

User Manual of Product 1:

APC UPS 1500VA UPS Battery Backup and Surge Protector,
BX1500M Backup Battery Power Supply, AVR, Dateline
Protection

User Manual of Product 2:

APC UPS Battery Backup and Surge Protector, 850VA Backup
Battery Power Supply, BE850G2 Back-UPS with (2) USB
Charger Ports



by **Schneider** Electric

User Manual Back-UPS™ Pro BX850/1000/1350/1500M/M-LM60

Safety and General Information

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

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

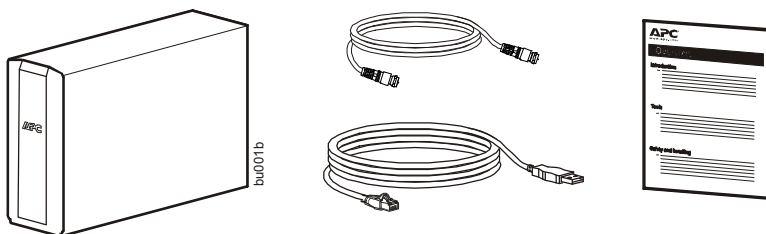
⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- This UPS is intended for indoor use only.
- Do not operate this UPS in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Connect the UPS power cable directly to a wall outlet.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.

Failure to follow these instructions will result in death or serious injury.

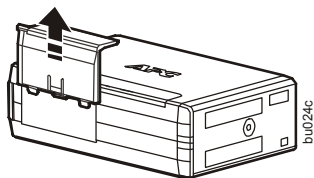
Inventory



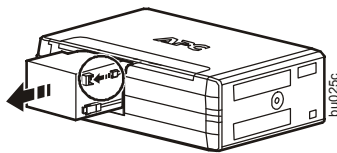
Connect the Battery

The UPS is shipped with the battery disconnected.

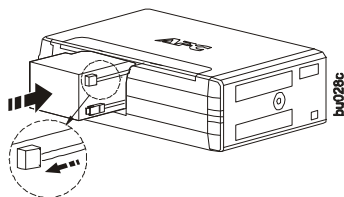
BX850/1000M/M-LM60



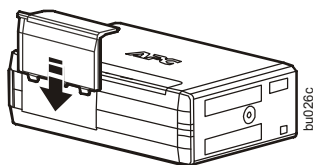
1 Remove the battery door.



2 Remove the battery. Connect the wire.

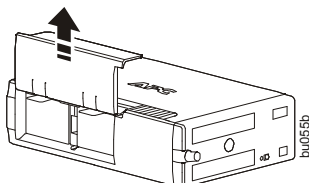


③ Push the battery into the unit.

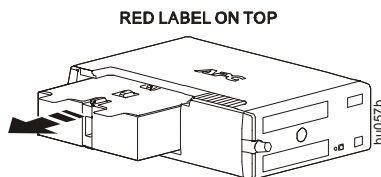


④ Replace the battery door.

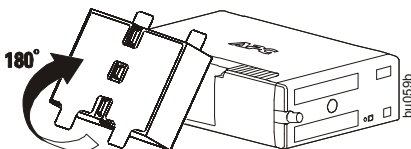
BX1350/1500M/M-LM60



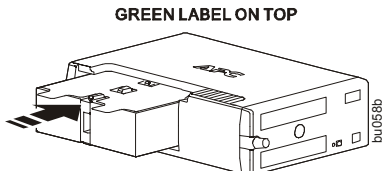
① Remove the battery door.



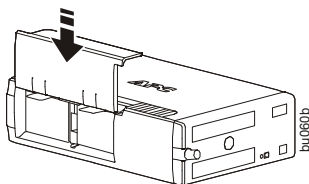
② Remove the battery.



③ Flip or turn the battery 180 degrees upward/downward to let green side of the label face up.



④ Push the battery into the unit.



⑤ Replace the battery door.

Install PowerChute™ Personal Edition Software

Use PowerChute Personal Edition software to configure the UPS settings. During a power outage, PowerChute will save any open files on your computer and shut it down. When power is restored, it will restart the computer.

Note: PowerChute is only compatible with a Windows operating system. If you are using Mac OSX, use the native shutdown feature to protect your system. See the documentation provided with your computer.

Installation

Use the cable supplied with the Back-UPS to connect the data port on the Back-UPS to the USB port on your computer. On the computer, go to www.apc.com Search for “PowerChute Personal Edition” then click on “View Details” to download the latest version of PCPE software. Click the download link and select Software product. Select the appropriate operating system. Follow directions to download the software.

