

# Pipe Video Inspection Camera System

## 3388Y/3688Y Series

### User Manual



(3388Y)



(3688Y)

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Please read the manual carefully before you use

## WARNING

1. NEVER USE THIS DEVICE IN AN ENVIRONMENT WITH EXPLOSIVE MATERIALS SUCH AS GAS, OIL, ETC.
2. Avoid using the device in extremely cold, hot or humid environment; otherwise it may damage the device. Do not drop or press hard on the device.
3. Avoid using the parts / components from other manufacturers to this system, which may damage the equipment due to the un-compatibility.
4. Warranty invalidation if the device is disassembled by users or if there are any physical damages.
5. Always back up your data before connecting your USB stick / Micro SD Card to this system. The manufacturer is not responsible for any data damage or loss on your USB stick / Micro SD Card for any reason.
6. Do not disconnect the unit while recording or playing. It may damage the unit and/or the USB stick / Micro SD Card.
7. Do not use the incompatible charger or adapter; otherwise the battery will be damaged and even the system will not work.
8. The system's PUSH CABLE made of fiberglass is very rigid and not flexible. It CAN NOT be bent sharply or pushed too hard; otherwise it will be broken.
9. We reserve the right to make any change about our products without any notice in advance.

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## Parts and Drawing List

No.	Description
1	7 inch Android Touch Screen
2	Pan Tilt Camera (Option: C40B self levelling camera)
3	charger
4	□60M(200FT) □90M(300FT) □120M(400FT) CABLE
5	SUPPORTING TUBE
6	USB CABLE
7	1M VIDEO CABLE
8	6PIN M-F CABLE (OPTION)
9	8PIN-4 PIN SPRING KIT (OPTION)



## Application

### Application:

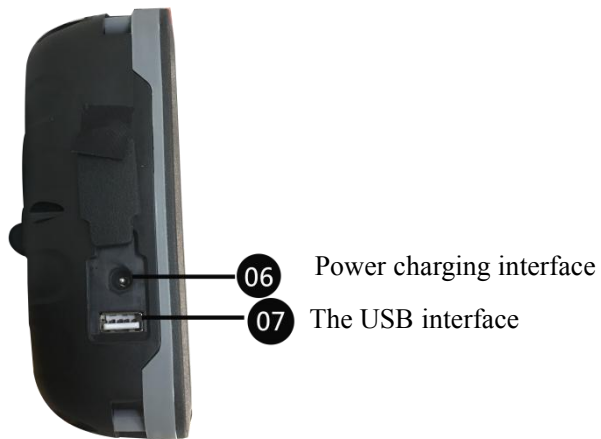
1. WATER SUPPLY SYSTEM
2. WASTE WATER PIPES
3. ELECTRICAL AIR CONDITIONER
4. CABLE DUCTING
5. DUCTED VACCUM SYSTEMS
6. PLUMBING
7. BUILDINGS

**WARNING: NEVER USE THIS DEVICE IN AN ENVIRONMENT WITH EXPLOSIVE MATERIALS SUCH AS GAS, OIL, ETC.**

### MONITOR SPECIFICATIONS

MODEL	7 INCH MONITOR
MONITOR SIZE	7 INCH TOUCH SCREEN
RESOLUTION	1280*800
BACKLIGHT	500 cd, ADJUSTABLE BACKLIGHT
CONTRAST	800:1
RECORDING FILE	H264/ MPEG4/ MJPEG
BODY MEMORY	8G
MEMORY CARD	32G/64G
POWER	DC11.1V 6600mAh
SIZE	230mm (Long) *140mm (Wide) *45mm (High)
Weight	1.5KG (Battery Not Included )
Working Temperature	-10°C-50°C

## I、7 inch Monitor



## II. Pan Tilt Camera



### I. Working Environment:

1. Temperature:  $-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$
2. Humidity: 90%RH (Non Condensing)

### II. Main Specifications:

#### I. Power input: DC 9~15V,8W (Maximum)

#### II. Camera Head Modules:

- 1) Sensor: 1/3 inch CMOS PC1099
- 2) Effective Resolution: 976 (H) x 496(V)
- 3) Horizontal Resolution: 500 TVL
- 4) Minimum LUX: 0.01LUX/F1.2
- 5) Signal to Noise Ratio: >45dB

#### 3. Focus Coil:

- 1) 20 steps can be adjusted.

