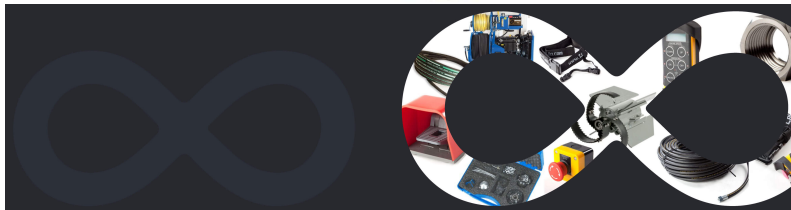


PIPE INSPECTION CAMERA



Please read the manual carefully before operating the system.

Please charge the battery before use.



MANUAL

Catalog



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Safety and Notice



Warning

To avoid electrical shock put the item indoor when charging



Warning













Use only input AC 110~240V output DC 13.5V 5A 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!

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, Otherwise, we will not be able to provide after-sales service
2. Working environment of camera system $-10^{\circ}\text{C}\sim 50^{\circ}\text{C}$ ($14^{\circ}\text{F}\sim 122^{\circ}\text{F}$) $\leq 95\%$ RH; Storage environment: $-20^{\circ}\text{C}\sim 70^{\circ}\text{C}$ ($-4^{\circ}\text{F}\sim 158^{\circ}\text{F}$) $\leq 95\%$ RH.
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 using the SD card for the first time, it is recommended to use the check system to format the SD card.
7. Remember to slide the write protection tab to the unlocked position. Otherwise, all data on the SD card is protected and cannot be edited or formatted.
8. Use only the original accessories to avoid possible risks to health and property, and thus meet all related legal regulations.
9. Keep controller dry.
10. Do 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.
11. Make sure all accessories are connected before starting up.
12. Do not remove or install camera, keyboard, coil, SD card and other accessories when the machine is turned on. If replacement is required, please replace it in the power off state.

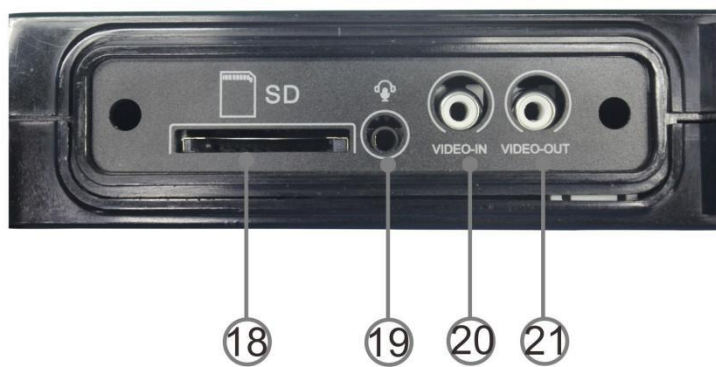
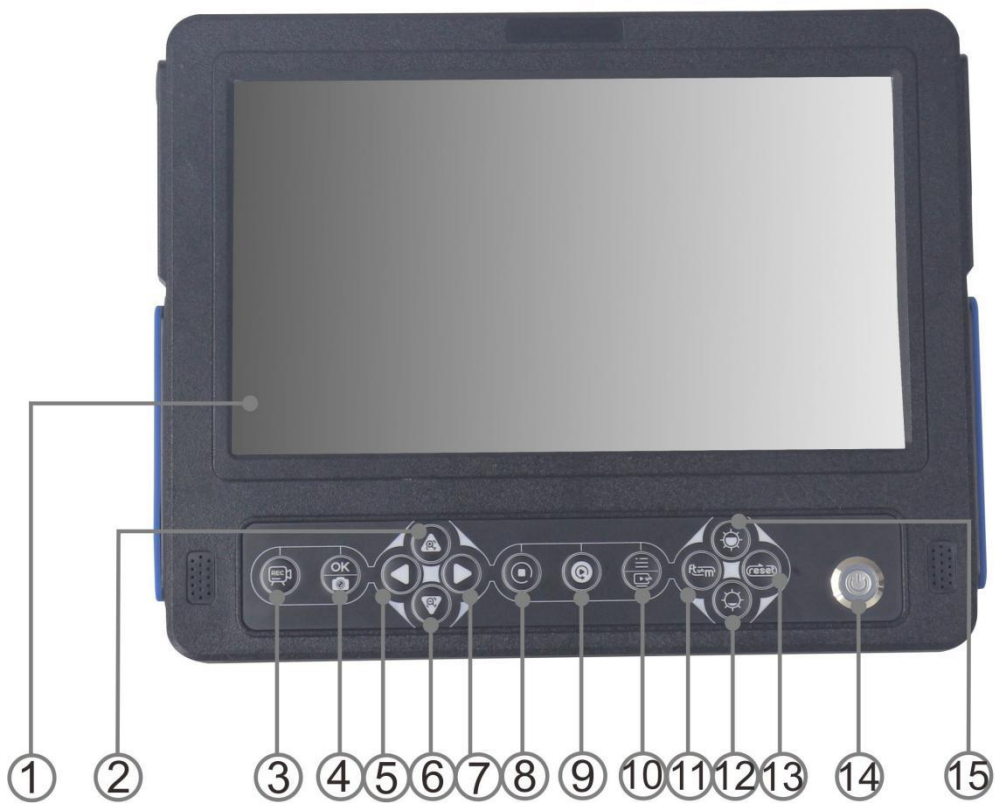
1. Parts list