Connect the Equipment

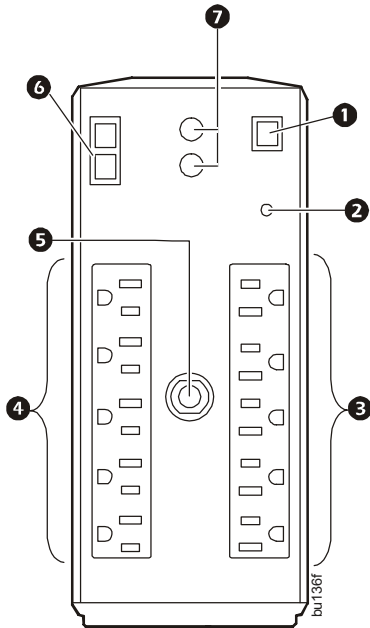
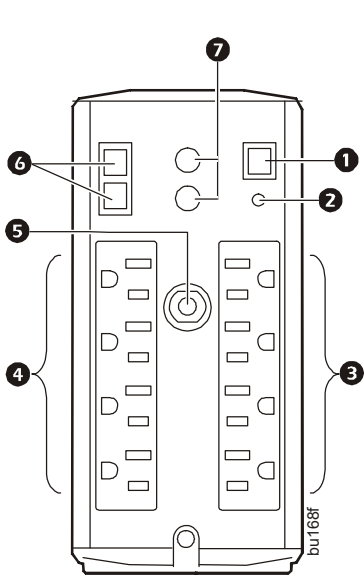
Battery Backup and Surge Protected outlets

When the Back-UPS is receiving input power, the Battery Backup with Surge Protection outlets will supply power to connected equipment. During a power outage or other AC problems, the Battery Backup outlets receive power for a limited time from the Back-UPS.

Connect equipment such as printers, fax machines, scanners, or other peripherals that do not need battery backup power to the Surge Protection Only outlets. These outlets provide full-time protection from surges even if the Back-UPS is switched OFF.

BX850/1000M/M-LM60

BX1350/1500M/M-LM60



- | | |
|---|---|
| 1 USB and Serial Data port | To use PowerChute Personal Edition, connect the supplied USB cable or an optional serial cable (not supplied). |
| 2 Building Wiring Fault indicator | If this indicator is illuminated, there is a problem with the wiring in the building. Contact an electrician immediately and do not use the Back-UPS. |
| 3 Surge Protected outlets | These outlets provide full-time protection from surges, even if the Back-UPS is off. Connect equipment such as printers and scanners that do not require battery backup protection. |
| 4 Battery Backup outlets with Surge Protection | During a power outage or other AC problems, the Battery Backup outlets receive power for a limited time from the Back-UPS. Connect critical equipment such as desktop computer, computer monitor, modem or other data sensitive devices into these outlets. |
| 5 Circuit Breaker | Use to reset the system after an overload condition has occurred causing the circuit breaker to trip. |

- 6 In/Out Ethernet surge-protected ports** Use an Ethernet cable to connect a cable modem to the IN port, and connect a computer to the OUT port.
- 7 Coaxial ports with surge protection** Connect a cable modem or other equipment with coaxial jacks.

Operation

Power Saving Display

The display interface can be configured to be continuously illuminated, or to save energy, it can be configured to darken after a period of inactivity.

1. Full Time Mode: Press and hold DISPLAY for two seconds. The display will illuminate and the Back-UPS will beep to confirm the Full Time mode.
2. Power Saving Mode: Press and hold DISPLAY for two seconds. The display will darken and the Back-UPS will beep to confirm the Power Saving mode. While in Power Saving Mode, the display will illuminate if a button is pressed, it then darkens after 60 seconds of no activity.

Unit sensitivity

Adjust the sensitivity of the Back-UPS to control when it will switch to battery power; the higher the sensitivity, the more often the Back-UPS will switch to battery power.

1. Ensure the Back-UPS is connected to AC power, but is OFF.
2. Press and hold the POWER button for six seconds. The LOAD CAPACITY bar will flash on and off, indicating that the Back-UPS is in programming mode.
3. Press POWER again to rotate through the menu options. Stop at selected sensitivity. The Back-UPS will beep to confirm the selection.

Generator Sensitivity



Low sensitivity

78-142 Vac

Input voltage is extremely low or high. (Not recommended for computer loads.)

Default



Medium sensitivity
(Default)

88-139 Vac

The Back-UPS frequently switches to battery power.

