

○ Modified Sine Wave

○ Pure Sine Wave

Art.HI-300□

POWER INVERTER

300W

Owner's Guide



1.Introduction

Thank you for purchasing our Power Inverter. It is a compact and highly portable power inverter, is the leader in the field of high frequency inverter . From the 12V/24V/48V DC outlet in your vehicle or boat, or directly from a dedicated 12V/24V/48V DC battery, the inverter will efficiently and reliably power a wide variety of household AC products, such as TVs, computers, VCRs, etc. The inverter is designed to provided years of trouble-free operation and includes automatic safety monitoring circuit to protect the inverter, and your battery, and loads from inadvertent overload conditions.

Read this guide before installing or using the inverter and save it for future reference.

Operating Instructions

This product was developed carefully and designed for permanent use. Please read these instructions carefully and keep them for subsequent reference. Please read the PRECAUTIONS section carefully to avoid any damage to the power inverter or the other units that are used.

2.Safety First

Incorrect installation or misuse of the inverter may result in danger to the user or hazardous conditions. We urge you to pay special attention to all CAUTION 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.

WARNING ! Shock hazard .keep away from children.

- The inverter generates the same potentially lethal AC power as a normal household wall outlet.Treat it as you use any other AC outlet.
- Do not insert foreign objects into the inverter's AC outlet,fan or vent openings.
- Do not expose the inverter to water,rain,snow or spray.
- Do not,under any circumstance,connect the inverter to AC Power.

WARNING! Heated surface.

- The inverters 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 maintained on all sides of the inverter.During operation,keep away from materials that may be affected by high temperature.

WARNING! Explosion hazard.

- Do not use the inverter in the presence of flammable fumes or gases ,such as in the bilge of a gasoline powered boat ,or near an propane tanks .Do not use the inverter in a enclosure containing automotive-type,lead-acid batteries .These batteries ,unlike sealed batteries, vent explosive hydrogen gas which can be ignited by sparks from electrical connection.
- When working on electrical equipment always ensure someone is nearby to help you in an emergency.

CAUTION!

- Do not connect live AC power to the inverter's AC outlets. The inverter will be damaged even if it is switched OFF.
- Do not expose the inverter to temperatures exceeding 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 nightlights that are plugged directly into an AC receptacle to recharge.
- 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 battery terminals.
- Note DC voltage of battery should be connected with input DC voltage of power inverter (for example,DC12V of battery connect with input voltage 12V of the inverter)

Don't disassemble or modify the inverter by yourself.

3.Safety Features

- Input protections: Polarity reverse (Fuse broken)/Over and under voltage/Low battery Alarm and shut Down
- Output protections: Short circuit / Overload / Over temperature
- With power ON/OFF switch and LED indicator
- Input and output fully isolation
- Low power consumption(standby)
- LVD meet EN60950 and e8 mark
- EMC meet EN61000-6-3,EN55022

4.Install (Using) Environment

For safe and optimum performance. Install the inverter in a location that is ...

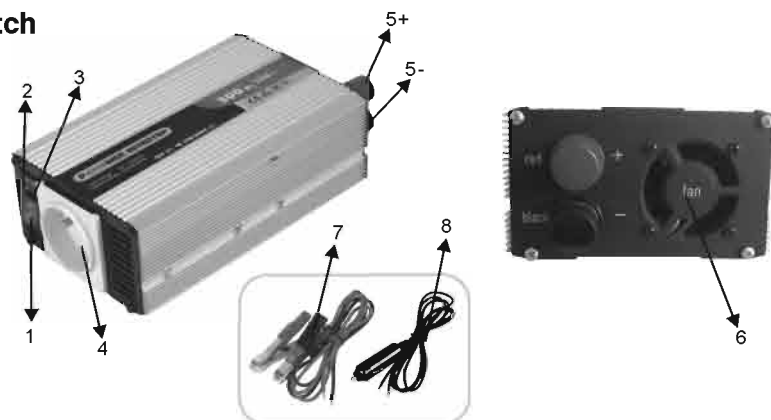
- Dry. Do not expose to water drip or spray.
- Cool. Operator only in ambient temperatures between 32F(0 °C)and 104F (40 °C) Keep away from surface heating vents or other heat producing equipment.
- Well ventilated. Allow at least 2 inches(5 cm) clearance above and on all sides of the unit for proper cooling.
- Safe. Do not install inverter in a compartment with batteries or flammable liquids, such as gasoline, or explosive vapors.
- Clean and free of dust and dirt. This is especially important if the Jazz inverter is used in a working environment.
Selecting a Suitable Location

