

Pro'sKit®

MT-7076

LCD Network Cable Tester & Probe Kit



User's Manual

1st Edition, 2023

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1. OVERVIEW

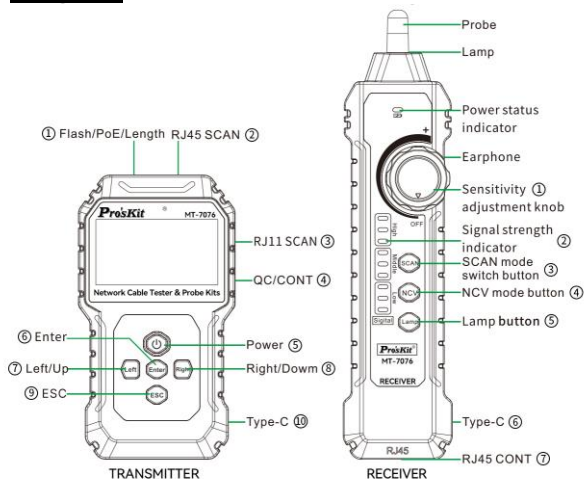
Thank you for purchase Pro'sKit MT-7076 LCD Network Cable Tester & Probe Kit. Please read the instructions carefully and pay attention to the following matters before using this instrument, please keep it properly for future reference.

MT-7076 is a new anti-interference line finding scheme using digital signal receiving and decoding technology, anti-interference degree is higher, more accurate, eliminate false positives. At the same time, it has the functions of analog line finding, anti-interference line finding, network cable connection testing, network cable length testing, PoE testing, Port Flash & Switch details testing, network cable plug connectors test, etc. LCD display screen. Users can select display language in Chinese or English.


Caution

- This device is powered by a lithium polymer battery. With the TYPE-C charging interface, please use the USB charger to charge the product. Please remove the charger after full charge. Do not charge for a long time, so as not to cause product damage or fire or other accidents. This product is not equipped with a charger.
- If you do not use the product for a long time, please charge the product once every 3 months, To keep the battery active and avoid battery damage.
- This product is strictly prohibited to access the live lines above voltage DC 60V or any AC voltage.
- Please do not perform related operations on the communication line during thunderstorms to prevent lightning strikes and personal safety.
- Do not place this product in dusty, wet and temperatures above 40°C.
- Please do not disassemble the device. Repair and maintenance should be done by a professional staff.

2. Diagram



Transmitter socket and keys:

- ① Flash/PoE/Length connector: For Cable Length/PoE test and Port Flash testing
- ② RJ45(SCAN): For Network Cable Tracing.
- ③ RJ11 connector: For Telephone Cable Tracing.
- ④ QC/CONT connector: For Cable map testing and RJ45 plug crimping testing.
- ⑤ “

2


Receiver socket and keys:

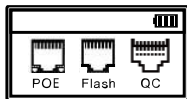
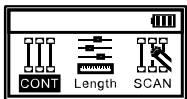
- ① Sensitivity: Tun on/off; Adjust the receiving signal sensitivity.
- ② Signal strength indicator: Low: The signal is weak; Middle: The signal is middle; High: The signal is high.
- ③ SCAN Key: Switch over the receiving signal mode.
- ④ NCV Key: Non-contact test on or off.
- ⑤ Lamp Key: The flashlight is the key.
- ⑥ Type-C: Charging jack.
- ⑦ RJ45 CONT: For Cable map testing

3. Operation



Do not connect with DC voltage over 60V or any AC voltage live circuit equipment or it will result damage.

Press “”key to power on, as show blow. Press “Left ” or“ Right ”key to choose function. Press “Enter” key to test. Press “ESC” key to return.



CONT: It is used to detect the network jumper connection situation and fault judgement; Test results such as open, short, crossing, etc.

Length: It is used to detect the length of the network cable; the measuring range is 2.5-200 meters. Applicable to CAT.5E and CAT. 6 network cable.

SCAN: It is used to find the target network cable; the transmitter and receiver should be used together. The transmitter transmits the audio signal, and the receiver receives the signal.

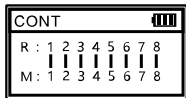
PoE: For PoE switch supply line, voltage, PoE standard (IEEE 802.3.af/at) or non-standard PoE testing.

Flash: It is used to find the corresponding interface on the other end of the target network cable on the switch, transmit the signal to flash the switch interface light, and test the performance of the switch: 10M/100M /1000M; FDX/HDX; Auto-Nego/Non-Auto Nego, etc.

