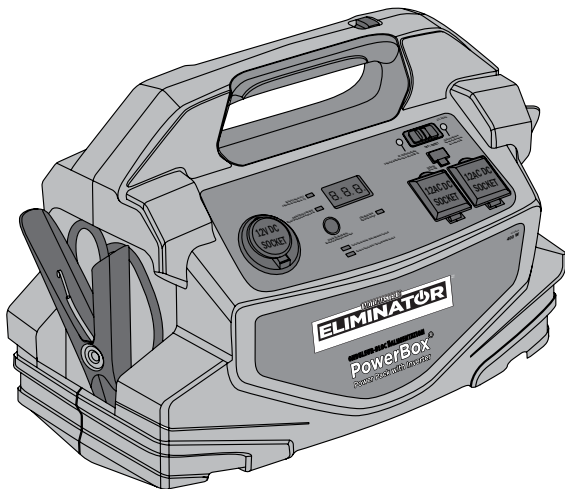


model no. 011-2016-6

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



DO NOT RETURN THIS PRODUCT TO THE STORE!

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

MOTOMASTER
ELIMINATOR

3

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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	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.

WARNING

- Do not use the MotoMaster Eliminator 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 rain, snow, spray, or bilge water.
- 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 user-serviceable parts.
- 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.
- 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.
- 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, 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 like blankets, pillows and sleeping bags, as they could be affected by the high temperatures generated by the power pack.

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.
- Make sure the area around the battery and engine is well ventilated and free from spark or flame.
- When working on electrical equipment, always ensure someone is nearby to aid you in case of emergency.
- 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 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.

EQUIPMENT DAMAGE

- Do not connect the power pack to any AC appliance 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, as 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.

SHOCK AND FIRE HAZARD

- Do not work near lead-acid batteries, as the batteries generate explosive gases during normal operation.
- Make sure the area around the battery or engine is well ventilated and free from spark or flame.
- 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.
- Do not use this device to charge nickel cadmium batteries.
- 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.
- 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.
- 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.

BATTERY RECYCLING

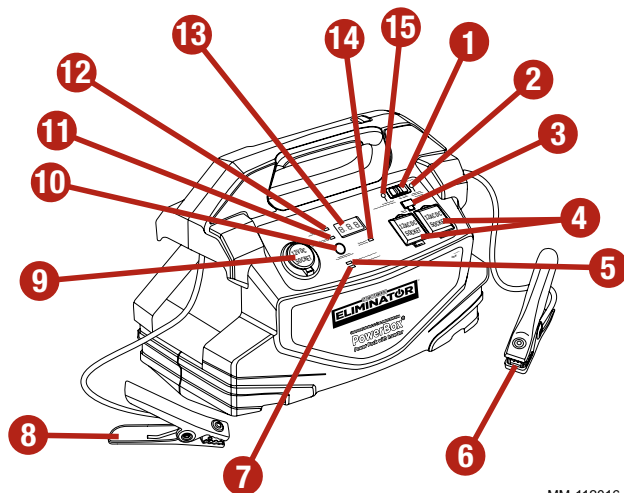
The Power Pack is durable. However, the internal batteries are not user replaceable.



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.

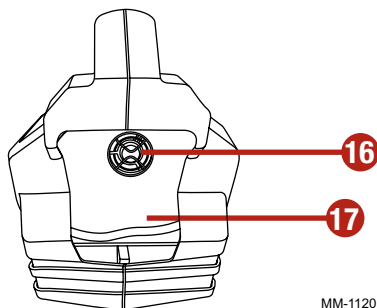
FRONT PANEL

- | | |
|----------------------------------|---------------------------------|
| 1 AC/USB indicator | 8 Negative battery clamp |
| 2 USB power indicator | 9 12 V DC outlet |
| 3 USB port | 10 Digital display button |
| 4 AC outlets | 11 Output power indicator |
| 5 Correct connection indicator | 12 Battery capacity % indicator |
| 6 Positive battery clamp | 13 Digital display |
| 7 Reverse polarity LED indicator | 14 Charging indicator |
| | 15 AC/USB indicator |

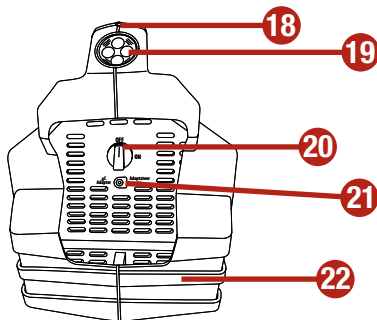


SIDE PANELS

- | | |
|---|---|
| 16 Cooling fan | 20 Jump start power switch |
| 17 Negative battery clamp holder | 21 Charging input port |
| 18 LED switch | 22 Positive battery clamp holder |
| 19 LED light | |



MM-112016-02



MM-112016-03

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.

