

## ZOYI ZT303

# ZOYI ZT303 Digital Multimeter User Manual

Model: ZT303

## 1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective operation of the ZOYI ZT303 Digital Multimeter. The ZT303 is a high-precision, auto-ranging measurement tool designed for professionals and enthusiasts, capable of measuring voltage, current, resistance, capacitance, frequency, and duty cycle. Please read this manual thoroughly before use to ensure proper operation and to prevent potential hazards.

## 2. SAFETY INFORMATION

To ensure safe operation and service of the meter, follow these instructions. Failure to observe these warnings can result in severe injury or death.

- Always ensure the meter is in the correct function and range before making measurements.
- Do not use the meter if it appears damaged or if the test leads are damaged.
- Do not apply more than the rated voltage, as marked on the meter, between the terminals or between any terminal and earth ground.
- Use extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Disconnect the test leads from the circuit before changing functions.
- Remove the test leads from the meter before opening the battery cover.
- Do not operate the meter with the battery cover removed.
- Adhere to local and national safety codes.

## 3. PRODUCT OVERVIEW

The ZOYI ZT303 Digital Multimeter features a clear display, a rotary switch for function selection, and various input jacks for test leads.



Figure 3.1: Front view of the ZOYI ZT303 Digital Multimeter, showing the display, rotary switch, and input terminals.

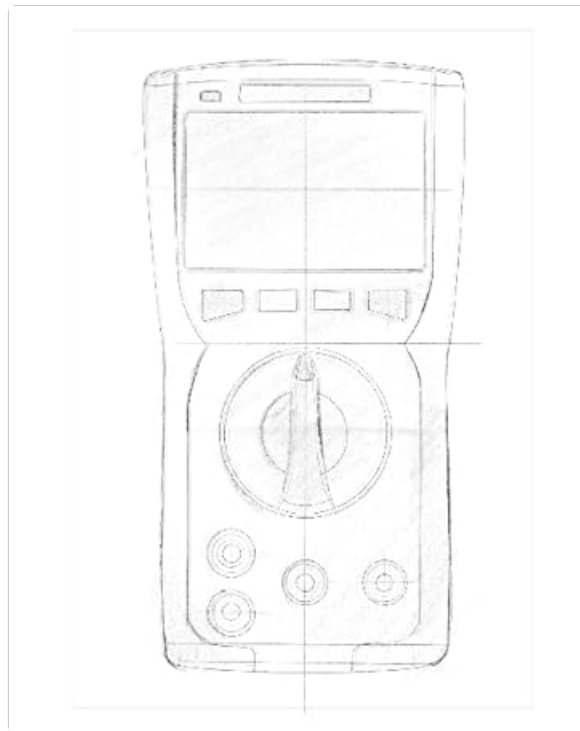


Figure 3.2: Technical drawing illustrating the internal layout or design elements of the ZOYI ZT303 Digital Multimeter.

### 3.1. Components

1. **LCD Display:** Shows measurement readings, units, and function indicators.
2. **Function Buttons:** For selecting specific modes (e.g., RANGE, REL, MAX/MIN, Hz, SELECT, HOLD).
3. **Rotary Switch:** Used to select the desired measurement function (e.g., V~, V-, A~, A-,  $\Omega$ , NCV).
4. **Input Jacks:**
  - **COM Jack:** Common terminal for all measurements. Connect the black test lead here.
  - **VHz $\Omega$ CAP Diode Jack:** Input for voltage, frequency, resistance, capacitance, and diode/continuity tests. Connect the red test lead here for these functions.
  - **mA $\mu$ A Jack:** Input for milliamperes and microamperes current measurements. Connect the red test lead here for these functions.
  - **10A Jack:** Input for 10 Ampere current measurements. Connect the red test lead here for high current measurements.

## 4. SETUP

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### 4.1. Battery Installation

1. Ensure the multimeter is powered off and disconnect all test leads.
2. Locate the battery compartment cover on the back of the unit.
3. Unscrew the retaining screw(s) and remove the cover.
4. Insert new batteries (e.g., 2 x AAA or 9V, refer to the battery compartment for specific type) observing the correct polarity.
5. Replace the battery cover and secure it with the screw(s).

### 4.2. Connecting Test Leads

Always connect the black test lead to the COM jack. Connect the red test lead to the appropriate input jack based on the measurement function:

- For Voltage, Resistance, Capacitance, Frequency, Diode, and Continuity: Connect the red lead to the **VHzΩCAP Diode** jack.
- For mA/μA Current: Connect the red lead to the **mAμA** jack.
- For 10A Current: Connect the red lead to the **10A** jack.

