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BSIDE Dual Channel Oscilloscope Multimeter

BSIDE 3-in-1 Handheld Oscilloscope Multimeter User Manual

Model: Dual Channel Oscilloscope Multimeter | Brand: BSIDE

1. Introduction

The BSIDE 3-in-1 Handheld Oscilloscope Multimeter is a versatile instrument combining the functionalities of a digital multimeter, an oscilloscope, and a signal generator. Designed for a wide range of applications, including automotive diagnostics, electronics testing, and general electrical measurements, this device offers high precision and ease of use.
Key features include:

- **3-IN-1 Design:** Functions as a digital multimeter, oscilloscope, and signal generator.
- **Dual Channels 25MHz Bandwidth:** Features 25MHz bandwidth and 208MSa/s sampling rate with 128kb record depth.
- **3.98" TFT LCD:** Ultra-large color screen for enhanced readability in various lighting conditions.
- **Full-Viewing Display:** 480*320 screen resolution provides clear test results from any angle.
- **Flexible AC Current Clamp Measurement:** Accurately measures flexible AC current up to 6000A (clamp not included).

2. What's in the Box

Upon unboxing, please verify that all the following components are included:

- 1 x Handheld Oscilloscope Multimeter
- 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 (this document)

Figure 2.1: All components included in the product package.

3. Setup

Before first use, ensure the device is fully charged. Connect the provided charging cable to the device and a suitable USB power source.

3.1 Connecting Probes

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

Figure 3.1: Overview of the device and its various connection points.

