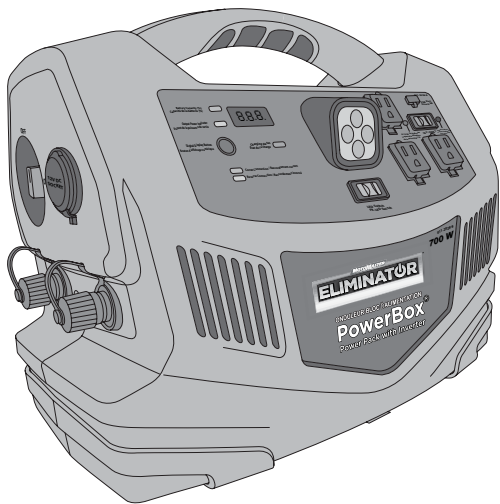


model no. 011-2028-8

MOTOMASTER  
**ELIMINATOR**

## POWER PACK WITH INVERTER



### **IMPORTANT:**

This manual contains important safety and operating instructions. Read all instructions and follow them with use of this product.

## **INSTRUCTION MANUAL**

**TABLE OF CONTENTS**

<b>Safety Information</b>	4
<b>Key Parts List</b>	9
<b>Important Information</b>	11
<b>Operation</b>	18
<b>Maintenance</b>	34
<b>Troubleshooting</b>	35
<b>Technical Specification</b>	39
<b>Warranty</b>	41



DO NOT RETURN THIS PRODUCT TO THE STORE!

QUESTIONS? CALL CUSTOMER SERVICE, HOTLINE: 1-877-619-6321

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-hours
DC	Direct current
LED	Light emitting diode
mm	Millimeter
cm	Centimeter
V	Volts
W	Watts
mA	Milliamperes

#### 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, as 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, as it does not have userserviceable 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 AC outlet, 12 V DC outlet, jumpstart cable port or ventilation hole. This power pack generates potentially lethal AC power same as a normal household wall outlet.

### FIRE HAZARD

- Do not cover or obstruct the ventilated openings of the power pack, as 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 batteries 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, as 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 15V. 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.

### EQUIPMENT DAMAGE

- Do not use the boosting feature for more than 5 seconds, as it is meant only for short term operations. Failure to comply could cause damage to the

equipment. Allow power pack to cool for at least 3 minutes after each boost operation.

- Do not connect the power pack to any AC device with neutral conductor connected to ground, as doing so may damage the power pack even if it is switched OFF.
- Do not expose the power pack to temperatures over 104° F (40° C).
- Make sure the area around the battery or engine is well ventilated and free from spark or flame.
- 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 clamps in appropriate holder on each side of the power pack after each 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

may cause sparks or damage the equipment.

### SAFETY PRECAUTIONS WHEN WORKING WITH BATTERIES

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

### SHOCK AND FIRE HAZARD

- Do not work near lead-acid batteries, as the batteries generate explosive gases during normal operation.
- Do not drop a metal tool on the battery, as doing so can create spark or short circuit in the battery or other electrical parts, resulting in battery explosion.
- While 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

- 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.
- Make sure there is plenty of fresh water and soap near the work area. If a person's skin or clothing accidentally contacts 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, as 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 APPLIANCE

Most rechargeable battery-operated equipment uses 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.

## BATTERY RECYCLING

The Power Pack is durable. However, the internal batteries are not user replaceable.

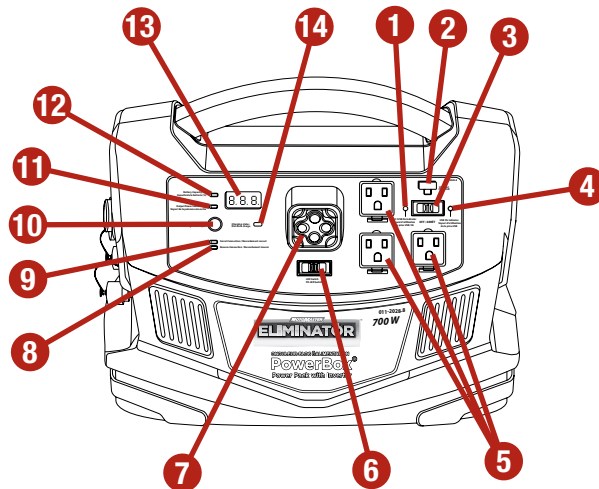


The internal batteries contain lead, which can be hazardous if exposed to environment. The battery should be recycled or safely disposed at your local recycling depot. Do not dispose of the battery or Power Pack with regular household waste. Contact your local authorities for recycling services.

