

## 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.

This equipment can be operated by any individuals with no previous training.

The socket-outlet shall be installed near the equipment and easily accessible.

During the installation of this equipment it should be assured that the sum of the leakage currents of the UPS and the connected loads does not exceed 3.5mA.

Attention, hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the UPS is necessary.

Do not dispose of batteries in a fire, the battery may explode.

Do not open or mutilate the battery or batteries, released electrolyte is harmful to the skin and eyes.

## INSTALLING YOUR UPS SYSTEM

### UNPACKING

Inspect the UPS upon receipt. The box should contain the following: UPS Unit; PowerPanel® Plus Software Disk×1; Serial Interface Cable (DB-9)×1; Telephone Cable×1; Power Cord-OP500E/ OP750E×2; Power Cord-OP1000UE/ OP1500UTE×4; USB Cable×1; User Manual; PowerPanel® Plus Software User Manual.

### HOW TO DETERMINE THE POWER REQUIREMENTS OF YOUR EQUIPMENT

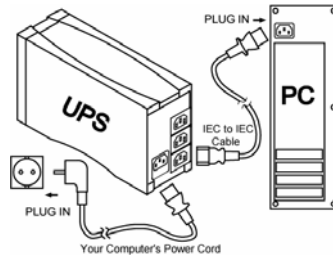
1. Insure that the equipment plugged into the battery power-supplied outlets does not exceed the UPS unit's rated capacity (500VA/300W for OP500E, 750VA/450W for OP750E, 1000VA/700W for OP1000UE, 1500VA/900W for OP1500UTE). If rated unit capacities are exceeded, an overload condition may occur and cause the UPS unit to shut down or the circuit breaker to trip.
2. If the power requirements of your equipment are listed in units other than Volt-Amps (VA), convert Watts (W) or Amps (A) into VA by doing the calculations below. Note: The below equation only calculates the maximum amount of VA that the equipment can use, not what is typically used by the equipment at any one time. Users should expect usage requirements to be approximately 60% of below value.

### TO ESTIMATE POWER REQUIREMENTS

1. \_\_\_\_\_ Watts (W) x 2.0 = \_\_\_\_\_ VA or \_\_\_\_\_ Amps (A) x 230 = \_\_\_\_\_ VA
2. Add the totals up for all pieces of equipment and multiply this total by 0.6 to calculate actual requirements. There are many factors that can affect the amount of power that your computer system will require. The total load that you will be placing on the battery-powered outlets should not exceed 80% of the unit's capacity.

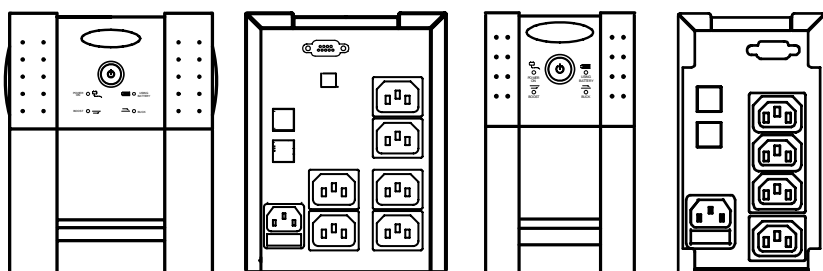
### HARDWARE INSTALLATION GUIDE

1. Connect the equipment to your UPS outlets. The IEC-IEC power cords coming with the unit are used to connect your computer and monitor to the UPS. Items such as copiers, laser printers, vacuums, space heaters, or other large electrical devices should not be connected to the UPS. Please make sure that the total loads of your equipments are less than the maximum total power load of your UPS.
2. Use your computer power cord to connect the UPS to a wall outlet. Please avoid using extension cords and adapter plugs. (To maintain optimal battery charge, leave the UPS plugged in at all times.)
3. Press the UPS power button to turn it on. The "Power On" indicator will be illuminated in "Green".
4. Install your software and accessories. To use the software, simply connect the enclosed serial interface cable to the serial port on the UPS and an open serial port on the computer.



## BASIC OPERATION

### FRONT PANEL AND REAR PANEL DESCRIPTION



OP1000UE/1500UTE

OP500E/750E

### ◆ Power Switch



Press the power button to turn the UPS ON or OFF.

### ◆ Power On Indicator



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

### ◆ Using Battery Indicator



This illuminates during utility failure, indicating that the battery is supplying power to the battery-power supplied outlets.

### ◆ Boost Indicator



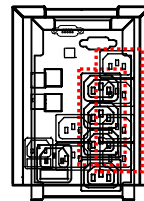
This LED indicates that the UPS is operating in automatic voltage regulation mode. When the led is illuminated continuously, it indicates that input under-voltage and that the UPS unit boosts input voltage.

### ◆ Buck Indicator



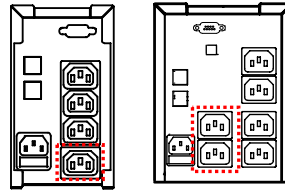
This LED indicates that the UPS is operating in automatic voltage regulation mode. When the led is illuminated continuously, it indicates that input over-voltage and that the UPS unit bucks the voltage.

