Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

UNI-T UT107+

UNI-T UT107+ Automobile Multimeter Instruction Manual

Model: UT107+

1. Introduction

This manual provides detailed instructions for the safe and effective use of the UNI-T UT107+ Automobile Multimeter. The UT107+ is a high-precision True RMS digital multimeter designed for automotive diagnostics and electrical measurements. It features a 6000-digit display and offers a wide range of functions including AC/DC voltage, AC/DC current, resistance, capacitance, frequency, temperature, dwell angle, RPM, and VFC measurements.

Safety Information:

- Always read and understand all safety warnings and operating instructions before using the multimeter.
- Ensure the test leads are properly connected and the function switch is set to the correct range before making any measurements.
- Do not exceed the maximum input values for any range.
- Exercise extreme caution when working with live circuits. High voltages can be dangerous.
- Replace batteries when the low battery indicator appears to ensure accurate readings.

2. Package Contents

Verify that all items listed below are included in your package. If any items are missing or damaged, contact your supplier.



Image: Contents of the UNI-T UT107+ package, showing the multimeter, red and black test leads, and the instruction manual.

- UNI-T UT107+ Automobile Multimeter (1 unit)
- Test Leads (1 pair)
- AA Batteries (2 units, pre-installed or included separately)
- Instruction Manual (1 copy)
- Temperature Probe (1 unit, if applicable to model)

3. Product Features

The UNI-T UT107+ is equipped with advanced features for comprehensive automotive and electrical testing:

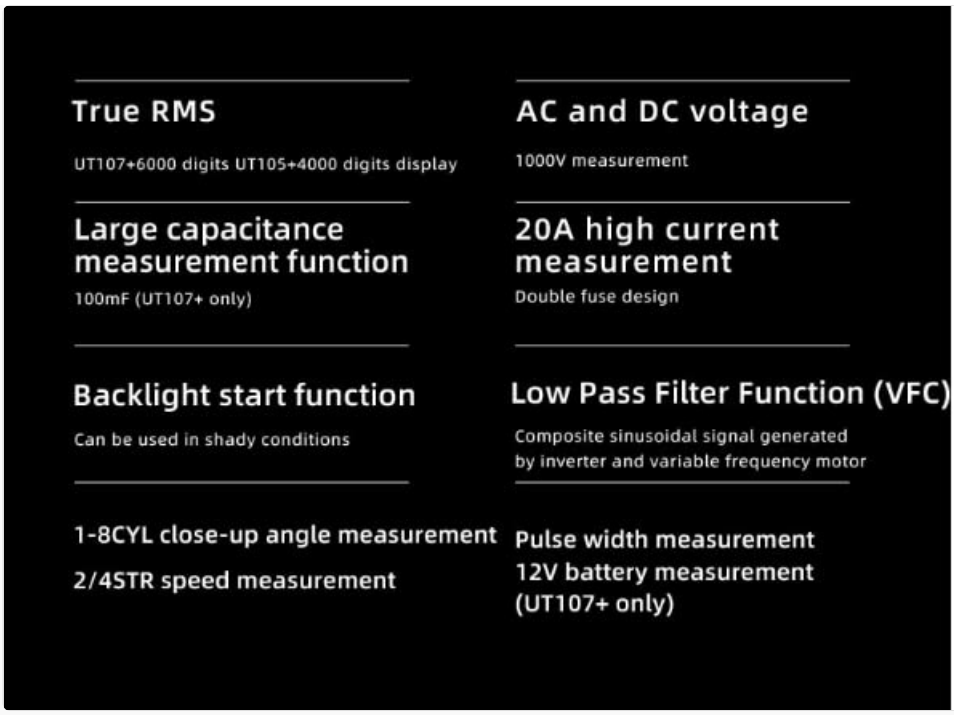

Image: Overview of the UNI-T UT107+ key features, highlighting True RMS, 1000V AC/DC voltage, 20A AC/DC current, Dwell Angle, RPM, VFC, and 12V battery measurement.

