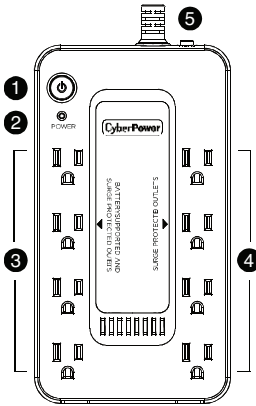
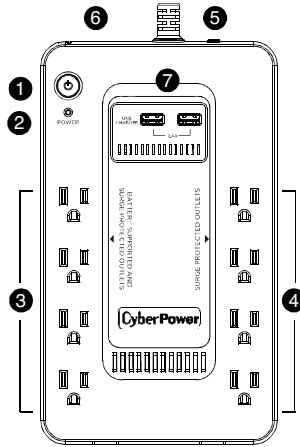


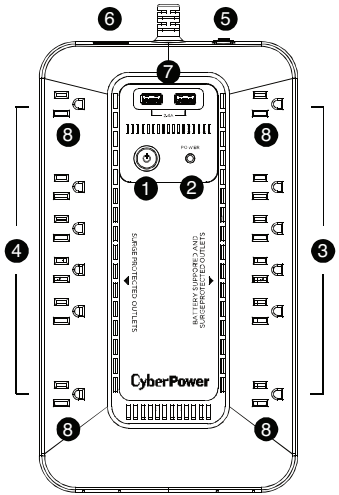
## STANDBY UPS SERIES SE450G1 / SX650U / SX950U USER MANUAL



SE450G1



SX650U



SX950U

### FEATURES

1. Power On Switch
2. Power On Indicator (green)
3. Battery and Surge Protected Outlets
4. Full-Time Surge Protection Outlets
5. Circuit Breaker
6. USB Port to PC (except for SE450G1)
7. USB Charging ports (except for SE450G1)
8. Widely-Spaced Outlets

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## PRODUCT REGISTRATION

Thank you for purchasing a CyberPower product. This UPS is designed to provide unsurpassed power protection, operation, and performance during the lifetime of the product. Please take a few minutes to register your product at: [www.CyberPowerSystems.com/registration](http://www.CyberPowerSystems.com/registration). Registration certifies your product's warranty, confirms your ownership in the event of a product loss or theft, and entitles you to free technical support. Register your product now to receive the benefits of CyberPower ownership.

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## IMPORTANT SAFETY WARNINGS (SAVE THESE INSTRUCTIONS)

This manual contains important safety instructions. Please read and follow all instructions carefully during installation and operation of the unit. Read this manual thoroughly before attempting to unpack, install, or operate your UPS.

**CAUTION!** To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (Please see specifications for acceptable temperature and humidity range).

**CAUTION!** To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable parts inside.

**CAUTION!** Hazardous live parts inside can be energized by the battery even when the AC input power is disconnected.

**CAUTION!** The UPS must be connected to an AC power outlet with fuse or circuit breaker protection. Do not plug into an outlet that is not grounded. If you need to de-energize this equipment, turn off and unplug the unit.

**CAUTION!** To avoid electric shock, turn off the unit and unplug it from the AC power source before installing a computer component.

**CAUTION!** To reduce the risk of fire, connect only to a circuit provided with 20 amperes maximum branch circuit over current protection in accordance with the National Electric Code, ANSI/NFPA 70.

**CAUTION!** Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer / Data Processing Equipment, ANSI/NFPA 75.

**CAUTION!** Do not dispose of batteries in a fire. The batteries may explode.

**CAUTION!** Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

### **DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT!**

CyberPower Systems does not sell products for life support or medical applications. DO NOT use in any circumstance that would affect operation and safety of life support equipment, any medical applications or patient care.

### **DO NOT USE WITH OR NEAR AQUARIUMS!**

To reduce the risk of fire or electric shock, do not use with or near an aquarium. Condensation from the aquarium can cause the unit to short out.

