PIPE INSPECTION CAMERA

Please read the manual carefully before operating the system.

Please charge the battery before using.

C

MANUAL

Catalog

Safety and Notice

⚠️ To Avoid electrical shock put the item indoor when Charging

Warning

Use only input 110~240V AC output DC 13.5V, 5000mA charger.

This machine can only use the original charger and lithium battery, reminding the charging time is 5 hours. Please charge the battery before use!

Warning

Please check the appearance and functionality of the goods upon receipt. In the event of damaged or missing goods, please forward images to us within 3 working days, as we will otherwise be unable to rectify.

1 Please check the appearance and functionality of the goods upon receipt. In the event of damaged or missing goods, please forward images to us within 3 working days, as we will otherwise be unable to rectify.

2 The camera system operating temperature is between -10ºC ~ 50ºC (14ºF ~ 122ºF).

3 The warranty becomes void if any physical damage is present by user or force majeure factors or if the system is disassembled or connect non-factory parts by the user

4 Do not disconnect the SD card while recording or playing as this may damage the system and/or the SD card

5 Remember to always back up the data on your SD card

6 Before initial use of a memory card, it is recommended to use the inspection system to format the card first.

7Remember to slide the write-protect tab to the unlock position. Otherwise, all data on the memory card is protected and the card cannot be edited or formatted.

8Use only the original accessories to avoid possible risks to health and property, and thus meet all related legal regulations.

9Keep controller dry.

10Do not drop, knock, or shake the inspection system. Inappropriate behavior when using the camera system may damage the internal electronic circuit board or deform the lens shape.

1. Parts list

1.1 Accessories

Item	Image	Description	Optional
Controller		• Size: 401 * 240 * 86.5mm • Display: 10.1 inch HD LCD, • Pixel 1280 * 800 • Storage medium: 64G SD card (max 256G) • Battery: Li-ion- Battery 6000MAH 12V • Running Time: ＞4hours	√
Cable wheel		• Size: 875 * 978 * 460mm • Cable length: 60m, • Cable diameter: Ø10.3mm, • 9 cores, Shielded coaxial cable • Cable wheel material: stainless steel and aluminum alloy • Counter accuracy: 0.1M • Counter deviation:±1％ • Waterproof keyboard • Size: 301 * 116 * 12mm	√
Camera Head & Skids		• Size: Ø60*144mm • Camera light: 4PCS highlight LEDS • Pixels: 1920*1080 • Viewing angle: 105° • Skid Size: Ø80MM • Skid Size: Ø170~300MM	√
Camera		• Size: Ø50*118mm • Pixels: 1920*1080 • Viewing angle: 105° • Camera light: 6PCS highlight LEDS • SKID:Φ110mm、Φ150mm、Φ210mm	√
Transmitter		• Size: Φ32*70MM • Emission frequency: 512Hz • Effective distance: 4.5M	√
Spring		• Size: Φ33*218mm • Weight: 0.41KG	√
Connect line		• Size: ø5.3* 1000mm	√

Test line		● Size: ø5.3-7* 1500mm ● SF12-7 Waterproof self-locking joint	√
Microphone		● Frequency Response: 20-20KHz ● sensitivity: 116dB ● Line Length: 1.2m	√
Charger		● input: AC100-240V～50 / 60Hz ● output: DC 13.5V / 5A ● Output plug specification: 5521 ● Weight: 0.30KG	√
SD card and card reader		● 64G SD card & card reader	√
Tool Bag		● Size: 400*280*210MM	√
Screw Driver		● 2.5mm	√
Waterproof Ring			√
Manual			√
Pipe Receiver		● Frequency 512hz ● Signal: Analog ● Distance: 4.5-5m	
Universal Skid		● Universal skid ● Skid Size: Ø170~300MM	

