APC™

by Schneider Electric
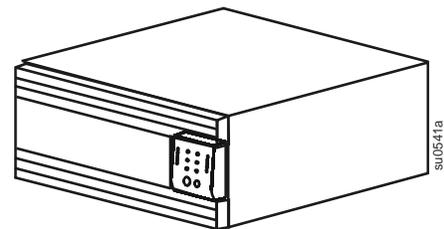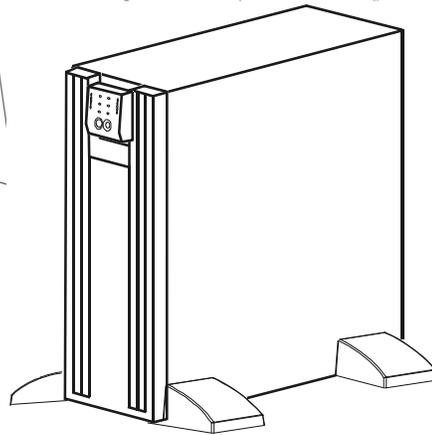
Installation and Operation

Smart-UPS™ SURTA
Uninterruptible Power Supply

1500XL/1500RMXL2U/1500XLJ

2200XL/2200RMXL2U

100/120 Vac
Tower/Rack-Mount 2U

su0541a

Smart-UPS™

SURTA1500XL

SURTA1500RMXL2U

SURTA1500XLJ

SURTA2200XL

SURTA2200RMXL2U

100/120 Vac

Tower/Rack-Mount 2U

English

Product Description

The APC™ by Schneider Electric Smart-UPS™ SURTA1500XL/2200XL is a high performance uninterruptible power supply (UPS). The UPS provides protection for electronic equipment from utility power blackouts, brownouts, sags, surges, small utility power fluctuations and large disturbances. The UPS also provides battery backup power for connected equipment until utility power returns to safe levels or the batteries are fully discharged.

This user manual is available on the enclosed Documentation CD and on the APC by Schneider Electric web site, www.apc.com.

Package Contents

All models

- UPS
- Front bezel
- Serial communication cable
- Literature kit containing:
  –Product documentation
  –Documentation CD
  –Safety Guide
  –Warranty information

120 Vac models

- PowerChute™ utility CD
- USB communication cable

Accessories

Install accessories prior to connecting power to the UPS

Refer to the APC by Schneider Electric web site, www.apc.com for available accessories.

Optional accessories

- External battery pack (XLBP)
- USB communication cables
- Network Management Card (NMC)

Important Safety Messages

Read the instructions carefully to become familiar with the equipment before trying to install, operate, service or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a Danger or Warning product safety label indicates that an electrical hazard exists that will result in death, serious injury and product damage if the instructions are not followed.

The addition of this symbol to a Warning or Caution product safety label indicates that a hazard exists that can result in injury and product damage if the instructions are not followed.

Safety and General Information

**Inspect the package contents upon receipt.
Notify the carrier and dealer if there is any damage.**

Read the instructions carefully to become familiar with the equipment before trying to install, operate, service or maintain it. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

- Adhere to all national and local electrical codes.
- All wiring must be performed by a qualified electrician.
- Changes and modifications to this unit not expressly approved by APC could void the warranty.
- This UPS is intended for indoor use only.
- Do not operate this unit in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- For a UPS with a factory installed power cord, connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- The battery typically lasts for two to five years. Environmental factors impact battery life. Elevated ambient temperatures, poor quality utility power, and frequent short duration discharges will shorten battery life.
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- The batteries are heavy. Remove the batteries before installing the UPS and external battery packs (XLBPs), in a rack.
- Always install XLBPs at the bottom in rack-mount configurations. The UPS must be installed above the XLBPs.
- Always install peripheral equipment above the UPS in rack-mount configurations.

Deenergizing safety

The UPS contains internal batteries and may present a shock hazard even when disconnected from the branch circuit (mains). Before installing or servicing the equipment check that the:

- input circuit breaker is in the **OFF** position.
- internal UPS the batteries are removed.
- XLBP battery modules are disconnected.