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 battery. The alarm also sounds when internal circuits temperature is high. When this happened, the power pack will automatic shut off to protect

the internal circuits from being damaged. The alarm also sounds if there is a reverse connection between the boosting cables and battery.

OVERLOAD SHUTDOWN - This feature automatically shuts down the power to AC outlet within 15 seconds, in case of an overload (>400 W).

POWER PACK COMPONENTS

AC/USB SWITCH - When this switch **1** 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.

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.

USB ON INDICATOR - This indicator **2** lights up if the AC/USB slide switch is slid to the right and power is available in the USB power port only.

USB PORT - The port **3** charges USB-enabled devices with power of 5 V 2100 mA.

AC OUTLET - The power pack is provided with two standard 3-prong outlets **4** through which 115 V AC power can be delivered to AC appliances.

CORRECT CONNECTION INDICATOR - This indicator **5** glows green when the positive (red) and negative (black) clamps are connected to the positive and negative battery terminals, respectively.

POSITIVE AND NEGATIVE CABLE CLAMPS - These clamps **6, 8** 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 chassis of the vehicle, respectively.

REVERSE POLARITY LED INDICATOR - This indicator **7** glows red when there is a reverse connection between the clamps and battery terminals. The audible alarm sounds to indicate error.

12 V DC OUTLET - The outlet **9** powers 12 V DC auto, RV or marine appliances. The outlet can also be used to recharge the unit using the DC charging cable.

DIGITAL DISPLAY BUTTON - This button **10** turns ON/OFF the digital display. When the button is pressed, the digital display indicates battery capacity % status.

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 charge information is displayed on the digital display.

DIGITAL DISPLAY - This feature displays **13** the output power in watts and the battery charge status in percentage.

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

AC/USB INDICATOR - This feature **15** indicates that the AC outlets and USB port are available.

COOLING FAN AND VENTILATION OPENING - These features **16** protect the Power Pack from overheating.

POSITIVE AND NEGATIVE CABLE CLAMP HOLDERS - These holders **17, 22** are used to hold the cable clamps after use.

LED SWITCH - It is a simple ON-OFF slide switch. Slide this switch **18**

forward to turn ON the white LED light and backward to turn OFF the white LED light.

LED LIGHT - The light **19** can be used for lighting purpose during an emergency situation.

JUMPSTART POWER SWITCH - The light **20** can be used for lighting purpose during an emergency situation.

CHARGING INPUT PORT - The port **21** through which the AC charger can be inserted to charge the internal battery of 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.

NOTE:

- It is recommended to detach the 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.
- It is recommended to use the power pack to charge 12 V accessories less than 12 A.

NOTE:

- 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.

- 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 (MHI) lights may be damaged.

HIGH SURGE LOADS

The wattage rating of an AC appliance is the average amount of power used by the appliance. Some appliances such as televisions, computer monitors and motor operated equipments consume more power than the average rating when starting initially.

AC APPLIANCE RUN TIME

AC APPLIANCE	WATTS*	HOURS
Cordless telephone (stand by)	5	40 h**
Clock radio	8	22 h**
Portable stereo	10	17 h**
Fluorescent work light	14	10 h**
Laptop computer	40	3 h**
Table lamp	40	3 h**
13" colour television	60	2 h**
3/8" drill	190	27 min**

NOTE:

- In case of difficulty in using your rechargeable appliance with the power pack, contact our customer support at 1-877-619-6321 to determine whether the appliance is compatible with the modified sine wave output of the power pack.
- Even though the power pack can supply momentary surge power up to 600 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.

DC APPLIANCE RUN TIME

DC APPLIANCE	WATTS*	HOURS
Mobile phone	6	30 h***
Fluorescent light	8	25 h**
Portable cooler	30	5 h**
Portable vacuum cleaner	100	1 h 20 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.
Cool	Maintain ambient air temperature between 0°C and - 40°C (-32°F and 104°F).
Ventilation	Leave atleast 3" (7.5 cm) of clearance around the power pack for airflow. Ensure that the ventilation openings are not obstructed.
Safe	Do not install the power pack in a compartment containing batteries or flammable liquids like gasoline.
Protection from 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 inverter, as they are very corrosive.

