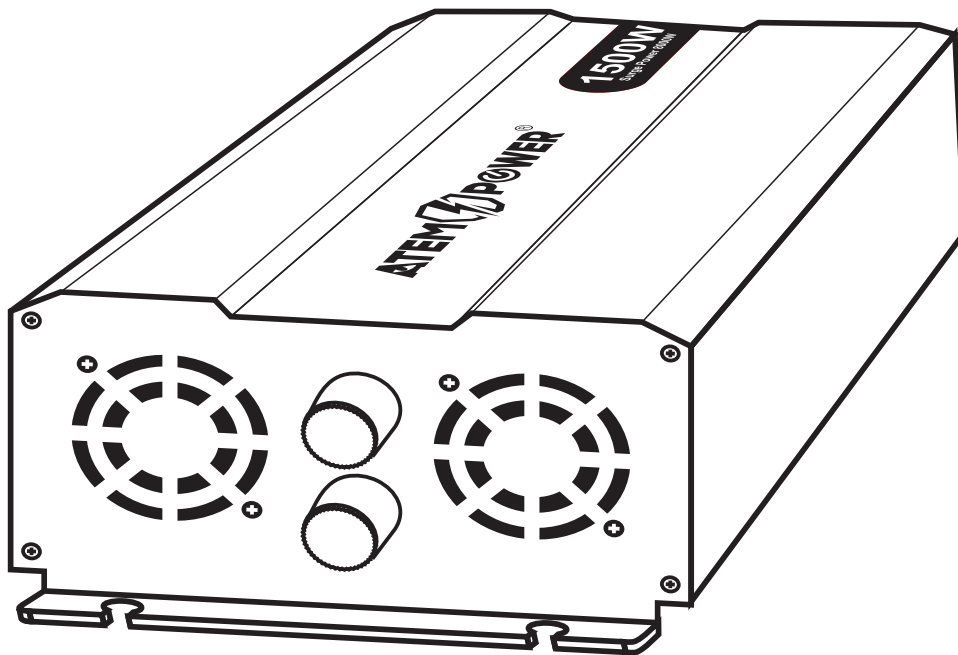


ATEM POWER[®]

1500W DC-AC PURE SINE WAVE INVERTER

USER MANUAL



PLEASE READ AND UNDERSTAND THIS MANUAL
THOROUGHLY BEFORE OPERATION

Thank you for purchasing our Pure Sine Wave Inverter. This pure sine wave inverter with durable aluminium housing is compact and well designed and represents the new trend of high-frequency technologies. It incorporates the latest IGBT inverter technology for a remarkable 90% high efficiency rate and offers continuous power of 1,500W and 3,000W maximum. The built-in smart microprocessor enables it to prevent undervoltage, overvoltage, overloads, overheating and short circuits. Silent cooling fans will keep this unit cool and only begin to operate when the temperature of the unit reaches 45°C. It can be connected to lead acid batteries like AGM, GEL and flooded batteries and LiFePO4 batteries, thus providing safe and reliable AC current for household appliances such as TV, recorder and electricity-driven tools.

PRODUCT APPLICATIONS

Power Tools Series: Electric Saw, Drilling Machine, Grinder, Sand Blast Machine, Punching Machine, Weeding Machine, Air Compressor, etc.

Office Series: Computer, Printer, LCD Monitor, Scanning Machine, etc.

Household Appliance Series: Dust Collector, Fan, Lamp or LED, Sewing Machine, etc.

Kitchen Appliance Series: Microwave Oven, Fridge, Freezer, Coffeemaker, etc.

