

Intelligent Microscope M2

DDL-M2A/B Instruction Manual

Please read this instruction manual in detail! Please keep this instruction manual in a safe place!



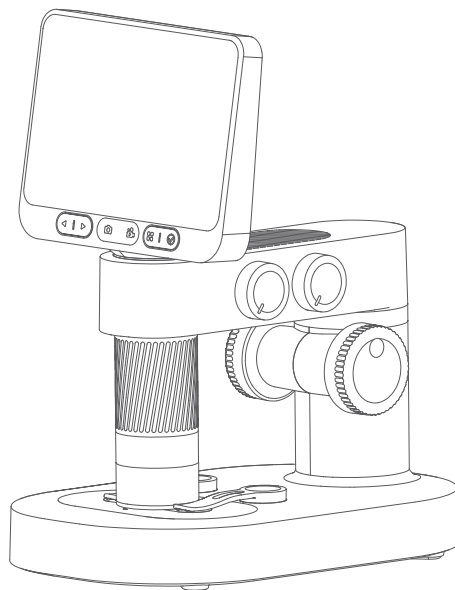
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1 Product Overview

Thank you for purchasing the Intelligent microscope M2, hereinafter referred to as the microscope.

Please read this manual carefully before use and keep it in a safe place. Please do not use the microscope without understanding how to use it.

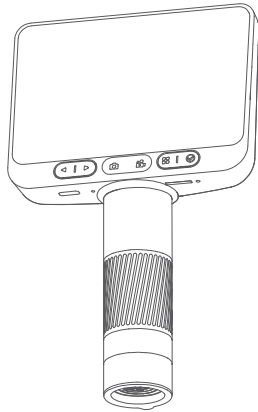


2 Notice In Application

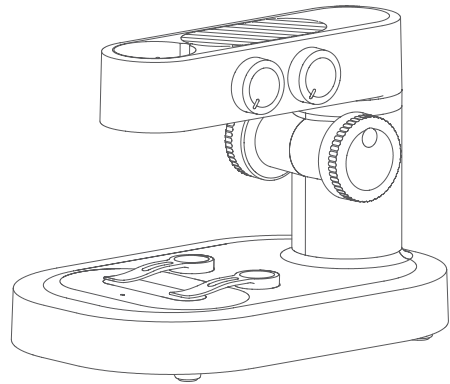
- Please read this manual carefully and use it correctly.
- Pay attention to the protection of the lens , be sure to close the lens cap after use to avoid dust or foreign objects into.
- This microscope can be used handheld or inserted into the base as a desktop use, pay attention to the strength when inserted to avoid damage to the components.
- Place the specimen directly below the center of the lens to avoid not being able to see the object and affecting the observation experience.
- Take care to protect the screen when using, do not scratch or deface the screen, and pay attention to keep the screen clean after use.
- Import of external files is not supported (external files such as videos, pictures, and documents do not support import and reading, which may cause the device to malfunction.)

3 Microscope Installation And Use Instructions

Microscope Composition



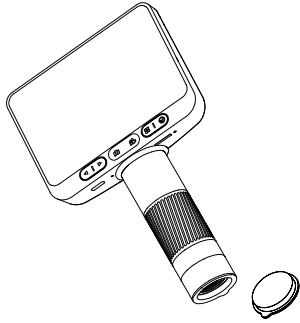
Microscope monomer



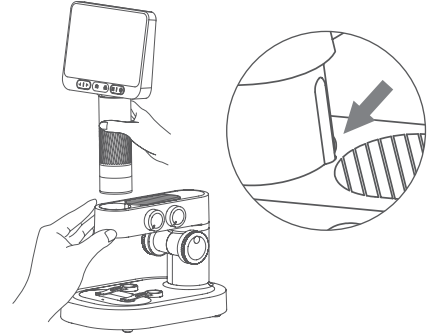
Microscope base

Microscope Pedestal Mounting Instructions

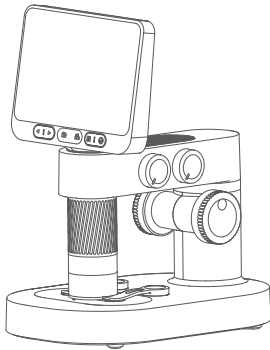
1. Take off the microscope monoblock lens cover.



2. Holding the base with one hand, insert the microscope monoblock vertically downward into the mounting hole, paying attention to the rear slot aligned with the mounting hole.



