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› POMIACAM CCTV Camera Tester HD-2950 Instruction Manual

## POMIACAM HD-2950

# POMIACAM CCTV Camera Tester HD-2950 Instruction Manual

Model: HD-2950

## 1. INTRODUCTION

The POMIACAM HD-2950 is a versatile 5-inch TFT-LCD CCTV camera tester designed for the installation and maintenance of HD coaxial cameras. It supports 8MP AHD, CVI, TVI, and Analog CVBS camera testing. This device also includes functions such as UTP cable testing, HDMI and VGA input, RS485 PTZ control, audio testing, and 12V power output, making it an essential tool for security system professionals.

**Important Note: This device does not support IP network cameras.**



# WARNING

pomiacam

## IP cameras(not supported)



Figure 1: Warning indicating that IP cameras are not supported by the HD-2950 tester.

## 2. PRODUCT FEATURES

- **8MP AHD/CVI/TVI/Analog CVBS Camera Test:** Automatically recognizes camera types and displays resolution and frame rate. Supports coaxial PTZ and OSD menu calls.
- **VGA & HDMI Input:** Features 1 channel HDMI signal input (max 4K 30FPS) and 1 channel VGA video signal input (max 1920×1200P 60FPS).
- **CVBS Video Signal Test:** Includes 1 channel BNC input (NTSC/PAL auto adapt), PTZ control (RS485, 600-115200bps, 30+ protocols), and 1 channel audio signal input for audio testing.
- **UTP Cable Tester:** Tests UTP cable continuity, detects faulty RJ45 cable pins, and measures network cable length up to 3000 meters.
- **Display & Battery:** Equipped with a 5-inch TFT-LCD screen (800x480 resolution, non-touch). Built-in 3.7V 4000mAh Li-ion battery provides approximately 8 hours of working time after 5 hours of charging.
- **Power Output:** Provides DC12V/1A power output for cameras.
- **LED Light:** Integrated LED light for working in dark environments.



Figure 2: Overview of the HD-2950 CCTV Tester's main features and supported technologies.

### 3. PACKAGE CONTENTS

The following items are included in your POMIACAM HD-2950 CCTV Camera Tester package:

- 1x CCTV Camera Tester (HD-2950)
- 1x Charger
- 1x Li-ion battery (built-in)
- 1x DC 5V power cable
- 1x Safety cord/Wrist belt
- 1x Audio test cable
- 1x BNC cable
- 1x RS485 Control cable
- 1x Power output cable
- 1x DC 12V 1A adapter
- 1x Cable tester (remote unit)

## HD-2950 Packing Listing

			
HD-2950	Packing box	Li-ion battery	DC 5V power cable
			
Safety cord/Wrist belt	Audio test cable	BNC cable	Rs485 Control cable
			
Power output cable	DC 12V 1A	Cable tester	

Figure 3: Visual representation of the HD-2950 CCTV Tester and its included accessories.

## 4. DEVICE OVERVIEW

### 4.1. Buttons and Indicators

## Button introduction



### 1 RS485 data transmission indicator

### 2 Charging indicator

### 3 Power indicator

### 4 Zoom

### 5 Focus

### 6 Confirm button

### 7 PTZ control button

### 8 Return/Close

### 9 Set

Figure 4: Front view of the HD-2950 with numbered callouts for buttons and indicators.

1. **RS485 Data Transmission Indicator:** Lights up during RS485 communication.
2. **Charging Indicator:** Indicates charging status.
3. **Power Indicator:** Shows the device's power status.
4. **Zoom Buttons:** Adjust the digital zoom level of the video feed.
5. **Focus Buttons:** Adjust the focus of the connected camera (if supported).
6. **Confirm Button:** Confirms selections or enters menus.
7. **PTZ Control Buttons:** Navigate and control Pan/Tilt/Zoom functions of PTZ cameras.
8. **Return/Close Button:** Navigates back or closes current menu/function.
9. **Set Button:** Accesses settings or specific function parameters.

