

ZOYI ZT-MD1

ZOYI ZT-MD1 Mini Digital LCR Meter Tweezer User Manual

Model: ZT-MD1

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1. INTRODUCTION

The ZOYI ZT-MD1 is a compact, high-precision digital LCR meter designed in a tweezer form factor. It features a 1.14-inch color OLED screen and is powered by a lithium polymer battery, offering extended operation. This device intelligently identifies and accurately measures resistance, capacitance, and inductance across a wide range with high precision. Its flexible measuring arms and detachable gold-plated tips ensure reliable contact for various SMD or other LCR parameter measurements. This manual provides essential information for the safe and effective use of your ZT-MD1 LCR Meter Tweezer.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- 1x ZOYI ZT-MD1 LCR Meter Tweezer
- 1 Pair x Replaceable Tweezer Tips (Gold-plated)
- 1 x USB Type-C Data Cable
- 1 x User Manual (this document)
- 1 x Storage Bag



Image: Contents of the ZOYI ZT-MD1 package, including the LCR meter, USB cable, extra tweezer tips, and storage bag.

3. PRODUCT OVERVIEW

The ZOYI ZT-MD1 is designed for precise measurement of electronic components. Key features include:

- **1.14-inch Color OLED Screen:** Provides a clear, high-definition display for measurement results.
- **Automatic Recognition:** Intelligently identifies and measures resistance, capacitance, and inductance.
- **Wide Measurement Range:**
 - Resistance (R): $1\text{m}\Omega$ - $10\text{M}\Omega$
 - Capacitance (C): 1pF - 20mF
 - Inductance (L): $1\mu\text{H}$ - 60H
- **Diode Test:** Measures on-voltage (approximately 0.7V).
- **Frequency Test:** Selectable frequencies of 100Hz , 1kHz , 10kHz .

- **Level Test:** Test voltages of 0.3V, 0.6V RMS.
- **Flexible Tweezer Arms:** Equipped with detachable gold-plated tips for reliable contact.
- **User Calibration:** Allows calibration based on standard resistors.
- **Data Hold:** Freezes the current measurement on the display.
- **History Record:** Connect to a PC to view and export measurement history.
- **Auto Shutdown:** Conserves battery life.
- **Flippable Screen:** For convenient viewing in various orientations.

LCR Bridge SMD Test Clip

It can automatically identify components such as resistors, capacitors, and inductors, with precise testing. It is an excellent assistant for electronic repairs.

- Resistance: 10m Ω -10M Ω
- Diode measurement
- Lithium battery power supply
- Component automatic identification
- Adjustable highest accuracy: 0.5%"
- Inductance: 1 μ H-60H (Q value, ESR)
- Frequency: 100Hz-10KHz adjustable
- Capacitance: 1pF-20mF (D value, ESR)



Image: The ZOYI ZT-MD1 LCR Meter Tweezer highlighting its key features and measurement capabilities, including resistance, diode, inductance, frequency, and capacitance ranges.

LCD color screen

High-definition display, fearless of darkness



Image: Close-up view of the ZOYI ZT-MD1's 1.14-inch color OLED screen, demonstrating its clear, high-definition display.

Main parameter measurement display area: up to 9999 characters, mainly showing data for main parameter L/C/R tests



Secondary parameter measurement display area: displaying up to 4 decimal places, mainly showing data for secondary parameter D/Q tests

Main and secondary parameters displayed simultaneously

Image: The ZOYI ZT-MD1 displaying both main (L/C/R) and secondary (D/Q) measurement parameters simultaneously on its screen.



Image: The ZOYI ZT-MD1 demonstrating its flipable screen feature, allowing for convenient measurement viewing from different angles.

4. SETUP

4.1. Initial Charging

Before first use, fully charge the device. Connect the provided USB Type-C cable to the charging port on the ZT-MD1 and the other end to a 5V/A USB power adapter (not included). The battery indicator on the screen will show charging status. A full charge ensures optimal performance and battery life.

4.2. Attaching Tweezer Tips

The ZT-MD1 comes with detachable gold-plated tweezer tips. Ensure they are securely attached to the arms of the device for accurate measurements. Gently push the tips into place until they are firm. To replace, carefully pull them out.



