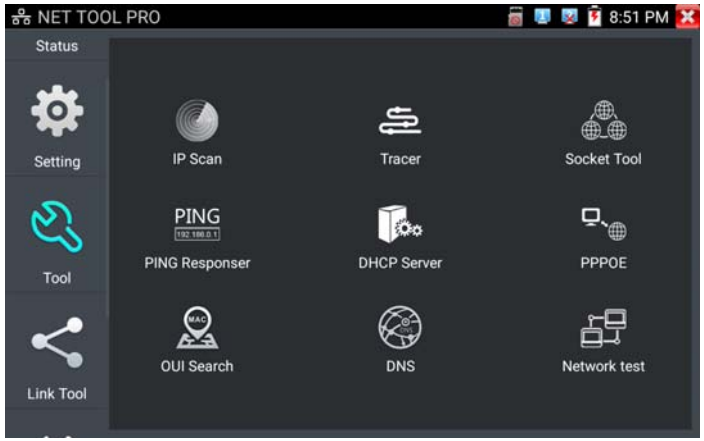
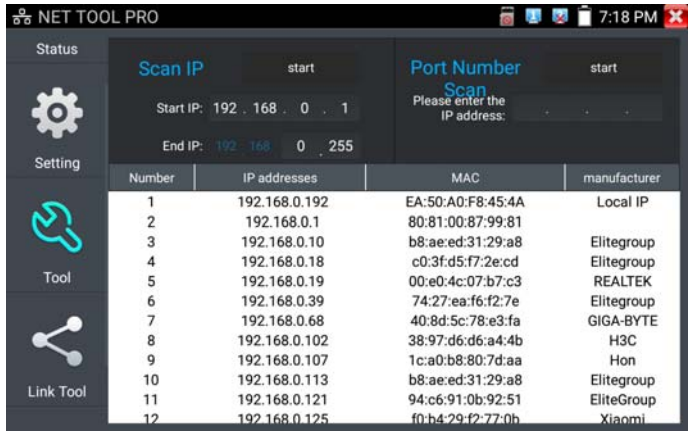
3.3.19 NET TOOL PRO

NET TOOL PRO-Cable Test, Wireless Tool, Link Tool, Full Duplex Detection, PING, IP Scan, DHCP Server, PPPOE, OUI Search, Socket Tool, DNS, LLLDP.



（1）IP address scan

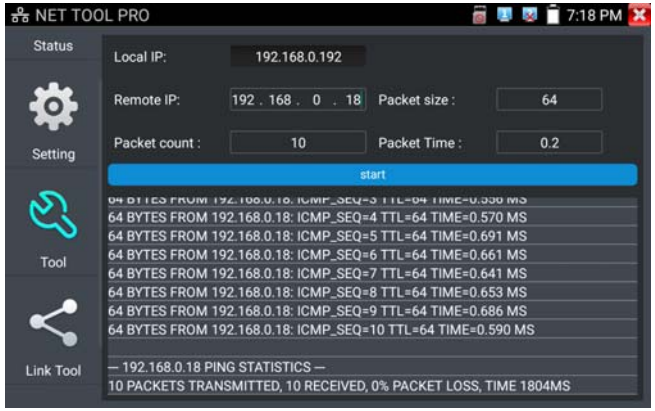
Connect the cable to the LAN port. Set your IP address search range by changing the Start and End IP addresses. Click the "Start" button to scan the IP address range. You can also input an IP address in the Port Number Scan to scan for open ports.



（2）PING Test

PING is the most conventional network debugging tool, 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.

Connect a network cable to the LAN port and click the  icon to open the PING tool. You can set your LOCAL (native) IP address, Remote IP address (e.g. IP camera), Packet count, Packet Size, Packet time and Timeout. Press "Start" to start pinging. If the IP camera or network device is not configured properly or not plugged in, it will say "Destination host unreachable" or "have 100% packet loss". If the tester connects to the device, the send and receive packets will 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.

It's normal that the first data packet will be lost when test start.

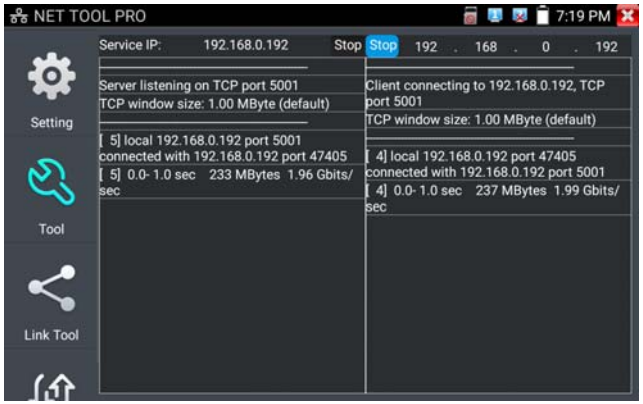
（3）Network test (Ethernet bandwidth test)

To use the Network tester, you will need two IP testers. One is used as a Server and the other as a Client. Both devices must be on the same network segment in order to communicate. Click the  icon to open the Network Tester app.

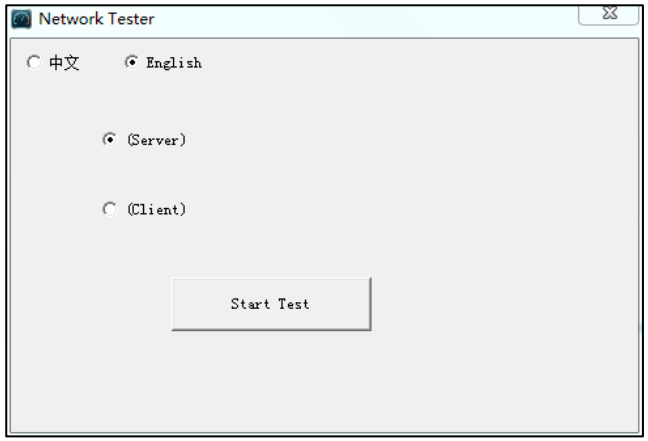
When test, need a tester or a computer installed Network Test Software as the Server, the other tester sends packet test. The two testers must be in the same network segment.

a). Start the server: Click "Start Server" button to use the tester as a Server. It will display its IP address at the top of the screen.

b). Start send packet test: Using the other IP tester, type in the Server's IP address at the top right corner of the screen. This app is used to send packets for network speed testing. Click the "Start" button to send the packets and start testing.

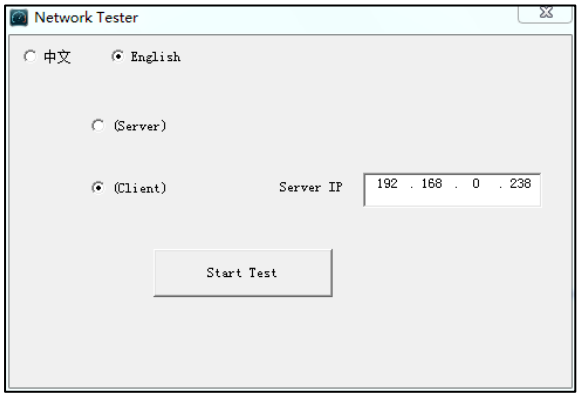


Network bandwidth testing can also be tested with a computer using compatible network bandwidth testing software. Install network bandwidth testing software on a computer, as a test Client or Server, to do the mutual testing with the tester. If use computer as the server, the computer IP address is :192.168.0.39



Tester as Client, tester's IP address is:192.168.0.238. The Server and the Client are at the same network segment, but with different IP address. Input Server's IP address 192.168.0.39 in the tester and click "Start" to test network bandwidth.

Or use tester as a Server, computer as test Client（select Client, input tester's IP address to test）



When use tester as Server, shows results:

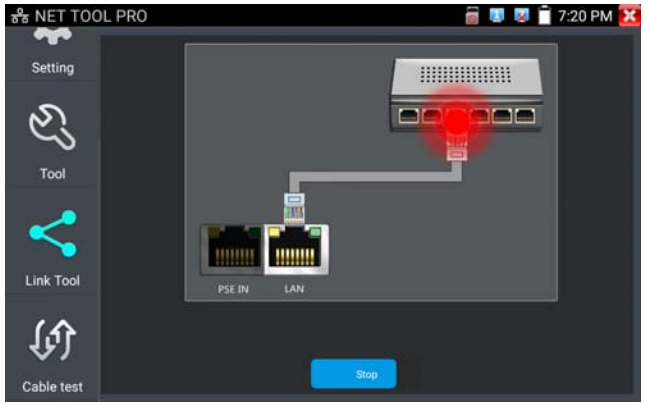
（4）Port Flashing

Connect a network cable to the meter's "LAN" port, click the icon  to open the Port Flashing app.

Click "Start". 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 non-corresponding cable to artificially interrupt network connection.

（5）DHCP server

Click on the DHCP icon to open the DHCP server app. Select the "Start" check box at the top and make any desired changes to the network settings. Click "Save" to start assigning dynamic IP addresses for IP cameras and other networked devices. Click the "Refresh" button to check your Client list.

（6）Trace route

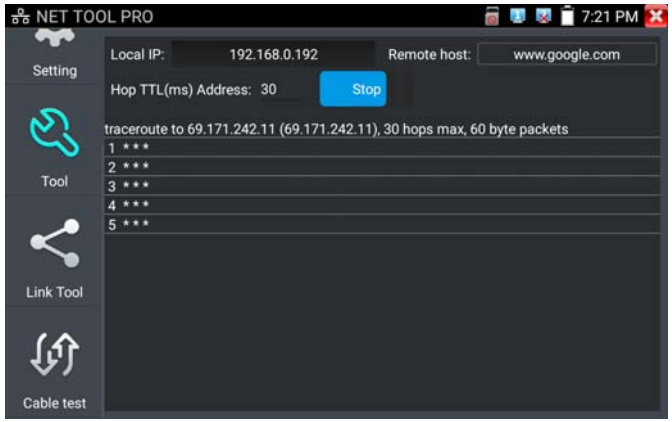
It is used to determine path of the IP packet access target.

Note: Trace route testing results only for reference, for accurate test route tracking, Please use professional Ethernet tester.

Click  to enter trace route

Input tracking IP address or domain name in the Remote Host IP. Set maximum hop count, normally default is 30

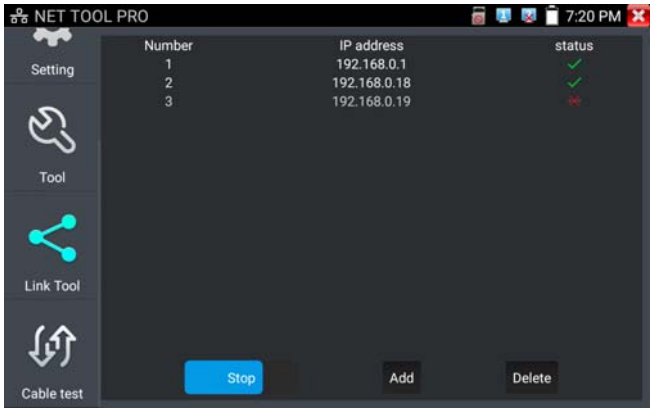
Click "start" to trace the goal address



（7）Link monitor

Click the  icon to open the Link Monitor app. This app is used to see if an IP address is occupied by other network devices. This will avoid new address conflicts

Click "Add " and enter the desired IP address. To test different network segments, click the "Settings" icon on the main menu and go to IP Settings and make the desired changes. Once the desired IP addresses are added to the Link Monitor list, click "Start". If the IP address status shows a check mark the IP address is occupied. If the IP address status shows an X the IP address is available. Click "Stop" to stop the testing



Application:

Add an IP camera or other network device to the current network group, the new IP address must not be occupied, otherwise it will cause IP conflicts and stop the equipment normal working. Link monitor can check if the new setting IP address is occupied.

