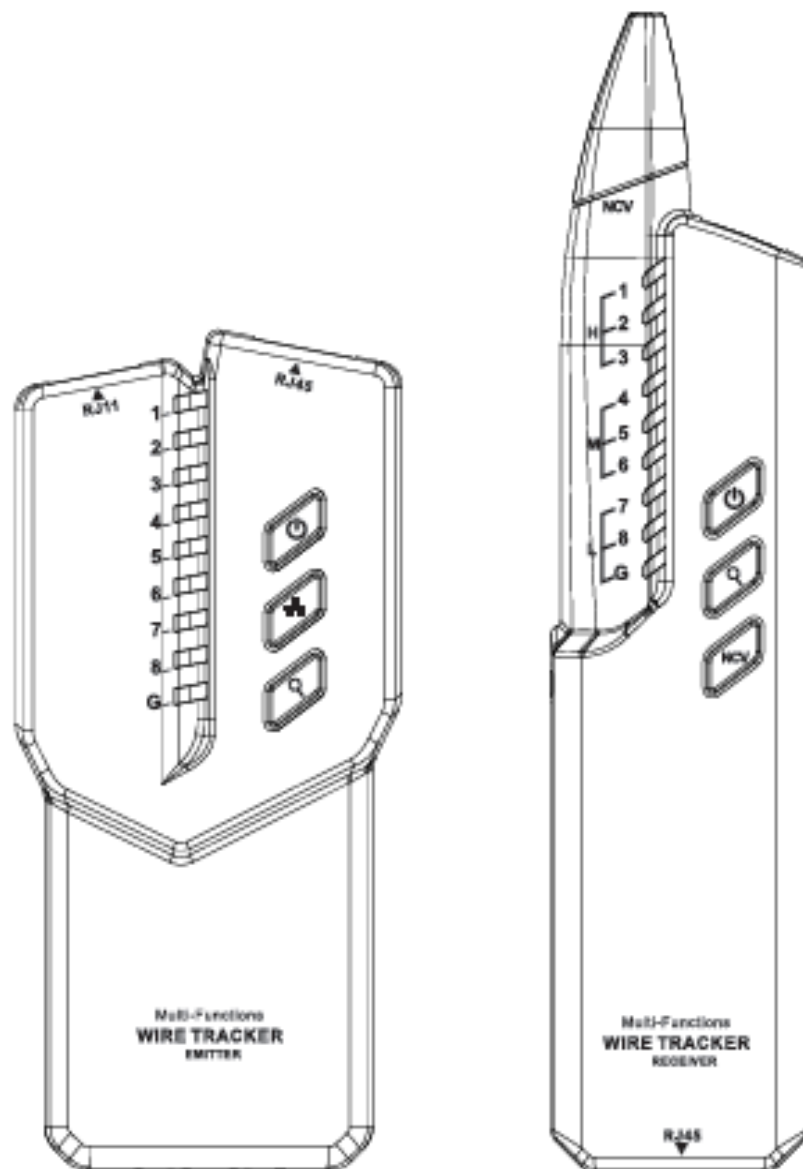


# USERS MANUAL



Designed and Conforms to  
**IEC61010-1**  
**CAT.III 600V**

## I. Safety instructions



### Warning

To avoid electric shock or personal injury, please read this manual carefully



### Warning

- Please read all the contents of this manual carefully.
- Please use the product according to the instructions in this manual, otherwise the protection function provided by this product will be invalid or weakened.
- Do not use the received product if the shell is cracked or damaged.
- Do not use this product to detect cables with strong currents (such as 220V power supply lines).
- Do not use products without battery back cover or improperly installed back cover.
- The test line must be separated from the tested line before opening the battery back cover.
- Do not try to repair this product, This product does not contain parts that can be replaced by the user.
- For your safety, please remember "safety first":
- Voltage exceeding 30V AC or 60V DC may cause electric shock injury.

## II. Overview

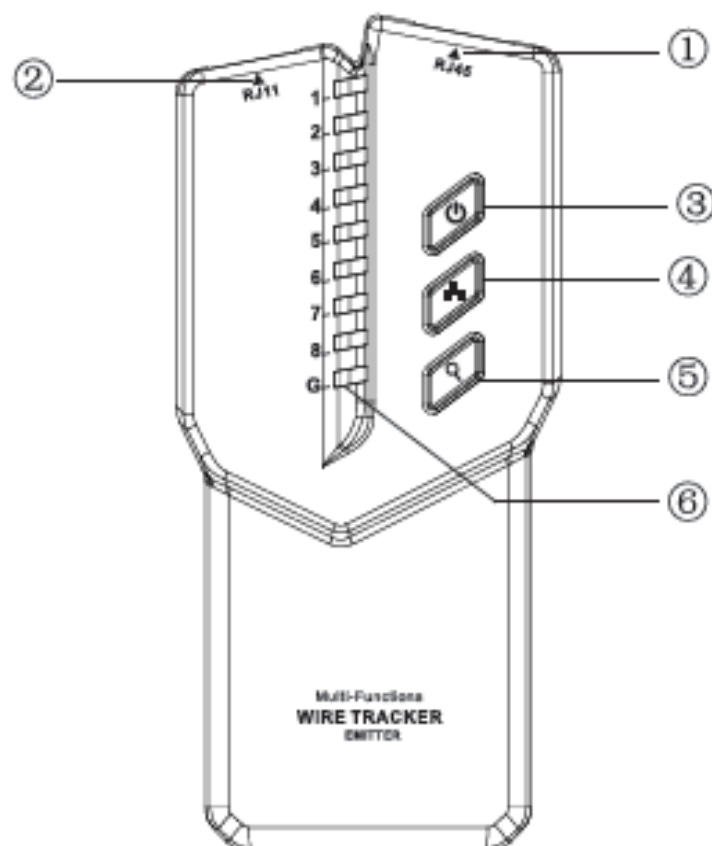
This instrument is a multifunctional handheld digital cable testing tool. The anti-interference ability is stronger, the cable has more types, more functions, and a wider range of applications. It is an indispensable testing tool for network maintenance, telecommunications engineering, professional wiring, electricians, etc.

