75W/100W/150W/300W
500W/600W/800W/1000W

DC to AC Power Inverter

User's Guide

1 Placement Guidelines

For optimum operation. Inverter should be Placed on a flat surface such as the floor of a car. THE LOCATION SHOULD BE:

- Dry. Do not expose to water drip or spray
- Cool. Operate only in ambient temperatures between 32°F(0℃)and 104°F(40℃)Keep away from heation vents.
- Well ventilated.Allow at lelase 2 inches (5 cm) clearance above and on all sides of the Inverter for proper cooling.

2 Using the Power Inverter

The 100P/150P/300P/500P is capable of continuously powering most 220-volt AC products that use 80w/120w/240w/400w or less. Its AC output waveform,called "modified-sine wave",is de signed to function similary to the sine wave shape of utility power. Most AC products rated for 80w/120w/240w/400w or less will operate normally with the 100P/150P/300P/500P.

The power or "wattage" rating of AC products is the average power they use. When many AC Products are first swiched on, the initially consume more power than than their power rating. Tvs, monitors, and electric motors are examples of poducts that have high"surge" requirements at start up. Although the 100P/150P/300P/500P can supply momentary surge power as high as 200w/300w/600w. 1000w, occasionally some products rated less than 80w/120w/240w/400w may exceed its surge capabilities and trigger its safaty overload shutdown feature.

Indicators Controls and Connectors

- An AC outlet is provided on onend of the Inverter. A220-vott AC product with a continuous power consumption of 80w/120w/240w/400w or less, may be plugged in.
- The Inverter receives its operating power through is DC Plug that fits standard vehicle cigarette lighter sockets and 12-volt power outlets.

- Thank you for purchasig the Power Inerter. The Power Inveeerter is an ultra compact and ann highly portalble power inverter from, the leadr in the fileld of high frequency inverter design. From the 12-volt outlet in your car or boat. The will reliably power a wide variety of household AC products, such as portable stereos,laptop computers, camcorders and mobile phone charges. The is designed to provide years of trouble free operation and includes automatic safety monitoring circuitry to protect it,and your battery, from in advertentoverload conditions. Read this guide befoe installing or using the and save it for future reference.

- The ON/OFF switch enables output AC power at the AC outlet when switchen ON.
- The green POWER light indicates AC power is present at the AC outlet and the Inverteris operating normally.
- The red FAULT light indicates inverter shutdown caused by low or high battery voltage, overload or excessive temperature.
- The ON/OFF switch enables output AC power at the AC outlet when switched ON.
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Inverter Operation

- Plug the Inverter DC Plug into a vehicle ' s cigarette lighter or 12-volt outlet.
- Turn the AC product you wish to operate into the Acoutlet and switch it on. As the battery charge isused up,battery voltage begins to fall. When the Inverter senses the voltage at its DC input has dropped to 10.7 volts, an audio warning is provided. When input voltage drips to 10.0 volts, the Inverter will automatically shut down to prevent battery damage. The red FAULT light illuminates.
- If the Inverter exceeds a safe operation temperature,due to insufficient ventilation or a high temperature environment, is will automatically shut down. Then red FAULT light will turn on.

CAUTION! Although the Inverter icorporates protection againstover-voltage, it may still be damaged if the inpu voltage exceeds 16 volts.

- In the event of an overload,1ow battery voltage or overheating,the inverter will automatically shut down.(See Section 4.)

Interference with Electroniscs Equipment

Generally, most AC products operate the inverterjust as they would with household AC power. Below is information concerning two possible exceptions.

Buzzing Sound in Audio Systems,

Some inexpensive stereo systems and "boom boxes"have inadequate internal power supply filtering and"buzz"slightly when powered by the inverter,Generally,the only solution is an audio

Television Interference.

The Inverter is shielded to minimize interference with TV signals. However,with weak TV signals interference maybe visible in the form of lines scrolling across the screen.The following should minimize or eliminate the problem.

- Use an extension cord to increase the distance between the inverter and the TV antenna and cables.
- Adjust the orintation of the Inverter, antenna and cables.
- Maximize TV signal strength by using a better antenna and use shielded antenna cable where possible.
- Try a different TV different models of televisions vary consierably in their susceptibility to inter ference.

