

# USER'S GUIDE

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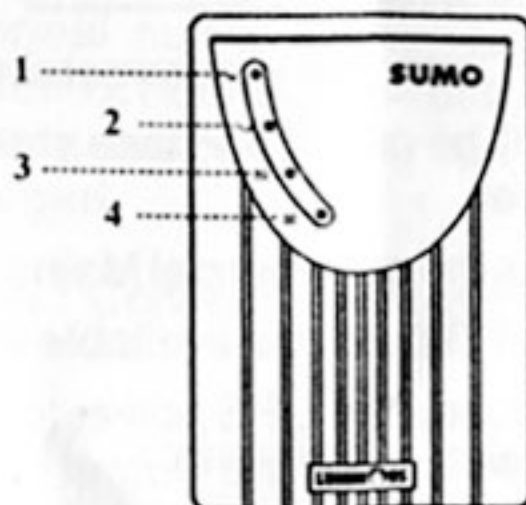
## 1. INTRODUCTION

- 1.1 We thank you for selecting Luminous UPS System & Welcome you to the family of Luminous UPS Systems users.
- 1.2 **FUNCTION** : This uninterruptible power supply (UPS) provides clean, reliable, AC power to your computer and peripheral loads, and protects them from power blackouts, sags, surges interference.
- 1.3 **FUNCTIONAL DESCRIPTION** : Normally, the UPS operates on mains, supplying power to the load from the utility input, The battery charger uses the mains power to keep the battery at an optimal level. When the power fails, the UPS transfers the load to the battery. The inverter converts the battery's DC power to AC power. The loads operate normally until the battery is exhausted. The load is automatically transferred back to the utility when the normal mains restores. The UPS also provides surge protection and RFI filtering as well as output voltage regulation which increases undervoltage and reduces over voltage conditions.

