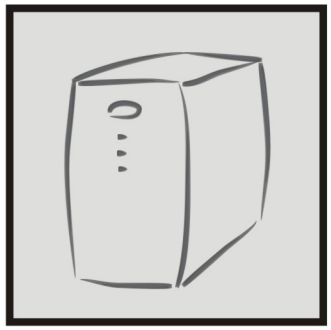
USER'S MANUAL



Please read and understand this instructions manual!

This manual provides safety, installation and operation instructions which guide you to the best performance of the product.

Please keep this manual!

It includes important instructions for safe use of the product and to obtain manufacturer's support in case of need.

Please keep or recycle the packaging materials!

Packaging materials used in the product are made to protect the products from damages during transportation.

Packaging materials are required in case the product needs to be sent back for service. Damage that may occur during transportation is not covered by the product's warranty.

1 INTRODUCTION

1-1 System Description

The product is Line Interactive UPS with LCD indicators, newest technology and powerful function.

The Line Interactive UPS is designed with 2-steps boost and 1-step buck AVR to stabilize utility voltage. Input voltage range is -30% +25%, and output voltage regulation is +/-10%.

The Line Interactive UPS provides perfect protection for your sensitive and critical devices.

1 INTRODUCTION

1-2 Features:

- Line interactive design
- Microprocessor control guarantees high reliability
- Frequency 50/60Hz auto-sensing
- Equipped with 2-steps boost and 1-step buck AVR to stabilize utility voltage
- Built-in DC start function enables UPS to be started up without AC power supplied
- UPS green mode (Energy saving function)
- Off-mode charging
- Modem/phone line surge protection (Optional)
- Over/low voltage, short-circuit, lightning and surge protection
- Built-in CCCV (Constant Current, Constant Voltage) battery charger

2 CAUTION

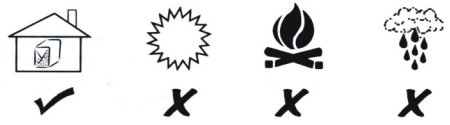
- The UPS contains voltage that is potentially hazardous. Qualified or certified technician should proceed all repairs and maintenance.
- The UPS has its own internal energy source (battery). The output receptacles may be active even when the UPS is not connected to an AC supply.
- The UPS is suitable for computers and electronic equipment with substantial rectifier or capacitive loads, not suitable for electronic equipment with significant inductive loads, such as motors & fluorescent lamps.
- Be sure to operate within the power rating of the UPS. Below 1/2 or 1/3 of the rated power is recommended for longer backup time & longer battery life.
- Do not place the UPS near excessive humidity, under sunshine, or close to heat-emitting sources.
- If the UPS is out of order, detach the power cord and consult your dealer right away. Do not remove cover; there is no serviceable part inside.
- The unit should be supplied by a grounded source. Do not operate the unit without a ground source.
- The socket should be installed near the equipment and be easily accessible.

2 CAUTION

- Do not plug the UPS's power cord into itself. That will result in a safety hazard.
- A qualified technician or electrician in accordance with local electrical code should perform installation.

3 INSTALLATION

The UPS must be installed in a protected environment away from heat-emitting appliances such as a radiator or heater. Do not install this product where excessive moisture is present.

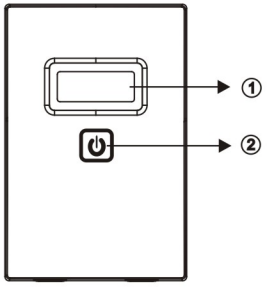


CAUTION : Never connect a laser printer or plotter to the UPS. A laser printer or plotter periodically draws significantly more power than its idle status, and may overload the UPS.

4 OVERVIEW

■ **Front Panel**

1.LCD screen.
2.Control button.

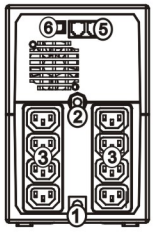


■ **Rear Panel**

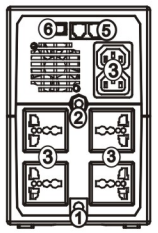
1.AC Input: Connect to input power cord
2.AC Fuse/ Circuit Breaker
3.Back-up/AVR Outlets
4.Surge Protection Outlets
5.RJ-45 port(Optional)
6.USB communication port (Optional)