3.3.20 PoE power / DC12V 3A and DC 5V 2A USB power output

When the tester is turned on, the DC 12V and DC 5V power output functions are automatically turned on. If the IP tester is turned off, the DC 5V USB can still be used to power an external USB device.

To use the PoE Power Output function, click on the icon  and change the switch "ON" or "OFF". The IP camera needs to be connected to the LAN port before you turn PoE Power on. If the IP camera Supports PoE, the PoE power is delivered via pins 1, 2, 3, and 6 on the LAN port. The IP tester will display "48V ON" at the top of the screen when the POE power is still on.

Note:

1. Don't input power into the "DC12/3A OUTPUT" port.
2. Don't output this DC12V/3A power to the DC12V/IN port of the IP camera tester to avoid destroy
3. The IPC tester power output is close to 3A, if the IP camera's power is over 3A, the tester will auto enter protection mode. Disconnect all the connections of the tester and then connect the tester with power adaptor to resume the tester.
4. Before turning on the PoE power output, please make sure the IP camera supports PoE power. Otherwise it may damage the IP camera.
5. Make sure you plug in your IP camera to the LAN port prior to turning on PoE power
6. Make sure the tester is full charged or more than 80% charged, otherwise the tester will shows "low power", "not able to supply power".

3.3.21 DC 24V 2A power output

The top and the bottom of the "DC24V ON/0W "is power output interface

Application:

Power output function is mainly used in the camera field demonstration and testing, meanwhile, for some camera installation sites, if there is no power outlet, the tester can offer temporary power for

the camera.

Notice:

a. Don't input any power into the "DC24V/2A OUTPUT"port of the tester to avoid destroy. Man-made damage is not within our company's warranty

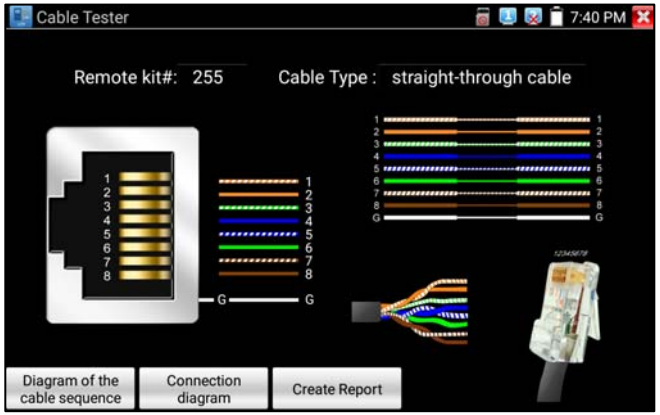
b. Don't output this DC24V/2A power to DC12V/ IN port to avoid destroy. otherwise the tester will damage, and man-made damage is not within our company's warranty.

c. The IPC tester power output is close to 2A, if the IP camera's power is over 2A, the tester will auto enter protection mode. Disconnect all the connections of the tester and then connect the tester with power adaptor to resume the tester.

d. Make sure the tester is full charged or more than 80% charged, otherwise the tester will shows "low power","not able to supply power"

3.3.22 Cable Test

Click icon  to enter



Test LAN cable or telephone cable.

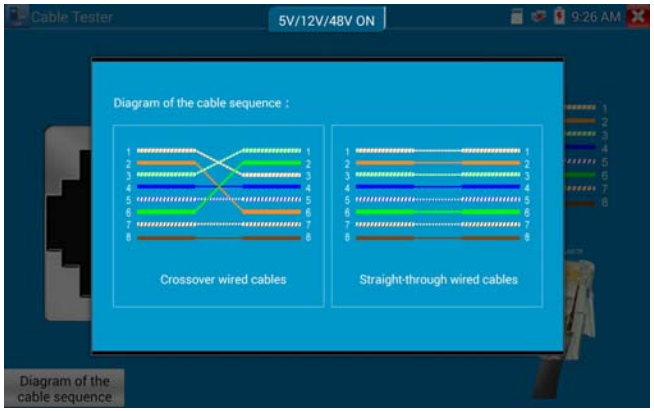
Connect LAN cable or telephone cable with the CCTV tester and cable tester. And then the connecting status, cable type and the sequence of wires as well as the serial number of the cable tester kit will be displayed.

The number of the cable tester is 255.

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

Cable test

Tap "cable test sketch map", pop up Straight-through cable and crossover cable sketch, It is for line sequence reference, when the crystal on the first pressure in the twisted-pair.



3.3.23 RJ45 cable TDR test

Connect cable to tester's LAN port, click icon " " to enter RJ45 cable TDR test app.

Single test: Test cable status, length and attenuation.

Repeat test: Continue to test cable status, length and attenuation.

Status: After link up, screen display "online", if not link up or open circuit, screen display "open circuit", if cable pair is short circuit, screen display "short circuit".

Length: The max test length is 180 meters, when cable is open circuit or short circuit, can test the cable length, if screen display "online", the testing result would be not accurate.

Cable quality test: Green is good quality cable, Yellow is Poor quality cable, Red is water poured cable, the attenuation value will be displayed when cable over 10 meters.

Advanced Test: Test cable pair status, length, attenuation, reflectivity, impedance, skew and other parameters.

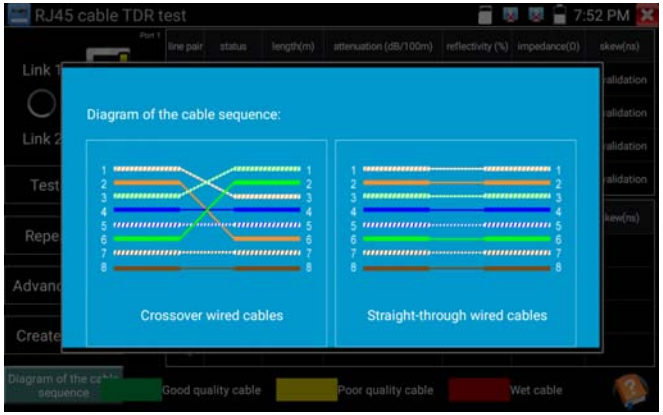
Attenuation reflectivity: After link up, if reflectivity value is 0, it is the best quality communication

Impedance: After link up, if the impedance value is 100Ω, it is the best quality communication, the range is generally in 85-135Ω.

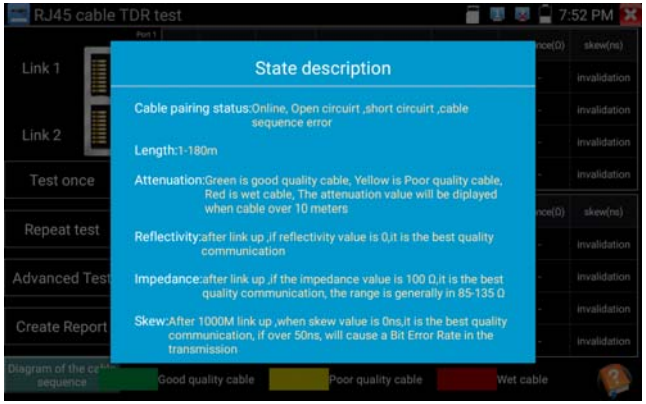
Skew: After 1000M link up, when skew value is 0ns, it is the best quality communication, if over 50ns, will cause a Bit Error Rate in the transmission.

Cable sequence diagram:

A straight- through and cross-over cable diagram, the cable sequence display for reference.

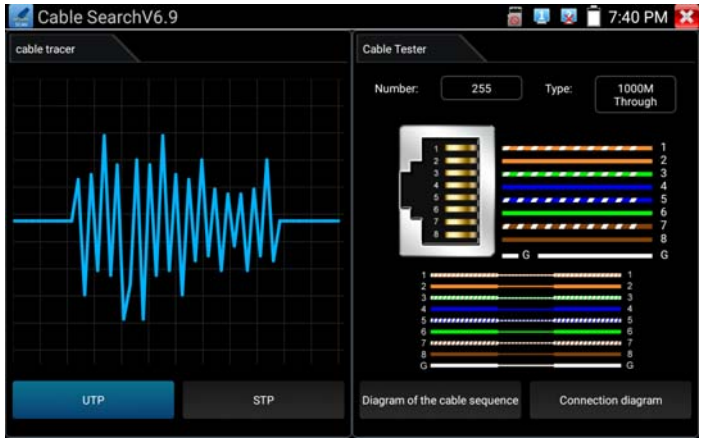


Click "Help" to check the instruction of all parameters.



3.3.24 Cable Tracer (*Optional)

Connect tested cable or BNC cable to the UTP port or the CABLE SCAN (VIDEO OUT) port on the bottom. Click icon  to enter, click the Number on the screen to adjust audio type.



UTP mode is used for searching the normal network cable or other cables. STP mode is used for searching the shielded network cable.

Rotating the switch of cable tracer to turn on. Clockwise rotation increases sensitivity, anticlockwise rotation reduce sensitivity.

Cable tracer and Cable tester can be tested at the same time. It is better to judge whether the search network cable is accurate. Connect the other end of the tested network cable to the "UTP" port of cable tracer, the cable sequence, continuity, test box number and network cable type will be displayed on the right side of the meter interface. The "G" indicates the continuity of the shielded network cable.

The 1-8 indicators of cable tracer will flash according to the cable sequence. The DIRECT / CROSS / OTHER three indicator lights display the type of network cable directly.

Press the "MUTE" button of cable tracer for 2 seconds. After the "Di" sound, the silent mode is turned on. In the silent mode, can judge cable type according to the indicator light. Press the "MUTE" button again to exit the silent mode.

Application

It's convenient for people to find out the other end of the cable from the messy cables in security maintenance and network engineering.

While searching BNC cable, connect one port of the alligator clips to the copper core or copper net of the BNC cable, the other one to connect the earth wire (barred windows).

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

Note: While the cable tracer tester is receiving the audio signal from the tester, it may be influenced by other signals and make some noise.

3.3.25 TDR cable test (*Optional)

Note: The testing cable can't be connected to any equipment, otherwise it will damage the tester.

Connect Alligator clip cable to the TDR port, and the cable must connect well before testing, **otherwise** it will influence the accuracy. Built-in BNC cable, network cable, RVV control cable, Telephone line and TVVB cable etc can test. 11 groups user-defined cable can be set.

(1) Curved trajectory

1) Curve result analysis

Inflection point: The position of break point or short-circuit of the cable, is where curve suddenly rises or falls after the smooth curve.

Short circuit: The curve shows an upward trend after the inflection point

Open (break point): The curve shows a downward trend after the inflection point

2) Curve operation

Zoom: Zoom the curve. Click icon "zoom", tap the curves by two fingers or use virtual keyboard (tap the icon of the screen left edge, to call virtual keyboard)

Move: Move curve, click icon "move", and drag the curve to move.

Distance bar: Display the current length, and use the virtual keyboard to move distance bar.

Curve thumbnail: Double-click the thumbnail, to restore the scaled curve

(2) Calibration

Due to differences in production processes and materials, the cable impedance of different manufacturers may be different, which will lead to large deviations in the test results. The Calibration function can be used at this time.

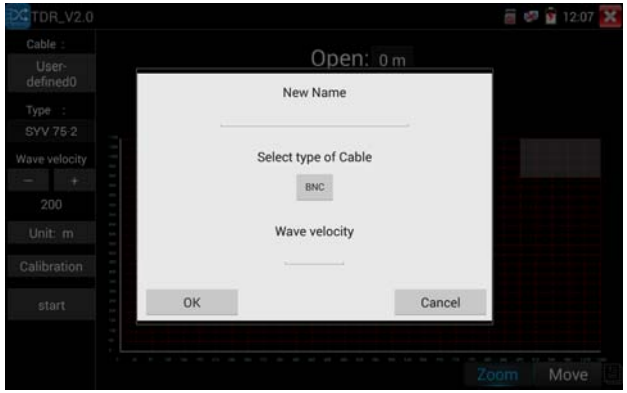
Click "Cable" "Type" to select cable and start testing. One tap on "Start", do one testing. If select built in cable type for testing, click "+" and "-" to adjust cable's wave speed.

