



# POWER INVERTER

Pure Sine Wave



**POWERMAN**

KUNSHAN POWERMAN ELECTRONICS CO., LTD.

[www.powermanelec.com](http://www.powermanelec.com)

# FEATURES

Powerman provides all series of Pure Sine Wave Inverter, which with features like high efficiency ( $\geq 90\%$ ) and low current drain at no load, etc. Advanced pure sine wave technology provides quality AC equivalent to grid power which will protect and extend the life of your electronics and appliances.

The Pure Sine Wave Inverter is perfect for most off-grid systems, whether for a van, semi-trucks, 5th wheels, cabin, or any remote location needing power.



## High Efficiency

Pure sine wave inverter has features like high efficiency ( $\geq 90\%$ ) and low current drain at no load. So, it can save battery power and provide longer battery life.

## High Surge Power

With the same output power, pure sine wave inverter outperforms the modified sine wave inverter. It can start appliances with high power consumption.

## Protect Your Electronics

Advanced pure sine wave technology provides quality AC equivalent to grid power which will protect and extend the life of your electronics and appliances. With its quiet and high inductive loads, there are no strange buzzing sounds when your electronics are turned on and allow them to run smoother, cooler, and quieter.

## Safety Guaranteed

Powerman Pure Sine Wave Power Inverters have 5 protections: Over load, Low Voltage, Over Voltage, Short Circuit, Over Temperature, to ensure electricity safety.

## EASY-TO-USE

Powerman Pure Sine Wave Power Inverters have not only the standard AC outlets, USB, which is easy to plug and use, but also hardwire output, which can be wired by yourself, to meet more needs.

And Powerman Pure Sine Wave Power Inverters have remote control function, so it's convenient for remote operation.

## Smart Fan

Cooling fan of Powerman Pure Sine Wave Power Inverters is intelligently controlled. It starts only when the temperature reaches  $104^{\circ}\text{F}$ , so it is quieter and more energy efficient.

## Aluminum Housing

The advantage of aluminum housing is light weight, sturdy and it has strong thermal conductivity. The wrinkles on the surface of the inverter can increase the heat dissipation area, so it has very good heat dissipation.



**PA1000**  
1000 Watt Pure Sine Wave  
Power Inverter



**PA1500**  
1500 Watt Pure Sine Wave  
Power Inverter



**PA2000**  
2000 Watt Pure Sine Wave  
Power Inverter



**PA3000**  
3000 Watt Pure Sine Wave  
Power Inverter



**PA5000**  
5000 Watt Pure Sine Wave  
Power Inverter

## SPECIFICATION

MODEL	PA1000	PA1500	PA2000	PA3000	PA5000
Output Waveform	Pure Sine Wave				
Nominal Input Voltage	12.8 ~ 13.2 VDC				
Operating Input Voltage	10.0 ~ 15.0 VDC				
Nominal Output Voltage	120V ± 10% VAC				
Continuous Output Power	1000W	1500W	2000W	3000W	5000W
Surge Output Power	2000W	3000W	4000W	6000W	10000W
Output Frequency	60Hz ± 3Hz				
USB Output	5V / 2A				
Replaceable Internal Fuse	40A Blade Fuse *3	30A Blade Fuse *6	30A Blade Fuse *8	40A Blade Fuse *8	35A Blade Fuse *16
Operating Ambient Temperature	32 ~ 104 °F				
Operating Humidity	10 ~ 90% RH				
Protection Functions	Short Circuit / Over Temperature / High Voltage / Low Voltage / Over Load Protection				
Product Dimension	5.04 * 10.2 * 2.95 in	8.27 * 9.25 * 3.54 in	9.57 * 10.9 * 3.58 in	10.4 * 12.9 * 4.6 in	10.4 * 19.7 * 4.6 in

# INTERFACE INTRODUCTION



Two AC hardwire output, which can be connected to the power supply system of recreation vehicles.



Electrical Appliance



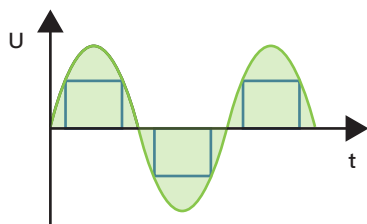
Remote



Mobile phone / Pad

## PURE SINE WAVE

The output waveform of pure sine wave power inverter is pure sine wave like the utility power, which has no electromagnetic interference, and could power any loads. It has many advantages such as high efficiency, strong compatibility, and low power consumption. But it has high technical requirements and high cost.



■ Pure Sine Wave  
■ Modified Wave

# 40%






















































Reduce power consumption



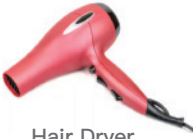




# 90%

Conversion Efficiency

# VALUE REFERENCE TABLE OF COMMON USED LOAD APPLIANCE

 Modified Wave  
  Pure Sine Wave  
  Can't Load

MODEL	PA1000	PA1500	PA2000	PA3000	PA5000
 Energy Saving Lamp					
 Electric Fan	 	 	 	 	 
 Computer		 	 	 	 
 TV		 	 	 	 
 Speaker					
 Rice Cooker			 	 	 
 Juicer					
 Printer			 	 	 
 Electric Drill					
 Microwave oven					

MODEL	PA1000	PA1500	PA2000	PA3000	PA5000
 Kettle	✗	✗	✓	✓	✓
 Electric Frying Pan	✗	✗	✓	✓	✓
 Hair Dryer	✗	✗	✓	✓	✓
 Refrigerator	✗	✗	✓	✓	✓
 Air Conditioner	✗	✗	✗	✗	✓
 Electric Hammer Motor	✗	✗	✗	✓	✓
 Induction Cooker	✗	✗	✗	✓	✓

\* The above is for reference only, since the parameters of the tested electrical appliances are different from those of the customer.

### Inductive Load

Usually, loads with inductive parameters are called inductive loads (loads conforming to voltage leading current characteristics). In the most general sense, it is a high-power electrical product made by applying the principle of electromagnetic induction, such as: electric motor, compressor, relay, energy saving lamp, etc.

Such products require much more current to start up than to maintain normal operation (about 3–7 times), so it has extremely high peak power requirements for power inverters. Under the same power, pure sine wave power inverters can more easily meet this requirement than the modified sine wave power inverters.