PIPE & WALL
VIDEO INSPECTION SYSTEMS
USER MANUAL

For

3388PT SERIES
ASSEMBLING AND OPERATING INSTRUCTIONS

NEW SYSTEM-2023

Read instructions carefully before operating this system

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. Don't misuse the Battery Charger Cable and Power Cord, otherwise the battery pack may be damaged or the system can not work properly.

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. Pleases forgive that if any change of products will not make additional specify in advance.

CONTENTS

Assembly Drawing and Parts List

Part No.	Description
1	Ø28MM PAN&TILT CAMERA
2	T-A SPRING WITH 512HZ T（OPTIONAL）
3	SPRING CONNECTOR（5-5P）
4	3M OR 5M VIDEO CABLE
5	POWER ADAPTER&BATTERY CHARGER
6	☐60M(200FT) FIBERGLASS CABLE
7	CAMERA SKIDS
8	DVR REMOTE CONTROL
9	MULTI-FUNCTION CASE
10	10 INCH MONITOR

Note: The small parts above are under the keyboard in the function case. Please open up the keyboard from the position of "**OPEN**" character, when you want to take them.

Specifications

Item	Description
Power adapter	110VAC~240VAC 13.5VDC 1700mA
Battery（In the case）	LI-ION battery，DC 12V，6600mAh
Length of Cable	□60M(200FT)
Camera Light Source	Built-in White LED lights (2PCS)
Camera Angle-of-View	Camera swing angle: 180°
Camera Rotating Angle	Camera Rotating angle: 360°
Camera Image	Effective Pixel Array: 976 (H) x 504(V)
Monitor Screen Size	10" TFT LCD Color Monitor
Monitor Picture Resolution	800*600 pixel (for 10" LCD)
Monitor Input Voltage	12 Volts DC
System Operating Temperature	-20°C to 55°C

User Manual

Application

1. WATER SUPPLY
2. WASTE WATER
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.

Know Your Device

1. Display Part
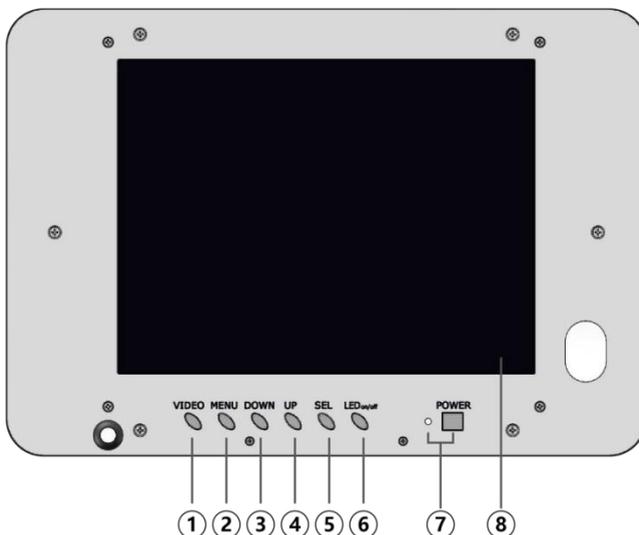
Remark:

After pressing **MENU** button, the following information will show on the screen:

"ENGLISH,DEUTSCH,FRANC,ESPAKOL,PORTUG,ITALIANO,ENGLES, PNCCK

BRIGHT------------------------------50
CONTRAST-------------------------50
COLOR------------------------------50
SHARP------------------------------50
LED BRIGHT-----------------------50
HUE----------------------------------50
ENGLISH ***

Use SEL/UP/DOWN buttons to choose the language and to adjust the picture and Led light.

1) Press MANU again, system exits.

2) DOWN: Press DOWN key, the image changes mirror up/down.

3) UP: Press UP key, the image changes mirror lift/right.

4) SEL key: Press SEL key to switch the image between 16:9 and 4:3 (except 10 inch monitor)

Remark: To get a regular image, the cursor on the screen should be at the bottom left. If not, you can press the UP or DWON button to move the cursor to the bottom left to get a regular image.