### ◆ Battery Backup and Surge Protection Outlets



The UPS provides battery powered and surge protected outlets for connected equipment to insure temporary uninterrupted operation during a power failure and against surges and spikes.

### ◆ Surge Protection Outlets



The UPS provides surge protected only outlet for connected equipments against surges and spikes.

### ◆ Serial Port to PC



This port allows connection and communication from the DB-9 serial or USB port on the computer to the UPS unit. The UPS communicates its status to the PowerPanel® Plus software. This interface is also compatible with the UPS service provided by **Windows 98, Windows ME, Windows NT, Windows 2000, Windows XP, Windows Server 2003.**

**REMINDER:** For contact closure communication function, please log onto our website at [eu.cyberpowersystems.com](http://eu.cyberpowersystems.com) to download the contact closure software patch.

### ◆ USB Type B Port to PC



This Port allows connection and communication from USB port on the computer to the UPS unit. The UPS communicates its status to the PowerPanel® Plus software. This interface is also compatible with the UPS service provided by **Windows 98, Windows ME, Windows NT, Windows 2000, Windows XP, Windows Server 2003.**

### ◆ Ethernet (RJ-45) Network Protection Ports



These ports are the protection for your computer network cable.

## BATTERY REPLACEMENT AND STORAGE

**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. Keep unauthorized personnel away from batteries.** If you have questions, **contact your dealer or call the number in this manual** for information on battery replacement.

**CAUTION!** Use only the specified type of battery. See your dealer for replacement batteries.

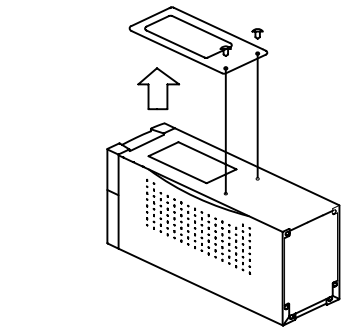
**CAUTION!** The battery may present the risk of electrical shock. **Do not dispose of batteries in a fire**, as it may explode. Follow all local ordinances regarding proper disposal of batteries.

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

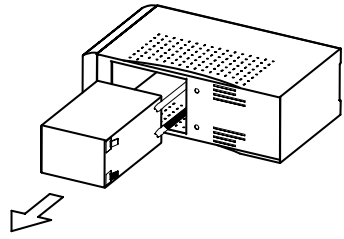
**CAUTION!** A battery can present a high risk of short circuit current and electrical shock. **Take the following precautions before replacing the battery:**

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. 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).
5. Batteries are consider **HAZARDOUS WASTE** and must be disposed of properly. Contact your local government for more information about proper disposal and recycling of batteries.
6. Turn off and unplug all connected equipment.
7. Turn the UPS off and unplug it from the AC power source.
8. Turn the UPS upside down.

## BATTERY REPLACEMENT PROCEDURE:

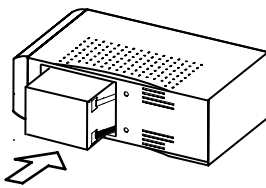


1. Remove the 2 retaining screws then push the battery cover backward and remove the cover.

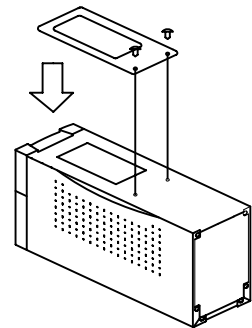


2. Lean the UPS to one side and pull out the battery partially from the compartment. Disconnect the battery wires from the battery, and then remove the battery from the compartment.

**REMANDER:** For OP1000E/OP1500TE, 2 batteries are attached with one single plastic strip. You can pull the plastic strip to pull out the battery.



3. Install the replacement battery by connecting the red wire to the positive (+) terminal of the battery and connecting the black wire to the negative (-) terminal of the battery.



4. Slide the battery back into the compartment. Turn the UPS upside down to help the batteries entirely slide into the compartment. Replace the cover and the retaining screws.

**REMANDER:** Recharge the unit for 4 – 8 hours to ensure the UPS performs expected runtime

## STORAGE

First turn off your UPS and disconnect its power cord from the wall outlet. Disconnect all cables connected the UPS to avoid battery drain. To store your UPS for an extended period, cover it and store with the battery fully charged. Recharge the battery every three months to insure battery life. If the battery remains uncharged for an extended period of time, it may suffer permanent loss of capacity.

