地下/墙内线缆探测仪

Multifunctional Cable Locator

用户手册

Users Manual



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Made in China.

PN 501826200

产品特性

1：探测墙壁或地下的电缆、电气线路、供水供气金属管道的铺设路径

2：辅助排查墙内≤400V低压电气线路断路、短路故障

3：辅助查找对应线路保险丝及保险电路

4：定位墙体遮盖的插座、分线盒位置

5：查找地板下的电热供暖线路的走向、断点、短路点

6：网线检测：支持断路、短路、线序/交叉线测试

7：声光双重提示，状态识别直观

8：升级款配备专业多功能万用表，60000Counts高精度显示

9：主机&接收器内置可充电锂电，环保耐用

简　介

地下&墙内线缆探测仪由发射器、接收器及配套配件组成，设备采用新型集成器件与数字电路技术，电气性能稳定可靠。可通过信号变化，辅助探测墙内埋设线缆的大致位置，并排查线路相关故障点；本设备不支持供水、供气非金属管道探测。

升级款额外搭载高精度多功能万用表，可达60000 Counts 显示，实现快速可靠的多维度电气测量。仪器同时支持网线检测、线路配件查找等功能，配备声光双重提示，主机与接收器采用可充电锂电池供电，适用于电力线缆、通讯线缆、电热供暖线路的施工、维护与检修作业。

产品介绍(基础款)

显示(基础款)

A.USB充电连接口
B.信号连接孔(红色-正极)
C.信号连接孔(黑色-负极)
E.SCAN/NCV感应区/照明灯

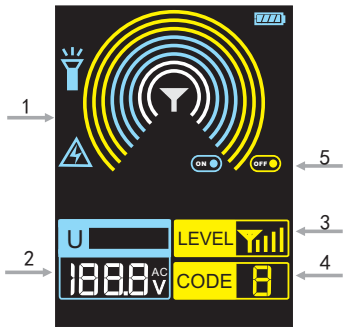


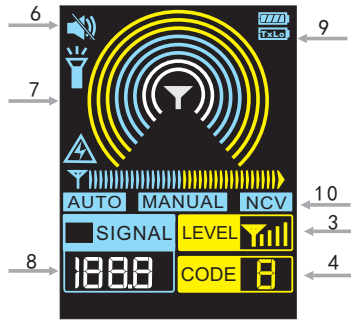
发射器　　接收器

显示/操作(基础款)

显示(基础款)

发射器显示　　接收器显示





1. 信号发射状态
2. 外部(连接)电压值
3. 信号等级
4. 信号代码
5. 信号发射状态
6. 喇叭状态
7. 信号方式
8. 信号强度
9. 发射器低电压提示
10. 功能选择

操作(基础款)

发射器操作



- CODE：切换信号代码 代码:A/C/E/F/H/L
- LEVEL：切换信号等级 长按2秒开/关手电筒
- START STOP：开始/停止发射信号
- 长按2秒开机/关机
- 备用按键，当前版本无功能

接收器操作

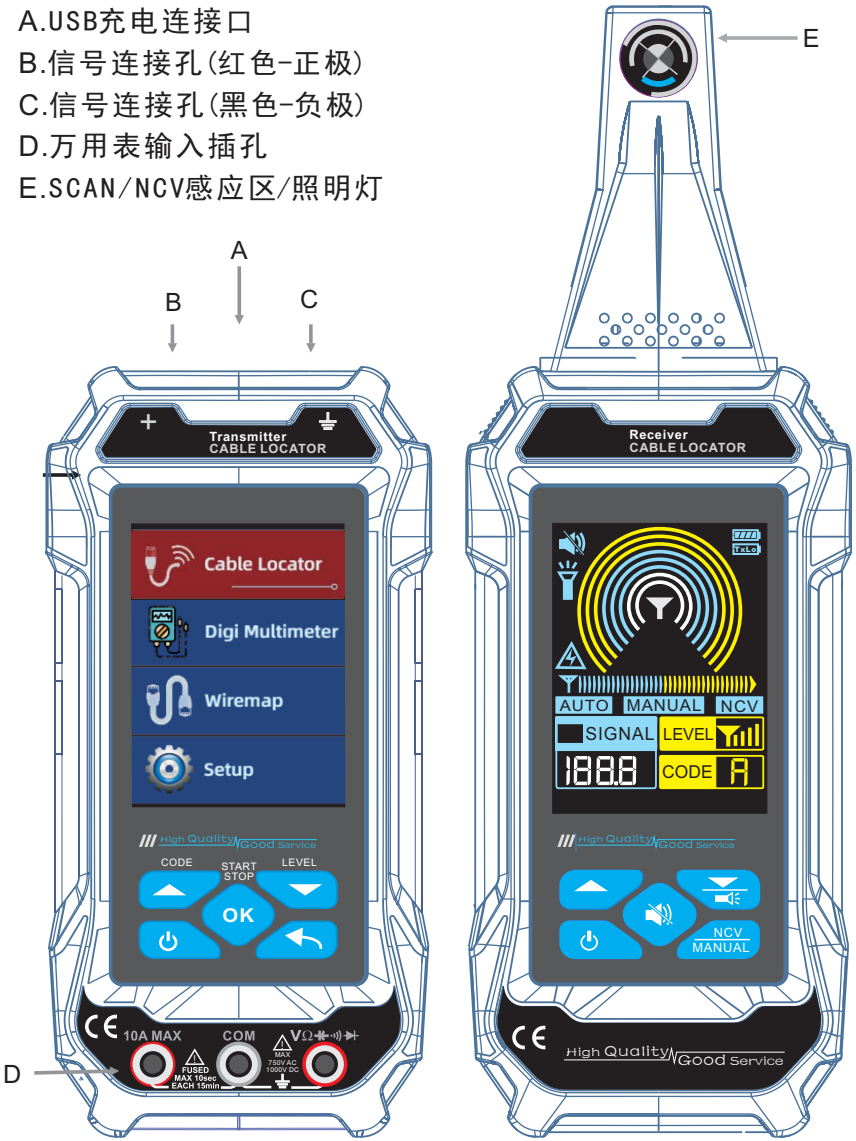


- 设置：增加
- 设置：减小 长按2秒开/关手电筒
- 开始/停止喇叭声音
- 长按2秒开机/关机
- NCV MANUAL：自动/手动/NCV模式选择

产品介绍(升级款)

显示(升级款)

A.USB充电连接口
B.信号连接孔(红色-正极)
C.信号连接孔(黑色-负极)
D.万用表输入插孔
E.SCAN/NCV感应区/照明灯

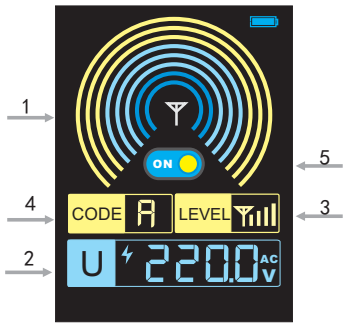


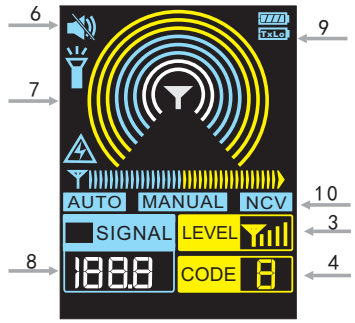
发射器　　接收器

显示/操作(升级款)

显示(升级款)

发射器显示　　接收器显示

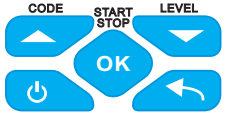




1. 信号发射状态
2. 外部(连接)电压值
3. 信号等级
4. 信号代码
5. 信号发射状态
6. 喇叭状态
7. 信号接收方式
8. 信号强度
9. 发射器低电压提示
10. 功能选择

操作(升级款)

