OR1000LCDRM1U / OR1500LCDRM1U

User's Manual

K01-0000814-02

PRODUCT REGISTRATION

Thank you for purchasing a CyberPower product. Please take a few minutes to register your product at: **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.

IMPORTANT SAFETY INSTRUCTIONS

(SAVE THESE INSTRUCTIONS)

This manual contains important safety instructions that should be followed during installation and maintenance of the UPS and batteries.

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

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! 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.

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) Rack mount brackets (d) USB A+B type cable

***PowerPanel® Business software is available on our website. Please visit CyberPowerSystems.com and go to the Software Section for free download.**

OVERVIEW

The OR1000LCDRM1U/OR1500LCDRM1U UPS provides automatic voltage regulation for inconsistent utility power. The OR1000LCDRM1U/OR1500LCDRM1U features 1150 Joules of surge protection, and provides battery backup during power outages. The OR1000LCDRM1U/OR1500LCDRM1U ensures consistent power to your computer system and includes software that will automatically save your open files and shutdown your computer system during a utility power loss.

HOW TO DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

1. Ensure that the equipment plugged into the UPS does not exceed the UPS unit's rated capacity. 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.

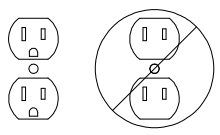
AUTOMATIC VOLTAGE REGULATOR

The OR1000LCDRM1U/OR1500LCDRM1U stabilizes inconsistent utility power. The incoming utility power may be damaging to important data files, but with Automatic Voltage Regulation, the computer will not experience damaging voltage levels. An Automatic Voltage Regulator automatically increases low voltage to a consistent, computer safe 110volts/120volts. The unit's powerful sealed lead-acid batteries will provide power only if the incoming voltage drops below 90volts or increases above 140volts.



HARDWARE INSTALLATION GUIDE

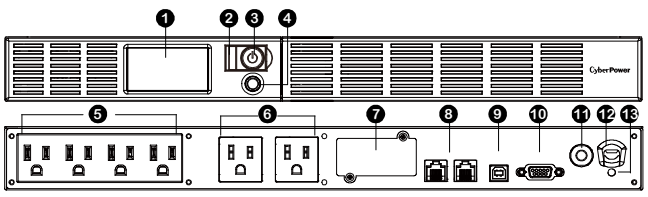
1. Your new UPS may be used immediately upon receipt. However, after receiving a new UPS, to ensure the battery's maximum charge capacity, it is recommended that you charge the battery for at least 8 hours. Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC outlet, the battery will automatically charge whether the UPS is turned on or turned off.
2. If you will use the software, connect the USB cable to the USB port on the UPS.
3. 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. Plug the other peripheral equipment (e.g. printer, scanner, speakers, etc.) into the full-time surge protection outlets. **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. 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 in conjunction with the UPS unit.



5. Press the power switch to turn the unit on. The Power On indicator light will illuminate green and the unit will "beep" twice.
6. 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.
7. To maintain optimal battery charge, leave the UPS plugged into an AC outlet at all times.
8. 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.
9. The socket-outlet shall be installed near the equipment and shall be easily accessible.