PRODUCT FEATURES

- Outstanding Performance: Offer 1,500W of continuous power and 3,000W maximum.
- Higher Efficiency: Incorporate IGBT technology for a 90% high efficiency rate.
- Heavy Duty Construction: With an aluminium shell, it resists vibration and impact.
- Quick Charge: Provide top speed charging with 2 AC sockets and 1 USB port.
- Noiseless Operation: Minimum noise level gives you peace of mind.
- Rapid Cooling: Thermal fans begin to operate when the temperature reaches 45°C.
- Enhanced Safety: Prevent undervoltage, overvoltage, overloads, overheating and short circuits with built-in microprocessor.
- Optimized Design: It comes with an on/off switch, a LCD display showing power levels and an isolated input and output design preventing bumps and drops.
- Super Versatility: Compatible with lead acid batteries like AGM, GEL and flooded and LiFePO4 batteries and can run your 240V appliances like fans, TVs, laptops, refrigerators, mixer grinders, etc.

PACKAGE LIST

- 1 PC(s) Pure Sine Wave Power Inverter
- 1 PC(s) 10mm² Black Cable
- 1 PC(s) 10mm² Red Cable
- 8 PC(s) 30A Blade Fuses
- 1 PC(s) User Manual

TECHNICAL SPECIFICATIONS

Model:	PSI1500-BLK-UD-AP
Product Dimension	12.87"L (32.7cm) x 7.20"W (18.3cm) x 3.35"H (8.5cm)
Gross Weight	7.01pounds (3.18kg)
Continuous Power	1,500W
Surge Power	3,000W
Output Voltage	240VAC+ 5%
Output Frequency	50Hz
Output Wave	Pure Sine Wave
Rated Input DC Voltage	12V
Static Current	≤0.6A
Input Voltage Range	9-15.5VDC
USB Current	5V, 2.1A
Total Harmonic Distortion	≤3%
Low Voltage Alarm	10.5±0.5VDC
Low Voltage Shutdown	9±0.5VDC
Recovery From Low Voltage Protection	11±0.5VDC
High Voltage Shutdown	15.5±0.5VDC
Recovery From High Voltage Protection	14.8±0.2VDC
Ambient Temperature	-10°C - +50°C
Maximum Efficiency	90%
Number of AU Socket	2
Number of USB Socket	1
Socket Type	Australian Standard
Heat Dissipation	Fan
Mounting Points	300 * 110 mm

WARNING & SAFETY INFORMATION

Shock hazard. Keep it away from children

- The inverter generates the same potentially lethal AC power as a normal household wall outlet. Treat it with the same respect.
- Do not insert foreign objects into the inverter's AC outlet, fan or vent openings.
- Do not expose the inverter to water, rain, snow or spray.
- Do not under any circumstance, connect the inverter to utility power AC distribution wiring.

Heated surface

- The housing of our inverter may become uncomfortably warm under high power operation. Ensure that at least 2 inches (5cm) of air space is maintained on all sides of the inverter. During operation, keep it away from materials that may be affected by high temperatures.

Explosion hazard

- Do not use the inverter in the presence of flammable fumes or gases, such as in the bilge of a gasoline powered boat, or near a propane tanks.
- Do not use the inverter in an enclosure containing automotive-type, lead-acid batteries. These batteries, unlike sealed batteries, emit explosive hydrogen gas which can be ignited by sparks from electrical connections.

CAUTION

- Do not connect live AC power to the inverter's AC outlets. The inverter will be damaged even if it is switched OFF.
- Do not expose the inverter to temperatures exceeding 104F(40°C).

Do not use the inverter with the following equipment:

- Small battery operated products such as rechargeable flashlights, some rechargeable shavers, and nightlights that are plugged directly into an AC receptacle to recharge.
- Certain battery chargers for battery packs are used in hand powered tools. There are warning labels that are present at the charger's battery terminal, stating the dangerous voltages.
- Note: DC voltage of battery should be same to input DC voltage of power inverter.

