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YONHAN 781912446215

YONHAN 25-Amp Smart Battery Charger User Manual

Model: 781912446215

1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your YONHAN 25-Amp Smart Battery Charger. This advanced charger is designed for 12V and 24V battery systems, compatible with various battery types including LiFePO4 and lead-acid (Standard, AGM, Gel, Deep-Cycle). Please read this manual thoroughly before first use and retain it for future reference.

2. SAFETY INFORMATION

Always prioritize safety when operating electrical equipment. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Read All Instructions:** Before using the charger, read all instructions and cautionary markings on the charger, the battery, and the vehicle or device using the battery.
- **Ventilation:** Ensure adequate ventilation during charging. Batteries can produce explosive gases.
- **Eye Protection:** Always wear eye protection and protective clothing when working with batteries.
- **Avoid Sparks:** Do not smoke or allow a spark or flame in the vicinity of the battery or engine.
- **Disconnect Power:** Disconnect the charger from the power outlet before making or breaking connections to the battery.
- **Proper Voltage:** Use the charger only for the specified voltage and battery types.
- **Children:** Keep out of reach of children.

MULTIPLE SAFETY PROTECTION

Ensures complete protection for you and your devices



The charger incorporates multiple safety protections including fireproof aluminum material, intelligent cooling, over-voltage, short-circuit, overload, reverse polarity, overheat, and anti-current backflow protection.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- YONHAN 25-Amp Smart Battery Charger Unit
- Smart Jumper Clamps (Red and Black)
- AC Power Cable
- User Manual (this document)

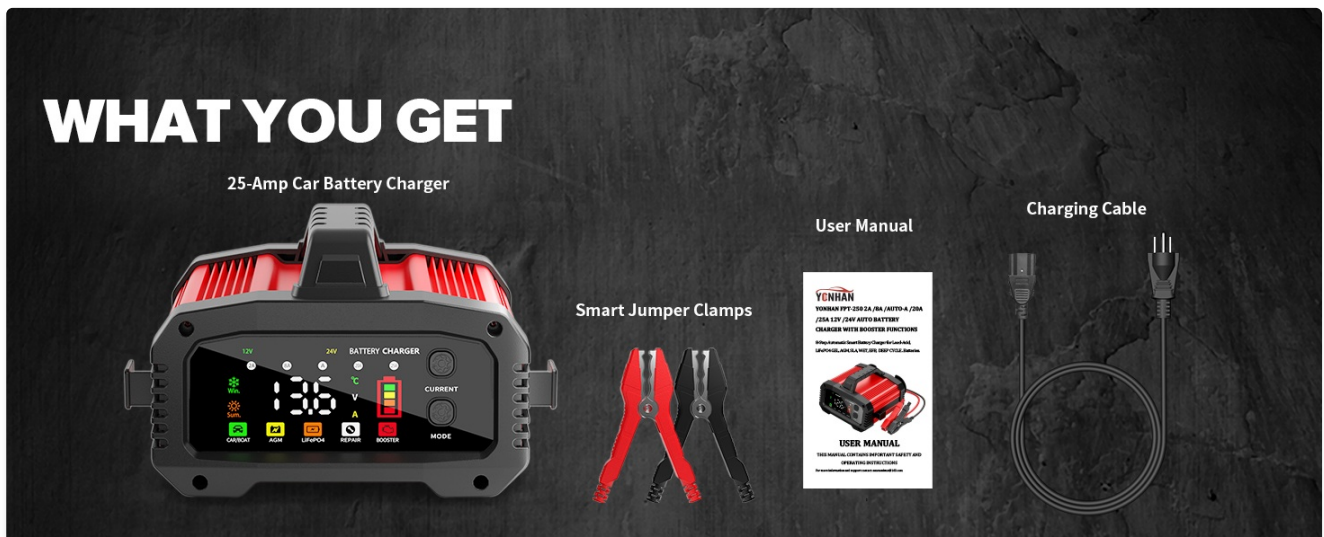


Illustration of the YONHAN 25-Amp Car Battery Charger, smart jumper clamps, user manual, and charging cable included in the package.

4. PRODUCT OVERVIEW

The YONHAN 25-Amp Smart Battery Charger features a robust design with an intuitive digital LCD display and convenient side clips for cable management.



Front view of the YONHAN 25-Amp Smart Battery Charger, showing the display, control buttons, and battery clamps.

