LTEU SERIES USER MANUAL

Thank you for selecting this UPS. It provides you with better protection for connected equipments.

Please read this manual!

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

Please save this manual!

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

Please keep or recycle the packaging materials!

Packaging materials used in our products are designed to provide protection from transportation. These materials are necessary in case that the equipment needs to be shipped back for service. Damage that may occur during the shipment is not covered by the product's warranty.

1. INTRODUCTION

1-1 System Description

The product is line interactive UPS with LED indicators, newest technology and powerful function. The line interactive UPS is designed with 2 steps boost and 1 step buck AVR to stabilize input voltage. Input voltage range is

-30%, +25%, but output regulation is +/- 10%. The line interactive UPS provides you with the ability of perfect protection for your critical devices.

1-2 Features

- Line interactive design.
- Microprocessor control guarantees high reliability.
- Frequency 50Hz/60Hz auto sensing.
- Equipped with 2 steps boost and 1 step buck AVR to stabilize Utility voltage.
- Built-in DC start function enable UPS to be started up without AC power supplied.
- UPS green mode (Energy saving function).
- Off mode charging.
- Modem / phone line surge protection.
- Over / low voltage, short circuit, lighting, surge (option) protection.
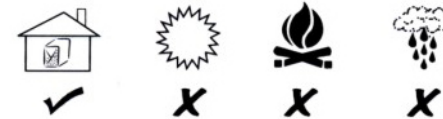
2. CAUTION

- 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 the Utility.
- 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 and 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 and 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.
- Do not plug the UPS 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.
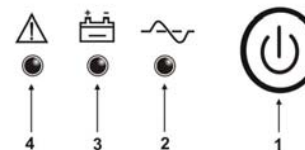

Caution: Never connect a laser printer or plotter to the UPS. A laser printer or plotter periodically draws significantly more power that its idle status, and may overload the UPS.
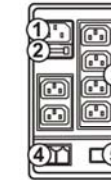
4. OVERVIEW

■ Front Panel
1. **Main Power Switch:** On/Off or Silence Button
2. **On-Line LED:** AC normal
3. **Back-Up LED:** Battery in backup
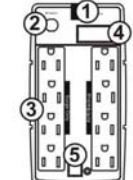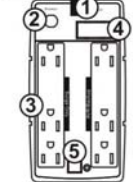4. **Cut-Off LED:** Overload or Fault

■ Rear Panel
1. **AC Input:** Connect to input power cord
2. **AC Fuse/ Circuit Breaker**
3. **Outlets**
4. **RJ-45 or RJ-11 (optional)**
5. **Communication interface:**
   USB port (Optional)

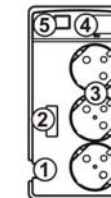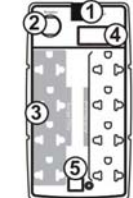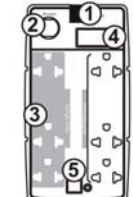■ IEC-320   ■ Standard Nema5-15R

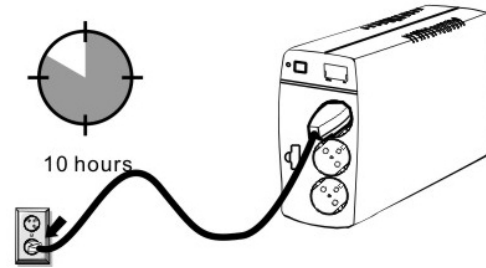■ UNIVERSAL R4   ■ Universal Nema

■ GERMAN

5. OPERATION

- When the UPS is connected to the Utility, but UPS is not powered on, UPS will charge battery automatically and green LED display will flash every 2 seconds. Please press main switch on front panel for 1 second to turn on UPS.

- 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, 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 plug out power cord from the Utility.
- Press on main switch for 4 seconds when the Utility is black out, UPS will be turned on and then go to back up mode. To turn off the 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 4 seconds again.
- When UPS is under battery mode and battery voltage is too high or too low, buzzer will beep.
- Buzzer will beep twice every 8 seconds when the Utility is black out. To silence alarm, please simply press main switch. To restart alarm, please press main switch again.

6. STORAGE

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

The UPS is shipped from the factory with its internal battery fully charged, however, some charge maybe lost during shipping and the battery should be recharged prior to use. Plug the UPS into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 10 hours.

Extend Storage

Storage Temperature	Recharge Frequency	Charging Duration
-15 - 30 ° C	Every 6 months	10 hours
30 - 45 ° C	Every months	10 hours

10 hours

7. INDICATION

	Status	Y-LED	G-LED	R-LED	Buzzer
Backup Mode	Battery normal, load normal	2 flashes every 4 seconds	Off		2 beeps every 8 seconds
	No load (for green mode function only)	1 flash every 4 seconds	Off		1 beep every 8 seconds
	Overload (will shut down at 120% of full load)	2 flashes every 4 seconds	Off	On	Continuous beep
	Over temperature	32 flashes every other 2 seconds	Off		Depends on load situation
	O/P short circuit	32 flashes every other 2 seconds	Off		32 Beeps every other 2 seconds
	Low battery	4 flashes every second	Off		4 beeps every second
	Over battery voltage	8 flashes every second	Off		8 beeps every second
	In phase lock (AC good, PLL working)	Off	4 flashes every second	Off	Off

	Status	Y-LED	G-LED	R-LED	Buzzer
AC Normal Mode	Battery full	Off	Continuous On	Off	Off
	Battery charge 70% - 90%	Off	1 blink every 8 seconds	Off	Off
	Battery charge 50% - 70%	Off	1 blink every 4 seconds	Off	Off
	Battery charge 30% - 50%	Off	1 blink every 2 seconds	Off	Off
	Battery charge 0% - 30%	Off	1 blink every second	Off	Off
	Overload (shut off at 120% of full load)	Off	On		Continuous Beep

	Status	Y-LED	G-LED	R-LED	Buzzer
Off Mode	AC I/P disconnected (UPS OFF completely)	Off			Off
	AC I/P normal (Battery in charging)	Off	1 flash every 2 seconds	Off	
	UPS timer is set (through RS232)	1 flash every 2 seconds	1 flash every 2 seconds	Off	

8. TROUBLE SHOOTING

Upon UPS failure, please kindly check UPS by following steps. If there is no problem with below points, please kindly 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 rating specified?
- Is the fuse broken (at rear panel)?
- Is the UPS overload?
- Is the battery not fully charged?

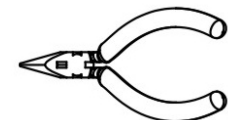Please provide the following information when call for service:

- Model number, serial number
- Date of the problem occurred, date of purchase

- Full description of the problem including load, LCD and alarm status, installation condition, working environment, etc.

UPS can not turn on LED not light	Battery voltage less than 10V	Recharge the battery
	PCB failure	Replace PCB, call for service
	Load less than 25W at battery mode	Normal condition, no load shutdown function is active
UPS always at battery mode	Power cord lose	Plug in the power cord
	AC fuse burn out	Replace the AC fuse
	PCB failure	Replace PCB, call for service
Back up time to short	Battery not fully charged	Recharge the UPS at least 5 hours
	Battery defective	Replace the battery
Buzzer continuous beeping	Overload	Remove some loads

9. OPEN UPS CABINET

Required tool: pliers (Needle Nose)

- There is a square hole on UPS front

panel. Please insert needle nose plier into the square hole and then press the plier downwards as (A) shown in below picture.

- Pull out UPS front panel as (B) shown in below picture.
- Please release screws on right and left UPS panels to open UPS cabinet completely.