3. Insert to the bottom (Expose the focusing rotary cylinder) .



Usage Environment



Please use in $-10^{\circ}\text{C}\sim 45^{\circ}\text{C}$ environment



Please avoid getting the microscope wet with water, drinking water, corrosive liquid, etc.



Please avoid placing the microscope near heat, open flames, flammable and explosive gases (liquids)



Please avoid dust entering the microscope lens and interior

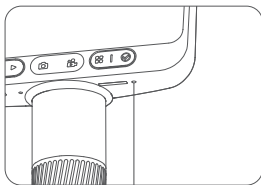


Please avoid the microscope to be hit and violent vibration

At low temperatures, the available battery capacity decays to varying degrees.

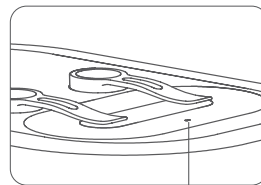
If abnormalities occur, please contact the after-sales department for repair. Private disassembly of the microscope will not enjoy the three packages policy, and may lead to irreparable damage.

Charging Instructions



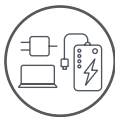
Indicator light

- Microscope single low battery, the power indicator red light flashing fast;
- The red light is always on when charging, and the light goes off when full.



Indicator light

- When the microscope base is low, the power indicator flashes red;
- The red light is always on when charging, and the green light is always on when full.



The microscope can be charged with a daily cell phone charger, computer, or rechargeable battery.



Do not charge for more than 12 hours to avoid affecting the battery life.

- Charging process, microscope shell and battery such as a slight heating for the normal phenomenon please do not worry to use.