## 4.2. Ports and Connections

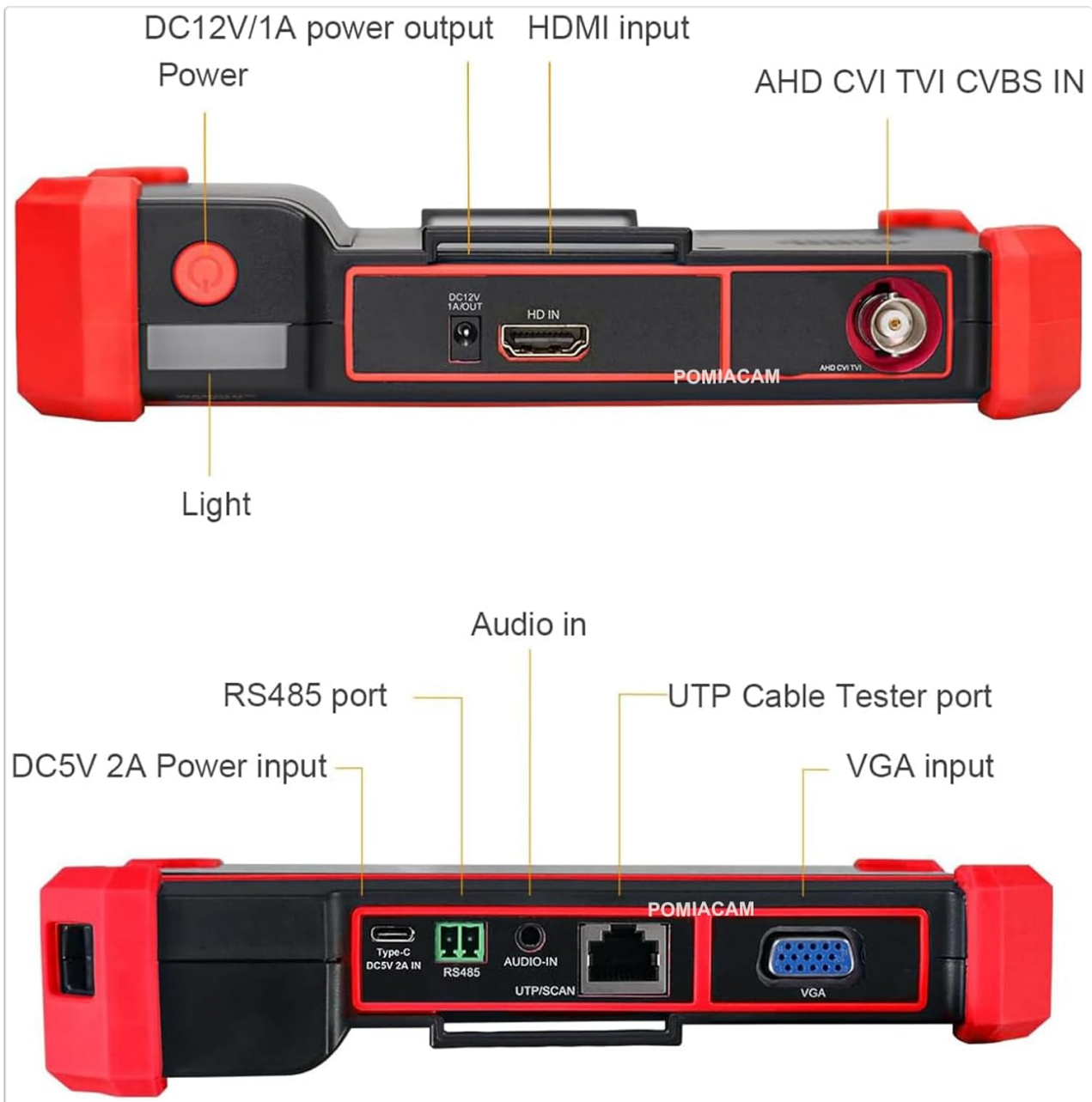


Figure 5: Top and bottom views of the HD-2950 highlighting input/output ports.

- **DC12V/1A Power Output:** Provides power to connected cameras.
- **HDMI Input:** For connecting external HDMI video sources (up to 4K 30FPS).
- **AHD CVI TVI CVBS IN (BNC):** Main input for coaxial camera signals.
- **Light:** Built-in LED flashlight.
- **RS485 Port:** For PTZ control and data communication.
- **Audio In:** For connecting audio input from cameras or other devices.
- **UTP/SCAN (RJ45):** For UTP cable testing.
- **VGA Input:** For connecting external VGA video sources (up to 1920×1200P 60FPS).
- **DC5V/2A Power Input (Type-C):** For charging the device.

## 5. SETUP

### 5.1. Charging the Device

Before initial use, fully charge the HD-2950. Connect the provided DC5V/2A charger to the Type-C power input port. The charging indicator will illuminate. A full charge typically takes approximately 5 hours and provides up to 8 hours of normal operation.

