

Model No. 011-1945-0



MOBILE POWER OUTLET 120 W INVERTER



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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**AC POWER**

AC output voltage (nominal)	115 V, 60 Hz
Maximum continuous power	100 W
5 minutes AC output power	120 W
Peak power	200 W
AC output frequency	60 ± 1 Hz
AC output waveform	Modified sine wave

DC POWER

USB output	5 V / 2.1 A
No load current draw (at 12 V)	< 0.32 A
Efficiency (maximum)	85%
Low-voltage shutdown	10.0 – 11.0 V
High-voltage shutdown	15.0 – 16.3 V

PHYSICAL SPECIFICATIONS

Ambient operating temperature range	0 – 40 °C (32 – 104 °F)
Dimensions (L x W x H)	5 13/16 x 2 15/16 x 1 1/2" (148 x 74.1 x 38mm)
Weight	6 oz (169 g)



This manual contains information that relates to PROTECTING PERSONAL SAFETY and PREVENTING EQUIPMENT PROBLEMS. It is very important to read this manual carefully and understand it thoroughly before using the product. The symbols listed below are used to indicate this information.

DANGER!

Potential hazard that will result in serious injury or loss of life.

WARNING!

Potential hazard that could result in serious injury or loss of life.

CAUTION!

Potential hazard that may result in moderate injury or damage to equipment.

IMPORTANT!

Installation, operation, or maintenance information that is important but not hazard related.

WARNING!

- **HEATED SURFACE.** The power outlet housing may become uncomfortably warm, and can reach up to 60 °C (140 °F) under extended high power operation.
- Do not operate the outlet if it has been dropped or damaged in any way.
- Always disconnect the device by pulling on the plug itself, not the power cable.
- The device must be fastened so that it does not cause a safety hazard in case of collision or hard braking.
- Route the power cable so that it does not interfere with the driver of the vehicle when plugged into the cigarette lighter socket.
- Prevent the power supply cable from hanging over sharp edges.
- Using improper voltage may result in damage to the device and possible injury to the user. The correct voltage is listed on the rating plate.
- Never leave the outlet unattended during operation.

CAUTION!

- Do not connect live AC power to the mobile power outlet's AC outlets. The outlet will be damaged even if it is switched off.
- Avoid placing the mobile power outlet on or near heating vents, radiators or other sources of heat. Do not place the outlet in direct sunlight (e.g. on the vehicle's dashboard) in order to prevent an overheat shutdown caused by high temperatures. Do not use the outlet in temperatures over 40 °C (104 °F).
- Do not insert foreign objects into the mobile power outlet outlets or ventilation openings.

CAUTION!

- **DO NOT USE** the mobile power outlet with the following equipment:



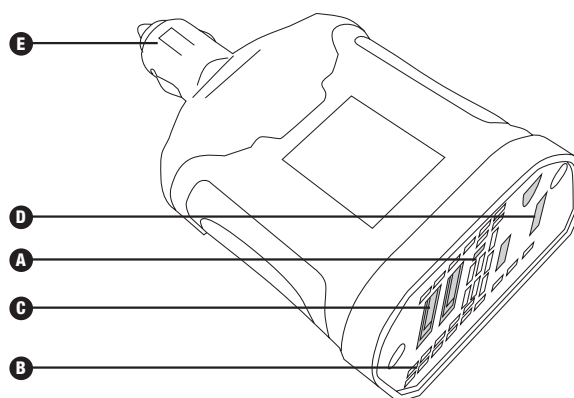
Small battery-operated devices such as rechargeable flashlights, some rechargeable shavers, and night lights that are plugged directly into an AC receptacle to recharge. The device can be damaged if connected to the power outlet. Always recharge batteries using a separate battery charger.



Battery chargers used in power tools. These chargers display a **WARNING LABEL** stating that there are dangerous voltages at the charger's battery terminals.

- Disconnect the power cable whenever the engine is switched off for extended periods of time. In some vehicles, the power does not turn off after the engine has been switched off. If the plug is left connected, the vehicle battery might become discharged or damaged.
- Using the mobile power outlet for extended periods of time can completely discharge the vehicle battery.
- When using a mobile power outlet continuously inside a vehicle that is not running, the engine should be started at least once an hour for 10 –15 minutes to keep the battery from discharging. Do not start a vehicle in a closed garage, as the carbon monoxide in the exhaust is fatal.
- Mobile power outlets work best with a battery that is good condition and fully charged. A weak battery will be drained easily if demands are too high. This could leave you stranded so be sure to check the battery's condition before using a mobile power outlet in a stationary vehicle.

