

Company Profile

The brand Ralcam belongs to Shenzhen Ralcam Co, Ltd. We are established in 2010 and based in Shenzhen. Ralcam is a professional high-tech manufacturer and exporter that is concerned with the design, development and production of high resolution and small diameter industrial endoscope. More than 30 of our models are FCCCE ROHS certified to be compliant with GS regulations. They have a 26-person R&D team, with well-equipped testing facilities, strong technical force and excellent quality control. ralcam borescope is committed to providing the best inspection tool for our customer to make our customer no worry about the problem of blind angle anymore. At present the our research and development directions are small diameter industrial endoscope, HD endoscope, wireless endoscope, semi-rigid endoscope and wide-angle HD endoscope. Our mission: Let visual products enter thousands of households and enhance family happiness and security. Take you to explore all the unknown!



VSCM6



<http://www.ralcam.com/>

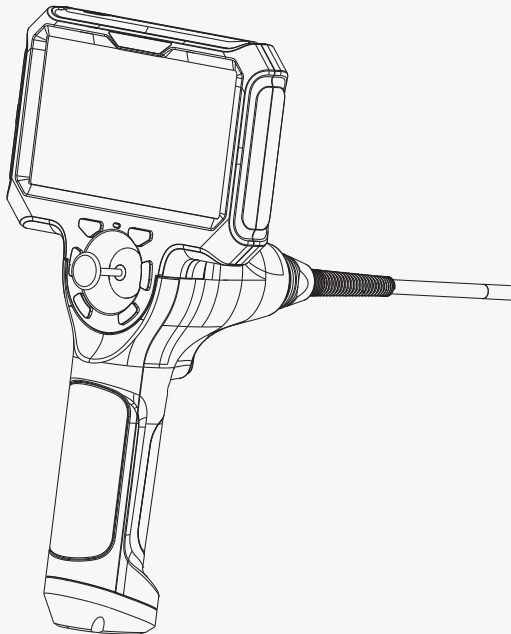
Information about the device

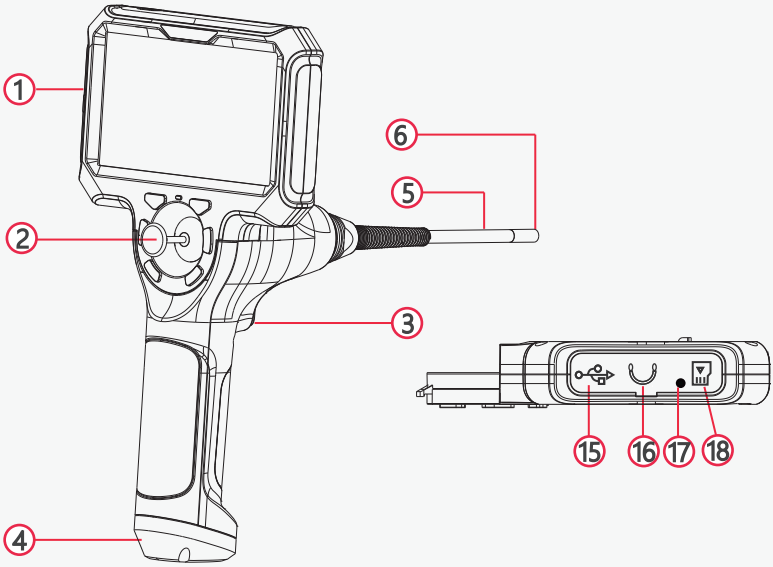
Device description

The device M6-series serves for inspecting concealed machine components and poorly accessible or inaccessible hollows.

A high-resolution camera and a moveable camera head with an adjustable, bright LED illumination are available for the display and capturing/recording of images and videos.

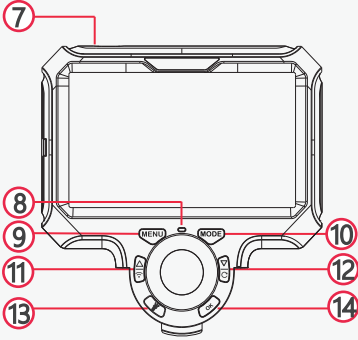
The device's functions can be controlled via an integrated operator software. The recordings can be stored on an TF card and transmitted via a USB interface.



