



# BATTERY CHARGER OWNER'S MANUAL

## **Caution**

Please, take a moment to read this manual in its entirety before using your board, batteries, and charger

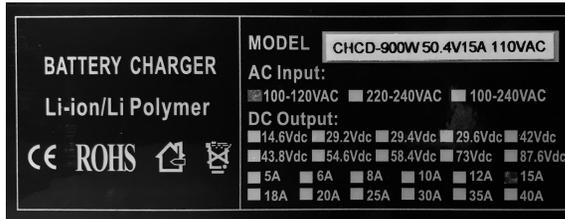
## **Note**

This Manual is only valid for the 110V versions of the Onean Battery Charger, that may be used in the USA, Canada, Bahamas, US Virgins. Check the outlet voltage locally on other Caribbean Islands for your security

# Features

## Summary

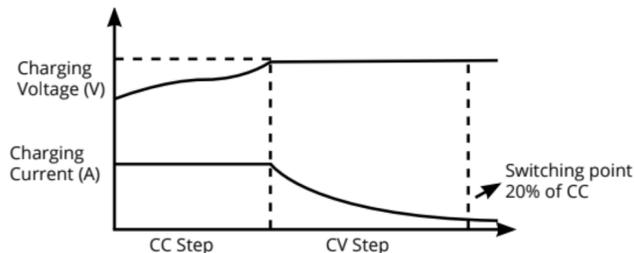
1. Advanced high frequency power supply with LED controls.
2. Single Input 110V, 50Hz~60Hz.
3. DC output isolated from AC input.
4. Automatic battery charging modes:  
CC (Constant Current) and, CV (Constant Voltage).
5. Protections include short circuit, over voltage, over-temperature, reverse polarity protections and over-heat protection at 167°F.
6. Forced ventilation. The temperature controlled fan will automatically start when the charger's internal temperature rises over 104°F.
7. Efficiency is 85% / 15% battery to charger ratio.
8. Every unit 100% full load bench tested.



## Charging mode (2-stage)

1st Charging Step: **CC Step (Constant Current)**

2nd Charging Step: **CV Step (Constant Voltage)**



# Fuses

## Input fuse

The input fuse is a 15A 250V M5x20mm glass fuse. It is located just below where the AC cable plugs into the charger. As shown on this image, the fuse & replacement are located here in a compartment that can be pulled out when the charger is unplugged.



## Output fuse

The output fuse is a 30A 250V M6x30mm glass fuse. It is located to the right of the charger's fan as shown in this image



**Note:** The charger comes with one of each fuse as replacements if needed. Please check with your local electronics store or online for additional replacement fuses for your charger. You may also email us at [support@ecoboardin.com](mailto:support@ecoboardin.com) or call us at 888-884-8599 if you have any trouble finding some.

# Precautions

1. The charging process must always be supervised.
2. It is normal to see a small spark when connecting the charger to a wall outlet.
3. This charger is designated for charging Onean Batteries only.
4. Do not use the charger for any use other than its intended purpose.
5. Recharge the Onean Battery only with the charger that was provided with your battery.
6. Use this charger only in cool and well ventilated areas.
7. Do not cover the charger with anything, as this will cause overheating and will restrict airflow that could keep the charger cool.
8. Do not use the charger in direct sunlight.
9. DO NOT disassemble this charger. Take it to an authorized reseller when service or repair is required.
10. Do not use the charger if there is any sign of damage or deterioration to the charger's housing or to any parts (connectors, cables, etc) attached to the charger.
11. Ensure the red and black charging prongs are oriented correctly when inserting into the battery. Red to Red and Black to Black. Failure to follow this procedure will cause reverse polarity and may damage the battery and the charger.
12. Make sure the power outlet's voltage is rated the same as the one indicated on the charger.
13. Do not handle the charger with wet hands and keep the charger dry at all times.
14. Charging should never take more than 150 mins. Stop charging immediately after your battery is fully charged. Disconnect the battery and allow the charger's fan to run until the charger has cooled down.

# Operation

## Setup

1. Ensure your main electrical supply conforms to the charger's input voltage of 110V.
2. First connect the battery charger to the wall outlet **before** connecting the charger to the battery.
3. If your charger has an ON/OFF, it must be switched to ON.
4. LED 1 RED confirms AC power is on
5. LED 2 GREEN confirms the charger is correctly connected and ready to start charging a battery.

## Charging

1. Before charging always perform the **Security Test Sequence** as explained below.
2. Connect the DC Output (prongs) to the battery charging ports. Remember to connect "red to red" and "black to black."
3. LED1 RED confirms charger is charging
4. LED2 GREEN confirms battery fully charged



# Security Test Sequence

The **Security Test Device** can easily check the correct performance of the Battery Management System (BMS). Please proceed with this Security Check before every charge of your Battery. This will take less than a minute.

1. Connect the charger to the wall outlet. Then, connect the two cables of the Security Test Device to the charger's connector body. Remember "red to red" and "black to black."



2. The LED 1 (ON indicator) near to the red prong of the Security Test Device will turn GREEN which indicates a proper connection.



3. Connect the Security Test Device to the battery's charging connectors making sure the connector body is fully inserted. Remember "red to red" and "black to black."



4. Once inserted, the LED 1 (ON indicator) will always remain GREEN. The LED 2 (TEST Indicator) could give 2 different results:



## Result 1:

When the LED 2 (TEST Indicator) stays OFF, your battery's BMS is in perfect working condition. **It is now okay to disconnect the Security Test Device and charge the battery as described above.**

## Result 2:

**If the LED 2 (TEST) lights up in RED, your BMS is not working correctly.**



With **Result 2** immediately discontinue the use of the tested battery and use the following four steps in this order.

- First:** Disconnect the Security Test Device from the battery
- Second:** Disconnect the Security Test Device from the charger connector body
- Third:** Do NOT use this battery or try to charge it
- Fourth:** Immediately contact our Support Team at [support@ecoboardin.com](mailto:support@ecoboardin.com), to get further instructions regarding service or repair