







OWNER'S MANUAL AND USER GUIDE

BikeMaster® Lithium Ion Battery Charger

Part Number 150906

The BikeMaster Lithium Ion Battery Charger is ideal for charging/maintaining 12 volt lithium ion batteries.

Features and Benefits

- The unit is designed for charging/maintaining Lithium-ion batteries
- Input: AC 120V, 60Hz
- Output: DC 12V, 2A
- Built-in circuit protection guards against overcharging, short circuit and reverse polarity
- Shock resistant ABS material
- Convenient, color-coded ring terminals and alligator clips for easy, correct installation
- Fully automatic: Powers on when needed, and leave it for long time maintenance
- Power on LED indicator 
- Reverse polarity indicator 
Red LED light will warn if the battery connections are reversed
- Charge indicator
Red LED light indicates the battery is charging 
Green LED light indicates fully charged battery and enter the maintenance mode 



IMPORTANT NOTICE

PLEASE READ AND SAVE THESE INSTRUCTIONS. THIS MANUAL CONTAINS IMPORTANT SAFETY AND OPERATING INSTRUCTIONS. READ ALL WARNINGS AND INSTRUCTIONS BEFORE USE. TO REDUCE THE RISK OF INJURY, ALWAYS FOLLOW THESE INSTRUCTIONS AND THOSE PUBLISHED BY THE BATTERY MANUFACTURER AND THE MANUFACTURER OF ANY EQUIPMENT YOU INTEND TO USE WITH THIS UNIT.

KEEP CHILDREN AWAY: THIS UNIT IS NOT FOR USE BY CHILDREN AND SHOULD ONLY BE OPERATED BY ADULTS. ALL VISITORS SHOULD BE KEPT AT A DISTANCE FROM WORK AREA.

CAUTION

GENERAL SAFETY INSTRUCTIONS:

- Before connecting the charger/maintainer to your battery or to a GFCI (Ground Fault Circuit Interrupter) 120V AC outlet, read all instructions and warnings provided with the battery charger/maintainer.
- This equipment employs parts that produce arcs or sparks. Therefore, if used in a garage or enclosed area, the charger/maintainer unit **MUST** be placed not less than 18 inches above the battery. Keep all cords and the charger/maintainer unit away from heat, liquids, gaseous or explosive atmospheres and sharp edges.
- Do not operate this unit in a closed area or restrict ventilation in any way.
- Only use attachments recommended for use specifically with this product.
- Do not operate the charger if it has received a sharp blow, direct hit of force, been dropped or otherwise damaged in any way.
- Do not disassemble the charger.
- Never allow battery acid to come in contact with this unit.
- When not in use, store indoors in a dry place-out of reach of children.
- Do not use the charger for any job except that for which it is intended.
- NEVER attempt to charge a damaged battery.
- NEVER attempt to jump start or charge a frozen battery.

PERSONAL SAFETY PRECAUTIONS:

- Someone should be within the range of your voice or close enough to come to your aid when working near a lithium ion battery.
- Be extra cautious to reduce risk of dropping a metal tool onto a battery. It may spark or short circuit electrical parts that may cause an explosion.
- Remove personal metal items such as rings, bracelets, necklaces and watches when working with a lithium ion battery. A lithium ion battery can produce a short circuit current high enough to weld a ring, or similar metal object, causing a severe burn.
- To reduce risk of electrical shock, disconnect the unit from any power source prior to any maintenance or cleaning. Pull the cord by the plug rather than the cord when disconnecting the unit from the power source. Never carry the unit by the cord or yank it to disconnect from receptacle. NEVER submerge this unit in liquids; do not expose it to rain, snow or use when wet. Keep clear of all liquids when in use.

SURFACE MOUNT INSTALLATION:

NOTE: The following surface mount installation instructions are intended to be used as a general guide. Your specific requirements may be different. Mounting hardware is not included. **DO NOT** make any electrical connections to the charger or batteries until the following steps are completed:

Installation steps:

1. Mount the charger as far away from the intended charging location of the battery as the DC electrical cord (battery charging cables between charger and battery) permits while in use. Allow for free air ventilation with a minimum of 8 inches of clear, unobstructed space around, in front or above the charger. Be sure to place the charger in an accessible area where all indicators are viewable.
2. Do not install charger on carpeted, upholstered, vinyl or varnished areas or above the intended charging location of the battery.
3. Using the charger as a template, use a small awl or pencil to mark the position of each mounting hole.
4. Use an appropriate drill bit to drill pilot holes in the marked locations as described in step 3.
5. Position the charger over the mounting holes and secure by installing quality hardware that meets your application requirements (mounting hardware not included).
6. Run your cables away from sharp objects and secure them in place with plastic cable ties. Coil excess cable; do not cut or shorten the length of the cables. Keep clear of moving objects such as drawers and doors that can damage the wires.




CHARGER/MAINTAINER USER INSTRUCTION

1. Open all battery compartments and ventilate for at least 15 minutes before applying AC power to your charger. While charging your batteries, make sure to keep your battery compartment open allowing proper air ventilation.
2. Follow battery manufacturer's recommendations for your lithium ion battery.
3. Connect the battery lead terminal rings or alligator clips directly to the corresponding battery posts. Position the RED terminal ring or alligator clip on the POSITIVE post connector. Position the BLACK terminal ring or alligator clip on the NEGATIVE post connector. Make sure all battery connections are tight and clean.



