

**Smart-UPS<sup>®</sup> XL**  
**Uninterruptible Power Supply**  
**Rack-Mount 3U**

SUA2200/3000 VA 120/230 Vac

SUA3000 VA 100/200 Vac

English



## Introduction

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### About this UPS

The APC Uninterruptible Power Supply (UPS) provides protection for electronic equipment from utility power blackouts, brownouts, sags and surges. The UPS filters small utility line fluctuations and isolates electronic equipment from large disturbances by internally disconnecting from utility line power. The UPS provides continuous power from the batteries until utility power returns to safe levels or the batteries are fully discharged.

### Accessories

This UPS is equipped with an accessory SmartSlot. Refer to the APC Web site, [www.apc.com](http://www.apc.com) for available accessories.

If a standard accessory, such as a Network Management Card is installed on this UPS, refer to the accessory user manual or CD for installation and operation instructions.

Install accessories prior to connecting power to the UPS.

### Unpack

#### Read the Safety Guide before installing the UPS.

Inspect the UPS upon receipt. Notify the carrier and dealer if there is damage.

The packaging is recyclable; save it for reuse or dispose of it properly.


Check the package contents:

- UPS
- Rail kit
- Front bezel
- EPO connectors

<p><i>120 V Models Only:</i></p> <p>UPS literature kit contents:</p> <ul style="list-style-type: none"> <li>• Two rack-mount brackets</li> <li>• Four cage nuts</li> <li>• Eight flathead screws</li> <li>• Product documentation</li> <li>• Smart-UPS® User Manuals CD</li> <li>• PowerChute® Business Edition CD</li> <li>• Serial and USB communication cable</li> <li>• Safety information</li> <li>• Warranty information</li> </ul>	<p><i>100/200 V Models Only:</i></p> <p>UPS literature kit contents:</p> <ul style="list-style-type: none"> <li>• Two rack-mount brackets</li> <li>• Four cage nuts</li> <li>• Eight flathead screws</li> <li>• Product documentation</li> <li>• Serial communication cable</li> <li>• Safety information</li> <li>• Warranty information</li> </ul>	<p><i>230 V Models Only:</i></p> <p>UPS literature kit contents:</p> <ul style="list-style-type: none"> <li>• Two rack-mount brackets</li> <li>• Four cage nuts</li> <li>• Eight flathead screws</li> <li>• Product documentation</li> <li>• Smart-UPS® User Manuals CD</li> <li>• PowerChute® Business Edition CD</li> <li>• Serial and USB communication cable</li> <li>• Safety information</li> <li>• Warranty information</li> <li>• Input power cord</li> <li>• Alternate input power cord (UK customers)</li> <li>• Utility connector plug</li> <li>• IEC jumper cables</li> </ul>
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**NOTE: The model and serial numbers are located on a small, rear panel label. For some models, an additional label is located on the chassis under the front bezel.**

## Specifications

Environmental		
<b>Temperature</b> Operating Storage	0° to 40°C (32° to 104°F) -15° to 30°C (5° to 86°F) charge the UPS battery every six months 30° to 45°C (86° to 113°F) charge the UPS battery every three months	This unit is intended for indoor use only. Select a location sturdy enough to handle the weight. Do not operate the UPS where there is excessive dust or the temperature or humidity are outside the specified limits. <b>Be sure the air vents on the UPS are not blocked.</b> Environmental factors impact battery life. High temperatures, poor utility power, and frequent, short duration discharges will shorten battery life.
<b>Maximum Elevation</b> Operating Storage	3,000 m (10,000 ft) 15,240 m (50,000 ft)	
<b>Humidity</b>	0 to 95% relative humidity, non-condensing	
Physical		
<b>Dimensions</b> H/W/D	133 mm x 483 mm x 673 mm 5.2 in x 19 in x 27 in	
<b>Weight</b>	73 kg (161 lbs) shipping weight 63 kg (139 lbs) with battery module 37 kg (82 lbs) without battery module	63 kg (139 lbs) 
<b>Maximum Number of External Battery Packs Supported by the Smart-UPS XL</b>		10

Electrical				
	100 V models	120 V models	200 V models	230 V models
<b>Output</b>				
<b>Output Frequency</b>	50/60 Hz +/- 3 Hz			
<b>Nominal Output Voltage</b>	100 V	120 V	200 V	230 V
<b>Input</b>				
<b>Input Frequency</b>	50/60 Hz +/- 3 Hz			
<b>Nominal Input Voltage</b>	100 V	120 V	200 V	230 V

## Installation

Your UPS model may vary in appearance from the examples depicted in this manual.