发射器操作



	线缆定位功能	其他功能
CODE	切换信号代码 代码:A/C/E/F/H/L	向上选择
LEVEL	切换信号等级 长按2秒开/关手电筒	向下选择 长按2秒开/关手电筒
START STOP OK	开始/停止发射信号	确定
⏻	长按2秒开机/关机	长按2秒开机/关机
↩	返回主菜单	返回主菜单

接收器操作



▲	设置：增加
▼	设置：减小 长按2秒开/关手电筒
🔊	开始/停止喇叭声音
⏻	长按2秒开机/关机
NCV MANUAL	自动/手动/NCV模式选择

接线方法/操作步骤

1.1 线缆走向探测

操作步骤

1.接线：将发射器正极接线端连接至目标被测线缆，负极接线端可靠接地；若目标线缆周边存在其他线缆，需将其同步接地。安全警示：被测线缆工作电压不得超过本仪器额定允许输入电压，严禁超压使用。

2.启动发射器，使其输出探测信号。

3.手持接收器，将探测探头贴近目标线缆所在墙体、地面等被测表面，缓慢平稳移动；当接收器拾取到探测信号时，屏幕显示信号强度数值，同时伴随提示音。探头与目标线缆距离越近，信号强度数值越大、提示音越明显；距离越远则反之。

判断方法

接收器信号强度最大的移动路径，即为目标线缆的实际敷设路径。

操作技巧

若探测信号过强或过弱，可对应调节发射器、接收器的CODE/ 接收档位，优化探测效果。

注意事项

1.发射器负极必须实现有效接地,接地不良会导致探测距离显著缩短。

2.有效接地方式示例：深埋接地导线、将接地桩打入潮湿土层等。

3.本操作仅适用于仪器规定工况，违规接线、超压使用、接地不良可能造成仪器损坏或安全风险。

线缆定位

步骤一：远距离跟踪线缆(定位大范围)



产品操作

步骤二：近距离跟踪线缆(精准定位)



1.2线缆断点探测

操作步骤

1.按照 1.1 章节操作方法，远距离跟踪线缆走向，完成故障区域大范围定位。

2.精准定位接线：将预判存在断路故障的线缆线芯接发射器正极；其余线芯接发射器负极并一并可靠接地，开启发射器输出探测信号。

3.手持接收器，将探测探头贴近目标线缆并缓慢平稳移动；接收器拾取到信号时，屏幕显示信号强度数值，同时发出提示音。

断点判定方法

沿目标线缆移动探头探测，若在某一位置信号强度数值突然大幅衰减或消失，该位置即为线缆断路故障点。

操作技巧

1.可先将接收器灵敏度调至最高档位

2.快速锁定断点大致区域；再调低灵敏度，对故障点进行精确定位。判断断点过程中，探头与线缆之间的探测距离应保持稳定，避免距离突变造成！判。

注意事项

发射器负极必须实现有效接地,接地不良会导致探测距离显著缩短。

1.3 线缆短路点探测

操作步骤

1.使用发射器红、黑测试夹分别夹持两根存在短路故障的线芯；若存在其余闲置线芯，一并接入黑色测试夹。

2.开启发射器，使其输出探测信号。

3.手持接收器，将探测探头贴近目标线缆并缓慢平稳移动；接收器拾取到信号时，屏幕显示信号强度数值，同时发出提示音。

短路点判定方法

沿目标线缆移动探头探测，若在某一位置信号强度突然大幅衰减或消失，该位置即为线缆短路故障点。

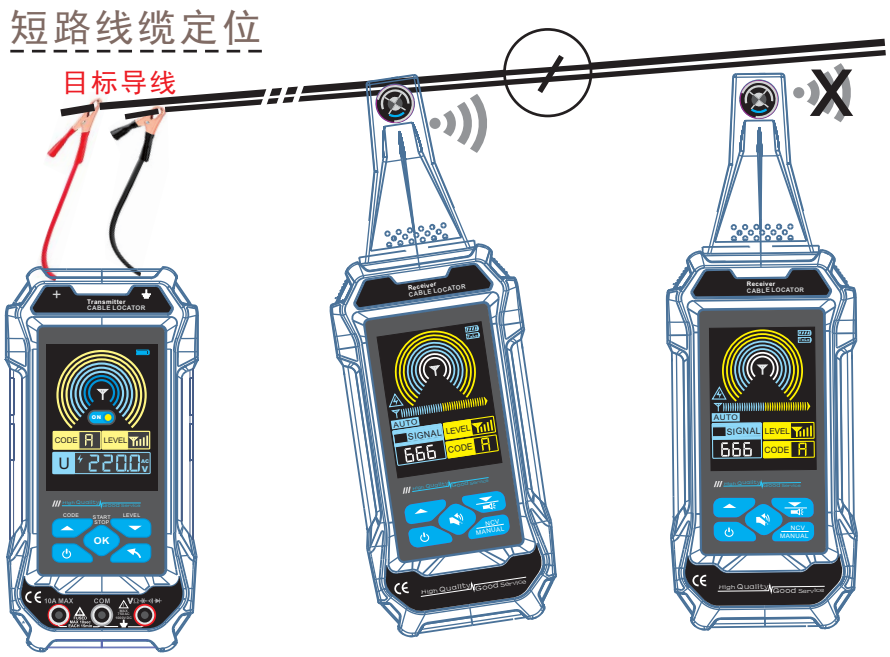
操作技巧

先将接收器灵敏度调至最高档位，快速锁定短路点大致区域；再调低灵敏度，对故障点进行精确定位。

注意事项

1.进行短路点探测前，必须预先确认发生短路的线芯，否则无法完成探测。

2.仅当短路回路电阻小于 200Ω 时，方可开展短路点查找；短路电阻可使用万用表进行测量。



1.4 线缆分类与识别

操作步骤

1.使用多台发射器，将各发射器的红、黑测试夹分别对应夹持待区分的各线缆。

2.开启各发射器，分别设置不同的信号编码(CODE)，使其发射对应编码的探测信号。

3.手持接收器，将探测探头贴近待测线缆并缓慢平稳移动；接收器拾取到信号时，屏幕显示对应信号编码，同时发出提示音。

判定方法

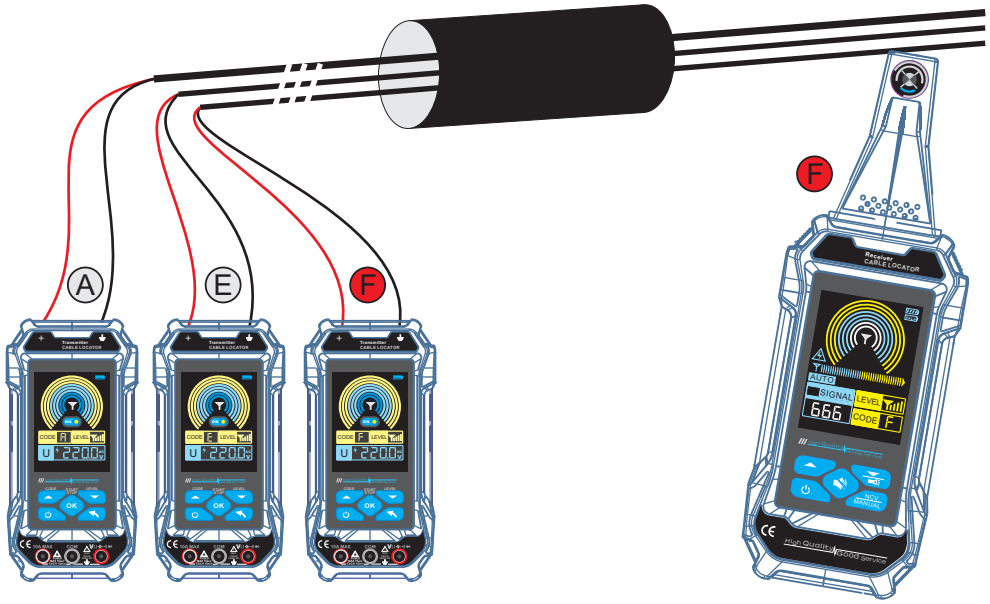
不同发射器发射不同编码信号(CODE)，通过接收器识别对应信号编码，即可区分对应线缆。

