MAXRIENY OT5 Handheld oscilloscope

MAXRIENY OT5 Handheld Oscilloscope User Manual

Model: OT5 Handheld Oscilloscope

1. Introduction

Thank you for choosing the MAXRIENY OT5 Handheld Oscilloscope. This device is a portable, high-performance digital oscilloscope designed for various electrical testing and measurement applications. Featuring a 50MHz bandwidth, 200MSa/s real-time sampling rate, and a 3.2-inch TFT color screen, it offers precise and clear waveform analysis. This manual provides essential information for safe and effective use of your oscilloscope.

2. Safety Information

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in electric shock, fire, or damage to the device.

- Do not use the device if it appears damaged or is not operating correctly.
- Ensure the probe is correctly connected and rated for the voltage being measured. The maximum input voltage is ±40V for ×1 range and ±400V for ×10 range (DC + AC peak).
- Avoid exposing the device to moisture, extreme temperatures, or direct sunlight.
- Use only the provided USB Type-C cable for charging.
- Do not attempt to disassemble or modify the device. Refer all servicing to qualified personnel.

3. Package Contents

Verify that all items are present in your package:

- 1 × OT5 portable oscilloscope
- 1 × Oscilloscope probe
- 1 × USB Type-C data cable

- 1 × EVA storage bag
- 1 × User's manual (this document)
- 1 × Regulating Rod
- 4 × Color ring

4. Product Overview

The MAXRIENY OT5 is a compact and lightweight handheld oscilloscope designed for portability and ease of use. It features a durable build with a soft silicone cover for shock and drop protection.

4.1 Key Features

- **Bandwidth:** 50MHz
- **Real-time Sampling Rate:** 200MSa/s
- **Display:** 3.2-inch TFT color screen
- **Trigger Functions:** Auto, Normal, Single
- **Input Voltage:** Up to ±400V (with ×10 probe attenuation)
- **Battery:** Built-in 1200mAh Lithium battery
- **Connectivity:** USB Type-C for charging and data transmission
- **Additional Features:** Auto range, true RMS value display, screen backlight, data hold, low battery alert, automatic shutdown.

