

**PSI Displays Ltd**

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## **HD CCTV Tester/Test Monitor**

**Model: HD5002**

### **User Manual**



**CE**

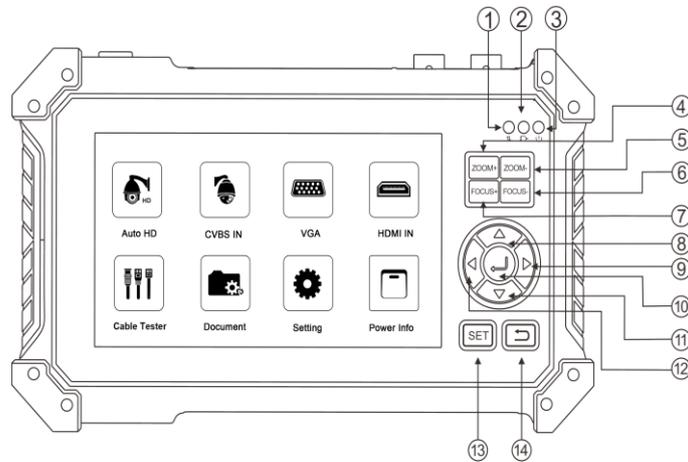
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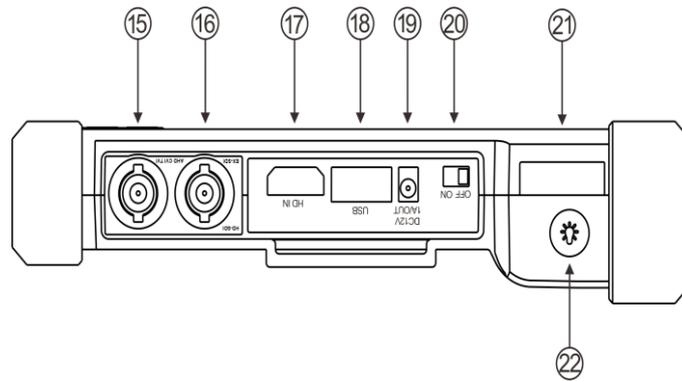
- **Safety information**

- ◆ The tester is intended to use in compliance with the local rules of the electrical usage and avoid to apply at the places which are inapplicable for the use of electrics such as hospital, gas station etc.
- ◆ To prevent the functional decline or failure, the product should not be sprinkled or damped.
- ◆ The exposed part of the 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 other connected cables.
- ◆ The 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 with the technician of our company.
- ◆ The instrument should not be used under the 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.

- **Function interface**



- 1\_RS485 data transmission indicator: the light is red while the data is being transmitted
- 2\_Charging indicator: the light is red while the battery is being charged. The light will automatically turn off if charge completed.
- 3\_Power indicator: the light is green while the tester is turned on
- 4\_Zoom in the image
- 5\_Zoom out the image
- 6\_Focus the image faraway
- 7\_Focus the image nearby
- 8\_Upward, select function, set parameter and tilt the PTZ upward
- 9\_Rightward, select function, set parameter and pan the PTZ rightward
- 10\_Confirm button, enter functions and save settings
- 11\_Downward, select function, set parameter and tilt the PTZ downward
- 12\_Leftward, select function, set parameter and pan the PTZ leftward
- 13\_Setting button, enter the function parameter settings
- 14\_Return/Close: Return and cancel the operation



15\_ CVBS/AHD/TVI/CVI input (BNC interface)

16\_ EX/HD-SDI input (BNC interface) ( Optional )

17\_ HDMI input

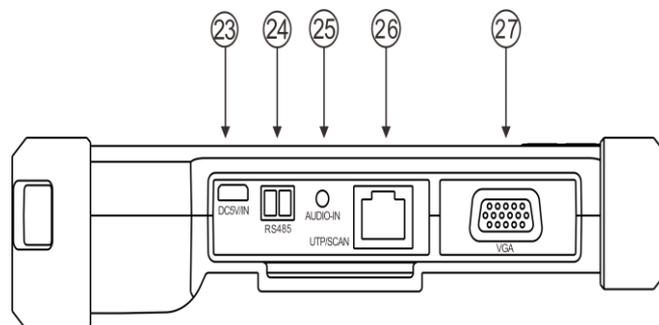
18\_ DC 5V 1A power output, USB power bank

19\_ DC 12V 1A power output, temperately supply power for camera

20\_ ON/OFF power switch

21\_ LED light

22\_ Light power button



23\_ DC 5V 2A charging interface

24\_ RS485 Interface: RS485 communication for the PTZ

25\_ Audio input

26\_ UTP port, UTP cable tester port/ Cable tracer port (\*Optional)

27\_ VGA input

- **Operation**

### **3.1 Installing the Battery**

The tester has built-in lithium ion rechargeable battery. The battery inside battery cabin should be disconnected for safety during transportation!

