WANLUTECH CT-66 Multi Function Cable Tester User Manual

Contents

WANLUTECH

WANLUTECH CT-66 Multi Function Cable Tester

- Thank you for purchasing the WANLUTECH Cable Tester. Please read the manual before using the Cable Tester and use it properly.
- To use the Cable Tester safely, please first read Safety Information carefully in the manual.
- The manual should be kept well in case of reference.
- Keep the S/N label for after-sale service within the warranty period. Products without S/N labels will be charged for repair service.
- If there is any question or problem while using the Cable Tester, or if damages occurred on the product, please contact our After-sales service department(**sales@testerpro.com.cn**)
- The following data is for reference only and no additional notice will be given if there are any changes in the data.

Safety information

- The cable tester is intended to use in compliance with the local rules of electrical usage and avoid applying at places that are inapplicable for the use of electrics such as hospitals, gas stations etc.
- To prevent functional decline or failure, the product should not be sprinkled or damped.
- The exposed part of the cable tester should not be touched by the dust and liquid.
- During transportation and use, it is highly recommended to avoid the violent collision and vibration of the tester, lest damaging components and causing failure.
- Don’t leave the tester alone while charging and recharging. If the battery is found severely hot, the tester should be powered off from the electric source at once. The tester should not be charged over 10 hours.
- Don’t use the tester where the humidity is high. Once the tester is damp, power off immediately and move away from other connected cables.
- The cable tester should not be used in the environment with the flammable gas.
- Do not disassemble the instrument since no component inside can be repaired by the user. If the disassembly is necessary indeed, please contact the technician of our company.
- The instrument should not be used under an environment with strong electromagnetic interference

- Don’t touch the tester with wet hands or waterish things.
- Don’t use the detergent to clean and the dry cloth is suggested to use. If the dirt is not easy to remove, the soft cloth with water or neutral detergent can be used. But the cloth should be tweaked sufficiently.

Production Introduction

Feature

- 2.4 inch TFT-LCD screen, 320×240 resolution
- Secondary code digital mode, decisively rejects noise and false signals, locate cables quickly and easily.
- Advanced UTP cable test, test UTP cable’s sequence, type and remote kit, quickly detect the near-end, mid-end and far-end fault point of RJ45 cable connector.
- RJ45 cable TDR test, test cable quality, length and attenuation.
- HD Coaxial video level meter, can detect the TVI/CVI/AHD/CVBS signal peak value, SYNC value and burst value.
- Port Flash, can search the switch port which connect the meter.
- PING test, check whether IP camera or other network equipment’s Ethernet port is working normally, the IP address whether is correct.
- IP Scan, quickly find the IP address of the IP camera or other network equipment which connected to the meter.
- Link status, quickly identify the connected network port (10/100/ 1000M) and duplex mode (full duplex / half duplex)
- TDR cable test 2.0, can test break point and short-circuit of cat 6e/5e (4 pairs), power line, BNC cable and Telephone line, etc. the Max. 1.2km length Optional
- 3.7 V /2000mAh Lithium Ion Battery, after 3 hours charging, working time lasts 18 hour

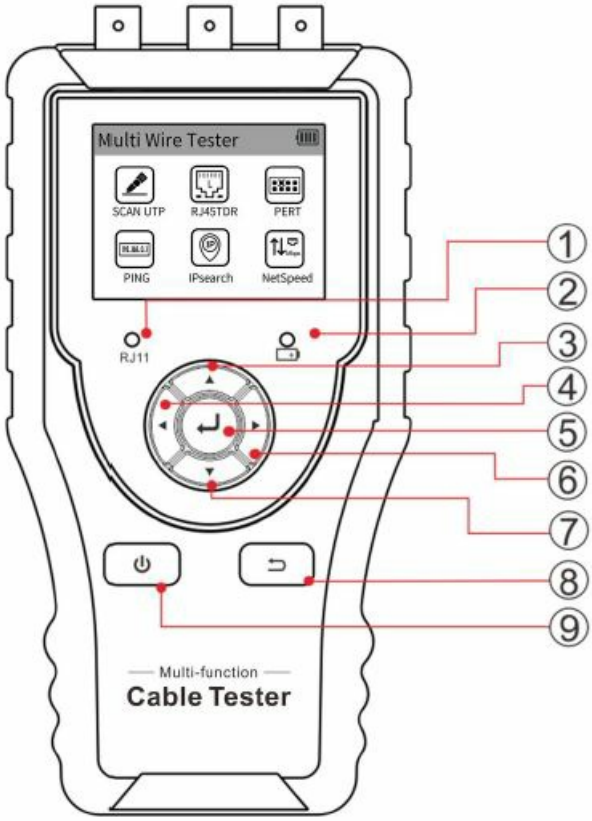
Packing list

1. Multi-function cable tester
2. Wire receiver
3. Adaptor DC5V 1A
4. USB charging cable
5. RJ45 cable
6. RJ11 cable
7. TDR alligator clip cable
8. Polymer lithium ion battery (3.7V DC 2000mAh)
9. User Manual

www.cctvtester.com
After-sales service department(**sales@testerpro.com.cn**)

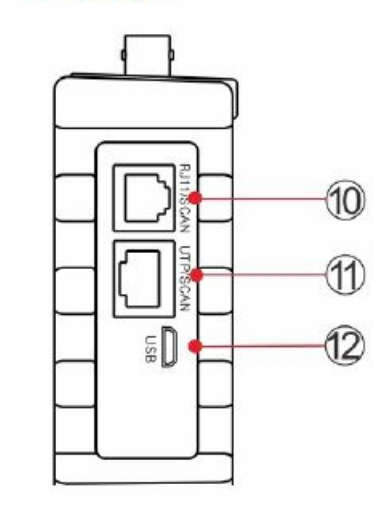
Interface and Function Introduction

1. Cable tester Interfaces :

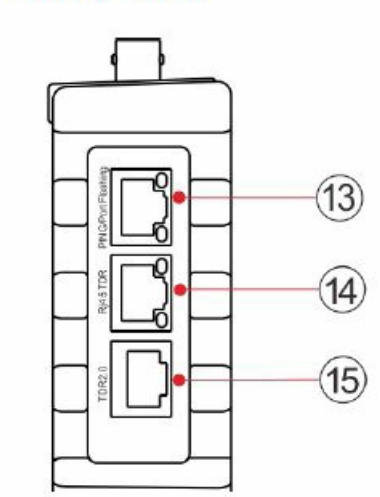


1	Telephone status indicator
2	The charge indicator: It lights red while the battery is being charged. As the charging is complete, th e indicator turns off automatically
3	Upward, set or modify parameters
4	Leftward, set or modify parameters
5	Confirm key
6	Rightward, set or modify parameters
7	Downward, set or modify parameters
8	Return/Close: Return or cancel while setting parameters of the menu
9	Power: Press more than 2 seconds, turn on or off the device, short press to turn on or off the menu display

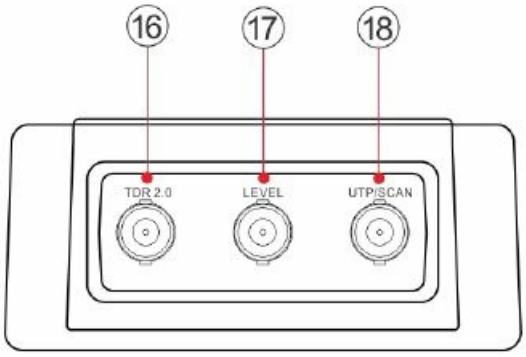
Left Interface:



Right Interface:



