ANENG ANENG 620A

ANENG 620A Digital Multimeter User Manual

Model: ANENG 620A

1. Introduction

The ANENG 620A is a compact, automatic and manual ranging digital multimeter designed for accurate measurement of various electrical parameters. Featuring a 4.7-inch LCD display with 6000 counts and True RMS capability, it is suitable for both professional and home use. This manual provides detailed instructions for the safe and effective operation of your multimeter.

Figure 1: ANENG 620A Digital Multimeter. This image shows the front of the multimeter with its large LCD display, function indicators, and input jacks.

2. Safety Information

Please read and understand all safety information before operating this multimeter. Failure to follow these instructions may result in electric shock, fire, or damage to the meter or the equipment under test.

- Do not exceed the maximum voltage ratings: 600V DC or 600V AC between the measurement terminal and ground.
- Always ensure the test leads are properly connected and the function switch is set to the correct range before making measurements.
- Do not use the multimeter if it appears damaged or if the test leads are damaged.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Remove the test leads from the circuit before changing functions.

- Replace batteries when the low battery indicator appears to ensure accurate readings.
- The multimeter features intelligent anti-burn protection with a built-in fuse. However, always operate within specified limits.

3. Package Contents

Verify that all items listed below are included in your package:

- 1 x ANENG 620A Digital Multimeter
- 1 x Pair of Test Leads (Red and Black)
- 1 x Temperature Cable
- 1 x English User Manual (this document)
- 1 x Packaging Box

Figure 2: Contents of the ANENG 620A Multimeter package. This image displays the multimeter, test leads, temperature cable, user manual, and packaging box.

4. Product Features

The ANENG 620A Multimeter offers a comprehensive set of features for various electrical measurements:

- **Automatic + Manual Test:** Automatically selects measurement function and range, with option for manual selection.
- **6000 Counts Digital Display:** High-resolution 4.7-inch LCD for clear readings.
- **True RMS:** Accurate measurement of AC voltage and current for non-sinusoidal waveforms.
- **Measurement Functions:** AC/DC Voltage, AC/DC Current, Resistance, Continuity, Diode, Capacitance, Temperature, Frequency.
- **Overload Protection:** Protection throughout the entire measurement range.

- **Polarity Indication:** Automatic indication for negative values.
- **Data Retention:** Hold function to freeze the displayed reading.
- **NCV Detection:** Non-Contact Voltage detection for safety.
- **Zero Line Recognition & Firewire Recognition:** For identifying live wires.
- **Backlight & Flashlight:** For use in low-light conditions.
- **Automatic Shutdown:** Conserves battery life after 15 minutes of inactivity.
- **Low Battery Indication:** Alerts when batteries need replacement.
- **Silicone Protective Sleeve:** Durable and anti-fall design for enhanced protection.

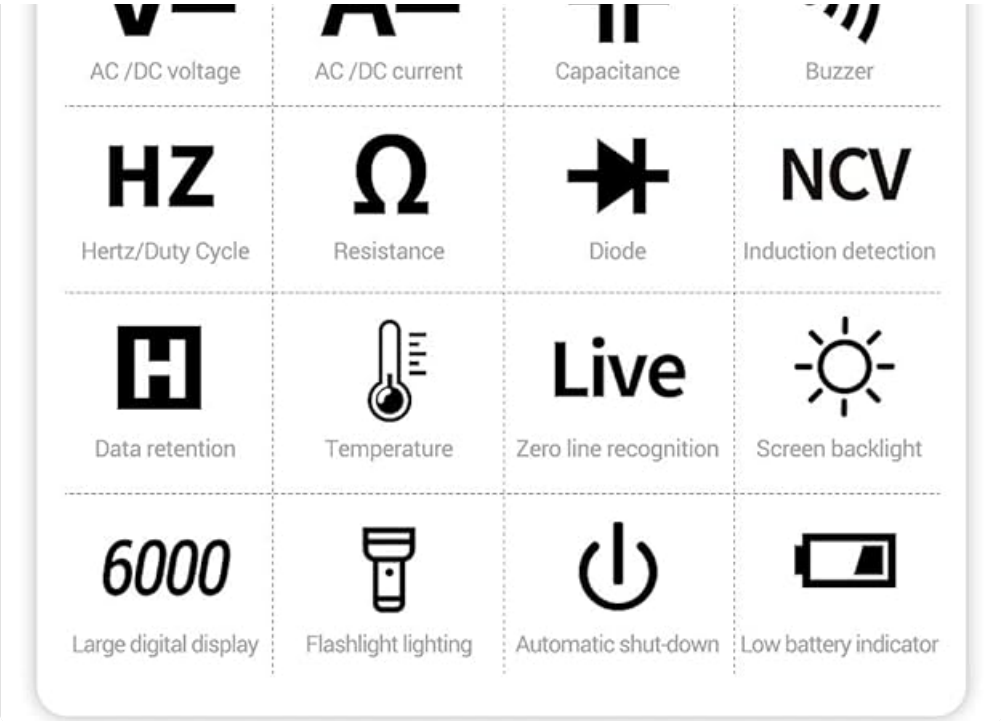


Figure 3: Key features and display of the ANENG 620A Multimeter. This image highlights the various measurement capabilities and the large digital display.