Sensitive Loads



High sensitivity

88-136 Vac

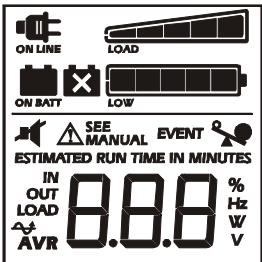
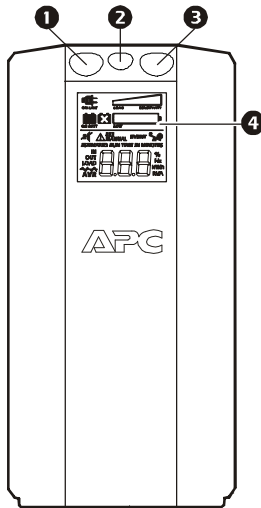
The connected equipment is sensitive to voltage fluctuations.

Front Panel Buttons and Display Interface

Use the three buttons on the front panel of the Back-UPS and the display interface to configure the Back-UPS.

Front panel

- 1 Mute button
- 2 Power On/Off button
- 3 Display button
- 4 Display interface



bu108g



On Line: The Back-UPS is supplying conditioned AC power to connected equipment



Load Capacity: The load is indicated by the number of sections illuminated, one to five. Each bar represents 20% of the load.



Battery Charge: The battery charge level is indicated by the number of sections illuminated. When all five blocks are illuminated, the Back-UPS is at full charge. When one block is filled, the Back-UPS is near the end of its battery capacity, the indicator will flash and the Back-UPS will beep continuously.



Overload: The power demand from the load has exceeded the capacity of the Back-UPS.



Event: The event counter shows the number of events that occurred that caused the Back-UPS to switch to on-battery operation.



Automatic Voltage Regulation: The Back-UPS can compensate for low input voltage.

When illuminated, the Back-UPS is compensating for low input voltage



In: Input voltage.
Out: Output voltage.



System Error Detected: The system has an error. The error number will illuminate on the display interface. See “System Errors” on page 7.



Mute: If the line through the speaker icon is illuminated, the audible alarm has been turned off.



Replace Battery: The battery is nearing the end of its useful life. Replace the battery as early as possible.



On Battery: The Back-UPS is supplying battery backup power to the connected equipment, it will beep four times every 30 seconds.

Alarms and System Errors

Audible Indicators

Four Beeps Every 30 Seconds	Back-UPS is running on battery. You should consider saving any work in progress.
Continuous Beeping	Low battery condition and battery run-time is very low. Promptly save any work in progress, exit all open applications, and shut down the operating system.
Continuous tone	Battery Backup outputs are overloaded.
Chirps every 2 Seconds with the Load Capacity Bar flashing	Battery is disconnected.
Continuous chirping with the Load Capacity Bar and Replace Battery icon alternately flashing	Battery did not pass the automatic diagnostic test and should be replaced as early as possible. Pressing the MUTE button pauses the chirping.

Status Icons

If these icons are illuminated...

This may be the problem.



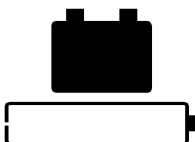
The Back-UPS is operating on AC power, but is overloaded. Disconnect one of the items connected to the Back-UPS. If the Overload icon stops flashing, the Back-UPS is no longer overloaded and will continue to operate normally.



The Back-UPS is operating on battery power, but is overloaded. Disconnect one of the items connected to the Back-UPS. If the Overload icon stops flashing, the Back-UPS is no longer overloaded and will continue to operate normally.



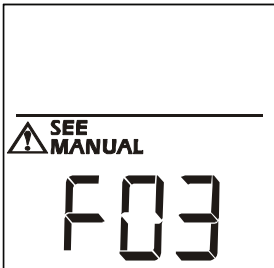
The Back-UPS is operating on AC power, but the battery is not functioning properly. Contact Schneider Electric IT (SEIT) Customer Service to order a replacement battery. See *"Replacement Battery"* on page 9.



The Back-UPS is operating on battery power and the battery power is getting low. Shut down all connected equipment to avoid losing an unsaved data. When possible, connect the Back-UPS to AC power to recharge the battery.

System Errors

The Back-UPS will display these error messages. Except for errors F01 and F02, contact SEIT Technical Support.



b01088a	F01	On-Battery Overload	Turn the Back-UPS off. Disconnect non-essential equipment from the Battery Backup outlets and the turn Back-UPS on.
	F02	On-Battery Output Short	Turn the Back-UPS off. Disconnect all equipment from the Battery Backup outlets and the turn Back-UPS on. Re-connect equipment one item at a time. If the output is tripped again, disconnect the device that caused the error.
	F03	On-Battery Xcap Overload	Errors F03-F09 cannot be corrected by the user, contact SEIT Technical Support for assistance.
	F04	Clamp Short	
	F05	Charge Error	
	F06	Relay Welding	
	F07	Temperature	
	F09	Internal Error	