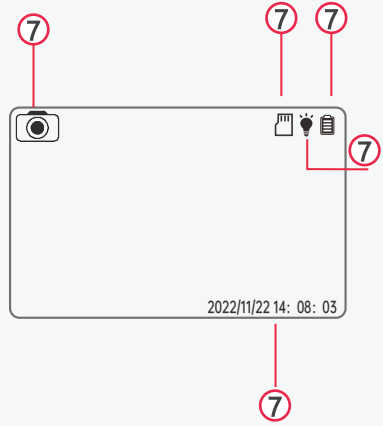


Company Profile

Control panel



Display

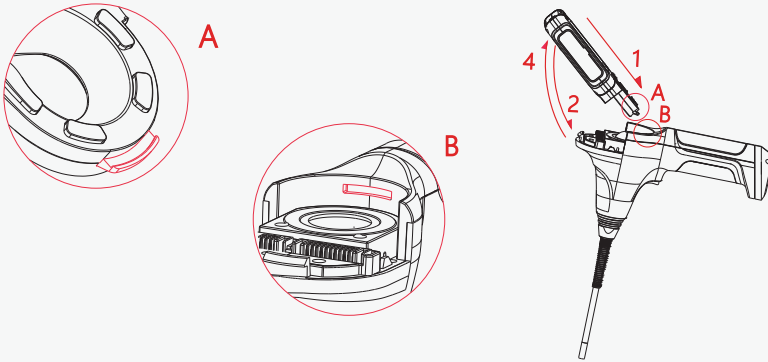


Specification Parameters

	Model	M604	M606
System	LCD display	5.0" IPS (1280*720)	
	MENU language	Chinese Simplified, Chinese Traditional, Japanese, English, Korean, French, Russian, Spanish, German	
	Snap resolution	JPG: 640*480/1280*720/1920*1080	
	Video recording resolution	MOV: 640*480/1280*720/1920*1080	
	Basic function	Taking photos, videos recording, playback, WiFi, etc	
	Image rotation	Support	
	Camera temperature	Support	
	Memory	Slot for removable TF card(max 32GB)	
	Output	TV out / WiFi	
probe	Steering Radius	36mm	
	Steering life	10000 time	
	Steering angle	Up/ down/ left/ right = 180°	
	Snake Tube Material	Tungsten woven mesh pipe	
	Snake Tube Length	1M / 2M / 3M / Customizable	
Camera	Camera Lens Diameter	φ3.9*15mm	φ6.0*12mm
	Fps	15—25FPS	
	Sensor	1/9"COMS, 1280(h)×720(v), 1.4μm×1.4μm	
	EFL	1.8±5%	
	FOV	120°	
	DOF	8 ~ 80mm	20mm - Infinity
	Struc	4P+1IR	4P+1IR
	Adjuster LED light	4 Level , 5 PCS LED	4 Level , 6 PCS LED
	AWB	ON	
	AGC	ON	
	Camera head IP Grade	IP67	
Power	Battery life	3.7V/5200mAh; About 5hours	
	Charging voltage	DC5V*2A	
Operating environment	Temperature	-10 — 50C°	
	relative humidity	less than 90%	
Package	Box Size	43.5*3*9CM , 2.1KG	
	Carton Size	10PCS/Carton , 47.5*46*44.5CM , 22KG	
	Certificates	CE / FCC	

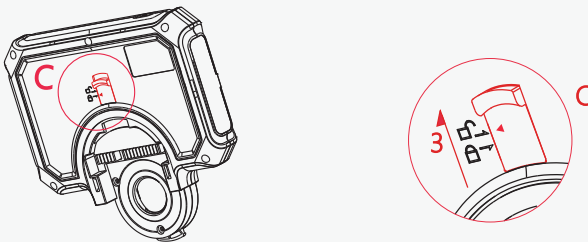
It Only Takes 2 Steps to Start!

- 1, Insert the host clip into the handle slot as shown in the figure below.
- 2, Press the host gently in the direction of the arrow




Disassembly the Boescope

- 1, Pull the red buckle behind the host to the unlocked position.
- 2, Take out the host in the direction of arrow 4.

