ZIBOO FT-1000W

ZIBOO FT-1000W Solar Panel Tester MPPT Meter Instruction Manual

Model: FT-1000W | Brand: ZIBOO

1. Introduction

The ZIBOO FT-1000W Solar Panel Tester MPPT Meter is a professional-grade device designed for evaluating the performance of photovoltaic (PV) modules. It accurately measures maximum power (Pmax), open-circuit voltage (Voc), and short-circuit current (Isc), making it an essential tool for R&D, manufacturing, and field maintenance of solar systems.

1.1. Package Contents

Upon opening the package, ensure all the following items are present:

- 1x ZIBOO FT-1000W Solar Panel Tester MPPT Meter
- 1x Special Test Lead (MC4 connectors)
- 1x User Manual
- 1x Carrying Pouch
- 1x Strap
- 2x Special Interface Wrench Tools

Figure 1: All items included in the ZIBOO FT-1000W package.

2. Key Features

- **Professional-Grade PV Testing:** Measures maximum power (Pmax) up to 1000W, open-circuit voltage (Voc: 12-80V), and short-circuit current (Isc: 35A) with ±0.8% accuracy.
- **MPPT Efficiency Optimization:** Tracks Vmp (80V) & Amp (35A) in real-time to identify panel degradation or shading issues.
- **Industrial Safety & Durability:** Rated CAT III 1000V/CAT IV 600V with double-insulated probes, meeting IEC/EN 61010 standards.
- **Smart Data Management:** Features data hold and a backlit LCD for reading values in various environments.
- **User-Friendly Design:** Auto-ranging simplifies operation, while IP54 dust/water resistance and low-power auto-off ensure reliability.

