

# AD-5571

## Non-Contact Voltage Tester

### Instruction manual

1WMPD4004724

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## 1. Introduction

This manual describes how the product, the AD-5571 (Non-Contact Voltage Tester) works and how to get the most out of the product. Read this manual thoroughly before using the product and keep the manual at hand for future reference.

## 2. Features

This product can perform non-contact voltage testing, illumination with an LED light, and determine the non-grounded / grounded side of a power outlet.

There are two modes for non-contact voltage testing.

- Low Voltage Response Mode (24 to 1000V)

Used for detection of voltages low voltage AC motors (90V), audio systems, arc welding, insulated cables and other weak electromagnetic AC signals.

- High Voltage Induction Mode (90 to 1000V)

Used for detection of voltages in lead-in lines and three-phase AC power supplies.

e.g.: Power distribution boxes, switchboards, various electrical appliances and electrical equipment.

## 3. Precautions for Use

All safety messages are given according to the ANSI Z535.4 (American National Standard Institute: Product Safety Signs and Labels) standard.

### 3-1. WARNING DEFINITIONS

The warnings described in this manual mean the following:

	<b>WARNING</b>	This symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.
	<b>CAUTION</b>	This symbol indicates a potentially hazardous situation that, if not avoided, could result in personal injury or property damage. It may also be used to alert the user about unsafe practices.

When using the AD-5571, the following safety precautions should always be followed.

### ⚠ WARNING

- Please carefully read and fully understand the warnings and operating instructions before use.
- Before using, apply the product to a known power source (such as a power outlet) to check if it works properly.
- If the Non-contact Voltage Tester is damaged, does not operate normally, or if any abnormality is found, stop using it immediately. Attach a notice to the product indicating that the product is "Out of Order" or move the product to a location where it will not be used accidentally. Continued use of the product is very dangerous. For repairs, please contact the store where you purchased the product or an A&D office.
- Do not use for measurement subjects that exceed the rated voltage (1000V). If the voltage to be measured exceeds AC 30V, there is a risk of electric shock, so please use carefully.
- Even if the red LED does not blink or the buzzer does not sound when using a Non-contact Voltage Detector, there still may be power running through the measurement subject. The Non-contact Voltage Tester Detector can only detect when there is a large enough AC voltage source to create an electrostatic field that is strong enough to be detected. If the electromagnetic field is weak, it may not be detected. In addition, false detections may occur if there is interference from a high-frequency switching power supply or other sources of electromagnetic waves.
- If a low battery warning is displayed, stop using the product immediately and replace with new batteries.
- Since live wires are measured, use insulating protective equipment such as electric rubber gloves and electric insulating rubber boots to prevent electric shock accidents.

### ⚠ CAUTION

#### Repair

Internal servicing or adjustment of the product must be performed by a qualified person.

- Do not apply strong impacts, vibrations, or electrical shocks to the product as they may cause the product to malfunction.
- Avoid using the product in places where are sudden changes in temperature, high temperature, high humidity, or high dust content.
- This product is not waterproof. Do not use it in water or in places where it may be directly exposed to water.
- To prevent hazards, do not use the product in the presence of flammable gases.
- Do not look directly into the light of the LED light. Doing so can cause other forms of eye damage.

### 3-2. Overvoltage category

This Non-contact Voltage Tester conforms is CAT IV (1000V) of the safety standards (EN61010 series, JIS C 1010 series), where the safety level is specified in terms of overvoltage categories, classified as CAT I to CATIV as follows.

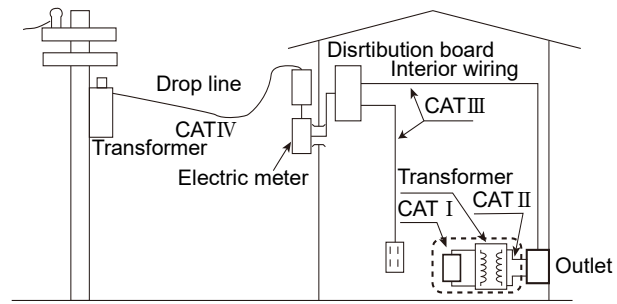
CAT I : Circuit with overvoltage control on the secondary side, routed from the power outlet through the power transformer.

CAT II : Primary side of devices which have power cables connected to a power outlet.

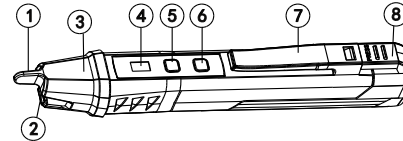
CAT III : Circuits from the primary side of devices that draw electricity directly from a distribution board and from the branching units of equipment to the power outlet.

CAT IV : Electrical meters and primary overcurrent protection devices for use on lead-in lines.