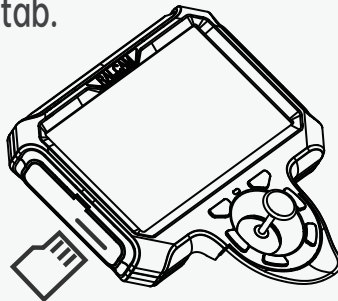


Switching on and off

1. Press the Power button for 3 seconds. The display is switched on. The device is ready for operation.
2. Press the Power button for 3 seconds. The device switches off.
3. After power on, the LED light is the brightest by default setting, press the button  to adjust the brightness.

Inserting the SD card

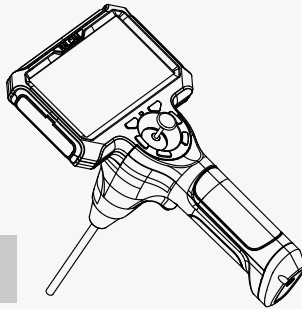
1. Open the rubber tab on the left side of the device
2. Insert the SD card in the SD card slot (11).
3. Slightly press down the SD card until it engage.
4. Close the rubber tab.



charge:

Without including a charger when ship out, please use 5V charger to charge it.

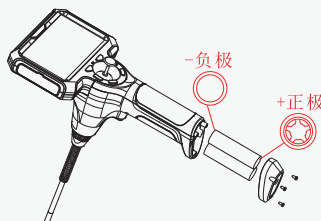
Note: Only use the power adapter with identical specifications ! The device will most likely be burned out once use the substandard power adapter.



Inserting the batteries

1. Remove the cover (24) from the battery compartment by sliding it in the direction of the arrow. The cover is firmly attached to the battery compartment.
2. Take out the battery holder Remove any used batteries.

Note: Please make sure to replace the battery when the device is dry and switched off.



Replace the Probe

1. Unscrew the handle screw cover and take off the cover, take out the probe.
2. Insert another probe, After fixed, close the battery cover and screw on the screws.



Aligning / moving the camera

Info

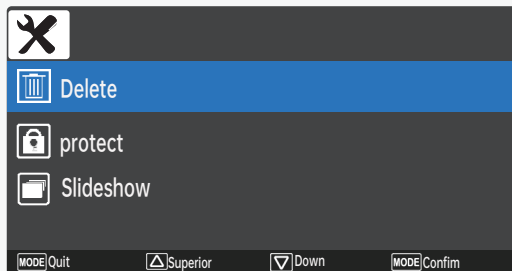
Please note that the surface of the netting at the probe exterior may fray over time depending on the mechanical stress (e . g . When in contact with sharp-edged objects) . This does not constitute a defect of the device but normal wear and tear , which cannot be avoided.

1. Use the joystick to move the camera in the desired direction.

2. Switching on
3. Press the Photo / OK button ,The picture is taken.
4. Press the Photo / OK button for 2 seconds,The recording is started. Press the Photo / OK button again, The recording is stopped.

Viewing and Deleting recordings

1. Press the MODE button
The Borescope switches to picture view.
2. Press the Up / Down button
The different recordings will be displayed on the screen.
Press the Photo / OK button to play a video .
3. Press the MENU button to Delete/Protect a recording.



Software

Resolution(The resolution of recordings)

1. Press the  button .

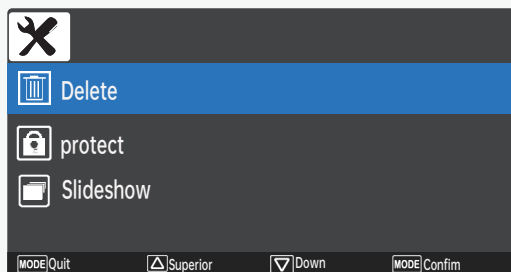
The selection menu will be displayed.

2. Select the menu item **Resolution** by use of the **Up / Down** button.

3 . Confirm the selection by pressing the OK/PHOTO button
The sub-menu will be displayed.