2. Control panel
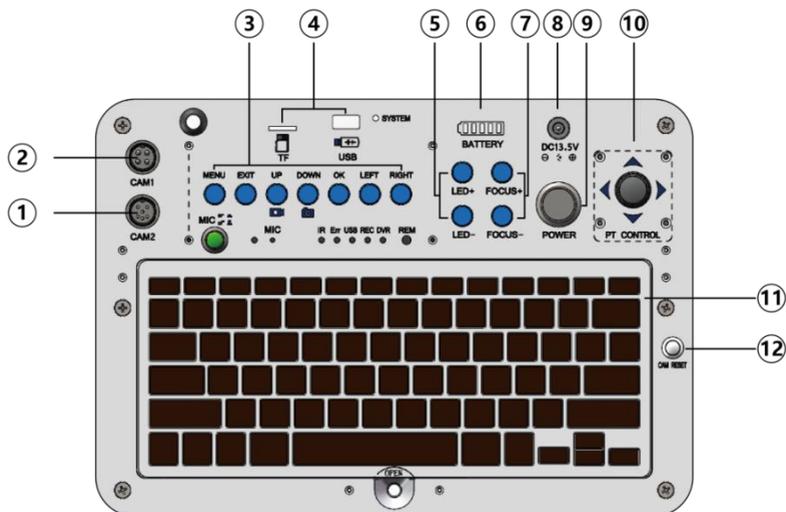
①、Camera Input：CAM2：360° rotation camera（five core interface）.

②、Camera Input：CAM1：Common camera（four core interface）.

③、**DVR Control Button**

MENU：enter DVR system setup.

EXIT：End the recording or return to the previous menu

UP/**RECORD**：DVR menu up operation button/**video recording**

DOWN/**PHOTO**：DVR menu down operation button/**take a photo**

OK：Enter button/Confirm button

LEFT：Left select button

RIGHT：right select button

MIC on/off：When need the voice at the process of video, press the switch, indicator lights up, work in MIC recording condition.

④、USB& TF Pin

⑤、LED+、LED-：Increase/Decrease the camera brightness.

⑥、BATTERY：Battery indicator.

⑦、FOCUS+、FOCUS-：Adjust the lens focal length+/ length-.

NOTE:Non-function when using this C28MM PT camera

⑧、power adapter input：as the machine power supply or charging the battery.

⑨、POWER：Power switch.

⑩、360°Rotation Camera Rocker

⑪、Keyboard：it can input characters on the real-time monitoring images.

⑫、Camera reset

3. LED Indicators

MIC	IR	Err	USB	REC	DVR	REM
●	●	●	●	●	●	●
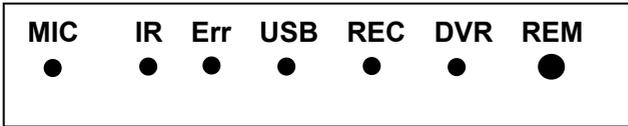
1）MIC:If light is on, you can Record Voice

2）IR: It blinks when the remote control is in use for **Recording Video**

3）Err: It indicates that the system or USB device has error

4）USB: It indicates that USB stick/Micro SD is connected

5）REM : Remote receiving window

6）DVR：It indicates that the DVR system is on

7）REM : Remote receiving window

Cable with meter counter

1. handle

2. diameter 8mm cable（60 meters）

3. female connector

4. cable reel

5. Bracket

6. Meter Counter Box

1）Reset

2）Metric & Imperial Conversion

3）6pin plug（Connect the cable reel to the Monitor）
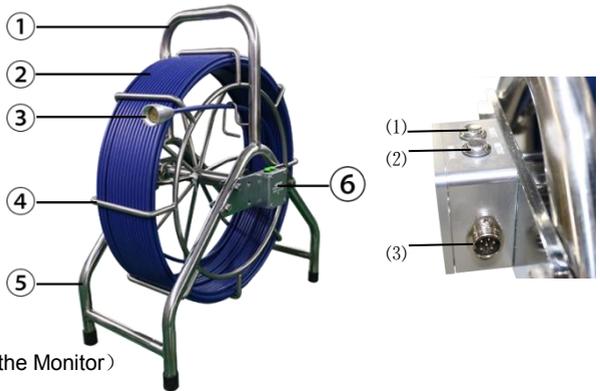
28MM PT Camera Head (Non FOCUS+/FOCUS- function)

28mmPT Camera   **Separate Spring Kit**

System Set-Up

1. IMPORTANT: When you connect the Camera to the Monitor, the power must be off; otherwise both units will be damaged.

2. Connect the soft cable(6-6pin) to the cable reel and monitor

3. Plug the Power Adapter cord into the wall AC socket and the other end into the "DC 13.5V" jack .

   Note : Don't misuse the Power Cord and Battery Charger Cable, otherwise the system can not work properly, or the battery pack may be damaged.