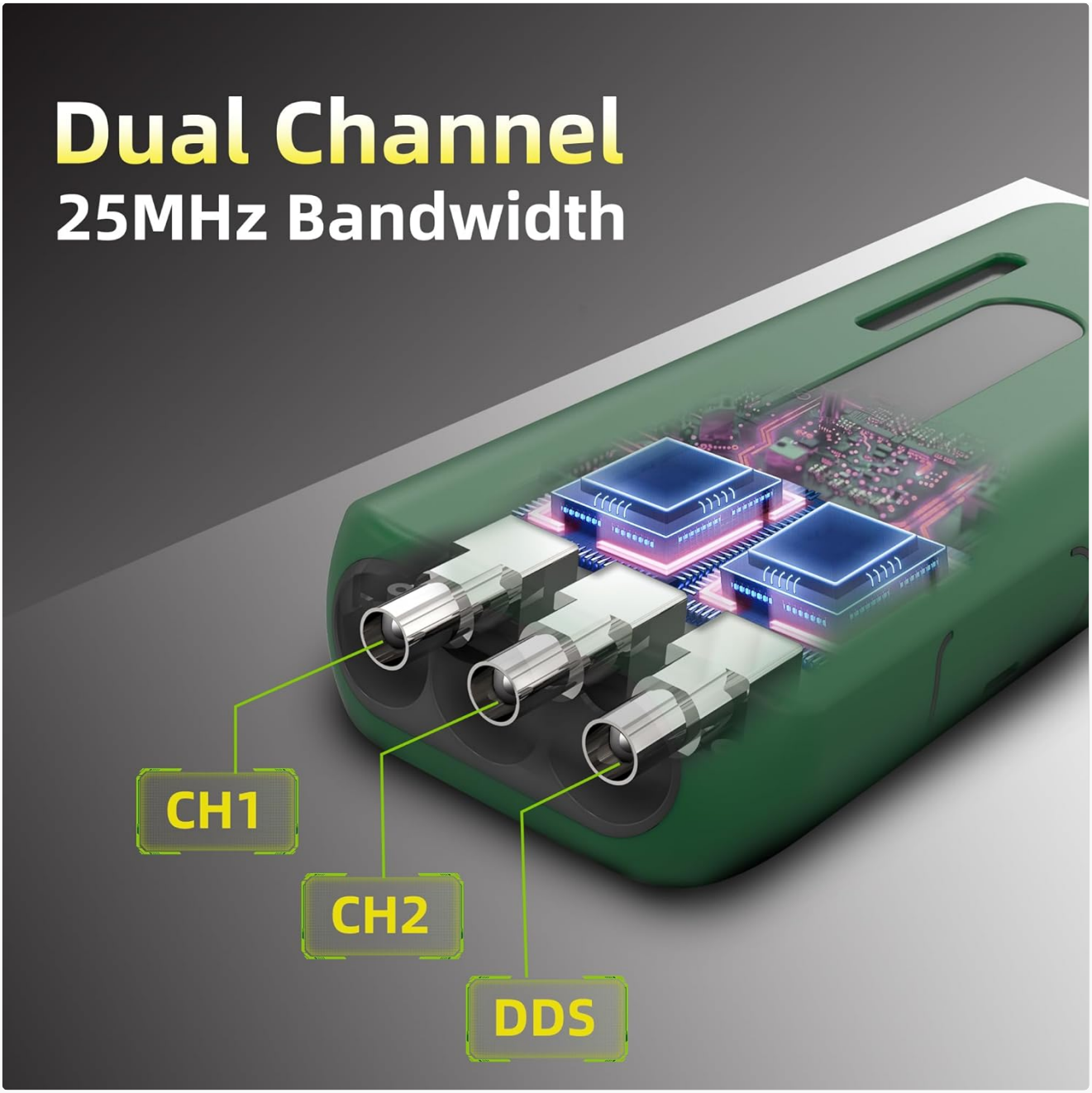

Figure 3.2: Detail of CH1, CH2, and DDS output ports.

4. Operating Instructions

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

4.1 Multimeter Function

To use the multimeter, select the appropriate measurement type (DC Voltage, AC Voltage, Resistance, Capacitance, Diode, Continuity, etc.) using the function buttons. Connect the test leads to the 'Input' and 'COM' ports. The large TFT LCD provides clear readings.

