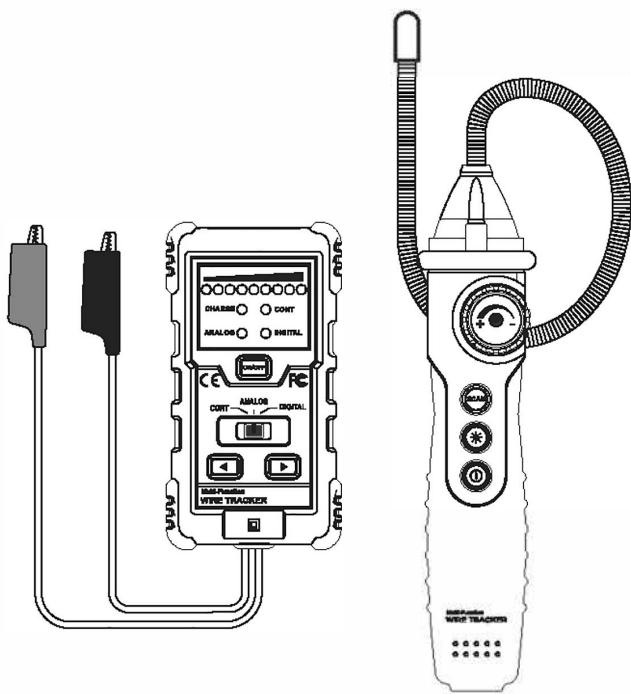


# User Manual

## Multi-Function WIRE TRACKER



Model:PM6819A/MT01

# CATALOGUE

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# Safety Instructions



## Warning



To avoid and prevent electric shock, burn or personal injury, please read this manual carefully.

**Note:** it is a condition that may cause damage to the instrument or wrong test results.

**Warning:** it is a condition or action that may cause injury to the user.



## Warning

Contact with electrical appliances may cause electric shock, serious injury or death. In order to avoid personal injury or death caused by electric shock, please operate in strict accordance with the instructions.

- 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 test line if it is damaged or the metal is exposed.
- If the product is damaged, such as the shell is broken, please do not use it.
- Do not use this product in electric storm, wet weather or thunderstorm.
- Do not use this product to detect the cable line with strong current (such as the power supply line of 220V).
- Do not use the product in the environment with combustible gas, high dust or water vapor.
- Do not connect power beyond the detection working voltage range.
- Do not use products without battery back cover or incorrect installation of back cover.
- Before opening the battery back cover, the test line must be separated from the tested line.
- Do not attempt to repair the product. The product does not contain parts replaced. For your safety, please remember "Safety First".
- Electric shock may be caused when the voltage exceeds 30V AC or 60V DC.
- Use appropriate personal protective equipment, such as safety glasses, face masks, insulating gloves, insulating boots and insulating pads, etc.
- Do not do ground connection, when working with electricity.
- When using alligator clip test line, always connect the ground wire with the zero wire first.
- This transmitter contains lithium battery, please pay attention to safety when charging.

## Overview

This instrument is a multifunctional hand-held cable testing tool. The cable application type is enhanced, the function is more, the scope of application is wider, it is the necessary test tool for telecommunication engineering personnel, wiring engineering personnel, network maintenance personnel and so on.

