Simply®

2A/6A/10A 6V/12V AUTOMATIC BATTERY CHARGER INSTRUCTION MANUAL

BTC-4010

Please read before use

Save this manual for future reference

SAFETY GUIDELINES/DEFINITIONS

• DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
• WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
• CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
• CAUTION: Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.
• RISK OF UNSAFE OPERATION. When using tools or equipment, basic safety precautions should always be followed to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. Simply Auto strongly recommends that this products NOT be modified and/or used for any application other than for which it was designed. Read and understand all warning and operating instructions before using any tool or equipment.

IMPORTANT SAFETY INSTRUCTION

WARNING-RISK OF EXPLOSIVE GASES

WORKING IN THE VICINTY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL OPERATION. FOR THIS REASON, IT IS IMPORTANT THAT YOU FOLLOW THESE INSTRUCTIONS EACH TIME YOU USE THE CHARGER.

To reduce the risk of a battery explosion, follow these instructions and those published by the manufacturers of the battery and any equipment you intend to use in the vicinity of the battery. Review the cautionary markings on these productions and on the engine.

WARNING:This product contains chemicals known to cause cancer and birth defects or other reproductive harm. Wash hands after handling. Wash hands after handling. Use the battery charger on 6V/12V AGM/STD/GEL/LION batteries, as used in cars, vans, lorries, tractors, airplanes, motorhomes, etc. This charger is not intended to supply power to low-voltage electrical systems, other than in a motor-starting application.

WARNING: Do not use battery charger with dry cell batteries that are commonly used with home appliances. These batteries may burst and cause injury or damage to property.
• Use only attachments recommended or sold by the battery charger's manufacturer. Use of non-recommended attachments may result in a fire, electric shock, or injury.
• Locate the battery charger's power cord so it cannot be stepped on, tripped over, or subjected to damage or stress.
• Do not operate the charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to a qualified professional for inspection or repair.
• Do not disassemble the charger. Take it to a qualified professional when service or repair is required.
• To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
• Always charge the battery in a well-ventilated area.

- Do not set the charger on flammable materials, such as carpeting, upholstery, paper, cardboard, etc.
- Never smoke or allow sparks or flames in the vicinity of the battery or engine.

WARNING: RISK OF EXPLOSIVE GAS.

- Operate the charger as far away from the battery as DC charger cables permit.
- Do not expose the charger to rain or snow.
- NEVER charge a frozen battery.
- NEVER set a battery on top of the charger.
- NEVER place the charger directly above a battery being charged. Gases from the battery will corrode and damage the charger.
- NEVER touch the battery clips together when the charger is energized.
- When disconnecting the battery charger, pull by the plug, not by the cord. Pulling on the cord may cause damage to the cord or plug.
- Do not operate the charger with damaged cord or plug.
- NEVER allow battery acid to drop onto the charger.

PERSONAL SAFETY PRECAUTIOUS

- Wear complete eye and clothing protection when working near lead-acid batteries. Always have someone nearby for help.
- Have plenty of fresh water, soap and baking soda nearby for use, in case battery acid contacts your eyes, skins, or clothing. Wash immediately with soda and water and seek medical attention.
- If battery acid comes in contact with eyes, flush eyes immediately for a minimum of 10 minutes and get medical attention.
- Neutralize any acid spills thoroughly with baking soda before attempting to clean up.
- Remove all personal metal items from your body, such as rings, bracelets, necklaces and watches. A battery can produce a short circuit current high enough to weld a ring to metal, causing a severe burn.
- Do not drop a metal tool onto the battery.
- If it is necessary to remove the battery from the vehicle to charge it, always remove the grounded terminal first.

ASSEMBLY INSTRUCTIONS

Remove all cord wraps and uncoil the cables prior to using the battery charger.
This battery charger is for use on a nominal 230 volt circuit.

Preparing to Charge

1. Determine voltage of battery to be maintained by referring to the vehicle manual.
2. If it is necessary to remove battery from vehicle to charge, or to clean terminal, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
3. Clean battery terminals. Do not allow corrosion to come in contact with eyes.
4. Add distilled water in each cell until battery acid reaches level specified by battery manufacturer. This helps purge excessive gas from cells. Do not overfill. For a battery without cell caps (maintenance free), carefully follow manufacturer's charging instructions.
5. Study all battery manufacturer's specific precautions, such as removing or not removing cell caps while charging, and recommended rates of charge.
6. Remove battery completely from boat/airplane or any confined area before charging. Area around battery should be well ventilated while battery is being charged. Do not operate while an enclosed area.

CAUTION: This battery charger does not detect, diagnose or analyze the condition of the battery. Attempting to charge/maintain a battery with an abnormal condition can further damage the battery. If in doubt, have the battery checked by a qualified professional prior to using this unit.