- Do not use this power pack for certain battery chargers of battery pack 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.

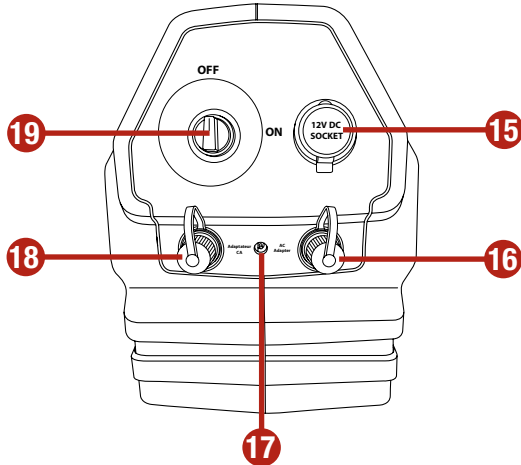
## FRONT PANEL

- |                    |                                 |
|--------------------|---------------------------------|
| 1 AC/USB indicator | 8 Reverse connection indicator  |
| 2 USB port         | 9 Correct connection indicator  |
| 3 AC/USB switch    | 10 Digital display button       |
| 4 USB ON indicator | 11 Output power indicator       |
| 5 AC outlets       | 12 Battery capacity % indicator |
| 6 LED switch       | 13 Digital display              |
| 7 LED light        | 14 Charging indicator           |



## SIDE PANEL

- 15** 12 V DC outlet
- 16** Negative DC terminal (black)
- 17** AC charging input port
- 18** Positive DC terminal (red)
- 19** Boosting ON/OFF switch



MM-112028-02

## GENERAL USE

The MotoMaster® Eliminator power pack is easy to use and designed for years of reliable service. The MotoMaster® Eliminator 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.

### AC OUTPUT OVERLOAD SHUTDOWN

This feature automatically turns OFF the power pack within 15 seconds if a short circuit occurs or if the load attached to the power pack exceeds the operating limit. The unit restarts automatically and if the loads are not removed from the outlets, the unit turns ON and OFF repeatedly until the largest load is removed from the outlet.

### NOTE:

If a high capacity load is not removed from the AC outlet of the power pack immediately after this shutdown, the power pack will shut OFF and then turn ON again and again. This will lead to ON-OFF-ON-OFF condition which could 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 overload shutdown. The power pack will then automatically resume its operation.

## LOW BATTERY VOLTAGE

**SHUTDOWN** - This feature automatically shuts down the power pack if the battery voltage drops below 10.5 V. This feature prevents the battery from being completely discharged.

## OVER TEMPERATURE

**SHUTDOWN** - This feature automatically turns OFF the power pack if internal components temperature is high. The audible alarm produces a beep when this happens. This may be caused by the ambient temperature being too high (over 40°C) or bad ventilation.

**SOUND ALARM** - The sound alarm produces a beep intermittently if the battery discharges to 11 V or lower. The sound alarm is also activated by reverse polarity connection.

## 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** - The USB port provides power, when the switch is slid to the right. **3** If it is in the middle, both the USB and AC are available. If it is slid to the left, the AC/USB indicator glows and both the AC outlet and USB port are available.

**USB ON INDICATOR** - This indicator **4** lights up if the USB switch is slid to the right and electricity is available.

**AC OUTLET** - This outlet **5** is a standard 3-prong outlet supplying 115 V AC power for running an AC appliance.

**LED SWITCH** - This slide switch **6** is used to turn ON/OFF the LED light.

**LED LIGHT** - The LED light **7** is designed to be used as an emergency feature.

## REVERSE CONNECTION

**INDICATOR** - This indicator **8** glows red, when the clamps are improperly connected to the battery. The sound alarm is also activated, indicating an error.

## CORRECT CONNECTION

**INDICATOR** - This indicator **9** glows green, when the clamps are properly connected to the battery, with the red clamp to the positive terminal and black clamp to the negative terminal.