1.1. Accessories

Item	Image	Description	Optional
Camera Head & Skids		<ul style="list-style-type: none"> ● Camera Head size : $\varnothing 17\text{mm} \times 115\text{mm}$ ● Skid size : $\varnothing 24\text{mm}$ 	
		<ul style="list-style-type: none"> ● Camera Head size : $\varnothing 23\text{mm} \times 134\text{mm}$ ● Skid size : $\varnothing 40\text{mm}$ & $\varnothing 80\text{mm}$ 	
		<ul style="list-style-type: none"> ● Camera Head size : $\varnothing 23\text{mm} \times 134\text{mm}$ ● Transmitter : 512Hz ● Skid size : $\varnothing 40\text{mm}$ & $\varnothing 80\text{mm}$ 	
		<ul style="list-style-type: none"> ● Camera Head size : $\varnothing 23\text{mm} \times 240\text{mm}$ ● Transmitter : 512Hz ● Self-balancing ● Skid size : $\varnothing 40\text{mm}$ & $\varnothing 80\text{mm}$ 	
Controller & Cable Wheel		<ul style="list-style-type: none"> ● Controller size: 280*220*37.5mm ● Resolution: 1024x600 ● Monitoring & Video recording & text writing ● Storage medium: 8G SD card & card read or USB stick (max 256G) ● Built-in battery: 12.6V 6000mAh 66.6Wh 	√
		<ul style="list-style-type: none"> ● Wire rack size: 360*455*215mm ● Wire rack material: aluminum alloy 	√
		<ul style="list-style-type: none"> ● Size: $\varnothing 332 \times 59\text{mm}$ ● Coil material: glass fiber ● Wire diameter: $\varnothing 6.3\text{mm}$ ● Coil length: 30 m 	√
		<ul style="list-style-type: none"> ● Hard Keyboard ● Size: 300.8*115.8*12.25mm 	√

Item	Image	Description	Optional
Charger		<ul style="list-style-type: none"> ● Input: AC100-240V ~ 50 / 60Hz ● Output: DC 13.5V / 5A ● Plug specifications: 5521 	√
Microphone		<ul style="list-style-type: none"> ● Frequency Response : 20-20KHz 	√
SD card & Card reader		<ul style="list-style-type: none"> ● 8G SD card & card reader 	√
Waterproof Ring			√
Manual			√
Screwdriver			√
Pipe Receiver		<ul style="list-style-type: none"> ● Frequency 512hz ● Signal: Analog ● Distance: 4.5-5m 	

1.2. Control Box



1	10.1 inch display	12	Light brightness down
2	UP/ZOOM+	13	Counter reset
3	Record	14	ON/OFF
4	Photo/OK/ Photo folder	15	Light brightness up
5	Left/ backward	16	DC JACK
6	Down/ZOOM-	17	USB stick port
7	Right/ Fast forward	18	SD Card Slot
8	Back	19	Headphone jack
9	Quick playback	20	Video input
10	Menu/ Delete	21	Video output
11	Meter/Feet switch	22	

2. Quick Start Guide

2.1. Connection

<p>1. Loosen the screw, open the sunshade and tighten the screw.</p> 	<p>2. Raise the screen to choose a suitable angle.</p> 	<p>3. Raise the keyboard to choose a suitable angle.</p> 
<p>4. Open the coil holder.</p> 	<p>5. Loosen the brake screw</p> 	<p>6. Can be used horizontally</p> 
<p>7. Can be used vertically</p> 	<p>8. Loosen the screw to open the coil plug.</p> 	<p>9. Rotating coil exits camera head and secures cable</p> 

WARNING:

Check the waterproof ring between all connections.