**The UPS and the battery modules are heavy. Remove the battery modules to lighten the UPS during installation.**

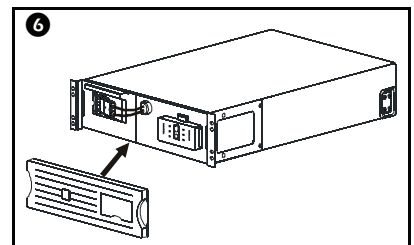
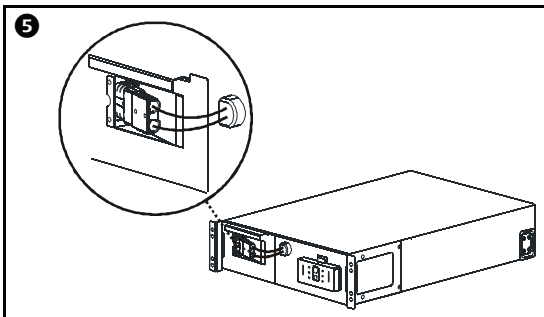
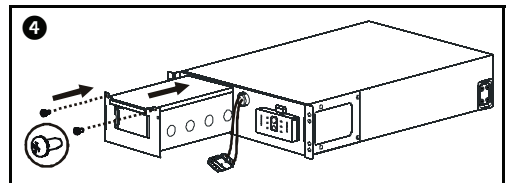
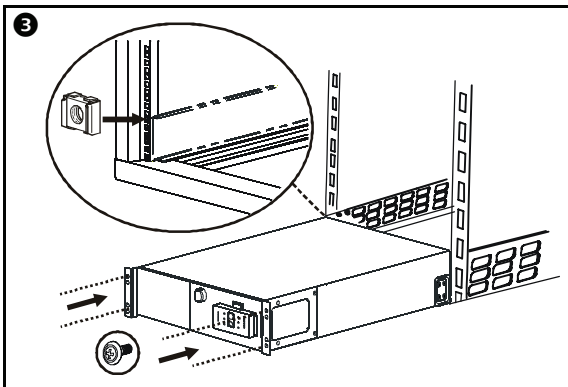
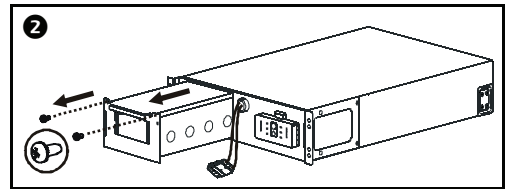
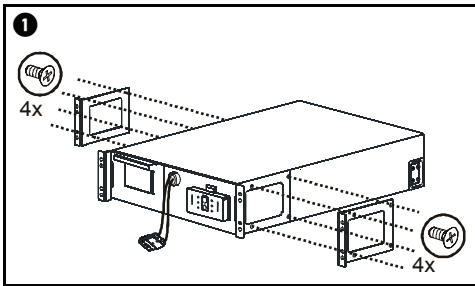
### Install the Rails in the Rack

This UPS is intended for installation in a 19" rack.

For details on rail installation refer to the instructions in the rail kit.

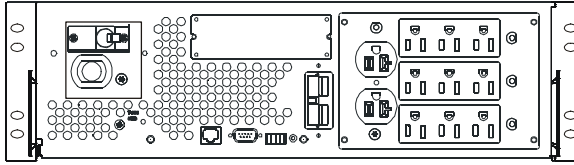
### Install the UPS in the Rack and Connect the Battery Module

Install the UPS at or near the bottom of the rack.

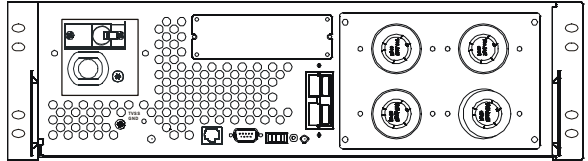


## Rear Panels

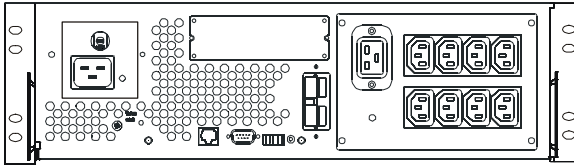
2200/3000 VA 120 Vac  
3000 VA 100 Vac








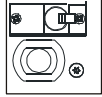


3000 VA 200 Vac



2200/3000 VA 230 Vac



## Rear Panel Features

	<p>The UPS features a TVSS screw located on the rear panel for connecting the ground leads on transient voltage devices.</p>
	<p>The UPS is equipped with an external battery connector located on the rear panel of the unit. Where appropriate use an APC extension battery cable. For ordering details contact your dealer or APC through the Web site <a href="http://www.apc.com">www.apc.com</a>.</p>
	<p><i>120 V models only:</i> The UPS is equipped with a <b>Site Wiring Fault</b> LED located on the rear panel of the unit. The LED will be illuminated if the UPS is plugged into an improperly wired utility power outlet, (see <i>Troubleshooting</i> in this manual).</p>
 <p>USB      Serial</p>	<p>USB and Serial connectors are communication ports. <b>Use only an APC approved cable to connect to the serial port. A standard serial interface cable is incompatible with the UPS.</b> <b>Serial and USB ports cannot be used simultaneously. USB has priority over Serial.</b></p>
	<p>The UPS has a SmartSlot located on the rear panel for adding optional accessories to the unit.</p>
	<p><i>100/120/200 V model</i> circuit breaker and line cord connection.</p>
	<p><i>230 V model</i> circuit breaker and line cord connection.</p>
	<p>The UPS is equipped with an emergency power off feature located on the rear panel of the unit.</p>