- **True RMS Measurement:** Provides accurate readings for non-sinusoidal waveforms.
- **High Voltage Measurement:** Capable of measuring up to 1000V AC/DC.
- **High Current Measurement:** Supports up to 20A AC/DC current (for 10 seconds maximum).
- **Dwell Angle Measurement:** For 1-8 cylinder engines.
- **RPM Measurement:** For 2-stroke and 4-stroke engines.
- **VFC (Low Pass Filter) Function:** Measures composite sinusoidal signals generated by inverters and variable frequency motors.
- **Large Capacitance Measurement:** Up to 100mF.
- **Backlight Function:** Improves readability in low-light conditions.
- **12V Battery Measurement:** Specific function for automotive battery testing.

4. Setup

4.1 Battery Installation

The UNI-T UT107+ requires two AA batteries for operation. These are typically included with the product. Follow these steps to install or replace the batteries:

1. Ensure the multimeter is turned off and disconnect all test leads from the device and any circuits.
2. Locate the battery compartment cover on the back of the multimeter.
3. Use a screwdriver to loosen the screw(s) securing the battery cover.
4. Remove the cover.
5. Insert two AA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
6. Replace the battery cover and tighten the screw(s) securely.

Note: Remove batteries if the multimeter will not be used for an extended period to prevent leakage.

5. Operating Instructions

5.1 General Operation

1. Connect the red test lead to the "VΩmA" or "20A" jack and the black test lead to the "COM" jack.
2. Turn the rotary switch to the desired measurement function (e.g., V~ for AC voltage, V- for DC voltage, A~ for AC current, A- for DC current, Ω for resistance).
3. For functions with multiple modes (e.g., AC/DC voltage, frequency), press the**SEL/VFC** button to cycle through modes if necessary.
4. Connect the test probes to the circuit or component under test.
5. Read the measurement value on the LCD display.

5.2 VFC Measurement Function

The VFC function allows for accurate voltage measurement of variable frequency drives (VFDs) and other noisy AC signals.

