

Sollatek ULTIMA 1000, 1400, 2000 Uninterruptible Power Supply

USER INSTRUCTIONS



CHARGE THE UPS AT LEAST 8 HOURS BEFORE USE, ENSURING THE BATTERY LEVEL INDICATOR IS FULL

Important safety instructions

WARNING!

IMPORTANT: UPON RECEIPT THE UPS SHOULD BE CONNECTED TO THE MAINS AND ALLOWED TO CHARGE ITS BATTERY FOR AT LEAST EIGHT HOURS BEFORE IT CAN BE EFFECTIVELY USED AS A BACKUP SYSTEM.

- This UPS utilises voltages that may be hazardous. Do not attempt to disassemble the unit. The unit contains no user serviceable parts. Only factory service personnel may perform repairs.
- Internal battery voltage is 12Vdc. Sealed, lead-acid, 6 cells battery.
- 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 liquids or any foreign objects to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
- This unit is 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, laser printers, life-support equipment, microwave ovens, or vacuum cleaners to the 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 heaters or furnaces.
- Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
- Do not dispose of batteries in a fire as they may explode.
- Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- 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 terminals.
- Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions. Keep unauthorised personnel away from batteries.
- When replacing batteries, replace with the same number and type of sealed lead-acid battery. The maximum ambient temperature rating is 40°.
- This pluggable type A equipment with battery already installed by the supplier is operator installable and may be operated by laymen.
- 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.
- 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 therefore be disconnected in the plus and minus pole of the battery when maintenance or service work inside the UPS is necessary.
- The mains socket outlet that supplies the UPS should be installed near the UPS and should be easily accessible.
- Electrical Energy Hazard: The battery pack contains HIGH ENERGY. To reduce the risk of electric shock, use caution when you handle and interconnect the units.
- If operating the UPS while it is unplugged from the source of electrical power, DO NOT make contact with the line cord input pins. Electrical shock hazard exists.
- To reduce the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants.
- DO NOT plug laser printers into a UPS. The high surge currents they produce can disrupt any manufacturer's UPS.

Installation

Safety precautions

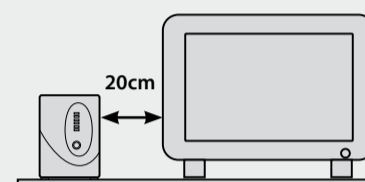
Please read this manual fully before installing and operating the UPS. Keep the manual in a safe place as it includes important information about installation, maintenance and troubleshooting. Under no circumstances should the cover be removed as dangerous voltages can be produced even when the UPS is not connected to mains.

Inspection

Inspect the UPS upon receipt. Notify the carrier and dealer if there is damage. The packaging is recyclable; save it for reuse or dispose of it properly.

Placement

Install the UPS unit in any protected environment that provides adequate airflow around the unit, and is free from excessive dust, corrosive fumes and conductive contaminants. Do not operate your UPS in an environment where the ambient temperature or humidity is high. Place the UPS away from the monitor at least 20cm to avoid interference.



Charging

This unit is shipped from the factory with its internal battery fully charged. However, some charge may be lost during shipping and the battery should be recharged prior to use. Plug the unit into an appropriate power supply and allow the UPS to charge fully by leaving it plugged in for at least 8 hours with no load (no electrical devices such as computers, monitors, etc.) connected.

Load connection

Connect the loads (PC etc.) to the sockets on the rear panel of the UPS before connecting the UPS to the mains. The UPS can be used as a master on/off switch for all the connected loads. If this is desired, the loads should be left switched on.

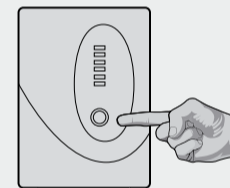
Never connect a laser printer to the UPS as damage may result.

Connect to mains

Connect the UPS to the mains using the mains cable supplied with your PC or monitor. A mains IEC cable is not provided with the UPS but can be ordered separately.

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.



Data line surge suppression (optional)

Connect the incoming telephone cable from the wall socket to the Comms Surge Protection IN socket. Using a telephone cable, connect Comms Surge Protection OUT socket to your PC modem.