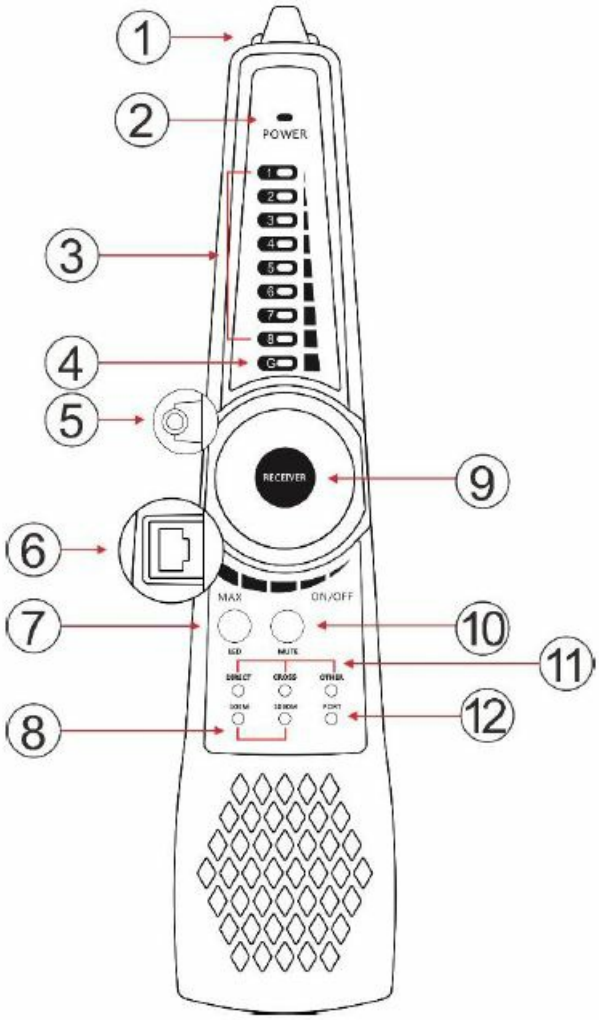
Top Interface:



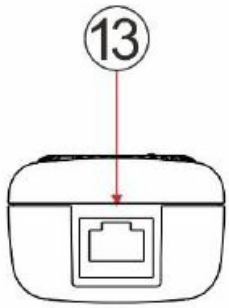
10	RJ11 cable tracer and status test port
11	UTP cable test, cable tracer and switch test port
12	DC 5V 1A charging port
13	Network cable test port (Ping/ Port flicker/ IP scan)
14	RJ45 cable TDR/ Network link status test port
15	TDR 2.0 test port (RJ45)
16	TDR 2.0 test port(BNC) **(Optional)**

17	Video level meter port (CVBS/TVI/CVI/AHD) **(Optional)**
18	Cable tracker port(BNC/2P cable)

Cable tracer (Receiver) Interfaces and functions



1	LED light
2	Power Indicator
3	UTP cable sequence/signal strength indicator
4	Shielded layer continuity indicator
5	Earphone jack
6	UTP cable test port
7	LED light switch
8	100M /1000M indicator
9	Switch / Sensitivity knob
10	MUTE button (long press to silent mode, short press to port connectivity detection)
11	UTP cable type indicator: straight /cross /other
12	Port continuity detection indicator (ON indicates local end cable connectivity function, OFF indicates cable sequence function)

Bottom interface	
	
13	PD Powered test port (detect whether the power output of the PoE switch pins is normal.)

Note: Receiver port continuity detection only supports the local end, and does not support the remote end. Emitter can support near-end, middle-end end and far-end port detection.

Operation

Installing the Battery

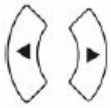
The tester has a built-in lithium-ion polymer rechargeable battery. The battery cable inside the battery cabin should be disconnected for safety during transportation! Prior to the use of the instrument, the battery cables inside the battery cabin should be well connected. When the battery icon is full or the charge indicator turns off automatically, indicate the battery charging is completed.

Notice: Please use the original adaptor and connected cable of the device!

Auto power off function

The meter can set 10-120 minutes auto power off, or close the auto power off function. Can set power off time in the Setting function. If you don't press a key, the meter will start the auto power off. If you press the key, the meter will return. The Auto power off is off by default.

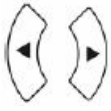
OSD Menu

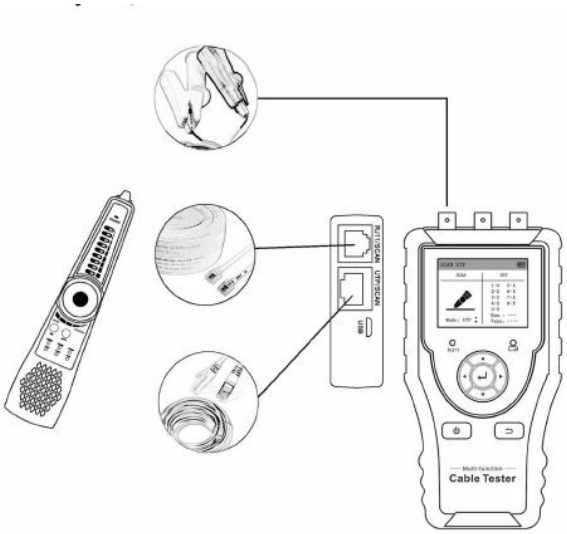
Press  key to choose the function, the Icon of screen  means has menu interfaces. Select the  Function icon, then click the key to enter the function.

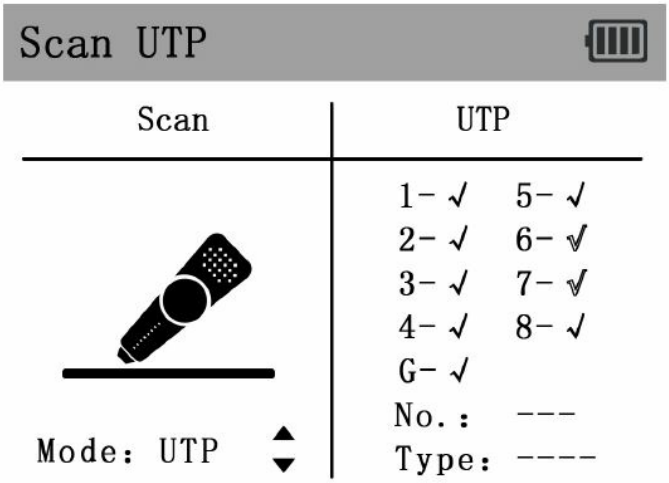
Cable tester

UTP cable test

Connect the network cable to the cable tester's RJ45 port, and the BNC cable or RJ11 telephone line connects to the cable tester's BNC or RJ11 port. If no connector cable, can use alligator clips to clip the bare copper wire.

Press  key to select the "SCAN UTP" function, press the  key to enter the cable tracer interface.