User-defined calibration: Choose the cable 100 meters to 200 meters (more than 50 meters), click "Cable", "Type" to select user-defined 1 for calibration, 11 groups user-defined can be set.

1. Select user-defined and click "Calibration" to enter test, click "user-defined 1" can define cable name, such as: AiPu BNC-5

2. Click "Cable", "Type" to select cable, and corresponding type, for example, if testing BNC cable, select "BNC", if testing communication cable 75-2, select SYV 75-2.

3. Click "+" or "-" to adjust wave speed, while display length is the same with the actual Length, click "Save" to save calibration data. It can be used for the same cable testing next time.



Application: TDR test is the use of pulse reflection method, to transmit pulse signal for tested cable, when cable is open circuit or short-circuit, reflected pulse is generated, the tester receives and deals with the reflected wave, measurement results displayed on the screen. TDR can test cable open circuit and short circuit, help engineer 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.**

3.3.26 BNC attenuation test (*Optional)

Introduction: Through hardware high-speed sampling and processing technology, the coaxial cable transmission attenuation value can be tested in real time, which can be used to detect the attenuation of the coaxial cable through long-distance transmission and the attenuation value of different cables but at the same distance, and can detect the quality of coaxial cable.

Test Methods:

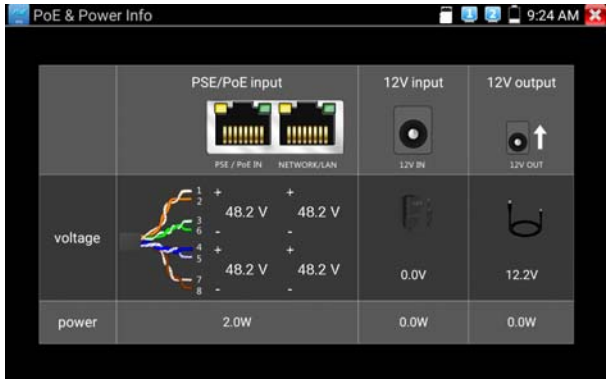
1.Connect the two alligator clip cables to the CVBS IN port and CVBS OUT port separately. Two crocodile clips red to red and black to black clip together, then click "calibration" to calibrate it.

2.After calibration, the red clip clips the copper core of the BNC cable, and the black clip clips the outer envelope of the BNC cable. attenuation value will be displayed after connection, as below:

3.Click "Reset", the application will restore factory defaults.

3.3.27 PoE Voltage test

Click icon  to enter PoE voltage measurement



Connect a network cable from a PoE switch to the IP tester's PSE IN port. Connect an IP camera or other PoE using node to IP tester's LAN port, the PoE voltage and the cable's pin connection status show on the screen.

Note: This test if for measuring the voltage being drawn by the PoE node and the IP tester must be between the PoE switch and the PoE node for this test to work.

Note: The PoE switch must be connected to the PSE IN port. The powered device such as IP camera or other PoE node must be connected to the LAN port.

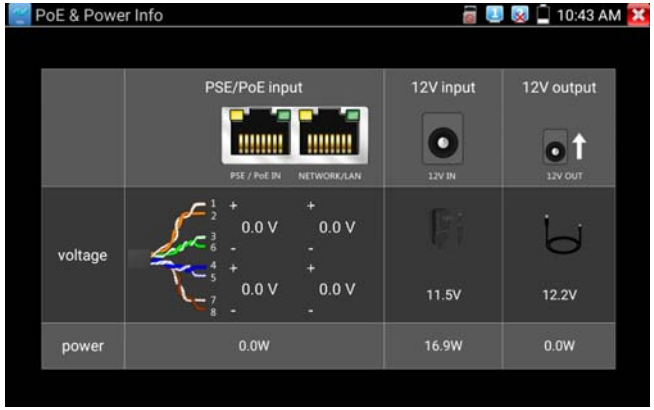
Note: Do not connect PoE power supply equipment (such as a PoE switch) to the tester's UTP/SCAN port, otherwise it will damage the tester.

PSE transmission

When PoE / PSE voltage testing, PoE/PSE conntect to the tester's PSE "IN" port, the camera connect to tester's LAN port, tester not only can transmit voltage to supply power for camera, but also transmit data at the same time. as well as the computer connect to the PoE/PSE, it can log in connected tester's PoE camera.

3.3.28 12V power input test

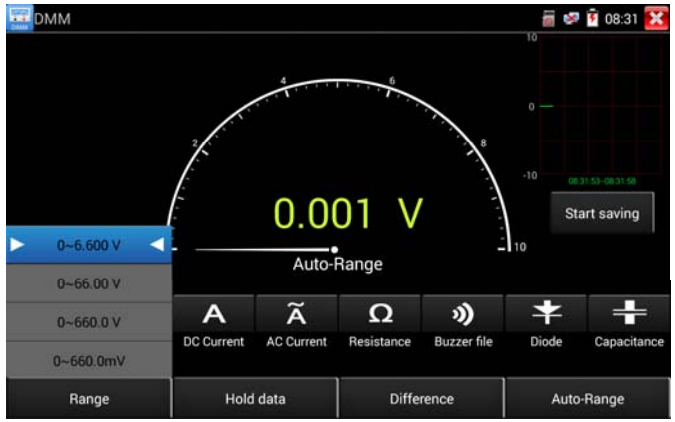
Connect 12V power adaptor to tester's charging port, then click icon "PoE" to enter voltage measurement app, screen show the current adaptor input voltage and power. Note: the current 12V input measured power is the battery charging power and the device working power, the measured power will change depending on the different of battery power and backlight brightness.



Warning: Not allow connect device with input power over 17V to tester "12V IN" port, otherwise it will damage the machine.

3.3.29 Digital Multi-meter (*Optional)

Click icon to enter.



1) SYMBOLS:

U: DC Voltage Measuring A: DC Current Measuring

Ω: Resistance Measuring : Diode Testing

U: AC Voltage Measuring A: AC Current Measuring

: Continuity Testing : Capacitance Measuring

AC/DC	Voltage and current measurement state display
Auto- range	The Multimeter auto adjust the range by input signal or tested components
Data hold	Hold data
Relative measurement	Display the relative measurement value Press the key to change display state
10A socket	In 10A current measurement state ,indicate use 10A socket
Over range	The current measurement value over the range, if in the Auto range state, to switch Auto.

2) OPERATING INSTRUCTION

A. DC Voltage Measuring

WARNING!

You can't input the voltage which more than 660V DC, it's possible to show higher voltage, but it's may destroy the inner circuit.

Pay attention not to get an electric shock when measuring high voltage.

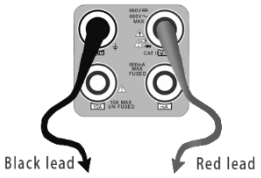
a. Connect the black test lead to the "COM " jack and the red test lead to the "V/Ω" jack.

b. Select U, enter the DC voltage measurement.

c. the tester default Auto range status ,by click "DC auto range" , press the key can select manual range and restore auto range .

Manual range: 0.000V → 6.600V range

00.00V → 66.00V range



000.0V → 660.0V range

000.0mV → 660.0mV rang

B. AC Voltage Measuring

> **WARNING!**
>
> You can't input the voltage which more than 660V AC, it's possible to show higher voltage, but it's may destroy the inner circuit.
>
> Pay attention not to get an electric shock when measuring high voltage.

a. Connect the black test lead to the "COM" jack and the red test lead to the "V/Ω" jack.

b. select U ~ , enter the AC voltage measurement.

C. The tester default Auto range status, by click "AC auto range"

d. Manual range can be select, press the key "NEAR" to restore Auto range

e. Manual range: 0.000V → 6.600V range

00.00V → 66.00V range

000.0V → 660.0V range

000.0mV → 660.0mV range

C. DC Current Measuring (only manual range)

> **WARNING!**
>
> Shut down the power of the tested circuit, and then connect the meter with the circuit for measurement.

a. Connect the black test lead to the "COM " jack and the red test lead to the "mA" jack for a maximum of 660mA current. For a maximum of 10A, move the red lead to the 10A jack.

b. Select **A,** enter the DC current measurement, the screen display"DC current ", can select manual range.

c. Manual range: 0.000mA → 6.6mA range

00.00mA → 66.00mA range

000.0mA → 660.0mA range

00.00A → 10.00A range（use 10A socket）

d. Select the range to enter current measurement

NOTE:

◆ When only the figure "OL" is displayed, it indicates over range situation and the higher range has to be selected.

◆ When the value scale to be measured is unknown beforehand, set the range selector at the highest position.

◆ The maximum current of mA socket is 660mA, over-current will destroy the fuse, and will damage the meter.

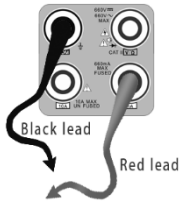
◆ The maximum current of 10A socket is 10A, over-current will destroy the meter, and will damage the operator.

D. AC Current Measuring (Only Manual range)

WARNING!

Shut down the power of the tested circuit, and then connect the meter with the circuit for measurement.

a. Connect the black test lead to the "COM" jack and the red test lead to the"mA" jack for a maximum of 660mA current. For a maximum of 10A, move the red lead to the 10A jack.



b. Select $\tilde{A}$, enter the AC current measurement, manually select the range.

c. Manual range: 0.000mA → 6.600mA range

00.00mA → 66.00mA range

000.0mA → 660.0mA range

00.00A → 10.00A range（use 10A socket）

Note:

◆ When only the figure "OL" is displayed, it indicates over range situation and the higher range has to be selected.

◆ When the value scale to be measured is unknown beforehand, set the range selector at the highest position.

◆ The maximum current of mA socket is 660mA; over-current will destroy the fuse, and will damage the meter.

◆ The maximum current of 10A socket is 10A, over-current will destroy the meter, and will damage the operator.

◆ In" AC " mode, only can input "AC ", if not, will damage the meter.

E. Resistance Measuring

WARNING!

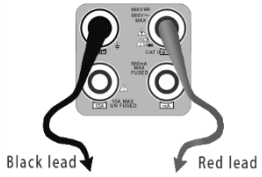
When measuring in-circuit resistance, be sure the circuit under test has all power removed and that all capacitors have discharged fully.

a. Connect the black test lead to the "COM " jack and the red test lead to the "V/Ω" jack.

b. Select Ω, enter the Ω measurement

the tester default Auto range status, Press the key manually select range, press "NEAR" to restore "Auto range"

Manual range: (Connect the red lead to black leads, will display the measure range)



000.0Ω → 660Ω range

0.000 KΩ → 6.600KΩ range

00.00 KΩ → 66.00KΩ range

000.0 KΩ → 660.0KΩ range

0.000 MΩ → 6.600MΩ range

00.00 MΩ → 66.00MΩ range

F. Continuity Testing

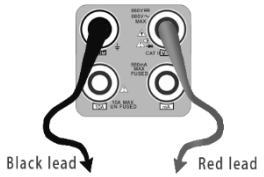
WARNING!

When testing the circuit continuity, be sure that the power of the circuit has been shut down and all capacitors have been discharged fully.

a. Connect the black test lead to the "COM" jack and the red test lead to the "V/Ω" jack.

b. Select , enter the continuity test, Connect test leads across two point of the circuit under testing.

c. If continuity exists (i.e., resistance less than about 50Ω), built-in buzzer will sound.



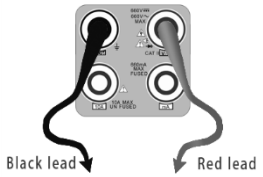
G. Diode Testing

WARNING!

