CCTV Tester

INSTRUCTION MANUAL

CE

MODEL: CCTV TESTER IP 711+AHD+TVI+CVI

ORIGINAL
AUTHENTIC

Patented products,
Counterfeiting not allowed

VER: V1
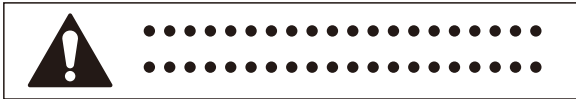
● Please comply with local rules regarding the electrical products, avoid using in hospitals, gas stations and other places where electrical appliances are prohibited.

● Please use original accessories to avoid damage to the product due to the use of unauthorized parts.

● The accessories attached to this instrument are only for supporting the instrument. To avoid unexpected accidents, please do not use for other purposes.

● Do not expose the instrument to rain or moisture to avoid performance degradation or damage.

● Keep the exposed part of the instrument away from dirt or liquid.

● Do not knock or shake the instrument during transportation and make sure to avoid damage to the components that may result in malfunction of the product.

● Do not leave the instrument while it is charging. If the temperature of battery is increasing, power off immediately. The charging time should not exceed 10 hours.

● Do not connect the instrument's any interface to live circuit when the power is on.

● Do not use in high humidity places. If the instrument is damp, disconnect the power supply and other wires immediately.

● Do not use in flammable gases.

● Please do not disassemble the instrument and repair parts of the instrument without authorization. For service maintenance, please contact our technical staff.

● Do not use in strong electromagnetic interference environment.

● Do not touch the instrument with wet hands or wet objects.

● Do not use detergent for cleaning. Please use a dry cloth to wipe dirt. If the dirt is difficult to remove, the soft cloth can be stained with water or neutral detergent and fully wrung dry before wiping.

Table of Contents

I. Brief introduction to the instrument

1.1 Overview

The instrument has an intelligent operating system, mainly for the purpose of installation and maintenance of network surveillance cameras, analog video surveillance cameras and other security monitoring equipment. The 7-inch high-definition IPS full-angle display of the instrument can clearly display images over the network and the analog surveillance camera.

The built-in network utilities of the instrument include PING, IP address scanning DHCP, and POE power supply output and 12V power supply output, all of which are necessary tools for security monitoring and integrated wiring engineering.

1.2 Product Features

● 7-inch full-view IPS display, 800 × 480 high-definition resolution, PPI is up to 216

● Adjustable display back-light brightness is up to 500cd, display contrast ratio is 800:1

● G+G structure capacitive touch screen is adopted for its solidity, abrasion resistance, corrosion resistance and high light transmission

● CVBS display, zoom, video recording and photo taking of NTSC/PAL analog video images

● Fully compatible with AHD, TVI, CVI digital high-definition video images.

● 10/100M Ethernet interface, built-in 150M WIFI wireless function.

● Support H264/MPEG4/MJPEG format network camera test and maximum resolution of 1080P.

● High definition hardware decoder is adopted to smoothly display high-definition video images in real time.

● Support ONVIF network camera image display and parameter modification.

● Support PELCO-P, PELCO-D, SAMSUNG and other 20 kinds of PTZ control protocols.

● Support high-definition video image real-time zoom.

● Internal SD card with 4G storage space and external replaceable Micro SD card.

● Built-in CVBS color bar output function which can be used to test debugging monitor.

● IP address scanning function for quick search of IP address of network camera.

● PING function for testing target IP address network connection status.

● POE voltage test for testing POE switch power supply status.

● POE 48V/24W standard power supply output for POE camera power supply.

● Built-in cable module, for wire mapping, tracing and measuring length of network cable, telephone line and coaxial lines.

● DC 12V/2A power supply output for PTZ and any cameras with self-recovery short circuit protection.

● Audio input test and recording for test of audio signal.

● Bright white LED for easy operation in dark.

● HDMI high-definition image output, which supports 1080P 60fps

● 7.4V 5000 mAh high-capacity polymer lithium battery, which can be used continuously for 12 hours after a charge of 5 hours.

