Crank Master

Instruction Manual

SAVE THESE INSTRUCTIONS: This manual contains important safety and operating instructions for ALL models. Read through this owner's manual carefully before using your new tool. Pay close attention to all safety instructions, Warning and Caution sections. Use your tool properly and only for its intended use.

WARNING:

1. The appliance is not intended for use by young children or infirm persons without supervision.
2. Young children should be supervised to ensure that they do not play with the appliance.
3. The jump starters described in this manual are suitable for portable power source or off-road side battery emergency rescues. Ratings are described as below.

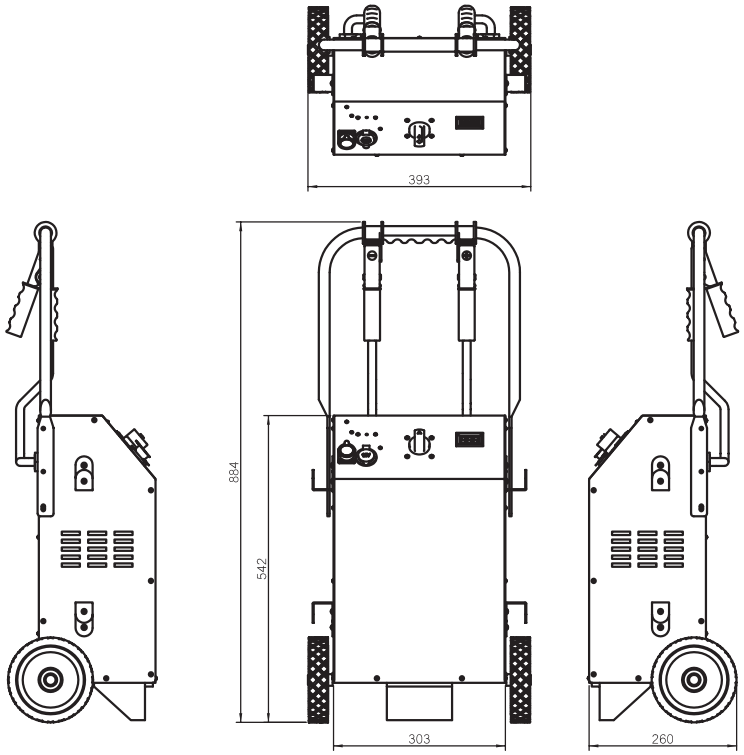
CAUTION:

1. Contains sealed, non-spillable lead acid, AGM or Lithium battery. Must be disposed of properly.
2. Unit should be kept at fully charged. Refer to recharge section in this manual.
3. **Never charge a frozen battery.**
4. **Recharge upon purchase and immediately after each use.**
5. **Recharge if not used for one (1) to three (3) months.**
6. Can be charged continuously without damage to unit.

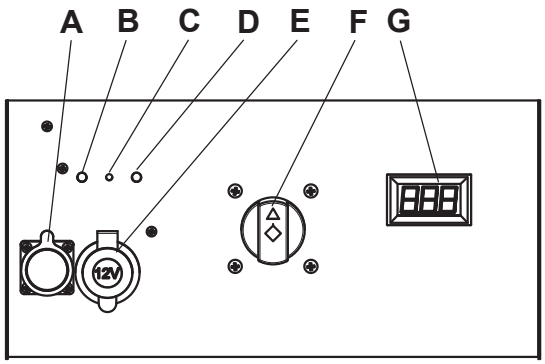
WARNING: Risk of Explosive Gases

1. Battery is dangerous because it can generate explosive gases during normal battery operation.
2. To reduce risk of explosion, follow these instructions and those of the battery manufacturer and of any equipment you intend to use in vicinity of battery. Review warnings on these products and on battery.
3. Make sure someone is close enough to come to your aid when you are working with a lead-acid battery.
4. Avoid touching eyes while working with a lead- acid battery. Wear complete eye and clothing protection.
5. Keep fresh water and soap nearby in case battery acid contacts skin. Wash immediately with soap and water if battery acid contacts skin. If acid should get into your eye, flush immediately with cold water for 10 minutes, and get medical attention.
6. Never smoke while working with a battery. Do not allow a spark or flame to get near the battery.
7. Be careful not drop any metal tool or object onto battery as spark may occur & may create explosion.
8. Battery can produce a short-circuit current strong enough to weld metal to skin. Remove all jewelry and personal metal items when working with a battery.
9. Do not use the portable power source to charge dry-cell batteries. These batteries may burst!
10. Do not attempt to charge or boost a frozen battery.
11. If your portable power source is equipped with polarity protection, always avoid clamps from touching each other or contact the same metal.
12. Use of an attachment not sold by the manufacturer is not recommended, as it may result in a risk of damage to the unit or personal injuries.
13. When using the charger or power extension cord, pull on the plug and NEVER ON THE CORD when disconnecting.
14. Replace damaged charger or power extension cord immediately. Do not attempt to recharge the portable power source with damaged cords.
15. The portable power source is designed for use under any weather condition.
16. Prevent submersion in water.
17. Do not operate with flammables in the vicinity such as gasoline etc.
18. If the portable power source is damaged in any way, discontinue use. If the portable power source is leaking battery acid do not scrap it. Take it to the closest battery recycler in your area.

