CyberPower®

Reliability. Quality. Value.

User's Manual

PR5000ELCDRTXL5U
PR6000ELCDRTXL5U

IMPORTANT SAFETY INSTRUCTIONS

This manual contains important 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 the UPS.

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

CAUTION! The battery can power hazardous components inside the unit, even when the AC input power is disconnected.

CAUTION! The UPS should be near the connected equipment and easily accessible.

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 an electric shock, do not remove the cover, except to service the battery. There are no user serviceable parts inside, except for the battery.

CAUTION! To avoid electrical shock, turn off the unit and unplug it from the AC power source before servicing the battery or installing a computer component.

CAUTION! To reduce the risk of fire, connect the UPS to a circuit with 30 amperes maximum over-current protection in accordance to CE requirement.

CAUTION! The AC outlet where the UPS is connected should be close to the unit and easily accessible.

CAUTION! Please use only VDE-tested, CE-marked mains cable, (e.g. the mains cable of your equipment), to connect the UPS to the AC outlet.

CAUTION! Please use only VDE-tested, CE-marked power cables to connect any equipment to the UPS.

CAUTION! When installing the equipment, ensure that the sum of the leakage current of the UPS and the connected equipment does not exceed 3.5mA.

CAUTION! This is permanently connected equipment and only qualified maintenance personnel may carry out installations.

CAUTION! Do not unplug the unit from AC Power during operation, as this will invalidate the protective ground insulation.

CAUTION! To avoid electrical shock, turn off and unplug the unit first, then install the input/output power cord with grounded. Connect the ground wire prior to connecting the line wires!

CAUTION! Do not use improper size power cord to avoid damaging your equipment and avoid fire hazards.

CAUTION! Wiring must be done by qualified personnel.

CAUTION! DO NOT USE FOR MEDICAL OR LIFE SUPPORT EQUIPMENT! Under no circumstances this unit should be used for medical applications involving life support equipment and/or patient care.

CAUTION! DO NOT USE WITH OR NEAR AQUARIUMS! To reduce the risk of fire, do not use with or near aquariums. Condensation from the aquarium can come in contact with metal electrical contacts and cause the machine to short out.

DO NOT INSTALL THE UPS WHERE IT WOULD BE EXPOSED TO DIRECT SUNLIGHT OR NEAR A STRONG HEAT SOURCE!
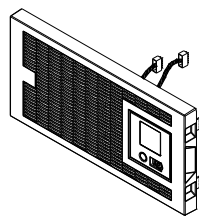
DO NOT BLOCK OFF VENTILATION OPENINGS AROUND THE HOUSING!

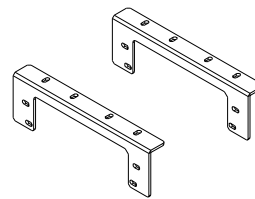**DO NOT CONNECT DOMESTIC APPLIANCES SUCH AS HAIR DRYERS TO UPS OUTPUT SOCKETS**
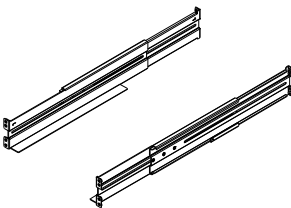
UNPACKING
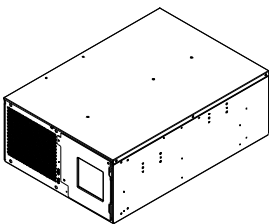
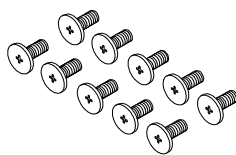

UPS unit

Front panel

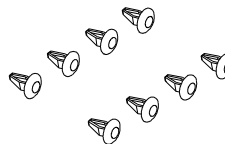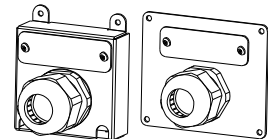Rack mount ears (Stands) (2)

User's manual

Rack mount rails (1 set – left and right sides)

Rack mount ear & rails screws (34)
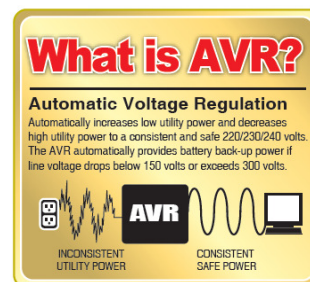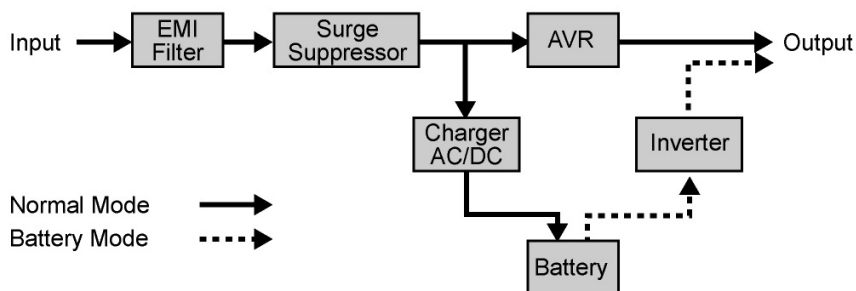

Screw hole dust covers (8)

Input/ Output terminal cover

AUTOMATIC VOLTAGE REGULATOR(AVR)

The PR5000ELCDRTXL5U/ PR6000ELCDRTXL5U stabilizes damaging inconsistent utility power. The Automatic Voltage Regulator automatically regulates low or high voltages to keep equipment working at safe AC power levels (220/230/240V) without switching to battery. Your equipment operates normally when power problems, such as, shout brownouts and blackouts. The unit's powerful sealed lead-acid batteries will provide power during the incoming voltage drops below 151V or increases above 302V.

