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› ZOYI ZT-702S Digital Oscilloscope Multimeter User Manual

ZOYI ZT-702S

ZOYI ZT-702S Digital Oscilloscope Multimeter User Manual

Model: ZT-702S

1. INTRODUCTION

The ZOYI ZT-702S is a versatile 2-in-1 handheld device combining the functionalities of a digital oscilloscope and a multimeter. It features a 2.8-inch IPS display, 10 MHz bandwidth, and a 48 MSa/s real-time sampling rate. This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your ZT-702S device.

2. PRODUCT OVERVIEW

Key Features:

- **2-in-1 Functionality:** Single-channel handheld oscilloscope and multimeter.
- **Display:** 2.8-inch IPS display with 320*240 resolution, adjustable brightness.
- **Oscilloscope Specifications:** 10 MHz bandwidth, 48 MSa/s real-time sampling rate, ± 400 V input capability, 64Kb recording depth.
- **Multimeter Specifications:** 9999 counts, AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency, Temperature, Diode, Continuity Measurement.
- **Design:** Double injection molded ABS and TPE reinforced construction for durability.
- **Data Management:** Waveform storage and viewing, USB Type-C connectivity for data transfer.
- **Auto Calibration:** Features auto calibration for ease of use.

Included Components:

- ZOYI ZT-702S Device
- 1x Oscilloscope Probe
- Multimeter Test Leads
- Temperature Probe



Figure 2.1: Front view of the ZOYI ZT-702S Digital Oscilloscope Multimeter.

Oscilloscope

2 IN 1

Multimeter

Type-C charger

Bandwidth 10 MHz

9999 counts / True RMS

Adjustable shutdown time

2.8-inch full-view color screen

One-click automatic adjustment



Figure 2.2: ZOYI ZT-702S highlighting 2-in-1 functionality, bandwidth, counts, and display.

Easy switching

Press "MODE" key to switch between multimeter and oscilloscope with one click



Figure 2.3: ZOYI ZT-702S demonstrating the mode switch button for easy operation.

3. SETUP

3.1 Initial Charging

Before first use, ensure the device is fully charged. Connect the ZT-702S to a power source using the provided Type-C cable. The charging indicator will show the charging status.

3.2 Connecting Probes


- **Oscilloscope Probe:** Connect the oscilloscope probe to the BNC connector labeled 'CH1' on the top of the device. Ensure a secure connection.
- **Multimeter Test Leads:** Insert the red test lead into the 'VΩHz+' jack and the black test lead into the 'COM' jack for voltage, resistance, frequency, and other measurements. For current measurements, refer to the operating instructions.
- **Temperature Probe:** Connect the temperature probe to the appropriate jacks as indicated for temperature measurements.



Figure 3.1: ZOYI ZT-702S showing Type-C charging port and probe connections.

4. OPERATING INSTRUCTIONS

4.1 Power On/Off

Press and hold the power button (usually marked with ) to turn the device on or off.

4.2 Switching Modes

The ZT-702S allows switching between Oscilloscope and Multimeter modes. Press the **MODE** button to toggle between the two functionalities. The display will indicate the active mode.



Figure 4.1: ZOYI ZT-702S showing both oscilloscope and multimeter displays.

4.3 Oscilloscope Mode Operation

In Oscilloscope mode, the device displays waveforms. Key controls include:

- **VOL/TIME:** Adjusts vertical sensitivity (Volts/Div) and horizontal time base (Time/Div).
- **MOVE:** Shifts the waveform horizontally or vertically.
- **TRIGGER:** Sets the trigger level and mode (Auto, Normal, Single) to stabilize the waveform.
- **AC/DC Coupling:** Selects AC or DC coupling for the input signal.
- **Auto Calibration:** Use the auto calibration function for quick setup and optimal display of the

waveform.



Figure 4.2: ZOYI ZT-702S demonstrating one-button automatic waveform acquisition.

4.4 Multimeter Mode Operation

In Multimeter mode, the device functions as a digital multimeter. Use the **RANGE** button or **AUTO RANGE** feature to select the appropriate measurement range. The device supports:

- **AC/DC Voltage:** Connect test leads to measure voltage.
- **AC/DC Current:** Connect test leads to the appropriate current jacks (10A or mA) and select the current function.
- **Resistance (Ω):** Measure resistance by connecting leads across the component.
- **Capacitance:** Measure capacitance of capacitors.
- **Frequency (Hz):** Measure signal frequency.
- **Temperature ($^{\circ}\text{C}/^{\circ}\text{F}$):** Use the temperature probe for measurements.
- **Diode Test:** Test diodes for forward voltage drop.
- **Continuity:** Check for circuit continuity with an audible beep.