Image: The ZOYI ZT-MD1 LCR Meter Tweezer with its dimensions (146mm length, 30mm width) indicated, showing its compact size.

5. OPERATING INSTRUCTIONS

5.1. Power On/Off

Press and hold the power button to turn the device on or off. The OLED screen will illuminate upon power-on.

5.2. Automatic Measurement

The ZT-MD1 defaults to automatic recognition mode. Simply touch the tweezer tips to the component you wish to measure. The device will automatically detect whether it is a resistor, capacitor, or inductor and display the corresponding value along with secondary parameters (D, Q, Rs) if applicable.

5.3. Manual Mode and Parameter Selection

Refer to the on-screen interface for options to switch between automatic and manual measurement modes, or to select specific test frequencies (100Hz, 1kHz, 10KHz) and test voltages (0.3V, 0.6V RMS) if needed for advanced

measurements.

5.4. Data Hold Function

Press the "Hold" button (if available, or indicated on screen) to freeze the current measurement reading on the display. Press again to release.

5.5. Flipping the Screen Display

The screen display can be flipped for better viewing angles. Consult the device's on-screen menu or physical buttons for this function.



Image: The ZOYI ZT-MD1 LCR Meter Tweezer demonstrating its use in measuring capacitance, inductance, resistance, and continuity on different electronic components.

6. CALIBRATION

6.1. User Calibration Learning Mode

The ZT-MD1 supports a user calibration learning mode. To perform user calibration, connect a known standard resistor to the tweezer tips and follow the on-screen instructions. This allows the device to adjust its readings for improved accuracy based on your specific reference.

6.2. Factory Reset

If necessary, factory calibration data can be restored by performing a factory reset. This will revert all settings and calibration data to their original factory values. Consult the device's menu for the factory reset option.

7. MAINTENANCE

7.1. Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the tweezer tips are clean and free of debris for accurate contact.

7.2. Storage

When not in use, store the ZT-MD1 in its provided storage bag to protect it from dust and physical damage. Store in a cool, dry place away from direct sunlight and extreme temperatures.

7.3. Battery Care

To prolong battery life, avoid fully discharging the device frequently. Recharge the battery when the low battery indicator appears. If storing for an extended period, charge the battery to approximately 50% and recharge every few months.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Battery is depleted.	Connect the device to a 5V/A USB charger using the provided Type-C cable and allow it to charge for at least 30 minutes before attempting to power on again.
Inaccurate readings.	Dirty or loose tweezer tips; device needs calibration.	Ensure tweezer tips are clean and securely attached. Perform user calibration with a known standard resistor. If issues persist, consider a factory reset.
Screen is blank or unresponsive.	Device frozen; low battery.	Try pressing and holding the power button for 10 seconds to force a restart. Ensure the battery is charged.
Cannot connect to PC for data export.	Incorrect cable or driver issues.	Ensure you are using the provided USB data cable. Check PC device manager for driver installation. Try a different USB port.

9. SPECIFICATIONS

Parameter	Value
Product Model	ZOYI ZT-MD1
Capacitance Range	1pF - 20mF

Parameter	Value
Inductance Range	1μH - 60H
Resistance Range	1mΩ - 10MΩ
Diode Test	On voltage 0.7V
Frequency Test	100Hz, 1kHz, 10KHz
Level Test	0.3V, 0.6V RMS
Parameter Display	L, C, R, D, Q, RS
Display	1.14" Color OLED Screen
Charging Interface	Type-C, 5V/A
Power Supply	400mAh Lithium Battery
Auto Recognition Measurement	Supported
Replaceable Tweezer Head	Supported
Auto Shutdown	Supported
Data Hold	Supported
History Record	Connect to PC to view and export
Language	Chinese, English
Dimensions (L x W x H)	146 x 30 x 18 mm
Item Weight	170 g

10. WARRANTY & SUPPORT

10.1. Warranty Information

ZOYI products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official ZOYI website. Keep your purchase receipt as proof of purchase for warranty claims.

10.2. Customer Support

If you encounter any issues or have questions regarding your ZOYI ZT-MD1 LCR Meter Tweezer that are not addressed in this manual, please contact ZOYI customer support. Contact details can typically be found on the product packaging, the official ZOYI website, or through your retailer.