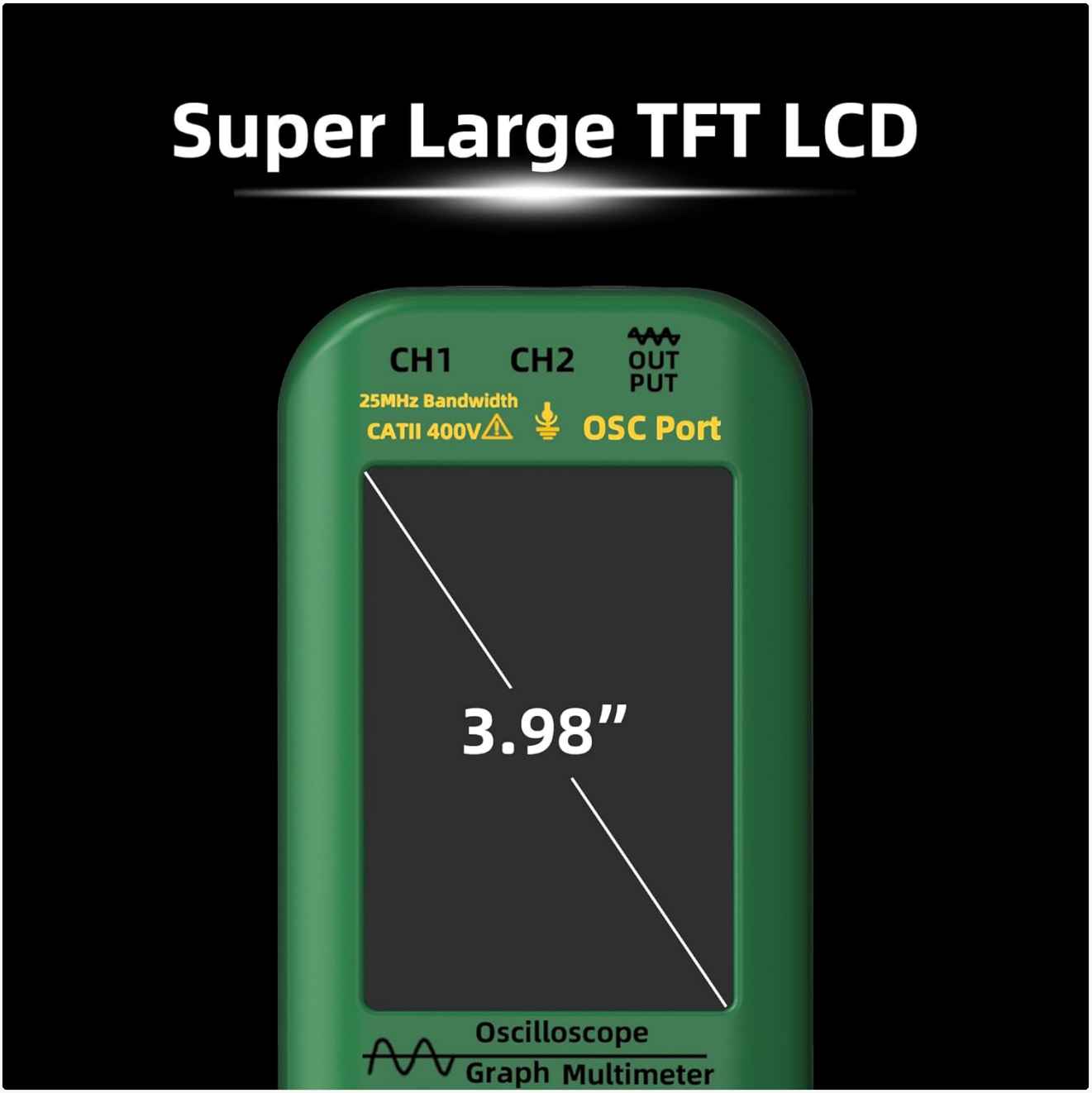

Figure 4.1: The 3.98" TFT LCD provides a clear display for all measurements.