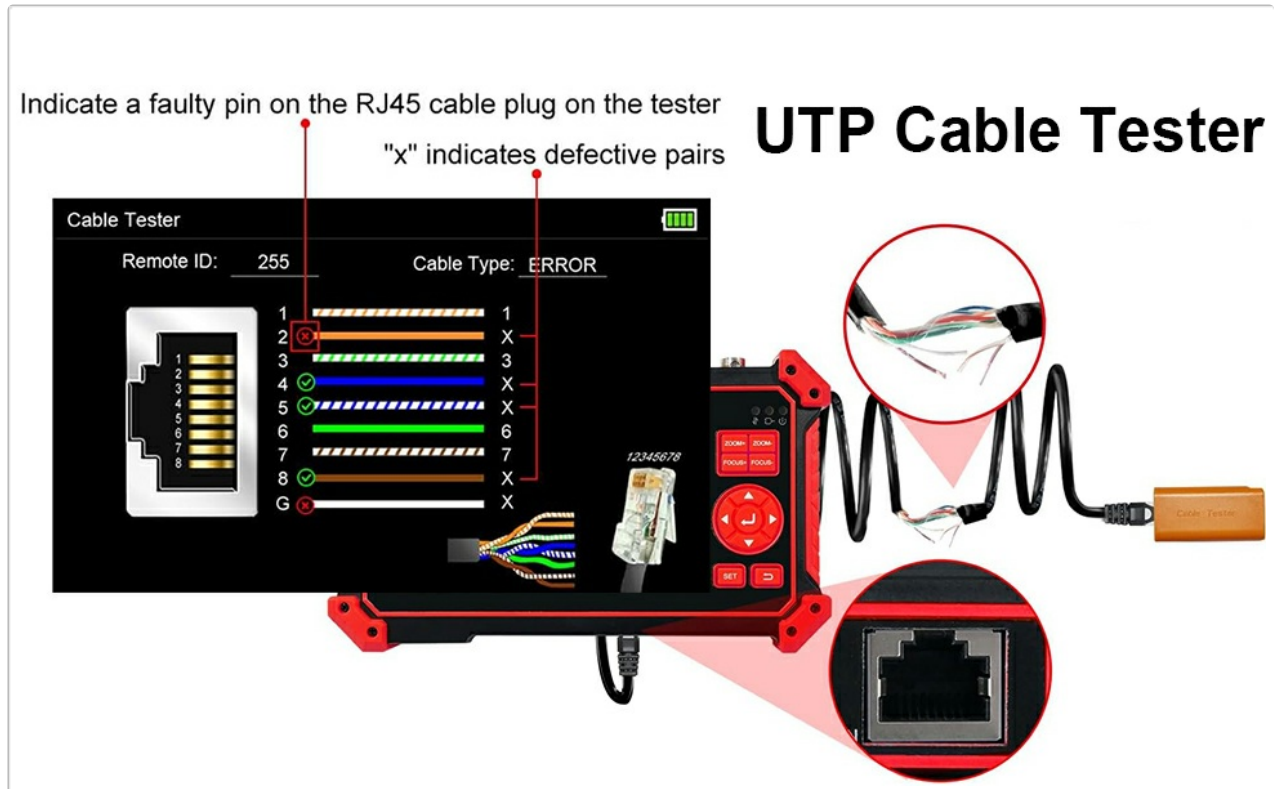


Figure 6: Battery charging and working time details for the HD-2950.

## 5.2. Powering On/Off

Press and hold the Power button (refer to Figure 5) for a few seconds to turn the device on or off. The Power indicator will show the device's status.

## 6. OPERATION

### 6.1. Coaxial Camera Test (AHD/CVI/TVI/CVBS)

Connect your AHD, CVI, TVI, or CVBS analog camera to the "AHD CVI TVI CVBS IN" BNC port using a BNC cable. The HD-2950 will automatically detect the camera type, resolution, and frame rate. You can navigate the camera's OSD menu and control PTZ functions (if supported by the camera) using the device's buttons.

# Auto HD

Auto recognize HD coaxial camera type and resolution, support coaxial PTZ & call OSD menu.



Figure 7: Auto HD function recognizing camera type and displaying PTZ settings.



Figure 8: Live view from an 8MP coaxial camera being tested by the HD-2950.

## Video Demonstration: How Analog 4 IN 1 (TVI-AHD-CVI-CVBS) Camera Test



Video 1: Demonstrates connecting and testing 4-in-1 analog cameras (TVI, AHD, CVI, CVBS) with the tester. Shows how to connect the

camera, power it, and view the live feed. Also shows how to switch between different camera modes if the image appears black and white.

