

MAXILION AIR 1500



Wall-Mounted
Lithium-ion Inverter

USER MANUAL

Customer Care No. - 9667 123 456

E-mail: customer.care@genusinnovation.com

CON0000007564

WARRANTY CARD

MODEL NO.		SERIAL NO.	
DATE OF PURCHASE	DEALER NAME		
CUSTOMER NAME		CONTACT	
ADDRESS			

- Genus Innovation Ltd. Warrants to the original purchaser provided the product is still possession of and used by the original purchaser from the date of purchase.
- The warranty stands on all parts (except LED, Switches, External body of system) for a period of 5 years.
- The warranty will not apply to defects arising in company's opinion by reasons of accident, abuse, misuse, neglect, improper installation (if not undertaken by the company or its representative), fire, flood or other act of GOD any other natural calamities. Any other unauthorized repairs done or carried out will have to be borne by the purchaser. The problem of fuse & MOV will not be included in the warranty of the product. The services given for the same will be a paid service.
- The company in no way will be held liable for any loss or injury or damage caused to any form of life for any reason whatsoever.
- The warranty will not apply if any original seal are found broken or tampered.
- The warranty will not apply if point to point wiring not found.

LIMITED WARRANTY STATEMENT

- Genus Innovation Ltd., represents and warrants that the Inverter/HUPS ("PRODUCT") is free from defects in material and workmanship.
- The warranty of the PRODUCT extends for a period of 60 months commencing from the date of installation or 66 months from the date of manufacturing whichever is less.
- During the warranty period Genus Innovation Ltd. or its authorized service network will repair or replace the PRODUCT or any relevant part (Except LCD/LED's, Switches and External Body) thereof in the event found to be defective. The repaired PRODUCT or the product / part provided as a replacement for a defective PRODUCT/ part shall be free from defects. The END USER/Consumer/Purchaser of the PRODUCT or his/her assignee ("CONSUMER") shall not be charged (whether for parts, labour or otherwise) for the repair or replacement of the defective product during the warranty period. All parts/boards or equipments shall become the property of Genus Innovation Ltd.
- The warranty in respect of a repaired or replaced PRODUCT/part shall extend for the remaining warranty period of the repaired PRODUCT or replacement thereof to the CONSUMER.
- The CONSUMER shall have no coverage or benefits under this warranty in the event that any of the following conditions are applicable:
 - a) The PRODUCT has been subject to abnormal use or conditions, improper storage, exposure to excessive moisture or dampness, exposure to excessive temperature (beyond specification), unauthorized modification, unauthorized repair (including but not limited to the use of unauthorized spare parts), abuse accident, acts of God, spills of food or liquids, improper installation and breakage or damage.
 - b) The CONSUMER has not notified the defect of the PRODUCT to Genus Innovation Ltd, during the applicable warranty period.
 - c) The PRODUCT serial number code or the accessory date code has been removed, defaced or altered.
 - d) The PRODUCT has not been with or connected to an accessory:
 - Not supplied by Genus Innovation Ltd or its affiliates.
 - Not fit for use with the PRODUCT
 - Used otherwise than is the manner intended.
 - e) All plastic surfaces and all other externally exposed parts that are scratched, or damages due to abnormal customer use.
- In order to the derive benefit of this warranty in respect of any defects in the PRODUCT, the CONSUMER shall ship the PRODUCT or part there of at its cost to the authorized service center of Genus Innovation Ltd. The Genus Innovation Ltd. shall bear the cost of shipping the PRODUCT or part there of back to the CONSUMER after the completion of the service under this limited warranty.
- NO OTHER EXPRESS WARRANTY IS APPLICABLE TO THE PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN GENUS INNOVATION LTD. SHALL NOT BE LIABLE FOR THE LOSS OF USE OF THE PRODUCT INCONVENIENCE LOSS OR ANY OTHER CONDOQUENTIAL DAMAGE ARISING OUT OF THE USE OF OR INABILITY OF USE OF THIS PRODUCT OR FOR THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY INCLUDING THE IMPLIED WARRANTY OF MARKETABILITY OR MERCHANTABILITY OR FITNESS APPLICABLE TO THIS PRODUCT.
- It's a hereby expressly clarified that all warranties (express of implied) in respect of the PRODUCT are provided by the Genus Innovation Ltd.
- All disputes are subject to jurisdiction of JAIPUR only.

