

PURE SINE WAVE INVERTER MANUAL



model:

150S
300S
500S
600S
800S
1000S
1500S
2000S
3000S
5000S

In order to ensure reliable service for you, inverter must install and use properly Before install and use, please read the installation and operating instructions. some conditions of use and practices may possibly lead to inverter damaged we advise you with caution. caution certain use conditions and practices that could cause bodily injury, as a clear warning statement . Before using the inverter please read all of the prompts.

Please read this manual in order to achieve the right to use. Particularly in the use, Please remember to read "Safety Precautions" section, to ensure safe use. After reading the instruction manual Please together with warranty card proper care, to the retained for future reference.

Safety notice (Please read and keep in mind the safety notice)

In order to avoid damage to you and others people, here we listed below safety notice. Please make sure to obey and refer for the following of the marks.

■ **Disregarded or misunderstanding of these marks, will lead to the following two situation.**

	Warn This mark means "it may cause people serious injury or death."
	Note This mark means "it may cause people serious injury or other articles damage."
	This mark means for prohibited item.
	This mark means for mandatory item.

Warn

<p>When connect to the battery may cause spark, connect the former to ensure that no flammable gas.</p> <p>Battery charging and discharging will cause inflammable gases, should be well ventilated, do not put in the place flammable or accumulate flammable gases.</p>	<p>Output can't be parallel with the mains.</p> <p>Will damage the inverter and the danger of electric shock.</p>	<p>Movers can't use it</p> <p>Output high voltage will cause a danger of electric shock.</p>
<p>Do not disassemble or remodel the inverter.</p> <p>Do not disassemble or remodel the inverter, disassemble or modify unauthorized inverter may cause a malfunction or fire, electric shock.</p>	<p>Do not wet the shell.</p> <p>Otherwise may lead to short circuit, even the fire and electric shock.</p>	<p>Do not place rod or other metal objects at vent or other openings.</p> <p>This may touch on the internal component to cause electric shock or injury.</p>
<p>Put the plug of load equipment full insert into an electrical outlet.</p> <p>Failure to fully insert the plug socket, could cause electric shock and overheating, even cause a fire accident.</p> <p>Do not use a damaged plug or loosed outlet.</p>	<p>Do not touch power plug with wet hands.</p> <p>This may cause electric shock. Prohibit wet hands.</p>	<p>Do not let the volatile substances or combustible materials flowing into the machine. Keep away from the flame.</p> <p>KEEP AWAY FIRE</p>

2

Safety notice

Do not damage the output sockets or wires.

Do not cut, remodel, close to the fire, over-distorted, reversed, wiring and pull wires, or placed outlet weight on wire or sockets.



In power, do not bundle wires. Please do not bundle wires. Use the broken wires can cause electric shock, short circuit or fire.

FORBIDDEN

ATTENTION

Use inverter in the common ground wire power system.

If the output connect with the ground will cause inverter short circuit and damage. For example, used in the car, the inverter's output terminal have the voltage reflected on the car body.



FORBIDDEN

In power, do not let the load and to type in the loop.

Cause the overload protection circuit will invalidate or increase the overload protection power.



FORBIDDEN

Do not install inverter worked in hot, humid environment.



FORBIDDEN

The inverters have not been tested for use in medical equipment.



FORBIDDEN

ATTENTION

- In connection cable should be used to install the appropriate cable, if the 230V output cable is too long or the wire cross-sectional area is too small, will cause a large number of cable power loss, the load performance as low power, low voltage.
- Battery and inverter connection cable are not standardized, cable is too long, cross-sectional area is too small, in connection parts of contact short, and even turn on does not work give a alarm. Meanwhile, cable must be waterproof, insulate strength to meet environment requires.

Applied to the following product:

Bulk, fluorescent light, rice cooker, electric iron, desktop computer, laptops, Computer display, fax machines, printers, LCD TV, VCR, fans, DVD machine, cell phone chargers, electric drill, electric iron, washing machine, hair dryer, amplifier, music center, subwoofer air conditioning and so on.

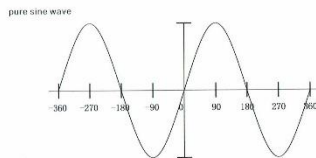
3

Introduction of performance

Environment for use

Inverter is a power equipment that can change DC (storage battery, solar cells, wind dynamo, etc.) to AC. The inverter use high frequency power conversion technology, and use the ferrite transformer instead of the old bulky silicon steel transformer. That is why power inverter is lighter, smaller than other similar inverter. When the inverter working in inverter mode, the output waveform is sine wave.

Pic1: Output sine waveform



Environment for use

In order to get the best using results, please put the inverter in flat surface, such as the ground, car floor, or other solid surface which can easily fixed the inverter's power cord. The working place should meet the following criteria:

- Keep dry, should not let the inverter contact the water or other liquids, keep the inverter away from moisture or water.
- Cool environment, keep the temperature between 0 Celsius degrees (no condensation) and 40 Celsius degrees. Do not put the inverter next to heat vents or other heat devices. Try keep the inverter not be shined directly by the sunshine.
- Ventilation. No objects block around, and keep free flow of the air. Do not put anything on the inverter when it was working, because the fan is help to radiating.
- Safety. Do not use inverter near the place of flammable materials or accumulate flammable gases.
- The battery is not only to provide a 1V to 15V DC voltage also provide sufficient load operating current. Power should be a full power, good lead-acid batteries. Rough estimate the current that a load need, can be estimated by the load power dividing 10.

