

PIPE & WALL
VIDEO INSPECTION SYSTEMS
USER MANUAL
For
3188XX SERIES
ASSEMBLING AND OPERATING INSTRUCTIONS



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. If you have an extra portable cable reel, and try to put it in the case after use, you must put it in the right position; otherwise, LCD monitor may be broken by the part on the reel when you close the case.
10. Please forgive that if any change of products will not make additional specify in advance.

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Assembly Drawing and Parts List

Part	Description
1	23MM auto-leveling camera with built-in 512hz transmitter(CD23FT) Optional For Other Series Camera
2	Power Adapter&Battery Charger
3	Function case&40M Fiberglass Cable
4	8 core Signal Cable
5	Remote Control
6.	Skids for CD23FT



①



②



③



④



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Specifications

Item	Description
Power adapter	110VAC~240VAC 13.5V DC 1700mA
Battery (In the case)	LI-ION battery, DC 12V, 4400mAh
Length of Cable	40M(130FT) WITH METER COUNTER
Camera Light Source	12PCS LED
Camera Angle-of-View	FOV=120° F2.8/2.42mm
Camera Image	Effective Pixel Array: 976 (H) x 496(V)
Monitor Screen Size	7" TFT LCD Color Monitor
Monitor Picture Resolution	800*480 pixel (for 7" LCD)
Storage Device	USB &TF(8G~512G)
DVR Format	AVI
System Operating Temperature	-20°C to 60°C

User Manual

Application

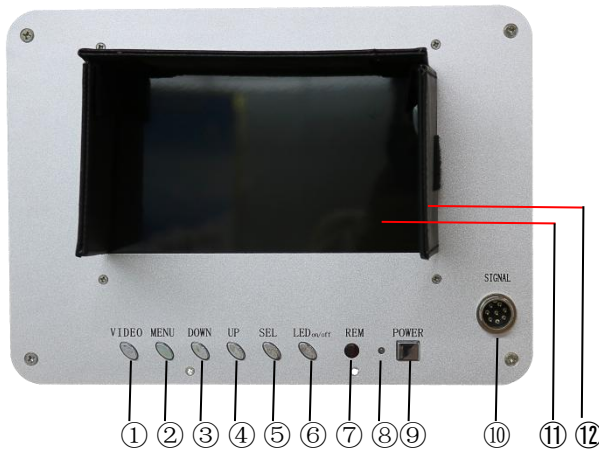
- 1.WATER SUPPLY
- 2.WASTE WATER
- 3.ELECTRICAL AIR CONDITIONER
- 4.CABLE DUCTING
- 5.DUCTED VACCUM SYSTEMS
- 6.PLUMBING
- 7.BUILDINGS

WARNING:

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

Know Your Device

1. Display Part



1. VIDEO	7. REM
2. MENU	8. POWER LED INDICATOR
3. DOWN	9. POWER
4. UP	10. SIGNAL INTERFACE
5. SEL	11. 7 INCH LCD
6. LED ON/OFF	12. SUN SHADE

Remark:

1) MENU key-press: Image adjust. Press SEL/DOWN/UP key to adjust below numerical value. Numerical value is from 0 to 100.