Warning: If wrong wiring found during installation, Warranty of product will be void.

OVERVIEW

At the very outset, allow us to congratulate you on your excellent choice of Lithium Inverter. In a world of me-too products, you will find Genus Pure Sine Wave Lithium Inverter a generation ahead of the entire category. That's because our breakthrough chip embedded sine wave technology delivers the same current as you get from your mains. The distinguishing features of Genus Pure Sine Wave" Lithium Inverter are:

- Sine Wave Output suitable for PCs
- DSP Based Intelligent Control Circuit
- LED + LCD Dual Display (Message and Faults)
- DSP Based Smart Charger
- Smarter Overload Sensing & Short Circuit Protection
- Easy to Service
- Battery State Monitoring
- ASIC Technology
- Great Power Saving
- Future Expandability possible
- Eco - Friendly and High Safety

This manual has been specially created to give you a thorough understanding of your Lithium inverter and its optimum use. Do spare some time to read it carefully. In case you need help at any time, please feel free to contact our dealer or mail us at customer.care@genusinnovation.com Any suggestions, comments or grievances are welcomed, after all, the ultimate "Quality Manager" of any product is the customer. Your insights guide our innovations.

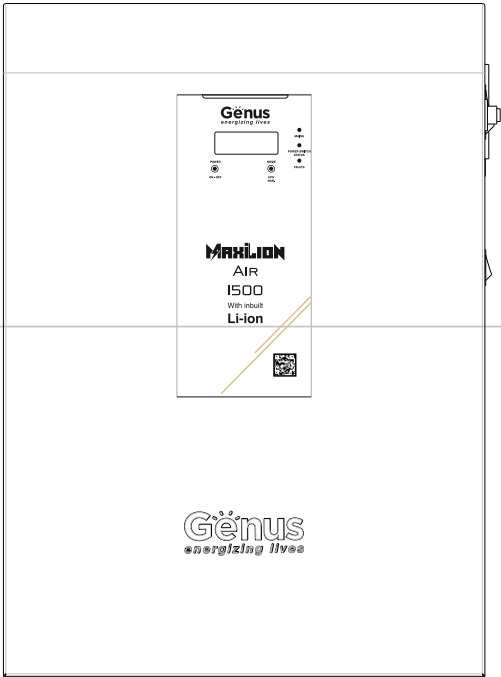
KNOWING YOUR LITHIUM INVERTER

Now let's begin the journey to explore various aspects of our Genus Pure Sine Wave Lithium inverter Welcome abroad. In its most basic form, a Lithium inverter transforms Direct Current (DC) to Alternating Current (AC). The battery pack with the Lithium inverter acts as a reserve to ensure continuous supply of power whenever mains supply from utility power is not available

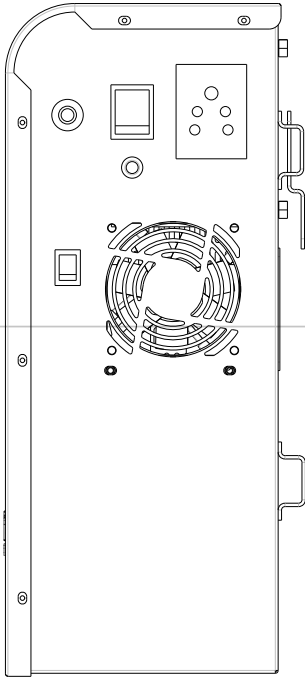
FRONT & BACK PANEL DESIGN

On the front panel of the Lithium Inverter there are 2 switches & 3 LED's and on the Side panel of Lithium inverter all wiring related points like Output Socket, Battery Switch, Mains Bypass Switch, AC Fuse given.

