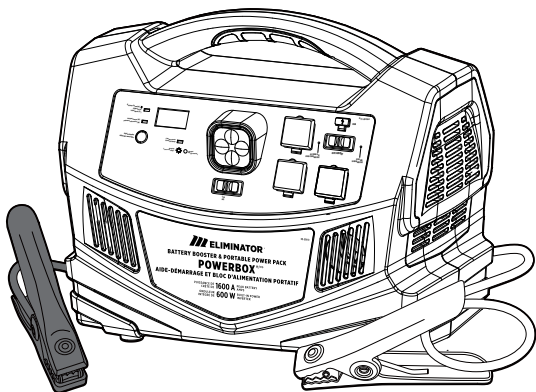




# ELIMINATOR

## PORTABLE BOOSTER & POWER PACK

# POWERBOX®



Model no. 011-2014-0

**IMPORTANT SAFETY INSTRUCTIONS.  
SAVE THESE INSTRUCTIONS.**

This manual contains important safety and operating instructions.

**INSTRUCTION  
MANUAL**

## TABLE OF CONTENTS

<b>Safety Information</b>	<b>4</b>
<b>Key Parts List</b>	<b>10</b>
<b>Important Information</b>	<b>12</b>
<b>Operation</b>	<b>19</b>
<b>Maintenance</b>	<b>33</b>
<b>Troubleshooting</b>	<b>34</b>
<b>Technical Specifications</b>	<b>38</b>
<b>Warranty</b>	<b>40</b>



DO NOT RETURN THIS PRODUCT TO THE STORE!

QUESTIONS? CALL OUR CUSTOMER SERVICE HOTLINE: 1-888-942-6686

This manual contains information that relates to protecting personal safety and preventing equipment problems.

Carefully read and follow the guidelines in this manual and give special attention to the CAUTION and WARNING statements.

#### ABBREVIATIONS AND ACRONYMS

A	Amp (Ampere)
AC	Alternating current
Ah	Amp-hour
DC	Direct current
LED	Light-emitting diode
mm	Millimetre
cm	Centimetre
V	Volt
W	Watt
mA	Milliampere

#### IMPORTANT!

Read and keep this owner's manual for future reference. This chapter contains important safety instructions.

Charge the power pack immediately after purchase for at least 48 hours and recharge the unit after every use. Recharge the unit once every 90 days, even if the power pack is not in use. Failure to comply will void the warranty.

### EXPLOSION AND FIRE HAZARD

- Do not use the power pack with life support systems or other medical equipment or devices.

### SHOCK AND FIRE HAZARDS

- Keep children away from the power pack. The AC power generated by the power pack is as lethal as a normal wall outlet.
- Do not expose the power pack to water, rain, snow, spray, or condensation.
- Make sure the power pack wiring is of proper size and rating and in good condition. Operating the power pack with damaged wiring may void warranty.

- Do not use the power pack if it is dropped, hit, worn, broken or damaged.
- Do not attempt to service or disassemble the power pack. It does not have user-serviceable parts.
- Disconnect the power source from the power pack before attempting to clean or operate the power pack. Turning OFF the power pack does not reduce the risk of electric shock.
- Do not open the power pack and attempt to replace the internal battery.
- Have a qualified technician perform any service work.
- Do not insert any foreign objects into the outlets, vents, or fan openings of the power pack.

### FIRE HAZARD

- Do not cover or obstruct the ventilated openings of the power pack. Doing so may cause overheating.
- Make sure there is a minimum of 3" (7.5 cm) of unblocked air space around the entire surface of the power pack at all times.

- Keep the power pack away from materials that can be affected by high temperatures such as blankets, pillows and sleeping bags.

### EXPLOSION AND FIRE HAZARD

- Never operate the power pack near flammable items or explosives, such as in cabin of a gasoline powerboat, or near propane/fuel tanks, in compartments containing batteries of flammable materials, locations that require ignition-protected equipment, joints, fittings or any connections between fuel system components.
- Make sure the area around the battery and engine is well-ventilated and free from spark or flame.
- Do not operate the power pack in an enclosed area containing automotive type lead-acid batteries. This type of battery emits explosive hydrogen gas that can be ignited by sparks.

- Do not allow the clamps of the boosting cable to touch each other or another common conductor. It causes sparks and/or damages the equipment.
- Always connect the clamps to the correct terminals. A reverse polarity connection damages the unit and/or creates a spark or explosion.
- DO NOT use DC to DC charging cable to charge power pack if your vehicle's electrical system operates above 15 V. This may lead to accumulations of hydrogen, causing exposure to fire and explosion hazards. This condition is typically found in marine appliances or portable generators with DC output.
- When working on electrical equipment, always ensure someone is nearby to aid you in case of emergency.

### EQUIPMENT DAMAGE

- Do not connect the power pack to any AC device with neutral conductor connected to ground, as doing so may damage the power pack.

