

BSIDE O7

BSIDE O7 Dual Channel Oscilloscope Multimeter User Manual

Model: O7 | Brand: BSIDE

1. INTRODUCTION

This user manual provides comprehensive instructions for the operation and maintenance of the BSIDE O7 Dual Channel Oscilloscope Multimeter. This device integrates a dual-channel oscilloscope, a multimeter, and a DDS signal generator into a single handheld unit, designed for various electrical testing and measurement applications.

2. KEY FEATURES

- **Dual Channels 25MHz Bandwidth:** Features 25MHz bandwidth and 208MSa/s sampling rate, with 128kb record depth for precise signal analysis.
- **Full-Viewing 3.98" TFT LCD Screen:** Equipped with an ultra-wide angle 480*320 color screen, providing clear test results and an enhanced reading experience in various lighting conditions.
- **3-in-1 Functionality:** Combines the capabilities of an oscilloscope, a multimeter, and a DDS signal generator in one portable device.
- **Flexible AC Current Clamp Measurement:** Capable of accurately measuring flexible AC current up to 6000A (flexible clamp wire not included).
- **5000mAh Rechargeable Battery:** Integrated rechargeable battery ensures extended operation time.
- **Soft Silicone Protective Case:** Features a full-body soft silicone case for comfortable handling and protection against shocks, friction, and bumps.
- **Data Saving and Export:** Allows tested data to be saved and exported to a computer for further analysis.

Super Large TFT LCD



Figure 2.1: The BSIDE O7 features a super large 3.98" TFT LCD for clear display.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package. If any items are missing or damaged, please contact customer support.

- 1 x Portable Oscilloscope Multimeter (BSIDE O7)
- 1 x Oscilloscope Probe
- 1 x BNC to Double-Headed Alligator Clip Test Leads
- 1 x Test Leads
- 1 x Thermocouple
- 1 x Carrying Case
- 1 x Charging Cable
- 8 x Marker Rings

- 1 x Adjustment Tool
- 2 x IC Test Protection Caps
- 1 x User Manual



Figure 3.1: Complete package contents of the BSIDE O7 Oscilloscope Multimeter.

FULL-BODY SOFT SILICONE CASE

**MILITARY
GRADE
PROTECTION**



Figure 4.1: The BSIDE O7 is equipped with a 5000mAh rechargeable battery.

4.2 Connecting Probes and Leads

The BSIDE O7 features dedicated input ports for oscilloscope probes (CH1, CH2) and multimeter test leads (Input, COM). Ensure correct connection for accurate measurements.

- For oscilloscope functions, connect the oscilloscope probe to the CH1 or CH2 BNC ports.
- For multimeter functions, insert the red test lead into the "Input" jack and the black test lead into the "COM" jack.

