ANENG 621A

ANENG 621A Smart Touch Rechargeable Multimeter

User Manual

Model: 621A | Brand: ANENG

1. Introduction

The ANENG 621A Smart Touch Rechargeable Multimeter is a versatile and accurate digital measuring instrument designed for electrical professionals and DIY enthusiasts. It features an intelligent mode for automatic measurement identification, a sensitive touch screen, and a clear backlit color LCD display. This manual provides essential information for safe and effective use of your multimeter.

Figure 1: ANENG 621A Smart Touch Multimeter in use.

2. Safety Information

Always observe basic safety precautions when using this multimeter to avoid potential electric shock, personal injury, or damage to the meter or equipment under test.

- **Double Fuse Protection:** The multimeter is equipped with a double fuse, which is fireproof and protects against overload, enhancing safety and reliability.
- **Shockproof Design:** The device features a shockproof ABS casing with a soft rubber grip for added protection against drops.
- Do not exceed the maximum input values for any function.
- Do not use the meter if it or the test leads appear damaged.
- Ensure the test leads are properly connected and your hands are dry before making measurements.
- Always turn off power to the circuit and discharge high-voltage capacitors before measuring resistance, continuity, diodes, or capacitance.
- Use caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.

3. Package Contents

Verify that all items are present in your package:

- 1 x ANENG 621A Multimeter
- 1 x Combined Lead Set (includes 4 connection sockets, 2 PVC leads, 2 copper needles, 2 U-shaped inserts, 2 test pens, 2 alligator clips, 2 piercing needles)
- 1 x Multimeter Test Lead
- 1 x Temperature Probe
- 1 x Type-C Charging Cable
- 1 x User Manual (this document)
- 1 x Storage Bag

4. Product Features

- **Smart Mode:** Automatically identifies measurement content and selects the best resolution.
- **Sensitive Touch Screen:** Intuitive control for various functions.
- **Rechargeable Battery:** Built-in lithium battery, charged via Type-C port, ensuring long-lasting operation.
- **Large Backlit Color LCD:** Clear display with analog bar graph, real-time temperature, and low battery indication, visible in dim environments.
- **Wide Measurement Range:** Measures AC/DC current, voltage, resistance, frequency, duty cycle, capacitance, continuity, diode, and temperature.
- **Non-Contact Voltage (NCV) Detection:** Safely detects AC voltage without direct contact.
- **Live/Zero Line Detection:** Identifies live and neutral wires.
- **Flashlight Function:** Integrated flashlight for illuminating dark work areas.
- **Portable Design:** Compact and lightweight for easy carrying.

Figure 2: Sensitive Touch Screen.

Figure 3: Flashlight and Bright Screen.

Figure 4: Clear Backlit Display.

Figure 5: Shockproof Silicone Sleeve.

5. Setup

5.1 Charging the Multimeter

The ANENG 621A comes with a built-in rechargeable lithium battery. To charge the device:

1. Connect the provided Type-C charging cable to the multimeter's charging port.
2. Plug the other end of the cable into a standard USB power adapter (not included) or a computer's USB port.
3. The battery indicator on the display will show charging status. Charge until the battery icon indicates full charge.

Figure 6: Charging via Type-C.

5.2 Connecting Test Leads

For most measurements, connect the red test lead to the "VΩmA" input jack and the black test lead to the "COM" input jack. For high current measurements (10A), connect the red lead to the "10A" input jack.

6. Operating Instructions

The ANENG 621A features an intelligent mode (AUTO) that automatically detects the measurement type. You can also manually select functions using the touch screen buttons.

Figure 7: Functional Measurement Overview.

6.1 Smart Mode (AUTO)

When powered on, the multimeter defaults to AUTO mode. In this mode, it automatically identifies and measures AC/DC voltage, resistance, and continuity. Simply connect the test leads to the circuit, and the meter will display the appropriate reading.

6.2 Manual Function Selection

Press the **SEL** button on the touch screen to cycle through different measurement functions if you need to select a specific mode not automatically detected by AUTO mode.

6.3 Voltage Measurement (AC/DC)

1. Connect the red test lead to the VΩmA jack and the black test lead to the COM jack.
2. Select AC or DC voltage mode (or use AUTO).
3. Connect the test probes in parallel to the circuit or component you wish to measure.
4. Read the voltage value on the display.