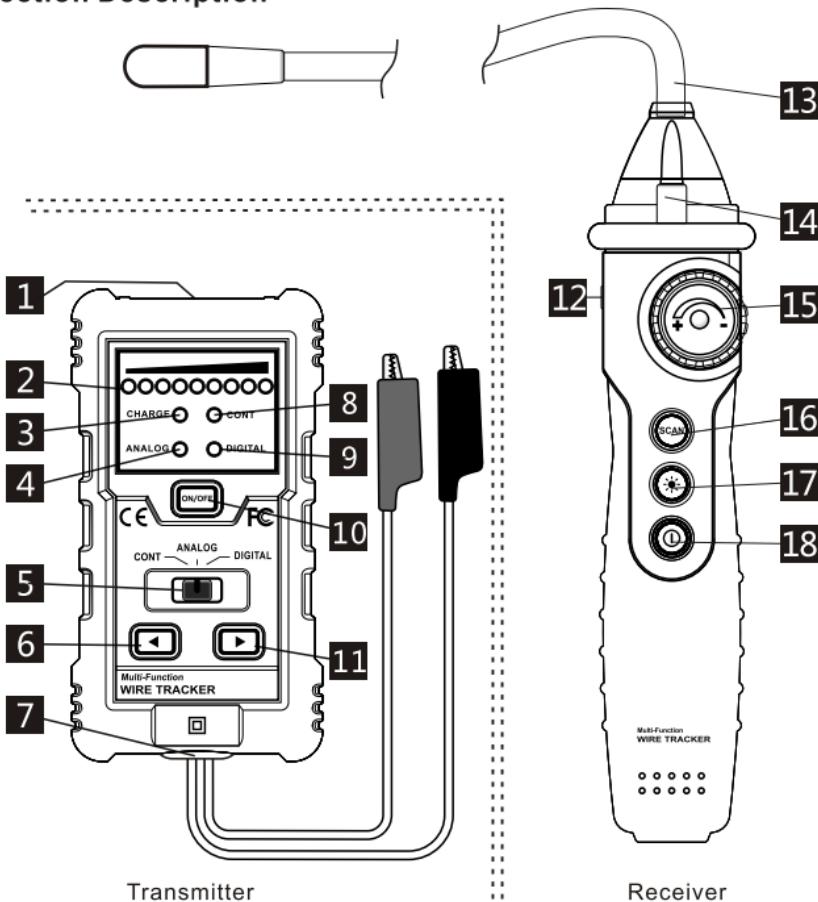
## Main Function

- Line finding function: it can find the underground metal cable directly, and the line finding of RJ11, RJ45 and BNC interface can be done through the adapter.
- When looking for the cable line, it is simple and fast without peeling the line skin, and it can identify the location of the line breakpoint.
- Continuous (path) detection of conducting wire.
- Low voltage prompt function.
- The receiver has a light function.

## Symbol Description

	For important safety information, please refer to the operation manual before use. Wrong use may cause damage to the equipment or its components.
	Grounding.
	Double insulation protection.
	Compliance with European Union directives.
	Compliance with Federal Communications Commission directives.
<b>CAT II</b>	Class II measurement is applicable to testing and measuring the line directly connected with the power point (socket and similar point) of the low voltage power supply device.
<b>CAT III</b>	Class III measurement is applicable to test and measure the circuit connected to the distribution part of the low voltage power supply device. of the building.

## Section Description



Transmitter

Receiver

### Transmitter:

- 1 USB charging port: type-C charging port for lithium battery charging.
- 2 Indicator / impedance indicator: in digital / analog line finding function, signal enhancement is indicated from left to right in turn. During "CONT" test, the more lights are lit, the less impedance is.
- 3 Charging indicator light: This is a red and green two-color indicator light, red indicates charging, green always on indicates full.

- 4 Analog line finding indicator: when the red indicator of analog line finding is on, it indicates that the current function is analog line finding.
- 5 Select toggle switch for line finding function: the left gear is "CONT" test, the middle gear is analog line finding, and the right gear is digital line finding.
- 6 Transmit signal strength down key: analog / digital transmit signal strength down.
- 7 Transmission signal alligator clamp connecting wire: connect the metal wire, network wire and BNC wire to be tested.
- 8 Wire "CONT" test indicator: when the "CONT" red indicator is on, it means that it is wire "CONT" test function.
- 9 Digital line finding indicator: when the red indicator of digital line finding is on, it indicates that the current function is digital line finding.
- 10 Transmitter power on / off key: long press on/off key 2 seconds to switch on; press on/off key to switch off.
- 11 Transmit signal strength up key: analog / digital transmit signal strength is upregulated.

#### **Receiver:**

- 12 Headphone jack: used to connect headphones.
- 13 Receiver signal receiving hose: an extended receiving probe can detect further metal wires.
- 14 Receiver lamp: it is used for offering lighting where there is insufficient light.
- 15 Receiver volume adjustment knob: adjust the received audio volume.
- 16 Receiver digital / analog line search button: press analog line search, button underneath indicator light flashing, press digital tracing function again, and the indicator light on the bottom of button is always bright.
- 17 The key of receiver light: press the light to turn on, and the indicator light under the key will turn on; press the light again to turn off, and the indicator light under the key will turn off.
- 18 Receiver power on / off key: press the key, and the indicator light under the key will be on; press the key again, and the indicator light under the key will be off.