OUTLINE DIMENTION



OPERATION PANEL



A：CHARGING PORT
B : SURGE PROTECTOR
C：BUZZER
D：REVERSE
E：12VDC SOCKET
F：SWITCH
G：VOLT METER

DESIGN AND SAFETY

1. Powers most 12Vdc equipment with a male cigarette dc plug.
2. DC plug is equipped with 15A output overload protection from its 12Vdc socket.
3. Safety storage compartment and clamp rest provides convenient storage of cables and clamps when not in use,
4. Storage compartments and clamp holder prevents possible accidental sparking of clamps.
5. The portable power source is recommended to be stored in UPRIGHT position.

MODIFICATIONS

Unauthorized modifications to the portable power source, not expressly approved by the party responsible for radio frequency emission levels from the portable power source, may cause an increased amount of radio frequency energy to be emitted. Such a modification will void the customer's authority to use the portable power source.

FIRST TIME CHARGING PROCEDURES

Turn power switch to 12V position when charging.
The power source can only be charged with the 12V charger within the package.
When first purchased the portable power source, it should be charged for a minimum of 30 hours, unless all the power level lights and the "**FULL**" indicator come the charger is showed.

RECHARGING THE PORTABLE POWER SOURCE

You can charge your portable power source via equipped charger. However it is preferred to charge the unit by using its automatic charger to prevent overcharge.

NOTE: Charging status is **NOT** automatically monitored **when charging with the DC to DC extension cord!** The portable power source could be damaged due to overcharge.

The portable power source should NEVER be left in a total discharged state for any period of time. Damage to the battery could be permanent! When not in use, recharge every one (1) to three (3) months. The more often you keep the unit at full charge, the longer life time it is for the battery.

1. Charging with the intelligent multi-stage switching charger.

a. Connect your switching charger AC cord to wall and wait for its LED display to show "Standby" .
b. In STANDBY mode, connect the DC plug to your Portable Power Source's DC cigar socket or charging port.
c. On your Portable Power Source, turn power switch to 12V position.
d. Allow the portable power source to charge until the charged light on the switching charger is lit.
e. The charging status is monitored and turns to float mode charging once the internal batteries are fully charged.
f. Once full, disconnect the switching charger or leave it on for overnight.

NOTE: Must keep your charging environment well ventilated.

2. Charging with the DC to DC Extension Cord. (MONITOR BATTERY LEVEL MANUALLY!)

a. Start the vehicle engine.
b. Plug one end of the power extension cord into the portable power source's DC socket and the other end into a vehicle's cigarette lighter socket.
c. Turn power switch on the portable power source to 12V position.
d. Monitor charging status by pressing the test button. When voltage meter shows voltage above 13.5Vdc, the unit is fully charged.
e. Disconnect the portable power source and turn the power switch to OFF position. (If your unit is designed with a power safety switch or a dual voltage power source.)

Note: DO NOT OVERCHARGE! This is NOT an automatic method of charging the portable power source. Be sure to frequently monitor the charging status to ensure the portable power source is not overcharged. Overcharging will damage the portable power source.
Note: Test button needs to be pressed to check for voltage level.

OPERATING INSTRUCTIONS: USE AS A BATTERY CHARGER

The portable power source can be used to restore a limited charge to the vehicle battery.

1. Using the dc extension cord included with the portable power source, plug one end into the portable power source. Plug the other end into the vehicle cigarette outlet. Allow the battery to charge for 30 minutes.

2. Some vehicle ignitions must be turned to "accessory" to activate the cigar lighter socket. A defective battery may not accept a charge from the portable power source.

3. Remove the power extension cord and start the vehicle.

USE AS A JUMP STARTER IN EMERGENCIES

1. Ignition MUST be turned off before making cable connections.
2. Be sure you operate the portable power source in a well ventilated area.
3. Be sure eyes are appropriately protected with safety eyewear.
4. Attach the red (positive +) clamp to the positive terminal on the battery.
5. Attach the black (negative -) clamp to the vehicle frame.
6. Be sure that all cables are clear of moving belts or fan blades.
7. Keep a safe distance from battery while jump starting.
8. Turn unit's power switch to 12V for 12V vehicles or 24V for 24V vehicles.
9. Turn on the vehicle ignition. If the vehicle does not start after 6 seconds, let the portable power source to rest and cool for 3 minutes before attempting to start the vehicle again. **Damages can arise from rapid usage.**
10. After the vehicle has started, disconnect the black (negative -) clamp to the vehicle frame. Then remove the red (positive +) from the battery terminal.

