



Please read the safety precautions before using or repairing this equipment.

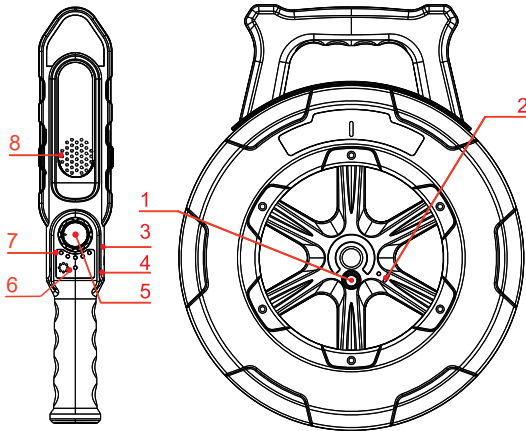
- After use, please turn off the power supply
- Because the device uses electromagnetic for detection, there may be noise interference when it is close to the electric wire, electronic devices or electric radiation
- When detecting metal pipes, the detection distance will be reduced due to electromagnetic shielding(the detection distance of 3mm thick iron pipe is about 15-20cm)
- If the blockage is found, please take back the detecting cable before digging
- Please use standard 5V power adapter and micro_ USB cable to charges the instrument.
- If it is not used for a long time, please keep it after full charge. It is recommended to charge the battery once every half a year to protect the instrument battery and prolong the service life.

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Overview

The instrument can be used in all kinds of scenarios, caused by various reasons of iron pipe, PVC pipe, Plastic pipe, cement pipe, steel pipe, copper pipe and other metal and non-metal pipe blockage. Can be Quick and accurate positioning of the plugging point of the pipeline buried in the cement wall, floor and land.



1	OFF/ON	2	Charging port
3	Charging port	4	Headphone jack
5	Sensitivity adjustment	6	Power light
7	Signal light *5 charging port	8	Horn hole

1. Functional features

1.1 The emitter

- Probe self-check function: automatically detect the probe after starting up. Open circuit: one short beep "di" prompts short circuit; two short beep "di" prompts normal; one long beep "di" prompts long beep, and the probe enters the working mode.
- Charging indicator function: red light when charging, green light when full.
- Low power alarm and battery protection function: low voltage (It;3.6V), green light flashing alarm, ultra-low pressure (<3.2V), the instrument a automatically shuts down to protect the battery.
- Automatic shutdown function, automatic shutdown after 1 hour, to prevent forgetting to shut down resulting in power depletion

1.2 Receiver

- Power detection function: automatically detect the battery power turning on, represented by 5 LED lights, all on means full power



- Charging indicator function: the red light is always on during charging; Full, always green



- Power alert function:

Normal power: green light is always on and low voltage ($3.6V$), green light 1 second slow flashing alarm, ultra-low pressure ($3.2V$), the green light flashes for 3 seconds and then turns off to protect the battery

- Automatic shutdown function:

Automatic shutdown after 30 minutes, to prevent forgetting to shut down resulting in power depletion.

- Indicating function of signal intensity:

The signal lamp can accurately indicate the signal intensity, and has the function of brightness adjustment

- The detection range is adjustable from 5 cm to 50cm

2.Specifications

Emitter	Model	NF-5120	NF-5130	NF-5140
	Tube Lamp	20M	30M	40M
	Applications	PVC/plastic/steel/copper/cement/iron tube		
	Power supply	18650 Lithium battery 2600mAh		
	Working frequency	300Hz		
	Working Hour	10H		
	Working temperature	10~40°C		
	Size	300x360x45mm		
	Weight	1500g		

Receiver	Sensitivity adjustment	Yes
	Distance range	Non-pipe pipe:0~40cm, metal-pipe: 0~ 15cm
	Power supply	Lithium1400mAh
	Working frequency	300Hz
	Working Hour	5H
	Working Temperature	10~40°C
	Size	65x360x40mm
	Storage Temperature	-10°C~50°C
	Voice Indication	Yes

3.How to use the product

3.1 Turn on and off the transmitter

- Press the power button for 2 seconds in the off state, when the power indicator is green, otherwise it will be turned off

- Receiver: turn the knob clockwise to power on the battery in the first 2 seconds after power on, using 5 LED to represent the battery, all of which are fully charged

3.2 Pre-use inspection

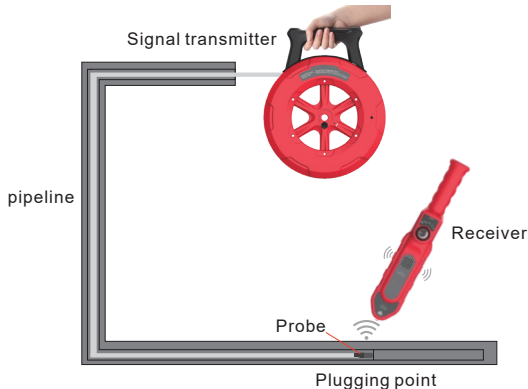
- Transmitter: turn on and spin the probe out for a while, and the probe is at a distance from the transmitter.

- Receiver: power on to the maximum sensitivity, put the receiver close to the transmitter probe, if the receiver emits a strong signal sound, it means that the instrument is normal, such as the receiver does not make sound or the sound is very low, the probe needs to be replaced.