### **DO NOT USE THE UPS ON ANY TRANSPORTATION!**

To reduce the risk of fire or electric shock, do not use the unit on any transportation such as airplanes or ships. The effect of shock or vibration caused during transit and the damp environment can cause the unit to short out.

## INSTALLING YOUR UPS SYSTEM

### UNPACKING

Inspect the UPS upon receipt.

The box should contain the following:

- (a) UPS unit
- (b) User's manual
- (c) USB device cable (except for SE450G1)

### DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

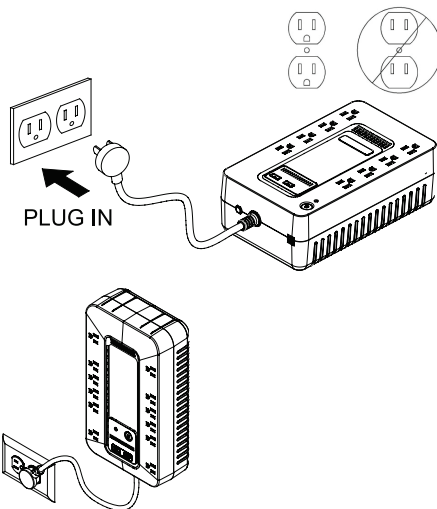
1. Ensure that the equipment plugged into the outlet does not exceed the UPS unit's rated capacity (450VA/260W for SE450G1, 650VA/360W for SX650U, and 950VA/510W for SX950U). If the rated capacities of the unit are exceeded, an overload condition may occur and cause the UPS unit to shut down or the circuit breaker to trip.
2. There are many factors that can affect the amount of power that your electronic equipment will require. For optimal system performance keep the load below 80% of the unit's rated capacity.

### HARDWARE INSTALLATION GUIDE

1. Your new UPS may be used immediately upon receipt. However, after receiving a new UPS, to ensure the battery's maximum charge capacity, it is recommended that you charge the battery for at least 8 hours. Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC outlet, the battery will automatically charge whether the UPS is turned on or turned off.
2. With the UPS unit turned off and unplugged, connect your equipment requiring battery backup into the battery power supplied outlets. Plug the other peripheral equipment (printer, scanner, speakers) into the full-time surge protection outlets.

**DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum, sump pump or other large electrical device into the "Battery and Surge Protected Outlets". The power demands of these devices will overload and possibly damage the unit.**

3. Plug the UPS into a 2-pole, 3-wire grounded receptacle (wall outlet). Make sure the wall branch outlet is protected by a fuse or circuit breaker and does not service equipment with large electrical demands (e.g. air conditioner, refrigerator, copier, etc...). The warranty prohibits the use of extension cords, outlet strips, and surge strips.



4. Press the power switch to turn the unit on. The Power On indicator light will illuminate green and the unit will "beep" twice.
5. If an overload is detected, an audible alarm will sound and the unit will emit one long beep. To correct this, turn the UPS off and unplug at least one piece of equipment from the battery power supplied outlets. Make sure the circuit breaker is depressed and then turn the UPS on.
6. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
7. To store the UPS for an extended period of time, cover it and store with the battery fully charged. While in storage, recharge the battery every three months to ensure optimal battery life.
8. Ensure the wall outlet and UPS are located near the equipment being attached for proper accessibility.
9. Lay the UPS horizontally or use the key-hole mounting slots to affix the UPS to the wall in the proper orientation. **DO NOT** stand the UPS up vertically.

## BASIC OPERATION

### 1. Power On Switch

To turn the UPS on, press the power button for approximately 2 seconds - you will hear a constant tone (1 second) - and release after a short beep.

To turn the UPS off, press the power button for approximately 2 seconds - you will hear a constant tone (1 second) - and release after two short beeps.

Alarm setting: The audible alarm can be turned OFF or ON by quickly pressing the POWER button twice. The default setting is for the Alarm On. To turn the Alarm Off, quickly press the power button twice. You will hear two short beeps when the Alarm is turned off. To turn the Alarm back ON, quickly press the power button twice. You will hear a single short beep when the Alarm is turned on.