- Do not expose the power pack to temperatures over 104° F (40° C).
- Do not allow the positive and negative clamps of the boosting cable to touch each other or another common metal conductor. Doing so may cause sparks and/or damage the equipment. Always store the boosting cables separately after use.
- Make sure the positive clamp of the boosting cable is connected to the positive terminal of the battery and the negative clamp is connected to the negative terminal of the battery. A reversed polarity connection (positive to negative) may cause sparks or damage the equipment.
- Do not use the boosting feature for more than 5 seconds. It is designed for short term operations only. Doing so may damage the equipment. Allow the power pack to cool for at least 3 minutes after each boosting operation.

### SAFETY PRECAUTIONS WHEN WORKING WITH BATTERIES

Follow all instructions mentioned by the manufacturer to avoid explosion of the battery.

- Remove all metal items such as rings, bracelets, and watches when working with lead-acid batteries. The batteries may produce short circuit current that can weld metals, thereby causing severe burns on skin.

### SHOCK AND FIRE HAZARD

- Do not operate the power pack in an enclosed area containing automotive type lead-acid batteries. These batteries, unlike the sealed AGM battery in the power pack, emit explosive hydrogen gas that can be ignited by sparks from electrical connections.
- Do not work near lead-acid batteries. The batteries generate explosive gases during normal operation.
- Make sure the area around the battery or engine is well-ventilated and free from sparks or flame.

- Do not drop a metal tool on the battery. Doing so can create a spark or short circuit in the battery or other electrical parts, resulting in battery explosion.
- When removing the battery, make sure to remove positive terminal from the battery and disconnect other electrical connections.
- Always have assistance nearby when working with the lead-acid batteries.
- Do not use this device to charge nickel cadmium batteries.
- Never smoke while handling the power pack or the batteries.

## CHEMICAL HAZARD

- Make sure there is plenty of fresh water and soap near the work area. If a person's skin or clothing accidentally comes in contact with battery acid, wash immediately with soap and water. If the acid enters eyes, wash immediately with running cold water for a minimum of twenty minutes and get medical attention immediately.
- Always wear complete eye and clothing protection. Avoid touching your eyes while working with the batteries.
- Always keep baking soda on hand for emergency purposes. It neutralizes the lead-acid battery electrolytes.
- Recycling of the battery is recommended to prevent inappropriate disposal of the battery.

## SAFETY PRECAUTIONS WHEN USING RECHARGEABLE APPLIANCES

Most rechargeable battery-operated types of equipment use

a separate charger or transformer that is plugged into an AC receptacle and produces a low-voltage charging output. Some chargers for small rechargeable batteries can be damaged if connected to this power pack.

## EQUIPMENT DAMAGE

- Do not use this power pack to charge small battery operated appliances such as flashlights, razors, and night lights that can be plugged directly into an AC outlet.
- Do not use this power pack with battery chargers intended to recharge battery packs used in hand power tools (with nickel cadmium batteries). The battery chargers provided for the tools will have a warning label indicating that the battery terminals contain dangerous voltage.

- In case of difficulty in using your rechargeable appliance with the power pack, contact the equipment manufacturer to determine the rechargeable appliance's compatibility with the modified sine wave (non-sinusoidal) AC waveform.
- Make sure the power pack is turned OFF when not in use to prevent unnecessary battery discharge.

## BATTERY RECYCLING

The power pack is durable. However, the internal batteries are not user-replaceable.



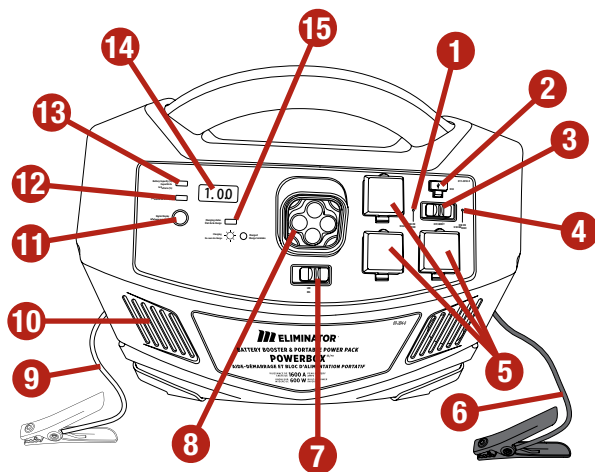
The internal batteries contain lead, which can be hazardous if exposed to environment. The battery should be recycled or safely disposed at your local recycling depot. Do not dispose of the battery or power pack with regular household waste. Contact your local authorities for recycling services.

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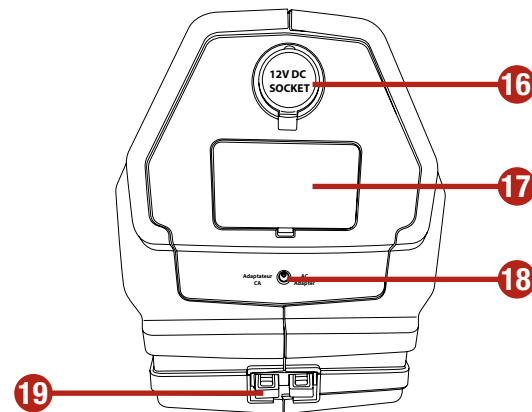
## FRONT PANEL