4.1. Digital LCD Display

The visual digital LCD provides real-time information about the charging process. It can display:

- Charging Voltage (V)
- Charging Current (A)
- Battery Type (e.g., CAR/BOAT, AGM, LiFePO4)
- Charging Mode (e.g., REPAIR, BOOSTER)
- Percentage of Power Remaining (Battery Level Indicator)
- Temperature (°C)
- Error Information (e.g., Misconnection)
- Charging Status (e.g., Finish)

VISUAL DISPLAY OF BATTERY INFORMATION



12V	Charge Voltage	25.0	Charge Current	22.0°C	Temperature
End	Finish	PUL	Repair Mode	87.0	Misconnection

Four stages battery level screen



The charger's LCD screen showing various charging parameters like voltage, current, temperature, and battery level.

4.2. Portable Design

The charger features integrated clip designs on both sides, allowing for neat storage and easy carrying of the charger cables when not in use. This makes the unit highly portable and reduces clutter.

TEMPERATURE ADAPTIVE

An integrated digital thermal sensor detects the ambient temperature

28°C

8°C

SUMMER MODEL

When the temperature is above +28°C Reduce the charge voltage

WINTER MODEL

When the temperature is below +10°C Raise the charge voltage.

NOTE: ONLY FOR CAR MODE

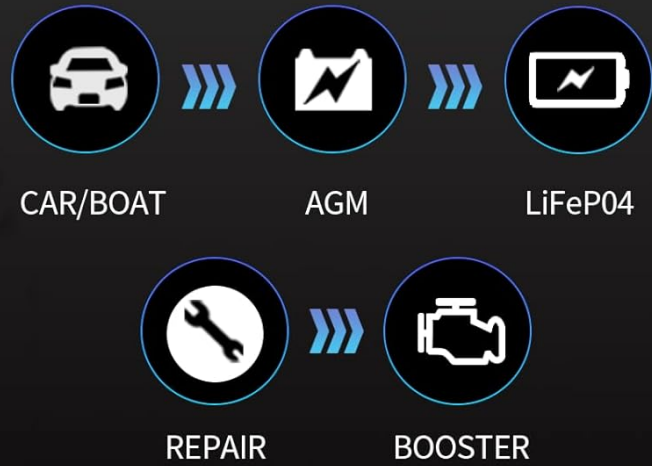
The redesigned clamps and integrated cable organizers on the side of the charger for convenient storage.

5. SETUP

Follow these steps to set up your YONHAN Smart Battery Charger:

1. **Prepare the Battery:** Ensure the battery terminals are clean and free of corrosion.
2. **Connect Clamps:** Connect the RED positive (+) clamp to the positive (+) battery terminal. Connect the BLACK negative (-) clamp to the negative (-) battery terminal. Ensure a secure connection.
3. **Connect to Power:** Plug the AC power cable into a standard wall outlet (100-240V AC). The charger will power on and begin automatic detection.
4. **Select Mode (if necessary):** The charger will automatically detect 12V/24V systems and the battery type. If you need to select a specific mode (e.g., LiFePO4, Repair, Booster), use the 'MODE' button on the charger.

CHARGE CURRENT AND 5 MODES SELECTION



Charge Current	2A	8A	Auto:A	20A	25A
Battery size	6-40AH	30-150AH	45-200AH	60-300AH	75-400AH

The YONHAN charger connected to a car battery, illustrating the proper clamp connections.

6. OPERATING MODES

The YONHAN charger offers various modes and current levels to optimize charging for different battery types and conditions.

6.1. Automatic Detection and Standard Charging

The charger automatically detects 12V/24V systems and is compatible with all lead-acid battery types (Standard, AGM, Gel, Deep-Cycle) and LiFePO4 batteries. It features 5 adjustable current levels: 25A, 20A, 8A, 2A, and AUTO.

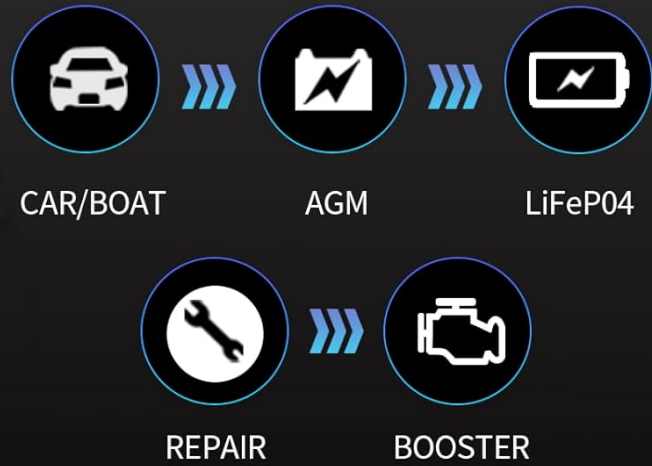
CAR BATTERY CHARGER 12V&24V

For all types of 12V/24V lead-acid automotive, LiFePO4, marine, and deep-cycle batteries



The charger's compatibility with 12V and 24V lead-acid, lithium, and LiFePO4 batteries.