SYSTEM BLOCK DIAGRAM

Input → EMI Filter → Surge Suppressor → AVR → Output

Charger AC/DC   Inverter   Battery

Normal Mode ⟶
Battery Mode ┈┈▶

HARDWARE INSTALLATION GUIDE

1. Battery charge loss may occur during shipping and storage. Before using the UPS, it's strongly recommended to charge batteries for four hours typically to ensure that the batteries' maximum charge capacity is met. To recharge the batteries, simply plug the UPS into an AC outlet.

2. When using the included software, connect either the serial or the USB cable between the computer and the corresponding port on the UPS. Note: If the USB port is used, the serial port will be disabled. They cannot be used simultaneously. The computer with the PowerPanel® Business Edition Agent software connects to the USB port or the Serial port on the UPS. It can control the operating schedule, battery test, outlet, etc. and obtain information on the UPS status. However, other computers with PowerPanel® Business Edition Client software can only obtain UPS status information via a LAN connection.

3. With the UPS off and unplugged, connect your computer, monitor, and any externally powered data storage device (Hard drive, Tape drive, etc.) into the outlets. DO NOT plug a laser printer, copier, space heater, vacuum, paper shredder or other large electrical device into the UPS. The power demands of these devices will overload and possibly damage the unit.

4. To protect a fax, telephone, modem line or network cable, connect the telephone or network cable from the wall jack outlet to the jack marked "IN" of the UPS. Then, connect a telephone cable or network cable from the jack marked "OUT" on the UPS to the modem, computer, telephone, fax machine, or network device.

5. Press the power switch to turn the UPS on. The Power-On indicator light will illuminate. If an overload is detected, an audible alarm will sound and the UPS will emit one long beep. In order to reset it, turn the unit off and unplug some equipment from outlets. Make sure your equipment carry a load current within the unit's safe range, (refer to the technical specifications), and then turn the unit on.

6. Your UPS is equipped with an auto-charge feature. When the UPS is plugged into an AC outlet, the battery will automatically charge, even when the unit is switched off.

7. To maintain an optimal battery charge, leave the UPS plugged into an AC outlet at all times.

8. Before storing the UPS for an extended period of time, turn the unit OFF. Then cover it and store it with the batteries fully charged. Recharge the batteries every three months to ensure good battery capacity and long battery life. Maintaining a good battery charge will help prevent possible damage to the unit from battery leakage.

9. The unit has one Primary Serial Port (I), one Secondary Serial Port (II), and one USB port, (paired with the Primary Serial Port), to allow connection and communication between the unit and any attached computers. The Primary Serial Port (I) as well as its paired USB port allow for bi-directional communication among the UPS and the primary connected computer running the PowerPanel® Business Edition Agent software. The UPS can control the computer's shutdown in case of an emergency, and at the same time, the computer can monitor the UPS and alter its various programmable parameters. On the other hand, secondary Serial Port II, only allows the UPS to initiate the connected computer's (installed the PowerPanel® Personal Edition software) graceful shutdown in case of an emergency. If necessary, please download PowerPanel® Personal Edition software at www.cpsww.com. DO NOT install PowerPanel® Business Edition Agent and PowerPanel® Personal Edition software on the same computer.

10. EPO (Emergency Power Off) Port:
Use the provided gray cable to connect to a special 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 an ordinary RJ-11 phone line. In case of an emergency, it can be used to immediately cut off power from the UPS unit.

11. To avoid electrical shock, before hardwiring the UPS (in/out power cord), turn the unit OFF and disconnect the unit from utility power. The in/out power cord MUST be grounded.

FRONT/REAR PANEL DESCRIPTION

1. Power Switch
Master On/Off switch for the UPS.

2. Power on Indicator
Indicates the UPS is on and supplying power free of surges and spikes.

3. LCD Readout Toggle Button
Use to rotate through multiple screens of UPS status information.

4. Multifunction LCD Readout
An illuminated digital screen that displays the UPS power status information.

5. Battery Backup & Surge Protected Outlets
This unit provides a total of ten outlets with battery backup and surge protection. They ensure that connected equipment will provide power to equipment over a period of time, during a power failure.

Critical /Non-Ccritical
It is possible to program the unit so that the outlet block marked as "Non-Critical", (5 ports), will stop the supplying to connected equipment after a certain period of time. This allows for additional runtime for the equipment connected on the outlets marked as "Critical", (5 ports). This allows the creation of load priorities ensuring the critical equipment is given priority under specific circumstances.

