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› [Y&H 60 Amp Solar Charge Controller WPE6048-SA Instruction Manual](#)

## Y&H WPE6048-SA

# Y&H 60 Amp Solar Charge Controller Instruction Manual

Model: WPE6048-SA | Brand: Y&H

## 1. INTRODUCTION

Thank you for choosing the Y&H 60 Amp Solar Charge Controller. This device is designed to manage the power flow from your solar panels to your battery bank, ensuring efficient and safe charging. It automatically detects 12V, 24V, 36V, and 48V DC system voltages and is compatible with various battery types, including LiFePO4, Gel, and Lithium batteries. This manual provides essential information for the proper installation, operation, and maintenance of your solar charge controller.

## 2. SAFETY INSTRUCTIONS

- Ensure all connections are tight and correct to prevent damage or injury.
- Do not attempt to repair or modify the controller yourself. Refer to qualified personnel.
- Install the controller in a well-ventilated area, away from flammable materials and direct sunlight.
- Always connect the battery first, then the solar panel, and finally the load. Disconnect in the reverse order.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.
- The controller is designed for indoor use or in a protective enclosure. Avoid exposure to water or excessive humidity.

## 3. PRODUCT OVERVIEW

The Y&H 60 Amp Solar Charge Controller features advanced technology for optimal solar power management. Key features include:

- **Automatic Voltage Detection:** Automatically identifies 12V, 24V, 36V, and 48V DC system voltages.
- **Multiple Protections:** Includes low voltage, overvoltage, overcharge, overcurrent, over-temperature, short-circuit, anti-reverse discharge, and reverse connection protection for both solar panel and battery.

- **Wide Battery Compatibility:** Supports various battery types such as SLA, UOZ, FLD, GEL, LiFePO4, and ternary lithium batteries, with user-defined battery parameters.
- **High-Definition LCD Screen:** Provides real-time monitoring of charging/discharging status, solar panel voltage, charging current, battery voltage, power generation, temperature, and error codes.
- **Intelligent PWM Charging:** Utilizes three-stage PWM charging technology for efficient and safe battery charging, preventing overcharging and over-discharging.
- **Dual USB Outputs:** Integrated 5V/2A (max) USB ports for charging mobile devices.
- **Natural Thermal Cooling:** Designed for quiet and silent operation.

## 4. SETUP

### 4.1 Connection Scheme

Follow the connection order carefully to ensure proper and safe operation. Connect the components in the following sequence:

1. **Connect the Battery:** Connect the battery to the charge controller first. Ensure correct polarity (+ to + and - to -).
2. **Connect the Solar Panel:** Connect the solar panel to the charge controller. Ensure correct polarity.
3. **Connect the Load:** Connect the DC load to the charge controller. Ensure correct polarity.

Refer to the diagram below for a visual representation of the connection scheme.

