

Back-UPS ES 500 User's Guide

Inspect/Place

Ensure the following items are inside the box:

- User's Manual
- · USB Cable
- · Safety Guide
- · Warranty Registration Form
- PowerChute[®] Personal Edition Software CD-ROM

Notify the carrier if damage is found. Please fill out the Warranty Registration Form, or fill out an on-line form at www.apc.com, to obtain warranty coverage.

Place the UPS:

- Provide 5 cm clearance at the top and sides for adequate airflow around the UPS.
- · Avoid direct sunlight.
- · Avoid excessive heat.
- · Avoid excessive humidity or liquids.
- Avoid excessive dust.



3 Power On and Install Software

Press the ON/OFF switch to power the unit ON.

A single short beep and the green "Power On" indicator confirms that Back-UPS ES is on and ready to provide protection.

The Back-UPS ES should charge for at least 16 hours to ensure sufficient runtime. The unit is being charged whenever it is connected to utility power, whether the unit is turned ON or OFF.

Install PowerChute® Personal Edition Software

Place the PowerChute Personal Edition Software CD-ROM into your computer and follow the installation instructions on the screen.

Connect Equipment

Plug the Back-UPS ES power cord directly into a wall outlet; not a surge protector or power strip.

Connect Universal Serial Bus (USB) Cable

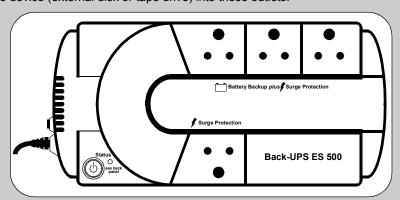
The supplied USB cable and software provide automatic file saving and shutdown of the operating system in the case of a sustained power outage.

Connect the USB cable to the Back-UPS ES Data Port. Connect the other end of the cable to computer's USB port. When installed the software will automatically find the USB Port of your computer.



Battery Back-up plus Surge Protection

These outlets are powered whenever the Back-UPS ES is switched ON. During a power outage or other utility problems (brownouts, over-voltages), these outlets will be powered for a limited time by the Back-UPS ES. Plug your computer, monitor, and one other datasensitive device (external disk or tape drive) into these outlets.



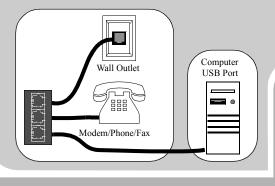
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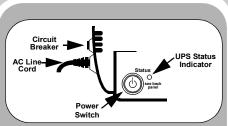
Surge Protection

This outlet provides full-time protection from surges even if the Back-UPS ES is switched OFF. Plug your printer, fax machine, scanner, or other peripheral that does not need battery power into this outlet.

Connect FAX/Modem/Phone

Back-UPS ES protects a single line (2-wire) fax, modem or phone from surges when it is connected through the Back-UPS ES as shown.



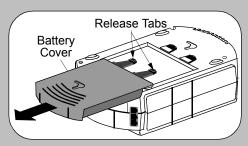


Battery Replacement

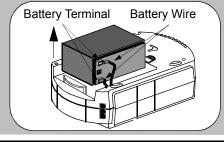
The Back-UPS ES is shipped with battery connected. Typical battery life is 3 to 6 years. Battery replacement is a safe procedure isolated from electrical hazards. Do not replace the battery when the UPS is On Battery (amber indicator is lit).

NOTE: Small sparks may occur during battery connection. This is normal.

Turn the Back-UPS over. Press down on the two release tabs. Slide the battery cover completely off of the unit.



Lift the battery out of the UPS. Note the wire color at each terminal. Disconnect the two wires from the battery terminals.

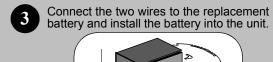


Status Indications

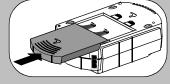
The Back-UPS ES indicates operating status using a combination of visual and audible indicators.

Status LED	Audible Indication	Status	Alarm Terminates When
Green	None	On Line - UPS is supplying conditioned AC power to the connected equipment.	n/a
Amber	4 beeps every 30 seconds	On Battery - UPS is supplying battery power to the equipment connected to the Battery outlets.	The UPS transfers back to On Line operation, or when the UPS is turned off.
Amber	Constant "beepbeepbeep"	Low Battery Warning - UPS is supplying battery power to the equipment connected to the Battery outlets and the battery is near exhaustion.	The UPS transfers back to On Line operation, or when the UPS is turned off.
Amber, flashing		Start-up Self-Test -UPS software is running a diagnostic test.	The UPS is turned off with the power switch or the test completes.
Red	Beeps for 1 minute every 5 hours.	Replace Battery - occurs when the battery fails self-test.	The UPS is turned off with the power switch or the battery is replaced.
Red	Constant "eeeeeee" tone.	Overloaded - Occurs when one or more of the battery powered outlets is overloaded.	The UPS is turned off with the power switch, or the equipment connected to the overloaded outlet(s) is disconnected.
Alternating Amber and Green		Shutdown - Occurs when the UPS is operating On Battery and has shutdown the applications running on the connected computer and has shutdown the computer.	n/a

See the Troubleshooting section for additional assistance.







