

BSIDE 50MHz Bandwidth Oscilloscope Multimeter

BSIDE O9 Portable Automotive Oscilloscope Multimeter User Manual

Model: 50MHz Bandwidth Oscilloscope Multimeter

1. INTRODUCTION

The BSIDE O9 is a versatile 4-in-1 instrument combining a 2-channel oscilloscope, a high-precision TRMS multimeter, a signal generator, and flexible current clamp functions. Designed for both professional and automotive maintenance applications, it offers advanced features in a portable, durable design.



Key Features:

- **Faster Oscilloscope:** Dual-channel 50MHz bandwidth, 250MSa/s real-time sampling rate, 128K storage depth. Features include quick automatic/manual waveform capture, cursor measurement, XY YT scroll functions, and remanence time for long-term signal observation.
- **Multimeter & Signal Generator:** High-precision TRMS multimeter for AC/DC voltage, current, resistance, capacitance, continuity, diode, and temperature measurements. Integrated DDS signal generator produces 7 waveform types (Sine, Square, Half, Full, Triangle, Ramp, DC).
- **Super Large 3.98-inch TFT Screen:** Full-view color display for clear readings from any angle. Waveforms can be saved and viewed on the device or a PC.
- **2000A Current Test:** Equipped with a Rogowski coil terminal for AC current testing up to 2000A, suitable for high-current applications.
- **Extended Battery Life:** 5000 mAh battery provides 10-20 hours of continuous operation, rechargeable via Type-C cable.
- **Durable Design:** Double injection molding process and silicone leather case provide shock, scratch, and drop protection.

2. PACKAGE CONTENTS AND SETUP

2.1 What's in the Box:

- BSIDE O9 Oscilloscope Multimeter
- BNC Oscilloscope Probe (x2)
- BNC to Alligator Clip Probe (x1)
- Multimeter Test Leads (1 pair)
- Color Rings (x8)
- K Thermocouple
- USB Type-C Charging Cable
- Carrying Case
- Alignment Screwdriver



Figure 2.1: All components included in the BSIDE O9 product package.

2.2 Initial Setup and Charging:

1. Unpack all components and verify against the "What's in the Box" list.
2. Before first use, fully charge the device using the provided USB Type-C charging cable. Connect the cable to the device's charging port and a standard USB power adapter (not included).
3. The 5000 mAh battery provides significant operating time, but a full charge ensures optimal performance.



Figure 2.2: The internal 5000mAh rechargeable battery, providing extended operational life.

3. OPERATING INSTRUCTIONS

The BSIDE O9 features a user-friendly interface with a large TFT screen and intuitive controls. The device supports three primary functions: Oscilloscope, Multimeter, and Signal Generator.

3-IN-1



Multimeter



DDS Generator



Oscilloscope



Figure 3.1: The BSIDE O9 combines Multimeter, DDS Generator, and Oscilloscope functionalities in one compact device.

3.1 Oscilloscope Mode:

The O9 operates as a dual-channel oscilloscope, ideal for waveform analysis.