4 OVERVIEW

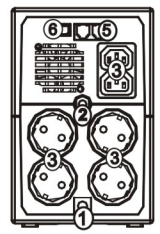
■ **IEC-320**



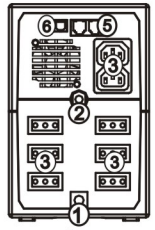
■ **Universal**



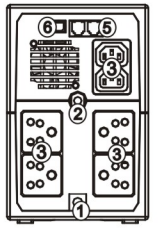
■ **German**



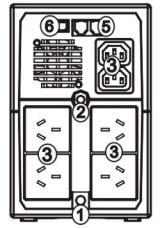
■ **Italian**



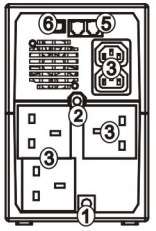
■ **Indian**



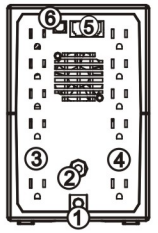
■ **Australian**



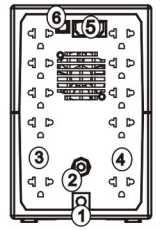
■ **UK**



■ **Nema5-15R**



■ **Universal Nema**



5 OPERATION

5.1

When UPS is connected to city utility, but UPS is not powered on, UPS will charge battery automatically and LCD display will show "UPS off". Please press main switch on front panel for 1 second to turn on UPS.

5.2

To turn off UPS when UPS is under AC mode, please press main switch on front panel for 4 seconds.
To turn off UPS when UPS is under battery mode, please press main switch and then UPS will shut down completely in 10 seconds.
This UPS is designed with "Off-mode charging",so UPS will charge battery continuously when UPS is under AC normal. If users intend to power off UPS completely, users have to disconnect input power cord from wall outlet of city utility.

5.3 DC Start:

Press on main switch for 1 second when city utility is black out, UPS will be turned on and then go to battery (back-up) mode. To turn off UPS, please press main switch for 4 seconds again. If users want to turn on UPS again, please wait for 10 seconds to press main switch for 1 second again.

5.4

When UPS is under battery mode and battery voltage is too high or low, buzzer will beep.

5.5

Buzzer will beep twice every 8 seconds when city utility is black out. To silence alarm, please simply press main switch. To re-start alarm, please press main switch again.

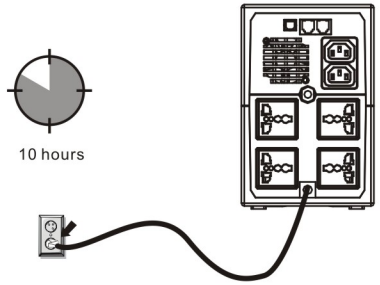
6 STORAGE

To ensure battery lifetime, please kindly read and also follow below instruction thoroughly.

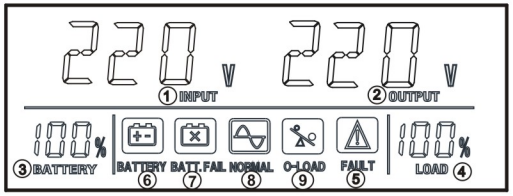
The UPS unit is shipped from factory with its internal batteries full charged. Some battery power might be depleted during shipment or transportation. It is recommended to recharge batteries prior to install UPS. Plug the UPS unit into an appropriate AC power supply and leave it for at least 10 hours to fully recharge its internal batteries.

Extended Storage

Storage Temperature	Recharge Frequency	Charging Duration
5 to 86℉(-15 to 30℃)	Every 6 Months	10 Hours
86 to 113℉(30 to 45℃)	Every Month	10 Hours



7 INDICATION AND CONTROL



No	Indicator	Description
1	Input Voltage	Indicate input line voltage value. Input voltage will blink continuously in back up mode
2	Output Voltage	Indicate output voltage value
3	Battery Capacity	Estimated battery capacity, the accuracy is influenced by UPS operation mode and load level.
4	Load Capacity	The load level, percentage of full load.
5	Fault	Icon is lighted: UPS is in fault condition and alarm will beep continuously
6	Battery	Icon is lighted: AC power is abnormal and UPS is on back up mode.
7	Battery Fail	Icon is lighted: UPS battery is abnormal, please check or replacement battery.
8	Normal	Icon is lighted: UPS is under normal status.
9	Overload	Icon is lighted: UPS is overloaded, buzzer will beep continuously. Please remove some loads.

8 TROUBLE SHOOTING

Please follow below steps to check UPS upon UPS failure. If there is no problem with below points, please send UPS for service

- Is main power switch turned on?
- Is the UPS plugged into a working wall outlet?
- Is the line voltage within the specified rating?
- Is the fuse blowned (at rear panel)?
- Is the UPS over-loaded?
- Is battery not fully charged?