- A** LED DISPLAY
- B** VENTILATION OPENINGS
- C** USB OUTPUT: 5 V/2.1 A
- D** AC OUTPUT: 120 V
- E** DC Input: 12 V

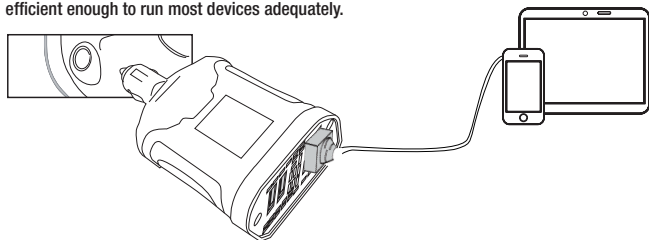


The MotoMaster® Eliminator® mobile power outlet is an electronic device that converts the low-voltage **12 V** (direct current) from a battery, such as those found in cars, motor homes, boats or other similar power sources, to the conventional **115 V** (alternating current) like you have in your home.

Do not connect this mobile power outlet to batteries below 6 V and above 16 V as it might get damaged.

This conversion process allows you to run standard household devices such as portable music/mp3 players, cell phones, digital cameras, handheld video games, portable work lights, portable DVD players battery chargers, stereo systems, laptop computers.

This mobile power outlet uses a modified sine wave that delivers power consistent and efficient enough to run most devices adequately.



Options for connecting devices to the mobile power outlet

According to the wattage of the devices and its features, you can choose to connect the device to the:



Determining the maximum load of connected devices

WARNING!

DO NOT overload your mobile power outlet! Overloading the outlet, even for a short time, could result in serious damage to the outlet and/or to the connected device.

A few simple steps are necessary to avoid overloading the mobile power outlet:

- Identify all devices that you would like to power.
- Add up the total wattage of devices that will be powered. The wattage can be found on the individual device's rating plate, as well as in the instruction manual.

IMPORTANT!

In some cases, the wattage might not be listed on the devices you want to connect to the mobile power outlet. In that case, calculate the wattage using the following equation:

$$\text{VOLTS} \times \text{AMPERE} = \text{WATTS}$$

$$\text{Formula: } 115 \text{ Volts} \times X \text{ Amperes} = \text{XXXX Watts}$$

$$\text{Example: } 115 \text{ Volts} \times 0.5 \text{ Amperes} = 60 \text{ Watts}$$

CAUTION!

Understand the difference between rated (running) wattage and surge (starting) wattage.

The **RATED (RUNNING) WATTAGE** is the average amount of power that a device consumes continuously.

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The **SURGE (STARTING) WATTAGE** is the amount of power that a device consumes at start-up for a limited period of time (2–3 seconds). Some devices (e.g. induction motors of drills and fans) may have a start-up surge of 3 to 7 times the rated wattage.

IMPORTANT!

The mobile power outlet can supply momentary surge power that is higher (200 W) than its maximum power rating (100 W). Some products with a rated wattage lower than the maximum power rating for your mobile power outlet may still exceed the mobile power outlet's surge capability and trigger an overload shutdown.

Products rated with the following power and surge ratings or less can be connected to the mobile power outlet.

POWER RATING	MAXIMUM WATTAGE
5 min max. power rating	120 W
Continuous power rating (RATED WATTAGE)	100 W
Surge rating max. (SURGE WATTAGE)	200 W

Wattage of commonly used devices

IMPORTANT!

The wattages given below are estimates. The actual wattage required for your devices may differ from those listed. Be sure to check the specific wattage requirements on the rating label and in the operating instructions of devices to be used.



PRODUCTS	WATTS REQUIRED
Portable music	1–5 W
Cell phone	10 W
Digital camera	15 W
Handheld gaming device	20 W
Portable work light	25 W

PRODUCTS	WATTS REQUIRED
Portable DVD player	30 W
Battery Charger	35 W
Stereo system	50 W
Laptop computer	75 W
13" television	100 W

NOTE: Power requirements for product examples are estimates only. To calculate the wattage of a product, use the following equation: amperage x 115.

IMPORTANT!