IMPORTANT: Do not start the vehicle with the charger connected to the AC outlet, or it could result in damage to the charger.

Charger Location

1. Locate battery charger as far away from battery as cables permit.
2. Charge above freezing temperature and below 40 degree Celsius(C) (104 degree Fahrenheit).
3. NEVER place battery charger directly above battery being charged; gases from battery will corrode and damage charger.
4. NEVER allow battery acid to drip on battery charger when reading gravity or filling battery.
5. NEVER operate battery charger in a closed-in area or restrict ventilation in any way.
6. Marine batteries must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use. This unit is NOT designed for such use.
7. Do not set a battery on top of battery charger.

WARNING: A SPARK NEAR THE BATTERY MAY CAUSE AN EXPLOSION. TO REDUCE RISK OF A SPARK NEAR THE BATTERY: CONNECT AND DISCONNECT DC OUTPUT CLAMPS AND RING TERMINALS ONLY AFTER REMOVING AC CORD FROM ELECTRIC OUTPUT.

Connection Precautious

1. Disconnect AC cord from electric outlet before connecting or disconnecting DC clamps.

Follow these steps when the battery is installed in a vehicle:

1. Position AC and clamp cords away from hood, door, or moving engine parts.
2. Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
3. Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has larger diameter than NEGATIVE (NEG, N,-) post.

4. Determine which post of battery is grounded (connected) to the chassis. If NEGATIVE post is grounded to chassis (as in most vehicles), see 5. If POSITIVE post is grounded to the chassis, see 6.
5. For negative-grounded vehicle, connect POSITIVE (RED) clamp from battery charger to POSITIVE (POS, P, +) engine block away from battery. Connect NEGATIVE (BLACK) clamp to vehicle chassis or engine block away from battery. Do not connect clip to carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
6. For positive-grounded vehicle, connect NEGATIVE (BLACK) clamp from battery charger to NEGATIVE (NEG, N, -) ungrounded post of battery. Connect POSITIVE (RED) clamp to vehicle chassis or engine block away from battery. Do not connect clip to carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
7. When disconnecting charger, disconnect AC cord, remove clamp from vehicle chassis, and then remove clamp from battery terminal.
8. Do not charge the battery while the engine is operating.

Follow these steps when the battery has been removed from a vehicle:

1. Check polarity of battery posts. Positive (marked POS, P, +) usually has a larger diameter than the Negative battery post (marked NEG, N, -).
2. Connect the POSITIVE (RED) battery clamp to the POSITIVE battery post (marked POS, P, + or red).
3. Stand as far back from the battery as possible, and do not face battery when marking final connection.
4. Carefully connect the NEGATIVE (BLACK) charger clamp to the free end of the battery cable connected to the NEGATIVE terminal.
5. When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as practical.

- Check unit periodically for wear and tear. Take to a qualified technician for replacement of worn or defective parts immediately.
- Read and Understand This Instruction Manual Before Using This Unit.

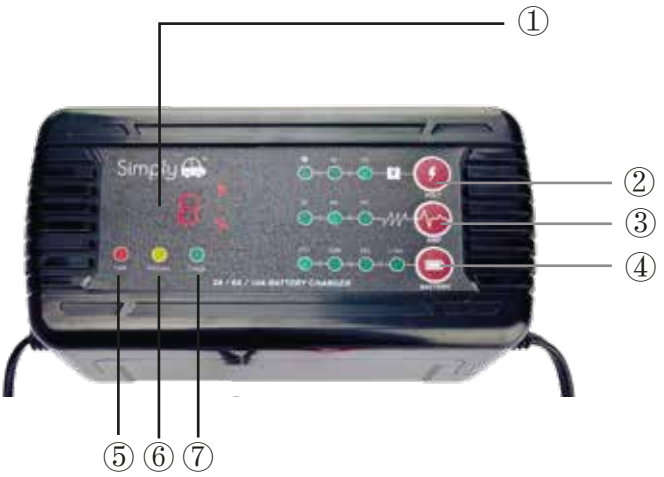
SAVE THESE INSTRUCTIONS

FEATURES:

- Battery Select Button: This button allows you to change the charging mode for different types of batteries(AGM battery,STD battery ,GEL battery or LION battery). Attention: Battery Select Button won't work during the process of charging.
- Visualized Charging:Design with LCD screen which displays charging voltage/battery capacity/mode,etc. Visualize charging,The battery charger let you know the current charging process more conveniently.
- 7-Step Charging Program: Desulphation, Soft Start, Bulk Charge, Absorption, Battery Test, Recondition and Floating. This allows for optimization of battery power, without overcharging or damaging.
- Excellent Winter Charging Mode: Specialized design for charging battery in winter weather conditions to sustain a longer life of battery and to ensure perfect charging.