4. Connect the battery lead plastic plug to the charger/maintainer plastic plug.



5. Proceed to plug the AC power cord into a nearby 120V AC GFCI (Ground Fault Circuit Interrupter) protected outlet. If needed, connect a heavy duty U.L. approved extension cord to the charger. After connecting the extension cord to the charger, proceed to plug the extension cord to a nearby 120V AC GFCI (Ground Fault Circuit Interrupter) protected outlet.
6. Observe the LED indicator (power on)  when connected to AC power and no connection is made to the battery. The charging LED indicator will turn solid red  when connected to a battery indicating it is now in the charging process.
7. Charge the battery until the charged LED indicator turns solid green  (The green light will turn on when the voltage reaches about 13.8V). This indicates that the bulk charging process is complete, and then the charger enters the absorption step to charge the battery with small current to 100% fully charged until the voltage reaches about 14.4V.
8. When you are ready to use your vehicle, unplug the AC power cord or extension cord (if used) from the 120V AC power outlet followed by unplugging your battery terminal lead from the charger.
9. The battery lead with terminals may be left attached to the battery. Use care to safely stow the battery lead away from heat sources, sharp edges and avoid pinching or crushing. The battery lead with alligator clips should be removed before installing or using the battery.

PERIODIC MAINTENANCE GUIDE

Lithium Ion Battery Maintenance Monthly Inspection and Maintenance:

- Clean and tighten all battery connections. Follow the battery manufacturer's instructions for cleaning.
- Visually inspect all wiring for cuts and abrasions. A qualified mechanic should perform repairs when needed.
- Visually inspect that the battery case, caps and terminals are free from any visible damage. Replace the battery if damage such as dents, cracks or bulging is visible to the case or if terminals are crushed or broken. Tighten or replace caps as needed.

CHARGER/MAINTAINER MAINTENANCE

AC Power Cord and Mounting Hardware Inspection before each use:

- Visually inspect all electrical cords and connections. Confirm cords are in good condition with no bare wires exposed; plugs and blades are in good condition and not bent out of place. NEVER touch exposed wires. Do not use if damage is visible.
- Check all mounting hardware. Tighten or replace as required.
- Check to be sure the charger/maintainer is free from other damage and is completely dry. Do not use a damaged or wet charger/maintainer.

TROUBLE SHOOTING GUIDE

- Be sure the charger/maintainer is connected to a GFCI (Ground Fault Circuit Interrupter) 120V AC outlet. Check AC power at the 120V AC outlet. Make sure all connections and GFCI (Ground Fault Circuit Interrupter) has not tripped. Using a meter or 120V AC test light, verify that AC power is present at the outlet or at the end of the extension cord (if using).
- Check that all charger cables are installed to the correct terminal polarities and that all connections are clean and tight.
- With the AC power removed and the engine off, check the charge level of the battery with a DC meter or tester. If there is no charge level indication for the battery, check the battery with a hydrometer to determine if it has one or more bad cells.
- With the charger on, read DC voltage at the battery. If the reading is less than 13V DC proceed with the following:
 - a. Disconnect AC power at the GFCI (Ground Fault Circuit Interrupter) 120V AC outlet.
 - b. Remove battery lead from the battery.
 - c. Reconnect AC power and read DC voltage across the output cable. If output voltage is approximately 13.3V DC the charger is okay. The battery should be tested with a hydrometer with the charger and engine off to determine if the battery has one or more bad cells.
 - d. After the above checks are made and it is determined that there is no DC voltage output reading or it is less than 13.0 volts contact your nearest BikeMaster retailer for product service.

CHARGING BATTERIES

CAUTION

LOCATE CHARGER AS FAR AWAY FROM THE BATTERY AS DC ELECTRICAL CABLE (CABLE FROM CHARGER TO BATTERY) PERMITS. NEVER PLACE CHARGER DIRECTLY ABOVE BATTERY BEING CHARGED. DO NOT OPERATE BATTERY IN A CLOSED-IN AREA OR RESTRICT VENTILATION IN ANY WAY. DO NOT PLACE ANY OBJECTS ON TOP OF THE CHARGER.

SAFETY PRECAUTIONS PRIOR TO CHARGING BATTERIES:

NOTE: ALWAYS disconnect the power cord from the GFCI (Ground Fault Circuit Interrupter) 120V AC outlet before connecting or disconnecting the charger to the battery.

- If the battery needs to be removed from vehicle to charge, follow the vehicle manufacturer's instructions. Make sure all vehicle accessories are off, as not to cause an arc.
- Be sure the area around the charger and batteries is well ventilated while the battery is being charged.
- Carefully follow the manufacturer's charging instructions. Study all manufacturers' precautions, such as removing or not removing cell caps while charging, in addition to rates of charge.

EXTENSION CORD USE

If an extension cord must be used, insure that cord is industrial grade/heavy duty U.L. approved and grounded. Check extension cord before use for damage, bent prongs, cuts and bare wires. Replace it if damaged.

WARNING

BURST HAZARD:

USE THE UNIT FOR CHARGING OR MAINTAINING A LITHIUM ION BATTERY ONLY. DO NOT USE THE UNIT FOR CHARGING DRY-CELL BATTERIES THAT ARE COMMONLY USED WITH HOME APPLIANCES. THESE BATTERIES MAY BURST RESULTING IN PROPERTY DAMAGE, ELECTRIC SHOCK, FIRE, SERIOUS INJURY OR DEATH.

DO NOT USE ATTACHMENTS THAT ARE NOT SPECIFICALLY RECOMMENDED FOR USE WITH THIS UNIT. THE USE OF IMPROPER OR UNSAFE ATTACHMENTS MAY RESULT IN PROPERTY DAMAGE, ELECTRIC SHOCK, FIRE, SERIOUS INJURY OR DEATH.

DO NOT DISASSEMBLE THE CHARGER. IMPROPER HANDLING OR INCORRECT ASSEMBLY MAY RESULT IN PROPERTY DAMAGE, ELECTRIC SHOCK, FIRE, SERIOUS INJURY OR DEATH.