## III. function introduction

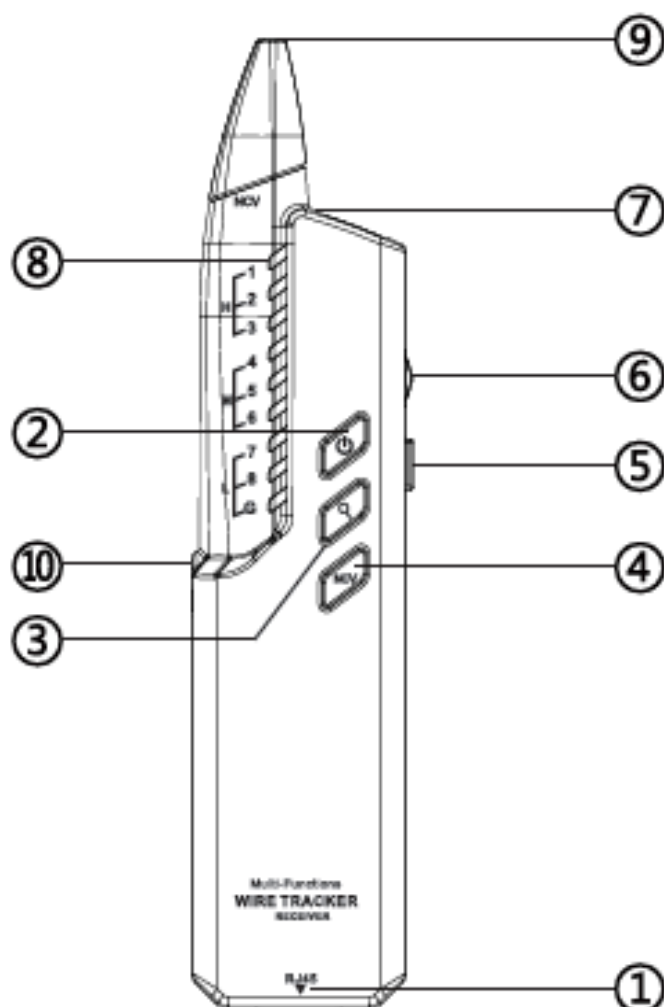
1. Line hunting function: It can be used for RJ11, RJ45 interface cable hunting, and other metal wires can be hunted through an adapter.
2. Find cable breakpoints: no need to strip the line insulation skin, simple, fast, convenient, and can quickly identify the location of the line breakpoint.
3. Find the short-circuit point of the cable: It can accurately find the short-circuit position of two cables.

4. Check the alignment: Measure whether the wiring sequence of the crystal plug of the network cable is correct.
5. It can search for weak current equipment such as switches, routers, etc. of any model in the power-on or non-power-on state.
6. When the battery is under-voltage, the power-on button flashes to indicate insufficient power.
7. Receiver NCV: can be used for non-contact AC voltage detection above 48V.
8. Receiver lighting: can be easily used in a darker environment.
9. Receiver signal attenuation knob: it can be used for tracking, breakpoint, short-circuit point, signal strength adjustment and precise positioning.
10. Receiver headphone jack: plug in headphones in a noisy environment to avoid external noise from interfering with the measurement.

#### IV. Schematic diagram of the appearance of the instrument



1. RJ45 interface: standard RJ45 network cable interface, used for network cable hunting, cable alignment, and network cable detection.
2. RJ11 port: telephone working status, level detection and trace interface for other metal wires.
3. Power switch button: long press for 2 seconds to turn on the indicator light, short press to shut down, the button indicator flashes when the battery is undervoltage.
4. Wire button: test whether the connection of the crystal head of the network cable is correct, and can judge the short circuit, open circuit, right or wrong, reverse connection and other problems of the network cable for testing.
5. Line hunting button: network cable, cable line search, query, short press to open or close the line hunting.
6. Alignment indicator: When the crystal head of the network cable is aligned, the wiring arrangement sequence can be displayed and the wiring can be judged according to the display.