1.2 Controller
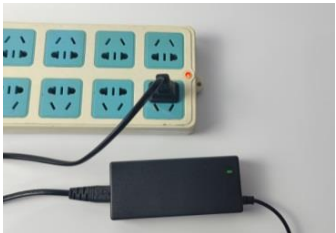
1	Visor	14	Zero count
2	Display	15	M/ft switch
3	Infrared receiving	16	Far focus
4	Record	17	Light brightness up
5	Photo/OK/ Photo folder	18	Near focus
6	Left/ Rewind/ Mute	19	Light brightness down
7	Down/ZOOM-	20	Tilt-up
8	Right/ Fast forward/ volume+	21	Pan-right
9	Return / video input switch	22	Tilt-down
10	UP/ZOOM+	23	Pan-left
11	Video directory	24	Speed range light
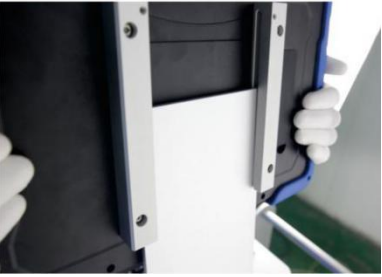
12	Menu/ Video input switch	25	Automatic rotation/ Reset
13	ON/OFF	26	Motor speed / Count mode switch

2. Quick Start Guide

2.1 Get accessories and charge the Battery

1. Connect the adapter to a power supply.	2. Connect the plug to the port of the Control terminal.	3. The indicator will change from red to green when finished charging.

2.2 Connection

1. Take out the control terminal and insert it into the coil	2. Tighten the screws	3. Open the sunshade
4. Connect one end of connect line.	5. Connect the other end of the connect line.	6. Connect keyboard.

7. Put cable into the clamp.	8. Rotate copper nut and tighten the black screw.	9. Loose the break.
10. Install camera, spring and transmitter.	11. Locking casters.	12. Installation is completed.
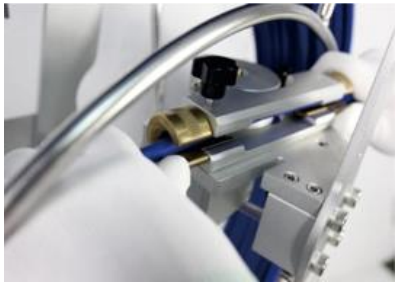
WARNING:

Check the waterproof ring between all connections.

Be careful:Do not turn the camera rotating part by hand to avoid damaging the motor.
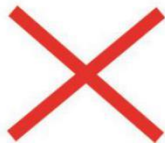
Be careful: Pan tilt camera can't be used in severe blockage and sludge pipeline, otherwise the camera may be damaged. After use, please clean the sediment on the camera with water in time to avoid jamming.

2.3 Assemble skid

1. Install 80mm skids

1. Remove the camera.	2. Install the skid and lock the screws.	3. Install to the coil spring connector.

2.Install universal skid

1. Remove the camera.	2. Loose the ring in the middle of skid, put into camera and tighten three screws to fix.	3. Tighten the camera and coil connector

2.4 Starting up
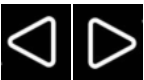
1. Insert SD card or card reader & SD card	2. Plug in microphone.	3. Staring up Long press power button for 3 seconds to turn on.
4. Record video Press button to record, press again to stop recording.	**5. Take photo & playback** Press button to take photo. Long press button to playback.	**6. Audio and text record** Support to record audio by microphone and input text by keyboard when recording video
7. Meter counter Press button to reset the counter.	**8. Zoom in and out** Press	**9. Adjust volume**

	button to zoom in and zoom out image when recording.(max 8 levels)	
counter. Press [⇄] button to switch meter/ feet.	When play video or photo, also use these two buttons to choose video or photo.	Press [◁] [▷] button to adjust volume when recording or play video.
10. Adjust lights of camera Press [🔆] button on control handle to adjust lights.	**11. Adjust pan tilt** Adjust the joystick on control handle to control pan and tilt [↺ ↻ ⟳ ⟲]	**12. Adjust manual focus** Press [🔲] button on control handle to adjust focus of camera. (Only for 50mm manual focus camera)
13. Play video Press [📁] and [📷] buttons to play video.	**14. Delete video** Press [📁] and [📝] buttons to delete video.	**15. CVBS Video output** Long press [📝] menu button for 3 seconds switch to connect other RCA jack screen. operate in same way back to close video output

When play back video, press [📷] button to pause the video, and press [◁] [▷] buttons to fast forward and backward the video.
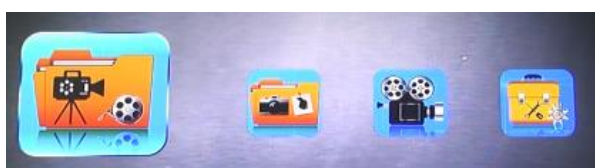
Warning: Do not use "USB STICK" and "SD card" at the same time. Pay attention to the direction of the SD card. Do not insert or remove the U disk or SD card during the photo/video process.

