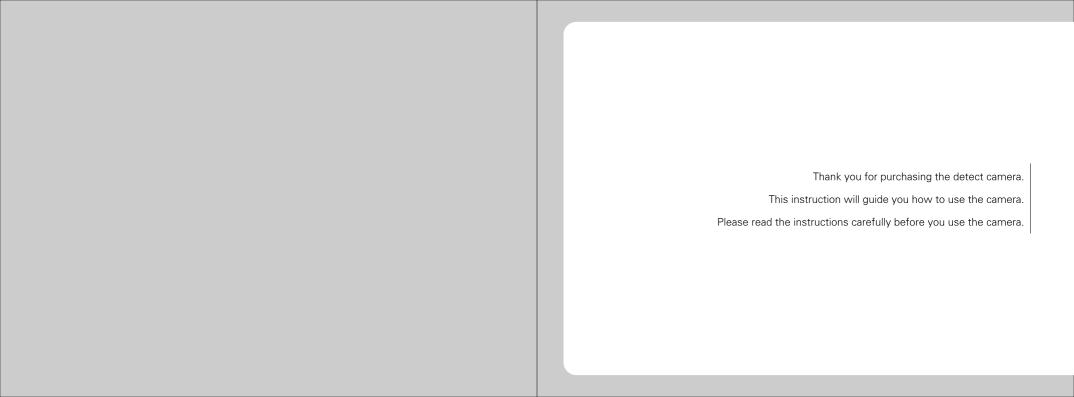


This specification is subjected to change without notice.





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1. PREPARATION

1.1 Introduction

The detector utilizes the latest image compression technology and use high resolution image CCD with 540TVL,low light performance. You can enjoy real–time with the 4"LCD and it is easy to carry and use because of aluminum safe case.

Features:

- Patented unique design
- High performance CCD camera with 8pcs white led
- 3 connected pipe, up to 5 meters length
- H.264 compression, record video real-time
- Support 1–16G micro SD card
- 2X2200mAh high capacity lithium batteries, 4 hours recording
- Aluminum safe case, easy to carry and use

GENERAL NOTES:

- Do not attempt to disassemble the camera, disassemble the machine by Non-professional staff that may lead to mechanical failures, and loss of warranty rights.
- Do not use the camera near flammable gas.
- Any liquid or objects enter the camera inside, please close the power as soon as possible and contact suppliers or professional maintenance.
- Prohibited metal or combustible objects through the connection point (for example: card slot or power jack) insert the camera.
- Do not operate the camera with wet hands to avoid electric shock.
- Placed away this product and accessories from children or animals to prevent accidents.
- Do not use alcohol, polishing powder, detergents, gasoline, thinner, wax, petroleum products or hot water cleaning the lens. These substances can cause changes in shape or color.
- Do not directly touch the lens, fingerprints will cause the image blurred and the lens can not focus.

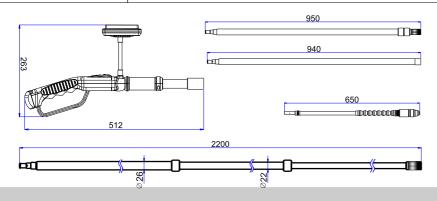
1.2. TECHNICAL SPECIFICATIONS

CCD sensor	1/3" Sony Super HAD CCD II	
Lens	3.6mm MTV	
Resolution	540TVL	
Effective pixels	PAL:752(H)X582(V)	
	NTSC:768(H)X492(V)	
Electronic shutter	PAL: 1/50-1/100,000Sec NTSC: 1/60-100,000Sec	
AGC	Auto	
Illumination	0 Lux (LED ON)	
Compression	H.264	
Video format	AVI (30f/s)	
Image format	JPEG	
Image	720 X480	
AV OUT port	φ =2.5mm	
USB port	USB2.0	
Mirror	180°	
LCD	4"TFT-LCD	
SD card	Micro SD Card,Up to16GB	