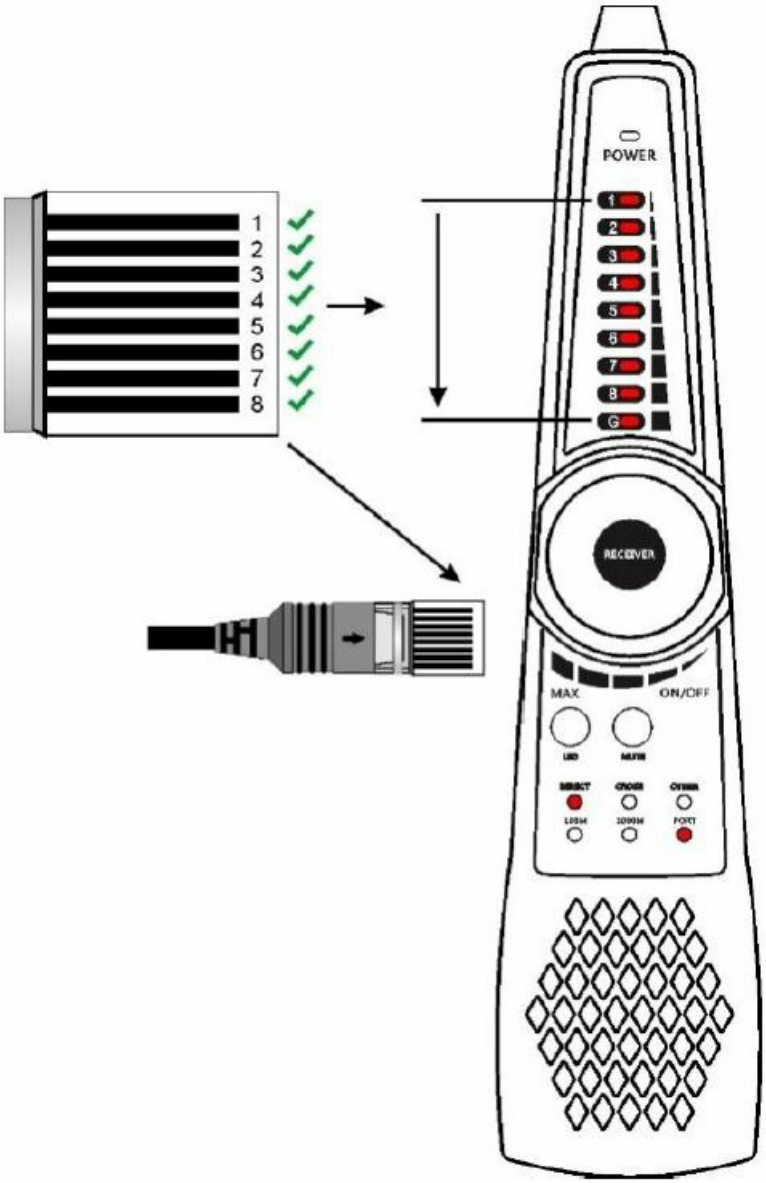




Cable tracer

The UTP mode and STP mode can be optional. The UTP mode is for searching the normal cable or other cable. The STP mode is for searching shielded cables. Turn on the wire receiver, can search cable. Rotating the knob of the receiver to adjust the sensitivity. When the cables are very close, can adjust to the small sensitivity to find the cable. Long press the “MUTE” key for silent mode. In this mode, the signal strength indicator light is used to trace the wi re. When the strongest signal, the eight indicator lights are on. Press “MUTE” again to exit MUTE mode.

1. Quickly verify the tracking result (only for RJ45 port). After finding the cable, connect the network cable to the wire receiver “UTP” port for pair line detection. For example, When the “Straight/Cross/Other” lights up, indicates the verification of the matching cable. The indicator also shows the type of the cable. The 1-8 and G indicators show the detection of line sequence by default, and the order in which the indicator lights up is the sequence of the line.
2. Port continuity detection: Connect the network cable to the cable tester’s RJ45 port, the other end of the network cable to the cable tester’s RJ45 port. Press the “MUTE” button, when the indicator light of the port is on, the 1-8 and G indicator lights will show the continuity of the line of the RJ45 cable connector or within 1 meter from the RJ45 cable connector. As shown on the right, If the light is on, it means it is connected and vice versa. Connect the network cable to the cable tester’s RJ45 port, the other end of network cable disconnects any device. Press the “MUTE” button, when the “Port” light is on, can test the continuity and short circuit status of the network cable.

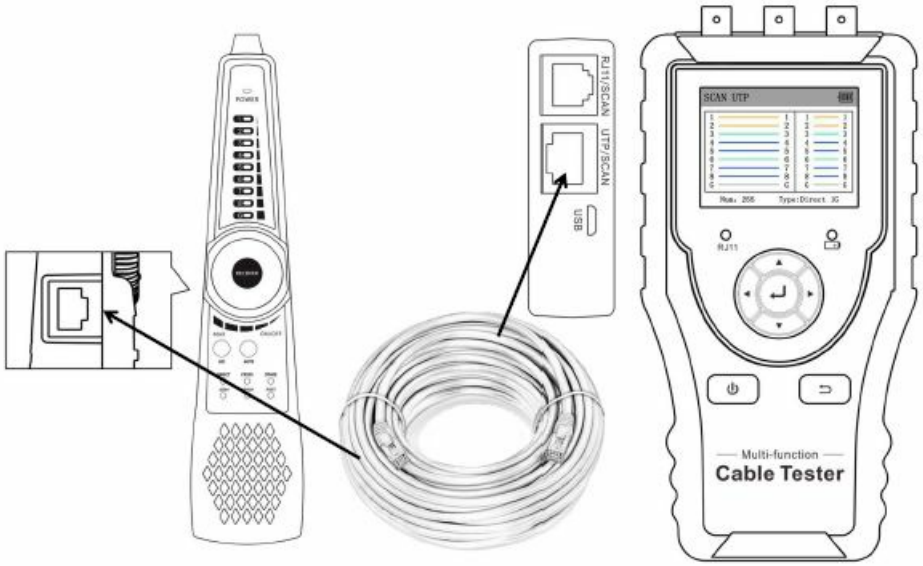


Extended function: For normal cables, the remote port is unknown, and the 1236 or 1-8 lights are flashing, which can be used to determine whether the remote end is connected to a switch or router. (Generally, 100M switches show that 1236 lines are connected, and Gigabit switches 1-8 lines are all connected)(3) The UTP port of the emitter and receiver can max 60V withstand voltage, the wire can be traced directly in connection with the PoE switch.

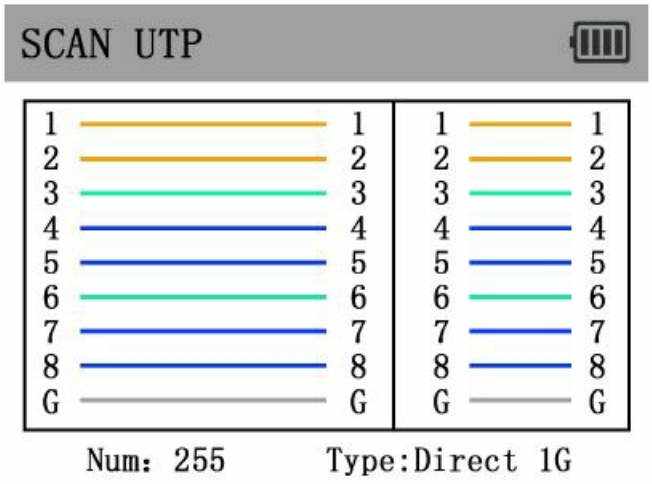
Note: The battery of the cable tracer must according to the corresponding positive pole + and negative pole -, otherwise will damage the tester.

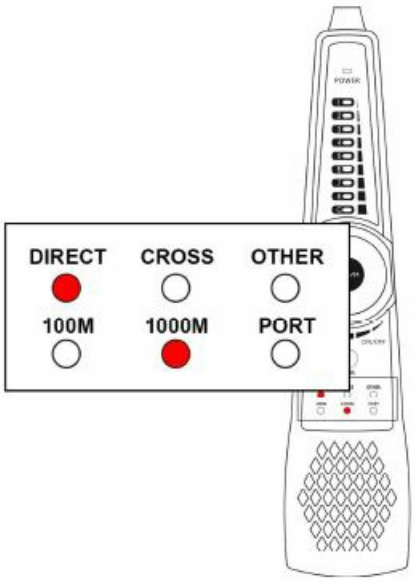
UTP cable test

In the “SCAN UTP ” interface, connect the network cable to the “UTP/SCAN” port of the cable tester, and the other end connects to the UTP interface of the receiver, can test the cable’s sequence, and display in the cable tester interface.



Can identify cable's type through the "Direct/Cross/other" indicator. And also can identify the cable whether suitable 100M or Gigabit cable. Can display the remote number(Default is 255)

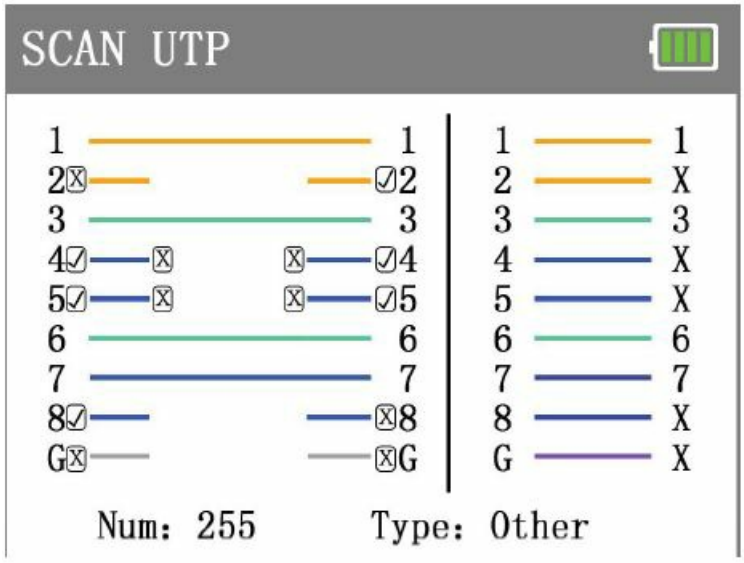




The 1-8 indicators on the cable tracer will flash in sequence according to the network cable sequence, and will display the cable type through the "Direct/Cross/other" indicator.