Dual Channel 25MHz Bandwidth

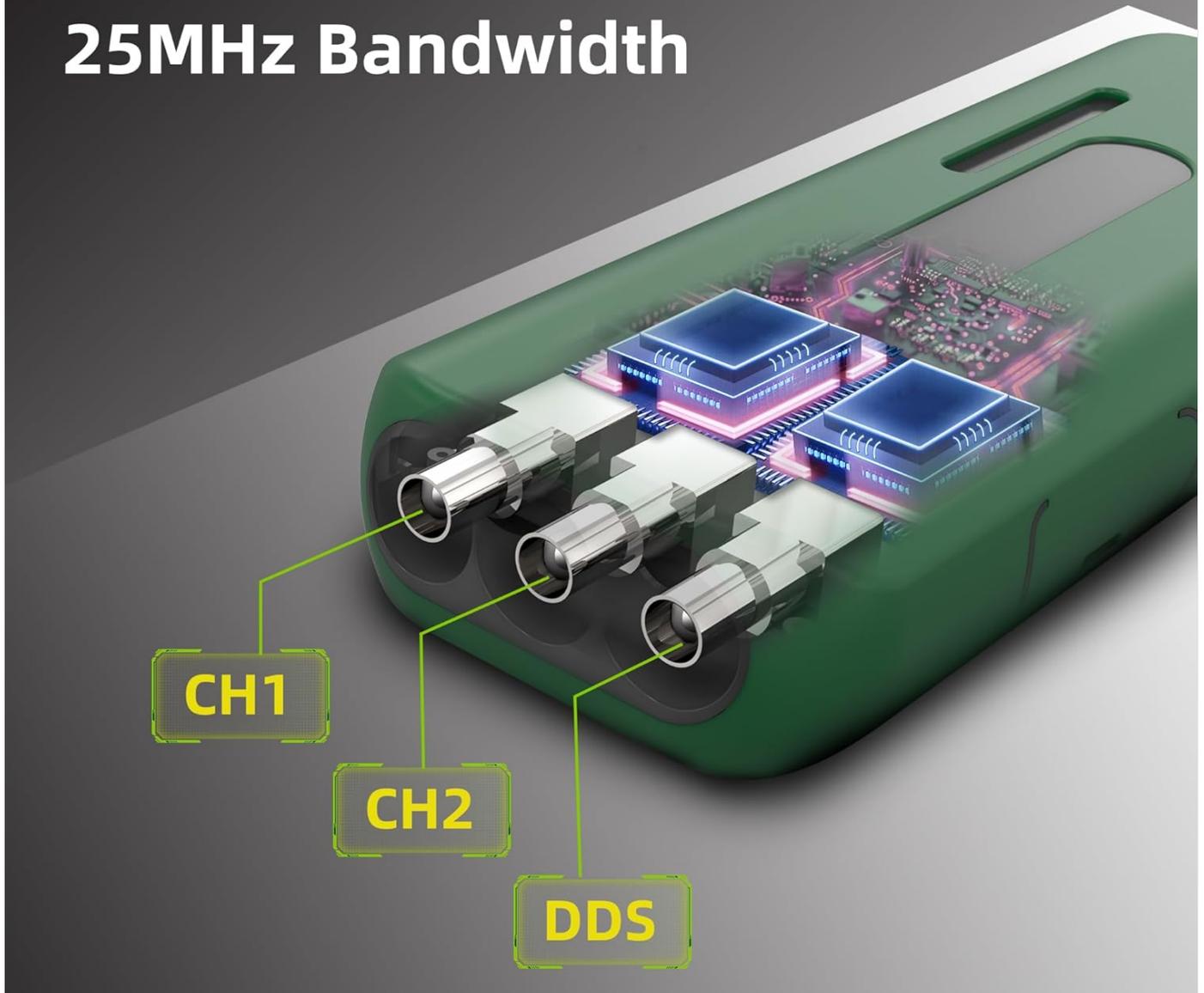


Figure 4.2: Input ports for CH1, CH2 (oscilloscope), and DDS (signal generator) on the BSIDE O7.

5. OPERATING INSTRUCTIONS

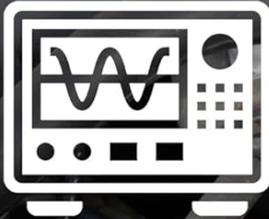
The BSIDE O7 offers three primary operating modes: Oscilloscope, Multimeter, and DDS Signal Generator. Use the **MODE** button to switch between these functions.



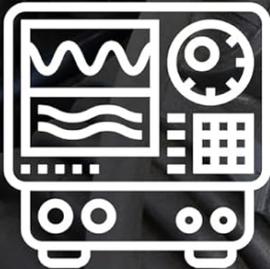
3-IN-1



Multimeter



DDS Generator



Oscilloscope

Figure 5.0: The BSIDE O7 combines Multimeter, DDS Generator, and Oscilloscope functions.

5.1 Oscilloscope Mode

In Oscilloscope mode, the device displays waveforms, allowing for analysis of electrical signals. Connect the oscilloscope probe to the desired channel (CH1 or CH2).

- Press **MODE** to select Oscilloscope.
- Use the navigation buttons to adjust vertical sensitivity (Volts/Div) and horizontal time base (Time/Div).
- The **TRIGGER** function allows stable display of repetitive waveforms.
- Use **CURSOR MEASURE** for precise voltage and time measurements on the waveform.

