

UNI-T UT217A

UNI-T UT217A/UT217B Oscilloscope Clamp Meter

USER MANUAL

1. Introduction

The UNI-T UT217A/UT217B is a versatile 2-in-1 device combining the functions of an AC/DC clamp meter and an oscilloscope. This instrument is designed for comprehensive electrical measurements, offering high precision and a user-friendly interface. It features a 2.8-inch high-definition LCD display and supports Bluetooth connectivity for mobile application integration, allowing for data transmission, analysis, and storage.

This manual provides essential information for the safe and effective operation of your UNI-T UT217A/UT217B device. Please read it thoroughly before use and retain it for future reference.

2. Safety Information

To ensure safe operation and prevent damage to the device or injury, observe the following safety precautions:

- Always adhere to local and national safety codes.
- Do not use the device if it appears damaged or is operating abnormally.
- Ensure the battery is adequately charged before use to avoid unexpected power loss during critical measurements.
- Avoid contact with live circuits when connecting or disconnecting test leads.
- Do not exceed the maximum input ratings specified for each function.
- Use only specified replacement parts and accessories.
- Keep the device dry and clean. Do not operate in wet or explosive environments.
- Be aware of the high voltage warning indicator on the device.

3. Package Contents

Verify that all items are present and undamaged upon unpacking:

- UNI-T UT217A/UT217B Oscilloscope Clamp Meter

- Test Leads
- Type-C Charging Cable
- User Manual
- Carrying Pouch (may vary by model/region)

4. Product Overview

Familiarize yourself with the components of your UNI-T UT217A/UT217B device:



Figure 1: Front view of the UNI-T UT217A/UT217B Oscilloscope Clamp Meter, showing the display, function dial, and clamp jaw.

- **Clamp Jaw:** Used for non-contact measurement of AC/DC current. The UT217A has a 31mm jaw opening, while the UT217B has a 38mm jaw opening.
- **LCD Display:** 2.8-inch high-definition screen displaying measurement readings, waveforms, and function indicators.
- **Function Dial:** Rotary switch to select measurement modes (e.g., ACV, DCV, ACA, DCA, Resistance, Capacitance, Frequency, Oscilloscope).
- **Function Buttons:** Buttons for range selection, hold, backlight, peak hold, and other specific functions.

- **Input Terminals:** Sockets for connecting test leads for voltage, resistance, capacitance, and other measurements.
- **Type-C Port:** For charging the built-in 2600mAh battery.

5. Setup

Before first use, ensure the device is properly set up:

1. Charging the Battery:

- Connect the provided Type-C charging cable to the device's Type-C port.
- Connect the other end of the cable to a standard USB power adapter (not included) or a computer's USB port.
- The charging indicator on the display will show the charging status. Allow the device to fully charge before initial use. The built-in battery capacity is 2600mAh.

2. Power On/Off:

- Rotate the function dial from the 'OFF' position to any desired measurement function to power on the device.
- To power off, rotate the function dial back to the 'OFF' position.

6. Operating Instructions

This section details the primary functions of the UNI-T UT217A/UT217B.

6.1 Clamp Meter Function (AC/DC Current Measurement)

1. Rotate the function dial to the 'ACA' (AC Current) or 'DCA' (DC Current) position.
2. Press the jaw release trigger to open the clamp jaw.
3. Enclose a single conductor (not a power cord with multiple wires) within the clamp jaw. Ensure the jaw is fully closed.
4. Read the current value displayed on the LCD. The device features 20000 count true RMS automatic ranging.
5. For surge current measurement (AC current only), select the appropriate function if available on the dial or via a button.

6.2 Oscilloscope Function (Waveform Measurement)

The oscilloscope function allows for simultaneous measurement of current and voltage waveforms.

1. Rotate the function dial to the 'Oscilloscope' position.
2. Connect the test leads to the appropriate input terminals for voltage measurement, or use the clamp jaw for current waveform measurement.
3. The display will show the real-time waveform. Use the function buttons to adjust parameters such as time base, voltage scale, and trigger settings as needed.
4. Analyze the waveform characteristics (e.g., frequency, amplitude, shape).

6.3 Bluetooth Connectivity

The device supports Bluetooth connection to a mobile phone application for enhanced functionality.

1. Download and install the official UNI-T mobile application from your device's app store.
2. Ensure Bluetooth is enabled on your mobile phone.
3. Power on the UT217A/UT217B.
4. Open the UNI-T application and follow the on-screen instructions to search for and connect to your device.
5. Once connected, you can transmit measurement data, analyze trends, and store readings directly on your mobile device.

7. Maintenance

Proper maintenance ensures the longevity and accuracy of your device.

- **Cleaning:** Use a soft, damp cloth with mild detergent to clean the casing. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from any power source before cleaning.
- **Storage:** Store the device in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, ensure the battery is partially charged (around 50%) to preserve battery health.
- **Battery Care:** The device has a built-in 2600mAh rechargeable battery. Avoid fully discharging the battery frequently. Recharge it regularly, especially if not used for a long time.
- **Calibration:** For professional applications, periodic calibration by qualified personnel is recommended to maintain measurement accuracy.

8. Troubleshooting

Refer to the table below for common issues and their solutions:

Problem	Possible Cause	Solution
Device does not power on	Low battery; Function dial not set correctly	Charge the battery; Rotate dial to a measurement function
Inaccurate readings	Improper connection; Environmental interference; Device malfunction	Check test lead connections; Move away from strong electromagnetic fields; Contact support if issue persists
Bluetooth connection fails	Bluetooth off on phone; App not installed; Device not discoverable	Enable Bluetooth; Install UNI-T app; Restart device and app
Display is blank or dim	Low battery; Backlight off; Display damage	Charge battery; Press backlight button; Contact support

9. Specifications

Key technical specifications for the UNI-T UT217A/UT217B Oscilloscope Clamp Meter:

Feature	Description
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Feature	Description
Model	UT217A / UT217B
Functions	AC/DC Clamp Meter, Oscilloscope
Display	2.8-inch High-Definition LCD
Count	20000 Count True RMS
Jaw Opening	UT217A: 31mm; UT217B: 38mm
Oscilloscope Function	Measures current and voltage waveforms simultaneously
Connectivity	Bluetooth to mobile phone APP (transmit, analyze, store)
Special Features	Surge current measurement (AC only), High voltage warning
Power Source	Type-C charging, Built-in 2600mAh battery
Manufacturer	UNI-TREND TECHNOLOGY (CHINA) CO., LTD.
Product Model Number	YQ-UT217A

10. Warranty and Support

UNI-T products are manufactured to high quality standards and are warranted against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official UNI-T website.

For technical support, service, or inquiries, please contact your local distributor or the UNI-T customer service department. Ensure you have your product model number (UT217A/UT217B) and purchase information available when seeking support.