

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

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VIKING®

ON-BOARD BATTERY MAINTAINER



Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

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When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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⚠ WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

Important Safety Information

1. **SAVE THESE INSTRUCTIONS**
 - This manual contains important safety and operating instructions for this battery charger.
2. Do not expose charger to rain or snow.
3. Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
4. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.
5. Do not use an extension cord with this item.
6. Do not operate charger with damaged cord or plug – replace the cord or plug immediately. Supply cord of this charger must be replaced only by a qualified service technician.
7. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman.
8. Do not disassemble charger; take it to a qualified technician when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
9. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
10. **WARNING – RISK OF EXPLOSIVE GASES.**
 - a. **WORKING IN VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOU FOLLOW THE INSTRUCTIONS EACH TIME YOU USE THE CHARGER.**
 - b. To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of battery. Review cautionary marking on these products and on engine.
11. **PERSONAL PRECAUTIONS**
 - a. Place Class C fire extinguisher nearby.
 - b. Consider having someone close enough by to come to your aid when you work near a lead-acid battery.
 - c. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
 - d. Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
 - e. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
 - f. **NEVER** smoke or allow a spark or flame in vicinity of battery or engine.
 - g. Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.
 - h. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
 - i. Use charger for charging LEAD-ACID or Absorbed Glass Mat (AGM) batteries only. It is not intended to supply power to a low voltage electrical system other than in a starter-motor application.

Do not use battery charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.

- j. NEVER charge a frozen battery.
12. PREPARING TO CHARGE
- a. If necessary to remove battery from vehicle to charge, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
 - b. Be sure area around battery is well ventilated while battery is being charged.
 - c. Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
 - d. Add distilled water in each cell until battery acid reaches level specified by battery manufacturer. Do not overfill. For a battery without removable cell caps, such as valve regulated lead acid batteries, carefully follow manufacturer's recharging instructions.
 - e. Study all battery manufacturer's specific precautions while charging and recommended rates of charge.
 - f. Determine voltage of battery by referring to vehicle owner's manual and make sure it matches output rating of battery charger.
 - g. Do not place charger or electrical connections on ground or floor.
13. FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE VEHICLE. A SPARK NEAR THE BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:
- a. Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has a larger diameter than NEGATIVE (NEG, N, -) post.
 - b. Attach at least a 24-inch-long 6-gauge (AWG) insulated battery cable to NEGATIVE (NEG, N, -) battery post.
 - c. Connect POSITIVE (RED) charger clip to POSITIVE (POS, P, +) post of battery.
 - d. Position yourself and free end of cable as far away from battery as possible – then connect NEGATIVE (BLACK) charger clip to free end of cable.
 - e. Do not face battery when making final connection.
 - f. When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as practical.
 - g. A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.
14. **Use this Charger/Maintainer with flooded lead-acid batteries, Absorbed Glass Mat (AGM) or Gel batteries only.** When charging a maintenance-free battery, always monitor the progress of the charge by viewing the ammeter. Do not over-charge a maintenance-free battery.
- 15. Do not attempt to charge non-rechargeable, damaged, or defective batteries.
 - 16. Do not charge more than one battery at one time.
 - 17. Unplug power cord when finished.

18. Have your charger serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the charger is maintained.
19. Do not use charger while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating charger may result in serious personal injury.
20. Do not leave charger or battery unchecked for extended periods of time to reduce risk.
21. Before moving charger, disconnect power supply and battery, then allow charger to cool.
22. Use as intended only.
23. Maintain labels and nameplates on charger. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
24. This product is not a toy. Keep it out of reach of children.
25. Unplug charger power cord before connecting its cables to a battery, or performing any inspection, maintenance, or cleaning procedures.
26. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Properly maintain and inspect to avoid electrical shock.
 - Properly ground power cord. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
27. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
28. Inspect before every use; do not use if parts are loose or damaged.
29. Use with 6 volt and 12 volt batteries only.



SAVE THESE INSTRUCTIONS.

VIKING®

Specifications

Input	120VAC, 60Hz, 0.52A Max
Output Current	1.5A DC Max
Rated Output	6/12V
Battery Type	LEAD ACID - Standard, Gel, Marine, AGM, Deep Cycle
Output Cable	18", 18 AWG
Fuse	7.5A

Operation Instructions

Mounting Charger

Mounting Charger to wall:

WARNING! TO PREVENT SERIOUS INJURY: Verify that mounting surface has no hidden utility lines before drilling or driving screws.

1. Set Bracket against wall at desired height.
2. Install Bracket with screws into wood studs or with mount strips.
3. Place Charger in Bracket, secure with velcro strap.