6.4 Resistance Measurement

1. Ensure the circuit is de-energized and capacitors are discharged.
2. Connect the red test lead to the VΩmA jack and the black test lead to the COM jack.
3. Select resistance mode (or use AUTO).
4. Connect the test probes across the component.
5. Read the resistance value on the display.

6.5 Continuity Test

1. Ensure the circuit is de-energized.
2. Connect the red test lead to the VΩmA jack and the black test lead to the COM jack.
3. Select continuity mode (or use AUTO).
4. Touch the probes to the two points of the circuit. A beep indicates continuity.

6.6 Diode Test

1. Ensure the circuit is de-energized.
2. Connect the red test lead to the VΩmA jack and the black test lead to the COM jack.
3. Select diode mode.
4. Connect the red probe to the anode and the black probe to the cathode of the diode. Read the forward voltage drop. Reverse the probes to check for open circuit.

6.7 Capacitance Measurement

1. Ensure the capacitor is fully discharged before testing.
2. Connect the red test lead to the VΩmA jack and the black test lead to the COM jack.
3. Select capacitance mode.
4. Connect the test probes across the capacitor terminals.
5. Read the capacitance value on the display.

6.8 Frequency and Duty Cycle Measurement

1. Connect the red test lead to the VΩmA jack and the black test lead to the COM jack.
2. Select frequency/duty cycle mode.
3. Connect the test probes to the signal source.
4. Read the frequency (Hz) or duty cycle (%) on the display.

6.9 Temperature Measurement

1. Connect the temperature probe to the appropriate input jacks (usually VΩmA and COM).
2. Select temperature mode.
3. Place the tip of the temperature probe on the object or in the environment to be measured.
4. Read the temperature value on the display.

6.10 AC/DC Current Measurement

1. **Important:** Ensure the circuit is de-energized before connecting the multimeter in series.
2. For currents up to 600mA, connect the red test lead to the VΩmA jack. For currents up to 10A, connect the red test lead to the 10A jack. Connect the black test lead to the COM jack.
3. Break the circuit and connect the multimeter in series with the load.
4. Select AC or DC current mode.
5. Apply power to the circuit and read the current value.

Figure 8: Current Measurement.

6.11 Non-Contact Voltage (NCV) Detection

1. Select NCV mode.
2. Bring the top of the multimeter close to the conductor or outlet.
3. The meter will beep and the bar graph will illuminate, indicating the presence and strength of AC voltage.

Figure 9: NCV Detection.

6.12 Live/Zero Line Detection

This function helps identify live and neutral wires in an AC circuit. Refer to the on-screen indicators for live (L) and zero (N) line detection.

7. Maintenance

- **Cleaning:** Wipe the meter with a damp cloth and mild detergent. Do not use abrasives or solvents.
- **Battery Care:** Recharge the multimeter regularly to maintain battery health. If not used for extended periods, charge it every few months.
- **Storage:** Store the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Calibration:** For professional accuracy, periodic calibration by qualified personnel is recommended.

8. Troubleshooting

- **No Display/Power On:** Ensure the battery is charged. Connect the Type-C charging cable and try again.

- **Incorrect Readings:**
  - Check if the test leads are correctly inserted into the appropriate jacks.
  - Verify that the correct measurement function is selected (or use AUTO mode).
  - Ensure the circuit is properly connected and de-energized for resistance/continuity tests.
- **Meter Beeps Continuously:** In continuity mode, this indicates a closed circuit. In NCV mode, it indicates the presence of AC voltage.
- **Display Shows "OL":** This typically means Overload, indicating the measured value exceeds the meter's range for the selected function.

9. Specifications

Specification	Value
Brand	ANENG
Model Number	621A
Power Source	Battery Powered (Rechargeable Lithium Battery)
Color	Red
Item Dimensions (L x W x H)	133mm x 66.5mm x 22.5mm (5.23in x 2.62in x 0.88in)
Compliance	CE Mark, RoHS Compliant
Measurement Type	Multimeter (AC/DC Voltage, Current, Resistance, Capacitance, Frequency, Diode, Continuity, Temperature, NCV, Live/Zero Line)
Display	9999 Counts, Backlit Color LCD with Analog Bar Graph

Figure 10: Product Dimensions.

10. Warranty and Support

ANENG offers lifetime service and technical support for the 621A Smart Touch Rechargeable Multimeter. For any inquiries or assistance, please contact ANENG customer service through their official channels or the retailer where the product was purchased.