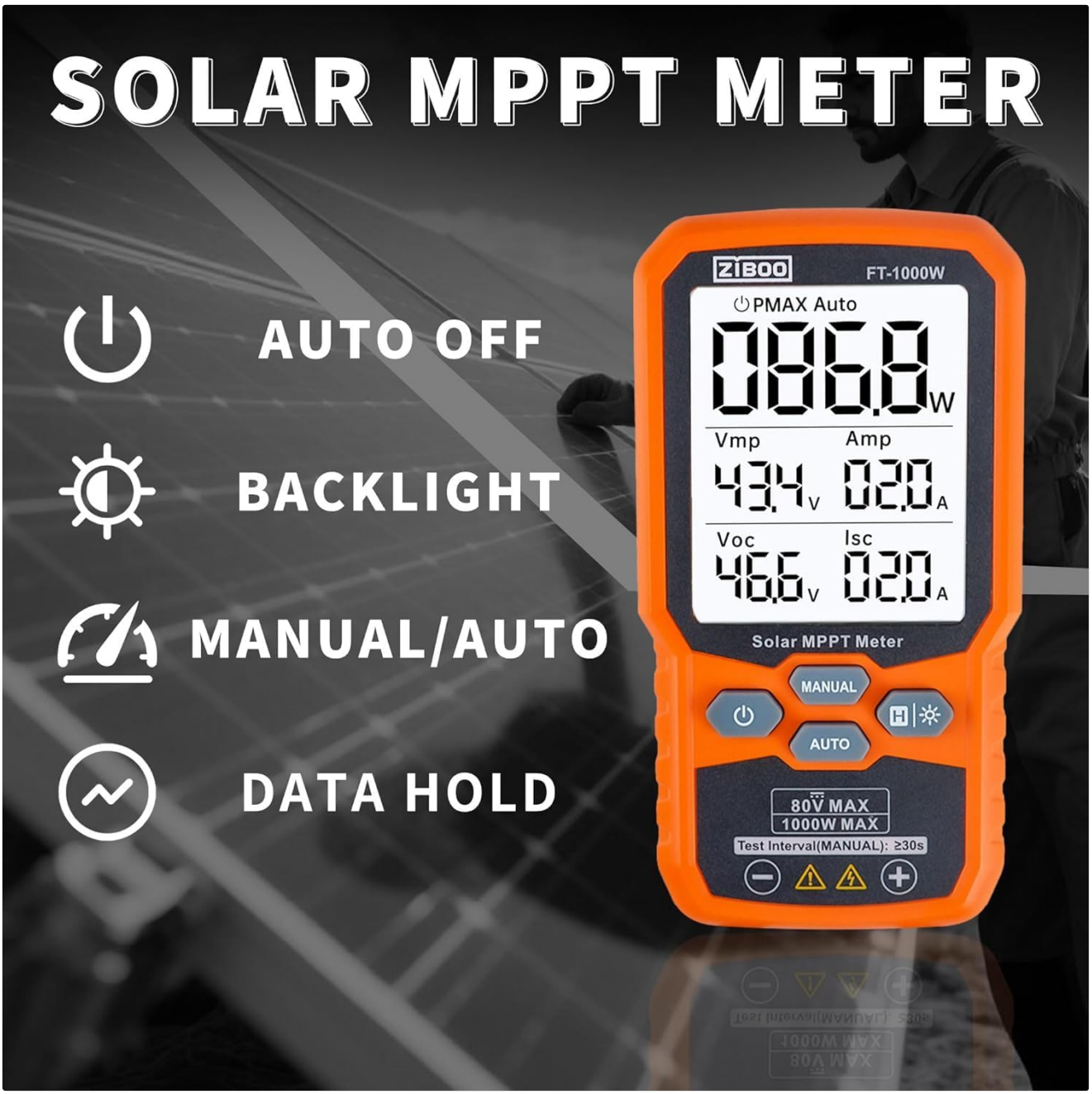


Figure 2: Overview of the ZIBOO FT-1000W's operational features.

Figure 3: Detailed display of test parameters on the ZIBOO FT-1000W.

3. Technical Specifications

Parameter	Value
Maximum Power (Pmax)	1000 Watts
Open-Circuit Voltage (Voc)	12-80V
Short-Circuit Current (Isc)	35A
Peak Power Voltage (Vmp)	80V
Peak Power Current (Amp)	35A
Accuracy	±0.8%

Safety Rating	CAT III 1000V/CAT IV 600V, IEC/EN 61010
Dimensions	5.51"L x 2.99"W x 1.26"H
Item Weight	10.4 ounces
Material	Aluminum, Monocrystalline Silicon, Tempered Glass
Power Source	3x AAA Batteries (not included)

Figure 4: Product dimensions of the ZIBOO FT-1000W.

Figure 5: Comparison of FT-1000W and FT-2000W models.

4. Setup

4.1. Battery Installation

1. Locate the battery compartment on the back of the meter.
2. Use a small screwdriver to open the battery cover.
3. Insert 3x AAA batteries, ensuring correct polarity (+/-).
4. Replace the battery cover and secure it with the screw.

4.2. Connecting Test Leads

The ZIBOO FT-1000W comes with special MC4 test leads for direct connection to solar panels.

1. Connect the red test lead to the positive (+) input terminal on the meter.

2. Connect the black test lead to the negative (-) input terminal on the meter.
3. Ensure the MC4 connectors on the test leads are securely attached to the corresponding connectors on your solar panel or array.

Figure 6: Standard MC4 Test Leads included with the meter.

Figure 7: Special Interface Wrench Tools for MC4 connectors.

Video 1: Demonstrates the connection process of the ZIBOO FT-1000W Solar Panel Tester to a solar panel using MC4 connectors, and shows the device in operation.

5. Operating Instructions

5.1. Power On/Off

- To power on: Press and hold the power button (**U**) for approximately 3 seconds.
- To power off: Press and hold the power button (**U**) for approximately 2 seconds. The device also features an auto-off function to conserve battery.

