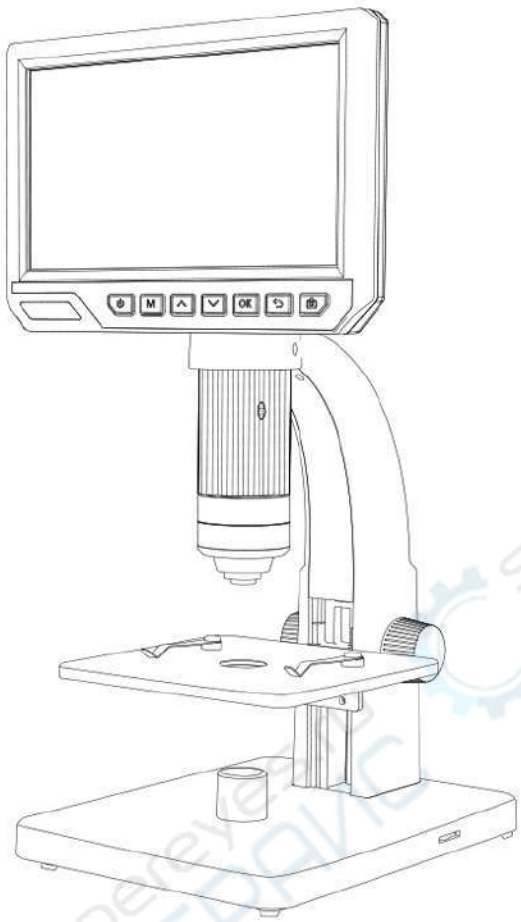
Digital microscope



User manual

EN

inskam-315

1 Preface

Thank you for choosing this equipment. The use of this product is more complicated. Please read this manual carefully to understand the operating method of the microscope before use.

2 Important notes

1. Please fully charge the device before using it for the first time. Please do not charge it directly through the PC. Please choose a 5V 1A adapter.

2. If you use a microscope to observe cells or microorganisms, the material to be observed with the microscope must be thin and transparent, so you need to make a self-made glass slide for observation.

3. The best focal length of the microscope is 0-60mm. You need to adjust the focal length through the focal length adjustment roller to achieve the clearest state.

4. This equipment cannot accurately read the magnification of the microscope. It is a microscope that combines digital and optical magnification. The specific magnification effect is subject to the actual picture taken.

5. When the battery is low, neither the memory mode nor the PC mode can be used normally. This situation is not a product breakdown.

6. Do not touch the lens and other optical parts with your hands, otherwise the image will be blurred and the image quality will be affected.

7. Do not disassemble the product or component structure yourself, so as to avoid abnormal use of the equipment.

8. If the exterior of the digital microscope needs to be cleaned, please wipe it with a soft dry cloth. Do not use organic solvents such as alcohol.

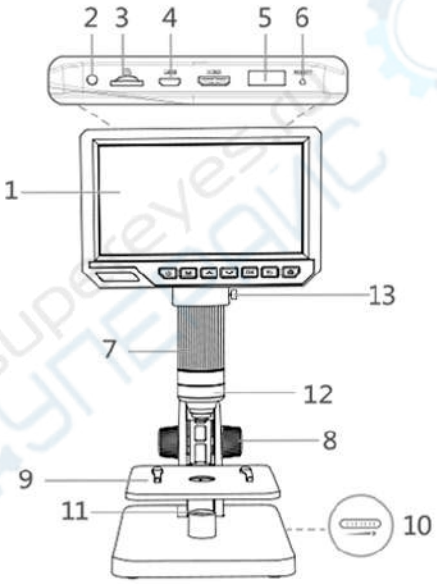
9. This equipment has no waterproof function, please do not use it outdoors, and avoid splashing water.