#### 4. Lighting Source:

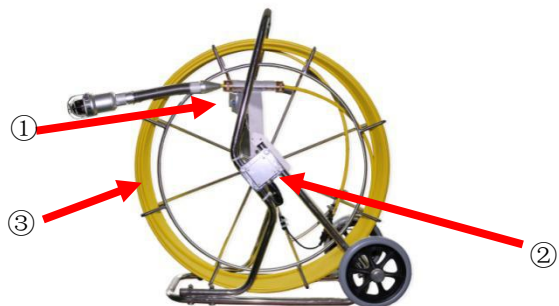
- 1) Highlight LED lights: 18 pcs
- 2) Working Current: 0~200 mA
- 3) Single Lamp Bead Angle:  $45^{\circ}$

#### 5. Camera Head Pitch Angle and Adjustable Angle:

- 1) Pitch Angle:  $-90^{\circ} \sim +90^{\circ}$
- 2) Adjustable Angle:  $1^{\circ}$

### III. Cable & Reel

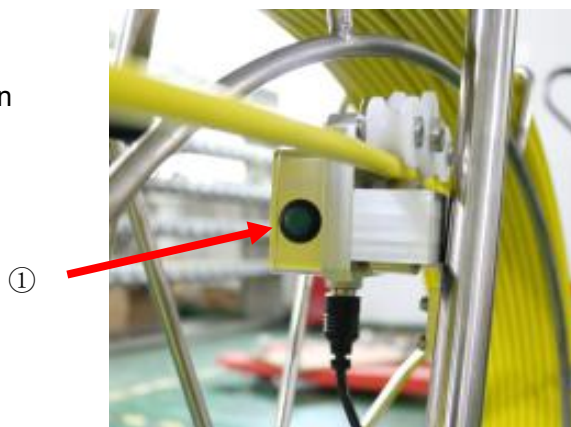
#### 1. Cable Reel



- 1) Meter Counter Box
- 2) Cable Connector
- 3) Fiberglass Cable

#### 2. Meter Counter Button:

- 1) Reset button
- 2) Meter/Footage Conversion Button



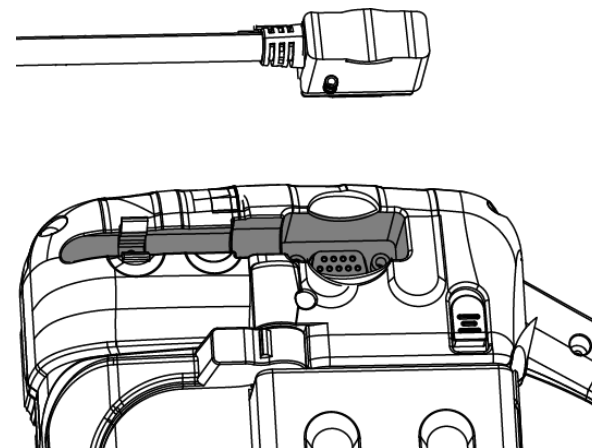
### IV. Assembly and Operation

Note: When the environment is too harsh (e.g. the temperature is very low), please turn on the camera system to preheat for 10-20 minutes before use.

### 1. Connecting and Disconnecting the Monitor

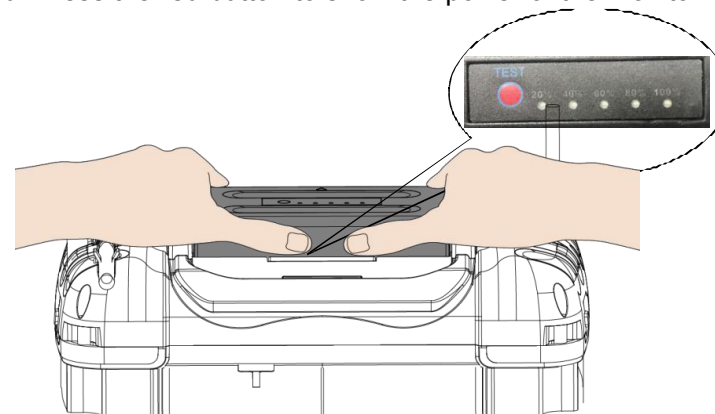
#### Connecting the monitor

\* Please ensure the monitor power is off during the connection. Align the DB9 plugs to the slot of DB9 on the monitor and then insert it.



