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Renogy KIT-STARTER-100D

Renogy 100W 12V Solar Panel Starter Kit Instruction Manual

Brand: Renogy | **Model:** KIT-STARTER-100D

INTRODUCTION

The Renogy 100W Solar Starter Kit is designed for easy installation and is an economical choice for solar beginners. This kit includes all necessary equipment for building a new system: a 100W monocrystalline solar panel, a 30A LCD PWM charge controller, adapter cables, tray cables, and Z-brackets. It is an ideal solution for off-grid and mobile solar power applications such as RVs, campers, boats, sheds, and cabins. The kit is capable of producing an average of 500Wh of electricity per day (based on 5 hours of direct sunlight conditions), providing a reliable and environmentally friendly power supply.

PRODUCT OVERVIEW

Key Features

- **Efficient Performance:** Generates an average of 500Wh per day with 22.5% cell efficiency. Each panel undergoes 100% EL testing to ensure quality.
- **Exceptional Safety:** Certified by UL 61730, CSA C22.2#61730, IEC 61730/IEC 61215, capable of withstanding 2400Pa wind and 5400Pa snow loads. Features IP65-rated J-box and IP67-rated solar connectors.
- **Remote Monitoring:** The Wanderer PWM Charge Controller includes an RS232 Bluetooth port for remote system monitoring via the Renogy DC Home app with an optional Renogy BT-1 Bluetooth Module.
- **Excellent Compatibility:** The Wanderer 30A PWM Charge Controller supports expansion up to 400W with additional solar panels and is compatible with AGM, Gel, Flooded, and Lithium batteries.

Kit Components

The Renogy 100W 12V Solar Panel Starter Kit includes the following main components:

- 100W Monocrystalline Solar Panel
- 30A LCD PWM Charge Controller (Wanderer)
- Adapter Kit Cables
- Tray Cables
- Z-Brackets for mounting

100W Panel with 30A PWM Controller



500Wh
of Power Per Day*

Grade A+
Cells 

22.5%
High Efficiency 

9 BusBars
Half Cell 

*It varies with sunlight.

Image: Renogy 100W Solar Panel and 30A PWM Controller, highlighting 500Wh power per day, Grade A+ cells, 22.5% efficiency, and 9 busbars.



Image: A vertical shot of the Renogy 100W solar panel and the Wanderer charge controller, illustrating the main components of the kit.

SAFETY INFORMATION

The Renogy 100W Solar Panel is built with safety in mind and is certified to meet high industry standards. Always follow general electrical safety guidelines during installation and operation.

- Ensure all connections are secure and properly insulated to prevent electrical hazards.
- Avoid touching exposed wires or terminals when the panel is exposed to sunlight.
- The solar panel is designed to withstand harsh weather conditions, including 2400Pa wind and 5400Pa snow loads.
- The junction box is IP65-rated, and solar connectors are IP67-rated for protection against dust and water ingress.



Wind Load
2400Pa



UL61730-listed
Solar Panel



Image: Visual representation of the solar panel's safety features, including IP65 junction box, IP67 solar connectors, and resistance to 5400Pa snow load and 2400Pa wind load, along with UL61730 listing.

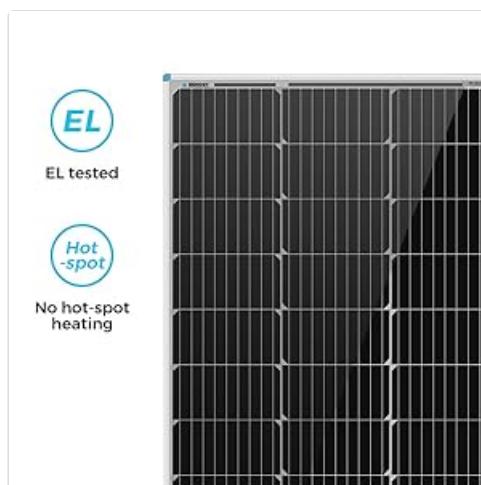


Image: Close-up of the solar panel's IP65 rated junction box and IP67 rated waterproof solar panel connectors, emphasizing durability and weather resistance.

SETUP AND INSTALLATION

The Renogy 100W Solar Starter Kit is designed for straightforward installation. Follow these general steps for setting up your system:

1. **Mount the Solar Panel:** Use the included Z-brackets to securely mount the 100W solar panel in a location that receives maximum direct sunlight. Ensure proper ventilation around the panel.
2. **Connect to Charge Controller:** Connect the solar panel's output cables to the 'PV' (Photovoltaic) input terminals on the Wanderer 30A PWM Charge Controller. Ensure correct polarity (positive to positive, negative to negative).
3. **Connect to Battery:** Connect the charge controller's 'Battery' output terminals to your 12V battery. The controller is compatible with AGM, Gel, Flooded, and Lithium batteries. Connect the battery first to the controller before connecting the solar panel.
4. **Connect to Load (Optional):** If using a DC load directly from the controller, connect it to the 'Load' terminals. For AC appliances, an inverter (not included) will be required, connected directly to the battery.



