

# USER MANUAL

## *Industrial Inspection Tool*

### SIDE VIEW RIGID VIDEO INSPECTION CAMERA



### Model:4908AL(Upgraded Version)

Version 2.0

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

# Contents

<b>General Safety Information</b> .....	<b>1</b>
<b>Safety Instructions</b> .....	<b>1</b>
<b>Welcome</b> .....	<b>2</b>
<b>Features</b> .....	<b>2</b>
<b>Structure</b> .....	<b>3-4</b>
<b>Specifications</b> .....	<b>5</b>
<b>Packing List</b> .....	<b>6</b>
<b>Installation</b> .....	<b>6-7</b>
To Insert SD Card.....	6
To Connect Monitor Power.....	6-7
To Connect Camera Power.....	7
Video Output of Monitor.....	7
Video Output of Camera.....	7
<b>Operation</b> .....	<b>7-8</b>
<b>Monitor Menu Interface</b> .....	<b>9-10</b>
<b>Troubleshooting</b> .....	<b>11</b>
<b>Maintenance Tips</b> .....	<b>12</b>
<b>Warranty Information</b> .....	<b>12</b>
<b>Return for Repair Policy</b> .....	<b>12</b>

## 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 and handle part. 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 or monitor 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 handle part and video display unit are 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.
- ☞ Use the original power adapter provided by the vendor.
- ☞ This product can only be completely disconnected from its power source by unplugging the power adapter.
- ☞ Some countries have regulations concerning batteries disposal. Please follow all applicable regulations.

## WELCOME

Thank you for purchasing our SIDE VIEW RIGID VIDEO INSPECTION CAMERA. This product is designed as a wireless real-time inspection camera with 5inch TFT display 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

- 2.4Ghz Wireless transmission between camera and monitor
- Mini stainless steel insertion tube with outer diameter 9mm
- Insertion tube length 300mm
- Side view camera head, 380TVL
- 2 high intensity LEDs on camera head, providing light up to 1.5 meters
- Video out function
- Waterproof level: IP67 (camera tube only)
- 5 inch high contrast color TFT display standard with rubber case for protection
- Photo and video recording function when the memory card is installed
- Support Micro SD card MAX. 32GB (optional, excluding SD card)
- Built-in rechargeable Li-battery for both camera and monitor
- Multi-language support

# STRUCTURE

## Main Unit



## Monitor



1. 5" TFT display 2. Power indicator 3. USB slot for power supply 4. Micro SD card slot  
5. Video output port 6. Labeling slot 7. Bracket connector 8. Reset button

### Buttons:

- ① POWER button. Long press to POWER ON/OFF the system.
- ② PHOTO/UP button. Short press to take picture.
- ③ OK button. Short press to confirm the selection.
- ④ VIDEO/DOWN button. Short press to record video.
- ⑤ FLIP/MIRROR button. Flip the picture/video 180 degree and mirror function.
- ⑥ MENU button. Short press to enter the MENU.
- ⑦ ZOOM/DELETE button. To enlarge video frame up to 2X, each button press increases zoom level by factor of 0.5.

# SPECIFICATIONS

	Items	Specifications
<b>Camera</b> <b>(Model NO. TC4908)</b>	Camera Lens	CMOS
	Resolution	752*582
	Viewing Angle	55°
	Focal Distance	4CM
	Depth of Field (DOF)	1.5CM~30CM
	Light Source	2 high intensity LEDs for 1.5m lighting distance
	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
	Battery Capacity	1500mAh
	Working Time	4 hours
	Charging Time	5 hours
Working Temperature	-10°~60°	
<b>Monitor</b> <b>(Model NO. DVR5)</b>	Screen Size	5.0 inch (Diagonal)
	Driver Element	A-Si TFT active matrix
	Resolution	800X3(RGB)X480
	Display Mode	Normally white, Transmissive
	Dot Pitch	0.045(W)X0.135(H)mm
	Active Area	108.0(W)X64.8(H)mm
	Image Zoom	1~3times (1.0X, 1.5X, 2.0X)
	Image flip/mirror	Normal, 180° flip, mirror, mirror & 180° flip
	Image/Video Resolution	800*480
	Image Format	.JPG
	Video Format	.AVI
	Internal Memory	Micro SD card (support Max.32G)
	Working Voltage	5V
	Working Current	600MA
	Battery Capacity	3800aMh
Working time	4.5 hours	
Charging Time	5 hours	
Working Temperature	-10°~60°	

## PACKING LIST



Camera Probe X 1



Monitor X 1



USB Cable X 2



Adapter X 2



AV Out Cable X 1



User Manual X 1





Tool Case X 1



Stainless Steel Protective Sleeve (Optional)

## INSTALLATION

### To Insert SD Card

After SD card is inserted into SD card slot successfully, a camera  icon will appear on the monitor screen; otherwise, the "no SD card"  icon will show.

### To Connect Monitor Power

Plug the USB cable into the power adapter, and the other end into the USB slot on monitor, connect the power adapter to an appropriate(100-240V~50/60Hz) power source to charge,

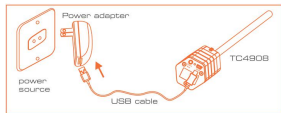
the power indicator LED will illuminate red to show in charging status, and it will turn off when the power is fully charged.