PACKAGING CONTENTS

NO.	MATERIAL NAME	QUANTITY	ILLUSTRATION
1	Power pack with inverter	1	
2	AC to DC adapter/charger	1	
3	DC charging cable	1	
5	Owner's manual	1	

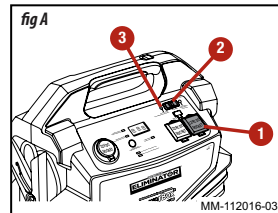
NOTE:

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

OPERATION 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).



WARNING! SPARK AND EXPLOSION HAZARD

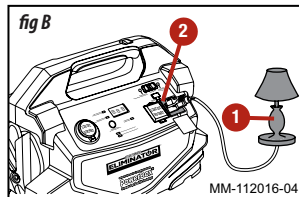
Do not operate the power pack in compartments containing batteries or flammable materials, or in locations that require ignition protected equipment.



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).

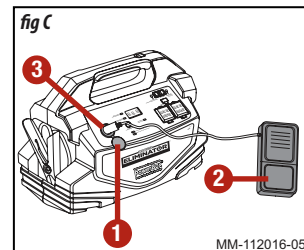
3. Plug the power cord of AC appliance (1) into the AC outlet (2) (fig B).



4. Turn ON the AC appliance.
5. Recharge the power pack immediately after use. Refer to Recharging the power pack with AC charger → pages 31-32.

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 31-32.



NOTE:

- 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 320 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 to Important information → page 15.



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.



CAUTION! EQUIPMENT DAMAGE

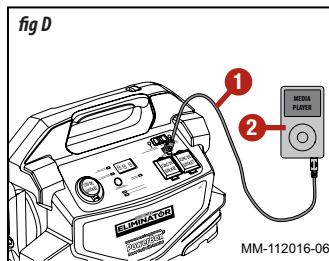
- While the DC appliance is operating, the combined load of the appliances including the power pack's LED light and USB port must not exceed 115 W.
- The DC outlet does not turn OFF automatically even when the internal battery is almost discharged. It is therefore recommended to turn ON the AC outlets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

NOTE:

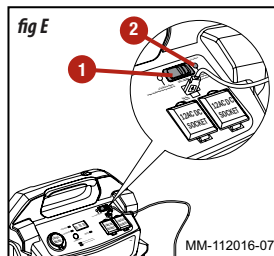
- The 12 V DC outlet does not automatically turn off the power supply to the DC appliance, even if the internal battery of power pack is discharged.
- Please disconnect the 12 V DC appliances after use to avoid over discharge of power packs internal battery.
- The power pack can charge auto, RV, or marine portable 12 V DC 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.

OPERATION OF USB DEVICES

1. Check battery capacity status to ensure the battery is fully charged. Refer to Important information → page 10.
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).

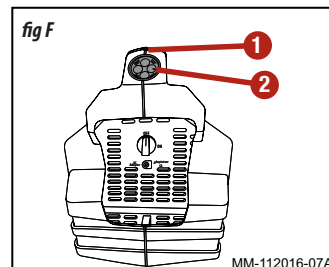


4. Slide the AC/USB switch to middle to turn off USB after use. Failure to do so may damage the internal battery because of over discharge.

5. Recharge the power pack immediately after use. Refer to Recharging the power pack with AC charger → pages 31-32.

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 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 unsure, please consult the vehicle owners manual.
2. Turn off the vehicle and other accessories.

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 battery discharge. 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.

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.

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

the transmission in neutral mode for a manual transmission 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, 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.

6. Connect the positive (red) cable clamp (1) to the positive (+) terminal (2) of the engine battery in the vehicle (fig G).

7. Connect the negative (black) cable clamp (1) to the chassis (2) of the vehicle (fig H).

fig G

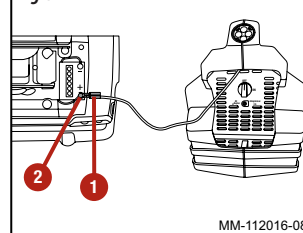
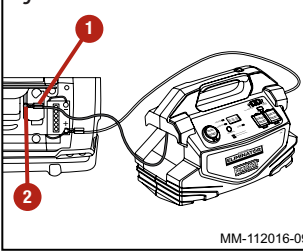


fig H



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.



