

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 AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.

1. SAFETY INSTRUCTIONS

- ▲ **DANGER!** - Beware, lead-acid batteries generate explosive gases during normal battery operation.
- ✓ If the battery terminals are corroded or dirty, clean them before attaching the clips.
- ✓ Before attaching to battery, remove ill fitting clothing, ties, watches, rings and other loose jewellery. Contain long hair.
- ✓ Keep children and unauthorised persons away from the working area.
- ☐ **WARNING!** DO NOT use on any vehicles other than those with 12Volt DC systems.
- ☐ **WARNING!** For delicate items such as laptops, an anti-surge device is recommended.
- X DO NOT connect to any AC power source.
- X DO NOT dis-assemble. The inverter must be checked by qualified service personnel only.
- X DO NOT get inverter wet or use in damp or wet locations or areas where there is condensation.
- X DO NOT use the inverter for any purpose other than for which it is designed.
- X DO NOT pull the cables or clips from the battery terminals.
- X DO NOT operate the inverter if damaged.
- X 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.
- ✓ Before connecting ensure nothing is plugged into the inverter.
- ☐ **WARNING!** Inverters become hot during use.
- ✓ When not in use store inverter in a safe, dry, childproof location.



2. INTRODUCTION & SPECIFICATIONS

Supplies continuous smooth 230V power from 12V DC power supply found in cars, caravans, boats and HGVs. Suitable for powering small TVs, laptops, power tools and various other electrical equipment within the wattage rating of the inverter. Anodized aluminium case provides durability and maximum heat dissipation. Safety features include automatic overload shut-down and a low battery alarm to prevent damage to the supply battery. Supplied with cigarette lighter plug and/or battery clips depending on model.

Input Voltage:	PI1000
Output Voltage:	12V DC
Continuous Output Wattage:	230V AC
Maximum Output Wattage:	1000W
Output Frequency Range:	2000W
Dimensions (LxWxH):	50Hz
Supply Connection:	290x210x72mm
	Battery Leads

3. SETUP & OPERATION

3.1 Power Source Requirements

- 3.1.1 The inverter must be connected to a 12 volt DC negative earth system. **DO NOT use with a positive earth system.**
- 3.1.2 The power source must be capable of providing between 10.0 and 15.5 volts and able to supply the necessary current to operate the load.

3.2 Connecting Battery Leads to Inverter.

NOTE! Check the battery is 12VDC. DO NOT use with a 6V or 24V battery

- 3.2.1 To attach the Battery Leads remove the terminal caps from the rear of the inverter (Fig.1).
- 3.2.2 Place the Black lead eyelet connector over the Black/Negative terminal post on the inverter, replace and tighten the terminal cap.
- 3.2.3 Place the Red lead eyelet connector over the Red/Positive terminal post on the inverter, replace and tighten the terminal cap.

3.3 Earth Connection

The chassis earth lug must be connected to a earthing point using 10mm² wire. 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.

3.4 Connecting to Battery Terminals.

- 3.4.1 Ensure battery terminals are clean, if necessary clean away any corrosion.
- 3.4.2 Check to make sure the inverter is turned OFF and no flammable fumes are present.
- 3.4.3 Undo the securing bolt for the red (+) battery terminal and secure the red battery lead to the red (+) terminal post on the battery.
- 3.4.4 Undo the securing bolt for the black (-) battery terminal and secure the black battery lead to the black (-) terminal post on the battery.
- 3.4.5 Check all connections are secure.

3.5 Connection to Load

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.

- 3.5.1 Plug the equipment you wish to use into the inverters 3 pin socket. Make sure the socket is in the OFF position.
- 3.5.2 Make sure the load does not exceed the wattage rating of the inverter.
- 3.5.3 Switch the inverter on and check that everything is working. Green LED lights.
- 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.

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.

3.6 Placement of Inverter

- 3.6.1 For best and safest operation the inverter should be placed on a flat and stable surface.
- 3.6.2 Use only in a dry location, do not allow inverter to get wet.
- 3.6.3 Use in cool ambient temperature of between 0°C and 40°C. Do not place on or near a heating vent.
- 3.6.4 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.
- 3.6.5 Do not use near flammable materials or anywhere that flammable gasses could accumulate.
- 3.6.6 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.

Fig.1



4. OPERATING TIPS

- 4.1 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 shutdown due to overloading, remove the overload.

NOTE! The inverter will not operate high wattage appliances or equipment that produce heat, such as hair dryers, microwave ovens and toasters.

4.2 Battery Operating Time

- 4.2.1 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 operator start the engine every hour to recharge the battery. This will prevent any unexpected shutdown 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 car.
- 4.2.2 The inverter draws less than 1.3 amperes from 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, please disconnect the unit from the battery.

5. PROTECTIVE FEATURES

5.1 The inverter monitors the following potentially hazardous conditions:

- 5.1.1 Low Battery Voltage - This condition is not harmful to the inverter but could damage the power source. An alarm will sound when input voltage drops to 10.5 volts. The inverter automatically shuts down when input voltage drops to 10 volts. When the condition is corrected, the unit may be restarted.
- 5.1.2 Short Circuit - Reverse polarity or short circuit of the load will usually result in the opening of the short circuit protection and blowing the 40 amp fuses. As the fuses are internal we recommend contacting your local repair agent or Sealeys technical help line directly on 01284 757505 for guidance.
- 5.1.3 High Temperature - When the temperature of the internal heat sink reaches 65°C, the solid state temperature sensor will automatically shut down the unit. Once it is allowed to cool, the unit may be restarted.

7. TROUBLE SHOOTING

Problem	Possible Cause	Suggested Remedy
Unit will not operate	1. Poor DC contact 2. Battery voltage below 10V. 3. Load draws too much power. 4. Inverter in thermal shutdown. 5. Vehicle battery in poor condition.	1. Check all DC contacts. 2. Recharge or replace battery. 3. Reduce load. 4. Allow inverter to cool. 5. Check / replace battery
Low output voltage.	Check with voltmeter.	Use true RMS voltmeter.
Low voltage alarm sounds continuously.	1. Bad connection or wiring. 2. Low battery voltage.	1. Check and tighten all DC connections. 2. Recharge battery without load.
Television Interference	1. Inverter too close to the television.	1. Locate the inverter as far as possible from the TV, antenna and other cables.

Environmental Protection.



Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycle centre and disposed of in a manner which is compatible with the environment.



When the product is no longer required, it must be disposed of in an environmentally protective way.

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.

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.



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