The capacitance of a capacitor should be tested separately, should not test in the installation of circuit.

a. Connect the black test test lead to the "COM" jack and the red test lead to the "V/Ω" jack. (the red lead anode "+")

b. Select , enter the diode testing.



c. Connect test red lead across to the anode, the black lead to the cathode of the diode under testing.

d. Connect test red lead across to the cathode, the black lead to the anode of the diode under testing.

e. Tested diode, forward voltage low 30m, there is sound indication, then can finish the testing quickly without view the screen.

H. Capacitance Measuring

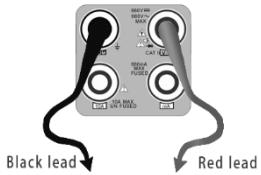
WARNING!

To avoid electric shock, be sure the capacitors have been discharged fully before measuring the capacitance of a capacitor.

a. Connect the black test lead to the "COM " jack and the red test lead to the "V/Ω " jack.

b. Select "⏚", enter the capacitance measurement.

c. The tester default auto range status, and manual range by press upward and downward key, Auto rang by press the key "NEAR"



Manual range: 0.000nF → 6.600nF range

00.00nF → 66.00nF range

000.0nF → 660.0nF range

0.000uF → 6.600μF range

00.00uF → 66.00μF range

000.0uF → 660.0μF range

0.000mF → 6.600mF range

00.00mF → 66.00mF range

d. Before connect test leads across two sides of the capacitor under measurement, be sure that the capacitor has been discharged fully.

⚠Note:

a. The capacitance of a capacitor should be tested separately, should not test in the installation of circuit.

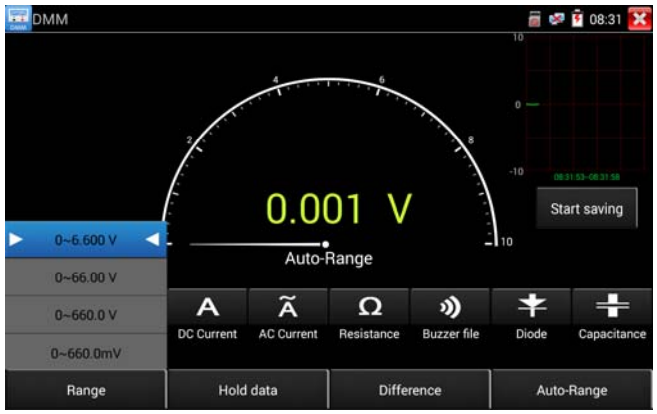
b. To avoid electric shock, be sure the capacitors have been discharged fully before measuring the capacitance of a capacitor.

c. While testing the capacitance of a capacitor to 660uF, the Max time will be 6.6 seconds, if the capacitor is leaked or damaged, the data can't be read.

The tester will be normal after disconnecting the capacitor.

Manual range and Auto range

When testing, click "Range select" to change the value, click "Auto range" to enter Auto measurement.



Data hold

Click "Hold data" to enter, the data be hold, the value is green. Press it again to quit.

Relative value measurement

Click "Relative "to enter, the tester Auto-save the data, the displayed new measurement and relative value is red color. Press it again to quit.

The hold function and the relative value be combined use, the display value is yellow

The meter protection

- **Voltage protection**

  You can't input the voltage which more than 660V AC, it's possible to show higher voltage, but it's may destroy the inner circuit.

- **Resistance, Continuity, Diode, PTC component Protection**

  Wrong input voltage, will Auto enter protection state , It only suitable for short and limit time work.

  If input voltage over 600V, will damage the meter.

- **mA current fuse range: 250V 1A**

  if the current over the rated range ,fuse will melt to protect the meter .Pls use the same model when

change the fuse, Pls opens the battery cover to change.

Note: 10A socket without fuse protection, if over the current range

Wrong using the 10A socket to measure the voltage, will damage the meter.

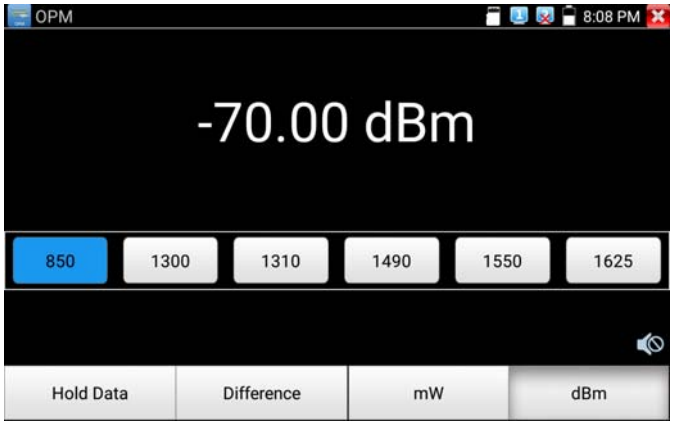
3.3.30 Optical power meter (*Optional)

Click icon to enter ,with five wavelength 1625nm,1550nm, 1490nm, 1310nm,1300nm, 850nm, linear or nonlinear optical power display, both for optical power testing and Fiber link loss relative measurement. It is necessary tool for installation and maintenance optical fiber communication, cable television and CCTV security system.

Note: Please keep the fiber connector and the dust cap be clean, and clean the detector with the special alcohol.

Data hold

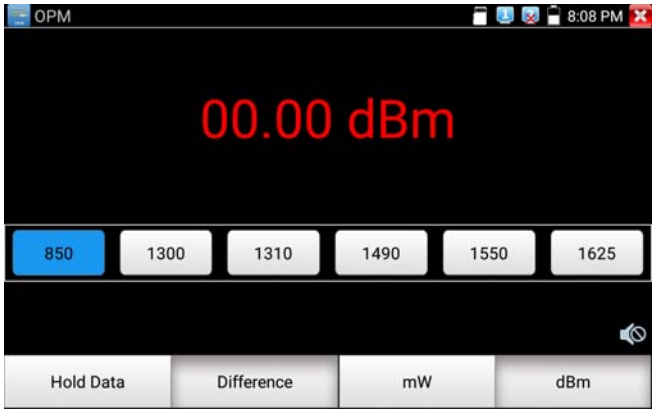
While testing, click "Hold" to data hold, the data will not change. It's convenient to read. Press again to quit.



Relative power value (optical link loss) measurement

While testing, set the wavelength for measurement. Click "relative"(difference) to test, the tester Auto save current fiber power value as the base reference value. Input another optical fiber to be measured,

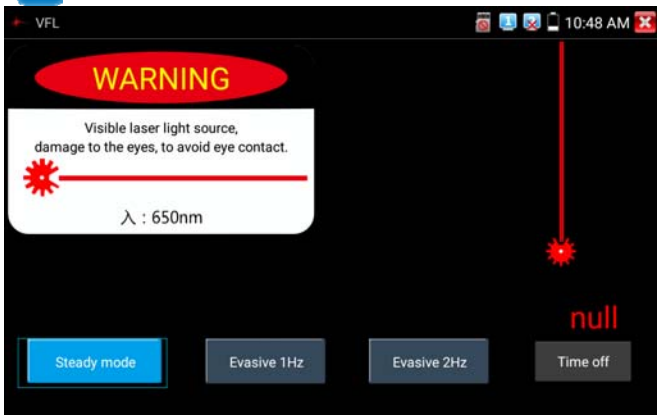
the displayed new measurement and relative value is red color. Press it again to quit.



Data hold and Relative measuring use together, the data is yellow while the function is effect.

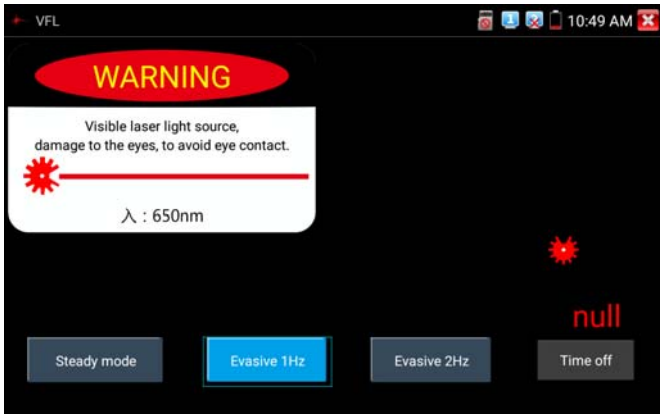
3.3.31 Visual Fault Locator (*Optional)

Click icon  to enter



VFL four status can select——"Steady mode", "Evasive 1Hz","Evasive 2Hz"and "Time off". Click button "Steady mode" to enter steady status, click button "Evasive 1Hz" and "Evasive 2Hz", to enter pulse mode, click button "Time off ", VFL is turned off. Timed turn off can select (5 mins, 10 mins, 30 mins, 60 mins and 120 mins).

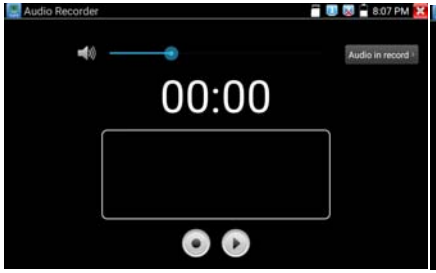
Click "Steady mode", red laser source emits steady, click again to quit.

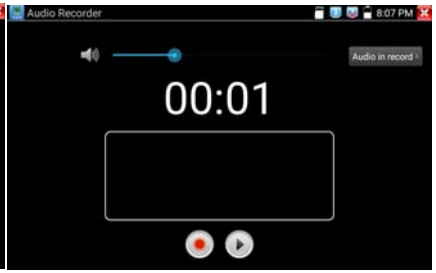


Click icons "Evasive 1Hz"or "Evasive 2Hz" to enter pulse mode, the red laser source is emitted by a certain frequency, press it again to quit

3.3.32 Audio Record

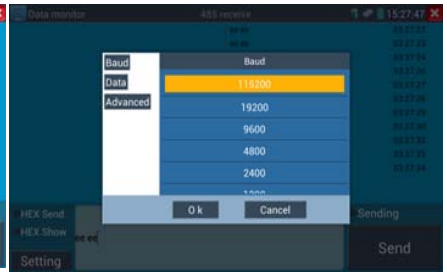
Connect an audio device to the IP tester's audio input port. Click the  icon to enter the Audio Recorder app. Click the red button to stop, and the unit will prompt you to save the recording.





3.3.33 Data monitor

Please click icon  to enter



Click "Setting" to choose the baud rate of RS485, it must be the same as the DVR or the Control keyboard. The DVR or Control keyboard send the code to the tester, if it can be read, the protocol will shown on the upper right, like Pelco D, if not, like P:---

While the tester receives the code, press the 

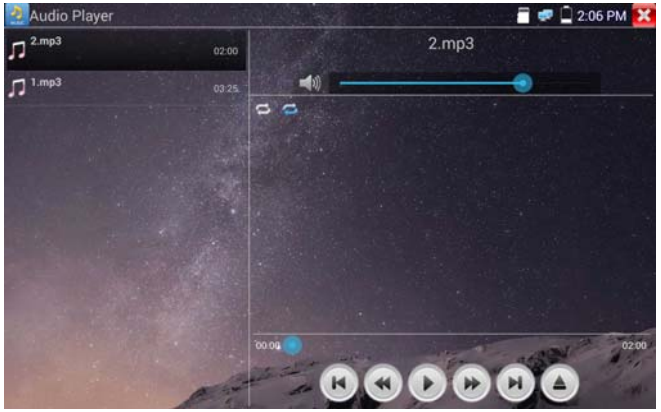
key to empty.

Though the RS485 port, display the PTZ control code of the multifunctional keyboard or the DVR. Controller can check the status of the RS485 transmission through the code on the display. (The RS485 communication rate must be the same.)