5. Working Principle

The inverters work in two stages. During the first stage, the DC to DC converter increases the DC input voltage from the power source (eg. a 12 volt battery) to 300 DC volts . In the

second stage, the high voltage DC is converted to the watts you need (AC) using advanced power MOSFET transistors or IGBT technology in a full bridge configuration. The result is excellent overload capability and the capacity to operate difficult reactive loads.

6.Sketch



(This picture just for reference, the product subject to the real model)

7.The instruction of controllors

(1)ON/OFF power switch

This switch turns ON/OFF the inverter

(2)Power indicator

When lit, it indicates the inverter has been turned on, and is ready for use

(3)Overload (Fault) indicator

If the LED overload on, indicates that the inverter in the state of warning or protection, please stop to use it soon.

(4)AC outlets

Output AC power, Please see the following Photos, Different countries can select the Right socket as following.

A	B	C	D	E	F	G
USA	AUSTRALIA	UNIVERSAL	Europe+USA+Japan	U.K	FRANCE	GERMANY

(5+, 5-)Battery connections posts

Please connect the inverter to the battery, using the included connecting wire Pay (10) attention to polarity when plug the alligators to the battery. Red terminal is positive(5+) and black terminal is negative(5-)

(6) High speed cooling fan

The fans cool the internal circuits automatically, while the inverter is in working

(7)Connecting wire

For Connecting batteries with the inverter

(8)Cigarette lighter wire

For Connecting the inverter with Car's Cigarette lighter

<http://prowest.ua>

8.Power supply

The power supply source needs to guarantee at least 10.5 Volt to max. 15.0 Volt DC and enough permanent output to operate the unit.

The power supply source can be a battery or a similar DC power supply.

To establish the estimated necessary power supply (in amps), divide the respective output (in Watt) of the operated unit by the incoming voltage. (12 Volt in the case of a car battery)

9.Connection to the power supply

- Unpack the power inverter and ensure that the switch is at the **OFF** position.
- Insert the cigarette lighter plug into the cigarette lighter socket.

Caution:

May only be operated with 12 Volt batteries. It cannot be operated at 6 Volt and at 24 Volt it will be damaged.

10.Connection of the consumer

- The output of the consumer needs to lie within the specifications of the power inverter.
- Insert the plug into the socket of the power inverter.
- Press the "On" switch – the green LED lights up, the unit is operational.
- The LED will turn off if the voltage drops below 10 V and the power inverter switches off – switch off the consumer and disconnect the plug.

Caution: Never draw power from the power inverter with a cable.

11.Rechargeable units

Caution: Some rechargeable units can be directly connected to standard sockets. These units can damage the power inverter.

When a rechargeable unit is used for the first time, observe the temperature for approx. 10 minutes. If it becomes relatively hot, the unit cannot be operated using the power inverter.

Rechargeable units can be easily operated using a separate charger or transformer.

12.Fuse

The power inverter is fitted with a 40 amp fuse. Defective fuses should be exchanged with new fuses.

13.Position of the power inverter

The unit was designed so that it can be placed in a drinks holder.

- No liquid may be allowed to enter the unit.
- The ambient temperature should lie between 10° and 27° C – do not place on or directly adjacent to a heat source.
- Do not expose to direct sunlight.
- Leave a space of 2 – 4 cm to allow adequate air circulation.
- Do not place any objects on top.
- Do not use close to inflammable materials or in places where inflammable vapours or smoke can occur.

14.Connection via the vehicle's battery

- It is recommended running the vehicle's motor for approx. 15 minutes every hour to avoid the battery from discharging.
- The power inverter can be operated when the motor is running or when the motor is at a standstill.
- It is possible that the power inverter may not work due to the voltage drop during the starting process.
- If not used, remove the unit from the battery.

15.Alarm in case of voltage drop of the battery

The power inverter switches off automatically when the voltage drops below 10 Volt.

16. Malfunctions

(Protective features of the power inverter)

Low-voltage of the battery – may damage the battery but not the power inverter as it switches off. Once the normal operating status is reinstated, the unit can be operated again.

