

0.75A **smarter**[™] battery maintainer



Battery Maintainer User Guide

MODEL: IC-750

Revision: AB Issue Date: April 2017 Manual No.: 0-IC7500417



DANGER



Please read and understand all important safety and operating instructions before using this charger. In addition, please read and follow all battery and vehicle manufacturer's instructions and cautionary markings. Failure to follow the instructions may result in ELECTRICAL SHOCK, EXPLOSION, or FIRE, which may result in SERIOUS INJURY, DEATH, DAMAGE TO DEVICE or PROPERTY. Do not discard this information.

This Operating Manual has been designed to instruct you on the correct use and operation of your product. Your satisfaction with this product and its safe operation is our ultimate concern. Therefore please take the time to read the entire manual, especially the Safety Precautions. They will help you to avoid potential hazards that may exist when working with this product.

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Ashland, VA 23005 (888) 241.8498
www.smartechproducts.com

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What's Included

- IC-750 Battery Charger
- Battery Clamp Connectors
- Eyelet Terminal Connectors
- User Guide



RISK OF EXPLOSIVE GASES

WORKING IN THE 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.

To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment intended to be used in vicinity of battery. Review cautionary marking on these products and on engine.

SAFETY PRECAUTIONS FOR WORKING IN THE VICINITY OF LEAD ACID BATTERIES

- 1) Batteries generate explosive gases during normal operation. Use in well-ventilated area.
- 2) Consider having someone close enough or within the range of your voice to come to your aid when you work near a battery.
- 3) **DO NOT** smoke, strike a match, or cause a spark in vicinity of battery or engine. Avoid explosive gas, flames and sparks.
- 4) Remove all personal jewelry, such as rings, bracelets, necklaces, and watches while working with a vehicle battery. These items may produce a short-circuit that may cause severe burns.
- 5) Be extra cautious to reduce risk of dropping a metal tool onto the battery. It might spark or short-circuit a battery or other electrical hardware which may cause an explosion or fire.
- 6) Wear complete eye protection, hand and clothing protection. Avoid touching eyes while working near a battery.
- 7) Study all battery manufacturer's specific precautions such as removing or not removing cell caps when charging and recommended rates of charge.

- 8) Clean battery terminals before connecting the charger. Be careful to keep corrosion from coming in contact with eyes.
- 9) For battery installed in a vehicle, first connect charger output lead (red) to positive (+) terminal on the battery. Second, connect the negative charger lead (black, -) to the vehicle's chassis (away from the battery). DO NOT connect to the carburetor or fuel lines. Disconnect the negative lead (black, -) from the chassis first.
- 10) When it is necessary to remove a battery from vehicle to charge, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off in order to prevent an arc.
- 11) It is not intended to supply power to an extra-low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may burst and cause injury to persons and property.
- 12) **NEVER** attempt to charge a frozen, damaged, leaking or non-rechargeable battery.
- 13) If battery electrolyte contacts skin or clothing, wash immediately with soap and water. If electrolyte enters eye, immediately flood eye with running clean cold water for at least 15 minutes and get medical attention immediately. If electrolyte is taken internally, drink large quantities of water or milk; do NOT induce vomiting and get prompt medical attention. Neutralize with baking soda any electrolyte that spills on a vehicle or in the work area; after neutralizing, rinse contaminated area clean with water.

SAFETY PRECAUTIONS FOR USING THE CHARGER

- 1) **DO NOT** place the charger in the engine compartment or near moving parts or near the battery; place as far away from them as DC cables permit. Never place a charger directly above a battery being charged; gases or fluids from battery will corrode and damage charger.
- 2) This product employs parts, such as switches and relays, that tend to produce arcs or sparks and therefore, if used in a garage, locate in a room or enclosure provided for the purpose or not less than 18 inches above the floor. Do not install on or over combustible surfaces. Do not cover the charger while charging.

