

ECO-WORTHY FD-100Watt

ECO-WORTHY 100W Portable Foldable Solar Panel Instruction Manual

Model: FD-100Watt



1. INTRODUCTION

This manual provides instructions for the safe and efficient use of your ECO-WORTHY 100W Portable Foldable Solar Panel. This solar panel is designed to convert sunlight into electrical energy, suitable for charging portable power stations and other compatible devices during outdoor activities, RV trips, camping, hiking, and in off-grid situations.

Please read this manual thoroughly before operating the product and retain it for future reference.

2. SAFETY INSTRUCTIONS

- Do not attempt to disassemble, repair, or modify the solar panel. Unauthorized modifications can lead to damage, electric shock, or fire.
- Keep the solar panel away from open flames, heat sources, and corrosive substances.
- Avoid dropping or subjecting the panel to strong impacts.
- Ensure all connections are secure and correct before use. Incorrect wiring can cause damage to the panel or connected devices.
- Do not immerse the solar panel in water. While it is designed to be water-resistant, prolonged submersion can cause damage.
- Handle the panel carefully to avoid scratching the surface, which can reduce efficiency.
- Keep out of reach of children.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- 1 x ECO-WORTHY 100W Portable Foldable Solar Panel
- 1 x 59-inch 3-in-1 Integrated Cable (XT60/DC7909/DC8020 connectors)



Image: The ECO-WORTHY 100W Portable Foldable Solar Panel shown both folded and unfolded, alongside its integrated 3-in-1 connection cable.

4. PRODUCT FEATURES

- **High Efficiency:** Features A+ monocrystalline silicon solar cells with PERC technology, achieving up to 23% conversion efficiency.
- **Durable Construction:** Utilizes a 7-layer one-piece lamination technology with an ETFE coating for enhanced waterproof, dustproof, and long-lasting durability.
- **Portable Design:** Foldable to an ultra-thin 0.98 inches, weighing 11.02 lbs, with a magnetic handle for easy

transport. Integrated adjustable kickstands allow for quick setup and optimal angle adjustment.

- **Versatile Connectivity:** Equipped with a 59-inch 3-in-1 integrated cable featuring XT60, DC7909, and DC8020 connectors for compatibility with various power stations.
- **Expandable System:** Supports series and parallel connections to adjust output power for higher energy demands.



Image: A visual summary of the solar panel's key features, including its multi-connector cable, integrated kickstand, layered construction, high efficiency, storage pouch, and operational temperature range.

5. SETUP GUIDE

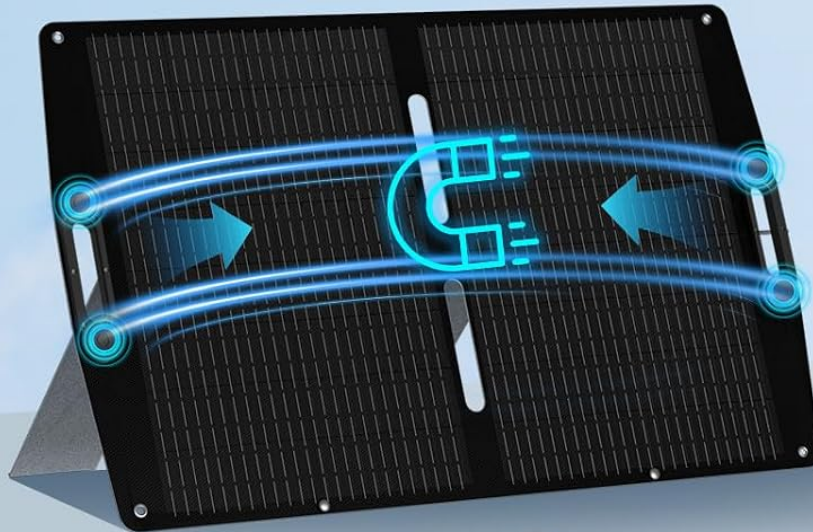
5.1 Unfolding the Panel

1. Place the folded solar panel on a flat, stable surface.
2. Gently unfold the panel sections until they are fully extended. The magnetic handle design helps secure the panel when folded.

