

## HANMATEK AC2

# HANMATEK AC2 Non-Contact AC Voltage Detector User Manual

Model: AC2 | Brand: HANMATEK

## 1. INTRODUCTION

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The HANMATEK AC2 is a non-contact AC voltage detector designed for safe and efficient electrical testing. It features adjustable sensitivity, an LCD display, an LED flashlight, and a laser pointer, making it a versatile tool for electricians, homeowners, and DIY enthusiasts. This manual provides essential information for the proper and safe use of your device.

## 2. SAFETY INFORMATION

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**WARNING: Always exercise extreme caution when working with electricity. This device is an indicator and should not be solely relied upon for verifying the absence of voltage in critical safety situations. Always follow local electrical safety codes and use appropriate personal protective equipment.**

- Do not use the device if it appears damaged or is not operating correctly.
- Ensure the battery compartment is securely closed before use.
- Do not attempt to measure voltages exceeding the specified range (1000V AC).
- Keep the device away from water and moisture.
- The laser light should not be pointed directly at eyes or reflective surfaces.

## 3. PRODUCT OVERVIEW AND COMPONENTS

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Familiarize yourself with the different parts of your HANMATEK AC2 voltage detector.

## AC2 USER-FRIENDLY STRUCTURE DESIGN



Figure 1: HANMATEK AC2 Component Diagram

**Battery Cover:** Protects the battery compartment.

**Sensitivity Down Key:** Decreases detection sensitivity.

**Sensitivity Up Key:** Increases detection sensitivity.

**Power Button:** Turns the device on/off.

**Display LCD:** Shows the selected sensitivity level.

**Signal Strength Indicator (H/L):** Indicates high or low signal strength.

**Voltage Signal Indicator:** Visual alert for detected voltage.

**Laser Switch:** Activates the laser pointer.

**Laser Light:** Emits a red laser beam.

**Probe NCV:** Non-Contact Voltage detection tip.



Automatic Shutdown  
More Energy Saving



1-9 Gears Sensitivity Range:12-1000V AC  
For Broad Application



Low Battery Indicator  
Indicator Light Flashes & Beep Once  
More Convenient



Red Laser Light  
Find Test Object



Buzzer & Red Light Warning  
Draw double attention

**Figure 2:** Key Features of the HANMATEK AC2

This image highlights the main functionalities: automatic shutdown for energy saving, 9 sensitivity levels for broad application (12-1000V AC), a low battery indicator, a red laser light for pointing, and combined buzzer and red light warnings for clear voltage detection.

## 4. SETUP

### 4.1 Battery Installation

The HANMATEK AC2 requires 2 AAA batteries (included). Ensure correct polarity when inserting.

1. Unscrew the battery cover at the top of the device.
2. Insert two AAA batteries according to the polarity markings (+/-) inside the compartment.
3. Replace the battery cover and screw it tightly to secure.

**2 cm / 0.79 in**



16 cm / 6.3 in



2 cm / 0.79 in



Non-contact AC Voltage Detector  
AC1/AC2  
Operation Manual

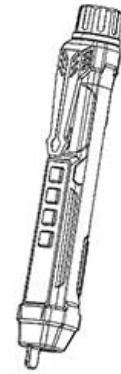


Figure 3: Device dimensions and battery type (2x AAA) for installation.

## 5. OPERATING INSTRUCTIONS

### 5.1 Power On/Off

Press the **Power Button** (green circle) to turn the device on. Press and hold the Power Button to turn it off.

### 5.2 Voltage Detection (NCV Mode)

The device automatically enters NCV (Non-Contact Voltage) detection mode upon power-on.

1. Hold the device with the NCV probe tip near the conductor, socket, or wire you wish to test.
2. If AC voltage is detected, the Voltage Signal Indicator will light up (red), and an audible buzzer will sound. The LCD display will show the detected signal strength (H for High, L for Low).
3. The intensity of the light and sound indicates the strength of the detected voltage.