## 5. OPERATING INSTRUCTIONS

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### 5.1. Power On/Off

Turn the rotary switch from the "OFF" position to any desired measurement function to power on the meter. To power off, turn the rotary switch back to the "OFF" position.

### 5.2. Auto Ranging

The ZT303 features auto-ranging, which automatically selects the appropriate measurement range. For manual range selection, press the **RANGE** button.

### 5.3. DC/AC Voltage Measurement (V)

1. Set the rotary switch to the **V~** (AC Voltage) or **V-** (DC Voltage) position.
2. Connect the black test lead to the COM jack and the red test lead to the VHzΩCAP Diode jack.
3. Connect the test probes across the circuit or component to be measured.
4. Read the voltage value on the LCD display.

### 5.4. DC/AC Current Measurement (A, mA, μA)

**Caution:** Never connect the meter in parallel to a voltage source when measuring current. This can damage the meter and the circuit.

1. Set the rotary switch to the appropriate current range (**A~**, **A-**, **mAμA~**, **mAμA-**).
2. Connect the black test lead to the COM jack. Connect the red test lead to the **mAμA** jack for low current or the **10A** jack for high current.
3. Open the circuit where current is to be measured and connect the meter in series with the load.
4. Read the current value on the LCD display.

### 5.5. Resistance Measurement (Ω)

**Caution:** Ensure the circuit is de-energized and all capacitors are discharged before measuring resistance.

1. Set the rotary switch to the **Ω** position.
2. Connect the black test lead to the COM jack and the red test lead to the VHzΩCAP Diode jack.
3. Connect the test probes across the component to be measured.
4. Read the resistance value on the LCD display.

### 5.6. Capacitance Measurement (F)

**Caution:** Ensure the capacitor is fully discharged before measurement to prevent damage to the meter.

1. Set the rotary switch to the **CAP** position (often shared with Ω or Diode, use SELECT button if needed).
2. Connect the black test lead to the COM jack and the red test lead to the VHzΩCAP Diode jack.
3. Connect the test probes across the capacitor terminals.
4. Read the capacitance value on the LCD display.

### 5.7. Frequency/Duty Cycle Measurement (Hz/%)

1. Set the rotary switch to the **Hz/%** position (often shared with voltage or other functions, use **SELECT** button if needed).
2. Connect the black test lead to the COM jack and the red test lead to the VHzΩCAP Diode jack.
3. Connect the test probes across the signal source.
4. Read the frequency or duty cycle value on the LCD display.

## 5.8. Diode Test and Continuity Test

1. Set the rotary switch to the **Diode/Continuity** position. Use the **SELECT** button to toggle between diode test and continuity test.
2. Connect the black test lead to the COM jack and the red test lead to the VHzΩCAP Diode jack.
3. **Diode Test:** Connect the red probe to the anode and the black probe to the cathode of the diode. A forward voltage drop will be displayed. Reverse the probes; an "OL" (Overload) reading indicates a good diode.
4. **Continuity Test:** Connect the probes across the circuit or component. A continuous beep and a low resistance reading indicate continuity.

## 5.9. Non-Contact Voltage (NCV) Detection

1. Set the rotary switch to the **NCV** position.
2. Move the top part of the meter close to the conductor or outlet.
3. The meter will emit an audible beep and/or flash an LED indicator when AC voltage is detected.

## 5.10. Data Hold Function

Press the **HOLD** button to freeze the current reading on the display. Press it again to release the hold function.

## 5.11. MAX/MIN Function

Press the **MAX/MIN** button to enter MAX/MIN recording mode. The meter will display the maximum or minimum reading detected since the mode was activated. Press again to cycle between MAX, MIN, and current reading. Hold to exit.

## 5.12. Relative Measurement (REL)

Press the **REL** button to store the current reading as a reference value. Subsequent measurements will be displayed as the difference from this reference value. Press again to exit relative mode.

# 6. MAINTENANCE

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## 6.1. Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

## 6.2. Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 4.1. Prompt replacement ensures accurate readings and proper operation.