Figure 4: Detailed view of the ANENG 620A Multimeter's construction, showing the test lead jack, intelligent anti-burn fuse, and silicone protective sleeve.

Figure 5: Internal components and the backlight/flashlight function of the ANENG 620A Multimeter. This image illustrates the circuit board, display, and the protective casing, along with how to activate the backlight and flashlight.

5. Setup

5.1 Battery Installation

The ANENG 620A Multimeter requires two 1.5V AAA batteries (not included). To install or replace batteries:

1. Ensure the multimeter is turned off and test leads are disconnected from any circuit.

2. Locate the battery compartment cover on the back of the multimeter.
3. Use a screwdriver to open the battery compartment.
4. Insert two AAA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
5. Replace the battery compartment cover and secure it with the screw.

5.2 Connecting Test Leads

To connect the test leads:

1. Insert the black test lead into the "COM" (common) input jack.
2. Insert the red test lead into the "VHz" (Voltage, Frequency, Resistance, Diode, Capacitance, Temperature) input jack for most measurements.
3. For current measurements (mA/A), insert the red test lead into the "10A" or "mA" input jack as appropriate for the expected current range.

Note: Always ensure test leads are fully inserted into the jacks.

6. Operating Instructions

The ANENG 620A Multimeter features both automatic and manual measurement modes. It will automatically select the appropriate range for most measurements.

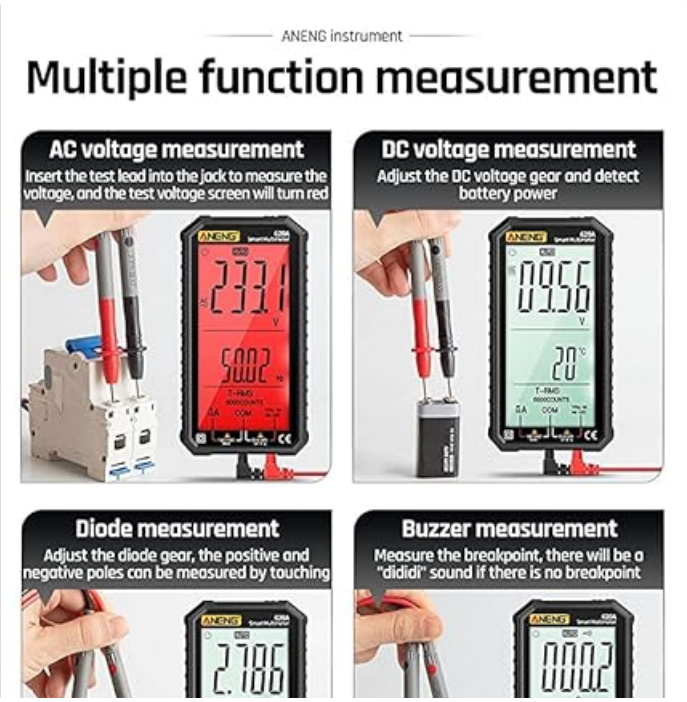
6.1 Power On/Off

Press the power button to turn the multimeter on. The display will light up. To turn off, press the power button again. The multimeter will automatically shut down after 15 minutes of inactivity.

6.2 Function Selection

The multimeter primarily operates in automatic mode. To cycle through specific sub-functions (e.g., AC/DC voltage, Diode/Continuity), press the "FUNC" button.