6. Output Terminal Block
Use this terminal to connect your equipment. **(Typical wire size is 10 AWG.)**

7. Output Circuit Breaker
The circuit breaker serves to provide output overload and fault protection.

8. Input Terminal Block
Use this terminal to connect the UPS System to utility power. **(Typical wire size is 10 AWG.)**

9. Input Circuit Breaker
The circuit breaker serves to provide input overload and fault protection.

10. SNMP/HTTP Network slot
Slot to install the optional SNMP card for remote network control and monitoring.

11. Serial Port I (Primary)
Serial port I provides bi-directional communication between the UPS and the computer. The UPS can control the computer's shutdown in case of an emergency, and at the same time, the computer can monitor the UPS and alter its various programmable parameters.
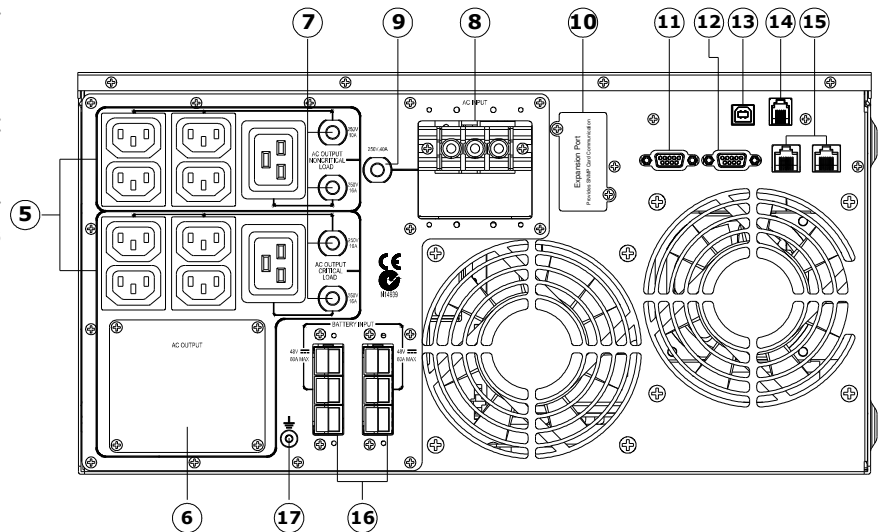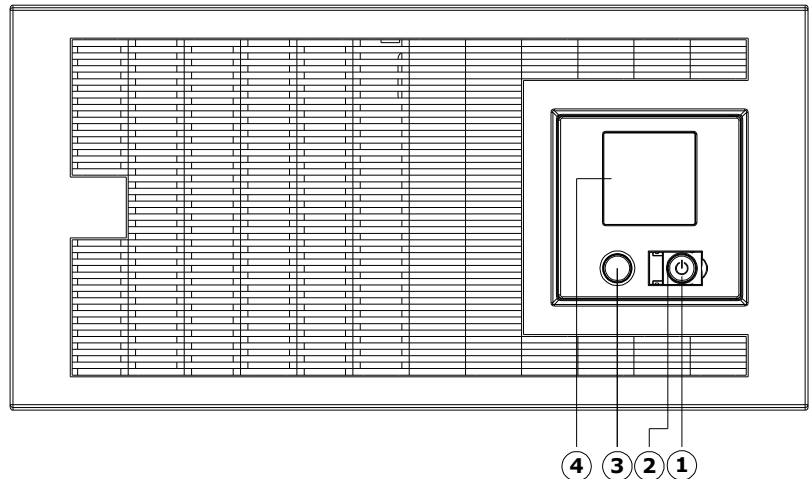
12. Serial Port II (Secondary)
Serial Port II allows the UPS to initiate a connected computer's graceful auto-shutdown in case of an emergency.

13. USB port to PC
This is a connectivity port allowing communication and control between the UPS and the connected computer. You should install the PowerPanel® Business Edition Agent software on the PC/Server connected with the USB cord.

14. EPO (Emergency Power Off) Port:
Allows for an emergency UPS Power-Off from a remote location.

15. Surge Protected Communication Ports - RJ11/RJ45
These ports are used to protect standard RJ-45/RJ-11 based, (ADSL, LAN, Phone/Modem-Lines), and cabling systems from surges.

16. Extended Runtime Battery Pack Connector
Provides a connection for additional CyberPower XL Battery Packs

17. Ground Stud
Use the Ground Stud to ground the UPS.
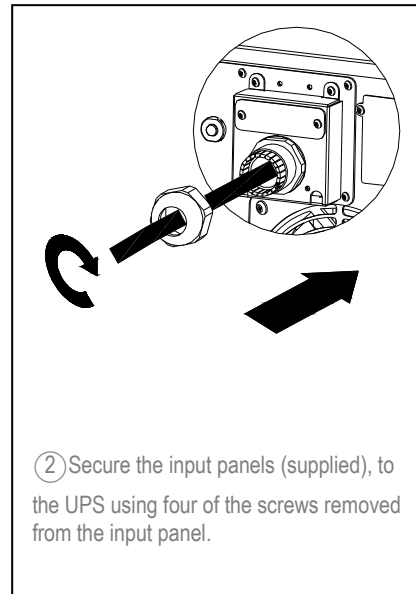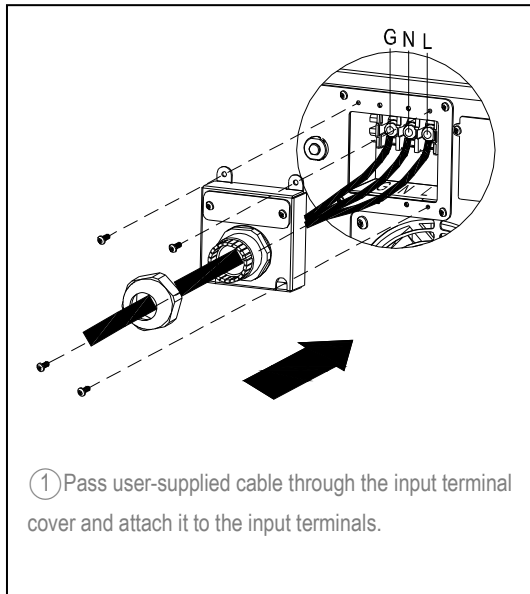
HARDWIRE THE INPUT/ OUTPUT TERMINALS

CAUTION! To avoid electrical shock, before hardwiring the UPS (in/out power cord), turn the unit OFF and disconnect the unit from utility power. The in/out power cord MUST be grounded.

