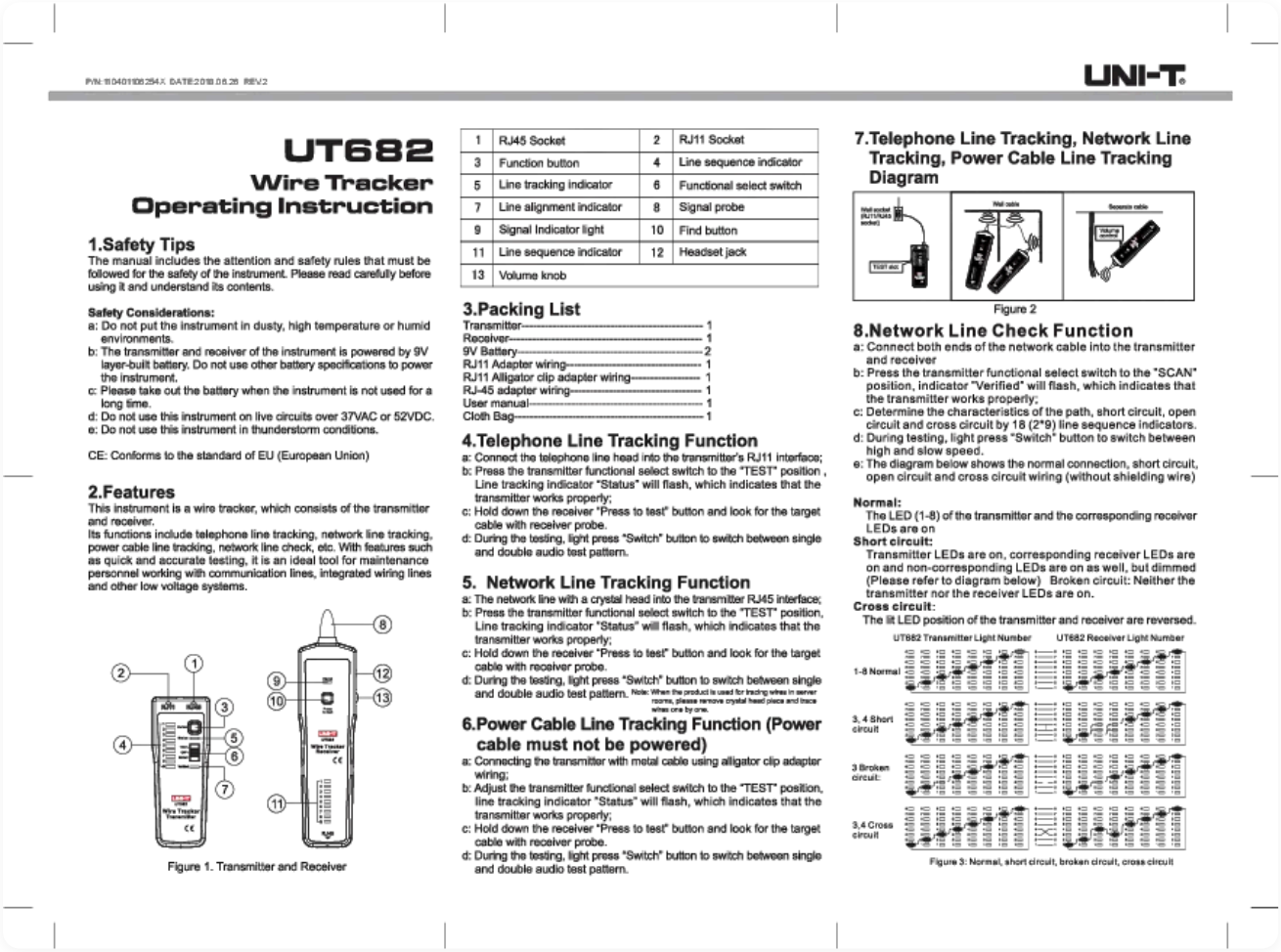

P/N:110401006254X DATE:2018.06.26 REV:2

UNI-T

UT682
Wire Tracker Operating Instruction

1.Safety Tips
The manual includes the attention and safety rules that must be followed for the safety of the instrument. Please read carefully before using it and understand its contents.