Function Button Quick Reference

Function	Button	Timing (seconds)	UPS Status	Description
Power				
Power On		0.2	Off	Press POWER to start receiving input AC power. If AC input power is not available, the Back-UPS will run on battery power.
Power Off		2	On	The Back-UPS is not receiving input AC power, but is providing surge protection.
Display				
Status Inquiry		0.2	On	Verify the status or condition of the Back-UPS. The LCD will illuminate for 60 seconds. Press the button the toggle into various information.
Full-Time/Power-Saving mode		2	On	The LCD will illuminate and the Back-UPS will beep to confirm the Full-Time mode. The LCD will darken and the Back-UPS will beep to confirm the Power-Saving mode. While in Power-Saving Mode, the LCD will illuminate if a button is pressed, then darkens after 60 seconds of no activity.
Mute				
General Status Enable/Disable		2	On	Enable or disable the audible alarms. The Mute icon will illuminate and the Back-UPS will beep one time. The Mute function will not activate unless the Back-UPS is operating on battery power.

Function	Button	Timing (seconds)	UPS Status	Description
Sensitivity		6	Off	The Load Capacity icon will blink, indicating that the Back-UPS is in programming mode. Use the POWER button to scroll through Low, Medium, and High, stop at selected sensitivity. The Back-UPS will beep to confirm selection. See "Unit sensitivity" for details.
Self-Test (manual)		6	On	The Back-UPS will perform a test of the internal battery. Note: This will happen automatically when the Back-UPS is turned ON or when the Back-UPS previously detected a bad battery.
Event Reset		0.2	On	When the Event screen is visible, press and hold DISPLAY, then press POWER, to clear the detected error event counter.
Error Reset		2	Error	After an error has been identified, press POWER to remove the visual indication and return to standby status.

Troubleshooting

Problem	Possible Cause	Corrective Action
Back-UPS will not switch on.	The Back-UPS is not connected to AC power.	Ensure that the Back-UPS is securely connected to an AC outlet.
	The circuit breaker has been tripped.	Disconnect non-essential equipment from the Back-UPS. Reset the circuit breaker. Re-connect equipment one item at a time. If the circuit breaker is tripped again, disconnect the device that caused the trip.
	The internal battery is not connected.	Connect the battery.
	The AC input voltage is out of range.	Adjust the transfer voltage and sensitivity range.
	The Back-UPS does not provide power during a AC power outage.	Ensure that essential equipment is not plugged into a SURGE ONLY outlet. Disconnect equipment from the SURGE ONLY outlet and re-connect to a Battery Backup outlet.
The Back-UPS is operating on battery power, while connected to AC power.	The plug has partially pulled out of the wall outlet, the wall outlet is no longer receiving AC power, or the circuit breaker has been tripped.	Ensure that the plug is fully inserted into the wall outlet. Ensure 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.
	The AC input voltage is out of range, the frequency is out of range, or the waveform is distorted.	Adjust the transfer voltage and sensitivity range.
The Back-UPS does not provide the expected amount of backup time.	Battery Backup outlets may be fully or improperly loaded.	Disconnect non-essential equipment from the Battery Backup outlets and connect the equipment to SURGE outlets.
	The battery was recently discharged due to a power outage and has not fully recharged.	Charge the battery cartridge for 16 hours.
	The battery has reached the end of its useful life.	Replace the battery.

Problem	Possible Cause	Corrective Action
The REPLACE BATTERY indicator is illuminated.	The battery has reached the end of its useful life.	Replace the battery as early as possible.
The OVERLOAD indicator is illuminated.	The equipment connected to the Back-UPS is drawing more power than the Back-UPS can provide.	Disconnect non-essential equipment from the Battery Backup outlets and connect the equipment to SURGE outlets.
The SYSTEM ERROR indicator is illuminated, all the front panel indicators are flashing.	There is an internal error.	Determine which internal error message is displayed by matching the number displayed on the LCD with the corresponding Error Message (see "System Errors") and contact SEIT Technical Support.

Specifications

Model	BX850M BX850M-LM60	BX1000M BX1000M-LM60	BX1350M BX1350M-LM60	BX1500M BX1500M-LM60
VA	850 VA	1000 VA	1350 VA	1500 VA
Maximum Load	510 W	600 W	810 W	900 W
Nominal Input Voltage	120 Vac			
Online Input Voltage Range	88 - 139 Vac			
Automatic Voltage Regulation	(88-107) +11.2% (compensate for low input voltage)			
Frequency Range	60 Hz ± 1 Hz			
Battery Type	Lead acid, 12V with 1 battery		Lead acid, 24V with 2 batteries	
On-battery Waveshape	Step-approximated sine-wave			
Typical Recharge Time	12 hours		16 hours	
Transfer Time	8 ms (typical), 10 ms (maximum)			
On Battery Runtime	Go to: www.apc.com			
Interface	USB			
Operating Temperature	0° to 40° C (32° to 104° F)			
Storage Temperature	-5° to 45° C (23° to 113° F)			
Unit Dimensions	19 x 9.1 x 31 cm (7.5 x 3.6 x 12.2 in)		25 x 10 x 38.2 cm (9.8 x 3.9 x 15 in)	
Unit Weight	6.8 kg (15 lbs)	7.2 kg (15.9 lbs)	10.2 kg (22.5 lbs)	11.0 kg (24.3 lbs)

