SMART APP SINEWAVE SERIES
PR1000LCD/PR1500LCD
USER'S MANUAL

K01-0000486-00

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! For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.

CAUTION! To reduce the risk of electric shock, do not remove the cover except to service the battery. There are no user serviceable parts inside except for the battery.

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

CAUTION! 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 the operation and safety of life support equipment, medical applications, or patient care.

CAUTION! 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.

INSTALLING YOUR UPS SYSTEM

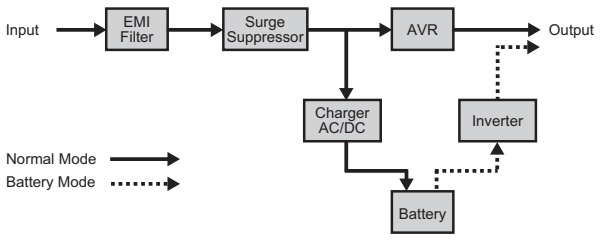
UNPACKING

Inspect the UPS upon receipt. The box should contain the following:
(a) UPS unit; (b) User's manual; (c) Emergency power off cable (gray); (d) Serial cable; (e) USB A+B type cable; (f) Warranty registration card; (g) Function Setup Guide

AUTOMATIC VOLTAGE REGULATOR

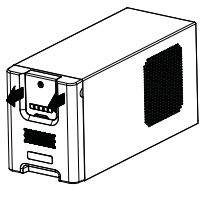
The PR1000LCD/PR1500LCD stabilizes inconsistent utility power voltage to nominal levels that are safe for equipment. Inconsistent utility power may be damaging to important data files and hardware, but with Automatic Voltage Regulation (AVR), damaging voltage levels are corrected to safe levels. AVR automatically increases low utility power and decreases high utility power to a consistent and safe 120 volts.

SYSTEM BLOCK DIAGRAM

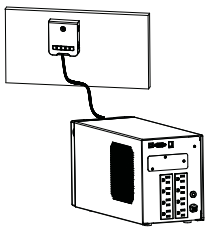


HARDWARE INSTALLATION GUIDE

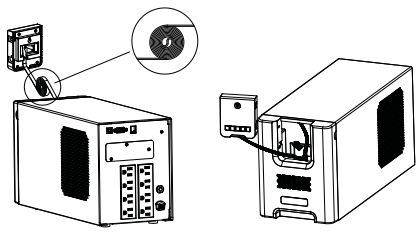
1. Your new UPS may be used immediately upon receipt. However, to ensure the battery's maximum charge capacity, it is recommended that you charge the battery for at least 16 hours. Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC outlet, the battery will automatically charge whether the UPS is turned on or off.
   Note: This UPS is designed with a safety feature to keep the system from being turned on during shipment. The first time you turn the UPS on, you will need to have it connected to AC power or it will not power up.
2. With the UPS unit turned off and unplugged, connect your computer, monitor, and any other peripherals requiring battery backup into the battery power supplied outlets. DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum, sump pump or other large electrical devices into the "Battery and Surge Protected Outlets". The power demands of these devices may overload and 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, 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 will illuminate and the unit will "beep". 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.
5. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
6. To store the UPS for an extended period, cover it and store with the battery fully charged. While in storage, recharge the battery every three months to ensure battery life.
7. Insure the wall outlet and UPS are located near the equipment being attached for proper accessibility.
8. The LCD module is wall-mountable for extended distance control. Follow the steps below for installation procedure:



Step1. Remove the LCD module from the front panel.



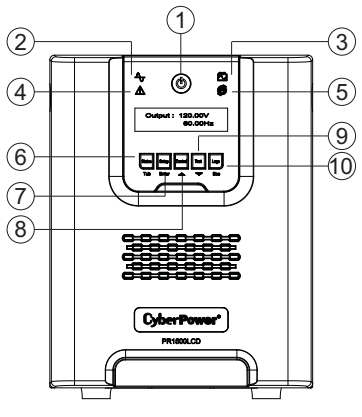
Step2. Hang the LCD module on the wall.