4. Press the POWER button on the front of the Monitor.

5. Gently lower the Camera into a pipe duct, etc and reel out the Cable until it is at the desired depth.

6. Record the pictures if you need (see DVR Operating).

7. When you finish the job, carefully remove the Camera head from the pipe duct, etc, clean it with a clean, soft and dry cloth and then put the Camera into the previous position

System Menu Setting

1. System settings

Press the remote control MENU button
Enter the MAIN MENU,
▼ key to select "SYSTEM"
OK key to enter

- ▶ Play settings
- ◀ Sound settings
- ⊙ time setting

Language : Chinese/English/German/Spain/Polish/French/Korean/Russian/Japanese.

Factory settings： This option can be used to restore the factory default settings (operate with caution).

System version：This setting is to view the system software version number.

2. OSD settings

TIME：In the real-time preview state No watermark on the screen time.

PLAYBACK：Refers to the playback of video no watermark.

FILE：Video file watermark off.

3. Save settings/format

Storage settings:
You can view storage usage capacity and remaining capacity.

If the device cannot be displayed Storage status,

Available through this function Format the storage device.

⚠ **Can't read card and can't record video?**

1. Please use a genuine card.
2. If the card is not read, enter "Save Settings" to format.
3. For SD cards that have not been used for a long time, please clean
   the pins of the SD card before inserting it into the device.
4. The card is not read, please restart the device.

4. Image settings
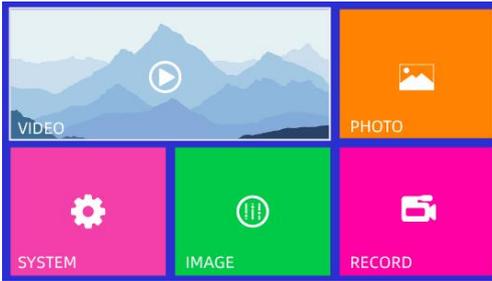
Image setting:

Through color contrast brightness adjusts image parameters in real time.
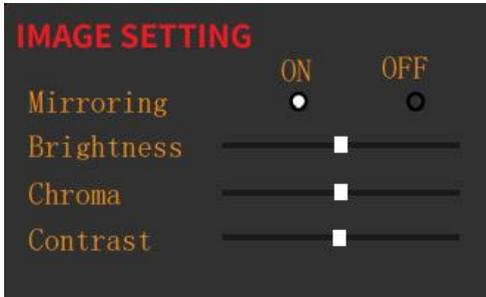
Mirror settings:

After entering the image settings,

the remote control ◀ ▶ key

to select enable or disable,

then press `ESC` key

It can be automatically saved.

Record settings

1. Recording time/segment setting

Remote control MENU key to enter the
MAIN MENU ,

Select "RECORD"

`OK` button to enter.
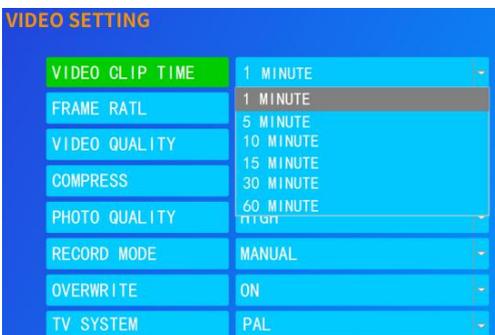
Video packaging time:

Press `OK` to pop up the option bar,
then press "UP/DOWN" button ON the
panel to select If you want the time
period, press `OK` to confirm and save.

Video packaging time:

After this function option bar is expanded, 1/5/10/15/30/60 minutes and other time periods, After the settings are saved, the device packs the video files according to this time period, for example: set to 1 minute, then the device will save the video as a video file per 1. minute when recording.

