

DETECTION ENDOSCOPIC



Modle:XR-DE

User Manual

Beijing Chip Rui Automation Technology Co., Ltd.

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一、 Brief introduction

1. Company Profile

Beijing Chip Rui Automation Technology Co., Ltd. (Hereinafter referred Chip Rui) is a set of product research and development, production, sales, service as one of high-tech enterprises, Major world software application, microcontroller applications, electronic circuit design, instrumentation R & D services.



Chip Rui services across five continents; Where there is a demand for instrumentation, where there is core Rui footsteps. As a global manufacturer and supplier, has been committed to electric, gas, water customers in the field to provide precision, high-quality instruments and a full range of system solutions.

As a pioneer of quality and innovation, the Group attaches great importance to the development of new products, and spare no effort to provide the most advanced products for every valued customers.

We introduced the latest, most state-of-the-art on-site solutions, is committed to helping customers to better deal with the relationship between their users to enhance their ability to "interface".

2. Product Description

In order to detect stenosis or by the human eye to the inconvenience observed region, Chip Rui independent research and XR-DE detection endoscope. The product has a real-time video viewing, video recording and photo capture functions.

Beijing Chip Rui independent research and XR-DE detection endoscope is the use of advanced science and technology in the United States. The product comes with an image processing system and recorder. Can be effective defect inspection records, storage, processing, image data archiving, analysis and processing event has a great deal of help.

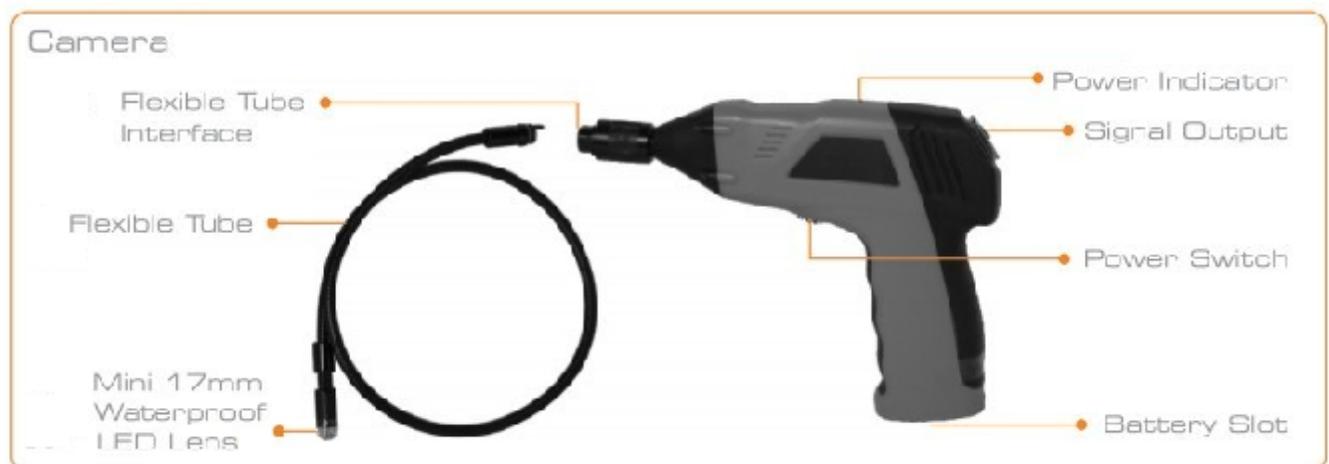
XR-DE detection endoscope can effectively improve the staff to check out a variety of equipment problems. Check parts corrosion, rust, crack, iron filings, foreign body, butt weld quality defects. The instrument itself is compact, portable, removable well reduce the intensity of the work, improve work efficiency, comes with portable batteries more convenient in the narrow space, height climbing, field operations and other harsh environments. XR-DE detection endoscope size due to its special design allows us not destroy detect the surface of the object is simple, accurate observation the objects internal surface of structure or work status.

二、 Product features

- ◆ Allows for easy surveying of small, hard-to-reach places
- ◆ Mini 4.5 mm (minimum) waterproof LED lens, 5 m (maximum) flexible extension tube
- ◆ Manufactured and tested to IP67 waterproof standard
- ◆ 3.5" TFT-LCD detachable/mountable monitor, built-in rechargeable Li-battery
- ◆ Video recording capability, supports up to 32GB micro SD card
- ◆ Adjustable brightness on lens-mounted LED light
- ◆ 3 useful accessories included: Hook, mirror and magnet
- ◆ Lightweight, handheld design, flexible and convenient to use
- ◆ Multi-language support: Chinese, English, Dutch, Japanese, Italian, Portuguese, Spanish, French, German, Russian