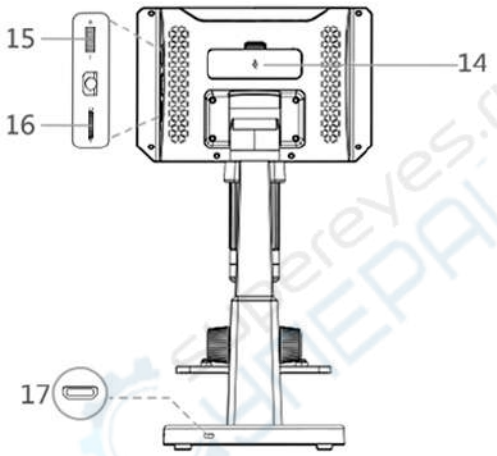
3 Product description

(一) Standard accessories

1. Digital microscope host
2. USB data cables
3. 2 biological slices
4. Cleaning cloth
5. Operation guide
6. Lens 1
7. Lens 2
8. Lifting bracket

(二) Interface name and function





1. 7 inch ips display
2. Charging indicator
3. Micro TF card interface
4. Micro USB socket
5. USB power output
6. Reset hole
7. Focus adjustment roller
8. Bracket adjustment knob
9. Object Stage
10. Bracket LED adjustment wheel
11. Bracket light source
12. Removable lens
13. Display fixing nut
14. 18650 battery slot
15. Image adjustment wheel
16. LED adjusting wheel
17. Bracket power interface

(三) Function introduction

1. Micro card slot: supports up to 64 GB Micro TF card (optional), including FAT and FAT32 file formats.
2. Micro socket: DC 5V/1A power supply or data transmission.
3. Power on/off key: long press to turn on or long press to turn off.

4. Menu key: Take photo, Record video mode: in this mode, short press the menu key to enter the standard function selection (viewfinder selection, image, video size selection, date label selection), short press again to enter the advanced menu mode : Screen brightness, automatic shutdown, language settings, date/time, USB mode, formatting, default settings, version query. Browse mode: It can be used as editing option function, delete function and file protection function.

5. Up key OR left key/color switch key: In the photo and video mode, you can switch different color display modes up and down at this time; menu mode or browse mode: you can switch up, down, left and right to see desired function.

6. Down key OR right key/color switch key: In the photo and video mode, you can switch different color display modes up and down; in menu mode or browse mode, you can switch the desired function up and down, left and right.

7. OK button/up and down key: in photo and video mode: short press to switch the up and down function, the bottom right R is the identifier; in other modes: confirm function.

8. Mode switching button/back button: the default mode is switching function when powering on, short press can switch between the three modes of taking photo, recording video, and browsing, and the default return function under other functions.

9. Photo/Video button: In photo mode, short press to take a photo; in video mode, short press to start recording, and short press again to stop recording, and it will be saved automatically.

10. LED adjusting wheel: up to enhance the light, down to weaken the light.

11. Image adjustment wheel: up to zoom in, down to zoom out.

12. Focal length adjustment roller: Rotate the left side to zoom in, and the right side to zoom out.

4 Quick guide for the main interface

Note: The default mode is photo mode when the machine is turned on, and the video mode, browsing mode, and photo mode can be sequentially switched by pressing the switch/back key.

(一) Color mode:

In the photo and video mode, press the left or right button to select the color options: standard, black and white, warm, inverted, cold, green, overexposed, the image will be updated in real time when the icon reaches the color mode, it will be hidden automatically 5 seconds later.

(二) Photo mode:

After the image is in focus, short press the photo/video button, it will reminder that the photo is taken successfully, and if there is no TF card, it will reminder"Please insert TF card".

(三) Video mode:

After the image is in focus, short press the photo/record button to start recording, the red dot will flash in the middle of the top of the screen, and start to record video. If there is no TF card, it will reminder "Please insert the TF card". Short press again and the video is automatically save (when there is a TF card).

（四） Browse mode:

After switching to the browse mode, you can use the menu key, the OK key and the left and right keys to view or delete files.

5 Use steps

1. Open the package and place the bracket on a stable surface (instability of the surface will cause the picture to shake).

2. ——Lens usage range: select and install an adaptable lens according to the object you are looking at.

