

## User Manual Back-UPS™ BC750-RS 230 V

### Important Safety Information

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 either a Danger or Warning safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you of potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

#### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, **will result in death** or serious injury.

#### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **can result in death** or serious injury.

#### **CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in minor or moderate injury**.

#### **NOTICE**

**NOTICE** is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word,

# Safety and General Information



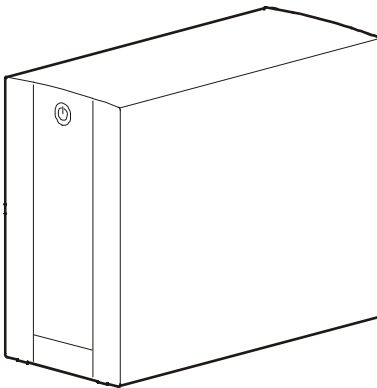
**SAVE THESE INSTRUCTIONS - This section contains important instructions that should be followed during installation and maintenance of the UPS and batteries.**

- This UPS is intended for indoor use only.
- Connect the Back-UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- Servicing of batteries should be performed by Schneider Electric IT (SEIT) Customer Support only.
- When grounding cannot be verified, disconnect the equipment from the utility power outlet before installing or connecting to other equipment. Reconnect the power cord only after all connections are made.

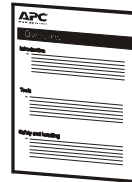
## CAUTION

- Do not dispose of batteries in a fire. The batteries may explode.
- Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.

## Inventory



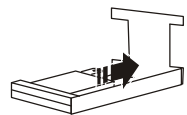
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## Connect the Battery

Connect the battery connector prior to using the UPS. Pull the battery connector handle down. Then push the connector into the UPS.

Do not expect full battery runtime capability during the initial charge period.



There are no serviceable parts in the Back-UPS. Do not attempt to open or repair the Back-UPS as this will void the warranty. The battery in this unit is not replaceable. Contact APC by Schneider Electric to order a new Back-UPS. Refer to the contact information at the end of this manual.

## Turn On the Back-UPS

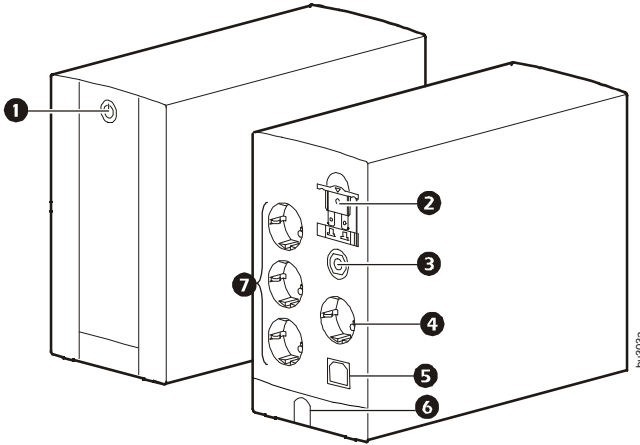
Press the Power ON button located on the front panel of the Back-UPS. The Power On/Replace Battery LED will illuminate and a single short beep will be audible to indicate that the Back-UPS is providing protection for connected equipment.

The Back-UPS battery charges fully during the first 10 hours while connected to utility power. The Back-UPS battery will charge while the Back-UPS is turned on or off and is connected to utility power. Do not expect full battery runtime capability during the initial charge period.

## Specifications

<b>Input</b>	Voltage	220-240 Vac nominal
	Frequency	45 ~ 65 Hz (50/60 HZ auto-sensing)
	Brownout Transfer	180 Vac (typical), 160 Vac (maximum adjustable)
	Over-voltage Transfer	266 Vac (typical), 278 Vac (maximum adjustable)
<b>Output</b>	UPS Capacity (total)	750 VA/415 W
	Voltage On Battery	230 Vac $\pm$ 8% (step-approximated sine wave)
	Frequency - On Battery	50 Hz $\pm$ 1 Hz, 60 Hz $\pm$ 1 Hz
	Transfer Time	6 ms typical, 10 ms maximum
<b>Protection and Filtering</b>	AC Surge Protection	Full time, 273 joules
	AC Input	Resettable circuit breaker
<b>Battery</b>	Type (maintenance-free)	Lead acid, 12V (1 battery), 7.2 Ah
	Average Life	2 - 5 years depending on the number of discharge cycles and environmental temperature
	Typical Recharge Time	8 Hours
<b>Physical</b>	Net Weight	5.8 kg
	Dimensions (H x W x D)	20 cm x 11.5 cm x 25.6 cm
	Operating Temperature	0°C to 40°C (32°F to 104°F)
	Storage Temperature	-15°C ~ 40°C (5°F to 104°F)
	Operating Relative Humidity	0 to 95% non-condensing
	Operating Elevation	0 to 3000 m (0 to 10,000 ft)