## 6.2. UTP Cable Test

To test UTP cable continuity, connect one end of the RJ45 cable to the "UTP/SCAN" port on the tester and the other end to the remote cable tester unit. The screen will display the continuity status of each pin. An "X" indicates a defective pair. For accurate length measurement, ensure the remote end of the cable is not connected to any other device.

# UTP Cable Tester

Testing UTP Cable continuity and display on the screen, support to detect the near-end fault point of the RJ45 cable plug on the tester, support for measuring network cable length.

WARM TIP: when you want to test the length of the network cable, one end of the network cable should be connected to the tester and the other end of the cable cannot be connected to other devices), test length max 3000 meters

Indicate a faulty pin on the RJ45 cable plug on the tester

"x" indicates defective pairs

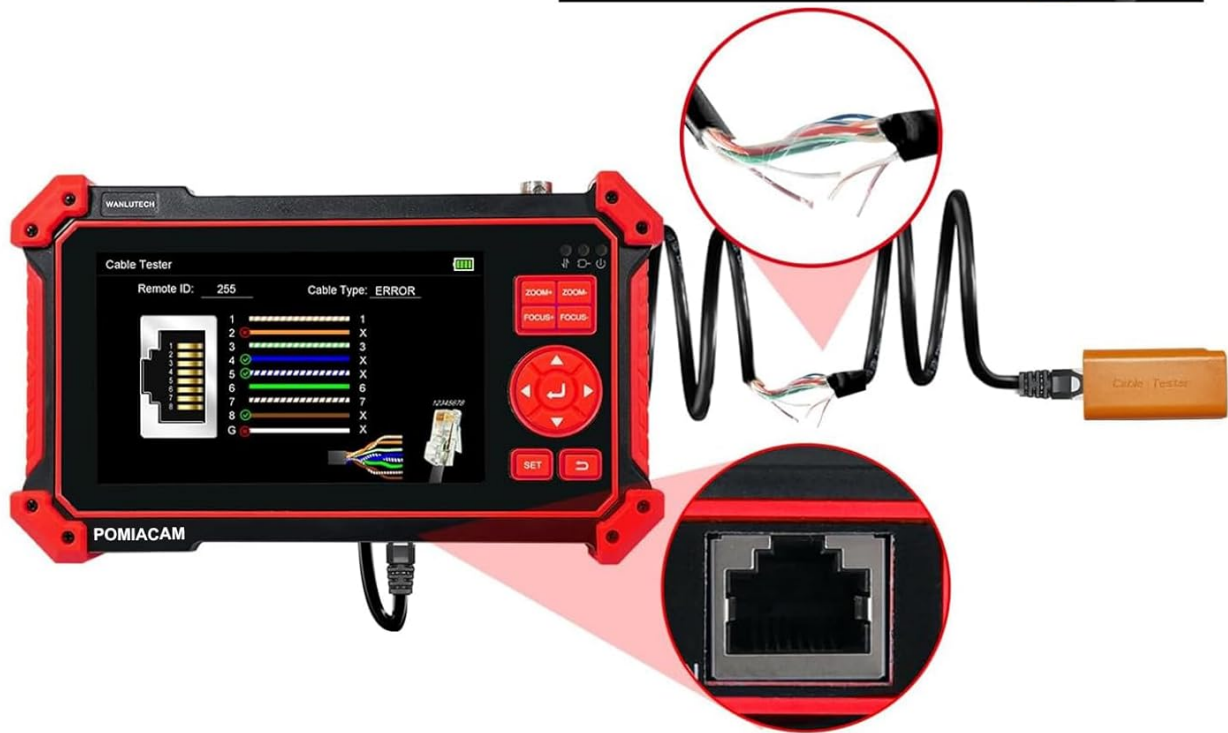
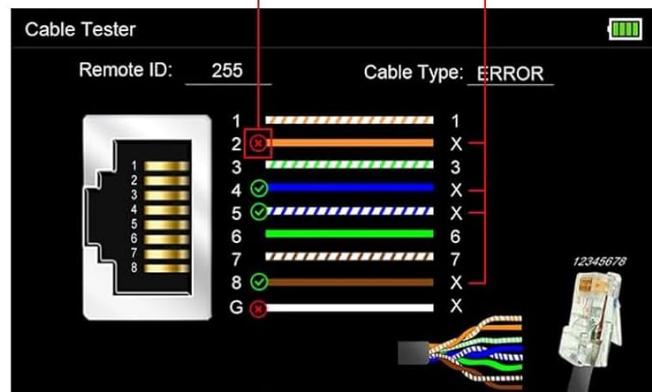


Figure 9: UTP cable testing interface, showing pin mapping and fault detection.