   Industry: circuit board inspection, maintenance, precision machinery, printing inspection, welding inspection, textile inspection, IC surface inspection (recommended to use lens 1 and lens 2 together)

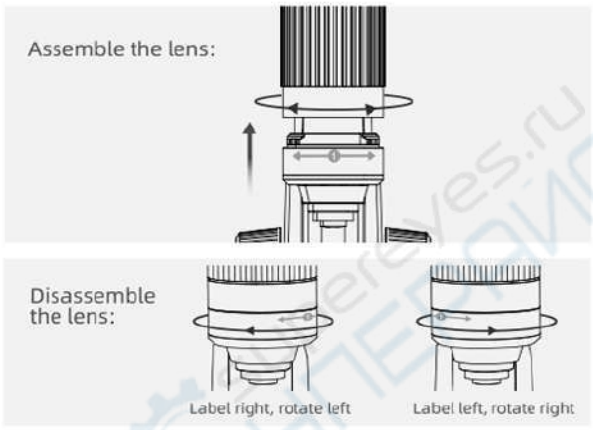
   Biology: microbial observation, section observation, plant pest observation (recommended to use lens 2)

   Others: Jade, calligraphy and painting, antiques, cultural relics, gems identification observation (recommended to use lens 1)

   —— Lens installation method: as shown in the figure below.

   When assembling the lens, make sure that the lens label direction is facing you, put it into the main unit vertically, and rotate it to the left or right for quick assembly.

   When removing the lens, confirm the direction of the lens label. When the label is to the left, rotate the lens to the right; when the label is to the right, rotate the lens to the left for quick removal.

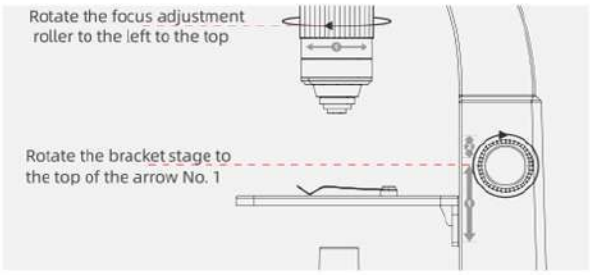


3. After assembling the lens, place the host into the positioning hole of the bracket, then adjust the angle of the display according to the actual situation, and tighten the display fixing nut clockwise.

4. Quick focus guide, as shown below:

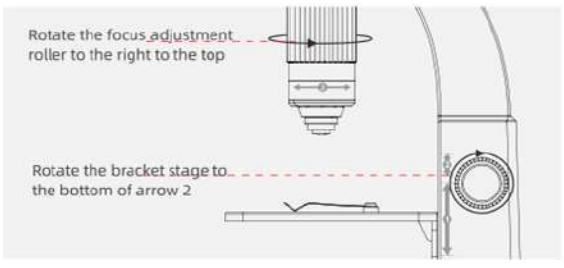
Quick focus of lens 1

(Top light source is recommended)



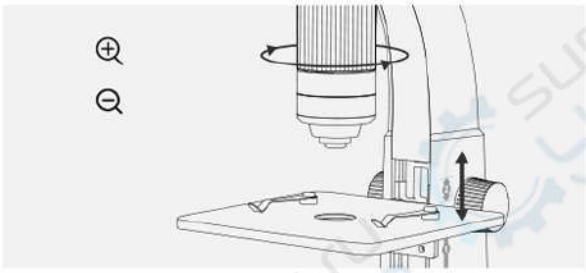
Quick focus of lens 2

(It is recommended to use bracket light source)

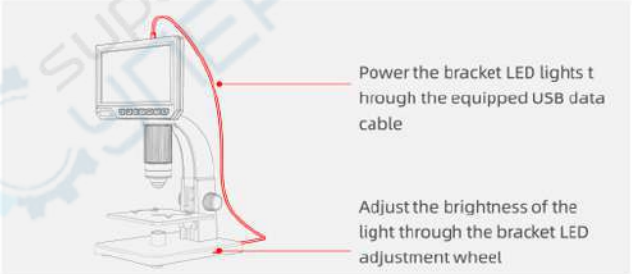


Note: When using the No. 1 lens to observe the object under test, the stage can only move up and down within the No. 1 adjustment range marked by the bracket. When observing the object under test with No. 2, the stage can only move up and down within the No. 2 adjustment range marked by the bracket, and no imaging is allowed beyond the corresponding range.

