

# USER MANUAL

## *Industrial Inspection Tool*

### 720P HIGH-DEFINITION VIDEO INSPECTION CAMERA



### V55 Series

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 VIDEO INSPECTION CAMERA. This product will provide a rich user-friendly experience for inspection solution with complete specification and reliable performance. Please read this user manual carefully before using this product. 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 appropriate for use in inspecting pipes/holes or other hard-to-reach areas, property inspection, equipment HVAC/R or furnishing installation, car repair or aviation maintenance ,search and rescue operations, laboratory observation, archeological exploration, and the visual inspection of otherwise inaccessible areas, etc.

## FEATURES

- 1MIP67 waterproof snake camera probe is coiled inside the case for storage
- 3 inch high contrast color LCD display
- 3.9MM/4.1MM/5.5MM 720P HD ultra small camera lens with flexible snake tube
- 6 light-adjustable LEDs mounted on lens
- 7 navigation buttons 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
- Powered by four "AA" batteries (not included)
- Rugged frame, compact structure, reasonable layout makes small size, portable and convenient to use
- The camera probe tip accessories: 45° mirror, hook and magnetic pickup are provided for different applications(V5555 only)

*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. Camera head 2. Probe 3. 3 inch TFT display

4. 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  OK 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

5. Micro SD card slot

6. Tube slot

7. Probe exit ports

8. Flashlight

9. Battery compartment

10. Accessories slot

11. Battery cover buckle

12. Labeling slot

**Probe Tip Accessories for V5555:** 1. Hook 2. Magnetic pickup 3. 45° mirror



# SPECIFICATIONS

Items	Product Standard	V5555	V5539	V5541
Snake Tube Camera	Camera Lens	CMOS		
	Resolution	1280*720		
	Viewing Angle	65°	85°	95°
	Focal Distance	4CM	2.5CM	1.5CM
	Depth of Field(DOF)	1.5CM~30CM	0.5CM~20CM	0.5~40CM
	Light Source	6LEDs		
	LED Light Irradiation Distance	30CMM	20CM	20CM
	Camera Outer Diameter	5.5MM	3.9MM	4.1MM
	Length of Metal Camera Part	30MM	25MM	28MM
	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		
Video	Brightness Control	/		
	Image/Video Resolution	1280*720		
	Signal Format	Digital		
	Image Format	.JPG		
	Video Format	.AVI		
Flashlight	Internal memory	Micro SD card(support Max.32G)		
	Power Output	0.5W		
Power Supply	Working Voltage	6V		
	Working Current	380MA		
	Internal Dry Battery	4AA		
Work Time	Continuous working time	about 3Hours( Typical )		
Product Dimension	L*W*H(mm)	160mm x 85mm x 35mm		
Product Weight	Unit (g)	292g	262g	264g
Package Dimension	L*W*H(mm)	197mm x 193mm x 60mm		
Package Weight	Unit (g)	610g	578g	580g
Probe Tip Accessories	Camera head	Protection ring, hook, magnetic pickup, 45° mirror	/	/

## PACKING LIST

The device and its accessories come in a tool case.

The package contains:

1.Main body X 1

(Only V5555 comes with probe tip accessories:  
hook X1, magnetic pickup X1 & 45° mirror X1.)

2.User Manual X 1

3.Toolbox X 1



## 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.



### PREPARE THE PROBE

To take out the probe, turn the unit over to its back faces you, use your thumb and index finger at the positions marked.

Note that the probe is tightly wrapped within a twisting channel that makes four full turns around the inside of the tube slot. The probe can be uncoiled to six working lengths through two probe exit ports. Unwrapping only one full turn will make the probe about 27cm long (counting from the tube exit port to the camera head); Unwrapping two turns will make the probe about 62cm long; Unwrapping three turns will make the probe about 95cm long.