1. RJ45 interface: test whether the connection of the crystal plug of the network cable is correct, and judge whether the network cable is short-circuited, open, right or wrong, reverse connection and other problems.
2. Power switch key: long press for 2 seconds to turn on the indicator light, short press to shut down, the button light flashes when the battery is undervoltage.
3. Line hunting key (  ): Short press to turn on the hunting function, the button indicator will light up, short press again to close the hunting function.
4. NCV key: short press to turn on the non-contact AC voltage detection function, the indicator light is on to perform non-contact AC voltage detection, short press again the NCV function to close.
5. Illumination button: Short press to turn on or off the illuminator, used to measure the auxiliary lighting when the environment is dark.
6. Signal attenuation adjustment knob: adjust the strength and volume of the received signal.
7. Signal strength indicator: used to indicate line hunting, NCV voltage signal strength and network cable alignment.
8. Probe: It is used to approach the conductor when it is used for line hunting or non-contact AC voltage detection to receive digital signals from the transmitter.
9. Headphone jack: plugging in headphones in a noisy environment can prevent external noise from interfering with the measurement. Five, functional operation

## V. functional operation

### 1. Line hunting function:

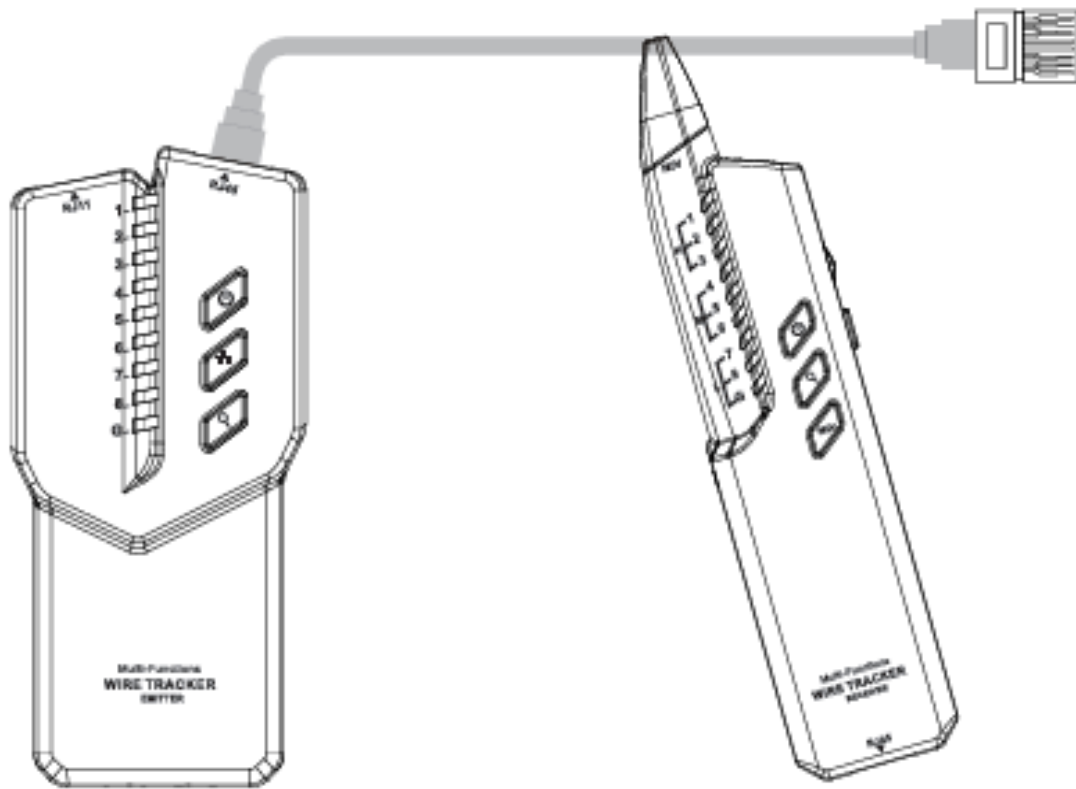
Line hunting function: refers to quickly find the required wires among many wires, network wires, and single cable wires. This instrument is used for RJ45 network cable interface and RJ11 telephone line interface hunting; other metal wires can be transferred through an adapter .

Operation method: Turn on the transmitter and receiver, and turn on the transmitter and receiver line hunting function (  ).