## 2. PRECAUTION FOR USE

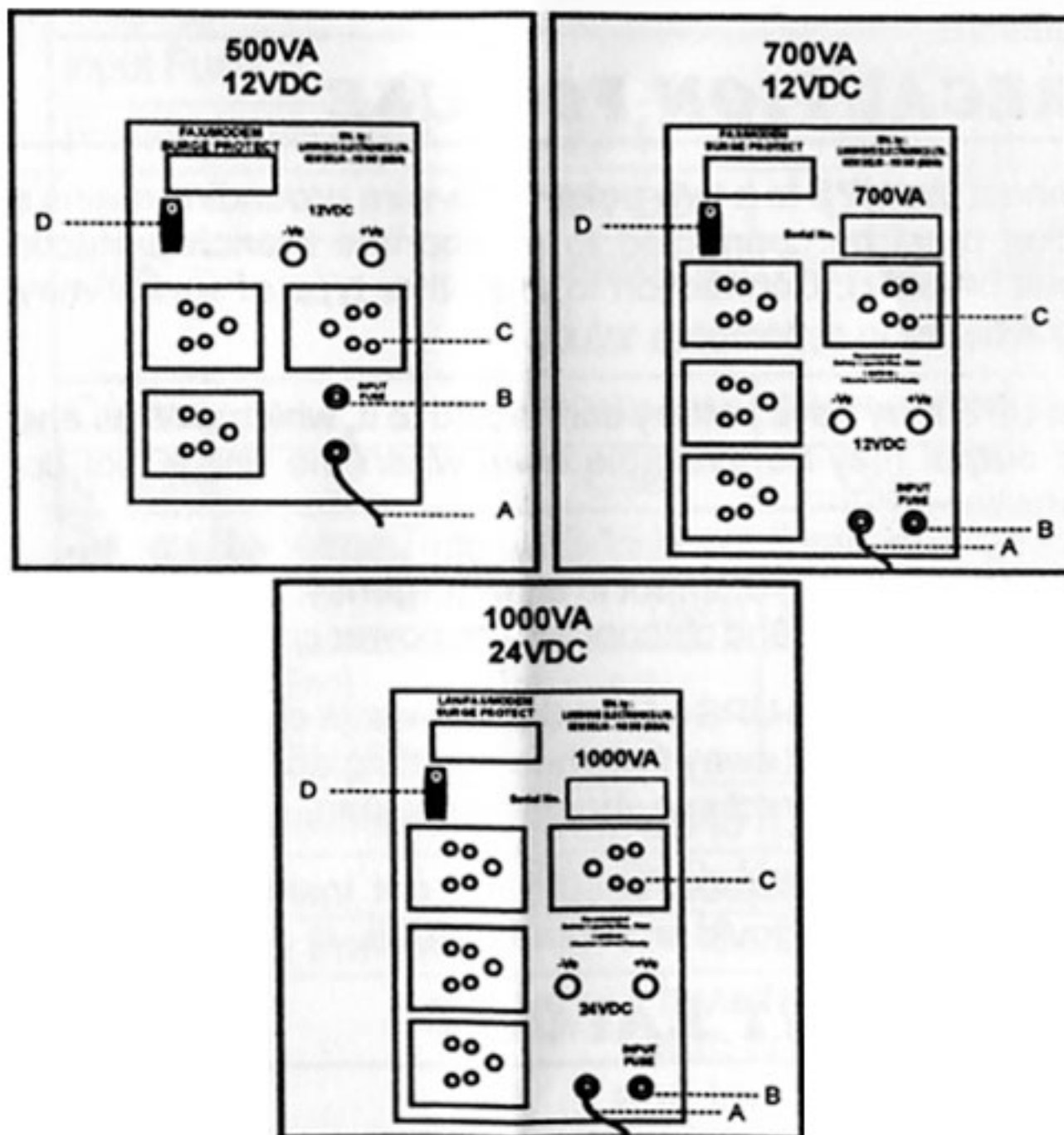
- a) Connect the UPS to a two-pole, three-wire grounding mains socket. The socket must be connected to appropriate branch protection (fuse or circuit breaker). Connection to any other type of socket may result in a shock hazard.
- b) This UPS may have battery connected to it, which acts as energy source and output may be available even when the unit is not connected to mains supply.
- c) To switch off the UPS output in an emergency, use the Switch on back to switch the UPS off and disconnect the power cord from the mains.
- d) Avoid installing the UPS where there is water or excessive humidity. The unit should be kept away from heat emitting appliances like heater, oven etc. Exposure to direct sun should be avoided.
- e) Water or foreign objects should not get inside the UPS. Do not put objects containing liquid on or near the unit.

## 3. UPS FRONT LAYOUT



1. **MAINS ON LED** : Glows when commercial mains is available as input to the unit.
2. **ON MAINS LED** : Glows whenever output is in mains mode & when the input voltage available from commercial mains is within normal limits (150 V-275V).
3. **ON BATTERY LED** : Glows when ever output is in Inverter Mode.
4. **BATTERY LOW TRIP LED** : Glows when
  - a) Battery gets exhausted because of usage.
 In above condition no output would be available in battery mode (See Sec. 6.0)
5. In case of overload UPS will trip & can be restarted by reducing the load & turning Off/On the Switch, located at UPS back.