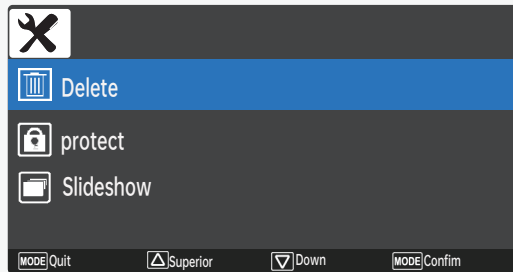
4、Use the UP/DOWN button to select the desired resolution
Press **FHD 1080P** to set 1080P resolution.
Press **HD 1280*720** to set 720P resolution.
Press **VGA 640*480** to set a normal resolution.

5、Confirm the selection by pressing the Photo/OK button .
The Resolution will be set and the selection menu will
be displayed.



Time stamp

1. Press the MENU button
The selection menu will be displayed.
2. Select the menu item **Time stamp** by use of the **Up / Down** button.
3. Confirm the selection by pressing the OK/PHOTO button
The sub-menu will be displayed.
4. Use the UP/DOWN button to select the desired selection.
5. Confirm the selection by pressing the Photo/OK button (7)
The time stamp will be set and the selection menu will be displayed.

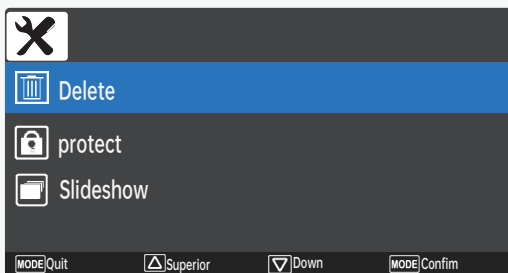


Date/time

Method 1:

The Borescope will automatically calibrate the time when connect to Phone via Wi-Fi.

1. Press the MENU button
The selection menu will be displayed.
2. Select the menu item **Date / Time** by use of the **UP /DOWN** button.
The sub-menu Set Date / Time will be displayed
The date is indicated in year / month / day format.
4. Use the **Up / Down** button to select the desired Date/Time.
5. Press the **OK/PHOTO** button, the settings will be saved.
Press the **MENU** button to quit and the selection menu be displayed.



Language settings

1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item **Language** by use of the **Up / Down** button.
3. Confirm the selection by pressing the **OK/PHOTO** button.
The sub-menu will be displayed.
4. Use the **Up / Down** button to select the desired language.
5. Confirm the selection by pressing the **OK/PHOTO** button
The desired language will be set and the selection menu be displayed.

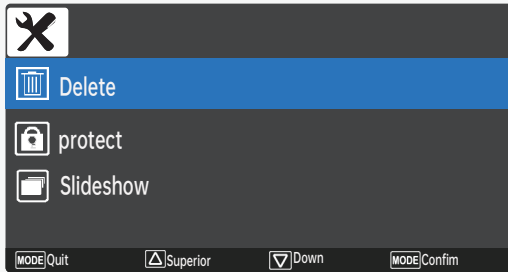
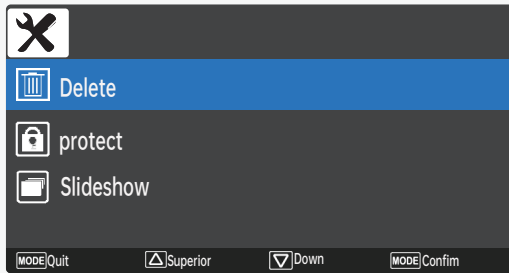


Image effects

1. Press the **MENU** button
The selection menu will be displayed.

1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item **Image effects** by use of the UP /DOWN button.
3. Confirm the selection by pressing the **OK/PHOTO** button
The sub-menu will be displayed.
4. Use the **Up / Down** button to select the desired Image effects.
5. Press the **OK/PHOTO** button
The Image effects will be saved and the selection menu, be displayed.