1.3 Brief introduction to the functions

1.3.1 Intelligent desktop system

The instrument adopts capacitive touch and touch slip operation, which is simple and convenient. Functions can be entered by direct touch. Users can also customize desktop icons and color styles according to their own usage requirements and habits. Battery power, charging status, network connection status, external SD card status and other indications are displayed.

1.3.2 Power management

The core module of the instrument adopts a TI industrial power management chip, which feature high stability and reliability. The instrument is powered by a 7.4V 5000mAh polymer lithium battery. The external input power is 2V/2A. For engineer's convenience and easier maintenance, the instrument can provide a temporary power supply for external cameras. For general camera, power output is 12V/1A, while for network camera which supports POE power supply; it can provide standard POE power supply of 48V/24W.

1.3.3 Monitoring video test

The video test module consists of the following modules:

◇ CVBS simulation monitoring test

◇ AHD, TVI, CVI HD monitoring test

◇ Speed ONVIF test

◇ IPC view official website mobile client

◇ RTSP network stream video live broadcast

1.3.4 Network tools

◇ IP address scanning function

◇ PING function

◇ DHCP function

◇ Port flash function

◇ Volume adjustment

1.3.5 Test tools

◇ POE voltage test

◇ Audio test

◇ Cable continuity test

◇ Cable tracing test

◇ Cable length test

1.3.6 Multimedia applications

◇ Browser

◇ Picture browser

◇ Video play

◇ Audio play

◇ HDMI output

1.3.7 Utilities

◇ Serial port tool

◇ Flashlight

◇ Calculator

◇ Office software

◇ Memo pad

◇ Theme

1.3.8 System functions

◇ File management services

◇ 10/100M adaptive Ethernet

◇ 150M WIFI Internet module

◇ Settable or automatically updated date and time

◇ Language settings

◇ Instrument version information

II. Technical parameter table

Product model	MODEL: CCTV TESTER IP 711+AHD+TVI+CVI
Touch screen	7-inch G+G structure capacitive screen
LCD screen	7-inch 800×480resolution IPS high-definition full view display
Ethernet port	10/100M adaptive
WIFI	Built-in wireless WIFI, speed 150M
IP monitoring test	ONVIF tool. Support mobile client installation, support maximum 1920×1080 resolution, real time browsing without delay.
CVBS simulation monitoring test	1-way CVBS analog input, support PAL/NTSC standard adaptive
Digital HD monitoring test	Fully compatible with AHD, TVI, CVI digital high-definition signal input
Video image zoom	Zoom in real-time mobile high-definition video images
Photograph, video recording, playback	All video images support picture taking and video recording. Support MP4 encoding storage
Cable test	Support cable continuity, cable tracing and cable length test for network cable, telephone line and coaxial cable
Audio test	Current audio input signal can be played
PTZ control	Support Pelco-D/P, Samsung, Panasonic and other 20 kinds of protocols
Color bar generator	Send PAL/NTSC color pattern bar

12V DC power output	12V DC output, maximum current 2A, temporary camera power supply
POE power output	48V standard POE output for POE camera power supply
RS485 serial port tool	Accept and send arbitrary data or hexadecimal data
PSE voltage test	Displays POE power supply voltage and line conditions
HDMI video image output	An HD monitor image can be sent to the HDMI monitor
5V DC output	Provide temporary power to USB powered camera or provide mobile phone emergency power supply, maximum 2A
Charger	DC 12V/2A
Battery	Built-in 7.4V polymer lithium battery with capacity of 5000mAh for 8-16 hours' use
Language	Chinese, English
Internal SD storage space	4G
Working temperature	-10°C - + 50°C
Working humidity	30% - 90%
Dimensions	290 x 140 x 40 mm
Weight	1163 g

