PIPE INSPECTION CAMERA

Please read the manual carefully before operating the system.

Please charge the battery before use.

C

MANUAL

Catalog

Safety and Notice

> **Warning**
> To Avoid electrical shock put the item indoor when Charging

Warning

Use only input AC 100~240V output DC 13.5V 5A charger.
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 dama ged 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°C~50°C(14°F~122°F)≤95% RH; Storage environment: -20℃~70℃(-4℉~158℉) ≤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		• Camera Head size: Φ23mmX120mm • Skid size：Φ40mm，Φ80mm	Standard
		• Camera Head size:Ø25mmX135mm • Skid size：Φ40mm，Φ100mm	Optional
main body and Control terminal		• Main body • Size:505*419*180mm	Standard
		• Control terminal • 10.1 inch LCD high brightness screen • Monitoring & Video recording & text writing • Storage medium：64G SD card (maximum 256G) • Battery：11.1V 6000mAh 66.6Wh	Standard
		• keyboard • size: 300.8 * 115.8 * 12.25mm • Waterproof soft keyboard • Language: English • Keyboard interface: USB	Standard
		• Coil • Coil size: Φ332 * 59mm • Cable material: fiberglass wire • Cable length: 30m standard • Cable diameter: Φ6.3mm	Standard
		• Charger • Input: AC100-240V~50/60Hz • Output: DC 13.5V/5A • Output plug specification：5521	Standard
power cord		• Length: 1.5m	Standard
Earphone		• Frequency Response：20-20KHz • Plug diameter：3.5mm	Standard
SD card and card reader		• 64G SD card & card reader	Standard

Screwdriver		● Specification:2.5mm	Standard
Waterproof Ring		● Size：Φ14*Φ11*1.5mm	Standard
Manual			Standard

1.2. Controller

1	Battery level indicator	13	Meter/Feet switch
2	Up / ZOOM +	14	Light brightness down
3	Right/volume+/fast forward	15	Video input switch
4	Down button / ZOOM-	16	ON/OFF
5	Left button/volume-/reverse	17	USB port
6	Photo/OK/ Photo folder	18	Video input
7	Quick playback	19	Video output
8	Menu	20	HDMI video output
9	Record	21	DC JACK
10	Back	22	USB stick port
11	Counter reset	23	SD Card Slot
12	Light brightness up	24	Headphone/microphone jack

2. Quick Start Guide

2.1. Get accessories and charge the Battery

Get accessories from tool box

1. Open the charging port.	2. Insert the power supply into the control terminal.	3. Plug in the charging power source.	4. When the battery is charging, the green indicator light will flash and stop flashing when it is fully charged.

2.2. Connection

1. Open the bracket and fix the coil.	2. Open the sun hood	3. Raise the screen

4. Raise the keyboard.	5. Open the coil plug.	6. After pulling out the coil and camera, fix the plug.

Warning:
Check the waterproof ring between all connections.

2.3. Assemble skid

2.3.1. Ø23mm camera with 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. Ø23mm camera with 80mm 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
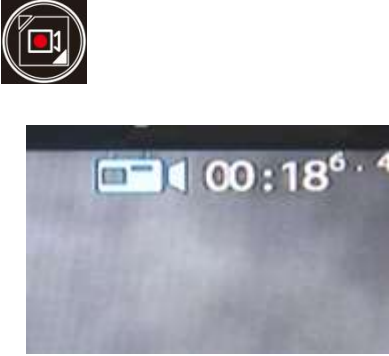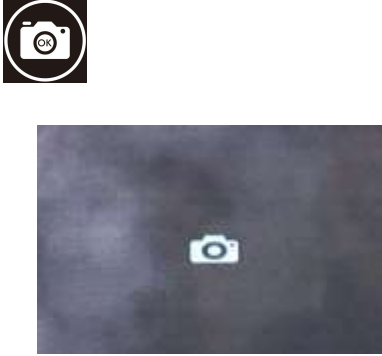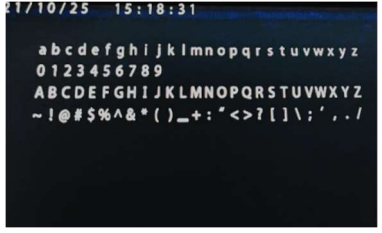
2.3.3. Ø25mm camera with 40mm skids

