

Coantec CP35 Series
Police Borescope

User Manual



Attention: Before using, please read the manual first

tube of the instrument in time to prevent corrosion.
9) During use, the joystick should be slowly operated. If the instrument is in abnormal condition, please stop operating immediately. After adjusting the joystick to the middle position, carefully retrieve the insertion tube and shut down the instrument, then contact the manufacturer or distributor in time.

2. Industrial videoscope product instruction

Parameters

Host	
Display	3.5-inch HD display
Display Resolution	640*480
Digital Zoom	Support real-time 4 times zoom, 8 times zoom when playback
LED Brightness Level	0-7 level adjustment
Photo/Video Function	With photo and video functions, snapshots available while recording
Night Vision Ability	Recognize A4 paper size objects 10m away in a completely black environment
Sound Collection Function	Can collect weak audio signals from 3m away
File Format	Image:JPEG/BMP; Video:MP4
Image Flip	0°/90°/180°/270°
Time Watermark	Yes
Screen Backlight Brightness	3-level adjustable
Exposure Time	Adjustable
Frame Rate	Adjustable
Output Port	Mirco HDMI
Menu Language	Simplified Chinese, Traditional Chinese, English, Japanese, Korean, French, German, Portuguese, Spanish, Russian, Italian, Dutch and more than ten languages
Host Size	240mm*102mm*126mm
Package Dimensions	411mm*321mm*165mm
Host Weight	≤0.45kg (With battery)

Tube				
Parameter	IR night vision tube	White light tube	IR night vision tube	White light tube
Probe Diameter (ø0.1mm)	Φ6	Φ6	Φ3.9	Φ3.9
Pixels	1,000,000			
Wavelength	850nm/940nm	/	850nm/940nm	/
Tube Length	1-3m	1-7m	1-3m	1-3m
Depth of Field	100mm-∞	8-80mm	25mm-∞	5-100mm
Direction of View	Direct View			
Lighting method	Rear-mounted LED,optical fiber light guiding/Front LED lights			
Articulation	360 degrees all-way articulation			
Joystick control method	Mechanical control			
Tube material	Tungsten wire wear-resistant braided tube			
Compatibility	Interchangeable insertion tubes can be customized			
Bending Angle	≥130° if the tube length not exceed 2m			
View Angle	70°	85°	120°	120°

Power	
Power Supply	Single rechargeable lithium battery
Working Time	≥4 hours

Operation Environment	
Machine Operating Temperature	-10°C-50°C
Probe Operating Temperature	-20°C-60°C
Storage Temperature	-20°C-60°C

Product instruction

CP35 series police borescope is a product with infrared night vision function, which developed and produced by Coantec independently. The product adopts an integrated hand-held design, light and portable. 360° articulation with the probe, no dead angle for observation. Users can monitor through the display screen in real time, take photos and record videos. The host can be equipped with white light and infrared insertion tubes of different specifications, which can effectively save cost for users. Wi-Fi function is optional, the Wi-Fi module can transmit the collected image to the mobile terminal wirelessly, which is convenient for remote monitoring. This product is suitable for applied in criminal investigation, explosion disposal, security inspection, anti-smuggling, search and rescue, in the area of public security, fire control, procuratorate, customs and other institutions.

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1. Users Instruction

1.1 Use and application

This product has the function of infrared night vision. Its front-end probe can effectively monitor the interior conditions of rooms and parcels in the daytime or in the dark night environment through narrow space. Users can monitor real-time through the display screen, and can also take photos and videos to provide more complete and reliable data for investigation and evidence collection. This product is suitable for anti-terrorism, criminal investigation, explosion disposal, security inspection, anti-smuggling, search and rescue work, can better help users to master the field situation, improve efficiency, also more covert, effectively guarantee the safety of investigators.

1.2 Maintenance and modification

This product has no spare parts which can be repaired independently by users, please do not attempt to disassemble, refit and repair it, our company will not bear any responsibility for the damage and loss caused by the above actions to users. Maintenance services for this product are provided only by our company and authorized distributors.