III. Shape and interface description

3.1 Shape and key instructions

《 Front view 》
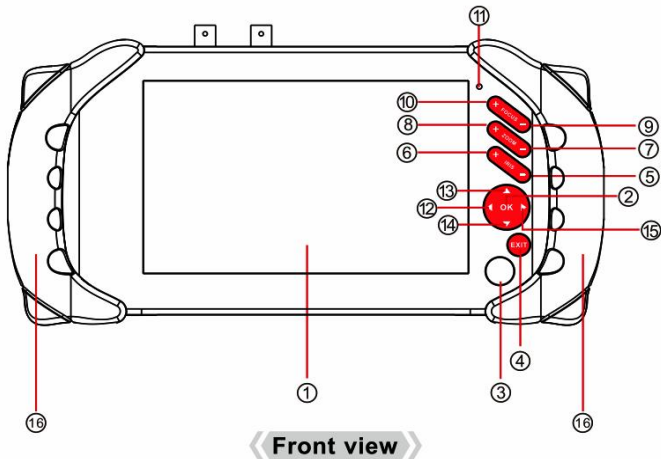
1. Touch screen
2. ENTER button for confirming an operation
3. Power button. Short press to sleep and long press for power off
4. EXIT button for exiting of operation
5. PTZ aperture – operation
6. PTZ aperture + operation
7. PTZ zoom - operation

8. PTZ zoom + operation
9. PTZ focus - Operation
10. PTZ focus + operation
11. Power/charge indicator
12. Left selection
13. Up selection
14. Down selection
15. Right selection
16. Protective sleeve

3.2 Interface description
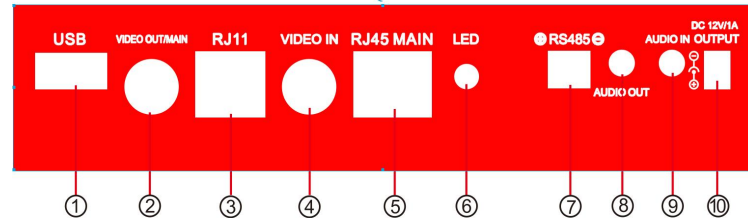
《 Top interface 》

1. 5V/2A USB output interface
2. Analog video color bar output and coaxial cable test interface
3. RJ11 cable test interface
4. Coaxial analog/HD video test input interface

6. LED light
7. RS485 interface
8. Audio test output interface
9. Audio test input interface
10. DC 12V/1A power output

《 Bottom interface 》

1. LAN port, Ethernet port, IPC camera connector
2. PSE POE input test port
3. HDMI high-definition output interface

4. External micro SD card slot
5. Charging interface DC 12V/2A

IV. Application operation instructions

4.1 System desktop

The instrument has an intelligent operating system. Ensure that the lithium battery is installed properly with electricity, long press the power button to start, and wait for the system to star and enter the desktop menu system. The desktop system is shown Figure 1:

Figure 1

Figure 2

Figure 3

As shown in the figures, the status bar icons at upper right show the status of SD card, network connection, battery power level, charge status and time.

Instructions:
1) The Main interface menu is switched by sliding. There are three default pages of main menu, which can be switched by sliding to left and right.
2) Touch the icon directly to enter the corresponding functions

4.2 CVBS simulation video test

Tap CVBS icon to enter the main interface of CVBS analog video test function, as shown in Figure 4:
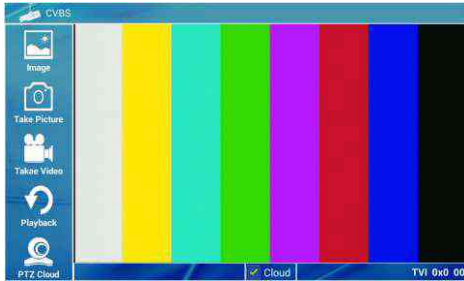
Figure 4

When analog video signals are received in CVBS-In status, analog video and standard can be displayed directly. The video is displayed as in Figure 5:


Figure 5

Functional operation:
1) Picture taking: Tap Camera icon on the left to take pictures. Tap the Gallery icon on the left to browse the recent pictures.
2) Video recording: Tap Video icon on the left to start recording, then tap again to end the recording. The video format is MP4. Tap the Playback button to watch the video.