## 4. UPS BACK LAYOUT



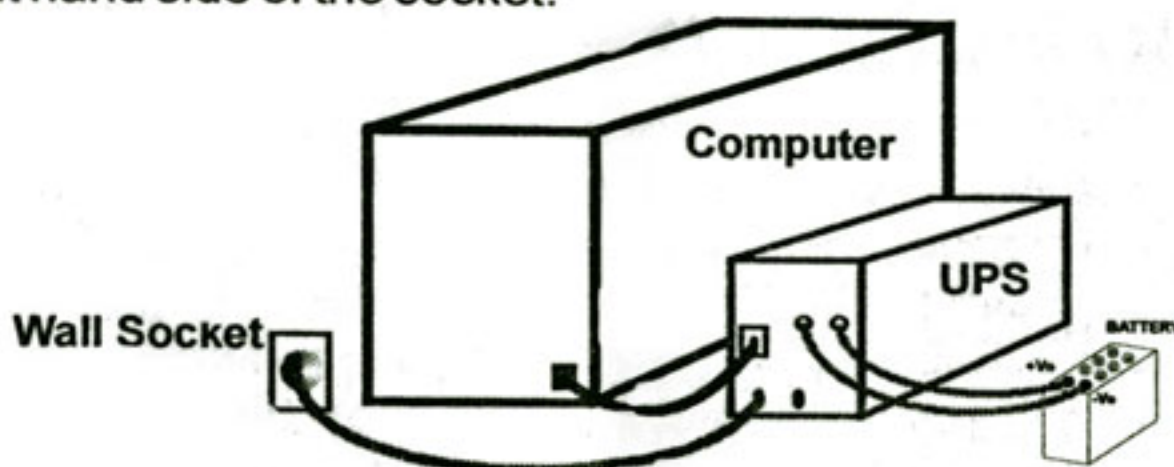
- A. **INPUT 3 CORE LEAD** : Connects to commercial mains (single phase)  
**CAUTION** : Neutral Shall be on left & Phase shall be on right hand side of Wall socket.
- B. **INPUT FUSE** : Connects the commercial Mains to UPS.
- C. **OUTPUT SOCKETS** : UPS output is available at these sockets.
- D. **UPS ON SWITCH** : Switches the UPS power to the loads On and Off. If mains in normal & this switch is Off no Output would be available to the loads but battery charging would continue.

## 5. INSTALLATION & OPERATION

- 5.1 **Unpacking** : On receiving the UPS Inspect it and inform the carrier and dealer if you find any transit damage. The packaging can be saved for future use.



- 5.2 **Placement** : UPS shall be kept at a place which is protected from dust, water and temperature and humidity should be within specified limits.
- 5.3 **Installation** : Input can be connected to a 3pin wall socket which is having a low impedance earth. Neutral shall be on left and phase shall be on right hand side of the socket.



- 5.4 **Battery Connection** : Connect only the recommended battery as mentioned in the table given below. Connect the +Ve of the battery to the +Ve (Red) of the UPS and -Ve of the battery to the -Ve (Black) of the UPS : Ensure the UPS switch is in off position. Kindly ensure the only recommended battery is connected.

MODEL	500VA	700VA	1000VA
Recommended battery	12V, 26AH to 32AH	12V, 50AH to 75AH	12V, 50AH to 75AH
Quantity	ONE	ONE	TWO

**Note** : Observe correct polarity while connecting the battery.

- 5.5 **Battery Charging** : The UPS charges the battery whenever it is connected to normal mains power. For normal backup, charge the battery for minimum 12 hours before use. UPS can be used even without charging the battery, but on-battery run time may be reduced until the battery has recharged.
- 5.6 **Load Connection** : Connect the load to the output socket on the rear panel.
- 5.7 **Turning ON the UPS** : To supply to the loads switch ON the UPS switch, on back panel. Wait for 2-3 seconds & then switch On the loads. Switching Off of the switch will stop the output to the loads.

Status of the LEDs on facia under different conditions shall be as given below.

Sl. No.	Condition	Mains On	On Mains	On Battery	B.Low Trip	
1.	Mains On (Within Range) UPS Switch is Off	ON	OFF	OFF	ON OFF	AC MAINS OPERATION
2.	Mains On (Within Range) UPS Switch is On	ON	ON	OFF	OFF	
3.	Mains Off, UPS Switch is On	OFF	OFF	ON	OFF	BATTERY OPERATION
4.	Mains On (Out of Range) UPS Switch is On	ON	OFF	ON	OFF	

## 6. **COMPUTER INTERFACE (Optional)**

Computer systems require time to perform an orderly shutdown, without corrupting or losing data. In an extended power failure a computer system protected by UPS at last will lose power when battery are exhausted. Through an optional software interface kit UPS & computer system communicate so that the computer system is warned of impending shutdown and has time to shutdown gracefully. This process of automatic orderly shutdown is completed by the computer system without any manual intervention.

