## SECTION V:

# DEVICE SETTINGS

### OVERVIEW OF DEVICE SETTINGS

The Device menus provide a view of current status and access to dialogs for Diagnostics, Control and Configuration.


### *Status*

**Battery Status:**

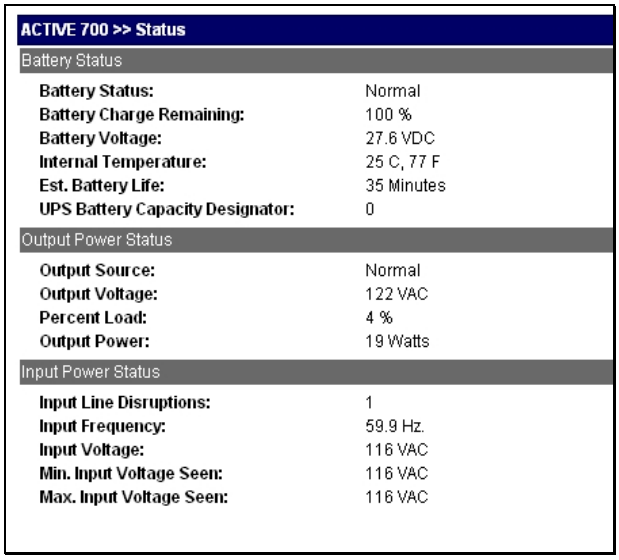
States are *Normal*, *Charging* or *Discharging*.

This value is returned as the object: `UpsBatteryStatus` in the UPS MIB - RFC1628.

**Battery Charge Remaining:**

Current percentage of the remaining total battery charge.

This value is returned as the object `upsBatteryChargeRemaining` in the UPS MIB - RFC1628.




**Battery Voltage:**

Voltage measured at the battery or charger output. This may be reported as "string" voltage or "cell" voltage depending on the UPS model. This value is returned as the `upsBatteryVoltage` object in the UPS MIB - RFC1628

**Internal Temperature:**

The internal temperature reported by the UPS. This value is returned as the `upsBatteryTemperature` object in the UPS MIB - RFC1628.

**Est. Battery Life:**

Sometimes referred to as *Estimated Autonomy.* This is an estimate of the amount of time the UPS batteries can sustain the current load. This value is continuously recalculated based on the operating conditions of the UPS. When the UPS is on battery, this value may decrease faster than expected due to battery age and other variables that are difficult to model in the calculation algorhythm. (This value is returned as the object; `upsBatteryEstimatedMinutesRemaining` in the UPS MIB - RFC1628)

**Battery Capacity Designator:**

Typically the number of battery packs attached to the UPS. (NOT A MIB OBJECT)

View the special help link for this parameter on the UPS Configuration page.

**UPS Up Time:**

The amount of time since the UPS was last started. (This value is returned as the sysUpTime object in MIB-2).

**Output Voltage**

The measured UPS output voltage.

**Output Source:**

The source of the UPS output power. Under normal conditions this will be Utility. The source may also be reported as Battery or Bypass.

**Percent Load:**

The percentage of the UPS capacity currently being supplied by the UPS.

**Output Watts:**

The measured UPS output power in Watts.

**Input Line Disruptions:**

The number of times the UPS has been on inverter due to input voltage being out of tolerance.

**Input Frequency:**

The frequency measured on the UPS AC input.

**Input Voltage:**

The voltage measured at UPS AC input.