**DIGITAL DISPLAY BUTTON** - When the button **10** is pressed the digital display shows the battery capacity %.

**OUTPUT POWER INDICATOR** - This indicator **11** glows green when the output power information is displayed on the digital display.

**BATTERY CAPACITY % INDICATOR** - The indicator **12** glows green when the battery capacity information is displayed on the digital display.

**DIGITAL DISPLAY** - The display **13** shows the output power in Watt and the battery charge status in percentage.

**CHARGING INDICATOR** - This indicator **14** flashes green intermittently when the battery is charging and glows green when the battery is fully charged.

**12 V DC OUTLET** - The 12 V DC outlet **15** supplies power to 12 V DC auto, RV or marine appliances. It is recommended to use the power pack to power 12 V accessories less than 12 A. The outlet can also be used to recharge the unit using the DC charging cable.

**NEGATIVE/POSITIVE DC TERMINALS** - The terminals **16**, **18** facilitate to connect the boosting cables to the power pack.

**AC CHARGING INPUT PORT** - Charges the battery in the power pack by inserting the AC to DC adapter charger into this charging port **17**.

**BOOSTING ON/OFF SWITCH** - This rotary switch **19** is used to turn ON and OFF the jump starting feature of the power pack.

**AC CHARGER** - Recharges the battery of the power pack from a standard AC wall outlet. This can only be used to recharge the internal battery of the power pack.

**DC CHARGING CABLE** - This cable facilitates to charge the power pack from a 12 V DC outlet of a vehicle.

## 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.

## TROUBLE LOADS

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.

## AC APPLIANCE RUN TIME

AC APPLIANCE	WATTS*	HOURS
Cordless telephone (stand by)	5	60 h**
Clock radio	8	38 h**
Portable stereo	10	30 h**
Fluorescent work light	14	22 h**
Portable DVD player	15	20 h**
Video game console	20	15 h**
Laptop computer	40	7 h
Table lamp	40	7 h*
13" colour television	60	4 h
3/8" drill	190	1 h**
5" random orbital sander	276	40 min

## DC APPLIANCE RUN TIME

AC APPLIANCE	WATTS*	HOURS
Mobile phone	6	60 h***
Fluorescent light	8	45 h**
Portable cooler	30	12 h**
Portable vacuum cleaner	100	3 h**

\* Actual power consumption as measured on sample products.

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

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

### NOTE:

- In case of difficulty in using your rechargeable appliance with the power pack, contact our customer support at 1-877-619-6321 for assistance between 9:00 am and 5:00 pm PST.
- 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.








## 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.
Temperature	Maintain ambient air temperature between 0°C and 40°C (32°F and 104°F).
Ventilation	Leave atleast 3" (7.5 cm) of space 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	1	
2	AC charger	1	
3	DC charging cable	1	
4	Battery cables	2	
5	Owner's manual	1	

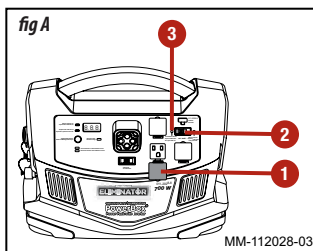
### NOTE:

If any of these materials are missing or damaged, please contact our Customer Service, Hotline: 1-877-619-6321.

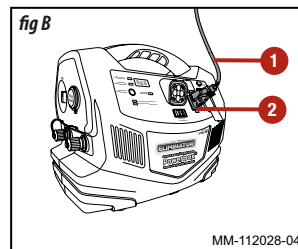
## OPERATION OF AC APPLIANCES

1. Check battery capacity status to ensure the battery is fully charged. Refer to Important information → page 13.

2. Open the AC outlet cover (1) of the power pack. Slide the AC / USB switch (2) to the left and the AC/USB indicator (3) will glow (fig A).



3. Plug the power cord (1) of the AC appliance into the AC outlet (2) of the power pack (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 30-31.

### NOTE:

- The power pack is equipped with AC outlets. The appliance can be directly plugged into the AC outlet or an AC power bar can be used to increase the number of outlets.
- In case of using many AC appliances, use an AC power bar for additional AC outlets. However, for continuous operations, the combined loads must be less than 480 W. The power pack will operate for a longer time on a single full charge if less 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 the section "Important information" pages 15.
- Contact the manufacturer of the device to determine the compatibility with the modified sine wave (non-sinusoidal) output of the power pack.