操作技巧

先将接收器灵敏度调至最高档位，快速识别目标线缆；再按需调低灵敏度，提升识别稳定性。

注意事项

待测电路必须处于断电状态，严禁带电操作。线芯末端需按照图示方式连接发射器。可配置多台发射器发射不同编码信号；若仅有单台发射器，可通过分次接线、多次测量的方式完成线缆区分。



1.5 多应用场景

1 探测埋设的金属水管和金属供暖管道管道必须是由金属的（如钢管 / 铁管），管道不能接地线，而且和土壤之间应有较大的电阻（如果电阻太小，探测距离将会很小）。用正极连接目标管道，负极接入地面。

2 查找同楼层三相供电线路用户分配

a.断开本楼层配电箱的总开关；

b.断开本楼层配电箱中的零线与其他楼层零线的连接；

c.将发射器正极接入待测三相电相线，负极接地；

d.设置好发射器后，拿接收器到住户端空开处探测，若有信号，则为找到对应线路，反之则不是。

3 查找插座对应的空开或漏电开关

a.断开配电箱内所有空气开关及漏电保护开关；

b.发射器正极接入插座火线，负极接入零线；

c.发射器调至合适信号档位，接收器灵敏度调至适配档位；

d.使用接收器在空气开关/漏电保护开关附近探测，信号会轻微串扰至相邻线路，以信号强度最大的开关为目标开关。

4 查找地暖电缆中的断路点

待测地暖电缆必须处于断电状态；将发射器正极接入地暖线缆，负极接地，按照线缆断点探测方法查找断路点。

5 查找埋设的非金属管道中的堵塞点

被测管道须为非金属材质（如 PVC 管道）；将一根电缆或金属软管伸入管道内部直至无法 续伸入；沿管道敷设路径使用接收器探测，若信号在某一区域突然衰减，则该区域判定为管道堵塞位置。

1.6 提升探测深度的方法

影响探测深度的因素

1 接线方式不正确；

2 仪器设置没有调到最强（发射器、接收器）；

3 铠装电缆或电缆有屏蔽层或电缆穿了金属管/有钢筋且较密集。铠装电缆、金属穿管、密集钢筋会屏蔽信号，大幅降低探测深度与精度。

4 地板或土壤过于潮湿；

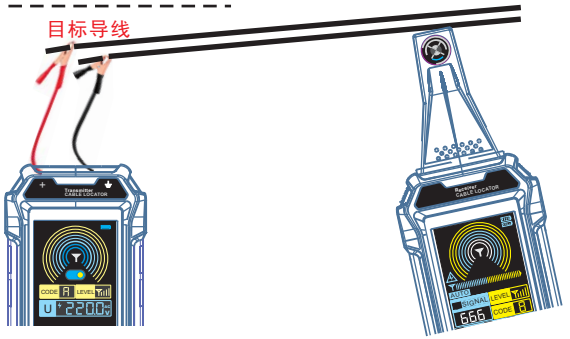
A 带电线路如何提升探测深度

若发射器直接连接相线与中性线，信号会在两条平行线路间传导，进而相互抵消，此种情况下最大探测深度仅为 0.5m。为消除该抵消效应，可借助电缆盘提供更长距离的回线，可将探测深度提升至 2.5 m

B 不带电线路如何提升探测深度

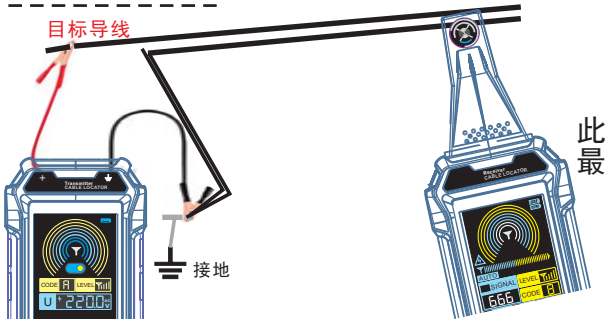
若使用多芯电缆内部线芯作为回线，探测深度会受到较大限制。原因在于馈线与回线间距过小，会造成磁场严重畸变，无法在目标区域形成足够强度的探测磁场。

双极应用



此种连接方法：
最大探测深度0.5米

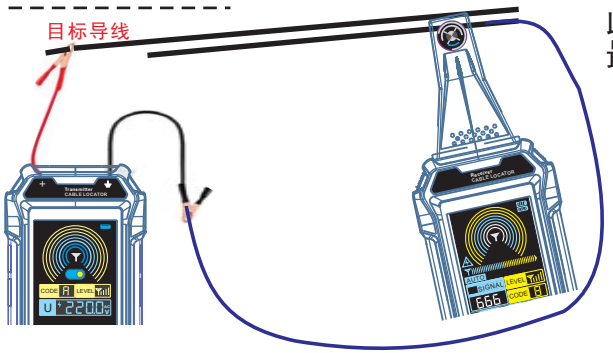
单极应用



此种连接方法：
最大探测深度1~1.5米

安全须知

单独回线



此种连接方法：
最大探测深度2.5米

安全须知

1、本产品按 IEC1010 国际电工安全标准设计，使用前请阅读安全注意事项及技术指标；

2、禁止私自拆解、改装设备；设备故障仅可由专业技术人员检修；

3、每次使用前，检查探测仪和测量线外表有无损坏，确保二者处于完好状态；

4、使用探测仪时，被测线路的额定电压不能大于 400V；

5、发射器与带电电网连接且其 “接地” 插孔接保护地时，供电线路漏电流可能与发射器回路电流合并，引发漏电保护开关跳闸；

6、万用表功能操作严格遵照使用规程，除表笔外其他接口不能连接强电，防止人员伤害和设备损坏；

7、留意电池状态，屏幕出现低电压符号时及时充电；

8、测量高于 36V 直流、25V 交流电压时，检查表笔接触、连接及绝缘情况，避免电击；

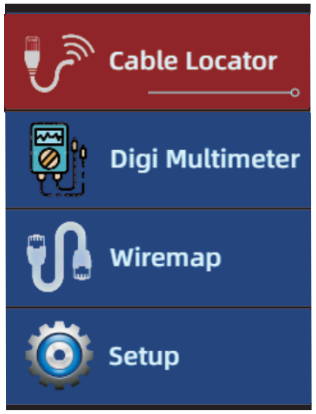
9、万用表测量电压不得超过直流 1000V、交流 750V 有效值，测量电流不得超过 10A；

10、更换万用表功能和量程时，表笔需离开测试点；

11、选择正确的功能和量程，谨防误操作，虽仪表有全量程保护功能，仍需规范使用。

特殊功能(仅升级款有)

主菜单显示



*此功能仅升级款有

产品发射器具有多 可选功能，分别为线缆定位、多功能万用表和网线测试功能，开机后将进入功能选择窗口，窗口列出产品全部功能；单击或长按▲/▼键选择功能，单击 OK 键进入功能；在功能操作窗口中，短按↩可返回主功能选择窗口。基础款产品发射器无需功能选择，开机直接进入线缆定位功能。

数字万用表（DMM）

*此功能仅升级款有

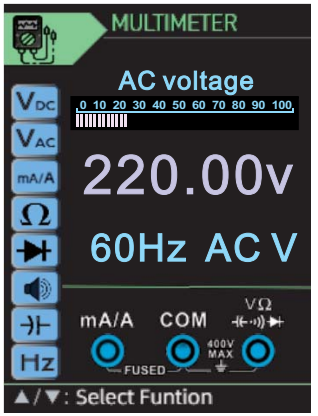
产品数字万用表具备多功能特性与 60000 位读数能力，功能配置与测量精度可媲美专业级万用表。