Image: A clear wiring diagram showing the connection flow from the solar panel to the charge controller, then to the battery (not included), and finally to an optional power inverter (not included).

Installation Video

Video: An official Renogy video demonstrating the setup of the Renogy Starter Kit, providing visual guidance for installation.

Product Overview Video

Video: An official merchant video providing a general overview of the Renogy 100 Watts 12 Volts Monocrystalline Solar Starter Kit.

OPERATING INSTRUCTIONS

Once installed, the Renogy 100W Solar Starter Kit operates largely automatically. The Wanderer PWM Charge Controller manages the charging process to protect your battery.

- The charge controller will automatically detect the battery voltage and begin charging when sufficient sunlight is available.
- The LCD display on the controller provides real-time information on system status.
- For enhanced monitoring, connect an optional Renogy BT-1 Bluetooth Module to the RS232 port on the

controller. This allows you to view voltage, current, and receive warnings via the Renogy DC Home app on your smartphone.



Image: The Wanderer PWM Charge Controller with an illustration of its RS232 Bluetooth port and remote monitoring capabilities via the Renogy DC Home app, showing real-time data.



Image: A smartphone screen displaying the Renogy DC Home app interface, showing solar system data like voltage and current, enabled by the BT-1 Bluetooth Module connected to the charge controller.



Image: An illustration depicting the various charging stages for a battery connected to the charge controller, including Bulk Charge, Boost Charge, Float Charge, and Equalization Charge.

MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your Renogy Solar Panel Starter Kit.

- **Clean Panels:** Periodically clean the surface of the solar panel with a soft cloth and water to remove dust, dirt, and debris that can reduce efficiency.
- **Inspect Connections:** Regularly check all electrical connections for tightness and corrosion. Ensure cables are not frayed or damaged.
- **Monitor Battery Health:** Use the charge controller's display or the Renogy DC Home app to monitor battery voltage and ensure it is within healthy operating ranges.
- **Environmental Checks:** Ensure the solar panel is free from obstructions (e.g., leaves, snow) that could block sunlight.

Image: A close-up of the solar panel highlighting its EL tested status and absence of hot-spot heating, indicating high quality and reliability.

TROUBLESHOOTING

If your solar system is not performing as expected, consider the following common issues:

- **No Power Output:** Check if the solar panel is receiving direct sunlight. Ensure all connections from the panel to the controller and from the controller to the battery are secure and correctly polarized.
- **Battery Not Charging:** Verify the battery type setting on the charge controller matches your battery. Check for any blown fuses in the system.
- **Low Power Output:** Clean the solar panel surface. Ensure there are no shadows or obstructions on the panel. Check the ambient temperature, as extreme temperatures can affect performance.
- **Controller Display Issues:** If the LCD display is blank, check the battery connection to the controller.

SPECIFICATIONS

Specification	Detail
Brand	Renogy
Model Number	KIT-STARTER-100D
Material	Aluminum
Product Dimensions	43.58" L x 22.72" W x 2.95" H
Item Weight	14.1 Pounds
Efficiency	High Efficiency (22.5% cell efficiency)
Included Components	Solar Panel, 30A PWM Charger Controller, Cables, Z-Brackets
AC Adapter Current	30 Amps (Charge Controller)
Maximum Voltage	12 Volts (System)
Maximum Power	100 Watts (Solar Panel)
Output Voltage	12 Volts
Special Feature	Lightweight Design
UPC	799475028984
Language	English

WARRANTY AND SUPPORT

Renogy provides comprehensive service plans for the 100W Solar Panel Starter Kit:

- **Solar Panel Material & Workmanship:** 10 years of coverage.
- **Charge Controller:** 2 years of coverage.
- **Solar Panel Power Output:** 25-year service plan.

For technical assistance or warranty claims, please contact Renogy customer support. Refer to the official Renogy website for the most up-to-date contact information and detailed warranty terms.

Market-Leading Service Plan

Enjoy worry-free usage with Renogy's support



Image: An infographic detailing Renogy's market-leading service plan, including 10 years for solar panel material and workmanship, 2 years for the charge controller, and a 25-year power output service plan.