3. Menu

Press [📝] to enter menu. Press [◁] [▷] [🔍+] [🔍−] choose the items. Press [📷] enter submenu. Press [↩] enter upper submenu until to homepage.

<div align="center">

Play Video   **Play Photo**
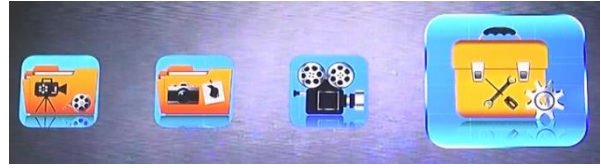
</div>

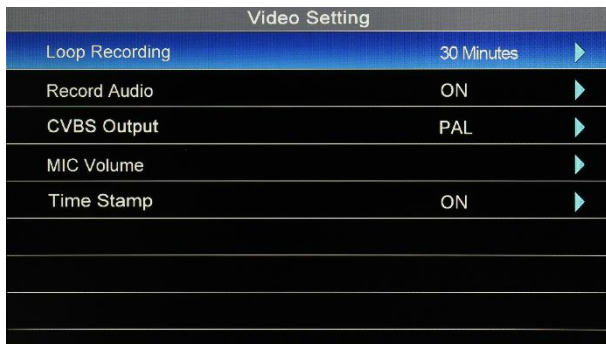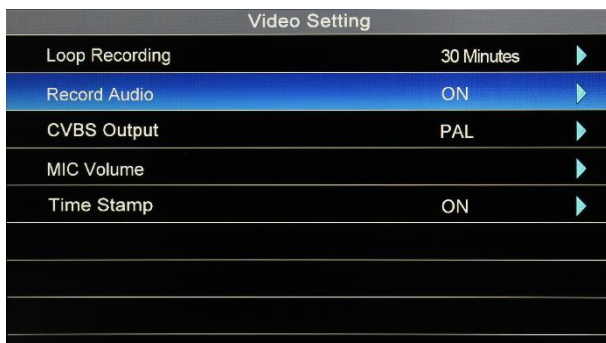|	
Video settings	**System settings**

3.1 Video settings

1.Set the length of time to record video
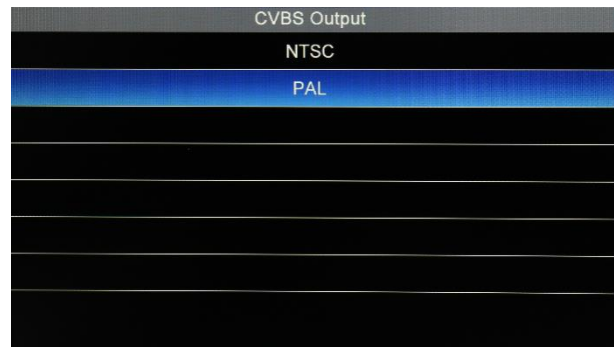
● 5 minute