2. Video frame rate

VIDEO SETTING	
VIDEO CLIP TIME	1 MINUTE
FRAME RATL	NTSC30FPS/PAL25FPS
VIDEO QUALITY	NTSC30FPS/PAL25FPS
	15FPS
COMPRESS	5FPS
PHOTO QUALITY	HIGH
RECORD MODE	MANUAL
OVERWRITE	ON
TV SYSTEM	PAL

Video frame rate:

low frame rate video,

the advantage of saving storage space

if not necessary, you can press the default setting.

3. Video quality

VIDEO SETTING	
VIDEO CLIP TIME	1 MINUTE
FRAME RATL	NTSC30FPS/PAL25FPS
VIDEO QUALITY	HIGH
COMPRESS	HIGH
	MIDDLL
PHOTO QUALITY	LOW
RECORD MODE	MANUAL
OVERWRITE	ON
TV SYSTEM	PAL

Video quality:

Three modes available :

- Low
- Medium
- High

4. Video compress

VIDEO SETTING	
VIDEO CLIP TIME	1 MINUTE
FRAME RATL	NTSC30FPS/PAL25FPS
VIDEO QUALITY	HIGH
COMPRESS	H. 264
PHOTO QUALITY	H. 264
	H. 265
RECORD MODE	MANUAL
OVERWRITE	ON
TV SYSTEM	PAL

Video compression method:

H.264

H.265

two compression methods.

5. Picture quality

High/medium/low, three modes, the higher the picture quality, the clearer the picture.

6. Video mode

Video mode:

Manual recording/automatic recording: Set up manual recording Need to use buttons, etc.

Power-on video: when the device is turned on Automatically record.

7.Loop recording settings

Video coverage:

Refers to the automatic Loop, if closed, after the device is full Automatically stop, it is recommended to turn on (default is on status)

8. Video format

System video format:

NTSC is the video standard commonly used in North America and most of South America.

PAL is the video standard which is popular in most of the European and Asian countries.

Remark: When you plug in the USB key/Micro SD card before starting the device, maybe the device can't find the USB stick/Micro SD card. In this case, please remove

them and try again.

NEW Remote Control (For Operating DVR Recording)
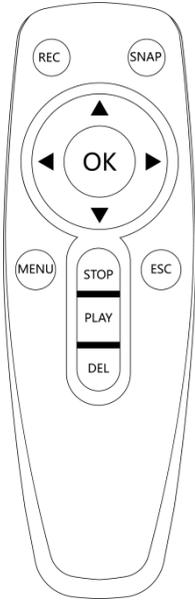
REC	Record button
SNAP	Take a picture button
▲	Up button (record key in real-time state)
▼	down button (camera key in real-time state)
◀	Left button (when playing back video)
▶	Right button (under playback video status)
OK	Confirm button
MENU	Menu button (enter menu setting)
ESC	Return key
STOP	Stop button
PLAY	Play button
DEL	Delete key

Remark: This style of remote control Only for equipment with new DVR versions.

DVR Recording Operation

(This operation is only available for the new DVR versions)

1. Press the Video Button and set the screen on **Video 2 channel.**

2. Install No. 7 battery on the remote control (pay attention to the positive and negative poles of the battery).

3. Insert your USB stick/removable hard disc into the USB Port, or micro SD card into micro SD card slot, you can see USB stick / micro SD card connected on the screen and the LED light indicator is on.
   Remark: When you plug in the USB stick/micro SD card before starting the device, maybe the device can't find the USB stick/micro SD card. In this case, please remove them and try again.

4. Press remote control button (REC) to start the recording and the RECORDING LED light is on. In recording, press the **SNAP** button again, the DVR will take a photo and it is saved in the USB stick or micro SD card.

    Remark:You also can press **on the panel** ▢◖ button to start the recording, In recording,press the ◉ button again, the DVR will take a photo.

5. Press **MIC** button on to record a voice while the video is recording

6. Press remote control Button [STOP] to stop recording.
7. The recorded video will be stored in the USB devices / Micro SD Card and played back on the TV screen.