INSTALLATION

For safe and optimum performance, please install the inverter in a location that is:

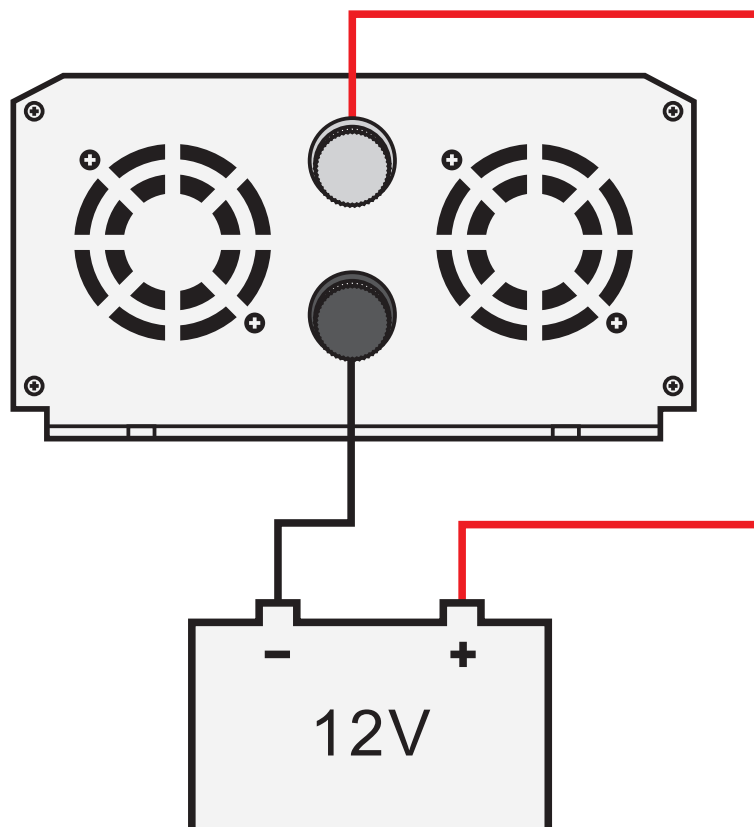
- **Dry**- Do not expose it to water drips or spray.
- **Cool**- Operate it only in ambient temperatures between 32F(0°C) and 104F (40°C). Keep it away from heating vents or other heat producing equipment.
- **Safe**- Do not install inverter in a compartment with batteries or flammable liquids, such as gasoline or explosive vapors.
- **Well ventilated**- Allow at least 2 inches(5cm) clearance above and on all sides of the unit for proper cooling.
- **Clean and free of dust and dirt**- This is especially important if the inverter is used in a work environment.

For connecting the inverter with a battery, you need to:

- Make sure that the inverter is switched off.
- Attach the DC connectors to the inverter, attach the positive red (+) to the positive terminal and the negative black (-) to the negative terminal.

CAUTION: Attaching the positive and negative incorrectly will result in a reverse polarity, potentially damaging the inverter & voiding warranty.

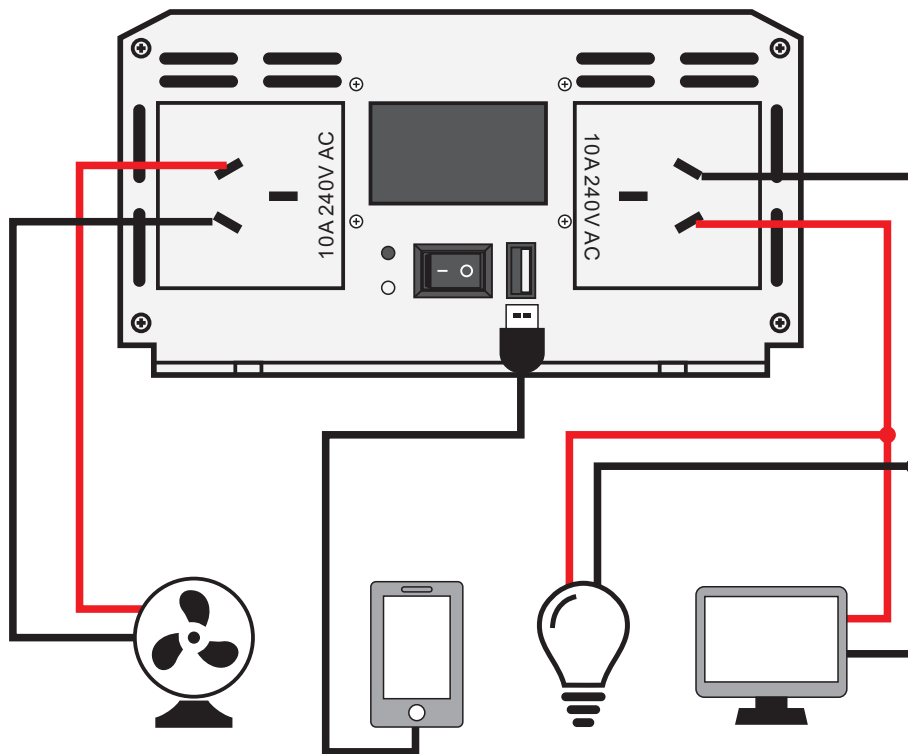
- Tighten the bolts on each DC terminal by hand. Do not over tighten.



