POWER INVERTER MODIFIED SINE WAVE, 1000W, 12V DC TO 230V~50HZ

MODEL NO: **PI1000.V5**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.

Refer to instruction manual

Electrical shock hazard

Keep in dry area protect from rain

1. SAFETY

- ✓ Save this instruction manual for safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagrams. Keep your invoice. Keep the instruction manual and invoice in a safe and dry place for future reference.
- ▲ **DANGER!** - Beware, lead-acid batteries generate explosive gases during normal battery operation.
- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush immediately with cool clean running water for at least 15 minutes and seek immediate medical attention**.**
- × **DO NOT** smoke or allow a spark or flame in the vicinity of the battery or engine.
- ✓ If the battery terminals are corroded or dirty, clean them before attaching the clips.
- ❑ **WARNING!** To prevent the risk of sparking, short circuit and possible explosion **DO NOT** drop metal tools in the battery area, or allow them to touch the battery terminals.
- ✓ Before attaching to battery, remove personal metallic items such as rings, bracelets, necklaces and watches. A lead acid battery can produce a short-circuit current which is high enough to weld such items to the vehicle and cause severe burns.
- ✓ Keep children and unauthorised persons away from the working area.
- ❑ **WARNING! DO NOT** use on any vehicles other than those with 12V DC systems.
- ❑ **WARNING!** For delicate items such as laptops, an anti-surge device is recommended.
- × **DO NOT** install in compartment containing batteries or flammable liquids.
- × **DO NOT** connect to any AC power source.
- × **DO NOT** get inverter wet or use in damp or wet locations or areas where there is condensation.
- × **DO NOT** use the inverter for any purpose other than for which it is designed.
- × **DO NOT** pull the cables or clips from the battery terminals.
- × **DO NOT** operate the inverter if damaged.
- × **DO NOT** connect to a positive earthed system. Ensure you have the polarity correct before connecting, red clip to positive (+) battery terminal and black clip to negative (-) battery terminal.
- × **DO NOT** obstruct ventilation or cover
- ✓ Before connecting ensure nothing is plugged into the inverter, and the inverter is switched OFF.
- ❑ **WARNING!** Inverters become hot during use.
- ✓ When not in use store inverter in a safe, dry, childproof location.

Modern vehicles contain extensive electronic systems. You are required to check with the vehicle manufacturer, for any specific instructions regarding the use of this type of equipment on each vehicle.

2. INTRODUCTION

Supplies continuous smooth 230V power from 12V DC power supply found in cars, caravans, boats and commercial vehicles. Suitable for powering small TVs, laptops, power tools and various other electrical equipment rated under 1000W (maximum under load). Features USB port (5V⎓2.1A) for use on various domestic electronic equipment such as digital cameras and mobile phones. Aluminium case provides durability and maximum heat dissipation. Safety features include automatic overload shutdown, short circuit protection, low voltage alarm, low voltage shutdown and overheat shutdown. Supplied with battery leads.

3. SPECIFICATION

Model No:	PI1000.V5
Continuous Output:	1000W
Dimension (W x D x H):	240 x 160 x 65mm
Input Voltage:	12V DC
Nett Weight:	1.9kg
Gross Weight:	2.3kg
Output Frequency:	50Hz
Output Voltage:	230V AC
Supply Connection:	Battery Terminal Leads
USB Output:	5V⎓2.1A

4. SETUP & OPERATION

4.1. POWER SOURCE REQUIREMENTS

4.1.1. The inverter must be connected to a 12V DC negative earth system. **DO NOT** use with a positive earth system.

4.1.2. The power source must be capable of providing between 10.0V and 15.5V and able to supply the necessary current to operate the load.

4.2. CONNECTING BATTERY LEADS TO INVERTER

4.2.1. To attach the Battery Leads loosen the terminal screws. (Fig.1).

4.2.2. Place the Black lead into the end of the Negative (-) terminal and tighten the terminal screw.

4.2.3. Place the Red lead into the end of the Positive (+) terminal and tighten the terminal screw.

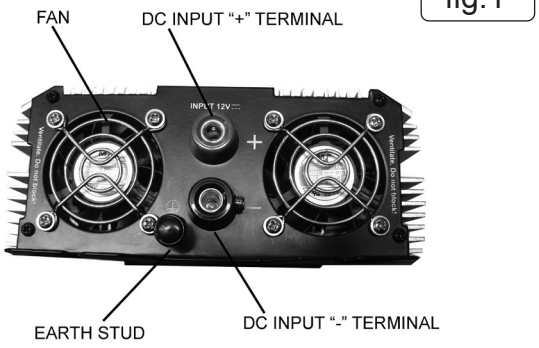

fig.1

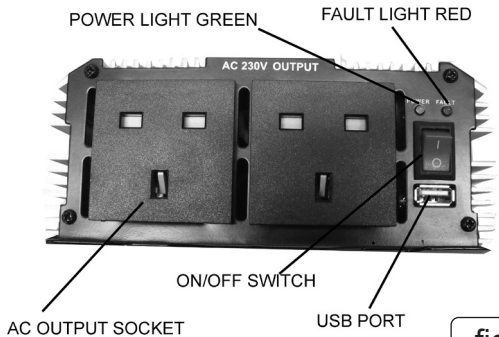

fig.2

4.3. EARTH CONNECTION

4.3.1. The chassis earth lug (See Fig.1) must be connected to an earthing point. In a vehicle connect the chassis earth lug to the vehicles chassis. In a boat connect to the earthing system of the vessel. In a fixed location connect to the ground.

