80B/100B/120B/150B/180B
250B/300B/500B/800B/1000B
1100B/1300B/1500B/2000B/2500B/3000B

DC to ACPower Inverter
User's Guide

thank you for purchasing the power Invertar the power Inverter is an ultra compact and highly portabte power inerter from,the leader in the fidld or high frequancy inverter design,Form the 12-votlet in your car or boat,the POWER will reliable Power a wide carlety of household AC products.Such as portable stereos,laptop computers, camcorders and mobile phone charges,The POWER is designed to provide years of trouble free operation and includes automatic satety monitoring circuitry satey to protect it,and your battery,trom insdvertent overlaad conditions

Read this guide before installing or uising the Power it for future reference

1 Placement Guidelines

For optimum operation,the inverte should be placed on a flat surface such as the floor or a car.THE LOCATION SHOULDBE:

- 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 heating vents
- Well ventilated.Allow at lease 2 inches(5com)clearance above and on all sides of the inverter for proper cooling

2 Uing the INVERTER

The Dc to Ac power inverter 150B/180B/300B/500B/1000B/is capable of continuously powering most 220-volt Ac products than use 120w/145w/240w /400w/800w or less.Its AC output waveform.,called"modifide-sine wave". is de signed to function similarly to the sine wave shape of utility power.Most AC products rated for 120w/145w/240w/400w/800w or less will operate normally with the 150B/180B/300B/500B/800B.

The power or"wattage"rating of AC products is ther average power they use. When many AC products are first switched on they initially consume more power than their power ratifng TVs.Monitors,and electric motors are examples of products than have high"surge"requirements at start up.Although the 150B/180B/300B/500B/800B/1000B can supply momentary surge power as high as 300w/360w/600w/1000w/2000w,occasionally some products rated less than 120w/145w/240w/400w/800w/may exceed its surge capabilities and trlgger its safety overload shutdown feature.

Indicators Controls and Connectors

- An AC outlet is provided on one end of inverter,A220-voti AC products with a continuous power consumption of 120w/145w/240w/400w/800w or less. may be pougged in vehicle cigarette lighter sockets and 12-voit power outlets.
- The ON/OFF switch enables output Ac power is present at the Ac outlet and the inverter is operating normally.
- the green POWER light indicates AC power is present at ther Ac outlet and the inverter is operating normally.
- The red FAULT light indicates inverter shutdown caused by low or high battery voltage.Overload or excessive temperature.

3. WARNING&CAUSION

Incorrect installation or misuse of the inverter may result in danger to the user or hazardous conditions, we urge you to pay special alttention to all CAUTION and WARNING statements. CAUTION statements indentify conditions or practices that may result in damage to the inverter or to other equipment. WARNING statements identify conditions than may result in personal injury or loss of life

WARNING! Shock hazard keep away from children

- The inverter generates the same potentially lethal AC power as a normal household wall outlet, treat it with the same respect that you would any AC Outlet.
- Do not insert foreign objects into the inverter's AC outlet or vent openyings
- 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(5cm)of air space is maintained on 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 connected 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 pougged directly into an AC receptacle to recharge.
- Certain battery charges for battery packs used in hand powered tools. These chargers will have warning labels stating that dangerous voltages are present at the charger's battery terminals.

Inverter operation

- Plug the inverter DC plug into a vehicle's cigarette lighter or 12-volt outlet.
- Turn the inverter ON/OFF switch ON.The green POWER light indicates AC power is available at the Ac outlet.
- Plug the AC product yau wish to operate into the AC outlet and switch in on.As the batterty charge is used up,battery voltage begins to fall, when the inverter senses the voltage at its DC input has dropped to 10.7 volts, and audio warning is provided. When input voltage drops to 10.0 volts,the inverter will autornatically shutdown to prevent battery battery damage.the red FAULT light illumiantes.
  If the inverter exceeds a safe operating temperature,due to insufficient ventilation or a high temperature enviroment.it w red FAULT light will turn on and the audio warning will sound.
- Should a defective battery charging system cause the battery voltage to rise to dangerously high lagvels,the inverter automatically shuts down. The red FAULT light will turn on.

CAUTION! Although the inverter incorporates protection against over-voltage,it may still be damaged if the input voltage exceeds 16 colts

- In the event of an overload,low battery or overheating, the inverter will automatically shut down,(see section4)

Interfernce with Electronics Equipment

Generally,most AC products operate with the inverter just as they would with household AC power.Below is information concerning two possible exceptions Buzzing Sound in Audia Systems.Some inexpensive stereo systems and"boom bosses"have invedequate internal power supply filtering and "buzz"slightly when powered by the inverter. Genervally,the only solution is an audla systems with a higher quality filter.

Television Interference.

The inverter is shielded to minimize interference with TV signals.However. with weak TV signals interference may be visible in the form fo lines scrolling across the screen,the following should minimize or eliminater the problem.

- Use an extension cord to increase the distance between the inverter and the TV antenna and cables.
- A djust the or antation of the inverter,television,antenna and cables.
- Maximize TV signal strength by using a better antenna and use shielded antenna cable where possible.
- Try a different TV different madels of televisons very considerably in their susceptibllity 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 typocal vehicle battery and a 50-watt load(such as a portable stereo/CDplayer),an operating time of 5-6hours or more can be expected. When using a vehicle battery as a power source,it is strongly recommended to start the evhicle every hour or two to recharge the batter before its capacity 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

4. Trojbleshooting

Problem:AC product will not operate cno invetrer lights are on

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

Problem:Measured inverter output is too low.

Possible cause:	suggested Remedy
Standard"averagelesding" AC voltmeter used to measure output voltage. rseulting in an apparent reading 5 to 15 volts too low.	Inverter's"modified sine wave"output requires"true RMS" voltmeter.far accur are measurement
Battery voltage is too low.	Recharge battery

Problem:Bateery run time is less than expected.

Possible cause:	suggested Remedy
AC product power consumption is higher than rated	Use a largter battery to make up for increased power requirement
Battery is old or defective.	Replace battery
Battery is not being properly charged	Have vehicle electrical systems chaecked by a qulified technician

5. Specialfecton

Output voltage:220 VAC
Output frequency:50Hz+/-2Hz
Output waveform:modified sine wave
Input voltage range:10.0-15.0VDC
Fuse:10A/15A/20A/30A/40A/70A/100A/140A
Low battery alarm(nominal):10.4-11.0V
Low battery shutdoun point(nominal):9.7-10.3V
High battery shutdoun point(nominal):14.5-15.5V
Battery drain with no AC load(at 12V input):<0.3A
Peak efficiency:>90%
Continues AC output power:145W/200W/240W/400W/ 640W/800W/
30-minte AC ouput power:80W/100W/120W/ 150W/180W/250W/300W/500W/800W/1000W
Maximum AC output power:160W/200W/240W/ 300W/360W/500W/600W/1000W/1600W/2000W