If need several different numbers other types of cable testers, should pay the additional cost.

Cable tester-end/wire receiver-end fault location:

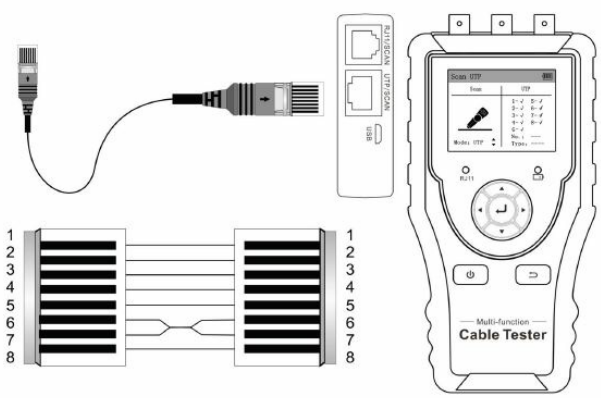


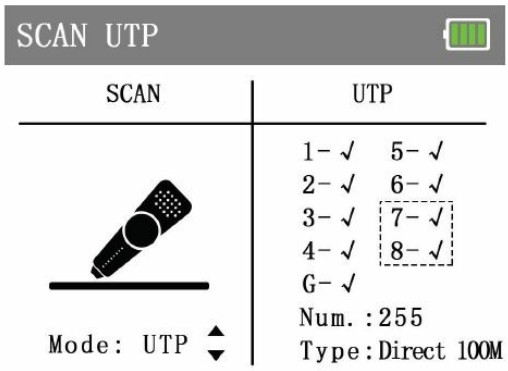
As shown above, the right side of the interface is the continuity result of the cable tester and wire receiver ports, and the left side is the cable's sequence.

1. Cable tester-end/wire receiver-end display "x", it means the RJ45 cable connector of the cable tester and wire receiver or within 1 meter from the RJ45 cable connector of the cable tester and wire receiver is faulty.
2. The middle part of the sequence displays "x", it means the RJ45 cable connector of the Cable Tester/wire receiver is normal, and there is a breakpoint 1 meter away from the RJ45 cable connector.
3. The middle part of the sequence is not communicated and does not display "x", it means the RJ45 cable connector of the Cable tester / Wire receiver is faulty, and the middle of the cable is normal.

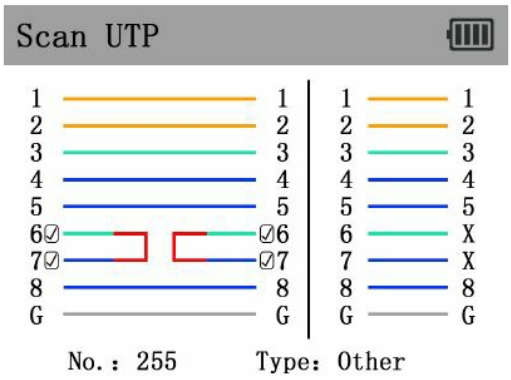
Short circuit detection

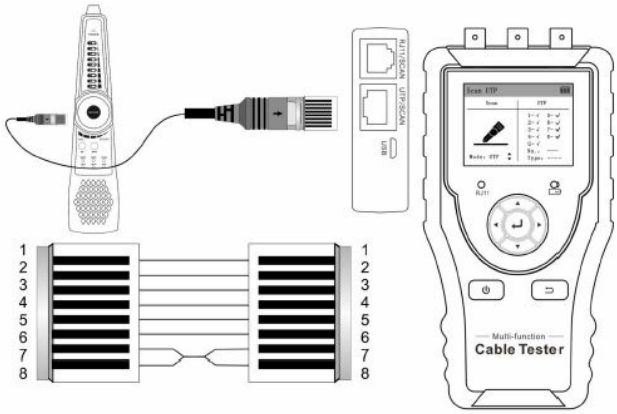
The cable not connect wire receiver end: If connect cable short short-circuited, the short-circuited indicator will flash. In the left side of the interface, the "√" means the RJ45 cable connector of cable tester and wire receiver is normal, the "x" means the RJ45 cable connector of cable tester and wire receiver or within 1 meter from the RJ45 cable connector of cable tester and wire receiver is faulty. As shown in the picture below, the 7 and 8 lines are short-circuited, the two RJ45 cable connectors is connected, so the two lines display "√" and the indicators are flash.





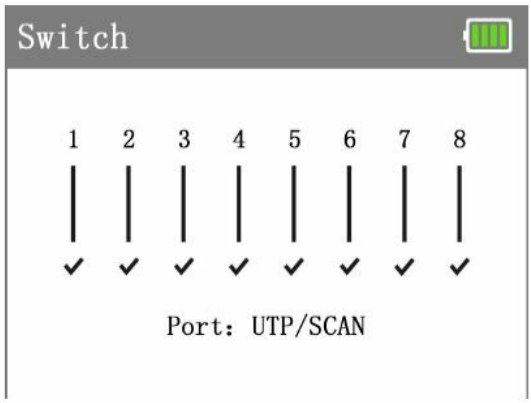
The cable connects the wire receiver end: If connect cable short circuit, the short circuit line will jump out, as shown in the picture below.

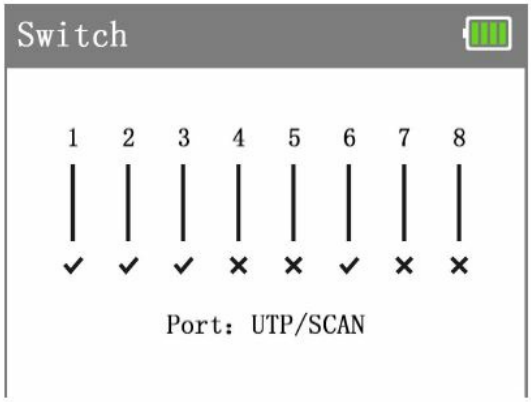




Continuity detection in the state of connected switches

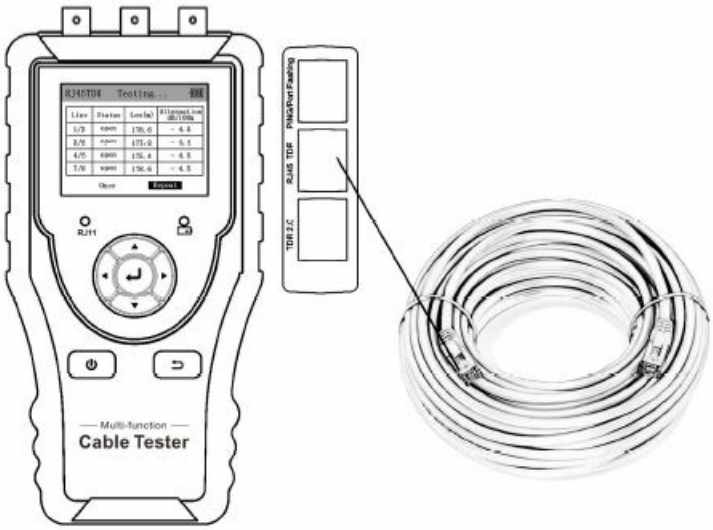
Can detect the switch sequence, and also detect the continuity between the cable tester port and the switch communication port. When connected to a switch, 1-8, G indicator indicates the continuity of the cable, the “√” means connected, and the “x” means disconnected (The 100M switch is 1236 line connected, and the 1000M switch is 1-8 lines connected). In this mode, connect one end of the cable to the LAN port of the cable tester, and the other end of the cable disconnects to the switch, also detecting the short circuit status of the network cable.