BASIC OPERATION

DESCRIPTION



1. **LCD module display**
   LCD shows all the UPS information with icons and messages.
2. **Power On Indicator**
   This LED is illuminated when the utility condition is normal and the UPS outlets are providing power, free of surges and spikes.
3. **Power Switch**
   Master on/off switch for equipment connected to the battery power supplied outlets.
4. **LCD function selected switch**
   The switch can be used to select the LCD display contents Including input/output voltage and estimated run time, etc.
5. **Battery and Surge Protected Outlets**
   The unit has four battery powered/surge suppression 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 cleaner, 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.)
6. **Full-Time Surge Protection Outlets**
   The unit has two surge suppression outlets.
7. **SNMP/HTTP Network Slot**
   Remove the cover panel to install an optional RMCARD for remote monitoring and management of your UPS over a network.
8. **Communication Protection Ports RJ45**
   Communication protection ports, bi-directional, will protect a 10/100/1000Ethernet connection.
9. **USB Port to PC**
   This port allows connection and communication from the USB port on the computer to the UPS unit. The UPS communicates its status to the PowerPanel® Business software.
10. **Dry contact**
    This port produces information for equipment that can read dry contact signals.
11. **Circuit Breaker**
    Located on the back of the UPS, the circuit breaker provides overload and fault protection. Under normal operating conditions, the circuit breaker is depressed.
12. **AC Input**
    Connect the AC Power cord to a properly wired and grounded outlet.
13. **Electrical Wiring Fault Indicator (Red)**
    This LED indicator will illuminate to warn the user that a wiring problem exists, such as bad ground, missed ground or reversed wiring. If this is illuminated, disconnect all electrical equipment from the outlet and have an electrician check to ensure the outlet is properly wired. The unit will not provide surge protection without being plugged into a grounded and properly wired wall outlet.

REPLACING THE BATTERY

CAUTION! Read and follow the IMPORTANT SAFETY INSTRUCTIONS before servicing the battery.

Service the battery under the supervision of personnel knowledgeable of batteries and their precautions.

CAUTION! Use only the specified type of battery. When replacing batteries, replace with the same number of the following battery: CyberPower/RB0670X4 for OR1000LCDRM1U and CyberPower/ RB0690X4 for OR1500LCDRM1U. See your dealer for replacement batteries.

CAUTION! For OR1000LCDRM1U: Risk of Energy Hazard, 24 V, maximum 7 Ampere-hour battery. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.

For OR1500LCDRM1U: Risk of Energy Hazard, 24 V, maximum 9 Ampere-hour battery. Before replacing batteries, remove conductive jewelry such as chains, wrist watches, and rings. High energy through conductive materials could cause severe burns.

CAUTION! Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

CAUTION! The battery may present the risk of electrical shock. Do not dispose of batteries in a fire, as the batteries may explode. Follow all local ordinances regarding proper disposal of batteries.

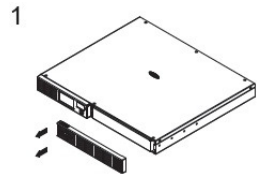
CAUTION! Do not open or mutilate the batteries. Released material is harmful to the skin and eyes and may be toxic.

CAUTION! A battery can present a high risk of short circuit current and electrical shock. Take the following precautions before replacing the battery:

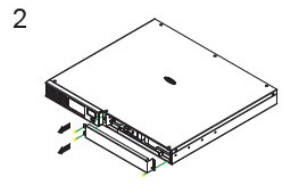
1. Remove all watches, rings or other metal objects.
2. Only use tools with insulated handles.
3. **DO NOT** lay tools or other metal parts on top of battery or any battery terminals.
4. Wear rubber gloves and boots.
5. Determine if the battery is inadvertently grounded. If inadvertently grounded, remove source of ground.

CONTACT WITH A GROUNDED BATTERY CAN RESULT IN ELECTRICAL SHOCK! The likelihood of such shock will be reduced if such grounds are removed during installation and maintenance (applicable to a UPS and a remote battery supply not having a grounded circuit).

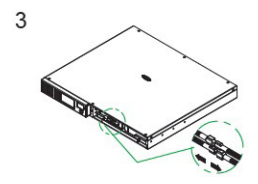
BATTERY REPLACEMENT PROCEDURE:



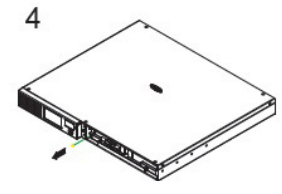
1. Remove the right-side of the faceplate.



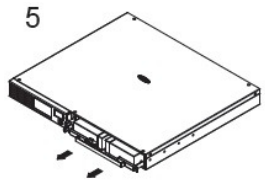
2. Remove the three retaining screws on the cable protection cover then remove the cover.