5.2. Measurement Modes (Manual/Auto)

The meter offers two measurement modes:

- **Auto Mode:** Press the **AUTO** button. The meter will automatically scan and display the PV module's parameters (Pmax, Vmp, Amp, Voc, Isc) every few seconds. This mode is ideal for quick, continuous monitoring.
- **Manual Mode:** Press the **MANUAL** button. In this mode, each press of the button initiates a single measurement cycle. Wait for approximately 3 seconds after pressing to allow the measurement to complete and display.

5.3. Data Hold Function

To freeze the current readings on the display, press the **H** button. Press it again to release the data hold and resume live readings.

5.4. Backlight Activation

For improved visibility in low-light conditions, press and hold the backlight button (**H***) to activate the display backlight. Press and hold again to turn it off.

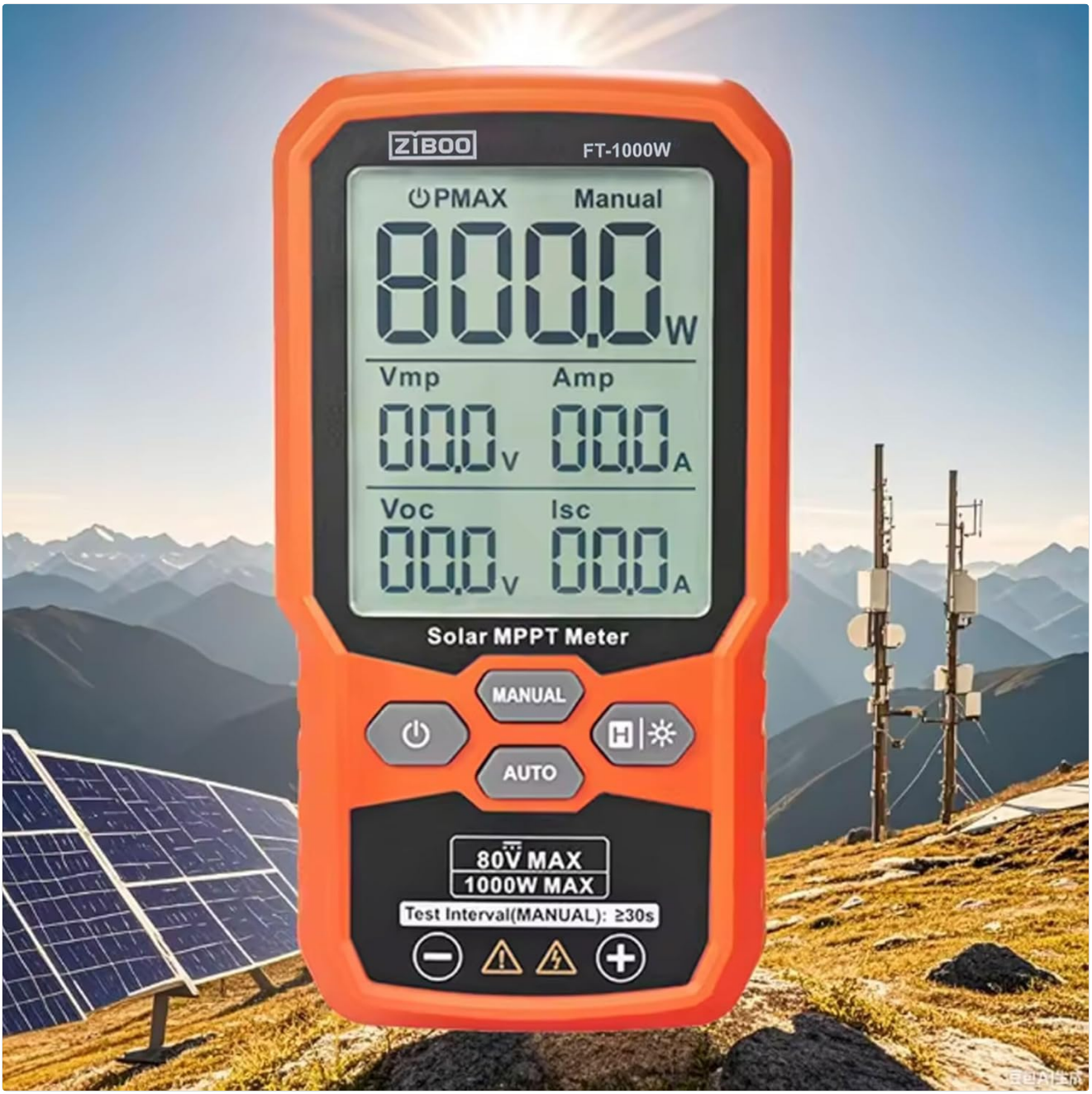


Figure 8: ZIBOO FT-1000W in operation, displaying real-time solar panel data.

Figure 9: Front view of the ZIBOO FT-1000W meter with accessories.

6. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the meter's exterior. Do not use abrasive cleaners or solvents.
- **Storage:** Store the meter and its accessories in the provided carrying pouch in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears to ensure accurate readings and prevent damage.
- **Inspection:** Regularly inspect test leads and connectors for any signs of wear or damage. Replace damaged components immediately to ensure safety and performance.

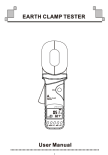
7. Troubleshooting

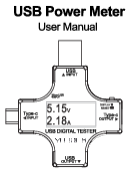
Problem	Possible Cause	Solution
Meter does not power on	Low or dead batteries; Incorrect battery installation	Replace batteries; Check battery polarity
No readings displayed	Incorrect connection to solar panel; Insufficient sunlight; Faulty test leads	Ensure secure and correct connection; Test under adequate sunlight; Inspect and replace test leads if damaged
Inaccurate readings	Environmental factors (e.g., shading, temperature); Damaged meter or leads	Ensure clear, direct sunlight; Verify connections; Contact support if issues persist