CAUTION! To avoid electrical shock, turn off and unplug the unit first, then install the input/output power cord with grounded. Connect the ground wire prior to connecting the line wires!
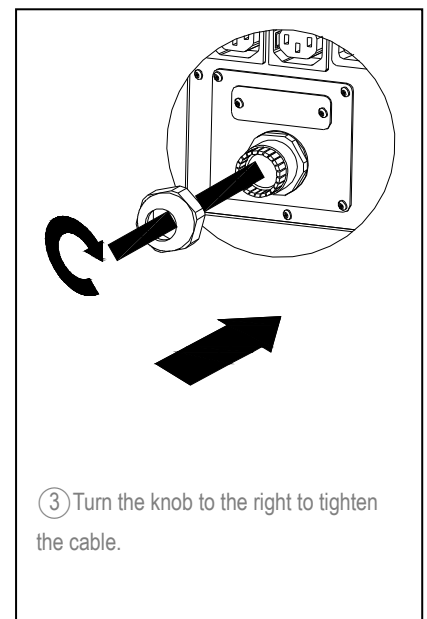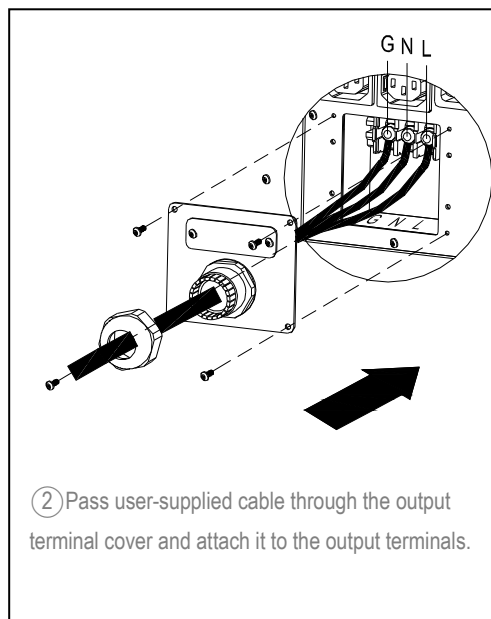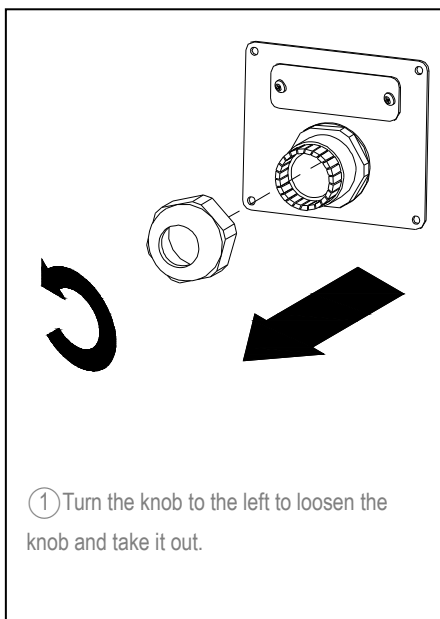
CAUTION! Do not use improper size power cord to avoid damaging your equipment and avoid fire hazards.

CAUTION! Wiring must be done by qualified personnel.

INPUT TERMINALS

① Pass user-supplied cable through the input terminal cover and attach it to the input terminals.

② Secure the input panels (supplied), to the UPS using four of the screws removed from the input panel.

OUTPUT TERMINALS

① Turn the knob to the left to loosen the knob and take it out.

② Pass user-supplied cable through the output terminal cover and attach it to the output terminals.

③ Turn the knob to the right to tighten the cable.

HARDWARE INSTALLATION

These versatile UPS systems can be mounted in a rack mount or vertical /tower orientation. This versatility is especially important to growing organizations with changing needs that value having the option to position a UPS on a floor or in a rack mount system. Please follow the instructions below for the respective mounting method.
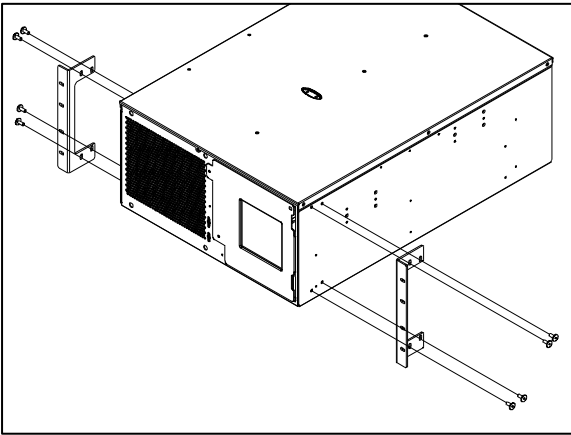
SAFETY PRECAUTIONS

CAUTION! To prevent the risk of fire or electric shock, use only the supplied hardware to attach the mounting brackets.