FRONT



Side



For MaxiLion Air 1500

Position	Function	Remark
1	Output Socket	Connect your load wire here to get the output from Lithium Inverter
2	Cooling Fan	To maintain temperature by forced cooling; Avoid blockage to this point
3	Input AC Mains Circuit Breaker (Fuse)	Use for protection from overload and short circuit - AC input Mains supply end
4	Battery DC Input Switch	Use for Battery ON/OFF.
5	Mains Bypass	Use Mains bypass in case of system failure
6	UPS/NOR Mode selection switch	Use to select between UPS or Normal (inverter) mode
7	Power ON-OFF Switch	Use for Load ON-OFF during backup mode

* Above Picture is for reference purpose, Actual product may differ.

Maxilion Air 1500	Condition	LED	LCD Slides
	Backup Mode	LED 1: OFF LED 2: Blinking LED 3: OFF	Load Status Load Voltage Load Current Load Percentage
	Mains Available	LED 1: Continuous Glow LED 2: Continuous Glow LED 3: OFF	Mains Voltage Charging Current
	Mains Out of Range	LED 1: OFF LED 2: Blinking LED 3: OFF	Mains HI (If Mains voltage is more then specification) Mains Low (If Mains voltage is Low then specification)
	UPS/Normal Mode	As Backup/Mains Mode	UPS ON (For UPS mode) UPS OFF (For Normal Mode)
	Battery Full Charged	LED 1: Continuous Glow LED 2: Continuous Glow LED 3: OFF	Battery Charged
	Mains Fuse Blown/ MCB Trip	LED 1: Continuous Glow LED 2: OFF LED 3: Continuous Glow	
	Over Temperature (When Mains Available)	LED 1: Continuous Glow LED 2: OFF LED 3: Continuous Glow	
	Over Temperature (When Mains Not Available)	LED 1: OFF LED 2: Blink LED 3: Continuous Glow	
	Short Circuit	LED 1: OFF LED 2: Blink LED 3: Continuous Glow	
	Low Battery Warning	LED 1: OFF LED 2: Blink LED 3: Continuous Glow	Battery Voltage
	Low Battery Cut	LED 1: OFF LED 2: Blink LED 3: Continuous Glow	
	Over Load Warning	LED 1: OFF LED 2: Blink LED 3: Continuous Glow	
	Over Load Trip	LED 1: OFF LED 2: Blink LED 3: Continuous Glow	

NON-OBSERVANCE OF THIS USER MANUAL

- Trouble-free and safe operation of this inverter presumes proper, professional and workmanlike transportation, storage, mounting and installation as well as careful operation and thorough maintenance.

Notice !

- Genus Lithium Inverter is not liable for the consequences arising from faulty installation of the Lithium Inverter. Among these consequences are:-
- Damage to the display and keyboard foil, deterioration of the readability.
- Fading of the print on the housing, the look of the housing deteriorates. Therefore, choose the place of installation for the inverter so that the device is not directly or indirectly exposed to UV radiation:-
- The device must not be exposed to direct sunlight.
- The device must be protected from reflections from glass facades.

EXPLANATION OF THE SYMBOLS USED ON THE NAMEPLATE

Attention & Danger !

O/P Socket, AC Fuse, AC Input Power Cord carrying high voltage, and it remain even after being disconnected. Please be sure to Wait until the capacitor have fully discharged (discharge period)

Attention

* Do not operate near water or place with excessive humidity, moisture or fume.

CONCEPT OF CHARGING

Charging Process

1- Constant Current (CC) Phase:

During this phase, the charger supplies a steady current while the voltage gradually increases. This continues until the battery reaches its maximum charge voltage, typically 14.0 V ± 0.2V (Bosst Voltage).

2- Constant Voltage (CV) Phase:

Once the battery reaches 14.0 V ±0.2V, the charger switches to constant voltage mode. The voltage is held steady at 13.9V±0.2V, and the current gradually decreases as the battery approaches full capacity. Charging is complete when the current drops to a low threshold , indicating the battery is fully charged.