# Connect the Equipment



1	ON/OFF button	Use to turn on/off the UPS.
2	Battery connector	Connect the internal battery before use.
3	Circuit breaker	Use to reset the system after an overload condition has occurred causing the circuit breaker to trip.
4	Surge protected outlet (no battery backup)	This outlet protects the connected equipment from damage by surge voltages but does not provide backup power during power interruption. Do not connect equipment that requires power backup during power interruptions to this outlet.
5	USB port	<b>Available only for BC750-RS model.</b> To use PowerChute software, connect a USB cable, to the USB port.
6	AC power cable	Use this cable to connect the Back-UPS to AC power.
7	Battery and surge protected outlets	These outlets provide battery backup power to connected equipment for a limited period of time during power outages and voltage fluctuations. The Battery Backup + Surge Protection outlets provide battery power to connected equipment only when the Back-UPS is turned on. Connect critical equipment such as a computer, computer monitor, modem or other data sensitive devices to these outlets. Do not connect aquarium equipment, laser printers, paper shredders, sump pumps, or fans to these outlets as the modified sine wave output of the Back-UPS may cause these devices to experience a decrease in performance. Do not connect surge protectors or extension cords to these outlets.

# PowerChute™ Personal Edition Software

## Overview

PowerChute Personal Edition Software allows you to use your computer to access additional power protection and management features of the Back-UPS.

Using PowerChute, you can:

- Preserve work in progress during a power outage by putting your computer into Hibernate mode. When the power returns, the computer will appear exactly as it did before the power outage.
- Configure the Back-UPS management features, such as power-saving outlets, shutdown parameters, audible alarms, and more.
- Monitor and view the status of the Back-UPS, including the estimated runtime, power consumption, power event history, and more.

Available features will vary by Back-UPS model and operating system.

If you choose not to install PowerChute, the Back-UPS will still provide backup power and power protection to connected equipment. However, you will only be able to configure a limited number of features using the display interface.

## Compatibility

PowerChute is compatible with Windows operating systems only. For a detailed list of supported operating systems, go to [www.apc.com](http://www.apc.com), select Software & Firmware.

For Mac operating systems, we recommend using the native shutdown application (within System Preferences) which recognizes your battery backup and allows you to configure shutdown of your system during power outages. To access this application, connect a USB cable from the Back-UPS DATA PORT (POWERCHUTE PORT) to a USB port on your computer, and see the documentation provided with your computer.

## Installation

To install PowerChute Personal Edition (PCPE) software, connect a USB cable to the data port on the UPS and the other end to a computer with access to the web.

On the computer, go to [www.apc.com/tools/download](http://www.apc.com/tools/download). Select “**Software Upgrades - PowerChute Personal Edition**” in the “**Filter by Software/Firmware**” drop down menu. Select the appropriate operating system.

Follow directions to download the software.

# Transfer Voltage and Sensitivity Settings

## Voltage regulation

The Back-UPS will switch to battery power if the AC input voltage level becomes too low or too high, or if the AC power is experiencing voltage fluctuations.

## No-load shutdown

The UPS will shut down to conserve energy if while operating on battery power the UPS detects that connected equipment is using less than 15 W of energy for more than 15 minutes.

Disable this feature if low power consuming equipment like ADSL-modem or wi-fi router is connected to the Back-UPS.

No-load shutdown can be enabled or disabled through **Program** mode described below.

## Voltage sensitivity adjustment

If the Back-UPS switches to battery power too frequently or too infrequently, adjust the transfer voltage and sensitivity settings:

1. Verify that the Back-UPS battery is connected. Connect the Back-UPS to a wall outlet. The Back-UPS should be turned off.
2. Press and hold the POWER ON/OFF button until the LED continuously flashes green. Release the button. The Back-UPS is now in **Program** mode.
3. The LED will flash once, twice, or three times per second, and emit audible beeps to indicate the current sensitivity level. The Back-UPS will beep to indicate that No-load Shutdown is enabled. Refer to the table for an explanation of the transfer voltage sensitivity levels.
4. Press the POWER ON/OFF button within two seconds to change the setting. Continue pressing the button until the desired setting is reached. If the button is not pressed within five seconds, the Back-UPS will exit the Program Mode.
5. To select LOW sensitivity, press the POWER ON/OFF button until the LED flashes green once per second.
6. To select MEDIUM sensitivity, press the POWER ON/OFF button until the LED flashes green two times per second.
7. To select HIGH sensitivity, press the POWER ON/OFF button until the LED flashes green three times per second.
8. To exit Program mode wait for five seconds, the LED will extinguish. Program mode is no longer active.