3. Disconnect the black and red cable.

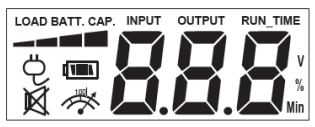


4. Remove the retaining screw of the cable connectors



5. Replace the new battery pack. Assemble the screws, cover, cable and front panel in the reverse sequence of above steps. Recharge the unit for 8 hours to ensure the UPS performs expected runtime.

DEFINITIONS FOR ILLUMINATED LCD



Line mode

Select SW Press	UPS Status Display				Capacity Display		Digital Value Display				
					Load Cap.	Battery Cap.	Input Voltage	Output Voltage	% of Load	% of Batt.	Run Time
Initial	V	X	--	X	V	X	V				
1st	V	X	--	X	V	X		V			
2nd	V	X	--	X	V	X			V		
3rd	V	X	--	X	X	V				V	
4th	V	X	--	X	V	X					V
5th(Return)	V	X	--	X	V	X	V				
(Overload)	V	X	--	V	--	--	--	--	--	--	--

"V" : Illuminated, "X" : Not Illuminated, "--" : Either

Battery mode

Select SW Press	UPS Status Display				Capacity Display		Digital Value Display				
					Load Cap.	Battery Cap.	Input Voltage	Output Voltage	% of Load	% of Batt.	Run Time
Initial	X	V	--	X	X	V	V				
1st	X	V	--	X	X	V		V			
2nd	X	V	--	X	V	X			V		
3rd	X	V	--	X	X	V				V	
4th	X	V	--	X	X	V					V
5th(Return)	X	V	--	X	X	V	V				
(Overload)	X	V	--	V	--	--	--	--	--	--	--

"V" : Illuminated, "X" : Not Illuminated, "--" : Either

TROUBLESHOOTING

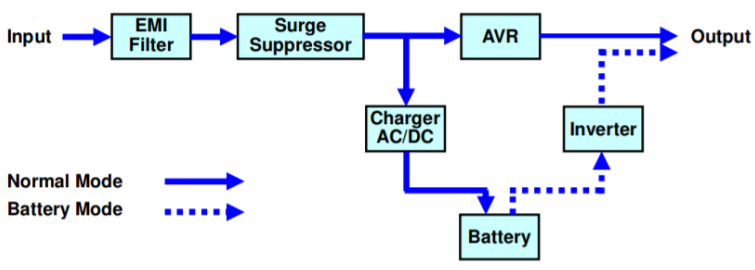
Problem	Possible Cause	Solution
Full-time surge protection outlets stop providing power to equipment.	Circuit breaker has tripped due to an overload.	Turn the UPS off and unplug at least one piece of equipment. Wait 10 seconds, reset the circuit breaker by depressing the button, and then turn the UPS on.
The UPS does not provide expected runtime.	Battery not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is slightly worn out.	Please contact CyberPower Systems about replacement batteries.
The UPS will not turn on.	The on/off switch is designed to prevent damage by rapidly turning it off and on.	Turn the UPS off. Wait 10 seconds and then turn the UPS on.
	The battery is worn out.	Please contact CyberPower Systems about replacement batteries.
	Mechanical problem.	Please contact CyberPower Systems.
PowerPanel® Business is inactive.	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 unit is not providing battery power.	Shutdown your computer and turn the UPS off. Wait 10 seconds and turn the UPS on. This should reset the unit.