Safety Considerations:
a: Do not put the instrument in dusty, high temperature or humid environments.
b: The transmitter and receiver of the instrument is powered by 9V layer-built battery. Do not use other battery specifications to power the instrument.
c: Please take out the battery when the instrument is not used for a long time.
d: Do not use this instrument on live circuits over 37VAC or 52VDC.
e: Do not use this instrument in thunderstorm conditions.

CE: Conforms to the standard of EU (European Union)

2.Features
This instrument is a wire tracker, which consists of the transmitter and receiver.
Its functions include telephone line tracking, network line tracking, power cable line tracking, network line check, etc. With features such as quick and accurate testing, it is an ideal tool for maintenance personnel working with communication lines, integrated wiring lines and other low voltage systems.

Figure 1. Transmitter and Receiver

1	RJ45 Socket	2	RJ11 Socket
3	Function button	4	Line sequence indicator
5	Line tracking indicator	6	Functional select switch
7	Line alignment indicator	8	Signal probe
9	Signal Indicator light	10	Find button
11	Line sequence indicator	12	Headset jack
13	Volume knob		

3.Packing List
Transmitter---------- 1
Receiver---------- 1
9V Battery---------- 2
RJ11 Adapter wiring---------- 1
RJ11 Alligator clip adapter wiring---------- 1
RJ-45 adapter wiring---------- 1
User manual---------- 1
Cloth Bag---------- 1

4.Telephone Line Tracking Function
a: Connect the telephone line head into the transmitter's RJ11 interface;
b: Press the transmitter functional select switch to the "TEST" position , Line tracking indicator "Status" will flash, which indicates that the transmitter works properly;
c: Hold down the receiver "Press to test" button and look for the target cable with receiver probe.
d: During the testing, light press "Switch" button to switch between single and double audio test pattern.

5. Network Line Tracking Function
a: The network line with a crystal head into the transmitter RJ45 interface;
b: Press the transmitter functional select switch to the "TEST" position, Line tracking indicator "Status" will flash, which indicates that the transmitter works properly;
c: Hold down the receiver "Press to test" button and look for the target cable with receiver probe.
d: During the testing, light press "Switch" button to switch between single and double audio test pattern. Note: When the product is used for tracing wires in server rooms, please remove crystal head piece and trace wires one by one.

6.Power Cable Line Tracking Function (Power cable must not be powered)
a: Connecting the transmitter with metal cable using alligator clip adapter wiring;
b: Adjust the transmitter functional select switch to the "TEST" position, line tracking indicator "Status" will flash, which indicates that the transmitter works properly;
c: Hold down the receiver "Press to test" button and look for the target cable with receiver probe.
d: During the testing, light press "Switch" button to switch between single and double audio test pattern.

7.Telephone Line Tracking, Network Line Tracking, Power Cable Line Tracking Diagram

Figure 2

8.Network Line Check Function
a: Connect both ends of the network cable into the transmitter and receiver
b: Press the transmitter functional select switch to the "SCAN" position, indicator "Verified" will flash, which indicates that the transmitter works properly;
c: Determine the characteristics of the path, short circuit, open circuit and cross circuit by 18 (2*9) line sequence indicators.
d: During testing, light press "Switch" button to switch between high and slow speed.
e: The diagram below shows the normal connection, short circuit, open circuit and cross circuit wiring (without shielding wire)

Normal:
The LED (1-8) of the transmitter and the corresponding receiver LEDs are on
Short circuit:
Transmitter LEDs are on, corresponding receiver LEDs are on and non-corresponding LEDs are on as well, but dimmed (Please refer to diagram below) Broken circuit: Neither the transmitter nor the receiver LEDs are on.
Cross circuit:
The lit LED position of the transmitter and receiver are reversed.