Each length incurs a tradeoff of probe reach versus probe rigidity. A longer probe is obviously better for inspecting distant

objects. But when uncoiled to its maximum length of 100cm, the probe sags from its own



weight, preventing it from being extended horizontally. If the 27cm length is sufficient to reach most of your inspection targets, select that shorter length; at about 45cm the probe is light enough to be extended horizontally. Whichever probe length you choose, you must carefully uncoil the unextended section of probe from the channel inside the tube slot. To re-coil the probe, it's important to note that when re-coiling the probe from either its short or long extended length, you must wrap it very tightly within the channel. If the camera head is not back to the original position as you finish wrapping the probe, you will not be able to squeeze the camera head. You must start over.

### **THE FUNCTION OF THE PROBE TIP ACCESSORIES in V5555**

The system comes with three accessories that screw onto the end of camera head. Take off the protection ring before using the tip accessories.



Each accessory has a specific purpose:

The 45° mirror lets the probe see around corners.

The hook lets you retrieve inaccessible items seen by the camera probe; for example, a wedding ring accidentally dropped down a sink drain.

The magnetic pickup lets you retrieve lost or dropped metal objects, like nuts and bolts.

## **OPERATING INSTRUCTIONS**

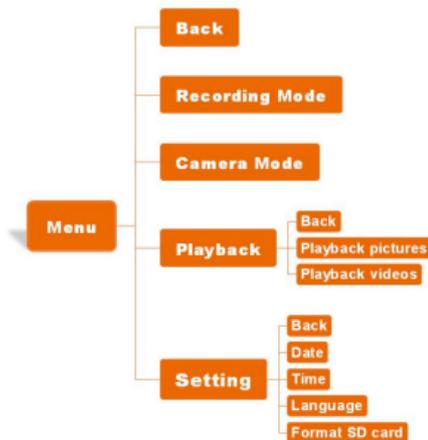
### **QUICK START PROCEDURE**

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 3 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 or bending the probe around objects if necessary. Avoid bending the delicate probe excessively, this will damage it.
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.
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.



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.

**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 to begin setting. Press the or button to decrease or increase in numbers, and press 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"> <li>1. The batteries have not been installed.</li> <li>2. The batteries are not installed correctly.</li> <li>3. The batteries have run out off power.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure the batteries are installed before starting the system.</li> <li>2. Make sure the batteries are installed correctly as instruction.</li> <li>3. Make sure the batteries are new or with enough power.</li> </ol>
Image too dark or light	<ol style="list-style-type: none"> <li>1. LEDs on camera need adjustment.</li> <li>2. The flashlight affects.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the brightness of LEDs according to the inspecting environment.</li> <li>2. Turn on/off the flashlight as the auxiliary lights if necessary.</li> </ol>
Camera LED does not light and no image	<ol style="list-style-type: none"> <li>1. The camera runs out of power.</li> <li>2. The connection problem between the main body and the camera probe.</li> <li>3. The camera is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Change the new batteries.</li> <li>2. Reconnect connections between the main body and the camera probe.</li> <li>3. Separate the camera probe from the main body, and replace a new one.</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 image is not so smoothly or not recording properly	<ol style="list-style-type: none"> <li>1. The transmission speed of the Micro SD card is less than 6MB/sec.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use the Micro SD card with transmission speed 6MB/sec or above.</li> </ol>
The video is not recorded	<ol style="list-style-type: none"> <li>1. Power off when recording.</li> <li>2. The Micro SD card is full.</li> </ol>	<ol style="list-style-type: none"> <li>1. Finish the video recording before the battery is running low.</li> <li>2. Change a Micro SD card or remove the old data and make room for the new video.</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> </ol>	<ol style="list-style-type: none"> <li>1. Restart the system.</li> </ol>
 Follow all safety precautions whenever diagnosing or servicing the tool.		

## MAINTENANCE TIPS

Do not insert or bend the probe by force. Over-bending any section of the probe to a radius of less than 40mm may permanently damage delicate internal cables. 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.