5. Through the fourth operation, we can determine the approximate object distance, and then adjust the actual multiple required according to the actual situation. The bracket adjustment corresponds to the host adjustment. If it is in a clear state, the bracket stage is adjusted downwards. , The corresponding focus adjustment drum needs to be rotated to the right, the multiple is reduced. When the bracket stage is adjusted upwards, the corresponding focal length adjustment roller needs to be rotated to the left, and the multiplier increases.



6. When observing transparent objects, such as glass slides, please use the bracket light source reasonably, the effect is better, the specific operation is shown in the figure below;



6 Mode introduction

This device has 3 modes function:

Memory mode: connect to the computer, read, write and format by TF card.

PC camera mode: Connect to a computer,use it through computer software. The large screen is more intuitive. Video mode: normal use mode of the device.

1、Memory mode:

Connect the microscope to the computer via the USB cable, turn on the device, select the memory mode, and then click the OK button to view the stored photos and videos on the computer. In the memory mode, long press the mode switch button/back button ,you can switch to normal use mode.

2、PC camera mode:

Note: when using PC mode.

1. Some function buttons will not be available, only the switch button, mode switch/return button, and LED adjustment wheel can be used.

2. The maximum resolution that can be set on the computer side is 1280*720.

3. In PC camera mode, the device and the computer will not display images at the same time, which is a normal phenomenon.

4. After connection, if there is no image in the software, please plug and unplug the USB data cable repeatedly or replace the data cable.

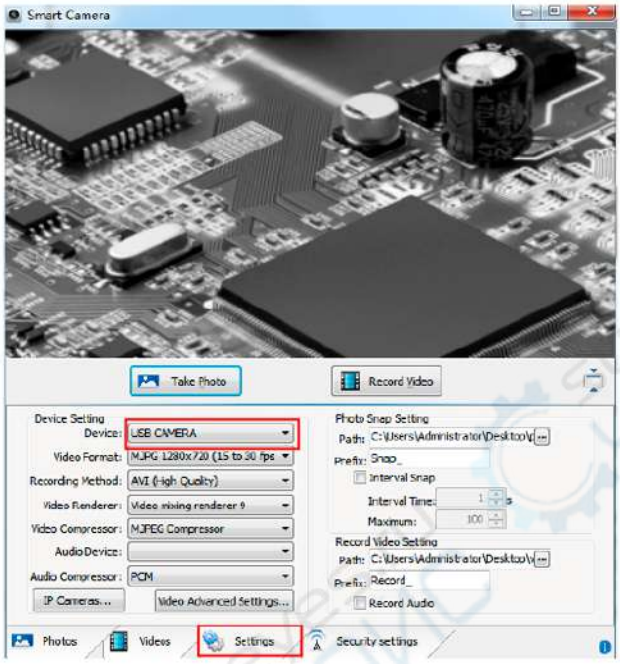
——Windows system:

——Windows system:

Download and install the software from the link below:

www.inskam.com/download/camera.zip

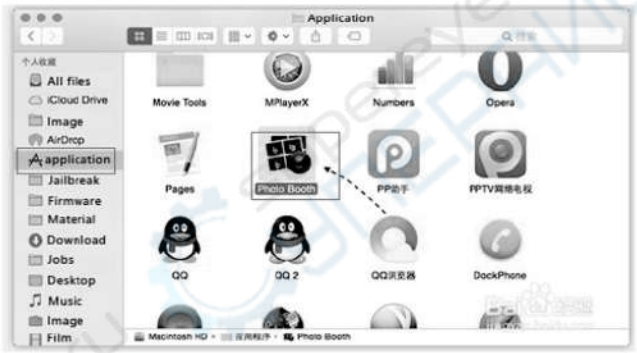
Insert the USB data cable into the computer USB 2.0 interface, connect and turn on the device,Select PC camera mode, open the software "Smart Camera", The specific parameter selection is shown in the figure below.