3) PTZ operation: turn on the PTZ button on the bottom, touch to start PTZ control, or operate with keys. Tap the PTZ icon on the left to enter the PTZ settings menu, as shown below:
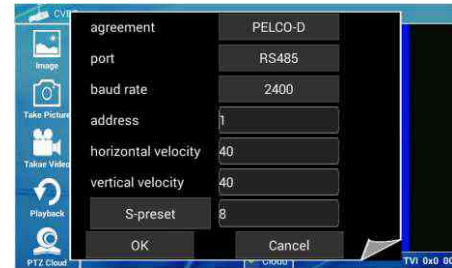
This menu can be used for the setting of the PTZ protocol, port, baud rate, address, horizontal speed, vertical speed and preset position. Tap OK after setting is finished. Once setting is completed, the PTZ control operations can be performed by keys, gestures or zooming.
4) Zoom function
Tap the button below to turn on the zoom function, and then turn off the PTZ function to touch the screen for image free zoom operation, as shown in Figure 6:

Figure 6

Touch twice quickly in image display area on the screen to enter full-screen mode, and touch twice to exit full-screen mode.
5) Full-screen operation
Touch twice quickly in image display area on the screen to enter full-screen mode, and touch twice to exit the full-screen mode.

4.3 Digital HD video test
Touch AHD, TVI, and CVI icon to enter the main interface of coaxial HD video test function, as shown in Figure 7:

Figure 7

Functional operation:
1) Picture taking   2) Video recording
3) PTZ operation: 4) Zoom function
The operation steps for the above four functions are the same as mentioned in Part 4.2

4.4 TV OUT color bar generator
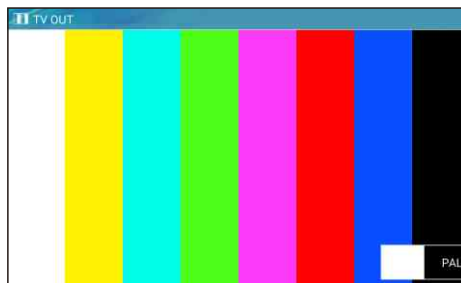Tap TV OUT icon on desktop to enter color bar generator function, as shown in Figure 8:

Figure 8

Instructions:
1) Tap the button icon on lower left to switch PAL/NTSC output system.

4.5 ONVIF speed test
As long as the camera IP and the instrument IP are in the same network segment, network camera images can be viewed quickly on the ONVIF live, and the camera supports ONVIF protocol, camera can be quickly located to view images. Tap ONVIF speed function icon on desktop to enter this function. Scanning will be finished in 1-2 seconds. For cameras that do not need authentication, tap the list of cameras on left to view images, for cameras that need authentication, enter user name and password to log in to view images, as shown in Figure 9 below:

Figure 9

Note: ONVIF speed function does not support cross-network scanning

4.6 RTSP player

RTSP player can directly play the RTSP network video stream. Tap the RTSP icon; just enter the camera IP address, or camera RTSP address that can play the video stream directly.

4.7 Network tools application

Tap Network Tool icon to enter network tool interface, as shown in Figure 10

Figure 10

1) IP address scanning

It can not only scan all the IP addresses in LAN, also can intelligently identify whether the IP address is the IP camera address. Tap the Scanning icon on the left; press starting & ending IP addresses. Tap Scanning IP icon and Waite for a few seconds then all IP addresses within the IP address range will be scanned. Select the corresponding IP address to scan the port.