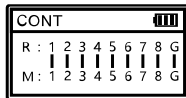
QC: It is used to detect the network cable plug and network cable crimping is "through" or "fail".

3.1 CONT:

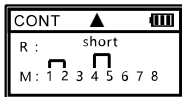
- Insert the pending network cable into the transmitter (QC/CONT) RJ45 socket in the right and the other end into the receiver socket.
- Select the "CONT" menu and press "Enter" to test with test results shown below:



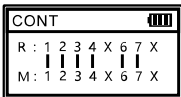
UTP



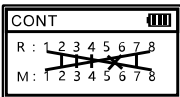
STP



Short

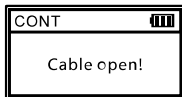


disconnection



crossover

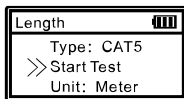
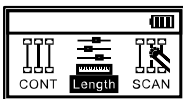
- If the display "cable open " indicates that the network jumper is all open or the other end of the network cable is not inserted in the test receiver, or the test interface is wrong.



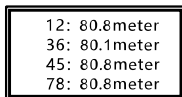
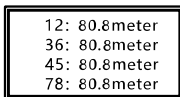
3.2 Measure Cable Length:

Cable length measurement range:2.5m~200m; Applicable to CAT.5(CAT5e) and CAT. 6 network cable.

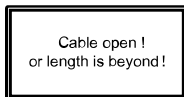
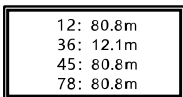
- Insert the pending network cable into the transmitter “Flash/PoE /Length” RJ45 socket at the head of the transmitter. Do not plug in any socket at the other end.
- Select the “Length” menu and press “Enter”, and access the menu below, Select the network cable type CAT 5 or CAT 6 in the Type menu.



- Units of length can select “Meter” “Yard” “Foot” under the Units menu.
- Select the “Start Test” menu and press “Enter” to test with test results shown below:



- Because each pair of wire has different twisted density, it is normal to measure the numbers slightly different, which can be measured many times to get the same measurement value.
- From the image, it means there exists problem at 12.1m. To make sure it is short or broke there, you can test it continuity to know details.



■ **NOTE: Kind reminds when measuring cable length.**

1. Only one end of the network cable is inserted into the transmitter test interface, and no network interface should be inserted at the

other end of the network cable.

- The range must be 2.5m—200m, otherwise , it would be display the incorrect numbers or display as shown above (right).

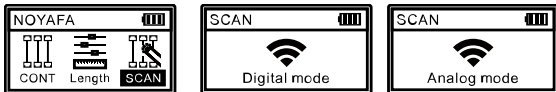
3.3 SCAN (Cables tracking):



Do not connect with DC voltage over 60V or any AC voltage live circuit equipment or it will result damage.

The cables tracking function has two modes: digital mode and Analog mode, The receiver and transmitter signals must be consistent to receive the signal.

- Connect one end of the target cable to the (SCAN) RJ45 socket at the head of the transmitter. Telephone cable can be connected to the RJ11 socket in the right of the transmitter.
- Select the “SCAN” menu and press “Enter” to transmit and show below:

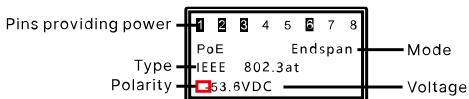
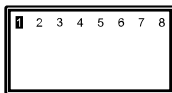
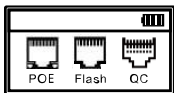


Press the Enter key ↔ Press the Enter key ↔ Press the Enter key

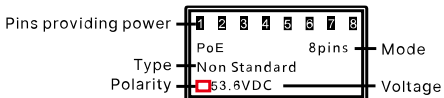
- The receiver knob rotates clockwise with a "beep". You can rotate clockwise to the maximum position with higher reception sensitivity.
- The receiver startup defaults in the digital signal receiver mode. You can press the “SCAN” key to switch to the receive signal mode. Analog signal reception mode, the SCAN indicator light flashes. Digital mode, the SCAN indicator is long and bright.
- While the probe is close to the network cable to be measured, the speaker emits a clear "beep-beep " sound, and the network cable contacted by the receiver probe is the target network cable to find.
 - When tracking a cable in the working network, due to the network switch, there may be audio signals adjacent to the target cable, each cable can be removed to find the target cable or try to rotate the receiver sensitivity knob counterclockwise to reduce the reception sensitivity to find the target cable.