PICTURE

BRIGHT-----50

CONTRAST-----50

COLOR-----50

SHARP-----50

LED BRIGHT-----80

HUE-----50

ENGLISH**

Language has ENGLISH,DEUTSCH,FRANC,ESPAKOL,PORTUG,ITALIANO,ENGLES,

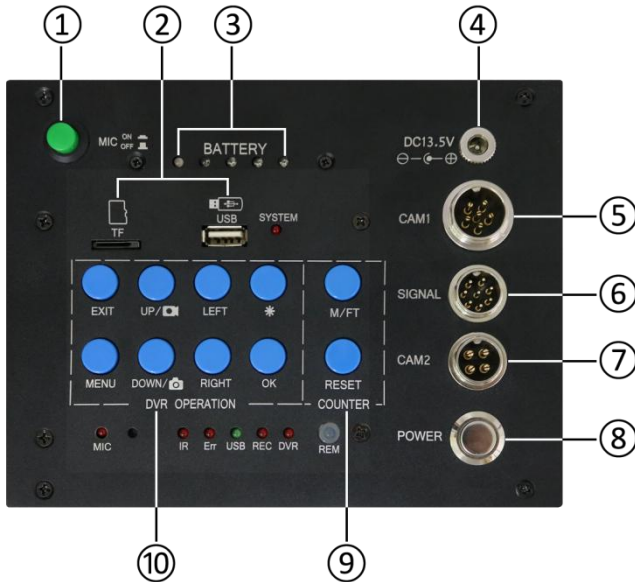
After exit "MENU" mode, below keys have different functions:

2) DOWN: Press DOWN key, the image change UP and DOWN (Mirror function)

3) UP: Press UP key, the image change LEFT and RIGHT (Mirror function)

4) SEL key: Press SEL key to change the image to 16:9 image or 4:3 image (except 10 inch monitor)

2. Control Box



① **MIC on/off:** press the switch, indicator lights up, work in MIC recording condition. After the end of the video, you must press the switch again, otherwise there is no audio signal output.

② **USB& TF pin:** please insert the right port.

③ **battery indicator.**

④ **Power adapter input:** DC13.5V IN

⑤ **CAM1:** Common camera socket 1(6 core interface).

⑥ **SIGNAL:** Signal interface(8 core interface).

⑦ **CAM2:** common camera socket 2(4 core interface).

⑧ **POWER:** Power switch

⑨ **COUNTER:**

M/FT: Metric & Imperial conversion

RESET : Reset the meter counter.

⑩ **DVR operation Button**

EXIT: Exit DVR video playing or left return to the next higher level submenu.

UP/RECODE: DVR user menu up operation button./Record video button.

LEFT: Left button

*: Nonfunctional button

MENU: DVR system setup

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

RIGHT: right button

OK: DVR play or select button.

3. LED indicators

MIC :indicator lights up,can record a voice while the video is recording

IR: It blinks when the remote control is in use for Recording Video.

ERR: It indicates that the system or USB device has error.

USB: It indicates that USB stick/Micro SD is connected.

REC: It will blink during recording.

DVR: It indicates that the DVR system is on.

REM: Remote receiving window.

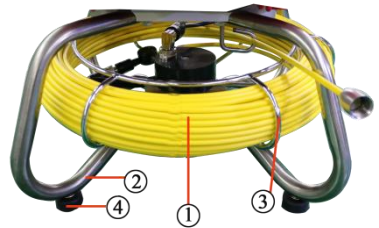
Cable Reel

(1)、Φ5.2mm fiberglass cable

(2)、304 stainless steel holder

(3)、cable reel

(4)、foot pad



Camera(CHD-DT-C23)

I.Working environment:

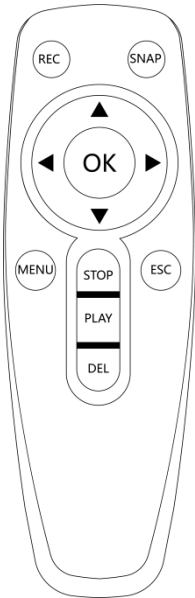
1. Temperature: -20℃~60℃
2. Humidity: 90%RH (non-condensation)

II.Main Technical Indicators:

1. Power source input: DC 9-13.5V
 2. Camera module:
 - 1) Image sensor: 1/3" color CMOS PC1099
 - 2) Effective Pixel Array: 960 (H) x 480(V)
 - 3) Horizontal resolution: 900TV LINES
 - 4) Minimum illumination: 0.01LUX/F1.2
 - 5) SNR: >45dB (AOC on)
 - 6) Video Output: 1.0 Vp-p / 75Ω(CVBS)
 - 7) Current consumption: 65mA Max(ALL LEDS LIGHTS ON≤200mA)
 3. Lighting source:
 - 1) LED quantity: 12pcs
 - 2) Luminous flux: 107~114 lm (180 mA)
- Working Current: 0~180 mA