CAUTION! EQUIPMENT DAMAGE

- Do not crank the engine for more than 5 seconds, as 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
- Use only the supplied boost cables to boost a vehicle or boat engine (4 cylinder) that has a 12 V starting battery.



WARNING! SHOCK AND FIRE HAZARD

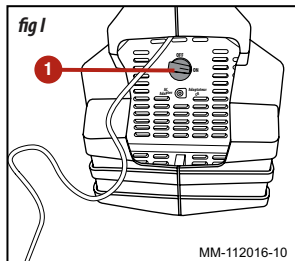
- Never allow the red and black clamps to touch each other or another common metal conductor, as it poses damage to the equipment and a spark or explosion hazard.
- Do not crank the engine for more than 5 seconds, as the jump start feature is designed only for short term operation. Failure to comply 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

- 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.
- After use, always turn OFF the jumpstart power switch and store the cable clamps in the appropriate holders on each side of the power pack.
- Always turn OFF the AC/USB switch before the operation, as the device can be damaged when connected to wrong terminals.

8. Disconnect the cable clamps from the battery of the vehicle if the connections are reversed and repeat the steps 5 and 6. If the correct connection indicator glows green, proceed to step 8.
9. Turn ON the jumpstart power switch (1) provided at the side panel (fig I).



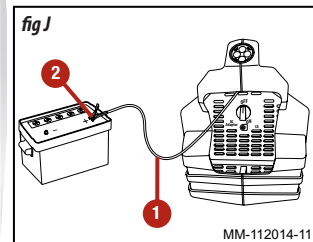
10. Crank the engine for 4-5 seconds or until it starts.
11. Turn OFF the boosting power switch after using the power pack.
12. Disconnect the positive (red) (+) clamp and then the negative (black) (-) clamp from the battery of the vehicle.
13. Store the clamps in the appropriate holders on each side of the power pack.
14. Recharge the power pack immediately after use. Refer to Recharging the power pack using the AC charger
→ pages 31-32.

CONNECTING TO AN EXTERNAL BATTERY

To extend the battery operating time, you can connect the power pack to a larger external battery.

1. Make sure the external battery rated voltage is 12 V.
2. Make sure the jumpstart power switch is in OFF position.

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



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.
- It is recommended to not to use the power pack to 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

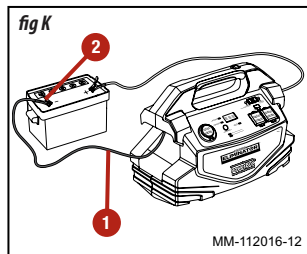
- Never allow the red and black clamps to touch each other or another common metal conductor, as it may cause damage to the equipment and create a spark or explosion hazard.
- Do not connect the boosting clamps in reverse polarity. Failure to comply may cause damage to the equipment and a fire hazard.



CAUTION! EQUIPMENT DAMAGE

- Do not recharge the power pack when an external battery is connected. The AC charger may be damaged.
- Make sure to connect only to a 12 V external battery. A higher or lower voltage battery will damage the power pack.

4. Connect the negative (black) cable clamp (1) to the negative (-) terminal (2) of the external battery (fig K).



5. Disconnect the cable clamps from the external battery if the connections are reversed and repeat the steps 1 and 2. If the correct connection indicator glows green, proceed to step 4.
6. Turn the jumpstart power switch ON.

DISCONNECTING FROM THE EXTERNAL BATTERY

1. After use, turn OFF the jumpstart power switch, remove the positive (red) clamp and then the negative (black) from the battery.
2. Store the clamps in the appropriate holders on each side of the power pack.
3. Recharge the power pack immediately after use. Refer to Recharging the power pack using the AC charger pages 31-32.

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.

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.

CAUTION! EQUIPMENT DAMAGE

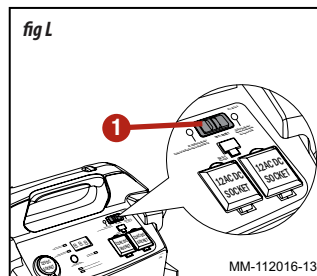
- Always ensure that the internal battery is fully charged. Do not overcharge the battery.
- Leaving a battery in a discharged state or without recharging every 90 days may result in permanent damage to the battery and poor boosting performance.

