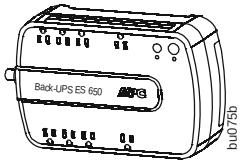
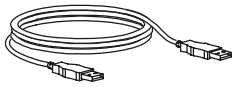
User Manual Back-UPS BE650MC

Inventory



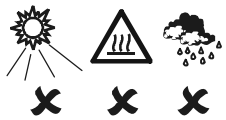


This unit is intended for indoor use only.

Do not operate this unit in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.

Connect the Back-UPS power cord directly into a wall outlet.

Do not use a surge protector or an extension cord.



Specifications

Input	Voltage	120 Vrms nominal
	Frequency	60 Hz ± 3
	Brownout transfer	92 Vrms typical
	Over-voltage transfer	139 Vrms typical
Output	Output Power	650 VA, 390 W
	Total Amperage (8 outlets)	12 A (including UPS output)
	Voltage - On Battery	115 Vrms ± 8% (step-approximated sine wave)
	Frequency - On Battery	60 Hz ± 1 Hz
	Transfer time	6 ms typical, 10 ms maximum
Protection and Filter	Utility power surge protection	Always on, 340 Joules
	Modem/Phone/FAX surge protection	Single line, 2-wire
	EMI/RFI filter	Always on
	Utility input	Resettable circuit breaker
Battery	Type	Sealed, maintenance-free lead-acid
	Average life	3-5 years depending on the number of discharge cycles and environmental temperature
Physical	Net weight	6.0 kg (13.2 lbs)
	Dimensions H x W x D	28 cm x 18 cm x 9 cm (11 in x 7 in x 3 in)
	Operating temperature	0º C to 40º C (32º F to 104º F)
	Storage temperature	–5º C to 45º C (5º F to 113º F)
	Operating relative humidity	0 to 95% non-condensing
	Operating elevation	0 to 3,000 m (0 to 10,000 ft)
EMC compliance	**Notice:** This device complies with part 68 and part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. "Locate the label on the bottom of this device that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this device. If requested, this information must be provided to the telephone company."	

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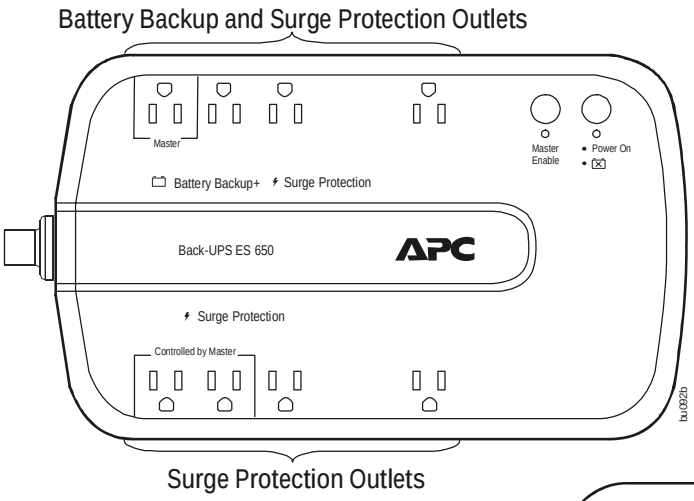
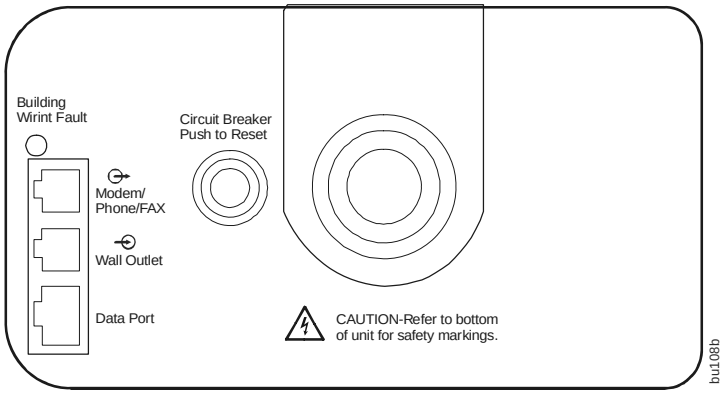
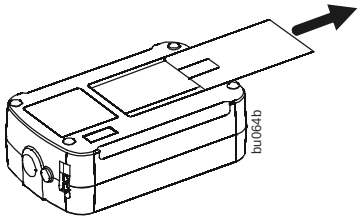
Installation