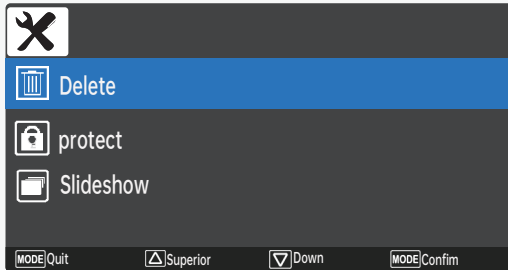


Ruler (Guides line on screen)

1. Press the **MENU** button
The selection menu will be displayed.

2. Select the menu item **Ruler** by use of the **UP /DOWN** button.
3. Confirm the selection by pressing the OK/PHOTO button
The sub-menu will be displayed.
5. Press the OK/PHOTO button.

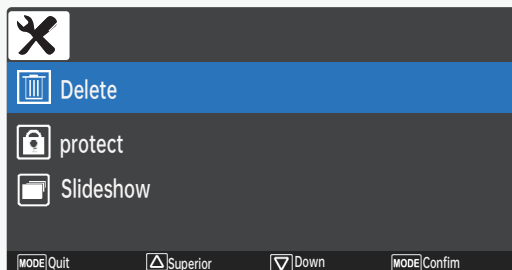
The Ruler will be saved and the selection menu be displayed



Automatic shut-down

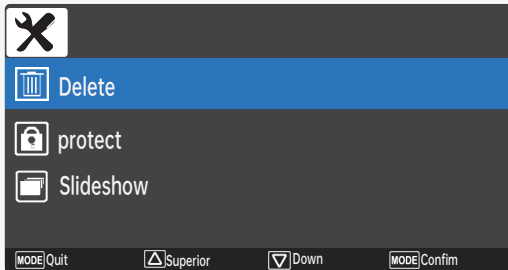
1. Press the MENU button
The selection menu will be displayed.
2. Select the menu item Automatic shut-down by use of the UP /DOWN button.
3. Confirm the selection by pressing the OK/PHOTO button
The sub-menu will be displayed.
4. Use the Up / Down button to select the desired one.

5. Press the **OK/PHOTO** button.
The Automatic shut-down will be saved and the selection menu be displayed.



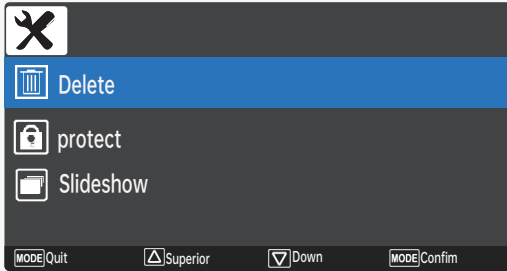
Projection mode

1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item **Projection mode** by use of the **UP /DOWN** button.
3. Confirm the selection by pressing the **OK/PHOTO** button
The sub-menu will be displayed.
4. Use the **UP / DOWN** button to select the desired one.
5. Press the **OK/PHOTO** button
The Projection mode will be saved and the selection menu be displayed.



1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item Recording by use of the **UP /DOWN** button.
3. Confirm the selection by pressing the **OK/PHOTO** button The sub-menu will be displayed.
4. Use the Up / Down button to select the desired one.
5. Press the **/PHOTO** button
The Recording will be saved and the selection menu be displayed.

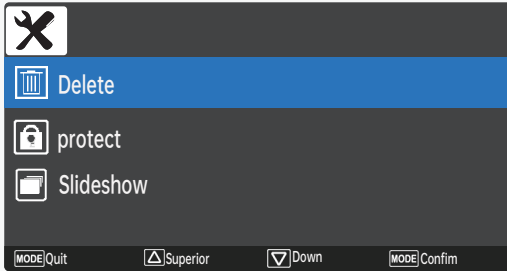
Note: Built-in microphone



Temperature system

1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item **Temperature system** by use of the Up /Down button.
3. Confirm the selection by pressing the **OK/PHOTO** button
The sub-menu will be displayed.
4. Use the Up / Down button to select the desired one.
5. Press the **OK/PHOTO** button
The Temperature system will be saved and the selection menu be displayed.

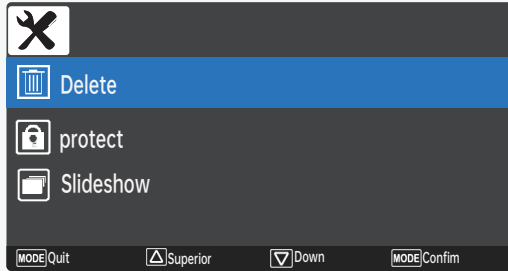
Note: Temperature of camera head.