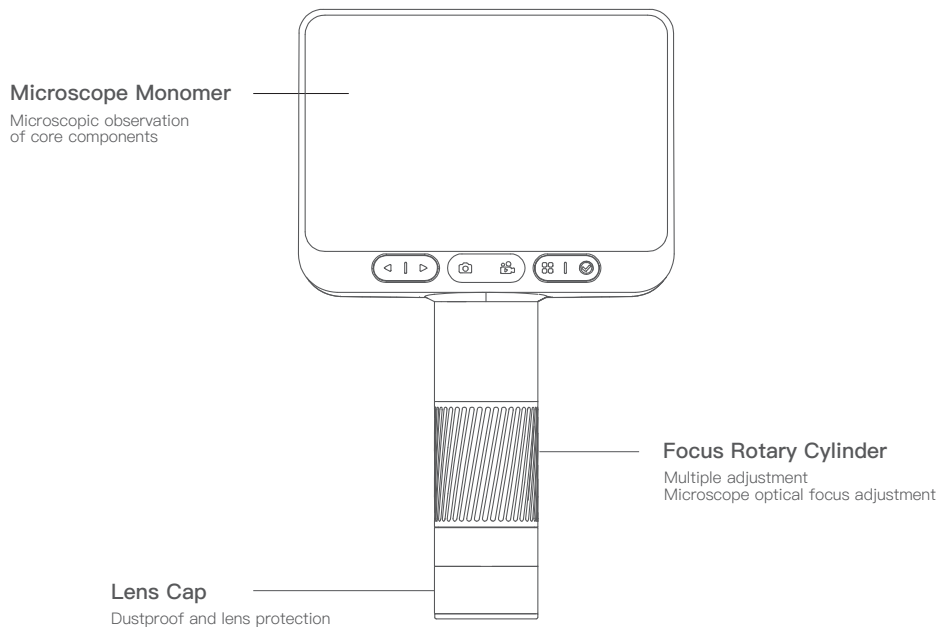
Storage Environment

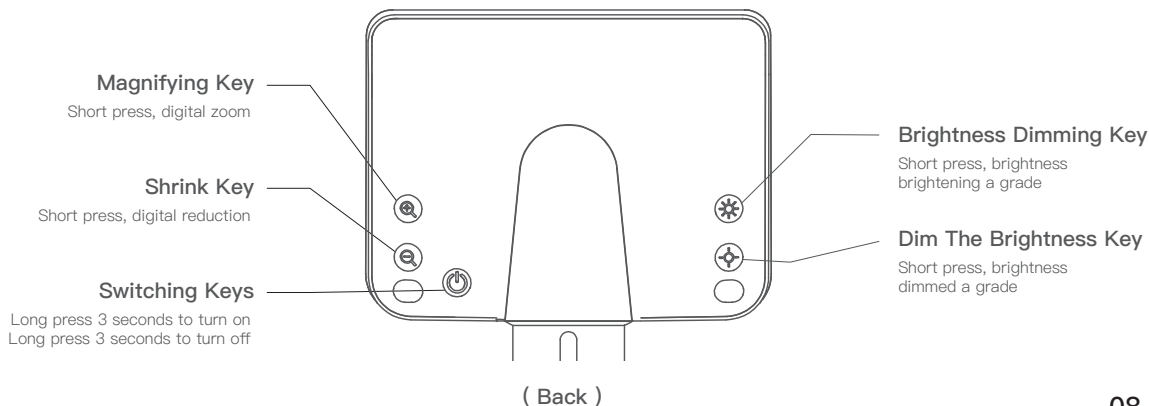
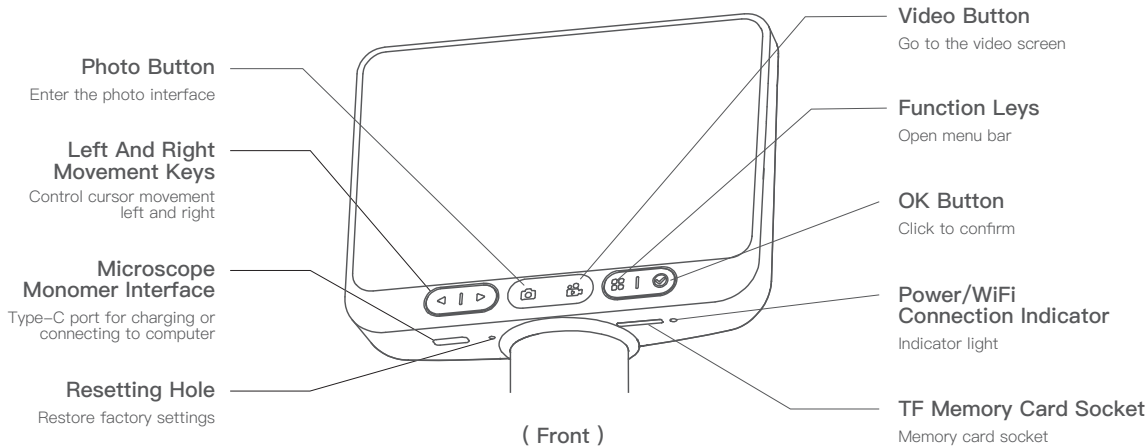
- Store in a cool, dry place for daily use and avoid direct sunlight.
- Avoid storing the microscope in places where there is a risk of dropping, which may cause damage to the internal lens deviation or other components of the microscope, as well as other irreparable damage problems.

4 Microscope Open And Use

Micromonomer Operation Instructions

Before using the microscope, please make sure to hold it firmly in your hand or place it on a tabletop for use.







Microscope Monoblock Power Button

Press and hold for 3 seconds to turn on the phone.
Press and hold for 3 seconds to turn off the phone.



Digital Zoom Button

Short press to digitally enlarge.



Digital Reduction Key

Short press to digitally reduce.



Microscope Monomer Interface

Charging and connecting to the computer side of the software to use.



Brightness Dimming Key

A short press, brightness brightening a grade.



Brightness Dimmer Key

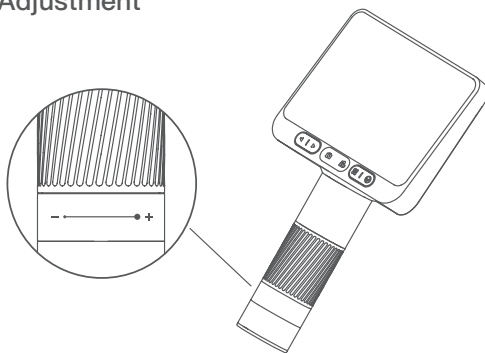
Short press to dim the brightness by one stop.

Microscope On And Off

- Press and hold the microscope rear power on button for 3 seconds, the lower small light of the button lights up or the bottom illumination lights up, that means the microscope has been turned on.
- Press and hold the on button at the back of the microscope for 3 seconds, and the small light at the bottom of the button goes out or the bottom illumination goes out, which means the microscope has been turned off.

(Note: After using the microscope, please put the lens cap on.)