Electrical safety

- For models with a hardwired input, the connection to the branch circuit (mains) must be performed by a qualified electrician.
- 230 V models only: In order to maintain compliance with the EMC directive for products sold in Europe, output cords attached to the UPS must not exceed 10 meters in length.
- The protective earth conductor for the UPS carries the leakage current from the load devices (computer equipment). An insulated ground conductor is to be installed as part of the branch circuit that supplies the UPS. The conductor must have the same size and insulation material as the grounded and ungrounded branch circuit supply conductors. The conductor will typically be green and with or without a yellow stripe.
- The UPS input ground conductor must be properly bonded to protective earth at the service panel.
- If the UPS input power is supplied by a separately derived system, the ground conductor must be properly bonded at the supply transformer or motor generator set.

Battery safety

- Before installing or replacing the batteries, remove jewelry such as wristwatches and rings. High short circuit current through conductive materials could cause severe burns.
- Do not dispose of batteries by burning them. The batteries may explode.
- Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes, and may be toxic.

Hardwire safety

- Verify that all branch circuit (mains) and low voltage (control) circuits are deenergized, and locked out before installing cables or making connections, whether in the junction box or to the UPS.
- Wiring by a qualified electrician is required.
- Check national and local codes before wiring.
- Strain relief is required for all hardwiring (not supplied).
- All openings that allow access to UPS hardwire terminals must be covered. Failure to do so may result in personal injury or equipment damage.
- Select wire size and connectors according to national and local codes.
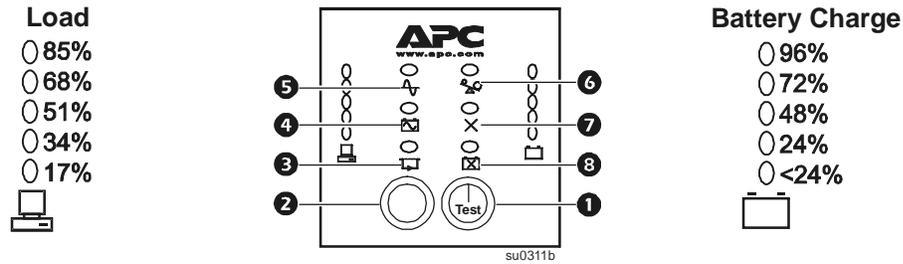
General information

- The UPS will recognize as many as 10 external battery packs connected to the UPS. However there is no limit to the number of XLBPs that can be used with the UPS.
  Note: For each XLBP added, increased recharge time will be required.
- 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.
- Always recycle used batteries.
- Recycle the package materials or save them for reuse.

FCC Statement for Class A products

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 intended 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 and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Product Overview

Front display panel

su0311b

Button or LED		Description

	❶	The **ON** button: has three functions.
		Press this button to turn on the UPS.
		Press this button to initiate a **Cold Start**. Cold Start is not a normal condition. When there is no utility power and UPS is off, press and hold this button to restore power to UPS. UPS will emit two beeps. During second beep, release the button.
		Press this button to initiate a **Self-Test**.
		  Automatic: The UPS performs a self-test automatically when turned on, and every two weeks there after by default. During self-test, UPS briefly operates on battery power.
		  Manual: Press and hold **ON** button for a few seconds to initiate self-test.

	❷	The **Off** button: This button is used to switch UPS off.
	❸	The **Bypass** LED illuminates indicating that the UPS is in bypass mode. Utility power is sent directly to connected equipment during bypass mode operation. Bypass mode operation is the result of an internal UPS fault, an overload condition or a selection made through NMC or PowerChute software. **Battery operation is not available while the UPS is in bypass mode.** Refer to "Troubleshooting" on page 10 in this manual.
	❹	The **On Battery** LED illuminates indicating that the UPS is supplying battery power to connected equipment.
	❺	The **On Line** LED illuminates when the UPS is drawing utility power and performing double conversion to supply power to connected equipment.
	❻	The **Overload** LED illuminates indicating that the UPS is experiencing an overload condition. Refer to "Troubleshooting" on page 10 in this manual.
	❼	The **Fault** LED illuminates indicating that the UPS detects an internal fault. Refer to "Troubleshooting" on page 10 in this manual.
	❽	The **Battery Fault** LED illuminates indicating that one or more batteries are disconnected or must be replaced. Refer to "Troubleshooting" on page 10 in this manual.