High temperature abnormal record

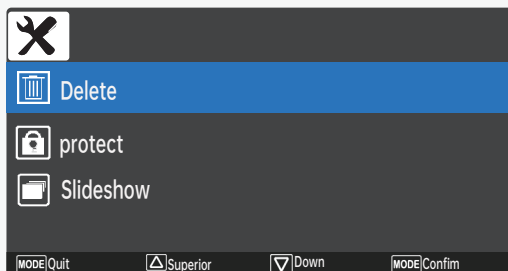
1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item **High temperature abnormal record** by use of the **UP /DOWN** button.
3. Check the recording of the High temperature abnormal record.
Note: High temperature alarms are recorded whenever it occur.

Note: The camera will shut down when it exceeds 90 ° C.



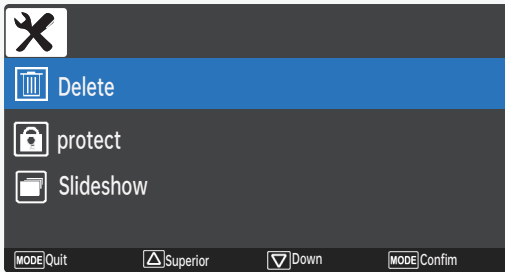
Format

- 1 . Press the **MENU** button
The selection menu will be displayed.
- 2 . Select the menu item **Format** by use of the **UP /DOWN** button.
3. Select the Cancel/ Confirm by use of the **UP /DOWN** button.
Confirm the selection by pressing the **OK/PHOTO** button



Default setting

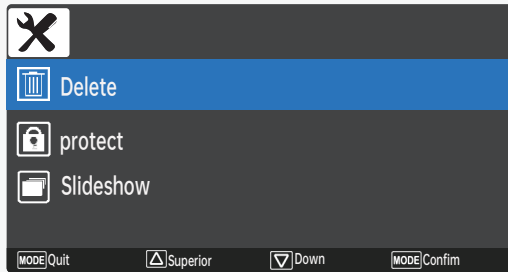
1. Press the **MENU** button
The selection menu will be displayed.
2. Select the menu item **Default setting** by use of the **UP /DOWN** button.
3. Select the Cancel/ Confirm by use of the **UP /DOWN** button.
Confirm the selection by pressing the **OK/PHOTO** button.



Wi-Fi switch (see below for more details)

1. Press the **MENU** button
The selection menu will be displayed.

2. Select the menu item **Wi-Fi switch** by use of the UP /DOWN button.
Confirm the selection by pressing the **OK/PHOTO** button
The Wi-Fi will be ON and Wi-Fi .



Version

1. Version information.

App

This app provides Live preview and view recording on TF card, download the recording to Phone (Live preview has same delay).



 **Android**

 **IOS(App store)**

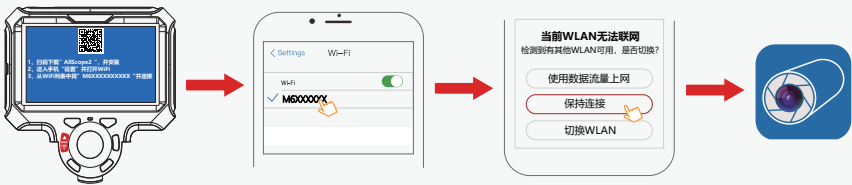
 **Android(Google Play)**



<http://www.ralcam.com/>

How can I connect my phone to Wi-Fi?

1. Press the Wi-Fi key for 3 seconds, and wait for Wi-Fi to turn on;
2. Go to mobile phone Settings - WLAN settings - find M6_XXXX's wifi signal, connected to Wi-Fi (has no password by default).
3. Open Allscope2 App to see live preview.
4. Please re-open the app if there is no image on phone.

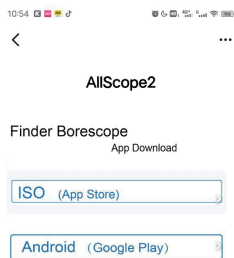


How to download the recording to phone?