3.4 PoE Testing

- Insert the network cable into the transmitter RJ45 socket (Flash/ PoE/Length) at the head of the transmitter and the other end of the cable to the PoE switch.
- Select the "PoE" menu and press "Enter" to test.
- The display shows the test results: if the tested PoE switch is a standard PoE switch, display the PoE power supply mode, standard type, PoE voltage, voltage positive and negative electrode, etc. As shown in the figure below:



- The figure shows that the power supply line supplies power to 12 36 line, span mode is "End span"; standard type is IEEE 802.3at; voltage is 53.6V; polarity "-" means that the left two lines are negative voltage poles; if display "+" means that the left two lines are voltage "+" pole.
- If the tested device is non-standard PoE device, display as blow:



- The figure shows that the power supply line is 8 pins. Non-standard PoE equipment. Voltage is 53.6V; Voltage polarity is not displayed when 8 pins power supply.
- The test result can usually be displayed within a few seconds. If the test result is not displayed when the test time is more than 30 seconds, the tested device may not be a PoE switch, or the test interface may be wrong.

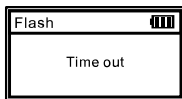
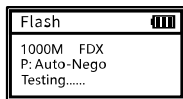
3.5 Port Flash & Switch details testing:

This function transmits the pulsing signal through the transmitter to flashing the LED indicator of the network switch, then can locate the interface of the network cable on the switch. At the same time, the network switch working performance can be tested.



Do not connect with DC voltage over 60V or any AC voltage live circuit equipment or it will result damage.

- Insert the network cable into the transmitter RJ45 socket (Flash/PoE/Length) at the head of the transmitter and the other end of the cable to the network switch.
- Select the “Flash” menu and press “Enter” to start testing.
- The 2 indicators on the RJ45 jack port will be lit and flash. Then observe the ports on switch, if there is a port whose flash frequency is 3 secs, and slower than all the other ports, it tells you the port is target one you're looking for.
- Also, the device can tell you the connected switch's information, such as its speed (10M/100M/1000M), transmitting modes (FDX: full duplex/ HDX: half duplex) Protocol (Auto- Nego / Non-Auto-Nego). See the graph for ref. as below.

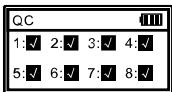


- If "Time out" is displayed, the reasons may be: 1. Network cable insertion error and test interface; 2. Network cable is not connected to the switch; 3. Network cable fault. 4. Switch, router fault or incompatibility with the instrument. 5. This instrument fails.

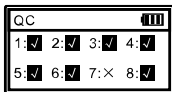
3.6 QC (RJ45 connectors testing)

QC: It is used to test whether the cable core is connected to the copper sheet of the RJ45 connector when you crimp a plug or not sure a plug is good.

- Insert the network cable (RJ45 plug) into the transmitter's RJ45 (QC/CONT) socket.
- Select the "QC" menu and press "Enter" to start testing.
- The test result showing "√" indicates that the cable is normal. If "x" appears, the line is failed. As shown in the figure below:



Normal

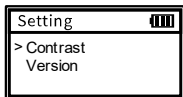
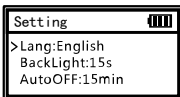


Example: No. 7 wire core is not connected

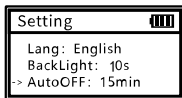
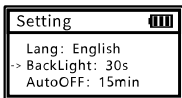
3.7 Setting:

This function can set the language (Chinese / English), backlight time, automatic shutdown time, contrast, etc.

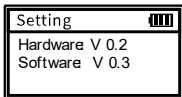
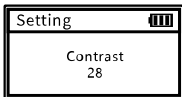
- Select the "Setting" menu and press "Enter" to start setting.



- Backlight setting: Press the "Enter" key to set. Adjust the backlight time among 15S, 30S, 60S, on and off.



- Auto-off time setting: Press the "Enter" key to set. Adjust the Auto-off time among 15mins, 30mins, 1hour, off.
- Contrast setting: Select the "Contrast" to setting. And press "Right" or "Left" key to adjust the contrast to suit yourself.



- Version information: Press the “Enter” key to set.
To check version information of software and hardware. as above.

3.8 Non-contact Voltage detection (NCV)

This function is used to determine whether the wire or equipment has an AC voltage, the detection range AC70-1000V (50 / 60Hz).

- Turn on the receiver and press "NCV" key, The indicator light on.
- Put the receiver probe close to the target body, if the AC voltage is detected, the speaker emits an alarm sound of different frequency, the speaker rapid sound indicates a high voltage or fire line, the slow sound may be low voltage or zero line.