三、 Product Use

1. Block Diagram





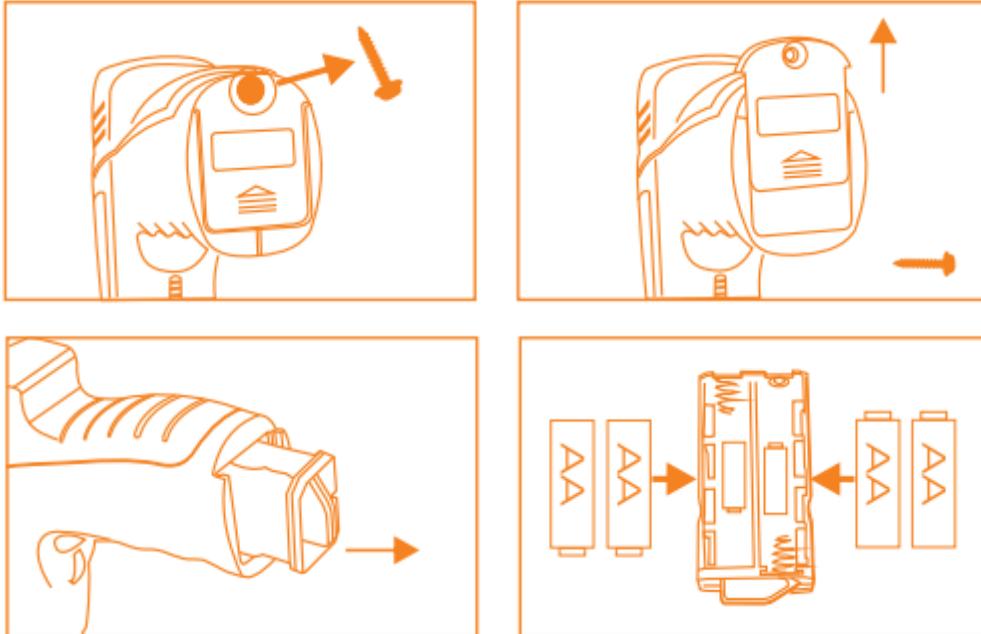
2. Install

(1) To Install Batteries (Dry your hands before installation or replacing batteries.)

Using a Philips head screwdriver, remove screw and cover as illustrated below

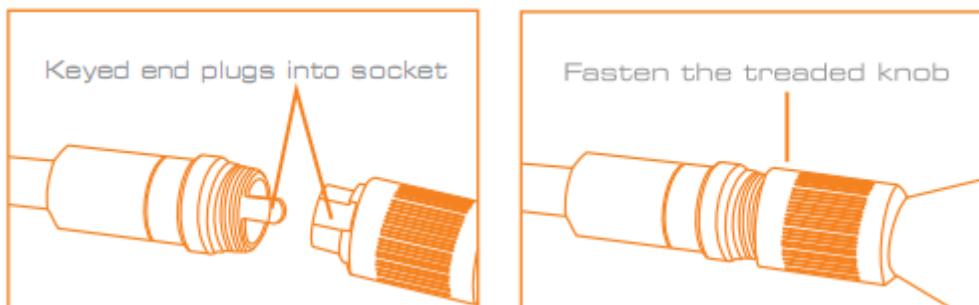
Remove battery compartment and insert four (4) AA batteries into their appropriate slots, with proper orientation, as indicated on the battery compartment.

(3) Reinstall battery compartment and replace battery cover and screw



(2) To Attach Flexible Tube With Handle

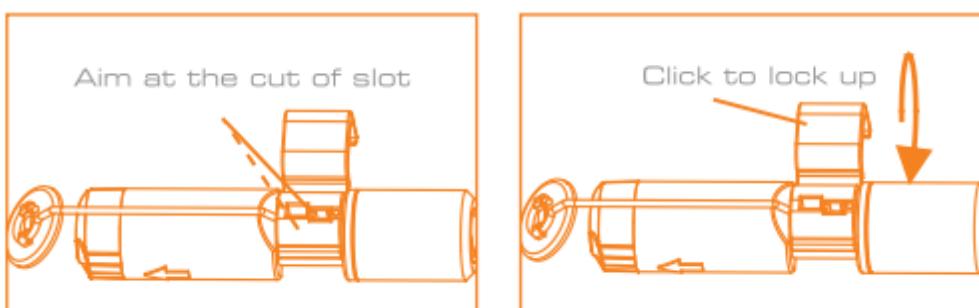
To connect the flexible tube camera with control handle, first make sure that the keyed end of the tube is aligned with the slot in the handle, then use slight force to push them together. Once properly aligned, twist the treaded knob clockwise until the connection is securely in place.