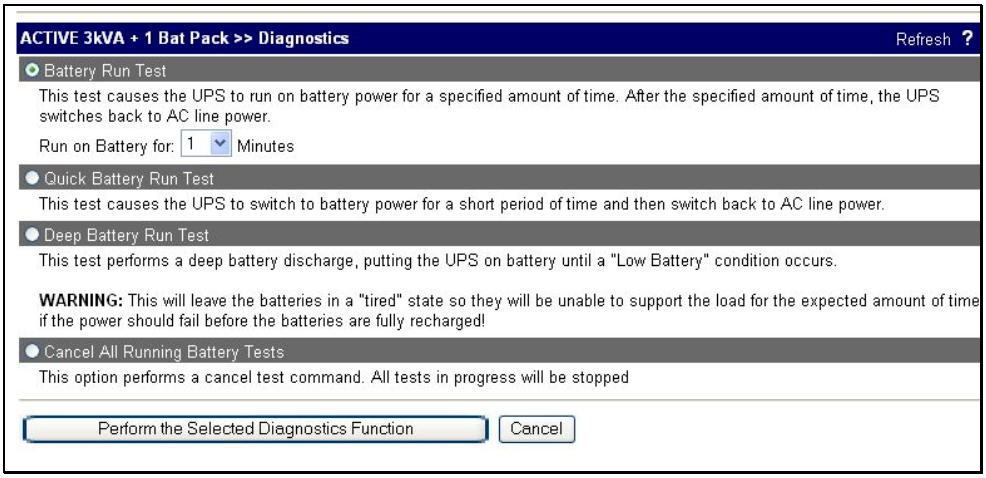
**Min. Input Voltage Seen:**

The lowest input voltage detected by the UPS since last reset.
(See Also *UPS Control* to reset the stored minimum input voltage to the current input voltage).

**Max. Input Voltage Seen:**

The highest input voltage detected by the UPS since last reset. (See Also *UPS Control* to reset the stored maximum input voltage to the current input voltage).

## *Diagnostics*




Your UPS may not support all of the test options listed above.

Your UPS may need to recharge its batteries after a battery test is complete. Your UPS may refuse to initiate a battery test if the battery is recovering from a previous test or if some other condition exists that would invalidate the results.

Select a test by choosing the corresponding radio button. To start the test, click the button: "Perform Selected Diagnostic Function".

Tests not shown in the screen picture above are described below.

**Battery Impedance Test:**

The Impedance test performs a qualitative analysis of the condition of the battery. This test runs at regular intervals. The impedance test returns one of three results; *Passed*, *Battery is significantly degraded*, or *The battery is defective and must be replaced as soon as possible.*

**Deep Battery (Autonomy) Calibration:**

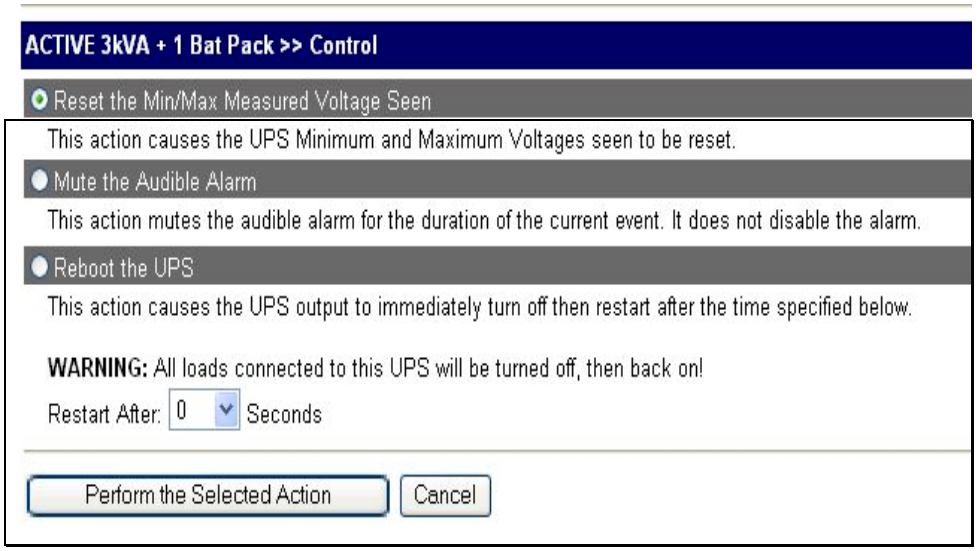
This test performs a deep battery discharge, putting the UPS on battery until a "Low Battery" condition occurs.

**WARNING:** This will leave the batteries in a "tired" state so they will be unable to support the load for the expected amount of time if AC input power should fail before the batteries are fully recharged!

**Front Display Test:**

This test is used to test the lights and display on the UPS front panel.

*Control*




Select one of the control actions by choosing the corresponding radio button. Click the "Perform Selected Action" button to start the action.

**NOTE:** Your UPS may not support all of the options listed in this help dialog.

**Reset the Min/Max Measured Voltage Seen:**

A record of the Minimum and Maximum input line voltages are stored in your UPS, or in the ManageUPS UPS agent

**Mute the Audible Alarm:**

This action mutes the audible alarm for the duration of the current event. It does not disable the alarm. If you want to silence the audible alarm for future events, navigate to the *UPS Configuration* menu. The control for the audible alarm is in the *General Settings* dialog area.