#### 1.1 Network cable hunting:

Insert the network cable directly into the RJ45 interface of the transmitter. When the receiver is close to the network cable to be found, the signal strength indicator will light

up and a signal beeps. You can adjust the signal strength of the receiver through the knob to accurately find the network cable under test. The specific usage is as follows:

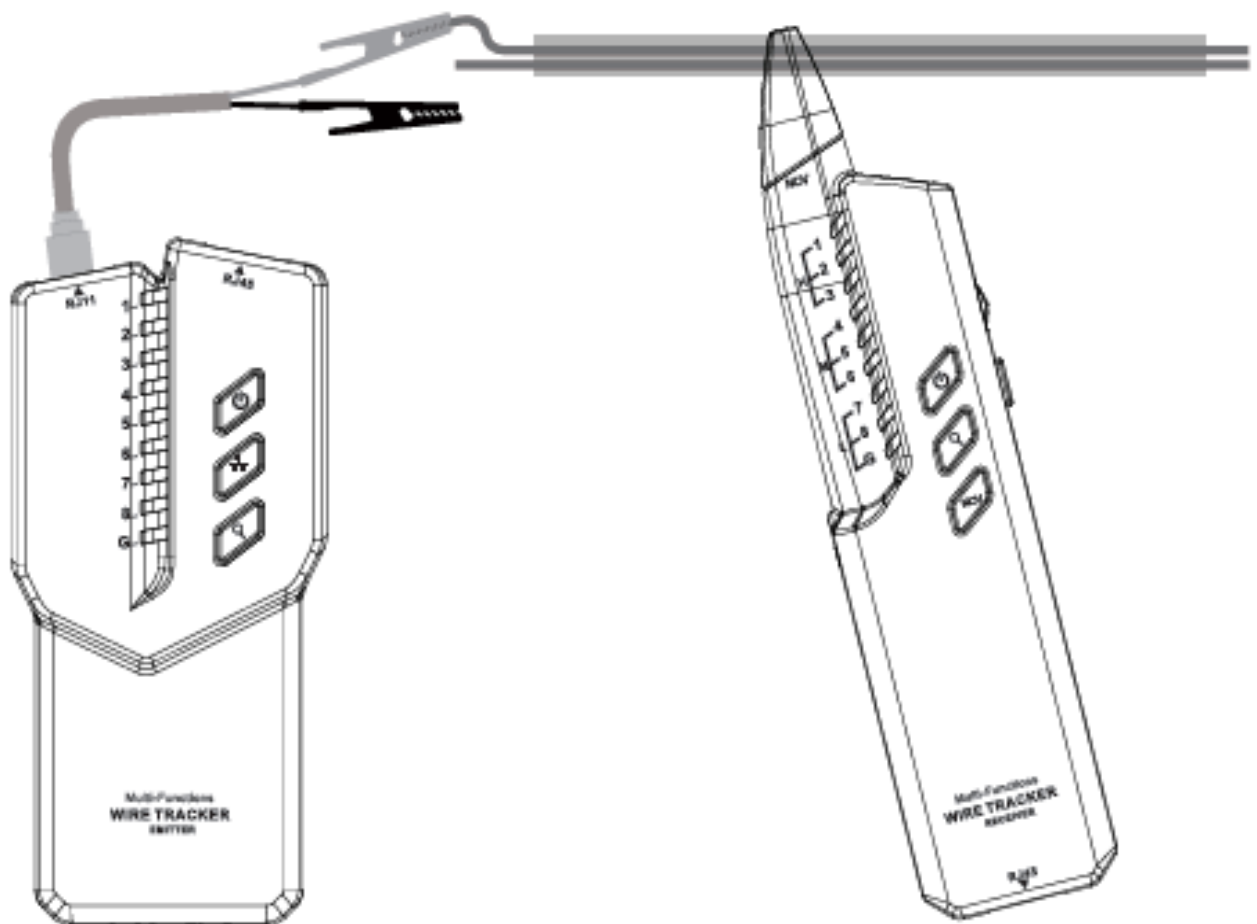


**Nota:**

The longest tracking distance is 300 meters, and it can be powered or unpowered. The voltage of powered tracking cannot exceed 60V, otherwise it will burn the instrument.

## 1.2 Cable hunting:

Multi-strand cable hunting (more than two strands), the instrument clip cable is inserted into the transmitter RJ11 interface, and the red or black (single clip) is used to clip a single cable hunting. Two cables cannot be used for hunting. The receiver is close. When the cable is sought, the signal strength indicator lights up and a signal sound is emitted. The specific usage method is as follows:

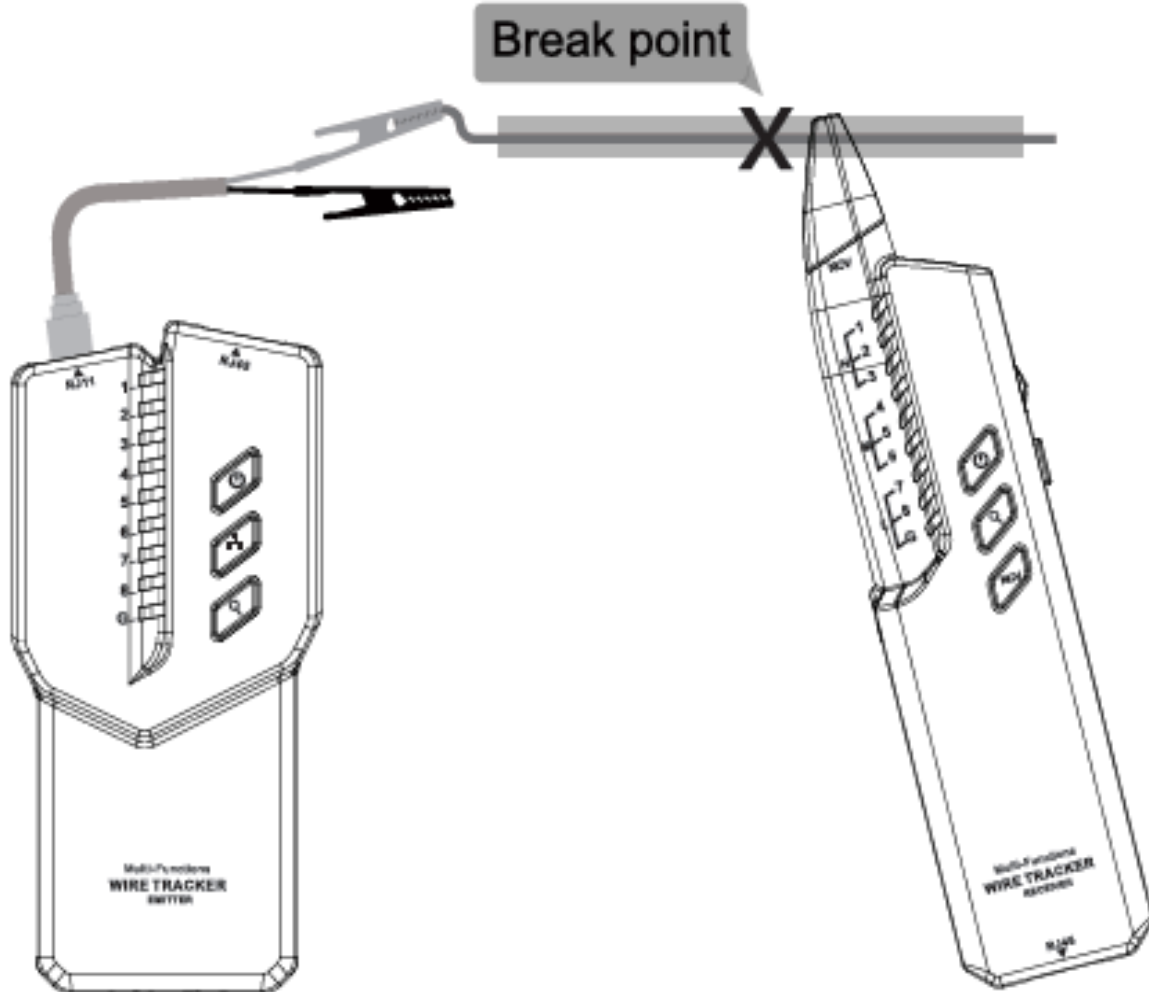


#### Nota:

Only a single clip can be used for cable hunting, and two clips cannot be used at the same time. The longest tracking distance is 300 meters, and it can be powered or unpowered. The voltage of powered tracking must be lower than 60V, otherwise the instrument will be burnt out.

### 1.3 Finding cable breakpoints:

Multi-strand cables cannot find breakpoints (more than two strands), and are limited to finding breakpoints on single wires. Insert the clip wire into the transmitter RJ11 interface, and use a single clip (red or black) to clip a single wire for tracking, and the receiver. When approaching the cable to be sought, the signal strength indicator lights up and a signal sound is emitted. After the cable breakpoint, the receiver signal strength and signal sound disappear. The position of the cable breakpoint is judged by the signal disappearing position. The specific usage method is as follows:

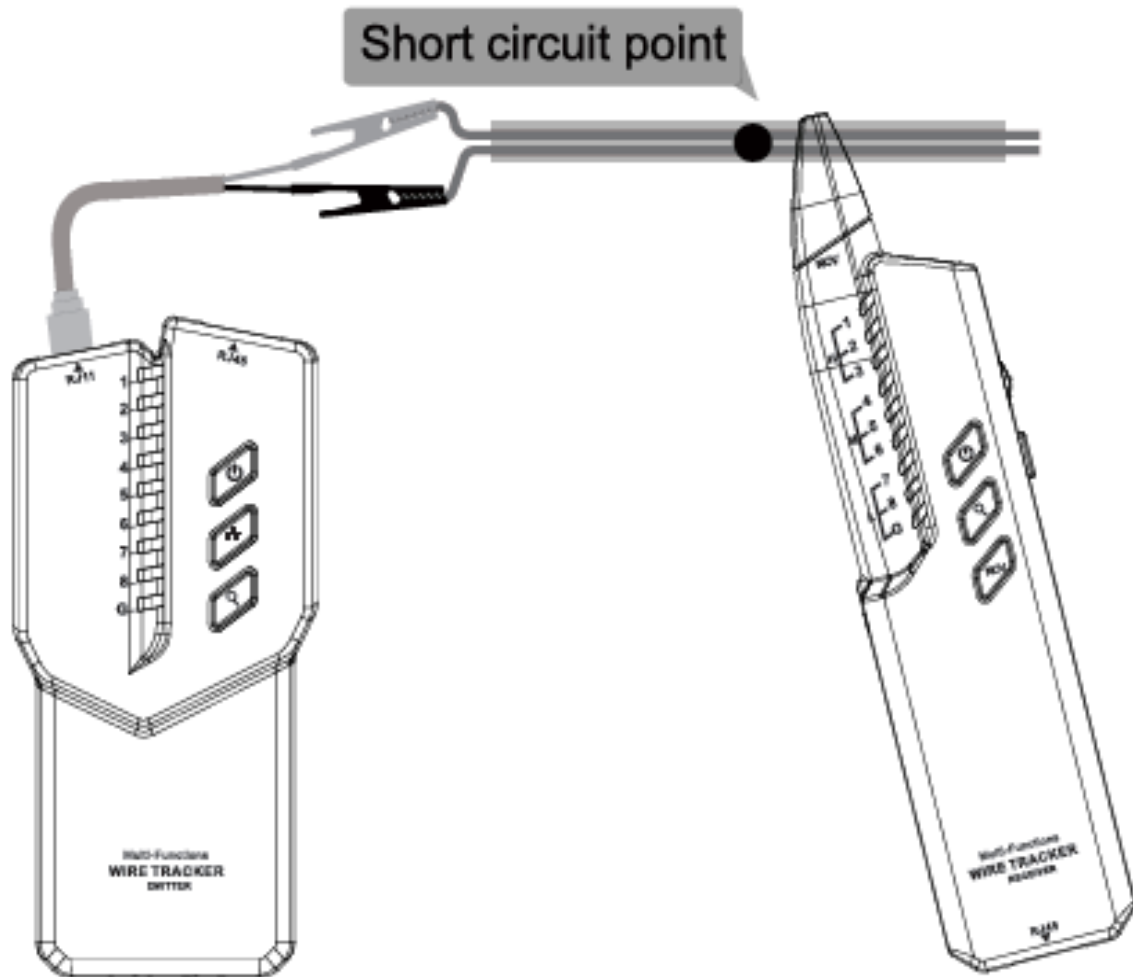


#### Nota:

The short-circuit point search distance is up to 300 meters, and the position of the short-circuit point can be accurately found through the receiver knob to attenuate the signal strength.

### 1.4 Finding the short-circuit point of the cable :

When the two cables are short-circuited, find the location of the short-circuit accurately, insert the clip cable into the transmitter RJ11 interface, and clip each of the red and black clips. When the receiver is close to the cable to be sought, the signal strength indicator will be on and a signal will sound. After the short-circuit point is passed The receiver signal strength indicator and signal sound disappear, and the short circuit position of the wire is judged by the signal disappearing position. The specific usage method is as follows:

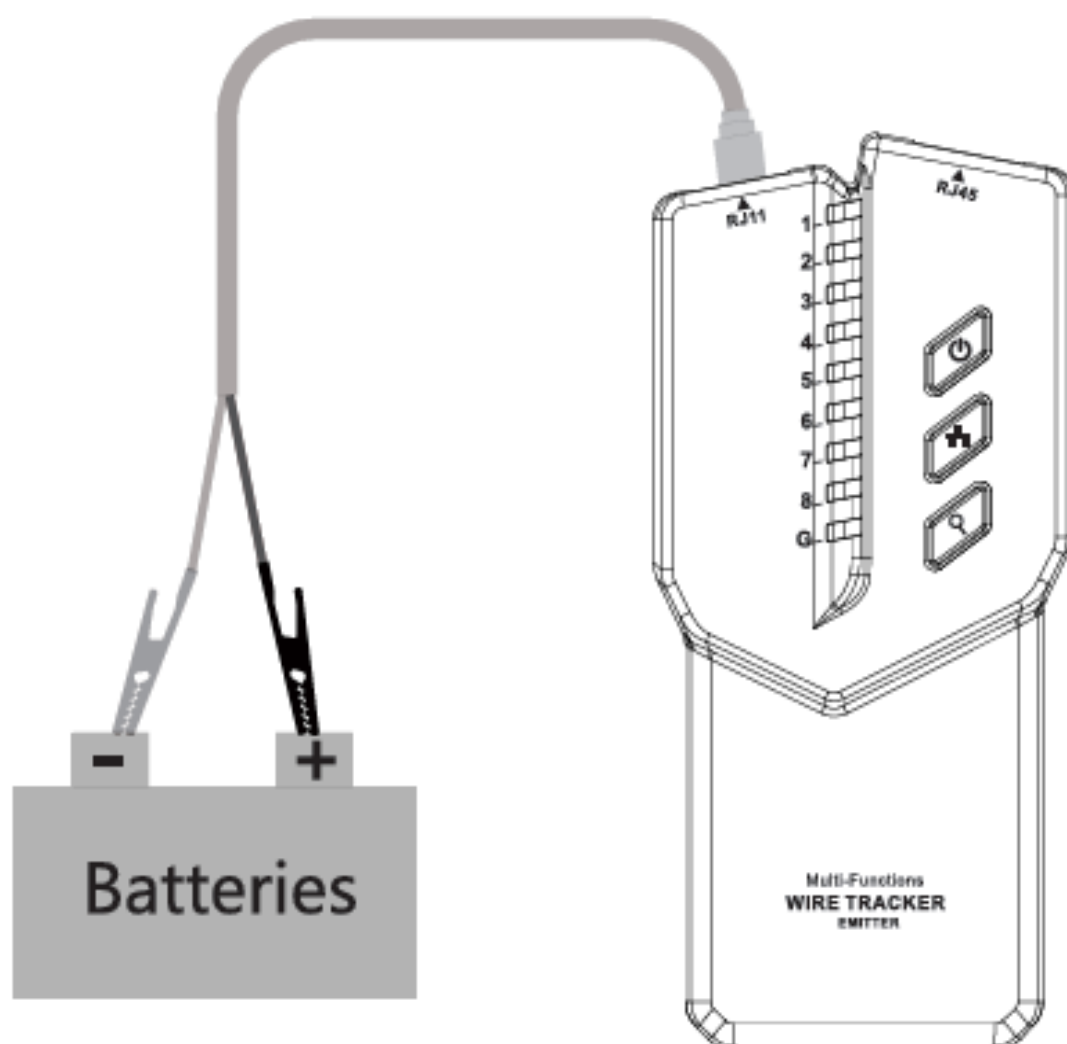


#### Nota:

The short-circuit point search distance is up to 300 meters, and the position of the short-circuit point can be accurately found through the receiver knob to attenuate the signal strength.

### 1.5 Judgment of the positive and negative poles of DC voltage below 48V

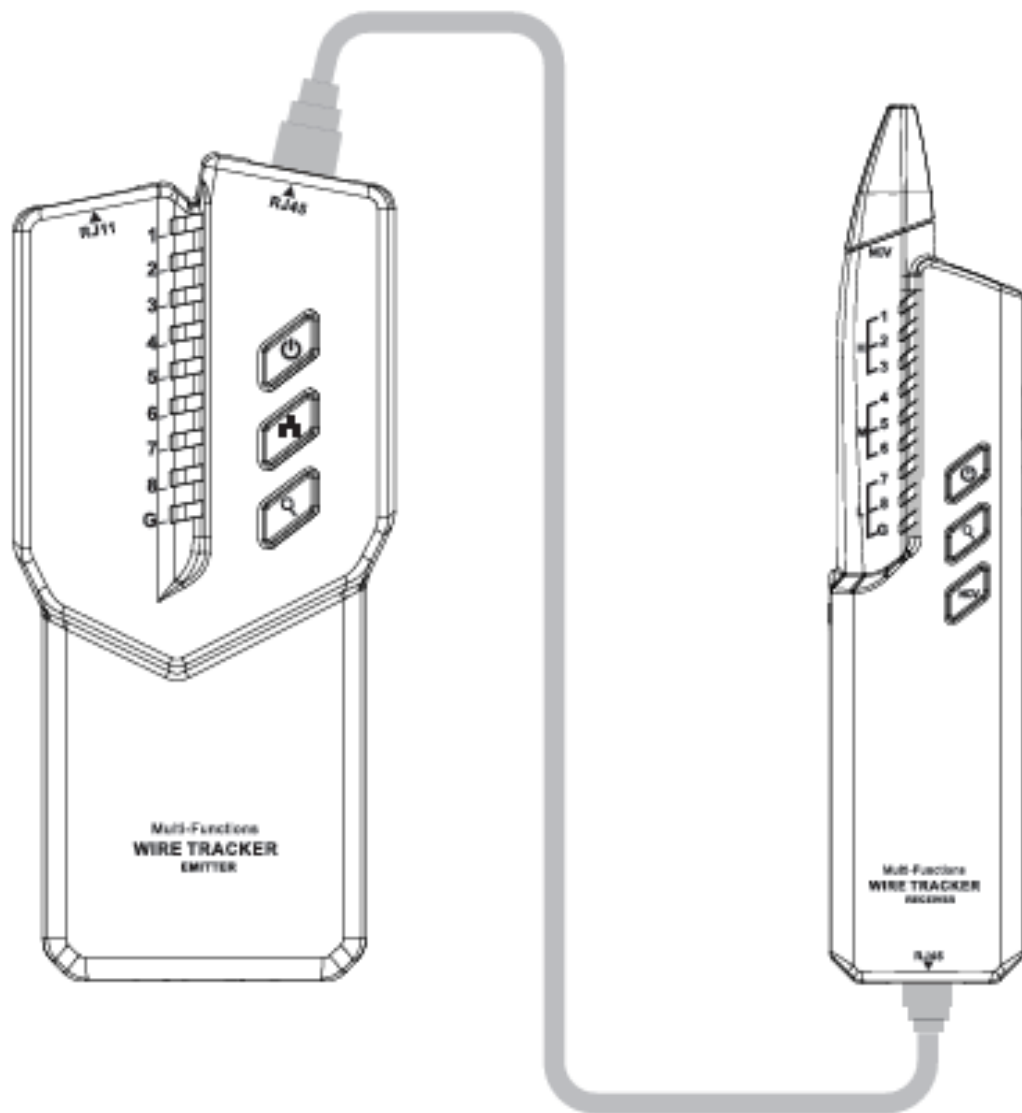
The transmitter RJ11 interface is inserted into the clip line, and the positive and negative poles of the DC voltage are arbitrarily connected. When the (  ) indicator light is red, it means that the red clip is positive and the black clip is negative. The red light is off, the specific usage method is as follows:

**Nota:**

It is not allowed to measure the voltage higher than 48V, but to judge the positive and negative poles only when the voltage is lower than 48V.