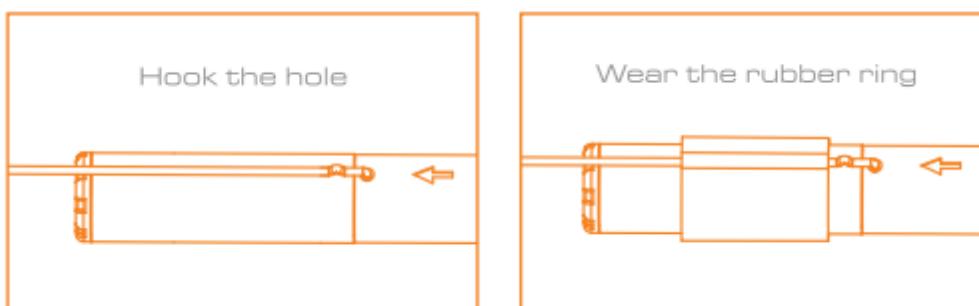
(3) To Install Accessories

The three (3) included accessories (mirror, hook and magnet) are all attached to the camera in the same way as illustrated below:

Example: XR-DE-9 accessories are installed

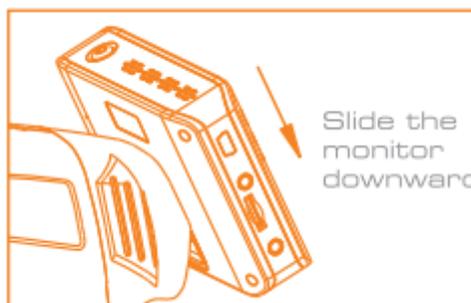


XR-DE-17 accessories are installed



(4) To Install Monitor For Wired Use

EXPLORER PREMIUM supports wired use by connecting the monitor to the camera handle





(5) To Install Extension Tube

To connect the extension tube, first align the keyed end with the slot in the handle. Use slight force to push them together. Once properly aligned, twist the treaded knob clockwise until the connection is securely in place. Repeat this process to connect the other end of extension tube to flexible camera tube.

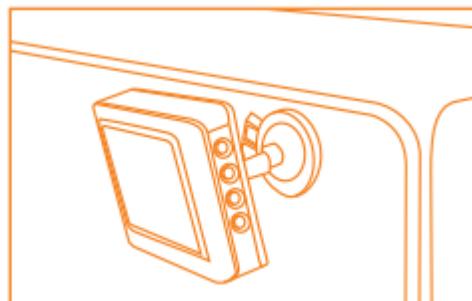
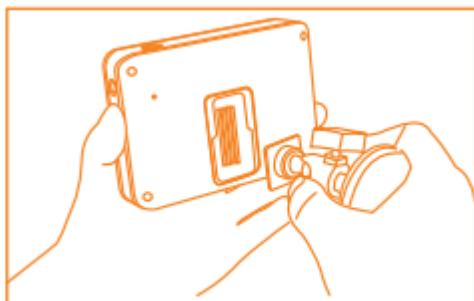
Note:

- ◆ Only XR-DE-17 may be mounted to the extension pipe, and the rest can be directly 5 meters with a camera tube.



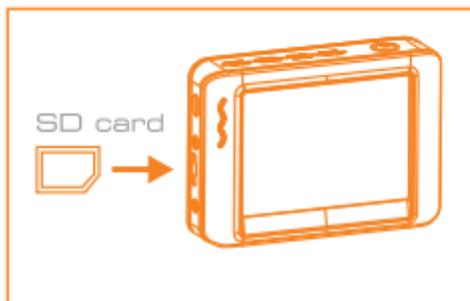
(6) To Install Monitor Mounting Bracket

Attach the magnetic mounting bracket to the monitor using the same method used to attach the monitor to the camera handle.



(7) To Insert SD Card

After SD card is inserted into SD card slot successfully, an SD card  icon will appear on the monitor screen; otherwise, the "no SD card"  icon will show.