## TROUBLE SHOOTING

Problem	Possible Cause	Solution
The UPS does not perform expected runtime.	Batteries are not fully charged.	Recharge the battery by leaving the UPS plugged in.
	Battery is slightly worn out.	Contact CyberPower Systems at <a href="mailto:sales@cyberpower-eu.com">sales@cyberpower-eu.com</a>
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 unit is not connected to an AC outlet.	The unit must be connected to a 220-240V 50/60Hz outlet.
	The battery is worn out.	Contact CyberPower Systems at <a href="mailto:sales@cyberpower-eu.com">sales@cyberpower-eu.com</a>
Outlets do not provide power to equipment	Mechanical problem.	Contact CyberPower Systems at <a href="mailto:sales@cyberpower-eu.com">sales@cyberpower-eu.com</a>
	Fuse is blown due to overload	Turn the UPS off and unplug at least one piece connected equipment. Unplug the power cord of the UPS then remove the fuse compartment beneath the power inlet of the UPS and replace the blown fuse with a spare one. Lock the compartment back to the UPS. Connect power cord then turn the UPS on. Make sure that your spare fuse meets the specification: 6.3A, 250V, 5x10mm.
	Batteries are discharged	Allow the unit to recharge for at least 4 hours.
PowerPanel® Plus is inactive (all icons are gray).	Unit has been damaged by a surge or spike.	Contact CyberPower Systems at <a href="mailto:sales@cyberpower-eu.com">sales@cyberpower-eu.com</a>
	The serial/USB cable is not connected.	Connect the serial/USB cable to the UPS unit and an open serial port on the back of the computer. You must use the cable that came with the unit.
	The serial/USB cable is connected to the wrong port.	Try another serial/USB port of your computer.
	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.
	The serial cable is not the cable that was provided with the unit.	You must use the cable included with the unit for the software.

## TECHNICAL SPECIFICATIONS

Model	OP500E	OP750E	OP1000UE	OP1500UE
Capacity (VA)	500VA	750VA	1000VA	1500VA
Capacity (Watts)	300W	450W	700W	900W
Input				
Input Voltage Range	220-240Vac			
Frequency Range	50/60 Hz			
Output				
On Battery Output Voltage	Simulated Sine Wave at 230Vac +/- 7%			
On Battery Output Frequency	50/60 Hz			
Overload Protection	On Utility: Fuse, On Battery: Internal Current Limiting			
Surge Protection and Filtering				
Lightning / Surge Protection	Yes			
Network Protection	RJ45 (One In/One Out)			
Physical				
Total # of UPS Receptacles	3		4	
Maximum Dimensions	28.3cm*9.1cm*16.4cm		30.9cm*14.1cm*18.4cm	
Weight (Kg)	6.5	7.6	12.3	14.2
Battery				
Sealed Maintenance Free Lead Acid Battery	12V / 7.2AHx1	12V / 9AHx1	12V/7.2AHx2	12V/9AHx2
User Replaceable	Yes, Hot Swappable Battery Pack			
Typical Recharge Time	8 Hours			
Warning Diagnostics				
Indicators	Power On, Using Battery, Boost, Buck			
Audible Alarms	On Battery, Low Battery, Overload			
Environmental				
Operating Temperature	+32°F to 95°F ( 0°C to 35°C )			
Operating Relative Humidity	0 to 95% NON-CONDENSING			
Communication				
PowerPanel® Plus Software	Windows 98/ME/2000/NT/XP, Server 2003			
Management				
Auto-Charger	Yes			
Auto-Restart	Yes			
USB	No		Yes	

## DEFINITIONS FOR ILLUMINATED LED INDICATORS

Power On	Using Battery	BOOST	BUCK	Fuse	Alarm	Condition
On	Off	Off	Off	Normal	Off	Normal
On	Off	On	Off	Normal	Off	Max. boost 13%/15%* of input voltage for output regulation while input voltage is from 11% to 22% under nominal.
On	Off	Off	On	Normal	Off	Max. buck 12%/13%** of input voltage for output regulation while input voltage is from 9% to 17% over nominal.
Off	On	Off	Off	Normal	Two Beeps	Utility Failure- The UPS is providing battery power to the Battery-Power Supplied outlets.
Off	On	Off	Off	Normal	Rapid Beeps	Utility Failure- The UPS is providing battery power. The rapid beeps indicate the battery will run out of charge within a few minutes.
Off	On/Off	On/Off	On/Off	Blown	Two beeps or rapid beeps	Overload- Occurs in the Full-time Surge Protection Outlets. Please turn the UPS off and unplug at least one piece of equipment from the UPS. Replace the fuse with a spare one then turn the UPS on.
Off	On/Off	On/Off	On/Off	Normal/ Blown	Long Beep	Overload- Occurs in the Battery-power Supplied Outlets. Turn the UPS off and unplug at least one piece of equipment from the UPS. Check the fuse and do the replacement if necessary. Turn the UPS on.

\*: 13% for OP500E/750E, 15% for OP1000UE/1500UE

\*\* : 12% for OP500E/750E, 13% for OP1000UE/1500UE

For more information, visit [eu.cyberpowersystems.com](http://eu.cyberpowersystems.com) or contact

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CyberPower warrants to you, the original purchaser, that CyberPower UPS will be free from defects in design, assembly, materials and workmanship for two years ( battery is only one year) from the date of original purchase. Any warranty services, please contact your local dealers or distributors.

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