## 7. **TROUBLE SHOOTING**

Problem	Possible Cause	Recommended Action
<p><b>6.1</b> Normal mains is supposed to be present but</p> <p>a) Mains On LED off and UPS is either working on battery (BATTERY On LED glowing) or battery has exhausted (Batt. Low trip LED glowing)</p>	<p>a1) Line cord plug is loose.</p> <p>a2) Dead wall socket.</p> <p>a3) Input fuse blown off.</p>	<p>a1) Fit line cord plug properly</p> <p>a2) Check socket with any lamp etc.</p> <p>a3) Replace the fuse</p>

<p>b) Mains on LED glowing but On Mains LED Off.</p> <p>c) Both Mains On &amp; On Mains LEDs On but no output is available.</p>	<p>b1) Switch on the back is off.</p> <p>b2) Mains is out of range (150V-275V)</p> <p>c1) Loose connection at output socket.</p>	<p>b1) Switch On</p> <p>b2) Wait for Normal Mains to restore.</p> <p>c1) Tighten the connection</p>
<p><b>6.2</b> In battery mode</p> <p>All LEDs are Off but Battery low trip LED glows.</p>	<p>Battery might have got discharged from recent use</p>	<p>Recharge the battery after Mains restoration</p>
<p><b>6.3</b> UPS some times transfers to battery, Computer equipment operates normally and Normal Mains is supposed to be present.</p>	<p>UPS is briefly transferring your equipment to battery because of short duration undervoltage &amp; overvoltage conditions.</p>	<p>This is normal, UPS is protecting your equipment from abnormal voltages.</p>
<p><b>6.4</b> UPS does not provide expected backup time &amp; low battery warning is sounded prematurely</p>	<p>a. Excessive loads connected at UPS's output sockets.</p> <p>b. Battery is weak from wear or recent operation during utility power outage.</p>	<p>a. Remove excessive loads.</p> <p>b. Recharge the battery by leaving the UPS plugged in for 15-18 hrs. Don't discharge battery during this interval. If UPS still sounds low battery warning prematurely when retested, replace battery or contact authorised dealer / battery vendor.</p>
<p><b>6.5</b> Low battery warning interval changes during different power outages.</p>	<p>a. Excessive loads connected to UPS or low battery capacity due to consecutive utility outages will reduce low battery warning interval.</p> <p>b. Loading much less than full rated capacity will increase low battery warning interval.</p>	<p>a. Remove excessive load or charge battery as required.</p> <p>b. There is nothing abnormal about it.</p>
<p><b>6.6</b> Low battery indication and alarm is continuous during power outage.</p>	<p>a. Excessive loads connected to UPS.</p>	<p>a. Remove excessive load and reset the UPS by switching Off &amp; On the switch at UPS back.</p>

## **8. SERVICE**

In case of an unlikely event of having any problem with the UPS kindly contact your nearest authorised dealer. Given detail of the problem being faced, along with equipment Serial number and date of installation. This will ensure prompt service with minimum downtime.

## **9. WARRANTY**

**LUMINOUS ELECTRONICS LTD.** Warrants each instrument to be free from defects in materials and workmanship for a period of one year after initial delivery. This obligation is limited to servicing any instrument of part returned to the authorised service centre for that purpose and to making good any parts there of which shall, within the warranty period, be returned to the company or Authorised service Centre under a written intimation and which to the company's satisfaction be found defective. The company reserves the right to decide as to whether the repair work should be carried out in the company's service centre or at site or at any other place. The freight incurred for to & fro despatch of the defective material will have to be borne by the purchaser, and the transit risk for the material will rest with the purchaser.

The warranty does not extend to any parts of the instrument which have been subjected to misuse, neglect or accident. Further, this warranty does not extend to any instrument which has been tampered with, by any agency not authorised by the company.