- 3) **DO NOT** operate this unit in or around water.
- 4) Connect and disconnect DC output only after removing AC cord from electric outlet.
- 5) Use of an attachment not recommended or sold by the manufacturer may result in a risk of fire, electric shock or injury to persons.
- 6) **DO NOT** overcharge batteries by selecting the wrong charge mode.
- 7) To reduce the risk of damage to electric plug and cord, pull by the plug rather than the cord when disconnecting charger.
- 8) **Pursuant to California Proposition 65**, this product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.
- 9) To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
- 10) Operate with caution if the charger has received direct hit of force or been dropped. Have it checked and repaired if damaged.
- 11) Need repair or replacement if any protective AC and DC cable insulation, charging clamps, DC fuse holders and/or ring terminals have been damaged.
- 12) Any repair must be carried out by the manufacturer or an authorized repair agent in order to avoid danger.
- 13) The use of an extension cord is not recommended. If you must use an extension cord, follow these guidelines:
 - Pins on plug of extension cord must be the same number, size, and shape as those of plug on charger.
 - Ensure that the extension cord is properly wired and in good electrical condition.
 - Wire size must be large enough for the AC ampere rating of charger, as specified:
 - Up to 100 feet** in length use **18 AWG** extension cord.
 - 100 to 150 feet** in length use **16 AWG** extension cord.

FOLLOW THESE STEPS WHEN BATTERY IS INSTALLED IN VEHICLE (USING THE BATTERY CLAMP CONNECTORS)

- 1) Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, -) post.
- 2) Identify if you have a negative or positive grounded vehicle. This can be done by identifying which battery post (NEGATIVE OR POSITIVE) is connected to the chassis.
- 3) For a negative grounded vehicle: connect the RED POSITIVE cable clamp first to the positive post of the battery, then connect the BLACK NEGATIVE cable clamp to the vehicle's chassis. Do not connect the black negative cable clamp to metal fuel lines or anywhere in proximity of the carburetor or the battery itself. Connect to a heavy gauge metal part of the frame or engine block.
- 4) For a positive grounded vehicle: connect the BLACK NEGATIVE cable clamp first to the negative post of the battery, then connect the RED POSITIVE cable clamp to the vehicle's chassis. Do not connect the red positive cable clamp to metal fuel lines or anywhere in proximity of the carburetor or the battery itself. Connect to a heavy gauge metal part of the frame or engine block.
- 5) Connect charger AC supply cord to electric outlet.
- 6) When charging is completed, disconnect AC power, remove clamp from vehicle chassis, and then remove clamp from battery terminal.

FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE VEHICLE

- 1) Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, -) post.
- 2) Connect the RED POSITIVE cable clamp or ring terminal to the POSITIVE post of battery.
- 3) Position yourself as far away from the battery as possible – then connect the BLACK NEGATIVE charger cable clamp or ring terminal to NEGATIVE post of battery.
- 4) Connect charger AC supply cord to electric outlet.
- 5) When disconnecting charger, always do so in reverse sequence of connecting procedure

and break first connection while standing as far away from the battery as possible.

- 6) A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment designed for marine use.

ABOUT THE MAINTAINER

- 1) This maintainer is perfect for keeping all types of 6V and 12V lead-acid batteries in top condition, including WET (Flooded), GEL, MF (Maintenance-Free), EFB (Enhanced Flooded Battery), and AGM (Absorbed Glass Mat) batteries.
- 2) The built-in intelligent microprocessor makes charging faster, easier and safer to use.
- 3) This maintainer has safety features, including spark proof, protection for reverse polarity, short circuit, overcurrent, overcharge and overheat.
- 4) It has auto-memory, which returns to last selected mode when restarted.
- 5) When the Green LED is flashing, the maintainer is in bulk charge at a constant 750mA rated current output. When the Green LED is solid, the battery is fully charged 14.0V (12V) and 7.2V (6V).
- 6) If the connected battery's voltage is lower than the threshold, the maintainer will automatically enter into desulphation process.
- 7) Since this is a battery maintainer and you will keep it connected with vehicle battery for a long time, do monitor monthly. Follow the battery manufacturer's instructions for adding distilled water if applicable.
- 8) Following is the charger's technical specification:

AC Input	100-240VAC, 50-60Hz, 0.5A
DC Output	12VDC, 0.75A; 6VDC, 0.75A; Variable Power, 10W Max
Start Voltage	> 2V
Battery Chemistries	WET, GEL, MF, EFB, AGM
Ambient Temperature	0°C ~ +40°C
Housing Protection	IP60

MODES

The charger has three (3) modes. Do not operate the charger until you confirm the appropriate charge mode for your battery.

Mode	Explanation
Standby	Not charging or providing any power (Green LED)
12V	Charging and Maintaining 12V WET/GEL/MF/EFB/AGM batteries (Blue LED)
6V	Charging and Maintaining 6V WET/GEL/MF/EFB/AGM batteries (Green LED)

NOTICE: Make sure your battery to be charged/maintained is in good condition. This product is not designed to be used to recover severely discharged batteries or dead batteries.