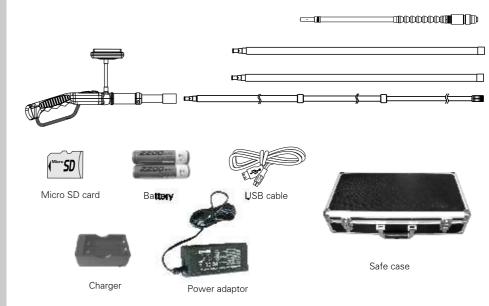
03

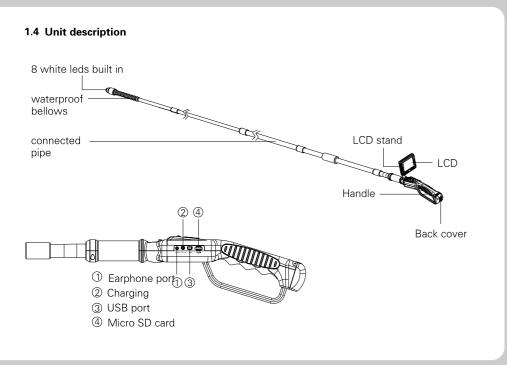
1.2. TECHNICAL SPECIFICATIONS

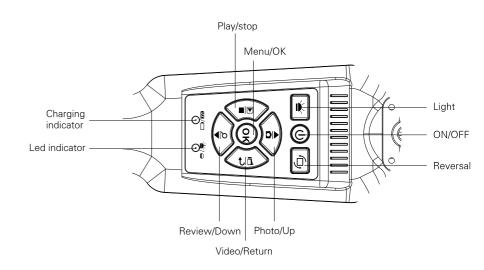
Battery	3.7VX2,2200mAh
S/N ratio	≥46dB
Humidity	5–95% RH
Storage temprature	-20°C70°C
Operation Temprature	-10°C50°C
Power consumption	4.5W
Weight	9600g (Contain optional components)
Dimension	1000x480x150mm



1.3 SYSTEM DIAGRAM





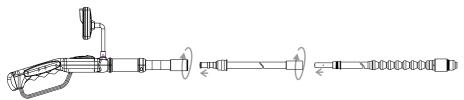


Light: Press 'Light' button to turn on or off the white led at the front of the camera;

ON/OFF: Press'ON/OFF' button to turn on or off the camera. **Reversal:** Press 'Reversal' button to reversal the image at 180°.

Please refer to chapter 2 and 3 about the operation of other buttons.

1.5 ASSEMBLY DIAGRAM



Assembling connected pipes









Inserting batteries

1.6 ELECTRONIC PARAMETER OF BATTERY

Items	Specification
Capacity	2300mAh
Voltage	3.7V
Dimension	φ18x72mm

1.7 USING POWER ADAPTOR

- 1. Connect the power adaptor to the charging port of the camera.
- 2. Choose a suitable charger and insert a power point and switch the power on.

 When starts charging, the charging led turns green. It would take 4 hours till the capacity is full.

	Input	AC 100~240V/50~60Hz
Power adaptor	Output	12V 2A
	Battery type	Lithium battery(2200mAh)

1.8 USING MICRO SD CARD

- Format the Micro SD card under the following conditions:
 - 1. Use the Micro SD card for the first time.
 - 2. The camera does not recognize Micro SD card data.
- 3. Delete the stored image you needn't.
- Make sure of turning off the camera, before you insert or remove the memory card.
- Memory card cut or broken without guarantee scope.
- Do not store the memory card in strong electric field or strong magnetic field environment.
- Do not store memory card in extreme temperature environments.

 It is normal that the SD card heats for constant work.

Note: If inserting or removing the SD card in stand-by mode, the camera will be in disorder with fault.

2. Recording video& Snapshot

2.1 Recording video

In the stand-by mode, press the right button to start recording, the green camera icon will be changed to red camera icon and the time length of recording video will be shown on the LCD display; press the right button again to stop recording, the red camera icon will be change to green camera icon, the camera returns to stand-by mode.



2-1 Recording video

2.2 Snapshot

In the stand-by mode, press the up button to snapshot, the green camera icon will be changed to green photo icon and the date /time will be shown on the LCD display, the camera returns to stand-by mode after snapshot.



2-2 Snapshot

2.3 LCD display icon

Description	Icon	State
Shooting mode	•	Red camera icon represents recording; green photo icon represents snapshot.
Battery states		These icons represent Sufficient battery; low battery; battery exhaust.
Recording length	14:18:43	Time length of recording video
Date/time	04/27/2009 14:18:43	Date and time in shooting

2.4 LCD Display Main menu

Menu icon	Main menu	Submenu icon	Setting function
	Video		Video mode(30F/15F);Play video; delete video; Protect video
	Photo	## 720	Photo mode(720X480); Review photo; Delete photo; Protect photo
	Memory Card	面	Delete all; Protect data; Format
	LCD Setup	~	Date/time mode
	System Config	(D) (S) (S) (M) (E) (M)	Clock; Language; Auto Off Time; recording time; TV standard, Product Info; Upgrade

2.5 Image quality / frame rate

In stand-by mode, press the OK button to enter the main menu, select Video or Photo icon by pressing Up or Down button, press OK button to enter submenu of video mode or photo mode; the default option is 30 frames/sec and 720x480.





