UNI-T UT123T

UNI-T UT123T Digital Multimeter Instruction Manual

Model: UT123T

1. Product Overview

The UNI-T UT123T is a compact and reliable digital multimeter designed for residential and general electrical measurements. It features auto-ranging capabilities, a 4000-count display, and Non-Contact Voltage (NCV) detection for enhanced safety. This device is suitable for troubleshooting common household electrical issues, checking automotive battery voltage, and performing various electrical tests.

Front view of the UNI-T UT123T Digital Multimeter, highlighting its clear LCD display and function dial.

2. What's in the Box

Upon opening your UNI-T UT123T kit, you should find the following components:

- 1 x UT123T Residential Multimeter (red and grey)
- 1 x Pair of Test Leads (red and black)
- 1 x Thermocouple (for temperature measurement)
- 2 x AAA Batteries
- 1 x User Manual (paper)
- 1 x eManual (PDF, typically available online or via QR code)
- 1 x Packaging Box

The complete UNI-T UT123T kit, showing the multimeter, red and black test leads, a thermocouple for temperature measurement, and the user manual.

3. Key Features

- **Display Count:** 4000 counts for precise readings.
- **Auto Range:** Automatically selects the appropriate measurement range.
- **Non-Contact Voltage (NCV):** Detects AC voltage without physical contact, indicated by acousto-optic signals.
- **Continuity Test:** Audible indication for circuit continuity.
- **Temperature Measurement:** Measures from -40°C to 300°C (-40°F to 572°F) using the included thermocouple.
- **Data Hold:** Freezes the displayed reading for easy recording.
- **Low Battery Indication:** Alerts when battery voltage is ≤2.7V.
- **Auto Power Off:** Automatically shuts down after 15 minutes of inactivity to conserve battery life.
- **Safety Rated:** CAT III 600V for safe operation in various electrical environments.

A detailed view of the multimeter's front panel, illustrating the layout of the display, rotary switch, and input terminals for various measurements.

4. Setup

4.1 Battery Installation

1. Ensure the multimeter is turned OFF.
2. Locate the battery compartment on the back of the device.
3. Use a screwdriver to loosen the screw securing the battery cover.
4. Remove the battery cover.
5. Insert the two AAA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
6. Replace the battery cover and tighten the screw.

The rear side of the multimeter, showing the secure battery compartment cover.

4.2 Connecting Test Leads

Always connect the black test lead to the 'COM' (common) input jack. Connect the red test lead to the appropriate input jack based on the measurement type:

- For Voltage (V), Resistance (Ω), Continuity, Diode, Capacitance, and Temperature (°C/°F) measurements, connect the red lead to the 'VΩ)))°C' jack.
- The UT123T does not measure current directly via test leads.

5. Operating Instructions

Turn the rotary switch to the desired function. The multimeter will automatically select the range (Auto Range) for most measurements.

5.1 Voltage Measurement (AC/DC)

1. Connect the black test lead to 'COM' and the red test lead to 'VΩ)))°C'.
2. Turn the rotary switch to 'V~' for AC voltage or 'V=' for DC voltage.
3. Touch the test probes to the circuit points where voltage is to be measured.
4. Read the voltage value on the display.

5.2 Resistance Measurement (Ω)

1. Connect the black test lead to 'COM' and the red test lead to 'VΩ)))°C'.
2. Turn the rotary switch to 'Ω'.
3. Ensure the circuit or component is de-energized before measuring resistance.
4. Touch the test probes across the component.
5. Read the resistance value on the display.

5.3 Continuity Test

1. Connect the black test lead to 'COM' and the red test lead to 'VΩ)))°C'.
2. Turn the rotary switch to ')))'.
3. Ensure the circuit or component is de-energized.
4. Touch the test probes across the circuit or component. An audible beep indicates continuity.

5.4 Temperature Measurement (°C/°F)

1. Connect the thermocouple to the 'VΩ)))°C' and 'COM' jacks, observing polarity.
2. Turn the rotary switch to '°C°F'.
3. Place the thermocouple tip on the object whose temperature is to be measured.
4. Read the temperature on the display. Use the 'SELECT' button to switch between Celsius and Fahrenheit.

5.5 Non-Contact Voltage (NCV) Detection

1. Turn the rotary switch to 'NCV'.
2. Move the top part of the multimeter near the conductor or electrical outlet.
3. The NCV indicator light and an audible beep will activate if AC voltage is detected. The frequency of beeps and light flashes increases with stronger voltage.

The multimeter being used for Non-Contact Voltage (NCV) detection near an electrical panel, indicating its ability to sense AC voltage without direct contact.

5.6 Data Hold Function

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

5.7 Auto Power Off

The multimeter will automatically power off after approximately 15 minutes of inactivity to save battery life. To disable this feature, refer to the detailed user manual.

5.8 Video Demonstration

Your browser does not support the video tag.

This video demonstrates the key features and operational aspects of the UNI-T UT125C Pocket Multimeter, which shares many functionalities and a similar compact design with the UT123T model. It covers auto-ranging, overload protection, non-contact voltage detection, probe holder functionality, and various measurement modes including voltage, current, resistance, capacitance, diode test, and continuity.

6. Maintenance

6.1 General Care

- Keep the multimeter clean and dry. Use a soft, damp cloth for cleaning; do not use abrasives or solvents.
- Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- Avoid dropping the multimeter or subjecting it to strong impacts.

6.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries promptly to ensure accurate measurements. Follow the battery installation steps in Section 4.1.

7. Troubleshooting

- **No Display/Faint Display:** Check battery installation and replace if necessary. Ensure the multimeter is turned ON.
- **Incorrect Readings:** Verify test lead connections. Ensure the correct function is selected on the rotary switch. Check if the batteries are low.
- **'OL' on Display:** This indicates an overload or out-of-range measurement. Select a higher range (if manual ranging is available, though UT123T is auto-ranging) or ensure the measured value is within the device's specifications.
- **No Continuity Beep:** Ensure the circuit is de-energized. Check for actual continuity in the circuit.

8. Specifications

Measurement	Range	Accuracy
DC Voltage	4V/40V/400V/600V	±(0.5%+2)
AC Voltage	4V/40V/400V/600V	±(1.0%+3)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ/20MΩ	±(0.8%+2)
Temperature	–40°C 300°C / –40°F 572°F	±4°C
Display Count	4000	N/A
Safety Rating	CAT III 600V	N/A
Auto Power Off	15 Minutes	N/A
Operation Temperature	0°C 40°C	N/A

Dimensions: Approximately 5.1 inches (13cm) x 2.6 inches (6.5cm) x 1.1 inches (2.8cm).

An image illustrating the compact dimensions of the UT123T multimeter, making it easy to handle and carry.

9. Warranty and Support

For warranty information and technical support, please refer to the official UNI-T website or contact your local distributor. Keep your purchase receipt as proof of purchase for any warranty claims.