



Battery Charger User Guide

MODEL: CT-1000

AC Input: 220-240VAC, 50-60Hz

DC Output: 12VDC, 1A;
6VDC, 1A



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.

IMPORTANT SAFETY INSTRUCTIONS

SAFETY PRECAUTIONS FOR WORKING IN THE VICINITY OF A BATTERY

- 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 could 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 while charging and recommended rates of charge.
- 8) Clean battery terminals before connected with the charger. Be careful to keep corrosion from coming in contact with eyes.
- 9) 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.
- 10) 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.
- 11) NEVER charge a frozen, damaged, leaking or non-rechargeable battery.
- 12) 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 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 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) To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
- 9) Operate with caution if the charger has received direct hit of force or been dropped. Have it checked and repaired if damaged.
- 10) Any repair must be carried out by the manufacturer or an authorized repair agent in order to avoid danger.

ABOUT CT-1000

- 1) The CT-1000 is perfect for keeping all of your 12V and 6V lead-acid batteries in top condition, including WET (Flooded), GEL, MF (Maintenance-Free), EFB (Enhanced Flooded Battery) and AGM (Absorbed Glass Mat) batteries.
- 2) Built-in intelligent microprocessor makes charging and maintaining faster, easier and safer.
- 3) This charger has safety features, including spark proof, protection for reverse polarity, short circuit, overcurrent and overcharge.
- 4) It has auto-memory, which returns to last selected mode when restarted.
- 5) When Emerald Green LED is flashing, the charger is in bulk charge at a constant 750mA rated current output. When Emerald Green LED turns

to solid, 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.

7) Following is the charger's technical specification:

AC Input	220-240VAC, 50-60Hz, 0.5A
DC Output	12VDC, 1A; 6VDC, 1A
Start Voltage	> 1V
Housing Protection	IP54
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 these letters or symbol (POS,P,+). The negative battery terminal is typically marked by these letters or symbol (NEG,N,-).

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 (NEG or POS) 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 NEGATIV clamp / ring connector to the negative battery terminal or vehicle chassis.

5) For a positive grounded vehicle (very uncommon): connect the BLACK NEGATIV clamp / ring connector first to the negative battery terminal, then connect the RED POSITIVE clamp / ring connector to the positive battery terminal or vehicle chassis.

6) When disconnecting, disconnect in the reverse sequence, removing the negative first (or positive first for positive ground systems).

7) Follow these steps when using 12V accessory plug (CT-1000 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 / receive 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

CT-1000 has two modes: 12V and 6V. Do not operate the charger until you confirm the appropriate charge mode for your battery.

Mode	Explanation
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. The CT-750 cannot 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 use the battery analyzer to get the result if you have.
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 normal voltage is above 8 volt at least; for 6V batteries, the normal voltage is above 4 volt at least.
3. Use the CT-1000 Charger / Maintainer do the rest charging and maintaining work.

CHARGING TIME

Different battery capacity and residual voltage would affect the charging time. Following data is only for reference (when discharge 12V lead-acid battery to 9V, with 5A discharge current).

Battery Size/Ah	Approx. Time to Charge in Hours (12V)
12	8H
20	11H
30	13H
40	18H

LED COMMUNICATION OF ABNORMAL RESULTS

No .	LIGHT(S) CONDITION	CAUSE(S)	SOLUTION(S)
1	Solid Red Warning! LED	Reverse Polarity	Exchange the red and black clamps or ring terminals to the correct battery posts
2	Flashing Red Warning! LED	1) Open-circuit 2) Dirty Battery Posts 3) Dead Battery (voltage below 1V) 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
3	Slow flashing Red Warning! LED +	Charging in 6V Mode(s) for 12V battery	Please do manually press Mode button to choose correct charge mode. CAUTION: If you choose

	6V LED		12V Mode(s) for 6V battery, the 6V battery will be damaged!
4	Only charging mode LED is on, warning and Charged indicator LED are flashing	Overheat protection	Current reduces when temperature in charger is too high. After cooling down, charge will begin
5	Quick flashing Red Warning! LED + Corresponding charging mode LED	Battery cannot store electric charge during charging process	Replace the battery with a new one immediately
6	Only corresponding charging mode LED	In Desulphation Process	-----
7	Red Warning! LED light flashes 2x stop for 3secs, 2x stop for 3 secs...	Battery cannot be recovered through Desulphation Process	Replace with a new battery
8	Flashing Yellow Warning! LED	Heavily Corroded Battery (voltage is less than 3V), need to repair	Replace with a new battery or try REPAIR Mode for recovery

Nameplate icon description



:Class II



:For indoor use only



:Before charging, read the instructions

1A



:Fuse



■ :Correct Disposal of this product

This marking indicates that this battery charger and batterypack should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

WARRANTY

- 1) This product is warranted to the original purchaser for a period of two (2) years from the original shipping date, to be free of defects in material and workmanship.
- 2) Warranty Performance: During the above two (2) years warranty period, a product with a defect will be replaced with a new one when the product is returned to the manufacturer. The replacement product will be in warranty for the balance of the original two (2) years warranty

period.

3) This warranty is void if the product has been damaged by accident, in shipment, unreasonable use, misuse, neglect, improper service, commercial use, repairs by unauthorized personnel or other causes not arising out of defects in materials or workmanship.

Important safety instructions

1) This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

2) Children should be supervised to ensure that they do not play with the appliance.

3) If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

3) The battery terminal not connected to the chassis has to be connected first. The other connection is to be made to the chassis, remote from the battery and fuel line. The battery charger is then to be connected to the supply mains; After charging, disconnect the battery charger from the supply mains. Then remove the chassis connection and then the battery connection.

4) Do not recharge non-rechargeable batteries.

5) During charging, the battery must be placed in a well ventilated area.