Dual Channel

50MHz Bandwidth

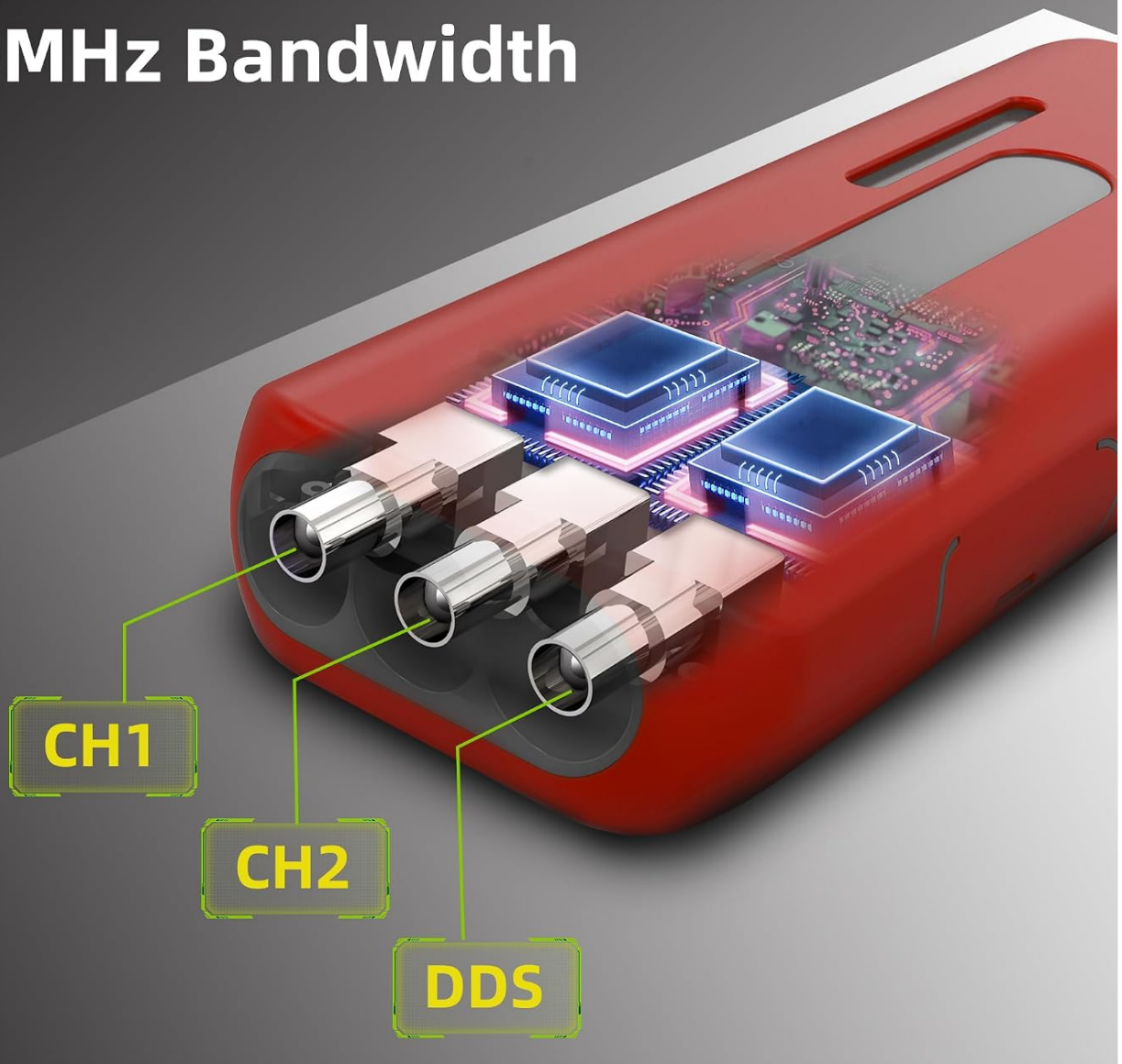


Figure 3.2: The device features dual channels (CH1, CH2) and a DDS output port for signal generation.

- **Bandwidth:** 50MHz
- **Real-time Sampling Rate:** 250MSa/s
- **Storage Depth:** 128kb
- **Input Impedance:** 1M Ω , @16pf
- **Coupling:** AC/DC (can be quickly changed with a single button)
- **Horizontal Time Base:** 100ns/div - 20s/div (accuracy: 20ppm)
- **Vertical Sensitivity:** 20mV/div - 10V/div
- **Maximum Input Voltage (Osc mode):** $\pm 300V$
- **Automatic Test Functions:** Period, frequency, amplitude, maximum, minimum, duty cycle, root mean square value.
- **Trigger Modes:** Auto, Single, Normal.
- **Trigger Edge:** Rising/Falling.
- **Display Modes:** YT, XY, Scroll.
- **Post-signal Duration:** Min, 500 ms, 1 s, 10 s, unlimited.

Use the dedicated buttons to quickly switch channels, adjust AC/DC coupling, and attenuation ratios. The remanence time function allows for observing long-term signal changes or capturing transients. Waveforms can be saved with a single click and reviewed on the device or transferred to a PC.