#### Detach or dock the monitor and battery pack

\* Please turn off the power before detaching the battery pack from the monitor. Press the button that controls the detachment of the battery pack from the monitor; grasp the battery pack and then push it upward to make it detached or push it backward to make it connected. Press the red button to show the power of the monitor.



## 2. Connecting the Cable Reel and Camera Head

1) Cable GX16-6 aviation female plug is connected to the GX16-6 male plug on the meter counter box of the cable reel.

2) Pan Tilt Camera head is screwed on the fiberglass cable connector.

Attention: When using C40B camera head on 3688 cable reel, a 10CM long 6 pin cable of male-female cable is needed to be connected on the slot in the meter counter and in the meantime a 8-4 pin spring kit is needed when the camera head is screwed on the cable connector. The power should be turned off when connecting the camera head with the cable reel. Otherwise there will be damages to the instrument.

Note: when the job is completed, please clean the camera head and fiberglass with clean cloth and put the camera head in the good position.

## 3.USB Cable

Note: USB of the 7 inch monitor is debug port. When the job is completed, please take off the USB port; otherwise the monitor cannot be turned off normally.



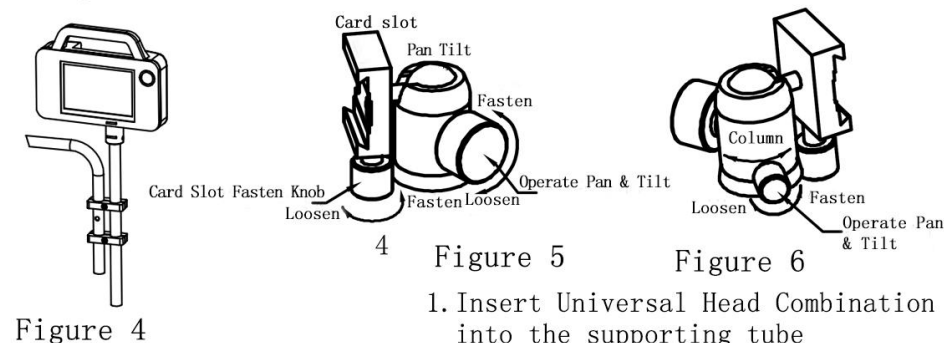
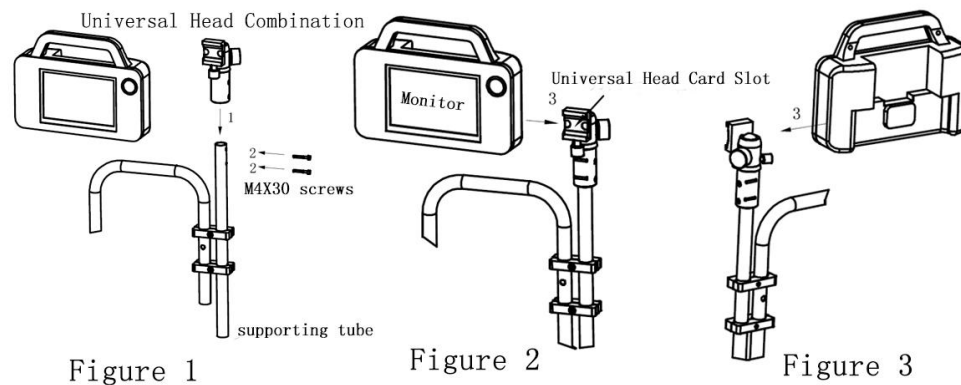
## 4.Lithium Battery charger

**Input Voltage:** AC100V~240V 50/60Hz

**Output :** DC12.6V 2.0A



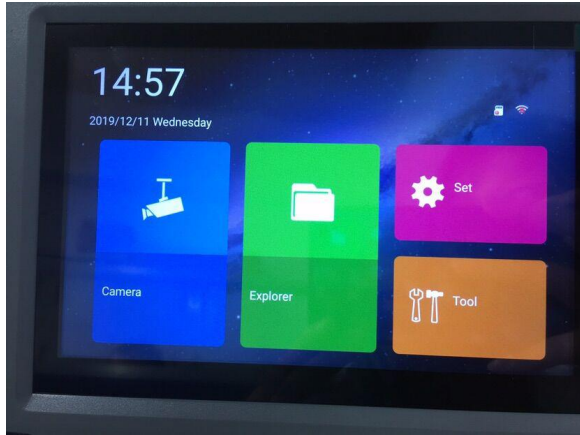
## 5. Assembling the monitor and supporting tube



1. Insert Universal Head Combination into the supporting tube
2. Fasten 2 pcs of M4\*30 screws
3. Insert the monitor into universal head card slot
4. Fasten the monitor

## 6. Turning on

This monitor uses the Android operating system. Please ensure the lithium battery is installed in the right way. Press and hold the power button for 2 seconds to turn on the system. The following is the desktop after turning on the monitor.



