

USER MANUAL

Industrial Inspection Tool

720P HIGH-DEFINITION SIDE VIEW RIGID VIDEO INSPECTION CAMERA



Model:HD4908

Version 1.0

Please read this user manual carefully and thoroughly before using this product.
Failure to understand operation procedures may result in injury.

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GENERAL SAFETY INFORMATION

WARNING! Read and understand all the instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

SAFETY INSTRUCTIONS

- ☞ Prevent object and liquid entry. Never spill liquid of any kind on the video display unit. Liquid increases the risk of electrical shock and damage to the product.
- ☞ The unit is not shock-resistant. Do not use this camera as a hammer and avoid high impact resultant from things such as dropping the unit from height.
- ☞ Do not immerse video handle in water. Avoid moisture, and store the product in a dry place. Such measures reduce the risk of electric shock and damage. The lens and tube are water resistant when the unit is fully assembled, but the video display unit is not.
- ☞ Do not use the camera if condensation forms inside the lens. Let the water evaporate before using again.
- ☞ Do not use the unit to inspect environments known or suspected to contain exposed electrical wiring.
- ☞ Do not use the unit in the presence of flammable or explosive gases.
- ☞ The unit is designed for industrial inspections. Never use to perform medical inspections.
- ☞ Turn off the system if it is not in use.
- ☞ Remove the batteries when cleaning the unit.
- ☞ When necessary, please plug all FOUR (4) batteries in this unit with new ones.
- ☞ Use only the size and type of battery specified.
- ☞ Be sure to install the battery with the correct polarity as indicated in the battery compartment.
- ☞ Properly dispose of batteries. Exposure to high temperatures can cause batteries to explode, so do not dispose in a fire.
- ☞ Some countries have regulations concerning batteries disposal. Please follow all applicable regulations.

WELCOME

Thank you for purchasing our 720P HIGH-DEFINITION SIDE VIEW RIGID VIDEO INSPECTION CAMERA. This product is designed as a 720P HD real-time inspection camera and to unveil the internal objects and/or structures with the illumination of the highlight LEDs, it is specially designed for cavity wall inspection, wall tie and dry rot inspection, inspection of spaces under floors, above ceilings and behind panels and ducts, and many more where a rigid side view endoscope is required.

FEATURES

- 720P HD side view camera head
- Mini stainless steel insertion tube with outer diameter 9mm
- Insertion tube length 300mm
- 2 high intensity LEDs on camera head, providing light up to 1.5 meters
- Waterproof level: IP67 (camera tube only)
- 3 inch high contrast color LCD display
- 7 navigation buttons on the main body for functional partition
- Photo and video recording function when the memory card is installed
- Image still function in PHOTO status to pause to observe/select the best picture to save
- Support Micro SD card MAX. 32GB(optional, excluding SD card)
- Standalone flashlight could be used as a flashlight or as camera auxiliary light
- Portable and convenient to use
- Powered by four “AA” batteries (not included)

Notice: We suggest you use 4 new AA alkaline batteries to enjoy 3 hours(approximately) long time monitoring(Continuing video recording and LED light adjusted to brightest), if you use the 4 new AA carbon-zinc batteries, the monitoring time will be about 1hour only. Using different brands and types of AA batteries tend to produce different results.

STRUCTURE



- 1.Side view camera with 2 LEDs 2. Rigid probe 3. Handle 4.Camera interface in handle
5.Connection cable 6.3 inch TFT display
7.Navigation buttons

- ① POWER/PAUSE button. Long press to POWER ON/OFF the system.Short press to still the image in PHOTO status or to pause the video when in playback video status
- ② PHOTO/VIDEO button. Short press to take picture/start to record video. Long press to convert the status, PHOTO to VIDEO or VIDEO to PHOTO
- ③ MENU/OK button. Short press to enter the MENU/to confirm the selection.
- ④ DELETE button. Increases/Decrease brightness of LED lights on camera head
- ⑤ UP button. ZOOM button, to enlarge video frame up to 2X, each button press increases zoom level by factor of 0.5
- ⑥ DOWN button. Flip the picture/video 180 degree
- ⑦ Power ON/OFF the FLASHLIGHT

- 8.Micro SD card slot 9.Right-angle connector 10. Straight connector 11.Flashlight
12.Camera interface in main body interface 13.Battery compartment
14.Battery cover 15.Battery cover buckle 16.Labeling slot