(8) To Connect USB Cable

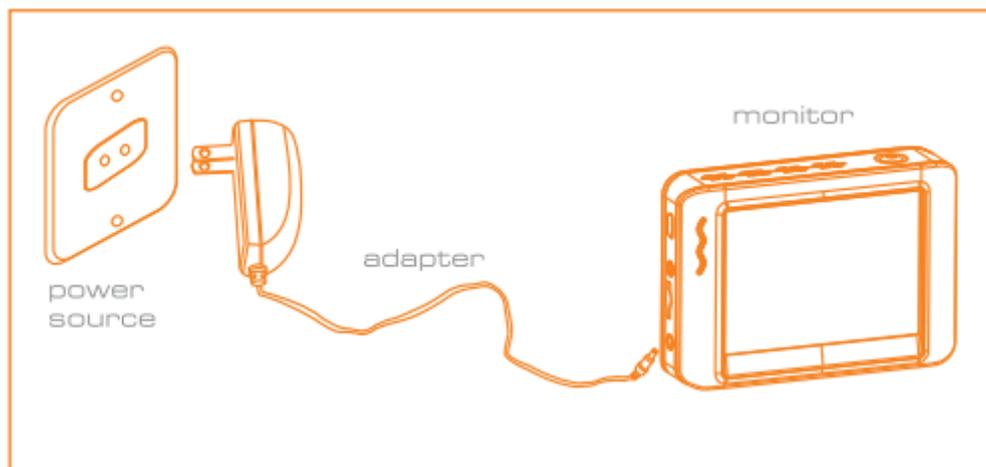
Use the provided USB cable to connect the monitor to any PC with a USB slot. Your computer should automatically recognize the new hardware, which you may browse by double-clicking on the My Computer icon on your desktop, and then navigating into the Mobile Disk directory



3、 Use

(1) To Connect Monitor Power

Connect the monitor to an appropriate (100-240V, 50/60Hz) power source with the provided adapter. The power indicator LED illuminates red and the battery capacity icon on the LCD will flicker, indicating that the battery is charging. When the red indicator light disappears, the battery has been fully charged.



Video Output

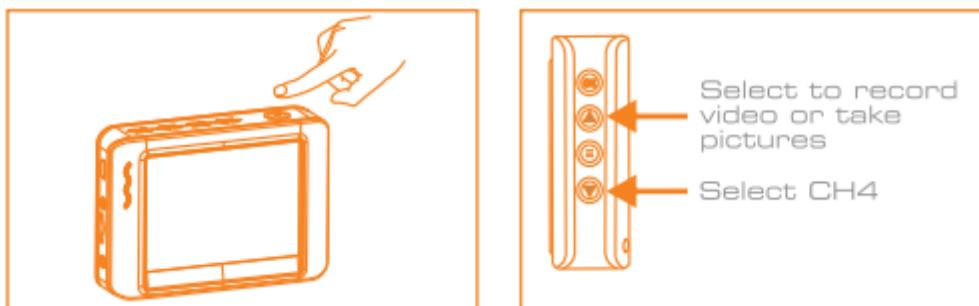
Insert video cable into the video out socket of the monitor, insert the other end of the cable into the video in jack of any compatible TV or display device. The LCD monitor is now capable of outputting high quality video to another display.

Operation

Basic Operation

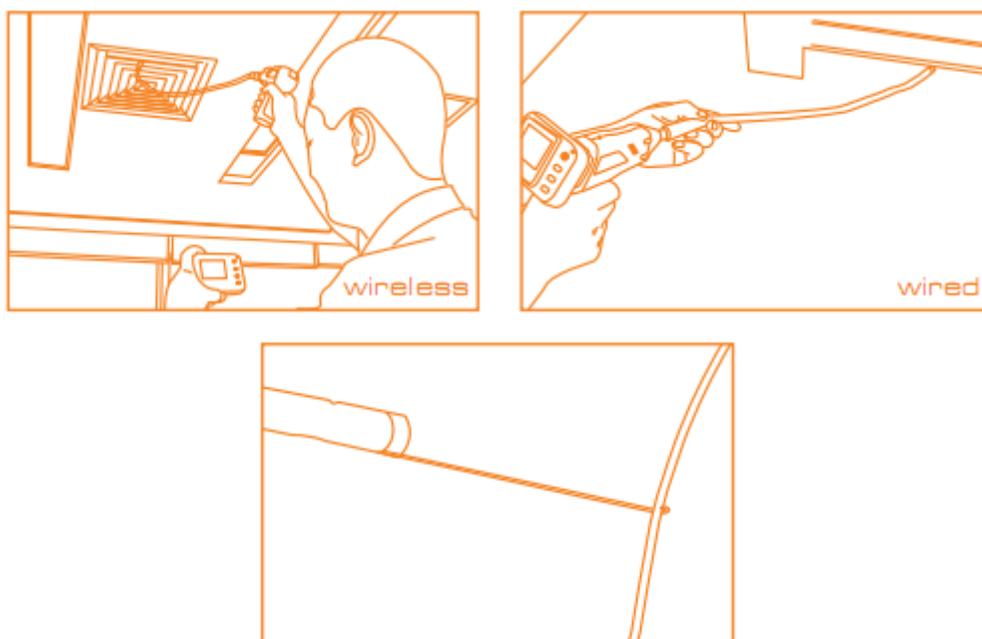
- ① As you roll the power switch to turn on the camera, the power indicator on the camera handle will light. The rolling switch then acts as a dimmer for the twin LEDs that surround the camera on the end of the flexible tube.
- ② Press and hold the power switch for 2 seconds on the monitor until the power indicator illuminates green. Then press the  button to select CH4 (channel 4), or until the picture from the lens is displayed on the monitor. To toggle between video recording and picture taking functions, press the  button on the side of the monitor.
- ③ When in use, the tube should easily maneuver itself into position. Do not apply excessive force.





