

YONHAN RJ-C121501B

YONHAN 15-Amp Smart Battery Charger User Manual

Model: RJ-C121501B

1. INTRODUCTION

Thank you for choosing the YONHAN 15-Amp Smart Battery Charger. This fully-automatic, 9-stage smart battery charger is designed for optimal charging and maintenance of various battery types, including LiFePO4, AGM, gel, and flooded lead-acid batteries. It automatically detects voltage (12V/15A or 24V/8A) and features advanced pulse repair technology to extend battery life. Please read this manual thoroughly before use to ensure safe and efficient operation.



Figure 1: The YONHAN 15-Amp Smart Battery Charger, showcasing its compact design, digital display, and included battery clamps and power cord.

2. IMPORTANT SAFETY INFORMATION

WARNING: Always read and understand all safety instructions before operating this charger. Failure to do so may result in electric shock, fire, or serious injury.

- **Battery Type Compatibility:** This charger is compatible with 12V/24V LiFePO₄, AGM, gel, and flooded lead-acid batteries. Do not attempt to charge other battery types.
- **LiFePO₄ Batteries:** Do not charge LiFePO₄ (14.6V/29.6V $\pm$ 0.2V) batteries without a Battery Management System (BMS).
- **Ventilation:** Ensure adequate ventilation during charging. Batteries can produce explosive gases.
- **Connection Order:** Always connect the charger to the battery terminals first, then plug the charger into the AC power outlet. Disconnect in reverse order.
- **Multi-Protection System:** The charger features built-in protections against reverse polarity, short circuits, overcharging, overheating, over-voltage, and over-current. However, always exercise caution.
- **Damaged Batteries:** This function cannot repair a completely dead battery. Do not attempt to charge severely damaged or frozen batteries.
- **Environmental Conditions:** Avoid exposing the charger to rain, snow, or excessive moisture. Operate in a well-lit area.

3. PACKAGE CONTENTS

Verify that all items are present and undamaged upon opening the package:

- YONHAN 15-Amp Smart Battery Charger Unit
- Battery Clamps (Red for positive, Black for negative)
- AC Power Cord
- User Manual (this document)

4. PRODUCT FEATURES

- **Versatile Charging:** Supports 12V (15A) and 24V (8A) batteries.
- **Wide Battery Compatibility:** Charges LiFePO₄, AGM, Gel, and Flooded Lead-Acid batteries.
- **9-Stage Smart Charging:** Advanced charging process for optimal battery health and longevity. (Note: LiFePO₄ model is 5-stage).
- **Pulse Repair Function:** Helps reactivate and desulfate old or sulfated batteries, restoring lost performance.
- **All-in-One Safety Protection:** Built-in safeguards against reverse polarity, short circuits, overcharging, overheating, over-voltage, and over-current.
- **Smart Charging with Memory Function:** Automatically remembers the last selected mode for convenience.
- **Climate-Adaptive Technology:** Optimized for various temperature environments (-15°C to 45°C automatic voltage compensation).
- **Large Digital Display:** Provides real-time information on temperature, voltage, current, charging status, and error codes.