2-3 Video Mode

2-4 Photo Mode

You can choose the suitable image size and video frame rate.

Mode	Photo		Video	
Size	720x480	640X480	30FPS	15FPS
File format	JPEG		А	VI

Note: High-resolution images require more storage space, the higher the resolution, the less remaining space can be taken.

2.6 Date /Time mode

Select Date/time icon, there are four Date/Time modes.



2-7 Date/Time modes

Submenu	Icon	Description
Date/Time mode	OFF ※ (• ★ (•	These icons represent: date/time is off on LCD; date is on; time is on; date/time is on. To disable the Date/Time from being recorded in the video or photo, set the Date/Time mode to OFF.

2.7 Power button

The power button is used to turn on or turn off the camera, press and hold the power button three seconds to turn on or turn off the camera.

2.8 Record/Return button r□ ←

Press the right button once in stand-by mode, the camera stars recording video; press the right button once again, the camera stops recording video and the video will be saved in the Micro SD card.

2.9 Snapshot/Up button 🗖

Press the up button once in stand-by mode, a snapshot is saved in Micro SD card.

2.10 OK button (menu/confirm) OK

Press OK button, the menu of current mode is displayed on the LCD, when you press the OK button in playing video mode, the video will pause playing; when you press the OK button in reviewing photo mode, the Delete Photo Dialogue appears.

Press the OK button in stand-by mode to enter the main menu, move the cursor to the desired submenu or data and press the OK button to confirm.

3. Reviewing & Playing

3.1 Reviewing photo

- 1. Quick review: After turning on the camera, press the Down button to review the latest photo, press the Down button to review the next photo, press the Up button to review the previous photo. Press Left button to return to photo listed files.
- 2. Reviewing the selected photo: After turning on the camera, press the OK button to enter the main menu. Select Photo icon by press the Up or Down button, press the OK button to enter the submenu. Select Review Photo option by pressing the Up or Down button, press the OK button to enter photo listed files as per picture 3–1. Select the desired Photo file by press the Up or Down button, press the OK button to review the selected photo as per picture 3–2. Press the Left button to return photo listed files.



3-1 Review photo list



3-2 Review photo

3.2 Replay video

- 1. Quick replay: After turning on the camera, press the Left button to start replay the latest recorded video. The camera will return to file submenu after finished replay; Press the OK button to pause playing the video or press Left button to return to the listed files while playing the video
- 2. Replay the selected Video: After turning on the camera, press the OK button to enter the main menu. Select Video icon, pressing the OK button to enter; Select Play Video option by pressing the Up or Down button, press the OK button to enter video listed files, as per picture 3–3. Select the desired video file by pressing the Up or Down button and press the OK button to play the selected video, as per picture 3–4. The camera will return to listed files after finishing playing; Press the OK button to pause playing the video or press the Left button to return to listed files while playing the video.



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3-44FPRaw widtero

3.3 Play/Stop button ▶ ■

Press the left button in stand-by to replay the latest video file, press the left button in reviewing photo mode to return the photo listed file; press the left button to stop playing video in playing mode and return to the video listed file mode automatically.

Down button, a enquiry dialog appears, as per picture 3–8, 3–9, select [Yes] by pressing the Up button and press OK button to unlock the selected video or photo file, The camera will return to listed files after finishing setting operation.









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3-77 Winhoodsk widtheo

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3-99 Whiteatk phteateo

3.6 Deleting

3.6.1. Deletingail

After turning on the camera, press the OK button to enter the main menu. Select Memory Card icon by pressing the Up or Down button, press the OK button to enter the Memory Management mode. Select Delete All option, as per picture 3–10, press the OK button, then select [Yes] and press OK button to delete all files recorded in the Micro SD Card which haven't been protected, but the files protected can't be deleted



3-100Dedeteeall

3.6.2 Deletingthbeseletatedifile

After turning on the camera, press the OK button to enter the main menu. Select Video or Photo icon by pressing the Up or Down button, press the OK button to enter the submenu. Select Delete Video or Delete Photo icon by pressing the Up or Down button, press the OK button to enter Delete Video or Delete Photo listed files, as per picture 3–11, 3–13. Select the desired video or photo file by pressing the Up or Down button, a enquiry dialog appears after pressing the OK button, select [Yes] and press OK button to delete the selected video or photo unprotected, but the video or photo file protected can't be deleted, as per picture 3–12, 3–14. The camera will return to listed files after finishing deleting operation.