5.2 Positioning with Kickstand

1. Locate the adjustable kickstands on the back of the panel.
2. Extend the kickstands to support the panel at your desired angle. Multiple angle adjustments are possible to optimize sunlight exposure throughout the day.
3. Orient the panel directly towards the sun for maximum efficiency.

Magnetic Handle Design



All-in-one kickstand for easy portability

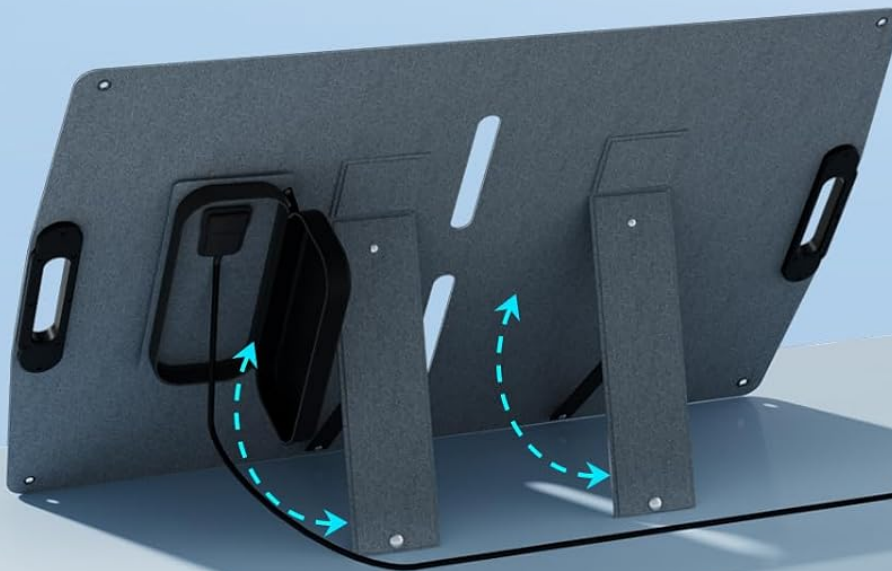


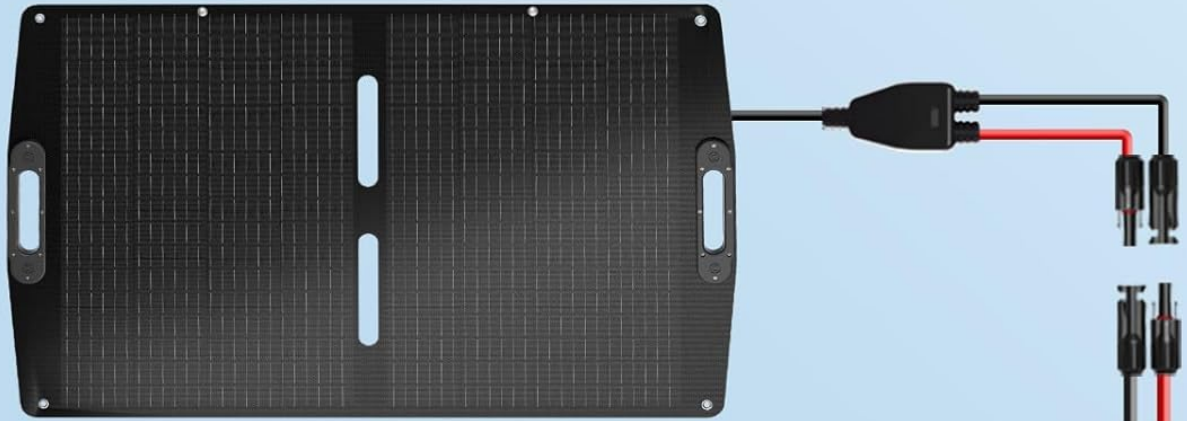
Image: A close-up view illustrating the magnetic handle for secure folding and the integrated adjustable kickstand for easy panel positioning.

5.3 Connecting to a Power Station

1. Identify the appropriate connector on the 3-in-1 integrated cable for your power station (XT60, DC7909, or DC8020).
2. Plug the correct connector into the solar input port of your power station.
3. Ensure the connection is firm and secure.