2.2. Charge the Battery

1. Connect the adapter to the AC 100~220V power supply.



2. Connect the DC plug to the jack on the controller.



3. The red light of the charger lights up and the battery charging status is displayed on the screen.



2.3. Assemble skid

2.3.1. Install 40mm skids

1. Put the camera in the stand.



2. Tighten the screws on the outside of the skid to fix the skid.



3. The skid is installed.



2.3.2. Install 80mm skids

1. Loosen the skid screws and install the camera head;








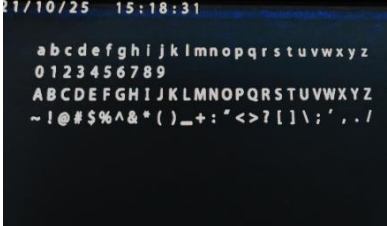




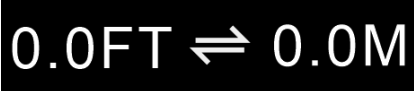





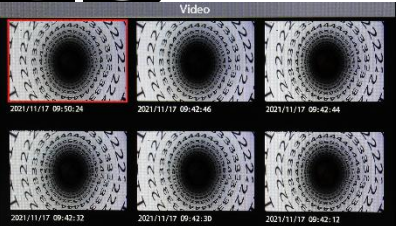

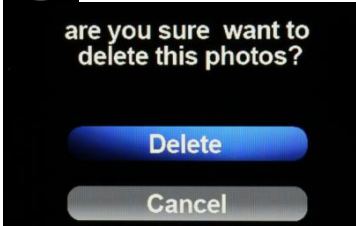

2. Tighten the screws on the outside of the skid to fix the skid.






3. The skid is installed.










2.4. Starting up

<p>1. Insert SD Card Insert SD card or card reader & SD card.</p> 	<p>2. Starting up Press and hold the On/Off button to power on.</p> 	<p>3. Record video Press this button to record, press again to stop recording.</p> 
<p>4. Take photo & playback Press this button to take photo. Long press button to playback.</p>  	<p>5. Audio and text record Support to record audio by microphone and input text by keyboard when recording video (requires a headset)</p> 	<p>6. Meter counter</p>  <p>Press  button to reset the counter.</p>  <p>Press  button to switch meter/ feet.</p> 
<p>7. Zoom in and out Press these two buttons to zoom in and zoom out image when recording. (max 8 levels)</p>  <p>When playing a video, you can use these two buttons to adjust the volume</p>	<p>8. Adjust volume When recording a video, you can use these two buttons to adjust the volume</p>  <p>When playing a video, press these two buttons to fast forward/rewind.</p>	<p>9. Adjust lights of camera Press these two buttons to adjust the light</p>  
<p>10. Play video Press these two buttons to play video.</p>  	<p>11. Delete video Press these buttons to delete video.</p>  	<p>12. CVBS video out Long press the menu button for 3 seconds to switch the screen connected to other RCA jacks. Operate in the same way to turn off this feature</p> 

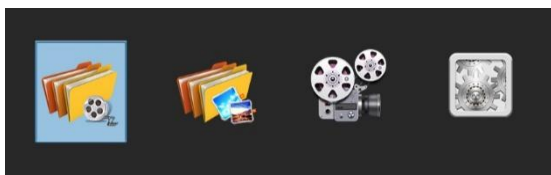
When play back video, press  button to pause the video, and press   buttons to fast forward and backward the video.

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.

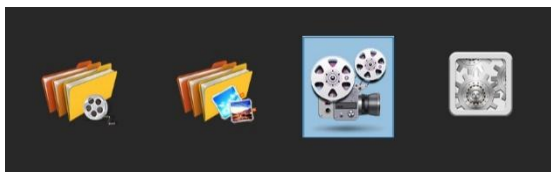
3. Menu

Press  to enter menu. Press     choose the items. Press  enter submenu. Press  enter upper submenu until to homepage.

