Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

E-FAST TK2500

E-FAST 25A Intelligent Battery Charger User Manual

Model: TK2500

1. Introduction

Thank you for choosing the E-FAST 25A Intelligent Battery Charger. This versatile device is designed to efficiently charge and maintain a wide range of 12V and 24V batteries, including lead-acid (flooded, gel, AGM, SLA, GEL) and LiFePO4 types. With its advanced features, adjustable current levels, and multiple protection mechanisms, it provides a reliable solution for your automotive, RV, powersports, and marine battery needs.



Figure 1: E-FAST 25A Intelligent Battery Charger

Key Features:

- **5 Levels of Adjustable Current:** Manually select charging currents of 2A, 8A, automatic, 20A, or 25A for optimal battery life.
- **Wide Battery Compatibility:** Supports 12V and 24V lead-acid (flooded, gel, AGM, SLA, GEL) and LiFePO4 batteries.
- **Upgraded Booster Mode:** Provides a 200-second high-current boost for starting 12V batteries.
- **Advanced Charging Protections:** Includes reverse polarity, overheating, overcurrent/overvoltage, short circuit protection, and a child lock.
- **Intelligent Temperature Control:** Optimizes charging based on ambient temperature (Summer/Winter modes).
- **Battery Repair Function:** Advanced recovery mode for repairing and restoring old, idle, or damaged batteries.
- **Portable Design:** Features a convenient handle and integrated cable storage for tidiness and easy transport.

2. Setup

Before using the E-FAST 25A Battery Charger, ensure you read and understand all safety instructions. Proper setup is

crucial for safe and effective operation.

2.1 Connecting to Power Source:

1. Ensure the charger is unplugged from any power outlet.
2. Connect the AC power cord to the charger's input port.
3. Plug the AC power cord into a standard 100-240V AC electrical outlet. An extension cord may be required if the power source is not within reach.

2.2 Connecting to Battery:

1. Identify the positive (+) and negative (-) terminals on your battery.
2. Connect the **RED** (+) charging clamp to the positive (+) battery terminal.
3. Connect the **BLACK** (-) charging clamp to the negative (-) battery terminal.
4. Ensure a secure connection to prevent sparks or poor contact.



Figure 2: Charger connected to a battery

2.3 Initial Power-On:

Once connected to both the power source and the battery, the charger will automatically power on and begin its diagnostic process. The LED display will show the current battery voltage and other relevant information.

▶ **Watch video online**
0-25A Battery Charger

Video 1: Demonstrates the initial setup and connection of the E-FAST 25A Battery Charger to a battery.

3. Operating Instructions

The E-FAST 25A Battery Charger features an intuitive LED display and control buttons for easy operation.

3.1 LED Display Overview:



Figure 3: LED Display and Controls

- **Voltage (V):** Displays the current battery voltage.
- **Current (A):** Shows the selected or actual charging current.
- **Temperature (°C):** Indicates the internal temperature of the charger.
- **Battery Level Indicator:** Visual representation of the battery's charge status (25%, 50%, 75%, 100%).
- **Mode Icons:** Indicate the currently selected charging mode (Car/Boat, AGM, LiFePO4, Repair, Booster).
- **Winter/Summer Mode Icons:** Automatically activate based on ambient temperature.

3.2 Selecting Charging Modes:

Press the **MODE** button to cycle through the available charging modes. The charger will automatically detect 12V or 24V batteries.

- **Car/Boat Mode:** Ideal for GEL, SLA, WET, DEEP CYCLE, EFB, and Calcium batteries.
- **AGM Mode:** Specifically for AGM batteries.
- **LiFePO4 Mode:** For Lithium Iron Phosphate batteries.
- **Repair Mode:** An advanced 16-hour recovery mode for repairing and restoring old, idle, or damaged batteries. Not all batteries can be recovered.

- **Booster Mode:** This function is only for 12V batteries. When selected, the charging current reaches maximum value for 200 seconds to provide an auxiliary start.

