YDBAO 303655031

YDBAO 10A 12V Smart Fully Automatic Car Battery Charger User Manual

Model: 303655031
Brand: YDBAO

1. Introduction

Thank you for choosing the YDBAO 10A 12V Smart Fully Automatic Car Battery Charger. This intelligent charger is designed to provide efficient and safe charging for a wide range of 12V batteries, including lead-acid and LiFePO4 types. It features an intuitive LCD display, multiple charging modes, and comprehensive protection systems to ensure optimal battery health and longevity. Please read this manual thoroughly before use to ensure proper operation and safety.

2. Safety Instructions

Always observe the following safety precautions to prevent injury or damage to the charger or battery:

- Read all instructions before using the charger.
- Do not expose the charger to rain or excessive moisture.
- Ensure proper ventilation during charging. Do not cover the charger.
- Do not operate the charger if it has received a sharp blow, been dropped, or otherwise damaged.
- Never attempt to charge a frozen battery.
- Always connect the charger to the battery before plugging it into a power outlet. Disconnect from the power outlet before disconnecting from the battery.
- Avoid sparks when connecting or disconnecting the battery clamps.
- Keep out of reach of children.
- Wear eye protection and gloves when working with batteries.
- Do not charge non-rechargeable batteries.

3. Product Overview

The YDBAO battery charger is equipped with an intelligent LCD display and various features for optimal performance.



Figure 3.1: YDBAO 10A 12V Smart Fully Automatic Car Battery Charger. This image shows the front view of the red and black charger with its LCD screen and battery clamps.

Key Features:

- **LCD Display:** Clearly shows ambient temperature, voltage, current, and remaining battery capacity.
- **10A Fast Charging:** Provides faster charging compared to 8A or 6A chargers, combining fast and trickle charging for effective battery protection.
- **6 Charging Modes:** Fully automatic charging circuit with selectable modes for various battery types, including specific modes for LiFePO4 and AGM batteries.
- **Multiple Protection Systems:** Includes polarity protection, short-circuit protection, overcurrent protection, undervoltage protection, overvoltage protection, and overheating protection.
- **Pulse Repair Function:** Can activate and extend the life of old or long-unused batteries.
- **Wide Compatibility:** Suitable for 12V lead-acid batteries and LiFePO4 batteries, including AGM, GEL, SLA, Wet, and Deep Cycle batteries. Applicable for cars, trucks, SUVs, motorcycles, lawnmowers, and boats.
- **Automatic Temperature Compensation:** Adjusts charging parameters based on ambient temperature for optimal performance in both summer and winter conditions.



Figure 3.2: Overview of the 6 charging modes. This image displays the charger's screen with icons representing Car, AGM, Moto, LiFePO4, Repair, and Reverse modes.



Figure 3.3: Automatic Temperature Compensation. This image illustrates the charger's ability to adapt to different temperatures, showing a "Summer Mode" with a car in a desert and a "Winter Mode" with a car in snow.

4. Setup

Before connecting the charger, ensure the area is well-ventilated and free from flammable materials. Identify the positive (+) and negative (-) terminals on your battery.

Connecting the Charger:

1. Ensure the charger is unplugged from the AC power outlet.
2. Connect the **red (+) clamp** to the **positive (+) terminal** of the battery.
3. Connect the **black (-) clamp** to the **negative (-) terminal** of the battery. If connecting to a vehicle battery, connect the black clamp to the vehicle chassis away from the battery and fuel line.
4. Once the clamps are securely connected, plug the charger's power cord into a standard AC power outlet.



Figure 4.1: Reverse Mode, Safe Charging. This image shows a hand connecting the red clamp to a car battery. The text indicates that if poles are connected incorrectly, the charger will display "ERO" to prevent battery damage.

Important: If the clamps are connected incorrectly (reverse polarity), the charger will display "ERO" and stop charging to prevent damage to the battery or charger. Correct the connection before proceeding.

5. Operating Instructions

After connecting the charger to the battery and power outlet, the charger will automatically detect the battery type and begin charging in a suitable mode. You can also manually select a mode.

LCD Display Information:



Figure 5.1: One button for all modes. This image highlights the LCD display showing current (A) and battery percentage.

The LCD display provides real-time information:

- **Temperature:** Ambient temperature.
- **Voltage:** Current battery voltage.
- **Current:** Charging current in Amperes.
- **Battery Capacity:** Percentage of battery charged.
- **Charging Mode Indicator:** Icon indicating the active charging mode (Car, AGM, Moto, LiFePO4, Repair, Reverse).
- **Error Codes:** "ERO" for reverse polarity.

