USER MANUAL & WARRANTY CARD

DIGITAL SINEWAVE UPS

PRIME 1050 / PRIME 1450

GENERAL SAFETY PRECAUTION

This user manual contains the most important information on operating the system safely. Each person concerned with the installation, commissioning, maintenance and operation of V-Guard Pure Sinewave UPS must have read and understood the entire user manual.

IMPORTANT INSTALLATION INSTRUCTION

Do not connect the output of UPS to any 16A socket as this will damage the UPS. Only connect Fan, Light, Point, TV Point and one extra 6A socket for your heavy load (like Mixer/Washing Machine/Room Heater).

WARNING : This symbol indicates the possibility of serious injury or death.

CAUTION : This symbol indicates the possibility of injury or damage to properties only.

Be sure not to do.

Be sure to follow the instruction.

BASIC SAFETY MEASURES

This UPS is designed for indoor use only. Do not expose the UPS to rain, snow, spray, dust or direct sunlight and never install the UPS in bathroom, kitchen & moisture prone areas.

To reduce the risk of hazard, do not cover or obstruct the ventilation openings. Do not install the UPS in a zero clearance compartment, minimum 150mm clearance of ventilation area is recommended from all sides.

Always remember there is risk of electrical shock, although the unit may be unplugged from utility power, *hazardous voltage still may be present through the battery.*

Don't load UPS more than the rated capacity even in mains bypass mode. i.e. Excess load can cause RCB (Residual Current Breaker) of UPS to trip frequently.

Don't connect batteries in parallel as it can cause inadequate charging & UPS malfunctioning too.

Don't connect ELCB / RCCB in UPS input.

To avoid a risk of fire or electric shock, make sure that existing wiring is in good condition and as per Indian standards.

This unit contains no user serviceable parts and should be returned to the service center in the case of failure.

This V-Guard UPS must be installed only by a qualified technician with proper technical background.

Do not disassemble the UPS. Internal capacitors remain charged even after all power is disconnected.

Ensure there is no any chance for shorting battery terminals that may lead to spark or fire.

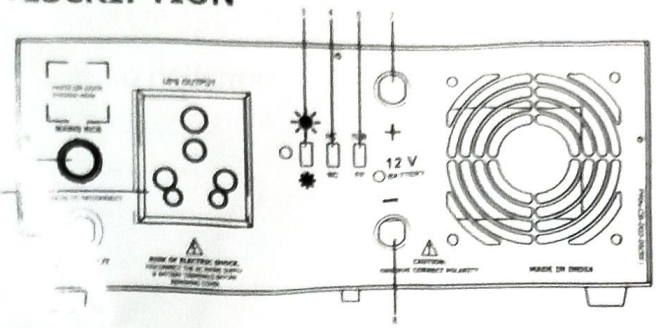
Remove personal metal items such as rings, bracelets, necklaces and watches when operating with lead-acid batteries. Failure to do so may cause short circuit and very high temperature, which can melt metal items and burn your skin.

If battery acid contacts skin or clothing you must wash it out with soap and water immediately. If battery acid contacts your eyes, you must wash it out with cold running water for atleast 20 minutes and get medical attention immediately.

There is surge/lightening protection incorporated in this UPS. However it is still recommending to unplug UPS from power line during lightening.

Recommended to keep this user manual safely, for self usage guide and warranty purposes.

II. UPS BACK PANEL DESCRIPTION



1. **MAINS RCB:** This is connected in line with the MAINS input to UPS. This will trip to disconnect the mains to the product in case of short circuit at load side or excess overload in mains mode. It is recommended not to connect excess load in UPS output and it should be limited to UPS capacity only to avoid unnecessary RCB tripping.
2. **OUTPUT SOCKET:** This is provided for connecting the loads that will run through the UPS while power is not available. It is recommended to use ISI marked plug for this.
3. **☀ & ☀ SELECTION SWITCH:** This switch selection is to increase the output voltage of UPS in backup moue. Use ☀ when you need to increase the Fan speed & keep in ☀ when longer backup is desired. Run loads like 1 or 2 fans and 1 or 2 CFL/LED lights only for ☀ mode benefits.
4. **HC & NC SELECTION SWITCH:** This can be used to select the charging current of UPS. Keep the switch in HC when using 135-230Ah battery and in NC when using 80-120Ah battery. It is recommended to keep this switch in NC position for local and flat plate batteries.
5. ***TUB & FP* SELECTION SWITCH:** This switch needs to be selected only at the time of installation or at the time of battery replacement to avoid wrong usage. The switch operation is limited to first 30 minutes after completing the installation and needs to be selected based on battery type used with inverter. TUB mode should be selected for tubular batteries and FP mode should be selected for Flat Plate batteries. Wrong selection of this switch can impact the battery performance and can cause damage to battery also.
6. **MAINS LEAD:** This is used to connect input mains supply to the UPS. Ensure proper earthing at Input supply to avoid electric shock due to earth leakage.
7. **POSITIVE BATTERY WIRE:** Connect the positive battery wire (RED) to positive terminal of battery.
8. **NEGATIVE BATTERY WIRE:** Connect the negative battery wire (BLACK) to negative terminal of battery.