## Connect equipment, external battery pack(s), and power to the UPS




**Prior to connecting the grounding cable, ensure that the UPS is NOT connected to utility or battery power.**

1. Connect equipment to the UPS.
2. Optional external battery packs provide extended runtime during power outages. This unit supports up to ten external battery packs. Refer to the APC Web site, [www.apc.com](http://www.apc.com) for information. Refer to the user manual for the external battery pack for installation instructions.
3. Add optional accessories to the SmartSlot located on the rear panel.
4. Plug the UPS into a two-pole, three-wire, grounded receptacle only. **Avoid using extension cords.**
  - *230 V models:* The utility power cord is supplied in the UPS literature kit. Prior to connecting the utility power, connect the ground lead (optional) to the chassis ground connection screw.
5. To use the UPS as a master on/off switch be sure all connected equipment is switched on.

## Start-up and Operation

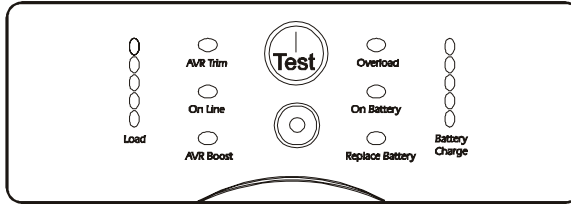
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### Start the UPS

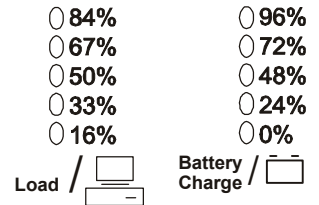
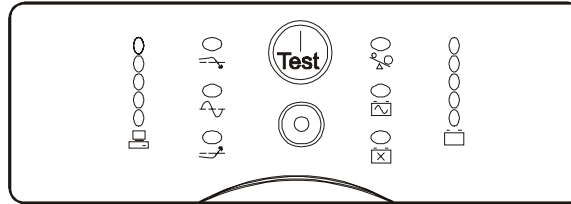
1. Press the  button on the front panel to start the UPS.
  - When the UPS utilizes only an internal battery, the internal battery charges to 90% capacity during the first four hours of normal operation.  
*Do not* expect full battery run capability during this initial charge period.
  - The charge time for internal and external batteries will vary depending on the number of batteries connected to the UPS.  
Refer to the APC Web site, [www.apc.com](http://www.apc.com) for battery runtimes.
2. For optimal computer system security, install PowerChute Smart-UPS monitoring software.

## Display Panels

120 V models






100/200/230 V models






## Display Panel Indicators and Function Buttons

Indicator LED	Indicator Title	Description
	AVR Trim	The UPS is compensating for a high utility voltage. Refer to the APC Web site, <a href="http://www.apc.com">www.apc.com</a> for AVR settings.
	On Line	The UPS is supplying utility power to the connected equipment, (see <i>Troubleshooting</i> in this manual).
	AVR Boost	The UPS is compensating for a low utility voltage. Refer to the APC Web site, <a href="http://www.apc.com">www.apc.com</a> for AVR settings.
	Overload	The connected equipment is drawing more than the UPS power rating allows, (see <i>Troubleshooting</i> in this manual).
	On Battery	The UPS is supplying battery power to the connected equipment.
	Disconnected Battery/ Replace Battery	The battery is disconnected or must be replaced, (see <i>Troubleshooting</i> in this manual).







<p><b>120 V</b>    <b>230 V</b></p> <p>○ 133    ○ 266</p> <p>○ 123    ○ 248</p> <p>○ 115    ○ 229</p> <p>○ 105    ○ 210</p> <p>○ 96     ○ 191</p> <p><b>Battery Charge</b> </p> <p><b>100 V</b>    <b>200 V</b></p> <p>○ 119    ○ 246</p> <p>○ 109    ○ 227</p> <p>○ 100    ○ 209</p> <p>○ 91     ○ 190</p> <p>○ 81     ○ 171</p> <p> </p>	<p>Diagnostic Utility Voltage</p>	<p>The UPS has a diagnostic feature that indicates the utility voltage.</p> <p>The UPS starts a self-test as part of this procedure. The self-test does not affect the voltage display.</p> <p>Press and hold the <b>Test</b> button to view the utility voltage bar graph indicator. As soon as the On Line LED starts flashing indicating a self-test is in progress, the five-LED <b>Battery Charge</b> indicator to the right of the display panel will show the utility input voltage.</p> <p>Refer to the figure on the left for the voltage reading. Values are not listed on the UPS.</p> <p>The indicator on the UPS shows the voltage is between the displayed value on the list and the next higher value, (see <i>Troubleshooting</i> in this manual).</p>
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Feature Button	Feature Title	Function
	Power On	Press this button to turn on the UPS. Continue reading for additional capabilities.
	Power Off	Press this button to turn off the UPS.
	Self-Test	<p><b>Automatic:</b> The UPS performs a self-test automatically when turned on, and every two weeks thereafter (by default). During the self-test, the UPS briefly operates the connected equipment on battery.</p> <p>The self-test is a diagnostic test of the condition of batteries and connected equipment.</p> <p><b>Manual:</b> Press and hold the <b>TEST</b> button for a few seconds to initiate a self-test.</p>
	Cold Start	<p><i>120/230 V models only:</i> When there is no utility power and the UPS is off, the cold start feature will switch the UPS and connected equipment onto battery power, (see <i>Troubleshooting</i> in this manual).</p>

## Configuration

### UPS settings

Settings are adjusted through PowerChute software or optional SmartSlot accessory cards.