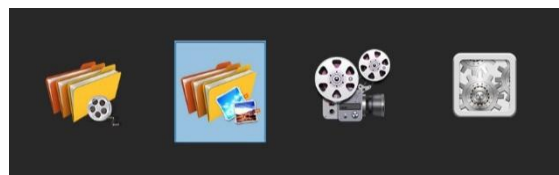
Play Video



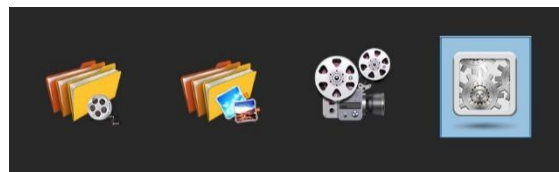
Video settings



Play Photo



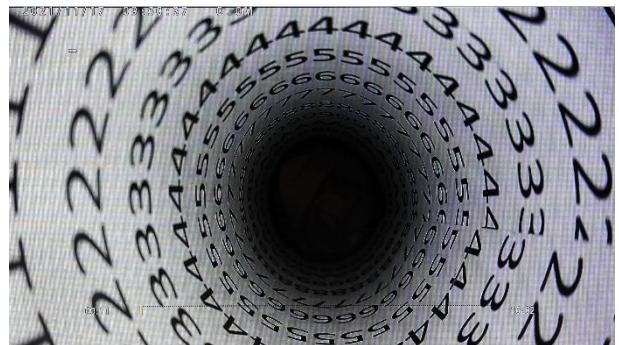
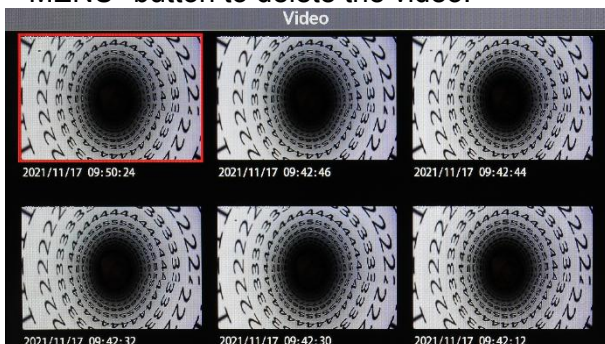
System settings



3.1. Play Video

The video folder can be opened in the menu, or it can be opened quickly by pressing " Quick playback ".

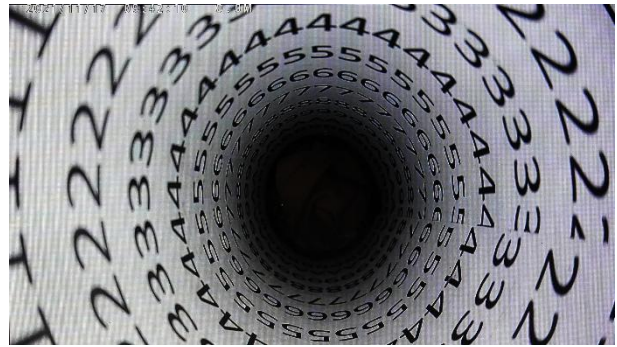
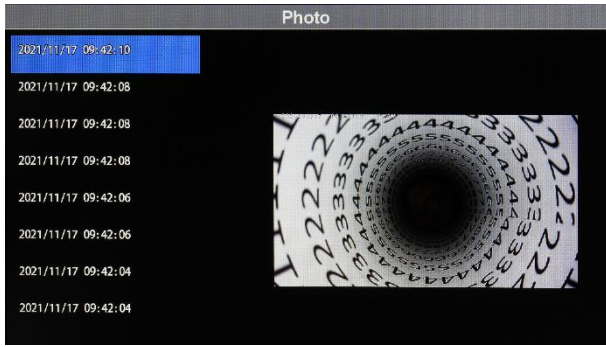
- "OK" button to play the video, "◀▶"backward/ Fast forward , "▲▼"adjust the volume , "MENU" button to delete the video.



3.2. Play Photo

The photo folder can be opened in the menu, or you can press and hold the "OK" button for 3 seconds to quickly open it.