### 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 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, as 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).



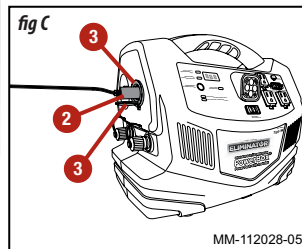
### CAUTION! EQUIPMENT DAMAGE

- Do not use equipments that require a pure sine wave power source, as the output of the power pack is non-sinusoidal.
- The combined loads of the appliances must be less than 700 W for continuous operations. The power pack operates longer on a single full charge when less wattage appliances are used.
- Equipments with high surge requirements cannot be operated with the power pack. Failure to comply may lead to equipment damage or personal injury.

## OPERATION OF 12 V DC APPLIANCES

1. Check battery capacity status to ensure the battery is fully charged. Refer to Important information → page 13.

2. Open the DC outlet cover (1) of the power pack. Plug the power cord (2) of the DC appliance into the DC outlet (3) of the power pack (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 30-31.
5. Please disconnect the 12 V DC appliances after use to avoid over discharge the internal battery of power pack.

### 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.
- The power pack can charge auto, RV, or marine portable 12 V DC appliance that draws 12 A or less through the 12 V DC outlet. While operating the DC appliance, the combine 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 less wattage appliances are used.



### CAUTION! EQUIPMENT DAMAGE

- While the DC appliance is operating, the combined load of the appliances including the power pack's LED light and USB port must not exceed 115 W.
- The DC outlet does not turn OFF automatically even when the internal battery is almost discharged. It is therefore recommended to turn ON the AC outlets while operating a DC appliance. Turning ON the AC outlets enables the power pack to raise an alarm when the internal battery charge goes low.

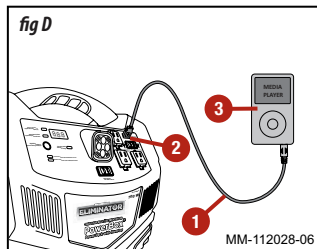


### CAUTION! EQUIPMENT DAMAGE

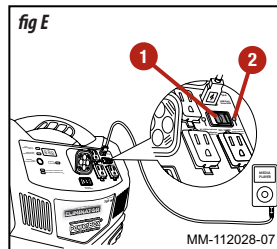
It is recommended to slide the AC/USB slide switch to the left when operating a DC appliance. Turning ON this switch will enable the audible alarm feature to produce an audible alarm when there is battery discharge. This will avoid excessive discharge and damage to the battery.

## OPERATION OF USB DEVICES

1. Check battery capacity status to ensure the battery is fully charged. Refer to Important information → page 11.
2. Plug one end of the USB cable (1) (not provided) of the device into the USB port (2) of the power pack. Plug the other end of the USB cable into the device (3) (fig D).



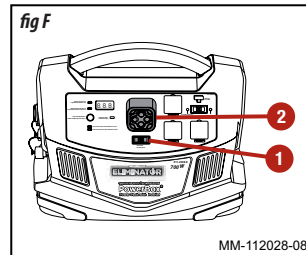
3. Slide the AC /USB switch (1) to the right and the USB power indicator (2) will glow (fig E).



4. Recharge the power pack immediately after use. Refer to Recharging the power pack with AC charger → pages 30-31.

## 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

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

### NOTE:

- The 5 V DC USB port of the power pack can only charge compatible devices like MP3 players, digital cameras and camcorders etc. that have internal batteries.
- Slide the AC/USB switch to middle to turn off USB after use. Failure to do so may damage the internal battery because of over discharge.

### 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 connect the USB port directly to a computer USB outlet. Failure to comply could result in damage to both the devices.



### CAUTION! EQUIPMENT DAMAGE

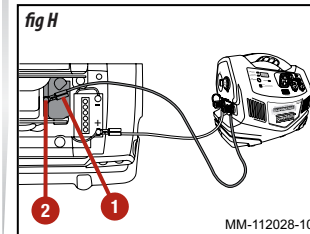
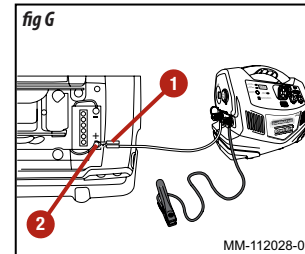
Do not use the LED light regularly, as it is designed for use only in emergency situations.