Please provide the following information when call for service.

1. Model number, serial number.
2. Date of the problem occurred, date of purchase.
3. Full description of the problem including load, LCD, alarm status, installation condition, and working environment, ...etc.

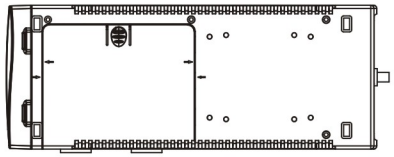
TROUBLESHOOTING CHART

PROBLEM	POSSIBLE CAUSE	ACTION TO TAKE
UPS cannot turn on and LCD is not lighted	Battery voltage is less than 10V	Recharge batteries
	PCB failure	Replace the PCB, call for service
	Load is less than 25W at battry mode	Normal condition,"No load shutdown function" is active
UPS stays at battery mode always	Power cord lose	Plug the power code tightly
	AC fuse burn out	Replace the AC fuse
	PCB failure	Replace the PCB, call for service
Back up time is too short	Battery is not fully charged	Recharge the UPS at least 5 hours
	Battery defective	Replace the Battery, call for service
Buzzer beeps continuously	UPS is overloaded	Remove some loads

9 INSTRUCTION TO CHANGE BATTERY

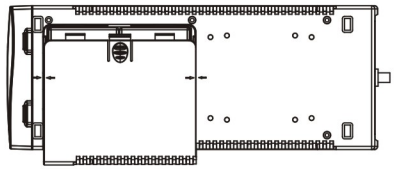
1. Please place UPS device as below picture.

A



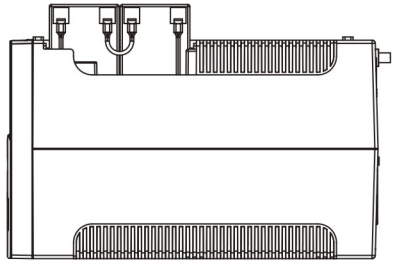
2. On the cover of battery compartment, there is a round button.
   Please press the round button and then push cover out till arrows on cover are aligned with arrows on UPS housing. After arrows on cover are aligned with arrows on UPS housing, the cover can be dismantled from UPS housing easily.

B



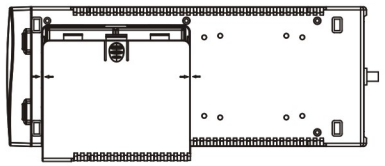
3. After cover is dismantled, please pull out battery and then disconnect wires from battery positive and negative terminals.
   Get a new battery and then connect wires to positive and negative terminals of new battery.
   Please make sure to connect wires to positive and negative terminals correctly, otherwise UPS device might be damaged.
   It is normal to have small spark when connecting wires.

C



4. Please take cover of battery compartment and then align arrows on cover with arrows on UPS housing. After arrows are all aligned, push cover in and then double check if cover is well-locked.
   Cover has to be well-locked, otherwise battery might fall out under operation and cause danger.

B



10 SPECIFICATIONS

Capacity	1000VA-2000VA
Input	
Voltage	110/115/120VAC or 220/230/240VAC
Voltage Range	-30% +25%
Frequency	50/60Hz Auto-sensing
Output	
Voltage Regulation (Batt.Mode)	+/-10%
Frequency	50/60Hz +/-1Hz
Waveform	Simulated Sinewave
Transfer Time	<6ms (Typical)
Battery	
Battery Voltage	24VDC (2pcs 12V/7AH or 9AH)
Recharge Time	5 hours to 90% after complete discharge
Battery Protection	Over Charge and Over Discharge Protection
Advanced Battery Management	Yes
Function	
Display	LCD Display (Multi-Data)
Alarm	Buzzer for Back-up Mode, Battery Low, Overload and Fault
Output Short Protection	AC Fuse and Electronic Circuit (Line Mode);Electronic Circuit (Back-up Mode)
AVR (Automatic Voltage Regulation	Yes
DC Start Function	Yes
Over/Under Voltage Protection	Yes
Safety Standard	
LVD	CE(EN60950-1:2006+A11:2009 +A1:2010+A12:2011)
EMC	CE (EN55022:2010 ; EN55024:2010)
Environment	
Operating Temperature	0-40°C
Relative Humidity	0-95%, non-condensing
Audible Noise	< 40dB at 1M
Physical	
Dimension (D*W*H)	343*135*208mm
Design,Manufacture,Service ISO9001:2008	