Traveller Series
240VAC Sine Wave Power Inverter

Operating Instructions
Please read these instructions before use

Features include:

• Microprocessor-based design with accurate and stable frequency • Capable of driving inductive loads, i.e. electric tools and appliances • Low Battery Shut Down • Input voltage (12V Models 10-15VDC) (24V Models 21-30VDC) • Output voltage 235-245VAC, Pure Sine Wave @ 50Hz
• Low harmonic distortion (3%≤) • Compact, rugged and designed with (82-85%≥) efficient • Aluminium chassis for harsh environments and easily mounted

Safety Instructions:

WARNING! - Professional electrical / renewable energy installer should perform the installation, as dangerous voltages can be present. Before installing and using your inverter, read the Installation Instructions!

Explosive Gas Precautions:

This equipment contains components that can produce arcs or sparks. To prevent fire or explosion do not install in compartments containing batteries or flammable materials, or in locations that require ignition-protected equipment. This includes any space containing petrol-powered machinery, fuel tanks, joints or other connections between components of the fuel system.

Precautions When Working With Batteries:

• If battery acid contacts skin or clothing, wash immediately with soap and water. If acid gets into eyes, immediately flood eyes with running cold water for at least 20 minutes and get medical attention immediately. **NEVER** smoke, allow a spark or flame in the vicinity of batteries or engine. Do not drop a metal tool on the battery as the resulting spark or short-circuit of the battery may cause an explosion.

• Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery produces a short-circuit current, high enough to weld a ring or similar metal, causing a severe burn.

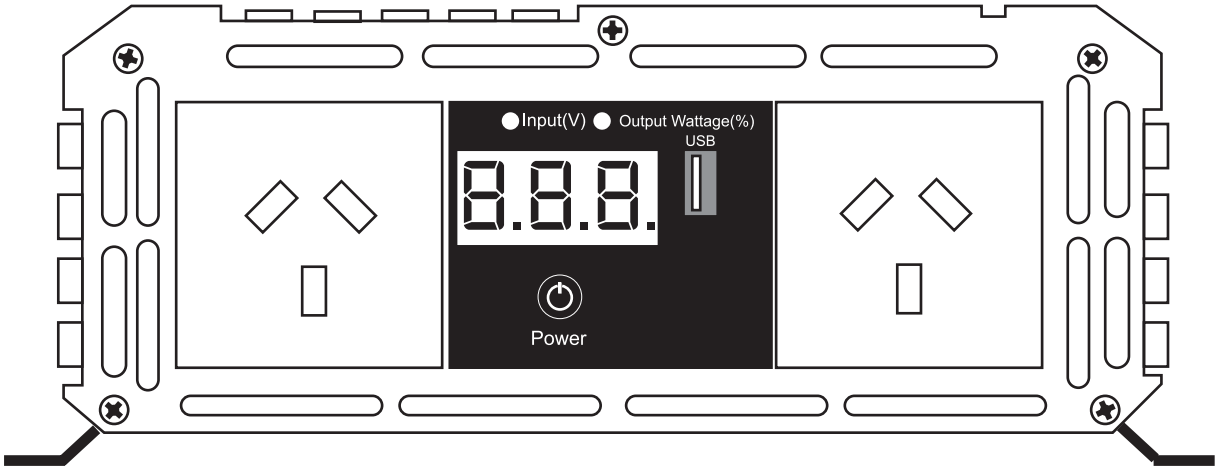
WARNING! - Shock Hazard! Before proceeding further, ensure that the Inverter is NOT connected to any Batteries, and that all wiring is disconnected from any electrical Sources. Do not connect the 0utput Terminals of the Inverter to an incoming AC sources.

Before installing your inverter, please make sure that you have appropriately sized batteries. A battery that is too small in capacity will not allow the inverter to perform to its full specification. The DC cabling must be connected to the correct polarity terminals of the battery bank. (Red = Positive, Black = Negative).

DO NOT extend the DC cable length to the inverter unless you are prepared to increase the diameter of the cable. If this is necessary consult your supplier or installer for advice.

WARNING! - Reverse polarity connection will blow the internal fuse and may damage the inverter permanently.

Front view, main functions & Operation:



1. ***Controls and indicators:***
The POWER switch turns the control circuit in the power inverter on and off. It does not disconnect power from the power inverter.
To turn ON: Press the power button 3-5 seconds then the inverter will start.

2. ***Input Voltage Indication:***
By default this enabled and is indicated by the “Input(V)” LED being lit. If the unit is in “Output Wattage(%)” Mode, press the POWER button once to toggle to Input Voltage.
When in Input Voltage mode it will display on the three digit display a reading of the battery voltage.

3. ***Output Wattage***:
The “Output Wattage(%)” LED indicates that the display now reads the Output Wattage being consumed represented as a percentage of the maximum opperating wattage.
To toggle the display to this mode, Press the POWER button once quickly.