4.2 Device Layout

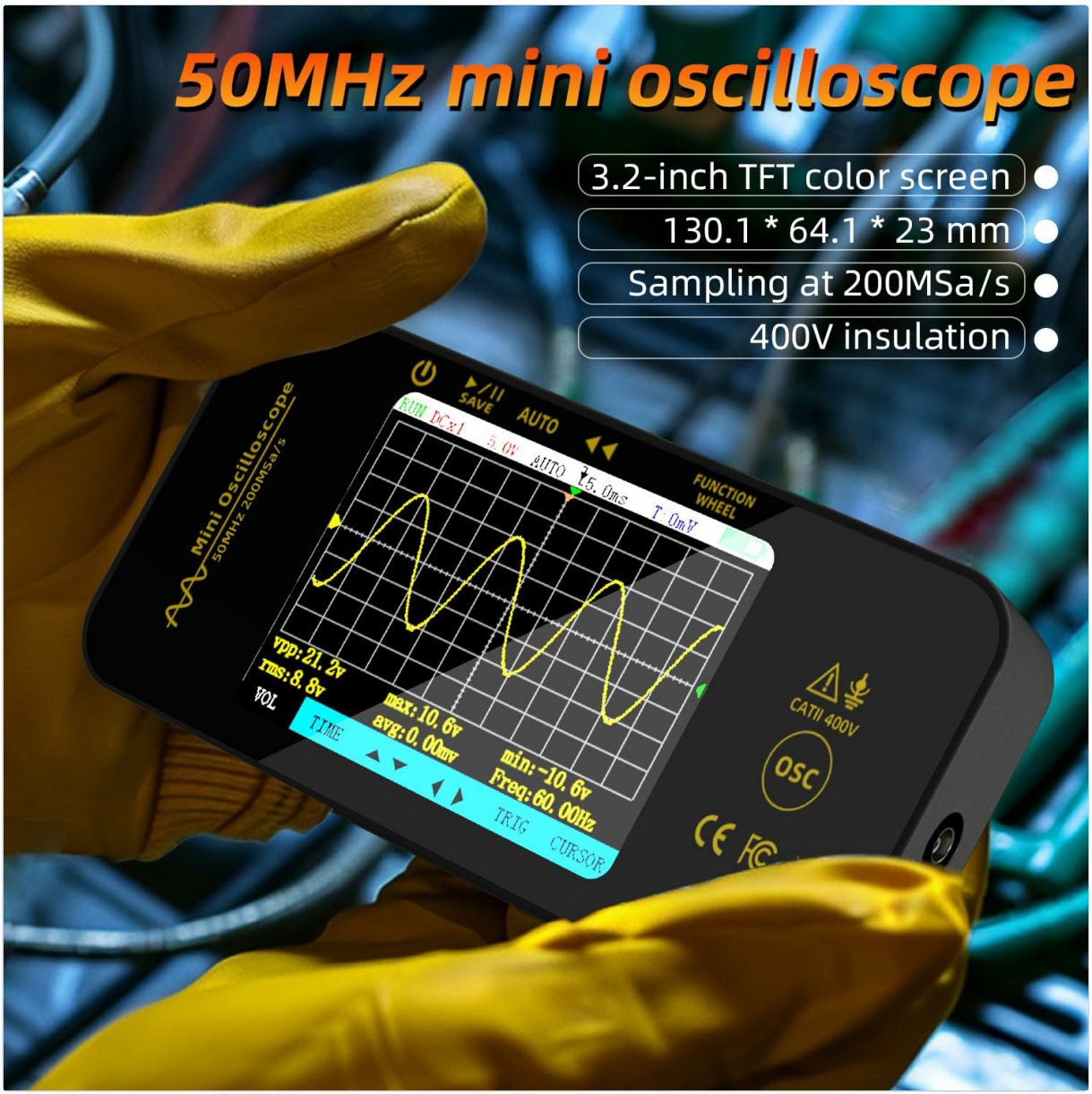

Figure 4.2.1: Front view of the OT5 Handheld Oscilloscope displaying a waveform.