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

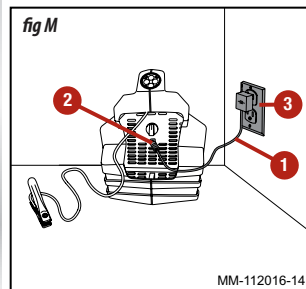
- Do not operate AC or DC appliances while the power pack is being charged. Doing so may damage the AC to DC adapter/charger.
- Do not attempt to recharge the internal battery if it is frozen.
- Use only the supplied AC charger or approved battery chargers to recharge the internal battery, to ensure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

RECHARGING THE POWER PACK WITH AC CHARGER

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



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 M).



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 20 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 24-35 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.

RECHARGING THE POWER PACK USING DC CHARGING CABLE

The power pack can be recharged using the DC charging cable in vehicle during emergency.

1. Open the DC outlet cover of the power pack.
2. Insert the other plug of the DC charging cable into 12 V DC accessory socket in 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 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% indicator is accurate only when the power pack is disconnected from all appliances and all charging sources for at least 15 minutes.



WARNING! EXPLOSION AND FIRE HAZARD

Do not use this DC charging cable, if vehicles 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 if 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.

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

The power pack can be recharged using a generator in 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 or lighter socket of the generator using the DC charging cable. Refer to Recharging the power pack with DC charging cable ➡ page 33.

NOTE: This method can be adopted for faster charging.

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 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 jumpstart the vehicle.	- The battery in the power pack is not fully charged. - The engine start capacity exceeds the power pack jumpstart capacity. - The battery of the power pack is damaged. - Battery of the vehicle is damaged.	- Recharge the battery. Refer to Recharging the power pack using the AC charger  pages 31-32. - Use a high capacity power pack. - Replace the power pack's battery. - Replace the vehicle battery.
The charging status LED indicator does not glow.	- There is no AC power at the AC wall outlet. - The AC to DC charger/adaptor does not function.	- Ensure power is available at the AC wall outlet. - 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. - The power pack is overheated due to poor ventilation or excessively warm environmental conditions.	- Recharge the battery. - Allow the power pack to cool for 15 minutes or more. Clear blocked ventilation opening or remove objects covering the power pack, then restart the power pack. Move to a cool environment.

PROBLEM	POSSIBLE CAUSE	SOLUTION
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. - The switch is not turned off or there is a load, such as 12 V outlet, LED light, inverter, USB etc, turned on. - The power pack automatically went into a recharge mode because battery voltage dropped below 12.9 V after it was fully charged. - The internal battery is permanently damaged. - False LED reading. - Switches are in the "ON" position or a DC or AC load is connected.	- Replace the 115 V AC charger. - Turn off all the switches and disconnect all loads. - Disconnect the AC adapter. Wait 15 minutes and press the digital display button to check the battery capacity %. - Check the battery at a car maintenance workshop. - Disconnect AC charger for 15 minutes. Check battery status. Reconnect AC charger to a different AC outlet. - Place all switches in "OFF" position and disconnect all DC or AC loads.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The AC appliance does not operate. The audible alarm does not beep.	The overload protection feature trips, as the AC appliance is rated more than 400 W.	Use AC appliance with a power rating of less than 400 W.
	The high starting surge current of the AC appliance trips the overload protection feature, even if the AC appliance is rated less than 400 W.	Use an AC appliance with a starting surge current rated within the power pack surge capability. Refer to Technical specification ➡ page 41.
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 AM-FM 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 interferes with the TV signal reception.	- Increase the distance between the power pack, 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 considerably in their susceptibility to interference.

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 power pack, as 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 SPECIFICATION

12 V DC SECTION

Internal battery (capacity/type)	20 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

AC POWER SECTION

Continuous output power	320 W
AC output power (5 minute)	400 W
AC output surge capacity	600 W
AC output voltage	104 - 125 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°F - 104°F (0°C - 40°C)
Storage temperature range	32°F - 86°F (0°C - 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

AC to DC charging cable	1.8 m
DC charging cable	0.9 m

PHYSICAL SPECIFICATION

Dimension (L x W x H)	14 15/16 x 8 9/16 x 9 13/16 " (38 x 21.8 x 24.9 cm)
Weight	18 lb 8 oz (8.2 kg)

AC CHARGER SPECIFICATION

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

IMPORTANT:

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

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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