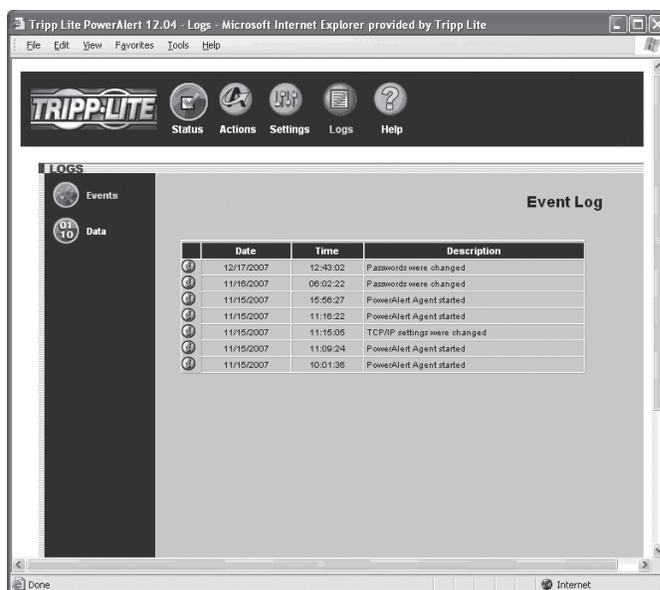

Figure 3-22: Logs > Events Page

3.12   Logs > Data

Click the "Logs" menu button and the "Data" submenu button to display the Logs > Data page (Figure 3-23). Data logging is disabled by default. You can enable data logging by entering a logging interval between 1 and 60. When data logging is enabled, all data fields and their current value are logged to a temporary location – if the card reboots or loses power, the data will be erased. You can export the data log to a .CVS file by right-clicking the "Export Data Log" link and choosing "Save Target As…" or "Save Link As…" from the pop-up menu. ***Note: Only 250 data entries at a time will be stored temporarily.***
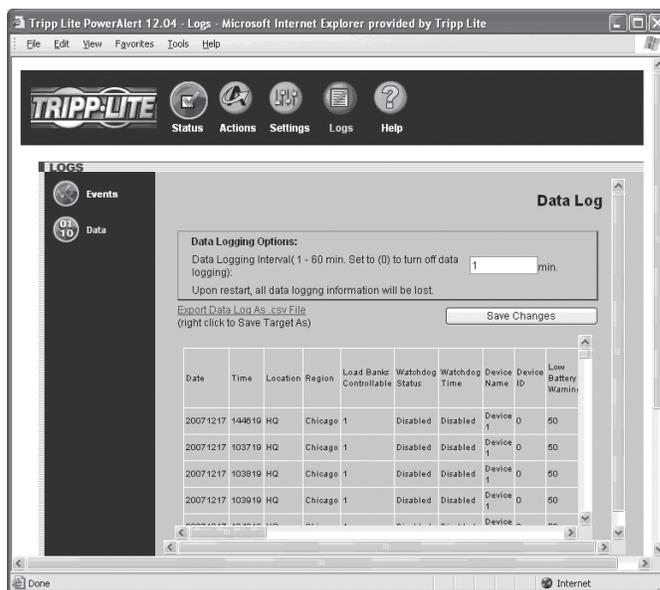

Figure 3-23: Logs > Data Page

3.13   Help

Click the "Help" menu button to open a PDF that contains the most recent version of the SNMPWEBCARD User's Guide.

4. Telnet Console

Most of the monitoring and control features available in the Web console (see **Section 3 – Web Console**) are also available in the telnet console. Accessing the SNMPWEBCARD through the telnet console is ideal for mobile or resource-limited platforms.

Accessing the Telnet Console

Open a telnet client and connect to the IP number of the SNMPWEBCARD. At the login prompt, enter the admin user name and password. (Telnet access must be enabled and an admin password must be defined. Guest users do not have telnet access.) After a successful login, you'll see the telnet console's main menu (Figure 4-1).