DC Start

All Ultima Series are equipped with DC Start. To start the UPS when AC utility power is not available, simply press the power switch. *Continued overleaf*

Introduction

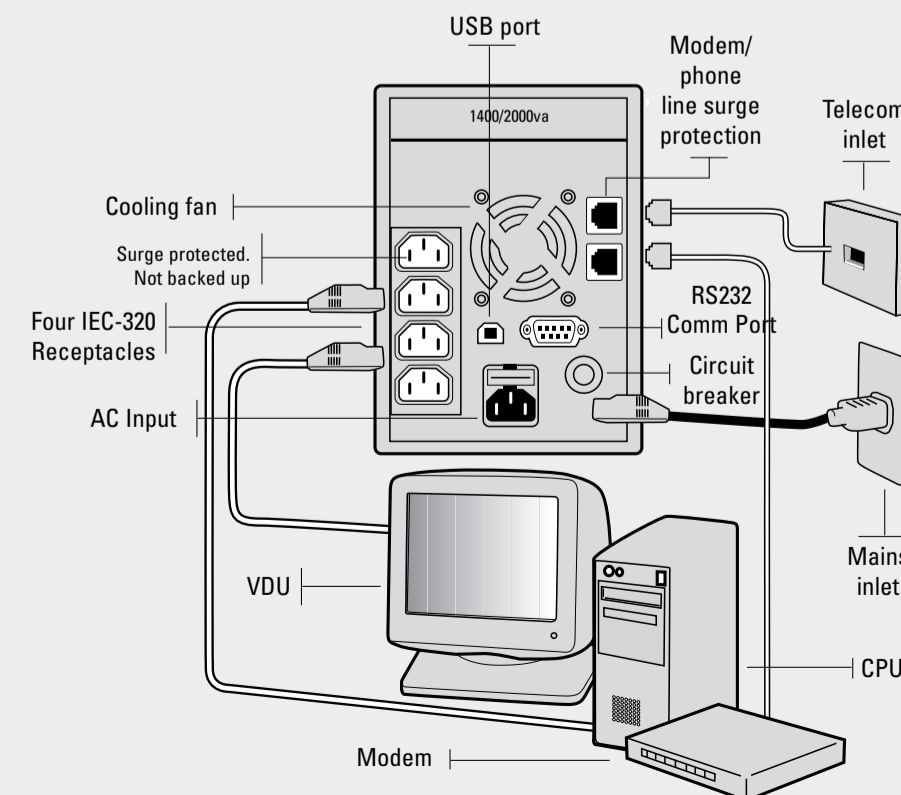
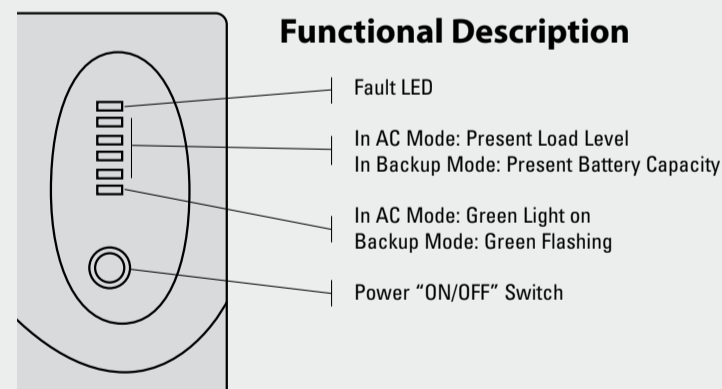
The Ultima is a multi-functional UPS and specially designed for a personal computer. Its light weight and compact design perfectly fits within a limited working environment. The Ultima UPS is equipped with boost and buck AVR to stabilise the input voltage range. It is also has built-in DC start function to enable the UPS to be started up without AC power supplied. Despite its compact dimensions, the UPS is equipped with Smart RS-232 and USB communication ports to offer users more flexibility of connection. The power monitoring software helps users monitor the status of the UPS.

