



PWRIG7K2404860

## OPERATION MANUAL



Congratulations on the purchase of this top quality power inverter!

It is very important that you read and understand this instruction manual completely prior to use  
Contained are important connection tips, safety issues, and warranty information

Make sure to read this manual carefully and follow the instructions.  
Not doing so may cause damage or malfunctions to the inverter

### Features

This inverter uses leading edge technology to generate the Vac output digitally. It uses a built in automatic control program. The ac output uses built-in pulse control circuit, minor fluctuations in the output are sensed and corrected. Even during sudden power variations, your equipment is protected from spikes in the voltage. Even when input Voltage is varying or high, the output is protected by our PWM design.

### Reference

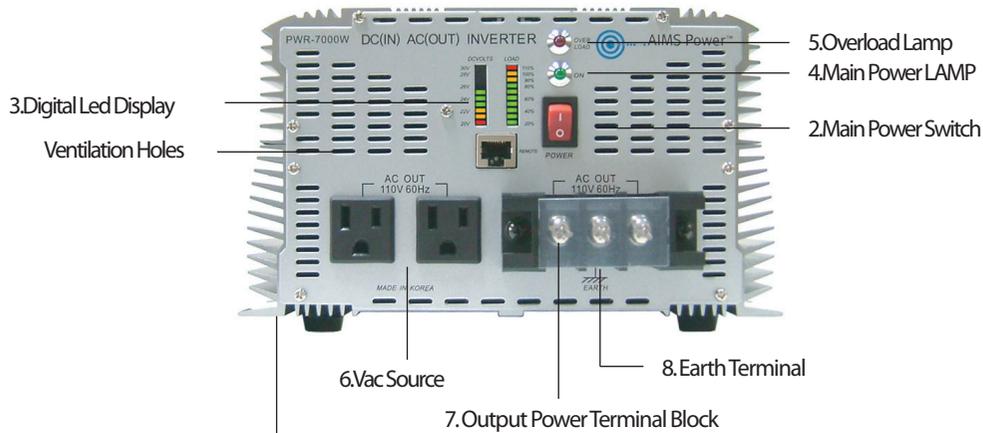
This product produces 110 Vac power by using 12Vdc input power sources. Your inverter uses 12Vdc only. It can not be modified in the field. This Power inverter can power very delicate devices and/or appliances within the operating range.

### Safety concern

This is a very high power device.  
Keep away from anything flammable.  
We recommend 4/0 cable be used with this inverter.

## Part name and location

### Frontside Overview



Heat Sink

### Backside Overview



## OVERVIEW

### 1. Protect Switch

The Protect Switch is a multiple 100 Amp circuit breaker . If the output is exceeded, the breaker will POP and you will have to manually reset it.

### 2. Main Power Switch

This is the main unit Power Switch. When this is turned OFF, the inverter is off. When turned ON, the inverter is on. Green ON Lamp will illuminate when ON and 110Vac will be available at the outlet and terminal block.

### 3. Digital Led Display

DCVOLTS - indicates Voltage level of batteries.  
LOAD-When inverter is in use, this indicates % of maximum Load.

### 4. Main Power Lamp

This Green Lamp is lit after successful power up. Self test diagnostics passed and inverter, is ready for use.

### 5. Overload Lamp

This Red Lamp is lit whenever there is a fault. It may be Overload, Over Temperature, faulty Power inverter Low High dc battery Voltage.

### 6. Vac Source

This product is supplied with 2 standard ac outlets and 1 terminal block for direct connect. Either or both may be used simultaneously

### 7. Output Power Terminal Block

A direct connect terminal block has been provided for easy connection.  
NOTE: Protect switch and main Power switch need to be off, prior to making any connection

### 8. Earth Terminal

This should be wired to a ground point for your safety, not used for inverter functionality. It should be connected to vehicle frame, water pipe, ground pipe or any other valid grounding point.

### 9. Auto Cooling Fan

These fans are thermally controlled and will turn on automatically when needed.

### 10. Input Terminal (12 Vdc)

Prior to any connections make sure you match the battery voltage to the inverter input voltage. You will probably notice an arc when connecting a discharged or new power inverter. Make sure to connect battery (-) to Black and battery (+) to Red. Tighten terminals. In case of extreme vibration, go back and verify terminals are tight. Never over tighten.

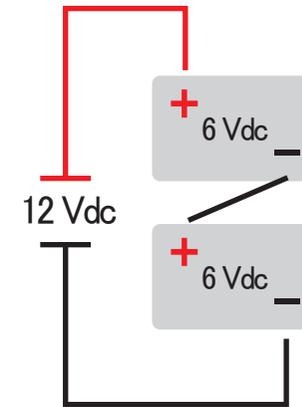
## Recommended Connection Procedure

1. Inspect product for visual damage.
2. Turn Main Power switch and Protect switch OFF
3. Connect all the Terminal Block wires that you intend to use. To do this you flex the plastic protective cover outward. Connect wires or U- or O- lugs to appropriate block. Ensure no loose strands that may cause a short circuit. Vac Neutral and Hot on the terminal block are reversible. Re-insert plastic protective cover.
4. Multiple 6Vdc, 12Vdc batteries are required.  
Connect 2 X 6Vdc in series or 2 X 12Vdc in series to make 12Vdc. See Diagram.  
You may connect any number of these configurations in parallel. See diagram.
5. Connect the "Red" + of inverter to the "Red" + on battery. Connect "Black" - of inverter to the "Black" - of battery as shown in Diagram.
6. At this point you are ready to power up the machine.  
You may plug in your ac devices at any time, but only turn them on after successful power up of inverter.
7. Turn Protect Switch to ON. The DCVOLTS bar will indicate your battery Voltage.  
It should be in the Green zone.
8. Turn on the Red Main Power switch. The machine will go through an extensive series of self tests.  
You will hear 3 beeps. See red light blink once, followed by green lamp staying on.  
Inverter is now ready for use.