4.4. CONNECTING TO BATTERY TERMINALS

4.4.1. Ensure battery terminals are clean, if necessary clean away any corrosion.

4.4.2. Check to make sure the inverter is turned OFF and no flammable fumes are present.

4.4.3. Undo the securing bolt for the red (+) battery terminal and secure the red battery lead to the red (+) terminal post on the battery.

4.4.4. Undo the securing bolt for the black (-) battery terminal and secure the black battery lead to the black (-) terminal post on the battery.

4.4.5. Check all connections are secure.

4.5. CONNECTION TO LOAD

4.5.1. NOTE: Most electrical appliances, tools etc, have a rating plate indicating the power consumption in Amps or Watts. Use these ratings to ensure you remain under the inverters maximum capacity. If the rating is shown in amps, multiply the value by the voltage (230V) to determine the wattage.

4.5.2. Ensure that the inverter is switched OFF. Plug the equipment you wish to use into one of the inverter's two 3 pin sockets or into the USB port as required.

4.5.3. Make sure the load does not exceed the wattage rating of the inverter.

4.5.4. Switch the inverter on, check that everything is working and the green LED is lit.

❑ **WARNING! DO NOT** connect the inverter to any AC distribution wiring or any AC load circuit in which the neutral conductor is connected to ground (earth) or to the negative of the DC (battery) source.

4.5.5. NOTE: Some rechargeable devices do not operate well with a moderated sine wave inverter. They only operate from a standard household outlet which provides a pure sine wave. It is recommended that these devices be operated from a standard household outlet only. This problem does not occur with most battery operated equipment. Most of these devices use a separate charger or transformer that is plugged into a separate AC socket.

4.6. PLACEMENT OF INVERTER

4.6.1. For best and safest operation the inverter should be placed on a flat and stable surface.

4.6.2. Use only in a dry location, **DO NOT** allow inverter to get wet.

4.6.3. Use in cool ambient temperature of between 5°C and 35°C. **DO NOT** place on or near a heating vent.

4.6.4. Allow sufficient space around the inverter for cooling. If the inverter overheats it will shut down and will not restart until it has cooled down.

× **DO NOT** use near flammable materials or anywhere that flammable gasses could accumulate.

4.6.5. The inverter may become uncomfortably hot during extended periods of full power use.

❑ **WARNING! DO NOT** place on or near materials that may be affected by heat.

4.7. WATTAGE LOADING

4.7.1. Inductive loads, such as TV's and stereos, require more current to operate than do resistive loads of the same wattage rating. Induction motors, as well as some televisions, may require 2 to 6 times their wattage rating to start up. The most demanding in this category are those that start under load, such as compressors and pumps. Testing is the only definitive way to determine whether a specific load can be started and how long it can run. The unit will simply shut down if it is overloaded. To restart the unit after a shut down due to overloading, remove the overload.

NOTE: The inverter will not operate high wattage appliances, such as hair dryers, microwave ovens and toasters.

4.8. BATTERY OPERATING TIME

4.8.1. With a typical vehicle battery, a minimum operating time of 1 to 2 hours can be expected depending on the load draw. It is recommended that the operator starts the engine every hour to recharge the battery. This will prevent any unexpected shut down of the equipment and will ensure that there is always sufficient battery capacity to start the vehicle. The inverter may be used either with the engine running or turned off. However, the inverter must be switched OFF when starting the vehicle.

4.8.2. The inverter draws less than 0.45 Amperes from the battery when it is not supplying power to a load. In most cases, the inverter may be left connected to the battery when it is not in use. If the vehicle will not be used for several days, disconnect the unit from the battery.

5. PROTECTIVE FEATURE

FUNCTION	State Description			Restart work method
	LED light	Alarm	AC Output	
Input low voltage alarm	Green on Red off	Alarm	AC has output	When the voltage of battery returns to required level, alarm stops automatically.
Input low voltage shut down	Green on Red on	Alarm	No AC output	When the voltage of the battery returns to required level, the inverter will start working,
Input high voltage shut down	Green on Red on	No Alarm	No AC output	When the voltage of the battery returns to required level, the inverter will restart, green light on, red light off.
Overload protection	Green on Red on	No Alarm	No AC output	Reduce the load to permissible level, the inverter will restart, green light on, red light off.
Over temperature shut down	Green on Red on	Alarm	No AC output	When the inside temperature returns to required level, inverter will restart, green light on, red light off.
Output short circuit	Green on Red on	No Alarm	No AC output	Remove short circuit, inverter restarts manually.

ENVIRONMENT PROTECTION
Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

REGISTER YOUR PURCHASE HERE

WEEE REGULATIONS
Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on technical@sealey.co.uk or 01284 757505.
Important: No Liability is accepted for incorrect use of this product.
Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

Jack Sealey Ltd t/a Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk, IP32 7AR UK
Jack Sealey (EU) Ltd t/a Sealey Group, Farney Street, Carrickmacross, Co. Monaghan, A81 PK68 Ireland
Tel: 01284 757500 ▪ **Email:** sales@sealey.co.uk ▪ **Web:** www.sealey.co.uk