Prior to the use of the instrument, please take out the battery insulation paper.

Sliding the ON/OFF power switch can power on or off the tester.

▲ Notice: please use 5V 2A adapter to charge when charging. Too high voltage/current will burn the instrument!

When the battery icon is full or the charge indicator turns off automatically, indicate the battery charging is completed.

### **3.2 General**

The 5 inch TFT-LCD screen HD CCTV Tester is designed for maintenance and installation of CVBS, TVI, CVI, AHD cameras, as well as HDMI input, VGA input, Audio input, PTZ control, PING test, LED Flashlight, DC 12V 1A power output, etc. Its portability, user-friendly design and many other functions make the CCTV tester an essential tool for all installers or technicians.

- **Feature**

- 5 inch TFT-LCD screen, 800\*480 resolutions
- RS485 PTZ control, baud 600-115200bps, compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, etc
- 8MP TVI test, 3840 x 2160P 12.5/15 FPS, coaxial PTZ control & call OSD menu
- 8MP AHD test, 3840x2160P 15 FPS, coaxial PTZ & call OSD menu
- 8MP CVI test, 3840 x 2160P 12.5/15FPS, coaxial PTZ & call OSD menu

● 8MP EX-SDI test, 3840 x 2160P 25/30FPS, coaxial PTZ & call OSD menu

(\*Optional)

● HD-SDI test, 1920 x 1080P 25/30/50/60 FPS, coaxial PTZ & call OSD menu

(\*Optional)

● 3G-SDI test, 1920 x 1080P 50/60 FPS, coaxial PTZ & call OSD menu

(\*Optional)

● CVBS camera test, PTZ controller

● DC12V/1A power output, camera can be powered from DC 12 Voltage.

● DC 5V 1A power output, support reading USB disk

● Audio in, support record and save the audio.

● Improvement cable tester, UTP cable, telephone cable etc order and connectivity test, can save testing report, if special number, need customized. Can detect the near-end, mid-end and far-end fault point of RJ45 cable connector

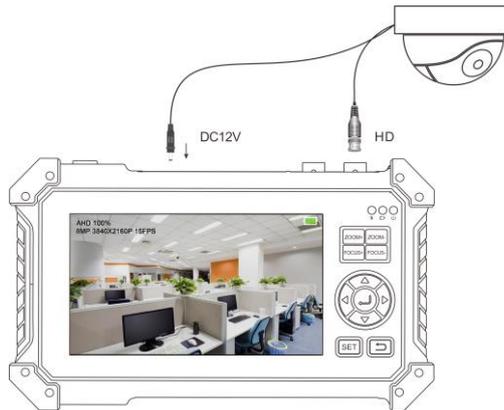
● Digital Cable tracer, search BNC cable, network cable and telephone cable from the mess cables. Cable tracer and UTP cable test app in the same interface(\*Optional)

● 3.7 V /5200mAh Li-ion Battery, after 4 hours charging, working time lasts 6.5 hours

• **Feature introduction**

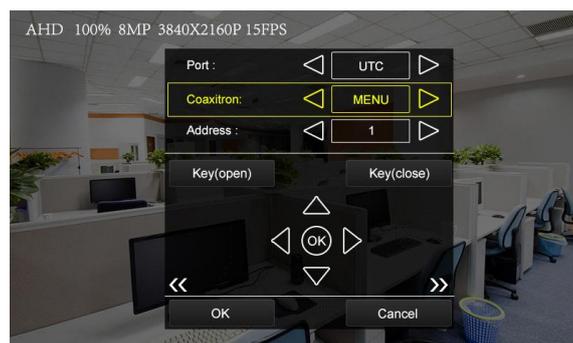
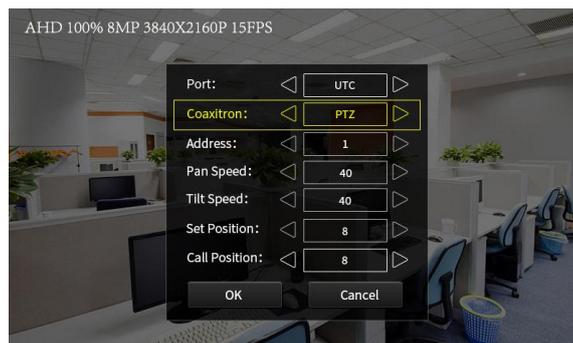
• **TVI/CVI/AHD/CVBS camera test**

Connect camera to “AHD/CVI/TVI” port, enter “Auto HD” app. Can auto recognize AHD/CVI/TVI/CVBS signal and display the image, as well as display the camera type and frame.