Touch and click the inspection camera and the screen display the new interface.

## V、 Detecting and Operating Software& Setting

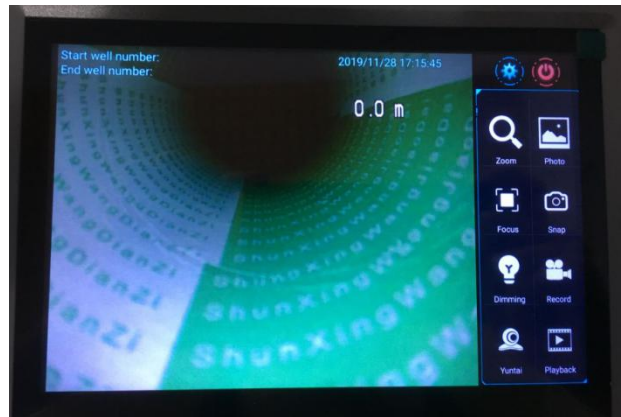
## 1. Monitor Operation and Software



- ① Pan Tilt Operation and Menu
- ② Zoom+
- ③ Zoom-
- ④ Video Taping Focus+
- ⑤ Video Taping Focus-
- ⑥ Snapshot
- ⑦ Video Recording
- ⑧ Ranging button
- ⑨ Return
- ⑩ Power button: press and hold for 2 seconds to turn on the system; press for short to enter the sleep mode; Press and hold for 2 seconds and there will be a reminder to turn off the system; Press and hold for 5 seconds to turn off the system.


## 2. Software Interface

### Interface of the Camera Head



(1) Zoom



 Press the button to increase the zooming to have further images. Release the button to stop. ( Data range 1X-72X)



Press the button to decrease the zooming to have closer images. Release the button to stop. ( Data range 72X-1X)

\* The greater data to increase or decrease the zooming; the slower speed to pitch the camera head



Focus



Far Focus. Press the button to have Far Focus; Release the button to stop.



Close Focus. Press the button to have Close Focus; Release the button to stop.



(3) Dimming

L3+

Increase Main Light Source; Press the button to increase the main light to the upper level. Press and hold the button to increase the light continuously and release the button to stop. The light percentage will vary.

L3-

Decrease Main Light Source; Press the button to decrease the main light to the lower level. Press and hold the button to decrease the light continuously and release the button to stop. The light percentage will vary.

(4) Pan Tilt Operation: Click the Pan Tilt operation for the control or directly use the button to operate.



Pan Tilt UP; Press and hold the button to move up and the angle shows 0°-45° and release the button to stop.




Pan Tilt Down; Press and hold the button to move down and the angle shows 0°-45° and release the button to stop.




Reset button; Press the button to have it in default setting position.

### 3. Snap shot and video taping.

(1)  Snapshot; Press the button to take pictures; Click the icon to view the pictures that have been taken before.



(2)  Video taping: click the icon to start video taping and click it again to stop. File format is H264; Click the icon to view the videos that been recorded before.





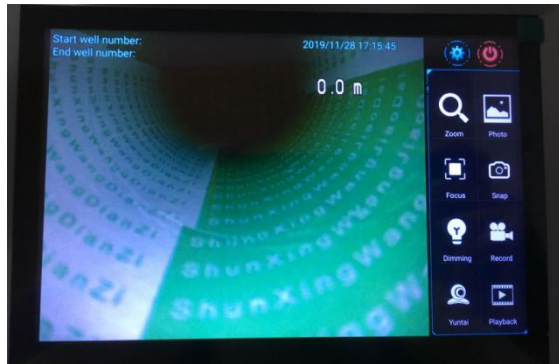
(Note: When you first click the icon to view the videos, there will be a reminder: Do you want to convert the format H264 to MP4 to play the video? If you need the conversion to MP4 format, please click “Yes”)



(3) Images Review; Click the icon to view the pictures that have been taken.