OPERATING THE INVERTER

- Connect the 12VDC battery to the inverter.
- Connect your AC devices to the AC outlet or USB port on the front panel of the inverter. The green indicator illuminates when the inverter is switched on, which shows the device is functioning properly.
- Please switch off the inverter and disconnect the battery when you are not using.

NOTICE: When connected to the appliances, remember to turn on the inverter before turning on the appliance. And the cooling fan is designed to operate only when the temperature reaches 45°C.



BATTERY OPERATING TIME

Operating time will vary depending on the charge level of the battery, its capacity and the power drawn by the particular AC loads.

When using the battery of the vehicle as a power source, it is strongly recommended to start the vehicle every hour or two to recharge the battery before its capacity drops to a very low level. The inverter can operate while the engine is running, but the normal voltage drop that occurs during starting may trigger the inverter's low voltage shutdown feature.

Because the inverter draws less than the no-load current draw with the ON/OFF switch in ON position and with no AC products connected, it has minimal impact on battery operating times.

BUILT-IN PROTECTION

Low Voltage Shutdown	As the battery capacity is used up, battery voltage begins to drop. When the inverter senses that the voltage at its DC input has dropped to 10.5V, the audible alarm will sound and the red FAULT light will be flashing. When the battery voltage drops to 9.5V, the audible alarm will sound and the red FAULT light will be flashing, at the same time, the inverter will automatically shut down, which prevents battery damage from excessive discharge.
High Voltage Shutdown	If the voltage of 12VDC battery reaches 15.5V($\pm 0.5V$), the audible alarm will sound and the red FAULT light will be flashing, then the inverter will automatically shut down.
Thermal Protection	If the temperature rises to above that for the inverter to operate safely, the audio warning alarm will sound and the red FAULT light will be flashing. If the temperature is still rising, the inverter will automatically shut down.
Overload Protection	If the inverter detects a load power that exceeds 1,500W, the audible alarm will sound continuously and the red FAULT light will be flashing continuously, the inverter will also automatically shut down.
Short-Circuit Protection	If the inverter short-circuits, the fuse will disconnect, protecting the unit.
Reverse Polarity Protection	If the positive terminal on the battery is mistakenly connected to the negative terminal on the inverter, the built-in fuse will burn out, avoiding potential dangers.

TROUBLESHOOTING

PROBLEM: AC appliances do not work and the green power indicator does not illuminate.

Possible Cause	Suggested Solution
Bad battery	Check the battery and replace it if necessary.
Reverse connection of negative and positive poles	Correct the connection to battery and the inverter may be damaged. Replace the fuse inside the inverter. (not covered by the warranty) Note: Please refer to the section Fuse Replacement on Page 8.
Loose connection of cables	Check the cables and connections. Screw the DC terminal tightly.

PROBLEM: Inverter does not provide full 1,500W power, just run AC devices with small loads.

Possible Cause	Suggested Solution
Voltage drop across DC cables	Shorten cables or use heavier cables. Check if your battery is fully charged or not.

PROBLEM: Battery run time is less than expected.