- Safety Protection: Battery Charger has Over Voltage, Over Heat, Overtime Charging, Short Circuit, and Reverse Polarity Protection to ensure users safety.
- Maintains battery charger in stored vehicles.
- Fully automatic; When the voltage of the battery is above 0.5V, battery charger will automatically power on to charge the battery, and it will automatically power off when battery is fully-charged.
- Built-in circuit protection guards against overcharging or short circuit.
- Automatically check the polarity (requires a minimum of 1.5 volts battery voltage).
- Convenient, color-coded clamps for easy, correct installation.
- Charges with high frequency, pure DC current.

Battery Charger and Components



1. LED Display
When charging, LED display reads the codes, to help user to learn charging status or trouble code.
XX.X V
Battery voltage in volt.
XX %
Battery capacity level
REVERSE POLARITY
When clamps connected with battery reversely, LED display will show the code, FAULT indicator light in red.

SHORT-CIRCUIT
When clamps connecting short-circuit, LED display will show the code, FAULT indicator light in red.
WARNING OVERVOLTAGE
When charging batteries over rating voltage, LED display will show the code and stop output.
WARNING OVERHEAT
When charger internal temperature over 125°(257 ℉),it will stop output and shows code on LCD display.
ANALYZING BATTERY
After constant charging stage, charger will analyze the battery for 1 min, LED display will show the code.
RECONDITIONING
When battery recovery stage, LED display will show the code. Recovery yellow indicator will light.
DEAD BATTERY
During pulse charging stage, after 10mins, if voltage lower than 8V, LED display will show the code. And after recovery stage, if battery cannot be reconditioned , LED display will show the code.

2. Voltage selector
The default setting is 12V, user can switch to 6V by selector button. And it also provide winter mode.When in cold season, winter mode will help to improve charging efficiency.

3. Amperage selector
User can select right output current for different batteries.There are 3 options: 2A, 6A, 10A.

4.Battery type selector
User can select right battery type for different batteriesThere are 4 options: STD-including regular lead-acid batteries, AGM, GEL, Li-iron batteries.

5.Fault indicator
When trouble happened during operation,fault indicator will light in red and showed with code on LED display.

6.Recovery indicator
When recovery stage, indicator will light in yellow.

7.Charge indicator
Duringcharging,indicator will light and flash.After fully charged,indicator will keep solid green.

OPERATING INSTRUCTIONS

IMPORTANT: ALWAYS disconnect the AC power cord from AC power outlet before connecting (or disconnecting) the charger to (or from) the battery.
Connecting the Charger and Charging the Battery with Battery Clamps
The charger's output leads have color-coded battery clamps (RED-POSITIVE and BLACK-NEGATIVE).

1.Unplug the battery charger AC cord from the AC outlet.
2.Disconnect the battery clamps from the unit at output and cord connector
3.Plug the AC cord into the AC outlet (230V~ 50/60 Hz)
4.Press the battery selection and current selection to proper setting
5.Connect the RED POSITIVRE clamp to the POSITIVE post of the battery.
6.Connect the BLACK NEGATIVE clamp to the NEGATIVE post of the battery.(Note: if reversely connect or short circuit, the "FAULT" indicator lit,and screen indicates"REVERSE POLARITY" alternatively.)
7.Then the charger will charging the battery automatically.
8.Leave the unit on.
9.Monitor the battery from time to time.

CHARGING INSTRUCTIONS

1.Connect the battery charger to the mains power (230V AC):
Connecting 230V AC power supply,theLED display will show 888 in a loop.If the output is in a short-circuit situation,the LED will indicate trouble code,please solve the problem.

2.Connecting the battery charger to your Battery
Check battery type and voltage according to battery manual,and choose right voltage and current by selector.Connect the red clamp from the charger to the positive(+) battery terminal.The Black clamp from the charger to the negative(-) battery terminal.(The trouble code on LED display will indicate if output reverse polarity connection,please re-connect)

3.Start the charging
Connect AC plug to 230V power correctly, select charging voltage 6V or 12V battery (if you are not sure the battery type please read the batterys rating label first).Then connect both of clamps with battery terminals, turn on the power switch and began charging, final select appropriate current.

4.Disconnecting the battery charger from your vehicle battery
When the battery is fully charged and ready for use,the LED will indicate and the charger will output at a constant safe voltage at 7.2V(+0.25V) for 6V batteries or 14.3V(±0.25V) for 12V batteries.

TROUBLESHOOTING
WARNING: During troubleshooting, if there is a need to connect/disconnect the unit from battery, follow the steps outlined in “Important Safety Instructions” at the front of this manual and the warning “To reduce risk of a spark near the battery”.