Replacement Battery

The battery typically lasts for 3 to 5 years, a shorter period if subjected to frequent outages or elevated temperatures. Battery replacement parts for Back-UPS BX850M/M-LM60 is **RBC17**, for BX1000M/M-LM60 is **APCRBC158**, for BX1350M/M-LM60 is **APCRBC123**, and for BX1500M/M-LM60 is **APCRBC124**. Delaying the replacement of parts may corrode the batteries in the cartridge. Recycle spent battery cartridges.

Warranty

The standard warranty is three (3) 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.



Select models are ENERGY STAR® qualified.
For more information on your specific model go to www.apc.com.



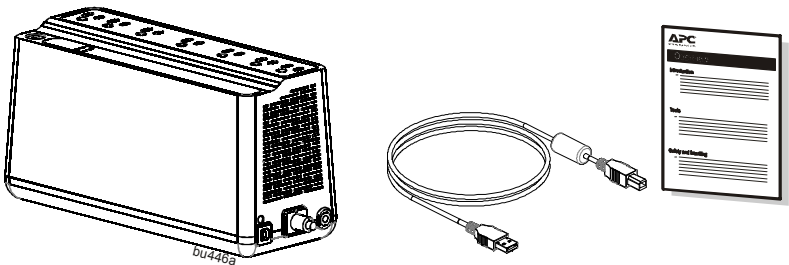
This UPS is certified to comply with California Battery Charger System regulations. For more information go to www.apc.com/company/us/en/sustainability/energy-efficiency/california-battery-charger-regulations/

EMC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Inventory



Safety and General Information

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

SAVE THESE INSTRUCTIONS - This section contains important instructions that should be followed during installation and maintenance of the UPS and batteries. Failure to follow these instructions can result in equipment damage.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Connect the UPS power cable directly to a wall outlet.
- The UPS is intended for indoor use only.
- Do not operate the UPS in direct sunlight, in contact with fluids, or where there is excessive dust and humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.

Failure to follow these instructions will result in death or serious injury.

CAUTION

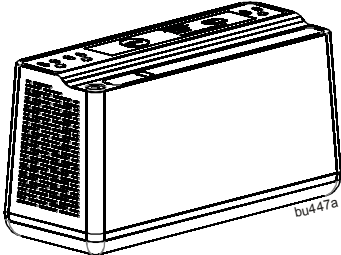
RISK OF HYDROGEN SULPHIDE GAS AND EXCESSIVE SMOKE

- Battery must be replaced when they reach end of service life.
- Batteries must be replaced when the unit indicates battery replacement is necessary.
- When replacing batteries, replace with the same number and type of batteries originally installed in the unit.

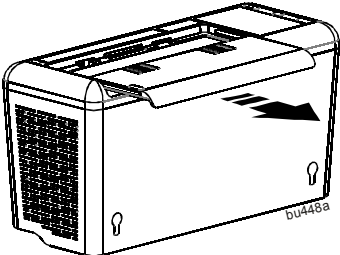
Failure to follow these instructions could result in minor or moderate injury and equipment damage.

Connect the Battery

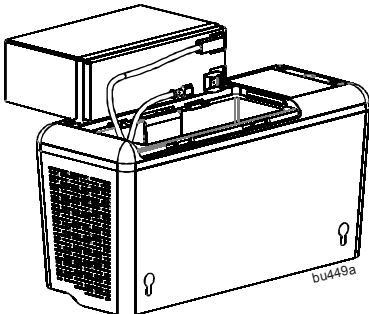
The Back-UPS is shipped with one battery cable disconnected.



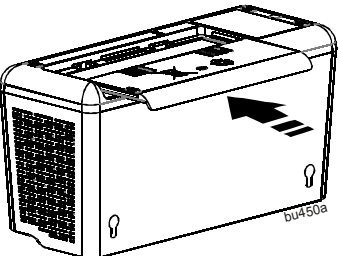
1 Remove the “Stop! Connect the Battery” label that covers the outlets.



