

1. Inspection

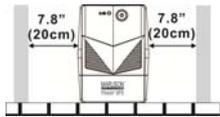
The following items are inside the box:

- User's manual
- UPS

Remove Power UPS from its package and inspect it for damage that may have occurred during shipping. If any damage is discovered, re-pack the unit and return it to the place of purchase.

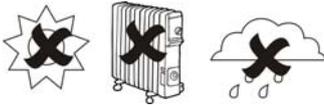
2. Place the UPS

Install this UPS in a protected area that is free of excessive dust and provide 7.8-inch (20-cm)



clearance on sides for adequate airflow around the unit.

- Avoid direct sunlight
- Avoid excessive heat
- Avoid excessive humidity or liquids
- Avoid excessive dust

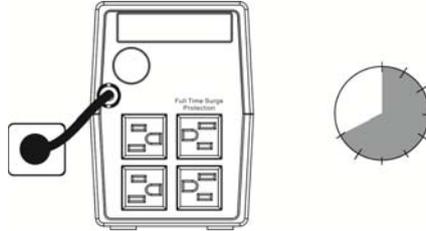


3. Connect UPS to Utility

Use the power cord that came with your UPS to connect the UPS directly to the wall outlet.

Battery Charging:

The UPS battery charges whenever the UPS is connected to utility power and typically requires less than eight hours to charge fully. Operating runtime is reduced until the battery is fully charged.

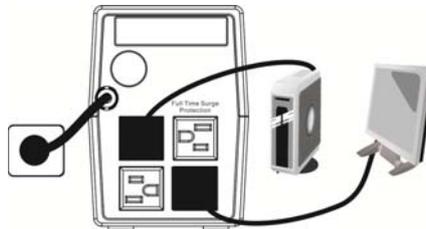


4. Connect Equipment to UPS

Connect the equipment to either, Battery Power Supplied or Surge-protected outlets.

Battery Power Supplied Outlets :

Connect computer, monitor, and external drive to the "Battery Power Supplied" outlets. These outlets provide battery backup, EMI filtering, line conditioning, and surge protection. Battery power is automatically provided in case of power failure. **Ensure** Power Switch is kept in the "ON" position, otherwise, the UPS will be disabled and your equipment will not be protected during a power failure.



CAUTION: DO NOT connect a printer or any motorized products to any Battery Power Supplied Outlet.

5. Turn On/Off

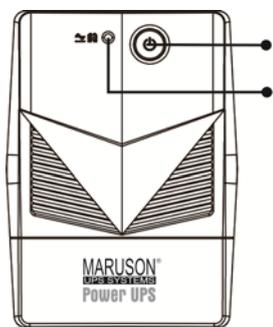
To turn on the UPS unit, press the power switch lightly. To turn off the UPS unit, press the power switch again.



6. Cold Start Function

When the UPS is off and there is no power utility, it's still possible to cold start the UPS unit to power the loads.

UPS INDICATORS & CONTROLS



Power Switch

UPS Status Indicator

AC mode: green lighting
Battery mode: yellow flashing
UPS fault: red lighting



Power Switch

Press and release the button to supply power to the Battery Power Supplied Outlets. Press and release the button again to switch off power to the Battery Power Supplied Outlets.

UPS Status Indicator

AC Mode Indicator:

This green LED is lit when the UPS transfers utility power to both Battery Power Supplied Outlets and Full Time Surge Protection Outlets.

Battery Mode Indicator

This yellow LED flashes when the utility power is outside acceptable limits and the battery supplies power only through the Battery Power Supplied Outlets.



Battery Mode: sounding every 10 seconds

Low Battery: sounding every seconds

UPS fault Indicator

This red LED is lit when the UPS occur fault.



Overload: sounding every 0.5 seconds

Fault: continuously sounding

Safety Caution

SAVE THESE INSTRUCTION-This manual contains important instructions for models Power UPS 1100/1600/2200 that should be followed during installation and maintenance of the UPS and batteries.