| Front Display Panel Feature		Description
100V 〇**118.0** 〇**108.7** 〇**99.3** 〇**90.0** 〇**80.6**	**120V** 〇**138.2** 〇**128.8** 〇**119.5** 〇**110.1** 〇**100.8**	The UPS has a diagnostic feature that indicates utility voltage. The UPS starts a self-test as part of this procedure. The self-test does not affect voltage display. Press and hold the **ON** button to view utility voltage bar graph indicator. As soon as the **On Line** LED starts flashing indicating a self-test is in progress, the five LED **Battery Charge** indicator to the right of the display panel will show utility input voltage. Refer to diagram for voltage reading. Values are not listed on the UPS. Indicators on the UPS show the voltage is between the displayed value on list and the next higher value. Refer to "Troubleshooting" on page 10 in this manual.

Rear panel
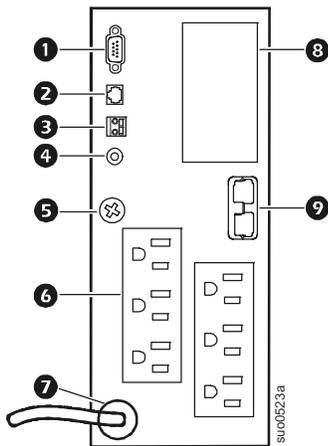
❶	SERIAL COM-serial communication port for: Power management software Interface kits **Use only interface kits supplied or approved by APC. Any other serial interface cable will be incompatible with UPS connector.** Serial and USB communication ports cannot be used simultaneously.
❷	USB COM-USB communication port 120 Vac models: USB communication cable 100 Vac models: USB communication cables and software are available as accessories. Contact APC at **www.apc.com** for purchase information.
❸	Emergency Power Off (EPO) terminal allows the user to connect the UPS to a central EPO system.
❹	SITE WIRING FAULT indicator-the LED illuminates when the UPS detects a building wiring fault.
❺	GND-The UPS features a chassis ground screw located on the UPS rear panel.
❻	Outlets for connecting electronic equipment.
❼	UPS power cable for connecting to utility power.
❽	SmartSlot for optional NMC or PowerChute accessories.
❾	External battery pack connector. The UPS will support up to 10 XLBPs.

Specifications

Temperature	**Operating**	0° to 40° C (32° to 104° F)	This unit is intended for indoor use only. Select a location sturdy enough to handle the weight.
	Storage	-15° to 45° C (5° to 113° F) charge UPS battery every six months	Do not operate UPS where there is excessive dust or temperature or humidity are outside specified limits.
Maximum Elevation	**Operating**	3,000 m (10,000 ft)	
	Storage	15,000 m (50,000 ft)	**This unit has side air vents. Allow adequate space for proper ventilation.**
Humidity		0% to 95% relative humidity, non-condensing	Environmental factors impact battery life. High temperatures, poor utility power, and frequent, short duration discharges will shorten battery life.

