ANENG ANH01

ANENG ANH01 Digital Multimeter User Manual

Model: ANH01

1. Introduction

The ANENG ANH01 Digital Multimeter is a versatile and reliable tool designed for electrical measurements. It features auto-ranging capabilities and a 4000-count display, making it suitable for a wide range of applications, from basic home electrical checks to professional circuit diagnostics. This manual provides detailed instructions for the safe and effective use of your multimeter.

2. Safety Information

Always observe safety precautions when using any electrical testing equipment. Failure to do so may result in injury or damage to the meter or equipment under test.

- Do not input voltage at the Current Mode, Resistance Mode, Diode Mode, or Continuity Mode.
- Do not input voltage exceeding 36V DC or 25V AC when you are at the setting of measuring current.
- Ensure the test leads are properly connected and the function switch is set to the correct range before making any measurements.
- Do not use the meter if it appears damaged or if the test leads are damaged.
- Always disconnect power to the circuit before connecting or disconnecting test leads, especially when measuring current.
- Be cautious when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Replace batteries when the low battery indicator appears to ensure accurate readings.

3. Product Overview

Familiarize yourself with the components of your ANENG ANH01 Digital Multimeter.

Figure 3.1: Front view of the ANENG ANH01 Digital Multimeter with key components labeled.

LCD Display: Shows measurement readings, units, and function indicators. Features a backlight for dim environments.

SELECT Button: Used to switch between different measurement modes within a single rotary switch position (e.g., AC/DC voltage, Diode/Continuity).

RAN (Range) Button: Toggles between auto-ranging and manual ranging modes.

HOLD Button: Freezes the current display reading. Long press for 2 seconds to activate backlight.

Rotary Switch: Selects the primary measurement function (Voltage, Current, Resistance, Capacitance, Frequency, NCV, etc.).

Input Jacks:

- **COM (Common) Jack:** For the black (negative) test lead.
- **VΩmA Jack:** For the red (positive) test lead when measuring voltage, resistance, capacitance, frequency, diode, continuity, and milliampere/microampere current.
- **10A Jack:** For the red (positive) test lead when measuring current up to 10A.

Figure 3.2: The ANENG ANH01 Multimeter with its included test leads.

4. Setup

4.1. Battery Installation

The ANENG ANH01 Multimeter requires 2 x 1.5V AAA batteries (not included) for operation.

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

4.2. Connecting Test Leads

Proper connection of test leads is crucial for accurate and safe measurements.

Figure 4.1: Contents of the ANENG ANH01 package, including the multimeter, test leads, and instruction manual.

- Always insert the black test lead into the **COM** (Common) input jack.
- For most measurements (Voltage, Resistance, Capacitance, Frequency, Diode, Continuity, and milliampere/microampere current), insert the red test lead into the **VΩmA** input jack.
- For measuring high current (up to 10A), insert the red test lead into the **10A** input jack.

5. Operating Instructions

This section details how to perform various measurements with your ANENG ANH01 Multimeter.

5.1. Measuring AC/DC Voltage

1. Set the rotary switch to the **V~** (AC Voltage) or **V-** (DC Voltage) position.
2. If measuring AC voltage, ensure the red lead is in the VΩmA jack. If measuring DC voltage, ensure the red lead is in the VΩmA jack.
3. Connect the test leads in parallel to the circuit or component you wish to measure.
4. Read the voltage value on the LCD display.

5.2. Measuring AC/DC Current

1. **IMPORTANT:** Disconnect power to the circuit before connecting the multimeter in series.
2. Set the rotary switch to the appropriate current range: **mA~** (AC mA), **mA-** (DC mA), **uA~** (AC uA), **uA-** (DC uA), or **A~** (AC A), **A-** (DC A).
3. Insert the red test lead into the **VΩmA** jack for mA/uA measurements, or the **10A** jack for A measurements.
4. Connect the multimeter in series with the circuit.
5. Apply power to the circuit and read the current value on the LCD display.

5.3. Measuring Resistance (Ohm)

1. Ensure the circuit is de-energized before measuring resistance.
2. Set the rotary switch to the **Ω** (Ohm) position.

3. Connect the test leads across the component whose resistance you want to measure.
4. Read the resistance value on the LCD display.

5.4. Measuring Capacitance

1. Ensure the capacitor is fully discharged before measuring.
2. Set the rotary switch to the **F** (Capacitance) position.
3. Connect the test leads across the capacitor terminals.
4. Read the capacitance value on the LCD display.

5.5. Measuring Frequency

1. Set the rotary switch to the **Hz** (Frequency) position.
2. Connect the test leads in parallel to the circuit where you want to measure frequency.
3. Read the frequency value on the LCD display.

5.6. Diode Test and Continuity

1. Ensure the circuit is de-energized.
2. Set the rotary switch to the **Diode/Continuity** position.
3. Use the **SELECT** button to toggle between Diode Test and Continuity Test.
4. **Diode Test:** Connect the red lead to the anode and the black lead to the cathode of the diode. The display will show the forward voltage drop. Reverse the leads to check for open circuit.
5. **Continuity Test:** Connect the test leads across the component or circuit path. A continuous beep indicates a good connection (low resistance).

5.7. Non-Contact Voltage (NCV) Detection

The NCV function allows for detection of AC voltage without direct contact, enhancing safety.