- This UPS utilizes voltage that may be hazardous. Do not attempt to disassemble the unit. The unit contains no user replaceable parts. Only factory service personnel may perform repairs.
- This pluggable type A equipment with battery already installed by the supplier is operator installable and may be operated by laymen.
- The mains socket outlet that supplies the UPS shall be installed near the UPS and shall be 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.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Connection to any other type of receptacle other than a two-pole, three-wire grounded receptacle may result in shock hazard as well as violate local electrical codes.
- In the event of an emergency, press the "OFF" button and disconnect the power cord from the AC power supply to properly disable the UPS.
- Do not allow any liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- This unit intended for installation in a controlled environment (temperature controlled, indoor area free of conductive contaminants). Avoid installing the UPS in locations where there is standing or running water, or excessive humidity.
- Do not plug the UPS input into its own output.
- Do not attach a power strip or surge suppressor to the UPS.
- Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.
- To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heater or furnaces.

- Do not dispose of batteries in a fire as they may explode.
- A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries:
 - 1) Remove watches, rings, or other metal objects from the hands.
 - 2) Use tools with insulated handles.
 - 3) Wear rubber gloves and boots.
 - 4) Do not lay tools or metal parts on top of batteries.
 - 5) Disconnect charging source prior to connecting or disconnecting batteries terminal.
- Internal battery voltage is 12VDC. Sealed, lead-acid, 6-cell battery.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.
- When replacing batteries, replace with the same number and type of sealed lead-acid battery.
- Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes and may be toxic.
- Attention, hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage may still be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the connectors of the battery when maintenance or service work inside the UPS is necessary.

Battery Recycling Information

Your UPS contains non-spillable Sealed Lead Battery. On the battery, you will find the battery name. Please reference below chart for recycling information or contact your local distributor for assistance.

Battery Name	Recycling inside the USA	Recycling outside the USA
RITAR Battery	(800) 273-8599	N/A

Panel Information



- A** Battery backup outlets:
- B** AC input
- C** Fuse/Circuit breaker (option)
- D** USB com. port (option for 1100VA model)
- E** Modem/Phone/Network line surge protection
- F** Cooling fan (only for 1600/2200 models)

Specification

MODEL		POW-1100A(S)	POW-1600AS	POW-2200AS
CAPACITY		1100VA/600W	1600VA/900W	2200VA/1200W
OUTLET NUMBER	NEMA(120V)	6	8	8
	IEC(230V)	4	6	6
INPUT	Voltage	110/115/120VAC or 220/230/240 VAC		
	Voltage Range	81-145VAC or 162-290 VAC		
	Frequency	50/60 Hz (auto sensing)		
OUTPUT	Voltage	110/115/120VAC or 220/230/240 VAC		
	Frequency Regulation (Batt. Mode)	60 Hz or 50 Hz ± 1 Hz		
	Waveform	Simulated Sine Wave		
BATTERY	Battery Type & Numbers	12V/7Ahx2	12V/9Ahx2	12V/9Ahx2
	Backup Time	Up to 60 min.	Up to 85 min.	Up to 90 min.
PROTECTION	Full Protection	Discharge, overcharge, and overload protection		
PHYSICAL	Dimension (DxWxH)	320 x 130 x 182 (mm) 12.6 x 5.1 x 7.2 (inch)		
	Net Weight	8.2 kgs 18.1 lbs	10.4 kgs 22.9 lbs	10.6 kgs 23.4 lbs

*Specifications are subject to change without notice.

*Battery backup time based on basic PC and varies with equipment, configuration, battery age, temperature, etc

Troubleshooting

Problem	Probable Cause	Solution
No LED display on the front panel.	Low battery.	Charge the battery at least 8 hours.
	Battery fault.	Replace the battery with the same type of battery.
	The UPS is not turned on.	Press the power switch again to turn on the UPS.
Alarm continuously sounds when the mains is normal.	The UPS is overloaded.	Remove some loads first. Before reconnecting equipment, please verify that the load matches the UPS capability specified in the specs.
When power fails, backup time is shorten.	The UPS is overloaded.	Remove some critical load.
	Battery voltage is too low.	Charge the battery at least 8 hours.
	Battery defect. It might be due to high temperature operation environment, or improper operation to battery.	Replace the battery with the same type of battery.
	The mains is normal but LED is flashing.	Power cord is loose.

If any abnormal situations occur that are not listed above, please call for service immediately.

Product Warranty and Service Information:

For U.S. customers, please register your product at www.MarusonUSA.com.
For international customers, please contact your local authorized distributor or e-mail CustSrv@MarusonUSA.com for assistance.

MARUSON
UPS SYSTEMS

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