Power On/Off	Problem	Reason	Possible solutions
Power Off & Battery Connected	Screen indicates "888" alternatively	Unit not charging, the battery is not connected	• Check that the charger is properly connected to a live AC Outlet. • Check that the correct battery selection setting has been selected for the battery being charged. • Check that the correct current selection setting has been selected • If the current under charging state has fallen below 0.5A, the charger will not charge the unit automatically. • Make sure output connections are secured. • Check correct polarity connections.
Power On & Battery Connected	The charging indicator lits all the time	The battery is being fully charged	Keep it away from being charged
	The restoring indicator lits with yellow LED light all the time ,and and Screen indicates "RECONDITIONING" alternatively	The battery is being restored	Keep it being restored within 4 four hours and if the voltage remain unchanged,then the battery is a dead one.
	"FAULT" indicator lit,and Screen indicates"REVERSE POLARITY" alternatively	Battery reversed connection	Reversed the connection
	"FAULT" indicator lit,and Screen indicates"SHORT CIRCUIT" alternatively	The clamps are suffering the short-circuit situation	Re-connect the clamps carefully
	"FAULT" indicator lit,and Screen indicates"WARN-ING OVERHEAT" alternatively	Over-heated	Disconnect the battery charger to let it cool down
	"FAULT" indicator lit,and Screen indicates"DEAD BATTERY"	Dead battery	The battery is bad and needs replacing
	Start Aid indicator lit with green light,and Screen indicates"START AID" alternatively	Start aid mode is working	It will last for 60s at most and then please turn it off

BATTERY CONNECTION
If the charger does not connected properly, charging will not start, Make sure the charger is connected to the battery and the connection points are clean and making a good connection or make sure no reverse connections at the battery.

CHARGING COMPLETION
Charge completion is indicated by the charging status indicator turning on (LED indicator shows fully charged state) . This means that the charger has stopped charging. NOTE: If the battery is not removed, the charger can detect the voltage. When battery voltage is lower than 13.5V, the charger will charge for battery automatically.

MAINTAINGING A BATTERY
The unit maintains 12V batteries, keeping them at fully charged. It can charge small batteries and maintain both small and large batteries. If you are maintaining a fully charged large battery, you are properly utilizing the battery charger. However, if you use this battery charger to charge a large battery, such as a marine deep-cycle battery, that was not fully charged, you may lose some of the battery's capacity. Therefore, we do not recommend charging a large battery with this unit.
NOTE: The maintain mode technology utilized in this charger allows you to safely charge and maintain a healthy battery for exhausted periods of time. However, problems with the battery, electrical problems in the vehicle, improper connections or other unanticipated conditions could cause excessive current draws. As such, occasionally monitoring your battery and the charging process is recommended.

MAINTENANCE AND CARE

A minimal amount of care can keep your battery charger working properly for years.
- Clean the clamps each time you are finished charging. Wipe off any battery fluid that may have come in contact with the clamps, to prevent corrosion.
- Occasionally cleaning the case of the charger with a soft cloth will keep the finish shiny and help prevent corrosion.
- Coil the input and output cords neatly when storing the charger. This will help prevent accidental damage to the cords and charger.
- Store the charger unplugged from AC power outlet, in an upright position.
- Store inside, in a cool, dry place. Do not store the clamps clipped together, on or around metal, or clipped to the cables.

WARNING
1. It only can be used for 6/12V rechargeable AGM/STD/GEL/LION batteries.
2. The product should not be used under the water.
3. Ensure enough power supplying for the battery charger.
4. Never charging damaged battery in case of destroying battery charger.
5. To prevent potential danger, the battery charger should be away from heat object and explosive gas during operation.
6. Do not change charger line or plug in order to avoid electric shock.
7. To prevent the battery charger from damage, the product should be away from children and animals.
8. The battery charged needs to be checked to verify the input current beyond standard output of charger.

9. Never charging on the condition that contains flammable and explosive gases.
10. Do not come close to the battery during charging.
11. The battery should be placed in ventilated well area.
12. The product should not be operated by children, those who have psychiatric disorders and lack of experience, except that is supervised and instructed by supervisor.
13. Do not dismantle or repair privately if the charger damaged, bring it to certified service center to repair.

SPECIAL NOTICE:
If the battery's low voltage result in battery charging failure cause of instant complete release, the battery need put aside for 1 hour until the battery voltage recover at proper range

SPECIFICATIONS PARAMETERS

- Input power supply: AC 230V 50/60Hz
- Maximum input power: 170W
- Output voltage: DC6V 2A,12V 2A/6A/10A
- Battery Type: 6V/12V Lead-acid Battery
- Maximum output current: 10A
- Max.Capacity: 200AH
- Output Display: LED

WARNING: The charger is NOT suitable for lithium cobalt battery!

Meaning of crossed-out wheelie dustbin icon:

- Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities
- Contact your local government for information regarding the collection systems available.
- If electrical appliances are disposed of in landfills or dumpshazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being
- When replacing old appliances with new ones,the retailer is legally obligated to take back your old appliance for disposals at least free of charge.