CHARGE CURRENT AND 5 MODES SELECTION



Charge Current	2A	8A	Auto:A	20A	25A
Battery size	6-40AH	30-150AH	45-200AH	60-300AH	75-400AH

Overview of the charge current options (2A, 8A, Auto, 20A, 25A) and battery size compatibility, along with mode selections (Car/Boat, AGM, LiFePO4, Repair, Booster).

6.2. Advanced Booster Mode

The Emergency Boost Technology is designed to revive severely depleted 12V batteries. When 'BOOSTER' mode is selected, the charger delivers maximum instantaneous current for 200 seconds (time-limited for safety). After this period, the display will show 'On', indicating the vehicle can now be started.

Note: This function is only for 12V batteries.

THE NEW BOOSTER MODE

When the "Booster" mode is selected, at this point the charging current will reach the maximum value and will last for 200 seconds. Afterward, the display will show "On", indicating that the vehicle can now be started.



The charger display indicating the 'BOOSTER' mode is active, designed for quick battery revival.

6.3. Battery Repair Function

The 'REPAIR' mode can be initiated by long-pressing the repair button. This function helps to maintain or soft-start batteries that have been idle for a long time, are old, or cannot be charged normally. It aims to activate and extend battery life.

Note: This function cannot repair a totally dead battery or a battery that is seriously damaged.

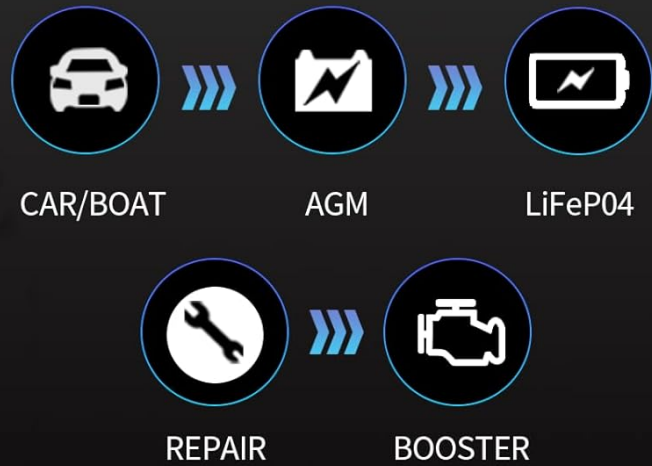
6.4. Temperature Adaptive Charging

The charger features an integrated digital thermal sensor that detects ambient temperature. This allows for adaptive charging:

- **Summer Model:** When the temperature is above +28°C, the charger reduces the charge voltage to prevent overcharging in hot conditions.
- **Winter Model:** When the temperature is below +10°C, the charger raises the charge voltage to ensure full charge in cold conditions.

Note: This feature is only for CAR mode.

CHARGE CURRENT AND 5 MODES SELECTION



Charge Current	2A	8A	Auto:A	20A	25A
Battery size	6-40AH	30-150AH	45-200AH	60-300AH	75-400AH

Illustration of the charger's temperature adaptive feature, adjusting charge voltage based on ambient temperature for optimal performance in summer and winter.

6.5. 8-Stage Charging Process

The charger employs an intelligent 8-stage charging process to ensure optimal battery health and longevity:

1. Battery Desulphation
2. Soft Start Charge
3. Bulk Charge
4. Absorption Charge
5. Battery Test
6. Recondition Charge
7. Float & Maintenance Charging
8. Re-start Charge after Battery Discharged

8-STAGE CHARGING PROCESS

- 1 Battery desulphation
- 2 Soft start charge
- 3 Bulk charge
- 4 Absorption charge
- 5 Battery test
- 6 Recondition charge
- 7 Float & maintenance charging
- 8 Re-start charge after battery discharged



A visual representation of the 8 distinct stages involved in the charger's intelligent charging process.