Note: To return the LCD module, roll up the LCD cable, move it to the space between front panel and battery compartment cover, and then place the LCD back on the UPS.

BASIC OPERATION

FRONT PANEL DESCRIPTION



1. Power Switch / Power On Indicator
Used as the master on/off switch for equipment connected to the battery power supplied outlets.

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

3. On Battery Indicator
During a severe brownout or blackout, this LED is illuminated and an alarm sounds (two short beeps followed by a pause) to indicate the UPS is operating from its internal batteries.

4. Fault Indicator
This LED is illuminated if there is a problem with the UPS.

5. Replace Battery Indicator
This LED is illuminated to remind users to replace the battery.

6. Status/Tab Button
For UPS status information, press the button for 1 second. For additional information including the use of the button as a Tab, please refer to the *Function Setup Guide*.

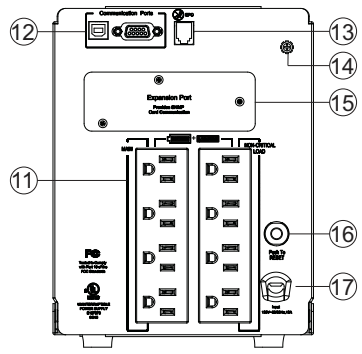
7. Setup/Enter Button
Press the Setup button for 1 second to enter setup menu and then select the functions for configuration. For more information about the Setup/Enter button, please refer to the *Function Setup Guide*.

8. Control/Up Button
Press the Control button for 1 second to enter control menu and then select the functions for configuration. This button is also used to scroll up. For more information about the Control/Up button, please refer to the *Function Setup Guide*.

BASIC OPERATION

9. Test/Down Button
Press the Test switch for 1 second to enter test menu and then select the functions for configuration. This button is also used to scroll down. For more information about the Test/Down button, please refer to the *Function Setup Guide*.

10. Logs/Esc Button
Press the Logs button for 1 second to view the events or logs that have been recorded. This button is also used to exit a menu. For more information about Logs/Esc button, please refer to the *Function Setup Guide*.



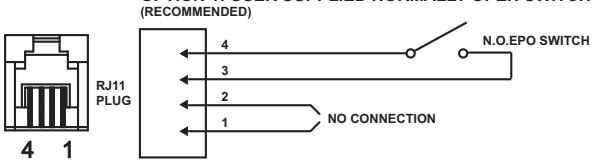
REAR PANEL DESCRIPTION

11. Battery and Surge Protected Outlets
The unit has eight battery powered and surge protected outlets for connected equipment to ensure temporary uninterrupted operation of your equipment during a power failure. (DO NOT plug a laser printer, paper shredder, copier, space heater, vacuum, sump pump or other large electrical devices into the "Battery and Surge Protected Outlets". The power demands of these devices may overload and damage the unit.)

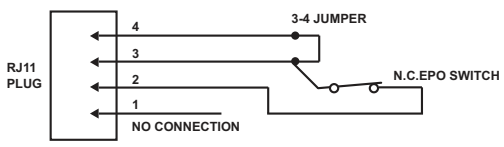
12. Serial/USB Ports to PC
The Serial and USB ports allow connection and communication between the computer and the UPS unit. Note: Only one port can be used at a time.

13. EPO Port
Use the provided gray EPO cable to connect to a provided EPO contact switch. Follow the appropriate circuit diagram below to wire the cable to your EPO configuration. The EPO remote switch is a switch installed in an outside area, connected to the unit via the Emergency power off cable. In case of an emergency, it can be used to immediately cut-off power from the UPS.

OPTION 1: USER SUPPLIED NORMALLY OPEN SWITCH
(RECOMMENDED)



OPTION 2: USER SUPPLIED NORMALLY CLOSED SWITCH



14. TVSS Ground
Use the Transient Voltage Surge Suppression Screw to ground the UPS.

15. SNMP/HTTP Network Slot
Remove the cover panel to install an optional RMCARD to remotely monitor and manage your UPS over a network.