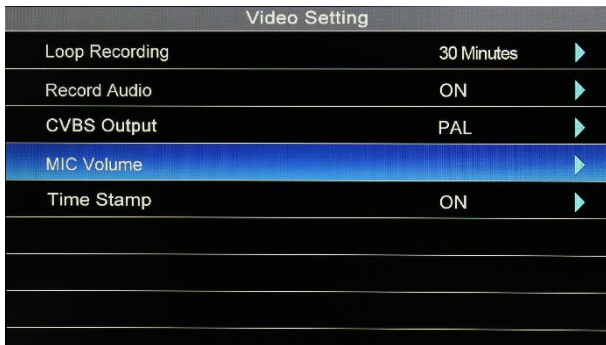● 15 minute

● 30 minute

2.Audio record

● ON

● OFF

3.CVBS output

● NTSC

● PAL

4.Mic volume

- First press the OK key, press the left and right keys to adjust the volume

5.Time watermark

- ON
- OFF
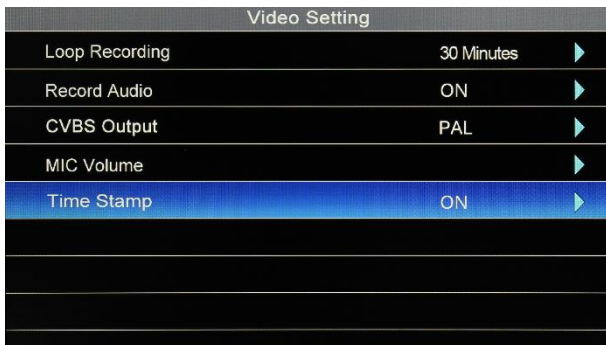
3.2 System settings

1. Image
- Brightness
- Contrast
- Chroma
- Reset
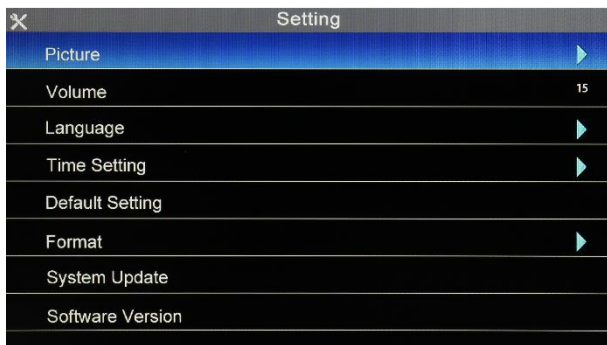
2. Volume

- Press the left and right keys to adjust the volume
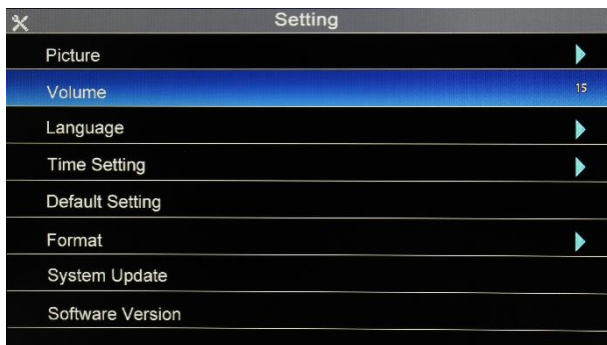
3. Language
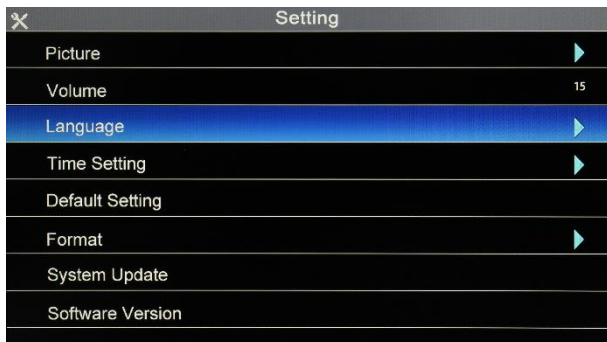
4. Time

Date and time

Press the up and down keys to set the date and time, and press the left and right keys to select the time and date
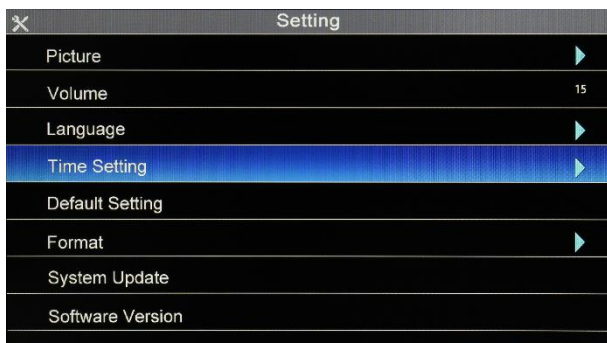
5. Restore default

