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> [SEEIRIR UT81A/B/C/D+ Series Oscilloscope Multimeter Signal Generator User Manual](#)

## SEEIRIR UT81A Plus 50MHZ

# UT81A/B/C/D+ Series Oscilloscope Multimeter Signal Generator User Manual

Model: UT81A Plus 50MHZ

Brand: SEEIRIR

## 1. INTRODUCTION

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This manual provides comprehensive instructions for the safe and effective operation of the SEEIRIR UT81A/B/C/D+ series Oscilloscope Multimeter Signal Generator. This versatile instrument combines the functions of a digital oscilloscope, a digital multimeter, and, for specific models (UT81C+/UT81D+), a signal generator, making it an essential tool for electronic maintenance, testing, and education.

Key features of the UT81A/B/C/D+ series include:

- **High Cost-Effectiveness:** Designed as a basic digital oscilloscope to meet daily electronic maintenance needs.
- **Easy to Use:** Features a user-friendly knob and button operation interface, allowing even beginners to quickly get started.
- **Automatic Measurement:** Enables one-click reading of frequency, voltage, and duty cycle for efficient analysis.
- **USB Storage:** Supports waveform data export for convenient analysis and record-keeping.
- **Portable Design:** Lightweight body, making it suitable for both laboratory and outdoor maintenance applications.

## 2. SAFETY INFORMATION

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Always observe standard safety precautions when operating this device to prevent personal injury or damage to the instrument. Ensure the device is used within its specified voltage and current limits. Do not attempt to measure circuits with voltages exceeding the maximum input rating. Disconnect power to the circuit under test before making connections or changing measurement functions.

- Do not operate the device if it appears damaged or if the test leads are compromised.
- Avoid using the device in wet or damp environments.
- Ensure proper grounding when necessary.
- Refer to the CAT rating for safe measurement categories.

## 3. PRODUCT OVERVIEW AND COMPONENTS

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**Figure 3.1:** Front view of the UT81A+ model. This image displays the device's main screen showing a typical waveform, along with the function buttons (F1-F4), mode selection, channel controls, system settings, save button, measurement range, auto-set, trigger/delta, and navigation buttons. The multimeter input jacks (A, mA, COM, QVC+) are visible at the bottom.



**Figure 3.2:** UT81D+ model shown with its standard accessories. This includes the main unit, a black carrying case, red and black test leads, a power adapter, a USB cable for data transfer, and additional probes/accessories. This illustrates the complete package contents.

### 3.1 Front Panel Layout

The front panel features a 320x240 pixel display, function buttons (F1-F4), navigation keys, and dedicated buttons for Mode, CH1/2, HOR (Horizontal), System, Save, Measure Range, Auto, and Trig/Δ. The bottom section includes input terminals for multimeter functions (A, mA, COM, QVC+).

### 3.2 Input/Output Ports

- **USB Port:** For data transfer and waveform export.
- **Power Input:** For connecting the power adapter.
- **Test Lead Jacks:** Dedicated inputs for multimeter and oscilloscope probes.

## 4. SETUP AND INITIAL OPERATION

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## 4.1 Unpacking and Inspection

Upon receiving your UT81A/B/C/D+ series device, carefully unpack all components. Verify that all items listed in Figure 3.2 are present and undamaged. If any items are missing or damaged, contact your vendor immediately.

## 4.2 Powering On the Device

1. Connect the provided power adapter to the device's power input port.
2. Plug the power adapter into a suitable electrical outlet.
3. Press and hold the power button (usually marked with a power symbol) until the display illuminates.
4. The device will perform a self-test and then display the main interface.

## 4.3 Initial Settings

Navigate through the 'System' menu to configure basic settings such as language, display brightness, and auto-off timer. Refer to the 'Operating' section for detailed navigation instructions.

# 5. OPERATING INSTRUCTIONS

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## 5.1 Oscilloscope Function

The oscilloscope function allows for waveform visualization and analysis. The device supports dual channels with a real-time sampling rate of 250MSa/s or 500MSa/s and a bandwidth of 50MHz or 100MHz, depending on the model.