Function	Factory Default	User Selectable Choices	Description
Automatic Self-Test	On startup and every 14 days (336 hours) there after	<ul style="list-style-type: none"> <li>• Every 7 days (168 hours)</li> <li>• On startup and every 14 days (336 hours) there after</li> <li>• On startup only</li> <li>• No self-test</li> </ul>	Set the interval at which the UPS will execute a self-test.
UPS ID	UPS_IDEN	Up to eight characters (alphanumeric)	Uniquely identify the UPS, (i.e. server name or location) for network management purposes.
Date of Last Battery Replacement	Manufacture Date	mm/dd/yy	Reset this date when you replace the battery module.
Minimum Capacity Before Return from Shutdown	0 percent	<ul style="list-style-type: none"> <li style="width: 50%;">• 0%</li> <li style="width: 50%;">• 60%</li> <li style="width: 50%;">• 15%</li> <li style="width: 50%;">• 75%</li> <li style="width: 50%;">• 30%</li> <li style="width: 50%;">• 90%</li> <li style="width: 50%;">• 45%</li> </ul>	Specify the percentage to which batteries will be charged following a low battery shutdown before powering connected equipment.
Voltage Sensitivity The UPS detects and reacts to line voltage distortions by transferring to battery operation to protect the connected equipment.	High sensitivity 	<ul style="list-style-type: none"> <li> Brightly illuminated: high sensitivity</li> <li> Dimly illuminated: medium sensitivity</li> <li> No illumination: low sensitivity</li> </ul>	<p>Adjust by pressing the <b>Sensitivity</b> switch located on the rear panel next to the green <b>Sensitivity</b> LED. Use a pointed object, such as a pen to do so.</p> <p>Note: In situations of poor power quality, the UPS may frequently transfer to battery operation. If the connected equipment can operate normally under such conditions, reduce the sensitivity setting to conserve battery capacity and service life.</p> <p>Voltage sensitivity levels can be changed through PowerChute software.</p>
Alarm Delay Control	Enable	<ul style="list-style-type: none"> <li>• Enable</li> <li>• Mute</li> <li>• Disable</li> </ul>	Mute ongoing alarms or disable all alarms permanently.
Shutdown Delay	90 seconds	<ul style="list-style-type: none"> <li style="width: 50%;">• 0 s</li> <li style="width: 50%;">• 360 s</li> <li style="width: 50%;">• 90 s</li> <li style="width: 50%;">• 450 s</li> <li style="width: 50%;">• 180 s</li> <li style="width: 50%;">• 540 s</li> <li style="width: 50%;">• 270 s</li> <li style="width: 50%;">• 630 s</li> </ul>	Set the interval between the time when the UPS receives a shutdown command and actual shutdown.

Function	Factory Default	User Selectable Choices	Description
<p>Low Battery Warning</p> <p>PowerChute software interface provides automatic, unattended shutdown when approximately two minutes of battery operated run time remains.</p>	 2 minutes	<p> <i>Brightly illuminated:</i> low battery warning level of about 2 minutes</p> <p> <i>Dimly illuminated:</i> low battery warning level of about 5 minutes</p> <p> <i>No illumination:</i> low battery warning level is about 8 minutes</p>	<p>The low-battery warning beeps are continuous when two minutes of run time remain.</p> <p>To change the default interval setting, use a pointed object such as a pen to press the <b>Sensitivity</b> switch located on the rear panel next to the green <b>Sensitivity</b> LED, while pressing the <b>Test</b> button located on the front display.</p> <p>Change the low battery warning interval setting to the time that the operating system or system software requires to safely shut down.</p>
Synchronized Turn-on Delay	0 seconds	<ul style="list-style-type: none"> <li>• 0 s</li> <li>• 60 s</li> <li>• 120 s</li> <li>• 180 s</li> <li>• 240 s</li> <li>• 300 s</li> <li>• 360 s</li> <li>• 420 s</li> </ul>	Specify the time the UPS will wait after the return of utility power before start up, to avoid branch circuit overload.
High Transfer Point	<p><i>100 V models:</i> 108 Vac</p> <p><i>120 V models:</i> 127 Vac</p> <p><i>200 V models:</i> 225 Vac</p> <p><i>230 V models:</i> 253 Vac</p>	<ul style="list-style-type: none"> <li>• 108 Vac</li> <li>• 110 Vac</li> <li>• 112 Vac</li> <li>• 114 Vac</li> <li>• 127 Vac</li> <li>• 130 Vac</li> <li>• 133 Vac</li> <li>• 136 Vac</li> <li>• 225 Vac</li> <li>• 229 Vac</li> <li>• 233 Vac</li> <li>• 237 Vac</li> <li>• 253 Vac</li> <li>• 257 Vac</li> <li>• 261 Vac</li> <li>• 265 Vac</li> </ul>	To avoid unnecessary use of the battery where utility voltage is chronically high, set the high transfer point higher if the connected equipment can tolerate this condition.

