

**API**600P  
**API**1000P  
**API**2000P

## PURE SINE WAVE INVERTER

12V DC TO 220V-240V AC 50Hz

## USER MANUAL



For more information on the  
Aerpro range go to our website



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## 2. INTRODUCTION

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The Aerpro API600P/API1000P/API2000P is an easy to use power inverter that is capable of providing 240V power from a 12V battery source. It allows you to power 240V appliances from a 12V battery (i.e your vehicle battery) and is ideal for use when a standard household 240V power point is not accessible. With 600W/1000W/2000W continuous and 1200W/2000W/4000W peak power. The API600P/API1000P/API2000P is a is a Pure Sine Wave inverter, suitable for sensitive & non-sensitive appliances. It has all the safety features you need including overload and short circuit protection, and connects directly to a battery via the supplied 80cm lead with ring terminal/alligator clamp battery connectors.

## 3. FEATURES

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- Pure sine wave, suitable for non-sensitive appliances
- Provides 240V power from a 12V battery source
- Operate 240V sensitive & non-sensitive devices
- Dual 240VAC output sockets for dedicated running of multiple appliances
- Dual 2.1A USB Ports for charging/powering USB devices
- Over temperature & overload protection to prevent damage to the battery, inverter or appliance

## 4. SPECIFICATIONS

	API600P	API1000P	API2000P
Rated power	600W	1000W	2000W
Peak power	1200W	2000W	4000W
Fuse (Internal)	35A x2	30A x4	40A x6
Output waveform	Pure Sine Wave		
Input voltage	12.8V-13.2V		
Output voltage	230V $\pm$ 5%		
Working voltage	11V-15V		
USB output	DC 5V 2100mA		
Max output efficiency	>85%		
Low voltage alarm	10.5V $\pm$ 0.5V		
Low voltage shutdown (no load)	9.5V $\pm$ 0.5		
Over voltage shutdown (no load)	15.5V $\pm$ 0.5V		
Overload alarm	Yes		
Overload shutdown	$\geq$ 720W	$\geq$ 1200W	$\geq$ 2200W
Short circuit protection	Yes		
Environment temperature	-10°C to 40°C		
Cable length	80cm		

## 5. SAFETY FIRST

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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! Ventilation**

The inverters housing may become uncomfortably warm, reaching 140F (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 for adequate cooling. During operation, keep away from materials that may be affected by high temperature.

## 5. SAFETY FIRST

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### **WARNING! Explosion hazard**

- Do not use the inverter in the presence of flammable fumes or gases, such as in the bilge of a petrol powered boat, or near propane tanks.
- Do not use the inverter in an 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 104F(40°C).

## 5. SAFETY FIRST

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### CAUTION!

Check that the battery voltage (12 Volt) is the same as the input voltage of power inverter (for example, DC 12V of battery connected with input voltage 12V of the inverter)

## 6. SAFETY FEATURES

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- Input protections: Polarity reverse(Fuse broken)/Over and under voltage and shut Down
- Output protections: Short circuit/Overload/Over temperature
- Power ON/OFF SWITCH and LED indicator
- Input and output full isolation
- Low standby power consumption.

## 7. OPERATING ENVIRONMENT

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- For safe and optimum performance, install the inverter in a location that is dry
- Do not expose to water or spray, do not use or store in a damp environment.
- **Cooling** - Operate only in ambient temperatures between 0°C and 40°C. Keep away from surface heating vents or other heat producing equipment.
- **Location** - Clean and free of dust and dirt. This is especially important if the inverter is used in a working environment.