2 Press the battery compartment cover release tabs located on the underside of the unit. Slide the battery cover off.

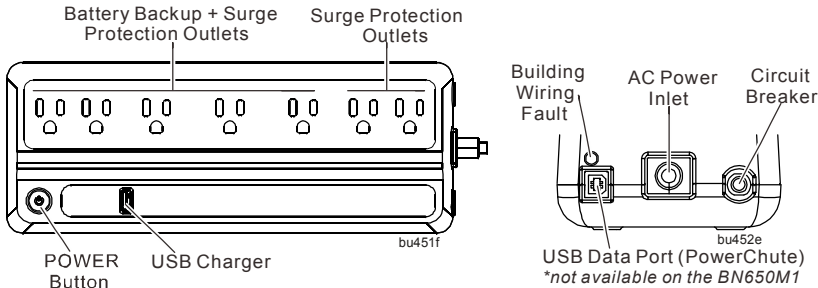


3 Connect the battery cable securely to the battery terminal. It is normal for small sparks to be seen when the battery cable is connected to the battery terminal.



4 Reinstall the battery compartment cover. Be sure that the release tabs lock into place.

Connect Equipment



Note: USB Data port (PowerChute) are only available on the BE600M1, BE600M1-LM, BN650M1-CA, BE670M1, BN675M1

Battery Backup + Surge Protection Outlets

Battery backup outlets provide protection to connected equipment when the Back-UPS is turned on and connected to AC power. Battery backup outlets receive power from the battery for a limited period of time when a power outage, or brownout condition occurs. Battery backup outlets provide protection from power surges or spikes. Connect a computer, monitor and other peripheral devices to these outlets.

Surge Protection Outlets

Surge protection outlets provide protection to connected equipment when the Back-UPS is connected to AC power, and is switched on or off. Surge protection outlets provide protection from power surges or spikes. Connect peripheral devices (such as printer, scanner, etc.) that do not need to remain on during power outages or AC problems to the surge protection outlets.

USB charging port

The USB port provides a maximum of 1.5A DC power. The USB port will provide power when the unit is on AC and on battery.

Turn On the Back-UPS

Press the POWER button located on the top of the Back-UPS. The POWER button will illuminate green and a single short beep will indicate that the Back-UPS is on and providing protection for connected equipment.

The Back-UPS battery charges fully during the first 24 hours while connected to AC power. The Back-UPS battery will charge regardless of whether the Back-UPS is switched on or off as long as it is connected to AC power. The UPS will have full runtime capability after the initial 24 hour charging period.

If the red Building Wiring Fault indicator (located on the end near the power cord) is lit, your building wiring may present a shock hazard that should be corrected by a qualified electrician.

Turn Off the Back-UPS

To turn off the Back-UPS, press the POWER button for at least 2 seconds. At the first beep, release the button and the UPS will turn off. A 2 second delay has been added to mitigate unintentional contact with the POWER button.

Quick Mute

The Back-UPS is able to temporarily mute user correctable alarms such as: On Battery, Battery disconnected and Overload.

During such alarms, a short press (less than 2 seconds) of the POWER button will temporarily mute the alarm until the condition has been reset. A short double beep will confirm that Quick Mute has been activated. Pressing the POWER button for more than 2 seconds will turn off the UPS.

Other critical events such as Battery replacement and Charger notification can not be temporarily muted. The unit in these cases must be turned off.

On Battery Indicator Modes

This Back-UPS has 3 On Battery Indicator modes provided that the UPS is turned on. To configure an On Battery Indicator mode, hold down the POWER button and wait for the third beep. At the third beep the POWER button will cycle red / green. Release the POWER button and its color will indicate the mode the UPS is in. Press the POWER button to cycle through each mode. See the table below for the mode selection colors. Once the mode has been selected, wait 5 seconds and the setting will be committed to the UPS.

Mode	Visual Indicator	Audible Indicator	Mode Selection Color
Quiet Alarm (default)	The POWER button is solid green and flashes twice every 2 seconds until Low Battery notification where it will flash green in rapid succession.	No alarm until Low Battery notification where the alarm beeps twice every 30 seconds	Flashing green
No Alarm		No alarm while the UPS is On Battery	Flashing red
Full Alarm		Alarm sounds 4 beeps every 30 seconds until Low Battery notification where the alarm beeps every half second. As the UPS shuts down it sounds one beep every 4 seconds	Flashing amber

PowerChute[™] Personal Edition Software

Overview

Use PowerChute Personal Edition software to configure the UPS settings, protect your computer and other equipment during a utility power outage. During a power outage, PowerChute will save any open files on your computer and shut it down. When utility power is restored, it will restart the computer.

Note: PowerChute is only compatible with a Windows operating system. If you are using Mac OSX, use the native shutdown feature to protect your system. See the documentation provided with your computer.

Installation

Use the USB cable to connect the Data port on the UPS to the USB port on your computer. Download PowerChute[™] Personal Edition Software from www.apc.com/pcpe. Select the appropriate operating system and follow directions to download the software.