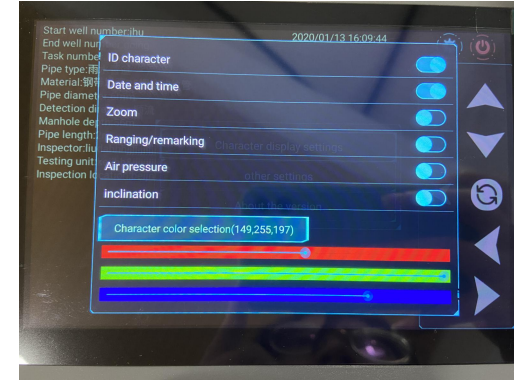
(4) Videos Review: Click the icon to view the videos that have been taken. It can play the high resolution videos and H264format videos and you can choose the files to play directly.



#### 4.Character Display



(1) Setting: Click the setting icon to enter the character display setting. Please turn on the ID Character and return to the desktop and use the touch screen to edit the characters. You can click the off button to hide it.

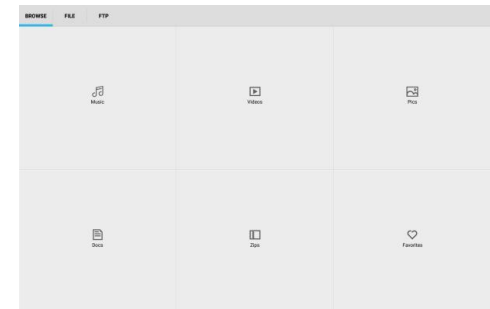


#### 5.File Management



Click the icon to enter the file management to copy, move or rename the files stored in the inner memory or SD card; When it is connected to the local area network, FTP can be used and you can copy the files in the computer without disconnecting the SD card.

4.1. Browse by category: List the files according to the categories for the convenience to search and manage.



4.2. File Management: Click the File Management to browse all the files stored in category;



4.3. Remote Management: when it is connected to the local area network, remote management is available; Click the button to operate FTP; Then open My computer in the computer terminal and input the ftp address in the address line as shown in the following picture and click return ; then you can enter the files stored in the memory of the monitor or SD card to copy, paste; or delete files without disconnecting the SD card.



## 6.Tools

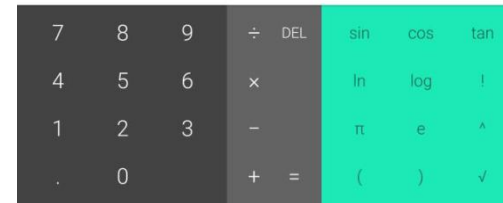
Click the icon  Tools to enter the interface:

(1) Music

Click the music icon to enter the music player interface; All the music files will be displayed; MP3 format file or audio testing files can be played directly.

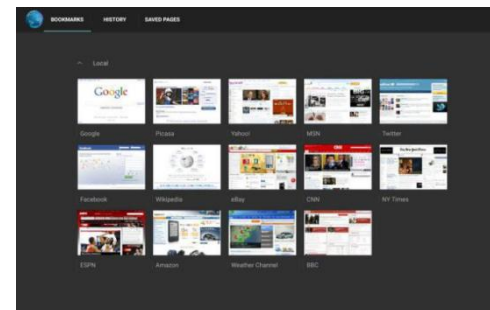


(2) Calculator



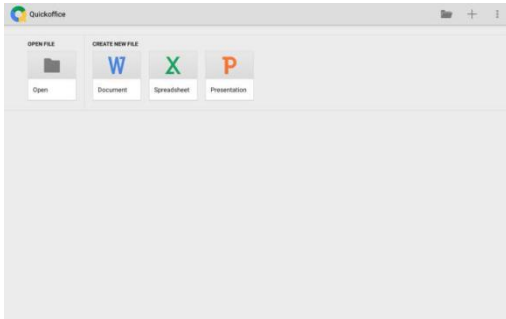
(3) Browser

This function is convenient for users to visit by the format of webpages. Click the browser icon to enter the interface.



(4) File

To Open the files or create new files.