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.

6. Connect the ring terminal of the positive (+) battery cable (red) to the positive (+) DC terminal (red) of the power pack. 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. Connect the ring terminal of the negative (-) battery cable (black) to the negative DC terminal (black) of the power pack. Then connect the negative (black) clamp (1) from the power pack to the chassis (2) of the vehicle (fig H).

**NOTE:**

- Allow the power pack to cool down for at least 3 minutes after each boost.
- Follow these instructions carefully for boosting your vehicle, as 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, as it poses damage to the equipment and a spark or explosion hazard.
- Do not crank the engine for more than 5 seconds, as 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, as 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.

**NOTE:**

- Ensure that the power pack is placed away from the moving parts of the engine and jumpstart 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.
- If the cable clamps are connected in reverse, the reverse polarity LED indicator glows red and the audible alarm sounds.
- If the glow of the correct connection indicator is green without the sound alarm, the connections are proper.

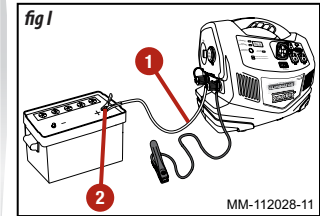
8. Disconnect the clamps from the battery of the vehicle if the connections are reversed and repeat the steps 6 and 7, or proceed to step 9.
9. Turn ON the boosting power switch of the power pack.
10. Crank the engine for 4-5 seconds or until it starts, whichever is first.
11. Turn OFF the boosting power switch after using the power pack.
12. Disconnect the positive (red) (+) clamp and then the negative (black) (-) clamp from the battery of the vehicle. And disconnect the battery cables from the power pack.
13. Store the clamps separately after use.
14. Recharge the power pack immediately after use. Refer to Recharging the power pack with AC charger → pages 30-31.

### CONNECTING TO AN EXTERNAL BATTERY

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

1. Make sure the external battery rated voltage is 12 V.
2. Turn OFF the boosting power switch before attempting to make any connections.

3. Connect the positive (red) clamp (1) from the power pack to the positive (+) terminal (2) of the external battery (fig I).



#### WARNING!

- Use a sealed battery for indoor applications. It is not recommended to use common auto and marine batteries for indoor use unless their fumes are vented. These batteries contain acid, which is hazardous if spilled.
- Always wear eye protection and protective clothing when connecting the power pack to an external battery.



#### WARNING! SHOCK AND FIRE HAZARD

- Never allow the red and black clamps to touch each other or another common metal conductor, as 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.

#### NOTE:

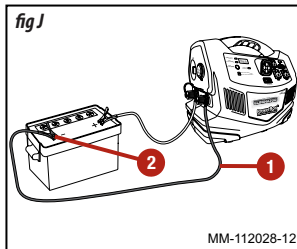
- Ensure that the power pack and the cables are away from the belts, fans or any other moving part of the engine.
- It is recommended to not to use the power pack to crank the engine for more than 5 seconds.
- Allow the power pack to cool down for at least 3 minutes after each boost.



#### 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.

- Connect the negative (black) clamp (1) from the power pack to the negative (-) terminal (2) of the external battery (fig J).



- Disconnect the clamps from the external battery if the connections are reversed and repeat the steps 2 and 3, or proceed to step 5.
- Turn ON the boosting power switch of the power pack.

### DISCONNECTING FROM THE EXTERNAL BATTERY

- Turn OFF the boosting power switch of the power pack.
  - Disconnect the positive (red) (+) clamp and then the negative (black) (-) clamp from the external battery.
- Store the battery cables separately.
  - Recharge the power pack immediately after use. Refer to Recharging the power pack with AC charger → pages 30-31.

#### NOTE:

- If the cable clamps are connected in reverse, the reverse polarity LED indicator glows red and the audible alarm sounds.
- If the glow of the correct connection indicator is green without the sound alarm, the connections are proper.