❗ Before troubleshooting read all the basic safety rules and precautions carefully.

PRODUCT TROUBLESHOOTING

Symptoms	Possible cause	Solution
Backup mode but no output	Battery low	Check if Battery low Indication is present, check the mains supply availability and mains On indication at UPS. If again problem persists please contact V-Guard care for further support.
	Battery loose Connection	Tighten the battery connections properly.
	Poor battery condition	Change your battery.
	Overload	Turn off the UPS and reduce the load connected to the system and turn on the UPS again.
	Short circuit	Remove all loads from the system and turn on the UPS to check whether the output is present. If output present checkout the related wiring for any kind of problem or faulty equipment connected. Remove the short circuit & run the unit.
Mains mode but no charging and output	Overload / Short circuit	Reduce the load connected to the system, press the button of mains RCB at the back panel. If again the same problem persist disconnect all the load from the system and check any problem or faulty equipment connected in the wiring.
MAINS ON LED blinking with buzzer sound.	Mains RCB trip	Press the button of the mains RCB at the back panel of UPS. Switch OFF/ON the front button to bypass mains immediately. If MAINS RCB not reconnected you can still run the UPS by switching on the UPS front button. Every 5 minutes it alerts you to reconnect the MAINS RCB.

If none of the above mentioned solutions effective, please contact V-Guard care (refer back page) in order to register your complaint.

INTRODUCTION

Congratulations!

You are now the proud owner of V-Guard PRIME Series of Digital Sinewave UPS which is an innovation marvel of the UPS Industry. It has got some extremely useful & stunning features which are 1st of it's kind in the industry as on date.

Starting and operation according to this manual assures maximum endurance to the Digital Sinewave UPS. The V-Guard Digital Sinewave UPS is designed to prevent blackouts and brownouts from reaching your computer load. This product is incorporated with the latest powerful DSC based Pulse Width Modulation technology.

SALIENT FEATURES

- Facility to increase your fan speed by using ☀ switch on product.
- Digital Signal Controller based design for pure sinewave output.
- Selectable charging mode for different battery technologies (Flat/Tubular battery) and capacities (80 to 230 Ah).
- Battery Gravity Builder with over charge and deep discharge protections.
- Fuzzy logic based sensor less battery water topping reminder.

INSIDE THE BOX

1. Product : PRIME 1050 ☐ / PRIME 1450 ☐ - 1 No
2. User Manual & Warranty card - 1 No

SPECIFICATIONS

Model	PRIME 1050	PRIME 1450
Capacity	900VA/740W	1200VA/840W
Recommended Input	220V, 50Hz, 1P	
Input Voltage/Frequency Working Range	Normal Mode: 90V-290VAC ± 10V, 43Hz-57Hz	
	UPS Mode: 180V-260VAC ± 6V, 47Hz-53Hz	
No Load output	220V, 50Hz, 1P (IN NORMAL MODE)	
	230V, 50Hz, 1P (IN UPS MODE)	
	240V, 50Hz, 1P (IN HIGH PERFORMANCE MODE)	
Nominal Output Voltage/ Frequency	On Mains: Same as Input (within the working range)	
	On Battery : 220VAC, 49.5Hz-50.5Hz	
Output waveform	Sinewave	
Transfer time	UPS mode < 10mSec	
Recommended battery	12V, 80Ah to 230Ah, Lead Acid (1No Only)	
Battery recharge time*	8-12hrs (Depends on battery capacity & charging selection)	
Operating Temperature	0°C to 45°C	
Product Dimensions	275mm x 250mm x 120 mm (L x W x H)	295mm x 250mm x 128mm (L x W x H)
Net weight	9.5Kg	9.6 Kg
Application	Fan, CFL, Tube Light, EESL LED Bulb, Mixer (Upto 600W**), Room Cooler	Fan, CFL, Tube Light, EESL LED Bulb, Mixer (Upto 900W**), Room Cooler

* Time for a fresh 150Ah tubular battery at high charging mode selection and mains voltage within 150-280V range.