TIP

- ◆ The flexible tube can be bent into numerous shapes that may help you explore areas you otherwise thought were impossible to see.
- ◆ The accessories included with EXPLORER PREMIUM can be used to retrieve small items like dropped rings or screws.



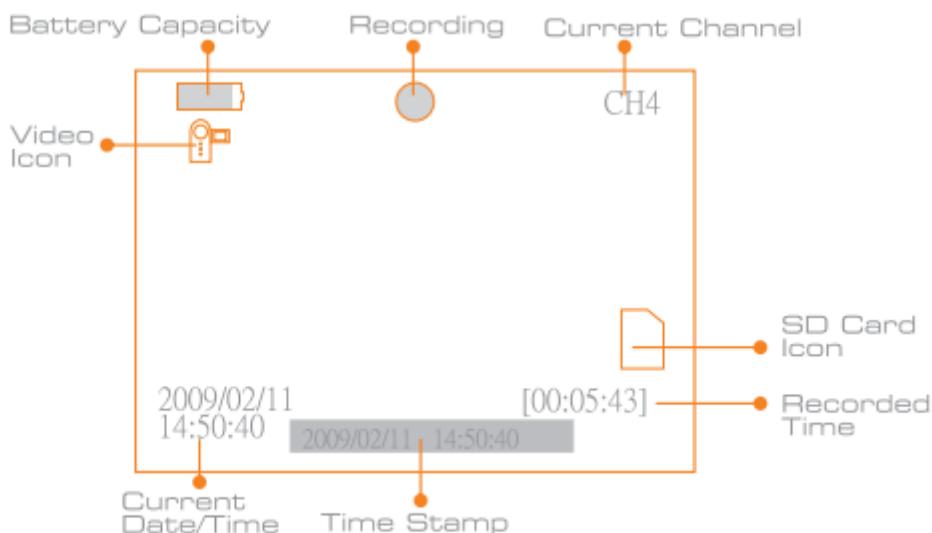
Recording Video

In real-time monitoring made, press the  button to toggle to video recording made.

- ① Press the 'OK' button to begin recording;
- ② Press again to stop recording.

Notice

- ◆ The video will be automatically saved as an individual file every 30 minutes.
- ◆ The  icon indicates that the SD card memory is full.



Taking photos

- ① In real-time monitoring mode, press the button to toggle to photo capturing mode.
- ② Press the 'OK' button to take a photo.

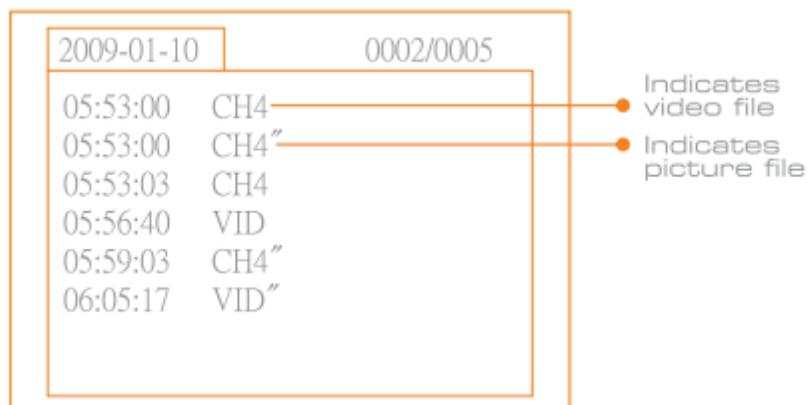
Notice

- ◆ The icon indicates that the SD card memory is full.



Playback Video/Picture

- ① In real-time monitoring mode, press the button to toggle to the video/picture folder.
- ② Press the or button to select your desired folder, and then press 'OK' to toggle to the right interface;



Notice

- ◆ A double quotation marks (") next to a file name indicates that the file is a picture. No double

quotation marks next to a file indicates that the file is a video.

1) for playback video:

Press the ▲ or ▼ button to select your desired video, and then press 'OK' to playback.

