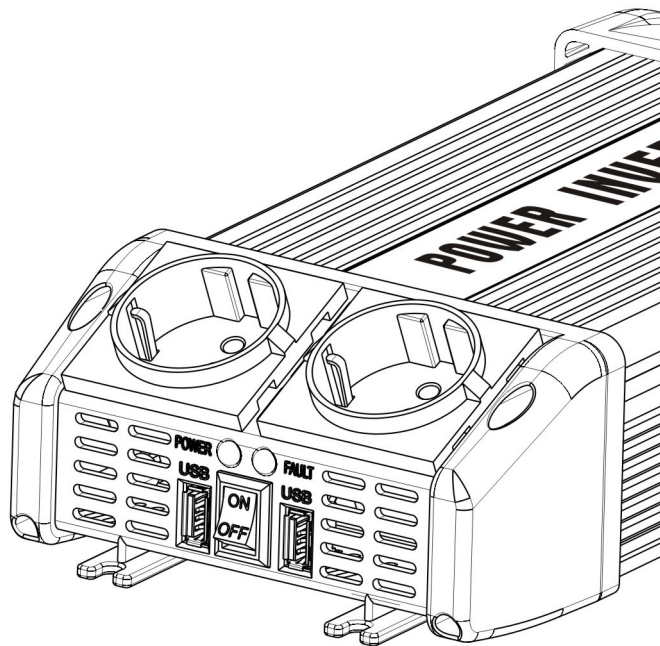


DC TO DC

# POWER INVERTER

## INSTRUCTION MANUAL



Applicable for: 400W. 800W. 1000W. 1500W

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# INSTRUCTION MANUAL

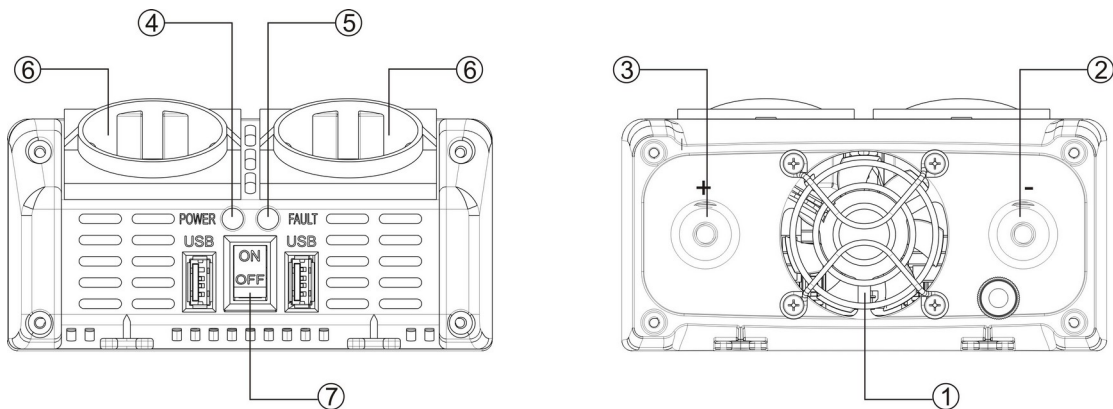
## I . Description

A power Inverter is a piece of equipment that can convert DC electricity into a useable source of AC electricity for use by electrical equipment and digital products. It has been widely used in cars, boats, mobile office, post and telecommunications, public security, emergency and so on.

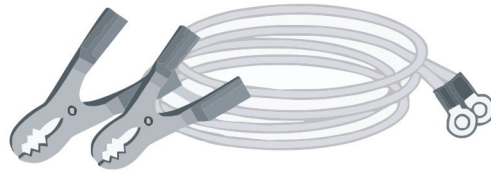
This power inverter has adopted the international lead circuit design, with the advantage of small size, light, stable, and high conversion efficiency. It has five kinds of protection circuits such as: input under voltage protection, input over voltage protection, overload protection, over temperature protection, output short circuit protection. These five functions can protect the electrical equipment and the circuit of the car.