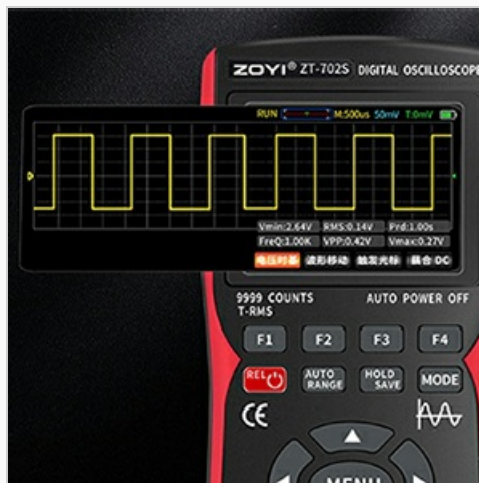


Figure 4.3: ZOYI ZT-702S multimeter display showing 9999 counts for precise measurements.

4.5 Waveform Storage and Data Transfer

The oscilloscope automatically stores measured waveform data. To access or download waveforms:

1. Connect the ZT-702S to a computer using a Type-C USB cable.
2. The device will appear as a USB flash drive.

3. Open the image folder to access stored waveform images.
4. You can then transfer these files to your computer for backup and analysis.



Figure 4.4: ZOYI ZT-702S showing data capture and storage capabilities.

5. MAINTENANCE

5.1 Cleaning

Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from all probes and power sources before cleaning.

5.2 Storage

Store the ZT-702S in a cool, dry place away from direct sunlight and extreme temperatures. Disconnect all probes and cables before storage. If storing for extended periods, ensure the battery is partially charged (around 50%) to prolong its lifespan.

5.3 Battery Care

The device is powered by a rechargeable battery. Avoid fully discharging the battery frequently. Recharge the battery when the low battery indicator appears. Do not attempt to replace the internal battery yourself; contact qualified service personnel if battery issues arise.

6. TROUBLESHOOTING

- **Device does not power on:** Ensure the battery is charged. Connect to a power source and try again.
- **No waveform displayed in Oscilloscope mode:** Check probe connections. Verify trigger settings. Ensure the input signal is within the device's measurement range.
- **Incorrect multimeter readings:** Check test lead connections. Ensure the correct measurement function and range are selected. Perform auto calibration if available.
- **Display issues:** Adjust screen brightness. If the display remains problematic, contact support.
- **Data transfer issues:** Ensure the Type-C cable is properly connected to both the device and the computer. Try a different USB port or cable.

For issues not covered here, please contact customer support.

7. SPECIFICATIONS

Feature	Specification
Brand	ZOYI
Model Number	ZT-702S
Power Source	Battery Powered
Item Weight	0.6 Kilograms
Item Dimensions (L x W x H)	8 x 4 x 3 Centimeters
Minimum Operating Voltage	0.1 Volts
Oscilloscope Bandwidth	10 MHz
Sampling Rate	48 MSa/s
Max Input Voltage	±400 V (DC+AC)
Channels	1
Input Resistance	1 MΩ, @16pF
Multimeter Counts	9999 Counts
AC Voltage Range	0-750 V
DC Voltage Range	0-999.9 V
DC/AC Current Range	0-9.999 A
Resistance Range	0-99.99 MΩ
Capacitance Range	0-99.99 mF
Frequency Range	0-99.99 kHz
Temperature Range	-20°C - 1000°C
Display	2.8-inch IPS color screen, 320*240 resolution
Country of Origin	China

8. WARRANTY AND SUPPORT

8.1 Warranty Information

Please refer to the warranty card included with your product for detailed warranty terms and conditions. Typically, ZOYI products come with a manufacturer's warranty covering defects in materials and workmanship.

8.2 Customer Support

For technical assistance, troubleshooting, or service inquiries, please contact the manufacturer or your local distributor. In India, support is provided by Skyking Instruments.

Manufacturer: ZOYI & ZOTEK Instruments

Importer (India): Skyking Instruments, Mumbai, India