Pause: press the 'OK' button once to pause, press again to resume play;

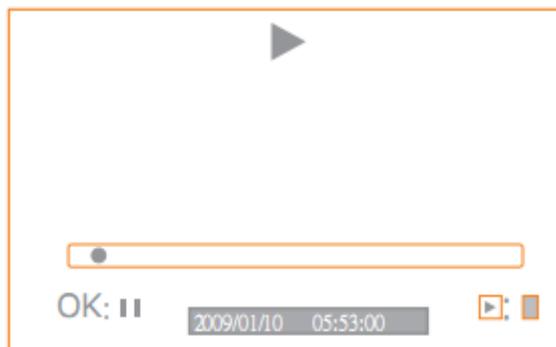
Fast Forward: press the ▲ button;

Rewind: press the ▼ button;

Stop/Exit: press the ≡ button;

2) For view pictures:

Press the ▲ or ▼ button to select your desired video, press 'OK' button to view and press again to exit.



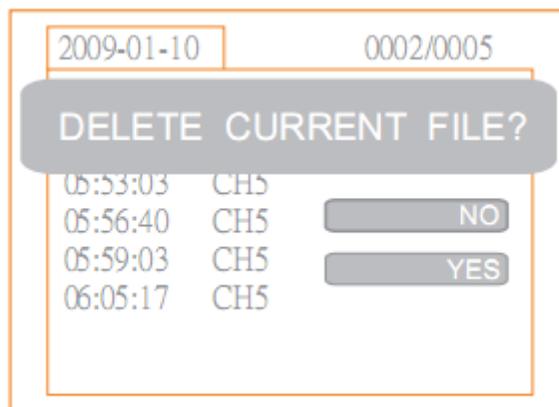
(6)Deleting Video/Picture

① In real-time monitoring mode, press the ≡ button to toggle to the video/picture folder.

② Press the ▲ or ▼ button to select your desired folder, and then press 'OK' button.

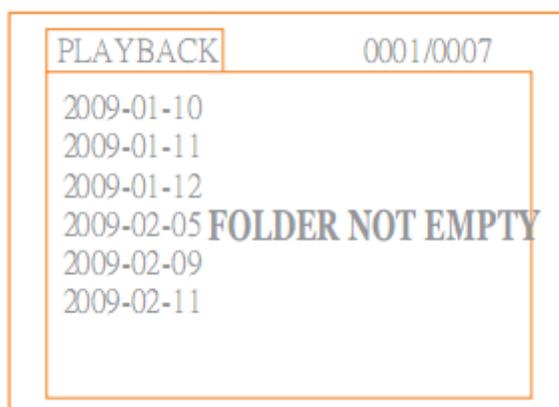
③ Press the ▲ or ▼ button to select your desired file, and then press and hold the ≡ button for 2 seconds, or until the right interface appears;

④ Press the ▲ or ▼ button to toggle between YES and NO, that is, to delete or cancel. Once you have highlighted your desired selection, press the 'OK' button.



(7)Deleting Folder

Deleting a folder in the same way as deleting a single file,however,make sure that the folder is empty first,otherwise the following error message will appear:



How To Enter The Setting Mode

In real-time monitoring mode,press and hold the  button for 1-2 seconds,or until the right interface appears;

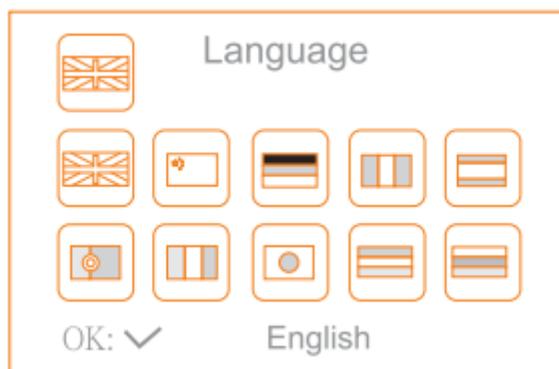


(8)Language Setting

①In the setting mode,press the  or  button to select “SYSTEM SETTING”,and then

press 'OK' button.

- ② Press the ▲ or ▼ button to select "Language", and then press 'OK' button, the following interface will appear;
- ③ Press the ▲ or ▼ button to select your desired language.
- ④ Press 'OK' button to confirm and exit.



(9) Video System Setting

- ① In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING", and then press 'OK' button.
- ② Press the ▲ or ▼ button to select "Video System", and then press 'OK' button.
- ③ Press the ▲ or ▼ button to toggle between NTSC and PAL. Once your desired system is selected, press "OK" button to confirm and exit.

(10) Formating

- ① In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING", and then press 'OK' button.
- ② Press the ▲ or ▼ button to select "Format", and then press 'OK' button.
- ③ Press the ▲ or ▼ button to toggle between YES and NO, that is, to format or cancel. Once you have highlighted your desired selection, press the 'OK' button.