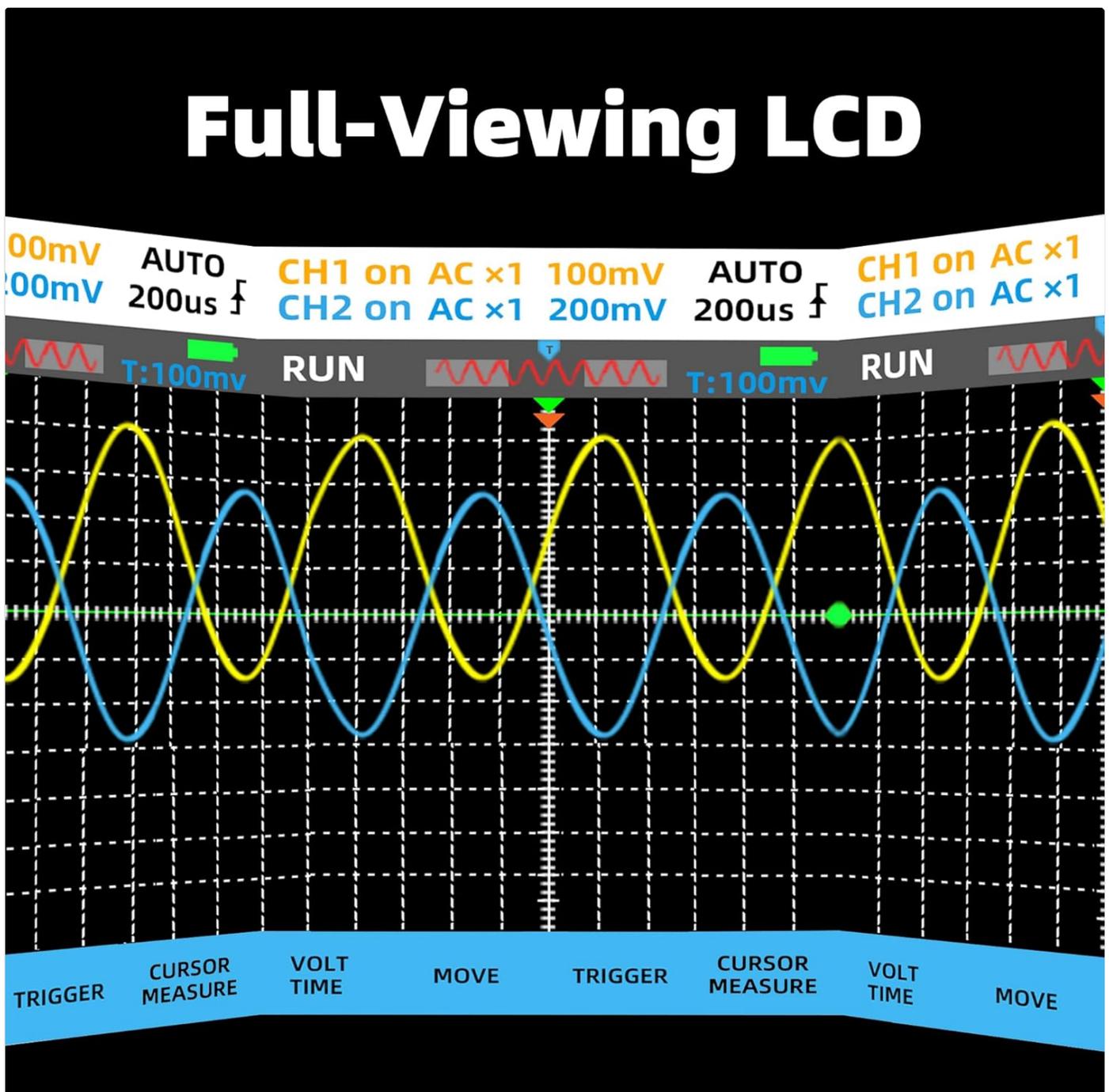


Figure 5.1: Example of dual-channel waveform display in Oscilloscope mode.

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Video 5.1: Demonstration of various measurement functions and waveform generation on the BSIDE O7.

5.2 Multimeter Mode

The Multimeter mode allows for standard electrical measurements such as voltage, current, resistance, capacitance, and temperature. Connect the test leads to the appropriate input jacks.

- Press **MODE** to cycle to Multimeter mode.
- Use the function buttons (e.g., **V**, **A**, **Ω** , **CAP**, **TEMP**) to select the desired measurement type.
- The device supports True RMS for AC measurements.
- For flexible AC current clamp measurements (up to 6000A), an external clamp is required (not included).

5.3 DDS Signal Generator Mode

The DDS (Direct Digital Synthesis) Generator mode allows the device to output various waveforms for testing circuits. The output

is available via the "OUT" port.