Additional troubleshooting information can be found under "Support" at CyberPowerSystems.com

TECHNICAL SPECIFICATIONS

Model	OR1000LCDRM1Ua / OR1000LCDRM1U	OR1500LCDRM1Ua / OR1500LCDRM1U
Capacity	1000VA / 600W	1500VA / 900W
Nominal Input Voltage	90Vac to 140Vac	
Input Frequency	60 Hz +/- 3 Hz(Auto-sensing)	
AVR Function	Yes	
On-Battery Output Voltage	120Vac +/- 5%	
On-Battery Output Wave Form	Simulated Sine Wave	
Operating Temperature	+ 32°F to 104° F / 0° C to 40° C	
Size (W x H x D)	1U Rack 17.05" x 1.8" x 15.6"	1U Rack 17.05" x 1.8" x 15.6"
Weight	30.1lbs	33lbs
Battery Type	CyberPower / RB0670X4	CyberPower / RB0690X4
Typical Battery Recharge Time	8 hours 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 5th, cUL CSA C22.2 No.107.3-05, FCC/DoC Class B	

SYSTEM FUNCTIONAL BLOCK DIAGRAM



CYBERPOWER GREENPOWER UPS™ TECHNOLOGY

Advanced Energy-Saving Patented Bypass Technology

CyberPower's patented GreenPower UPS™ with Bypass Technology reduces UPS energy costs by up to 75% 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.

FCC 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"

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)

Limited Warranty and Connected Equipment Guarantee

Read the following terms and conditions carefully before using the CyberPower OR1000LCDRM1U/OR1500LCDRM1U (the "CPS Product"). By using the CPS 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 CPS Product for a full refund prior to using it.

Who is Providing this Warranty?

Cyber Power Systems (USA), Inc. ("CyberPower") provides this Limited Warranty.

What Does This Warranty Cover?

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

What is the Period of Coverage?

This warranty covers the CPS Product for three years from the date of purchase and connected equipment for as long as you own the CPS Product.

Who Is Covered?

This warranty only covers the original purchaser. Coverage ends if you sell or otherwise transfer the CPS Product.

How Do You Get Warranty Service?

1. Before contacting CyberPower, identify Your CPS Product model number, the Purchase Date, and each item of Connected Equipment (e.g. computer tower, computer monitor, ink jet printer, cable modem, etc).
2. Visit our web site at: CyberPowerSystems.com/support or call us at (877) 297-6937.
3. If your CPS 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 submit a web ticket via www.CyberPowerSystems.com/Support-for instructions, within 10 days of the occurrence.
2. When you contact CyberPower, identify the CPS 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) for the CPS Product and connected equipment. You also need to provide a description of the damage to your connected equipment.
4. Pack and ship the CPS 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.

NOTE: 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 CPS Product.

If the CPS 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 CPS Product (if defective) within a reasonable time, CyberPower will refund to you the full purchase price you paid for the CPS Product (purchase receipt showing price paid is required).

If it appears ~~that our~~ CPS 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 CPS 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 $300,000 for the OR1000LCDRM1U and the OR1500LCDRM1U.

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 CPS 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 CPS 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 CPS Product, such as laser printers, appliances, aquariums, medical or life support devices, etc.

What are the Limitations?

The sole and exclusive remedies of the Initial Customer are those provided by this Warranty.

1. This Warranty does not apply unless the CPS 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 CPS Product must have been plugged directly into the power source and the equipment connected to the CPS Product must be directly connected to the CPS Product and not "daisy-chained" together in serial fashion with any extension cords, another Product or device similar to the CPS Product, surge suppressor, or power tap. Any such installation voids the Limited Warranty.
3. The CPS 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 CPS Product and the equipment connected to it.
4. The CPS Product must have been used at all times within the limitations on the CPS Product's VA capacity.

The CPS 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 CPS 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 CPS Product.
4. Damages from fire, flood, wind, rain, rising water, leakage or breakage of plumbing, abuse, misuse or alteration of either the CPS 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 CPS Product is not for use in high-risk activities or with aquariums. The CPS 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 CPS 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 CPS 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 more information contact CyberPower at:
Cyber Power Systems (USA), Inc.
4241 12th Ave E., STE 400, Shakopee, MN 55379
Phone: (877) 297-6937; web ticket via
CyberPowerSystems.com/Support

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.

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