1. Set the rotary switch to the **NCV** position.
2. Move the top part of the multimeter (where the NCV sensor is located) close to the wire or outlet you suspect has AC voltage.
3. The meter will emit an audible beep and the NCV indicator will light up if AC voltage is detected (range: 12V-1000V AC).

Figure 5.1: Example of a Live Wire Test using the NCV function. The display shows a large value for a live line and a small value for a null line.

5.8. Data Hold and Backlight

- **Data Hold:** Press the **HOLD** button briefly to freeze the current reading on the display. Press again to release.
- **Backlight:** Long press the **HOLD** button for approximately 2 seconds to turn the LCD backlight on or off.

6. Maintenance

6.1. Cleaning

Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents.

6.2. Battery Replacement

When the low battery indicator appears on the display, replace the batteries as described in Section 4.1. Battery Installation.

6.3. Fuse Replacement

If the current measurement function fails, the fuse may need replacement. Refer to the specifications for the correct fuse type. Fuse replacement should only be performed by qualified personnel.

7. Troubleshooting

Problem	Possible Cause	Solution
No display or dim display	Low or dead batteries	Replace batteries (2 x 1.5V AAA).

Problem	Possible Cause	Solution
Incorrect readings	Incorrect function/range selected; Poor test lead connection; External interference.	Verify rotary switch setting; Ensure leads are firmly connected; Move away from strong electromagnetic fields.
Current measurement not working	Blown fuse.	Replace the fuse (refer to specifications for type).
"OL" (Overload) displayed	Measurement exceeds selected range or meter's maximum capacity.	Select a higher range (if in manual mode) or ensure the measured value is within the meter's limits.

8. Specifications

Detailed technical specifications for the ANENG ANH01 Digital Multimeter.

Brand: ANENG

Model: H01

Material: ABS

Display Type: 4000 Counts LCD

Operating Mode: Automatic range/manual range

Operating Temperature: 0 - 40 °C

Power Source: 2pcs x 1.5V AAA Battery (NOT included)

DC Voltage Range: 400.0mV / 4.000V / 40.00V / 400.0V / 1000V

AC Voltage Range: 400.0mV / 4.000V / 40.00V / 400.0V / 750V

DC Current Range: 40.00uA / 400.0uA / 40.00mA / 400.0mA / 4.000A / 10.00A

AC Current Range: 40.00uA / 400.0uA / 40.00mA / 400.0mA / 4.000A / 10.00A

Resistance Range: 400.0Ω / 4.000kΩ / 40.00kΩ / 400.0kΩ / 4.000MΩ / 40.00MΩ

Capacitance Range: 4.000nF / 40.00nF / 400.0nF / 4.000uF / 40.00uF / 200.0uF / 400.0uF

Frequency Range: 99.99Hz / 999.9Hz / 9.999kHz / 99.99kHz / 999.9kHz / 9.999MHz

NCV: Yes (AC 12V-1000V)

Diode Test: Yes

Continuity: Yes

Data Hold: Yes

Backlight: Yes

Low Battery Alert: Yes

Auto Power Off: Yes

Color: Red

Test Lead Length: Approx. 100cm/39.4inch

Size: Approx. 150*72*33mm / 5.9*2.8*1.3inch

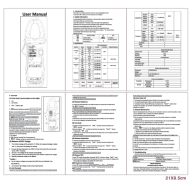
Weight: Approx. 268g / 9.5oz

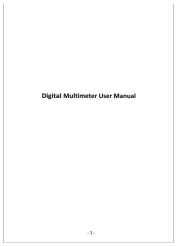
Figure 8.1: Dimensions of the ANENG ANH01 Digital Multimeter.

9. Warranty and Support

For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official ANENG website. Keep your purchase receipt as proof of purchase.

Related Documents - ANH01

	ANENG ST180 Digital Clamp-On Multimeter Operating Manual This comprehensive operating manual details the ANENG ST180 Digital Clamp-On Multimeter. It covers essential safety information, step-by-step operating instructions for various measurements (AC/DC Voltage, Current, Resistance, Frequency, Capacitance, Temperature, NCV), general characteristics, and detailed specifications. Essential for safe and effective use of the device.
Preview	ANENG ST180 Digital Clamp Meter User Manual User manual providing detailed information, specifications, and operating instructions for the ANENG ST180 Digital Clamp Meter.
	ANENG AT619 Smart AC Clamp Meter User Manual Comprehensive user manual for the ANENG AT619 Smart AC Clamp Meter, detailing its features, specifications, safety information, operating instructions, maintenance, and troubleshooting. Features true-rms, auto-ranging, 4000 counts LCD display, and backlight.

	[Mini Digital Clamp-On Multimeter Operating Instructions] This document provides operating instructions, safety information, and specifications for the Mini Digital Clamp-On Multimeter. It covers measurements for AC/DC voltage, DC/AC current, resistance, audible continuity, diode, temperature, and Non-Contact ACV detection.
	[ANENG 616 Digital Intelligent Multimeter: Operating Instructions and Specifications] Comprehensive operating instructions and detailed specifications for the ANENG 616 digital intelligent multimeter. Learn how to measure voltage, current, resistance, capacitance, frequency, and temperature safely and effectively.
	[ANENG AL01 Inductance Digital Multimeter User Manual] User manual for the ANENG AL01 Inductance Digital Multimeter, featuring 6000 Counts, True-RMS AC/DC voltage and current measurement, and inductance testing for professional electricians.