RJ45 cable TDR test

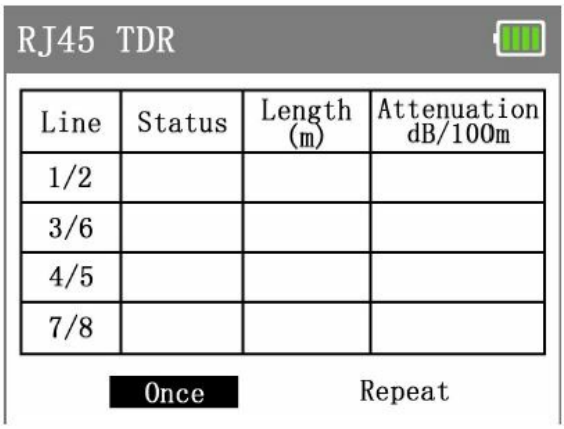
Connect network cable to cable tester’s RJ45 port, press key to RJ45 TDR icon and enter the interface.

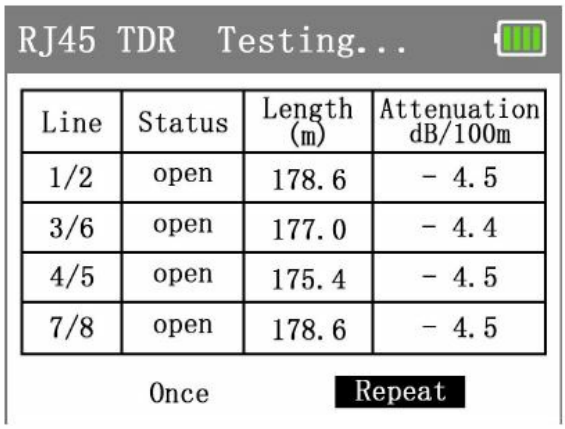


- **Single test:** Test cable status, length and attenuation.
- **Repeat test:** Continue to test cable status, length and attenuation.
- **Status:** After link up, the screen displays “online”, if not linked up or open circuit, the screen displays “open

circuit", if the cable pair is short circuit, the screen displays "short circuit".

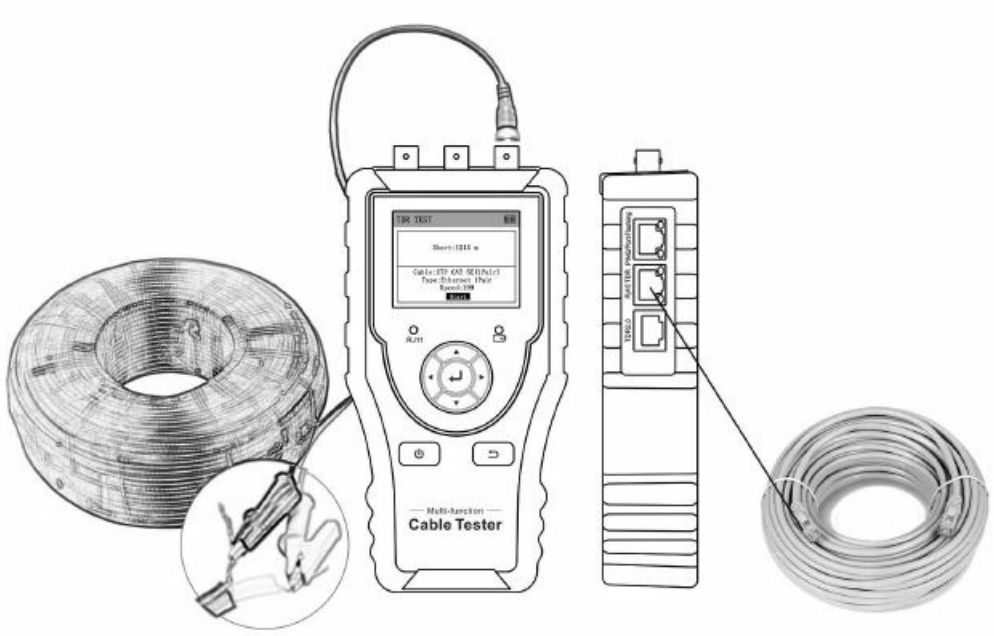
- **Length:** The max test length is 180 meters, when the cable is open circuit or short circuit, can test the cable length, if the screen displays "online", the testing result would be not accurate.
- **Attenuation:** The attenuation value will be displayed when the cable is over 10 meters.



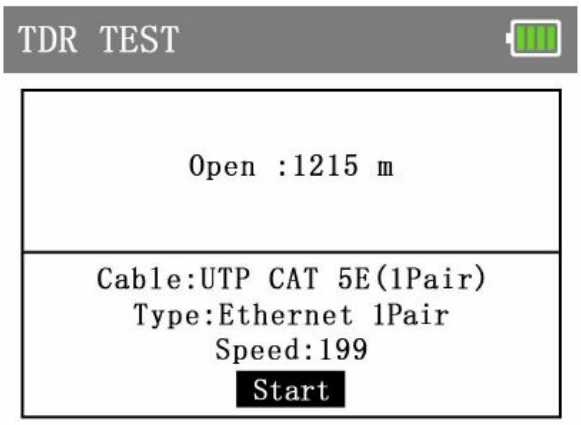


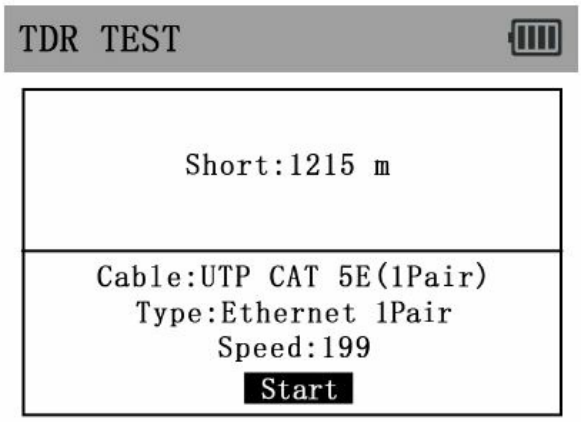
TDR 2.0 Test (Optional)

Note: The testing cable can't be connected to any equipment, otherwise it will damage the tester. Connect the Alligator clip cable to the TDR port, and the cable must connect well before testing, otherwise it will influence the accuracy. Connect the network cable to tester's TDR2.0 port.

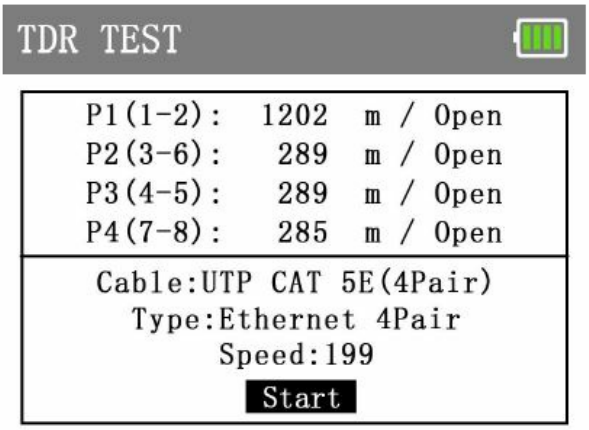


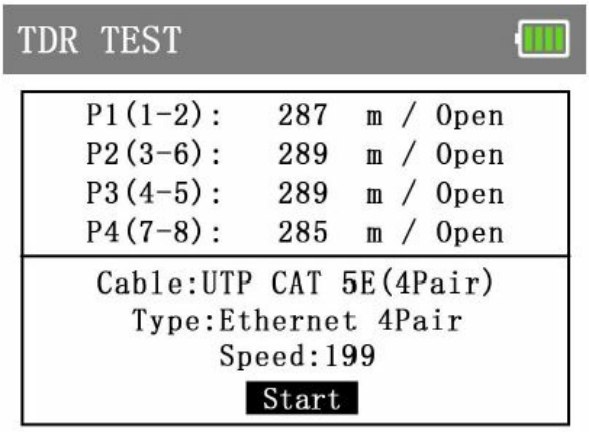
Press key to RJ45 TDR icon and enter the interface. Built-in BNC cable, network cable, RVV control cable, Telephone line and TVVB cable etc can test. 4 groups user-defined cable can be set.