本产品支持测量功能包含：交流电压、直流电压、交流电流、直流电流、通断蜂鸣测试、二极管测试、电阻、电容、频率。

产品可自动识别直流电流与交流电流，用户无需手动切换选择。

用户操作时，通过▲/▼按键切换测量功能。

使用本万用表时，表笔需严格按照标识提示插入对应插孔，错误接线可能造成保险丝熔断或仪器损坏。



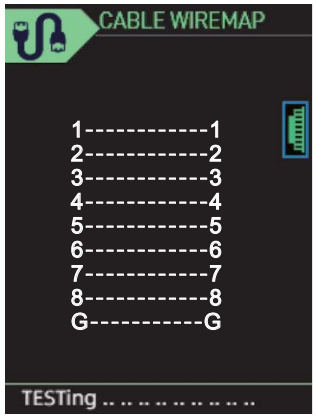
特殊功能(仅升级款有)

对线（WIREMAP）

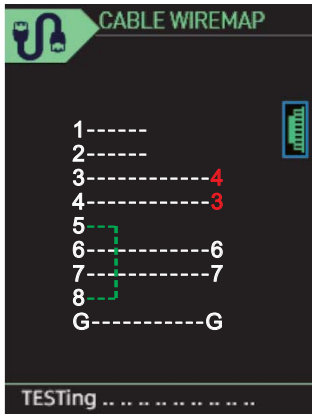
*此功能仅升级款有

产品具备网线对线功能。使用该功能时，需配合产品附件对线适配器使用，可检测线缆开路、线序异常、短路、线芯交叉等连接特性。

将网线一端接入仪器　机，另一端插入对线适配器的RJ45 插座；等待约 5 秒后，　机显示测试结果（详见下图），据此判定线路连接状态。



正常



开路（1. 2）/交叉(3. 4)
短路(5. 8)/正常(6. 7. G)

常见问题及解决方法

使用线缆寻线仪时，若出现声音干扰、无法探测或定位线缆等问题，首先应检查发射器、发射器信号设置、线缆接地情况和电池电量等基本因素。同时，需注意环境因素对探测深度的影响，合理调整测试环境和设备设置，以获得更准确的测试结果。

1. 连接后到处都是提示音怎么办？

常见问题

问题原因：可能是公共接地干扰或信号过强（电视机、电脑、电饭煲等设备共用同一地线易引发该问题）。

解决方法：

A 独立接地：建议使用接地杆进行独立接地，避免公共接地带来的信号干扰；

B 调整信号强度：调小发射器的信号强度，或将接收器切换为手动模式以提高精度，更准确地定位线缆。

2. 接收器无法探测或提示音微弱怎么办？

问题原因：发射器信号输出过小、接地不良。

解决方法：调整发射器设置：将发射器信号调至最大，提升信号输出强度；

优化接地：采用独立接地方式，减少信号干扰。

3. 无法检测 / 定位线缆怎么办？

问题原因：线缆损坏、信号偏弱、电池电量不足、线缆存在屏蔽结构等。

解决方法：

检查线缆状态：确认线缆无烧毁或断裂，损坏线缆无法传输信号；改善接地增强信号：使用金属材质接地钉优化接地，提升信号接收效果；

调整发射功率：根据实际工况调节发射器信号档位；检查电池：确保设备电池电量充足；

排查屏蔽影响：确认线缆是否带有屏蔽层，屏蔽层可能阻隔信号；可将发射器测试夹直接夹持在屏蔽层上测试。

4. 为什么标称探测深度与实际探测深度不一致？

原因解释：环境介质：金属构件、管道、混凝土等会干扰信号传播，导致实际探测深度小于标称深度；

土壤湿度：土壤湿度过大时，水分包裹线缆易造成信号折射，影响测试准确性。

技术指标

功能/发射器	基础款	升级款
输出信号	125kHz/信号编码：A. C. E. F. H. L 信号等级：4	
外部电压检测	电缆定位夹 DC 12~400V ±2%	
(线缆定位模块)	AC 12~400V (50~400Hz) ±2%	
显示	VA LCD	320*240彩屏
过压类别	万用表模块1000VDC/750VAC	
电源	1500mA. H可充锂电	
保险丝FUSE	线缆定位 2A/500V	
万用表功能		(60000位显示)
直流电压		6.0000V~1000V(±0.5%+0.3)
交流电压		6.0000V~750V(±0.8%+0.5)
直流电流		600.00mA~10A(±1%+0.4)
交流电流		600.00mA~10A(±1%+0.5)
电　　阻		600.00Ω~60 MΩ(±1%+0.6)
电　　容		6.0000nF~60 mF(±2%+0.6)
频　　率		6.0000Hz~6 MHz(±1%+0.1)
通断蜂鸣		< 50Ω蜂鸣/610Ω以上显0L
二 极 管		0. 0000~3.3000v,3.3v以上显0L
表笔提示		√

功能/接收器	基础款	升级款
追踪深度	跟踪深度取决于介质和具体应用	
电缆定位器模式	大约 0~2米（单极应用）	
	大约 0~0. 5米（双极应用）	
	可达2. 5米（单独回线）	
电压检测(NCV)	约0. 4米	
显示	带信号编码、信号等级、编号强度	
电源	1500mA. H可充锂电	

整机	基础款	升级款
温度范围（工作）	0~40℃, 最大80% 相对湿度(不凝结)	
温度范围（存储）	-20~60℃, 最大80% 相对湿度(不凝结)	
尺寸	发射器175*85*36mm / 接收器255*85*36mm	
重量	约1150g(带电池)	约1180g(带电池)
包装	彩盒/说明书/工具包/强电测试线/接地锤/表笔	
	（升级款配：RJ45线/远端对线适配器）	
充电器要求	需要5V/3A/10W或以上充电器充电(不标配)	

*上述指标是功能最佳指标

Product Features

1.Detect the routing of cables, electrical circuits, water supply and gas supply metal pipes buried in walls and underground.

2.Detect open and short-circuit faults of wall-mounted electrical lines ≤ 400V.

3.Locate fuses and fuse circuits of corresponding lines.

4.Locate hidden sockets and junction boxes in walls.

5.Locate the routing, breakpoints and short-circuit points of underfloor electric heating cables.

6.Network cable test: Support detection of open circuit, short circuit, wire sequence error and wire crossover.

7.Audible and visual dual indicators for clear device status.

8.The upgraded model is equipped with a professional multimeter with 6000 Counts high-precision display.

9.Main unit and receiver adopt built-in rechargeable lithium batteries, eco-friendly and durable.

Product Overview

This Underground & In-wall Cable Locator comes with a transmitter, a receiver and supporting parts. Featuring advanced integrated circuits, it works stably and reliably. It helps locate buried wall cables and diagnose line faults, and cannot be used for non-metallic water and gas pipeline detection.

The upgraded version adds a high-precision 60000-count multimeter for comprehensive electrical testing. It also supports network cable test and accessory search, with audible and visual alerts. Powered by built-in rechargeable lithium batteries, it is suitable for construction, maintenance and repair of power, communication and electric heating cables.