Figure 3: Normal, short circuit, broken circuit, cross circuit

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UNI-T UT682 Wire Tracker Operating Instruction

UNI-T

1. Safety Tips

Safety Considerations

- Do not put the instrument in dusty, high temperature or humid environments.
- The transmitter and receiver of the instrument is powered by 9V layer-built battery. Do not use other battery specifications to power the instrument.
- Please take out the battery when the instrument is not used for a long time.
- Do not use this instrument on live circuits over 37VAC or 52VDC.
- Do not use this instrument in thunderstorm conditions.

CE: Conforms to the standard of EU (European Union) [CE mark]

2. Features

This instrument is a wire tracker, which consists of the transmitter and receiver. Its functions include telephone line tracking, network line tracking, power cable line tracking, network line check, etc. With features such as quick and accurate testing, it is an ideal tool for maintenance personnel working with communication lines, integrated wiring lines and other low voltage systems.

Components

Transmitter	Receiver
1. RJ45 Socket	2. RJ11 Socket
3. Function button	4. Line sequence indicator
5. Line tracking indicator	6. Functional select switch
7. Line alignment indicator	8. Signal probe
9. Signal Indicator light	10. Find button
11. Line sequence indicator	12. Headset jack
13. Volume knob	

Diagram: Transmitter and Receiver

Figure 1 shows the UNI-T UT682 Wire Tracker Transmitter and Receiver. The transmitter features an RJ11 socket, RJ45 socket, function button, line tracking indicator, line alignment indicator, signal indicator light, line sequence indicator, volume knob, and a headset jack. The receiver features an RJ11 socket, line sequence indicator, functional select switch, signal probe, find button, and a headset jack.

3. Packing List

- Transmitter: 1
- Receiver: 1
- 9V Battery: 2
- RJ11 Adapter wiring: 1
- RJ11 Alligator clip adapter wiring: 1
- RJ-45 adapter wiring: 1
- User manual: 1
- Cloth Bag: 1

4. Telephone Line Tracking Function

1. Connect the telephone line head into the transmitter's RJ11 interface.
2. Press the transmitter functional select switch to the "TEST" position. The Line tracking indicator "Status" will flash, indicating the transmitter is working properly.
3. Hold down the receiver "Press to test" button and use the receiver probe to locate the target cable.
4. During testing, briefly press the "Switch" button to toggle between single and double audio test patterns.

1. Connect the network cable with a crystal head into the transmitter's RJ45 interface.
2. Press the transmitter functional select switch to the "TEST" position. The Line tracking indicator "Status" will flash, indicating the transmitter is working properly.
3. Hold down the receiver "Press to test" button and use the receiver probe to locate the target cable.
4. During testing, briefly press the "Switch" button to toggle between single and double audio test patterns.
5. Note: When tracing wires in server rooms, remove the crystal head piece and trace wires one by one.

6. Power Cable Line Tracking Function (Power cable must not be powered)

1. Connect the transmitter to the metal cable using the alligator clip adapter wiring.
2. Adjust the transmitter functional select switch to the "TEST" position. The line tracking indicator "Status" will flash, indicating the transmitter is working properly.
3. Hold down the receiver "Press to test" button and use the receiver probe to locate the target cable.
4. During testing, briefly press the "Switch" button to toggle between single and double audio test patterns.

7. Telephone Line Tracking, Network Line Tracking, Power Cable Line Tracking Diagram

Figure 2 illustrates the setup for telephone line tracking, network line tracking, and power cable line tracking. It shows a wall socket (RJ11/RJ45 socket) connected to a wall cable, which can be a separate cable. The diagram also indicates the TEST slot, volume control, and the transmitter and receiver units.