Installation

NOTICE
RISK OF EQUIPMENT DAMAGE • Adhere to all national and local electrical codes. • Wiring should be performed by a qualified electrician. • Always connect the UPS to a grounded outlet. • The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment. • Always connect ground wires between the UPS and the external battery packs. • Refer to the XLBP user manual for details. **Failure to follow these instructions can result in equipment damage**

Rack-Mount and Stack Configurations

NOTICE
RISK OF EQUIPMENT DAMAGE • Refer to the installation guide supplied with the rail kit for rack-mount configuration instructions. **Failure to follow these instructions can result in equipment damage**

Tower Configuration

NOTICE
RISK OF EQUIPMENT DAMAGE • The UPS is shipped with stabilizer brackets installed. Do not remove the stabilizer brackets when the UPS is to be operated in tower configuration. **Failure to follow these instructions can result in equipment damage**

External Battery Pack(s)

Refer to the user manual supplied with the external battery pack for installation instructions.
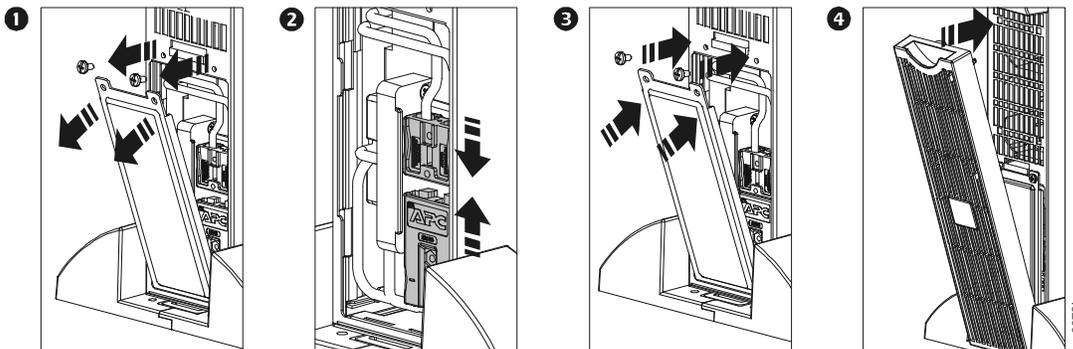
Operation

Connect equipment to the UPS

1. Connect equipment to UPS. **Do not use extension cords, plug equipment directly into the UPS outlets.**

2. If applicable, connect equipment to the serial or USB ports.

3. Add optional accessories to the SmartSlot.

4. For additional system security, install PowerChute software. Refer to the PowerChute Utility CD for instructions.

5. External battery packs provide extended runtime during power outages. Refer to the APC by Schneider Electric web site, www.apc.com for external battery pack purchase information. Refer to the external battery pack user manual for installation instructions.

Connect the Internal Battery and Install the Bezel

The UPS is shipped with the internal battery disconnected.

1. Remove the battery compartment cover. ❶

2. Remove the warning label and protective sticker from the battery connector. Place the sticker on the back of the battery compartment cover for re-use.

3. Snap the battery connectors together. ❷

4. Reinstall the battery cover. ❸

5. Install the front bezel. ❹

Connect Power and Start the UPS

The UPS will charge to 90% capacity in the first four hours of normal operation. **Do not expect full battery run capability during this initial charge period.**

1. Connect the UPS to the building utility power. **Connect the UPS into a two-pole, three-wire, grounded receptacle.**

2. Press the **On** button the front display panel of the UPS to apply power to the unit and all connected equipment.

3. To use UPS as a master on/off switch turn on all the equipment that is connected to the UPS.

4. Configure the Network Management card (NMC), if installed. Refer to NMC documentation for instructions.

Configuration

UPS Settings

Configure the settings using PowerChute software, a network management card or terminal mode.