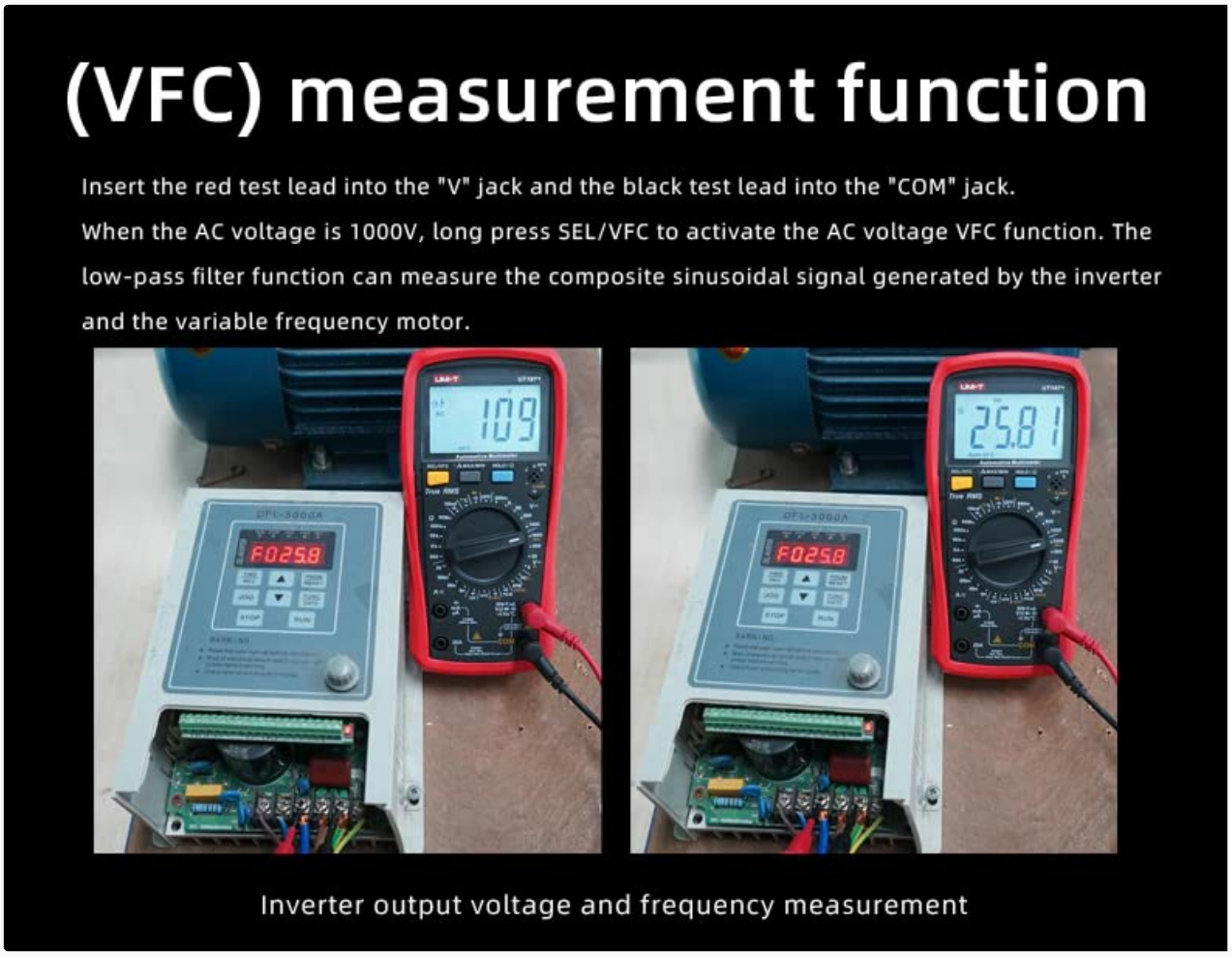

Image: The UNI-T UT107+ Multimeter measuring inverter output voltage and frequency. The image demonstrates the VFC function, showing how it filters out high-frequency noise for more accurate readings on complex waveforms.

1. Insert the red test lead into the "V" jack and the black test lead into the "COM" jack.
2. Turn the rotary switch to the AC voltage (V~) range.
3. Long press the **SEL/VFC** button to activate the AC voltage VFC function. The display will indicate VFC mode.
4. Connect the test probes to the inverter output or variable frequency motor.
5. Read the filtered AC voltage value on the display.

5.3 Dwell Angle and RPM Measurement

These functions are specifically designed for automotive engine diagnostics.

1. Connect the test leads according to the manual's specific instructions for Dwell Angle or RPM measurement (often involves connecting to the ignition system).
2. Turn the rotary switch to the Dwell Angle (DWELL) or RPM function.
3. Select the correct cylinder setting (1-8CYL for Dwell) or stroke setting (2STR/4STR for RPM) using the **SEL** button if available.
4. Follow engine manufacturer guidelines for connecting to the ignition system.
5. Read the Dwell Angle or RPM value on the display.

6. Maintenance

6.1 Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep the terminals free from dirt and moisture.

6.2 Fuse Replacement

If the current measurement function fails, the fuse may need replacement. Refer to the full user manual for specific fuse types and replacement procedures. Always replace with a fuse of the same type and rating.

6.3 Battery Replacement

Refer to Section 4.1 for battery installation and replacement instructions. Replace batteries promptly when the low battery indicator is displayed to maintain measurement accuracy.

7. Troubleshooting

Problem	Possible Cause	Solution
No display or dim display	Dead or low batteries	Replace batteries (refer to Section 4.1).
Incorrect readings	Incorrect function selected; poor test lead connection; damaged test leads; out of calibration	Verify function switch setting; ensure secure connections; inspect and replace damaged leads; contact service for calibration.
Current measurement not working	Blown fuse	Replace the fuse (refer to Section 6.2). Ensure correct fuse type and rating.
"OL" (Overload) displayed	Input value exceeds selected range	Select a higher range or ensure the input is within the meter's capabilities.