2) PING tool

Tap PING icon on the left column to use PING tool to facilitate network debugging. Press the target IP address, the number and size of contracts can be the default value. Tap Start icon and it will show as in Figure 11:
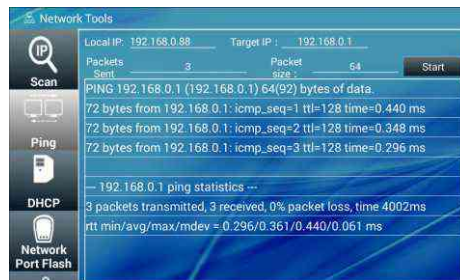

Figure 11

3) DHCP service

Start DHCP service to assign IP address to cameras which can obtain IP address idiomatically. Tap the DHCP icon on left to enter DHCP operation interface.

Your excellent helper in cable test!

Your excellent helper in cable test!

Figure 12

As shown in Figure 12, tap to start DHCP service, Wait for the camera to complete start and obtain the assigned IP address, then enter onvif function to watch real-time images of the camera.

4) Port flash
Tap Port Flash icon to enter network port flashing function interface.
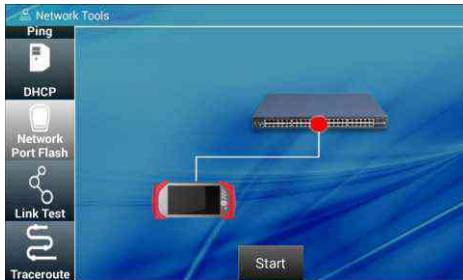

Figure 13

As shown in Figure 13, tap Start button to start port flash to trace network cable port easily.

5) Link test
Tap to enter link test interface. It is mainly used to test the current network IP address condition. Tap Add icon to add the IP address that need to be tested. Tap Start to carry out test. Ticks indicates that IP addresses exist on internal network, otherwise there is no IP address exists, as shown in Figure 14:

Figure 14

6) Route tracking
Press destination IP or URL ,Tap Start to find the path taken by the access target and display the IP address of the intermediate router and the time it takes. If time is out, it will show Figure 15.

Figure 15

4.8 POE voltage test

POE voltage test can test the power supply voltage of POE network cable port and wire sequence. Tap POE icon to enter this function, as shown in Figure 16:
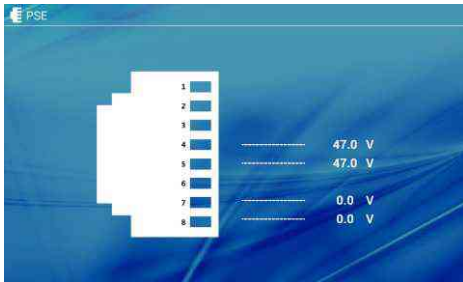
Figure 16

As shown in Figure 16: power supply of network cable 1, 2, 3, 6 cores is 34.8V.

4.9 POE power output

POE power output can provide 48V temporary power supply for cameras. Tap the POE power icon to enter control this function.
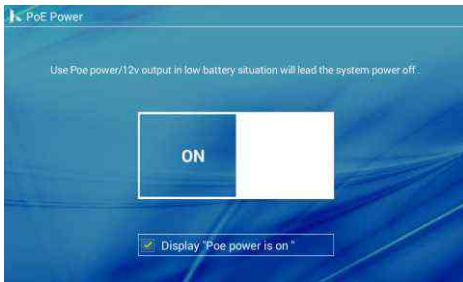
Figure 17

Tap Start to turn off or turn on the power supply, then LAN port 1, 2, 3, 6 can supply the camera with 48V standard POE voltage output.

WARNING: Before using this function, make sure that the camera supports POE power; otherwise neither connect the external 12V power supply of the camera, nor connect it to the instrument's 12V power outlet, for it may result in malfunction of the camera.

4.10 RS485 serial port tool

Rs485 tools mainly use for data receiving, accepting and analyzing and include PTZ protocol. Tap Serial Port icon on the desktop to enter serial port function interface:

Figure 18

As shown in Figure 18, serial baud rate, data bit, parity bit and stop bit can be set. Data can be set in character or hexadecimal to be displayed and sent. Tap "Clear Accepted" or "Clear Sent" to CLS.