<b>LED Flashes</b>	<b>Audible Indicator</b>	<b>Voltage Sensitivity Setting</b>	<b>Input Voltage Range</b>	<b>No-load Shutdown</b>	<b>Recommended Use</b>
Once per second	None	Low	160-278	Disabled	The Back-UPS will switch to battery power less often. Use this setting for equipment that is not sensitive to low or high level voltage levels or minor voltage waveform distortions.
Twice per second	None	Medium	180-266	Disabled	Use when the input utility power is normal, without any fluctuation in voltage levels.
Three times per second	None	High	196-256	Disabled	The Back-UPS will switch to battery power during any small fluctuation in voltage. Use this setting for equipment that is sensitive to low or high level voltage levels or minor voltage waveform distortions.
Once per second	4 beeps per second	Low	160-278	Enabled	The Back-UPS will switch to battery power less often. Use this setting for equipment that is not sensitive to low or high level voltage levels or minor voltage waveform distortions.
Twice per second	4 beeps per second	Medium (factory default)	180-266	Enabled	Use when the input utility power is normal, without any fluctuation in voltage levels.
Three times per second	4 beeps per second	High	196-256	Enabled	The Back-UPS will switch to battery power during any small fluctuation in voltage. Use this setting for equipment that is sensitive to low or high level voltage levels or minor voltage waveform distortions.

# Status Indicators

LED	Audible Alarm	Condition
<b>Illuminates Green</b>	None	<b>Power On</b> -The Back-UPS is supplying utility power to the connected equipment.
	Constant tone	<b>Overload Alarm</b> - The Back-UPS draws more voltage than the utility voltage rating allows. Disconnect non-essential equipment.
	Constant beeping	<b>Overload Shutdown</b> - While operating on utility power the Back-UPS experiences an overload condition. Disconnect non-essential equipment, one device at a time until the overload condition has been corrected. The Back-UPS will shutdown if the overload condition is not corrected.
<b>Illuminates Green</b> The LED is not illuminated during the beeps.	4 beeps once every 30 seconds	<b>On Battery</b> - The Back-UPS is supplying battery power to the battery backup outlet.
<b>Flashes Green</b>	Rapid beeps once every 1/2 second	<b>Low Battery Indicator</b> - The Back-UPS is supplying battery power to the battery backup outlet and the battery is near a total discharge state. The Back-UPS has 2 minutes of runtime remaining before shutdown.
	Constant tone	<b>Bad Battery Indicator</b> - The battery needs to be charged, or is at the end of its service life. The battery in this unit is not replaceable. Contact Schneider Electric IT (SEIT).
	Chirps once every 2 seconds	<b>Charger Indicator</b> - The Back-UPS has detected an internal error, and continues to provide power to the connected equipment. Contact SEIT Technical Support.
<b>Not Illuminated</b>	Constant tone	<b>On Battery Overload</b> - While operating on battery power the connected equipment draws more voltage than the battery capacity can provide. Disconnect non-essential equipment, one device at a time until the overload condition has been corrected. If the problem persists, contact SEIT Technical Support.
	Constant tone	<b>Internal Charger Error Detected</b> - The Back-UPS detects an internal error and no longer provides power to connected equipment. Contact SEIT Technical Support.
	Constant tone	<b>Temperature Error Detected</b> - The Back-UPS has overheated and has shut down.
	Short beeps every 4 seconds	<b>Low Battery Shutdown</b> - During On Battery operation the battery is at a complete discharge state and the Back-UPS stops providing output power. (Once utility power is restored the Back-UPS will return to normal operation.)