6.3 Measurement Functions



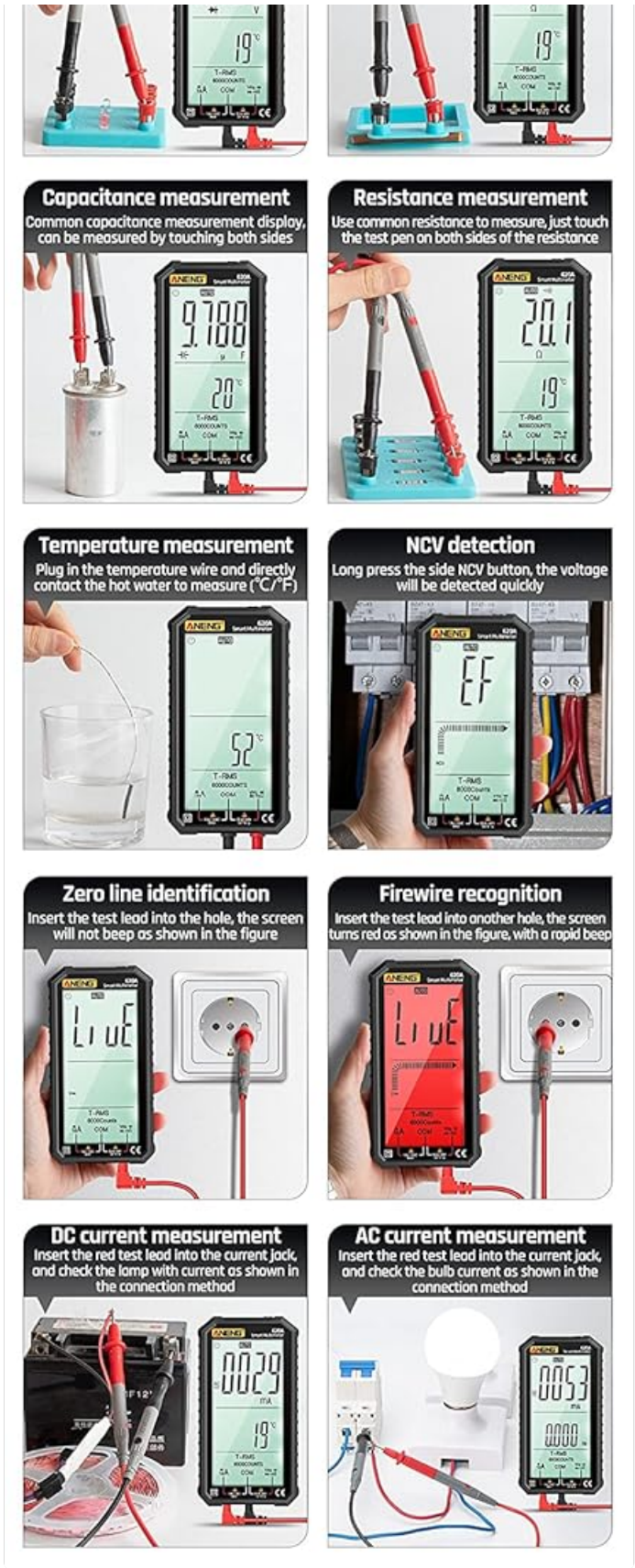


Figure 6: Visual guide to various measurement functions of the ANENG 620A Multimeter, including voltage, current, resistance, continuity, diode, capacitance, temperature, NCV, zero line, and firewire recognition.

6.3.1 AC/DC Voltage Measurement

Connect the red test lead to the VHz input and the black test lead to the COM input. Touch the test probes to the circuit points where voltage is to be measured. The multimeter will automatically detect AC or DC voltage and display the reading.

6.3.2 AC/DC Current Measurement

Caution: To measure current, the multimeter must be connected in series with the circuit. Ensure the circuit is de-energized before connecting the multimeter. Connect the red test lead to the 10A or mA input (depending on expected current) and the black test lead to the COM input. Break the circuit and insert the multimeter in series. Re-energize the circuit to take the reading.

6.3.3 Resistance Measurement

Connect the red test lead to the VHz input and the black test lead to the COM input. Ensure the circuit or component is de-energized. Touch the test probes across the component to measure its resistance.

6.3.4 Continuity Test

Connect the red test lead to the VHz input and the black test lead to the COM input. Press the "FUNC" button until the continuity symbol (buzzer icon) is displayed. Touch the test probes to the points to be tested. A continuous beep indicates a good connection (low resistance).

6.3.5 Diode Test

Connect the red test lead to the VHz input and the black test lead to the COM input. Press the "FUNC" button until the diode symbol is displayed. Touch the red probe to the anode and the black probe to the cathode of the diode. The display will show the forward voltage drop. Reverse the probes; an open circuit reading indicates a good diode.

6.3.6 Capacitance Measurement

Connect the red test lead to the VHz input and the black test lead to the COM input. Press the "FUNC" button until the capacitance symbol is displayed. Ensure the capacitor is fully discharged before testing. Touch the test probes to the capacitor terminals. The display will show the capacitance value.

6.3.7 Temperature Measurement

Connect the temperature cable to the VHz and COM inputs, observing polarity if indicated. Press the "FUNC" button until the temperature symbol (°C/°F) is displayed. Place the temperature probe on the object or in the environment to be measured. The display will show the temperature reading.

6.3.8 Frequency Measurement

Connect the red test lead to the VHz input and the black test lead to the COM input. Press the "FUNC" button until the frequency symbol (Hz) is displayed. Touch the test probes to the circuit points where frequency is to be measured.

6.3.9 NCV (Non-Contact Voltage) Detection

Long press the NCV button. Bring the top of the multimeter near a live AC voltage source. The display will show "EF" and the meter will beep and flash, indicating the presence of AC voltage without direct contact.