The main features of Ultima UPS are listed below:

Features

- Microprocessor controlled line interactive UPS.
- Automatic Voltage Stabiliser with two boost and one buck taps.
- RS232 and USB communication ports with software for controlling the PC for safe shutdown and UPS parameter reporting via user friendly interface.
- Unique system for charging battery even during a brown out (If the load is off).
- Short circuit and overload protection.
- Cold start feature for load shedding environments.
- Bad battery detection and advance replacement notification (3 months ahead).
- Free power monitoring and PC shutdown software included.
- Green power function for energy saving.
- DC start function.
- Auto restart while AC recovery.
- Compact size and light weight.
- Provides modem/phoneline surge protection.

Functional Description



Green Power Function

Ultima UPS is equipped with green power function. For saving power and protecting battery, this method of deep discharging protection is adopted on inverter mode.

Free power monitoring software on CD

- Choose the operation system you need and follow the instructions described on the CD to install the software.

Note: If you find the communication unsuccessful after monitoring software installation, you have to switch the Auto Search on and you can only do that if you go into 'Act as Administrator'. Once selected, the software will hunt for and find the UPS.

Note: The power switch must be kept in the 'ON' position, otherwise, the UPS will be disabled and your equipment will not be protected during a power failure.

Note: If you change your UPS model, please ensure you uninstall and reinstall the Software.

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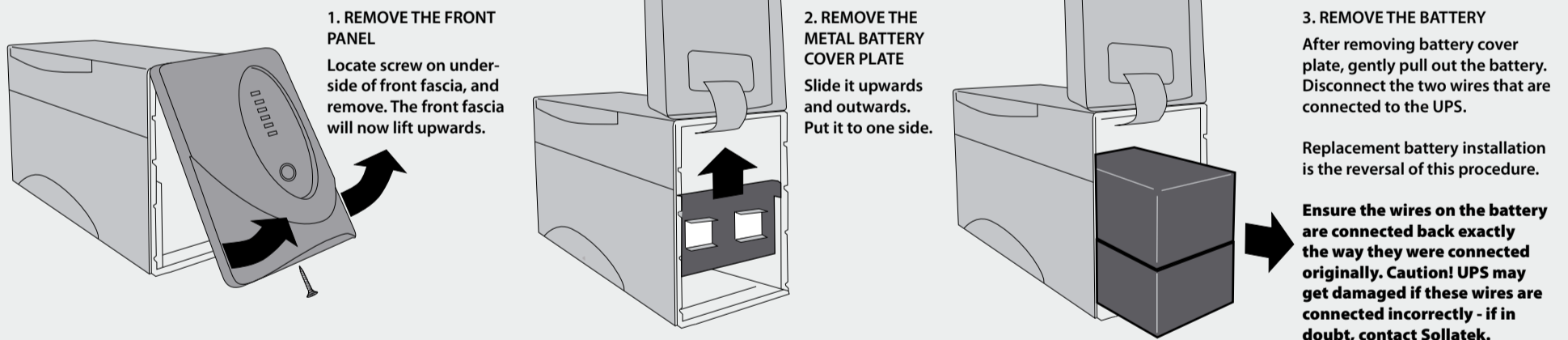
Proper care of batteries

- Do not subject the battery to heavy vibration or mechanical shock.
- When you receive a new battery, charge fully before use.
- Full capacity will be reached after 2 or 3 full charge/discharge cycles.
- To obtain maximum life, always store batteries in a charged state.
- When storing batteries, re-charge every 6 months to prevent damage through self discharge. This should be done more often if storage temperature exceeds 25°C.
- Try to store / use in a cool, dry place. Do not expose to excessive hot or cold (i.e. outside the range 10-35°C ambient temp).
- To prolong battery life, try to avoid the complete discharge of your battery before recovery charge.
- Do not discharge a battery deeper than you have to.
- Do not attempt to dismantle a battery. They do not require topping up.
- Do not incinerate batteries. Always recycle old batteries.
- To avoid the risk of shock, do not touch the terminals.
- Keep terminals free from dirt and corrosion.
- Do not short the connections.
- Always charge in a ventilated area.
- Always use a suitable charging device. If unsure, contact your distributor.
- Replace only with Sollatek recommended replacement batteries. If unsure, contact your distributor.