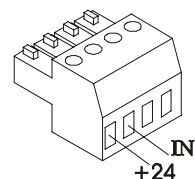
Function	Factory Default	User Selectable Choices	Description
Low Transfer Point	<i>100 V models:</i> 92 Vac	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• 86 Vac</li> <li>• 90 Vac</li> <li style="margin-right: 20px;">• 88 Vac</li> <li>• 92 Vac</li> </ul>	To avoid unnecessary use of the battery where utility voltage is chronically low, set the low transfer point lower if the connected equipment can tolerate this condition.
	<i>120 V models:</i> 106 Vac	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• 97 Vac</li> <li>• 103 Vac</li> <li style="margin-right: 20px;">• 100 Vac</li> <li>• 106 Vac</li> </ul>	
	<i>200 V models:</i> 184 Vac	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• 173 Vac</li> <li>• 180 Vac</li> <li style="margin-right: 20px;">• 176 Vac</li> <li>• 184 Vac</li> </ul>	
	<i>230 V models:</i> 208 Vac	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• 196 Vac</li> <li>• 204 Vac</li> <li style="margin-right: 20px;">• 200 Vac</li> <li>• 208 Vac</li> </ul>	
Output Voltage 230 V models	230 Vac	<ul style="list-style-type: none"> <li style="margin-right: 20px;">• 220 Vac</li> <li>• 240 Vac</li> </ul>	<i>230 V models only:</i> Sets the UPS output voltage.

### Connect the Emergency Power Off option

The Emergency Power Off (EPO) option is a safety feature that will immediately remove power to all connected equipment. When the EPO button is pushed, all connected equipment will immediately turn off and will not switch to battery power.

#### Adhere to all national and local electrical codes when wiring the EPO.

1. Use the EPO terminal block supplied with the UPS.
2. Insert one wire from the EPO cable into the +24 terminal, and one wire into the IN terminal of the EPO terminal block.
3. Secure the connection by tightening the screws on the EPO terminal block.
4. Plug the terminal block into the UPS.



**The EPO interface is a Safety Extra Low Voltage (SELV) circuit. Connect it only to other SELV circuits. The EPO interface monitors circuits that have no determined voltage potential. Such closure circuits may be provided by a switch or relay properly isolated from the utility. To avoid damage to the UPS, do not connect the EPO interface to any circuit other than a closure type circuit.**

Use one of the following cable types to connect the UPS to the EPO switch.

- CL2: Class 2 cable for general use.
- CL2P: Plenum cable for use in ducts, plenums, and other spaces used for environmental air.
- CL2R: Riser cable for use in a vertical run in a floor-to-floor shaft.
- CLEX: Limited use cable for use in dwellings and for use in raceways.
- For installation in Canada: Use only CSA certified, type ELC, (extra-low voltage control cable).
- For installation in other countries: Use standard low-voltage cable in accordance with national and local regulations.

## Configure UPS parameters

**This configuration affects the accuracy of the predicted runtime calculations the UPS performs while running on battery power.**

Smart-UPS XL models must be programmed to recognize the number of external battery packs connected to the UPS.

There are five options available for configuring the UPS to recognize the number of external battery packs

1. PowerChute® *Business Edition*: Refer to the instructions included with the software
2. Network Management Card (NMC) Web interface: Refer to the instructions included with NMC
3. Network Management Card (NMC) terminal mode: Refer to the instructions below
4. UPS terminal mode
5. Download the Smart-UPS Battery pack utility program from the APC Web site, <ftp://ftp.apcc.com/apc/public/hardware/smartups/xbattpack/>

### Configure UPS connection settings using NMC terminal mode

Connect the serial cable to the serial port on the back of the UPS. If using USB communication to the UPS, disconnect the USB cable prior to connecting the serial cable.

1. Open a terminal program, such as HyperTerminal®.  
From the Desktop, go to: **Start, Programs, Accessories, Communication, HyperTerminal**
2. Follow the prompts to choose a name and select an icon. Disregard the message, "...must install a modem," if it is displayed, click **Cancel**.
3. Go to **File, Properties**. Select the COM port that is connected to your UPS. The port settings are:
  - **bits per second - 9600**
  - **data - bits 8**
  - **parity - none**
  - **stop bit - 1**
  - **flow control - none**
4. Click **OK** in each of two windows
5. Press **ENTER** to initiate the connection to the UPS.