1.3 Safety precautions

- Do not use this instrument to observe human body or animal body.
- Do not use this instrument to check object with current carrying, in order to avoid electronic shock.
- Do not touch the end of the lens directly during use, especially pay attention that touching end of the probe may cause burns after using the borescope under high temperature.
- Do not watch the bright light at the front-end LED of the probe in close range directly, so as to avoid the strong light affecting the vision.
- Do not bend, stretch, twist or roll the insertion tube with excessive force to avoid damage to the insertion tube or instrument.
- Long-term use of this product will cause the lens stained, resulting in blurred picture and affecting data acquisition, please clean the lens with alcohol before use.
- Keep the insertion tube away from any liquid except water, brine, oil and light oil.
- After finishing use, please clean the front end of the insertion

4. Operation Guide

There are three working modes for CP35 series police borescope: real-time inspection mode, playback preview mode and system setting. For details of button function in each mode and sub-mode, please refer to Table 1 Button Function List.

Button	Name	Real time detection mode	Play back mode	Video play	System setting	Time setting
	Joystick	Control the direction of the probe: up/down/left/right				
	LED brightness control					
	Downward/ Switch for photo and video					
	Menu/OK					
	Return/Playback	Adjust brightness	Photo/ video playback	Return	Upward	Upward
	Upward		Rotate the image 90° clockwise	Fast Forward	Exit	Upward
	On/Off		Real time detection/ Image freezing	Upward	Return	Exit
	Downward		Switch for photo and video	Downward	Ok	Ok

3. Operation Procedures

- Take out the instrument: Open the instrument case and take out CP35 videoscope. Hold the probe well during removal to avoid collision.
- Start-up preparation: Check whether all parts of the device are in good condition, confirm that the TF card has been installed, and press and hold the power button to turn on.
- Inspection operation: Insert the tube into the machine/object under test and control the direction of the front-end probe by operating the joystick.
- Brightness adjustment: Adjust the brightness of the light source to get the appropriate illumination to make the picture achieve the best effect.
- Shoot/Record: Press the photo/Video button to take photos or videos of the observation results.
- Insertion tube retraction: Move the joystick to middle position to make sure the tube is roughly straight and then slowly draw it out.
- Instrument storage: Turn off the power switch, put the instrument into the carrying case, ensure that no part will be squeezed by the cover and close the upper cover.



Real-time inspection mode:

Press the power button for 3 seconds, the blue light in the upper left corner of the screen is on, and the system is turned on, it enters the real-time inspection mode by default. In this mode, the user can observe the image detected by the camera through the display screen, control the movement direction and speed of the front-end camera by manipulating the joystick, lock the current position of the probe by stopping the operation of the joystick, freeze the current picture by short pressing the power button, and release the freeze by short pressing the power button again.

1. The button  can adjust the brightness of LED lighting in 7 levels, the icon  in the upper right corner of the screen shows the current brightness level. Brightness adjustment can only be performed in real-time inspection mode.

2. The button  can switch the mode of photography/video recording. This function is only used for white light inspection. The top left corner of the screen  is displayed by default, indicating that the current mode is photo mode. Press the camera/video button on the back of the host to take pictures. The icon in the upper left corner indicates the current video mode. In this mode, press the Photo/Video button  to start the video recording, recording time is shown on the screen, and then press once again to finish the video recording and save it automatically. Only video is recorded by default. If an audio module is selected, the sound recording is performed simultaneously.

System setup mode:

In the real-time inspection mode, press the setting menu button to enter the system setting mode, which can set the following system parameters:

- Image zooming: zoom in by pressing button "upward", zoom out by pressing button "downward", the number on the upper right corner of the screen shows the current zooming times, 4 times at maximum.
- Watermarking information: Watermarking information can be turned off or turned on.
- Picture format: JPEG/BMP can be selected as the image storage format.

- Time and Date: Set the system date and time, and adjust it by button "OK", "upward" and "downward".
- Language setting: The system has more than ten languages including Simplified Chinese, traditional Chinese, English, Japanese, Korean, French, German, Portuguese, Spanish, Russian, etc.
- Card Formatting: Format the memory card, please use it carefully.
- Restore factory defaults: Restore the instrument to the factory default settings.
- Version information: Select the current version information of the system and upgrade the system settings.
- Wi-Fi Settings: Real-time images can be wirelessly transmitted to mobile terminals such as mobile phones after opening.