Mounting Charger to vehicle fender:

1. Locate a mounting position that is away from the fan blades, belts, pulleys. Position cables to reduce risk of damage by hood or moving engine parts.

WARNING! TO PREVENT SERIOUS INJURY: Verify that mounting surface has no hidden wires, brake lines or other parts before drilling or driving screws.

WARNING! DO NOT MOUNT THE MAINTAINER DIRECTLY TO THE SIDE OR ON THE TOP OF THE BATTERY.

Note: The double-sided adhesive tapes are a temporary attachment. Use provided mounting bracket and screws for long term and safe mounting.

2. Clean area before mounting.
3. Set Bracket in place to be mounted.
4. Install Bracket with screws or with mount strips.
5. Place Charger in Bracket, secure with velcro strap.

Note: Periodically inspect and clean Charger and surrounding area. If any wires are corroded or damaged, do not use charger.

Record Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Aside from the fuse, this device does not contain any user replaceable parts. If it needs service, take it to a qualified technician. Reference UPC 193175473356.

Connecting



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this document including all text under subheadings therein before set up or use of this product.



A SPARK NEAR BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY follow these instructions exactly.

⚠WARNING

TO PREVENT SERIOUS INJURY:



Wear ANSI-approved splash-resistant safety goggles and heavy-duty rubber work gloves whenever connecting, disconnecting, or working near battery. Battery acid can cause permanent blindness.

⚠WARNING

TO PREVENT SERIOUS INJURY: DO NOT PLUG IN CHARGER UNTIL DIRECTED TO DO SO.

WARNING! TO PREVENT SHORT CIRCUIT AND FIRE: Do not leave Ring Terminal Connectors installed indefinitely.

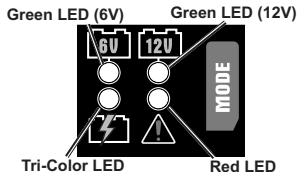
WARNING! TO PREVENT SERIOUS INJURY: Do not connect Ring Terminal Connector to carburetor, fuel lines, or sheet-metal body parts. Do not leave Ring Terminal Connectors attached indefinitely.

Note: This Charger is intended only to keep a fully charged battery from losing its charge. It will not work to charge a battery that is discharged or damaged.

1. Connect and disconnect DC output Ring Terminals Connectors only after unplugging charger power cord. Never allow Ring Terminal Connectors to touch each other.
2. Position cables to reduce risk of damage by hood, door, or moving engine parts.
3. Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
4. Check polarity of battery terminals. POSITIVE (POS, P, +) battery post usually has larger diameter than NEGATIVE (NEG, N, -) post.
5. Unplug charger power cord from outlet.
6. Bolt POSITIVE (RED) Ring Terminal Connector to POSITIVE (POS, P, +) post of battery.
7. Bolt NEGATIVE (BLACK) Ring Terminal Connector to NEGATIVE (NEG, N, -) post of battery. CAUTION! Do not turn on equipment that battery is connected to while charging.
8. Plug in power cord to (GFCI) outlet.
9. When disconnecting charger, unplug power cord from outlet, then remove Ring Terminal Connectors from battery.

LED Functions

1. Red LED:
 - a. (Solid) Reversed Polarity, Bad Battery.
 - b. (Flashing) Wrong Battery Voltage, Low Battery Voltage, Short Circuit or Standby.
2. Green LED 6V:
 - a. (Solid) 12V battery charge complete and charger is monitoring battery.
 - b. (Flashing) 12V battery charging.
3. Green LED 12V:
 - a. (Solid) 6V battery charge complete and charger is monitoring battery.
 - b. (Flashing) 6V battery charging.
4. Tri-Colored LED:
 - a. (RED) Battery capacity is lower than 40%.
 - b. (AMBER) Battery capacity is 40% to 70%.
 - c. (GREEN) Battery capacity is greater than 70%.



Maintenance Instructions



Procedures not specifically explained in this manual must be performed only by a qualified technician.

⚠ WARNING

TO PREVENT SERIOUS INJURY: Unplug the charger, disconnect any battery, and allow charger to cool completely before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

1. **BEFORE EACH USE**, inspect general condition of charger. Check for:
 - loose hardware,
 - cracked or broken parts,
 - damaged electrical wiring or cable insulation, and
 - any other condition that may affect its safe operation.
2. If fuse needs replacing:
 - a. Unplug charger power cord from outlet.
 - b. Disconnect Ring Terminal Connectors from battery.
 - c. Uncap Fuse Housing.
 - d. Remove spent fuse
 - e. Replace with a new 7.5A Blade-type fuse.
 - f. Recap Fuse Housing.
3. **AFTER USE**, wipe external surfaces of tool with clean cloth.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST IN THIS DOCUMENT AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