For example, an AC load power is 100W, the power supply must provide a current of 100/10=10A. If you need large current, you can use a few batteries in parallel. The most important is to ensure that there is sufficient cross-sectional area of the connecting cable. This manual can't list all of the battery combinations. Battery charge and battery configuration are other areas of expertise.

4

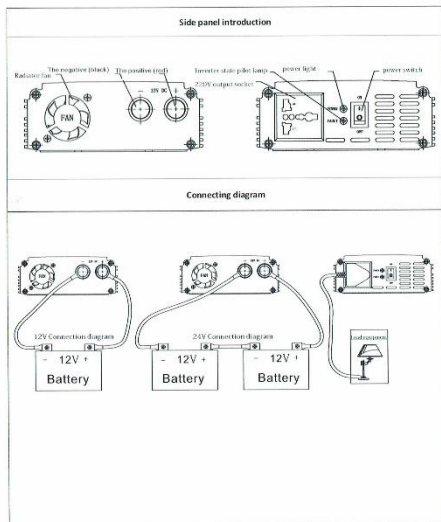
Installation and use method

Side panel introduction

Connecting diagram

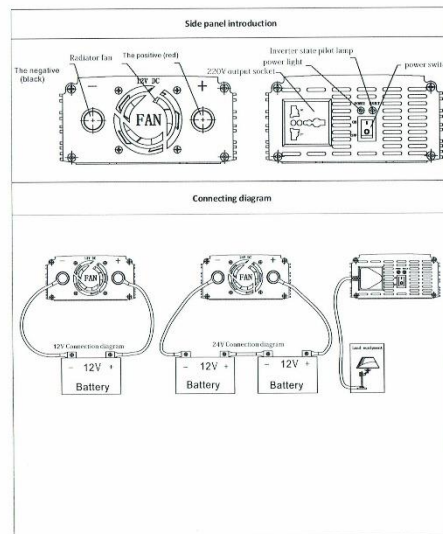
5

Installation and use method



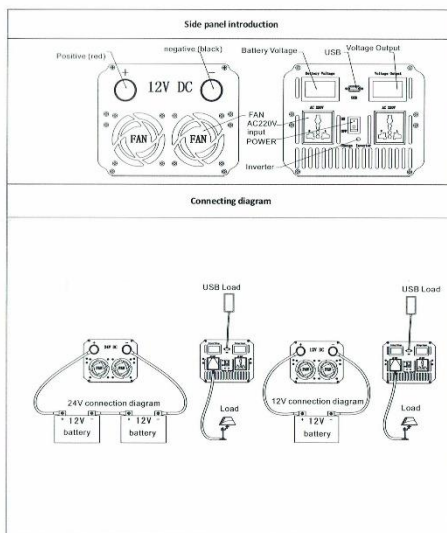
6

Installation and use method



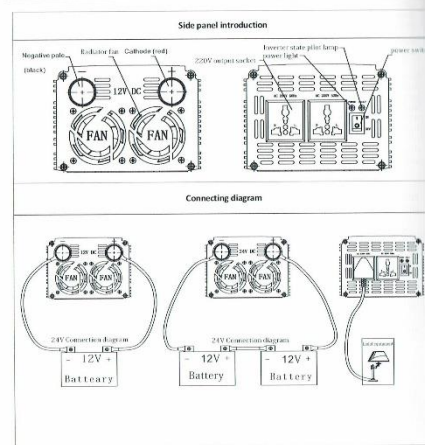
7

Installation and use method



8

Installation and use method



Installation connection steps: please refer to the above connection diagram

1. Turn off the inverter power.
2. Use the black DC cable to connect the negative pole of the battery and the black post head of the inverter.
3. Use the red DC cable to connect the positive pole of the battery and the red post head of the inverter.

4. Insert the power plug of the equipment in the inverter's output socket.

5. Press the inverter's switch then it can be used.

Disassemble steps:

1. Turn off the inverter power.
2. Disconnect the power plug.
3. Dismantle the red DC cable.
4. Dismantle the black DC cable.

9

Installation and use method others

- Notes: the connecting diagram only for basic reference, please contact with the professional technical personnel for the actual installation. Inverter can be use one or more batteries. Use of 150AH or large battery is best.
- Notes: because these processes may have to connect the battery, before connecting you must ensure that no flammable gas around.

Use the cable of inverter equipped with (not including high-power mode cable) to connect the inverter and battery, the red cable connect to the red post head of the inverter input terminal and the positive terminal of the battery. The black cable connect to the black post head of the inverter input terminal and the positive terminal of the battery. Make sure all connections solid and reliable. Improper cable connections may result in overheating, post head and lug damage. At the same time will reduce battery time. The inverter mode dial to switch ON, if your battery is fully charged situation, POWER LED glows green below. If the light change to red, it means there's something wrong with the inverter. Should find a way to solve before use it (check the battery voltage is too low, the inverter output is overloaded or short circuit.)