(11) Default Setup

- ① In the setting mode, press the ▲ or ▼ button to select "SYSTEM SETTING", and then press 'OK' button.
- ② Press the ▲ or ▼ button to select "Default Setup", and then press 'OK' button.

③ Press the  or  button to toggle between YES and NO, that is to restore default or cancel. Once you have highlighted your desired selection, press the 'OK' button.

⑫ View Version Information

① In the setting mode, press the  or  button to select "SYSTEM SETTING", and then press 'OK' button.

② Press the  or  button to select "Version", and then press 'OK' button. You will now be able to view the version details of your product.

Frame Rate Setting

① In the setting mode, press the  or  button to select "RECORDER SETTING", and then press 'OK' button.

② Press the  or  button to select "Frame Rate", and then press 'OK' button.

③ Press the  or  button to toggle between different frame rates. Once your desired rate is selected, press 'OK' button to confirm and exit.

Time Stamp Setting

① In the setting mode, press the  or  button to select "RECORDER SETTING", and then press 'OK' button.

② Press the  or  button to select "Time Stamp", and then press 'OK' button.

③ Press the  or  button to toggle between on and off. Once your desired selection is made, press 'OK' button to confirm and exit.

Recording Type

① In the setting mode, press the  or  button to select "RECORDER SETTING", and then press 'OK' button.

② Press the  or  button to select "Recording Type", and then press 'OK' button.

③ Press the  or  button to toggle between "still" and "video". Once your desired selection is made, press 'OK' button to confirm and exit.

Date/Time Setting

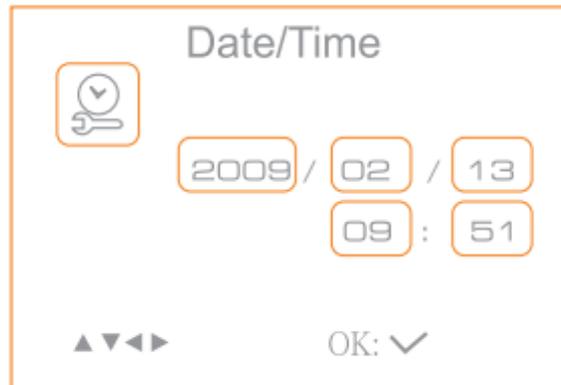
① In the setting mode, press the  or  button to select "Date/Time", and then press

'OK'.The interface will appear.

②Press 'OK' button to select Date or Time.

Press the ▲ or ▼ button to adjust selection.

Press the ☰ button to confirm and exit.



(17)Event Playback

①In the setting mode,press the ▲ or ▼ button to select "EVENT PLAYBACK",and then press 'OK' button.

②Refer to user manual instructions on Playback of Video/Picture,Deleting Video/Picture,and Deleting Folder for guidance.