- |                           |                                 |
|---------------------------|---------------------------------|
| 1 AC/USB indicator        | 9 Positive boosting cable       |
| 2 USB port                | 10 Ventilation opening          |
| 3 AC/USB switch           | 11 Digital display button       |
| 4 USB ON indicator        | 12 Output power indicator       |
| 5 AC outlets              | 13 Battery capacity % indicator |
| 6 Negative boosting cable | 14 Digital display              |
| 7 LED switch              | 15 Charging indicator           |
| 8 LED light               |                                 |



## SIDE PANEL

- |                   |                           |
|-------------------|---------------------------|
| 16 12 V DC outlet | 18 AC charging input port |
| 17 250 A fuse     | 19 Boosting cable port    |



## GENERAL USE

The MotoMaster® Eliminator Portable Booster & Power Pack is easy to use and designed for years of reliable service. The MotoMaster® Eliminator Portable Booster & Power Pack can run AC and 12 V DC Appliances and also can be used to jump start engines.

## SAFETY FEATURES

These safety features ensure safe and trouble-free operation of the power pack.

**AUDIBLE ALARM**—The alarm produces an audible sound when the battery reaches 11 V DC. Turn the power pack OFF after disconnecting all AC and DC loads. If the warning is ignored the power pack will automatically shut off to avoid damage to the battery. The alarm also sounds when the internal circuits temperature is high. When this happens, the power

pack will automatically shut off to protect the internal circuits from being damaged.

**OVERLOAD SHUTDOWN**—The feature automatically shuts down the power to AC outlet within 15 seconds in case of an overload (>600 W).

## POWER PACK COMPONENTS

**AC/USB INDICATOR**—The indicator ① indicates both the AC and USB are available.

**USB PORT**—The USB port ② supplies 5 V 2100 mA of power.

**AC/USB SWITCH**—When this switch ③ is slid to the right, the USB power indicator glows to indicate that the power can be delivered to the electrical appliances through USB port. If this switch is slid to the left, the AC/USB indicator glows to indicate that the AC outlets and USB port are available. If the switch is in middle, power will be disconnected from both the USB port and AC outlet.

**USB ON INDICATOR**—The indicator ④ lights up if the AC/USB slide switch is slid to the right and power is available in the USB power port only.

**AC OUTLET**—The power pack is provided with three standard 3-prong outlets ⑤ through which 115 V AC power can be delivered to AC appliances.

**NEGATIVE AND POSITIVE BOOSTING CABLES**—The cables ⑥, ⑨ are connected to engine battery of vehicle when the power pack is used to jump start a vehicle. Make sure the positive and negative cable clamps are connected to the positive

and negative battery terminals, respectively.

**LED SWITCH**—The switch ⑦ is a simple ON-OFF slide switch. Slide this switch forward to turn ON the white LED light and backward to turn OFF the white LED light.

**LED LIGHT**—The light ⑧ is used for lighting purposes during an emergency situation. This light is not intended for prolonged use.

**VENTILATION OPENING**—The opening ⑩ protects the power pack from overheating.

**DIGITAL DISPLAY BUTTON**—The button ⑪ turns ON/OFF the digital display. When the button is pressed, the digital display indicates battery capacity % status.

**OUTPUT POWER INDICATOR**—The indicator ⑫ glows green when the output power information is displayed on the digital display.

**BATTERY CAPACITY % INDICATOR**—The indicator ⑬ glows green when the battery charge information is displayed on the digital display.

## NOTE:

If a high-capacity load is not removed from the AC outlet of the power pack immediately after an overload shutdown, the power pack will shut OFF and then turn ON again and again. This will lead to ON-OFF-ON-OFF condition which can be noticed through wattage displayed in the digital display. It is recommended to disconnect the load from the AC outlet immediately after the occurrence of an overload shutdown. The power pack will then automatically resume its operation.

**DIGITAL DISPLAY**—The feature displays **14** the output power in watts and the battery charge status in percentage.

**CHARGING INDICATOR**—The indicator **15** will flash green intermittently when the battery is charging and glows green when the battery is fully charged.

**12 V DC OUTLET**—The outlet **16** powers 12 V DC auto, RV or marine appliances. The outlet can also be used to recharge the unit using the DC to DC charging cable.

**250 A FUSE**—The fuse **17** protects the power pack from damage due to reverse connection and short circuit. It is strongly recommended to avoid reverse connection of the booster cables with the battery terminals.

**AC CHARGING INPUT PORT**—The port **18** into which the AC charger can be inserted to charge the battery of the power pack.

**BOOSTING CABLE PORT**—The port **19** into which the boosting cables are connected to supply high power DC current, when boosting a vehicle's battery or when connecting an external battery to the power pack. The boosting cable connection is designed in such a way that the boosting cables cannot be inserted incorrectly into the power pack.

## TROUBLE LOADS

The output of this power pack is non-sinusoidal. The electrical appliances mentioned below will be damaged when connected to this power pack.

- Electronics that modulate RF (radio frequency) signals on the AC line will not function and may be damaged.
- Speed controllers found in some fans, power tools, kitchen appliances, and other loads may be damaged.
- The chargers used for small nickel cadmium rechargeable batteries may be damaged.

- Metal halide arc (HMI) lights will be damaged.