#### WARNING! CHEMICAL HAZARD

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

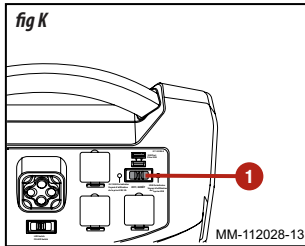


#### CAUTION! EQUIPMENT DAMAGE

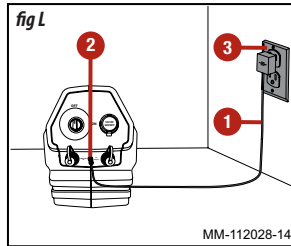
- Make sure the cable clamps are connected correctly to the battery terminals. A reversed polarity connection (positive to negative) may cause sparks and damage the equipment.
- Never allow the positive (red) and negative (black) cable clamps to touch each other or another common metal conductor. Doing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

### RECHARGING THE POWER PACK WITH AC CHARGER

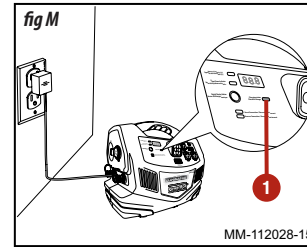
1. Turn OFF the AC/USB switch (1) of the power pack (fig K).



2. Plug the 115 V AC charger (1) into charging input port (2) of the power pack. Plug the adapter of the 115 V AC charger into 115 V AC electrical socket (3) (fig L).



3. The charging indicator (1) flashes green intermittently to indicate charging processing (fig M).



#### NOTE:

Digital display button can be used to determine the battery capacity.



#### CAUTION! EQUIPMENT DAMAGE

- The power pack battery gradually discharges when left idle. Lead acid batteries must be charged at least once every 90 days even if the battery is not in use, especially in a warm environment. Leaving a battery in a discharged state or not recharging every 90 days, may result in permanent damage to the battery and poor boosting performance.
- Do not operate AC or DC appliances while the power pack is being charged.
- Do not attempt to recharge the power pack battery if it is frozen.
- Use only the supplied AC charger or approved battery chargers to recharge the power pack battery, to ensure safe recharging and maximum battery life.
- Recharge the power pack battery periodically to maintain maximum battery capacity.

#### NOTE:

- The charging indicator glows green when the charging is complete. The charging time could take up to 55 hours for the battery when it is fully discharged.
- Do not unplug the power cord until the battery is fully charged. Charging a battery to its full capacity takes 25-55 hours depending on the charge left in the battery of the power pack.
- The charging time of the power pack is calculated as 35 hours based on the assumption that there is 115 V in the AC wall outlet. If the voltage in the AC wall outlet is less than 115 V AC, it may take more than 40 hours to fully recharge. Once fully charged, the charging current automatically reduces to a floating charge mode. If the power is interrupted, the charging process automatically restarts when power returns.



### 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 only during emergency situations.

1. Open the DC outlet cover of the power pack.

2. Plug one end of the DC charging cable into the 12 V DC accessory outlet of the vehicle.
3. Plug the other end of the DC charging cable into the 12 V DC outlet of the power pack.
4. 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 indicator does not flash green when the power pack is recharged using the DC charging cable, as it is meant only for 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.



#### WARNING! EXPLOSION AND FIRE HAZARD

Do not recharge the power pack using this method if the electrical system of the vehicle which is to recharge the power pack operates above 15 V, as it results in accumulation of hydrogen. This is usually found to happen in marine appliances/portable generators with DC output.



#### CAUTION! EQUIPMENT DAMAGE

- Do not operate AC or DC appliances while the power pack is being charged with the DC charging cable from the vehicle.
- Do not leave the power pack permanently connected to the 12 V accessory outlet of the vehicle.
- Disconnect the DC charging cable from the power pack and the vehicle as soon as the battery is fully charged or if the vehicle's engine is turned OFF.

### 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 31-32.



#### WARNING! EXPLOSION AND FIRE HAZARD

The output of the generator must be 15 V or less to charge the power pack. An unregulated output or output exceeding 15 V DC damages the battery and leads to the accumulation of hydrogen causing a fire hazard.