VISUAL DISPLAY OF BATTERY INFORMATION

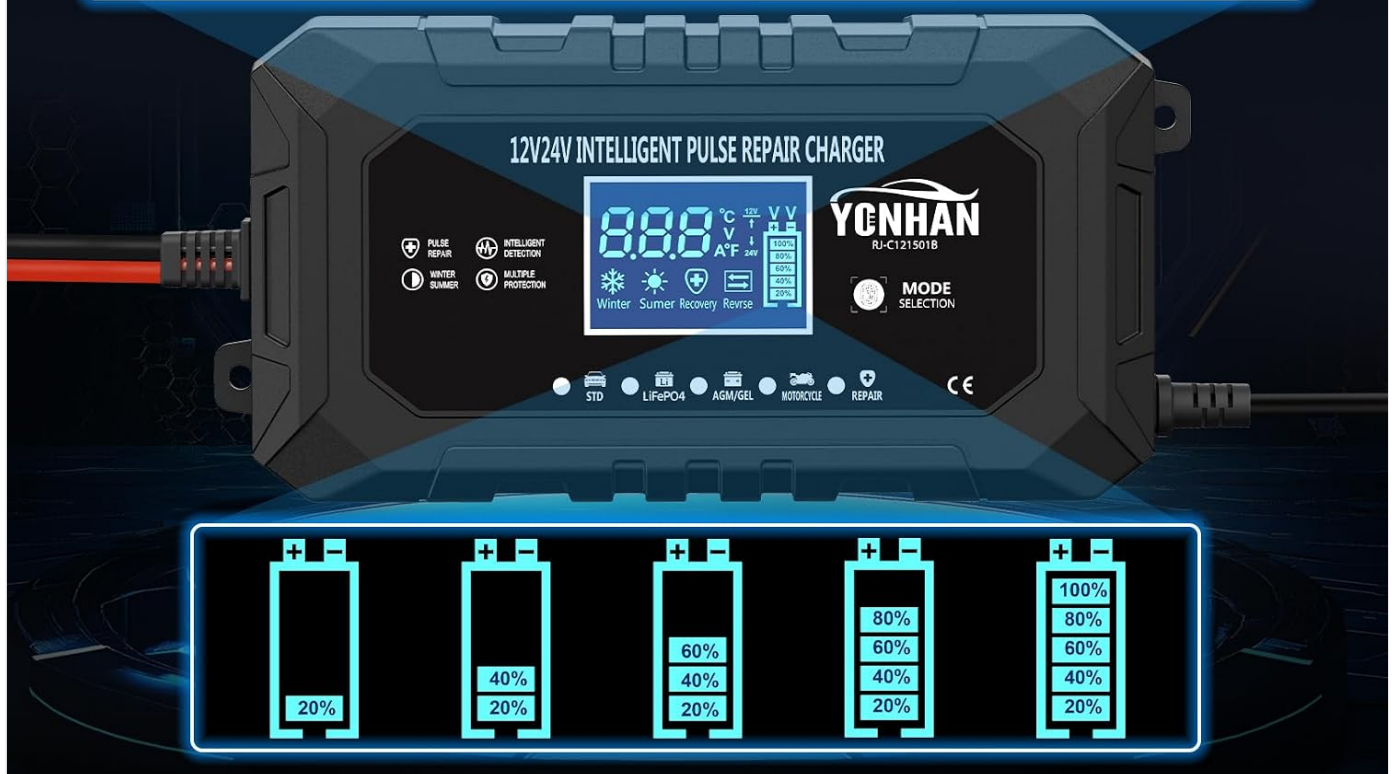
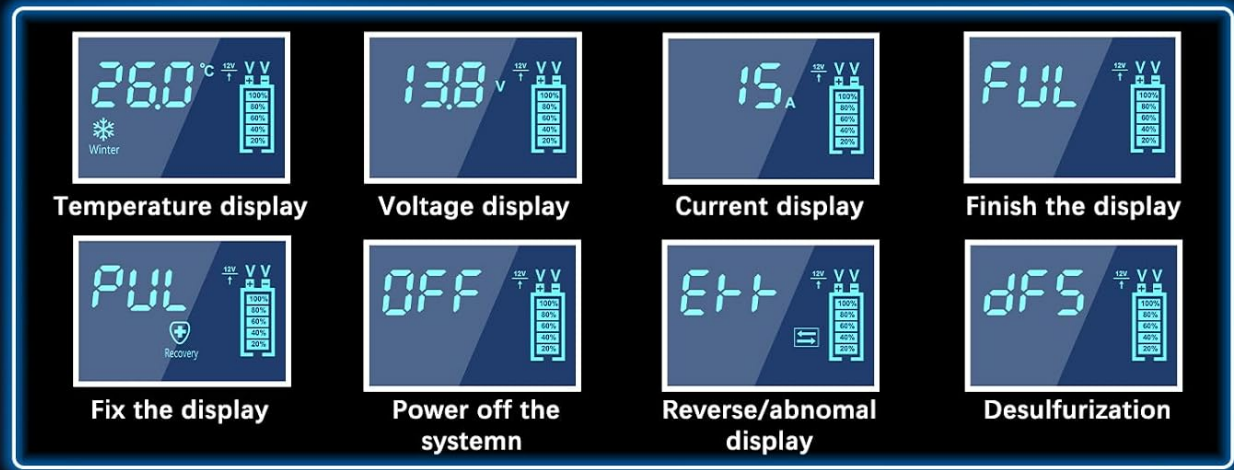


Figure 2: The charger's visual display provides comprehensive battery information, including temperature, voltage, current, and charging progress.

5. SETUP

- 1. Prepare the Battery:** Ensure the battery terminals are clean and free of corrosion.
- 2. Connect Battery Clamps:**
 - Connect the **RED** positive (+) clamp to the positive battery terminal.
 - Connect the **BLACK** negative (-) clamp to the negative battery terminal.
- 3. Connect to Power:** Plug the AC power cord into a standard 110-230V (50-60Hz) electrical outlet. The charger will power on and display current battery information.

