



**Modified wave 1000 watt voltage inverter**  
**12 volt dc to 230 volt 50Hz ac**  
**Part 0-856-10**

### Warnings



**Read all instructions before attempting to install or use the inverter.**  
**High voltage, 230 volts ac, is generated by this unit.**  
**Do not use with wet hands or near water.**  
**This unit is only suitable for 12 volt electrical systems with negative earth.**  
**To supply 230 volt 50 Hz loads of <1000 watts.**  
**Do not connect to any other ac power source.**



### Installation Instructions

1. Disconnect all battery leads, -ve leads first, before installing the inverter.
2. Locate a suitable position for the inverter and fit securely. The site chosen should be:
  - (a) Well ventilated.
  - (b) Not exposed to direct sunlight or heat source.
  - (c) Away from water or moisture.
  - (d) Out of reach of children.
  - (e) Away from any flammable or heat sensitive substance.
3. Connect the black 12 volt -ve terminal to the negative side of the supply source and the red 12 volt +ve terminal to a fused positive supply source. Use a minimum of 16.0mm<sup>2</sup> cable and keep all cable runs as short as possible.
4. Connect the inverter case ground terminal to the chassis ground when installing in a vehicle, the vessel's grounding system in a boat or to earth in a fixed location. The case ground terminal is connected to the ground terminal in the ac outlet socket.
5. If using the optional remote control (part 0-856-98), fix the remote control in a suitable position and insert the connector into the remote control socket on the inverter control panel.

### Operating Instructions

1. Ensure that the inverter is supplied by a 12-14 volt dc negative earth system and that the load requires <1000 watts at 230 volt 50Hz ac.
2. Plug the appliance into the inverter and then turn on the inverter's power switch. The LED will illuminate to indicate ac power is present, then switch on the appliance. Always turn on the inverter before turning on loads individually. If using the optional remote control, ensure the control panel power switch is set to 'Remote' then use the remote 'On/Off' switch as the inverter power switch.
3. Switch off the inverter when not in use or when heavy current is drawn from the dc supply, e.g. when starting an engine from the same supply source.
4. Battery voltage and current bar graphs indicate supply voltage and current. In normal operation the inverter will operate in the green region. The inverter can operate for short periods in the current yellow zone and protective shutdown will occur if used in the red zone.



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5. If the inverter beeps, but is still supplying ac output, this indicates a low supply voltage; switch off the inverter to preserve battery voltage. If left on the inverter will automatically shut down when the supply voltage falls to approximately  $10.0 \pm 0.5$  volts.
6. The overtemp indicator illuminates when the inverter has shutdown due to overheating. The inverter will restart automatically once it has cooled down.
7. The overload indicator illuminates when the inverter has shutdown due to output short-circuit or gross overloading. If this occurs switch the inverter off and correct the cause before switching the inverter on again.

### Troubleshooting

If the inverter beeps or does not appear to be functioning properly, check the following:

- (i) Low dc supply voltage, supply voltage  $<10.5 \pm 0.5$  volts.
- (ii) Low dc voltage shutdown, supply voltage  $<10.0 \pm 0.5$  volts.
- (iii) Overload shutdown, check load requirement is  $<1000$  watts.
- (iv) Thermal shutdown, switch off, allow the inverter to cool down and reduce load.
- (v) Wiring, terminals and connections.

### Specifications

DC input voltage	12 volts (12 - 15 volts)
AC output voltage	230 volts
Output frequency	50 Hz
Output waveform	Modified wave
Continuous output power	1000 watts
Surge output power	2000 watts
Efficiency	90%
No load current	$< 0.45$ amps
Input 100% load current draw (@ 12 volt supply)	92.6 amps
Output 100% load current draw	4.35 amps
Battery low voltage alarm	$10.5 \pm 0.5$ volts
Battery low voltage shutdown	$10.0 \pm 0.5$ volts
Alarm and thermal shutdown	$55 \pm 5^{\circ}\text{C}$
Dimensions	l 240 x w 363 x h 76mm
Weight	3.84 Kg

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