Safety Features:

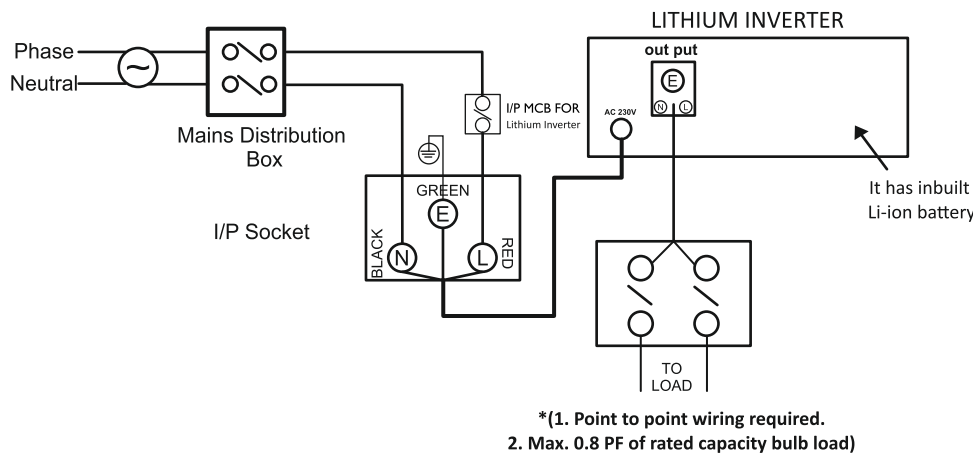
Battery Management System (BMS):The battery is equipped with a BMS to protect against overcharging, over-discharging, short circuits, and overheating. The BMS ensures each cell is balanced and operates within safe limits.

Temperature Monitoring: Charging should occur within the recommended temperature range (typically 0°C to 40°C). Avoid charging if the battery is too hot or too cold.

Grounding Instructions: This UPS must be connected to a grounded, permanent wiring system.

GETTING STARTED

INSTALLATION DIAGRAM



Installing steps for your Lithium Inverter

To be done by an professional service person.

Note :-

Environment:- Lithium Inverter are sophisticated device and must be treated accordingly. Keep the Lithium Inverter in non-condensing, well- ventilated environment, ensure that there is no ingress of moisture of foreign material.

Location:- Do not Locate the Lithium Inverter in the same compartment in which non-sealed batteries, flammable or any kind of gases/fume generating materials. Because they generate gases, which are very corrosive to the electronic equipment and everything else, Always ensure there should be some distance between Maxilion and the back wall so that hot air from fan get some area to dissipate

Step 1:- Switch off the supply to distribution point to which the Lithium Inverter unit to be connected. Make absolutely sure with the measurement that there is no power.

Step 2:- Connect AC input supply to the power cord/terminal of Lithium Inverter such that the phase is connected to L(RED), Neutral is connected to N(Black) and Earth is connected to E(Green). Make sure AC supply/Grid/Mains switch is in OFF Condition.

Step 3:- Connect output Load wires to the socket/terminal of Lithium Inverter, such that the phase is connected to L (YELLOW), Neutral is connected to N (Black) and Earth is connected to E (Green).

Step 4:- Turn ON Battery Switch located at the Side panel of Lithium Inverter.

Step 5:- Switch ON Power ON/OFF Switch located at the front panel of the Lithium Inverter and check at display Load LED indication and also at LCD representation and also verify load is in running condition.

Step 6:- Switch ON AC supply/Grid/Mains switch and check at display mains LED indication and also at LCD representation.