### Configure the number of external battery packs using NMC terminal mode

1. Once the blank terminal window is open:
2. Press **ENTER** to initiate terminal mode. Press **ENTER** multiple times, until the prompt User Name: is displayed. Follow the prompts. Type slowly, waiting until each character appears on the screen prior to typing the next character.  
Network Management Card defaults:
  - **User Name: apc**
  - **Password: apc**

## Configuration

3. Press **1** and **ENTER** to select Device Manager.  
Select the model by entering the corresponding number, then press **ENTER**.
4. Press **3** and **ENTER** to select **Configuration**.
5. Press **1** and **ENTER** to select **Battery**.
6. Press **2** and **ENTER** to change **Battery Settings**.
7. Type in the number of external battery packs then press **ENTER**.  
Number of external battery packs:  
1=1 external battery pack; 2=2 external battery packs; 3=3 external battery packs etc.
8. Press **3** and **ENTER** to accept the changes.
9. Press **ESC** multiple times (5) to return to the main menu.
10. Press 4 and **ENTER** to log out.

### Configure UPS connection settings using UPS terminal mode

Connect the serial cable to the serial port on the back of the UPS. If using USB communication to the UPS, disconnect the USB cable prior to connecting the serial cable.

1. Open a terminal program, such as HyperTerminal  
From the Desktop, go to: **Start, Programs, Accessories, Communication, HyperTerminal**
2. Follow the prompts to choose a name and select an icon. Disregard the message, "...must install a modem," if it is displayed. Click **Cancel**
3. Go to **File, Properties**. Select the COM port that is connected to your UPS. The port settings are:
  - **bits per second - 2400**
  - **data - bits 8**
  - **parity - none**
  - **stop bit - 1**
  - **flow control - none**
4. Click **OK** in each of two windows
5. Press **ENTER**

### Configure the number of external battery packs using UPS terminal mode

1. Once the blank terminal window is open, follow these steps to enter the number of external battery packs:

**NOTE:** Letter key commands are case sensitive. Use capital letters when using letter key commands.

2. Press **Y**. The UPS will respond with **SM** in the command box. If the UPS does not respond to the **Y** command, ensure the serial cable is securely connected to the serial port on the UPS. Use only an APC supplied serial cable.
3. When **SM** appears in the command box press the **>** key. The UPS will respond with the number of external battery packs connected to the UPS. If the UPS has not been previously programmed to recognize the number of external battery packs this number will be zero.
4. Use the **+** or **-** keys to change the number of external battery packs. **OK** will appear in the command box.
5. Press **>** key. The number of external battery packs will appear in the command box.  
**NOTE:** The **+** or **-** keys and the **>** key must be used again to change the number of external battery packs from this point in the programming.
6. Press **R**. The UPS will respond with **BYE** in the command box.

## Maintenance, Transport, and Service

### Replacing the Battery Module

This UPS has a replacable, hot-swappable battery module. Replacement is a safe procedure, isolated from electrical hazards. Leave the UPS and connected equipment on during the replacement procedure.



**Once the batteries have been disconnected the connected equipment is not protected from power outages.**

Refer to the appropriate replacement battery user manual for battery module installation instructions. See your dealer or contact APC at [www.apc.com](http://www.apc.com) for information on replacement battery modules.



**Be sure to deliver the spent battery(s) to a recycling facility or ship it to APC in the replacement battery packing material.**

### Service

If the UPS requires service do not return it to the dealer. Follow these steps:

1. Review the problems discussed in *Troubleshooting* in this manual to eliminate common problems.
2. If the problem persists, contact APC Customer Support through the APC Web site, [www.apc.com](http://www.apc.com).
  - Note the model number of the UPS, the serial number located on the back of the unit, and the date purchased. If you call APC Customer Support, a technician will ask you to describe the problem and attempt to solve it over the phone. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).
  - If the UPS is under warranty, repairs are free.
  - Procedures for servicing or returning products may vary internationally. Refer to the APC Web site for country specific instructions.
3. Pack the UPS in its original packaging. If this is not available, refer to [www.apc.com](http://www.apc.com) for information about obtaining a new set.
  - Pack the UPS properly to avoid damage in transit. Never use Styrofoam beads for packaging. Damage sustained in transit is not covered under warranty.
  - **Always DISCONNECT THE UPS BATTERY before shipping in compliance with U.S. Department of Transportation (DOT) and IATA regulations.** The battery may remain in the UPS.
4. Mark the RMA# on the outside of the package.
5. Return the UPS by insured, prepaid carrier to the address given to you by Customer Support.

## Troubleshooting

Use this table to solve minor UPS installation and operation problems. Refer to [www.apc.com](http://www.apc.com) for assistance with complex UPS problems.