Battery Operating Time

When using the Inverter, operating time will vary depending on the charge level of the battery, its capacity and the power level drawn by the particular AC load,With a typical vehicle battery and a 50-wattload (such as a portable stereo/CDplayer),an operating time of 5-6 hours or more can be expected.

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

Because the Inverter draws less than 0.15 amps with the ON/OFF switch in the ON position and with no AC products connected,it has minimal impact on battery operating times.

3 WARNING & CAUSION

Incorrect installation or misuse of the Inverter may result in danger to the suer or hazardousconditions. We urge you to pay special attention to all CAUTINN and WARNING statements.CAUTION statements identify conditions or practices that may result in damage to the Inverter or to other equipment. WARNING statements identify conditions that may result in personal injury or loss of life.

All of the nominal inverter power are within 30 minutes of continuous work in an effe ctive and reliable power, the real long-term use when you use in less than 80% of the nominal power inverter can only guarantee the normal and reliable.

WARNING! Shock hazard,Keep away from children.

- The Inverter generates the same potentially lethal AC power as a normal house hold walloutlet. Treat it with the same respect that you would any AC Outlet,
- Do not insert foreign ob iects into the Inverter ' s Acoutlet or vent openings.
- Do not expose the Inverter to water, rain,snow or spray.
- Do not,under any circumstances,connect the Inverter to power utility AC distribution wiring.
- Failure to follow the above instructions may result in personal injury or damage to the Inverter.

WARNING! Heated surface.

- The Inverter ' S housing may become uncomfortably warm, reaching 140' F (60";C) under extended high power operation.
- Ensure at least 2 inches(5 cm)of air space is all sides of the inverter. During operation, keep away from materials that may be affected by high temperatures.

CAUTION!

- Do not connect any AC product to the Inverter,whose neutral conductor is connect to ground.
- Do not expose the Inverter to temperatures in excess of 104'F(40'C)

CAUTION! Do not use the Inverter with the following equipment;

- Small battery operated products Such as rechargeable flashlights,some rechargeable shavers, and night-lights that are plugged directly intoan AC receptacle torecharge.
- Certain battery chargers for battery packs used in hand powered tools. These chargers will have warning labels Stating that dangerous voltages are present at the charger ' s battey terminals.

4 Troubleshooting

- Problem:AC product will not operate,no inverter lights are on.

Possible. Cause:	Suggested Remedy:
Poor contact with lighter socket or 12--volt	Press plug firmly into socket, clean plug or socket if necessary.
Lighter socket or 12--volt outlet may require ignition to be switched on.	Turn key to accessory position.
Cigarette lighter or 12-volt outlet fuse is blown.	Check vehicle fuses and replace blown fuse with correct value.
Inverter has been connedcted with reverse DC input polarity.	Probable inverter damage has occurred. Have unit repaired.

- Problem:Measured inverter ouput is toolow.

Possible. Cause:	Suggested Remedy:
Standard"average-leading" AC voltmeter used to measure output voltage. Reading 5 to 15 volts toolow.	Inverter's "modified sine wave"output Requires"trus RMS"voltmeter,such as Fluke 87 series millimeter,for accur ate measurement.
Battery voltage is too low.	Recharge battery.

- Problem:Battery run time is less than expected

Possible.Cause:	Suggested Remedy:
AC product power consumption is higher than rated.	Use a large battery to make up for increased power requirement.
Battery is old or defective. Battery is not beingproperly charged.	Replace battery. Have vehicle electrical system checked by a qualifled technician.

5 Specialfecton

Output voltage:220 VAC
Output frequency:50 HZ +/-2 Hz
Output waveform: Modified sine wave

input voltage range: 10.0-15.0 VDC
Fuse: 10A/15A/20A/40A/70A
Low battery alam(nominal):9.7-10.3V
High battery shutdown point(nominal):14.5-15.5V

Battery drain with no AC load(at 12V input):<0.3A
Peak efficiency:>90%

Continues AC output power:80W/120W/240W/400W
30-minute AC output power:100W/150W/300W/500W
Maximum AC output power:200W/300W/600W/1000W

Dimensiond(LxWxH):80x60x45/108x95x55/128x95x55 /168x95x55mm³

Weight:350g/550g/800g/1200g