3-173 Deddate philosocialist 3-174 Deddate philosoci

3.7 Formætting

After turning on the camera, press the OK button to enter the main menu. Select Memory Card icon by pressing the Up or Down button, press the OK button to enter the Memory Card Management mode. Select Format option; press the OK button and select [Yes] to format the Micro SD card, as per picture 3–15.



3-155Foormaatt

4. Setting

4.1 Settingdate#/time

Select Clock icon, as per picture 4–1, shift different setting options by pressing the OK button repeatedly. Press the Up or Down button to adjust the date or time.



4-11 Saattiiringgdalate/Virinee

4.2 SettingLanguage

Select Language icon and press the OK button to enter the setting mode, as per picture 4–2. Press the Up or Down button to select the desired language. Press the OK button to confirm the setting, press the Right button to exit the language setting mode.



4-22Llanguagge

4.3 Settingauttooffffine

Select Auto off Time icon and press the OK button to enter the setting mode, as per picture 4–3. Press the Up or Down button to select the desired auto off time and press the OK button to confirm the setting, press the Right button to exit the setting.



4-33AAutrooffftimee

4.4 Record time

Set Record time icon and press the OK button to enter the setting mode, as the picture 4-4. The default record time is 30 minutes.

4.5 Vidleo ocultout

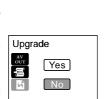
Press AV OUT, wow can athorosse NATICSSoorFFAAL.

4.6 Product Information

Select Product Info icon and press the OK button to view the product information such as company name, producing area and version number, as per picture 4-6, press the Right button to exit the settina.

4.7 Upgrædte Firmwarære

Select Upgrade icon and press the OK button to enter the setting mode as per picture 4–7. Select [Yes] and press OK button to upgrade firmware. Letters Upgrade 'Upgrading firmware please waiting...' will be shown on LCD display in the process of updating firmware 4-8. The camera will turn off automatically after finishing upgrade operation



4-77U.bogradteffirmwaace



4-44Recordttimee



4-55AWooutpout



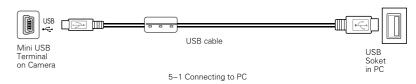
4-46Producttinformation



4-88U.bouradteffirmwaaee

5. CONNECTING

5.1 Connect to PC



- 1. Turn on the camera and PC.
- 2. Connect the small end of the USB cable to the USB socket of the camera.
- 3. Connect the big end of the USB cable to the USB socket of the PC.
- 4. Confirm connection to the PC correctly, as per picture 5-1.

Notes:

- 1. The letters 'Mass Storage' are displayed on the LCD of the camera to indicate that the camera is connected to the PC. The USB Mass Storage Device icon is displayed on the PC monitor.
- 2. Do not disconnect the USB cable and remove the memory card, while data is being transferred to the PC. Doing so may damage the memory card's data.

Make sure that you save the image data, you can download images from the Micro SD card to a computer using the supplied USB cable.

5.2 Downloading

- 1. After turning on the PC and the camera, connect the camera to the PC using USB cable.
- Select my computer and double-click Removable Disk-DCIM-100DVREC image files will be shown on the PC.
- 3. Select one or more images, click the right mouse button and select 'cut' or 'copy'.
- 4. Open the folder you selected, click the right mouse button and select 'paste', the selected Images will be sent to your PC.

TROUBLESHOOTING:

If you have problem with your camera, refer to these solutions. Consult your dealer if the problem persists.

1. Memory card cannot be inserted

Insertion of memory card was not the correct direction. Place the memory card correctly.

2. Image cannot be erased.

Image file is protected, and then you can unlock the file protected.

- 3. After connecting camera to the PC, it cannot find the new driver in the computer folder.
- Make sure each end of the USB cable is properly and firmly connected.
- 4. Can't record the video
- Make sure there is enough space on the Micro SD card.
- Make sue the card is inserted correctly.
- 5. Can't play the video on television
- Make sure each end of the AV cable is properly and firmly connected to camera and to your television.
- Make sure the camera is power on.