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ANENG 621A

ANENG 621A Digital Smart Multimeter User Manual

Model: 621A

1. INTRODUCTION

The ANENG 621A is a versatile digital smart multimeter designed for accurate and wide-ranging electrical measurements. It features an automatic identification system for measurement content, a large color LCD touch screen, and a built-in flashlight for enhanced usability in various environments. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your ANENG 621A multimeter.

2. SAFETY INFORMATION

Always adhere to safety precautions when using electrical testing equipment.

- Ensure the multimeter is in good working condition before each use.
- Do not exceed the maximum input values specified for each function.
- Use appropriate personal protective equipment (PPE), such as insulated gloves and safety glasses.
- Avoid touching exposed wires or circuit components during measurements.
- The device features a double fuse and flame-retardant casing for overload protection. However, exercise caution to prevent damage or injury.
- Do not operate the multimeter in wet conditions or explosive atmospheres.
- Refer to local electrical codes and safety standards for specific applications.

3. PRODUCT OVERVIEW

The ANENG 621A multimeter is equipped with a range of features for comprehensive electrical testing.

3.1 Key Features

- **Measurement Functions:** AC/DC Current, AC/DC Voltage, Resistance, Frequency, Duty Cycle, Capacitance, Continuity, Diode, Temperature, Live/Zero Line Detection.
- **Smart Mode:** Automatic identification of measurement content and optimal resolution selection.

- **Display:** Large color LCD with backlight for clear readings in various lighting conditions.
- **Rechargeable:** Built-in lithium battery, charged via Type-C USB.
- **Safety:** Double fuse, flame-retardant, overload protection, shockproof ABS casing with soft rubber grip.
- **Additional Features:** Flashlight, Non-Contact Voltage (NCV) detection, Real-time temperature display, Low battery indication, Auto-sleep mode.

3.2 Components

The package includes the following items:

- 1x ANENG 621A Multimeter
- 1x Combined Test Lead Set (4 connection sockets, 2 PVC cables, 2 copper needles, 2 U-shaped inserts, 2 measuring pens, 2 alligator clips, 2 puncture needles)
- 1x Standard Multimeter Test Leads
- 1x Temperature Probe
- 1x Type-C Charging Cable
- 1x Instruction Manual (this document)
- 1x Storage Bag



Figure 1: ANENG 621A Digital Smart Multimeter with test leads.



Figure 2: Overview of ANENG 621A Multimeter's key features and icons, including voltage, current, resistance, capacitance, flashlight, diode, smart anti-burn, temperature, live detection, power sensing, reverse display, data retention, and auto-shutdown.

4. SETUP

4.1 Initial Charging

Before first use, fully charge the multimeter using the provided Type-C USB cable. Connect the cable to the multimeter's charging port and a standard USB power adapter (not included).



Figure 3: The ANENG 621A Multimeter connected to a USB power strip for charging via its Type-C port.

4.2 Connecting Test Leads

Insert the red test lead into the 'VΩmA' input jack and the black test lead into the 'COM' input jack for most measurements. For high current measurements (10A), insert the red lead into the '10A' jack.










5. OPERATING INSTRUCTIONS

The ANENG 621A features a smart mode that automatically detects the measurement type. You can also manually select functions using the touch screen.

5.1 Smart Mode (AUTO)

Upon powering on, the multimeter defaults to Smart Mode (AUTO). In this mode, it automatically identifies and measures AC/DC voltage, resistance, and continuity without manual selection. Simply connect the test leads to the circuit or component to be measured.

AUTO Smart Touch Multimeter

-  Rechargeable
-  Resistance
-  AC/DC voltage
-  AC /DC current
-  Diode
-  Buzzer
-  Capacitance
-  Frequency
-  Temperature

NCV induction
Live Zero Fire



Figure 4: ANENG 621A Multimeter with test leads connected to a power outlet, displaying AC voltage and frequency. Icons for rechargeable, resistance, AC/DC voltage, AC/DC current, diode, buzzer, capacitance, frequency, temperature, NCV induction, and Live/Zero detection are shown.