- **Connecting Probes:** Connect the oscilloscope probes to the appropriate input jacks (CH1/CH2).
- **Auto-Set:** Press the 'Auto' button for automatic waveform scaling and positioning.
- **Vertical Control:** Use the vertical scale knob/buttons to adjust the voltage per division.
- **Horizontal Control:** Use the 'HOR' button and associated controls to adjust the time base (time per division).
- **Trigger Settings:** Use the 'Trig/Δ' button to set trigger mode, level, and slope for stable waveform display.
- **Cursor Measurement:** Activate cursor measurement to precisely determine voltage difference and time difference between points on the waveform.
- **Automatic Measurements:** The device can automatically measure cycle, frequency, amplitude, peak, max, min, and average values. Access these via the 'Measure Range' or 'Auto' functions.

## 5.2 Digital Multimeter Function

The integrated digital multimeter provides 24000 readings and supports various electrical measurements.

- **Function Selection:** Use the 'Mode' button or rotary switch (if present) to select desired measurement mode (Voltage, Current, Resistance, Capacitance, On-off, Diode).
- **Connecting Leads:** Connect the test leads to the appropriate input jacks (COM, VΩmA, A).
- **Measurement:** Apply the leads to the circuit or component under test. The reading will be displayed on the screen.

## 5.3 Signal Generator Function (UT81C+/UT81D+ only)

For UT81C+ and UT81D+ models, the device includes a signal generator capable of producing various waveforms.

- **Waveform Types:** Generate sine, rectangular, sawtooth, pulse, and arbitrary waves.
- **Frequency/Amplitude Adjustment:** Use the controls to set the desired frequency and amplitude of the output signal.
- **Output Connection:** Connect the signal output to the circuit or device requiring a test signal.

## 5.4 Data Storage and Export

The device supports USB storage for waveform data. Connect the device to a computer using the provided USB cable. Access the 'Save' or 'System' menu to export stored waveforms for further analysis on a PC.

## 6. MAINTENANCE

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### 6.1 Cleaning

To maintain the device's performance and appearance, clean the exterior regularly with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from all power sources before cleaning.

### 6.2 Storage

When not in use, store the device in a cool, dry place, away from direct sunlight and extreme temperatures. Use the provided carrying case to protect the device from dust and physical damage.

### 6.3 Battery Care (if applicable)

If your model includes a rechargeable battery, ensure it is charged periodically, even when not in use, to maintain battery health. Avoid fully discharging the battery for extended periods.

## 7. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Device does not power on.	No power, faulty power adapter, or discharged battery.	Check power connection. Ensure power adapter is working. Charge the battery if applicable.
No waveform displayed on oscilloscope.	Incorrect probe connection, wrong trigger settings, or signal out of range.	Verify probe connection. Press 'Auto' button. Adjust trigger level and time/voltage scales.
Multimeter shows incorrect readings.	Incorrect function selected, faulty test leads, or component issue.	Ensure correct measurement mode is selected. Check test leads for continuity. Verify component integrity.
USB data transfer fails.	Faulty USB cable, driver issue, or incorrect device settings.	Try a different USB cable. Ensure device is in data transfer mode. Check computer's USB port and drivers.

## 8. SPECIFICATIONS

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Parameter	Value
Model Series	UT81A+, UT81B+, UT81C+, UT81D+
Real Time Sampling Rate	250MSa/s or 500MSa/s
Bandwidth	50MHz or 100MHz
Digital Channels	Dual channel or more
Record Length	8K or 4K optional
Display Resolution	320*240 Pixels
Display Size	3.0 - 4.9 Inches
Sampling Method	Sampling, peak detection
Cursor Measurement	Voltage difference, time difference
Automatic Measurement	Cycle, frequency, amplitude, peak, max, min, average value

Parameter	Value
Digital Multimeter Readings	24000 readings
Multimeter Measurement	Voltage, current, resistance, capacitance, on-off, diode
Signal Generator (UT81C+/UT81D+ only)	Sine, rectangular, sawtooth, pulse, arbitrary wave
Certifications	CE, FCC, RoHS, UL, KC, pse, weee
Manufacturer	SEEIRIR
Country of Origin	China
Item Weight	400 Grams
Package Dimensions	0.39 x 0.39 x 0.39 inches

## 9. WARRANTY AND SUPPORT

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For product support, technical assistance, or warranty inquiries, please contact SEEIRIR customer service. Refer to the product packaging or the official SEEIRIR website for the most current contact information.

While specific warranty terms may vary, it is recommended to retain your proof of purchase for any warranty claims. Protection plans may also be available for extended coverage.