RACKMOUNT INSTALLATION

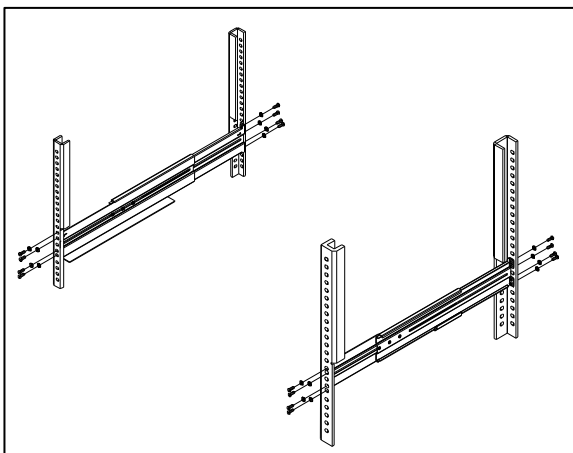**Step 1: Take out the internal battery modules first. (See page 10)**

Step 2: Rack mount ears installation

Attach the two rack mount ears to the UPS using the provided screws.


Step 3: Rack mount rail Installation

Ensure rack stability prior to installing devices in the rack.


Attach the rack mount rails to your rack using fasteners that are designed for your rack system.

Step 4: Adjust rack mount rails to fit your rack

Take the rack mount rail inscribed with an "L" (Left) and attach it to the rear bracket of the Rack-mount Rail using three (3) of the six (6) Rack-mount Rail Screws. Do not fully tighten the rack mount rail screws, as the rack mount rails will need to be adjusted to fit your rack. Once complete, perform the same steps for assembling the Rack-mount Rail inscribed with an "R" (Right).
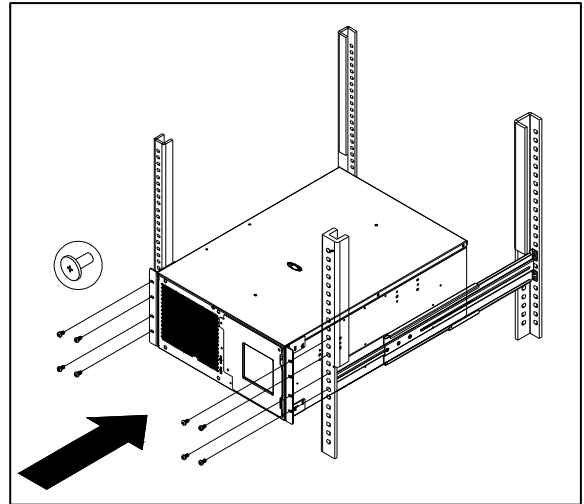
Step 5: Carefully align the front panel connector and latches with the PR5000ELCDRTXL5U/ PR6000ELCDRTXL5U
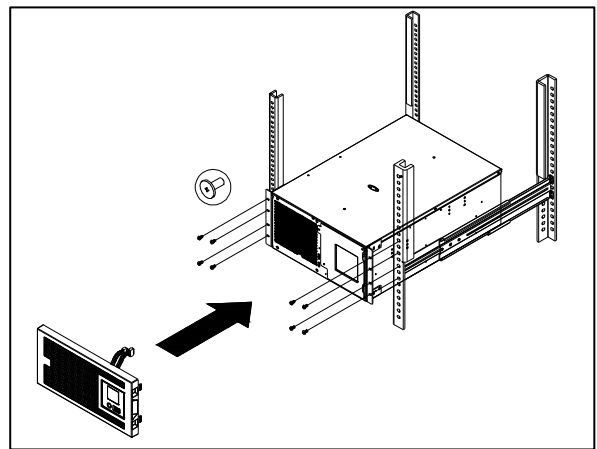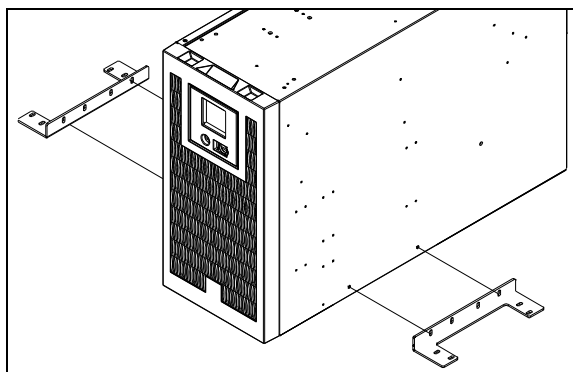

CAUTION! The UPS must be installed at the bottom of the rack system.

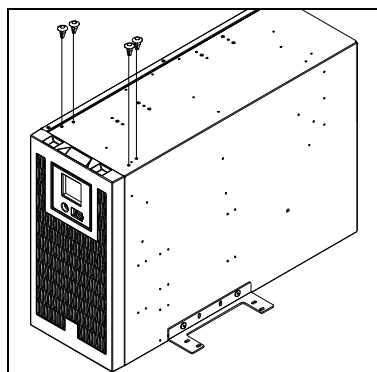**CAUTION!** Do not lift the front panel when removing the UPS unit.

VERTICAZL/TOWER INSTALLATION

Step 1: Attach the base stands
Simply slide the base stands onto the bottom of the UPS, roughly 8-10" apart.

Step 2: Attach dust covers
Insert dust covers into the rack mount ear screw holes that are not being used.