Function	Factory Default	Options		Description
Automatic Self-Test	On startup and every 14 days (336 hours) there after	• On startup and every 7 days (168 hours) there after • On startup and every 14 days (336 hours) there after • On startup only • No self-test		Set the interval at which the UPS will execute self-tests.
UPS ID	UPS_IDEN	Use a maximum of eight alphanumeric characters to define a name for the UPS.		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 the battery module is replaced.
Minimum Capacity Before Return from Shutdown	0 percent	• 0% • 15% • 30%	• 60% • 75% • 90%	Specify the percentage to which batteries will be charged following a low-battery shutdown, before sending power to connected equipment.
Alarm Delay Control	Enable	• Enable • Mute	• Disable	Specify the delay between an event and the alarm to avoid alarms for insignificant events.
Shutdown Delay	90 seconds	• 0 sec • 90 sec • 180 sec • 270 sec	• 360 sec • 450 sec • 540 sec • 630 sec	Specify the delay between the UPS shutdown command and the actual shutdown.
Duration of Low Battery Warning	2 minutes	• 2 min • 5 min • 8 min • 11 min	• 14 min • 17 min • 20 min • 23 min	Specify the number of minutes before system shutdown, after the low battery warning.
Synchronized Turn-on Delay	0 seconds	• 0 sec • 60 sec • 120 sec • 180 sec	• 240 sec • 300 sec • 360 sec • 420 sec	Specify the delay between the return of utility power and the UPS turns on. Set the interval to avoid a branch circuit overload condition.
High Bypass Points	*100 Vac models* 110 Vac	• 107 Vac • 110 Vac • 113 Vac • 116 Vac	• 119 Vac • 122 Vac • 125 Vac • 128 Vac	Maximum voltage that the UPS will pass to connected equipment during internal bypass operation.
	120 Vac models 133 Vac	• 127 Vac • 130 Vac • 133 Vac • 136 Vac	• 139 Vac • 142 Vac • 145 Vac • 148 Vac	

Function	Factory Default	Options		Description
Low Bypass Points	*100 Vac models* 78 Vac	• 78 Vac • 80 Vac • 82 Vac • 84 Vac	• 86 Vac • 88 Vac • 90 Vac • 92 Vac	Minimum voltage that the UPS will pass to connected equipment during internal bypass operation.
	120 Vac models 86 Vac	• 86 Vac • 88 Vac • 90 Vac • 92 Vac	• 94 Vac • 96 Vac • 98 Vac • 100 Vac	
Output Frequency	Automatic selection between: 50 ± 3 Hz 60 ± 3 Hz	Automatic 50 ± 0.1 Hz 50 ± 3Hz 60 ± 0.1 Hz 60 ± 3 Hz		Specify the UPS output frequency. Whenever possible the output frequency should track the input frequency.
Number of Battery Packs	1	Number of connected battery packs		Defines the number of connected battery packs for proper runtime prediction. 1=internal battery module 2=one external battery pack 3=two external battery packs

Emergency Power Off (EPO)

The Emergency Power Off (EPO) option is a safety feature that will immediately remove power to all connected equipment. When 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. Wiring must be performed by a qualified electrician.

The switch should be connected in a normally open switch contact. External voltage is not required; the switch is driven by 12 V internal supply. In closed condition, 2 mA of current are drawn.

The EPO switch is internally powered by the UPS for use with non-powered switch circuit breakers.

Connect the EPO

The EPO connector is located on the rear panel of the UPS.

1. Strip insulation from one end of each wire to be used for connecting EPO.
2. Insert a screwdriver into the slot above the terminal to be wired. Insert stripped wire into terminal. Remove screwdriver to secure wire in terminal. Repeat for each terminal.

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.

TERMINAL MODE TO CONFIGURE UPS PARAMETERS

Terminal Mode is a menu driven interface that enables configuration of the UPS by users not wishing to use PowerChute software or an optional Network Management Card.

Connect the serial cable to the serial com connector on the back of the UPS.

If PowerChute software is not installed do not perform steps 1, 2, 8 and 9.

1. For Windows users: STOP the PowerChute *Server* using the following steps:

   – From the Desktop, go to **Start => Settings => Control Panel => Administrative Tools => Services**.

   – Select **APC PowerChute Server** - right click the mouse and select **Stop**.

2. For Linux users: STOP the PowerChute *Server* using the following steps:

   – Change directory to /**etc/init.d**.

   – Initiate the command **./PowerChute stop**.

3. Open a terminal program. Example: HyperTerminal

   – From the Desktop, go to **Start => Programs => Accessories => Communication =>HyperTerminal**.

4. Double-click on the **HyperTerminal** icon.

   – Follow the prompts to choose a name and select an icon. Disregard the message, "...must install a modem," if it is displayed. Click OK.