USE AS AN ALTERNATIVE POWER SUPPLY

Since most vehicles have electronic components (alarm systems, radios, etc.) whose memory can be lost when the battery is disconnected, the portable power source is a useful tool when replacing a battery. By connecting the DC extension cord to the vehicle's cigarette lighter, the memory can be retained.

USE AS A MULTIPURPOSE POWER SOURCE

1. The portable power source can also be used to power any equipment that incorporates a 12Vdc male adapter. The dc outlet on the portable power source comes equipped with overload protection. DC power will be generated only through the dc outlet.

2. Used with an inverter, the portable power source can operate appliances normally powered by 120Vac or 220Vac. Maximum of 300 watts of inverter is recommended.

Protect Function :

1. ANTI-SURGE protection

Portable Power Source has a surge protection LED light and when power switch is turned ON, the circuit is being protected from surge and green LED will be flashing. This works on both 12V and 24V.

2. REVERSE POLARITY warning

This feature is only a warning and while power safety switch is at "**OFF**" position!
When at power "**OFF**" position, the unit reads connection status from its alligator clamps. If the clamps are attached in reverse, the unit will beep and red LED will lit constantly.
You must correct the connection of your DC clamps immediately. **DO NOT TURN POWER SWITCH ON WHEN YOU HERE THE BUZZER!**

NOTE: When your Portable Power Source has good battery level status but not giving you output, most likely is caused by poor connection,or polarity reversed. In such state, Please check the polarity again.

TROUBLESHOOTING

1. Charger works well but there is no Volt change on volt meter when the charger is connected to the portable power source.
   a. Possible defective battery or faulty breaker. Try using a device (light, TV etc.) with a dc plug on it to see if it works.
   b. If it works, the portable power source breaker is operational and the battery may be the issue.
   c. Charger comes up full charge butvolt meter shows lower than 12.8V.
   a. Portable power source has a defective battery. May be caused by the battery is damaged.

2. Portable power source is fully charged but has no power.
   a. Check where the wire meets the jaw on the portable power source clamp. Make sure they are well crimped, or if your unit has a power switch, make sure it is in the ON position.

FREQUENTLY ASKED QUESTIONS

Q: How many jump starts can I expect from a fully charged unit before needing to be recharged?
A: Depending on the engine type, size, condition of car battery and temperature. The portable power source can be used around 30 times before each recharge.
Q: What is the ideal storage temperature of the portable power source?
A: The portable power source will operate most effectively when stored at room temperature. The unit will also operate below zero degree but with less cranking power. Excessive heat will accelerate self discharge.
Q: When recharging the unit, how can I know power source is fully charged?
A: Check wall charger indicator or press test button to check voltage from volt meter. If the analog indicator is over 14V, the battery is fully charged.
Q: How long should I charge the portable power source?
A: The portable power source should be charged for a minimum of 30 hours when first purchased. If the unit is to be stored for some time without use, be sure to recharge between every 1 to 3 months. It is also ideal to recharge after each use.
Q: Can the self contained battery be recycled?
A: Yes. Please see REMOVAL AND DISPOSAL instructions.

TESTING THE BATTERY OF PORTABLE POWER SOURCE

After fully charging the battery so all red lights come on, use a 100 amp battery load tester to apply a 100 amp load to the portable power source. For a period of 6 seconds, the voltmeter on load tester should be 9Vdc or higher.

BATTERY REMOVAL AND DISPOSAL INSTRUCTIONS

Contains sealed non-spillable lead acid battery, must be disposed of properly.

IMPORTANT :
REMOVAL AND DISPOSAL

The battery inside this portable power source is a sealed lead-acid battery. It is required by law to be removed and recycled or disposal of properly. National, as well as, any additional local regulations must be followed. When the battery in this product is in need of disposal, remove it according to the instructions provided below and take it to your local recycling center for proper recycling or disposal. If you don't have a local recycling center that handles sealed lead-acid batteries, contact your local environmental agency for instructions.

REMOVAL INSTRUCTIONS

Begin by making sure that both booster clamps are securely stored in their compartments on each side of the portable power source.

1. Lay the portable power source front side down. On the back of the unit, locate the screws that hold the portable power source enclosure together.
2. Remove the screws, then lift off the back lid of the portable power source enclosure.
3. On the top of the battery are two terminals, each with wires connected to them. Disconnect these wires from the battery by removing the bolts that hold them to the battery terminals. Be careful not to touch both the battery terminals with the tools being used to remove the bolts to prevent accidental arcing.
4. Lift the battery out of the front of the enclosure.