Application: Check the RS485 communication states of the video optical transmitter whether normal. Engineer can analyze the protocol and check the data through the displayed code.

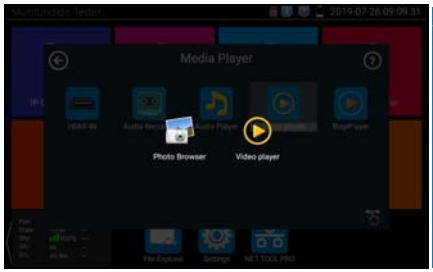
3.3.34 Audio player

Click the icon  to enter . The audio player only supports MP3 format Audio files.



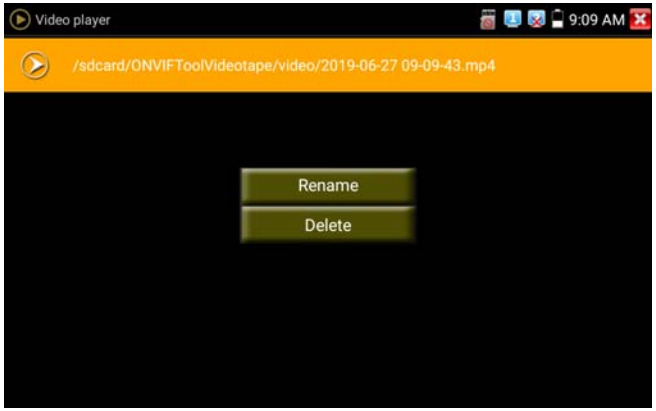
3.3.35 Media Player

Click the icon  to enter



The Media player can browse video and image files. It supports the video formats of MP4, H.264, MPEG4, and MKV. The IP tester recorded files can play directly via the Media player. The Media player will automatically display the video files from the SD card. Click on the desired file to play. Click RETURN to exit.

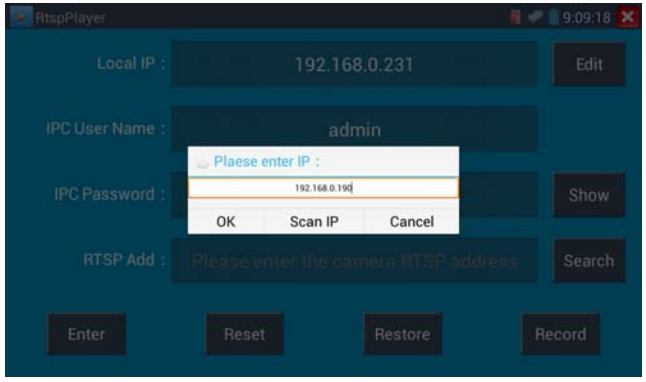
To rename or delete an existing file, press the file name for a few seconds until the screen below appears. You can then rename or delete the file by pressing the desired option.



3.3.36 RTSP Player

The RTSP Player app will allow you to view the RTSP video stream from an IP camera. If you were unable to view your camera via the ONVIF or IPC Test apps, it is possible your camera will have an RTSP stream and you can view live video.

From the main menu, select the "APP Tool" folder and then select the "RTSP Player" to open the app. If the IP camera uses MJPEG, select the RTSP icon. If the IP camera uses H.264, select the "RTSP HD" icon.



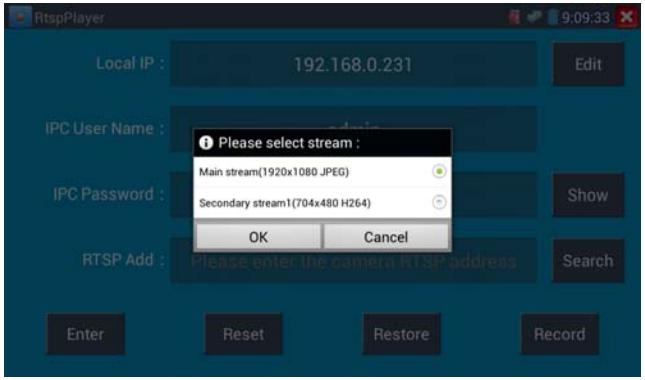
Local IP: This is the IP testers IP address.

RTSP Add: This is where you can manually enter the IP camera's RTSP URL or click on Search to search the network for cameras that use an RTSP stream.

IPC Username: Enter the IP camera's user name.

IPC Password: Enter the IP camera's password.

Once you have entered all the necessary information, select Enter at the bottom left to view the RTSP stream.



Note: In the event the IPC tester does not auto detect the RTSP stream, refer to the specific camera manufacturer for the specific RTSP stream URL. you may find this on line with a search of the camera model number and the word RTSP.

3.3.37 Hik test tool

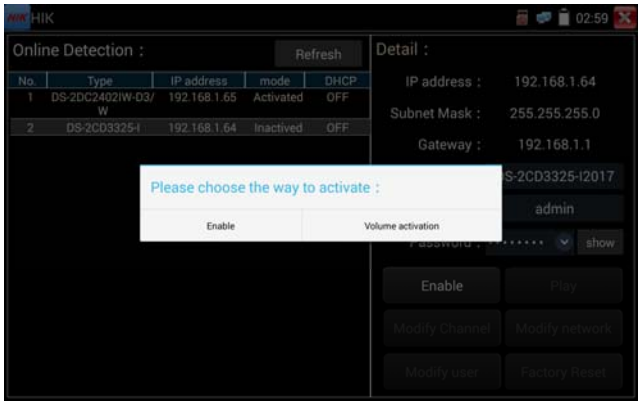
Hik test tool app is design for activating and debugging Hikvision camera, can auto-identify

inactivated hikvision camera, also can display image from the Hikvision camera.

Tap icon  to enter

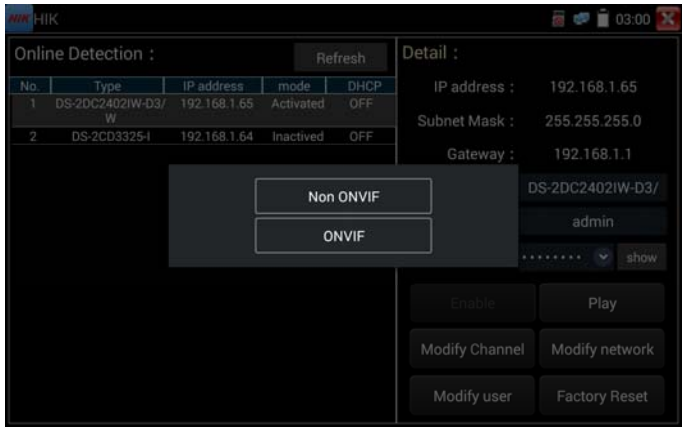
1.**Activation:** Select left [online detection] to display the "inactivated" camera and click activate.

"Activation" and "Batch activation" are optional.



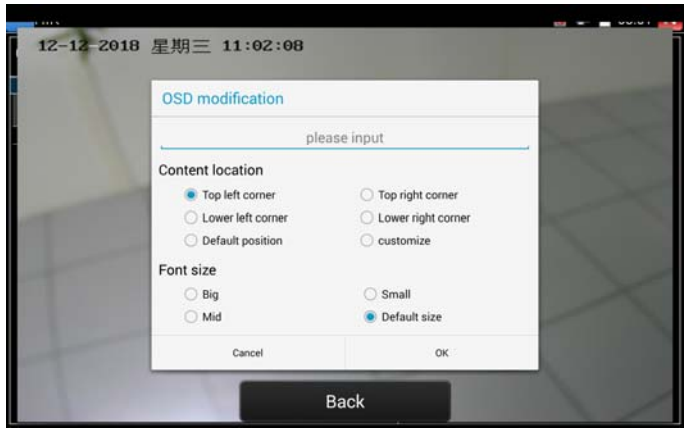
Auto open ONVIF protocol: After activation, the new HIK cameras click "play, modify the channel name, modify network information, modify user information" any one of to auto open the selected camera ONVIF protocol.

Play: Security status shows the "activated" camera. Enter the correct camera password in the right [password] and click [play] to pop up the "private protocol" or "speed ONVIF" two options. Select the protocol you need to see the camera images.



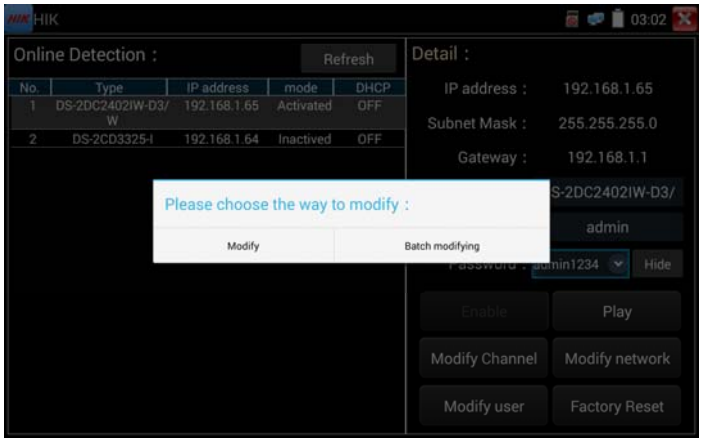
Modify channel name: Clicking "Modify the channel name" will pop up OSD settings, including time, channel name and other optional items.

After channel selecting, you can edit the channel name, modify the display position, and switch the font size. Select "default location" in "content location" is without modification. Select "Customization" to arbitrarily adjust the channel name and display location. Click"OK"and the effects will appear. Press return key or click any area of the screen to return to the upper layer of the interface.

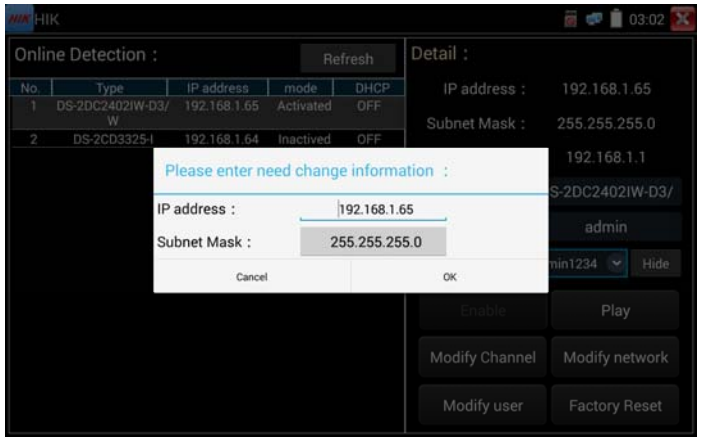


Modify network information: Support "modify" and "batch modify" camera IP address, subnet mask

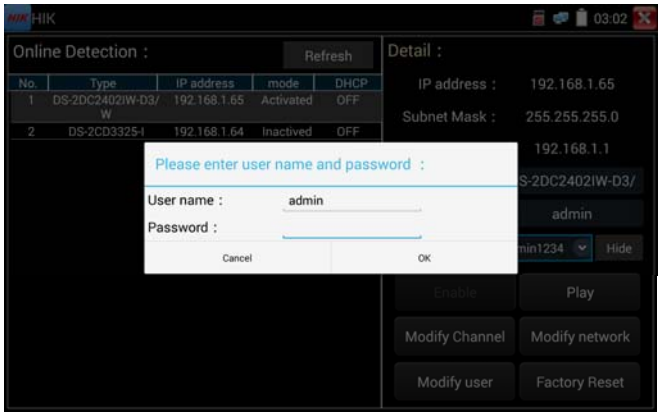
and other parameters modification.