4.11 Audio test

Tap the Audio test icon to enter audio test, as shown in Figure 19:

Figure 19

4.12 Video play

Tap Video icon to enter video play to play high-definition video, as shown in Figure 20, but should choose the specified file to play.

Figure 20

4.13 Audio play

Tap the Music icon to enter music player. The program will automatically scan all directory music files in internal & external SD cards to play music in mp3 files, as shown in Figure 21.
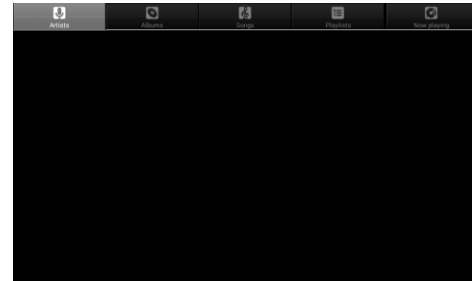

Figure 21

Play mode can be looped, single cycle, random play and sequential play. Play progress and volume are adjustable.

4.14 LCD flashlight

It can be used as emergency lighting for easy operation in dark places. Tap Flashlight icon to turn on the light, and touch again to turn off; as shown in Figure 22:

Figure 22

4.15 Continuity test

Tap the Continuity Test icon to enter the function, as shown in Figure 23:

Figure 23

Operation:

1.Select the type of cable to be tested.

2.The target cable is connected to the cable interface in the machine.

3.Tap Start Test.

4.16 Cable tracing test

Tap to start trace cable, as shown in Figure 24:

Figure 24

Operation:

1.Select the type of cable to be tested.

2.The target cable is connect the cable to the corresponding interface.

3.Cable tracing test.

Using the receiver to seek the target cable.

a loudest and clearest voice comes out when touch a cable is the target cable.

4.17 Cable length test

Tap Length Test to enter length test, as shown in Figure 25:

Figure 25

Operation:

1. Select the type of cable to be tested.

2. Connect the cable to the corresponding i nterface

3. Tap Start Test to read the length of the cable.

Calibration function of cable length: Load data calibration value and calibration length verification, as shown in Figure 26:

Figure 26

Up to 9 sets of calibration parameters can be stored in the instrument.

4.18 Picture browser

Pictures saved in internal or external SD cards can be viewed in the picture browser. Tap Picture Browser to enter. Pictures can be zoomed in and out, or moved according to gestures, as shown in Figure 27.
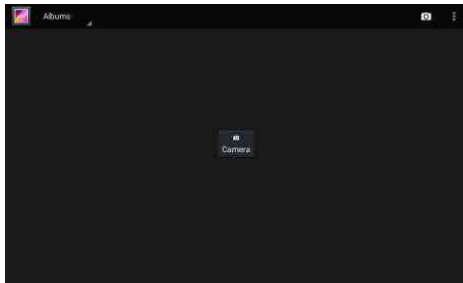

Figure 27

4.19 File management

Copy, move, rename and other operations of files stored in internal and external SD cards can be easily done by file management function. Tap File Browser icon to enter file management interface, as shown in Figure 28

Figure 28

4.20 Browser

Users can access IPC camera directly through web page by the browser. Tap Browser icon to enter the browser. Press IP camera address in the address bar to open camera page:

Figure 29

Your excellent helper in cable test!

Your excellent helper in cable test!

Press camera user ID and password to log into camera page configuration function to modify camera IP and parameters.

4.21 Theme
Tap Theme icon to enter the background and icon function to set up the background and icon , as shown in Figure 30 below.
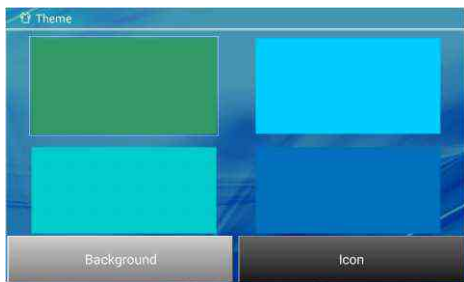

Figure 30

4.22 Upgrade center
The version number can be verified, and instrument program online and local upgrade can be carried out in application center. Tap the Application Center icon to enter application upgrade function, as shown in Figure 31.