   – 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**

   – Press ENTER

5. Press 1 to modify the UPS parameters.

6. Follow the prompts.

7. Exit the terminal program.

8. For Windows users: START the PowerChute *Server* using the following steps:

   – From the Desktop, go to **Start => Settings => Control Panel => Administrative Tools => Services**.

   – Select **APC PowerChute Server** - right click the mouse and select **Start**.

9. For Linux users: START the PowerChute Server using the following steps:

   – Change directory to /**etc/init.d**.

   – Initiate the command ./**PowerChute start**.

Troubleshooting

Problem and Possible Cause	Solution
The UPS will not turn on or there is no output	
The unit has not been turned on.	Press the **ON** button once to turn on the UPS.
The UPS is not connected to utility power.	Ensure that the power cable is securely connected to the utility power supply.
The input circuit breaker has tripped.	Reduce the load to the UPS, disconnect nonessential equipment and reset the circuit breaker.
The unit shows very low or no input utility voltage.	Check the utility power supply to the UPS by plugging in a table lamp. If the light is very dim, check the utility voltage.
The battery connectors are not securely connected.	Ensure that all battery connections are secure.
The UPS will not turn off	
The unit has not been turned off.	Press the OFF button once to turn off the UPS.
There is an internal UPS fault.	Do not attempt to use the UPS. Disconnect the UPS from utility and battery power. Have the UPS serviced immediately.
UPS beeps occasionally	
The UPS is in normal operation.	None. The UPS is protecting the connected equipment. Press the **ON** button to silence the alarm.
The UPS is operating on battery, while connected to input utility power	
The input circuit breaker has tripped.	Reduce the load to the UPS, disconnect nonessential equipment and reset the circuit breaker.
There is very high, very low, or distorted input line voltage.	Move the UPS to a different outlet on a different circuit. Test the input voltage with the utility voltage display.
A connected generator is an inappropriate size.	*XLJ models do not support the use of a generator.* Check the UPS and generator specifications for compatibility.
UPS does not provide expected backup time	
The UPS battery is weak due to a recent outage or is near the end of its service life.	Charge the battery. Batteries require recharging after extended outages and wear out faster when put into service often or when operated at elevated temperatures. If the battery is near the end of its service life, consider replacing the battery even if the **Replace Battery** LED indicator is not yet illuminated.
A UPS overload condition has occurred.	Check the UPS **Load** indicator. Disconnect nonessential equipment.
Site Wiring Fault indicator is illuminated	
The UPS is connected to an improperly wired utility outlet.	Wiring faults detected include missing ground, hot-neutral polarity reversal and overloaded neutral circuit. Do not attempt to use the UPS. Disconnect the UPS from utility and battery power. Contact a qualified electrician to correct the building wiring.
All indicators are off and the UPS is connected to utility service	
The UPS has been shut down or the batteries are discharged from extended usage.	None. The UPS will restart automatically when utility power returns and configuration criteria have been met.