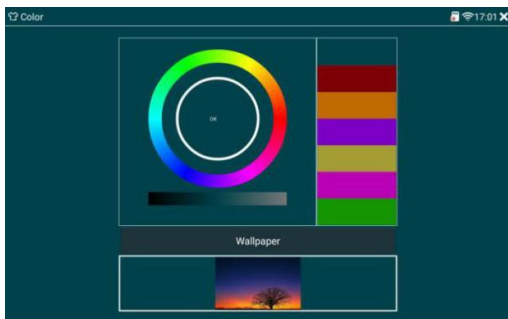
(5) Memo

To record daily events or to do the list.




(6) Topic

Click the color circle or the color ribbon; Then move gradient color column of the circle bottom to adjust the lightness of the background color; After the setting, click the button of Confirm to complete the setting.



7.System Menu Setting

Click the main interface setting  to enter the system setting to set the network parameter; WIFI; time; backlight; volume; sleep mode; time and language and you can also check the operation system information;

(1) Ethernet

Connect the wire in the LAN port; It is possible to set the static and mobile IP mode; If you want to use the static IP mode, you can choose the IP address of the static one; Then set the instrument IP address, gateway, subnet mask, preferred DNS and alternate DNS in order.





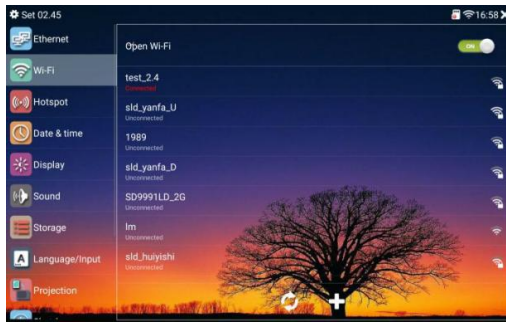
The default static IP address: 192.168.1.88; Gateway: 192.168.1.1; Subnet Mask: 255.255.255.0; Preferred DNS: 192.168.1.1; Alternate DNS: 8.8.8.8.

After static IP address is deleted, the setting is dynamic IP and the dynamic IP address is got automatically.

\* Monitor IP address: 192.168.1.111

(2) WIFI

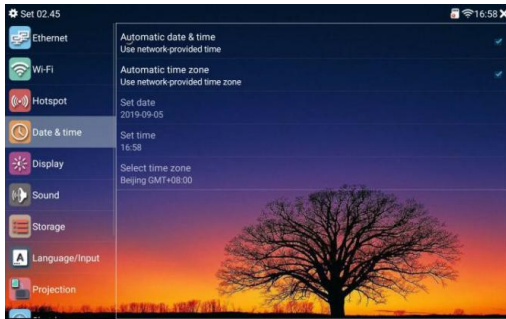
Turn on  to get the available WIFI network; Click the icon  to add the WIFI network manually; choose the required WIFI network and input the password to connect it to WIFI.



\* When it is in Ethernet and it is connected to WIFI at the same time; the priority is to use the WIFI network.

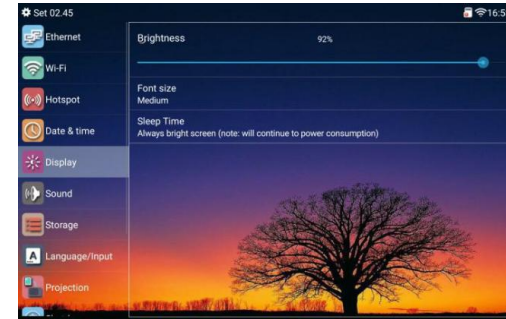
### (3)Date and Time

When the automatic selection of the date and time and the time zone is clicked, the system needs to be connected to the internet; The system will get the updated information from the internet without manual setting; When these two selections are deleted, you can set the date and time manually.



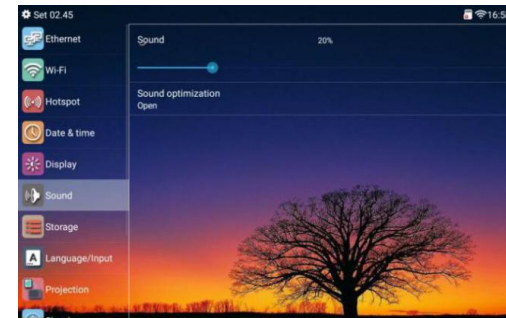
### (4)Display

You can set the lightness and sleep mode time by sliding the brightness bar and selecting the sleep mode time. Available setting time is 30 seconds to 30 minutes.