- Press **MODE** to select DDS Generator mode.
- Select the desired waveform type (sine, square, triangle, full wave, half wave, sawtooth, DC wave) using the navigation buttons.
- Adjust frequency (0-2MHz) and output amplitude (0.1-3V) as needed.
- For square waves, the duty cycle can be adjusted from 1% to 99%.

6. MAINTENANCE

6.1 Cleaning

To clean the device, use a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from any power source or test circuits before cleaning.

6.2 Battery Care

The device uses a rechargeable Li-ion battery. To prolong battery life:

- Avoid fully discharging the battery frequently.
- Charge the device regularly, even if not in use, to maintain battery health.
- Store the device in a cool, dry place if not used for extended periods.

6.3 Storage

When not in use, store the BSIDE O7 in its provided carrying case to protect it from dust, moisture, and physical damage. Keep it away from extreme temperatures and direct sunlight.

5000mAh Rechargeable Battery



5000mAh

Figure 6.1: The durable full-body soft silicone case provides protection for the device.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with the BSIDE O7. If the problem persists, please contact customer support.

Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery.	Charge the device fully using the provided charging cable.
Inaccurate measurements.	Incorrect probe/lead connection; improper mode selection; damaged leads.	Ensure probes/leads are correctly connected to the appropriate ports. Verify the correct operating mode is selected. Check leads for damage and replace if necessary.

Problem	Possible Cause	Solution
Screen is blank or frozen.	Software glitch; device crash.	Perform a hard reset by holding the power button for 10-15 seconds. If issue persists, contact support for potential firmware update.
Cannot export data to computer.	Incorrect cable; driver issue; software incompatibility.	Ensure you are using the correct charging/data cable. Install necessary drivers if prompted by your computer. Refer to the manufacturer's website for compatible software.

8. SPECIFICATIONS

Parameter	Value
MAX Display	6000 counts
Bandwidth	25MHz
Channels	2
Real-time sample rate	208MSa/s
Input Impedance	1M Ω , @16pf
Maximum input voltage	300V (DC+AC peak)
Horizontal SEC range	100ns/div - 20s/div
Vertical sensitivity	20mV/div - 100V/div
DC voltage	60mV (0.01mV, 1%+5); 600mV/6V/60V (0.1mV/0.001V/0.01V, 0.8%+3); 600V/1000V (0.1V, 1%+5)
AC voltage	60mV (0.01mV, 1.2%+5); 600mV/6V/60V (0.1mV/0.001V/0.01V, 1%+3); 600V/750V (0.1V/1V, 1.2%+5)
DC current	60mA/600mA (0.01mA/0.1mA, 1%+3)
AC current	60mA/600mA (0.01mA/0.1mA, 1.2%+5)
Flexible AC Current	600A/6000A (0.1A/1A, 1.0%+5)
Resistance	600 Ω (0.1 Ω , 1.2%+5); 6k Ω /60K Ω /600K Ω (0.001K Ω /0.01K Ω /0.1K Ω , 1.0%+3); 6M Ω (0.001M Ω , 1.2%+5); 60M Ω (0.01M Ω , 1.5%+5)
Capacitance	999.9nF (0.1nF, 5%+20); 9.999 μ F/999.9 μ F (0.001 μ F/0.1 μ F, 4.5%+5); 99.99mF (0.01mF, 5.0%+10)
Temperature	-20 $^{\circ}$ C to 1000 $^{\circ}$ C / -4 $^{\circ}$ F to 1832 $^{\circ}$ F (1 $^{\circ}$ C/1 $^{\circ}$ F, 2.5%+5)
Diode	Yes
Continuity	Yes
Output Waveforms (DDS)	Sine wave, square wave, triangle wave, full wave, half wave, sawtooth wave, DC wave
Frequency range (DDS)	0-2MHz
Output Amplitude (DDS)	0.1-3V

Parameter	Value
Square Wave Duty Cycle (DDS)	1%-99%
Power	2* Rechargeable Li-ion battery (5000mAh total)
Size	216.6 x 84.5 x 36 mm (8.5 x 3.31 x 1.42 inches)
Weight	384g (1.05 Pounds)

9. WARRANTY AND SUPPORT

BSIDE products are designed for reliability and performance. For warranty information and technical support, please refer to the official BSIDE website or contact your local distributor.

Typical support channels include:

- Online FAQs and knowledge base.
- Email support.
- Phone support (during business hours).

Please have your product model (O7) and purchase information ready when contacting support.