## HIGH SURGE LOADS

Some induction motors used in freezers, pumps, and other motor-operated equipment need high surge current to start. This power pack may not be able to start these motors even though their rated current is within the power pack's limits. The power pack will start single phase induction motors rated at horsepower of 1/2 or less.

### NOTE:

- It is recommended to detach the DC to DC charging cable from the unit and vehicle as soon as the battery is fully charged or if the vehicle's engine is turned off. DO NOT leave the power pack permanently connected to the vehicle's 12 V accessory outlet.
- It is recommended to use the power pack to charge 12 V accessories less than 12 A.
- It is recommended to use only the AC charger provided for charging the internal battery. This charger has protection function. Do not use cable clamps to charge the internal battery.

### NOTE:

- In case of difficulty in using your rechargeable appliance with the power pack, contact our customer support at 1-888-942-6686.
- Even though the power pack can supply momentary surge power up to 1,000 W, some appliances may exceed capabilities of the power pack and trigger the safety overload shutdown circuit. This shutdown is intermittent. The power pack will automatically restart and shutdown until the load does not exceed the surge rating. It is recommended to check the output of your appliance.



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## AC APPLIANCE RUN TIME

AC APPLIANCE	WATTS*	HOURS
Cordless telephone (stand by)	5	56 h**
Clock radio	8	35 h**
Portable stereo	10	28 h**
Fluorescent work light	14	20 h**
Laptop computer	40	5 h 30 min**
Table lamp	40	5 h 30 min**
13" colour television	60	3 h 20 min**
3/8" drill	190	50 min**
5" random orbital sander	276	30 min**

## DC APPLIANCE RUN TIME

AC APPLIANCE	WATTS*	HOURS
Mobile phone	6	46 h***
Fluorescent light	8	35 h**
Portable cooler	30	10 h**
Portable vacuum cleaner	100	2 h 20 min**
Jigsaw	345	30 min

\* Actual power consumption as measured on sample products.

\*\* Operating times assume a fully charged 28 Ah battery and may vary based on model/brand used.






\*\*\* Represents talk time available from 5 rechargeable cycles.

## POWER PACK LOCATION

The power pack should be operated only in locations that meet the following requirements:

CONDITION	DESCRIPTION
Dry	Avoid splashing of water or other liquids on the power pack. Keep the power pack away from damp or moist areas.
Temperature	Maintain ambient air temperature between 32 and 104°F (0 and 40°C).
Ventilation	Leave at least 3" (7.5 cm) of clearance around the power pack for airflow. Ensure that the ventilation openings are not obstructed.
Safety	Do not install the power pack in a compartment containing batteries or flammable liquids like gasoline.
Flammable battery gases	Do not mount the power pack in a place where it is exposed to gases produced by the batteries. Prolonged exposure to these gases will damage the power pack as they are very corrosive.

## PACKAGING CONTENTS

NO.	MATERIAL NAME	QUANTITY	ILLUSTRATION
1	Power pack with inverter	1	
2	AC charger	1	
3	DC charging cable	1	
4	Boosting cables	1	
5	Owner's manual	1	

### NOTE:

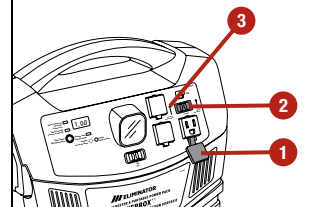
If any of these materials are missing or damaged please contact our toll-free hotline: 1-888-942-6686.

## OPERATION OF AC APPLIANCES

1. Check battery capacity status by pushing the digital display button to ensure that the battery is fully charged.

2. Open the AC outlet plastic cover (1). Slide the AC/USB slide switch (2) to the left. The AC/USB indicator (3) will glow (fig. A).

fig. A



### WARNING! SPARK AND EXPLOSION HAZARD

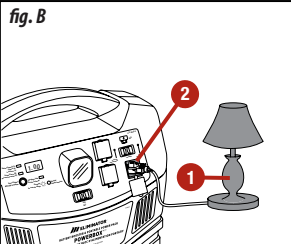
Do not operate the power pack in compartments containing batteries or flammable materials, or in locations that require ignition-protected equipment.



### CAUTION! EQUIPMENT DAMAGE

- Read all operating instructions before operating the MotoMaster® Eliminator Portable Booster & Power Pack.
- Do not use the power pack to operate any AC appliances or 12 V DC appliances while recharging the power pack battery with the AC charger. The AC charger may fail if the appliances are being used while the AC charger is connected.
- Do not use the power pack as an UPS (Uninterruptible Power Supply).

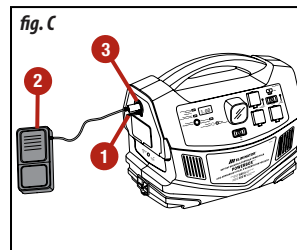
3. Plug the power cord (1) of the AC appliance into the AC outlet (2) (fig. B).



4. Turn ON the AC appliance.
5. Recharge the power pack immediately after use. Refer to Recharging the Power Pack with AC Charger → pages 29-30.

## OPERATION OF 12 V DC APPLIANCES

1. Check battery capacity status by pushing the digital display button to ensure that the battery is fully charged.
2. Open the 12 V DC outlet plastic cover (1). Plug the power cord of the DC appliance (2) into the 12 V DC outlet (3) (fig. C).
3. Turn ON the DC appliance.
4. Recharge the power pack immediately after use. Refer to Recharging the Power Pack with AC Charger → pages 29-30.