1. Install the back cover into the camera;	2. Install the main body and tighten it;	3. The skid is installed

2.3.4. Ø25mm camera with 100mm skids

1. Install the back cover into the camera;	2. Install the main body and tighten it;	3. The skid is installed

2.4. Starting up

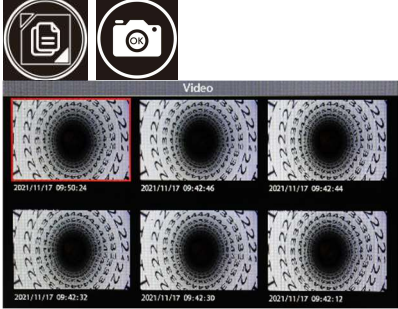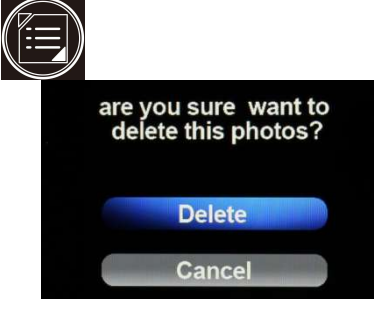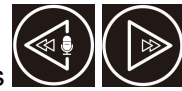| 1. **Insert SD Card** Insert SD card or card reader & SD card 	2. Plug in microphone. 	3. **Staring up** Long press the power button for 3 seconds to turn on.
4. **Record video** Press this button to record, press again to stop recording. 	5. **Take photo & playback** Press this button to take photo. 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 [icon] button to reset the counter. Press [icon] button to switch meter/ feet.	8. **Zoom in and out** Press these two buttons to zoom in and zoom out image when recording.(max 8 levels) When playing a video, you can use these two buttons to adjust the volume	9. **Adjust volume** When recording a video, you can use these two buttons to adjust the volume When play video or photo, also use these two buttons to choose video or photo.
10. **Adjust lights of camera** Press these two buttons on control handle to adjust lights. 	11. **Play video** Press these two buttons to play video. 	12. **Delete video** Press these buttons to delete video.

When play back video, press button to pause the video, and press   uttons to fast forward and backward the video.
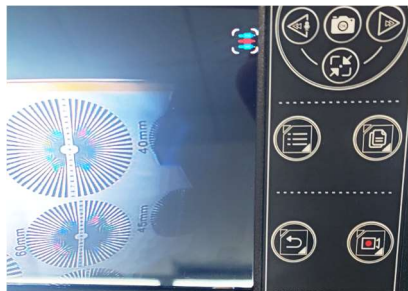
Warning:
Do not insert two SD cards at the same time. Pay attention to the direction of the SD card

2.5. CVBS/HDMI Oput

1. Let the screen power up and light up	2. The CVBS/HDMI interface connects to an external display.	3. Long press the menu button for 3 seconds each time to switch CVBS/HDMI/body display.

2.6. CVBS Input

1. Power on the external camera.	2. RCA connector insertion "VIDEO IN"。	3. Press and hold the "Back" button for 3 seconds to switch the CVBS/body display.

3. Menu

Press ![icon] to enter menu. Press ![icon] ![icon] ![icon] ![icon] choose the items. Press ![icon]

enter submenu. Press ![icon] enter upper submenu until to homepage.