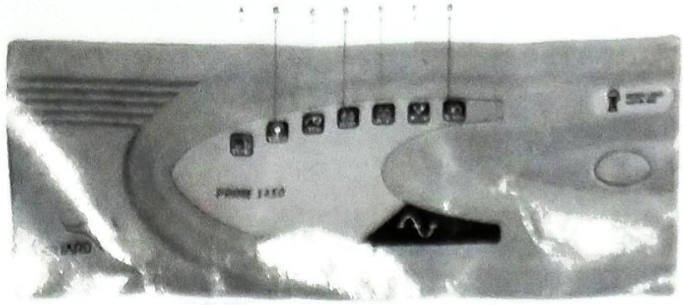
** subjected to material and usage conditions.

Due to continuous research, specifications are subject to change without prior notice.

Note: Electrical and electronic devices up to specified capacity can be powered by this Digital Sinewave UPS.

UNDERSTANDING YOUR PRODUCT

I. FRONT PANEL DESCRIPTIONS



A. UPS MODE LED: Glows when the front ... ON/OFF switch is pressed for 5 secon... continuously until second beep sou... it unit will be in NORMAL mode. In orc... to change the mode fror NORMAL to U... and ... follow the above step.

B. MAINS ON LED: Glows ste... when the mains is available w... the normal limits 90-290V in NORMAL mode and 180-260V i... PS... blinks when mains out of range.

C. CHARGE LED: This will blinks when battery is charging and Glows steady when b... y is charged.

D. BACKUP LED: This LED will glow steady when the UPS is in backup mode due to mains failure or out of range.

E. LOW BATT LED: Blinks during low battery w rni g and glows steady after low batter y shutdown with buzzer indication.

F. OVERLOAD LED: Blinks when loading above it's spec. ed capacity and blinks ... tinuous buzzer after overload shutdown.

G. FILL WATER LED: Blinks to remind user for water topp... y with buzzer in... tion. Fill distilled water of required amount to battery without overflowing and press ON/OFF switch continuously until 2 beeps occurs to clear the indication.

H. ON/OFF SWITCH: This switch can be used to make the uni... OFF and ... be done by pressing the switch continuously for 1 second until ... eep sou... ED will be OFF whe... he unit is in OFF mode. If ... unit ... OFF mode, the ... the output will not v... in the event of mains ... re, howeve charging wil... s is in normal limit. The ... also works as a reset in an event of o erload & low ttery shutdown. When the switch is in ... dition the switch glows & it will not g... ow if the Swi... OFF.

LED Indication... of the status of product is given below.

	VI... LED INDICATIONS							Au...dio Indications by Buzzer
LED Color		Green	Green	White	Red	Red	Red	
LED FOR	UPS MODE	MAINS ON	CHARGE	BACKUP	LOW BATT	OVERLOAD	FILL WATER	
Short-circuit shutdo...						Glows		Buzzer beeps
Low battery shutdown					Glows			
High battery shutdown					Blinks		Blinks	
MAINS RCB Trip***		Blinks						
Back feed Happened		Glows		Blinks		Glows		
Thermal shutdown		Blinks	Blinks	Blinks	Blinks	Blinks		
Battery terminal loose/open (Mains mode)		Glows	Blinks (5 sec interval)					
Water topping reminder							Blinks	

***UPS operation when mains RCB Trip : MAINS ON LED blinks and BACKUP LED glows and there will be 4 times buzzer at 5 minutes interval during 20 minut... operation after that system goes off.

WARRANTY

Every V-GUARD DIGITAL SINEWAVE UPS is inspected and tested thoroughly before leaving our premises. We undertake to repair this UPS free of cost for a period of 24 months from the date of purchase. However the warranty does not cover damage caused to the cabinet or any trouble arising from misuse of the UPS or repair effected by unauthorized persons. V-GUARD shall not be responsible for the repairs of any damages or physical loss caused to the equipment and accessories by any accident, unauthorized / improper handling, natural calamities or act of GOD. Further, the warranty covers repair done solely by our own service personnel. Bringing the product to V-GUARD Service center or delivery to authorized dealer for its service is the responsibility of the owner. Warranty is void if the seal of warranty is broken. The warranty obligation does not also cover charges, if any, incurred on account of services rendered which are outside the ambit of warranty.

CAUTION : Opening V-GUARD UPS may disturb calibration. Only experienced V-GUARD engineers can re-calibrate the unit using sophisticated test equipments.

Sl. No. / QR Code

6639978769235314

Inspected by ....

This unit was sold by us to .....

Vide Bill No..... .....dated..... .....

Signature & rubber stamp of the Dealer

Under any circumstances, this warranty is not valid unless duly filled in and stamped by our dealer.

V-GUARD

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