8. Specifications

Detailed technical specifications for the UNI-T UT107+ Multimeter:



Specifications	Range	UT105+	UT107+
DC voltage (V)	1000V	±(0.5%+3)	±(0.5%+3)
AC voltage (V)	1000V	±(0.8%+3)	±(0.8%+3)
AC current (A)	10A (20A for 10s max)	±(1.0%+8)	±(1.0%+8)
DC current (A)	10A (20A for 10s max)	±(0.8%+8)	±(0.8%+8)
Resistance (Ω)	40MΩ	±(0.8%+3)	
	60MΩ		±(0.8%+3)
Capacitance (F)	100mF		±(3%+10)
Frequency (Hz)	10Hz~10MHz	±(0.1%+5)	±(0.1%+5)
Temperature (°C)	-40°C~1000°C	±3	±(1.0%+3)
Temperature (°F)	-40°F~1832°F	±5	±(1.5%+5)
VFC	1000V	±(2.0%+10)	±(2.0%+10)
RPM	2STR	±(3.0%+5)	±(3.0%+5)
	4STR	±(3.0%+3)	±(3.0%+3)
Dwell angle	1CYL:(0~356.4°)/2CYL:(0~178.2°)/3CYL:(0~118.8°)/4CYL:(0~89.1°)/5CYL:(0~71.3°)/6CYL:(0~59.4°)/8CYL:(0~44.5°)	±(3.0%+5)	±(3.0%+5)
Pulse width	999.9mS		±(1.5%+10)
Features			
Display count		4000	6000
Manual range		√	√
Continuity/diode/transistor		√	√
Duty cycle		√	√
High voltage alarm		√	√
High voltage overload alarm		√	√
Large current alarm		√	√
Low battery indication	<2.4V approximately	√	√
Backlight		√	√
Auto power off	Approximately 15 minutes	√	√
Data hold		√	√
Max/Min/Relative mode		√	√
VFC		√	√
12V battery test			√
Safety rating		CAT II 1000V/CAT III 600V	CAT II 1000V/CAT III 600V

Image: A comprehensive table outlining the technical specifications for both the UNI-T UT105+ and UT107+ models, including measurement ranges and accuracy for various electrical parameters.

Parameter	Range (UT107+)	Accuracy (UT107+)
DC Voltage (V)	1000V	±(0.5%+3)
AC Voltage (V)	1000V	±(0.8%+3)
DC Current (A)	10A (20A for 10s max)	±(0.8%+8)
AC Current (A)	10A (20A for 10s max)	±(1.0%+8)
Resistance (Ω)	60MΩ	±(0.8%+3)
Capacitance (F)	100mF	±(3%+10)
Frequency (Hz)	10Hz~10MHz	±(0.1%+5)
Temperature (°C)	-40°C~1000°C	±(1.0%+3)
Temperature (°F)	-40°F~1832°F	±(1.5%+5)
VFC	1000V	±(2.0%+10)
RPM	2STR/4STR	±(3.0%+5) / ±(3.0%+3)
Dwell Angle	1CYL (0°~356.4°) to 8CYL (0°~44.5°)	±(3.0%+5)
Pulse Width	999.9ms	±(1.5%+10)

Parameter	Range (UT107+)	Accuracy (UT107+)
Display Count	6000	-
Safety Rating	CAT II 1000V / CAT III 600V	-
Dimensions	7.2 x 3.46 x 2.2 inches	-
Weight	0.2 Kilograms (7.05 ounces)	-
Batteries	2 AA batteries	-

9. Warranty and Support

UNI-T products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the official UNI-T website or contact your local distributor.
You can find more information and support resources by visiting theUNI-T Store on Amazon.

© 2025 UNI-T. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B0BLN3NKBQ

More documents and user manuals: **https://manuals.plus/**