Play Video　　　　　　　　　　　　　　　**Play Photo**

Video settings　　　　　　　　　　　　　**System settings**
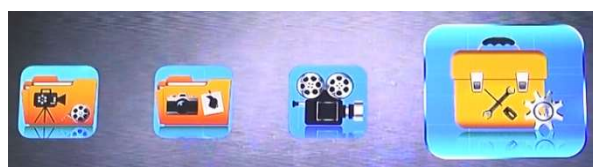
3.1. Play Video

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.
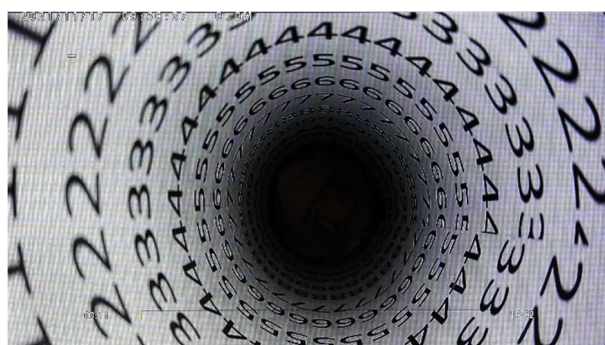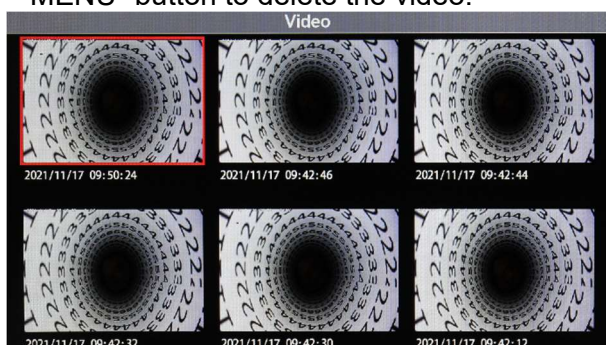
3.2. Play Photo

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.
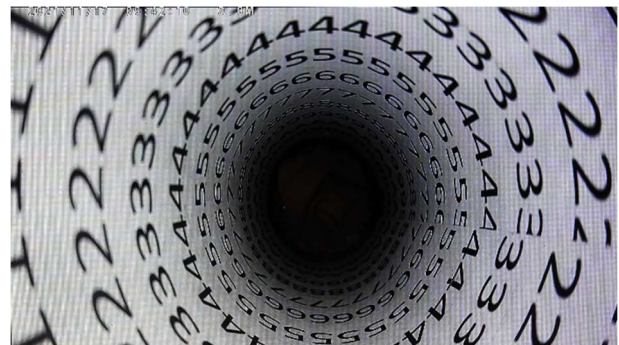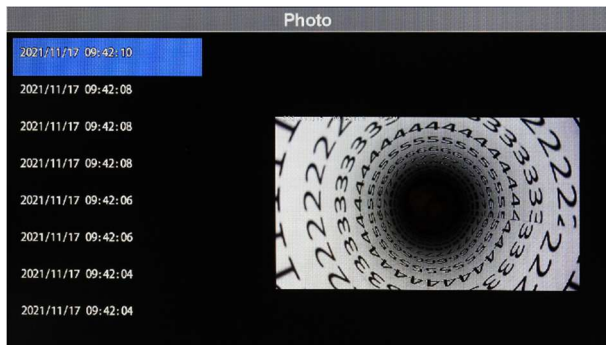
3.3. Video settings

3.3.1. Set the length of time to record video

- 5 minute
- 15 minute
- 30 minute
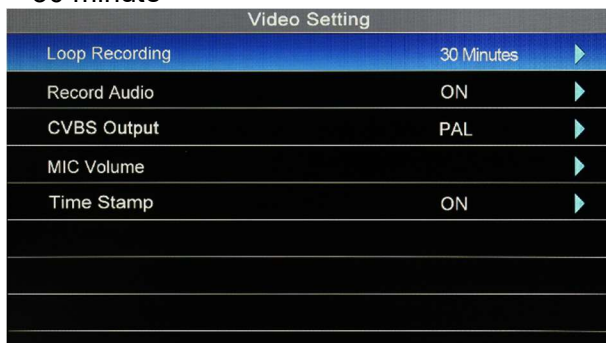
3.3.2. Audio record