SPECIFICATIONS

tems	Product Standard	HD4908
Camera Probe	Camera Lens	CMOS
	Resolution	1280*720
	Viewing Angle	55°
	Focal Distance	4CM
	Depth of Field(DOF)	1.5CM~30CM
	Light Source	2LEDs
	LED Light Irradiation Distance	150CM
	Camera Probe Outer Diameter	9.0MM
	Insertion Length	30CM
	Overall Length	40CM
	Waterproof Level	IP67(Probe Only)
	Working Current	95mA
	Working Voltage	3.5V~5V
	Working Temperature	-10°~60°
TFT Display	Size(Active area)	3inch
	Resolution	640*480
	Luminance for LCM	400
	Image Zoom	1~3times(1.0X, 1.5X, 2.0X)
	Image flip	180°flip
	Brightness Control	/
Video	Image/Video Resolution	1280*720
	Signal Format	Digital
	Image Format	.JPG
	Video Format	.AVI
	Internal memory	Micro SD card(support Max.32G)
Flashlight	Power Output	0.5W
Power Supply	Working Voltage	6V
	Working Current	380MA
	Internal Dry Battery	4AA
Work Time	Continuous working time	about 3Hours(Typical)

PACKING LIST

The device and its accessories come in a tool case.

The package contains:

1. Camera probe X 1
2. Main body X 1
3. Connection cable X 1
4. User Manual X 1
5. Tool case X 1
6. Stainless Steel Protective Sleeve(Optional)



BASIC OPERATION

INSTALL BATTERIES

The battery compartment is accessible from the back of the unit.

Press the battery cover buckle and remove the cover and set it aside.

Load four "AA" batteries into the compartment according to the polarity markings.

Replace the battery compartment cover and secure it.














CONNECT THE CAMERA PROBE WITH THE MAIN BODY

To take out the camera probe, turn the main body over to its back faces you, use your thumb and index finger to carry the connection cable with the right-angle connector and insert into the camera interface in main body; then use your thumb and index finger to carry the connection cable with the straight connector and insert into the camera interface in handle.



OPERATING INSTRUCTIONS


QUICK START PROCEDURE



1. Before you use the device for the first time, carefully peel off and discard the plastic film protecting the LCD.
2. Press and hold the  button for at least 2 seconds to power on the unit and illuminate the LCD.
3. Point the camera-tipped end of the probe at the target, pushing the probe through holes.
4. Press the  button to take picture. Long press the button to enter recording mode, short press the button to begin recording, press again to stop recording.
5. Press the  button to still the picture, press the button again to release the picture, press the  button to save the still picture when the Micro SD card is installed.
6. Press the  button to increase/decrease the brightness of the camera's LEDs.
7. Press the  button to delete the picture/video in playback picture/video status.
8. Press the  button to flip the picture/video (rotate it 180°). Press the button again to undo the inversion.
9. Press the  button to down to the bottom in the MENU or to decrease the number in DATE/TIME setting.
10. Press the  button to up to the top in the MENU or to increase the number in DATE/TIME setting.
11. Press the  button to zoom the picture/video frame. The first press of the button to a zoom level of 1.0X. "1.0X" will appear in light at the top right of the screen. Push the button second and third time to zoom in closer at a level of 1.5X and 2.0X. The next push of the  button reverts to normal size (1.0X) viewing.
12. Press the  button to turn on/off the flashlight. (The flashlight is standalone, you can only press the  button to use the flashlight without



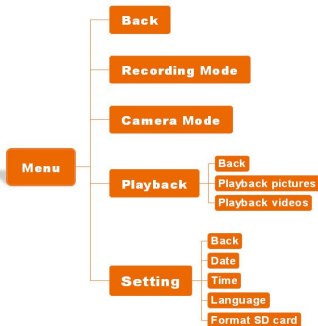
power on the device.)

13. To put the Micro SD card (support MAX.32G) into the device, use your thumb and index finger to carry the SD card with the front side up and insert into the SD card slot, then use your thumb to push gently until the SD card is locked with a sound. To take out the SD card, push the end of the SD card with your thumb, the SD card is unlocked with a sound, then you can pull out the SD card.

14. To power off the device, press and hold the  button for at least 3 seconds.

15. The device is designed to be powered for several hours by the same set of four “AA” batteries. A  full battery icon will appear on screen when the total battery charge is full. A  flickering low battery icon will appear on screen when the total battery charge drops below an operational threshold. To replace the batteries, follow the procedure on **INSTALL BATTERIES**.

MENU INTERFACE



Icons prompt:



shows the SD card is not installed.



CAMERA NOT CONNECTED

shows the camera is not connected.



shows there is no SD card found.



shows the video is deleting.



shows the delete is completed.



shows no data in the SD card.



shows the SD card memory is full.







show the SD card is formatting.



shows the SD card is format completed.