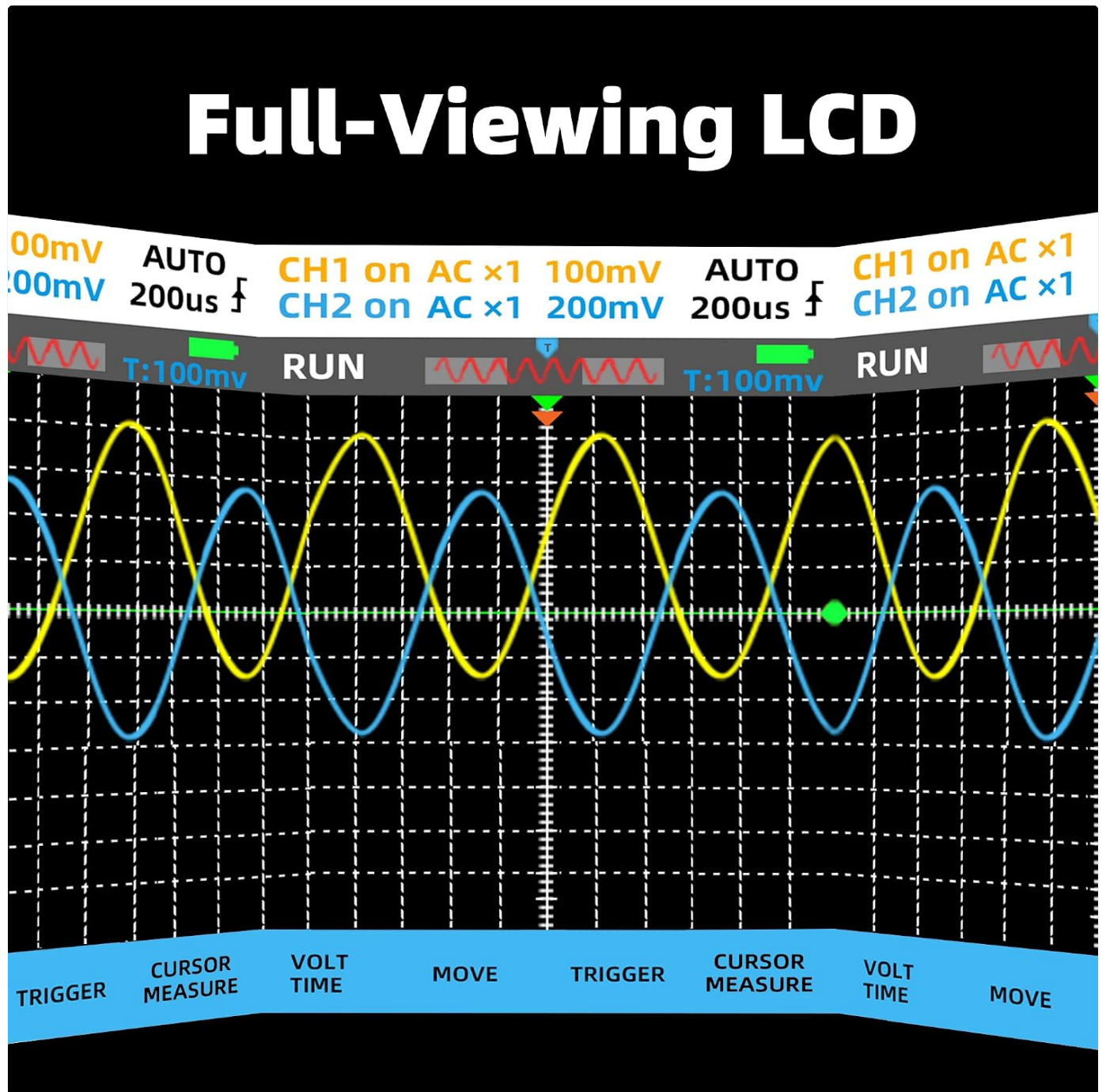


Figure 3.3: The full-view LCD provides a clear and detailed display of waveforms and measurement data.

3.2 Multimeter Mode:

The integrated TRMS multimeter provides high-precision measurements.

- **Display:** 20000 counts on a 3.98-inch full view TFT screen.
- **DC Voltage (mV):** 20.000mV/200mV, 0.001mV/0.01mV resolution, $\pm(0.8\%+3)$ accuracy.
- **DC Voltage (V):** 2.0000V/20V/200V/1000V, 0.0001V/0.001V/0.01V/0.1V resolution, $\pm(0.8\%+3)$ accuracy.
- **AC Voltage (mV):** 20.000mV/200mV, 0.001mV/0.01mV resolution, $\pm(1.0\%+3)$ accuracy.
- **AC Voltage (V):** 2.0000V/20V/200V/750V, 0.0001V/0.001V/0.01V/0.1V resolution, $\pm(1.0\%+3)$ accuracy.
- **ACV Frequency:** 40-1000 Hz.
- **DC Current (mA):** 20.000mA/200mA, 0.001mA/0.01mA resolution, $\pm(1.0\%+3)$ accuracy.