- **Coaxial PTZ control**

When enter “PTZ” option, press  key switch to “menu setting”, and switch to “key (open)” or “OK” option, press  key to call out the camera main menu.



- **RS485 control**

Support RS485 control, baud 600-115200bps, compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, etc. Can set PTZ pan speed and Tilt speed, call set preset position. In the Auto HD/CVBS IN interface, press “SET” , can set RS485 protocol, Port, Baud, Address, PTZ, etc.



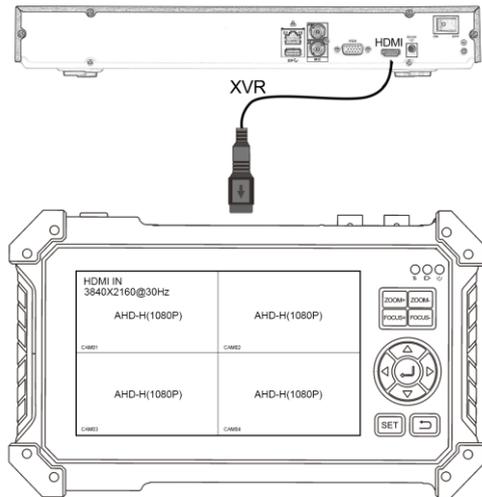
- **EX-SDI/HD-SDI camera test**

Connect camera to “SDI” port, enter “Auto HD” app, and select “SDI” to enter SDI interface, can display the camera image, and will display the resolution and frame rate in top-left corner, support up to 4K/8MP 3840x2160p 25/30fps EX-SDI camera test, coaxial PTZ, call OSD menu and RS485 control.

- **XVR display**

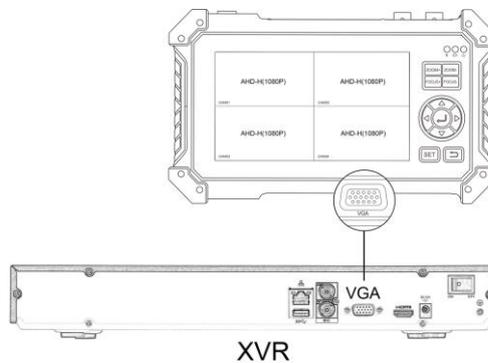
- **HDMI input**

Connect one end of HDMI cable to Tester’ s “HD IN” port, other end connect to XVR’ s “HDMI” port, enter “HDMI input” app, can receive the real-time audio and video signal from XVR, and will display the resolution and frame rate in top-left corner, support up to 4K/3840x2160p30fps resolution.



- **VGA input**

Connect one end of VGA cable to Tester' s “VGA” port, other end connect to XVR' s “VGA” port, enter “VGA input” app, can receive the real-time video signal from XVR, support up to 1920x1200 resolution.

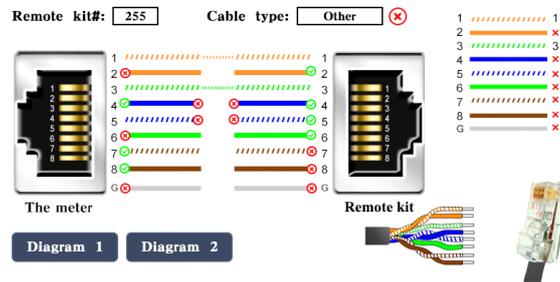
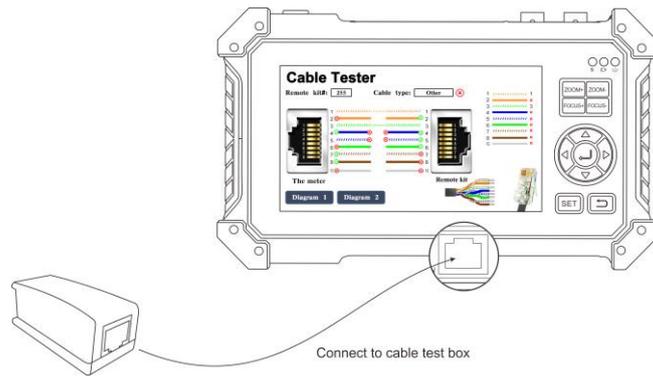


- **Cable Tester**

- **UTP Cable Tester**

Connect one end of LAN cable or telephone cable to Tester' s UTP/SCAN port, other end connect to the UTP port of Cable tester or cable tracer (\*optional).