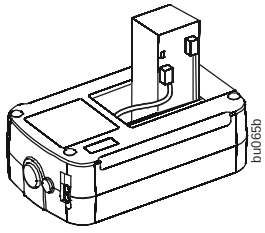


Connect the battery

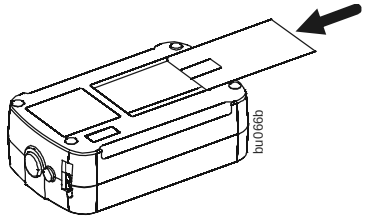
❶ Press the battery compartment cover release tab located on the rear side of the unit. Slide the battery cover off.



❷ Remove the battery from the compartment. Connect the battery cable securely to the battery terminal.



❸ Insert the battery into the compartment. Replace the battery cover. Ensure the release tab locks into place.



Connect equipment to battery backup outlets

Battery backup outlets provide protection to connected equipment when the Back-UPS is turned on and connected to utility power.

Battery backup outlets receive power from the Back-UPS for a limited period of time when a power outage or brownout condition occurs.

Battery backup outlets provide protection from power surges and spikes.

Connect a computer, a monitor, and other peripheral devices to the battery backup outlets.

Install PowerChute® software

Install the PowerChute® software CD in the computer and follow the prompts to install the software.

Connect modem/phone/FAX

Use a standard telephone cable to connect the Back-UPS Wall Outlet port to a telephone wall jack.

Use a standard telephone cable to connect the Back-UPS Modem/Phone/FAX port to a modem or FAX machine.

Connect equipment to surge protection outlets

Surge protection outlets provide protection to connected equipment when the Back-UPS is connected to utility power and is turned on or off.

Surge protection outlets provide protection from power surges and spikes.

Connect a printer, FAX machine, scanner, or other peripheral devices to the surge protection outlets.

Connect equipment to power saving outlets

The **Master** and **Controlled by Master** outlets provide energy conservation capability.

Connect a computer or an A/V receiver to the **Master** outlet.

Connect peripheral devices, such as a printer, speakers, or a scanner to the **Controlled by Master** outlets.

When the device connected to the **Master** outlet goes into Sleep mode, Standby mode or turns off, the devices connected to the **Controlled by Master** outlets will automatically shut down.

Note: The Back-UPS ships with the power saving feature DISABLED. To use this feature, the outlets must be enabled.

Enable the power saving feature

The **Master Enable LED** illuminates green when the power saving feature is enabled.

Press and hold **Master Enable** button for two seconds. The unit will beep to indicate the feature is enabled. The **Master Enable** LED will illuminate green.

Disable the power saving feature

Press and hold **Master Enable** button for two seconds. The unit will beep to indicate the feature is disabled. The **Master Enable** LED not be illuminated.

Setting the threshold

The amount of power used by a device in Sleep or Standby mode varies. It may be necessary to adjust the threshold at which the **Master** outlet signals the **Controlled** outlets to shut down.

1.Ensure a master device is connected to the **Master** outlet. Put that device into Sleep mode, Standby mode, or turn the device off.

Press and hold the **Master Enabled** button for six seconds. After two seconds the unit will beep. Continue holding the button down until the unit beeps three times. Release the **Master Enabled** button. The Back-UPS will now recognize the new threshold level of the master device and save it as the new threshold setting.Connect the battery

The Back-UPS is shipped with one battery cable disconnected. Prior to connecting any equipment to the unit, connect the battery cable to the unused battery terminal.