Figure 31

The number under the application program name in the Figure is the current version. Tap Online Upgrade button, the instrument will connect to the server and check whether the program needs to be updated. Tap on the corresponding application program, and then tap the Download button, wait for the download to be completed and install to update. Tap Local button, it will show the local downloaded application, tap the application need to install for update.

4.23 Camera official client
The mobile client provided by the camera manufacturer can be installed in the instrument. Users who need to add mobile client may contact the agent for the mobile client version. Our company will upload the file in the server for the installation of corresponding mobile client program.

4.24 System setting
Instrument network parameters, WIFI, time, volume and language settings and local system version info can be carried out in system settings function. Tap Setting button on desktop to enter system setting function.

Figure 32

▲ Ethernet setting

Tap Ethernet icon on left, as shown in Figure 33, select Ethernet and connect network cable to the LAN port of the instrument. Static IP and dynamic IP mode can be set in the instrument. To use a static IP address, select static IP address column, and then set the instrument IP address, gateway, subnet mask, preferred DNS and backup DNS.

Figure 33

The instrument is set with static state:
A default static IP address 192.168.0.110,
Gateway 192.168.0.1,
Subnet mask 255.255.255.0,
Preferred DNS 114.114.114.114,
Standby DNS is 8.8.8.8.

When use of static IP address is stopped, the instrument is set to obtain IP address automatically in dynamic IP mode, as shown in Figure 34:

Figure 34

Note: Make sure to turn off WIFI first when using Ethernet, for the instrument defaults to use WIFI as the network connection.

▲ WLAN setting

Press WLAN icon on the setting interface, tap WLAN switch button to start automatic WIFI connection is available, as shown in Figure 35:

Figure 35

Tap the Refresh icon on the top to re-obtain available WIFI network, and tap + icon to manually add WIFI network. Select the WIFI network to be connected and press password to connect WIFI.

Note: When Ethernet network is open and connected to the network cable, while WIFI network is open at the same time, WIFI network is preferred.

▲ **Date and time setting**
Select Date and Time on the setting function.

Figure 36

As shown in Figure 36, when automatic determination of date, time and time zone was selected, the instrument is needed to be connected to Internet, then the instrument will automatically update following the Internet without manual settings. When these two options were canceled, date and time can be set manually.

▲ **Volume adjustment**
Select Sound icon on the setting interface that can adjust the volume by sliding the sound bar.

Figure 37

▲ **Language setting**
The instrument can be set to use Simplified Chinese, Traditional Chinese and English. Select Language icon on setting interface to set the language.
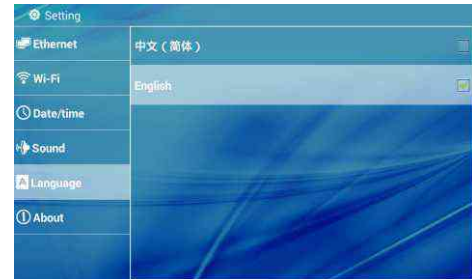

Figure 38

▲ **About**
After enter Setting menu, you can enter About to obtain more information about the device, such as model, software version, Figure 39 as below:

Figure 39

Read the precautions before your operation .

● Keep the tester in right place to avoid hurt with the sharp probe .

● Never put the equipment in the place with much dust , humidity and high temperature (over 40 degree)

● Please use the battery according to the specification . Other wise it may result in damage to equipment .

● Please never dismout the equipment arbitrarily . The maintenance and care shall be conducted by professional personnel .

● Please take out the battery in launcher and receiver if the equipment is not used for a long time .

● Never use the equipment to detect power cord with electricity (such as power supply circuit of 220V) .Otherwise it may result in damage to equipment and personal injury .

● Never conduct related operation of communication line in thunderstorm weather so as to prevent lightning stroke and impact on personal safty