- No: Cancel

● Yes: Confirm
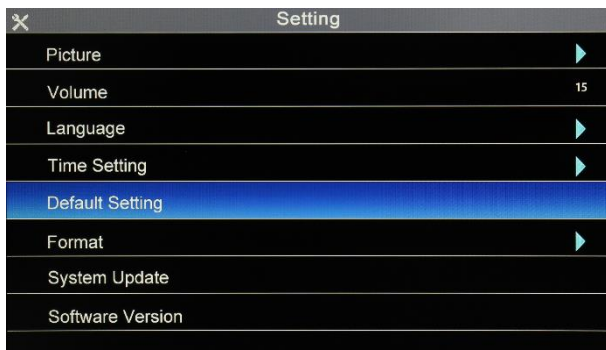
6. Format

● No: Cancel

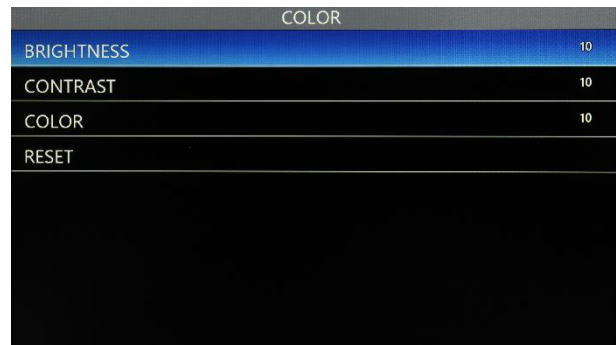● Yes: Format SD card(Note: please back up the data in the SD card before operation)
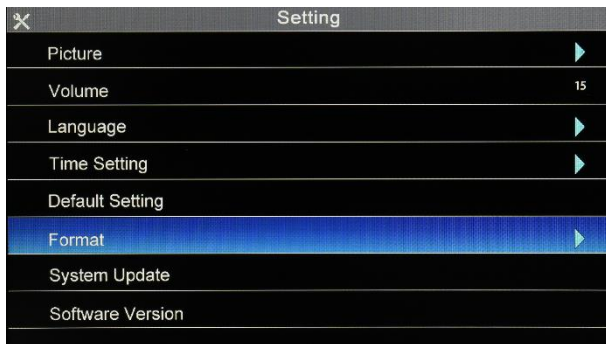
7. Firmware update

● No: Don't upgrade system

● Yes: Start to upgrade
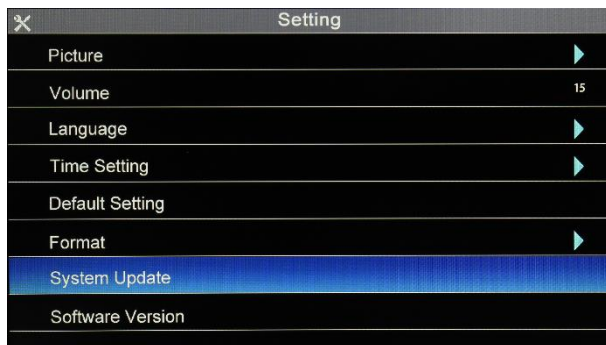
8.View software version

● View software version, date

Setting	
Picture	▶
Volume	15
Language	▶
Time Setting	▶
Default Setting	
Format	▶
System Update	
Software Version	