CAUTION

- 1.Before buying a Lithium Ion battery other than Genus, the consumer should match the specifications of the battery with the specifications of the system(UPS).
- 2.Wrong specifications of battery may cause technical problems, when used with the system. Refer to Genus Technical Specifications or you can contact to the Genus Technical Team to know the suitable Li-ion battery.
- 3.Under warranty, If the fault in the system is due to other component such as Lithium Ion Battery (other than GENUS provided) including BMS and installation or other component malfunction , service visit and component replaced will be on chargeable basis.
- 4.If the Lithium Ion Battery BMS gets disconnected or In order to Revive the Deep Discharged Battery from the system, user have to provide GRID to the system for at least 15 min. Further time depends on BMS and Battery Condition.



No user serviceable part inside.
Do not operate near water or place near excessive humidity wet or fume.
Hazardous live parts inside this system are energized from battery supply, even when the input AC power is disconnected.
Observe correct polarity of wires.
Call authorised service engineer, if required.

RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER.

TROUBLESHOOTING

SYMPTOMS	REMEDY / RECTIFICATION
Grid is available, display is showing fuse /MCB Trip or Mains Fuse Trip	Reduce/ disconnect the load and reset theAC MCB/ Resettable Fuse given at side of Lithium Inverter
Grid is available, but unit is operating in backup mode and display is showing low battery indication /Mains MCB/ Fuse Trip	Wait Till grid supply available in Operating range with Input
Back-up mode but no power	Make sure proper contact with input terminal pins. Check display if low battery condition is present, remove all load and allow the battery to charge when the mains is resumed before running the Lithium Inverter on battery again
Lithium Inverter trips frequently at back-up mode	Check display if overload/short-circuit condition is present, reduce load and click ON/OFF power switch.
There is NO output power	Reduce the load and reset the Lithium Inverter
Lithium Inverter shuts down after 20 seconds no display at all	Check condition of batteries and recharge
Unit Overheats	Check and clean all AC output connections
	Check for proper AC Input and Output wiring and if battery is in deep discharge mode connect it with mains for 15 mins.
	Reduce load and let the unit cool down contact authorized service engineer / centre

TECHNICAL SPECIFICATIONS

MODEL	MaxiLion Air 1500
System Rating(KVA/KW)	1125 VA
Nominal Input Battery Voltage	12.8V
Grid Range	Mains (Grid) Mode Normal Mode (Wide Window) 90 VAC-290VA ± 15VAC Mains (Grid) Mode UPS Mode (Narrow Window) 180VAC-265VAC ± 5VAC
Grid Charging Current to Battery	Battery Charging 18 Amp
Modes	
Power Switch	Via Switch (Front Side)
UPS/NORMAL Mode	Via Switch (Front Side)
Output Parameters	
Wave form type	Pure Sine Wave
Output Voltage Regulation throughout Battery range/load	220V±10%
Output Frequency	50Hz±0.5Hz
Peak Efficiency (with linear load)	> 73%
Distortion (THD)	<3% (At Linear Load)
Overload Protection	Provided at >100% with manual reset
Low Battery Protection	Provided at <11.3 V with manual reset
Short circuit Protection	Provided at >300% with manual reset
Over Temperature Protection	Provided at >90 deg. C
Change Over Time (Approx.)	
In UPS Mode	<12millisecond
In Normal Mode	<50 millisecond
Battery Parameter	
Boost Voltage	14.0 V ± 0.2V
Float Voltage	13.9 V ± 0.2V
Low Battery Warning	12.0 V±0.2V
Low Battery Cut	11.8 V±0.2V
Battery Type	Lithium-ion (* as per system specifications)
Environment	
Forced cooling	Through DC Cooling FAN
Humidity	0-90% non condensing
Operating & Storage Temperature	0-40 deg. C
Display Parameters	
Display Type	LCD + LED
DUAL DISPLAY LCD+LED	LCD shows - Mains Voltage, Load voltage, Battery voltage, Battery current, protection display, Mains HI, Mains Low status LED 1 - Mains (constant glow when mains available) LED 2 - Power Switch (constant glow when mains available , blink when backup LED 3 - Fault (constant glow when any protection occur)
Switch	
Switches	Switch 1 : Power ON/OFF Switch 2 : UPS/NOR Mode

*Specifications are subject to change without any prior notice.



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