Installation

1. *Where to install* - The power inverter should be installed in a location that meets the following requirements:
Dry – Do not allow water to drip or splash on the inverter and in an area free of salt or moisture-laden air.
Temperature – Ambient air temperature should be between 0º and 40º.
Ventilation – Allow at least twenty-five millimeters / one inch of clearance around the inverter for airflow. Ensure the ventilation openings on the rear and bottom of the unit are not obstructed. The installation site should not be susceptible to temperatures in excess of 50ºC.
Safety – Do not install in a battery compartment or other areas where flammable fumes may exist, such as fuel storage or engine compartments.
Dust-free – Do not install the inverter in an environment where there are dust, wood particles, metal filings and shavings. These can be pulled into the unit blocking the cooling fans.
Close to battery / batteries – Avoid excessive cable lengths (Mount the inverter between one and two metres from the batteries) but do not install the inverter over or in the same compartment as batteries. Use the recommended wire lengths and sizes. Do not mount the inverter where it will be exposed to the gases produced by the battery. These gases are very corrosive and prolonged exposure will damage the inverter.

2. *Making DC Wiring Connections:* Follow this procedure to connect the battery cables to the DC input terminals on the inverter. Your cables should be as short as possible (ideally, less than 10 feet / 3 metres).

a. Unpack and inspect the power inverter, check to see that the power switch in the OFF position.

CAUTION! - Reversed polarity connections will blow a fuse in inverter and may permanently damage the inverter. Damage caused by a reverse polarity connection is not covered by our warranty.

b. Connect the DC POSITIVE cable to the Positive (POS+) terminal on the battery.
c. Connect the cable to the Positive terminal on the inverter.
d. Connect the DC NEGATIVE cable to the Negative terminal on the inverter.

WARNING! - You may observe a spark when you make this connection. Do not make this connection in the presence of flammable fumes. Explosion or fire may result.

e. Connect the cable to the Negative (NEG-) terminal of the battery. This should be the last connection made. A spark when making this final connection is normal.

WARNING! - Make sure all the DC connections are tight. Loose connections will overheat and could result in a fire hazard.

Maintenance:

Helpful Tip to Conserve Battery Power

Should the inverter not be used over an extended period of time, it is recommended that the battery be disconnected from the inverter. This will ensure battery will not be drained over the period of non-usage.

Very little maintenance is required to keep your inverter operating properly. You should clean the exterior of the unit periodically with a damp cloth to prevent accumulation of dust and dirt. At the same time, tighten the screws on the DC input terminals.

WARNING!
Do not open or disassemble inverter. Attempting to service the unit yourself may result in a risk of electrical shock or fire.

Opperation:

1) Press the power button for 3-5 Seconds, Unit will turn ON.
2) If the Left indicator is on then the Display will show the Input Voltage
3) If you desire to see the output power being used as a percentage press the power button with a quick short press once. Now the Right LED will be lit and the display will show the Output Power Consumpton as a Percentage of the total watts of the unit.
4) If you wish to return to viewing the Input Voltage press the power button quickly once more.
5) To turn OFF the unit press the power button for 3-5 Seconds.

Specifications:

Continuous Power	900W	1620W	2250W
30Min Max Power	1000W	1800W	2500W
Working Voltage Range	12V = 10.5V±0.3 - 15.5V±0.5 24V = 21V±0.3 - 31V±0.5		
Rated Input DC Voltage Range	12V = 12.8V-13.2V 24V = 25.6V - 26.4V		
Output Voltage	235-245V		
Output Frequency Range	50±0.3Hz		
Max Power Efficiency (at rated input DC Voltage)	≥85%		
Full load Power Efficiency (at rated input DC voltage)	≥82%		
No Load Power Current (at rated input DC voltage)	12V ≤0.8A 24V ≤0.6A	12V ≤1.2A 24V ≤1.2A	12V ≤1.5A 24V ≤1.2A
Over-Voltage Shut Down (No Load)	12V = 15V - 16.5V 24V = 30V - 33V		
Low Voltage Alarm (No Load)	12V = 10.7±0.3V 24V = 21.4±0.6V		
Low Voltage Shut Down (No Load)	12V = 10±0.3V 24V = 20±0.6V		
Restart Voltage after Low Voltage condition	12V = 12±0.3V 24V = 24±0.3V		
Internal Fuses 12V/(24V)	35A x 4 (20A x4)	30A x 8 (15A x 8)	40A x 8 (20A x 8)
Sine Wave Observation	Smooth, No Burr (No Load or Load)		
Total Harmonic Distortion	≤3%		
Fan Control	Thermal and Load Controlled		
Over Temperature Cutout	60°C - 70°C		
Overload Protection (sustatined 5-30sec)	1230W	2050W	2750W
USB	5V 1A		
Working Temerature Range	-10°C - 40°C		

Warranty Conditions: Our products come with guarantees that cannot be excluded under the Australian Consumer Law.
The customer is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. The customer is also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure.
GSL Electronics (GSL) warrants that its products will, under normal use and service, be free of defects in material and workmanship for a period of two (2) years from the date of the original purchase by the customer as marked on the customer's original invoice. Please refer to our website for full warranty and return information.