Microscope Magnification Adjustment



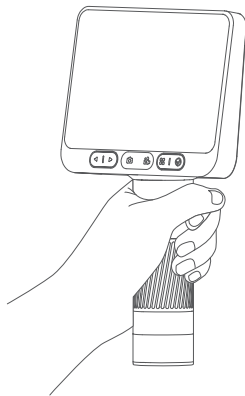
Microscope Magnification Adjustment

-  Counterclockwise rotation: Magnification
-  Clockwise rotation: Zoom out

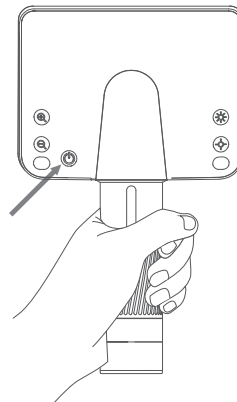
(Note: At the same distance, there are two magnifications by rotating the focusing rotary drum. The lifting knob and digital zoom in and zoom out keys can also be used to adjust the multiple. The focusing rotary drum, lifting knob and digital zoom in function are used together.)

Step-by-step Instructions For Use:

1. Hold the lower part of the microscope with one hand.
2. Press and hold the rear power-on button until the screen lights up.

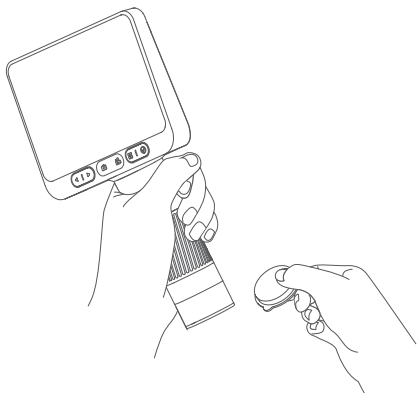


(Front)

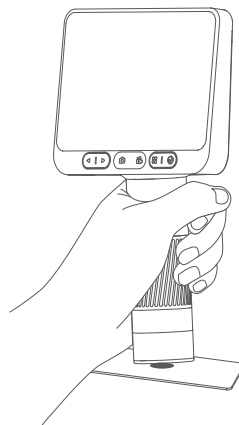


(Back)

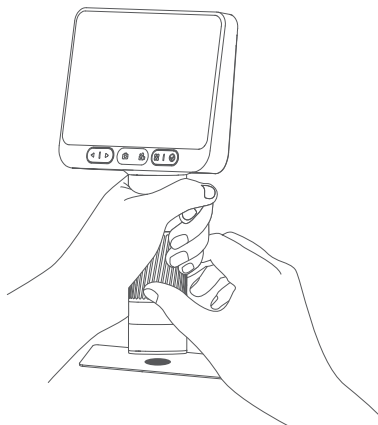
3. Remove the lens cover.



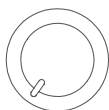
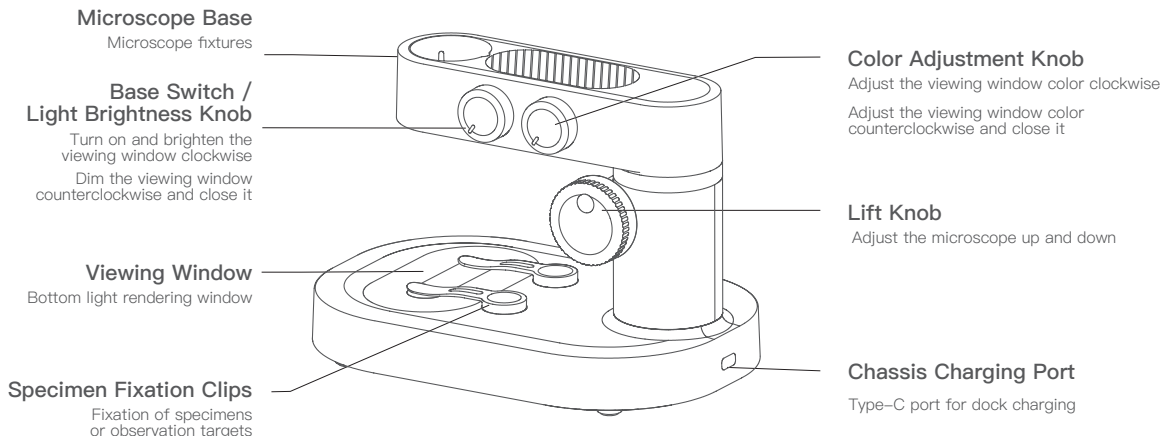
4. Aim the microscope at the object to be observed.