\*When the Alarm is turned off, there will be no audible notification when the UPS reaches a low battery state.

### 2. Power On Indicator (green)

This LED is illuminated when the utility power is normal and the UPS outlets are providing power, free of surges and spikes.

### 3. Battery and Surge Protected Outlets

The unit has several battery powered and surge protected outlets to ensure temporary uninterrupted operation of your equipment during a power failure. **(DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum cleaner, sump pump,**

**or other large electrical device into the "Battery and Surge Protected Outlets." The power demands of these devices will overload and possibly damage the unit.)**

### 4. Full-Time Surge Protection Outlets

The unit has several surge suppression outlets.

### 5. Circuit Breaker

Located on the side of the UPS, the circuit breaker serves to provide overload and fault protection.

### 6. USB Port to PC (except for SE450G1)

The port allows connection and communication between the USB port on the computer and the UPS unit. The UPS communicates its status to the PowerPanel® Personal software.

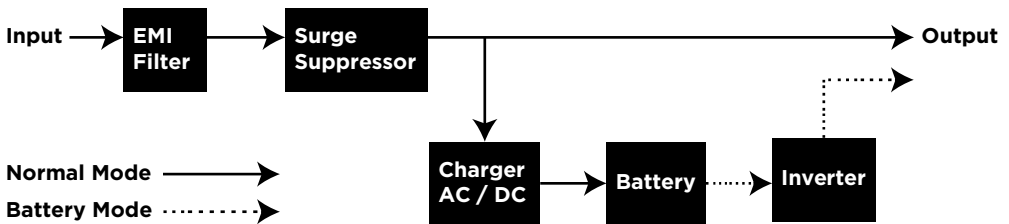
### 7. USB Charging ports (except for SE450G1)

The USB charging ports provide 5V 2.1A power output.

### 8. Widely-Spaced Outlets

The UPS unit has four widely-spaced outlets, so AC power adapters can be plugged into the UPS without overlapping or blocking adjacent outlets.

## SYSTEM FUNCTION BLOCK DIAGRAM





## TROUBLESHOOTING

Problem	Possible Cause	Solution
Full-time surge protection outlets stop providing power to equipment. Circuit breaker button is projecting from the side of the unit.	Circuit breaker has been tripped due to an overload.	Turn the UPS off and unplug at least one piece of equipment. Reset the circuit breaker by depressing the button, and then turn the UPS on.
The UPS does not perform expected runtime.	Battery not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is worn out.	Contact CyberPower Systems about replacement batteries at: <a href="http://cyberpowersystems.com/support">cyberpowersystems.com/support</a> .
The UPS will not turn on.	The on/off switch is designed to prevent damage from rapidly turning it off and on.	Turn the UPS off. Wait 10 seconds and then turn the UPS on.
	The unit is not connected to an AC outlet.	The unit must be connected to a 120V 60Hz outlet.
	The battery is worn out.	Contact CyberPower Systems about replacement batteries at: <a href="http://cyberpowersystems.com/support">cyberpowersystems.com/support</a> .
	Mechanical problem.	Contact CyberPower Systems at: <a href="http://cyberpowersystems.com/support">cyberpowersystems.com/support</a> .
PowerPanel* Personal is inactive (all icons are gray). *except for SE450G1	The USB cable is not connected.	Connect the USB cable to the UPS unit and an open USB port on the back of the computer.
	The USB cable is connected to a bad USB port.	Check for a different USB port and plug the cable in.
	The unit is not providing battery power.	Shutdown your computer and turn the UPS off. Wait 10 seconds and turn the UPS back on. This should reset the unit.