5.2 Manual Function Selection

To select specific functions not automatically detected by Smart Mode, use the touch screen buttons:

- **Voltage (AC/DC):** Touch the 'V' icon. The multimeter will automatically detect AC or DC.
- **Resistance (Ω):** Touch the ' Ω ' icon.
- **Capacitance (F):** Touch the 'F' icon.
- **Diode/Continuity:** Touch the diode/continuity icon. Press again to toggle between diode test and continuity buzzer.
- **Frequency (Hz)/Duty Cycle (%):** Touch the 'Hz' icon.
- **Temperature ($^{\circ}$ C/ $^{\circ}$ F):** Connect the temperature probe to the input jacks and select the temperature function.
- **AC/DC Current (A/mA):** Ensure test leads are correctly inserted into the '10A' or 'V Ω mA' jack as appropriate. Select the current function.

5.3 Non-Contact Voltage (NCV) Detection

Activate the NCV function by touching the 'NCV' button. Bring the top of the multimeter near a live wire or

electrical outlet. The device will indicate the presence of AC voltage through an audible alarm and a visual bar graph on the display.



Figure 5: ANENG 621A Multimeter performing a Non-Contact Voltage (NCV) test near a power outlet, indicating signal detection with a beep and a full signal bar.

5.4 Live/Zero Line Detection

Touch the 'Live' button. Use the red test probe to touch the conductor. The display will indicate 'LIVE' for live wire and 'ZERO' for neutral wire, accompanied by an audible alert.

5.5 Flashlight

Press the flashlight button to activate the built-in LED flashlight for illumination in dark work areas.

FLASHLIGHT/BRIGHT SCREEN



Figure 6: ANENG 621A Multimeter showing its flashlight function in a dim environment and the backlit display for clear readability day or night.

6. MAINTENANCE

6.1 Cleaning

Wipe the multimeter casing with a damp cloth. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from any circuits before cleaning.

6.2 Battery Care

The ANENG 621A uses a rechargeable lithium battery. Recharge the battery when the low battery indicator appears. For long-term storage, charge the battery to approximately 50% and store the device in a cool, dry place. Recharge every few months to maintain battery health.

6.3 Storage

Store the multimeter and its accessories in the provided storage bag to protect them from dust, moisture, and physical damage. Avoid storing in extreme temperatures.

Shockproof Silicone sleeve



Figure 7: ANENG 621A Multimeter with its shockproof silicone sleeve, illustrating its durability against impacts.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Multimeter does not power on.	Low battery or completely discharged.	Charge the multimeter using the Type-C USB cable.
Inaccurate readings.	Incorrect function selected, poor test lead connection, or damaged test leads.	Ensure correct function is selected (or use Smart Mode). Check test lead connections and replace if damaged.
No continuity beep.	Continuity function not selected or circuit resistance is too high.	Select continuity mode. Ensure the circuit is closed and resistance is within the audible range.
Display is dim or unreadable.	Low battery or backlight setting.	Charge the battery. Adjust backlight brightness if available, or ensure sufficient ambient light.
Multimeter enters auto-sleep mode too quickly.	Normal operation to conserve battery.	Touch the screen or press any button to wake the device.

8. SPECIFICATIONS

Feature	Specification
Brand	ANENG
Model	621A
Measurement Type	Multimeter (True RMS)
Display Count	9999
Power Source	Rechargeable Battery (Type-C USB)
Item Dimensions (LxWxH)	10 x 10 x 2 cm (approximately 133mm x 66.5mm x 22.5mm)
Color	Red
Country of Origin	China

SMALL & PORTABLE DESIGN



Figure 8: Detailed dimensions of the ANENG 621A Multimeter, illustrating its compact size.

9. WARRANTY AND SUPPORT

ANENG offers lifetime service and technical support for the 621A Digital Smart Multimeter. For any issues, questions, or technical assistance, please contact ANENG customer support through your purchase platform or the official ANENG website.