Add up the total wattage of devices to be powered.

TAKE INTO CONSIDERATION THE SURGE WATTAGE REQUIRED BY ELECTRICAL MOTORS AS WELL AS THE RATED WATTAGE.

Example:

These devices can be operated simultaneously.

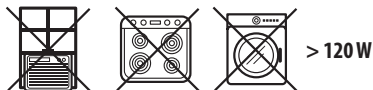
DEVICE	SURGE (STARTING) WATTAGE MAX. 200 W	RATED (RUNNING) WATTAGE MAX. 100 W
Cell Phone	10	10
Laptop	50	50
Total wattage used	60	60

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These devices usually CAN be connected to the MotoMaster® Eliminator® mobile power outlet:



These devices usually **CANNOT** be connected to the MotoMaster® Eliminator® mobile power outlet, as they might have a start-up surge or continuous rating that is too high.



IMPORTANT!

The device is not suitable for professional or industrial use.

Before you start

- Unpack the mobile power outlet. Inspect the unit for damage. If the unit has been damaged, contact the retailer immediately.

The carton should contain:

- Mobile power outlet
- Owner's manual
- Check the mobile power outlet's identification label to ensure that you have purchased the intended model and that it has the required specifications for its intended use.



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Positioning of the mobile power outlet:

Position the mobile power outlet on a flat and stable surface in a location that is:

DRY	Do not expose to water, rain, moisture, snow or spray.
COOL	Operate the outlet in ambient temperatures between 0 °C and 40 °C (32 °F and 104 °F). Keep it away from heating vents and direct sunlight. We recommend using the outlet in environments not exceeding 25 °C (77 °F).
WELL-VENTILATED	For proper cooling, allow at least 2" (5 cm) of clearance around the outlet.
CLEAN	Choose a location that is free of any debris that could get into the outlet.
SAFE	Do not install the mobile power outlet in a compartment with batteries or flammable liquids, such as gasoline, or explosive vapours.

Connecting the MotoMaster® Eliminator® mobile power outlet

- Insert the lighter plug directly into the cigarette lighter socket of your vehicle. Make sure the plug is fully inserted.
- Plug an AC product into the three-prong AC receptacle and turn it on. Ensure your product draws 120 W or less of continuous AC power. To avoid discharging the battery, always remove the mobile power outlet from the lighter socket when not in use.



- The mobile power outlet is now ready for use.

CAUTION!

Always disconnect the mobile power outlet from the cigarette lighter socket when you are not using the device.

IMPORTANT!

The normal voltage drop that occurs when the vehicle's engine is started may trigger the mobile power outlet's low-voltage shutdown feature. We recommend having the mobile power outlet disconnected from the cigarette lighter plug while starting the engine.

Switching on/off

- Be sure to have your mobile power outlet properly placed and connected before attempting to switch it on.
- Plug in the device that you want to operate by using either the AC outlet (D) or the USB port (C).
- To switch the mobile power outlet off, disconnect it directly from the cigarette lighter socket of your vehicle.

CAUTION!

Switch the mobile power outlet off and disconnect it from the cigarette lighter socket when it is not in use.

IMPORTANT!

When the mobile power outlet is switched off, it draws no current from the battery. When the outlet is switched on without any load connected to it, it draws approx. 0.32 A from the battery. This low current draw will eventually discharge the battery.

**Using the USB port**

Plug the USB-powered device into the inverter's USB port (C) and operate normally.

IMPORTANT!

This unit's USB charging port does not support data communication. It only provides 5 V/2.1 A DC power to an external USB-powered device. Not all mobile phones are provided with a charging cable. Data cables are not supported by this device. Please check with your mobile phone dealer for the correct charging cable.

Automatic safety features

The MotoMaster® Eliminator® mobile power outlet includes the following automatic safety features to ensure safe and trouble-free operation:

- Vehicle battery low-voltage automatic shutdown: activated when the battery voltage drops to 10–11 V, to protect the battery from being damaged.
- Vehicle battery high-voltage automatic shutdown: activated when the battery voltage rises to a dangerously high level due to a defective battery.
- Overload protection with automatic shutdown: activated when a device rated more than 120 W is plugged into the mobile power outlet.
- Overheat protection with automatic shutdown: activated in case the mobile power outlet overheats due to improper ventilation or a high ambient temperature.
- Output short-circuit protection: activated in case of a short circuit in the connected device.
- Replaceable 8 A fuse: used for continued protection against a risk of fire or electric shock and should be replaced manually, if necessary.

