

X-Energy YX12V6A

X-Energy YX12V6A 6-Amp 12V Smart Battery Charger User Manual

Model: YX12V6A

1. SAFETY INFORMATION

Please read and understand all safety information before using this product. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always wear eye protection and protective clothing when working with batteries.
- Ensure adequate ventilation when charging batteries.
- Keep the charger away from flammable materials.
- Do not expose the charger to rain or excessive moisture.
- Never attempt to charge a frozen or damaged battery.
- Connect the charger to the battery before plugging it into the AC power outlet. Disconnect from AC power before disconnecting from the battery.
- Ensure the charger is compatible with your battery type (12V lead-acid batteries only). Not compatible with lithium-ion batteries.
- Avoid short-circuiting the output clamps.

2. PRODUCT OVERVIEW

The X-Energy YX12V6A is a 6-Amp, 12-volt smart battery charger designed for various lead-acid batteries, including AGM, GEL, SLA, and Flooded types. It functions as a charger, maintainer, and desulfator for vehicles such as cars, trucks, motorcycles, lawn mowers, and marine applications.

Key features include:

- **Smart Control:** Features temperature compensation, reverse polarity protection, cooling system, overcurrent

protection, fireproof material, overcharge protection, and short circuit protection.

- **Pulse Repair Function:** Designed to help restore lost battery performance and extend battery life. Note: This function cannot activate or charge totally dead batteries.
- **Visualized Charging:** A large LCD displays charging status, battery voltage, charging current, and charging percentage.
- **Float/Trickle Charge Mode:** Automatically maintains battery charge over extended periods.



Image 2.1: The X-Energy YX12V6A Smart Battery Charger with its display and battery clamps.



STEP 2

Select the corresponding mode

Select the appropriate mode according to the type of battery

Image 2.2: Detailed view of the charger's large LCD display, indicating charging parameters and mode options.

3. SETUP AND CONNECTION

Follow these steps to properly connect and begin charging your battery:

1. Step 1: Plug into AC Power

Connect the charger's power plug to a standard AC 110V household power outlet. Ensure the connection is secure.



Image 3.1: The charger's power cord connected to a wall outlet.

2. Step 2: Select Charging Mode

Press the 'MODE' button on the charger to select the appropriate charging mode for your battery type. Available modes include CAR, MOTO, AGM, and REPAIR. The selected mode will be displayed on the LCD screen.



Image 3.2: A hand interacting with the charger's 'MODE' button to choose the desired charging setting.

3. Step 3: Connect Battery Clamps

Connect the red clamp to the positive (+) terminal of the battery. Connect the black clamp to the negative (-) terminal of the battery. Ensure a secure connection to prevent sparks.



Image 3.3: The red clamp attached to the positive terminal and the black clamp to the negative terminal of a battery.

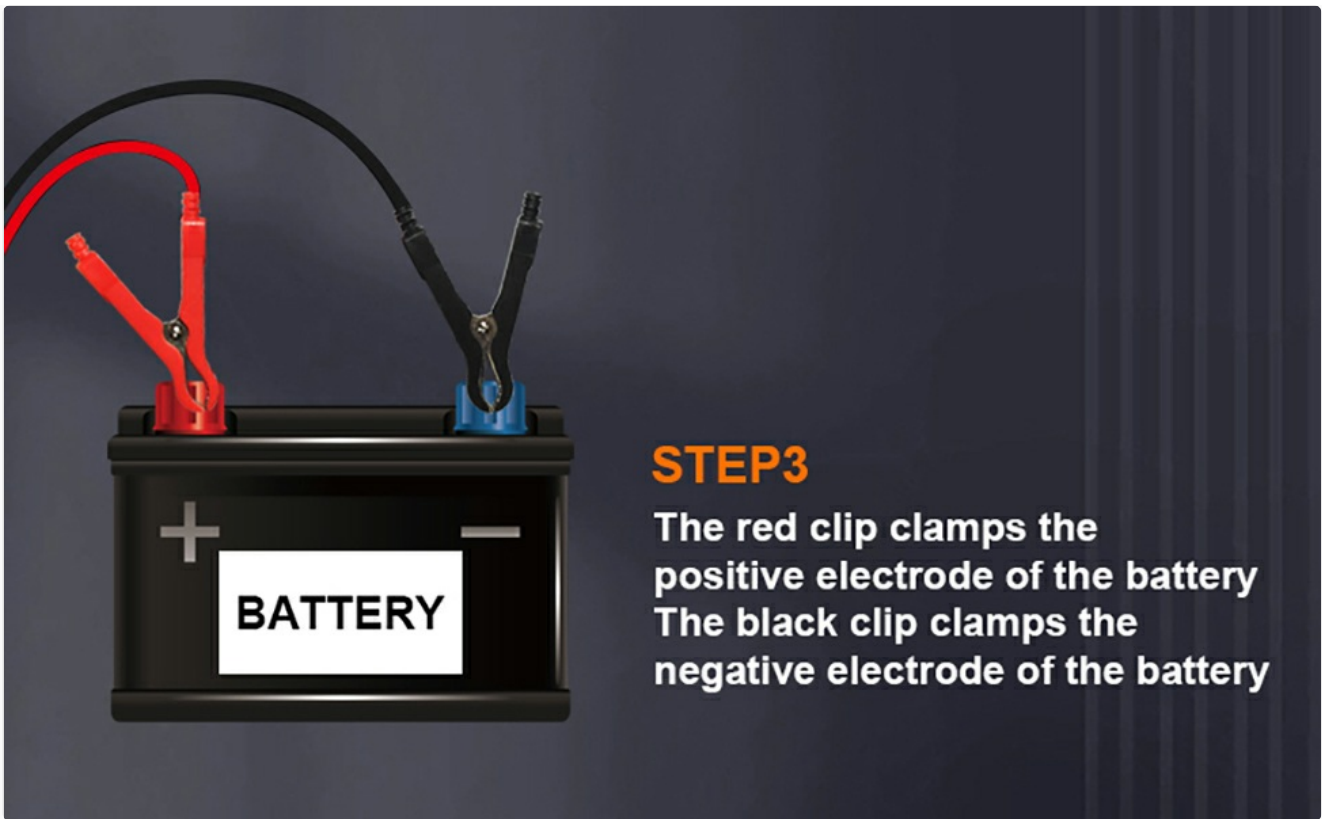
Once connected, the charger will begin its charging process according to the selected mode. The LCD will display real-time charging information.

