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ACOPOWER 90W Portable Solar Panel

ACOPOWER 90W Portable Foldable Solar Panel User Manual

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient use of your ACOPOWER 90W Portable Foldable Solar Panel. Please read this manual thoroughly before operation to ensure proper functionality and longevity of the product. This solar panel is designed to provide portable power for various devices, ideal for camping, RV use, and other outdoor activities.



Image 1.1: The ACOPOWER 90W Portable Foldable Solar Panel in its unfolded state, ready for use.

2. SAFETY INSTRUCTIONS

- **Water Exposure:** The solar panel is IP65 water-resistant, protecting against splashing water. **Do not submerge the panel in water or expose it to heavy rain.**
- **Handling:** Handle the solar panel with care. Avoid dropping or subjecting it to strong impacts.
- **Temperature:** Do not expose the solar panel to extreme temperatures or open flames.
- **Modifications:** Do not attempt to disassemble, modify, or repair the solar panel yourself. Contact customer support for assistance.
- **Children:** Keep the solar panel out of reach of children.
- **Electrical Safety:** Ensure all connections are secure before use. The panel includes built-in protection against overcharging, overheating, and short circuits.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- 1 x ACOPOWER 90W Portable Foldable Solar Panel
- Integrated cables for DC, USB, and Type-C outputs
- Adjustable stands (integrated into the design)

4. PRODUCT FEATURES

- **Multiple Output Ports:** Equipped with DC, USB, and Type-C output ports for broad compatibility with various devices.
- **High Conversion Efficiency:** Monocrystalline photovoltaic cells achieve up to 25% solar conversion efficiency.
- **Durable Construction:** Features advanced laminated technology and long-lasting ETFE material for scratch resistance and improved light transmittance.
- **Integrated Safety:** Built-in smart IC chip provides protection against overcharging, overheating, and short circuits.
- **Portable Design:** Lightweight (8.1 lb) and foldable, with compact dimensions (21.4 x 13.3 x 0.79 inches folded) for easy transport.
- **Adjustable Stands:** Two integrated adjustable stands allow for optimal angle positioning towards the sun.

23% High Conversion Efficiency



Image 4.1: Cross-section diagram illustrating the high-efficiency monocrystalline solar cell and durable ETFE material layers.

Foldable & Portable Design



Image 4.2: The solar panel in both folded and unfolded states, highlighting its compact and portable design with dimensions.

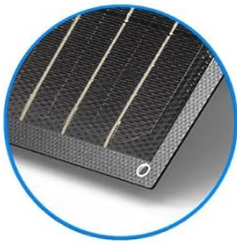
5. SETUP

1. **Unfold the Panel:** Carefully unfold the ACOPOWER 90W solar panel from its compact, suitcase-like form.
2. **Position the Stands:** Extend the two adjustable stands located on the back of the panel. Position them to support the panel at an angle that maximizes exposure to direct sunlight. An angle of approximately 45 degrees to the sun is often optimal.
3. **Placement:** Place the unfolded solar panel in an area with unobstructed sunlight. Ensure no shadows fall on the panel, as this can significantly reduce efficiency.
4. **Secure the Panel:** If necessary, use the integrated mounting holes to secure the panel against wind or accidental displacement.

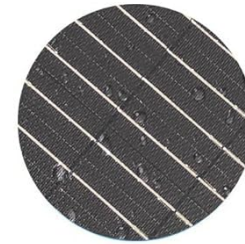
Waterproof & Easy Install Design



Adjustable Kickstand



Mounting Holes



Waterproof Panel

Image 5.1: A person setting up the ACOPOWER solar panel, demonstrating the use of the adjustable kickstand for optimal positioning.

6. OPERATING INSTRUCTIONS

Once the solar panel is set up and exposed to sunlight, you can begin charging your devices.

• Connecting Devices:

- **DC Output:** Use the DC port to connect to compatible portable power stations or other devices requiring DC input.
- **USB Output:** Connect smartphones, tablets, power banks, and other USB-powered devices to the USB-A ports. The smart IC chip will automatically detect your device and optimize charging speed (up to 2.4A max 5V DC per port, 6A max overall).
- **Type-C Output:** Connect compatible devices, such as modern smartphones, tablets, or laptops, to the Type-C port.

- **Charging Indicator:** Some devices may have a charging indicator. Observe this to confirm power flow.
- **Optimal Performance:** For best charging results, ensure the solar panel is positioned directly facing the sun and free from any obstructions. Adjust the angle periodically as the sun moves.



Image 6.1: The ACOPOWER solar panel connected to various devices including a power station, laptop, camera, smartphone, and tablet, demonstrating its wide compatibility.

Equipped with Protection Function



Short Circuit
Protection



Surge
protection



Overload
protection

Image 6.2: The solar panel highlighting its built-in protection functions, including short circuit, surge, and overload protection, ensuring safe charging.