Software Version

Jul 13 2021 / 15:44:11
FHA 20210708 / 10:43:43 16M

4.Keyboard
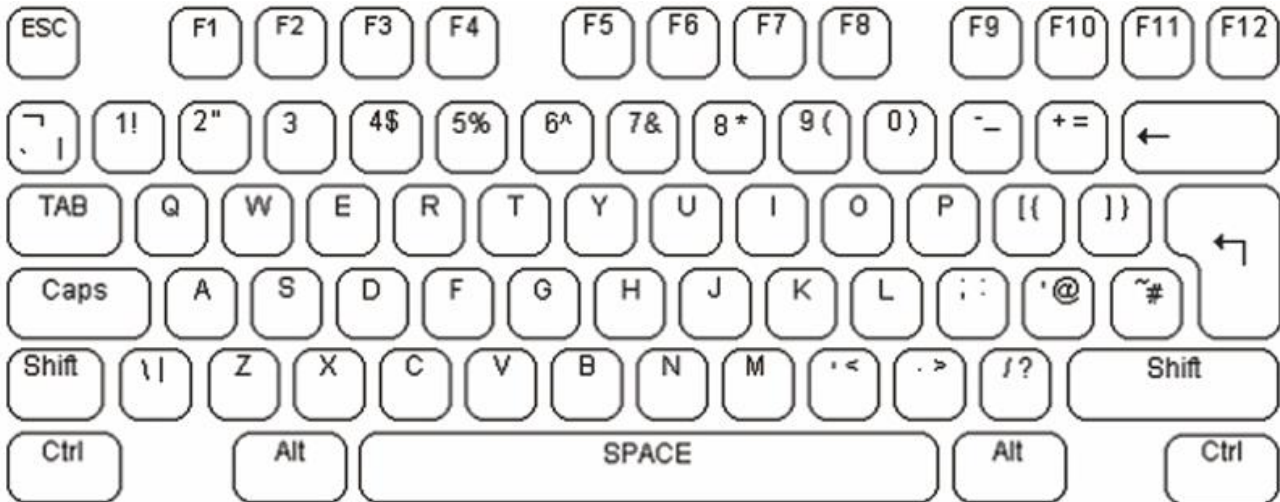
1. The font and character size have been set and cannot be changed.
2. The basic operation of characters is to automatically push back, covering the input characters on the image.
3. The cursor flashing indicates the current position of the character to be input on the screen. The cursor position can be controlled by the direction key on the keyboard. The cursor will move from left to right, from top to bottom and back. After typing a character, the cursor flashes qui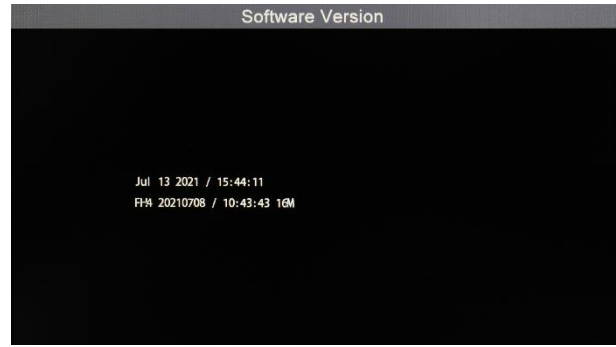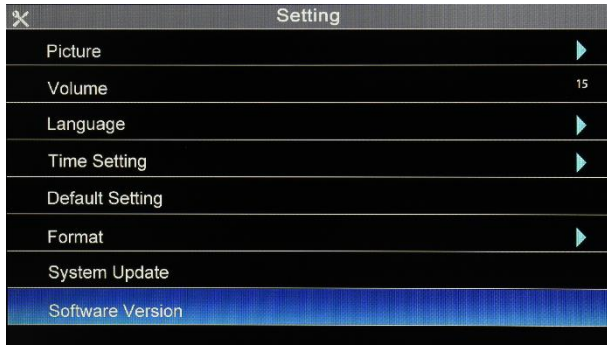ckly at the position of the next character, and then disappears. Press F6 to switch between cursor flashing and cursor clearing.
4. Video character overlay input uses a standard American keyboard. The alphabetic characters in the QWERTY area and the numeric characters of the keypad can be directly input to the screen. Normally, lowercase letters are entered. When you press and hold the shift key or press caps lock, you can enter uppercase letters. When exiting uppercase input, press caps lock again. Use the backspace key to move the characters on the screen, which will quickly replace the characters to the left of the cursor with blank characters, and the cursor will move to the left. The delete key on the keyboard does not give any function. Press enter to move the cursor to the start of the next line.

F6	The switch cursor flashes
F9	Clear screen
↑↓←→	Move cursor position
CTRL+1~8	Quick jump page

5. The video text superimposing unit displays it in the current screen page. The text written to these pages will be saved in the local nonvolatile memory until it is overwritten. To move between screen pages, use the page up and page down keys. To quickly jump to page 1 ~ 8, press Ctrl + X (x stands for 1 ~ 8). Supports up to 64 page editing. To clear the screen page of the text, press F9.