Battery replacement

WARNING: Disconnect all sources of supply before replacing battery.

- Replace only with Sollatek recommended replacement batteries. If unsure, contact your distributor.



Troubleshooting guide:

Problem	Possible Cause	Solution
No LED display on the front panel.	1. Battery weak. 2. Battery defect. 3. Power switch is not pressed.	1. Re-charge battery up to 8 hours. 2. Replace with the same type of battery. 3. Press the power switch again.
Alarm buzzer beeps continuously when AC supply is normal.	UPS overload.	Verify that the load matches the UPS capability specified in the specs.
When power failure, back-up time is shortened.	1. Overload of the UPS. 2. Battery voltage is too low. 3. Battery defect due to high temperature operation environment, or improper operation to battery.	1. Remove some noncritical load. 2. Charge battery 8 hours or more. 3. Replace with the same type of battery.
Communication lost between UPS and computer	1. Software is not properly installed 2. Interface cable is not properly connected	1. Check the setting of the software 2. Check the interface cable is properly connected to the COM1/COM2 of the computer and confirm the setting again
Mains normal but UPS is not working.	1. Circuit breaker has tripped. 2. Power cord is loose.	1. Reset the circuit breaker. 2. Reconnect the power cord properly.

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Specifications

MODEL		Ultima 1000	Ultima 1400	Ultima 2000
CAPACITY	VA/W	1000VA/600W	1400VA/840W	2000VA/1080W
INPUT	Voltage	220/230/240VAC	220/230/240VAC	220/230/240VAC
	Voltage range	89-145VAC/160-290VAC	166-280VAC	166-280VAC
	Frequency	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
OUTPUT	Voltage	220/230/240VAC	220/230/240VAC	220/230/240VAC
	Voltage regulation (batt. mode)	+/-10% at load <50%	+/-10% at load <50%	+/-10% at load <50%
	Frequency	50Hz or 60Hz	50Hz or 60Hz	50Hz or 60Hz
	Frequency regulation (batt. mode)	+/-1 Hz	+/-1 Hz	+/-1 Hz
	Output waveform	modified sinewave	modified sinewave	modified sinewave
BATTERY	Battery type and number	12V/7AH x 2pcs	12V/9AH x 2pcs	12V/9AH x 2pcs
	Recharge time	10 hours	6 hours (to 90% after complete discharge)	6 hours
TRANSFER TIME	Typical	4-6 ms	4-8 ms	4-8 ms
INDICATOR	AC mode	The first green LED lighting The second to fifth green LEDs gradually lighting, indicating load level		
	Battery mode	The first green LED flashing The second to fifth green LEDs gradually lighting, indicating battery capacity		
FAULT		Red LED lighting		
AUDIBLE ALARM	Battery mode	sounding every 10 seconds		
	Low battery	sounding every second		
	Overload	sounding every 0.5 second		
	Battery replacement	sounding every 2 seconds		
	Fault	continuously sounding		
PROTECTION	Full protection	overcharge and overload protection	overcharge and overload protection	overcharge and overload protection
PHYSICAL	Dimension (mm)			
	D x W x H	405 x 145 x 205	405 x 145 x 205	405 x 145 x 205
WEIGHT	Net weight	9.6kgs	9.7kgs	9.8kgs
ENVIRONMENT	Operating environment	0- 40°C, 0-90 % relative humidity (non-condensing)		
	Noise level	Less than 50dB		
INTERFACE	RS-232	Windows family, Sun Solaris, IBM Aix, Compaq True64, UnixWare, FreeBSD, HP-UX, Linux, MAC		
	USB	Windows 98/2000/ME/XP		

Ultima battery back-up times (in minutes)

	200VA	300VA	400VA	600VA	800VA	1000VA	1200VA	1400VA	1600VA	1800VA
Ultima 1000	45	25	15	8	<5	3				
Ultima 1400	58.5	37.3	25	13.5	8.25	4.7	3	1.5		
Ultima 2000	58.5	37.3	25	13.5	8.25	4.7	3	1.5	0.5	<0.5