8. Network Line Check Function

2. Press the transmitter functional select switch to the "SCAN" position. The indicator "Verified" will flash, indicating the transmitter is working properly.
3. Determine the characteristics of the path, short circuit, open circuit, and cross circuit by the 18 (2*9) line sequence indicators.
4. During testing, briefly press the "Switch" button to toggle between high and slow speeds.

Wiring Diagram Descriptions

The diagram below shows normal connection, short circuit, open circuit, and cross circuit wiring (without shielding wire).

Normal:

The LED (1-8) of the transmitter and the corresponding receiver LEDs are all on.

Short circuit:

Transmitter LEDs are on, corresponding receiver LEDs are on and non-corresponding LEDs are also on but dimmed. (Refer to diagram below).

Broken circuit:

Neither the transmitter nor the receiver LEDs are on.

Cross circuit:

The lit LED position of the transmitter and receiver are reversed.

LED Indicators

Figure 3 displays the UNI-T UT682 Transmitter and Receiver LED numbers for Normal, Short circuit, Broken

9. Other Function Tests & Product Specifications

Open Circuit or Short Circuit Test Function

1. Shift the transmitter functional select switch to the "SCAN" position and long press the transmitter "Switch" button for 3 seconds. The "Verified" indicators will change from flashing to solid. Connect the alligator clip adapter wiring to the transmitter RJ11 interface. Clamp the two ends of the wire to be tested with the alligator clip.
2. If it is a short circuit, the first indicator of the transmitter will light up. The resistance of the circuit can be expressed by the light and shade level: brighter indicator means smaller resistance; darker indicator means bigger resistance.

DC Voltage Testing Function

1. Shift the transmitter functional select switch to the "TEST" position and long press the transmitter "Switch" button for 3 seconds. The "Status" light will be off and the "Verified" light will flash. Connect the alligator clip adapter wiring to the transmitter RJ11 interface. Clamp the two ends of the wire to be tested with the alligator clip.
2. If the "Status" turns green, the clamped red clip is positive. If the "Status" turns red, the clamped red clip is negative. DC voltage test range: ±3.3V~±52V. For safety, when testing DC voltage >10V (absolute value), each measurement should be performed in less than 2 minutes, with a rest interval of more than 5 minutes for the instrument to cool off.

Low Battery Indication Function

1. Shift the transmitter functional select switch to the "TEST" position. When the battery voltage is below approximately 6V, the "Status" light and "Verified" light will flash simultaneously. The instrument cannot be used normally until the battery is replaced.

Volume Control Function

During line tracking, adjust the volume knob on the receiver to control the sound.

Target Audience

This instrument is suitable for internet cafes, telecommunication companies, corporate network administrators, etc.

Product Specifications

Specification	Value
Product name	Wire Tracker
Power specifications	9V Battery
Signal transmission form	Multi frequency pulse
Short circuit, open circuit test	✓
Telephone line polarity Instructions	✓
Audio signal test range	≥1000 m
Video line distance	≥100 m
Low battery Indication (Transmitter)	✓

Headset Function

To avoid outside interference, wear a headset when testing in noisy environments.

Note 1:

Note 2:

The headset needs to be set up by the user; this product is not equipped with a headset by default.

Other Specifications

Work environment:

Working temperature: 0°C-40°C; Altitude: <2000m; Storage temperature: -10°C-50°C; Working humidity: 20%-75%RH; Storage humidity: 10%-90%RH.

Exterior size:

Transmitter: 125mm×48mm×28mm; Receiver: 195mm×48mm×30mm.

Weight:

Transmitter: about 125g; Receiver: about 153g.

Application standard:

EN61326-1:2013, EN61326-2-2:2013.

10. Battery Replacement

1. Firstly, shift the functional select switch to the "OFF" position and then remove the test leads from the instrument. (For transmitter only; for receiver, directly remove the battery cover, then reinstall the battery).
2. Remove the battery cover, replace the 9V battery.
3. After replacement, close the battery cover.