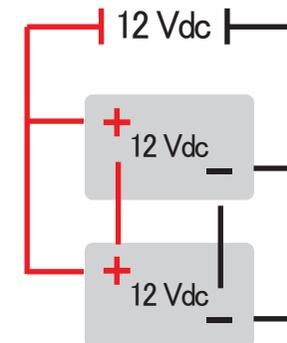
## To Turn OFF

1. Turn "Red" Main Power switch off. Green lamp will turn off.
2. If you do not intend to use this product for several days or more, it is recommended to turn the Protect Switch OFF. This will save your battery power and isolate the machine from your dc wiring.

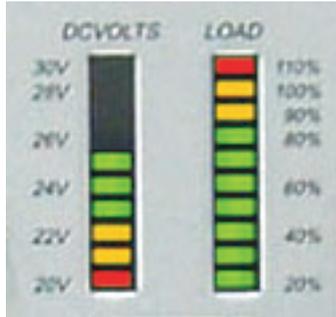
### 6 Vdc batteries



### 12 Vdc batteries



## Digital Led Display



LED Indicators		
LED	Color	Description
DCVOLTS	Green	BATTERY IN GOOD CONDITION.
	Orange	LOW-BATTERY VOLTAGE.
	Red	LOW-BATTERY CONDITION. The battery voltage is below the units limits.
LOAD	Green	NORMAL CONDITION.
	Orange	WARNING CONDITION.
	Red	OVERLOAD CONDITION.

DCVOLTS display will illuminate as soon as the protect switch is turned "on" and batteries are connected

LOAD display only illuminates when INVERTER run Led is on and a Load is present.

## A Few Helpful Inverter Tips:

- Never leave an inverter connected to a line where other power (Vac) may feed into inverter. It doesn't matter if inverter is on or off
- Using inverters in moist areas is a common cause for their drivers to burn out. Even an outdoor extension cord that was laying in a puddle a day previously, may have enough moisture to burn out the drivers of the inverter. Tip: if using inverter in rain one day, allow cords that may have gotten wet to dry a few days before using in inverter again
- Always prevent foreign objects from entering inverter through the vent or fan openings
- Keep cables between inverter and batteries as short as possible. This will help your batteries perform their best
- Don't over tighten nuts to battery or inverter, but do check them occasionally.
- If the cables between your battery and inverter get hot while under heavy load, then you should consider using heavier cables
- Both "hot" and "neutral" lines are hot on most inverters. Do not ground the neutral line. Do not connect neutral to panels that may have neutral grounded.
- Using a 12Vdc inverter, your input Voltage should never exceed 16Vdc (18Vdc for some models) or the inverter may shut down with Over Temp and you should hear an audible beep
- When selecting an inverter, try to buy one that will stay in the continuous operating range and do not rely on advertised surges
- Standard 110Vac outlets are typically rated at 1650W or 15Amps. This is for heat dissipation through the outlet and is not a limitation of the inverter
- If cables need to be run, it is best to keep inverter as close as possible to batteries. Use extension cords on the output side (Vac output) rather than extending the Vdc cables. Tip: Contractors often need to mount the inverter in the back of their trucks. In a case like this it would be best to mount a secondary battery near the inverter and wire it to the primary truck battery
- Ac plug testers do not work with inverters. You would see an open ground
- Be aware of lightning storms. If struck, inverter would go to a permanent Over load state and may even smoke
- Vac extension cords should not exceed 200 feet or you will have signal loss
- Inverters emit RF and may cause interference. This is noticeable in AM radio and often monitors and computer mice
- Never parallel multiple inverter outputs. This will generally burn the ac drivers out.

Model No.	PWRIG-7K2404860
	48V
Output power continuous	7000W
Max. Surge power	14000W
AC Output Voltage	240 VAC
DC Input Voltage	45~62V(64V)
Efficiency at MaxLoad	90%
Output frequency	60Hz
No Load Current main on	270mA
No Load Current protect off	0W
Input Low Voltage Protection	Yes
Input High Voltage Protection	Yes
Reverse polarity protection	Yes
Output Short Circuit Protection	Yes
Overload shut-down	Yes
Temperature control fan	Yes
Over temperature shut- down	Yes
Dimensions( L x W x H inch)	23.78 x 9 x 4.96
Dimensions( L x W x H mm)	604 x 230 x 126
Net weight (by Kg/s / lb)	13.38 / 29.49
Output Waveform	Modified Sine Wave with PWM (Pulse Width Modulation) correction

made in korea

#### AIMS Power™ Warranty Instructions:

This product is designed using the most modern digital technology and under very strict quality control and testing guide lines. If however you feel this product is not performing as it should, please contact us at:

Techsupport @ (775)762-5400 or e-mail: techsupport@aimscorp.net

We will do our best to resolve your concerns. If the product needs repair or replacement, make sure to keep you receipt/invoice, as that will need to be sent back along with the ups prepaid to AIMS. You have a full 1 year from date of purchase warranty.

This warranty is valid world wide with the exception that freight and duty charges incurred outside the contiguous 48 United States will be paid for by conustomer.

For additional products such as

- Modified sine wave inverters
- Digital pure sine wave inverters
- Power controllers
- Automatic transfer switch controllers
- Custom cut cables

Please visit our web page : [www.aimscorp.net](http://www.aimscorp.net).

To find out where to buy any of our products, you can e-mail :  
sales@aimscorp.net or call(775)359-6703