3-in-1, Reducing Clutter

Compatible with most Power Station models on the market



RIVER 2

RIVER 2 Pro

River 2
Max 500

DELTA 3

XT60



1000 v2

1000 Plus

2000 Plus

2000 v2

DC7909



Explorer
300

Explorer
500

Anker 521

ALLWEI
300W

DC8020

Image: The 3-in-1 integrated cable displaying its XT60, DC7909, and DC8020 connectors, designed for compatibility with a wide range of portable power stations.

6. OPERATION

6.1 Optimal Sunlight Exposure

For best charging performance, ensure the solar panel is positioned in direct sunlight without any shadows. Adjust the angle of the panel using the kickstands to face the sun directly. Repositioning the panel periodically as the sun moves across the sky can maximize energy capture.



Image: A graphic representation highlighting the 23% high efficiency achieved by the solar panel's PERC cells, indicating effective light conversion.

6.2 Expandable Power System

The ECO-WORTHY 100W solar panel supports series and parallel connections to increase total power output. This

allows you to combine multiple panels to meet higher energy demands for larger power stations or multiple devices. Refer to your power station's manual for specific instructions on connecting multiple solar panels.

Meet Different Power Needs

Supports series-parallel connection



Model	Charging Time*	Recommended Qty.
300WH	3H	100w*1
500WH	5H	100w*1
1000WH	5H	100w*2
1500WH	3.75H	100w*4

*Data based on internal lab testing, the actual charging time depends on built-in battery capacity and sunlight.
Note: Expansion cable are not included.

Image: A table providing estimated charging times for various power station capacities (300WH, 500WH, 1000WH, 1500WH) when charged with a 100W solar panel. Note: Actual times may vary based on sunlight and battery condition.

7. MAINTENANCE

- **Cleaning:** Regularly clean the surface of the solar panel with a soft, damp cloth to remove dust, dirt, or debris. Avoid using abrasive materials or harsh chemicals that could scratch or damage the ETFE coating.
- **Inspection:** Periodically inspect the panel and cables for any signs of damage, wear, or loose connections.
- **Storage:** When not in use, fold the solar panel and store it in a dry, cool place away from direct sunlight and extreme temperatures.

Enduring ETFE Coating

One-Piece Lamination Technology

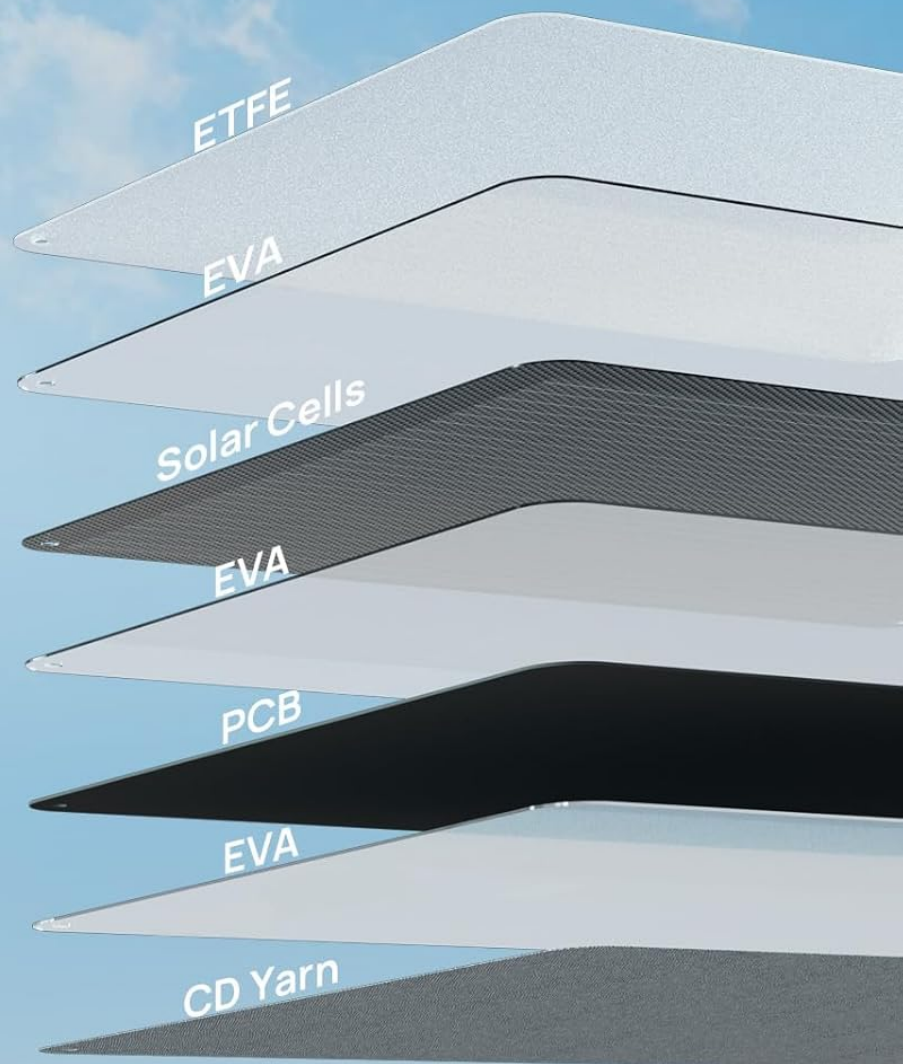
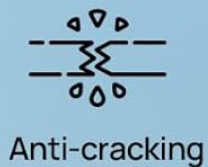
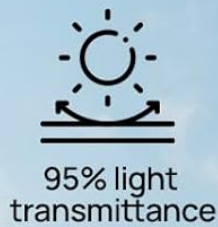