Product Introduction (Basic Model)

Display (Basic Model)

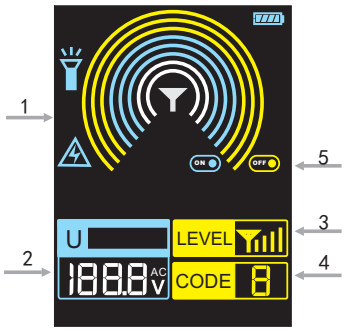
A. USB Charging Port
B. Signal Connection Jack (Red - Positive Pole)
C. Signal Connection Jack (Black - Negative Pole)
D. SCAN/NCV Sensing Area / Flashlight



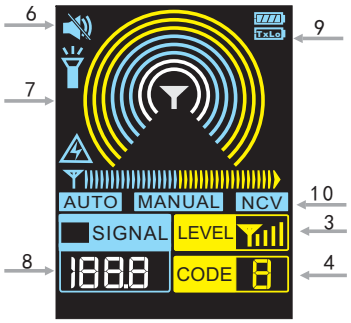
Transmitter Receiver

Display / Operation (Basic Model)

Transmitter Display



Receiver Display



1.Signal transmission status
2.External (connected) voltage value
3.Signal level
4.Signal code
5.Signal transmission status
6.Speaker status
7.Signal CODE
8.Signal LEVEL
9.Transmitter low-V
10.Function selection

Operation (Basic Model)

Transmitter Operation



CODE	Switch signal codes Codes available: A / C / E / F / H / L
LEVEL	Switch signal level /Press and hold for 2 seconds to turn on/off the flashlight
START STOP	Start / stop signal transmission
⏻	Press and hold for 2 seconds to power on / power off
↩	Spare button, no function in current version

Receiver Operation

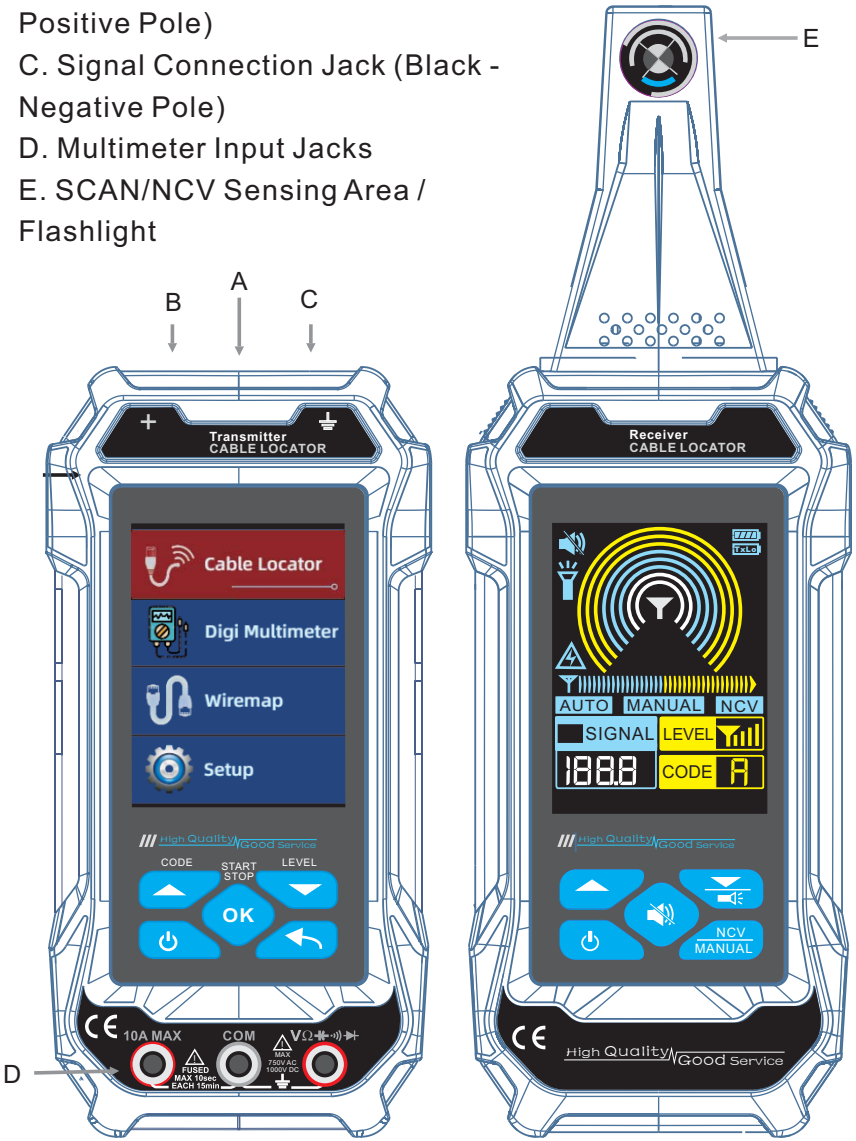


▲	Settings: Up
▼	Settings: Down Press and hold to turn on/off the flashlight
🔊	Start / stop speaker sound output
⏻	Press and hold to power on / power off
NCV MANUAL	Sele ATUO/Manual/NCV (Non-Contact Voltage) function

Product Introduction (Upgraded Model)

Display (Upgraded Model)

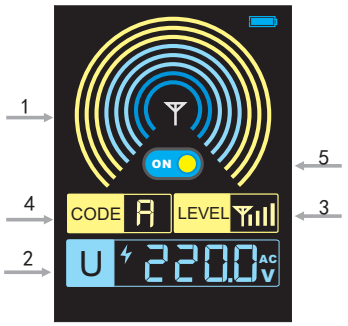
A. USB Charging Port
B. Signal Connection Jack (Red - Positive Pole)
C. Signal Connection Jack (Black - Negative Pole)
D. Multimeter Input Jacks
E. SCAN/NCV Sensing Area / Flashlight



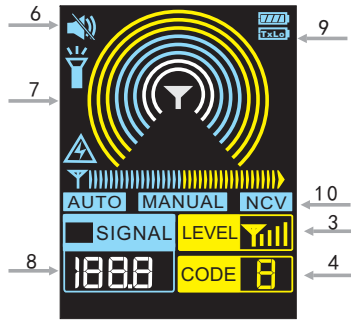
Transmitter Receiver

Display / Operation (Upgraded Model)

Transmitter Display



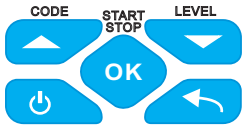
Receiver Display



1.Signal transmission status
2.External (connected) voltage value
3.Signal level
4.Signal code
5.Signal transmission status
6.Speaker status
7.Signal CODE
8.Signal LEVEL
9.Transmitter low-V
10.Function selection

Operation (Upgraded Model)

Transmitter Operation



	Cable Locating Function	Other Functions
CODE	Switch signal codes Codes available: A / C / E / F / H / L	Select upwards
LEVEL	Switch signal level Press and hold to turn on/off the flashlight	Select downwards Press and hold to turn on/off the flashlight
START STOP / OK	Start / stop signal transmission	Confirm
⏻	Press and hold to power on / power off	Press and hold to power on / power off
↩	Return to main menu	Return to main menu

Receiver Operation



▲	Settings: Up
▼	Settings: Down Press and hold to turn on/off the flashlight
🔊	Start / stop speaker sound output
⏻	Press and hold to power on / power off
NCV MANUAL	Sele ATUO/Manual/NCV (Non-Contact Voltage) function

1.1 Cable Route Detection

Operating Procedures

1.Wiring: Connect the positive terminal of the transmitter to the target cable, and firmly connect the negative terminal to a reliable ground. If there are other cables around the target cable, ground them as well.

Safety Warning: The operating voltage of the tested cable shall not exceed the rated input voltage of this instrument. Overvoltage operation is strictly prohibited.

2.Power on the transmitter to start signal transmission.

3.Hold the receiver and move its probe slowly and steadily close to surfaces such as walls or floors where the target cable is buried. When the receiver picks up the signal, the signal strength value will be displayed on the screen along with an audible alert. The closer the probe is to the target cable, the higher the signal reading and the louder the alert sound, and vice versa.

Judgment Method: The path where the receiver detects the maximum signal strength is the actual routing of the target cable.

Operation Tips: If the signal is too strong or too weak, adjust the CODE settings of the transmitter and the sensitivity gears of the receiver to optimize detection performance.