Notice: You must use the original power adapters provided by the vendor.

### To Connect Camera Power

Plug the USB cable into the power adapter, and the other end to the camera, connect the power adapter to an appropriate(100-240V~50/60Hz) power source to charge the camera.

Notice: You must use the original power adapters provided by the vendor.

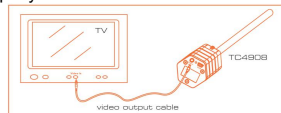


### Video Output of Monitor

Insert the video cable into the video output port of the monitor, insert the other end of the cable into the video in jack of any compatible TV or display device. The LCD monitor is now capable of outputting high quality video to another display.

### Video Output of Camera

Insert the video out cable to camera's video out port, and the other end to a TV, the camera is now capable of outputting high quality video to another display.

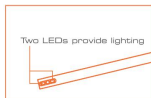


## OPERATION

### Basic Operation


1. As you roll the power switch to turn on the camera, the power indicator on the camera handle will light RED. The rolling switch then acts as a dimmer for the LEDs that beside the camera on the end of the tube.

2. Press and hold the power button for at least 2 seconds on the monitor until the power indicator illuminates green, when the real-time image from the lens is displayed on the monitor.






3. To insert 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 down 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.





4. Press the  button to take picture.


5. Press the  button to begin recording, press again to stop recording.


6. Press the  button to flip/mirror the image. The first press for 180degree flip, the second press for mirror, the third press for mirror & 180 degree flip, the fourth press for the normal image.


7. 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.


8. Shot press the  button to enter menu. Long press to enter the channel selection.



9. Press the  button to confirm the selection.

10. Press the  button to delete the picture/video in playback picture/video status.

11. Press the  button to up the top in the MENU or to increase the number in DATE/TIME setting.

12. Press the  button to down to the bottom in the MENU or to decrease the number in DATE/TIME setting.

13. To power off the monitor, press and hold the  button for at least 2 seconds.

14. The monitor is built-in rechargeable Li-battery. 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 recharge the battery, follow the procedure on **To Connect Monitor Power**.

15.Only when the system is crashed and the buttons didn't work, you can use a needle to press the Reset button to restart the system.

# MONITOR MENU INTERFACE

## Icons prompt:



shows the SD card is not installed.



shows the camera is not connected.

CAMERA NOT CONNECTED

SD CARD

No SD card found!

shows there is no SD card found.

VIDEO

Deleting...

shows the video is deleting.

DELETE

Completed!

shows the delete is completed.

PLAY BACK

No data!

shows no data in the SD card.

SD CARD

Memory full!

shows the SD card memory is full.

SD CARD

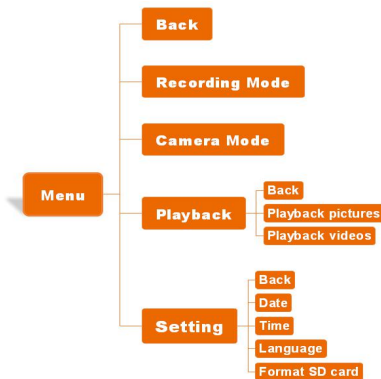
Formatting...

show the SD card is formatting.



SD CARD



Format completed!

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  or  button to switch the language, and press  to select the 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
Tool will not start	<ol style="list-style-type: none"> <li>1. Camera not charged.</li> <li>2. Monitor not charged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge camera.</li> <li>2. Charge monitor.</li> </ol>
Monitor will not charge	<ol style="list-style-type: none"> <li>1. USB cable not attached properly.</li> <li>2. Power adaptor not connected power</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure USB cable is connected between monitor and power adapter.</li> <li>2. Make sure power adapter is securely plugged into power source.</li> </ol>
Image too dark or light	<ol style="list-style-type: none"> <li>1. LEDs near camera need adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use dial on control handle to adjust brightness of LEDs according to the inspecting environment</li> </ol>
Image too dark or light	<ol style="list-style-type: none"> <li>1. LEDS near camera need adjustment</li> </ol>	<ol style="list-style-type: none"> <li>1.</li> </ol>
Micro SD card can not be read	<ol style="list-style-type: none"> <li>1. SD card problem.</li> <li>2. System breakdown.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure the Micro SD card is fine and not more than 32G.</li> <li>2. Restart the system.</li> </ol>
The video can not play	<ol style="list-style-type: none"> <li>1. Maybe the format of video file is not supported by this DVR.</li> </ol>	<p>Please convert it into the supported format.</p>
The video is not recorded	<ol style="list-style-type: none"> <li>1. SD card is not in monitor</li> <li>2. SD card memory is full</li> <li>3. There is damaged area in memory</li> </ol>	<ol style="list-style-type: none"> <li>1. Please insert SD card</li> <li>2. Change a SD card or remove the old data and make room for the new video.</li> <li>3. Format the SD card.</li> </ol>
The system is breakdown	<ol style="list-style-type: none"> <li>1. Switching operations too fast and the system can't react.</li> <li>2. System breakdown and the power.</li> </ol>	<ol style="list-style-type: none"> <li>1. Restart the system. Use a needle to press the Reset button to restart the system.</li> </ol>
<p> Follow all safety precautions whenever diagnosing or servicing the tool.</p>		

## 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 monitor, 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.