Never use a measuring instrument rated with a small CAT No. to measure an object with a larger CAT No., as this may lead to a serious accident.

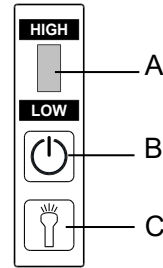


## 4. Part Names



- ① Detection part
- ② LED light
- ③ Light emitting part (red LED)
- ④ Status display panel
- ⑤ Power button / mode switching button
- ⑥ LED light button
- ⑦ Pen clip
- ⑧ Battery cover

Descriptions for each parts



A Status display panel  
The LED lights up when the power is turned on. The color of the LED indicates the status of the non-contact voltage tester.

LED Color	Status
Red	High Voltage Induction mode
Green	Low Voltage Response Mode
Yellow-green	Low battery voltage

B Power button  
Short press : Turns power on, switches measurement mode  
Long press : Turns power off

C LED light button : Turns LED light ON / OFF

## 5. How to Use

### 5-1. Turn on the Non-contact Voltage Tester

If you press the power button while the power is off, the buzzer sounds twice, the Non-contact Voltage Tester turns on, and the status display panel lights up in red. The Non-contact Voltage Tester goes into standby mode in high voltage induction mode.

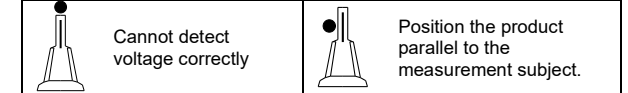
### 5-2. LED light

Each time you press the LED light button, the LED light turns on or off. The LED light can be used even when the Non-contact Voltage Tester is turned off. The product turns off automatically after about 5 minutes.

### 5-3. Non-contact voltage tester

Bring the detection part close to the AC voltage measurement subject or power outlet. When the product detects an AC voltage signal, the red LED on the tip of the detection part blinks and the buzzer sounds. The closer the product is brought to the AC voltage measurement subject, the faster the red LED blinks and the buzzer sounds more frequently. The ungrounded and grounded sides of a power outlet can be determined using the product by inserting it into two of the receptacles of the power outlet and comparing the difference in the detected signal strengths.

Apply the product to the measurement subject correctly as shown in the figure below.



### 5-4. Selection of detection range

When the product is turned on, it starts in "High Voltage Induction Mode", which has an AC voltage detection range of 90 to 1000 V, and the status display panel lights up in red.

When the power button is pressed once, the status display panel lights up in green and switches to "Low Voltage Response Mode", which has an AC voltage detection range of 24 to 1000 V. If the measurement subject is known to exceed 90 V in advance, it is recommended that you use the "High Voltage Induction Mode".

### 5-5. Auto power off

This is a function that automatically turns off the power to save battery power. If the product is not used for about 5 minutes, the buzzer sounds once and the product is turned off.

### 5-6. Turning off the product

When the power button is pressed and held for 2 seconds or longer, the buzzer sounds once and the product turned off.

### 5-7. Low battery display

When the battery voltage is low, the status display panel blinks yellow-green three times and the buzzer sounds once before the product is turned off. Replace the batteries.

## 6. Maintenance

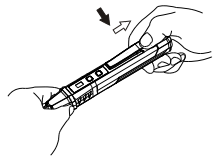
### 6-1. Installing / Replacing Batteries

This product uses two AAA batteries. If the low battery indication is displayed or the product does not turn on, replace the batteries by the following method.

The included batteries are for testing purposes only, so the battery life may be short. If you insert the batteries with the "+" and "-" polarities reversed, the product will not operate normally and it may malfunction. Be careful not to cut your hands or otherwise be injured when replacing the batteries.

- Battery replacement procedure

- Refer to the figure below. While pressing on the part of the battery cover marked "PRESS", pull out the battery cover to remove it.
- Remove the old batteries.
- Insert the new batteries with the correct orientation into the battery space.
- Put the battery cover back on.



## 7. Specifications

AC voltage range	90 to 1000V AC (When the Red LED is lit.) 24 to 1000V AC (When the Green LED is lit.)
Frequency range	50Hz/60Hz
Alarm method	Buzzer / Blinking Red LED
LED light	White LED
Auto power off	Approx. 5 minutes
Low battery display	Yes
Overvoltage category	CAT IV
Maximum operating temperature / humidity range	0 to 40°C 80%RH or less (No condensation) 2000m or less above sea level
Storage temperature / humidity range	-20 to 50°C, 80% RH or less (No condensation)
Power supply	AAA batteries 2 pcs
Battery life	Approx. 200 hours
Size	150(W)×18(H)×23(D)mm
Mass	Approx.50g (Including batteries)
Accessories	Instruction Manual, batteries (for testing)