## Function Operation

### 1. Digital search function:

The digital search function can find the location of the metal wire (including power line, telephone line, network line) buried in the ground or wall.

#### Operation method:

a) Turn on the power of the transmitter, and then turn the function knob switch to the "DIGITAL" position for switching to the digital transmission function. The transmission signal indicator lights up 5 by default, and the transmitter starts to work.

b) Connect one end of the cable to be tested to the alligator clamp of the transmitter.

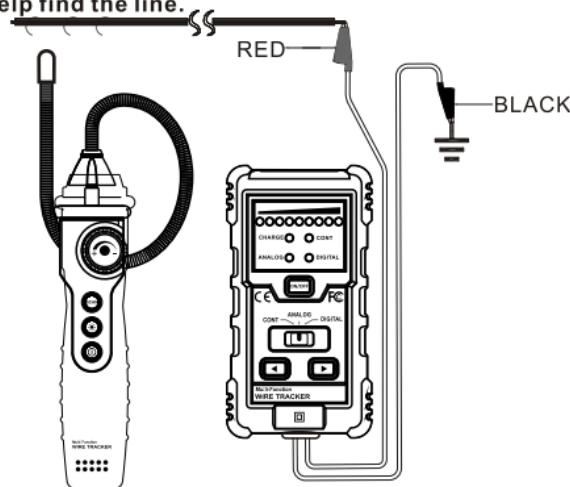
c) Turn on the power of the receiver, the power indicator will be on, the default digital receiving function will be turned on, the function indicator will flash, and the detection will be conducted on the left, right or upper part of the cable to be tested. By comparing the sound emitted by the receiver, the cable with the largest sound when approaching the probe is the cable to be found.

d) In the detection process, the volume can be changed by adjusting the volume adjustment knob on the receiver, and the digital signal strength from the transmitter can be changed by the signal strength key on the transmitter to adapt to the actual environment.

e) If there is a lot of noise or the receiver receives little sound, clip the black clip of the transmitter onto the ground wire.

(such as water pipe, building grounding or metal shell of equipment, etc.), please refer to the following schematic diagram.

**Note: when using in a noisy place, use the headphone jack connected to the receiver to help find the line.**



Schematic diagram of metal cable digital searching

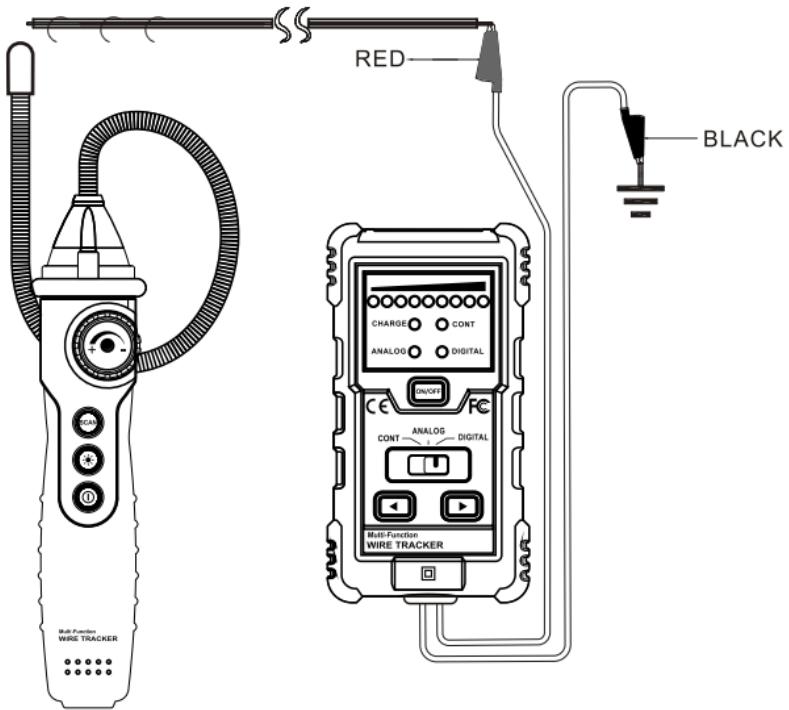
## **2. Analog line finding function:**

The analog search function can find the metal wire (including power line, telephone line, Network cable etc.) buried in the ground or wall.