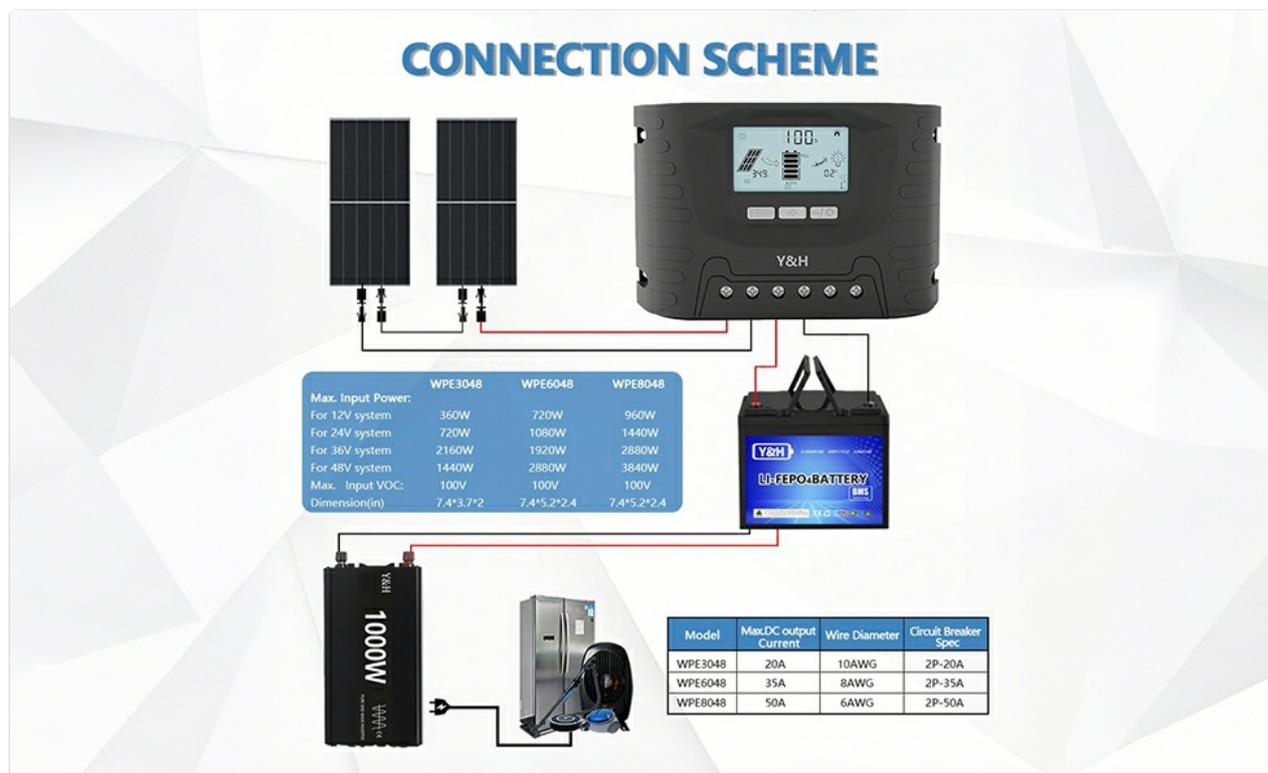


Image: Connection diagram illustrating the wiring of solar panels, charge controller, battery, and DC load.

### 4.2 Initial Configuration

Upon initial connection, the controller will automatically detect the system voltage. You can then adjust parameters via the LCD screen to match your specific battery type and charging preferences. The controller supports user-defined battery settings for optimal performance.

## 5. OPERATING INSTRUCTIONS

### 5.1 LCD Display

The large LCD screen provides comprehensive real-time information about your solar power system. It displays:

- Current Charging Mode
- Battery's Current State (Voltage, Charge Level)
- Loads' ON/OFF Status & State
- Solar Panel Charging Voltage and Current
- Power Generation
- System Temperature
- Error Codes (if any)



Image: Close-up of the LCD screen showing various system parameters.

### 5.2 Parameter Adjustment

The controller allows for adjustment of various charging and discharging parameters to optimize performance for different battery types and system requirements. Consult the detailed user interface guide (not provided in this summary) for specific steps on navigating the menu and modifying settings. This includes setting battery voltage calibration and load control hours.



Image: Visual details of the controller, including LCD display, dimensions, USB charging port, and heat dissipation fins.

## 6. MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your solar charge controller:

- **Cleanliness:** Keep the controller clean and free from dust and debris. Use a dry cloth for cleaning.
- **Connection Checks:** Periodically inspect all wiring connections for tightness and corrosion. Loose connections can lead to power loss or overheating.
- **Ventilation:** Ensure the installation area remains well-ventilated to allow for proper heat dissipation.
- **Environmental Conditions:** Verify that the controller is not exposed to extreme temperatures, direct moisture, or corrosive environments.

## 7. TROUBLESHOOTING

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If you encounter issues with your solar charge controller, refer to the following common troubleshooting steps:

- **No Display/No Power:** Check battery connections and ensure the battery has sufficient voltage.
- **No Charging:** Verify solar panel connections and ensure panels are receiving adequate sunlight. Check for any shading or damage to the panels.
- **Load Not Working:** Check load connections and ensure the load is within the controller's rated capacity. Verify load settings on the LCD.
- **Error Codes:** If an error code appears on the LCD, consult the full product manual (if available) for specific code meanings and solutions. Common errors relate to overvoltage, undervoltage, or short circuits.
- **Battery Overcharging/Undercharging:** Ensure the correct battery type and parameters are selected in the controller settings.

If the problem persists after following these steps, contact customer support.

## 8. SPECIFICATIONS

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# LCD SCREEN

## View Controller Operating Status



Current Charging Mode



Battery's Current State



Loads' ON/OFF & State



Image: Diagram illustrating the multiple protection features integrated into the solar charge controller.

Feature	Specification
Brand	Y&H
Model Number	WPE6048-SA
Product Dimensions	20 x 13 x 6 cm
Weight	700 grams
System Voltage	12V/24V/36V/48V Auto-Detect
Max. PV Input Open Circuit Voltage	100V
Max. PV Input Power (12V System)	720W
Max. PV Input Power (24V System)	1440W
Max. PV Input Power (36V System)	2160W
Max. PV Input Power (48V System)	2880W
USB Output	Dual 5V/2A (Max)
Battery Compatibility	SLA, UOZ, FLD, GEL, LiFePO4, Ternary Lithium, User-defined
Display Type	LCD
Material	Plastic
Color	Black
UPC	704334854932



Image: The controller's compatibility with various battery types, including AGM, GEL, Flooded, LiFePO4, and Sealed Lead-acid.

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the documentation included with your purchase or contact the seller directly. Keep your purchase receipt as proof of purchase for warranty claims.

The Y&H 60 Amp Solar Charge Controller is designed for various applications, including solar home systems, farms, boats, and RVs, providing reliable power management.



Image: Examples of solar charge controller applications in homes, farms, boats, and RVs.