*not applicable to BN650M1

Status Indicators

Status	Power Button illumination	Audible Indicator On	Audible Indicator Terminates
Power On The Back-UPS is supplying AC power to connected equipment.	Solid green	None	N/A
On Battery Back-UPS supplying battery power to battery backup outlets.	Solid green and flashes twice every 2 seconds.	The audible alarm depends on the On Battery Indicator mode setting. See the <i>On Battery Indicator Modes</i> section for full details.	Beeping stops when AC power is restored or the Back-UPS is turned off. Applies only to modes where the on battery alarm is audible.
Low Battery notification The Back-UPS is supplying battery power to the battery backup outlets and the battery is near a total discharge state.	Flashes green in rapid succession.		
Low Battery shutdown The battery has been completely discharged while the Back-UPS is on battery, the UPS will shut down.	None		- AC power is restored - AC is not restored within 32 seconds - The Back-UPS is turned off.
Sleep Mode The UPS has shut down and will “awaken” once AC power is restored	None	None	N/A
Replace Battery - The battery is disconnected. - The battery needs to be charged, or replaced.	- Flashes red only. - Alternates green-red	- Constant tone - Constant tone	Back-UPS is turned off
Overload Shutdown An overload condition has occurred in one or more of the battery backup outlets while the Back-UPS is operating on battery power.	None	Constant tone	Back-UPS is turned off
USB Detected Fault A short circuit has been detected or an error has occurred.	Alternates green-amber	None	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. Turn off the UPS while connected to a wall outlet.
2. Press and hold the **ON/OFF** button for 10 seconds. The POWER button will alternate green-red to indicate that the Back-UPS is in **Program** mode.
3. The POWER button will flash either green, amber, or red to indicate the current sensitivity level. Refer to the table for an explanation of the transfer voltage sensitivity levels.
4. To exit **Program** mode wait five seconds and all LED indicators will extinguish. **Program** mode is no longer active.

LED Flashes	Sensitivity Setting	Input Voltage Range (AC Operation)	Recommended Use
Green	LOW	88 Vac to 142 Vac	Use this setting with equipment that is less sensitive to fluctuations in voltage or waveform distortions.
Red	MEDIUM	92 Vac to 139 Vac	Factory default setting. Use this setting under normal conditions.
Amber	HIGH	96 Vac to 136 Vac	Use this setting when connected equipment is sensitive to voltage and waveform fluctuations.

Specifications

Model		BE600M1/ BE600M1-LM	BN650M1/ BN650M1-CA	BE670M1/ BN675M1
Input	Voltage	120 Vac Nominal		
	Frequency	50/60 Hz ± 3Hz auto-sensing		
	Brownout Transfers	92 Vac Typical		
	Over-voltage Transfer	139 Vac Typical		
Output	UPS Capacity	600 VA, 330 W	650 VA, 360 W	675 VA, 360 W
	Total Amperage (AC outlets)	5.0A	5.42A	5.63A
	Voltage - On Battery	115 Vac ± 8%		
	Frequency - On Battery	50/60 Hz ± 1		
	Transfer Time	6 ms Typical, 10 ms maximum		
USB Port	* Charging Current	1.5A		
	Charger compatibility	USB Battery Charging Specification 1.2		
	* Power output is dependent power drawn by the connected device. Check your device manufacturer to understand the maximum charging current for a given USB spec.			
Protection and Filtering	AC Surge Protection	Full time, 490 Joules		
	EMI/RFI Filter	Full time		
	AC Input	Resettable circuit breaker		
Battery	Type	Sealed, maintenance-free, lead acid 12V		
	Average Life	3 - 5 years, the number of discharge cycles and environmental temperature		
	Charging Time	10 hours. Using the USB port while charging the battery will increase the amount of time required.		
Physical	Net Weight	7.7 lb (3.5 kg)		
	Dimensions LxWxH	10.8 in x 4.1 in x 5.5 in 27.4 cm x 10.5 cm x 13.9 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 humidity		
	Operating Elevation	0 to 10,000 ft (0 to 3000 m)		

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 Schneider Electric IT (SEIT) 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 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 in the original packaging whenever possible to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.
 4. **Always DISCONNECT THE UPS BATTERIES before shipping. The United States Department of Transportation (DOT), and the International Air Transport Association (IATA) regulations require that UPS batteries be disconnected before shipping.** The internal batteries may remain in the UPS.
 5. Write the RMA# provided by Customer Support on the outside of the package.
 6. Return the unit by insured, pre-paid carrier to the address provided by Customer Support

Replace Battery

Deliver the used battery to a recycling facility.