Operation

Turn On the Back-UPS

Press the **Power On** button located on the top of the Back-UPS. The **Power On** LED will illuminate and a single short beep will be audible, indicating that the Back-UPS is providing protection for connected equipment.

To turn the Back-UPS off, press the **Power On** button.

The Back-UPS battery charges during the first 16 hours while connected to utility power. The Back-UPS battery will charge while the Back-UPS is connected to utility power and is turned on or off.

Status Indicators

Status	LED Indicator	Audible Indicator On	LED or Audible Indicator Off
Power On/Replace Battery- Back-UPS is supplying conditioned utility power to connected equipment.	**Power On/Replace Battery** LED illuminates green.	N/A	N/A
On Battery-Back-UPS is supplying battery power to battery backup outlets.	**Power On/Replace Battery** LED illuminates green. The LED is not illuminated during the beeps.	Back-UPS beeps four times every 30 seconds.	Beeping stops when power transfers back to utility power or the Back-UPS is turned off.
Low Battery Warning- Back-UPS is supplying battery power to the battery backup outlets and the battery is near a total discharge state.	**Power On/Replace Battery** LED flashes green.	Back-UPS emits rapid beeping, (every 1/2 second).	Beeping stops when power transfers back to utility power or the Back-UPS is turned off.
Power On/Replace Battery-			
The battery is disconnected.	**Power On/Replace Battery** LED flashes alternately green and red.	Constant tone	Back-UPS is turned off.
The battery needs to be charged, or replaced.	**Power On/Replace Battery** LED flashes alternately green and red.	Constant tone	Back-UPS is turned off.
Overload Shutdown- While operating on battery power an overload condition has occurred in one or more of the battery backup outlets.	N/A	Constant tone	Back-UPS is turned off.
Sleep Mode- While on battery power the battery is completely discharged. The Back-UPS will begin operation once utility power is restored.	N/A	Back-UPS beeps four times every 30 seconds.	• Utility power is restored • If utility power is not restored within 32 seconds • The Back-UPS is turned off
Building Wiring Fault-LED illuminates when there is no ground circuit, an overloaded neutral, or there is a reversed polarity in the building wiring. Discontinue use and have a qualified electrician check the wiring in the building.	**Building Wiring Fault** LED illuminates red.	N/A	• Back-UPS is turned off. • Building wiring fault is corrected.
Master Enable LED-illuminates when the power saving feature is enabled.	**Master Enable** LED-illuminates green when the power-saving feature is enabled.	N/A	N/A

Voltage Sensitivity Adjustment (optional)

The Back-UPS detects and reacts to line voltage distortions by transferring to battery backup power to protect connected equipment. In situations where either the Back-UPS or the connected equipment is too sensitive for the input voltage level it is necessary to adjust the transfer voltage.

1. Connect the Back-UPS to a wall outlet. The Back-UPS will be in **Standby** mode, no indicators will be illuminated.
2. Press and hold the **Power On** button for 10 seconds. The LED will illuminate alternately green-amber-red, to indicate that the Back-UPS is in **Program** mode.
3. The Back-UPS will indicate the current sensitivity level. Refer to the table below for an explanation of the transfer voltage sensitivity levels.
4. To select LOW sensitivity, press and hold the **Power On** button until the LED flashes green.
5. To select MEDIUM sensitivity, press and hold the **Power On** button until the LED flashes red.
6. To select HIGH sensitivity, press and hold the **Power On** button until the LED flashes amber.
7. To exit **Program** mode wait five seconds and all LED indicators will extinquish. **Program** mode is no longer active.

LED color flashes	Sensitivity Setting	Input Voltage Range	Use Indications
Green	LOW	88 V to 142 V	Input voltage is extremely low or extremely high. Not recommended for computers.
Red	MEDIUM (factory default)	92 V to 139 V	Use when the Back-UPS frequently switches to battery operation.
Amber	HIGH	96 V to 136 V	Use when connected equipment is sensitive to voltage fluctuations.