Possible Cause	Suggested Solution
Power consumption of AC product is higher than rate	Use a larger battery to make up for increased power requirement.
Battery is old or defective	Replace the battery.
Battery is not being properly charged	Make sure battery is recharging correctly.
Power dissipation in DC cables	Use shorter/heavier DC cables.

PROBLEM: The AC appliances do not work, and the red FAULT indicator of the inverter is flashing.

Possible Cause	Suggested Solution
AC product(s) connected are rated at more than the rated continuous output power: overload shutdown has occurred.	Use product with a power rating less than the rated continuous output power.
AC product is rated less than rated continuous output power: high starting surge power surge has caused overload shutdown.	Product exceeds inverter's surge capability. Use a product with a starting surge power within the inverter's capability.
Inverter has overheated due to poor ventilation and has caused over temperature shutdown.	Switch POWER OFF. Locate the inverter to a cooler environment and allow it to cool for 15 minutes. Clean blocked fans or remove objects which cover the unit. Reduce load if continuous operation is required. Restart. Verify charging system is properly regulated and battery is 12V DC nominal.

PROBLEM: The inverter cannot provide full power.

Possible Cause	Suggested Solution
Battery incompatibility.	Make sure that the battery you use is lead acid (AGM, GEL and flooded batteries) battery or LiFePO4 battery.

FUSE REPLACEMENT

1. Turn the inverter upside down and disconnect the battery from the inverter.
2. Discharge the inverter capacitors by short-circuiting the negative and positive poles of the inverter and then pushing the power switch in the “I” position.
3. Remove all four screws on the AC end panel and push the power switch in the “O” position (see Figure 1.).
4. Slide out the bottom plate to the direction of the AC end panel (see Figure 1.).
5. Using nipper pliers or a similar tool, gently pull out the fuse(s) to be replaced (see Figure 2.).
6. Replace the fuse(s) with new one(s) of the same specification (8pcs included in the package).
7. Realign the bottom panel with the enclosure and slide it back in place.
8. Screw all four screws on the AC end panel.

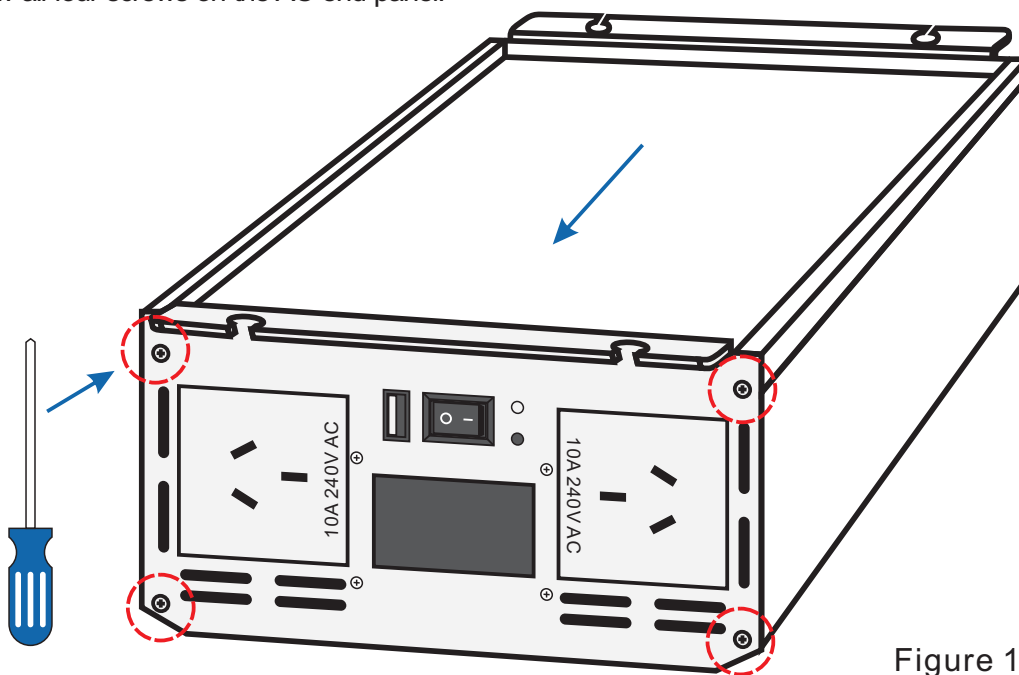


Figure 1.

