



User Manual

SMART BATTERY CHARGER

Model: SHARK CB-750

AC Input: 220-240V, 50-60Hz, 0.25A

DC Output: 12V, 0.75A or 6V, 0.75 A



IMPORTANT SAFETY INSTRUCTIONS

SAFETY PRECAUTIONS FOR WORKING IN THE VICINITY OF A BATTERY

- 1) Batteries generate explosive gases during charging. Charge batteries only in well-ventilated areas.
- 2) Do NOT smoke, strike a match, or cause a spark in vicinity of battery or engine. Avoid explosive gas, flames and sparks.
- 3) Remove all personal jewelry, such as rings, bracelets, necklaces, and watches while working with a vehicle battery. These metal items may produce a short-circuit that could cause severe burns.
- 4) 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.
- 5) Wear complete eye protection, hand and clothing protection. Avoid touching eyes while working near a battery.
- 6) Study all battery manufacturers' specific precautions such as whether to remove cell caps or not while charging, and recommended charging rates.
- 7) Clean battery terminals before connected with the charger. Be careful to keep corrosive particles from coming in contact with your eyes.
- 8) 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.
- 9) This charger is NOT intended to supply power to an extra-low-voltage electrical systems or to charge dry-cell batteries. Charging dry-cell batteries may burst and cause injury to persons and property.

10) NEVER charge a frozen, damaged, leaking or non-rechargeable battery.

11) 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.

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 it as far away from them as DC cable permits. NEVER place a charger directly above a battery being charged; gases or fluids from battery will corrode and damage charger.

2) Do NOT cover the charger while charging.

3) Do NOT expose to rain or wet conditions.

4) Connect and disconnect DC output only after setting AC cord from wall socket.

5) Use of not recommended or non-original attachments may result in a risk of fire, electric shock or injury to persons.

6) Do not overcharge batteries by selecting 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 the charger.

8) To reduce risk of electric shock, unplug charger from wall socket before attempting any maintenance or cleaning.

9) Operate with caution if the charger has received direct hit or has been dropped. Have it checked and repaired if damaged.

10) Any repair must be carried out by the manufacturer or an authorized repair service in order to avoid danger.

SHARK CB-750 CHARGER

- 1) The CB-750 is perfect for keeping all of your 12V and 6V lead-acid batteries in top condition, including WET (Flooded), GEL, MF (Maintenance-Free) and EFB (Enhanced Flooded Battery).
- 2) Built-in intelligent microprocessor makes charging and maintaining faster, easier and safer.
- 3) This charger has safety features, including spark protection, protection against reversed polarity, short circuit, over current and overcharge.
- 4) The CB-750 charger has auto-memory, which returns to last selected mode when restarted.
- 5) When Green LED is flashing, the charger is in bulk charge at a constant 750mA rated current output. When Green LED turns to steady light, the battery is fully charged.
- 6) 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.

Technical specifications

AC Input	220-240V, 50-60Hz, 0.25A
DC Output	12V, 0.75A; 6V, 0.75A
Minimum Voltage	> 4V for 6V batteries > 8V for 12V batteries
Housing Protection	IP60
Battery Type	All Types of 6V and 12V Lead-acid batteries
Accessories Included	Clamp Connectors, Ring Connectors
Ambient Temperature	0°C ~ +40°C

CONNECTING TO THE BATTERY

- 1) Identify polarity of battery posts. The positive battery terminal is typically marked by (+) symbol. Negative battery terminal is typically marked by (-) symbol.
- 2) Do not make any connections to the carburetor, fuel lines, or thin metal parts.
- 3) Identify if you have a negative or positive grounded vehicle. This can be done by identifying which battery post (-) or (+) is connected to the chassis.
- 4) For a negative grounded vehicle (most common): connect the RED POSITIVE clamp / ring connector first to the positive battery terminal, then connect the BLACK NEGATIVE clamp / ring terminal to the negative battery terminal or vehicle chassis.
- 5) For a positive grounded vehicle (very uncommon): connect the BLACK NEGATIVE clamp / ring terminal first to the negative battery terminal, then connect the RED POSITIVE clamp / ring terminal to the positive battery terminal or vehicle chassis.
- 6) When disconnecting, disconnect in the reverse sequence, removing the negative clamp first (or positive clamp first for positive ground systems).
- 7) Follow these steps when using 12V accessory plug (CB-750 does not have this accessory): keep the vehicle hood open. Connect the end of the 12V accessory plug to the charger; insert the 12V accessory plug into the vehicle's 12V outlet. If the vehicle's ignition key has to be on in order for the 12V outlet to supply power, turn the key without starting the engine.
- 8) A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.

CHARGING MODES

CB-750 has three modes: Standby, 12V and 6V. Do not operate the charger until you confirm the appropriate charge mode for your battery.

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

NOTICE: Make sure your battery to be charged / maintained is in good condition. The CB-750 cannot be used to recover severely discharged 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 use the battery analyzer to get the result.
2. Jumpstart your 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 minimum normal voltage is above 8 V at least; for 6V batteries, the minimum normal voltage is above 4 V at least.
3. Use the CB-750 Charger / Maintainer to the rest charging and maintaining work.

ERROR LED

	LIGHT	CAUSE	SOLUTION
1	Steady Red Warning!LED	Reversed polarity	Exchange the red and black clamps or ring terminals to the correct battery posts
2	Flashing Red Warning! LED	<ol style="list-style-type: none">1) Open-circuit2) Dirty Battery Posts3) Dead Battery (voltage below 1V)4) Output Short Circuit	<ol style="list-style-type: none">1) Connect the red and black clamps or ring terminals to the battery posts2) Clean the battery posts3) Replace the battery with a new one immediately4) Disconnect red and black output terminals
3	Slow flashing Red Warning! LED + 6V LED	Charging 12V battery in 6V mode	Press Mode button to choose correct charging mode. CAUTION: If you choose 12V mode for 6V battery, the 6V battery will be damaged!
4	Flashing Charging LED and Warning! LED	Overheat protection	Current reduces when temperature in charger is too high. After cooling down, charging will resume

5	Quick flashing Red Warning! LED + Corresponding charging mode LED	Battery cannot store electric charge during charging	Replace the battery
6	Only corresponding charging mode LED + Charging LED is OFF	In desulphation process	-----
7	Red Warning! LED light flashes 2x stop for 3 secs, 2x stop for 3 secs,...	Battery cannot be recovered through desulphation process	Replace the battery



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