Problem and Possible Cause	Solution
All indicators flash sequentially	
The UPS has been shut down remotely through software or an optional accessory card.	None. The UPS will restart automatically when utility power returns.
All indicators are illuminated and the UPS emits a constant beeping sound	
The UPS detects an internal fault.	Do not attempt to use the UPS. Disconnect the UPS from utility and battery power. Have the UPS serviced immediately.
Battery Fault indicator is illuminated	
The **Battery Fault** 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 battery to recharge for 24 hours and perform a self-test. If the problem persists after recharging, replace battery.
Failure of a battery self-test: **Battery Fault** LED illuminates and the UPS emits short beeps for one minute. The UPS repeats the alarm every five hours.	Allow 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. If battery fails again, it must be replaced. The connected equipment is unaffected.
Bypass indicator is illuminated	
Bypass mode has been turned on through an accessory.	If bypass mode has been selected, ignore the LED.
Overload indicator is illuminated and the UPS emits a sustained alarm tone	
A UPS overload condition exists.	Disconnect nonessential equipment from UPS to eliminate overload condition.
Bypass and Overload indicators are illuminated and the UPS emits a sustained alarm tone	
A UPS overload condition has occurred.	Connected equipment exceeds specified "maximum load" as defined in *Specifications* on APC by Schneider Electric web site, **www.apc.com.** The alarm remains on until the overload is removed. Disconnect nonessential equipment from UPS to eliminate overload condition. The UPS continues to supply power as long as it is on line and the circuit breaker does not trip. The UPS will not provide power from batteries in the event of a utility voltage interruption.
Fault indicator is illuminated	
An internal UPS fault has occurred.	Do not attempt to use UPS. Turn UPS off and have it serviced immediately. Refer to APC by Schneider Electric web site, **www.apc.com**.
Bypass and Fault indicators are illuminated and the UPS emits a sustained alarm tone	
The UPS has automatically switched to **Bypass** mode. Bypass mode operation is the result of an internal UPS fault or an overload condition while operating on utility power.	In the event an internal UPS fault occurs, **Do Not** attempt to use UPS. Turn UPS off and have it serviced immediately. Refer to APC by Schneider Electric web site, **www.apc.com**.

Problem and Possible Cause	Solution
Fault and Overload indicators are illuminated and the UPS emits a sustained alarm tone	
The UPS is not sending power to connected equipment.	Connected equipment exceeds specified "maximum load" as defined in *Specifications* on APC by Schneider Electric web site, **www.apc.com.**
	The alarm remains on until the overload is removed. Disconnect nonessential equipment from UPS to eliminate overload condition.
	The UPS will not provide power from batteries in the event of a utility voltage interruption.
There is no utility power	
There is no utility power and the UPS is off.	Use the **Cold Start** feature to supply power to connected equipment from UPS battery(s).
	Press and hold the **ON** button. There will be a short beep followed by a longer beep. Release the button during second beep.
Diagnostic utility voltage feature	
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.
On Line indicator	
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.

Maintenance and Transport

Battery replacement

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

Once the battery modules have been disconnected the connected equipment is not protected from power outages.

When the battery modules have been replaced the LED on the display interface will prompt the user to enter a new battery replacement date.

Refer to the appropriate replacement battery user manual for installation instructions. See your dealer or contact APC by Schneider Electric at **www.apc.com** for information on replacement batteries.

Be sure to deliver spent batteries to a recycling facility or ship to APC by Schneider Electric in the replacement battery packing material.

Prepare the UPS for transport

1. Shut down and disconnect all connected equipment.
2. Disconnect the unit from utility power.
3. Disconnect all internal and external batteries (if applicable).
4. Follow the shipping instructions outlined in the *Service* section of this manual.

Service

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

1. Review the *Troubleshooting* section of the manual to eliminate common problems.

2. If the problem persists, contact APC by Schneider Electric Customer Support through the APC by Schneider Electric web site, **www.apc.com**.

    a. Note the model number and serial number and the date of purchase. The model and serial numbers are located on the rear panel of the unit and are available through the LCD display on select models.

    b. Call Customer Support and a technician will attempt to solve the problem over the phone. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).

    c. If the unit is under warranty, the repairs are free.

    d. Service procedures and returns may vary internationally. Refer to the APC by Schneider Electric web site, **www.apc.com** for country specific instructions.

3. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.

    a. **Note: When shipping within the United States, or to the United States always DISCONNECT ONE UPS BATTERY before shipping in compliance with U.S. Department of Transportation (DOT) and IATA regulations.** The internal batteries may remain in the UPS.

    b. Batteries may remain connected in the XBP during shipment. Not all units utilize XLBPs.

4. Write the RMA# provided by Customer Support on the outside of the package.

5. Return the unit by insured, prepaid carrier to the address provided by Customer Support.

Limited Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of two (2) years from the date of purchase. The SEIT obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. Repair or replacement of a defective product or parts thereof does not extend the original warranty period.

This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase. Products may be registered online at warranty.apc.com.

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