### **Operation method:**

- a) Turn on the power of the transmitter, and then turn the function knob switch to the "analog" position to switch to the analog transmission function. The transmission signal indicator lights up 5 by default, and the transmitter starts to work.
- b) Connect one end of the cable to be tested to the alligator clamp of the transmitter.
- c) Turn on the power supply of the receiver, turn on the power indicator, press the "receiver digital / analog search button /  " to switch to the analog receiving function, turn on the function indicator, and detect on the left, right or upper part of the cable to be tested. By comparing the sound emitted by the receiver, the cable with the largest sound when approaching the probe is to be found.
- d) In the detection process, the volume can be changed by adjusting the volume adjustment knob on the receiver, and the analog signal strength from the transmitter can be changed by the signal strength key on the transmitter to adapt to the actual environment.
- e) If the noise is very loud or the sound received by the receiver is very small, please clamp the black clip of the transmitter on the ground wire (such as water pipe, building grounding or metal shell of equipment), please refer to the following schematic diagram.

**Note: when using in a noisy place, use the headphone jack connected to the receiver to help find the line.**



**Schematic diagram of metal cable simulation seeking**

### **3. Continuous (path) detection of Conductor:**

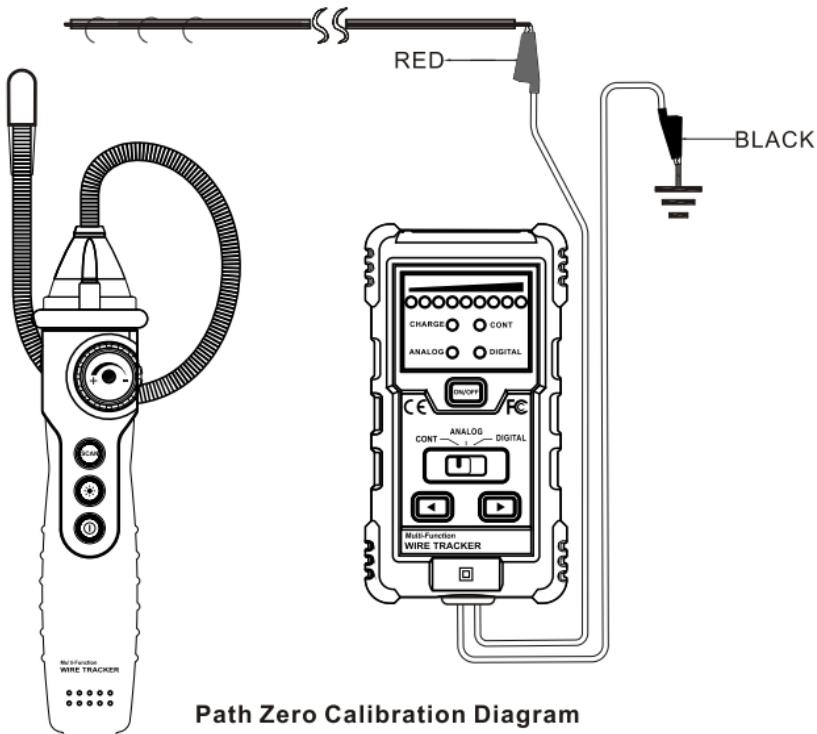
There are two ways to detect the connectivity of lines:

- Only use the transmitter to detect. Turn on the power of the transmitter, turn on the power indicator light, and the transmitter starts to work. Then pull the function knob switch to the "CONT" position, and clamp the red and black clamps to both ends of the line to be tested. If the impedance indicator light is on, the line is continuous. The smaller the line impedance is, the more the indicator lights are on. If it is more than 1K, it is considered that the line is not connected. If it is less than 1K, every  $100 \Omega$  less, one more lamp will be lit.
- Using line finding method to detect, the operation method is the same as that of the line finding function. If the receiver can detect the signal at the other outer end of the line, the line is continuous.

**Note: for each test, start the test circuit to zero calibration, as shown in the figure.**

After power on, turn on the power of the transmitter, then turn the function knob switch to the "CONT" position, switch to the path detection function, then short connect the red and black clips, and long press the "up key of transmission signal strength"

Enter the zero calibration mode in 3 seconds, and the test circuit zero calibration is completed after all the transmit signal indicators flash twice.