5. The other hand rotate the focus rotating cylinder, observe the screen display, and adjust to the best observation effect.

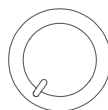


5 Microscope Pedestal Use Step By Step Instructions



Base Switch / Light Brightness Adjustment Knob

Turn on and brighten the viewing window clockwise
Dim the viewing window counterclockwise and close it



Color Adjustment Knob

Adjust the viewing window color in the order of white, red, orange, yellow, green, blue, indigo, and violet, clockwise, and counterclockwise and close it



Viewing Window

Bottom light rendering window



Specimen Fixation Clips

Fixation of specimens or observation targets



Lift Knob

Adjust the microscope up and down to achieve different magnifications



Chassis Charging Port

Type-C port for dock charging

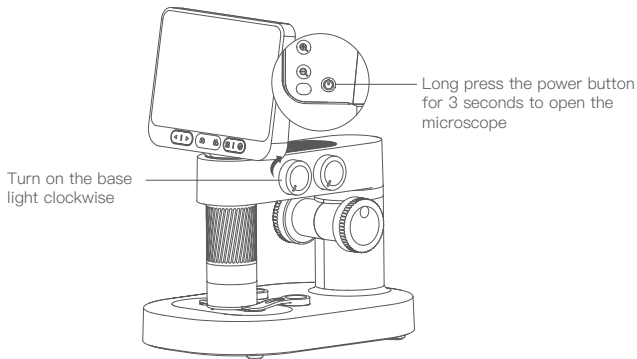
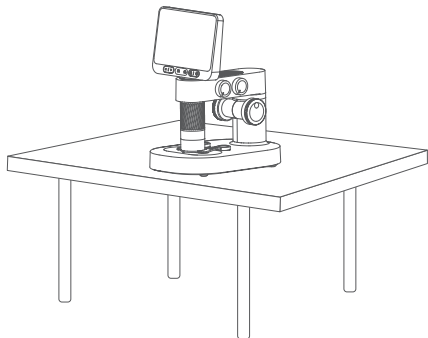
Microscope Base Opening And Closing

- Turn the upper brightness adjustment button clockwise, and hear the "Ta" sound, the observation window lights up, that means the microscope base has been opened.
- Turn the upper brightness adjustment button counterclockwise, and when you hear the "Ta" sound, the observation window goes out, which means the microscope base has been closed.

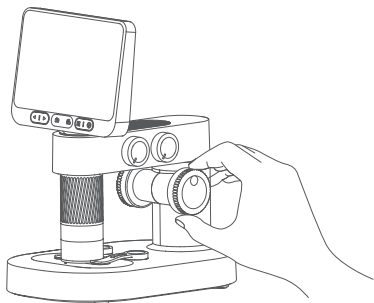
(Note: After using the microscope, remember to close the microscope monoblock and cover the lens cap at the same time.)

Step-by-step Instructions:

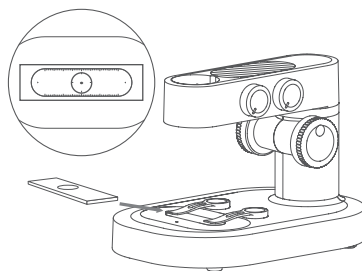
1. Place the microscope on a smooth table to avoid shaking or dropping it.
2. Open the microscope lens barrel and open the base.



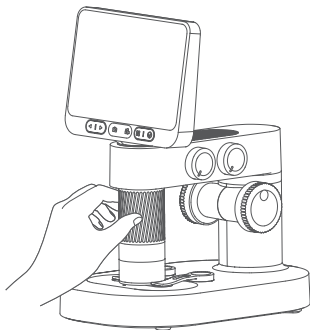
3. Adjust the microscope lift knob, so that the lens barrel is at a relatively suitable height, easy to place the object of observation.



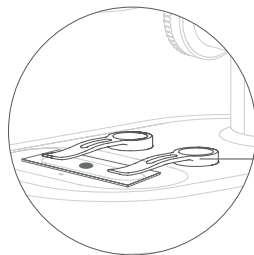
4. Place the object to be observed on the bottom viewing panel, in the center of the crosshairs of the viewing panel. (Note that the side with the coverslip faces up. Do not place it backwards.)