Image: A cross-section diagram illustrating the multi-layered construction of the solar panel, featuring the ETFE coating, EVA layers, solar cells, and PCB for durability and protection.

8. TROUBLESHOOTING

- **Low Power Output:**

- Ensure the panel is in direct sunlight and not shaded by objects.
- Adjust the panel angle to face the sun directly.
- Clean the panel surface if it is dirty.
- Check all cable connections for proper seating.

- **No Charging:**

- Verify that the correct connector is used for your power station.
- Confirm the power station's solar input port is functioning correctly.
- Test the panel in bright sunlight to ensure it is generating power.

- **Panel Not Folding/Unfolding Smoothly:**

- Check for any obstructions in the folding mechanism.
- Ensure the panel is clean and free of debris that might hinder movement.

9. SPECIFICATIONS

Specification	Value
Brand	ECO-WORTHY
Model Number	FD-100Watt
Maximum Power	100 Watts
Efficiency	23%
Material	ETFE coating material, monocrystalline solar cells
Product Dimensions (Folded)	20.94"L x 26.22"W x 0.98"H
Product Dimensions (Unfolded)	41.89"L x 26.22"W x 0.16"H (Approximate, inferred from folded dimensions)
Item Weight	11.02 Pounds
Maximum Voltage (Vmp)	19.4 Volts
AC Adapter Current (Imp)	5.16 Amps
Output Voltage	19.4 Volts
Upper Temperature Rating	176 Degrees Fahrenheit (80°C)
Special Feature	Portable, Foldable, Adjustable Kickstand
UPC	810127138889

Lightweight Foldable for Great Portability



20.94"L x 26.22"W x 0.98"H
Folded Dimensions



41.89"L x 26.22"W x 0.16"H
Unfolded Dimensions



Weight: **11.02lb**



Image: The solar panel's folded and unfolded dimensions are displayed, along with its weight of 11.02 lbs, emphasizing its portability.

10. WARRANTY AND SUPPORT

ECO-WORTHY products are designed for reliability and performance. For warranty information, technical support, or any inquiries, please contact ECO-WORTHY customer service.

- Website: www.eco-worthy.com/

- **Facebook:** www.facebook.com/ecoworthy.store
- **Email:** customer.service@eco-worthy.com



Image: Information regarding ECO-WORTHY's after-sales service, including 24/7 support, high customer satisfaction, local warehouses, and experience in solar energy.