Display backlight not working	Backlight function not activated; Low batteries	Press and hold backlight button; Replace batteries

8. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the contact details provided in the product packaging or visit the official ZIBOO website. Keep your purchase receipt as proof of purchase for warranty claims.

Related Documents - FT-1000W

	User Manual: Earth Clamp Tester (Model UT278A) Comprehensive user manual for the ZIBOO Earth Clamp Tester, detailing safety precautions, technical specifications, operation methods, and field applications for measuring grounding resistance. Includes instructions for multi-point, limited-point, and single-point grounding systems.
	ZIBOO DC Resistance Tester UT620C User Manual User manual for the ZIBOO DC Resistance Tester (Model UT620C), detailing safety precautions, technical specifications, operation, and accessories for measuring low DC resistance.

	[Novopal Power Inverter Troubleshooting Guide] A comprehensive troubleshooting guide for Novopal Power Inverters, covering common issues like overload, undervoltage, over-voltage, over-temperature, short circuits, reverse connections, and no DC input voltage. Includes solutions and a battery capacity reference table.
	[YOJOCK USB Power Meter User Manual] User manual for the YOJOCK USB Power Meter, detailing product parameters, operating instructions, and testing procedures for charging speed, quality, and power bank capacity.
	[Novopal Power Inverter Troubleshooting Guide | Overload, Undervoltage, Over-voltage, Over-temperature, Short Circuit] Comprehensive troubleshooting guide for Novopal Pure Sine Wave Power Inverters. Learn how to diagnose and resolve common issues like overload, undervoltage, over-voltage, over-temperature, short circuit, and reverse connection.
	[NOVOPAL Power Inverter Troubleshooting Guide] A comprehensive troubleshooting guide for NOVOPAL Power Inverters, covering common issues like overload, undervoltage, over-voltage, over-temperature, short circuits, and reverse polarity, with solutions and battery recommendations.