- ON
- OFF
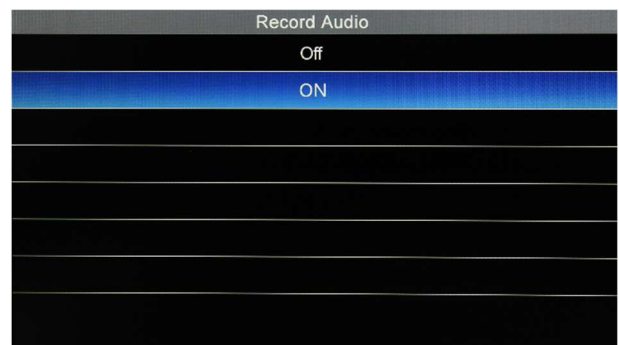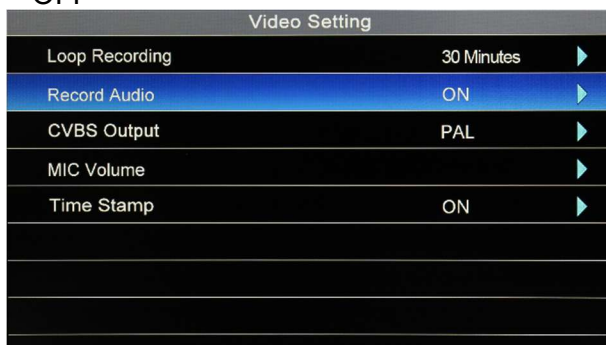
3.3.3. CVBS output

- 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 watermark

- ON
- OFF

3.4. System settings

3.4.1. Image

- Brightness
- Contrast
- Chroma
- Reset

Setting			COLOR	
Picture	▶		BRIGHTNESS	10
Volume	15		CONTRAST	10
Language	▶		COLOR	10
Time Setting	▶		RESET	
Default Setting				
Format	▶			
System Update				
Software Version				
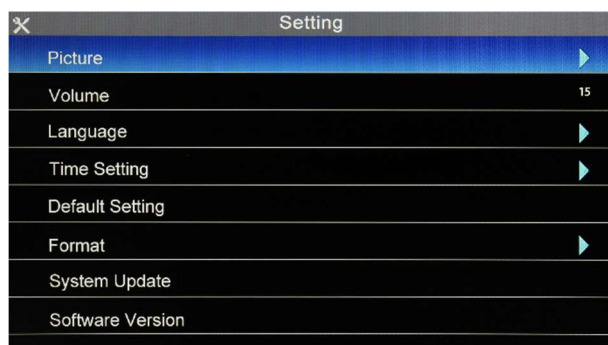
3.4.2. Volume

● Press the left and right keys to adjust the volume

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

3.4.3. Language

Setting			Language
Picture	▶		English
Volume	15		Français
Language	▶		Deutsch
Time Setting	▶		Italiano
Default Setting			Español
Format	▶		čeština
System Update			Nederlands
Software Version			
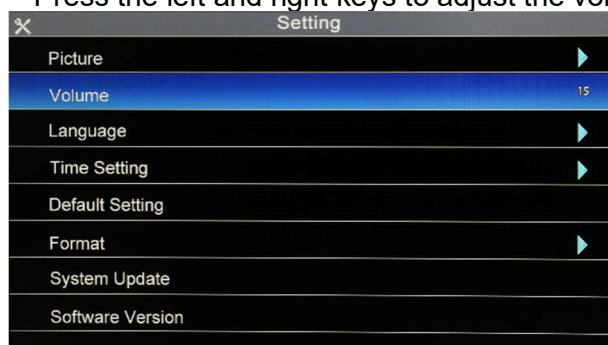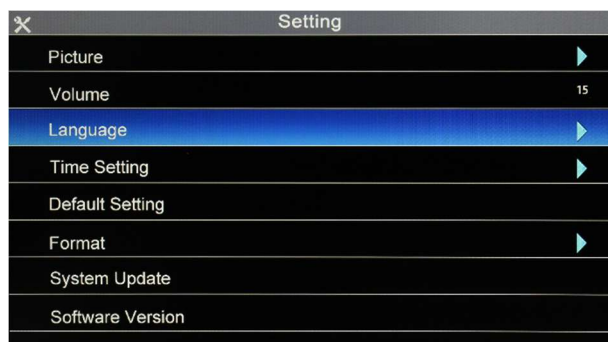
3.4.4. Time