Problem and/or Possible Cause	Solution
<b>UPS will not turn on</b>	
The battery is not connected properly.	Check that the battery connector is fully engaged.
<b>Test</b> button not pushed.	Press the <b>Test</b> button once to power-up the UPS and connected equipment.
The UPS is not connected to utility power supply.	Check that the power cable from the UPS to the utility power supply is securely connected at both ends.
Very low or no utility voltage.	Check the utility power supply to the UPS by plugging in a table lamp. If the light is very dim, have the utility voltage checked.
<b>UPS will not turn off</b>	
The UPS is experiencing an internal fault.	Do not attempt to use the UPS. Unplug the UPS and have it serviced immediately.
<b>UPS beeps occasionally</b>	
Normal UPS operation when running on battery.	None: The UPS is protecting the connected equipment. Press the <b>Test</b> button to silence this alarm.
<b>UPS is not providing expected backup time</b>	
The UPS battery(s) are weak due to a recent power outage or battery(s) are near the end of their service life.	Charge the battery(s). Batteries require recharging after extended outages. Batteries can wear faster when put into service often or when operated at elevated temperatures. If the battery(s) are near the end of their service life, consider replacing the battery(s) even if the <b>Replace Battery</b> LED is not yet illuminated.
<b>All LEDs are illuminated and the UPS emits a constant beeping</b>	
The UPS is experiencing an internal fault.	Do not attempt to use the UPS. Unplug the UPS and have it serviced immediately.
<b>Front panel LEDs flash sequentially</b>	
The UPS has been shut down remotely through software or an optional accessory card.	None: The UPS will restart automatically when utility power returns.
<b>All LEDs are off and the UPS is plugged into a wall outlet</b>	
The UPS is shut down or the battery is discharged from an extended outage.	None: The UPS will restart automatically when utility power is restored and the battery has a sufficient charge.



Problem and/or Possible Cause	Solution
<b>The Overload LED is illuminated and the UPS emits a sustained alarm tone</b>	
The UPS is overloaded.	<p>The connected equipment exceeds the specified “maximum load” as defined in <b>Specifications</b> on the APC Web site, <a href="http://www.apc.com">www.apc.com</a>.</p> <p>The alarm remains on until the overload is removed. Disconnect nonessential equipment from the UPS to eliminate the overload condition.</p> <p>The UPS continues to supply power as long as it is online and the circuit breaker does not trip; the UPS will not provide power from batteries in the event of a utility voltage interruption.</p>
<b>The Disconnected Battery/ Replace Battery LED is illuminated</b>	
The <b>Disconnected Battery/Replace Battery</b> LED flashes and a short beep is emitted every two seconds to indicate the battery is disconnected.	Check that the battery connectors are fully engaged.
Weak battery.	Allow the battery to recharge for 24 hours and perform a self-test. If the problem persists after recharging, replace the battery.
Failure of a battery self-test: <b>Disconnected Battery/ Replace Battery</b> LED illuminates and the UPS emits short beeps for one minute. The UPS repeats the alarm every five hours.	<p>Allow the battery to recharge for 24 hours. Perform the self-test procedure to confirm the replace battery condition. The alarm stops and the LED clears if the battery passes the self-test.</p> <p>If the battery fails again, it must be replaced. The connected equipment is unaffected.</p>
<b>The Site Wiring Fault LED on the rear panel is illuminated (120 V models only)</b>	
The UPS is plugged into an improperly wired utility power outlet.	<p>Wiring faults detected include missing ground, hot-neutral polarity reversal, and overloaded neutral circuit.</p> <p>Contact a qualified electrician to correct the building wiring.</p>
<b>The input circuit breaker trips</b>	
The connected equipment exceeds the specified “maximum load” as defined in <b>Specifications</b> on the APC Web site, <a href="http://www.apc.com">www.apc.com</a> .	<p>Unplug all nonessential equipment from the UPS.</p> <p>Reset the circuit breaker.</p>
<b>The AVR Boost or AVR Trim LEDs are illuminated</b>	
The system is experiencing very high or low utility voltage.	Have qualified service personnel check your facility for electrical problems. If the problem persists, contact the utility company for further assistance.

Problem and/or Possible Cause	Solution
<b>There is no utility power</b>	
There is no utility power and the UPS is off.	<p><i>120/230 V models only:</i> Use the cold start feature to supply power to the connected equipment from the UPS battery(s).</p> <p>Press and hold the <b>Test</b> button. There will be a short beep followed by a longer beep. Release the button during the second beep.</p>
<b>UPS operates on battery although line voltage exists</b>	
The UPS input circuit breaker trips.	Unplug all nonessential equipment from the UPS. Reset the circuit breaker.
Your system is experiencing very high, low or distorted line voltage.	Move the UPS to a different outlet on a different circuit: Inexpensive fuel powered generators may distort the voltage. Test the input voltage with the utility voltage display, (see <i>Operation</i> in this manual). If acceptable to the connected equipment, reduce the UPS sensitivity.
<b>Battery Charge and Load LEDs flash simultaneously</b>	
The UPS has shut down. The internal temperature of the UPS has exceeded the allowable threshold for safe operation.	Check that the room temperature is within the specified limits for operation. Check that the UPS is properly installed, allowing for adequate ventilation. Allow the UPS to cool down. Restart the UPS. If the problem persists, contact APC at <a href="http://www.apc.com">www.apc.com</a> .
<b>Diagnostic utility voltage</b>	
All five LEDs are illuminated.	The line voltage is extremely high and should be checked by an electrician.
There is no LED illumination.	The line voltage is extremely low and should be checked by an electrician.
<b>On Line LED</b>	
There is no LED illumination.	The UPS is running on battery, or it must be turned on.
The LED is blinking.	The UPS is running an internal self-test.