Notes

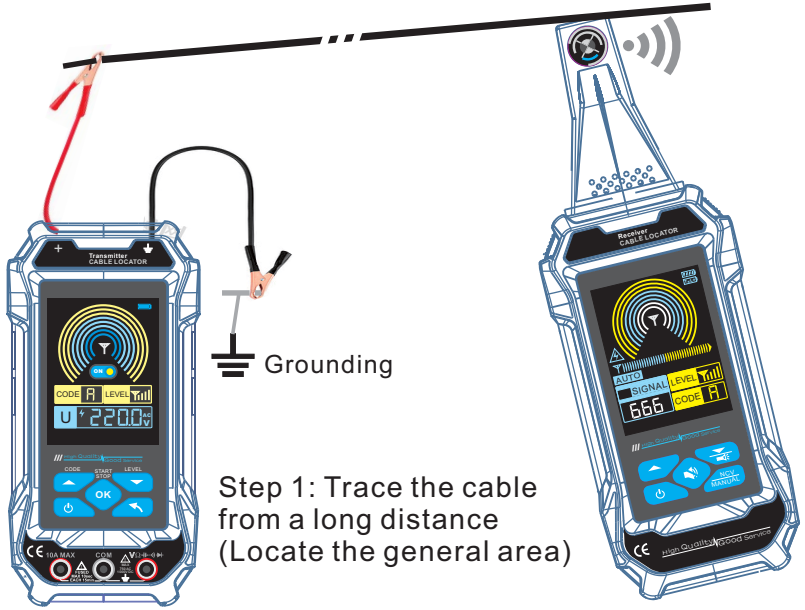
1.The negative terminal of the transmitter must be properly grounded. Poor grounding will greatly reduce the detection range.

2.Examples of reliable grounding methods: Burying ground wires deeply, driving a ground rod into moist soil, etc.

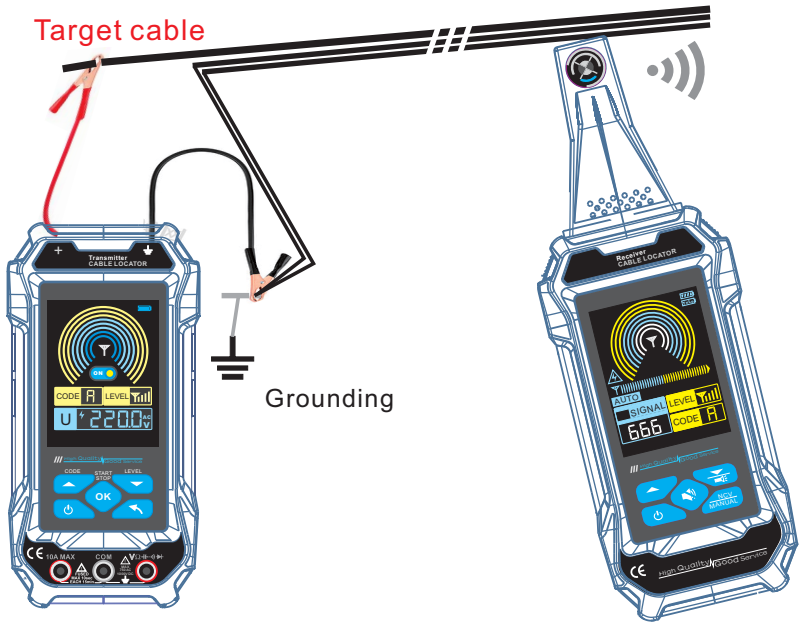
3.This operation shall only be performed under the specified working conditions of the instrument. Improper wiring, overvoltage use and poor grounding may lead to equipment damage and potential safety hazards.

Cable Location

Target Conductor (Single-core or Multi-core)



Step 2: Trace the cable at close range (Precise Positioning)



1.2 Cable Breakpoint Detection

Operating Procedures

1.Follow the procedures in Section 1.1 to trace the cable route from a distance and narrow down the general area of the fault.

2.Precision wiring: Connect the broken cable core to the transmitter's positive terminal. Attach all remaining cores to the transmitter's negative terminal and ensure they are properly grounded. Turn on the transmitter to output detection signals.

3.Hold the receiver and move its probe slowly and steadily alongside the target cable. When a signal is detected, the signal strength value will appear on the screen together with an audible alert.

Breakpoint Judgment Method

Move the probe along the target cable. The position where the signal strength drops sharply or disappears completely is the cable breakpoint.

Operation Tips

1.First set the receiver to the maximum sensitivity to quickly locate the general area of the breakpoint.

2.Then lower the sensitivity for precise positioning. Keep a constant distance between the probe and the cable during detection to avoid misjudgment caused by sudden distance changes.

Notes

The transmitter's negative terminal must be reliably grounded. Poor grounding will drastically reduce the detection range.

1.3 Cable Short Circuit Detection

Operating Procedures

1.Use the red and black alligator clips of the transmitter to clamp the two shorted cable cores respectively. Connect all other spare cores to the black alligator clip as well.

2.Turn on the transmitter to start signal transmission.

3.Hold the receiver and move its probe slowly and steadily close to the target cable. When the receiver captures the signal, the signal strength value will be displayed on the screen with an audible alert.

Short Circuit Judgment Method

Move the probe along the target cable. The position where the signal strength drops sharply or disappears is the cable short circuit point.

Operation Tips

Set the receiver to maximum sensitivity first to quickly find the general area of the short circuit, then reduce the sensitivity to locate the fault point precisely.

Notes

Confirm the specific shorted cores before detection; otherwise, the test cannot be performed.This detection is only applicable when the resistance of the short circuit loop is less than 200 ohms. A multimeter can be used to measure the short circuit resistance.

Short-Circuited Cable Location



1.4 Cable Classification and Identification

Operating Procedures

1.Equip multiple transmitters, and use the red and black alligator clips of each transmitter to clamp the respective cables to be distinguished.

2.Power on all transmitters and set a unique signal code (CODE) for each, so as to transmit detection signals with different codes.

3.Hold the receiver and move its probe slowly and steadily close to the tested cables. Once the receiver picks up a signal, the corresponding signal code will be shown on the screen along with an audible alert.

Judgment Method

Each transmitter outputs signals with a distinct code. You can identify the corresponding cable by checking the signal code displayed on the receiver.

Operation Tips

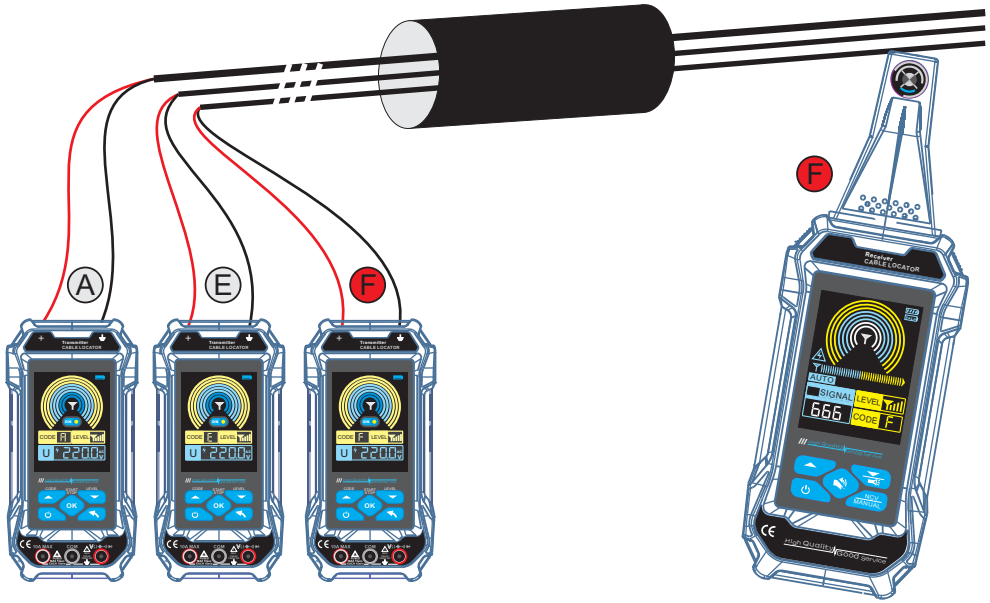
First set the receiver to maximum sensitivity to quickly identify target cables. Reduce the sensitivity as needed to improve identification stability.