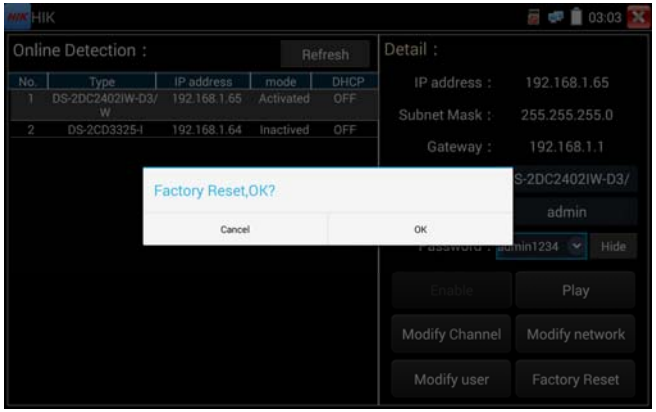
Enter a new IP address and subnet mask, the default gateway will be auto modified according to the IP address. Click "OK" to save the changes.



Modify user information: Modify the camera's user name and password.



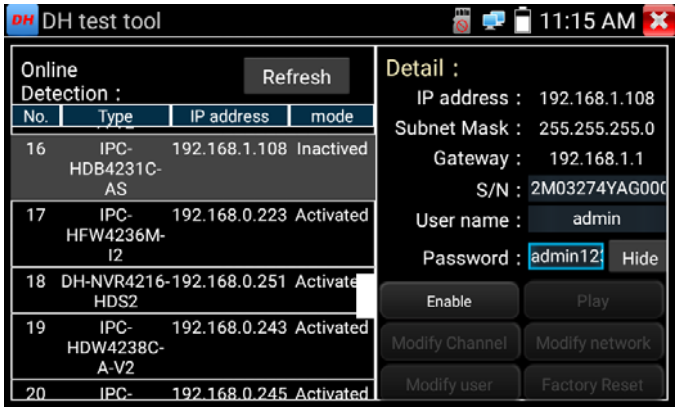
Factory Reset: Camera factory reset.



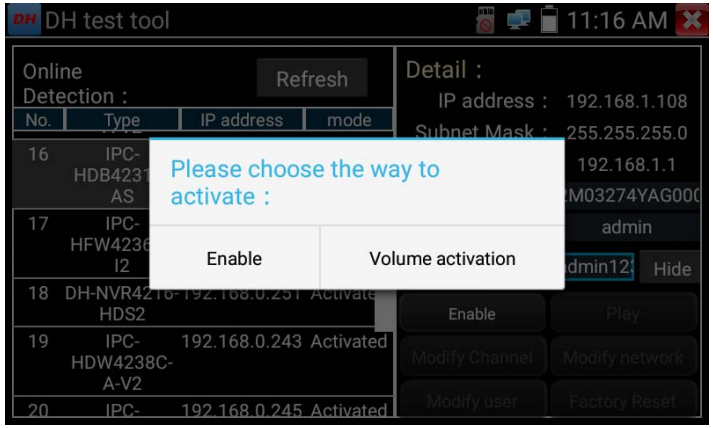
3.3.38 Dahua test tool

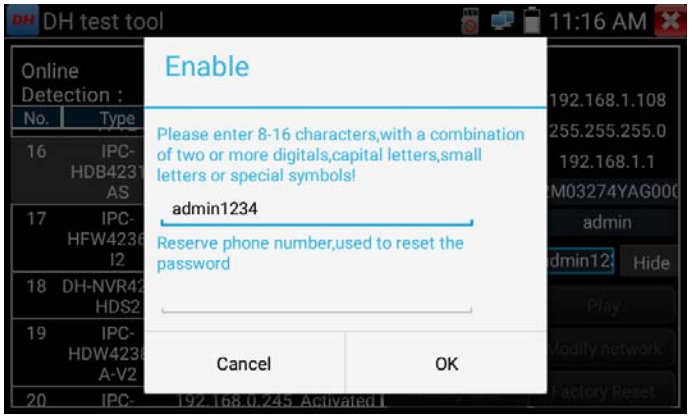
Dahua test tool is developed for installation and debugging of the Dahua IP camera, it can display image, and modify IP, user name and password etc. Making Dahua camera test more convenient and quickly.

Activation: select left [online detection] to display the "inactivated" camera and click activate.



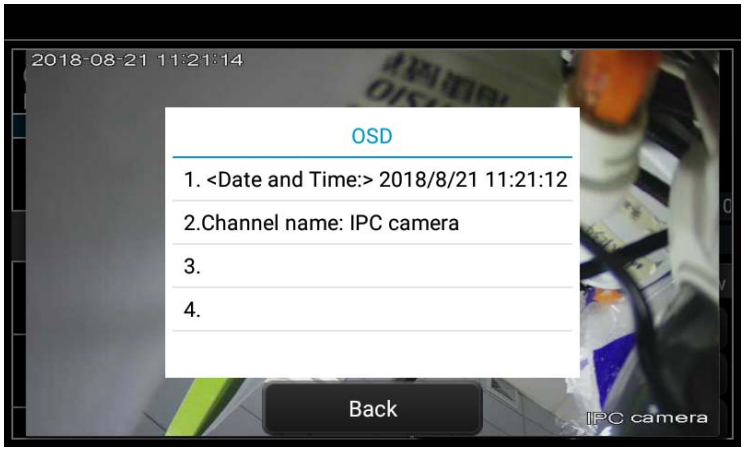
Activate and Batch activate are optional, support reserved phone number for resetting password.



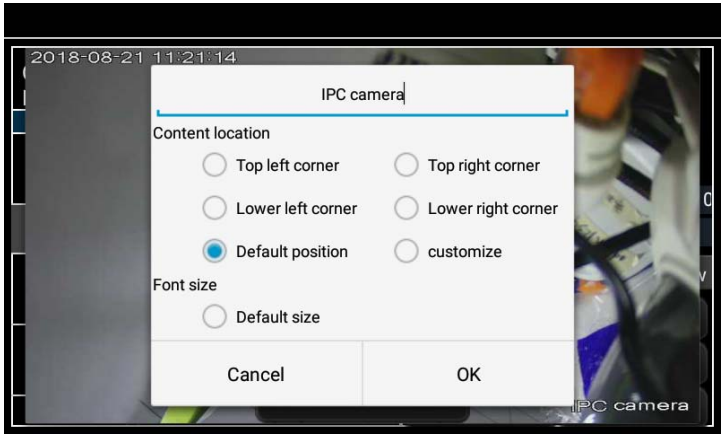


Play: When mode display "activated" camera, input correct password, click "Play" poping up "private protocol" and "ONVIF", Select correspond protocol to view the camera image.

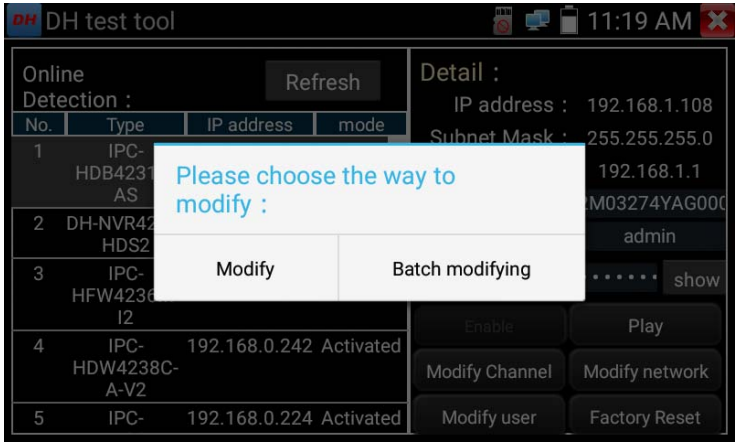
Modify Channel: Click "Modify Channel", will pop up OSD setting, includes time, channel name,etc



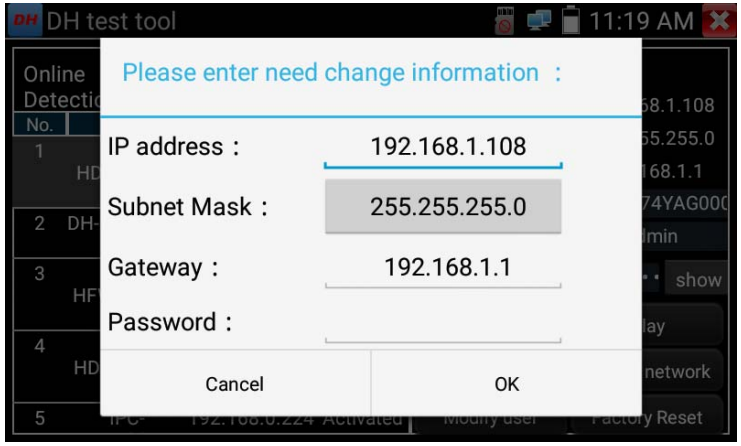
After selected Channel name, can edit channel name, modify the display position and font size. If select "Default position" of Content location, then no need to modify. If select "customize", then can modify Channel name and display position, click "OK"to view the image. Click "Back" or "Return" button to return previous interface.



Modify Network: Support Modify and batch modify two way, can modify camera IP address, Subnet mask and gateway.

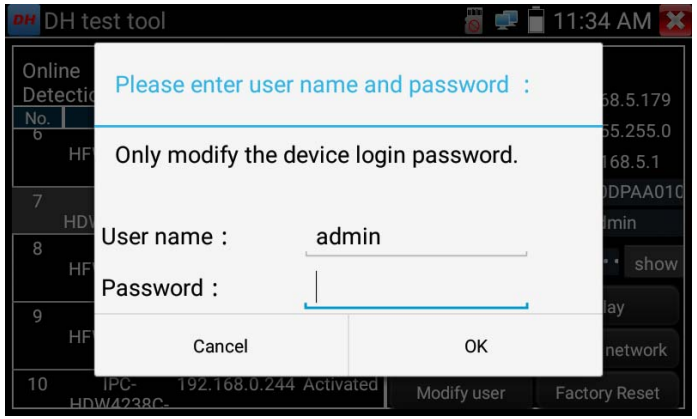


Input new IP address, need to input password, click "OK" to save the modification

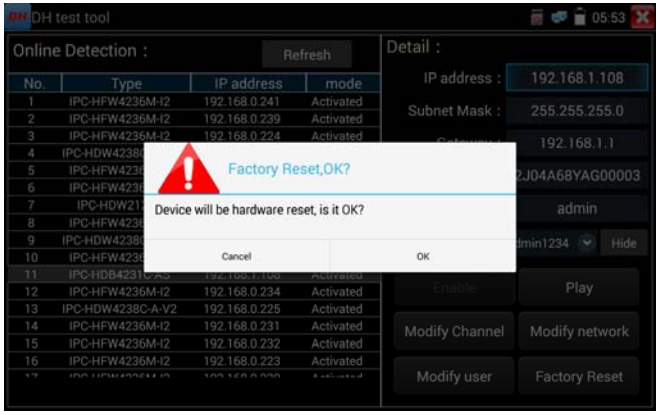


Modify user information: Modify camera user name and password, which is onvif, Dahua test tool,

IPC TESTE user name and password, not web user name and password.



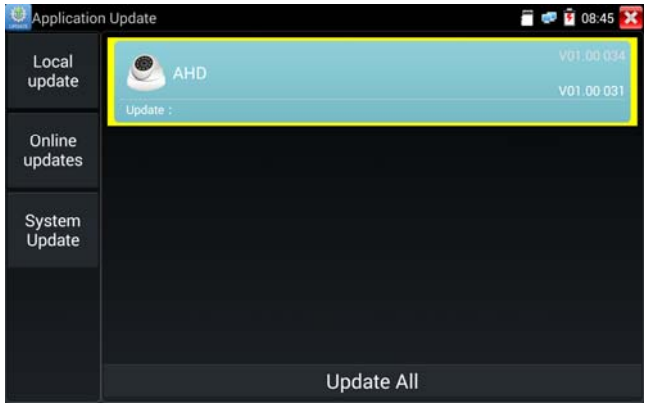
Factory reset setting: Camera will be soft reset, and the device's user name, password and network set be saved. Other settings information is factory reset.