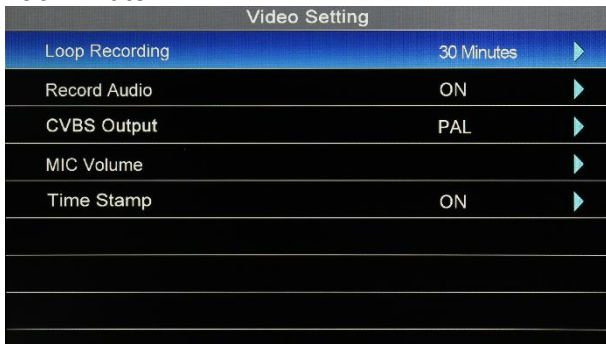
- "OK" button to view photos, "MENU" button to delete photos.



3.3. Video settings

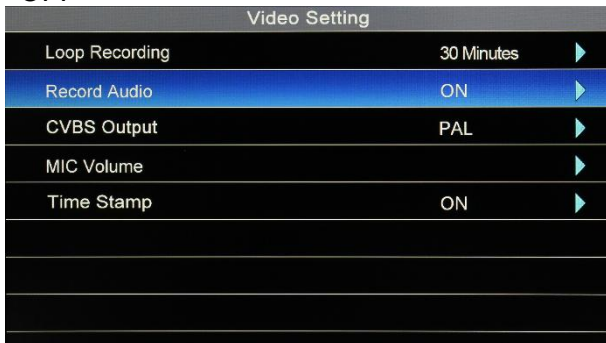
3.3.1. Set the length of time to record video