How to deal with the batteries which are deeply discharged, but in good condition?

1. Make sure the battery is in good condition (not dead) and was deeply discharged only. You can have your local auto parts store test the battery's condition for you.
2. Jumpstart the vehicle or use a battery charger with recovery function to activate the battery until the battery voltage increases to normal condition. For 12V batteries, the normal voltage is above 8 volt at least; for 6V batteries, the normal voltage is above 4 volt at least.
3. The maintainer can be used to complete the charging and maintain the battery's condition.

WARNING/COMMUNICATION LIGHTS

LIGHT(S) CONDITION	CAUSE(S)	SOLUTION(S)
Solid Red Warning! LED	Reverse Polarity	Exchange the red and black clamps or ring terminals to the correct battery posts
Flashing Red Warning! LED	1) Open-circuit 2) Dirty Battery Posts 3) Dead Battery 4) Output Short Circuit	1) Connect the red and black clamps or ring terminals to the battery posts 2) Clean the battery posts 3) Replace the battery with a new one immediately 4) Disconnect red and black output terminals
Flashing Red Warning! LED + 6V LED	Charging in 6V Mode for 12V Battery	Press Mode button to choose the correct 12V charging mode. CAUTION: If you choose 12V Mode for 6V battery, the 6V battery will be damaged!



6V/12V

6V/12V COMPATIBILITY

Maintain 6V and 12V lead-acid batteries



DESIGNED FOR SAFETY

Reverse polarity, short circuit, open circuit, spark proof, overheat, overcurrent & overcharge



VARIABLE INPUT COMPENSATION

100% full charge even with varying A/C input voltages



FAULT PROTECTION

Automatically shuts “off” if charger remains in Bulk charge mode for an extended period of time



AUTO-MEMORY

Returns to last selected mode when restarted



HF/HE SWITCH MODE DESIGN

High-frequency, high-efficiency inverter



INTERCHANGEABLE CONNECTORS

Interchangeable connectors for easy accessory changes



FULLY INTERACTIVE

Automatically adjusts itself to changing current needs



MULTIPLE BATTERY CHEMISTRY

Safely maintains 6V/12V Wet, Gel, MF, EFB & AGM lead acid batteries.

LIMITED WARRANTY

Effective April 15, 2017. Replaces all undated warranties and all warranties dated before April 15, 2017

Repair/Replacement Warranty

Smartech Products warrants to the original purchaser that the mechanical and electrical components will be free of defects in material and workmanship for a period of five (5) years from the original date of purchase. This product is intended for household use only. Transportation charges on product submitted for repair or replacement under this warranty are the sole responsibility of the purchaser. This workmanship for a period of warranty only applies to the original purchaser and is not transferable.

Do not return the unit to the place of purchase.

Contact Smartech Products' Customer Service and Smartech Products will troubleshoot any issue via phone or e-mail. If the problem is not corrected by this method, Smartech Products will, at its option, authorize evaluation, repair or replacement of the defective part or component at a Smartech Products' Service Center. Smartech Products will provide you with a case number for warranty service. Please keep it for future reference. Repairs or replacements without prior authorization, or at an unauthorized repair facility, will not be covered.

Warranty Exclusions

This warranty does not cover the following repairs and equipment:

Normal Wear

This warranty does not cover repair when normal use has exhausted the life of a part or the equipment as a whole

Installation and Use

This warranty will not apply to parts and/or labor if this product is deemed to have been misused, neglected, involved in an accident, abused, modified, installed improperly or connected incorrectly to any electrical component.

LIMITED Warranty (continued)

Other Exclusions

This warranty excludes:

- Merchandise sold as reconditioned, used as rental equipment, or floor/display models sold without packaging and/or missing parts or components.
- Repair and transportation costs of merchandise determined not to be defective.
- Cosmetic defects such as paint, decals, etc.
- Failures due to acts of God and other forces of nature beyond the manufacturer's control.
- Problems caused by parts that are not original parts.

Limits of Implied Warranty and Consequential Damage

Smartech Products disclaims any obligation to cover any loss of time, use of this product, freight, or any incidental or consequential claim by anyone from using this product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

A unit provided as an exchange will be subject to the warranty of the original unit. The length of the warranty governing the exchanged unit will remain calculated by reference to the purchase date of the original unit.

This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.

Some states do not allow the exclusion, so it may not apply to you.

Contact us at:

Smartech Products' Customer Service

Ashland, VA 23005

(888)241-8498

customerservice@smartechproducts.com