Remote Control (For Operating DVR and SD Card Recording)



	Record button
	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)
	Confirm button
	Menu button (enter menu setting)
	Return key
	Stop button
	Play button
	Delete key

System Set-Up

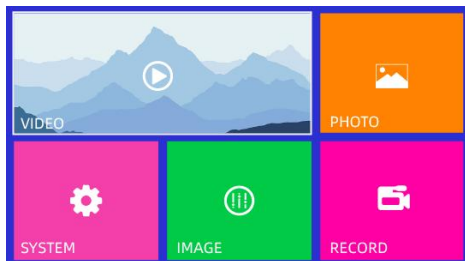
1. **IMPORTANT:** When you connect the Camera to the Monitor, the power must be off; otherwise both units will be damaged.
2. Connect the reel cable to the Monitor.
3. Plug the Power Adapter cord into the wall AC socket and the other end into the "DC 13.5V" jack.


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

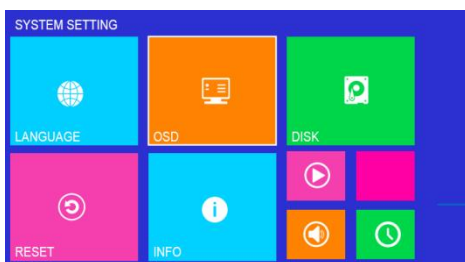



Press the remote control  button


Enter the menu,


 key to select “SYSTEM”,

 key to enter “SYSTEM SETTING”



 Play settings

 Sound settings

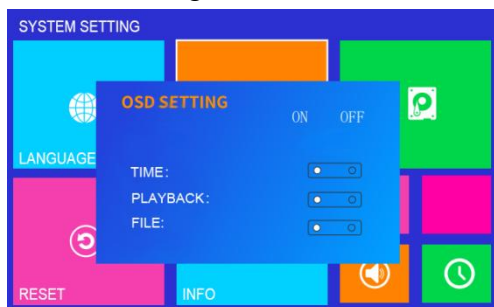
 time setting

Language settings: Include Chinese/English/German/Spain/Polish/French.

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

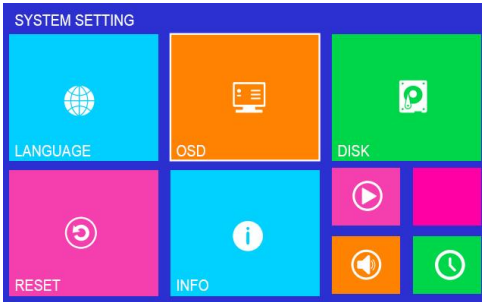


TIME: In the real-time preview state No watermark on the screen time.

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

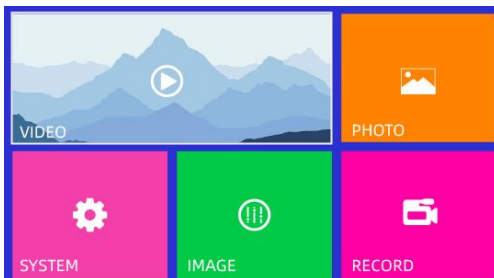
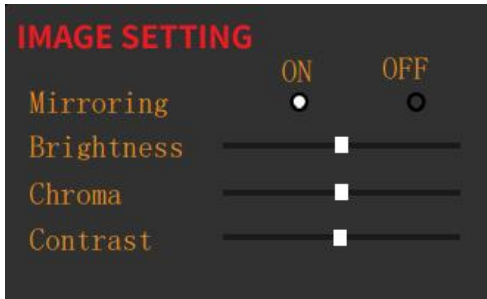


Image setting:

Through color contrast brightness
adjusts image parameters in real time.