- 5 minute
- 15 minute
- 30 minute



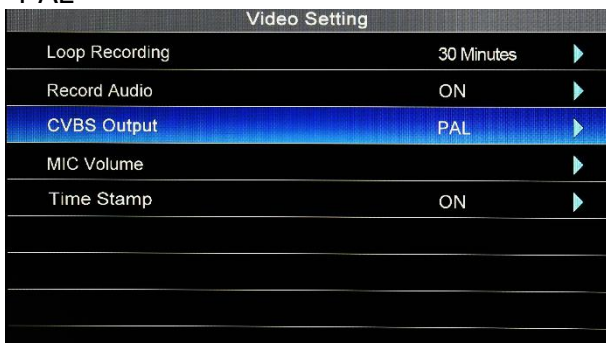
3.3.2. Record Audio

- ON
- OFF



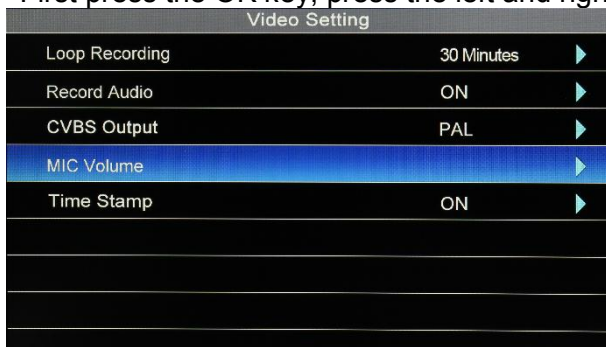
3.3.3. CVBS output

- NTSC
- PAL



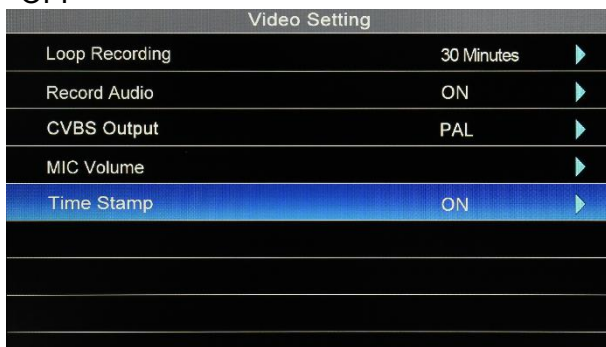
3.3.4. Mic volume

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



3.3.5. Time Stamp

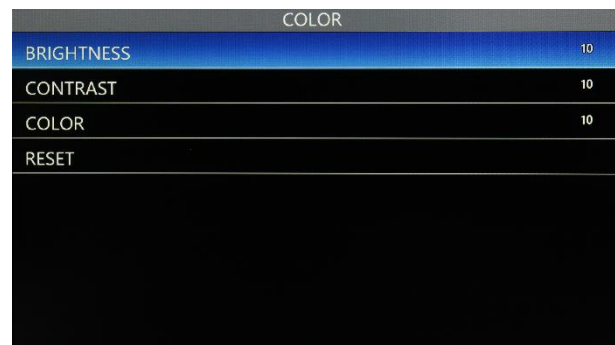
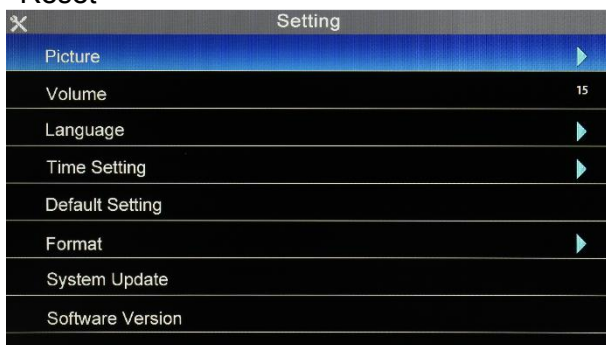
- ON
- OFF



3.4. System settings

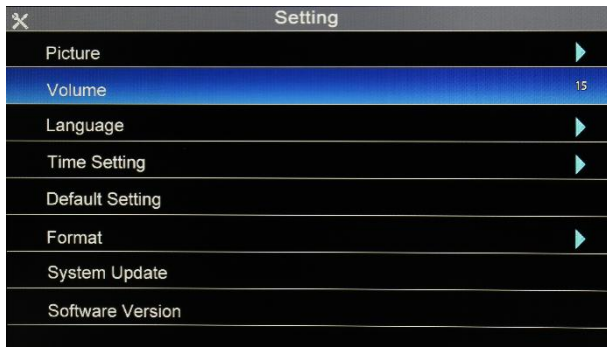
3.4.1. Picture

- Brightness
- Contrast
- Chroma
- Reset



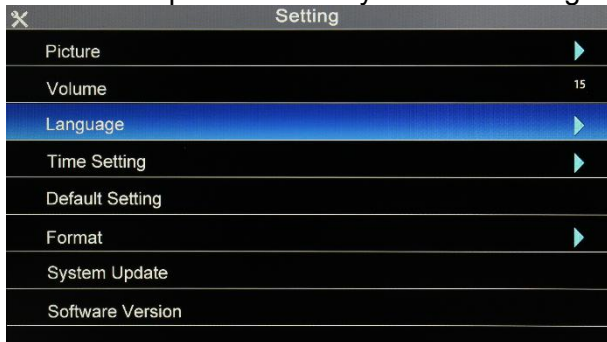
3.4.2. Volume

- Press the left and right keys to adjust the volume



3.4.3. Language

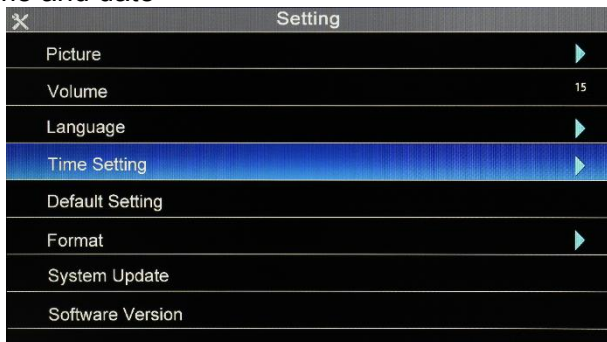
- Press the up and down keys to set the language



