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> MT111 Touch Screen Digital Multimeter 6000 Counts Intelligent Scanning Digital Multimeter AC DC Measurement NCV True RMS Measurement

WnewTools MT111

WnewTools MT111 Touch Screen Digital Multimeter User Manual

Model: MT111

INTRODUCTION

The WnewTools MT111 is an intelligent scanning digital multimeter designed for accurate and efficient electrical measurements. Featuring a touch screen display and 6000 counts, it provides precise readings for AC/DC voltage, resistance, capacitance, and includes NCV (Non-Contact Voltage) and True RMS measurement capabilities. This manual provides comprehensive instructions for the safe and effective use of your MT111 multimeter.

SAFETY INFORMATION

Always observe basic safety precautions when using this multimeter to avoid personal injury or damage to the meter or equipment under test. Read the following safety information carefully before use.

- Do not exceed the maximum input limits for any function.
- Use extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. Such voltages pose a shock hazard.
- Disconnect the test leads from the circuit before changing functions or ranges.
- Ensure the test leads are properly seated in the correct input terminals for the desired measurement.
- Do not use the meter if it appears damaged or if the insulation on the test leads is compromised.
- Always turn off power to the circuit and discharge all high-voltage capacitors before performing resistance, continuity, diode, or capacitance tests.
- Replace the battery immediately when the low battery indicator appears to ensure accurate readings.

PRODUCT OVERVIEW AND COMPONENTS

The MT111 multimeter features a compact design with a large, integrated touch screen for easy operation and clear display of measurements.

THIN AND LIGHT FONDLE ADMIRINGLY

INTEGRATED LARGE SCREEN



Figure 1: The MT111 multimeter's thin and light design, comparable to a modern smartphone (12mm thickness).

Key Components:

- **Touch Screen Display:** Shows measurement values, units, and function indicators.
- **Function Buttons:** Touch-sensitive buttons for HOLD, Flashlight, Live/NCV, and Power.
- **Input Terminals:** Sockets for connecting test leads (COM and VΩmA).
- **Test Leads:** Red and black leads with probes for making electrical connections.
- **Flashlight:** Integrated LED for illuminating dark work areas.



Figure 2: Front view of the MT111 multimeter with its display and connected test leads.

SPECIFICATIONS

Parameter	Value
DC Voltage Range	0V - 1000V
AC Voltage Range	0V - 750V
Resistance Range	1Ω - 6MΩ
Capacitance Range	1nF - 60mF

Parameter	Value
Display Counts	6000 (3 5/6 digits)
Item Dimensions (L x W x H)	8.66 x 3.15 x 5.91 inches
Item Weight	370 Grams
Included Components	Multimeter, Test Leads (No other components listed)



Figure 3: Physical dimensions of the MT111 multimeter.

Battery Installation:

The MT111 multimeter requires batteries for operation. To install or replace batteries:

1. Ensure the multimeter is powered off and test leads are disconnected.
2. Locate the battery compartment on the back of the device.
3. Open the battery compartment cover (refer to the device for specific latch/screw mechanism).
4. Insert the required batteries, observing correct polarity (+ and -).
5. Close the battery compartment cover securely.

Connecting Test Leads:

Always connect the black test lead to the "COM" (common) input terminal. Connect the red test lead to the "VΩmA" input terminal for most voltage, resistance, and current measurements.



Figure 4: Correct connection of test leads to the MT111 multimeter.

OPERATING INSTRUCTIONS

The MT111 features intelligent scanning for automatic recognition of measurement types. Simply connect the leads, and the meter will attempt to identify the measurement (voltage, resistance, continuity).