Overload protection – If the incoming voltage exceeds 15 Volt DC, or if the permanent output is exceeded, the unit switches off automatically.

Short-circuit– If the wires are crossed or the consumer has short-circuited, this usually causes the 15 amp fuse to blow. Disconnect the consumer immediately from the power inverter and exchange the fuse.

Overheating protection – If the internal temperature of 65°C is exceeded, the unit switches off automatically. After a cool-down phase of approx. 15 minutes, the unit can be switched on again.

17. General problems

The unit is started but no permanent operation is possible

Some inductive motors may require 2 – 6 start-up attempts. If the consumer only runs at the moment in which the power is supplied, switch the power inverter on and off quickly and repeatedly.

Humming in music systems

The loudspeakers of cheaper stereo systems may hum as they cannot filter the modified sinus waves that the power inverter generates.

Malfunctions when operating a TV

The power inverter is already screened, although there may be visible interference, especially if the TV signal is weak. Try one of the following actions:

- Position the power inverter as far away as possible from the unit, the aerial and the aerial cable.
- Look for the best possible position for the aerial cable, the power cable, the TV and the power inverter.
- Use good quality aerial cables.

18. Troubleshooting

Problem: Low outgoing voltage

Cause

- The power inverter is overloaded.
- Incoming voltage is below 10.6 Volt.

Recommendation

- Reduce the outgoing output.
- Ensure adequate incoming voltage of over 10.6 Volt.

Note: Only use RMS voltmeters to measure the outgoing voltage.

Problem: battery power is too low

Cause

- Poor condition of the battery.
- Inadequate power supply or inappropriate voltage drops.

Recommendation

- Replace the battery.
- Check the condition of the cigarette lighter – clean or replace.

Problem: No output

Cause

- The power inverter is not at operating temperature.
- Cigarette lighter requires power.
- Battery voltage below 10 Volt.
- Power inverter has cut-off automatically due to overheating.
- The fuse has blown.



Recommendation

- Switch the power inverter off and on again. If necessary repeat the process until the operated unit starts.
- Switch the ignition on.
- Charge or exchange the battery.
- Allow the power inverter to cool down. Ensure there is enough air circulation.
- Exchange the fuse. Check that the wires are connected correctly when connecting the power inverters

19. Precautions

- If connected directly to a battery or similar unit, please check the wires are connected correctly with regard to the polarity
- Ensure that the incoming current does not exceed 15 Volt.
- Check that the plug and connections are tight at regular intervals. Loose connections can generate heat and/or damage the inverter or the power source.
- Improper use of the power inverter can cause injuries.

20. Technical Data

RATED POWER		300W
OUTPUT	SURGE POWER	600W
	FREQUENCY	60Hz ±5% or 50Hz ±5%
	AC REGULATION	± 10%
	AC VOLTAGE	100/110/120VAC or 220/230/240 VAC (The Specific data is based on the product label)
	WAVEFORM	 Modified sine wave or pure sine wave  (The Specific date is based on the product label)
INPUT	NO LOAD-CURRENT DRAW	<0.4A
		<0.6A
	DC VOLTAGE	12V or 24V (The Specific data is based on the product label)
	VOLTAGE RANGE	10~15VDC or 21~30VDC or 42-61VDC
	EFFICIENCY(Typ.)	≥80%
	REPLACEABLE-FUSE	12V 40A × 1 24V 20A × 1
PROTECTION	BAT.LOWALARM	10VDC ±0.5V or 20.5VDC ±1V or 44VDC ±1V
	BAT.LOWSHUTDOWN	9.5VDC ±0.5V or 19.5VDC ±1V or 42VDC ±1V
	OVER LOAD	>340W Shut off output voltage, re-power on to recover
	OVER VOLTAGE	15-16V or 30~32V or 60~65V
	OVER TEMPERATURE	>60°C, / >140
	OUTPUT SHORT	Auto. Shut-off
	BAT.POLARITY	By fuse open
Other	1. With accessories AC connector, and a wire of 1.5m (only for CPS) 2. With spare fuse in the packing 3. With DC wire in the packing	

21. Caution

The warranty will lapse in case the power inverter is used improperly.

Metal and electro parts should not be disposed of in the household waste system. Information about proper disposal is available from your local council.