## 6.3. RS485 PTZ Control

Connect the RS485 control cable from the tester's RS485 port to the PTZ camera. Use the PTZ Control buttons (refer to Figure 4) to adjust the camera's pan, tilt, and zoom. Access the PTZ settings menu to configure protocols, baud rate, and address if needed.

# HD-2950 CCTV tester

5.0 inch 8M Coaxial Camera tester  
Auto HD, Analog Camera Test



VGA HDMI

AHD CVI TVI

PTZ RS485



**This device does not support IP cameras testing**

Figure 10: PTZ control interface showing options for coaxial and RS485 protocols.

## 6.4. HDMI & VGA Input

The HD-2950 can serve as a display for external video sources. Connect an HDMI cable to the "HDMI IN" port or a VGA cable to the "VGA Input" port to view video from DVRs, NVRs, or other compatible devices. The tester supports HDMI input up to 4K 30FPS and VGA input up to 1920×1200P 60FPS.

## VGA INPUT

Test and debug NVR / DVR,  
as the display screen  
Support max 1920x1200P 60FPS



VGA IN

## HDMI INPUT

The instrument is equipped  
with HDMIHD input interface,  
support 4K 30FPS, .supporting  
image display, record,  
photoand playback.



HDMI INPUT

Figure 11: Demonstrates connecting the HD-2950 to a DVR/NVR using VGA and HDMI inputs.

### 6.5. Audio Test

Connect the audio output from your camera or audio pickup device to the "Audio In" port on the tester using the provided audio test cable. This allows you to verify if the audio signal is functioning correctly.

### 6.6. 12V Power Output

The HD-2950 can supply DC12V/1A power to a camera directly from its "DC12V/1A Power Output" port. This is useful for powering cameras during installation or testing without needing an external power supply.

## 7. MAINTENANCE

- Keep the device clean and free from dust and moisture.
- Avoid dropping the device or subjecting it to strong impacts.
- Store the device in a cool, dry place when not in use.
- Regularly charge the battery to maintain its lifespan, even if not in frequent use.

## 8. TROUBLESHOOTING

### 8.1. Black and White Image Display

If the camera image appears black and white, it may indicate that the signal type (AHD, CVI, TVI, CVBS) does not correspond between the camera and the tester. Use the tester's menu to manually switch the signal type to match the connected camera. This should resolve the issue.

**Video Demonstration:** HD-2950 Auto HD TVI/CVI/AHD Coaxial Camera Tester



Video 2: Demonstrates the auto-detection feature for TVI/CVI/AHD coaxial cameras and how to navigate the OSD menu. Includes a segment on troubleshooting black and white images by manually adjusting the signal type.

**Video Demonstration:** Auto HD TVI/CVI/AHD/CVBS CCTV Tester Monitor



Video 3: Shows the automatic detection and display of various HD analog camera signals (TVI, CVI, AHD, CVBS) on the tester monitor.

**Video Demonstration:** CCTV tester monitor



Video 4: A brief demonstration of the CCTV tester monitor's display capabilities and interface.

**Video Demonstration:** SGEF Operation video, CCTV Tester, Camera Debugging Helper



Video 5: An operation video demonstrating various functions of a CCTV tester, useful for camera debugging.

## 9. SPECIFICATIONS

Feature	Specification
Model Number	SHX-2950
Display	5 inch TFT-LCD, 800 x 480 resolution (Non-touch screen)
Supported Camera Types	8MP AHD, 8MP CVI, 8MP TVI, CVBS Analog
HDMI Input	Max 4K 30FPS
VGA Input	Max 1920x1200P 60FPS
PTZ Control	RS485, Baud 600-115200bps, compatible with 30+ protocols
UTP Cable Test Length	Max 3000 meters
Battery	Built-in 3.7V Li-ion battery, 4000mAh
Working Time	Approx. 8 hours (after 5 hours charging)
Power Output	DC12V/1A
Power Input	DC5V/2A (Type-C)

Feature	Specification
Product Dimensions	7.87 x 5.51 x 3.94 inches
Item Weight	1.76 pounds

## 10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact POMIACAM customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.