## 6.3. Fuse Replacement

If the current measurement function fails, the fuse may need replacement. Refer to the specific fuse ratings printed near the input jacks or inside the battery compartment. Fuse replacement typically involves opening the back case (after removing batteries) and carefully replacing the blown fuse with one of the identical type and rating. If unsure, consult a qualified technician.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display or dim display	Low or dead batteries	Replace batteries (Section 4.1)
"OL" (Overload) displayed	Measurement exceeds selected range or meter's maximum capacity	Select a higher range (if in manual range) or ensure measurement is within meter's limits.
Incorrect readings	Incorrect function selected, poor test lead connection, or damaged test leads	Verify function, check lead connections, inspect and replace damaged leads.
Current measurement not working	Blown fuse	Replace fuse (Section 6.3)

## 8. SPECIFICATIONS

Feature	Detail
Brand	ZOYI
Model Number	ZT303
Product Dimensions	4.53 x 1.97 x 7.68 inches
Item Weight	14.11 ounces (399.98 Grams)
Power Source	Battery Powered
Color	Blue
Display	Digital LCD, 19999 Counts (typical for ZT303 series)
Ranging	Auto/Manual Ranging
Special Features	True RMS, NCV, Data Hold, Backlight, MAX/MIN, REL

*Note: Detailed electrical specifications (e.g., voltage/current ranges, accuracy) are typically printed on the device or included in a separate specification sheet.*

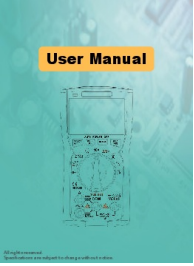
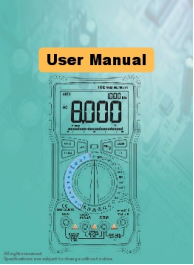



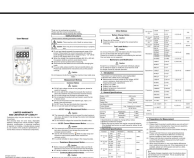
## 9. WARRANTY AND SUPPORT

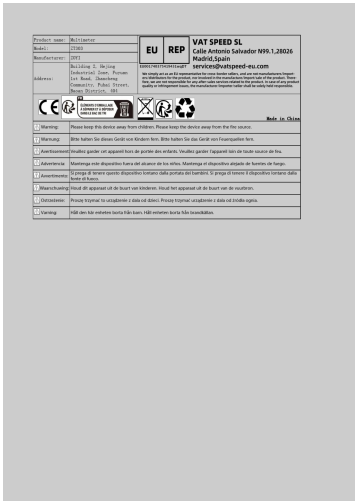
Warranty information for the ZOYI ZT303 Digital Multimeter is typically provided at the point of purchase or within the product packaging. For specific warranty terms, technical support, or service inquiries, please refer to the official ZOYI website or contact your authorized dealer.

For further assistance, visit: [ZOYI Official Flagship Store on Amazon](#)



## Related Documents - ZT303

	<p><a href="#">ZOYI ZT-Y Digital Multimeter User Manual: Operation, Safety, and Specifications</a></p> <p>This user manual provides comprehensive instructions for the ZOYI ZT-Y digital multimeter, covering its features, safety precautions, detailed operation procedures for various measurements (voltage, current, resistance, etc.), maintenance, and technical specifications.</p>
	<p><a href="#">ZOYI ZT-M1 Digital Multimeter User Manual - Features, Specifications, and Operation</a></p> <p>Comprehensive user manual for the ZOYI ZT-M1 digital multimeter. Learn about its features, safety instructions, measurement procedures, maintenance, and detailed electrical specifications for accurate electrical testing.</p>
	<p><a href="#">ZOYI ZT-5BQ Digital Clamp Multimeter User Manual</a></p> <p>Comprehensive user manual for the ZOYI ZT-5BQ digital clamp multimeter, covering safety, specifications, measurement instructions, maintenance, and troubleshooting.</p>
	<p><a href="#">ZOYI ZT-QS9 Digital Clamp Multimeter User Manual</a></p> <p>User manual for the ZOYI ZT-QS9 digital clamp multimeter, detailing its features, specifications, safe operation, measurement procedures, maintenance, and troubleshooting.</p>
	<p><a href="#">ZT-102L Digital Multimeter User Manual</a></p> <p>Comprehensive user manual for the ZOYI ZT-102L Digital Multimeter, covering safety information, specifications, operating instructions, maintenance, and troubleshooting for this true RMS, auto-ranging instrument.</p>
	<p><a href="#">ZOYI ZT102A Digital Multimeter User Manual</a></p> <p>Comprehensive user manual for the ZOYI ZT102A auto-ranging digital multimeter, covering safety instructions, specifications, measurement procedures, maintenance, and troubleshooting.</p>



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Product name: Multimeter Model: **ZT303** Manufacturer: ZOYI Address: Building 2, Hejing Industrial Zone, Fuyuan 1st Road, Zhancheng Community, Fuhai Street, Baoan District, 404 Warning: Please keep this device away from children. Please keep the device away from the fire source. Made in China ...

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