# Troubleshooting

Problem	Possible Cause	Corrective Action
<b>The Back-UPS will not turn on.</b>	The Back-UPS is not connected to AC power.	Be sure that the Back-UPS is securely connected to an AC outlet.
	The circuit breaker has been tripped.	Disconnect nonessential equipment from the Back-UPS. Reset the circuit breaker. Reconnect equipment one item at a time. If the circuit breaker is tripped again, disconnect the device that caused the short circuit.
	The internal battery is not connected.	Connect the battery using back panel battery key. See “Turn On the Back-UPS” section.
<b>The Back-UPS is operating on battery power, while connected to AC power.</b>	<ul style="list-style-type: none"> <li>• The Back-UPS power cable is not securely connected to the wall outlet.</li> <li>• The wall outlet is no longer receiving AC power.</li> <li>• The circuit breaker has been tripped.</li> </ul>	Verify that the power cable plug is securely connected to the wall outlet. Verify that the wall outlet is receiving AC power by checking it with another device.
	The Back-UPS is performing an automatic self test.	No action is necessary.
	<ul style="list-style-type: none"> <li>• The AC input voltage is out of range.</li> <li>• The frequency is out of range.</li> <li>• The waveform is distorted.</li> </ul>	Adjust the transfer voltage and sensitivity range.
<b>The Back-UPS does not provide the expected amount of backup time.</b>	The UPS battery is weak due to a recent power outage or is near the end of its service life.	Charge the battery. Batteries require recharging after an extended outage. Elevated ambient temperatures, poor quality AC power, and frequent short duration discharges will shorten battery life.
<b>Connected equipment loses power.</b>	The Back-UPS has experienced an overload condition.	Disconnect non-essential equipment one device at a time to reduce the overload condition.
	The Back-UPS has exhausted its available battery power.	The Back-UPS can operate on battery power for a limited amount of time. The Back-UPS will shut down when the available battery power has been exhausted. Allow the Back-UPS battery to charge for 10 hours before using the Back-UPS.
	The equipment connected to the Back-UPS does not accept the step approximated sine waveform from the unit.	The output waveform is designed for computers and computer-related equipment. It is not designed for use with motor-type equipment.
	The Back-UPS may require service	Contact SEIT Technical Support for further troubleshooting.

## 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 SEIT Customer Support through the Web site, [www.apc.com](http://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 SEIT 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 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.

**Note: When shipping within the United States, or to the United States always DISCONNECT A UPS BATTERY before shipping in compliance with U.S. Department of Transportation (DOT) and IATA regulations.** The internal batteries may remain in the UPS.
4. Write the RMA# provided by Customer Support on the outside of the package.
5. Return the unit by insured, pre-paid carrier to the address provided by Customer Support.

## Battery Replacement

### CAUTION

#### HAZARD OF EXPLOSION

Do not dispose of the batteries in a fire. The batteries may explode.  
Do not open or mutilate the batteries. Release electrolyte may be toxic and it is harmful to the skin and eyes.

**Failure to follow these instructions can result to injury.**

The battery in the Back-UPS is not user-replaceable. Contact APC by Schneider Electric Sales and SEIT Technical Support for a list of authorized service centers near you.

# Warranty

The standard warranty is two (2) years from the date of purchase. Schneider Electric IT (SEIT) standard procedure is to replace the original unit with a factory reconditioned unit. Customers who must have the original unit back due to the assignment of asset tags and set depreciation schedules must declare such a need at first contact with an SEIT Technical Support representative. SEIT will ship the replacement unit once the defective unit has been received by the repair department, or cross ship upon the receipt of a valid credit card number. The customer pays for shipping the unit to SEIT. SEIT pays ground freight transportation costs to ship the replacement unit to the customer.

## APC by Schneider Electric IT Customer Support Worldwide

For country specific customer support, go to the APC by Schneider Electric Web site, [www.apc.com](http://www.apc.com).

## EAC Requirements

<b>EAC</b>	<b>Product type</b>	UPS
	<b>Models</b>	BC750-RS
	<b>Manufacturer contact information</b>	International Precision Assemblies Inc. Lot 2 Block 17 Phase IV, PEZA Rosario 4106 Cavite, Philippines
<b>Transportation conditions</b>	Battery key should be disconnected prior to transportation.	
<b>Type of atmosphere for operations</b>	Normal	
<b>Type of environment for operations</b>	Normal	
<b>Date of manufacturing</b>	Printed on packaging.	
<b>Made in Philippines</b>		
<b>Company representative in Russia</b>	AO Schneider Electric 127018, Moscow, Dvintsev street 12, Building 1	
<b>Product life time</b>	3 to 5 years	
<b>Warranty</b>	2 years	

Visit our Web site [www.apc.com](http://www.apc.com) for detailed information about regulations and declarations for these products.

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