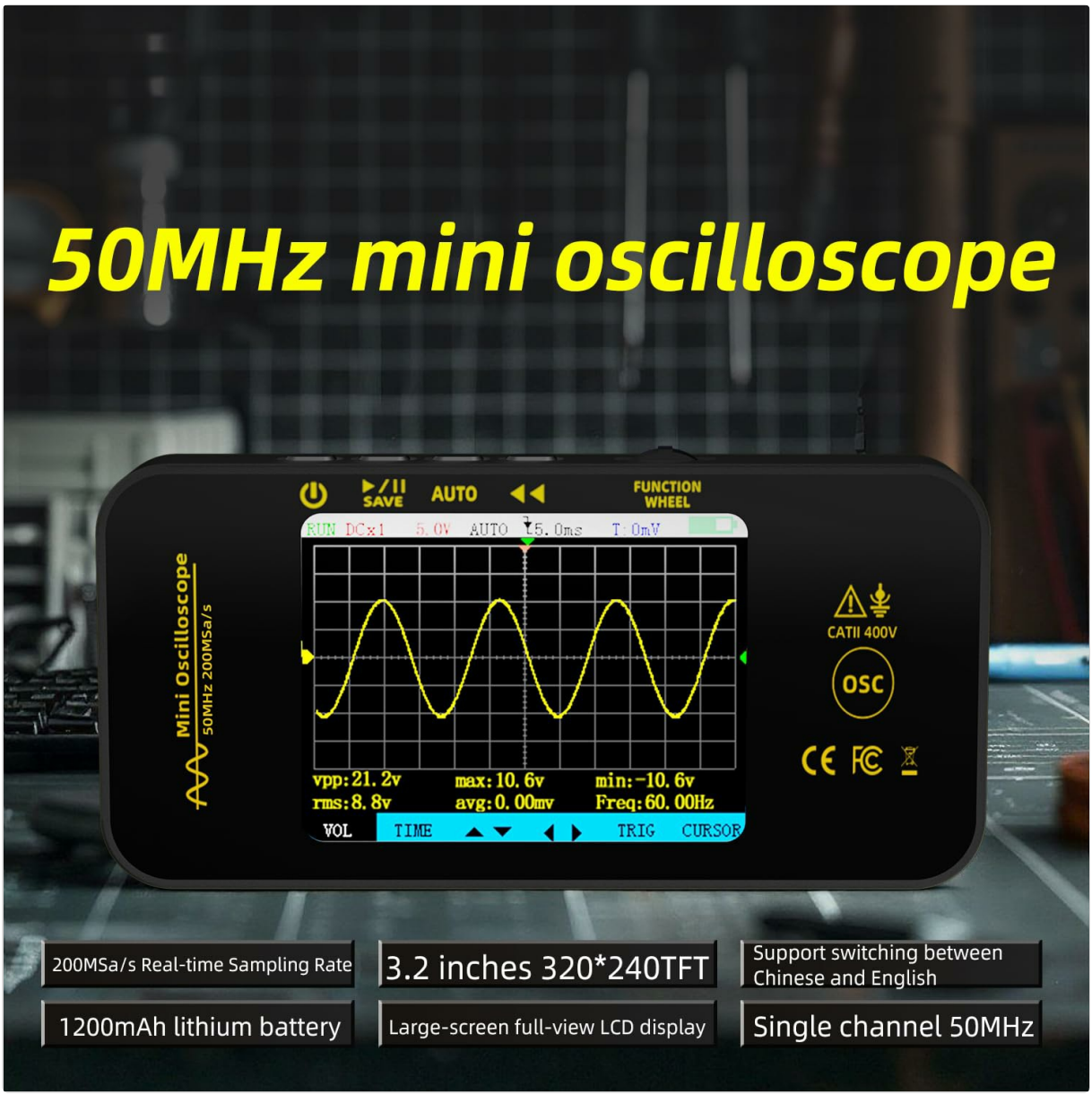

Figure 4.2.2: The OT5 oscilloscope with its main specifications and features highlighted.

Figure 4.2.3: The OT5 oscilloscope illustrating its compact dimensions and the 'pulley' function wheel for navigation.

5. Setup

5.1 Initial Charging

Before first use, fully charge the oscilloscope using the provided USB Type-C cable and a compatible power adapter (not included). The charging port is located on the side of the device.

Figure 5.1.1: The OT5 oscilloscope connected via its Type-C port for charging.

5.2 Connecting the Probe

Connect the oscilloscope probe to the BNC connector on the device. Ensure a secure connection. Select the appropriate attenuation (×1 or ×10) on the probe based on your measurement requirements.

5.3 Powering On/Off

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

6. Operating Instructions

The OT5 oscilloscope features intuitive controls for easy operation. The 'Function Wheel' and dedicated buttons allow for quick adjustments and menu navigation.

6.1 Basic Measurement

Upon powering on, the oscilloscope will typically enter auto-ranging mode, automatically adjusting vertical and horizontal scales to display a stable waveform. Connect the probe to the circuit under test.

6.2 Adjusting Settings

- **Vertical Sensitivity (VOL):** Use the 'VOL' buttons or function wheel to adjust the vertical scale (Volts per division).
- **Horizontal Time Base (TIME):** Use the 'TIME' buttons or function wheel to adjust the horizontal scale (seconds per division).
- **Trigger Mode (TRIG):** Select between Auto, Normal, and Single trigger modes using the 'TRIG' button. Auto mode is suitable for most general-purpose measurements.
- **Cursor (CURSOR):** Activate cursors for precise voltage and time measurements.
- **Save (SAVE):** Save waveform data or screenshots.
- **Auto (AUTO):** Automatically adjusts the vertical and horizontal scales for optimal waveform display.

6.3 Language Switching

The device supports switching between Chinese and English. Navigate through the menu settings to find the language option and select your preferred language.

6.4 Demonstration Video

Video 6.4.1: A demonstration of the MAXRIENY OT5 Handheld Oscilloscope's unboxing, power-on sequence, and basic waveform measurement capabilities.

7. Maintenance

7.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure no liquids enter the device openings.

7.2 Battery Care

The built-in 1200mAh lithium battery provides lasting power. For optimal battery life, avoid fully discharging the battery frequently and store the device in a cool, dry place if not used for extended periods.

7.3 Firmware Updates

The device supports firmware upgrades. Check the manufacturer's website for available updates and follow the provided instructions for installation using the USB Type-C interface.

8. Troubleshooting

- **Device does not power on:** Ensure the battery is charged. Connect the device to a charger and try again.
- **No waveform displayed:** Check probe connection. Ensure the input signal is within the device's measurement range. Adjust vertical and horizontal scales.
- **Unstable waveform:** Adjust the trigger level and trigger mode. Try 'Auto' trigger mode for general signals.
- **Screen is blank or frozen:** Try restarting the device by holding the power button. If the issue persists, contact customer support.

9. Specifications

Feature	Specification
Display	3.2-inch TFT color screen
Bandwidth	50MHz
Real-time Sampling Rate	200MSa/s
Number of Channels	1 channel
Input Impedance	1MΩ, @16pF
Probe Attenuation	×1, ×10
Maximum Input Voltage	×1 range ±40V, ×10 range ±400V (DC + AC peak)
Horizontal Sampling Rate Range	1.5Sa/s-200MSa/s
Vertical Sensitivity	20mV/div-10V/div
Battery	1200mA Lithium battery (included)
Product Dimensions	2.52 x 0.91 x 5.12 inches (130.1 x 64.1 x 23 mm)
Item Weight	5 ounces (143g with battery)
Manufacturer	BSIDE

10. Warranty and Support

For warranty information and technical support, please refer to the contact details provided with your purchase or visit the official MAXRIENY website. Keep your purchase receipt as proof of purchase.