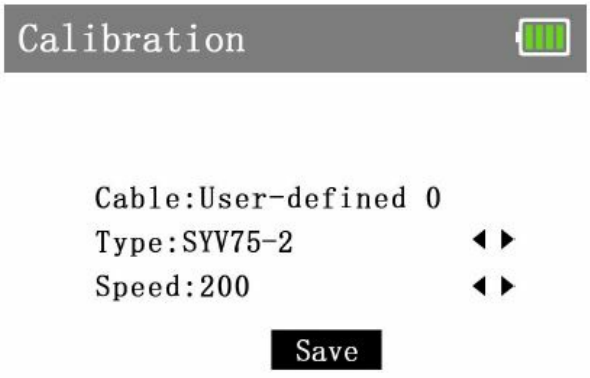


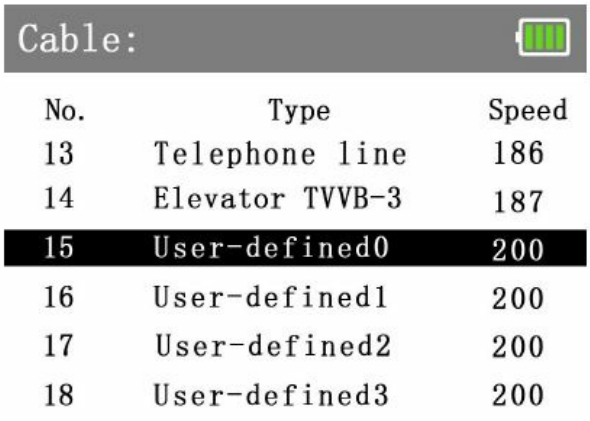
If want to test “UTP CAT 5E (4 pair) or UTP CAT 6E (Pair)”, please connect the cable to “TDR 2.0” port.





When select user-defined to test, please press  key to adjust the cable speed. User-defined calibration: Prepare one piece calibrated cable, the cable length must be over 50 meters, the better length is about 100-200 meters. Enter cable type interface, and select “User-defined”, total has 4 groups user-defined.





Press key to adjust the cable speed, when the screen display length and real length are the same, please select the start, then press to confirm. Press the to select the cable type, and press “Save” key to save the calibration data. When the cable have been calibrated, can select the corresponding name “User-defined x” to test this cable again.

Application: TDR test is the use of the pulse reflection method, to transmit a pulse signal for a tested cable, when a cable is open circuit or short-circuit, a reflected pulse is generated, the tester receives and deals with the reflected wave, and measurement results displayed on the screen. TDR can test cable open circuits and short circuits, and help engineers quickly find the cable’s problem location. It is more convenient and efficient to repair

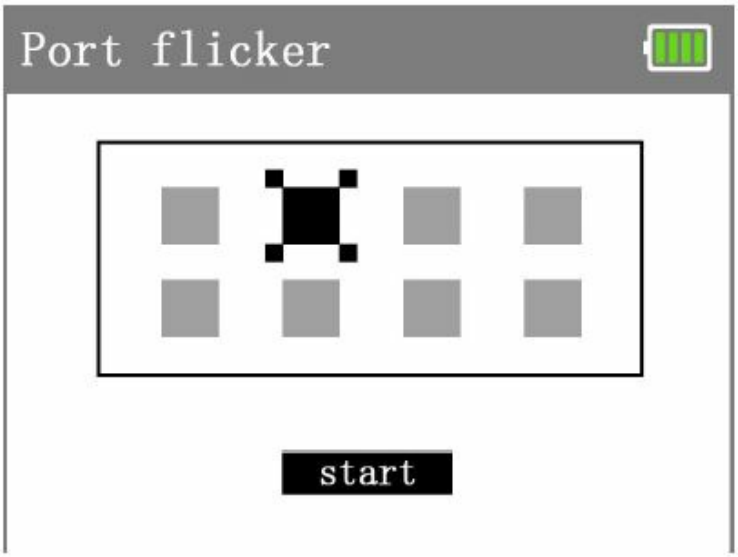
the faulty cable.

Note: The TDR reflect signal could be affected by the cable quality cable's not well connected etc to cause the different TDR measurement. The TDR measurement is for reference only.

Network test

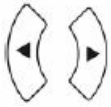
Port flicker

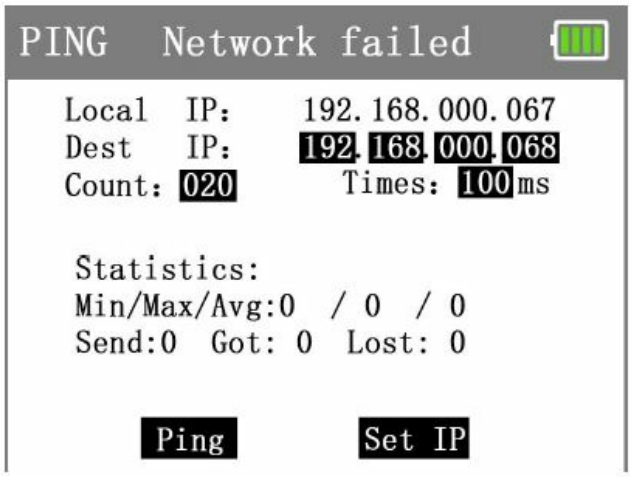
Connect a network cable to the meter's "PING/Port flashing" port, press key to "Port flicker" icon and enter to app interface.

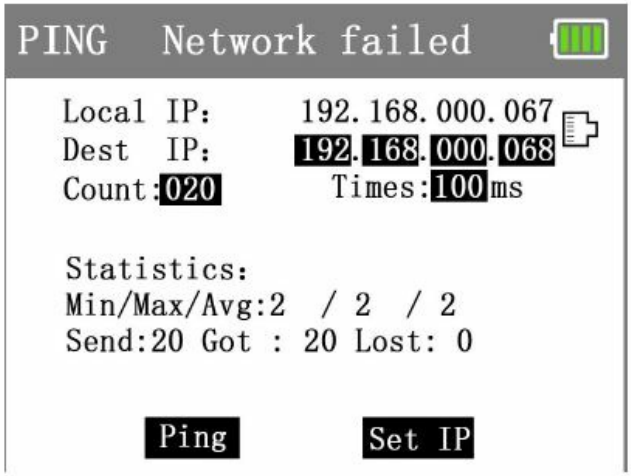


Press "Start" key, and the IP tester sends a unique signal to make the connected LAN port of the switch flash. If the tester and PoE switch are connected well, the LAN port of POE switch flash at special frequency, If not, no any changes on the LAN port.
Application: The tester will send special signals to make the connected LAN port flicker at special frequency, which will enable the installers to easily and quickly find the connected Ethernet cable. This function can prevent mistakenly insertion or disconnection of non-corresponding cables to artificially interrupt network connection.