Replace the used battery with an APC by Schneider Electric approved battery. Replacement batteries can be ordered through the APC by Schneider Electric Web site, **www.apc.com**. Battery replacement part for Back-UPS BE600M1 / BE600M1-LM / BE670M1 / BN650M1 / BN650M1-CA / BN675M1 is **APCRBC154**.

APC by Schneider Electric IT Customer Support Worldwide

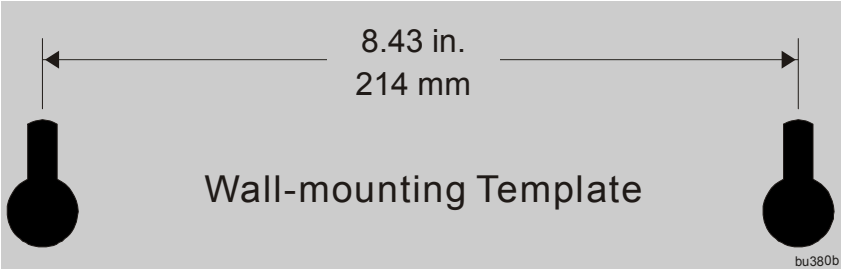
For country specific customer support, go to the APC by Schneider Electric Web site, www.apc.com.

Troubleshooting

Problem and Possible Cause	Solution
The Back-UPS will not turn on	
The Back-UPS has not been turned on.	Press the POWER button.
The Back-UPS is not connected to AC power, there is no AC power available at the wall outlet, or the AC power is experiencing a brownout or over voltage condition.	Make sure the power cord is securely connected to the wall outlet, and that there is AC power available at the wall outlet. Where applicable, check that the wall outlet is switched on.
The Back-UPS is on, the POWER button flashes red and the unit emits a constant tone	
The battery is disconnected.	Refer to the <i>Connect Equipment on page 1</i> .
Connected equipment loses power	
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. Charge the battery for 24 hours to make sure it is fully charged. If the overload condition still occurs, replace the battery.
The Back-UPS battery is completely discharged.	Connect the Back-UPS to AC power and allow the battery to recharge for ten hours.
PowerChute software has performed a shutdown due to a power outage.	This is normal Back-UPS operation.
Connected equipment does not accept the step-approximated sine waveform from the Back-UPS.	The output waveform is intended for computers and peripheral devices. It is not intended for use with motor driven equipment.
The Back-UPS may require service.	Contact Schneider Electric Technical Support for more in depth troubleshooting.
The POWER button is green and flashes twice every 2 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 AC power is restored the battery will recharge.
The POWER button flashes green in rapid succession.	
The Back-UPS battery has approximately two minutes of remaining runtime.	The Back-UPS battery is near a total discharge state. At this point the user should save all open files, and shutdown the computer. When AC power is restored the battery will recharge.
The Building Wiring Fault LED is red	
The building wiring presents a shock hazard that must be corrected by a qualified electrical.	Do not operate the Back-UPS. Call a qualified electrician to correct the building wiring fault.
The Back-UPS has an inadequate battery runtime	
The battery is not fully charged. The battery is near the end of useful life and should be replaced.	Leave the Back-UPS connected to AC power for ten hours while the battery charges to full capacity. As a battery ages, the runtime capability decreases. Contact APC by Schneider Electric at the Web site www.apc.com , to order replacement batteries.
USB charging is slow	
Charging a device using the UPS's USB charger is slower than the device's original USB charger	The amount of power a device draws depends on its compatibility with the USB Battery Charging Specification 1.2. Compatible devices can draw more power than devices that are less compatible.
USB charging stops and the Power On LED alternately illuminates green-amber	
The USB port has detected a short circuit or has detected a fault.	Disconnect cable and device from the USB port. USB charging will resume when the POWER button turns green. Contact SEIT Technical Support if the POWER button remains green-amber.
The UPS and outlets are off but the UPS keeps beeping twice every 30 seconds (Quiet Alarm mode) or keeps beeping once every 4 seconds (Full Alarm mode)	
In this situation the voltage is not low enough to shutdown the UPS but not high enough to start the UPS and power the outlets. There is however enough voltage to charge the UPS.	Use Quick Mute to mute the alarm. The UPS will return to normal operation once the AC input voltage has returned to a normal range

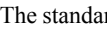
Wall Mount Installation

- Horizontal installation, use 2 screws 8.43” (214 mm) apart.
- Allow 5/16” (8 mm), of the screw to protrude from the wall.



Warranty

Register your product on-line. <http://warranty.apc.com>



The standard warranty is three (3) 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.

EMC Compliance

This device complies with 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.



Some models are compliant with California (CEC) Battery Charger regulations. For more information, search for your model number on www.apc.com and review the Conformance Approvals section of the Technical Specifications.