Additional troubleshooting information can be found at "Support" at [www.CyberPowerSystems.com](http://www.CyberPowerSystems.com)

## DEFINITIONS FOR LED INDICATORS & AUDIBLE ALARMS

 POWER	 ALARM	CONDITION
On	Off	<b>Normal</b>
On*	Beep twice every 30 seconds	<b>Utility Failure - Battery Mode</b> - The UPS is providing power to battery power-supplied outlets from its battery.
On*	Rapid beeping every 1/2 second	<b>Utility Failure - Low Battery</b> - The UPS is providing battery power. Rapid beeping indicates the unit will run out of power soon.
Off	Constant tone	<b>Overload</b> - Occurs when connected equipment exceeds the rating of battery outlets of the UPS. Turn the UPS off, unplug at least one piece of equipment from battery outlets, reset the circuit breaker and turn the unit on.
On	Constant tone	<b>Utility Failure</b> - The frequency is beyond 47-63Hz. The UPS will not turn on in line mode.

\* LED will flash when UPS alarm is beeping.

## TECHNICAL SPECIFICATIONS

Model	SE450G1	SX650U	SX950U
Capacity	450VA / 260W	650VA / 360W	950VA / 510W
Nominal Input Voltage	120 Vac		
Input Frequency	50/60 Hz $\pm$ 3 Hz		
On-Battery Output Voltage	120Vac $\pm$ 5%		
On-Battery Output Frequency	50Hz/60Hz $\pm$ 1% (auto-sensing)		
Max. Load for UPS Outlets	450VA / 260W	650VA / 360W	950VA / 510W
Max. Load for Full-Time Surge Protection outlets	7 Amps	12 Amps	12 Amps
On-Battery Output Wave Form	Simulated Sine Wave		
Operating Temperature	+ 32°F to 104°F / 0°C to 40°C		
Operating Relative Humidity	0 to 95% non-condensing		
Size (W x H x D)	8.3" x 4.5" x 3.2" 210 x 115 x 81 mm	9.8" x 5.8" x 3.2" 250 x 147 x 82 mm	12.2" x 7" x 3.1" 310 x 178 x 80 mm
Net Weight (lbs / kg)	3.79 lbs / 1.72 kg	6.48 lbs / 2.94 kg	8.70 lbs / 3.95 kg
Typical Battery Recharge Time	8 hours typical from total discharge		
Typical Battery Life	3 to 6 years, depending on number of discharge/recharge cycles		
Recommended Battery	Sealed Maintenance Free Lead Acid Battery		
Safety Approvals	UL1778(UPS), cUL CSA C22.2 No. 107.3-05, FCC/DoC Class B		

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# CYBERPOWER GREENPOWER UPS™ TECHNOLOGY

## Advanced Energy-Saving Design

The GreenPower UPS™ has a high-efficiency charger, which makes it the most energy-efficient UPS in its class. The advanced high-frequency charging system significantly improves charging efficiency and conserves energy. As a result of this advanced design, the GreenPower UPS™ uses less energy compared to competitive models. The GreenPower UPS™ is manufactured in accordance with the Restriction on Hazardous Substances (RoHS) directive making it one of the most environmentally-friendly UPS systems on the market today.



**GREENPOWER UPS™**  
Energy-Saving Technology

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## FCC COMPLIANCE STATEMENT

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.

Note: 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 to 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.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



### Canadian Compliance Statement

CAN ICES-3 (B)/NMB-3(B)

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## LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE

Please visit [www.CyberPowerSystems.com](http://www.CyberPowerSystems.com) for a copy of the Limited Warranty and Connected Equipment Guarantee.

### Where Can I Get More Information?

The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded. CyberPower is the warrantor under this Limited Warranty.

For further information please feel free to contact CyberPower at:

Cyber Power Systems (USA), Inc. 4241 12th Ave E., STE 400, Shakopee, MN 55379;

call us at **(877) 297-6937**; or submit a web ticket online at [cyberpowersystems.com/support](http://cyberpowersystems.com/support).

Cyber Power Systems (USA), Inc. encourages environmentally sound methods for disposal and recycling of its UPS products. Please dispose and/or recycle your UPS and batteries in accordance to the local regulations of your state.

WARNING: This product can expose you to chemicals including bisphenol A (BPA) and styrene, which is known to the State of California to cause reproductive harm and cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).