The Telnet Console Interface

The telnet console uses a menu-driven, text-based interface. It has most of the same menus and submenus as the Web console, but they are arranged differently. Several submenus that were previously grouped below "Settings" now appear at the top level, and instead of appearing at the top level, the "Status," "Actions," "Settings" and "Logs" menus are accessible under the "Devices" menu. You'll see those menu choices after selecting your device, along with information about the device (Figure 4-2). *Note: You can also select an ENVIROSENSE temperature/humidity and alarm monitoring device if one is present.*

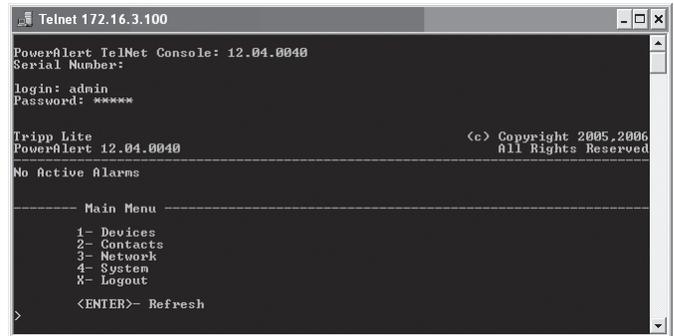The functional menu hierarchy of the telnet console interface is shown in Figure 4-3.
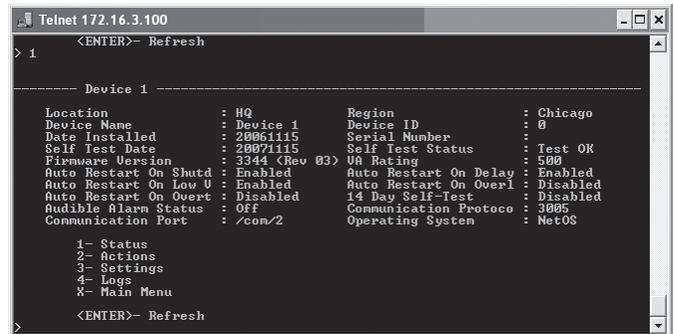