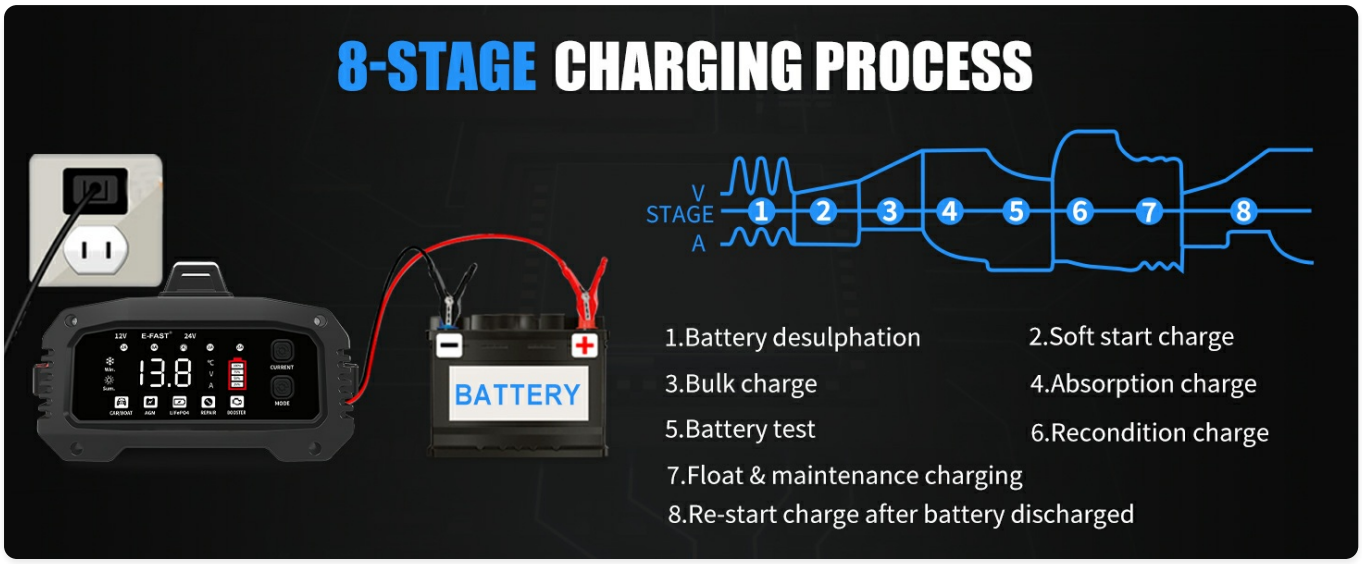

Figure 4: 8-Stage Charging Process

3.3 Adjusting Charging Current:

Press the **CURRENT** button to select from 5 adjustable current levels: 2A, 8A, automatic, 20A, and 25A. Choose the appropriate current based on your battery's capacity and desired charging speed.



Figure 5: Adjustable Current Levels

3.4 Using Booster Mode:

For 12V batteries that need a quick boost to start, select the**BOOSTER** mode. The display will show a 200-second countdown. After the countdown, the charger will indicate 'ON', and you can attempt to start the vehicle.



Figure 6: Upgraded Booster Mode

▶ **Watch video online**

25A Battery Charger

Video 2: Overview of the 25A Battery Charger's features and modes.

▶ **Watch video online**

tk2500 25A Lifepo4 Battery Charger

Video 3: Detailed demonstration of the TK2500 25A LiFePO4 Battery Charger.

3.5 Climate Optimization:

The charger automatically adjusts its charging process based on ambient temperature. It enters Summer Mode above 82°F (28°C) for safe charging and Winter Mode below 50°F (10°C) for powerful charging in colder conditions.



Figure 7: Automatic Summer and Winter Modes

4. Maintenance

Regular maintenance ensures the longevity and optimal performance of your E-FAST 25A Battery Charger and your batteries.

4.1 Battery Repair Function:

The Repair mode is designed to recover old, idle, or slightly damaged batteries. Select this mode and allow the charger to run for up to 16 hours. Note that severely damaged or non-rechargeable batteries may not be recoverable.



Figure 8: Repair Your Battery Efficiently

4.2 Cleaning and Storage:

- Always disconnect the charger from the power source and battery before cleaning.
- Wipe the charger's exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- The charger features a large silent fan for efficient heat dissipation. Ensure the fan vents are clear of obstructions.
- Utilize the integrated cable storage design on the back of the product to keep power cords tidy when not in use.
- Store the charger in a cool, dry place away from direct sunlight and extreme temperatures.



Figure 9: Portable Storage and Design Features

5. Troubleshooting

If you encounter issues with your E-FAST 25A Battery Charger, refer to the following common problems and solutions:

- **Charger Not Turning On:** Ensure the AC power cord is securely plugged into a live outlet and the battery clamps are correctly connected to the battery terminals (red to positive, black to negative).
- **"dE5" Mode Displayed:** If "dE5" is displayed during charging, it indicates the charger is automatically adjusting. No action is required; wait at least 5 minutes for the charger to automatically adjust and begin charging.
- **Overheating Protection:** The charger has internal temperature monitoring. If it overheats, it will automatically reduce current or shut down to prevent damage. Ensure proper ventilation and clear fan vents.
- **Reverse Polarity Protection:** If the clamps are connected incorrectly, the charger will not operate and will display an error. Correct the connections immediately.

- **Short Circuit/Overcurrent/Overvoltage Protection:** The charger is equipped with multiple protections. If an issue occurs, the charger will stop charging and display an error code. Refer to the full user manual for specific error code meanings.
- **Battery Not Charging:** Verify that the battery type selected matches the battery connected. Ensure the battery is not severely damaged or non-rechargeable.

For more detailed troubleshooting steps or specific error codes, please consult the comprehensive user manual provided with your product.

6. Specifications

Feature	Specification
Model	TK2500
Input Voltage	100-240V AC
Output Voltage	12V / 24V DC (Auto-detect)
Output Current	2A, 8A, Auto, 20A, 25A (Adjustable)
Battery Types Supported	Lead-Acid (Flooded, Gel, AGM, SLA, GEL), LiFePO4
Booster Mode Duration	200 seconds (for 12V batteries only)
Repair Mode Duration	16 hours
Cooling	Large Silent Fan with Intelligent Control
Product Dimensions	7.6 x 8.5 x 5 inches
Item Weight	3.8 pounds
Housing Material	ABS Flame-Retardant Shell, Aluminum Alloy
Country of Origin	China

7. Warranty and Support

E-FAST products are manufactured with high-quality materials and undergo rigorous testing to ensure reliability and performance. This product comes with a standard manufacturer's warranty covering defects in materials and workmanship.

7.1 Warranty Information:

Please refer to the warranty card included in your product packaging for specific warranty terms, conditions, and duration. Retain your proof of purchase for warranty claims.

7.2 Customer Support:

For technical assistance, troubleshooting, or warranty inquiries, please contact E-FAST customer support through the retailer where you purchased the product or visit the official E-FAST website for contact information.

We are committed to providing excellent service and support for our products.

© 2025 E-FAST. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B0CYBVWBWL

More documents and user manuals: **https://manuals.plus/**