Playback Preview Mode:

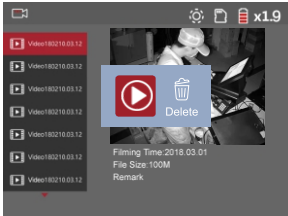
In real-time inspection mode, press the Return/preview button  to enter the playback preview mode. Pictures and videos are saved separately and previewed in list. The preview is accompanied by showing the current file information on the screen. After selecting the file, icons  and  appear in the interface, which can view or delete the current file.

- In full-screen viewing mode, there are 7 icons at the bottom of the screen: "+ / -", Left / Right, Up / Down, Return", which can zoom in / out, move to the Left / Right, Up / Down, and return to the previous menu. The Left / Right, Up / Down keys are only available under the enlarged images and view the images.
- After opening the video file, the video will be played at the normal speed. Press  fast forward to play,  backward to play,  pause, and then press  again to continue playing.
- Select "delete" file, the interface will appear  and   means cancel delete operation, select  file will be deleted directly.

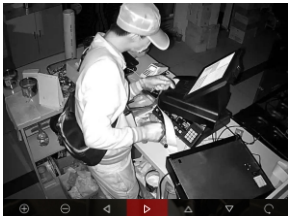
5.Wi-Fi (Optional) Use Method:

5.1 Open Wi-Fi in the menu and you can see the Wi-Fi logo on the top of the screen.

- Open Wi-Fi on the mobile phone, search for the Wi-Fi of "CDR *** r", and connect.
- Open XDV (general software, download to mobile phone before use), select the current connection (Wi-Fi of CDR *** f) to transmit the image to mobile phone in real time.



(Figure 1) Playback preview mode



(Figure 2) full screen view mode

6. Reading Documents

Take out the TF card from card slot, insert it into card reader, and read the card data directly through the computer. Files are saved in the "My Computer/ Movable Disk/ DCIM". Note: Do not pull out TF card at will when reading data, otherwise abnormal errors may occur.

7. HDMI Connection

Through the mini HDMI cable, the handset can be connected with the external display screen, and the real-time screen captured by the probe will be displayed directly on the external display screen.

8. Replacement Method of Insertion Tube

Part 1: Remove the insert tube (Schematic Diagram)



Step 1:
Loosen the nut by rotating it.



Step 2:
Hold the nut and bolt in hand and push it up to remove the tube from the host.



Step 3:
Remove the nut and draw the tube from the upper end of the host.

Noted: Avoid holding the insertion tube directly with your hand and pushing it up. Do not push it too hard, or it may cause damage to the optical fiber.

Part 2: Install the insert tube(Schematic Diagram)



Step 1:
Insert the tube from the opening at the top of the host, and make sure the triangular arrow on the top cover is pointed directly above the opening.



Step 2:
Lock the host with nut to fix the insertion tube, then the installation is completed.

9.Shutdown

Press the power button for 1~2 seconds under state of power-on, the screen displays the shutdown screen. The system parameters and files need to be saved for several seconds. The instrument will be shut down after saving.

10.Charging

The icon  at the upper right corner of the screen shows the current power. When the power is insufficient, please charge the instrument online through the Micro USB cable. Note: This USB interface has no data transfer function.

11.Instrument storage method

- Store the instrument in a clean state and keep it at routine room temperature.
- Strictly forbidden to store the instrument in high temperature, high humidity, strong light, strong earthquake, high dust, pollution or corrosive environment.
- Do not collide with other objects during storage or treat the instrument rudely.
- When the product is not used for a long time, please take out the battery and check the function of the instrument regularly.

12.Solutions to common problems

Problem	Reason	Solution
Boot without reaction	No battery or power shortage	Charge or install battery
Auto shutdown	Battery power shortage	Charge or change battery
Boot screen freezing	System boot failure or battery power shortage	Remove the battery to re install and restart or charge
The image cannot be recorded or found	The capacity of TF card is not enough	Replace TF card or delete useless files



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