3.4.4. Time

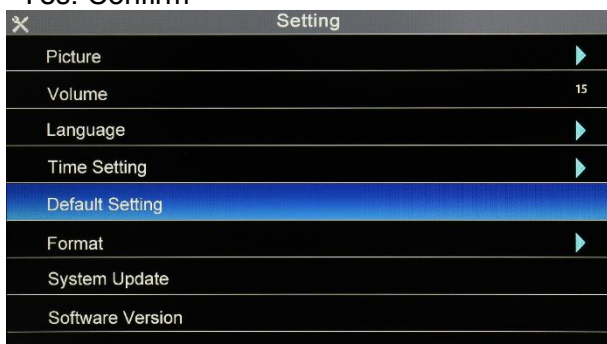
Date and time

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



3.4.5. Default Setting

- No: Cancel
- Yes: Confirm



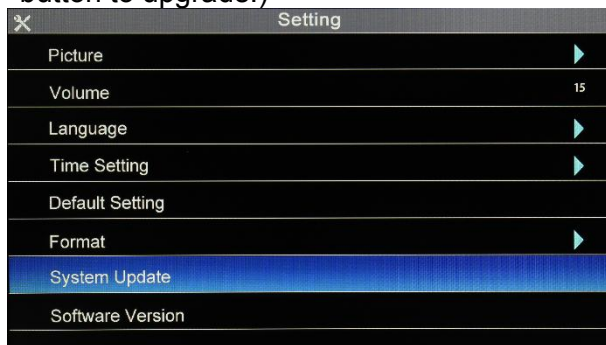
3.4.6. Format

- No: Cancel
- Yes: Format SD card(Note: please back up the data in the SD card before operation)



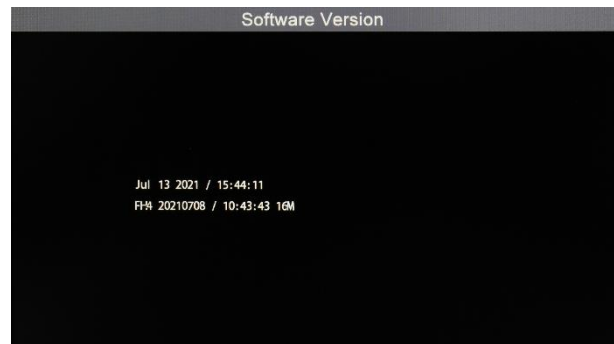
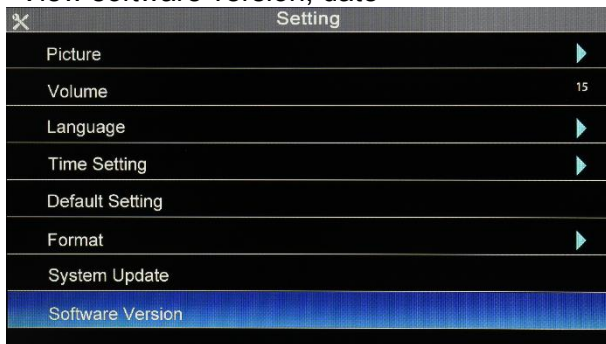
3.4.7. Firmware update

- No: Don't upgrade system
- Yes: Start to upgrade (Need to insert the SD card with the upgrade program, press the "OK" button to upgrade.)

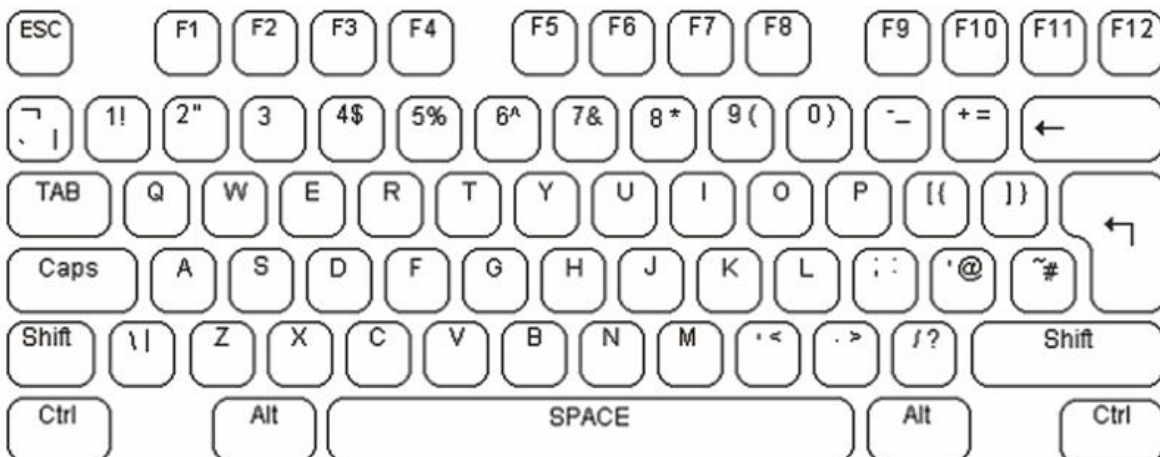


3.4.8. View software version

- View software version, date



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 quickly 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.