**Reboot the UPS:**

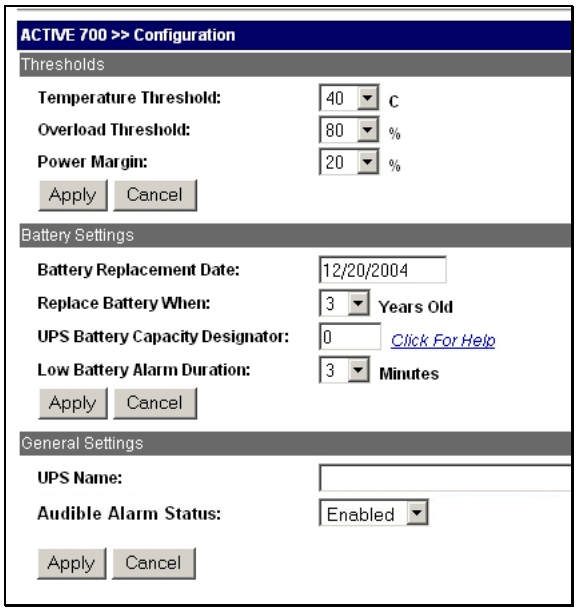
This action causes the UPS output to immediately turn off and then restart after the time specified.

**WARNING:** When you initiate the reboot control**, all loads connected to this UPS will lose power and will then be turned back on when the UPS output is re-energized.**

Make sure this is what you want to do before you initiate this control!

## Configuration

**NOTE:** Your UPS may not support all of the configuration options listed in this document.




**Temperature Threshold:**

The maximum internal UPS temperature allowed before triggering a *UPS over temperature* alarm.

**Overload Threshold:**

The maximum percent load allowed before triggering a UPS overload alarm.

**Power Margin:**

The maximum percent load allowed before triggering a Power Margin Exceeded

**Low/High Transfer Point: (Stand-by & Line Interactive)**

The transfer points determine the range of acceptable output voltage values. If the input line voltage drops below the lower transfer point or rises above the upper transfer point, the UPS takes corrective action either by using the booster or switching to battery power.

The proper setting of transfer points depends on the voltage tolerance of the devices connected to the UPS. Setting the transfer points closer together will cause the UPS to provide a more tightly controlled voltage, but may also cause the UPS to switch to battery power more frequently, depending on the quality of your AC line power. The factory default values are sufficient for most applications.

**Battery Replacement Date:**

The date on which the UPS was first commissioned or when the battery was last replaced.

This value will be set automatically the first time ManageUPS boots up and retrieves a valid date from a network time (NTP) server. The assumption is that the ManageUPS is installed at about the same time the UPS is first installed and commissioned.

It is up to the user to set this date to a more accurate commissioning date and to maintain the date when batteries are replaced in the future.

**Replace Battery When:**

Counts elapsed time from the value in the *Battery Replacement Date* field.

**Low Battery Alarm Duration:**

Triggers the UPS Low Battery alarm when estimated minutes remaining -- as computed by the UPS, or limited by the *Authorized Autonomy* setting -- reaches this value.

**Authorized Autonomy:**

Triggers the UPS Low Battery alarm when the estimated minutes remaining value computed by the UPS reaches this value. (see *Estimated Battery Life* on the *UPS Status* page).

This is the value a UPS administrator *authorizes* the UPS to use. Some UPS administrators set this value at 60% of specified available autonomy to reserve some charge (40%) in the batteries to be used in case a second power fail condition occurs before the batteries have been recharged after the first outage.

**Learned Autonomy:**

The estimated autonomy available in a fully charged battery after the deep battery calibration test has been (See UPS Diagnostics) completed. *Learned Autonomy* will initialize at a value set at the UPS factory representing the specified capacity of the UPS batteries when new.

**Available Autonomy:**

The lesser value of *Authorized* or *Learned*.

**Shutdown Type:**

This setting controls the behavior of the UPS when a shutdown command is received from monitoring software.

If "W*hole UPS*" is selected, the UPS output and internal electronics are turned off. In this state, the UPS will not be able to communicate with monitoring software until the UPS is restarted.

If "*Output Only*" is selected, the UPS output is turned off but the UPS internal electronics remain

**Auto Restart:**

This setting controls the conditions under which UPS output is restarted after the UPS has been shut down.

If "*AC Return*" is selected, UPS output is automatically restarted when AC line power is restored.