3.3.39 Update

Copy the downloaded update file to SD card "update" directory, if no directory, please create one.

Click the  icon to open the Update menu. Select "Local Update" to update via the SD card or select "Online Update" to check for updates on the internet. If there are applications that need updating, the applications will be displayed on the



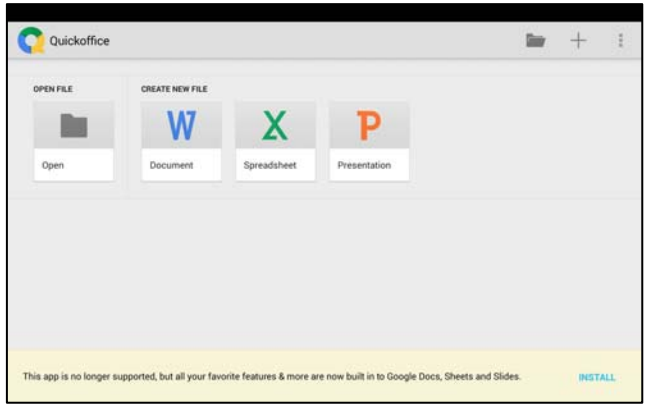
If there are update programs, applications will be listed in the interface, click related applications, update to the latest version.

Update online: Before using online update, need enter settings-user management to register first.

System update: Connect the Internet to update systems.

3.3.40 Office

Quick office app (support excel, word, ppt format) doc. editable



3.3.41 LED Flashlight

It is convenient for the installation or maintenance in the evening or in the dark. Click icon  to enter

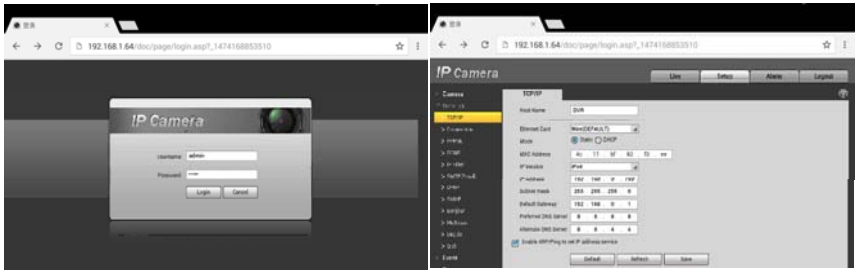
While in the flashlight app, click the red button to turn on the LED lamp. Press it again to turn it off. If you don't press the red button  to shut off the lamp and press the button to exit the app, the lamp will stay on. Click the Time Setting button to set a timer that will shut off the lamp.

3.3.42 Browser

Click icon  to enter

Type in the camera's IP address and press "Go" to access the IP camera's interface.

NOTE: You will not be able to view live video in the web browser. For viewing video, use the IP tester's live camera view Apps



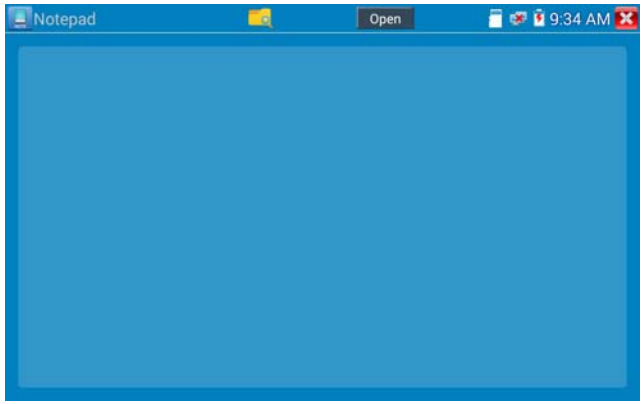
The IP camera and IP tester be on the same network segment for the browser to interface with the

camera. If they are not in the same segment, click the button RETURN or press "RETRUN" to exit. Open the "Settings" app from the main menu to change the IP tester's network settings to match those of the IP camera.

3.3.43 Notepad

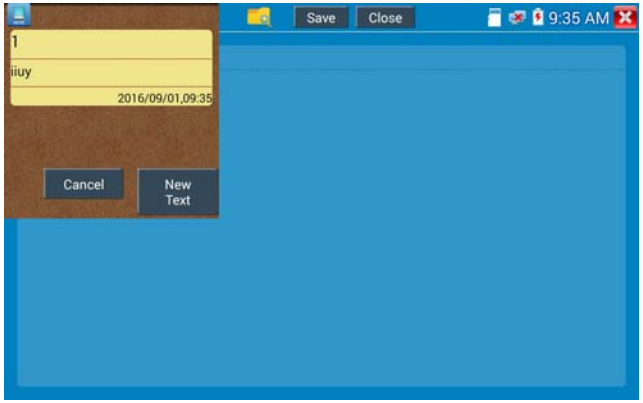
Notepad can be used to record the important testing results, click the key "Save" to save the contents. Notepad can auto record the storage date and time.

.



Please click 

to view the notepad, all saving contents display. Click each record bar to show the details. Press the record bar for several seconds, prompt whether delete it.



3.3.44 System Setting

Click icon  to enter

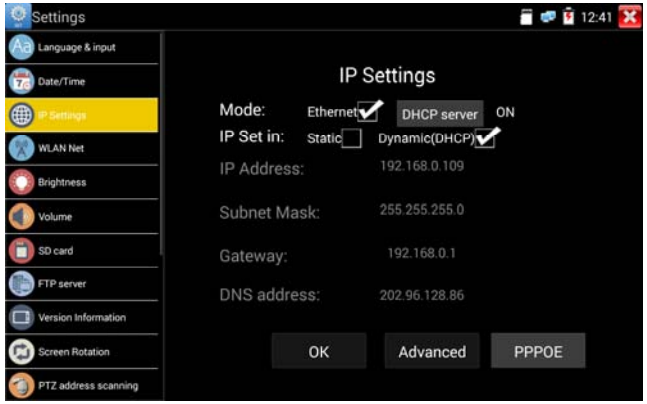
Language: Select your desired language: English, Chinese, Korean, Russian, Italian, Polish, Spanish, French or Japanese, German,Turkish,etc.

Typewriting: You can select typewriting or install other typewriting:

Date/Time: Set the Date/time of the IP tester

IP setting: Manually set the IP address, Subnet Mask, Default Gateway and DNS address or select "Dynamic allocation" to use DHCP. To test multiple network segments, click "Advanced " and then

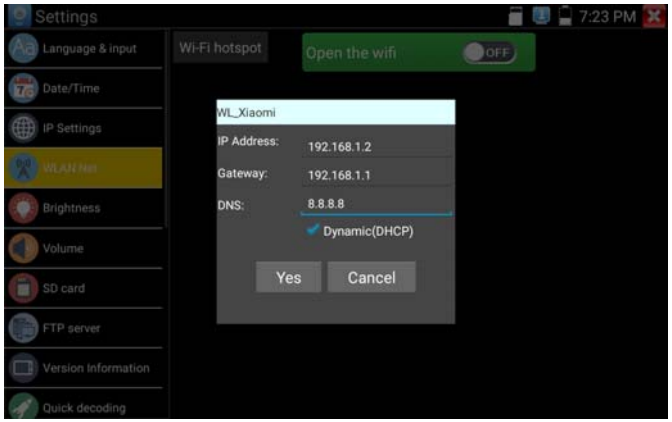
click "Add " to enter another IP address for the IP tester.



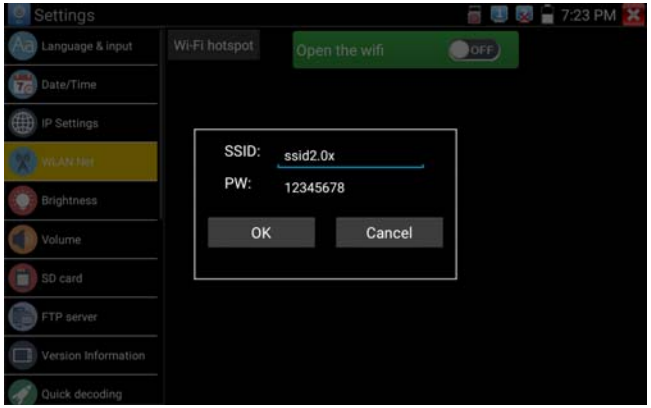
After setting an advanced IP address (refer to the photos above), the unit can test two network segments (192.168.5.0) and (192.168.1.0)

WLAN Net: Turn WiFi off or on by pressing the "Open the wifi" button. Once WiFi is turned on, and click connected WIFI, it will scan for wireless networks in your area.

Select and press "WIFI" several seconds, to set static IP address.



Wi-Fi hotspot: Input "SSID" name and "password", and then click "ok" to create Wi-Fi hotspot.

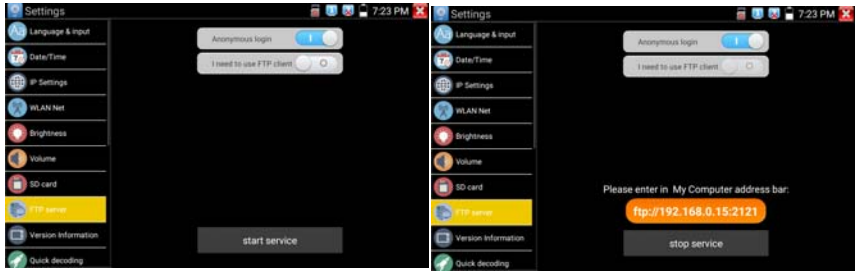


Brightness: Set the desired brightness of the IP tester and adjust the sleep time settings.

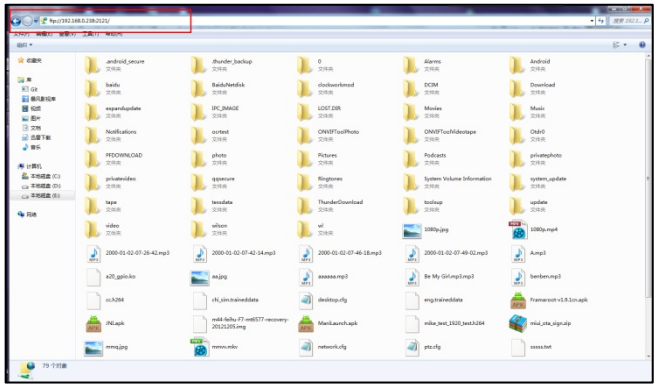
Volume: Set volume level

SD Card: Displays SD Card Capacity. You can also format the SD card or unmount it before removing it.

FTP server: Once the IP tester connects to a network, a computer can be used to read the SD card files via FTP



Start the FTP server and then input the tester's FTP address in the PC's address bar. This will enable the PC to read, copy and edit the files from the SD card without the use of SD card reader.



Version Information: Shows applications version information, if press any apps icon several seconds to uninstall.

Screen display rotation: Click on "Screen Rotation" to flip the IP tester's display 180 degrees. This function is very convenient for the user to connect the LAN cable on the bottom of the unit without having to flip the unit itself.

PTZ address scan: You can toggle the PTZ Address scan off or on before entering the " PTZ controller" app. This needs to be turned on in order to use the PTZ Scan feature of the PTZ app.

Online Registration: Online update need register first, after the tester connect to network, then fill registration information to register.

User Feedback: If you have any comments or suggestions for the tester, please connect it to network

and write your feedback.

Lock Screen: The meter default is not locked. You can choose password Lock screen, pattern Lock screen or "NO".

Password Lock Screen: Set password, you can input digitals, letters or characters as password, input it again to confirm .when the meter is in standby mode or turn it on, you can input your password to enter.