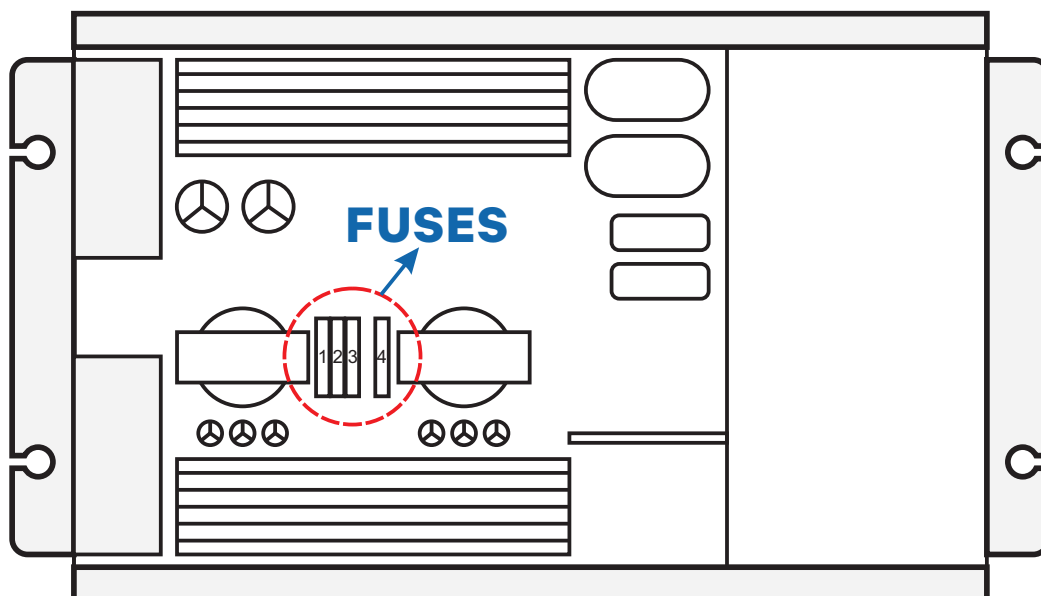


Figure 2.



WARRANTY



WARRANTY PERIOD:

Full 12 months warranty from date of purchase against all manufacturing defects. This DC-AC Pure Sine Wave Inverter by ATEM POWER comes with guarantees that cannot be excluded under the Australian Consumer Law.

WHAT DOES THE WARRANTY COVER?

Under normal usage conditions, this warranty covers:

1. Any defect in design or manufacture which results in its failure to perform correctly as described.
2. We will either repair or replace the product at our discretion provide that the fault is found to have been caused by a design or manufacturing defect and not misuse or tampering.
3. The limited warranty is the only one that applies to this unit, and it sets forth all the responsibilities of ATEM POWER.

THE WARRANTY DOES NOT COVER:

1. Cost of removing and reinstalling the product.
2. Travel and /or other expenses due to customer's location.
3. Transport charges and damage in transit. It is your responsibility to deliver and pick up your product, including any costs associated with the postage of repairing or replacing your product. If you want to send the product back we recommend that you insure against loss or damage.
4. Any loss directly or indirectly associated with the product that fails to operate.
5. Damage caused by mould, misuse, incorrect operation, adverse weather, accidents and daily wear and tear.
6. The warranty does not extend to subsequent purchasers or users other than OEM applications.
7. This unit is not intended for commercial use. This warranty does not apply to damage to units from misuse or incorrect installation/connection. Misuse includes wiring or connecting to improper polarity power sources.