Please read this carefully before using , it is applicable to 300W and 500W of products.

## II . Inverter and wiring diagram.



1. Fan;
2. DC input “+” terminal (RED);
3. DC input “-” terminal;(BLACK)
4. Power light green light;
5. Fault light red light;
6. AC output socket;
7. On/Off switch



### **Battery to inverter connection cable.**

The above picture just for reference cables will vary between different models. The green and yellow earth cable is a spike guard cable and is connected to the chassis or negative terminal of your equipment. If you are running an inductive load, for example power tools, microwave ovens and equipment that uses a motor can produce a feed back voltage sufficient to damage an inverter. It is always recommended you connect the spike guard to the load side or chassis of the AC equipment being powered by the inverter.

### **III. Connecting to the inverter**

If connecting your inverter under the wrong conditions, you run the risk of destroying the power inverter as well as the electrical equipment attached so please follow the steps in the sequence below and make sure you use your inverter in the correct way.

1. When using your 300W and 400W inverter in the car, please connect the inverter with the DC cigarette lighter port. Note (Red + Positive) and (Black-negative).
  - A) Connect the red side of the cigar lighter with “Red + Positive” terminal and secure it.
  - B) Connect the black negative lead to the black negative terminal on the inverter. Do not reverse the polarity or the inverter may be instantly destroyed.

#### **IMPORTANT NOTE**

a)When drawing more than 200w for example if you were to boil an 800W kettle with a 1000W inverter you would need to use your alligator clips (supplied) to connect directly to your battery as you Cigarette lighter port will not handle much more than 200W, this may result in the vehicle accessory fuse failing over time due to excessive current being drawn

b) Insert the cigarette lighter into the DC port of the car, **(Do not)** turn on the inverter until you have connected the electrical equipment you wish to power.

c)Insert the plug of the electric equipment into the AC socket of the inverter and the

turn the inverter on.

2. Use the inverter outside car connected directly to the battery if exceeding 200W:

a) When using outside car and exceeding 200W please use the battery clip cable to connect with the battery.

b) The battery clip cable will have a red and black cable, connecting the red cable with “+” and secure it connect the black cable with the “-” and secure it;

c) The clip on the red cable connect with “+” terminal of the battery and the clip on the black connect with the “-” terminal. Do not reverse or it will destroy the power inverter.

d). Turn on the power inverter, the green light will turn on; Insert the plug of the electric equipment into the AC socket of the inverter.

3) Application and related matters:

Electrical equipment that can be used:

Office equipment: Computer, scanner, printer, facsimile printer, min-duplicator, projector, working light, monitor etc...

☆ Digital products: All kinds of mobile phone/digital camera/digital projector, PDA, palm computer, recreational machines;

☆ Small house electrical equipment: TV, fan, water dispenser, dust collector, small electric iron, hair drier and so.

☆ Hardware appliance: Portable electric drill, waxing machine, electric iron and so on.

**b) Electric appliances that would be incompatible.**

☆ All electric appliances that exceed the rated power of the inverter;

☆ Generally capacitive load and perceptual load appliances are not inapplicability: Air conditioner, high power electric drill, fridge, microwave oven, blender;

☆ We do not recommend using this inverter with appliances which have strict requirement on power supper, such as precise equipments, if use ordinary power inverters with this kind of equipment will affect the measuring data.

c) Electrical appliances that are incompatible with the USB (Only for inverters with USB port)

☆ USB is only for charging , do not have data exchange function;

☆ Before charging please check carefully if the charging current of the appliance is under the inverters current, if it is exceed the charging current of the inverter please do not use, or it may destroy the USB port.

☆ Some appliance must charging use certain charger, please use the certain charger to charging .

4. Please use the inverter in a well ventilated and dry area. Check the fan inlet and make sure the fan inlet and outlet vents are not blocked.

For best performance and to extended life of your inverter, please keep it working at 85 to 90% of the units rated power. Never exceed the rated wattage.