Selecting Charging Modes:

Press the "MODE" button on the charger to cycle through the available charging modes. Select the mode appropriate for your battery type and charging needs.

- **CAR Mode:** Standard mode for most 12V lead-acid car batteries.

- **AGM Mode:** Specifically for AGM (Absorbent Glass Mat) batteries.
- **MOTO Mode:** For 12V motorcycle batteries.
- **LiFePO4 Mode:** For Lithium Iron Phosphate batteries.
- **REPAIR Mode:** Used for desulfation and recovery of old, idle, or deeply discharged batteries.
- **REVERSE Mode:** Indicates reverse polarity connection (error state).



Figure 5.2: 10A 12V Intelligent Car Battery Charger applications. This image shows the charger being used for automobiles, motorcycles, sailboats, and construction vehicles.

Using the Repair Function:

The pulse repair function can help restore batteries that have been idle for a long time, have low voltage, or show weak performance. Select the "REPAIR" mode and allow the charger to run its cycle. This process can take several hours depending on the battery's condition.



Figure 5.3: Intelligent Repair Function. This image illustrates scenarios where the repair function is useful: long idle time of a car, low voltage and weak performance, and an aging battery that cannot be charged.

Charging Completion:

The charger will automatically stop charging when the battery is fully charged. The LCD display will indicate "FUL" or 100% capacity. You can leave the charger connected for maintenance charging (trickle charge) if desired.

Disconnecting the Charger:

1. Unplug the charger from the AC power outlet.
2. Disconnect the **black (-) clamp** from the battery's negative terminal or vehicle chassis.
3. Disconnect the **red (+) clamp** from the battery's positive terminal.

6. Maintenance

Proper maintenance ensures the longevity and optimal performance of your YDBAO battery charger.

- **Cleaning:** Wipe the charger casing with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the charger in a cool, dry place when not in use. Keep the cables neatly coiled to prevent damage.
- **Cable Inspection:** Regularly inspect the power cord and battery clamps for any signs of damage, fraying, or corrosion. Do not use the charger if any part is damaged.
- **Ventilation:** Ensure the ventilation openings on the charger are clear of dust and debris to prevent overheating.

7. Troubleshooting

If you encounter issues with your YDBAO battery charger, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger not turning on / LCD display off.	No power from outlet; loose connection; charger malfunction.	Check power outlet with another device. Ensure power cord is securely plugged in. If problem persists, contact support.
"ERO" displayed on LCD.	Reverse polarity connection (positive and negative clamps swapped).	Unplug charger from AC outlet. Disconnect clamps and reconnect them correctly: red (+) to positive (+), black (-) to negative (-). Plug charger back in.
Battery not charging or charging slowly.	Incorrect mode selected; battery deeply discharged/damaged; poor clamp connection.	Ensure correct charging mode is selected. For deeply discharged batteries, try "REPAIR" mode. Check that clamps are securely attached and free of corrosion. Battery may be beyond repair.
Charger feels hot.	Normal operation during charging; poor ventilation; excessive load.	Some heat is normal. Ensure charger is in a well-ventilated area and not covered. If overheating persists or is excessive, disconnect and contact support.



Figure 7.1: Multiple Protection Systems. This image shows icons representing various safety features: Polarity Protection, Fire Protection, Overcurrent Protection, Overvoltage Protection, Short-circuit Protection, Touch Protection, Undervoltage Protection, and Overheating Protection.

8. Specifications

Feature	Detail
Model Number	303655031
Input Voltage	AC 100-240V, 50/60Hz (Standard)
Output Voltage	DC 12V
Output Current	10A (Max)
Battery Types Supported	12V Lead-Acid (AGM, GEL, SLA, Wet, Deep Cycle), LiFePO4
Product Dimensions	22 x 6 x 12 cm (approx. 8.66 x 2.36 x 4.72 inches)

Feature	Detail
Product Weight	630 grams (approx. 1.39 lbs)
Certifications	CE
Cable Length (Power)	85 cm (approx. 33.5 inches)
Cable Length (Clamps)	60 cm (approx. 23.6 inches)



Figure 8.1: What's in the Box. This image shows the charger, power cable, battery clamps, and user manual, along with dimensions of the charger and cable lengths.

9. Warranty and Support

YDBAO products are manufactured to high-quality standards. For warranty information and customer support, please refer to the contact details provided with your purchase or visit the official YDBAO website. Keep your purchase receipt as proof of purchase for warranty claims.

For technical assistance or troubleshooting beyond this manual, please contact YDBAO customer service.

YDBAO Customer Service: Please refer to the contact information provided on the product packaging or the official YDBAO brand store on Amazon.

Online Resources: Visit the YDBAO Store on Amazon

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