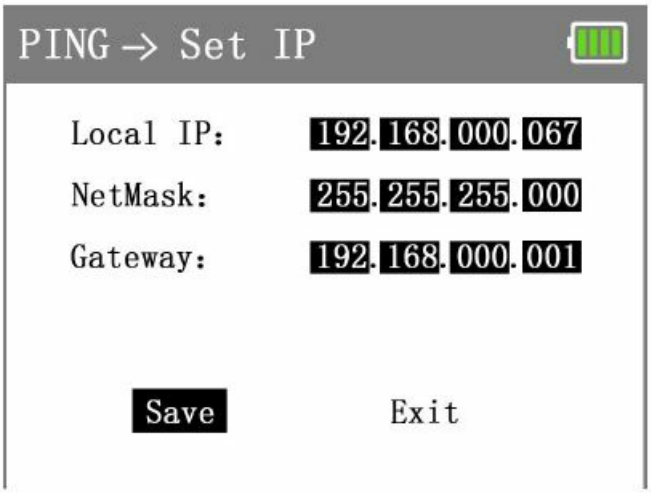
PING

- Connect a network cable to the meter's "PING/Port flashing" port, press the key to the "PING" icon and enter to app interface.
- Press  key to modify the IP address, package size, package time send package count parameter,etc.
- Press   key to adjust the value, and press  key to start the testing





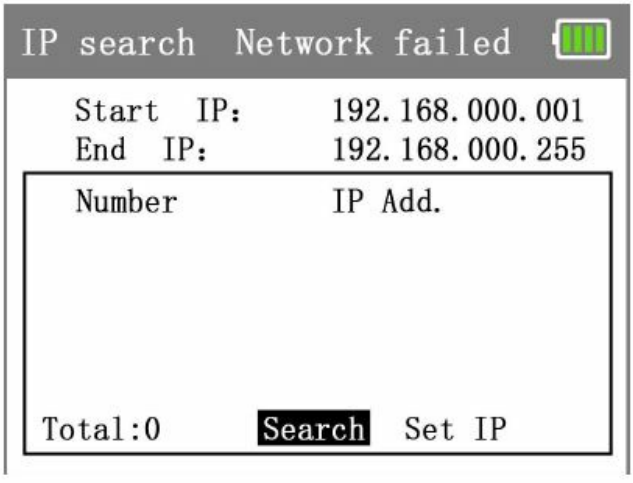
If the IP camera or network device is not configured properly or not plugged in, it will say “network failed”, send and received package number is 0, have 100% packet loss . If the tester connects to the device, it will say “network succeeded”, send and received package numbers are the same, and have a 0% packet loss.

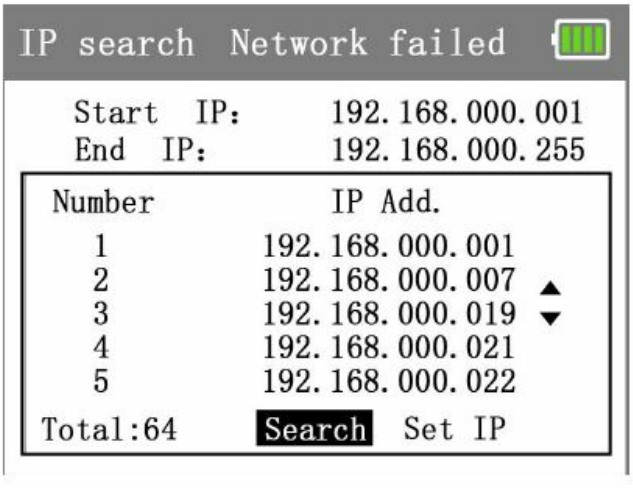


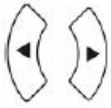
Application: PING testing is the most conventional network debugging tools. It is used for testing if the connected IP camera or other network equipment’s Ethernet port is working normally and the IP address is correct. Normally, the first data packet will be lost when test start.

IP search

Connect a network cable to the meter’s “PING/Port flashing” port, press key to “IP Scan” icon and enter to app interface.

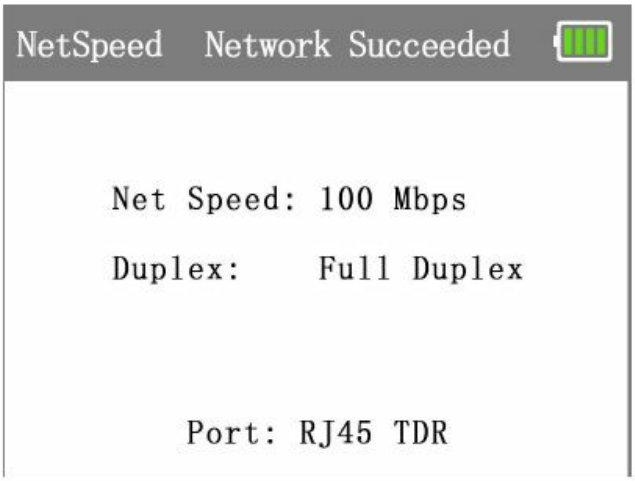


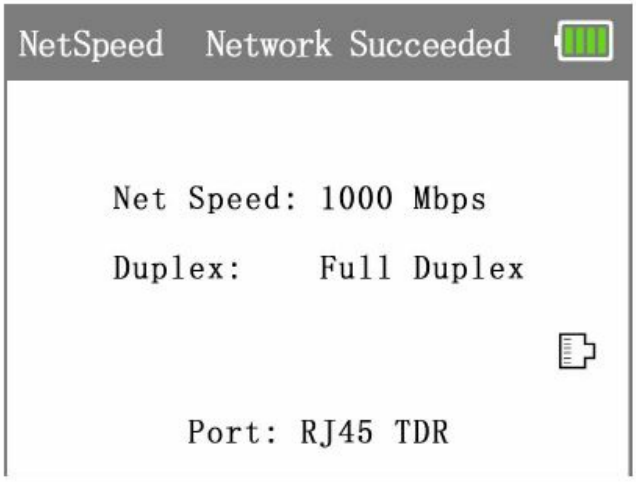


Press  key to “Set IP” function, press  to set the tester’s IP address, the tester’s IP address must be the same network segment as the scanned network equipment, and select the “Scan” and press confirm key, then can quickly search the IP address of the IP camera or other equipment connected to the tester.

NetSpeed

Connect a network cable to the meter’s “ RJ45” port, press key to the “NetSpeed” icon and enter to app interface.



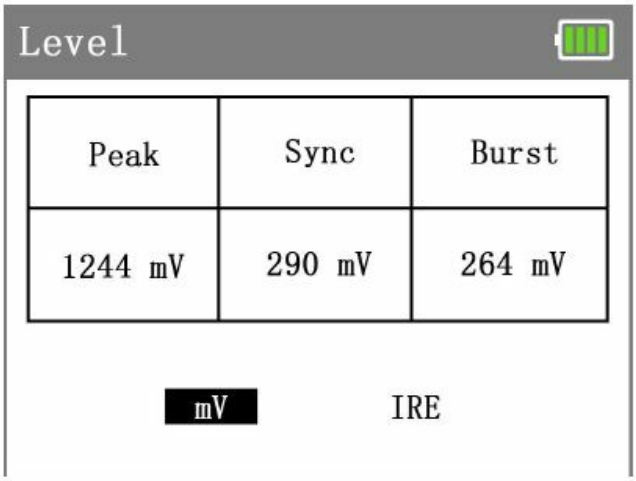


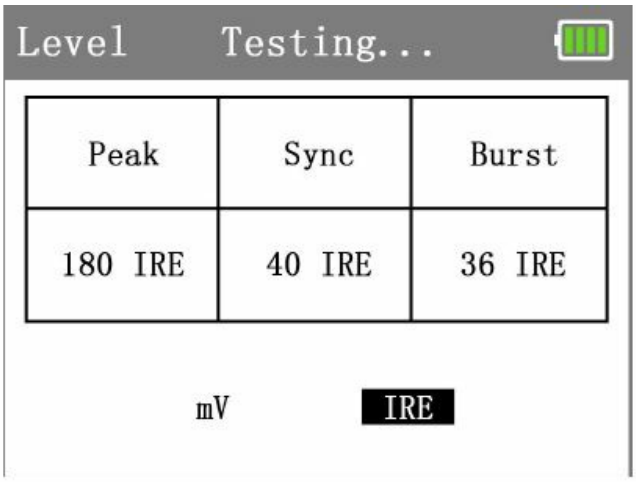
Connected to the tested IP camera or Ethernet device to tester, the top of the screen shows “network succeeded”, can automatically detect and identify information such as connection speed and duplex mode. If it says “network failed”, please check whether the connection port is correct and whether the connected device is working normally.