## NOTE:

- The 12 V DC outlet does not automatically turn off the power supply to the DC appliance, even if the internal battery of power pack is discharged.
- Please disconnect the 12 V DC appliances after use to avoid over discharge of power packs internal battery.
- The power pack can charge auto, RV, or marine portable 12 V DC appliances that draw 12 A or less through the 12 V DC outlet. While operating the DC appliance, the combined load of the appliance including the power pack's white LED light and USB port must not exceed 115 W. The power pack will operate for a longer time on a single full charge if lower wattage appliances are used.

## NOTE:

- If using many AC appliances, use an AC power bar for additional AC outlets. However, for continuous operation, the combined load must be less than 480 W. The power pack will operate for a longer time on a single full charge if lower wattage appliances are used.
- Some appliances may be difficult or impossible to operate using this power pack. They may have high surge requirements or may be incompatible with the output waveform of this power pack. Refer to Important Information → page 15.

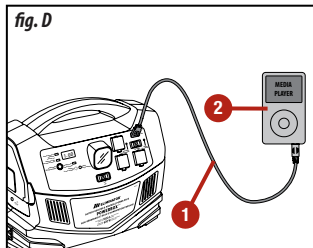


## CAUTION! EQUIPMENT DAMAGE

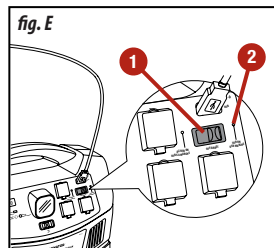
- Do not use equipment that requires a pure sine wave power source. The output of the power pack is non-sinusoidal.
- The combined load of the appliances must be less than 480 W for continuous operation. The power pack operates longer on a single full charge when lower wattage appliances are used.
- Equipment with high surge requirements cannot be operated with the power pack. Failure to comply may lead to equipment damage or personal injury.

## OPERATION OF USB DEVICES

1. Check battery capacity status to ensure the battery is fully charged. Refer to Important Information → page 13.
2. Plug one end of USB cable (1) (not provided) into the USB power port and other end to the USB-chargeable device, e.g., MP3 player (2) (fig. D).



3. Slide the AC/USB slide switch (1) to the right. The USB power indicator (2) will glow to indicate that the USB power port is activated (fig. E).



4. Recharge the power pack immediately after use. Refer to Recharging the Power Pack with AC Charger → pages 29-30.

## NOTE:

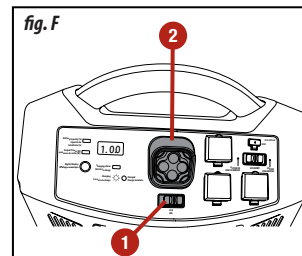
The USB power port of the power pack can only charge compatible devices like MP3 players, PDAs, digital cameras, and camcorders that have internal batteries.

## CAUTION! EQUIPMENT DAMAGE

- It is recommended to slide the AC/USB slide switch to the left when operating a DC appliance. Turning ON this switch will enable the audible alarm feature to produce an audible alarm when there is a low battery charge. This will avoid excessive discharge and damage to the battery.
- Never connect the USB power port directly to a computer USB outlet. Doing so may cause damage to both the power port and USB outlet.

## OPERATION OF LED LIGHT

1. Slide the LED switch (1) of the power pack to turn ON/OFF the LED light (2) (fig. F).



## JUMP STARTING AN ENGINE

The power pack can boost a vehicle or boat engine (all 4 cylinder type and most 6 cylinder type) that has a 12 V starting battery using the boosting cables.

1. Make sure your vehicle is a negative ground system. If it is a positive ground system vehicle or you are unsure, please consult the vehicle's owner's manual.
2. Turn off the vehicle and other accessories.

## NOTE:

Please slide the switch (1) to OFF after use. Failure to do so may damage the internal battery because of over discharge.



## CAUTION! EQUIPMENT DAMAGE

Do not use the LED light regularly as it is designed for use only in emergency situations.

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**ELIMINATOR**

3. Engage the park/emergency brake of the vehicle.
4. Engage the transmission in park mode for an automatic transmission vehicle or engage the transmission in neutral for a manual transmission vehicle.
5. Place the power pack on a flat, stable surface close to the battery of the vehicle.

### NOTE:

- Allow the power pack to cool down for at least 3 minutes after each boost.
- Follow these instructions carefully for boosting your vehicle. The instructions may be different from those mentioned for other boosting products or cables.
- If boosting a boat engine, purge the engine compartment and vent all fumes before boosting.



### WARNING! SHOCK AND FIRE HAZARD

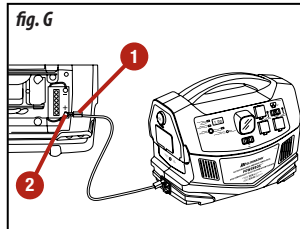
- Never allow the red and black clamps to touch each other or another common metal conductor. It may damage the equipment and cause a spark or explosion hazard.
- Do not crank the engine for more than 5 seconds. The jump start feature is designed only for short term operation. Failure to comply may cause damage to the device.
- Do not connect the boosting clamps in reverse polarity. Failure to comply may cause damage to the equipment and a fire hazard.