Video recording format

The default video recording resolution is 640*480. One-hour recording will take up storage of 500MB. The video recorded by the device is MP4 format.

Note: The video player of the device may not support some downloaded videos

Video Playing

You can use on-panel "**MENU**" to enter "**VIDEO**" mode. The unit will display the recorded video and other compatible videos stored in USB stick / Micro SD Card. It will not list the non-compatible videos.

Select the Video File

enter "**VIDEO**" mode, the set will display all of the available video files on the screen.

You can use [▲] or [▼] button to select desired video and press [OK] button to play.

Use [**OK/STOP**] button to start or pause the playing .

Use [**STOP/ESC**] button to stop or go back to previous menu.

Fast Forwarding and Rewinding

You can use [►] or [◄] button on the remote control to fast forwarding or rewinding (Each time you press, fast forward 4 seconds or fast backward 4 seconds).

How to use the text writer?

With the signal overlay technology, the text writer is a device that can display the input characters from the keyboard (supporting English). Keyboard input function is basically the same as the computer keyboard operation.

I. Keyboard Functions

1. It supports the display of 3 pages.

2.The keyboard has a 0-9 number input with symbol switching through the Shift +"key"

3. 26 English letters input and case switching with Caps Lock.

4. F5 is the character display/hide switch key. When you press F5, all the characters are hided. Press F5 again, all characters are displayed.

5. Move the cursor through the four arrow keys of the keyboard to enter the character at the position where you want.

6. Keys:

1)See Appendix 1 for other punctuations, Appendix 2 for function keys.

2)Keys without functions：Esc、F1、F2、F3、F4、F6、F7、F8、F9、F10、Num Lock、Prtscsysrq、Tab、Ctrl、Fn、Alt

II. How to Operate

1. To start the device, press the VIDEO button on the LCD monitor to enter the VIDEO 2 channel if your system coming with 2 channels.

Appendix 1: Punctuations

,	。	(	)	?
:	;	*	/	@
-	<	>		

Appendix 2: Function Keys

F1	Clear all characters
F5	Display/hide character switch
Caps lock	Case Switching
Four arrow keys	Up, Down, Left and Right Movement
Backspace、 Delete	To delete
Enter	Enter Key
Shift+ Key	Input the symbol on the corresponding key
space key	Space bar

Recharging the Battery

1) Plug the charger into the AC socket on the wall and insert the other end into the DC jack (See Figure2- A).

2) The battery can be charged while the device is being used. However, once the power in the battery runs completely out, it can only be charged when the device is turned off.

Figure 2

IMPORTANT MESSAGE: Do not overcharge the battery! Overcharging can result in acid leaking from or damage to the battery.

Battery specifications:

1. TOTAL POWER $\leqq$ 14W
2. LI-ION BATTERY 12VDC MAX. $\leqq$ 79Wh
3. CHARGER 13.5V 1700mA
4. CHARGE TIME 6 HOURS
5. WORKING TIME $\geqslant$200 MINUTES
6. PROTECTIVE VOLTAGE 8.1 V
7. THE VOLTAGE BEFOR DISCHARGING 12.6V
8. LOAD CURRENT 1200mA(INPUT 12.2V)

WARNING:

Batteries are dangerous goods. Customers/users are prohibited from disassembling and repairing this battery pack by themselves. Otherwise,the manufacturing is not responsible for any consequence and losses.

TROUBLE SHOOTING

Trouble	Reason / Solution
Blank screen	1. Change the fuse
	2. Recharge the battery
	3. Check power line and connect it again.
No signal	1. Read the manual again and reconnect it.
	2. Check the camera and screw down
	3. Clean the camera pins
	4. Check the pins and find if they are in the same level
The camera has weak or no light	Press the "LED+ LED-" button to adjust the brightness
No recording	1. Press the "Video" button and change to Video2
	2. Press POWER button and the monitor indicator light is green.
	3. Use another USB stick /micro SD and try
Recording abnormity	Shut off the unit and restart the unit in correct steps
Flashing pictures	1. Deficiency of the battery power. Please recharge the battery
	2.Misuse of the charger cable and power cord: switch the cables
No working of battery recharging	Misuse of the charger cable and power cord : switch the cables