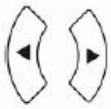
Video level meter test (Optional)

The Level value is an important indicator reflecting the signal quality and strength of the coaxial HD video image. The meter detects the peak, sync and burst level of TVI, CVI, AHD, CVBS video signals in real time. Connect the CVI/TVI/AHD/CVBS camera to tester’s “LEVEL” port.

Press key to “level” icon and enter to app interface, the tester will auto start testing, the top of screen will display “Testing”, and auto-display the peak level, sync level and burst level.

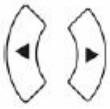




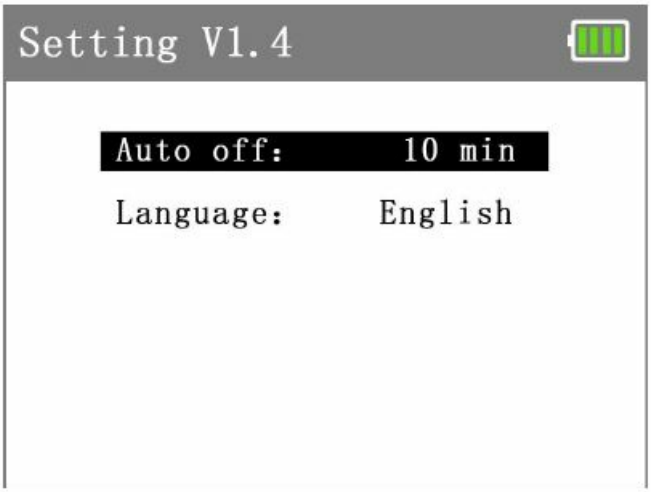
Press  key to switch the MV and IRE (Institute of Radio Engineers) mode, NTSC format uses IRE as the unit of measurement, and PAL format uses mV as the unit of measurement. If the cable too long, it will cause the video signal attenuation, the image will be dim and reduce the dynamic range of the image. If the video signal is too strong, it will cause ghost images and reduce the resolution of the image.

Other functions

Setting

Press key to the “Setting” icon and enter to app interface, press  key to select the function. Press  key to adjust the value, press  key to save and exit, press  key to cancel and exit the setting.

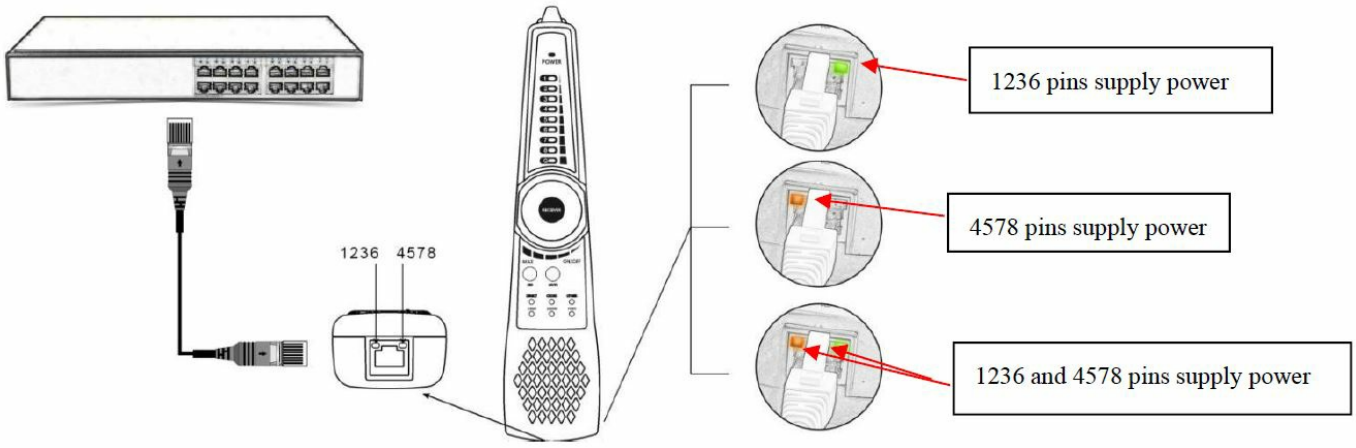
- **Auto-off:** The meter can set 10-120 minutes auto power off, or close the auto power off function. If the user not use the tester in setting time, the meter will be turned off.
- **Language:** Chinese and English



PD powered detected

PoE switch or PSE power supply device connected to the “PD” port of the wire receiver, if the indicator light is on, it means the PoE voltage output working normally. There are 2 indicator lights of the “PD” port, when testing the pins used of the PoE switch for the power supply, if the 1236 indicator light is ON, it means PoE switch supplies power through Pin 1236. If 4578 indicator light is ON, it means PoE switch supplies power through pins 4578. If

the 1236 and 4578 indicator lights are ON, it means the device power supply through pins 1236 and 4578. If the indicator light is lighting on, that is a non-standard PoE. If the indicator light is flashing, that is standard PoE. It also supports 24V and 48V PoE supply power devices. The lamp brightness of 24V PoE is relatively dark, and the lamp brightness of 48V PoE is relatively bright.



Application: Checking the pins used of PoE switch or other device for power supply, to avoid cause cannot supply power or camera and other device damaged. Can detect the voltage of POE power supply device, PoE is standard or non-standard.

Telephone status

Telephone status detection: If the telephone status is, please turn off the cable tester. The RJ11 indicator light flash is ringing, the indicator light on is standby, the indicator light off is off-hook. Positive/negative polarity detection: Turn off the cable tester, the red and black alligator clip of RJ11 to clip the cable. If the indicator light is red, that means the red wire clip is positive, and the black wire clip is negative. If the indicator light is green, that means the black wire clip is positive, and the red wire clip is negative. The level is higher, the indicator light is brighter, if the level is lower, the indicator light is darker.

Specification

LCD	Item series	LT-1200
	Display	2.4 inch TFT-LCD screen, 320×240 resolution
Cable test and cable tracer	UTP cable test	Test the UTP cable's sequence, type and remote kit, quickly detect the near-end, mid-end and far-end fault points of RJ45 cable connector
	Cable type	RJ45 Twisted pair, RJ11 telephone line, BNC cable etc.
	The fault of RJ45 cable connector	Can determine the fault point of RJ45 cable connector from LOCAL/Remote indicator light

RJ45 TDR cable test	Test cable pair status, length, attenuation, reflectivity, impedance, skew etc. measurement range 180M.
TDR cable test	Can test break point and short-circuit of cat 6e/5e (4 pairs), power line, BNC cable and Telephone line, etc. the MAX. 1.2km length. **(Optional)**
Port flashing	Can search the Ethernet switch port which connects the meter
PING test	Check whether IP camera or other network equipment's Ethernet port is working normally, the IP address is correct.
IP Scan	Quickly find the IP address of the IP camera or other network equipment connected to the meter
Link Monitor	Quickly identify the connected network port (10/100/ 1000M) and duplex mode (full duplex / half duplex).
External power supply	DC 5V/1A
Battery	Built-in 3.7V Lithium Ion battery, 2000mAh.
Rechargeable	After charging 3 hours, the normal working time 16 hours
Auto-off	1-30 (mins)
Working Temperature	-10℃—+50℃
Working Humidity	30%-90%
Dimension/ Weight	126mm x 83mm x 33mm / 0.34kg

WARM TIP:

1. The above data is for reference only, and you will not be notified in advance of any changes in the data.
2. For more detailed technical inquiries, please feel free to contact our After-sales service department (**sales@testerpro.com.cn**)

Documents / Resources

	WANLUTECH CT-66 Multi Function Cable Tester [pdf] User Manual CT-66 Multi Function Cable Tester, CT-66, Multi Function Cable Tester, Function Cable Tester, Cable Tester, Tester

References

- World leading CCTV Tester, Cable tester, Fiber tester original manufacturer
- User Manual

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