15A HIGH-CAPACITY RAPID CHARGER

EFFICIENT CHARGING IN LESS TIME

WARNING: Do not charge the LiFePO4 (14.6V/29.6V $\pm 0.2V$) battery without the 'BMS' system.



INPUT VOLTAGE:
AC: 110-230V (50-60HZ)

OUTPUT VOLTAGE:
12V-15.5V/24V-31V

Figure 3: Proper connection of the charger to a battery, illustrating the input power and output charging connections.

6. OPERATING INSTRUCTIONS

The YONHAN Smart Battery Charger is designed for ease of use with one-touch operation.

6.1. Mode Selection

After connecting the charger to the battery and power, the charger will automatically detect the battery voltage. Use the **MODE** button to cycle through the available charging modes:

- **STD/AGM:** Standard lead-acid and AGM batteries.
- **GEL/WET:** Gel and wet cell batteries.
- **LiFePO4:** Lithium Iron Phosphate batteries.
- **MOTORCYCLE:** For smaller 12V batteries, also used for trickle charging.
- **REPAIR:** Pulse repair function for desulfating and reactivating batteries.



Figure 4: The MODE button allows selection of the appropriate charging program for your battery type.

6.2. Charging Process

1. Select the appropriate mode for your battery type.
2. The charger will automatically begin the 9-stage (or 5-stage for LiFePO4) charging process. The display will show real-time charging status.
3. When charging is complete, the screen will display "FUL". The charger will then automatically switch to float/trickle charge mode to maintain the battery.

6.3. Winter Maintenance (Trickle Charge)

To maintain your battery during winter or extended storage, follow these steps:

1. Select the appropriate mode (STD/AGM, GEL/WET, or LiFePO4) to fully charge the battery until the screen displays "FUL".
2. Once fully charged, switch the mode to "MOTORCYCLE". The charger will automatically enter trickle charging mode, keeping the battery optimally charged for an extended period.

7. MAINTENANCE

- **Cleaning:** Disconnect the charger from power and battery before cleaning. Use a soft, dry cloth to wipe the exterior. Do not use harsh chemicals or abrasives.
- **Storage:** Store the charger in a cool, dry place when not in use. Keep cables neatly coiled.
- **Battery Health:** Regularly inspect battery terminals for corrosion and clean as necessary. Ensure battery fluid levels are adequate for flooded batteries.
- **Pulse Repair:** Utilize the pulse repair function periodically for older or sulfated batteries to help maintain their capacity and extend their lifespan.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Charger does not power on.	No AC power; loose connection.	Check power outlet and ensure all connections are secure.
Display shows "dE5" mode.	Charger is automatically adjusting.	No action required. Wait at least 5 minutes for the charger to automatically adjust and begin charging.
Charger not charging.	Incorrect mode selected; battery severely discharged/damaged; reverse polarity.	Verify correct mode for battery type. Check battery condition. Ensure clamps are connected correctly (red to positive, black to negative).
Fan runs continuously.	Normal operation during charging.	This is normal until the battery is fully charged.

9. SPECIFICATIONS

- **Model Number:** RJ-C121501B
- **Input Voltage:** 110-230V (50-60Hz)
- **Output Voltage/Current:**
 - 12V-15.5V / 15A (Max)
 - 24V-31V / 8A (Max)
- **Automatic Voltage Compensation:** -15°C to 45°C
- **Product Dimensions:** 6.49"D x 2.59"W x 3.4"H (16.48 cm x 6.58 cm x 8.64 cm)
- **Item Weight:** 1.46 pounds (0.66 kg)
- **Safety Certification:** UL
- **Manufacturer:** YONHAN

Weather-Resilient Charging System with Enhanced Environmental Adaptability



❄ Winter : 0-10°C

☀ Summer : > 28°C

Normal temperature: 10°-27°C (pictograph not shown)

Figure 5: The charger is designed with climate-adaptive technology to perform optimally across a wide range of temperatures.

10. WARRANTY & SUPPORT

YONHAN products are manufactured to the highest quality standards. For warranty information, technical support, or any inquiries regarding your YONHAN 15-Amp Smart Battery Charger, please contact YONHAN customer service through the retailer's platform or visit the official YONHAN store online. Please retain your proof of purchase for warranty claims.

For the latest information and support, please visit the [YONHAN Store on Amazon](#).

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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