Pattern Lock Screen: Drawing a pattern to lock. While the meter is in standby mode or turn it on, you can input your pattern to enter.

Modify Lock screen password, you need input lock password again. Select password Lock screen or pattern Lock screen to reset lock screen password. After reset pattern lock screen, you need to draw a new lock pattern.

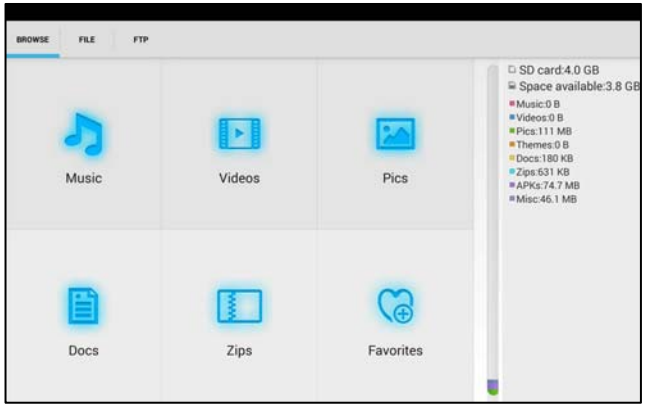
Restore the factory settings: If the tester to restore factory settings, all your personal files and apps will be removed.

3.3.45 File explorer

Click "File" on the top bar tool, can select internal or external storage. Click on the upper right corner Icon"... ". will pop-up menu, you can select other operation or exit.

Browse

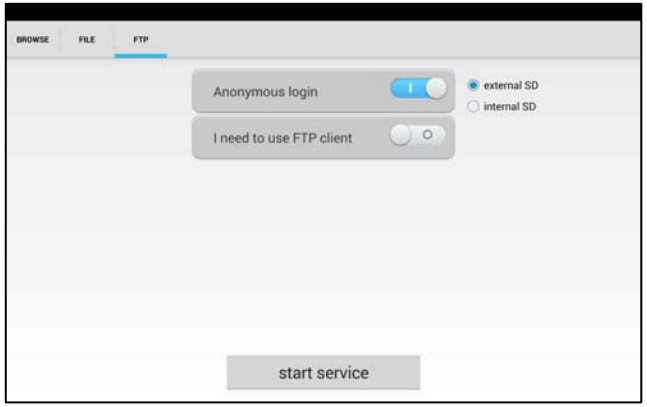
It includes Music, Videos, Pictures, Documents, zip file etc. It is convenient to view and manager.



FTP server

You can choose internal or external SD card.

Other operation details, Please refer to FTP settings.



3.3.46Audio test

You can test the audio input from audio pickup devices by connecting the audio pickup device to the IP tester with the supplied audio cable.

4. Specifications

4.1 General Specifications

Model	IP Camera Tester【*】models Optional
Display	New 7 inch retina touch screen, 1920*1200 resolution
Network port	10/100/1000M auto adjust, RJ45, Dual LAN port
WIFI	Built in WIFI, speeds 150M, allows you to connect to a wireless network and view IP cameras
H.265 Mainstream test	New hardware decoding, 4K H.265/H.264 camera image display by mainstream testing
IP discovery	Auto-scan the whole network segment camera IP
Rapid ONVIF	Search camera quickly, auto log in and display image from the camera, activate Hikvision camera
Hik test tool	Batch activate Hikvision camera, display image from the camera, modify

	Channel, batch modify IP, user name and password parameters etc.
DH test tool	Batch activate Dahua camera, batch modify IP, modify Channel, user name and password parameters etc.
IP camera type	ONVIF, ONVIF PTZ, Dahua IPC-HFW2100P, Hikvision DS-2CD864-E13, Samsung SNZ-5200, Tiandy TD-NC9200S2, Kodak IPC120L, Honeywell HICC-2300T, RTSP Viewer
AutoHD* (Optional)	Auto-recognize the resolution and Auto-display the image of the connected camera. Support coaxial PTZ control and call OSD menu, support up to 8MP TVI/CVI/AHD and CVBS cameras.
4K HD Coaxial level test* (Optional)	Through hardware high-speed sampling and processing technology, accurately measure video peak level, sync level and burst level. By one key to create testing report.
SDI video signal test * (Optional)	1 channel HD-SDI/EX-SDI input（BNC interface), resolution support: 720P 60fps, 1080P 60fps, 1080i 60fps, EX-SDI: 2560 x1440P /25/30fps, 3840 x 2160P 20/30 fps, UTC control and call OSD menu
CVI video signal test *（Optional）	1 channel CVI input（BNC interface, resolution support 720P 25/30/50/60fps,1080P 25/30fps, 2560x1440P 25/30fps, 2592x1944 20fps, 2960x1920 20fps, 3840 x 2160 12.5/15 fps. UTC control and call OSD menu
TVI video signal test*（Optional）	1 channel TVI input（BNC interfce）,resolution support 720P 25/30/50/60fps, 1080P 25/30fps, 2048x1536P 18/25/30fps, 2688x1520P 15fps, 2560x1440P 15/25/30fps, 2560x1944P 12.5/20fps, 3840 x 2160 12.5/15 fps, UTC control and call OSD menu
AHD video signal test *（Optional）	1 channel AHD input（BNC interface）,resolution support 720P 25/30fps, 1080P 25/30fps, 2048x1536P 18/25/30fps, 2560x1440P 15/25/30fps, 2560x1944P 12.5/ 20fps, 3840 x 2160P 15 fps, UTC control and call OSD menu
Analog video test	1 channel BNC Input & 1 channel BNC Output , NTSC/PAL (Auto adapt)

Video level meter	PEAK video signal level, SYNC signal level, COLOR BURST chroma level measurement for CVBS camera.
Zoom Image	Supports Analog and IP camera image zooming & movement
Snapshot, Video record and playback	Capture current images and record live video as JPG file. Media player will view photos and playback video
HDMI IN *(Optional)	HDMI IN, Support 720×480P /720×576P/1280×720P/1920×1080P /1024×768P/1280×1024P /1280×900P /1440×900P.
HDMI output	1 channel HDMI output, supports up to 1080P
RJ45 cable TDR test	RJ45 cable TDR test and cable quality test, to test cable pair status, length, attenuation reflectivity, impedance, skew and other parameter.
24V 2Apower output	Output DC24V/2A power to camera
12V 3A power output	Output DC12V/3A power to camera
USB 5V power output	5V 2A power output
PoE power output	48V PoE power output, Max power 25.5W
Screen management	Under normal mode, you can change icons sequence and self-define the number of icons in each page
Theme	Self-define icons, desktop and application interface background, modify interface sliding effect.
drop-down menu	PoE power switch, IP setting, WLAN switch, HDMI IN functions etc screen lock, password lock screen or pattern lock
Audio test	1 channel audio signal input and 1 channel audio signal output to connect headphones
PTZ control	SupportRS485 control, Baud 600-115200bps, Compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, etc
Color bar generator	Output one channel PAL/NTSC color bar video signal for testing monitor or video cable.(red, green, blue, white and black color)
UTP Cable tester	Test UTP cable connection status and display on the screen. Read the number on the screen

Data monitor	Captures and analyzes the command data from controlling device, also can send hexadecimal
NET TOOL PRO	NET TOOL PRO-Cable Test, Wireless Tool, Link Tool, Full Duplex Detection, PING, IP Scan, DHCP Server, PPPOE, OUI Search, Socket Tool, DNS, LLLDP.
Cable tracer*（Optional）	Find a connected cable from a bundle of cables using audio tones
PoE /PSE voltage test	Measures PoE switch voltage and displays pin configuration
Digital Multi-meter *(Optional)	AC/DC Voltage, AC/DC current, Resistance, Capacitance, Data hold, Relative measurement, Continuity testing. Testing speed: 3 times/ seconds, Data range -6600～+6600.
Optical power meter *(Optional)	Calibrated Wavelength(nm): 850/1300/1310/1490/1550/1625nm Power range(dBm): -70～+10dBm
Visual fault locator *(Optional)	Test fiber's bending and breakage (SM and MM fiber)
TDR cable test *(Optional)	BNC cable, network cable, telephone cable, RVV cable and elevator cable, cat 5/6 cable’s length and short circuit. measurement range 1.2KM
BNC attenuation test *(Optional)	Through hardware high-speed sampling and processing technology, test the BNC coaxial cable transmission attenuation value, detect the transmission quality of BNC cable.
POWER	
External power supply	DC 12V 2A
Battery	Built-in 7.6V Lithium polymer battery, 7800 mAh
Rechargeable	Fasting charge, after charging 3.5 hours, normal working time 16 hours
Parameter	
Operation setting	Capacitive touch screen, OSD menu, select your desired language: English, Chinese, Korean, Russian, Italian or Polish, etc

Auto off	1-30 (mins)
General	
Working Temperature	-10℃---+50℃
Working Humidity	30%-90%
Dimension/Weight	240mm x 154mm x 46mm / 620g

4.2 Multi-meter specifications

Counts: -6600～+6600

Conversion rate: 3times/s

Current modes for clamp meter with ZERO function

Isolation: the Multi-meter connector must be isolated with the other connector.

DC voltage

Range	Accuracy	Resolution
660mV (Manual range)	±（0.3%+4）	0.1mV
6.600V		1mV
66.00V		10mV
660.0V		100mV

AC voltage

Range	Accuracy	Resolution
660.0mV (Manual range)	±（1.5%+6）	0.1mV
6.600V	±（0.8%+6）	1mV
66.00V		10mV
660.0V		100mV

DC current

Range	Accuracy	Resolution
6.600mA	±（0.5%+3）	1uA
66.00mA		10uA
660.0mA		100uA
10.00A	±（1%+5）	10mA

AC current

Range	Accuracy	Resolution
6.600mA	±（0.5%+3）	1uA
66.00mA		10uA
660.0mA		100uA
10.00A	±（1%+5）	10mA

Resistance

Range	Accuracy	Resolution
660.0Ω	±（0.8%+5）	0.1Ω
6.600KΩ	±（0.8%+2）	1Ω
66.00KΩ		10Ω
660.0KΩ		100Ω
6.600MΩ		1KΩ
66MΩ	±（1.2%+5）	10KΩ

Continuity

Range	Resolution	Function
660.0Ω	0.1Ω	The measurement value less 30Ω±3Ω,the tester will sound

Diode

Range	Resolution	Function
2.0V	1mV	Schottky diode:0.15~0.25V rectifier diode:0.6~1.0V triode PN junction:0.5~0.8V

Capacitance

Range	Accuracy	Resolution
6.600nF	±（0.5%+20）	1pF
66.00nF	±（3.5%+8）	10pF
660.0nF		100pF
6.600μF		1nF
66.00μF		10nF
660.0μF	±（5%+8）	100nF
6.600mF		1μF
66.00mF		10μF

4.3 Optical power meter specifications

Measure Range(dBm)	-70～+10dBm
Wavelength(nm)	850nm,1300nm,1310nm,1490nm,1550nm,1625nm
Detector	InGaAs
Uncertainly	＜±3%dB(-10dBm,22℃) ＜±5%dB(full range,22℃)
Display Resolution	Linear:0.1% ; Nonlinear:0.01dBm
Operating Temperature(℃)	-10～+50

Storage Temperature (℃)	-20～+70
Connector type	FC/PC

4.4 Visual fault locator specifications

Laser type	LD
Wavelength Calibration	650nm
Output power	5mW（Optional 10mW,20mW）
Modulation mode	CW/1Hz/2Hz
Measurement Range	5KM（Optional 10-20KM）
Connector	FC/PC exchangeable
Working Temperature	－10℃～+50℃
Operating Temperature	-20℃～+70℃

The data above is only for reference and any change of them will not be informed in advance. For more detailed technical inquiries, please feel free to call the Technical Department of our company.

FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.