**Path Zero Calibration Diagram**

#### **4. Battery undervoltage indication:**

**Under voltage indication of transmitter:** when the battery voltage of receiver is lower than about 3.5V, all other indicators, except the charging indicator, flash for 5 times to remind charging in time, and turn off automatically after flashing for 5 times.

**Under voltage indication of receiver battery:** when the battery of transmitter is about 6V lower than the working voltage, the power indicator on transmitter will flash 5 times to remind the battery to be replaced, and it will shut down automatically after flashing 5 times.

## 5. Charging indication of transmitter lithium battery:

When the lithium battery of transmitter is lower than 3.5V, it will enter into undervoltage protection. The type-C charger configured randomly should be used to charge the transmitter, as shown in the figure.

When the transmitter is under charged, the "charge" indicator lights red, and when it is fully charged, the "charge" indicator lights green.



### Attention shall be paid to the use of lithium battery:

1. The discharge curve is different at different temperatures, and the discharge voltage and time are also different. The condition is the worst when discharging at - 20 °C.
2. When charging the battery, the ambient temperature shall not exceed the temperature range listed in the product characteristics table.
3. If the battery is stored for a long time, it shall be kept at 50% discharge state.
4. The battery shall be kept in a low temperature and dry environment.
5. Keep away from heat and direct sunlight.

Schematic diagram of transmitter charging

## General technical indicators

### ● Temperature Range

Working temperature: 0-40°C, maximum 80% relative humidity (non condensing).

Storage temperature: - 10-50°C, maximum 80% relative humidity (non condensing, excluding battery)

● Altitude: < 2000m

● Digital search distance: > 1000M

● Digital detection depth: 0~2m

● Analog line finding distance: > 300m

● Analog detection depth: 0~0.3m

● Battery: Transmitter 3.7V No less than 1500mah lithium battery, 1; Receiver 6LR61/9V

● size: Transmitter 125mm x 66mm x 30mm;

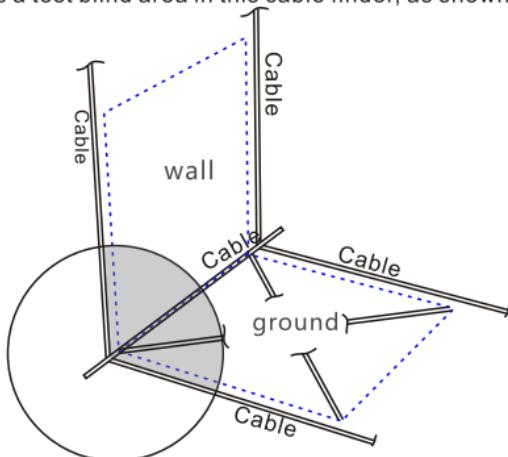
Receiver 210mm x 45mm x 23mm

● Weight: transmitter about 144.6g (without battery); receiver about 179.6g (without battery)

## Attentions

### 1. Test blind area

If the buried depth of the tested cable is greater than the distance between adjacent cables, the adjacent cable may be used as the buried cable to be tested. There is a test blind area in this cable finder, as shown in the figure:



### 2. High Voltage Protection

The transmitter signal output terminal is connected with a voltage protection circuit higher than 51vac. When the transmitter signal output terminal is wrongly connected to 220VAC high voltage, the circuit high voltage protection will be triggered, and the circuit will be disconnected, so as to achieve the purpose of protection.

## Maintain:

Do not attempt to repair this instrument unless you are an experienced repairman and have relevant calibration, performance test and maintenance data.

Use a wet cloth and a small amount of detergent to clean the instrument shell regularly. Do not use abrasive or chemical solvent.

## Battery replacement:

Replace the battery as follows:

1. Remove the battery cover and the old battery.
2. Replace the new battery with the same specification.
3. Install the battery cover . (receiver only)

## List of accessories:

Transmitter: 1  
Receiver: 1  
Type-C charging line: 1  
6LR61 9V battery: 1  
Certificate: 1  
Warranty card: 1  
Instruction manual: 1  
Headset: 1



### Warranty Registration

We are glad to invite you to register the warranty information at [www.tacklifetools.com](http://www.tacklifetools.com). After registration, you may kindly enjoy the exclusive service.

## FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.