**1.6 network line to line detection:**

The operation method is as follows:

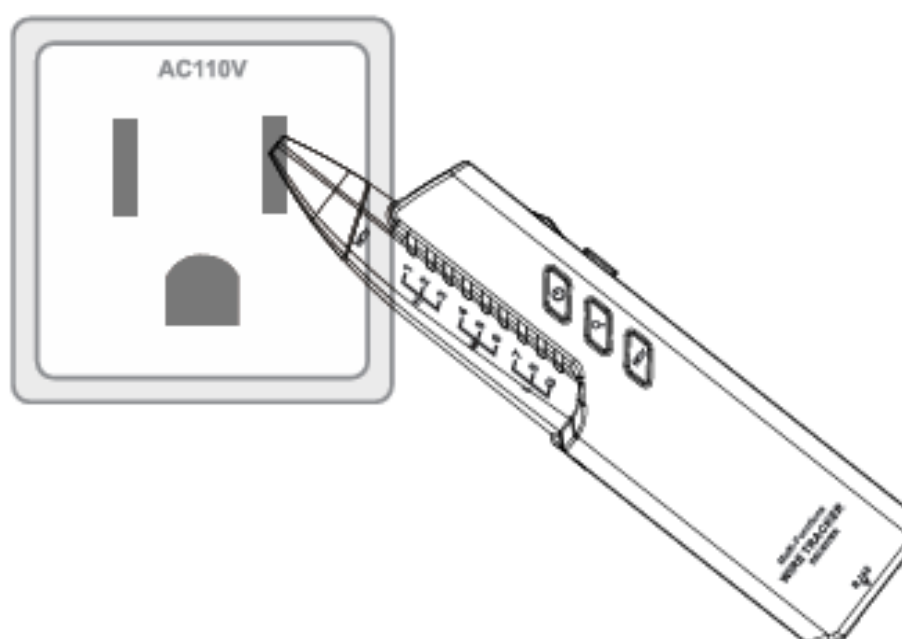


1. Turn on the transmitter and the power indicator will light up. Press (  ) to select the alignment function, and the alignment button indicator will light up.
2. One end of the crystal head of the network cable is inserted into the RJ45 interface of the transmitter.
3. The other end of the network cable is inserted into the receiver RJ45 interface. Start to automatically detect the network cable, observe the lighting sequence of receiving and transmitter indicator lights to judge whether the wiring is correct. If the light sequence of receiving and transmitter is consistent, it is normal.

## 1.7 NCV non-contact AC voltage detection

The NCV function can perform non-contact voltage detection on live cables above AC 45V. When AC voltage is detected, the NCV indicator will light up the corresponding signal strength indicator (high, medium, low) according to the intensity of the induced voltage. At the same time, the buzzer emits alarm sounds of different frequencies. When the receiver is turned on, the power indicator light is on, press the (  ) key, the NCV indicator light is on, when the induction probe is close to the wire or object to be tested, when the NCV probe senses an AC voltage signal, it lights up the signal strength indicator and sounds an alarm.

The operation method is as follows:



### Nota:

The non-contact detection voltage may be affected by different factors such as socket design, insulation thickness and type, and there may still be voltage even if there is no voltage indication. Do not rely solely on non-contact AC voltage detection to determine whether a conductor has voltage. External environmental interference sources (such as switching power supplies, various chargers, motors, etc.) may falsely trigger non-contact voltage detection.

### 1.8 battery under voltage indication:

Under voltage indication of transmitter and receiver: when the battery of transmitter and receiver is lower than the working voltage, the power indicator of power on button will flash to prompt timely replacement of battery.

## VI. Maintenance and maintenance

- Working temperature: 0 ~ 40°C, maximum relative humidity of 80%.
  - Storage temperature: -10 ~ 50°C, maximum relative humidity of 80% (without battery)
  - Transmitting signal distance: >300m
  - Safety level: IEC61010 -1 600V CAT III, pollution level II
- Battery: 2x6F22 9V

### maintain

If the instrument is damaged or there is a problem, please contact the factory after-sales personnel in time, and do not repair the instrument without authorization. When the instrument is stained or dusty, use a damp cloth or a small amount of detergent to clean the housing of the instrument. Do not use abrasives or chemical solvents.

### Replacement battery

Please follow the steps below to replace the battery:

1. Unplug all test wires of the instrument.
2. Use a screwdriver to push down the battery cover screws.
3. Remove the battery cover and remove the old battery.
4. Replace with new batteries of the same specifications.
5. Install the battery cover and tighten the screws with a screwdriver.

# USERS MANUAL