4. OPERATING MODES

The charger offers several modes tailored for different battery types and charging needs:

- **CAR Mode:** Suitable for charging and maintaining 12V lead-acid batteries in cars, SUVs, and minivans.
- **MOTO Mode:** Designed for 12V lead-acid batteries in motorcycles, lawn mowers, boats, and other smaller vehicles.
- **AGM/GEL Mode:** Specifically for 12V AGM and GEL type batteries, often found in start-stop vehicles.
- **REPAIR Mode:** Utilizes pulse repair technology to help restore lost battery capacity and extend battery life. This mode is not for charging completely dead batteries.

Float/Trickle Charge: After a full charge (indicated by "FUL" on the screen), if you switch to "MOTORCYCLE" mode, the charger will automatically enter a trickle charging state to maintain the battery's charge over long periods, such as during winter storage.



STEP3

The red clip clamps the positive electrode of the battery
The black clip clamps the negative electrode of the battery

Image 4.1: The charger's interface highlighting the various charging modes for different vehicle types.

5. MAINTENANCE

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

- Keep the charger clean and dry. Wipe with a soft, damp cloth. Do not use solvents.
- Inspect the cables and clamps regularly for any signs of damage or wear. Replace if necessary.
- Store the charger in a cool, dry place when not in use.
- Ensure the cooling vents are not obstructed during operation.

6. TROUBLESHOOTING

If you encounter issues with your X-Energy YX12V6A charger, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger not turning on / No display	No AC power; Loose connection	Check AC outlet; Ensure power plug is fully inserted.
"ERROR" displayed on screen	Reverse polarity; Short circuit; Battery fault	Verify clamp connections (red to +, black to -); Check for short circuits; Test battery condition.

Problem	Possible Cause	Solution
Battery not charging	Incorrect mode selected; Battery is completely dead; Poor connection	Select appropriate mode; This charger cannot activate totally dead batteries; Ensure clamps are securely attached.
Charger gets hot	Normal operation; Obstructed ventilation	Some heat is normal; Ensure vents are clear and charger is in a well-ventilated area.

7. SPECIFICATIONS

- **Model:** YX12V6A
- **Brand:** X-Energy
- **Input Voltage:** AC 100-240V, 50/60Hz
- **Output Voltage:** 12V DC
- **Output Current:** 6 Amp
- **Compatible Battery Types:** 12V Lead-Acid (AGM, GEL, SLA, Flooded)
- **Product Dimensions:** 5.9 x 3.3 x 2 inches (15 x 8.4 x 5.1 cm)
- **Item Weight:** 14.1 ounces (0.4 kg)
- **Certifications:** UL, CE, FCC
- **Manufacturer:** X-ENERGY

8. WARRANTY AND SUPPORT

For warranty information or technical support, please contact X-Energy customer service. Refer to the product packaging or the official X-Energy website for contact details.

Note: Specific warranty terms may vary by region and retailer. Please retain your proof of purchase for warranty claims.