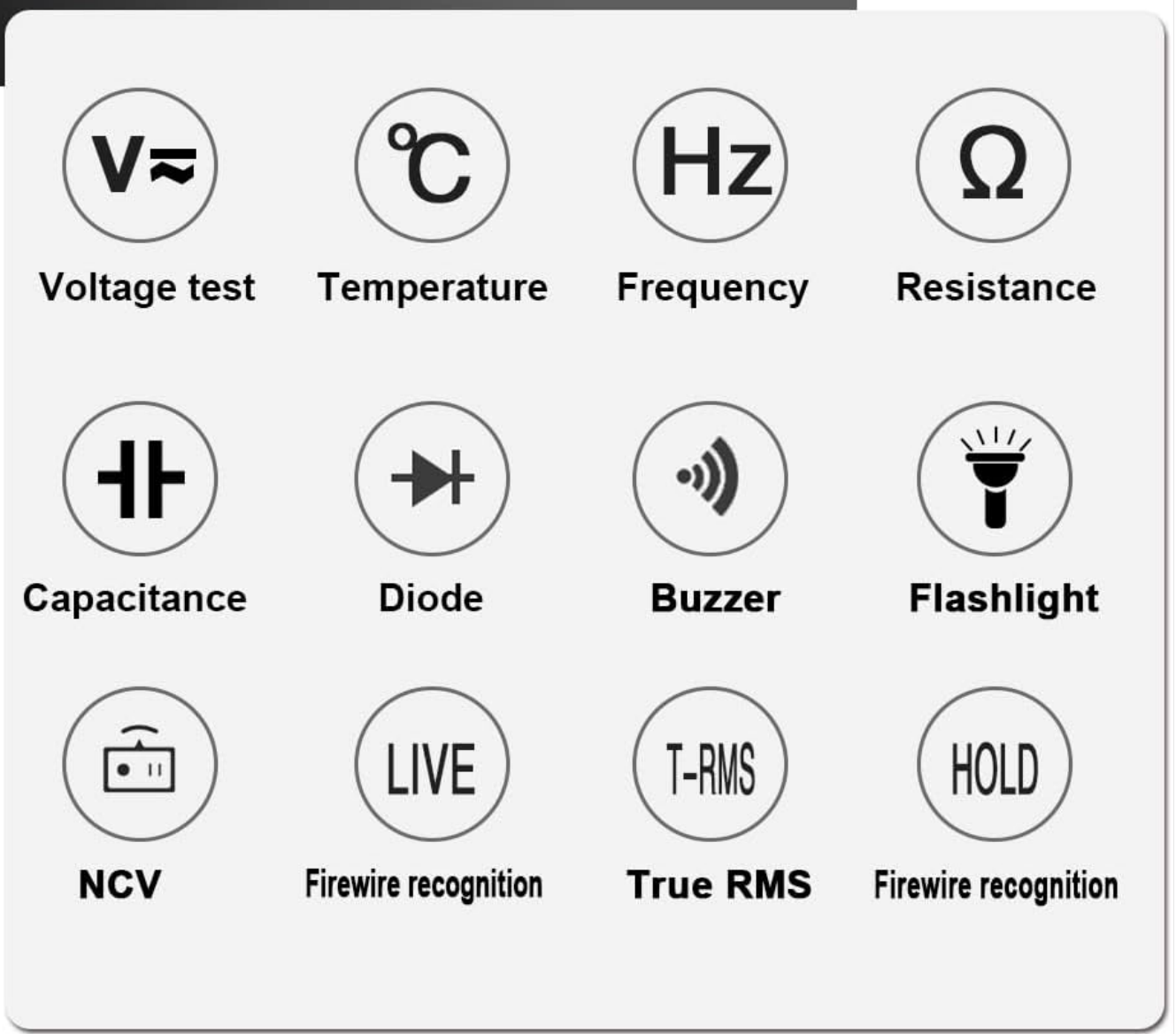


Figure 5: Overview of measurement functions and features.

Power On/Off:

Press and hold the **Power** button (usually marked with a power symbol) on the touch screen to turn the multimeter on or off.

Automatic Measurement (Intelligent Scanning):

In automatic mode, the multimeter will detect the type of measurement (AC/DC voltage, resistance, continuity) and display the reading. For specific functions like capacitance or diode test, you may need to press the corresponding function button if available, or the meter will automatically switch when probes are connected to the component.



Figure 6: Using the touch screen interface for measurements.

Specific Functions:

- **Voltage Measurement (AC/DC):** Connect the red lead to the VΩmA terminal and the black lead to the COM terminal. Apply probes across the circuit or component to measure voltage. The meter will automatically detect AC or DC.
- **Resistance Measurement:** Ensure the circuit is de-energized. Connect leads across the resistor or circuit path. The meter will display the resistance in Ohms (Ω).
- **Capacitance Measurement:** Ensure the capacitor is discharged. Connect leads across the capacitor. The meter will display capacitance in Farads (F).
- **NCV (Non-Contact Voltage) Detection:** Press the "Live NCV" button. Bring the top of the multimeter near an AC voltage source. The meter will indicate the presence of voltage without direct contact.
- **True RMS:** The MT111 provides True RMS measurements for AC voltage, ensuring accurate readings for non-

sinusoidal waveforms.

- **HOLD Function:** Press the "HOLD" button to freeze the current reading on the display. Press again to release.
- **Flashlight:** Press the **Flashlight** button (often depicted as a light bulb icon) to turn on the integrated flashlight. Press again to turn off.



Figure 7: Activating the integrated flashlight feature.

MAINTENANCE

Cleaning:

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep the display clean and free of dust.

Storage:

If the meter is not to be used for a long period, remove the batteries to prevent leakage and damage to the device. Store

the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity and replace batteries if necessary.
"OL" (Overload) displayed.	Measurement exceeds the meter's range.	Ensure the measurement is within the specified range for the function. Disconnect immediately if measuring voltage beyond limits.
Inaccurate readings.	Low battery, incorrect lead connection, or external interference.	Replace batteries. Verify leads are in correct terminals. Move away from strong electromagnetic fields.
No NCV detection.	Not close enough to AC source, or source is DC.	Ensure the top of the meter is very close to the AC voltage source. NCV only detects AC voltage.

WARRANTY AND SUPPORT

For warranty information and technical support regarding your WnewTools MT111 Digital Multimeter, please refer to the warranty card included with your purchase or contact WnewTools customer service directly. Contact details are typically available on the product packaging or the manufacturer's official website.

Please note that protection plans offered by third parties are separate from the manufacturer's warranty and should be consulted with the respective provider.