7. MAINTENANCE

The YONHAN charger is designed for minimal maintenance. Keep the unit clean and dry. Regularly inspect the cables and clamps for any damage. Store the charger in a cool, dry place when not in use, utilizing the integrated cable organizers.

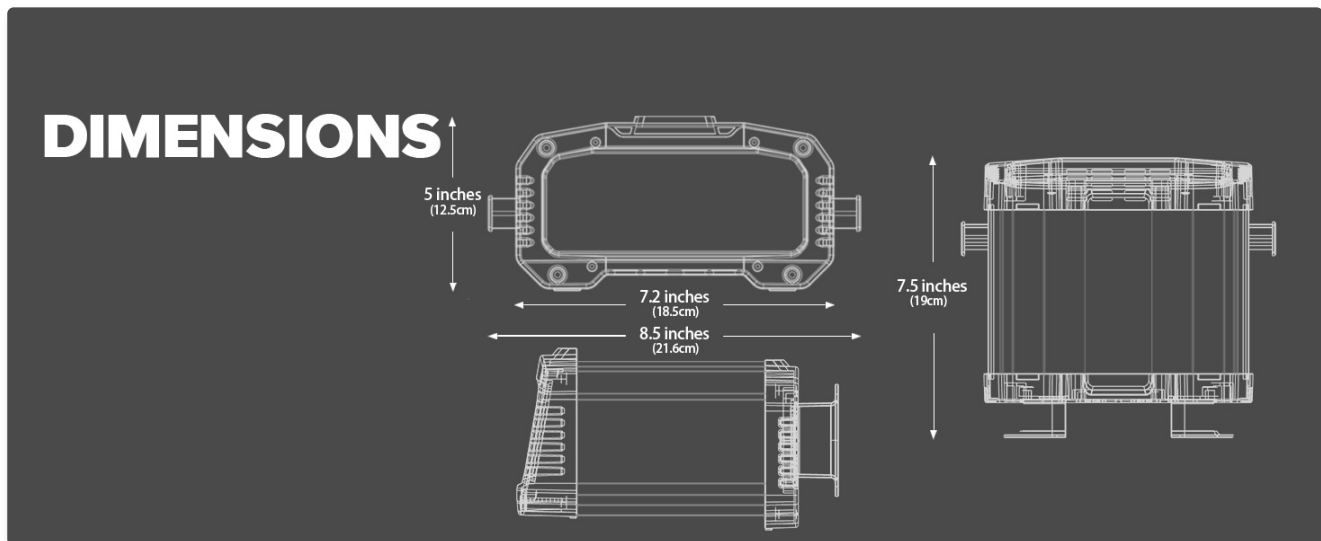
8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Charger does not turn on.	No power from outlet; faulty connection.	Check power outlet; ensure AC cable is securely plugged in.
Charger displays "Misconnection" or error code.	Incorrect battery clamp connection (reverse polarity); loose connection.	Ensure RED clamp is on positive (+) and BLACK clamp on negative (-). Tighten connections.
Battery not charging or charging slowly.	Battery is severely damaged; incorrect mode selected; battery capacity too large for selected current.	Try 'REPAIR' mode for depleted batteries (if not totally dead). Select appropriate current level for battery size. Ensure battery is not beyond repair.
Charger gets hot during operation.	Normal operation; high ambient temperature; poor ventilation.	The charger has built-in over-temperature protection. Ensure adequate ventilation around the unit. Charging may pause automatically if temperature is too high.
Cannot switch to 24V charging.	Possible unit malfunction or specific battery condition preventing 24V detection.	Ensure the battery system is indeed 24V. If the issue persists, contact YONHAN customer support.

9. SPECIFICATIONS

Feature	Specification
Brand	YONHAN
Model Number	781912446215
Product Dimensions	10 x 5.9 x 9.2 inches (25.4 x 14.99 x 23.37 cm)
Item Weight	3.87 pounds (1.76 Kilograms)
Output Voltage	12 Volts (DC) / 24 Volts (DC)
Adjustable Current Levels	2A, 8A, AUTO, 20A, 25A
Compatible Battery Types	Lead-Acid (Standard, AGM, Gel, Deep-Cycle), LiFePO4
Color	Red
Manufacturer	YONHAN



Technical drawing illustrating the dimensions of the YONHAN battery charger.

10. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the warranty card included with your product or visit the official YONHAN website. You may also contact YONHAN customer service through the retailer where the product was purchased.

YONHAN Store: [Visit the YONHAN Store on Amazon](#)