The GREEN indicator (A) will flash in cases of short-circuit or overload shutdown.

The GREEN indicator (A) will turn off in case of low-/high-voltage shutdown.

**WARNING!**

Before cleaning, make sure the mobile power outlet is switched off and disconnected from the power source.

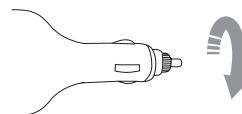
- The exterior of the device should be cleaned periodically with a damp cloth or sponge and a mild soap solution.
- Be sure vents and fans are free of dust or debris.
- Never immerse the device in water or any other liquid.
- For cleaning, never use corrosive detergents, wire brushes, abrasive scourers, or metal or sharp objects.
- Store the device in a cool, dry, location that is protected from moisture and out of the reach of children.

Maintaining battery condition

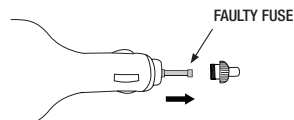
- Vehicle batteries are designed to provide brief periods of very high current needed for engine starting. They are not intended for constant deep discharge.
- The battery operating time depends on:
 - the charge level of the battery,
 - the battery capacity,
 - the amount of power drawn by the devices that are connected to the mobile power outlet.
- With an average load of about 100 W connected to the mobile power outlet, consider that the engine should be started at least once an hour for 10–15 minutes to keep the battery from discharging.
- If you need to start the engine to recharge the battery, first disconnect the mobile power outlet from the battery or the cigarette lighter socket.
- Once the engine is running, the mobile power outlet can be connected to the cigarette lighter socket again.

Fuse replacement**WARNING!**

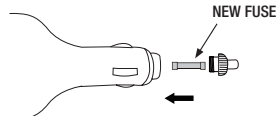
For continued protection against risk of fire or electric shock, replace only with a fuse of the same type and rating (12 V, 8 A).



Screw off the upper cover of the cigarette lighter plug.



Remove the faulty fuse.



Insert a new fuse and screw the cover of the plug back on.

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The mobile power outlet is equipped with protective shut-down features. The details are listed in the following table:

PROTECTION	POSSIBLE CAUSE	SOLUTION
Low battery low-voltage shutdown	Voltage drops to: 10.0–10.5 V = shutdown. This protects the battery from being over-discharged.	Recharge the battery.
High- Voltage shutdown	A defective battery charging system can cause the battery voltage to rise to high levels (15.0–16.3 V). Although the mobile power outlet has a protection against high voltage, it might still be damaged if the input voltage were to exceed 16 V.	Disconnect the connected devices. Verify that the charging system is properly regulated and the battery is 12V nominal.
Overload shutdown	If you connect a device that is rated too high or a load that draws excessive surge power, the mobile power outlet shuts down.	Use a product with a power rating within the mobile power outlet's continuous power rating range (see Operation).
Overheat shutdown	The power inverter shuts down automatically if it exceeds its safe operating temperature.	<ul style="list-style-type: none"> • Switch the mobile power outlet off and disconnect it from the cigarette lighter socket. • Disconnect all connected devices and allow the mobile power outlet to cool for at least 15 minutes. • Use a brush to clear any blocked ventilation holes. • Move the mobile power outlet to a cooler place. Reduce the load if continuous operation is required.

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PROBLEM	POSSIBLE CAUSE	SOLUTION
The connected device does not switch on.	The battery is defective.	Check the battery and replace it if required.
	The mobile power outlet is damaged and needs to be repaired.	Have the mobile power outlet repaired by an authorized service centre.
	Connection to the mobile power outlet or cigarette lighter plug is not tight.	Check all connections. Make sure the connection is correct and tight.
Measured mobile power outlet output is too low.	The battery voltage is too low.	Recharge the battery.
No power to inverter.	Blown fuse.	Replace fuse.
Buzz in the audio system.	Inadequate internal power supply filtering of stereo system.	Use an audio system with a high-quality filter.
Television interference.	TV signals are weak.	<ul style="list-style-type: none"> • Adjust the orientation of the mobile power outlet, television, antenna and cables. • Maximize TV signal strength by using a better antenna and use shielded antenna cable where possible. • Try a different TV model.

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.