16. Circuit Breaker
Located on the back of the UPS, the circuit breaker provides overload and fault protection.

17. AC Input Power Cord
Heavy-duty power cord.

BATTERY REPLACEMENT

Read and follow the IMPORTANT SAFETY INSTRUCTIONS before servicing the batteries:
Replacement of batteries located in an OPERATOR ACCESS AREA. Contact your dealer or call the number on this manual for more information on battery replacement.

CAUTION! RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO LOCAL REGULATIONS.

CAUTION! When replacing batteries, replace with the same number of the following battery: CyberPower / RB12120X2B for the PR1000LCD, CyberPower / RB12170X2A for the PR1500LCD. Contact CyberPower Systems about replacement batteries.

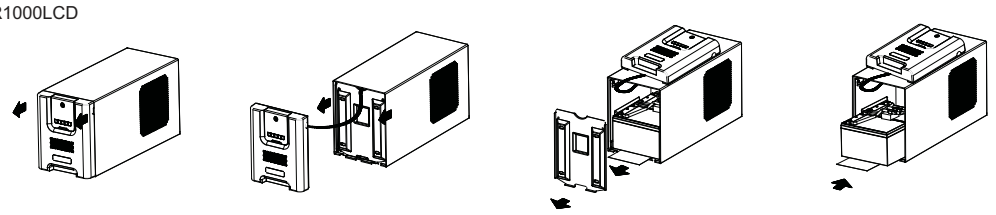
CAUTION! Risk of Energy Hazard, 12V, maximum 20 Ampere-hour battery. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy conducted through these materials could cause severe burns.

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

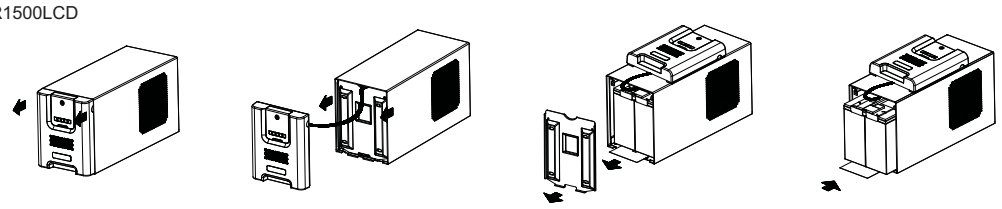
CAUTION! Do not open or mutilate batteries. Released material is harmful to the skin and eyes. It may be toxic.

BATTERY REPLACMENT PROCEDURE

PR1000LCD



PR1500LCD



Step1. Remove the front panel of the UPS.

Step2. Remove two screws from the battery compartment cover.

Step3. Slide the cover completely off of the unit. Disconnect the battery wires from the batteries and remove the batteries from the compartment.

Step4. Insert the new battery pack. Assemble the screws, cables, battery compartment cover and front panel in the reverse sequence of above steps. Recharge the unit for 16 hours to ensure the UPS performs expected runtime.

BATTERY WIRING

Connect RED battery cable/connector to RED connector on battery pack (positive to positive).
Connect BLACK battery cable/connector to BLACK connector on battery pack (negative to negative).

REMINDER! The used batteries are considered hazardous waste and must be disposed through recycling. Most retailers that sell lead-acid batteries collect used batteries for recycling, as required by the local regulations.

DEFINITIONS FOR ILLUMINATED LCD INDICATORS

Status Menu/Switch		
➢ Operation Mode	➢ Load Energy	➢ Output
➢ Load Power	➢ Estimated Runtime	➢ Last Self Test
➢ Load VA	➢ Battery Information	➢ Date & Time
➢ Load Amps	➢ Input	➢ NCL Output
Setup Menu/Switch		
➢ Setup Wizard	➢ Sensitivity	➢ Back to Default
➢ Utility Power	➢ Charge Mode	➢ Delay Turn On
➢ MIN O/P Voltage	➢ Low Battery Warning	➢ Delay Turn Off
➢ MAX O/P Voltage	➢ Auto Self Test	➢ Reboot Duration
➢ LCD Auto Sleep	➢ Date & Time	➢ Minimum Restore Capacity
➢ Cycling Display	➢ Battery Change Date	➢ Uptime on Battery
➢ Audible Alarm	➢ Firmware Update	➢ Reserve Runtime
➢ Temporarily Mute	➢ Power Meter Reset	➢ Configure NCL
Control Menu/Switch		
➢ UPS On/Off	➢ NCL On/Off	
Test Menu/Switch		
➢ Self Test	➢ Alarm Test	➢ Battery Calibration
Logs Menu/Switch		
➢ Transfer Event X1-X10	➢ Last Battery Change	➢ LCD Firmware Version
➢ Fault Event F1-F10	➢ Next Battery Change	➢ Serial Number
➢ Model Name	➢ UPS Firmware Version	