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

Setting			Time Setting
Picture	▶		
Volume	15		
Language	▶		
Time Setting	▶		_2021_/ 11 / 17 10 : 51 : 37
Default Setting			
Format	▶		
System Update			
Software Version			

3.4.5. Restore default

- No: Cancel
- Yes: Confirm

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

Default Setting

press the "Confirm" button to restore the factory settings and press the "Cancel" button to return

| Confirm | Cancel |
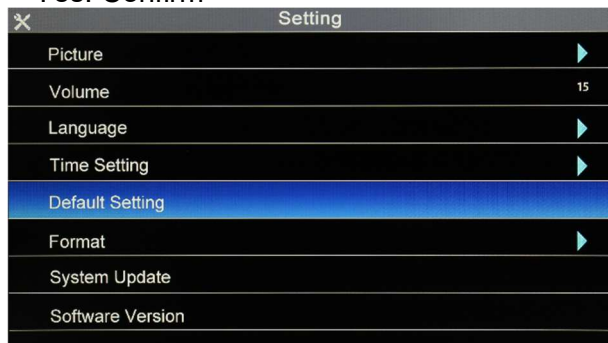
3.4.6. Format

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

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

Format

press the "Confirm" button to start formatting and press the "Cancel" button to return

| Confirm | Cancel |
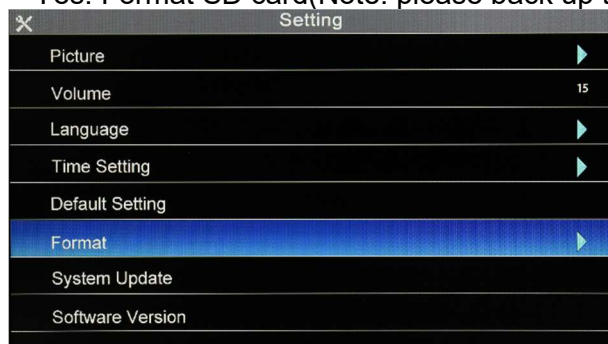
3.4.7. Firmware update

- No: Don't upgrade system
- Yes: Start to upgrade

Setting	
Picture	▶
Volume	15
Language	▶
Time Setting	▶
Default Setting	
Format	▶
System Update	
Software Version	
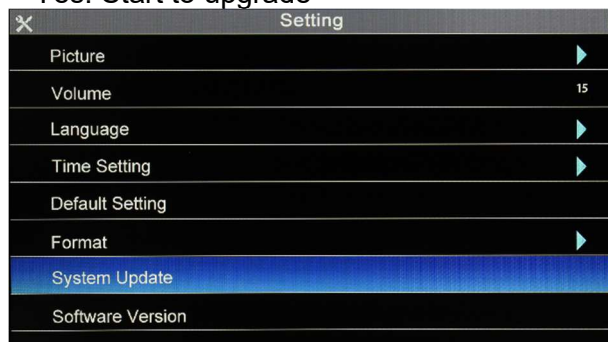
3.4.8. View software version

- View software version, date

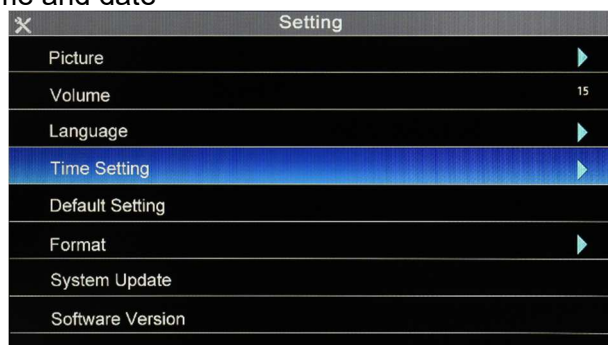| Setting	
Picture	▶
Volume	15
Language	▶
Time Setting	▶
Default Setting	
Format	▶
System Update	
Software Version	