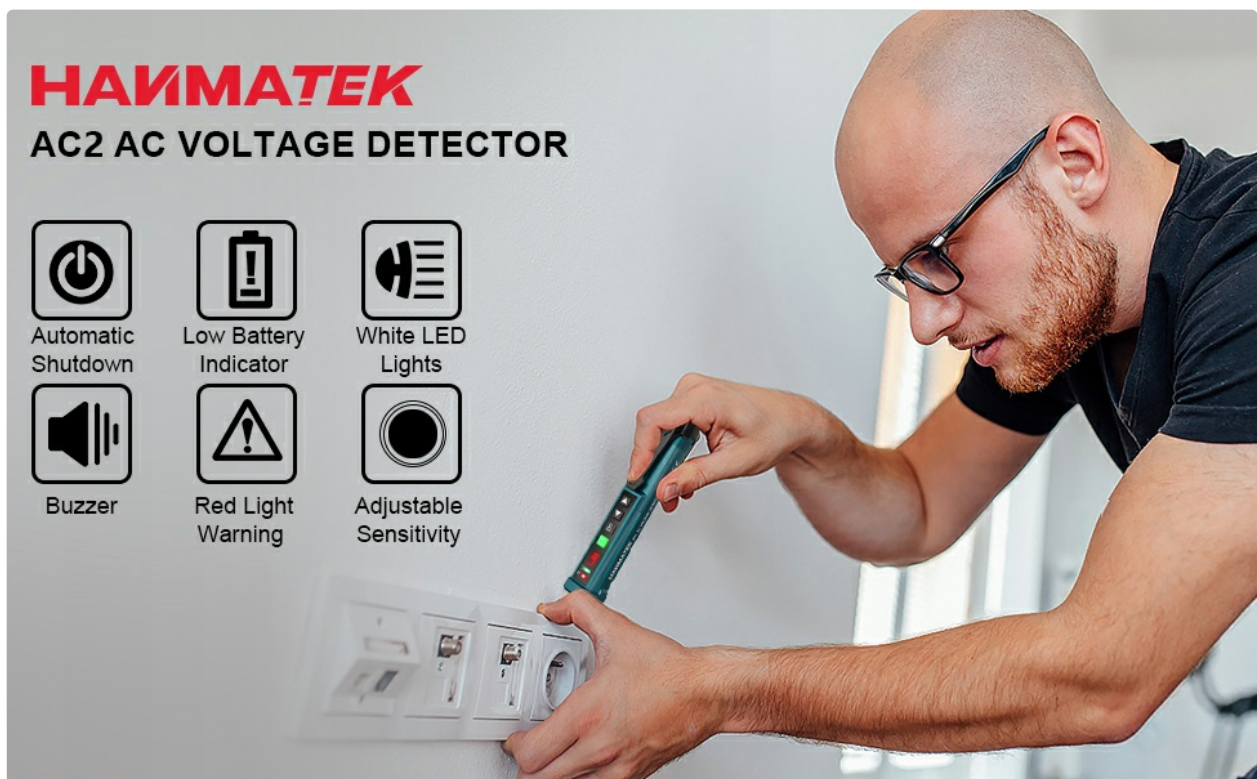


Figure 4: Detecting voltage in an electrical panel.



Gear 9	about 12-1000V	suitable for (below 12V) low voltage line equipment
Gear 8	about 20-1000V	suitable for (below 24V) low voltage line equipment
Gear 7	about 30-1000V	suitable for (below 36V) low voltage line equipment
Gear 6	about 40-1000V	suitable for tracking of 110V power supply system line breakpoints
Gear 5	about 50-1000V	suitable for the United States and Japan (resolved zero line and live line)
Gear 4	about 60-1000V	suitable for the United States and Japan (resolved zero line and live line)
Gear 3	about 70-1000V	suitable for tracking of 220V power supply system line breakpoints
Gear 2	about 80-1000V	suitable for tracking of 220V power supply system line breakpoints
Gear 1	about 90-1000V	suitable for European China mains (resolved zero line and live line)

Figure 5: Detecting voltage in a wall socket.

### 5.3 Sensitivity Adjustment

The HANMATEK AC2 offers 9 levels of sensitivity, allowing detection from 12V AC to 1000V AC.

1. Press the **Sensitivity Up Key** (up arrow) to increase sensitivity.
2. Press the **Sensitivity Down Key** (down arrow) to decrease sensitivity.
3. The LCD will display the current sensitivity level (1-9). Higher numbers indicate higher sensitivity, allowing detection of weaker signals or through thicker insulation.



**Figure 6:** Examples of voltage detection: No-Voltage Condition, Strong Electricity, and Weak Current. Note that at the highest sensitivity (level 9), the measuring distance can be extended.

#### 5.4 Live/Neutral Wire Differentiation

When testing a live socket or wire, the device can help differentiate between live and neutral lines:

1. Set the sensitivity to a lower level (e.g., 1 or 2) for more precise detection.
2. Place the NCV probe near each terminal or wire.
3. The live wire will typically trigger a stronger and more consistent indication (faster flashing light, louder buzzer) compared to the neutral wire.

#### 5.5 LED Flashlight Function

Press the **Flashlight Button** (light bulb icon) to turn the integrated LED flashlight on or off. This is useful for working in dimly lit areas.

#### 5.6 Laser Pointer Function

Press the **Laser Switch** (star icon) to activate the red laser pointer. Press it again to turn it off. This feature can be used for pointing or indicating specific areas.



Figure 7: Demonstrating the laser pointer function.

### 5.7 Automatic Shutdown

To conserve battery life, the device will automatically shut down after approximately 3 minutes of inactivity or no signal detection.

### 5.8 Low Battery Indication

If the battery voltage drops below approximately 2.6V, the operating display will flash three times, and the buzzer will sound before the device automatically shuts down. Replace the batteries promptly when this occurs.

## 6. MAINTENANCE

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### 6.1 Battery Replacement

When the low battery indicator appears or the device fails to power on, replace the batteries as described in Section 4.1. Always use fresh AAA batteries.

### 6.2 Cleaning

Wipe the device with a dry, soft cloth. Do not use abrasive cleaners or solvents. Ensure no moisture enters the device.

### 6.3 Storage

If the device will not be used for an extended period, remove the batteries to prevent leakage and damage. Store in a cool, dry place away from direct sunlight.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
No voltage detected, but power is present.	Low sensitivity setting; device too far from source; very weak signal.	Increase sensitivity using the Up Key; move closer to the conductor.
False positive detection (detects voltage where none exists).	High sensitivity setting; interference from nearby electrical fields.	Decrease sensitivity using the Down Key; ensure no other strong electrical sources are nearby.
Low battery indicator flashes.	Batteries are low.	Replace batteries immediately.

## 8. SPECIFICATIONS

Feature	Specification
Brand	HANMATEK
Model	AC2
Measurement Type	Non-Contact AC Voltage Detector
Voltage Range	12V - 1000V AC
Sensitivity Levels	9 adjustable levels
Power Source	2 x 1.5V AAA Batteries
Automatic Shutdown	Yes (after approx. 3 minutes of inactivity)
Low Battery Indication	Yes
Integrated Features	LED Flashlight, Laser Pointer
Item Weight	76 Grams
Item Dimensions (L x W x H)	12.9 x 2 x 2.9 Centimeters
UPC	708082590159
ASIN	B087TNNSDF

## 9. WARRANTY AND SUPPORT

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HANMATEK products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase or visit the official HANMATEK website. Please retain your proof of purchase for warranty claims.