Cable tester can test cable sequence, continuity and cable type, can detect near / medium / far end fault of RJ45 cable connector, display the number of the remote kit (Remote default No.255).



Visual judgment of network cable availability:

- ✔ All sequence of cable is correct, generally corresponds to Gigabit straight/cross network cables.
- ✘ Cable sequence is wrong, but the cable is still available, generally corresponds to 100M straight-through/cross network cable.
- ✘ All sequence of cable is wrong, not available.

### Meter-end/cable tester-end fault location:

Tester-end/cable tester-end display “x”, it means the RJ45 cable connector or within 1 meter from the RJ45 cable connector is faulty.

The middle part of sequence display “x”, it means the RJ45 cable connector at the end of Tester/Cable tester is normal, and there is a breakpoint 1 meter away from the RJ45 cable connector.

The middle part of sequence is not communicated and not display “x” , it means the RJ45 cable connector at the end of Tester / Cable tester is faulty, and the middle of the cable is normal.

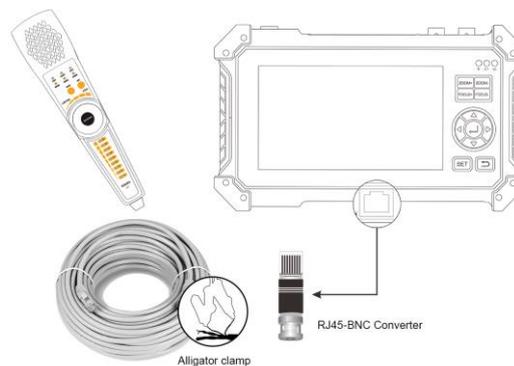
Tester-end can perform RJ45 cable connector fault detection even when the remote end is not connected to the cable tester’s UTP interface.

- **Digital cable tracer (Optional)**

Press key button, to enter “Cable Tester” and select “Cable tracer” app.

Connect UTP cable or telephone cable to tester bottom port “UTP/SCAN” , or use adapters and cables to connect other cables, such as BNC cable. Or use BNC adapters and alligator clamp cable to connect BNC cable etc.

**Note:** If use BNC adapters and alligator clip cable to connect BNC cable etc. Please select to “BNC mode”, if connect shielded cable, please select “STP mode”.



**Locate cables:** Arrow keys to switch mode, “UTP mode” to looking for unshielded network or telephone cables, “BNC mode” for finding BNC cable after connecting adapter. “STP mode” is used to find the shielded network cable. Turn on the cable tracer. The round knob, if clockwise rotation the knob to increase sensitivity, and turn it counter clockwise to decrease the sensitivity.

**Silent mode:** Press the key “MUTE” for 2 seconds and will make a sound “Di” to start.

In silent mode, locate cable according to the indicator signal of 1-8. Press the "MUTE" key again to exit silent mode.

**Cable sequence test:** When search cable, also can test UTP cable sequence.

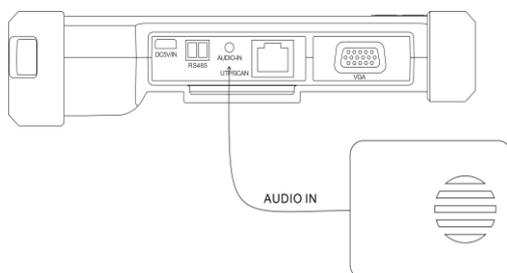
Through the indicator to check cable sequence whether is correct. If the indicator is “ON”, it means the cable sequence is correct.

- **U disk reading**

Insert U disk to Tester’ s “USB” port, enter “Media player” app, can read the image, music, video and documents. And also support DC 5V 1A power output, as power bank.

- **Audio test**

Connect pickups or other Audio equipment to tester’ s bottom port “Audio in” , you can test the audio input from audio pickup devices by connecting the audio pickup device to the CCTV tester with the supplied audio cable.



- **Setting**

**Language:** Select your desired language: English, Korean, Russian, Italian, Polish, Spanish, French, Japanese, Deutsch, Turkish, Portuguese, Czech, Serbian, etc.

