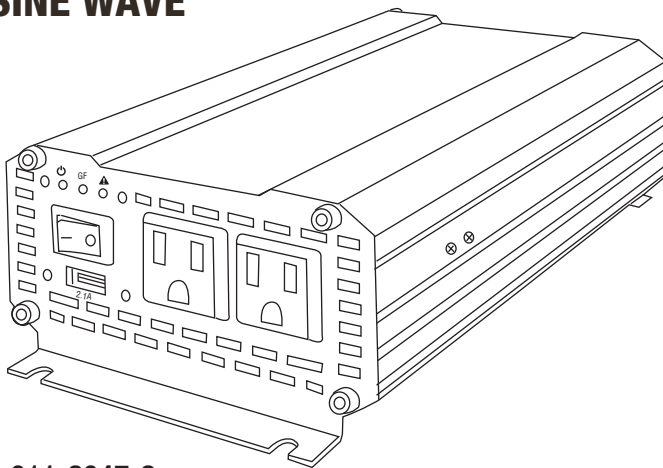




ELIMINATOR

400 W POWER INVERTER

PURE SINE WAVE



model no. 011-2047-2

SAVE THESE INSTRUCTIONS!

This manual contains important safety and operating instructions.
Read all instructions and follow them with use of this product.
Questions? Call Customer Service Hotline: 1-877-466-8191

INSTRUCTION MANUAL

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INTRODUCTION

Read and understand this manual before installing and operating this inverter. Keep this manual for future use.

It delivers a true AC sine wave identical to that of commercial power. Use this inverter to power AC appliances in your vehicle. Pure Sine Wave AC means that your sensitive electronics, such as audio/video systems, computers, and communications equipment will operate properly. Furthermore, appliances with motors operate cooler, quieter, and more efficiently when they are powered by pure sine wave AC.

The inverter is powered from 12 volt DC and it will continuously deliver 400 watts AC power at 115 volts, 60 Hz. Superior surge capability of 800 watts allows the inverter to start most difficult motorized appliances. Advanced microprocessor-controlled circuits run cooler and are more reliable than competing units. The Pure Sine 400 W operates at high efficiency (up to 90%), that results in long run time and extended battery life compared to other inverters with this level of power output. A 2.1 A USB power port provides a convenient way to power USB devices, including tablets, e-readers, smart phones, and other mobile electronics.

This inverter bonds neutral to ground, just like utility power. The enclosure vents have been minimized to reduce the risk of pest intrusion in arid tropical climates.

This inverter has added safety features including cETLus certification (UL458, CSA 22.2), conformal coating to protect circuits from dust and moisture, ground fault protection, and DC terminal protection.

SPECIFICATION

Output waveform	Pure sine wave
Input	12 V DC
Output	115 V AC
True Rated Power™	400 W (24-hour continuous)
Peak power	800 watts
Maximum efficiency	88%
Frequency	60 Hz
Total harmonic distortion (THD)	≤ 3%
No load current draw	< 0.6 A
Battery low alarm	10.5 V - 11.0 V DC
Battery low shutdown	10.0 V - 11.0 V DC
Over voltage shutdown	15 V - 16.3 V DC
Cooling system	Thermo fan
AC output sockets	2 North American standard
USB power port	5 V, 2.1 A
Power output control	AC On/Off Switch
Dimensions	9 5/16 x 4 11/16 x 2 13/16" (23.6 x 12 x 7.1 cm)
Net weight (approximate)	2 lb 10 oz (1.2 kg)
Battery Clamps with ring connectors	23 5/8" (60 cm), 11 AWG

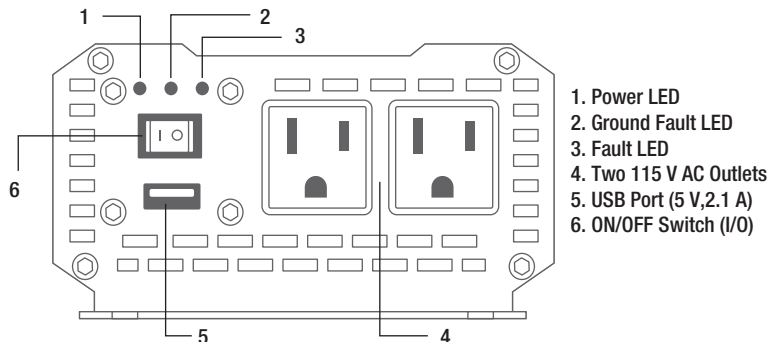
* All specifications are typical at nominal line, half load, and 77°F (25°C) unless otherwise noted. Specifications are subject to change without notice.

