# SIMTEK®

## UNINTERRUPTIBLE POWER SUPPLY

## USER's MANUAL


SIMTEK® POWER SERVICES

## INTRODUCTION

This product is basically a DC-to-AC inverter with auto line to battery transfer and integrated charging system. The device serves as an uninterruptible power supply (ups) for the connected load, bearing the property of delivering power while charging.

## FEATURES

- Controlled battery charging.
- Battery over charging protection.
- Automatic line to battery switchover.
- Built-in AVR to enhance charging on low voltage.
- Auto shut down on low battery.
- Auto restart as utility power restores.
- Electronic overload protection.
- Visual and audible indications.
- Cold start function.



## TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | REMEDY |
|---|---|---|
| No output, displaying mains LED only | 1. weak battery/battery not connected<br>2. wires not connected to battery properly<br>3. DC fuse blown out | 1. Re-charge / connect battery<br>2. Clean wire (sulphate or carbon) & tighten wires properly to the terminals<br>3. Solder DC fuse inside the casing |
| Not shifting to mains, running on inverter mode only | 1. AC fuse blown out | 1. Replace fuse with same rating |
| Buzzing continuously | 1. Weak battery<br>2. Deep discharged battery | 1. Replace battery<br>2. Re-Charge battery |
| Displaying mains, charging and inverter LEDs at the same time | 1. Low utility power voltage | 1. Check the utility power voltage |
| Less back up time | 1. Excessive load<br>2. Battery life is over<br>3. Battery not being charged properly due to low voltage | 1. Reduce load<br>2. Replace battery<br>3. Check the utility power voltage |

In case of any abnormal condition that is not listed above, please contact to the dealer immediately.

## SPECIFICATIONS

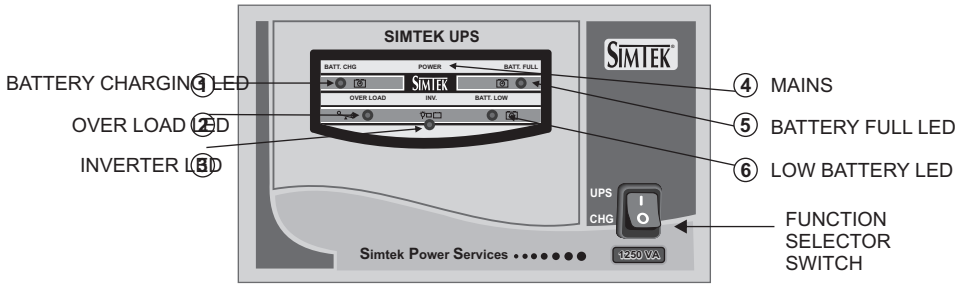
| | | | |
|---|---|---|---|
| CAPACITY | 500VA / 700VA / 1000VA / 1250VA | | 1500VA / 2000VA |
| AC INPUT | Nominal Voltage | 220VAC ~ 240VAC | |
| | InputVoltage range | 180 ~ 240VAC | |
| | Nominal Frequency | 50Hz ~ 60Hz | |
| OUTPUT | Voltage | 220VAC ± 15% | |
| | Frequency | 50 – 60Hz | |
| | Waveform | Squarewave | |
| | Efficiency (ACtoAC) | >95% | |
| | Efficiency (DCtoAC | >60% | |
| BATTERY | Nominal Voltage | 12Vdc | 24Vdc |
| CHARGER | Charging Voltage | 13.8V | 27.6V |
| | Overcharging Protection | 14.4V | 28.8V |
| TRANSFER | Transfer Time | <10ms | |
| AUDIBLE ALARM | Low Battery Voltage on Backup | Buzzing Continuously | |

***NOTE:-*** *Specifications are subjected to be changed without any prior notice.*



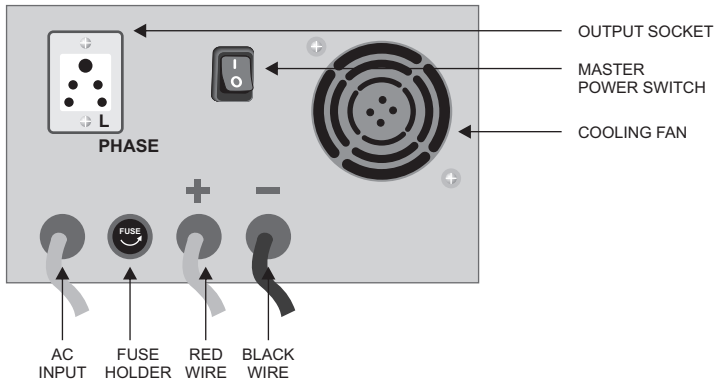
## OPERATION

### Front Panel Controls and LED Indications




**FUNCTION SELECTOR SWITCH**
**Put the switch to upper position (I), to use the device as UPS & to down (O) for battery charging**

### Back Panel Controls and Description




**MASTER POWER SWITCH**
**To turn ON the device put the switch to upper position (I)**

***NOTE:-****It is to be insured that phase is available on the right side of the output socket(Marked L) otherwise change the input connections.*

## INSTALLATION INSTRUCTIONS

It is highly recommended that the electrical appliances to be operated on the device are isolated from the house wiring, however qualified electrician is to be consulted if not possible.

While making connections through house wiring the load is to be matched with the capacity of the device. Below 1/2 or1/3 of the rated power is recommended for longer backup time &longer battery life.

During the wiring process it is to be insured that the output is never fed to the input of the device, otherwise the unit will get damaged.

Keep the device away from the heat generating sources.

Sufficient ventilation is necessary in the area where unit is placed.

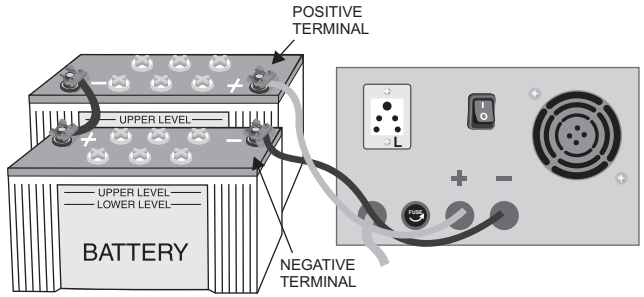


## BATTERY CONNECTION

**Red Lead** is to be connected to the positive (+) terminal

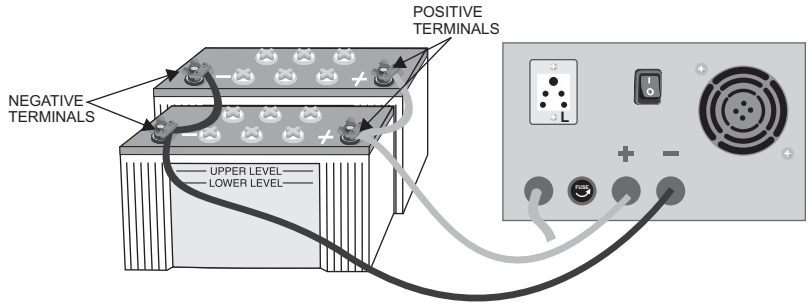
***Warning:-*** *Connecting the reverse polarity will damage the unit Immediately.*

**Series connection (24v)** While making series connection Batteries capacity must be equal to each other.




In series connection positive terminal of one battery is connected to the negative of other battery.

**Parallel connection (12v)**




In parallel connection positive terminal of one battery is connected to the positive terminal of other battery & negative to the negative terminal.