**Brightness/Contrast/Colour:** Set the image brightness of Auto HD, CVBS, VGA and HDMI input

**Backlight:** Set the desired brightness of the CCTV tester

**Volume:** Set volume level

**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.

**Power on status:** Set the instrument to power on and enter the program directly. It can set the main screen/Auto HD/SDI/CVBS in/VGA/ HDMI in, etc



- **Packing kits**

1. Tester
2. Network cable tester
3. Adaptor DC5V 2A
4. RJ45-BNC converter (Only for cable tracer)
5. Li-ion battery (3.7V DC 5200mAh)
6. Tool bag /DC Power cable/BNC cable/RS485 cable/Audio cable
7. Safety cord/Wrist belt
8. Manual

• **Specifications**

|                                    |   |
|------------------------------------|---|
| Model                              | HD5002  |
| Display                            | 5-inch TFT-LCD screen with 800*480 resolution   |
| CVI video signal test              | 8MP CVI camera test, 3840 x 2160P 12.5/15 FPS, UTC control / call OSD menu  |
| TVI video signal test              | 8MP TVI camera test, 3840 x 2160P 12.5/15 FPS, UTC control / call OSD menu  |
| AHD video signal test              | 8MP AHD camera test, 3840 x 2160P 15FPS, UTC control / call OSD menu  |
| SDI video signal test (* Optional) | 8MP EX-SDI, HD-SDI, 3G-SDI, UTC control / call OSD menu*  |
| Auto HD                            | Auto HD app, auto recognize HD coax camera type and resolution, support coaxial PTZ & call OSD menu   |
| HDMI input                         | 1 channel HDMI input, support 4K 30FPS. The resolution as follow:4K_3840*2160 /2K_2560*1440P/1920x1080p /1920x1080i/ 720x480p /720x576p /1280x720p/1024x768p/ 1280x1024p /1280x900p /1440x900p, etc   |
| VGA input                          | 1 channel VGA input, support 1920 x 1200P 60FPS. The resolution as follow: 1920 x 1200P /1920x1080P/1400x 1050P/1600x 1200P /1600x 900P/1440x900P/1360x768P/1280x1024/1280x960/1280x800/1280x768, etc |
| CVBS video signal test             | 1 channel BNC input, NTSC/PAL (Auto adapt), PTZ control, RS485 control, Baud 600-115200bps, compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic etc                          |
| Digital Cable tracer (* Optional)  | Search BNC cable, network cable and telephone cable from the mess cables. Cable tracer and UTP cable test app in the same interface *   |
| UTP cable test                     | Test UTP cable connection status and display on the screen. Detect the near-end, mid-end and far-end fault point of RJ45 cable connector.   |
| DC 12V/1A power output             | DC12V/1A power output, supply temporarily power for the camera  |
| 5V 1A power output                 | 5V 1A power output, support reading USB disk  |
| Audio test                         | 1 channel audio signal input, test the audio whether is normal  |
| Power                              |   |

|                     |   |
|---------------------|---|
| Battery             | Built-in 3.7V Li-ion battery, 5200mAh   |
| Rechargeable        | After charging 4 hours, normal working time 6.5 hours. The maximum charging current of the battery is 1.67A, and 5V 2A charger is standard.                     |
| Parameters          |   |
| Operation setting   | OSD menu, select your desired language: English, Korean, Russian, Italian, French, Polish, Spanish, Japanese, Deutsch, Turkish, Portuguese, Czech, Serbian, etc |
| General             |   |
| Working Temperature | -10°C ~ +50°C   |
| Working Humidity    | 30%-90%   |
| Dimension/Weight    | 184mm x 110mm x 41mm / 0.4Kg  |

**Note: Digital cable tracer is optional function and not including, if added, need pay extra cost.**

#### Comparison Table:

| Features/ Model  | 5 inch tester +<br>Analog +TVI CVI<br>AHD+VGA input<br>+ HDMI input | 5 inch tester<br>+Analog+ TVI CVI<br>AHD+SDI/EX<br>SDI+VGA input +<br>HDMI input |
|--|---|--|
| 8MP AHD  | √   | √  |
| 8MP TVI  | √   | √  |
| 8MP CVI  | √   | √  |
| HD-SDI/3G-<br>SDI/EX-SDI 2.0*  | x   | √  |
| HDMI INPUT<br>4K 30 FPS  | √   | √  |
| VGA IN   | √   | √  |
| Digital Cable<br>tracer*   | Optional  | Optional   |
| Upgrade UTP cable<br>test, check fault of<br>RJ45 cable<br>connector | √   | √  |

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 contact our technical department.