WARNING

INVERTER OUTPUT CAN BE LETHAL. IMPROPER USE OF THIS INVERTER MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

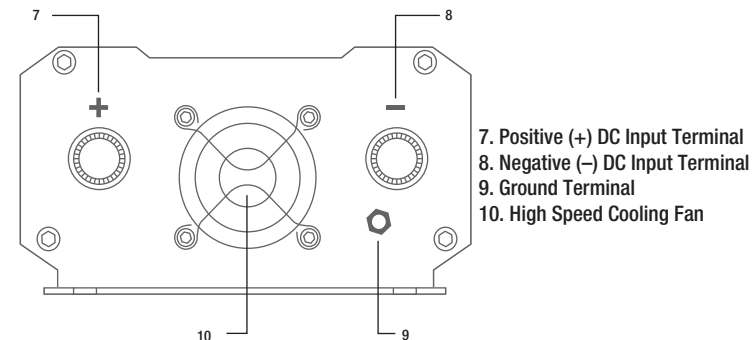
- Keep the inverter away from any direct heat source or combustible materials.
- Keep well ventilated—this device generates heat.
- Keep this inverter in a dry environment.
- Do not operate any equipment over 400 watts.
- This inverter is designed to operate from a 12 volt DC power source only.
- Do not attempt to connect the inverter to any other power source, including any AC power source.
- Incorrect battery polarity will damage the inverter and void the warranty.
- Do not open the inverter; there are no user serviceable parts inside.

Front Panel



- **ON/OFF Switch** — This switch controls AC output of the inverter.
 - **Power LED (Green)** — When this green LED is lit, the inverter is operating normally.
 - **Ground Fault LED (Yellow)** — When the yellow LED is lit, the ground fault circuit has been activated. Shut down the inverter and restart.
 - **Fault LED (Red)** — The RED indicator turns on as the inverter shuts down due to overheating, overload, under voltage, over voltage, short circuit or current leakage protection.
- Caution:** For short circuit protection, it will be automatically recovered within 5 times, but after 5 times, need to be resettled manually.
- Immediately turn off all AC appliances if the FAULT LED is lit. Allow the inverter to cool before continuing. Make sure that the ventilation vents are not blocked.
 - If an inverter shutdown was preceded by a buzzing sound, there may be an excessive load in combination with a low voltage or cable problem.
 - Normal operating range is 11 V to 15 V DC.
- **USB Power Port** — This power port can supply 5 volts at 2.1 A for charging or powering tablets, e-readers, smart phones, and other small electronic devices.
 - **Audible Alarm (internal to the inverter)** — When the Audible Alarm makes a buzzing sound, the inverter senses a low battery condition. The user should reduce the AC load, charge the battery, and check the DC cable for excessive losses.

Rear Panel



- **Positive Terminal** — Positive (+) DC Input (Red)
- **Negative Terminal** — Negative (-) DC Input (Black)
- **Cooling Fan** — High-speed and temperature controlled
- **Ground Terminal** — For attaching an insulated safety ground wire. This safety wire is for protecting personnel if there is an unlikely failure in either the cabling or enclosure insulation. Grounding the inverter enclosure ensures personnel safety should a DC cable problem occur. During the installation procedure, the Ground Terminal is connected either to a vehicle chassis or to the negative DC terminal of the battery. Do not directly connect this ground connection to the negative DC terminal of the inverter. Use an insulated 12 gauge wire to make the ground connection. If the inverter installation is located in a fixed location, the safety wire can be grounded.



- 11. negative (-) ring connector
- 12. positive (+) ring connector
- 13. black (-) battery clamp
- 14. red (+) battery clamp

Load Considerations

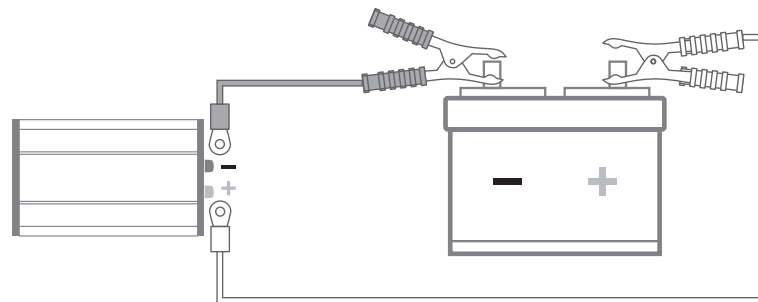
The startup load of an appliance is a major factor of whether this inverter can power it. This initial load is only momentary. With many appliances, it is approximately twice the continuous load, but some appliance startup loads can be as high as eight times the continuous load.

The inverter will automatically shut down in the event of an output overload so there is no danger of damaging either the inverter or the equipment. When the red LED indicator is lit, the inverter is signaling a fault.

Setting Up the Battery

Batteries that are used indoors or inside a vehicle or vessel, should be deep-cycle, sealed lead acid batteries.

Connecting the Inverter



WARNING—EXPLODING BATTERIES!!

Exploding batteries can spray molten lead, hot sulphuric acid, and other metal, and plastic fragments. Batteries that are charging or under high discharge rates produce explosive hydrogen gas into the surrounding area.

Mount the inverter in a secure location. If the inverter is to be mounted on a wall, mount it horizontally. Make sure that the front and rear of the inverter has free air flow.