1. After connecting to Wi-Fi, open the APP. The Media File show on the bottom of the homepage.
2. Select the recording file and select Download to phone, It will appear on "Album" after downloading.

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Why does the Live preview have some delay?
This is normal and does not affect the use.

Troubleshooting

Fault	Possible causes	Method
Unable to Power-on	1. Dead Battery 2. Incorrect Installation	1. Please recharge or replace the battery. 2. Please check the battery and battery compartment contact if it is dirt or deformation then reinstall the battery
Auto Power-off	Low Battery	Please recharge or replace the battery

Troubleshooting

Fault	Possible causes	Method
Boot screen stuck	<ol style="list-style-type: none"> 1. Failed to start the system 2. Low Battery. 	<ol style="list-style-type: none"> 1. Reassemble the battery and restart it, then charge it 2. Reinstall the host
Image cannot be recorded or found	SD card capacity is insufficient.	<ol style="list-style-type: none"> 1. Replace the SD card or delete unnecessary files. 2. Formatting the SD Card.
"SD card error" or "Format" when inserting	The position of the card is deviated	<ol style="list-style-type: none"> 1. Clean the SD card contact. 2. Reinstall the SD card.
Can't charge	<ol style="list-style-type: none"> 1. The charging interface is dirty. 2. Damaged charging cable. 	<ol style="list-style-type: none"> 1. Clean the charging interface and replug it. 2. Replace the charging cable or charger
Blurry Image	<ol style="list-style-type: none"> 1. The probe is dirty. 2. Probe is not within the range of the depth-of-field. 3. Damaged lens due to high temperature. 	<ol style="list-style-type: none"> 1. Clean the probe with the lint-free cloth within the package. 2. Please place the probe within the depth of field range of 20-100mm. 3. Do not place the probe in a high temperature environment (below 70°C).
The probe steering range is too small	Snake tube is distorted	Please place the snake tube straight

Application Environment

For professional maintenance personnel, this portable articulating car endoscope can be used to detect places where the human eye can't see without disassembling the machine or damaging the instrument. It can be applied to precision instrument testing, engine overhaul, auto repair, pipeline overhaul, building maintenance, air conditioning overhaul, and so on.

Operating Temperature	Snake Tube	-10°C—70°C
	Whole Machine	-10°C—50°C
Input Voltage	Whole Machine	DC5V
Humidity	Whole Machine	15%—90%
Waterproof Level	Whole Machine	No Operating Under the Water

Cautions

Please read this manual carefully before using this product, and follow the instructions to avoid the damage caused by improper use.

- * Please don' t use our snake tube camera with other manufacturers' endoscope parts without authorization, even if the interfaces are the same.
- * Please don' t use the product in areas where it may be exposed to wire or charged objects, as the exposed metal parts can be electrically conductive and may cause unexpected accidents.
- * Please don' t allow minors to operate this endoscope separately, and it' s forbidden to use this borescope for medical or human and animal testing.
- * Please keep the product clean, avoid exposure to the sun, or direct contact with water, oil and corrosive liquids.
- * NOTE: The whole endoscope is NOT WATERPROOF!
But IP67 Waterproof lens, please dry the lens water stains after use.
- * Please take it lightly, don' t over-tugging the tube, the maximum bending of the snake tube is one circle.

- * Please make sure that the Joystick is returned to the neutral position before pulling out the snake tube. It is strictly forbidden to turn the Joystick roughly.
- * Please use the original USB cable for charging.

Warranty Limitations

Join the Ralcam Family, Enjoy a No-Worry Warranty policy:

- * 30-day money-back guarantee for any reason.
- * For 30 days after the date of purchase, return your undamaged Ralcam product and receive a full refund for ANY reason.
- * 6-month warranty for quality-related issues. After checked the root cause is caused by defective manufacturing process or component damage via our professional maintenance engineer.
- * We take care of all quality-related issues with a REPLACEMENT.
- * Reminder: Be sure to use your product as directed.

Join the Ralcam Family, Enjoy a No-Worry Warranty policy:

- * Damage caused by improper storage.
- * Damage caused by the customer's own disassembling.
- * Damage caused by the customer's own modification.
- * Damage caused by other irresistible factors.