Step 3: Rotate the Multifunction LCD Readout
Separate the front panel and the UPS. Gently lift the LCD out. Rotate it to the preferred orientation. Reinstall the display for a tower configuration.
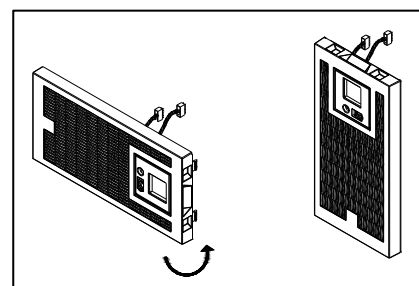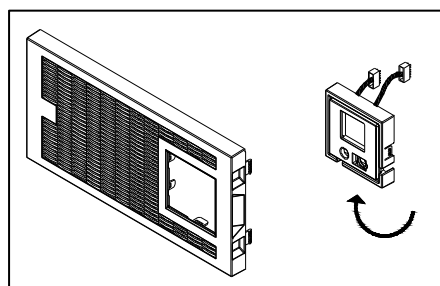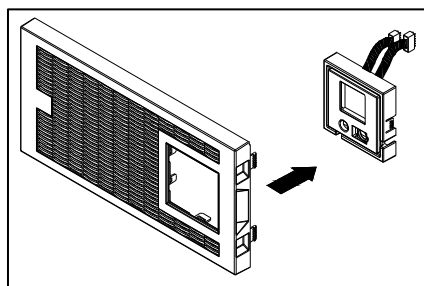
ELECTRICAL INSTALLATION

After completing the hardware installation of the UPS, you are now ready to plug in the UPS and attach your equipment.

SAFETY PRECAUTIONS

- CAUTION! - Installation environment should be in a temperature and humidity controlled indoor area free of conductive contaminants. Do not install this UPS where excessive moisture or heat is present (Please see specifications for acceptable temperature and humidity range)
- CAUTION! - Never install a UPS, or associated wiring or equipment, during a lightning storm.
- CAUTION! - Do not work alone under hazardous conditions.
- CAUTION! - To reduce the risk of electric shock, do not remove the top cover.
- CAUTION! - The battery can energize hazardous live parts inside even when the AC input power is disconnected.
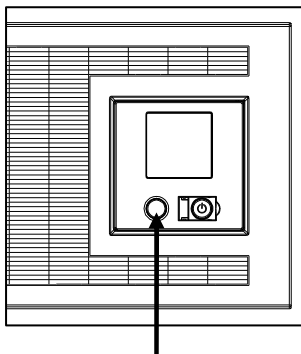
DEFINITION FOR ILLUMINATED LCD INDICATORS

MULTIFUNCTION LCD READOUT
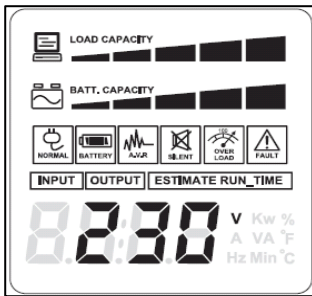
The multifunction LCD readout provides ready access to power/battery condition vitals, such as: Runtime, Load, Temperature, and much more.

The screen is also rotatable so the UPS can be used in either rack mount or vertical/tower orientation.

BASIC OPERATION

Screen toggle – To toggle through the status screens press the Select button which is located directly next to the LCD.

Screen illumination– After 30 seconds of inactivity, the LCD backlight will automatically turn off to conserve energy. Keeping the LCD screen lit at all times is not an option on this UPS.

Select Button

- If the LCD screen is not lit pressing the Select button once will turn the LCD on. If the LCD screen is lit, then pressing the Select button once will toggle through the status screens.
- Pressing and holding the Select button for four (4) seconds while UPS is in Normal operation will initiate the Self Test.
- Pressing and holding the Select button for four (4) seconds while UPS is in Battery/Offline mode will activate Silent Mode on the UPS.

Select Button

MAIN FEATURES

Load Level: The total load of the connected equipment shown in 20% increments.

Battery Capacity: The battery's current charge level shown in 20% increments.

Normal Icon: This icon appears when the UPS is working under normal conditions.

Silent icon: This icon appears when the UPS is in silent mode. During Silent mode, the unit's alarm does not sound until the Battery Capacity falls to < 20%.
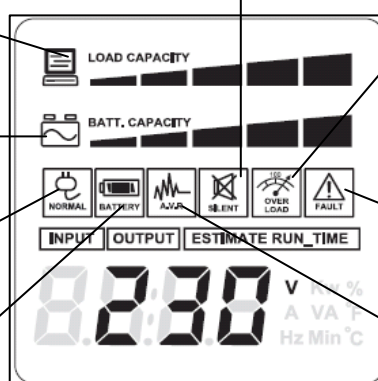
Overload icon: This icon appears when the Battery/Surge outlets on the UPS are overloaded. The UPS will also sound an alarm at this point. To clear the overload, the total load of the connected equipment must be less than the unit's maximum capability. The easiest way to correct this problem is to remove noncritical equipment from the Battery/Surge outlets.

Fault icon: This icon appears if there is an internal problem with the UPS. Please contact Technical Support if this icon is lit.

Battery Icon: This icon appears when the UPS is operating using battery power. The UPS will also sound alarms (two short beeps followed by a pause) when this icon is lit. When the Battery Icon is lit and the Battery Capacity falls to 20% the frequency of the alarms will increase indicating that the UPS batteries are nearly out of power. If this occurs, it is recommended that you either restore AC power, or manually power down your equipment that may be negatively affected by sudden power loss.