### (5)Volume

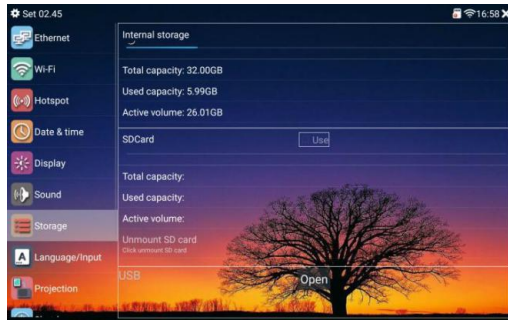
Volume can be set by sliding the volume bar.



### (6)Storage

You can check the current memory space of the inner SD card; the outer SD card and available volume; You can set the default storage path in the outer SD card or inner SD card; of snapshot; videotaping and voice recording; As displayed in Picture A; when the SD card is selected to be in use; the storage path is outer SD card; when the SD card is not selected, storage path is inner SD card;

\* Please uninstall SD card before taking out the SD card to avoid the damage of the SD card or data lost.



### (7) Language/Input

The language can be set as Simplified Chinese; Traditional Chinese and English; click the icon to set the language.



### (8) Screen Projection

\* Please turn on WIFI and use the Ethernet first and then click projection icon

and scan the QR code to go ahead with screen projection.



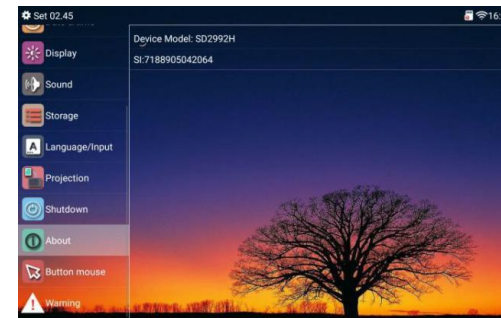
### (9) Turn off

The system can be set to be timing turn-off; Click the timing turn-off icon to turn on the function and set the time.



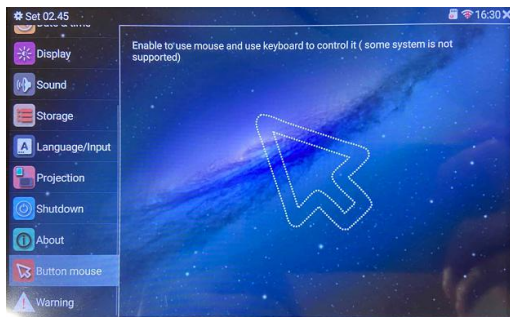
### (10) About the system

Choose About the system in the setting interface to check the system model; serial number; hardware and software information;



### (11) Mouse

Click the mouse button to enable the function.



### (12) Warning Sound

Slide warning sound to turn on or off (pressure warning)



## VI、 Trouble Shooting

Please refer to the list for the solution before you ask for help:

Problems	Potential Reason
Not turning on	1、 Check if 7inch monitor is connected. 2、 Check if the power button is turned on.
Not Video Taping	1、 Check the memory and see if there is the space. 2、 If the button is working (recording files size is related with the lightness of the environment)
No Images after the power is turned on	Check if the camera head has dirt; if the zooming or focus button is pressed too much.
Images Not Clear	Check if the camera head has dirt; if the port is connected in the right way and if the cable is connected in the loose way.
Unable to control	1、 Check if the parts are connected well and if the port is connected in the right way. 2、 Check if the cable is connected in the loose way.

Notice:

- If there are some abnormal things to happen, please turn off the switch or disconnect the system with the power; otherwise there will be electric shock or fire.
- Please do not fix it by yourself; Please ask the professionals to do the repair otherwise there will be electric shock or fire.

## VII、 Key Points

Please follow this diagram to check before you operate the system to avoid any problems. After all the check, the initial system check is completed.

Category	Check Description	Test Index	Test Result	
Skills Check	Control Software	Ranging (if this feature is included)	Ranging adjustable	Normal
		Image Proportion	Adjustable	Normal
		Ethernet	IP can be set	Normal
		Storage Path	Storage Path can be changed	Normal
		Snapshot & Video Taping	Can video tape and snapshot	Normal
		Full Screen	Can apply	Normal
		WIFI	WIFI can be connected	Normal
		Date and Time	Can set	Normal
		Lightness and Sleep Mode time	Can set	Normal
		Volume	Can set	Normal
Language/Input	Can set	Normal		