For more information about functions setup, please refer to the *Function Setup Guide*.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Circuit breaker button is projecting from the back of the unit.	Circuit breaker has tripped due to an overload.	Turn the UPS off and unplug at least one piece of equipment. Wait 10 seconds, reset the circuit breaker by pressing the button in, and then turn the UPS on.
The UPS does not perform expected runtime.	Batteries are not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Batteries are worn out.	Contact CyberPower Systems about replacement batteries.
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 50/60Hz outlet.
	Batteries are worn out.	Contact CyberPower Systems about replacement batteries.
	Mechanical problem.	Contact CyberPower Systems for repair.
PowerPanel® Business Edition is inactive.	The USB/serial cable is not connected.	Connect the USB/serial cable to the UPS unit and an open USB/serial port on the back of the computer. You must use the cable that came with the unit.
	The USB/serial cable is connected to the wrong port.	Check the back of the computer for an additional USB/serial port. Move the cable to this port.
	The serial cable is not the cable that came with the unit.	Please use the serial cable that came with the unit for the software.
The Fault LED is illuminated.	Overload	Remove excessive load and restart the UPS.
	Output Short	Contact CyberPower Systems.
	Battery Overcharge	Contact CyberPower Systems.
	Over Temperature	Contact CyberPower Systems.

Additional troubleshooting information can be found at www.cyberpowersystems.com/support.

TECHNICAL SPECIFICATIONS

MODEL	PR1000LCD	PR1500LCD
Capacity (VA)	1000	1500
Capacity (Watts)	1000	1500
INPUT		
Input Voltage Range	78Vac – 149Vac	
Input Adjustable Voltage Range	75Vac – 154Vac	
Input Frequency Range	50/60Hz +/- 3Hz Auto-sensing	
Input Plug Type	NEMA 5-15P	
OUTPUT		
Output Receptacles	(8) NEMA 5-15R	
On Battery Output Voltage	120Vac +/- 5%	
On Battery Output Frequency	50/60Hz +/- 0.1Hz	
Transfer Time (Typical)	4ms	
Overload Protection	Internal Current Limiting	
SURGE PROTECTION AND FILTERING		
Lightning / Surge Protection	Yes	Yes
BATTERY		
Replaceable Battery Pack	RB12120X2B	RB12170X2A
Sealed Maintenance Free	Yes	
Recharge Time (Typical)	3 hours (Quick Charge Mode), 8 hours (Eco Mode)	
WARNING DIAGNOSTICS		
Indicators	LCD Display, LED Indicators (Power On, Online, On Battery, Fault, Replace Battery)	
Audible Alarms	On Battery, Battery Low, Overload, UPS Fault, Replace Battery	
ENVIRONMENTAL		
Operating Temperature	32℉ to 104℉ (0℃ to 40℃)	
Operating Relative Humidity	0 to 95% Non-condensing	
Storage Temperature	5℉ to 113℉ (-15℃ to 45℃)	
Storage Relative Humidity	0 to 95% Non-condensing	
MANAGEMENT		
Connectivity Ports	(1) USB Port, (1) Serial Port	
SNMP/HTTP Networking	Yes, with optional RMCARD205	
Software	PowerPanel® Business Edition	
PHYSICAL		
Dimensions (WxHxD) (in/mm)	6.7" x 8.7" x 17" / 170 x 222 x 433 (mm)	
Weight (lb/kg)	43.7 lbs / 19.8kg	54 lbs / 2.45kg
SAFETY		
Conformance Approvals	UL1778, cUL, FCC/Doc Class B	