### CAUTION! EQUIPMENT DAMAGE

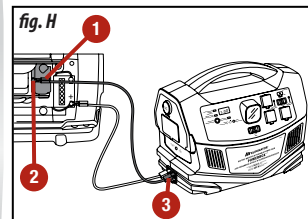
- Always turn OFF the AC/USB switch before the operation. The device can be damaged when connected to wrong terminals.
- Use only the supplied boost cables to boost a vehicle or boat engine (4 cylinder) that has a 12 V starting battery.
- Never allow the positive (red) and negative (black) clamps of the boosting cables to touch each other or another common metal conductor. Doing so may damage the equipment and create a spark.

6. Connect the boosting cable to the power pack through boosting cable port. Then connect the positive (red) clamp (1) from the power pack to the positive (+) terminal (2) of the battery in the vehicle (fig. G).
7. Then connect the negative (black) clamp (1) from the power pack to the chassis (2) of the vehicle (fig. H).



### NOTE:

- Ensure that the power pack is placed away from the moving parts of the engine and jump start power switch is in OFF position.
- The positive (+) terminal of the battery is usually larger in diameter than the negative terminal (-). The positive terminal (+) of the battery is usually connected with a red wire.
- The 250 A fuse will be blown if the boosting cables are connected in reverse.



### CAUTION! EQUIPMENT DAMAGE

- Always store the boosting cable clamps separately after use.
- Do not crank the engine for more than 5 seconds. The jump start feature is designed only for short term operation. Doing so may damage the power pack. Allow the power pack to cool down for at least 3 minutes after each boosting operation.

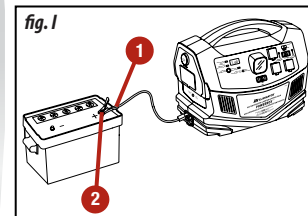
8. Disconnect the cable clamps from the battery of the vehicle and replace the 250 A fuse if the connections were reversed and repeat the steps 6 and 7, and proceed to step 9.
9. Crank the engine for 4-5 seconds or until it starts.
10. When the boosting operation is over, disconnect the positive (red) (+) clamp and then the negative (black) (-) clamp from the vehicle.
11. Store the boosting cables separately after use.
12. Recharge the power pack immediately after use. Refer to Recharging the Power Pack with AC Charger → pages 29-30.

### CONNECTING TO AN EXTERNAL BATTERY

The operating time of the power pack can be extended by connecting the power pack to a larger external battery.

1. Make sure the external battery rated voltage is 12 V.

2. Connect the positive (red) clamp (1) of the boosting cable to the positive (+) terminal (2) of the external battery (fig. I).



#### NOTE:

- Before starting the engine, ensure that the power pack and the cables are away from belts, fans or any other moving part of the engine.
- Do not crank the engine for more than 5 seconds.



#### CAUTION! EQUIPMENT DAMAGE

Make sure the cable clamps are connected correctly to the battery terminals. A reversed polarity connection (positive to negative) may cause sparks and damage the equipment.



#### WARNING! SHOCK AND FIRE HAZARD

- Never allow the red and black clamps to touch each other or another common metal conductor. It may cause damage to the equipment and create a spark or explosion hazard.
- Do not connect the boosting clamps in reverse polarity. Failure to comply may cause damage to the equipment and a fire hazard.

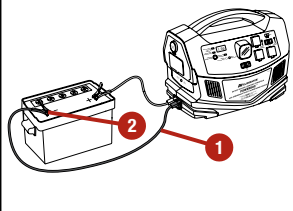


#### CAUTION! EQUIPMENT DAMAGE

- Do not recharge the power pack when an external battery is connected, as it could damage the AC charger.
- Make sure to connect only to a 12 V external battery. A higher or lower voltage battery will damage the power pack.

3. Connect the negative (black) clamp (1) of the boosting cable to the negative (-) terminal (2) of the external battery (fig. J).

fig. J



4. Disconnect the cable clamps from the battery and replace the 250 A fuse if the connections were reversed and repeat the steps 2 and 3.
5. After use, remove the positive (red) clamp and then the negative (black) from the external battery.
6. Store the boosting cables separately after use.
7. Recharge the power pack immediately after use. Refer to Recharging the Power Pack with AC Charger → pages 29-30.

The 250 A fuse will be blown if the boosting cables are connected in reverse.



### WARNING! CHEMICAL HAZARD

- Use only a sealed battery when the power pack is used indoors.
- Do not use automobile and marine batteries. They emit fumes which are undesirable for indoor use, and their acids are hazardous if spilled.
- Wear eye protection and protective clothing when connecting the power pack to an external battery.



### CAUTION! EQUIPMENT DAMAGE

- Make sure the cable clamps are connected correctly to the battery terminals. A reversed polarity connection (positive to negative) may cause a spark and break 250 A fuse.
- Never allow the positive (red) and negative (black) clamps of the boosting cables to touch each other or another common metal conductor. Doing so may damage the equipment and create a spark.