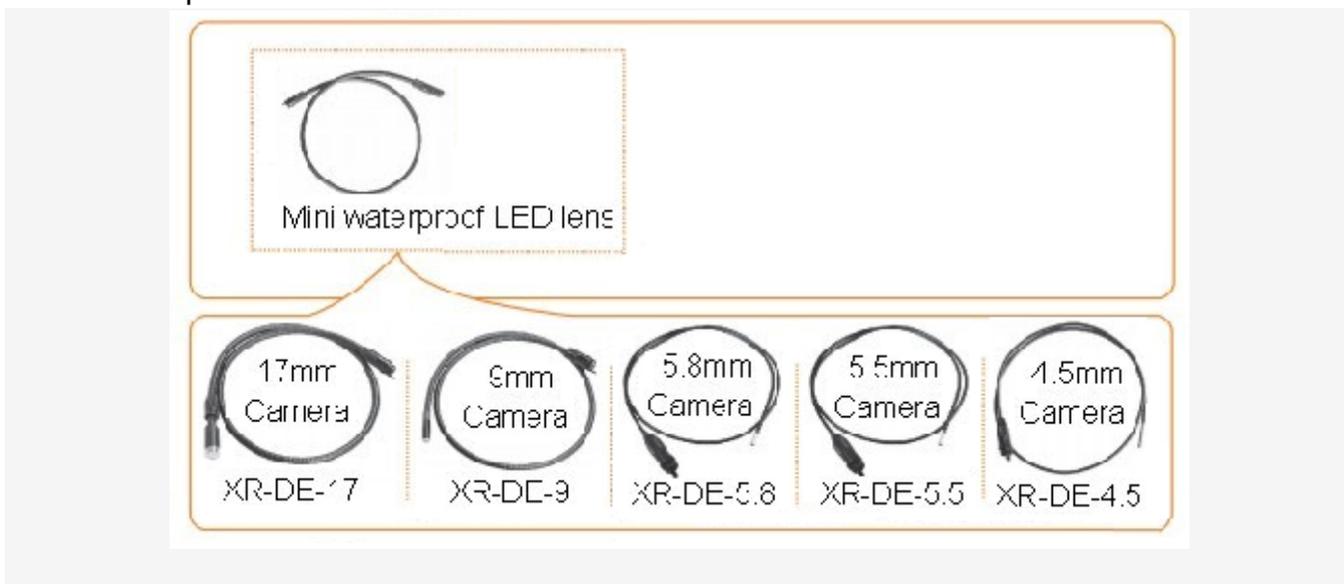
4. Packing List

- (1)Handle X 1 ;
- (2)LCD Monitor X 1 ;
- (3)USB cable X 1 ;
- (4)Power Adapter X 1 ;
- (5)Video cable X 1 ;
- (6)CD X 1 ;
- (7)Mini waterproof LED lens X 1 ;
- (8)Micro SD Card X 1 (4GB);
- (9)Hook X 1 ;
- (10)Magnet X 1 ;
- (11)Mirror X 1 ;
- (12)Plastic Ring X 1 ;
- (13)Magnetic Bracket X 1 (可选项);



Notice

◆ Mini waterproof LED lens:



5. Applications

- ◆ Vehicle maintenance and production industry
- Precision casting and machinery manufacturing
- Aerospace industry
- Petroleum, chemical, pressure vessel industry
- Defense and military security, security
- Railway construction, shipbuilding, research units

四、 Technical parameters

Items		Specifications				
Model No.		XR-DE-17	XR-DE-9	XR-DE-5.8	XR-DE-5.5	XR-DE-4.5
Brand		Chip Rui				
Camera	Imaging Sensor	CMOS				
	Total Pixels	704x576(PAL) 712x486(NTSC)	640x480(PAL) 640x480(NTSC)	648x488	720x525(NTSC) 720X625(PAL)	320x240
	Horizontal Viewing Angle	50°	36°	35°	48°	63°
	Transmission Frequency	2468MHz				
	Minimum Illumination	0Lux				
	Modulation Tpe	FM				
	Bandwidth	18MHz				
	Power Supply	4XAA batteries				
	Unobstructed Effective Range	10m (max.)				
	Waterproof Capacity	IP67 (for lens/tube only)				
	Tube Diameter	17mm	9mm	5.8mm	5.5mm	4.5mm
	Dimensions (WxDxH)	186x145x41(mm) (Excluding Flexible Tuube)				
	Approx.Weight	474g	408g	289g	303g	231g
Monitor	LCD Screen Type	3.5" TFT-LCD				
	Effective Pixels	960x240				
	Video System	PAL/NASC				
	Transmission Frequency	2414MHz, 2432MHz, 2450MHz, 2468MHz				
	Exterior Supply Voltage	5VDC				
	Consumption Current(Max.)	700mA				
	Charging Time	3 hours				
	Working Time	2 hours				
	Picture/Video Pixels	640x480				
	Video Size	27M byte/minute				
	Frame Rate	30 frame/second				
Video Output	0.9-1.3VP-P@75ohm					

Level	
Receiving Sensitivity	≤-85dBm
Dimensions(WxDx H)	100x70x25(mm)
Approx.Weight	140g
Operating Temperature	-10℃~50℃/14°F~122°F
Operating Humidity(Max)	15~85%RH

五、FCC Information

This device complies with part 15 of the FCC Rules.Operation is subject to the following two conditions:

- (1)This device may not cause harmful interference;
- (2)This device must accept any interference received,including interference that may cause undesired operation.Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

六、After-Sales Service

1. New device quality assurance

New device, all sold to the user within one year from the date shipped out to customers. Because of design, materials and workmanship defects caused by the failure of free and quality assurance.Have been determined to meet the above warranty conditions, the company will repair and replacement.

2. Device Warranty Limitations

The following devices are not free warranty range:

- ◆Damage caused due to improper use, storage
- ◆Beyond the product under the normal operation
- ◆Agency or person authorized by non-local companies and non-self-repair device
- ◆Beyond the free warranty period of the device

Warnings

- ◆ This product shall not be exposed to water either by dripping, splashing, immersing, etc., unless otherwise indicated.
- ◆ Turn off the system if it is not in use.
- ◆ If you do not use for a long time, remove the batteries.
- ◆ Replace the battery, insert the 4 batteries replaced at the same time is not recommended to replace only one or two.
- ◆ Can only use the same specifications as the battery (if the voltage is too high: the burned XR-DE).
- ◆ Install battery, properly installed according to the polarity of the battery box diagram (Such as positive and negative reversed: XR-DE is not working properly, resulting in the burning of the XR-DE).
- ◆ Do not cut the DC power cable of provided with this product to fit with another power source.

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