5. The inverter has a low and a high input voltage protect function as well as an over-load protection function. The inverter also has an over temperature protect function as well as a short circuit protect function. If these conditions occur the inverter will stop working and after a short period the inverter will restart work automatically.

#### **6. Fans.**

To save energy, the fans will only work under two conditions

- a) The fan will work when the load is in excess of 30% of the related power of the inverter.
- b) When the inside temperature of the inverter exceed 60 degree the fan will work.

#### **7. Using extension cable:**

- a) We do not recommend the use of extension cables between the inverter and the battery as it will cause a drop resulting in a loss of DC electricity and will affect the performance of the inverter.
- b) If you really need to use an extension cable, we suggest you use high quality thick cable to reduce the loss of electricity.

#### **8. Testing your inverter**

- a) This is modified sine wave inverter; When measuring the voltage please use precise equipment. (RMS)
- b) When supplying power to audio system, radio or TV, the appliance may have experience interference this is normal for what it is
- c) When using in cars, please do not use the inverter when the engine has stopped as continued use will flatten your battery.
- d) Please do not open the inverter as there are no user serviceable parts inside and the voltages in the case can be lethal.

### **IV. SAFETY:**

1. Please do not operate the inverter while your hands are wet.  
Keep it away from children.
2. The temperature of the metal shell will be rather high after a long working period, so do not touch it in case its hot.

3. Do not put metal into the inverter in case not to electric shock.
4. Do not touch the metal of the socket pins while inserting the plug into the socket of the inverter.
5. Keep the inverter away from explosives;
6. Keep all AC electric away from the inverter, it will damage the inverter and also may case electric shock.

## V、Protect function and Restart work method;

Function	State description			Restart work method
	LED light	Alarm	AC output	
Input low voltage alarm	Green on Red off	Alarm	AC have output	When the voltage of the batter return to the related range,alarm stop automatically
Input low voltage shut down	Green on Red on	Alarm	No AC output	When the voltage of the battery return to related range,the inverter will restart work,green light on,red light off.
Input over voltage protection	Green on Red on	No alarm	No AC output	When the voltage of the batter return to the related range,the inverter will restart work, green light on, red light off.
Over load protection	Green on Red on	No alarm	No AC output	Reduce the load to related rang the inverter will restart work, green light on, red light off
Over temperature protection	Green on Red on	Alarm	No AC output	When the inside temperature return to related rang, inverter will restart work, green light on ,red light off.
Output short circuit	Green on Red off	No alarm	No AC output	When short circuit stoped,inverter restart to work automatically

(PS:: If using the USB port ,the USB port will work normally under all kinds of

protection conditions.)

## VI、 Waste disposal:

Please do not discard this product in the bin it is 100% recyclable

## VII、 Specification:

Model		400W	800W	1000W	1500W
DC input		DC 12V (DC 11-15V)			
		DC 24V (DC 22-30V)			
AC output		AC 230V ± 10%			
Output frequency		50 ± 3Hz			
USB output (if have)		DC 5V (500mA)			
Continuous power		400W	800W	1000W	1500W
Peak power		800W	1600W	2000W	3000W
Output wave		Modified sine wave			
Efficiency		≥80%			
No load current	12V input	<0.35A		<0.45A	
	24V input	<0.30A			
Input under voltage alarm	12V input	DC 10.2 – 10.8V			
	24Vinput	DC 20.4 – 21.6V			
Input under voltage shut down	12Vinput	DC 9.2 – 9.8V			
	24Vinput	DC 18.4 – 19.6V			
Input over voltage shut down	12Vinput	DC 15 – 16V			
	24Vinput	DC 30 – 32V			
Overload shut down		480W – 520W	850W – 1040W	1150W – 1300W	1700W – 1950W
Fuse	12V input	25A×2	25A×4	30A×4	30A×6
	24V input	25A×1	15A×4	35A×2	25A×4
The best working temperature		5 – 35°C			
Cooling method		Fan			
Accessories		Cigar cable, Battery clip cable			