The warranty will last for a period of 12 months from the date of initial delivery/despatch of the instruments if used within its specifications. The warranty for the replaced components will lapse along with that of the main instrument.

**LUMINOUS ELECTRONICS LTD.** Reserves the right to make changes in design and specifications without notice and without any obligation to install such changes on units previously supplied.

In no event will **LUMINOUS ELECTRONICS LTD.**, its Distributors / Dealers be liable for consequential or incidental damages or for any expenses incurred by buyer or user, due to use or sale of products sold by **LUMINOUS ELECTRONICS LTD.** directly or through its authorised Distributors / Dealers or any third party.

Until superseded otherwise or in contractual form this warranty is made expressly in lieu of all other liabilities and obligations on part of **LUMINOUS ELECTRONICS LTD.**

Title to the instrument passes to the buyer upon delivery to the common carrier.

# 10. EQUIPMENT DETAILS

<b>RATING :</b>  500VA <input type="checkbox"/>  700VA <input type="checkbox"/>  1000VA <input checked="" type="checkbox"/>	<b>SERIAL #</b> BO-DB851-1103	
	<b>INSPECTED BY</b>  BVS	<b>DATE OF INSPECTION</b>  15/11/03
	<b>DEALER'S INVOICE NO.&amp; DATE OF SALE</b>	

## IMPORTANT

In the event of an instrument requiring servicing at our authorised service centre, the following procedure should be adopted.

1. The instrument should be securely packed, preferably in its original packing.
2. The instrument should be despatched on Freight Pre-paid basis duty insured. One of our Service / Sales Executives should be informed of goods Receipt No., Name of the Carrier and Date of despatch.

The above procedure should only be adopted on the advice of one of our Service / Sales Executives or Dealer.

We reserve the right to charge the consignee for any damage incurred during transit.

## 11. SPECIFICATIONS

		500VA	700VA	1000VA
Input	Voltage range	150V AC to 275V AC		
	Frequency	50HZ +/- 6%		
Output	Maximum Power	500VA/300W	700VA/420W	1000VA/600W
	Voltage (inverter mode)	220V AC Nominal		
	Frequency (inverter mode)	50HZ +/-2%		
	Voltage (mains AVR mode)	220V +/- 12%		
	Transfer time (typical a.s.)	3 m.s.		
Protection	Surge protection	Provided		
	Input Fuse	Provided		
	Fax/Modem/Network	RJ-11	RJ-11	RJ-45
DC Input		12V DC	12V DC	24V DC
Battery Recommended	Type	Sealed Lead Acid Maintenance Free or Tubular automotive or Inverter UPS battery		
	Capacity	12V 26AH-32AH	12V 50AH-75AH	12V 50AH-75AH
	Quantity	One	One	Two
	Typical Recharge Time	12-15 hours (Upto 90% of full capacity)		
	Protection	Deep Discharge Protection		
Physical	Net Weight (kg)	4.3	6.5	7.4
	Gross Weight (kg)	4.7	7.2	8.7
	Dimensions(WxHxD)(mm)	91x154x348	130x199x399	130x199x399
LED Indication		Mains On, On Mains, On Battery, Battery Low Trip		
Alarms	Low Battery Pre-alarm	Continuous beeping		
	Over load	Inverter mode O/P trip with continuous beeping and low Battery indication.		
Computer Interface	DB 9 (Optional)	Bi-directional (dry contact) Mains failure, Low Battery pre-alarm UPS & computer shutdown		
Environmental	Operating Temperature	0-40 deg C (32-104 deg F)		
	Storage Temperature	0-40 deg C (32-104 deg F)		
	Humidity	0-95% RH non-condensing		

Due to continuous product improvement, the specs are subject to change without notice.

**LUMINOUS ELECTRONICS LTD.**

**NEW DELHI - 110 043 (INDIA)**

**[www.myluminous.com](http://www.myluminous.com)**

**NOTE :**

For most of the problems encountered,  
trouble shooting chart would be helpful,  
Before calling the Dealer.