Figure 4-1: Telnet Console Main Menu

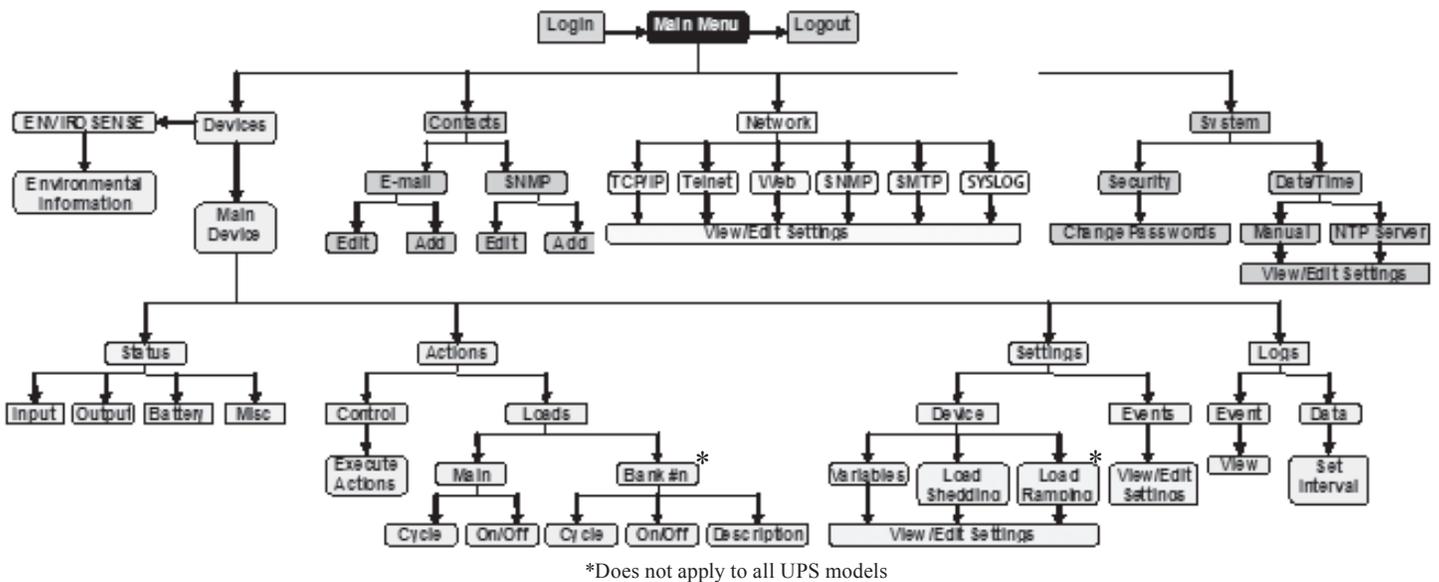

Figure 4-2: Telnet Console Device Submenu

*Does not apply to all UPS models

Figure 4-3: Telnet Console Menu Hierarchy

5. Load Ramping and Shedding

Click the "Settings" menu button and the "Device" submenu button to display the Settings > Device page. If your device supports load ramping and shedding, the "Ramping" tab and/or "Shedding" tab (Figure 5-1) will be available.

The "Ramping" and "Shedding" tabs each contain a table of the load segments available for your device. Each load segment has a "Description" field, an "Action" field and a "Delay" field. The "Description" field allows you to enter a note about the equipment connected to the load segment. The "Action" field allows you to configure the load ramping or shedding behavior by choosing from the possible actions listed in the pop-up menu. The "Delay" field allows you to enter the delay (in seconds) before the specified action is performed. After entering the desired values, click the "Save Changes" button to make the values active. Ramping sequences are applied when AC input power is switched on. Shedding sequences are applied when AC input power is lost, increasing the battery backup runtime available for supported equipment. You can disable load shedding by setting all actions to "Remain On."

Load ramping and load shedding require a Tripp Lite UPS system, ATS or PDU with switchable load banks (banks of one or more outlets that can be switched on and off remotely, independent of other outlets). A device that has switchable load banks can be classified as an autonomous device or a non-autonomous device, which determines its load ramping and load shedding characteristics (Figure 5-2).

Figure 5-1: Settings > Device > Shedding Tab

	Custom Load Ramping		Custom Load Shedding	
	Configuration	*Execution*	*Configuration*	*Execution*
Autonomous Device	Requires SNMPWEBCARD or PowerAlert.	Functions without SNMPWEBCARD or PowerAlert.	Requires SNMPWEBCARD or PowerAlert.	Functions without SNMPWEBCARD or PowerAlert.
Non-Autonomous Device	Not supported.	Not supported.	Requires SNMPWEBCARD.	Requires SNMPWEBCARD.

Figure 5-2: Autonomous and Non-Autonomous Device Characteristics

An autonomous device can execute stored load shedding and load ramping configurations independent of an SNMPWEBCARD or PowerAlert. Configuration of an autonomous UPS system requires PowerAlert or an SNMPWEBCARD (disconnect the SNMPWEBCARD network cable before attempting to use an autonomous UPS system's RS-232 serial port). Configuration of an autonomous PDU requires an SNMPWEBCARD (the card is pre-installed in "NET" models). Figure 5-3 lists autonomous devices that are currently available.

Non-autonomous devices require an SNMPWEBCARD for configuration and execution of a custom load shedding sequence. Non-autonomous devices do not support custom load ramping. UPS systems that have switchable load banks are non-autonomous devices unless they are listed in Figure 5-3.

Note: Load ramping and shedding can also be configured through the telnet console. (Select the first menu option "1- Devices" from the Main Menu, then select the first device from the Device List menu, then select the third menu option "3- Settings". From the Settings menu, select the second menu option "1- Device". From the Device Settings menu, select the second menu option "2- Shedding" for shedding configuration or the third menu option "3- Ramping" for ramping configuration.)