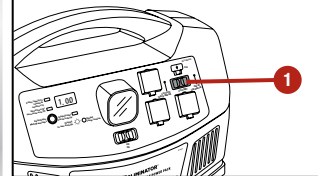
### RECHARGING THE POWER PACK

All rechargeable batteries gradually discharge when left idle. Due to inherent self discharge, lead-acid batteries must be charged once every 90 days, especially in a warm environment. Use the AC charger for charging the battery.

### RECHARGING THE POWER PACK WITH AC CHARGER

1. Turn OFF the AC/USB switch (1) of the power pack (fig. K).

fig. K



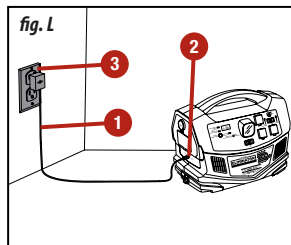
### CAUTION! EQUIPMENT DAMAGE

- Always ensure that the internal battery is fully charged. Do not overcharge the battery.
- Leaving a battery in a discharged state or without recharging every 90 days may result in permanent damage to the battery and poor boosting performance.

NOTE: Press digital display button to check the battery status.

- Do not operate AC or DC appliances while the power pack is being charged. Doing so may damage the AC charger.
- Do not attempt to recharge the internal battery if it is frozen.
- Use only the supplied AC charger or approved battery chargers to recharge the internal battery to ensure safe recharging and maximum battery life.
- Recharge the internal battery periodically to maintain maximum battery capacity.

2. Plug one end of 115 V AC charger (1) into charging input port (2) of the power pack and other end to 115 V AC electrical socket (3) (fig. L).



### RECHARGING THE POWER PACK WITH DC CHARGING CABLE

The power pack can also be recharged using the DC charging cable from a 12 V accessory outlet of a vehicle. This is recommended only during emergency situations.

1. Open the plastic cover of the 12 V DC outlet. Insert one plug of the DC charging cable into the 12 V DC outlet.

2. Insert the other plug of the DC charging cable into the 12 V DC accessory socket in vehicle.
3. Disconnect the DC charging cable from the power pack and the vehicle once the power pack is fully charged or when the vehicle's engine is no longer running.

### NOTE:

- The charging status LED indicator will not illuminate when the power pack is recharged using the DC charging cable. This charging method is applicable only during emergency purposes.
- The battery capacity shown in the digital display of the power pack is accurate only when the power pack has been disconnected from all appliances and all charging sources for at least 15 minutes.

### NOTE:

- The charging status indicator will flash green while charging and glows green when charging is completed.
- Do not unplug the power cord until the battery is fully charged. It may take 24 hours or more to fully recharge the power pack battery provided the voltage is 115 V AC. If the voltage is less than 115 V AC, it may take 24–48 hours to recharge.
- Once fully charged, the charging current automatically reduces to a floating charge mode. In case of power interruption, the charging process automatically recovers when power resumes.



### WARNING! EXPLOSION AND FIRE HAZARD

Do not use this DC charging cable if vehicle's electrical system operates above 15 V. This condition is typically found in marine appliances or portable generators with a DC output. Failure to comply may lead to accumulation of hydrogen, causing fire or explosion hazard.



### CAUTION! EQUIPMENT DAMAGE

- Do not operate AC or DC appliances while the power pack is being recharged with the DC charging cable.
- It is recommended to remove the DC charging cable from the power pack and vehicle immediately when the battery is fully charged or vehicle engine is turned OFF.
- Do not leave the power pack permanently connected to 12 V accessory socket of the vehicle.
- The charging status LED indicator will not illuminate when the power pack is recharged using the DC charging. This charging method is applicable only during emergency.
- The battery capacity shown in the digital display of the power pack is accurate only when the power pack has been disconnected from all appliances and all charging sources for at least 15 minutes.



### RECHARGING THE POWER PACK WITH REGULATED 12 V DC OUTLET OF A GENERATOR

The power pack can be recharged using a generator in three different ways:

- Connect the AC charger between the power pack and the generator.

**NOTE:** This method requires extended running time of the generator.

- Connect the power pack to an auxiliary regulated 12 V DC output of the generator.

**NOTE:** This method is to be adopted for faster recharging.

- Connect the power pack to a regulated 12 V DC lighter socket of a generator. Refer to Recharging the Power Pack with DC Charging Cable ➡ pages 30-31.

### MAINTENANCE

The power pack will operate properly when maintained properly.

- Clean the exterior surface of the power pack with a damp cloth to prevent accumulation of dust and dirt.
- Make sure the plastic covers on the 12 V DC outlet and AC outlet are closed after use.
- Recharge the battery at least once every 90 days. This will extend the durability and efficiency of the battery.

### NOTE:

Familiarize yourself with the operating instructions of the generator before connecting the generator to the power pack.