## Regulatory and Warranty Information

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### Regulatory Agency Approvals and Radio Frequency Warnings

#### FCC Compliance Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case users will be required to take whatever measures may be necessary to correct the interference at their own expense.

#### 120 V models



#### 100/200 V models



この装置は、情報処理装置等電波障害自主規制協議会 (VCCI)の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

#### 230 V models



## **Two-Year Limited Warranty**

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The limited warranty provided by American Power Conversion (APC®) in this statement of Limited Factory Warranty applies only to products you purchase for your commercial or industrial use in the ordinary course of your business.

### **Terms of warranty**

APC warrants its products to be free from defects in materials and workmanship for a period of two years from the date of purchase. The obligation of APC under this warranty is limited to repairing or replacing, at its sole discretion, any such defective products. This warranty does not apply to equipment that has been damaged by accident, negligence or misapplication or has been altered or modified in any way. Repair or replacement of a defective product or part thereof does not extend the original warranty period. Any parts furnished under this warranty may be new or factory-remanufactured.

### **Non-transferable warranty**

This warranty extends only to the original purchaser who must have properly registered the product. The product may be registered at the APC Web site, [www.apc.com](http://www.apc.com).

### **Exclusions**

APC shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user or any third person misuse, negligence, improper installation or testing. Further, APC shall not be liable under the warranty for unauthorized attempts to repair or modify wrong or inadequate electrical voltage or connection, inappropriate on-site operation conditions, corrosive atmosphere, repair, installation, start-up by non-APC designated personnel, a change in location or operating use, exposure to the elements, Acts of God, fire, theft, or installation contrary to APC recommendations or specifications or in any event if the APC serial number has been altered, defaced, or removed, or any other cause beyond the range of the intended use.

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NO SALESMAN, EMPLOYEE OR AGENT OF APC IS AUTHORIZED TO ADD TO OR VARY THE TERMS OF THIS WARRANTY. WARRANTY TERMS MAY BE MODIFIED, IF AT ALL, ONLY IN WRITING SIGNED BY AN APC OFFICER AND LEGAL DEPARTMENT.

### **Warranty claims**

Customers with warranty claims issues may access the APC customer support network through the Support page of the APC Web site, [www.apc.com/support](http://www.apc.com/support). Select your country from the country selection pull-down menu. Open the Support tab at the top of the Web page to obtain contact information for customer support in your region.

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## EC Declaration of Conformity

# 2008

Date of product declaration

We, the undersigned, declare under our sole responsibility that the equipment specified below conforms to the following standards and directives:

<b>Harmonized Standards:</b>	EN 60950-1; IEC 60950-1; EN 62040-1-1; EN 55022; EN 55024; IEC 61000-3-2, 3-3, 4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11	
<b>Applicable Council Directives:</b>	2006/95/EC	
<b>Type of Equipment:</b>	Uninterruptible Power Supply	
<b>Model Numbers:</b>	SUA3000RMXLI3U; SUA2200RMXLI3U	
<b>Manufacturers:</b>		
American Power Conversion Ballybritt Business Park Galway, Ireland	American Power Conversion 2nd Street PEZA, Cavite Economic Zone Rosario, Cavite Philippines	APC (Suzhou) UPS Co., Ltd 339 Suhong Zhong Lu Suzhou Industrial Park Suzhou Jiangsu 215021 P. R. China
American Power Conversion Breaffy Rd. Castlebar Co Mayo, Ireland	American Power Conversion Lot 10, Block 16, Phase 4 PEZA, Rosario, Cavite Philippines	APC Power Infrastructure Co., Ltd 1678, Ji Xian Road, Tong An Xiamen, P. R. China 361100
American Power Conversion 132 Fairgrounds Rd. West Kingston, RI 02892 USA	American Power Conversion Lot 3, Block 14, Phase 3 PEZA, Rosario, Cavite Philippines	
American Power Conversion 1600 Division Rd. West Warwick, RI 02892 USA	APC Brazil LTDA. Al. Xingu, 850 Barueri Alphaville/Sao Paulo 06455-030 Brazil	
American Power Conversion 40 Catamore Blvd. East Providence, RI 02914 USA		
APC India Pvt. Ltd. 187/3, 188/3, Jigani Industrial Area, Jigani Bangalore, 562106 Karnataka India		
<b>Importer:</b>	American Power Conversion (A. P. C.) b. v. Ballybritt Business Park Galway, Ireland	
<b>Place:</b>	Galway, Ireland	Gerry Daly, Managing Director, Europe

5 Jan 08

## **APC Worldwide Customer Support**

Customer support for this or any other APC product is available at no charge in any of the following ways:

- Refer to the APC Web site to access documents in the APC Knowledge Base and to submit customer support requests.
  - **www.apc.com** (Corporate Headquarters)  
Connect to localized APC Web sites for specific countries, each of which provides customer support information.
  - **www.apc.com/support/**  
Global support searching APC Knowledge Base and using e-support.
- Contact an APC Customer Support center by telephone or e-mail.  
Local, country-specific centers:  
go to **www.apc.com/support/contact** for information.

Contact the APC representative or other distributor from whom you purchased your APC product for information on how to obtain local customer support.