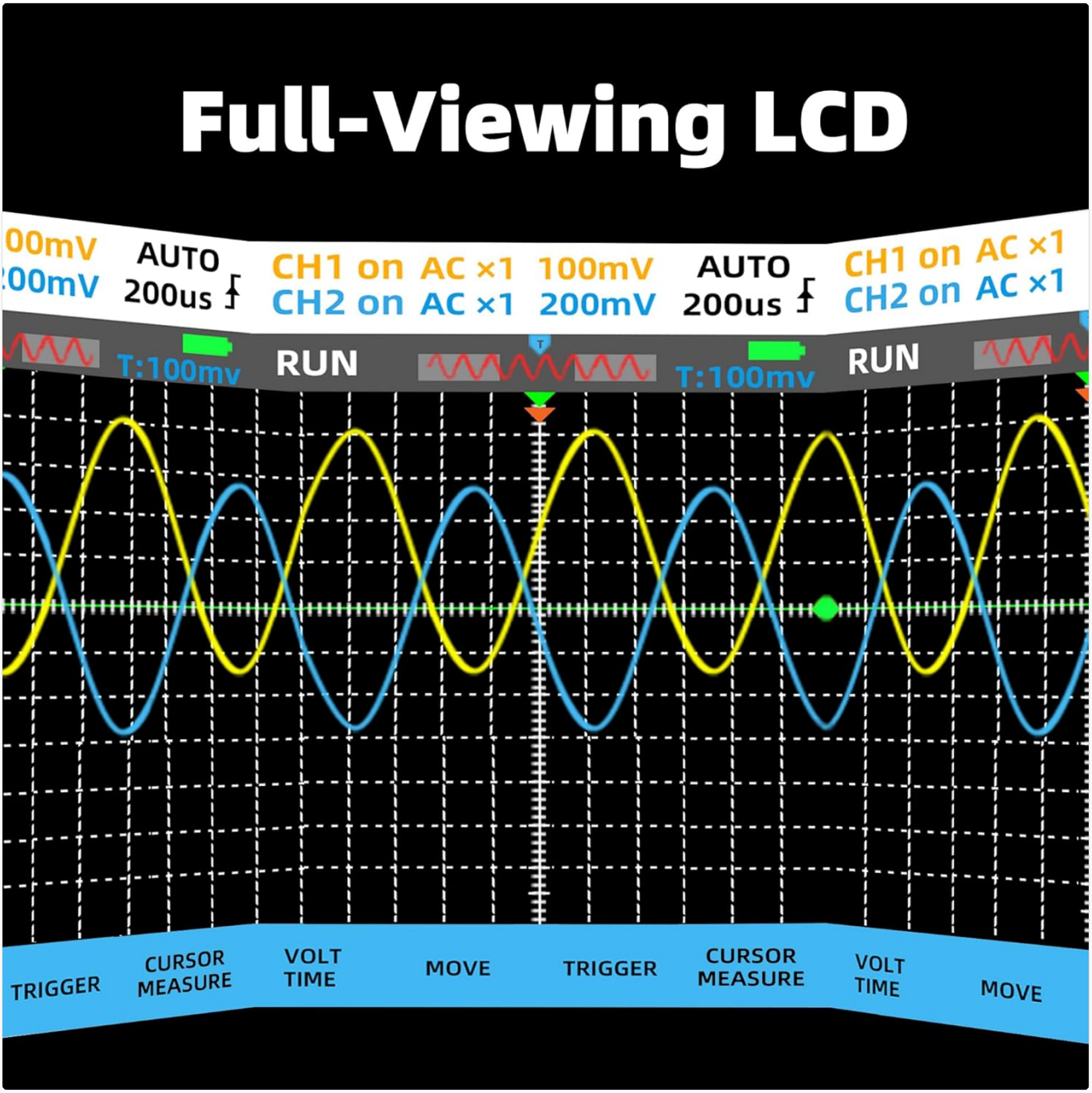

Figure 4.2: The full-viewing LCD ensures readability from various angles.

4.2 Oscilloscope Function

Connect the oscilloscope probe to either CH1 or CH2. Adjust the vertical sensitivity (V/div) and horizontal time base (s/div) as needed. The device supports dual-channel waveform display and various trigger modes.

Your browser does not support the video tag.

Video 4.1: Demonstration of the dual-channel oscilloscope function, showing waveform display and measurement capabilities.

4.3 DDS Generator Function

The DDS (Direct Digital Synthesis) generator can output various waveforms including sine, square, triangle, full wave, half wave, sawtooth, and DC waves. Adjust frequency and amplitude using the device's controls. The output is available via the 'OSC Port'.

Figure 4.3: The device integrates Multimeter, DDS Generator, and Oscilloscope functions.

5. Specifications

Feature	Specification
MAX Display	6000 counts
Bandwidth	25MHz
Channels	2
Real-time sample rate	208MSa/s
Input Impedance	1MΩ, @16pf
Maximum input voltage	300V (DC+AC peak)
Horizontal SEC range	100ns/div - 20s/div

Feature	Specification
Vertical sensitivity	20mV/div - 100V/div
DC voltage	60mV, 600mV, 6V, 60V, 600V, 1000V
AC voltage	60mV, 600mV, 6V, 60V, 600V, 750V
DC current	60mA, 600mA
AC current	60mA, 600mA
Flexible AC Current	600A, 6000A
Resistance	600Ω, 6kΩ, 60KΩ, 600KΩ, 6MΩ, 60MΩ
Capacitance	999.9nF, 9.999μF, 999.9μF, 99.99mF
Temperature	-20℃ to 1000℃ / -4℉ to 1832℉
Diode	Yes
Continuity	Yes
Output Waveforms	Sine, square, triangle, full wave, half wave, sawtooth, DC wave
Frequency range (DDS)	0-2MHz
Output Amplitude (DDS)	0.1-3V
Square Wave Duty Cycle	1%-99%
Power	2* Rechargeable Li-ion battery (5000mAh)
Size	216.6 x 84.5 x 36 mm
Weight	384g

Figure 5.1: The device is powered by a high-capacity 5000mAh rechargeable battery.

