1. Overview

The Corebox Battery Charger is a 12V, 6-Amp automatic smart charger, maintainer, and desulfator. It is designed for charging and maintaining 12V lead-acid batteries, including AGM, GEL, SLA, and Flooded types, commonly found in cars, trucks, motorcycles, lawn mowers, and marine applications.

The device features a 7-stage intelligent charging process, temperature compensation, and multiple safety protections to optimize battery health and lifespan.

2. Specifications

- **Brand:** COREBOX
- **Input Voltage:** 12V
- **Output Voltage:** 12 Volts (DC)
- **Charging Current:** 6 Amps

- **Product Dimensions:** 8.4"D x 2.6"W x 4.3"H
- **Compatible Batteries:** 12V Lead-Acid (AGM, GEL, SLA, Flooded)
- **Cable Length:** 7 feet
- **Warranty:** 2-Year Manufacturer Warranty

3. Features and Functions

3.1 Charging Modes & Process

The charger uses an intelligent 7-stage charging process monitored by an MCU controller:

1. **Desulfation:** Applies pulse to break down sulfate crystals on battery plates.
2. **Soft Start:** Tests battery condition before applying full current.
3. **Bulk Charge:** Delivers maximum current to charge the battery rapidly.
4. **Analysis:** Checks if the battery can hold a charge.
5. **Recondition:** Applies a slow charge to restore deeply discharged batteries.
6. **Float:** Maintains the battery at full charge without overcharging.
7. **Pulse Maintenance:** Periodically applies pulses to keep the battery at optimal charge.

3.2 Pulse Repair Function

The charger includes a high-efficiency pulse repair mode. It automatically detects battery sulfation and acid stratification to help restore performance in old or idle batteries. Note: This function cannot repair a completely dead (totally depleted) battery.

3.3 Safety Protections

The device incorporates eight key safety features:

- Temperature Compensation (adjusts charge based on ambient temperature)
- Reverse Connection Protection
- Cooling System
- Overcurrent Protection
- Fireproof Material Housing
- Overcharge Protection
- Short Circuit Protection
- Automatic Shutdown when fully charged

The charging cables use high-quality, heat-resistant, cold-resistant, and oxidation-resistant copper wire.

4. Use Guide

4.1 Before You Begin

- Ensure the charger is off and unplugged from AC power.
- Identify your battery type (e.g., AGM, GEL, Flooded) and ensure it is a 12V lead-acid battery.
- Work in a well-ventilated area. Keep sparks and flames away from the battery.
- For vehicles, consult your vehicle's manual for any specific charging instructions.

4.2 Connection Steps

1. **Connect to Battery:**
    - Attach the RED clamp to the POSITIVE (+) battery terminal.
    - Attach the BLACK clamp to the NEGATIVE (-) battery terminal or a clean, unpainted metal part of the vehicle chassis (ground).

2. **Connect to Power:** Plug the charger's AC power cord into a standard 110V wall outlet.
3. **Start Charging:** The charger will automatically begin its diagnostic and charging sequence. The display or indicators will show the charging status.

4.3 During Charging

- The charger will automatically progress through its 7-stage cycle.

- You may hear a clicking sound when it changes stages; this is normal.
- The built-in cooling system may activate; this is normal operation.

4.4 After Charging

1. Once the battery is fully charged, the charger will automatically switch to maintenance (float/pulse) mode.
2. To disconnect, first unplug the charger from the AC wall outlet.
3. Then remove the BLACK clamp, followed by the RED clamp from the battery.

4.5 Using the Repair Mode

If a battery is not accepting a charge, you can attempt to use the charger's repair function:

1. Connect the charger to the battery as described in section 4.2.
2. The charger will automatically detect sulfation and may enter a reconditioning stage.
3. This process can take several hours. Allow the charger to complete its full cycle.

5. Safety Information

- **Read all instructions** before using the charger.
- Do not use the charger to charge non-rechargeable batteries.
- Do not disassemble the charger. Refer servicing to qualified personnel.
- Protect the charger from moisture and water.
- Ensure the AC power cord and output cables are not damaged before use.
- A loose battery connection may cause the charger to spark. Always connect clamps firmly.
- Reverse polarity connection is protected against, but correct connection (Red to +, Black to -) is essential for safe operation.

6. Troubleshooting

- **Charger does not turn on:** Check AC power connection. Ensure the wall outlet is live.
- **Charger shows fault or error:** Disconnect and reconnect the battery clamps, ensuring a clean, secure connection. Check for reverse polarity.
- **Battery does not charge:** The battery may be completely dead and unrecoverable. Verify battery type is 12V lead-acid. Try using the repair mode.
- **Charger gets warm during use:** This is normal. The unit has a cooling system and overheat protection.

- **Clicking sounds during charging:** This is normal and indicates the charger is switching between stages.

7. Warranty and Support

This product is backed by a **2-Year Manufacturer Warranty**.

If you encounter any problems during use, contact the seller or manufacturer for support. Have your product details (e.g., ASIN: B0DNSWH1RS) ready when seeking assistance.

> **Warning**
>
> This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.