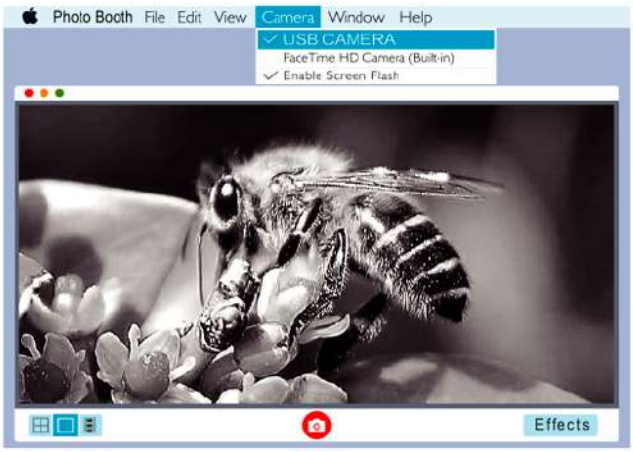
(Refer to the picture content for specific parameter settings)

——Mac system:

Find an application named Photo Booth in the "Applications" directory of the Finder window.



Insert the USB data cable into the USB 2.0 interface of the computer, connect and turn on the device, select the PC camera mode. Open the software "Photo Booth" and switch the camera to "USB CAMERA", as shown below.



7 Charging

1. Please use a 5V 1A power adapter to charge the device. When the battery is charging, the charging indicator on the top of the device will be red. After the battery is fully charged, the charging indicator will be off. The entire charging process takes about 3 hours.

2. After fully charged, you can use the microscope continuously for up to 2.5 hours (without external power supply).

3. When the battery power is low, there will be a low battery indicator on the upper right of the panel (as shown in the figure below), the LED light will become weak, and the image quality will deteriorate. Then, you must connect the power adapter to charge the device (Note: When the device is completely unpowered, you need to charge it with a 5V/1A charger for at least 1 hour before it can be used normally.

4. When the battery is low, neither the memory mode nor the PC camera mode can be used normally, and the battery must be charged more than 1/3 of the position before it can be used again.

8 Product specifications

Pixel	1200W pixels
Magnification	2000X
Display screen	7 inch IPS HD display
Working height	0-60mm
Focus mode	Manual focus
Knob focus range	2mm-55mm
Picture resolution	4032*3024P
Video resolution	1920*1080P
Data format	JPG/MOV
Light source	10 bright LED lights +1 super bright LED light (brightness adjustable)
Operating system	Windows XP ,Vista,Win7/8/10, Mac 10.5 or above
Power supply	18650 lithium battery 3.7V/2600mAh Working time: 2 hours; Charging time: 3.5 hours
Language	Simplified Chinesi/Traditional Chinese/ Japanese/English/Korean/French/ German/Spanish/Italian/Russian

7 Troubleshooting

Problem	Solution
Device cannot be turned on	1. Is the battery charged? 2. Is power connected 3. Is it charged for more than 1 hour when there is no electricity
Device crashes	1. Press the reset hole of the host with a fine needle to restart the device
Screen image has black edges	1. Is the lens fixed in the middle of the bracket 2. Whether the object being observed is placed upright
The image is not clear	1. Confirm whether the measured object is correctly positioned directly under the lens 2. Whether the focal length has been adjusted to the best position 3. Whether the light is used correctly
Smudges or blemishes on the screen	1. Clean the screen and lens carefully with a soft cloth 2. Whether there is dirt on the surface of the measured object 3. Whether the stage is dirty
Connect the microscope to the PC end, After successfully downloading and opening the software,no image	1. Reconnect the microscope and PC 2. Confirm whether to enter the PC mode correctly 3. Whether the battery has low power alarm 4. Is the data cable used correctly?
The microscope is connected to the PC, and the TF card cannot be read	1. Reconnect the microscope and PC 2. Confirm whether to enter the memory mode correctly 3. Whether the memory card is damaged
The battery indicator light does not light red when charging, flashing red light, does not light red light	1. Check whether the charging head is normal 2. Check whether the cable is normal 3. Check whether the battery is damaged 4. Check if the battery is properly assembled

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