6. Maintenance

To ensure the longevity and optimal performance of your BSIDE 3-in-1 Handheld Oscilloscope Multimeter, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in its carrying case in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** Recharge the battery regularly, even if the device is not in frequent use, to maintain battery health. Avoid fully discharging the battery for extended periods.
- **Probe Care:** Inspect probes and test leads for damage before each use. Replace any damaged accessories immediately.

Figure 6.1: The durable soft silicone case provides military-grade protection for the device.

7. Troubleshooting

If you encounter issues with your device, refer to the following common problems and solutions:

Problem	Possible Cause / Solution
Device does not power on.	Battery may be depleted. Connect the charging cable and allow it to charge for at least 30 minutes before attempting to power on again.
Inaccurate readings in multimeter mode.	Ensure test leads are correctly connected to the 'Input' and 'COM' ports. Verify the correct measurement function is selected. Check for damaged test leads.
No waveform displayed in oscilloscope mode.	Check if the oscilloscope probe is securely connected to CH1 or CH2. Adjust the vertical sensitivity (V/div) and horizontal time base (s/div) settings. Ensure the signal source is active.

Problem	Possible Cause / Solution
DDS output is not as expected.	Verify the correct waveform type, frequency, and amplitude settings. Ensure the output is connected to the 'OSC Port'.

For issues not listed here, please contact customer support.

8. Warranty and Support

This product comes with a standard manufacturer's warranty. Please refer to the warranty card included in your package for specific terms and conditions. For technical support, troubleshooting assistance, or warranty claims, please contact BSIDE customer service through their official website or the contact information provided in your product documentation.

Figure 8.1: The device is suitable for various applications, including automotive maintenance, and can export data to a computer.

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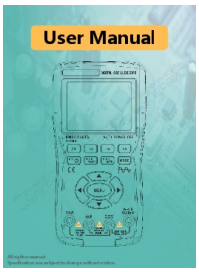
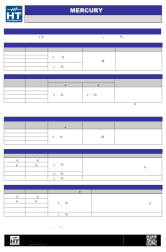
Related Documents - Dual Channel Oscilloscope Multimeter

	Bside ZT702S Digital Oscilloscope Multimeter User Manual Comprehensive user manual for the Bside ZT702S digital oscilloscope multimeter, covering operation, safety instructions, maintenance, and detailed technical specifications for both oscilloscope and multimeter functions.
	FNIRSI 2C53P Dual-Channel Oscilloscope User Manual Detailed user manual for the FNIRSI 2C53P dual-channel flat-panel oscilloscope, covering its features, operations, and specifications, including oscilloscope, multimeter, and signal generator functions.
	HT Instruments MERCURY TRMS Thermal Multimeter Specifications and Features Detailed specifications for the HT Instruments MERCURY TRMS Thermal Multimeter, covering electrical specifications, current measurements, resistance, capacitance, temperature, and general features. Includes information on accuracy, overload protection, and environmental conditions.
	ANENG ST180 Mini Digital Clamp-On Multimeter Operating Manual Operating manual for the ANENG ST180 Mini Digital Clamp-On Multimeter, covering safety information, introduction, specifications, panel description, control buttons, operation instructions for various measurements (AC/DC voltage, resistance, current, frequency, capacitance, temperature, NCV), and battery replacement.
	MESTEK DM100C Digital Multimeter User Manual Comprehensive user manual for the MESTEK DM100C Digital Multimeter, covering its features, specifications, and operation. Includes instructions in multiple languages.
	MESTEK DM96 Series Digital Multimeter Specifications Detailed specifications and features for the MESTEK DM96 series digital multimeters, including DM96A, DM96B, DM96C, DM96D, DM96E, DM96F, DM96G, DM96H, DM96I, DM96J, DM96K, and DM96L models. Covers AC/DC voltage, current, resistance, capacitance, frequency, and more.

Documents - BSIDE – Dual Channel Oscilloscope Multimeter

Understanding Trigger Settings in Electronic Measurement Equipment
A guide to essential trigger settings for electronic test instruments, covering X1/X10 adjustment switches, trigger points, trigger levels, and edge detection (rising/falling).
lang: score:27 filesize: 11.28 M page_count: 1 document date: 2024-08-09