Notes

1.Ensure the tested circuit is fully powered off. Live operation is strictly prohibited.

2.Connect the wire ends to transmitters in accordance with the attached diagram.

3.Multiple transmitters can be used to send signals with different codes. If only one transmitter is available, complete cable classification by rewiring and taking multiple measurements.



1.5 Multi-scenario Applications

1. Detection of Buried Metal Water Pipes and Heating Pipes

The pipes must be made of metal (e.g. steel pipe, iron pipe). Do not connect the pipes to ground, and ensure a high resistance between the pipes and soil — low resistance will greatly shorten the detection range. Connect the transmitter's positive terminal to the target pipe and the negative terminal to the ground.

2. Identify Power Distribution for Three-phase Circuits on the Same Floor

a. Turn off the main switch of the distribution box on this floor.

b. Disconnect the neutral wire of this floor from those of other floors.

c. Connect the transmitter's positive terminal to the tested three-phase live wire and the negative terminal to ground.

d. After configuring the transmitter, use the receiver to detect around the circuit breakers in each household. A detected signal means the matched circuit is found; no signal indicates otherwise.

3. Match Sockets with Corresponding Circuit Breakers / Residual Current Devices (RCDs)

a. Switch off all circuit breakers and residual current devices in the distribution box.

b. Connect the transmitter's positive terminal to the socket live wire and the negative terminal to the neutral wire.

c. Set the transmitter to a proper signal level and adjust the receiver sensitivity accordingly.

d. Detect around the breakers with the receiver. Minor signal crosstalk may occur on adjacent circuits. The breaker with the strongest signal is the target one.

4. Locate Breakpoints of Underfloor Heating Cables

Make sure the underfloor heating cable is completely powered off. Connect the transmitter's positive terminal to the heating cable and the negative terminal to ground. Locate the breakpoints following the cable breakpoint detection procedures.

5. Locate Blockages in Buried Non-metallic Pipes

The tested pipes shall be non-metallic (e.g. PVC pipes). Insert a cable or metal hose into the pipe until it cannot go further. Move the receiver along the pipe route. A sudden signal drop in a certain area indicates a pipe blockage.

1.6 Methods to Improve Detection Depth

Factors Affecting Detection Depth

1.Improper wiring.

2.The transmitter and receiver are not set to maximum power/sensitivity.

3.Armored cables, shielded cables, cables routed inside metal conduits, or areas with dense steel bars. These structures will shield signals and drastically reduce detection depth and accuracy.

4.Excessively wet floors or soil.

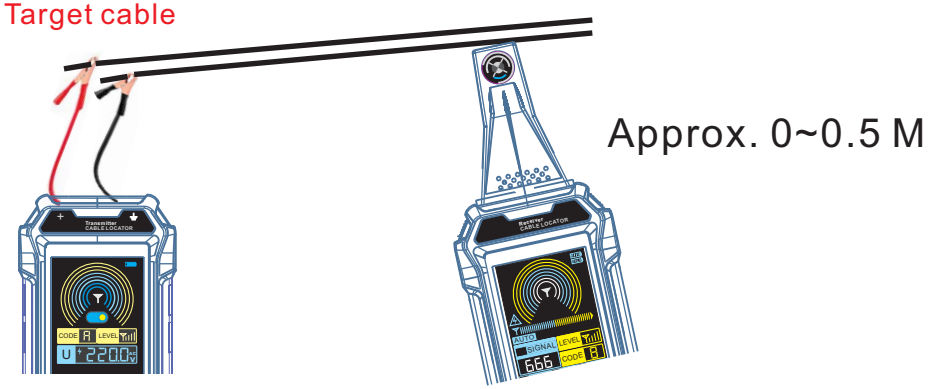
A. Improve Detection Depth for Live Circuits

If the transmitter is directly connected to the live wire and neutral wire, signals transmitted along the two parallel lines will counteract each other, limiting the maximum detection depth to only 0.5 meters. To avoid signal cancellation, use a cable reel to create a remote return line, which can extend the detection depth up to 2.5 meters.

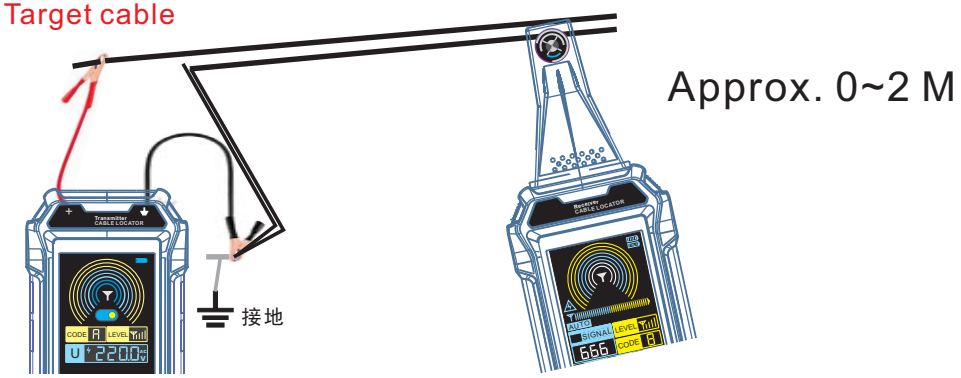
B. Improve Detection Depth for De-energized Circuits

Using inner cores of multi-core cables as the return line will severely restrict detection depth. The close distance between the feed line and return line causes severe magnetic field distortion, making it impossible to generate a strong enough detection magnetic field in the target area.

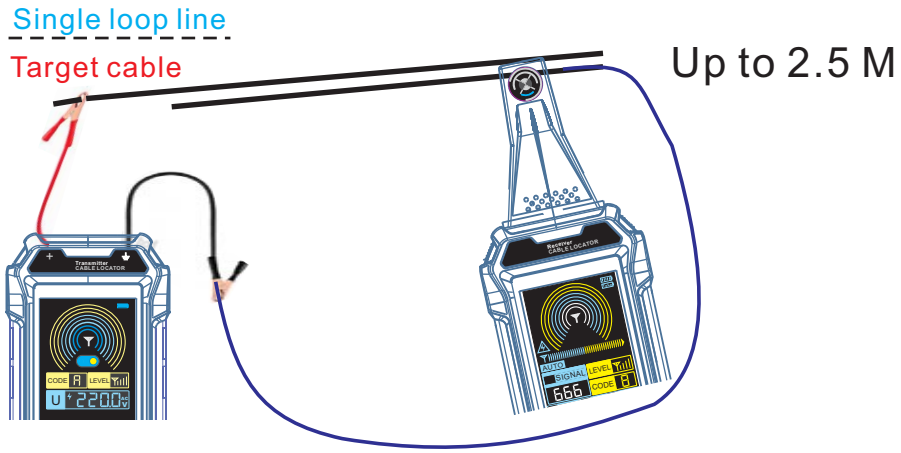
Double-pole application



Single-pole application



Safety Instructions



Safety Instructions

1.This product is designed in compliance with the international electrical safety standard IEC 1010. Read all safety notes and technical specifications before use.

2.Do not disassemble or modify the device without authorization. Only professional technicians are allowed to perform maintenance and repairs.

3.Inspect the detector and test cables for external damage before each use. Ensure all equipment is in good working condition.

4.The rated voltage of the tested line shall not exceed 400V during operation.

5.When the transmitter is connected to a live power grid and its ground terminal is linked to protective earth, the combined leakage current from the power line and the transmitter loop current may trip the residual current device.