Automatic Voltage Regulation (AVR) icon: This icon appears when the UPS is automatically correcting AC input line voltage without using battery power. This is a normal, automatic operation of your UPS, and no action is required. The AVR in this UPS continuously conditions the power to a nominal 220/230/240V output to connected equipment. In the event of a complete power loss, severe brownout, or over voltage, the UPS relies on its internal battery back up to supply a consistent 220/230/240V output.
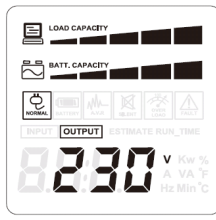
TOGGLE SCREENS
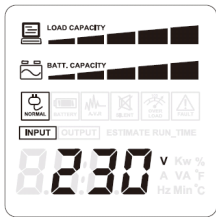
Input Voltage

The Input Voltage screen displays the AC voltage that the UPS system is receiving from the utility wall receptacle. This can be used as a diagnostic tool to identify poor quality input power. Units are listed in V (Volts).

Output Voltage

The Output Voltage screen measures, the AC voltage that the UPS is providing to your connected equipment via the UPS outlets. Units are listed in V (Volts).
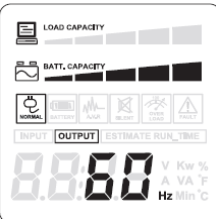
Output Frequency

The Output Frequency screen displays the current frequency at which the UPS is operating. Units are listed in Hz (Hertz).
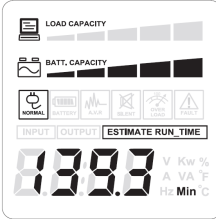
### Estimated Runtime

The Estimated Runtime Screen displays how many minutes of runtime can be expected of the UPS if it were to experience a power outage. Note: The number displayed may be less than actual runtimes for low loads.

Load Capacity

Similar to the Load/Current Level screen, this displays the total load/current of the connected equipment expressed as a percentage (%).
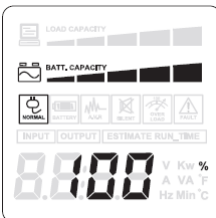
Battery Capacity

The Battery Capacity screen displays the battery's current charge level and is expressed as a percentage (%) of the battery's total capacity of 100%.
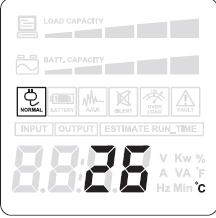
Temperature

The Temperature screen displays the internal temperature of the UPS in degrees Centigrade. Normal ranges are 0℃-40℃. If the temperature exceeds 40℃, additional methods should be implemented to cool the UPS (i.e. air conditioning, additional ventilation, isolation from other heat producing equipment, etc.).
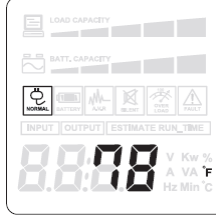
Temperature

The Temperature screen displays the internal temperature of the UPS in degrees Fahrenheit. Normal ranges are 32℉-104℉. If the temperature exceeds 104℉, additional methods should be implemented to cool the UPS (i.e. air conditioning, additional ventilation, isolation from other heat producing equipment, etc.)

Load

This displays the total load/current of the connected equipment.

Storage

To store your UPS for an extended period, cover it and store with the battery fully charged. Recharge the battery every three months to ensure battery life.

Battery Replacement

Please read and follow the Safety Instructions before servicing the battery. Battery replacement should be performed by trained personnel who are familiar with the procedures and safety precautions. Make a note for the replacement battery pack number, (RBP843a/RBP843b), regarding PR5000ELCDRTXL5U and PR6000ELCDRTXL5U.

CAUTION! – Put the battery pack marked RBP843b into the UPS unit first, and then put the battery pack marked RBP843a.

Safety Precautions

- CAUTION! – Only use replacement batteries which are certified by CyberPower Systems. Use of incorrect battery type is an electrical hazard that could lead to explosion, fire, electrical shock, or short circuit.

- CAUTION! – Batteries contain an electrical charge that could cause severe burns. Before servicing batteries, please remove any conductive materials such as jewelry, chains, wrist watches, and rings.
- CAUTION! - Do not open or mutilate the batteries. Electrolyte fluid is harmful to the skin/eyes and may be toxic.
- CAUTION! - To avoid electrical shock, turn off and unplug the UPS from the wall receptacle before servicing the battery.
- CAUTION! – Only use tools with insulated handles. Do not lay tools or metal parts on top of UPS or battery terminals.

Replacement Batteries

Please refer to the front side of the battery module for the model number of the correct replacement batteries. To purchase these batteries, log onto www.CPSww.com, or contact your local dealer.
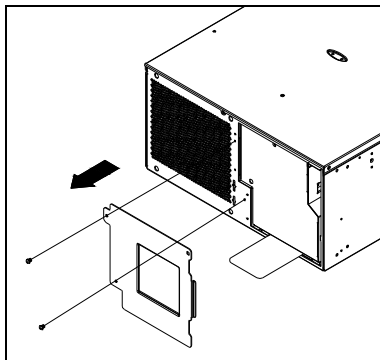
Battery Disposal

Batteries are considered hazardous waste and must be disposed of properly. Contact your local government for more information about proper disposal and recycling of batteries. Do not dispose of batteries in a fire.