12V inverter power source can be a 12V battery, or a few 12V battery in parallel to increase the battery power supply time.


- Notes: The inverter required to connect the same voltage battery, 12V inverter to 12V battery, 24V inverter to 24V battery.

- In the plug all your electrical equipment patch, make sure that all equipment is turned off.

Turn on the inverter mode switch, LED below POWER glows green, then your device can be opened one by one. If your device does not overload, it can be work normally now. If the LED light change to red means overloaded. You need to reduce the load, then re-start to work.

Characteristic (inverter mode)

Inverters are equipped with perfect protection circuits. Provide safe automatic shutdown function, including grounding protection, low voltage alarm to prevent damage to your battery. Inverters with advanced anti-jamming technology, fully functional protection circuit and soft start circuit, convenient mode of operation. Protection circuit is automatic. Overload protection, input over-voltage protection, input low-voltage protection, over-temperature protection. Soft-start circuit has the function of gradually raise the output voltage when startup to eliminate cold start failure. And also has the function of instantaneous output voltage drop and fast recovery to reduce the load body instantly overload.

 Warning: non-professional and technical personnel, please do not open the inverter shell.

Other Frequently Asked Questions

Operation tips

Rated current and the actual used equipment. The nominal current or power of most electromotive tools, household appliances and audio-visual equipment, in the range power or much lower, but when they startup it will occurred overload protection phenomenon. Inverter most likely to drive resistive load and switching power supply load. Because the resistive load is linear load that can be work with full load. Such as: electric stove, rice cooker, LCD TVs and other devices.

Some audio-visual equipment and electromotive tools need more power than the resistive load to work, just like an asynchronous motor, CRT TV, compressors, pumps and so on. They need 2 to 6 times of the operating current to start. Whether it can run a specific load depend on the subject test.

Note: under normal circumstances, the fuse will not burn, unless a serious fault please don't try to repair the inverter when it can not work please contact the professional technical personnel of the processing machine with high risk, there will be an electric shock.

Frequently Asked Questions

Power tools and microwave ovens can't start	Read the parameter of the high-power equipment carefully and make sure that the input power and output power can be enough to support the equipment and the microwave ovens, please remember that the electric tools may needs 2 to 6 times power.
Television interference	The inverter just has little interference to the TV signal. But in some case, it will have interference, especially when the TV signal is poor. Please try to deal with it in the following way. <ol style="list-style-type: none"> Let the inverter away from the TV antenna as possible or lengthen the TV antenna cable. Adjust the placed direction of the inverter. To ensure that the signal strength the antenna supply to the TV is strong enough, and use a good shielding effect and good quality antenna cable. When you watch TV, do not run the high power electrical equipment or tools. There's no way to completely disappear interference of some old TV.

Note: under normal circumstances, the fuse will not burn, unless a serious fault, the faults occurred in the inverter, please don't try to repair, please contact the professional technical personnel of the processing machine with high risk, because it may cause an electric shock.

The machine equipped accessories

- Manual
- A pair of DC connection cable(Optional)
- Warranty card

Technical parameters

Model	150S	300S	500S	600S	800S	1000S	1500S	2000S	3000S	5000S
Output voltage	AC220V±5%									
Output power	150W	300W	500W	600W	800W	1000W	1500W	2000W	3000W	5000W
Peak power	300W	600W	1000W	1200W	1600W	2000W	3000W	4000W	6000W	10000W
Frequency	50Hz									
No load current	<0.6A, <0.3A	<0.5A, <0.2A	<0.7A, <0.4A	<0.7A, <0.4A	<1.2A, <0.6A	<1.2A, <0.6A	<1.8A, <1.0A	<2.5A, <1.4A	<3.5A, <2.1A	<1.5A, <0.8A
Working voltage	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V	DC12V, DC24V
Voltage range	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	10-15V, 20-30V	23-30V, 40-60V
Low voltage alarm	11V, 21V	11V, 21V	11V, 21V	11V, 21V	11V, 21V	11V, 21V	10.5V, 21V	10.5V, 21V	10.5V, 21V	21V, 42V
voltage protection	10V, 20V	10V, 20V	10V, 20V	10V, 20V	10V, 20V	10V, 20V	10V, 20V	10V, 20V	10V, 20V	20V, 40V
Over voltage protection	15V, 30V	15V, 30V	15V, 30V	15V, 30V	15V, 30V	15V, 30V	15.5V, 31V	15.5V, 31V	15.5V, 31V	30V, 60V
Maximum efficiency	94%									
Product size	160*95*55mm	170*130*65mm	200*150*75mm	200*150*100mm	200*180*110mm	267*150*100mm	384*180*110mm	454*180*110mm	520*180*110mm	620*180*110mm
Weight	510g	940g	1000g	1170g	2000g	2750g	4000g	5750g	8000g	13900g