Part Number	Series Number
PDUMH15AT	All
PDUMH15ATNET	All
PDUMH15HVNET	All
PDUMH20AT	All
PDUMH20ATNET	All
PDUMH20HVNET	All
PDUMH30HVNET	All
PDUMH30NET	All
PDUMV15NET	All
PDUMV20HVNET	All
PDUMV20NET	All
PDUMV30HVNET	All
PDUMV30NET	All
SMART2200RMXL2U	AGSM5389
SMX2200RMXL2U	AGSM5392

Figure 5-3: Autonomous Devices

6. Troubleshooting

If you encounter a problem:

- Confirm that the SNMPWEBCARD is turned on.

- Check all connections and confirm that they are secure.

- Refer to the following list of problems and implement any recommended solutions.

- If the problem persists after trying the recommended steps, contact Tripp Lite Technical Support.

Problem	Possible Solution
The IP address of the SNMPWEBCARD is unknown. Open terminal session.	If your network's DHCP server assigned an IP address to the SNMPWEBCARD, contact your network administrator to discover the IP address assigned to the card or view it during terminal session at boot-up. You'll need to know the MAC address of the SNMPWEBCARD. If your network does not use DHCP, or if you need to assign a static IP address for another reason, follow the instructions for assigning a static IP address via terminal mode configuration. Refer to the printed manual that came with your SNMPWEBCARD or PDU for more information.
Unable to perform SNMP get operations.	Check the SNMP settings of the SNMPWEBCARD (see **3.9 Settings > Networ**k). The IP address and community name of the device or application trying to perform the SNMP get operation must be entered in "NMS Access Settings" with "Read Only" or "Read/Write" permission.
Unable to perform SNMP set operations.	Check the SNMP settings of the SNMPWEBCARD (see **3.9 Settings > Networ**k). The IP address and community name of the device or application trying to perform the SNMP set operation must be entered in "NMS Access Settings" with "Read/Write" permission.
Unable to receive traps at your management station.	Check the SNMP settings of the SNMPWEBCARD (see **3.9 Settings > Network**). The IP address and community name of the management station must be entered in "NMS Access Settings" with "Read Only" or "Read/Write" permission. Also check trap recipient settings in Contacts menu and Events menu.
Unable to use autodiscovery to find the agent from your management station.	Check the SNMP settings of the SNMPWEBCARD (see **3.9 Settings > Network**). The IP address and community name of the management station must be entered in "NMS Access Settings" with "Read/Write" permission.
The HTTP interface displays an error message: Action Fail.	If the previous command is not yet finished, another command cannot be executed. You must wait until the previous command has finished.
SNMPWEBCARD e-mail notifications are not working.	Before your SNMPWEBCARD can send e-mail notifications, you must enter e-mail server information and add at least one e-mail contact in the Settings > Contacts > Email Tab (Figure 3-14). Click the "SMTP Settings" button to enter the settings for your local mail server. If you do not know the correct settings, contact your network administrator. Add a new e-mail contact by clicking the "New" button and entering the information requested in the pop-up window. Test your settings by clicking the "Send Test Email" button. Additional requirements for E-mail settings: 1. Enter a valid IP address or DNS name for the SMTP mail server. (Using a DNS name requires valid DNS server settings. See **3.9 Settings > Network**.) 2. The mail server must not require authentication. 3. The mail server must be set up to relay e-mail from the subnet or IP address of the SNMPWEBCARD. 4. The "To" and "From" addresses must be valid. 5. A DNS IP must be specified in the Settings > Network > TCP/IP tab page. ***Note: You also need to configure and enable each event setting through the Settings > Events page before notifications can be sent to your contacts.***

7. Technical Support

Before contacting Tripp Lite Technical Support, refer to Section 6 – Troubleshooting for possible solutions. If you are still unable to resolve the problem, you can reach Tripp Lite Technical Support here:

Telephone
+1 773 869 1234
Monday through Friday, 8:30AM to 6:00 PM CST
(CST is Central Standard Time in the United States)

E-mail
techsupport@tripplite.com

Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice.

TRIPP·LITE

Tripp Lite World Headquarters
1111 West 35th Street, Chicago, IL 60609 USA • +1.773.869.1234 • www.tripplite.com