Troubleshooting

Use the table below to solve minor Back-UPS ES installation or operation problems. Consult APC Online Technical Support or call APC Technical Support for assistance with problems that cannot be resolved using the table below:

Problem	Probable Cause	Solution
Back-UPS ES will not turn on.	Battery is disconnected and utility power is not available at the wall outlet.	Connect the battery (see <i>Battery Replacement</i>) and ensure power is available at the wall outlet.
No power available at the Surge Protection outlet.	Surge Protection outlet has been overloaded.	Move equipment plugged into Surge Protection outlet to Battery Backup <i>plus</i> Surge Protection outet.
	Utility power not available at the wall outlet.	Ensure that the fuse or circuit breaker for the outlet is not tripped, and that the wall switch controlling the outlet (if any) is in the ON position.
Connected equipment loses power.	Equipment is connected to the "Surge Protection" outlet.	Ensure that the equipment you want to stay powered during a power failure is plugged into the "Battery Backup <i>plus</i> Surge Protection" outlets and NOT the "Surge Protection" outlet.
	The Back-UPS ES is overloaded.	Make sure the equipment plugged into the outlets of the unit are not overloading the capacity of the unit. Try disconnecting some of the equipment and see if the problem continues.
	The PowerChute Personal Edition software has performed a shutdown due to a power failure.	The Back-UPS ES is operating normally.
	The Back-UPS ES has exhausted its available battery power.	The Back-UPS ES can only operate on battery power for a limited amount of time. The unit will eventually turn off when the available battery power has been used. Allow the unit to recharge for 5 hours before continuing use of the unit.
	Connected equipment does not accept the step- approximated sine waveform the Back-UPS ES.	The output waveform is designed for computers and computer-related equipment. It is not designed for use with motor-type equipment.
	The Back-UPS ES may require service.	Contact APC Technical Support for further troubleshooting.
The Status indicator is lit (amber) and the Back-UPS ES is beeping four times every 30 seconds.	The Back-UPS ES is using battery.	The Back-UPS ES is operating normally and using battery power. Once On Battery, you should save your current work, power down your equipment, and turn the unit OFF. Once normal power is restored, you may turn the unit back ON and power your equipment.
The Status indicator flashes (amber) once per second and the Back-UPS ES beeps once per second at the same time.	Battery capacity is low (about 2 minutes of use remaining).	The Back-UPS ES is about to shut off due to a low battery charge condition! When the unit beeps once every second, the battery has about 2 minutes of power remaining. Immediately power down your computer and turn the unit OFF. When normal power returns, the unit will recharge the battery.
Inadequate runtime.	The battery is not fully charged.	Allow the unit to charge by leaving it plugged into the wall at least 16 hours.
	Battery is near the end of useful life.	As a battery ages, the amount of runtime available will decrease. You can replace the battery by ordering one at www.apc.com. Batteries also age prematurely if the Back-UPS ES is placed near excessive heat.

Specifications

Model		BE500-IN
Input	Voltage	230 Vrms Nominal
	Frequency	47 - 53 Hz
	Brownout Transfer	140 Vrms, typical
	Over-voltage Transfer	305 Vrms, typical
Output	Battery Backup with Surge Capacity (3 outlets)	500 VA / 300 W
	Surge Only Capacity (1 outlet)	7 Amps (including UPS output)
	Voltage - On Battery	230 Vrms <u>+</u> 8% (step-approximated sine wave)
	Transfer Time	5 ms typical, 8 ms maximum
Protection and Filter	AC Surge Protection	Full time, 320 joules
	Telephone Surge Protection	Single line (2-wire)
	EMI/RFI Filter	Full time
	AC Input	Resettable circuit breaker
Battery	Туре	Sealed, maintenance-free lead acid
	Typical Life	3 - 6 years depending on the number of discharge cycles and environmental temperature
Physical	Net Weight	18.19 lb. (8.25 kg.)
	Size	3.9" (H) x 11" (W) x 7.8" (D) (10 x 28.3 x 19.6 cm)
	Operating Temperature	+32°F to 104°F (0°C to 40°C)
	Storage Temperature	+5°F to 113°F (-15°C to 45°C)
	Operating Relative Humidity	0 to 95% non-condensing
	Operating Elevation	0 to 10,000 ft (0 to 3,000m)

APC Contact Information

 Online Technical Support
 isbtech@apcc.com

 Web Site
 www.apc.com

 Worldwide
 +1.401.789.5735

 APC India:
 +91 80 221 3798 (3847)

 Fax: +91 80 221 3816

Order Replacement Battery

Replace with an APC qualified battery. Replacement batteries can be ordered from www.apc.com (valid credit card required). Have your Back-UPS ES model number available when ordering. Your model number can be found on the bottom of the unit.

Warranty

The standard warranty is 2 years from the date of purchase. APC's standard procedure is to replace the original unit with a factory reconditioned unit. Customers who must have the original unit back due to assigned asset tags and set depreciation schedules must declare such a need at first contact with APC Technical Support. APC will ship the replacement unit once the defective unit is received by the repair department or cross-ship upon the provision of a valid credit card number. The customer pays for shipping to APC, and APC pays ground freight transportation costs back to the customer.

Service

Please DO NOT RETURN Back-UPS ES to the place of purchase under any

- Consult the Troubleshooting section to eliminate common problems.
- 2. Verify the battery is connected (see *Battery Replacement*) and the Circuit Breaker is not tripped (see *Troubleshooting* section).

If you still have problems or questions, please contact APC via the internet or at one of the phone numbers listed below.

- 3. Before contacting APC, please be sure to record the date purchased, UPS model, and serial number (on bottom of unit).
- 4. Be prepared to troubleshoot the problem over the telephone with a Technical Support Representative. If this is not successful, the representative will issue a Return Material Authorization Number (RMA#) and a shipping address.

Pack the unit in its original packaging. If the original packaging is not available, ask APC Technical Support about obtaining a new set. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under the warranty (insuring the package for full value is recommended).

- 5. Write the RMA# on the outside of the package.
- 6. Return the unit by insured carrier to the address given to you by the APC Technical Support representative.