Note:

- This function is for reference, the voltage may remain even there is no detection showed up. There are many possible factors might block the detection.
- There are external sources (like flashlight and motor) may trigger non-contact voltage detection.

3.9 Flashlight

- Turn on the receiver and press "Lamp" key, the indicator and the front LED auxiliary lighting LED is turned on for lighting with insufficient light. Press the key again to turn off.

4. Charge the product

The transmitter and receiver of this product are both built-in 3.7V 1400mAh lithium battery, TYPE-C charging interface, which can use the mobile phone or other USB charger to charge this product, but this product is not equipped with the charger.

- When the battery symbol of the transmitter display screen flashes, the receiver power indicator light flashes, indicating that the battery voltage is insufficient, please charge in time to avoid affecting the work.
- Please pull out the charger in time. Do not charge for a long time to avoid damage to the instrument.

- If this product is not used for a long time, please charge once every 3 months, so that the lithium battery remains active, to avoid damage to the lithium battery.

5. Accessories

Parts	QTY	Parts	QTY
Transmitter	1pc	RJ45/RJ11/Alligator clips Cable	1set
Receiver	1 pc	User Manual	1 pc
Type-C Cable	1 pc	Storage bag	1 pc
Earphone	1 pc		

6.Specification

MT-7076 Transmitter Specifications	
Display	LCD 53x29mm (128x64 Dots)
Language	Chinese/English
Connectors	RJ45x3; RJ11x1
Cable Map	Cable Type : CAT.5; CAT.5e; CAT.6; CAT.7
	Display: R&M; 1-8/G
	Max range: 300m
Transmission	Singal : Analog mode/Digital mode
	Max. Signal Voltage: 5.0V ± 1.0Vp-p
	Frequency : 455kHz
	Cable Type : CAT5/ CAT5e/CAT6 STP/UTP ; Telephone cable
	Scan range: 1km(Analog mode) / 600m (Digital mode)
Cable Length	2.5~200m CAT.5(CAT5e)/CAT.6 ;

Measurement	accuracy: $\leq 20m, \pm 1.6m$; $20m \sim 100m, \pm 2.4m$; $100m \sim 200m, \pm 3.2m$
	Unit : m/yd/ft
Port Flash	Frequency: 1time/3sec;
	Link test: 10M/100M/1000M; FDX/HDX; Auto-Nego/Non-Auto Nego.
PoE Testing	Type: IEEE802.3af/at; Non-Standard
	Midspan / Endspan /8 pins ;
	Voltage values
QC Testing	Connector RJ45 8pin; $\geq 10cm$
Back Light	15sec/30 sec /60 sec /on/off
Auto OFF	15min/30min/60min/off
Battery	3.7V 1400mAh Li-ion
Dimension	125x70x32 mm
MT-7076 Receiver Specifications	
Receiver signal	Analog mode/ Digital mode
Vocality	Doble Vocality
Sensitivity	knob-operated control
Flashlight	1 LED
NCV	AC 70V-1000V 50/60Hz
Low Battery	Power light flashing
Earphone jack	$\Phi 3.2mm$

Battery	3.7V 1400mAh Li-ion
Dimension	198x50x28 mm

7. MAINTENANCE & TROUBLE SHOOTING



Warning:

- Do not try to open the product shell without authorization. Disconnect all external connection lines before opening.



Caution:

- To avoid damaging the case, do not use solvents or abrasive cleansers. Clean the case with a soft cloth dampened with water or a mild soap solution.

Trouble shooting

Possible Problems	Trouble shooting
Line order fault displayed incorrect	1.Adjust the two ends of the network jumper, and then test again.
	2. Test the socket insertion error, please insert the correct test socket.
	3. Instrument failure, send to the dealer for repair.
The receiver could not detect the signal from the audio transmitter	1.The receiver is not consistent with the transmitter signal mode. Refer to the SCAN operating instructions.
	2. Test the socket insertion error, please insert the SCAN or RJ 11 socket.
	3. The receiver sensitivity is too low: rotate the sensitivity adjustment knob clockwise to maximum detection.

	<p>4. The emitter signal conflicts with the switch signal. You can switch to anti-interference mode. And you can also use the crocodile clip line to connect the test network line of 2 retest</p>
	<p>5. Instrument failure, send to the dealer for repair.</p>
<p>Other abnormal functions</p>	<p>1. Test the socket insertion error, please insert the correct test socket.</p>
	<p>Instrument failure, send to the dealer for repair.</p>