If "*Manual Return*" is selected, UPS output must be restarted manually, either by turning the UPS power switch off and then on or by issuing a command on the serial port of the UPS.

**UPS Name:**

The name of this UPS. (This value will be returned as `upsIdentName` object in the SNMP UPS MIB - RFC1628).

**Audible Alarm:**

Controls audible alarms that the UPS may initiate during tests or alarm conditions. You can use this control to silence audible alarms that might sound when a UPS test is initiated. (The control is the `upsConfigAudibleStatus` object in SNMP UPS MIB - RFC1628).

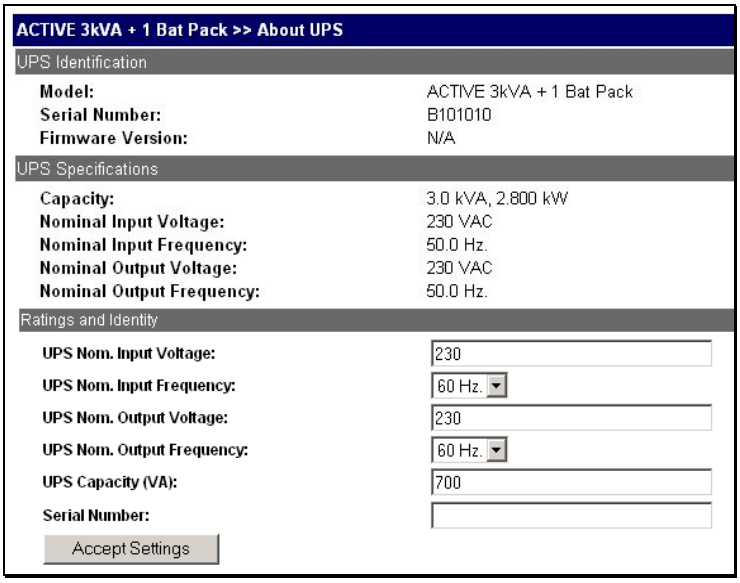
**Auto Stop:**

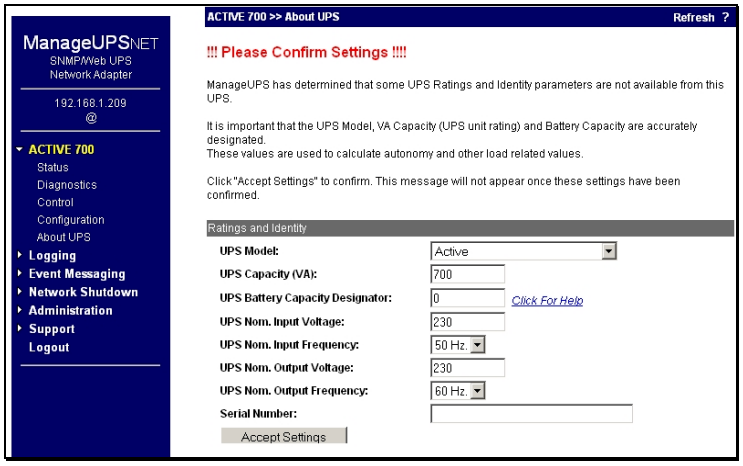
Sets the AutoStop control in some UPS that cause the UPS to turn off after some time with no measurable load present.

## *About UPS*

This dialog area displays identity and nominal ratings of the UPS.

For UPS that do not communicate identity and nominal ratings information, the form controls in the *Ratings and Identity* area allow the user to set this information in the ManageUPs adapter manually.




The first time the web interface is accessed, ManageUPS may prompt you to confirm ups identity and ratings information that the UPS does not communicate to ManageUPS

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**Model:**

The model number of the UPS unit.

**Serial Number:**

The serial number of the UPS unit.

**Firmware Version:**

The version number of the firmware in the UPS.

**Capacity:**

The maximum power output of the UPS. Capacity is measured in VA and Watts. The VA measurement is the maximum power available to drive devices with switched-mode power supplies such as computers. The Watts measurement is the maximum power available to drive resistive loads such as lighting or devices with motors.

**Nominal Input Voltage:**

The line voltage that the UPS is designed to operate with.

**Nominal Input Frequency:**

The line frequency that the UPS is designed to operate with.

**Nominal Output Voltage:**

The nominal output voltage supplied by the UPS.

**Nominal Output Frequency:**

The nominal frequency that supplied by the UPS.