Diagram: UT682 Receiver

Figure 5 shows the UNI-T UT682 Receiver, illustrating its components and battery access.

11. Maintenance and Repair

Case Cleaning

When cleaning the case, gently wipe with a dry towel. Keep the instrument dry. Do not use alcohol or any corrosive agent.

Repair

If the following issues occur, contact the service center or authorized agent:

- Instrument casing damage or device damage
- LED indication is not normal
- Button malfunction

Company Information

UNI-T UNI-TREND TECHNOLOGY (CHINA) CO., LTD. No6, Gong Ye Bei 1st Road, Songshan Lake National High-Tech Industrial Development Zone, Dongguan City, Guangdong Province, China. Tel: (86-769) 8572 3888. http://www.uni-trend.com

ISO9001

Indicates compliance with ISO9001 quality management standards.

UT682D Tone and Probe Instruction Manual

1. Introduction

The UT682D provides a simple way to quickly trace and identify cables, wires, and wire pairs. Connect the toner to a line, then trace and follow the signal with the probe. The toner can also test continuity and check polarity on telephone lines. With proper use, this tester will provide many years of reliable service.

2. Safety Information

Symbols Used

- WARNING: Risk of personal injury or risk of damage or destruction to equipment. See the manual for details.
- Caution, risk of electric shock
- Equipment protected throughout by double insulation or reinforced insulation.
- Read the manual before using.
- Do not put circuit boards in the garbage. Dispose of circuit boards in accordance with local regulations.
- CE: Complies with European Union standards [CE mark]

The manual includes attention and safety rules that must be followed for the safety of the instrument. Please read carefully before using it and understand its contents.

- Do not put the instrument in dusty, high temperature, or humid environments.
- The toner and probe are powered by 9V battery. Do not use other batteries to power the instrument.
- Take out the battery when the instrument is not used for a long time.
- The maximum voltage allowed across the test leads is 60V DC in toner and polarity modes.
- Do not connect to circuits carrying AC voltage in toner or polarity modes.
- Do not connect to circuits carrying AC or DC voltage in continuity mode.
- Do not touch the metal test lead tips when making connections.
- Do not use this instrument in thunderstorm conditions.

4. Structure

Toner Components

Item	Description
1	TONE/POWER/CONTINUITY switch
2	TONE LED
3	POWER LED
4	CONTINUITY LED
5	Modular connector (RJ11 plug)
6	Test leads

Probe Components

Item	Description
1	Signal probe
2	Volume/Sensitivity slider
3	POWER LED
4	Test button

Diagram: Toner and Probe

Figure 1 shows the structure of the Toner and Probe units, labeling key components like the switch, LEDs, connector, test leads, signal probe, volume slider, and test button.

5. Packaging List

- Toner: 1 pc
- Probe: 1 pc
- 9V Battery: 2 pcs
- Manual: 1 pc

6. Tracing cables (see Figure 2)

WARNING: Never connect to AC voltage. Do not connect to DC voltage in excess of 60 volts.

1. Set the function switch to the TONE position. TONE and POWER LEDs will turn on.
2. Connect the red test lead to one wire of a cable and the black lead to ground. If the cable is shielded, connect the red lead to the shield.
3. Point the signal probe to the wire and press the test button. The POWER LED on the probe will turn on.
4. Adjust the volume slider on the probe to identify and trace the wire.
5. The loudest voice from the probe indicates the wire connected to the toner.

Diagram: Tracing cables

Figure 2 illustrates the process of tracing cables using the toner and probe, showing connections to a telephone line.

7. Tracing pairs (see Figure 3)

WARNING: Never connect to AC voltage. Do not connect to DC voltage in excess of 60 volts.

1. Set the function switch to the TONE position. TONE and POWER LEDs will turn on.
2. Connect the red test lead to one wire and the black lead to the other wire of the pair being traced.
3. Point the signal probe to the wires and press the test button. The POWER LED on the probe will turn on.
4. Adjust the volume slider on the probe to identify and trace the wires.
5. The loudest voice from the probe indicates the wire connected to the toner.