Software Version

Jul 13 2021 / 15:44:11
FH# 20210708 / 10:43:43 16M
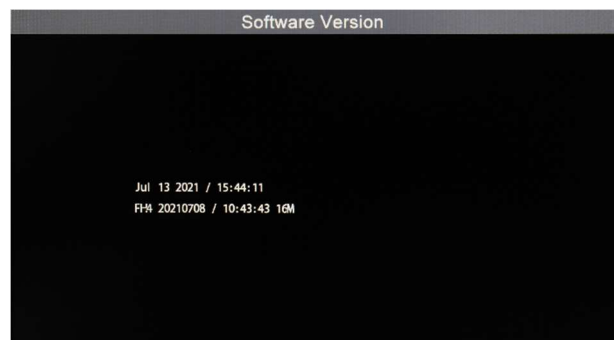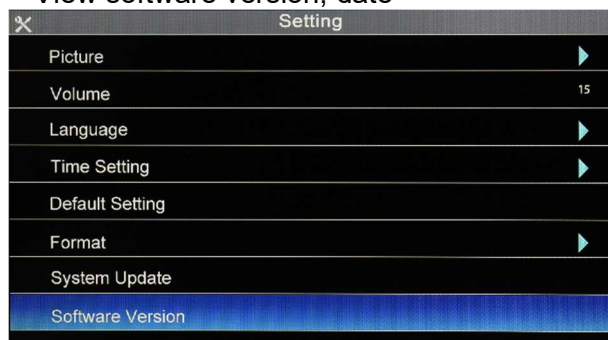
4. Keyboard
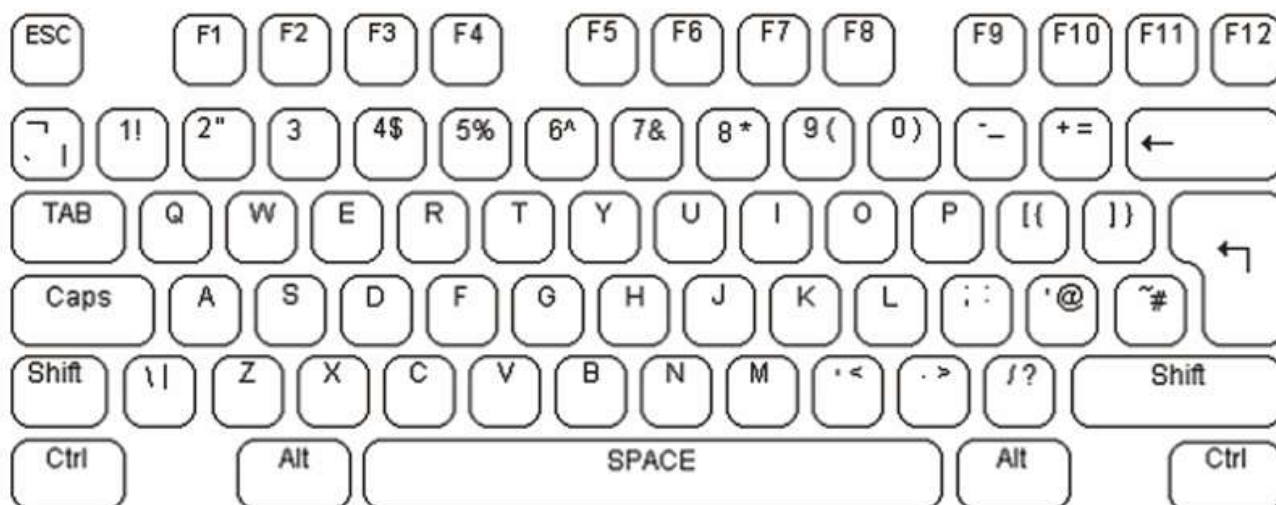
1. The font and character size have been set and cannot be changed.
2. The basic operation of characters is to automatically push back, covering the input characters on the image.
3. The cursor flashing indicates the current position of the character to be input on the screen. The cursor position can 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 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.