## 8. OPERATING INSTRUCTIONS

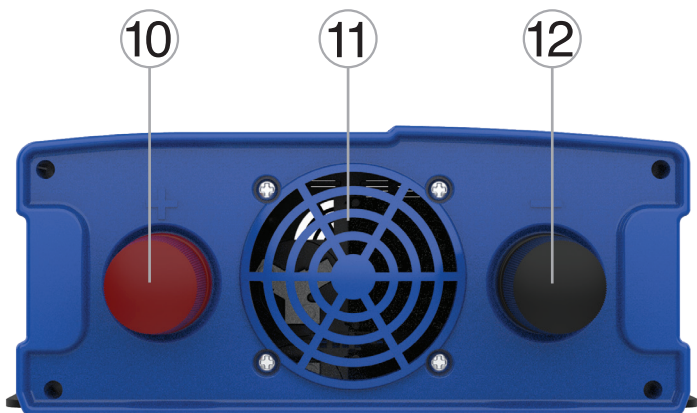


- (1) **Power indicator** (Battery input)
- (2) **Wattage indicator** (Output device)
- (3) **Voltage indicator** (Battery input)
- (4) **USB outlet** - Dual outputs DC 5V 2100mA power for charging only
- (5) **ON/OFF** - Power switch
- (6) **ON/OFF** - Standby mode
- (7) **Overload (Fault) indicator** - If the LED is on, it indicates that the inverter is in a state of warning or protection, cease use.
- (8) **Reset button** (Press to turn LCD display on or off)
- (9) **AC outlets** - Dual output AC power sockets



## 8. OPERATING INSTRUCTIONS

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(10) **12 Volt positive (+) terminal**, for connection to the positive (+) of a 12V battery

(11) **High speed cooling fan**

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

(12) **12 Volt negative (-) terminal**, for connection to the negative (-) of a 12V battery

## 9. POWER SUPPLY

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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.

**NOTE: Connecting the DC power in the wrong way (reverse polarity) will destroy the power inverter and may damage the electrical equipment in use, please follow the steps below in the correct sequence and make sure to use the inverter in the correct way.**

### 9.1. Connecting to the power supply

1. Unpack the power inverter and ensure that the switch is at the OFF position.
2. Supplied are one red and one black ring terminal cable to attach the inverter to the vehicle's battery.
3. Screw tightly the red ring terminal end cable to the inverter's "+" and attach the other ends alligator clamp/ring terminal to the vehicle's battery's "+" terminal.
4. Screw tightly the black ring terminal end cable to the inverter's "-" and attach the other ends alligator clamp/ring terminal to the vehicle's battery's "-" terminal.
5. Turn on the inverter switch, the LCD screen should power on ready for use

**Caution: Inverter may only be operated with 12 Volt batteries. It cannot be operated at 6 Volts and at 24 Volts the inverter will be damaged!**

## 9. POWER SUPPLY

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### 9.2. Connecting the load

The load connected 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 LCD screen powers on, the unit is now operational.
- The LED will turn off if the voltage drops below 10V and the power inverter switches off-switch off the consumer and disconnect the plug.

**Caution: Never draw power from the power inverter with an extension cable.**

### 9.3. Rechargeable units

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.

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

### 9.4. Position of the power

- 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..
- Do not place any objects on top.
- Do not use close to inflammable materials or in a places where inflammable vapors or smoke can occur.

### 9.5. Connection via the vehicle's battery

It is recommended running the vehicle's motor for approx.15 minutes every hour to prevent 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.

### 9.6. Alarm (low battery voltage)

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

### 9.7. Malfunctions (Protective features of the power inverter)

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

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

**Short-circuit protection** - If the wires are crossed or the output has short-circuited, this usually causes the 20 amp fuse to blow. Unplug the load 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.

### 9.8. General Problems

Some inductive motors may require several start-up attempts. If the device only runs for a moment, switch the power inverter on and off quickly and repeat until the device runs.

#### **Humming in music systems**

The loudspeakers of some stereo systems may hum as they cannot filter the pure sine waves that the power inverter generates.

#### **Problems 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.

## 10. TROUBLESHOOTING

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**Problem:** Low outgoing voltage

**Solution:** • The power inverter is overloaded Incoming voltage is below 10.6 Volts.

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

**Problem:** battery power is too low

**Solution:** • Poor condition of the battery Inadequate power supply or inappropriate voltage drops

- Replace the battery

**Problem:** No output

**Solution:** • The power inverter is not at operating temperature.

- Switch the power inverter off and on again.
- If necessary repeat the process until the operated unit starts.

## 10. TECHNICAL ASSISTANCE

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### **Never disassemble or repair the inverter by yourself.**

If you need assistance setting up or have an issue regarding the use of your Aerpro product contact Aerpro Customer Support. Australian Agent:

TEL: 03 – 8587 8898      FAX: 03 – 8587 8866

Mon-Fri 9am – 5pm AEST

For more information, manuals, software or other products in the Aerpro range please go to our website. [Aerpro.com](http://Aerpro.com)

This manual is considered correct at time of printing but is subject to change.

For latest manuals and updates refer to the website.

Please retain this user guide for future reference.