Diagram: Tracing pairs

Figure 3 demonstrates how to trace wire pairs using the toner and probe, showing connections to two wires of a pair.

8. Indicating line conditions (Checking polarity) (see Figure 4)

WARNING: Never connect to AC voltage. Do not connect to DC voltage in excess of 60 volts.

1. Set the function switch to the POWER position.
2. Connect the red test lead to one wire and the black test lead to the other wire of the telephone line being tested.
3. If the CONTINUITY LED turns green, it indicates a normal working line with correct polarity.

6. If the TONE LED turns dark red, it indicates off-hook or faulty line with reversed polarity.
7. If the CONTINUITY or TONE LED is flickering, it indicates a ringing condition.

Diagram: Indicating line conditions

Figure 4 illustrates how to check telephone line conditions and polarity using the toner and probe, showing LED indicators for different states.

9. Continuity test (see Figure 5)

WARNING: Do not connect to circuits carrying AC or DC voltage in continuity test mode to avoid damage to the toner.

1. Connect the test leads to the wire or device being tested.
2. Set the function switch to the CONTINUITY position.
3. The CONTINUITY LED will turn on if there is an electrical path between the connection points. The tester indicates continuity up to approximately 10kΩ. The LED will be brighter for low resistance and less bright for high resistance.

Diagram: Continuity test

Figure 5 shows the continuity test setup, demonstrating how to connect the leads to test for electrical paths.

10. Supplying talk power

1. Insert the RJ11 plug into the corresponding telephone interface.
2. Set the function switch to the CONTINUITY position to supply talk power.

11. Using RJ11 modular plug

The toner has an RJ11 phone plug that can be used instead of clip test leads when the wires being tested are terminated with an RJ11 jack. The RJ11 plug can be used in any of the unit's operating modes.

12. Product specifications

A. General specifications

Parameter	Toner	Probe
Output power	10mW (into 600Ω)	
Output frequency	Alternating 1.25/1.4kHz; Warble rate: 6Hz	
Output voltage in continuity mode	8VDC with a new battery	
Over voltage protection	60VDC	
Battery	9VDC	9VDC
Low battery indication	Around 7V	Around 7V
Operating temperature	0°C~40°C	0°C~40°C
Storage temperature	-10°C~50°C	-10°C~50°C
Dimensions	74*68*28mm	208*47*33mm
Weight	150g	130g
Input impedance	>100MΩ	

B. Certification

The device conforms to CE standards: EN61326-1: 2013, EN61326-2-2:2013.

13. Maintenance

A. General maintenance

- Keep the tester dry. If it gets wet, wipe it off.
- Clean the case with a dry cloth. Do not use chemicals, detergents, or solvents.
- Use and store the tester in normal temperatures.
- Handle the tester with care. Dropping it can damage the electronic parts or the case.
- Take out the battery when the instrument is not used for a long time.
- Maintenance and service must be implemented by qualified professionals or designated maintenance departments.

B. Battery installation and replacement

WARNING: To avoid electrical shock, turn the unit off and disconnect its leads from any circuit before opening the battery door.

1. Turn the unit off.
2. Open the battery door.
3. Install or replace the 9V battery (observe polarity).
4. Close the battery door.

Company Information

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ISO9001

Indicates compliance with ISO9001 quality management standards.

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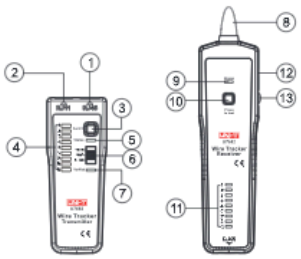

Figure 1. Transmitter and Receiver

1	RJ45 Socket	2	RJ11 Socket
3	Function button	4	Line sequence indicator
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11	Line sequence indicator	12	Headset jack
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Receiver---------- 1
9V Battery---------- 2
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RJ-45 adapter wiring---------- 1
User manual---------- 1
Cloth Bag---------- 1

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a: Connect the telephone line head into the transmitter's RJ11 interface;
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c: Hold down the receiver "Press to test" button and look for the target cable with receiver probe.
d: During the testing, light press "Switch" button to switch between single and double audio test pattern.