SAFETY COMPLIANCE STATEMENT

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

Important: 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)

CYBERPOWER GREENPOWER UPS™ TECHNOLOGY

Advanced Energy-Saving Patented Bypass Technology

CyberPower's patented GreenPower UPS™ with Bypass Technology are ENERGY STAR complainant ensuring lower power consumption and energy costs compared to conventional UPS models. Even when utility power is normal, conventional UPS models constantly pass power through a transformer. By contrast, under normal conditions the advanced circuitry of a GreenPower UPS™ bypasses the transformer. As a result, the power efficiency is significantly increased while decreasing waste heat, using less energy, and reducing energy costs.

When an abnormal power condition occurs, the GreenPower UPS™ automatically runs power through its transformer to regulate voltage and provide "safe" power. Since utility power is normal over 88% of the time, the GreenPower UPS™ operates primarily in its efficient bypass mode.

The GreenPower UPS™ is also manufactured in accordance with the Restriction on Hazardous Substances (RoHS) directive making it one of the most environmentally-friendly on the market today.

LIMITED WARRANTY AND CONNECTED EQUIPMENT GUARANTEE

Read the following terms and conditions carefully before using the CyberPower PR1000LCD/PR1500LCD (the "Product"). By using the Product you consent to be bound by and become a party to the terms and conditions of this Limited Warranty and Connected Equipment Guarantee (together referred to as this "Warranty"). If you do not agree to the terms and conditions of this Warranty, you should return the Product for a full refund prior to using it.

Who Is Providing This Warranty?
CyberPower Systems (USA), Inc. ("CyberPower") provides this Limited Warranty.

What Does This Warranty Cover?
This warranty covers defects in materials and workmanship in the Product under normal use and conditions. It also covers equipment that was connected to the Product and damaged because of the failure of the Product.

What Is The Period Of Coverage?
This warranty covers the Product for three years and connected equipment for as long as you own the Product.

Who Is Covered?
This warranty only covers the original purchaser. Coverage ends if you sell or otherwise transfer the Product.

How Do You Get Warranty Service?
1. Before contacting CyberPower, identify Your Product Model Number, the Purchase Date, and each item of Connected Equipment (E.G. Computer tower, Computer Monitor, Cable Modem, etc).
2. Visit our web site at www.cyberpowersystems.com/support or Call us at (877) 297-6937.
3. If your product requires warranty service you must provide a copy of your dated purchase receipt or invoice.

How Do You Open A Connected Equipment Claim?
1. Call us at (877) 297-6937 or write to us at Cyber Power Systems (USA), Inc., 4241 12th Ave. E., STE 400, Shakopee, MN 55379, or send us an e-mail message at claims@cpsww.com for instructions, within 10 days of the occurrence.
2. When you contact CyberPower, identify the Product, the Purchase Date, and the item(s) of Connected Equipment. Have information on all applicable insurance or other resources of recovery/payment that are available to the Initial Customer and request a Claim Number.
3. You must provide a dated purchase receipt (or other proof of the original purchase) and provide a description of the damage to your connected equipment.
4. Pack and ship the product to CyberPower and, if requested, the item(s) of Connected Equipment, a repair cost estimate for the damage to the Connected Equipment, and all claim forms that CyberPower provides to you. Show the Claim Number on the shipping label or include it with the product. **You must prepay all shipping costs, you are responsible for packaging and shipment, and you must pay the cost of the repair estimate.**

How Long Do I Have To Make A Claim?
All claims must be made within ten days of the occurrence.

What Will We Do To Correct Problems?
CyberPower will inspect and examine the Product.

If the Product is defective in material or workmanship, CyberPower will repair or replace it at CyberPower's expense, or, if CyberPower is unable to or decides not to repair or replace the Product (if defective) within a reasonable time, CyberPower will refund to you the full purchase price you paid for the Product (purchase receipt showing price paid is required).