6.Follow operating procedures strictly when using the DMM function. Never connect high-voltage power to any ports except test probes to avoid personal injury and equipment damage.

7.Keep an eye on the battery level. Charge the device promptly when the low-battery icon appears on the screen.

8.When measuring DC voltage above 36V or AC voltage above 25V, check the contact, connection and insulation of test probes to prevent electric shock.

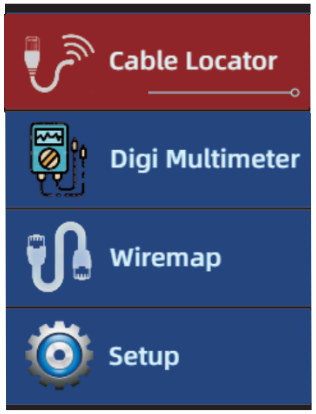
9.Maximum measuring ranges: DC voltage ≤ 1000V (rms), AC voltage ≤ 750V (rms), current ≤ 10A. Do not exceed the rated limits.

10.Remove test probes from the measured points before switching DMM functions or ranges.

11.Select the correct function and measuring range to avoid incorrect operation. Though the meter is equipped with full-range protection, standard operation is still required.

Special Functions (Upgraded Model Only)

Main Menu



*Available on the upgraded model

The transmitter of the upgraded version supports multiple functions: cable location, multi-functional multimeter and network cable test. After power-on, the function selection interface will pop up with all available functions displayed. Press or long-press the ▲/▼ keys to select a function, then press the OK key to confirm and enter the corresponding interface. While operating any function, press the ↩ key to go back to the main function selection menu.

The standard model directly enters the cable location function after power-on without function selection.

Digital Multimeter (DMM)

*Available on the upgraded model

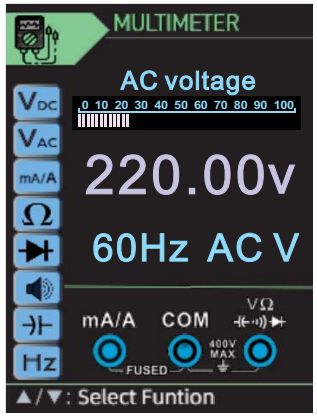
This digital multimeter features versatile functions and a 60,000-count display, with professional-grade configurations and measurement accuracy.

Supported measurement functions: AC v, DC v, AC current, DC current, continuity buzzer test, diode test, resistance, capacitance and frequency.

It can automatically distinguish DC and AC current with no manual switching required.

Press the ▲/▼ keys to switch between measurement functions.

Insert the test probes into the corresponding jacks strictly as marked. Improper wiring may blow the fuse or damage the device.

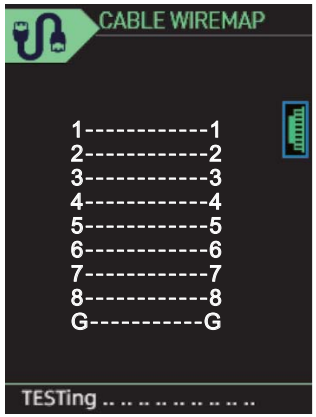


Special Functions (Upgraded Model Only)

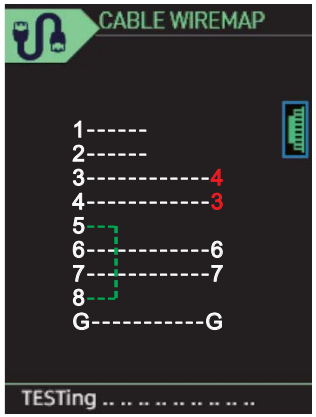
WIREMAP *Available on the upgraded model

This device is equipped with a network cable wire mapping function. To use this function, connect the matching wire mapping adapter (included in accessories). It can detect cable faults such as open circuits, incorrect wire sequence, short circuits and crossed wire cores.

Plug one end of the network cable into the main unit, and insert the other end into the RJ45 port of the wire mapping adapter. After approximately 5 seconds, the test results will be displayed on the main unit (see the figure below) for you to judge the cable connection status.



NORMAL



Open-circuit (1, 2)
Crossed (3, 4)
Short-circuit (5, 8)
Normal (6, 7, G)

FAQ

If you encounter abnormal noise, failed detection or inaccurate cable positioning while using the cable locator, first check basic items including the transmitter, signal settings, cable grounding and battery level. Meanwhile, take environmental factors affecting detection depth into account, and adjust the test environment and device settings properly for accurate results.

1. Audible alerts sound everywhere after connection

Cause: Shared ground interference or excessive signal strength. This issue often occurs when devices such as TVs, computers and rice cookers share the same ground wire.

FAQ

Solutions:

A. Use an independent ground rod for separate grounding to eliminate interference from shared ground.

B. Lower the signal level of the transmitter, or switch the receiver to manual mode for more precise cable positioning.

2. No signal detected or weak audible alert on the receiver

Cause: Insufficient signal output from the transmitter or poor grounding.

Solutions:

* Turn up the transmitter signal to maximum to boost signal output.

* Adopt independent grounding to reduce signal interference.

3. Failed cable detection and positioning

Cause: Damaged cables, weak signals, low battery power, or shielded cable structure.

Solutions:

* Inspect cables: Make sure the cables are not burnt or broken, as damaged cables cannot transmit signals.

* Improve grounding: Use a metal ground rod to optimize grounding and enhance signal reception.

* Adjust transmit power: Change the transmitter signal level according to actual working conditions.

* Check battery: Ensure the device has sufficient power.

* Check for shielding: Cables with shielding layers may block signals. You may clip the transmitter alligator clips directly onto the shielding layer for testing.

4. Discrepancy between rated detection depth and actual performance

Explanation:

* Surrounding media: Metal components, pipes and concrete interfere with signal transmission, resulting in a shorter actual detection depth than the rated value.

* Soil moisture: Excessively wet soil surrounds the cables and causes signal refraction, which affects test accuracy.

Technical indicators

Transmitter/Functions	Basic	Upgrade
Output signal	125kHz/CODE：A/C/E/F/H/L LEVEL：4	
External voltage detection (Cable Location Module)	DC 12~400V ±2% AC 12~400V (50~400Hz) ±2%	
Display	VA LCD	320*240
Power supply	1500mA.H Rechargeable lithium battery	
FUSE	Cable Locator Fuse 2A/500V	
DMM		√ (60000COUNT)
DCV		6.0000V~1000V(±0.5%+0.3)
ACV		6.0000V~750V(±0.8%+0.5)
DCA		600.00mA~10A(±1%+0.4)
ACA		600.00mA~10A(±1%+0.5)
R		600.00Ω~60 MΩ(±1%+0.6)
CAP		6.0000nF~60 mF(±2%+0.6)
Hz		6.0000Hz~6 MHZ(±1%+0.1)
Continulty		< 50Ω buzzing / >610Ω:OL
Diode		0.0000~3.3000v,>3.3v:OL
DMM/FUSE		CE 5*20MM 10A/1000V
Receiver/Functions		
Tracing depth	The tracing depth depends of mediun and application	
Cable locator mode	Approx. 0~2 M(single-pole application) Approx. 0~0.5 M(double-pole application) Up to 2.5 M(single loop line)	
NCV	Approx.0~0.4meters	
Display	Signal CODE/LEVEL/Strength	
Power supply	1500mA.H Rechargeable lithium battery	
Product		
Range(Work)	0-40°C,max 80% rel.humidity(not condens.)	
Range(storage)	-20~60°C,max 80% rel.humidity(not condens.)	
Size	Transmitter:175*85*36mm / Receiver:255*85*36mm	
Weight	Approx. 1150g	Approx. 1180g
Package	Color box/manual/tool kit/test lead/USB cable Alligator clip cable/Grounding pile (RJ45 cable only for Upgrade)	
Charger requirements	Charging requires a 5V/2A/10W charger or above (not included)	

*Indicators are the best indicators of function