6.3.10 Zero Line Identification and Firewire Recognition

Insert one test lead (typically red) into the VHz input. For Zero Line Identification, insert the probe into the neutral socket; the screen will not beep. For Firewire Recognition, insert the probe into the live socket; the screen will display "Live" and beep rapidly.

6.4 Backlight and Flashlight Function

Press the side backlight button to turn on the display backlight and the integrated flashlight. This is useful for working in dimly lit environments. Press the button again to turn them off.

7. Maintenance

7.1 Cleaning

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

7.2 Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 5.1. Always use two new 1.5V AAA batteries.

7.3 Fuse Replacement

The ANENG 620A features an intelligent anti-burn design with internal fuses. If the current measurement function stops working, the fuse may need replacement. Fuse replacement should only be performed by qualified personnel. Refer to the specifications for fuse type and rating. Always disconnect power and test leads before opening the meter case.

8. Troubleshooting

Problem	Possible Cause	Solution
Multimeter does not power on.	Dead or incorrectly installed batteries.	Check battery polarity or replace batteries.
"OL" or "-OL" displayed.	Over-range condition.	The measured value exceeds the meter's maximum range. Ensure correct function selection and input jack.
Inaccurate readings.	Low battery, poor test lead connection, or incorrect function/range.	Replace batteries, ensure test leads are fully inserted, verify function selection.
No current measurement.	Blown fuse.	Replace the internal fuse (refer to Section 7.3).
Display is dim or flickering.	Low battery.	Replace batteries.

9. Technical Specifications

Parameter	Specification
Display	4.7-inch LCD, 6000 counts
True RMS	Yes

Parameter	Specification
Max. Voltage (between terminal & ground)	600V DC or 600V AC
Polarity Indication	Automatic, '-' for negative
Over Range Display	'0L' or '-0L'
Sampling Time	Approx. 3 times/second (bargraph 10 times/second)
Automatic Shutdown Time	15 minutes
Power Supply	2 x 1.5V AAA batteries (not included)
Low Battery Indication	LCD display symbol
Operating Temperature	18°C ~ 28°C
Storage Temperature	-10°C ~ 50°C
Dimensions (approx.)	142.7mm x 77.4mm x 23.8mm (from image 816+QV1r+nL.jpg)
Weight (approx.)	183.5g (from image 816+QV1r+nL.jpg)
Material	ABS / Silicone
Safety Rating	CE (from specifications)

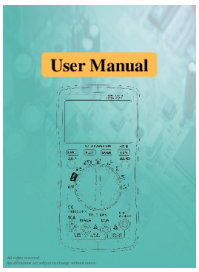
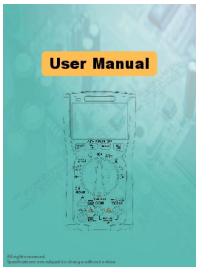
10. Warranty and Support

ANENG products are manufactured to high quality standards. While specific warranty terms may vary by region and retailer, ANENG generally provides a limited warranty against defects in materials and workmanship for a specified period from the date of purchase.

For warranty claims, technical support, or service inquiries, please contact your original point of purchase or visit the official ANENG website for contact information. Please have your product model number (ANENG 620A) and proof of purchase ready when seeking support.

For further assistance, you may refer to the manufacturer's website:www.aneng.cn (*Note: This is a placeholder URL as no specific support URL was provided in the input.*)

Related Documents - ANENG 620A

	[ANENG AN9002 Digital Multimeter User Manual: Features, Operation, and Specifications] Comprehensive user manual for the ANENG AN9002 digital multimeter. Learn about its features, safety information, measurement instructions, maintenance, and detailed electrical specifications.
	[Aneng SZ18 Digital Multimeter User Manual] Comprehensive user manual for the Aneng SZ18 digital multimeter, covering features, operation, safety, maintenance, and detailed specifications for accurate measurements.
	[ANENG AR01 -] ANENG AR01 (-20°C 550°C) 25000
	[Intelligent Digital Multimeter User Manual - ANENG 622B] Comprehensive user manual for the ANENG 622B Intelligent Digital Multimeter, covering safety information, product description, technical specifications, operating instructions, and maintenance procedures.
	[ANENG AN8008 Portable Multimeter User Manual] Comprehensive user manual for the ANENG AN8008 portable digital multimeter. It details front panel features, measurement procedures for voltage, current, resistance, continuity, diode, capacitance, frequency, and duty cycle, as well as square wave output and auto power-off functions. Safety precautions are included.
	[Aneng AN8009 True-RMS Multimeter Datasheet and Specifications] Detailed technical specifications, features, and general information for the Aneng AN8009 True-RMS 9999 display autorange multimeter, including AC/DC voltage and current, resistance, capacitance, frequency, and temperature measurements. Distributed by HESTORE Hungary Ltd.