If it appears that our Product failed to protect any equipment plugged into it, we will also send you forms for making your claim for the connected equipment. We will repair or replace the equipment that was damaged because of the failure of our Product or pay you the fair market value (NOT REPLACEMENT COST) of the equipment at of the time of the damage. We will use Orion Blue Book, or another a third-party valuation guide, or eBay, craigslist, or other source to establish that amount. Our maximum liability is limited to $375,000 for the PR1000LCD and PR1500LCD.

Who Pays For Shipping?
We pay when we send items to you; you pay when you send items to us.

What Isn'T Covered By The Warranty?
1. This Warranty does not cover any software that was damaged or needs to be replaced due to the failure of the Product or any data that is lost as a result of the failure or the restoration of data or records, or the reinstallation of software.
2. This Warranty does not cover or apply to: misuse, modification, operation or storage outside environmental limits of the Product or the equipment connected to it, nor for damage while in transit or in storage, nor if there has been improper operation or maintenance, or use with items not designed or intended for use with the Product, such as laser printers, appliances, aquariums, medical or life support devices, etc.

What Are The Limitations?
1. The sole and exclusive remedies of the Initial Customer are those provided by this Warranty.
1. This Warranty does not apply unless the Product and the equipment that was connected to it were connected to properly wired and grounded outlets (including compliance with electrical and safety codes of the most current electrical code), without the use of any adapters or other connectors.
2. The Product must have been plugged directly into the power source and the equipment connected to the Product must be directly connected to the Product and not "daisy-chained" together in serial fashion with any extension cords, another Product or device similar to the Product, surge suppressor, or power tap. Any such installation voids the Limited Warranty.
3. The Product and equipment connected to it must have been used properly in a suitable and proper environment and in conformance with any license, instruction manual, or warnings provided with the Product and the equipment connected to it.
4. The Product must have been used at all times within the limitations on the Product's VA capacity.

The Product was designed to eliminate disrupting and damaging effects of momentary (less than 1ms) voltage spikes or impulses from lightning or other power transients. If it can be shown that a voltage spike lasting longer than 1ms has occurred, the occurrence will be deemed outside the rated capabilities of the Product and the Limited Warranty is void. CyberPower Does Not Cover or Undertake Any Liability in Any Event for Any of the Following:
1. Loss of or damage to data, records, or software or the restoration of data or records, or the reinstallation of software.
2. Damage from causes other than AC Power Line Transients, spikes, or surges on properly installed, grounded and code-compliant 120 volt power lines in the United States and Canada; transients, surges or spikes on standard telephone land lines, PBX telephone equipment lines or Base 10T Ethernet lines, when properly installed and connected. (This exclusion applies, for example, to fluctuations in data transmission or reception, by CATV or RF transmission or fluctuations, or by transients in such transmission.)
3. Damage from any circumstance described as excluded above with respect to the Product.
4. Damages from fire, flood, wind, rain, rising water, leakage or breakage of plumbing, abuse, misuse or alteration of either the product or the Connected Equipment.
5. CyberPower excludes any liability for personal injury under the Limited Warranty and Connected Equipment Guarantee. CyberPower excludes any liability for direct, indirect, special, incidental or consequential damages, whether for damage to or loss of property [EXCEPT FOR (AND ONLY FOR) the specific limited agreement of CyberPower to provide certain warranty benefits regarding "Connected Equipment" under this Warranty], loss of profits, business interruption, or loss of information or data. NOTE: Some States or Provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.
6. The Product is not for use in high-risk activities or with aquariums. The Product is not designed or intended for use in hazardous environments requiring fail-safe performance, or for use in any circumstance in which the failure of the Product could lead directly to death, personal injury, or severe physical or property damage, or that would affect operation or safety of any medical or life support device (collectively, "High Risk Activities"). CyberPower expressly disclaims any express or implied warranty of fitness for High Risk Activities or with aquariums. CyberPower does not authorize use of any Product in any High Risk Activities or with Aquariums. ANY SUCH USE IS IMPROPER AND IS A MISUSE OF THE PRODUCT.

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 CyberPower Systems (USA), Inc. 4241 12th Ave E., STE 400, Shakopee, MN 55379; call us at (877) 297-6937; or send us an e-mail message at claims@cpsww.com.

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