### WARNING! EXPLOSION AND FIRE HAZARD

The generator output must be 15 V or less to charge the power pack. An unregulated output or output exceeding 15 V DC may damage the battery and lead to accumulation of hydrogen, thereby causing fire or explosion hazard.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The power pack cannot jump start vehicle.	• The battery in the power pack is not fully charged.	• Recharge the battery. Refer to Recharging the Power Pack with AC Charger ➡ pages 29-30.
	• The engine start capacity exceeds the power pack's jump-start capacity.	• Use a higher capacity power pack.
	• The battery of the power pack is damaged.	• Replace the power pack's battery.
	• Battery of the vehicle is damaged.	• Replace the vehicle battery.
The charging status LED indicator flashes green but the battery has not been charged after 50 hours of charging.	• The output of the AC charger is low.	• Replace the 115 V AC charger.
	• The internal battery is permanently damaged.	• Check the battery at a car maintenance workshop.
	• False LED reading.	• Disconnect AC charger for 15 minutes. Check battery status. Reconnect AC charger to a different AC outlet.
	• Switches are in the "ON" position or a DC or AC load is connected.	• Place all switches in "OFF" position and disconnect all DC or AC loads.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The charging status LED indicator does not glow.	• There is no AC power at the AC wall outlet.	• Ensure power is available at the AC wall outlet.
	• The AC charger does not function.	• Replace the 115 V AC charger.
The AC appliance does not operate. The audible alarm beeps.	• The battery has discharged to less than 11 V.	• Recharge the battery.
	• The power pack is overheated due to poor ventilation or excessively warm environmental conditions.	• Allow the power pack to cool for 15 minutes or more. Clear blocked fan opening or remove objects covering the unit then restart the power pack. Move to a cool environment.
The AC appliance does not operate. The audible alarm does not beep.	• The overload protection feature has tripped because the AC appliance is rated more than 600 W.	• Use AC appliance with a power rating of less than 600 W.
	• The high starting surge current of the AC appliance trips the overload protection feature, even if the AC appliance is rated less than 600 W.	• Use an AC appliance with a starting surge current rated within the power pack surge capability. Refer to Technical Specifications ➡ page 38.

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PROBLEM	POSSIBLE CAUSE	SOLUTION
The run time for appliance is less than operating limit.	• The internal battery is not fully charged.	• Recharge the power pack using the AC charger until the charging status LED indicator glows green.
	• The power consumption of the AC appliance is higher than operating limit.	• Check the power or wattage rating of the AC appliance (or current draw for 12 V DC appliances).

## BUZZING IN AUDIO SYSTEMS AND RADIOS

PROBLEM	POSSIBLE CAUSE	SOLUTION
The audio systems and radios produce a buzzing sound when powered by the power pack.	The power supply in audio system does not adequately filter the modified sine wave generated by the power pack.	Use sound system with high quality filter.

## TELEVISION INTERFERENCE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Lines scroll across the TV screen.	The power pack operation affects the TV signal reception.	• Increase the distance between the power pack and the TV, antenna and cables.
		• Adjust the orientation of power pack, TV, antenna and cables.
		• Increase the TV signal strength by using a better antenna and a shielded antenna cable.
		• Try a different model. The models may vary considerable in their susceptibility to interference.

### NOTE:

If the above solutions do not eliminate the problem, contact 1-888-942-6686 for assistance.



### WARNING!

- Do not disassemble the power pack. It does not contain user-serviceable parts.
- Have the power pack serviced by a qualified technician. Attempting to service the power pack by yourself could result in electric shock or burn.

## ELECTRICAL SPECIFICATIONS

### 12 V DC SECTION

Internal battery (capacity/type)	28 Ah/12 V sealed lead-acid battery
DC power socket (maximum continuous load)	12 A with automatic reset
Built-in LED light	0.3 W bulb
Fuse	250 A

### AC POWER SECTION

Continuous output power	480 W
AC output power (5 minute)	600 W
AC output surge capacity	1000 W
AC output voltage	115 V $\pm$ 5 V AC
AC output frequency	59 – 61 Hz
AC output waveform	Modified sine wave
No load current draw	< 0.5 A
Input voltage range	11 – 15 V DC
Low battery alarm	11 $\pm$ 0.3 V DC
Low battery shutdown	10.5 V $\pm$ 0.3 V DC
High battery voltage shutdown	15.5 V $\pm$ 0.5 V DC
Ambient operating temperature range	32 – 104°F (0 – 40°C)
Storage temperature range	32 – 86°F (0 – 30°C)

## INTERNAL BATTERY CHARGING CONTROLLER SYSTEM

AC charging bulk charging current	1000 mA
Peak charging voltage (nominal)	14.2 $\pm$ 0.2 V
Charging restart voltage (nominal)	12.9 $\pm$ 0.2 V

### ACCESSORIES

Jump start cables (size/length)	19 mm <sup>2</sup> /0.8 m
AC to DC charging cable	6' (1.8 m)
DC to DC charging cable	3' (0.9 m)

## PHYSICAL SPECIFICATIONS

Dimension (L x W x H)	14 19/32 x 9 8/16 x 11 12/16" (37.1 x 24.1 x 29.8 cm)
Weight	24 lb 13 oz (11.3 kg)

## AC CHARGER SPECIFICATIONS

Input voltage	115 V AC
Output voltage	15 V DC
Input current	800 mA

### IMPORTANT:

All specifications are subject to change without notice. Please note that the battery capacity has been tested in 20 hours mode.

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This MotoMaster® Eliminator product carries a one (1) year limited 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.

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