3.3 Start detection (figure 3-1)

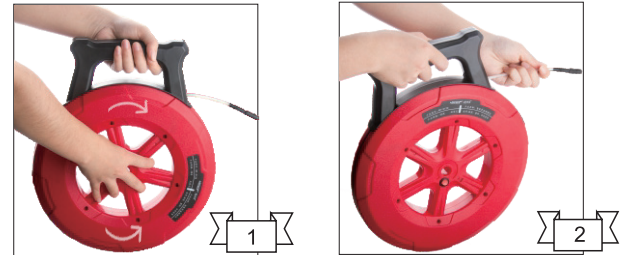
- **Transmitter:** put the transmitter probe into the pipe, turn the transmitter turntable handle line into the pipe, until the emitter pipeline feels the resistance and cannot go further into the pipeline, then the position of the transmitter probe is the blocking position.
- **Receiver:** adjust the receiver sensitivity to the maximum, move the receiver transmitter probe closer along the pipe, the stronger the signal received, the more signal strength indicator lights up, the louder the tone.
- **The strongest signal is the blocking point.** In some usage scenarios, there may be ambient noise, so that the sound emitted by the receiver cannot be heard clearly and headphones can be used to work.

Tips: use high sensitivity, quickly locate the approximate position of the plugging point, and then adjust the sensitivity to locate the plugging point accurately.



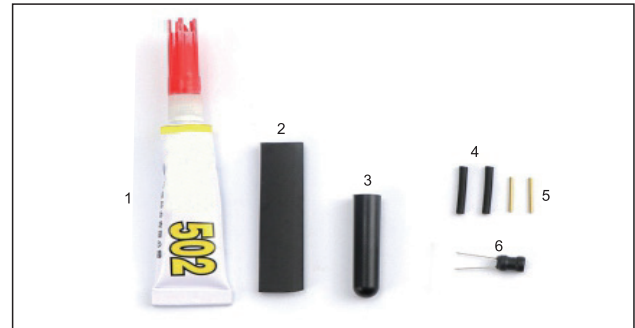
(figure 3-1)

3.4 Outgoing / unwinding method



1. Correct exit / take-up: turn the wheel clockwise / counterclockwise with the right hand after lifting the instrument with the left hand.
2. Wrong take-out / take-up: lifting the instrument with the left hand and pulling the wire out with the right hand and pushing the wire in will cause the pipeline to get tuck or even break

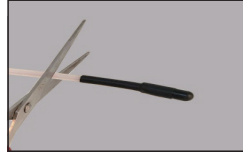
4. Probe replacement method



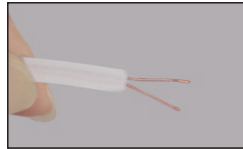
1. Remove the parts to replace the probe

1	502 glue	2	Large heat shrinkable tube
3	Protective sleeve	4	Small heat shrinkable tube
5	Thin copper tube	6	Probe

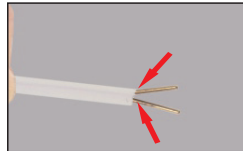
2. Use the tool to subtract the damaged probe part of the signal receiver.



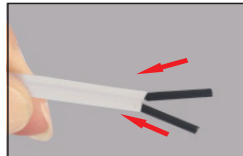
3. Peel off the 5mm of the signal wire (remove the rubber from the fiber core).



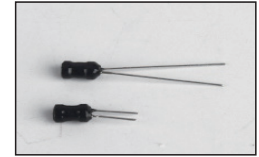
4. Put on a thin copper pipe and tighten it with pliers near the bottom of the thread



5. Put on the small heat-shrinkable pipe respectively



6. Cut the probe connection to the length 5mm



7. Insert the probe and clamp the thin copper pipe with pliers and put the heat shrinkable pipe up and down



8. Bake the heat-shrinkable pipe with a lighter



9. Put on the protective cover and drop 502 glue



10. Put on a large heat shrinkable pipe lighter



11. Complete probe replacement



5. Packing list

1	Transmitter (lithium battery)	1ps
2	Receiver (lithium battery)	1ps
3	Double head charging line	1 piece
4	Earphone	1 pair
5	Transmitter Probe Accessories	6sets
6	502 glue	1 branch
7	operating instruction	1 piece
8	Certificate / Warranty Card	1 piece

6. Product usage scenarios



7. Simple fault description

Fault phenomenon	Possible causes of failure	Suggested solutions
Machine can not turn on (the light is not on after boot)	Receiver battery poor contact	Please check number battery interface
	Low battery power	Please charge and test again
Receiver silence or shorter detection distance	The receiver is sensitive and low	Please adjust the sensitivity and test again
	The receiver is too far from the transmitte	Please approach the launcher for further testing
	Launcher not activated	Check the transmitter for boot
	Transmitter probe damaged	Replace probe
Non-signal noise from receiver	Strong electromagnetic interference nearby	Test to empty areas of useless appliances
	The charger may cause electromagnetic interference to the machine	Do not use the machine while charging
Non-signal noise from receiver	Poor contact with charging interface	Please check the charging line is in good contact
	Damage to charging line	Please change the line and test again
	Receiver battery contact poor	Please plug in the battery interface
Power indicator flashing	Low battery power	Please charge and test again
If the above-mentioned failure occurs, or above solution is invalid, please contact the customer to resolve it		