7. MAINTENANCE

- **Cleaning:** Regularly clean the surface of the solar panel with a soft, damp cloth to remove dust, dirt, or debris. Avoid abrasive cleaners or harsh chemicals.
- **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.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power output from ports.	<ul style="list-style-type: none">◦ Insufficient sunlight.◦ Loose or incorrect cable connection.◦ Damaged cable or port.	<ul style="list-style-type: none">◦ Ensure the panel is in direct, unobstructed sunlight.◦ Check all cable connections for tightness and correctness.◦ Try a different cable or port. If issue persists, contact support.
Slow charging speed.	<ul style="list-style-type: none">◦ Partial shading on the panel.◦ Panel not optimally angled towards the sun.◦ Cloudy weather conditions.◦ Device requires higher input than available.	<ul style="list-style-type: none">◦ Relocate the panel to a fully unshaded area.◦ Adjust the panel's angle to face the sun directly.◦ Charging speed will naturally be lower in cloudy conditions.◦ Verify device input requirements.
Panel feels hot during operation.	<ul style="list-style-type: none">◦ Normal operation under direct sunlight.◦ Poor ventilation.	<ul style="list-style-type: none">◦ This is normal. Ensure adequate airflow around the panel.◦ Avoid placing the panel on heat-retaining surfaces.

9. SPECIFICATIONS



Attribute	Detail
Brand	ACOPOWER
Model Number	90W Portable Solar Panel
Material	ETFE
Product Dimensions (Unfolded)	46.9 x 21.4 inches
Product Dimensions (Folded)	21.4 x 13.3 x 0.79 inches
Item Weight	8.1 lb (3.67 kg)
Efficiency	Up to 25% (Monocrystalline)
Output Ports	DC, USB-A (up to 2.4A max 5V DC per port, 6A max overall), Type-C
Water Resistance	IP65 (Splash-proof)
Safety Features	Overcharging, Overheating, Short Circuit Protection (Smart IC chip)
UPC	810073750647

10. WARRANTY AND SUPPORT

ACOPOWER products are designed for reliability and performance. For warranty information, technical support, or any questions regarding your 90W Portable Foldable Solar Panel, please contact ACOPOWER customer service directly.

You can find contact information on the official ACOPOWER website or through your purchase platform.

Related Documents - 90W Portable Solar Panel

<div><div>User Manual</div><div>3x30W Foldable solar panel</div><div></div></div>	<div>ACOPOWER 90W Foldable Solar Panel User Manual</div> <div>Comprehensive user manual for the ACOPOWER 90W foldable solar panel suitcase, detailing features, setup, testing, specifications, and warranty information for portable solar power solutions.</div>
<div><div><div>ACOPOWER</div><div>OUTDOOR RECHARGEABLES</div></div><div>User Manual</div><div>PLK-2x100W20A</div><div><div><div><div></div><div>1-800-979-1722</div><div>info@acopower.com</div><div>www.acopower.com</div></div></div></div></div>	<div>ACOPOWER PLK-2x100W20A Portable Solar Panel Kit User Manual</div> <div>User manual for the ACOPOWER PLK-2x100W20A portable solar panel kit, detailing its features, setup, testing, specifications, and warranty. This guide provides comprehensive instructions for optimal use and maintenance of the solar panel and its integrated charge controller.</div>
<div><div><div>ACOPOWER</div><div>MPPT Solar Charge Controller</div></div><div>User Manual</div><div></div></div>	<div>ACOPOWER MPPT Solar Charge Controller User Manual</div> <div>Comprehensive user manual for ACOPOWER MPPT Solar Charge Controller models MY50, MY60, MY80, and MY100. Covers installation, operation, safety, specifications, and troubleshooting for efficient solar energy management.</div>
<div><div><div>ACOPOWER</div><div>30/40/50L Rechargeable SolarFridge Freezer</div></div><div><div><div><div></div><div>Thank you for choosing our Rechargeable SolarFridge Freezer!</div><div>Please Read This Manual Carefully Before Using Your Unit.</div></div></div><div>User Manual</div><div>Model: X30AX/40AX/50AX</div><div>Model: X30AX/40AX/50AX</div><div>Model: X30AX/40AX/50AX</div></div></div>	<div>ACOPOWER 30/40/50L Rechargeable SolarFridge Freezer User Manual</div> <div>Comprehensive user manual for the ACOPOWER 30/40/50L Rechargeable SolarFridge Freezer, covering features, safety instructions, operation, charging, battery management, Bluetooth connectivity, FAQs, and technical specifications.</div>
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[ACOPOWER SGR-MP30011-2 Photovoltaic Inverter User Manual | Installation & Operation Guide](#)

User manual for the ACOPOWER SGR-MP30011-2 Photovoltaic Inverter. This guide details installation, operation, system architecture, safety instructions, specifications, and troubleshooting for this 3000W hybrid solar charger.