MENU INTERFACE INTRODUCTION



Recording Videos: In real-time recording mode, press the  button to begin recording, the  icon on the screen, press again to stop recording.




Taking Photos: In the real-time camera mode, press the  button to take a photo, the  icon on the screen will flicker once to indicate successfully take the photo and save.







Notice:* In the recording mode, the SD card should be installed, otherwise it will prompt No SD card found!


* The video will be automatically saved as an individual file every 4minutes(approximately).

* When the SD card memory is full, you can not continue to save the picture/video unless you backup the files and release the memory space.

Playback Videos/Pictures: Press the  or  button to select your desired video/picture and stop to pause.

Delete Videos/Pictures: Press the  or  to select your desired video/picture, then press the  button to delete One or All videos/pictures, or Cancel to delete any video/picture.

Date/Time Setting: In the setting mode, press  or  button to select Date/Time, and press  button to begin setting. Press the  or  button to decrease or increase in numbers, and press  button to confirm.

Language Setting: In the Language setting mode, press the  button to switch the language, and quit to select the language. Each press switch one language.

Support languages: English, Deutsch, Français, Nerderlands, 简体, 繁體, 日本語, Español, Русский

Format SD card: In the setting mode, press  button to select Yes or No to continue the action.

TROUBLESHOOTING

Problem	Possible Causes	Likely Solutions
The system can not be started	<ol style="list-style-type: none"> 1. The batteries have not been installed. 2. The batteries are not installed correctly. 3. The batteries have run out off power. 	<ol style="list-style-type: none"> 1. Make sure the batteries are installed before starting the system. 2. Make sure the batteries are installed correctly as instruction. 3. Make sure the batteries are new or with enough power.
Image too dark or light	<ol style="list-style-type: none"> 1. LEDs on camera need adjustment. 2. The flashlight affects. 	<ol style="list-style-type: none"> 1. Adjust the brightness of LEDs according to the inspecting environment. 2. Turn on/off the flashlight as the auxiliary lights if necessary.
Camera LED does not light and no image	<ol style="list-style-type: none"> 1. The camera runs out of power. 2. The connection problem between the main body and the camera probe. 3. The camera is damaged. 	<ol style="list-style-type: none"> 1. Change the new batteries. 2. Reconnect connections between the main body and the camera probe. 3. Separate the camera probe from the main body, and replace a new one.
Micro SD card can not be read	<ol style="list-style-type: none"> 1. SD card problem. 2. System breakdown. 	<ol style="list-style-type: none"> 1. Make sure the Micro SD card is fine and not more than 32G. 2. Restart the system.
The video image is not so smoothly or not recording properly	<ol style="list-style-type: none"> 1. The transmission speed of the Micro SD card is less than 6MB/sec. 	<ol style="list-style-type: none"> 1. Use the Micro SD card with transmission speed 6MB/sec or above.
The video is not recorded	<ol style="list-style-type: none"> 1. Power off when recording. 2. The Micro SD card is full. 	<ol style="list-style-type: none"> 1. Finish the video recording before the battery is running low. 2. Change a Micro SD card or remove the old data and make room for the new video.
The system is breakdown	<ol style="list-style-type: none"> 1. Switching operations too fast and the system can't react 	<ol style="list-style-type: none"> 1. Restart the system.



Follow all safety precautions whenever diagnosing or servicing the tool.

MAINTENANCE TIPS

Do not use the camera probe as a hammer or insert the holes less than 9.0mm by force. Do not spill water on the handle and the main body, only the camera probe is waterproof. Do not force the misplaced Micro SD card into the SD card slot, and do not force to pull out the SD card from the slot directly, doing these would damage the slot and SD card. To protect the device and the Micro SD card, do not insert or take out the Micro SD card when the device is working, please power off the device when doing these.

WARRANTY INFORMATION

We warrant its instruments and accessories against defects in material or workmanship for one year from the date of purchase. We will replace or repair the defective unit, at its option, subject to verification of the defect.

This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the product.

Any implied warranties arising from the sale of a product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. We shall not be liable for loss of use of the product or other incidental or consequential damages, expenses, or economic loss, or for any claim of such damage, expenses, or economic loss.

State laws vary. The above limitations or exclusions may not apply to you.

RETURN FOR REPAIR POLICY

Every effort has been made to provide you with a reliable product of superior quality. However, in the event your instrument requires repair, please contact our Sales to obtain an RGA (Return Goods Authorization) number before forwarding the unit via prepaid/collect freight to us.

All the graphics and specifications included in this user manual are subject to minor change without prior notice.