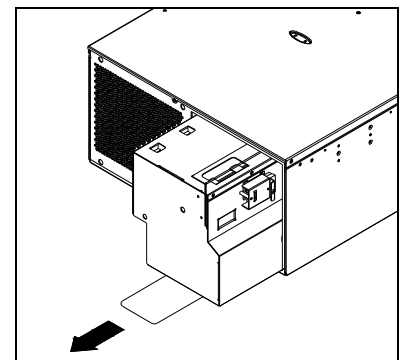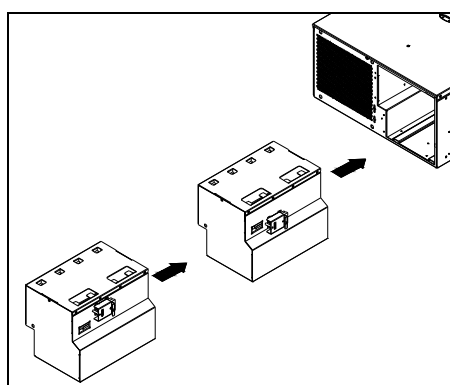## *Battery Installation*
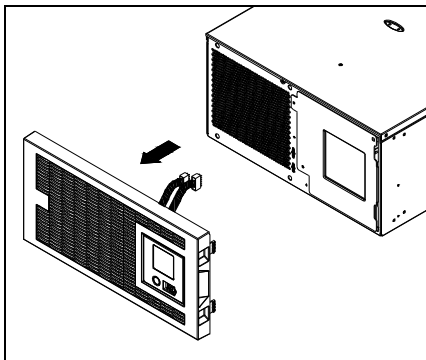
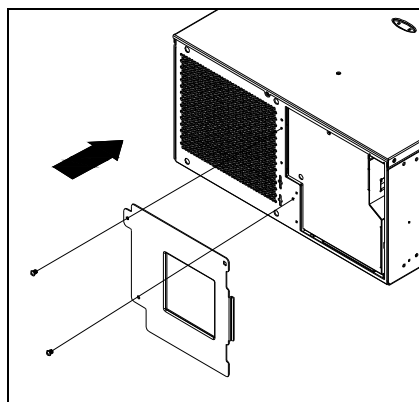① Remove the front panel.

② Remove the retaining screws of the cable protection cover, and then remove the cover itself.

③ Pull the plastic sticker out slowly to remove the battery module.

④ Put the new battery modules back into the compartment.

⑤ Tighten the screws and replace the cable protection cover and the front panel.

TECHNICAL SPECIFICATIONS

Model	PR5000ELCDRTXL5U	PR6000ELCDRTXL5U
Configuration		
Capacity (VA)	5000VA	6000VA
Capacity (Watts)	4000W	4500W
Energy-saving Technology	GreenPower UPS™ Bypass	
Input		
Nominal Input Voltage	230V	
Input Voltage Range	159-288V	
Input Adjustable Voltage Range	151-302V	
Frequency Range	50/60Hz +/- 3Hz	
Input Plug Type	(1) Terminal block	
Cold Start	Yes	
Output		
Output Voltage Note	Configurable for 220/ 230/ 240 nominal output voltage	
UPS Outlets	(8) IEC C 13, (2) IEC C19, (1) Terminal block	
On Battery Output Voltage	Pure Sinewave, 230V +/- 5%	
On Battery Output Frequency	50Hz+/- 0.1Hz	
Transfer Time (Typically)	4ms	
Overload Protection	On Utility: Circuit Breaker; On Battery: Internal Current Limiting	
Data line Protection		
Surge Protection	2430Joules	2430Joules
Phone / Network Protection	RJ11/RJ45 (One In/One Out)	
Battery		
Specifications	(16) 12V/9.0AH	
Sealed, Maintenance Free	Yes	
User Replaceable	Yes	
Recharge Time (Typically)	4 hours	
Status Indicators		
Indicator LEDs	Power On, LCD Display (Using Battery, AVR, Load Level, Battery Level)	
Audible Alarms	On Battery, Low Battery, Overload	
Environment		
Operating Temperature	32℉ to 104℉ (0℃ to 40℃)	
Operating Relative Humidity	0 to 95% Non-Condensing	
Management		
On-Device Features	Self Test, Auto-Charge, Auto-Restart	
Connectivity Ports	(1) USB, (2) Serial	
SNMP/HTTP Capable	Yes [With optional RMCARD 202]	
Software		
Power Management Software	PowerPanel® Business Edition	
Physical		
Dimensions (LxWxH) (mm)	640 x 430 x 222	
Weight (kg)	101	103
Safety		
Conformance Approvals	CE, C-tick	

TROUBLE SHOOTING

Problem	Possible Cause	Solution
Outlet does not provide 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 and then turn the UPS on.
	Batteries are discharged.	Recharge the unit for at least 4 hours
	Unit has been damaged by a surge or spike.	Contact CyberPower for repair.
	Uncritical outlets have turned off automatically due to an overload.	Push the toggle button to make the uncritical outlets turn on.
The UPS does not perform expected runtime.	Batteries are not fully charged.	Recharge the batteries by leaving the UPS plugged in.
	Batteries are degraded.	Contact CyberPower for repair.
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 220/230/240v outlet.
	The batteries have degraded.	Contact CyberPower for repair.
	Mechanical problem.	Contact CyberPower for repair.
PowerPanel® Business Edition/ PowerPanel® Personal Edition Edition is inactive.	The serial cable or USB cable is not connected.	Connect the cable to the UPS unit. You must use the cable that came with the unit.
	The cable is connected to the wrong port.	Try another port of your computer.
	The unit is not providing power of batteries.	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.

CyberPower Systems Inc.
www.cpsww.com