- **AC Current (mA):** 20.000mA/200mA, 0.001mA/0.01mA resolution, $\pm(1.2\%+5)$ accuracy.
- **Resistance:** 600 Ω /6k Ω /60K Ω /600K Ω /6M Ω /60M Ω , 0.1 Ω resolution, $\pm(1.2\%+5)$ accuracy.
- **Capacitance:** 999.9nF/9.999 μ F/999.9 μ F/9.999mF/99.99mF, 0.1nF resolution, $\pm(4.5\%+5)$ accuracy.
- **Temperature:** -20~1000°C, -4~1832°F, 1°C/1°F resolution, $\pm(2.5\%+5)$ accuracy.
- **Continuity:** Yes.
- **Diode:** Yes.

The multimeter also supports a flexible Rogowski coil for high AC current measurements.

- **Flexible Current Clamp (Optional):** AC Current (A): 200.0A/2000A, 0.1A/1A resolution, $\pm(1.0\%+5)$ accuracy.
- **Standard Rogowski Coil:** 100mV@1000V, 50Hz.



Figure 3.4: The BSIDE O9 is suitable for various applications, including automotive maintenance.

3.3 Signal Generator Mode:

Access the DDS signal generator with a dedicated button to produce various waveforms.

- **Waveform Types:** Sine, Square, Triangle, Half, Full, Ramp, DC.
- **Frequency:** 0Hz~2MHz.
- **Amplitude:** 0.1V~3V.
- **Minimum Resolution:** 1Hz.
- **Square Wave Duty Cycle:** 1%~99%.

4. MAINTENANCE

4.1 Battery Care:

The device is powered by a 5000 mAh lithium-ion battery. To maximize battery life:

- Recharge the battery using the provided Type-C cable when the battery indicator is low.
- Avoid fully discharging the battery frequently.
- Store the device in a cool, dry place if not used for extended periods.

4.2 Cleaning and Storage:

The BSIDE O9 features a durable design with double injection molding and a silicone leather case for protection.

FULL-BODY SOFT SILICONE CASE

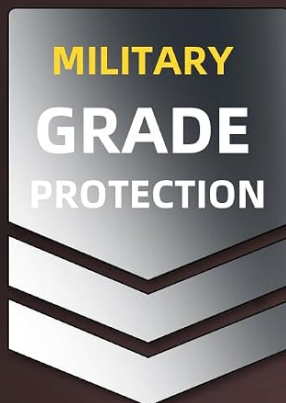


Figure 4.1: The robust full-body soft silicone case offers enhanced protection against impacts.

- Clean the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- Ensure all ports are free of dust and debris.
- Store the device in its carrying case to protect it from physical damage, dust, and moisture.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your BSIDE O9.

Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery.	Connect the device to the charging cable and allow it to charge for at least 30 minutes before attempting to power on again.

Problem	Possible Cause	Solution
Inaccurate multimeter readings.	Incorrect range selected; damaged test leads; environmental interference.	Ensure the correct measurement range is selected. Check test leads for damage and replace if necessary. Move away from strong electromagnetic fields.
No waveform displayed in oscilloscope mode.	Incorrect probe connection; trigger settings incorrect; signal too weak/strong.	Verify probe connections are secure. Adjust trigger level and mode. Check vertical sensitivity and horizontal time base settings to match the input signal.
Screen is unresponsive or frozen.	Software glitch.	Perform a soft reset by holding the power button until the device turns off, then power it back on. If the issue persists, contact support.

6. SPECIFICATIONS

Feature	Detail
Model Number	50MHz Bandwidth Oscilloscope Multimeter
Power Source	Battery Powered (1 Lithium-ion battery included)
Battery Capacity	5000 mAh
Product Dimensions (L x W x H)	21.6 x 8.4 x 3.6 cm (8.5 x 3.3 x 1.4 inches)
Weight	700 grams (1.54 lbs)
Display	3.98-inch Full View TFT Color Screen, 20000 counts (Multimeter)
Oscilloscope Bandwidth	50MHz
Oscilloscope Sample Rate	250MSa/s
Oscilloscope Storage Depth	128kb
Max Input Voltage (Osc)	±300V
Signal Generator Frequency	0Hz~2MHz
Signal Generator Amplitude	0.1V~3V
Compliance	CE
Country of Origin	China

7. WARRANTY AND SUPPORT

BSIDE is committed to providing high-quality products and customer satisfaction.

7.1 Firmware Updates:

Future firmware updates may be available to enhance functionality and performance. Please check the official BSIDE website or contact customer support for the latest updates.

7.2 Customer Support:

For technical assistance, troubleshooting, or warranty inquiries, please contact BSIDE customer support. A comprehensive PDF

manual in French is available via email upon request, as noted by a customer review, suggesting direct seller support for additional language manuals.

Please refer to your purchase documentation for specific warranty terms and contact information.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question