## 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 atleast once every 90 days. This will extend the durability and efficiency of the battery.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The power pack cannot jump start vehicle.	<ul style="list-style-type: none"> <li>• The battery in the power pack is not fully charged.</li> <li>• The engine start capacity exceeds the power pack jump-start capacity.</li> <li>• The battery of the power pack is damaged.</li> <li>• Battery of the vehicle is damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Recharge the battery.</li> <li>• Use a high capacity power pack. Make secure cable connections.</li> <li>• Replace the power pack's battery.</li> <li>• Replace the vehicle battery.</li> </ul>
The charging status LED indicator does not glow.	<ul style="list-style-type: none"> <li>• No AC power at the AC wall outlet.</li> <li>• The AC charger is faulty.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure power is available at the AC wall outlet.</li> <li>• Replace the 115 V AC charger.</li> </ul>
The AC appliance does not operate. The sound alarm is working.	<p>The battery has discharged less than 11 V.</p> <p>The power pack has overheated due to poor ventilation or excessively warm environmental conditions.</p>	<p>Recharge the battery.</p> <p>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 cooler environment.</p>

PROBLEM	POSSIBLE CAUSE	SOLUTION
The charging status LED indicator flashes green but the battery has not been charged to steady 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.
The AC appliance does not operate. The sound alarm is working.	• The battery has discharged to less than 11 V.	• Recharge the battery.
	• The power pack has 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 cooler environment.
The AC appliance does not operate. The sound alarm is working.	• The safety overload has tripped, as the AC appliance is rated more than 700 W.	• Use AC appliance with a power rating of less than 700 W.
	• The high starting surge has tripped the safety overload, even if the AC appliance is rated more than 1,000 W.	• 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 cooler environment.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The run time for appliance is less than expected.	<ul style="list-style-type: none"> <li>• The internal battery is not fully charged.</li> <li>• The power consumption of the AC appliance is higher than expected.</li> </ul>	<ul style="list-style-type: none"> <li>• Recharge the power pack using the AC charger until the charging status LED indicator glows green.</li> <li>• Check the power or wattage rating of the AC appliance (or current draw for 12 V DC appliances).</li> </ul>

### 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
Improper signal reception on TV screen.	The power pack operation affects the TV signal reception.	<ul style="list-style-type: none"> <li>• Increase the distance between the power pack and the TV, antenna and cables.</li> <li>• Adjust the orientation of power pack, TV, antenna and cables.</li> <li>• Increase the TV signal strength by using a better antenna and a shielded antenna cable.</li> <li>• Try a different model. The models may vary considerable in their susceptibility to interference.</li> </ul>

## ELECTRICAL SPECIFICATION

Continuous AC output power	700 W
Maximum AC output surge power	1000 W
Five minute AC output power	800 W
AC output voltage range	104 - 125 V AC
AC Output frequency	59 - 61 Hz
AC Output waveform	Modified sine wave
No load current draw	< 1 A
Input voltage range	11- 15 V DC
Low battery voltage alarm	11 ± 0.3 V DC
Low battery shutdown	10.5 V ± 0.3 V DC
High battery shutdown	15.5 V ± 0.5 V DC
AC bulk charging current	1000 mA
Peak charging voltage (nominal)	14.2 ± 0.2 V
Charging restart voltage (nominal)	12.9 ± 0.2 V
Internal battery (capacity / type)	33 Ah / 12 V sealed lead-acid battery (deep cycle)
DC power socket (maximum continuous load)	12 A with automatic reset
Built-in LED	0.3 W bulb

### NOTE:

If the above solutions do not eliminate the problem, contact 1-877-619-6321 for assistance between 9:00am to 5:00pm PST, Monday through Friday.

### WARNING!

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

**PHYSICAL SPECIFICATION**

Ambient operating temperature range	32°F - 104°F (0°C - 40°C)
Storage temperature range	32°F - 86°F (0°C - 30°C)
Dimension (L x W x H)	15 1/4 x 9 1/2 x 12" (38.8 x 24.1 x 30.6 cm)
Weight	28 lb 13 oz (13.1 kg)
Jump start cables (size / length)	19 mm <sup>2</sup> /0.8 m
AC to DC charging cable	1.8 m
DC to DC charging cable	0.9 m

**AC CHARGER SPECIFICATION**

Input voltage	115 V AC
Output voltage	13.5 V DC
Input current	1 A

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.

Imported by MotoMaster® Canada, Toronto, Canada M4S 2B8

**IMPORTANT:**

All specifications are subject to change without notice. The battery capacity was tested in 20 hours mode.