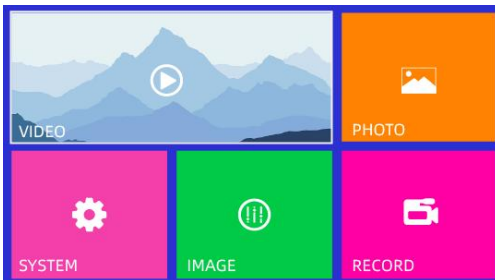


Mirror settings:

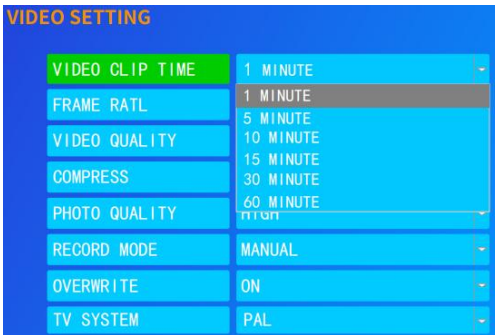
After entering the image settings, the remote control ◀▶ key to select enable or disable, then press **Esc** key. It can be automatically saved.

Video settings

1. Recording time/segment setting



Remote control **MENU** key to enter the menu, Select "RECORD", **OK** button to enter "video setting".



Video packaging time:

Press **OK** to pop up the option bar, then press ▲ ▼ 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
COMPRESS	15FPS 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
PHOTO QUALITY	MIDDLL 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 settings

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

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

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

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

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.



DVR/Micro SD RECORDING OPERATION




(Recording via MICRO SD Card is only available for the new 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  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 black box**  button to start the recording, In recording,press the  button again, it will take a photo.

5. Press remote control Button  to Play recording.
6. Press **MIC** button on to record a voice while the video is recording
7. Press remote control Button  to stop recording.
8. If you need to manage your videos and pictures, press remote control button  . enter"MAIN MUNE" page,select the "VIDEO"or"PHOTO" module.

NOTE:

1. DVR system sometimes need 12 - 18 seconds for reposition before it can work properly, please let it run about 20 seconds each time when you try to record.
2. The default video recording resolution is 640*480. One-hour recording will take up storage of 500MB. User may select 320*240 to save storage space.

3. Schedule recording

You can schedule a recording in advance. Simply enable the schedule recording in the **VIDEO SETTING** and then the unit will ask user to setup timing. Recording schedule can be used once. You have to set up schedule again for next recording.

4. Fast Forwarding and Rewinding

You can use [▶] or [◀] button on the remote control to fast forwarding or rewinding (1x, 2x, 4x, or 8x, speed).

5. Compatible video format:

Divx3.11/Divx4/Divx5/MPEG1/MPEG2/MPEG4 (MPEG4 video file format: .avi, .m4v, .MPG, MPEG, .VOB)

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

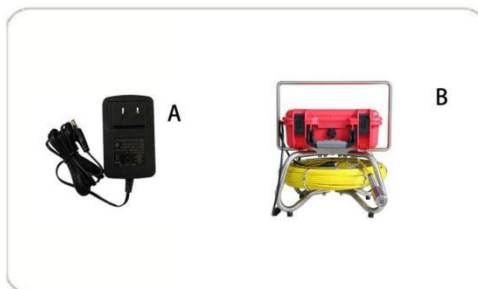
Video Player Software Installation

Generally, the recorded videos can be played on the computer purchased after the year 2006. If you can not open the recorded document on computer,

Option 1 : Go to the website“ <http://www.kmplayer.com/> ”and download the KMPlayer software for free.

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.



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

Battery Specifications:

1. TOTAL POWER $\leq 15W$
2. LI-ION BATTERY 12VDC MAX. $\leq 52.8Wh$
3. CHARGER 13.5V 1700mA
4. CHARGE TIME 4 HOURS
5. WORKING TIME ≥ 120 MINUTES
6. PROTECTIVE VOLTAGE 8.25V
7. THE VOLTAGE BEFOR DISCHARGING 12.6V
8. LOAD CURRENT 1200mA (INPUT 12.2V)

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 "MENU" button, locate the LED brightness setting and then 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