Troubleshooting

Problem and Possible Cause	Solution
The Back-UPS will not turn on	
The Back-UPS has not been turned on.	Press the **Power On** button.
The Back-UPS is not connected to utility power, there is no utility power available at the wall outlet, or the utility power is experiencing a brownout or over voltage condition.	Ensure the power cord is securely connected to the wall outlet, and that there is utility power available at the wall outlet.Where applicable, check that the wall outlet is switched on.
The Surge Protection outlets have no power	
The surge protection outlets are experiencing an overload condition.	Remove all nonessential equipment connected to the surge protection outlets. Push the Circuit Breaker Reset button located on the side of the unit.
The Back-UPS is not connected to utility power, there is no utility power available at the wall outlet, or the utility power is experiencing a brownout or surge condition.	Ensure the power cord is securely connected to the wall outlet, and that there is utility power available at the wall outlet, (check that any switch for the wall outlet is on).
Connected equipment loses power	
Equipment is connected to the surge protection outlets.	Make sure the equipment that must remain functioning during a power failure, is plugged into the battery backup outlets.
A Back-UPS overload condition has occurred.	Remove all nonessential equipment connected to the outlets. One at a time reconnect equipment to the Back-UPS.
The Back-UPS battery is completely discharged.	Connect the Back-UPS to utility power and allow the battery to recharge for 16 hours.
PowerChute software has performed a shutdown due to a power failure.	The Back-UPS is operating normally.
The Back-UPS may require service.	Contact APC Technical Support for more in depth troubleshooting.
The Back-UPS is on and the Replace Battery LED flashes and the unit emits a constant tone	
The battery is disconnected.	Refer to “Specifications” on page 1.
The Power On LED is illuminated and the Back-UPS beeps four times every 30 seconds	
The Back-UPS is operating on battery power.	The Back-UPS is operating normally on battery power. At this point the user should save all open files, and shutdown the computer. When utility power is restored the battery will recharge.
The Building Wiring Fault LED illuminates	
A building wiring fault exists.	Do not operate the Back-UPS, this will void the warranty. Call a qualified electrician to correct the building wiring fault.
The Back-UPS has an inadequate battery runtime	
The battery is not fully charged.	Leave the Back-UPS connected to utility power for 16 hours while the battery charges to full capacity.
The battery life cycle is near completion.	As the battery ages the runtime capability decreases. To order a replacement battery contact APC at **www.apc.com**.
The Back-UPS is sending no Modem/Phone/FAX signal	
The data line from the ISP or wall outlet is connected to the wrong port on the Back-UPS.	The data ports on the Back-UPS are labelled. Check to be sure they are connected properly.
The connection from the Back-UPS to the internet is lost during a power outage	
The modem has lost power.	Connect the modem cable into one of the surge protection outlets.

Battery replacement

Deliver the used battery to a recycling facility.

Replace the used battery with an APC approved battery. Replacement batteries can be ordered through the APC Web site, **www.apc.com**.

Warranty

The standard warranty is 3 years from the date of purchase. APC 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

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 Customer Support through the APC 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 APC 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 Web site for country specific instructions.
3. Pack the unit in its original packaging. If this is not available, refer to **www.apc.com** to obtain a new set.
   a. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.
   b. **For the UPS, always DISCONNECT THE BATTERY before shipping in compliance with U.S. Department of Transportation (DOT) and IATA regulations.** The battery may remain in the unit.
   c. Internal batteries may remain connected in the XLBP during shipment, (if applicable, not all units have XLBPs).
4. Write the RMA# provided by Customer Support on the outside of the package.
   Return the unit by insured, pre-paid carrier to the address provided by Customer Support.

Contact APC Worldwide Support

APC Web site, www.apc.com

Telephone Support: (888) 272 3858

Customer support and warranty information is available at the APC Web site, **www.apc.com**.