1. Remove the terminal covers from the inverter.
2. Connect the positive (+) connector of battery clamps to positive (+) DC input terminal (7) of Inverter.
Connect the negative (-) connector of battery clamps to negative (-) DC input terminal (8) of Inverter.
Connect the red (+) battery clamp to positive (+) terminal of the vehicle battery.
Connect the black (-) battery clamp to negative (-) terminal of the vehicle battery.
Make sure you have good, secure connections.
3. Switch the ON/OFF switch to Position "I". Make certain that the green Operating LED is lit and the FAULT LED indicator is not lit.
4. Switch the ON/OFF switch to Position "O". The Fault LED may briefly "flash". This is normal.
The audible alarm may also sound a short "chirp". This is also normal.
5. Plug the appliance into one of the two AC outlets. Make sure the appliance is off before plugging it in. Connect devices to USB port for charging (if needed).
6. Turn the inverter on.
7. Turn the appliance on. The appliance should begin working.
8. Observe the LED indicators for normal operation.

Note: If an extension cord is used from the inverter to the appliance, limit the extension cord length to 100' (30 m) or less. Make sure that the cord is safety approved and AWG 10 or greater to carry the appliance load. Remember that extension cords are for temporary use.

WARNING: THERE IS DANGER OF EXPLOSION. DO NOT CONNECT OR DISCONNECT INVERTER CABLES DIRECTLY AFTER BATTERY DISCHARGE OR RECHARGE—MAKE SURE THAT THE BATTERY AREA IS WELL VENTED BEFORE ATTACHING OR REMOVING CABLES.



CAUTION: Making an initial connection between the positive cable end and the inverter's positive terminal may cause a spark. This is a normal and is a result of capacitors in the inverter starting to charge. Because of the possibility of sparking, it is extremely important that both the inverter and the battery be positioned away from any source of flammable fumes or gases. Failure to heed this warning can result in fire or explosion. Do not make the positive terminal connection immediately after the batteries have been charging. Allow time for the battery gasses to vent to outside air.

Operating Issues

TELEVISION AND AUDIO EQUIPMENT SUGGESTIONS

Although all inverters are shielded and filtered to minimize signal interference, some interference with your television picture may be unavoidable, especially with weak signals. However, here are some suggestions that may improve reception.

- Make sure that the television antenna produces a clear signal under normal operating conditions (i.e. plugged into a standard 110 V/115 V AC wall outlet). Also ensure that the antenna cable is of good quality and properly shielded.
- Sometimes vehicle alternators produce some electrical noise. There are filters available to mount on the alternator to reduce the noise.
- Change the positions of the inverter, antenna cables, and television power cord.
- Isolate the television, its power cord, and antenna cables from the 12 volt power source by running an extension cord from the inverter to the television.

TROUBLESHOOTING**PROBLEM: Low or No Output Voltage – Fault LED Lit**

Reason	Solution
Poor contact with battery, inverter terminals.	Clean terminals thoroughly. Reinstall and tighten.

PROBLEM: Inverter Auto Shut Down – Fault LED Lit

Reason	Solution
Battery voltage is below 10.0 volts.	Charge or replace battery.
Inverter is too hot (thermal shut down mode).	<ul style="list-style-type: none"> Allow inverter to cool. Check for adequate ventilation. Reduce the load on the inverter to the specified TrueRated™ power max output.

PROBLEM: Inverter Shut Down – Fault LED Lit

Reason	Solution
Equipment being operated draws too much power.	Do not use the equipment with this inverter; use a higher wattage inverter.

PROBLEM: No AC Output – Yellow Ground Fault LED Lit

Reason	Solution
Ground fault is unintended AC current that is flowing to ground. It can be caused by faulty wiring, bad insulation, very long wiring, and sparking appliances.	Turn inverter OFF (O) to reset it, then to ON (I). IF the inverter immediately shuts off, disconnect each appliance or wiring until the inverter will stay on after reset. Examine the wiring or appliance for unintended connections. Repair or replace as necessary.

PROBLEM: Continuous Buzzing Sound

Reason	Solution
Input voltage is below 10.5 volts.	Keep input voltage above 10.5 volts.
Poor or weak battery condition.	Recharge or replace battery.
Poor or loose cable connection.	Inspect terminals and tighten all connections.
Inadequate power being delivered to the inverter or excessive voltage drop.	

DISPOSAL/RECYCLING OF INVERTER

Electronic products are known to contain materials that are toxic if improperly disposed. Contact local authorities for disposal and recycling information.

This MotoMaster® Eliminator® product carries a one (1) year warranty against defects in workmanship and materials. At its discretion, MotoMaster Canada agrees to have any defective part(s) repaired or replaced free of charge, within the stated warranty period, when returned by the original purchaser with proof of purchase. This product is not guaranteed against wear or breakage due to misuse and/or abuse.

Made in China

Imported by MotoMaster Canada, Toronto, Canada M4S 2B8



Intertek

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CONFORMS TO UL STD. 458
CERTIFIED TO CSD STD. C22.2 NO.107.1