5. Network Line Tracking Function
a: The network line with a crystal head into the transmitter RJ45 interface;
b: Press the transmitter functional select switch to the "TEST" position, Line tracking indicator "Status" will flash, which indicates that the transmitter works properly;
c: Hold down the receiver "Press to test" button and look for the target cable with receiver probe.
d: During the testing, light press "Switch" button to switch between single and double audio test pattern. Note: When the product is used for testing wires in server rooms, plastic rollers, crystal head pliers and insert wires one by one.

6.Power Cable Line Tracking Function (Power cable must not be powered)
a: Connecting the transmitter with metal cable using alligator clip adapter wiring;
b: Adjust the transmitter functional select switch to the "TEST" position, line tracking indicator "Status" will flash, which indicates that the transmitter works properly;
c: Hold down the receiver "Press to test" button and look for the target cable with receiver probe.
d: During the testing, light press "Switch" button to switch between single and double audio test pattern.

7.Telephone Line Tracking, Network Line Tracking, Power Cable Line Tracking Diagram

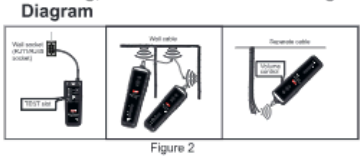


Figure 2

8.Network Line Check Function
a: Connect both ends of the network cable into the transmitter and receiver
b: Press the transmitter functional select switch to the "SCAN" position, indicator "Verified" will flash, which indicates that the transmitter works properly;
c: Determine the characteristics of the path, short circuit, open circuit and cross circuit by 18 (2*9) line sequence indicators.
d: During testing, light press "Switch" button to switch between high and slow speed.
e: The diagram below shows the normal connection, short circuit, open circuit and cross circuit wiring (without shielding wire)

Normal:
The LED (1-8) of the transmitter and the corresponding receiver LEDs are on
Short circuit:
Transmitter LEDs are on, corresponding receiver LEDs are on and non-corresponding LEDs are on as well, but dimmed (Please refer to diagram below) Broken circuit: Neither the transmitter nor the receiver LEDs are on.
Cross circuit:
The lit LED position of the transmitter and receiver are reversed.

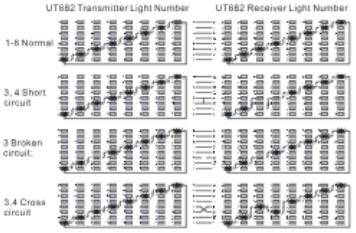
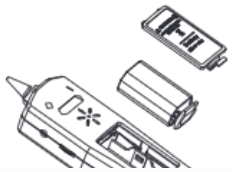


Figure 3: Normal, short circuit, broken circuit, cross circuit

9.Other Function Tests & Product Specifications
a: Open Circuit or Short Circuit Test Function
Shift the transmitter functional select switch to the "SCAN" position and long press transmitter "Switch " button for 3 seconds. At this time, the "Verified" indicators will change from flashing to a solid light, connect the alligator clip adapter wiring to the transmitter RJ11 interface. Clamp the two ends of the wire to be tested with the alligator clip. If it is short circuit, the first indicator of transmitter will light up, the resistance of the circuit can be expressed by the light

g: Headset Function
To avoid outside interference, wear headset when testing in noisy environments.
Note 1:
Please turn the receiver down to the minimum and plug in headset, slowly turn the volume knob to the appropriated slot, then begin testing.
Note 2:
Headset needs to be set up by the user, this product is not equipped with headset by default.

h: Other Specifications



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