5. Rotate the focus knob, observe the screen display, and slowly adjust to the best viewing (Adjust the viewing height and focal length to achieve different magnifications of viewing.)



Use Of Specimen Fixation Clips



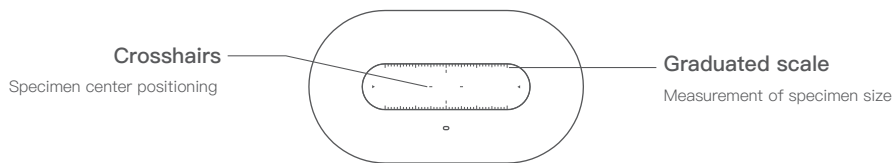
Specimen Fixation Clips

Fixation of specimens or observation targets

Caution:

- The retaining clip is magnetically attached, so it can be attached in place as long as it is close to the base mounting section.
- Specimen fixation clip bottom and base adsorption position regularly cleaned to avoid adsorption of other metal substances.

Use Of The Viewing Panel



Crosshairs

Specimen center positioning

Graduated scale

Measurement of specimen size

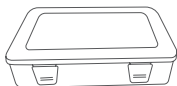
Caution:

- Please wipe the viewing panel regularly to avoid affecting the viewing experience.

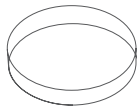
Observation Window Light Adjustment Function Description

- The intensity of the observation window light will affect the specimen outline and some details, please pay attention to the adjustment during use.
- Choose the appropriate rendering lighting to optimize the observation of the specimen.

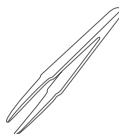
6 Accessories And Tools



Tool Storage Box



Petri Dish x2



Tweezers



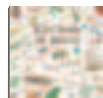
Dropper



Specimen Collection Box



Collection Bottle x3



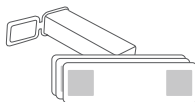
Popular Science Books
(Not For Sale)



Observation Record Book



Blank Slides And
Coverslips x10 Each
(coverslip: round/square
randomly shipped)



Biopsy Specimens x10



Data Cable



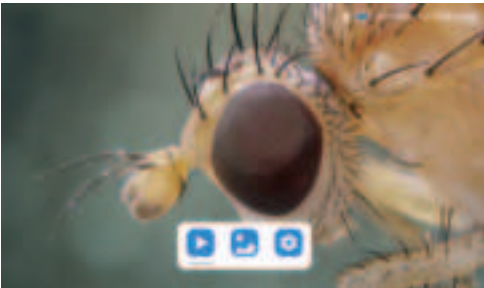
Specimen Fixation
Clip x2

(Note: Education Edition accessories include all of the above,
Youth Edition accessories include only the content in the dotted box.)

7 Interface Usage Instructions

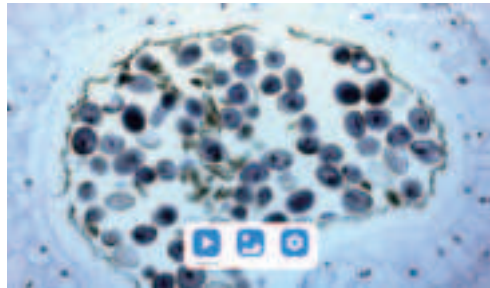
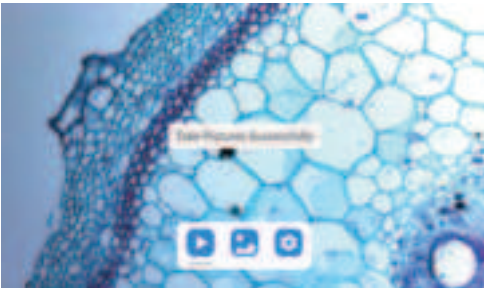
- Turn On The Device

Press and hold the power on button 3S to turn on the phone



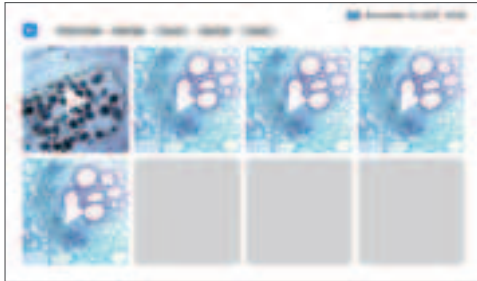
- Photo And Video

Touch the photo icon to take a picture and touch the record icon to start/end recording.



- Album

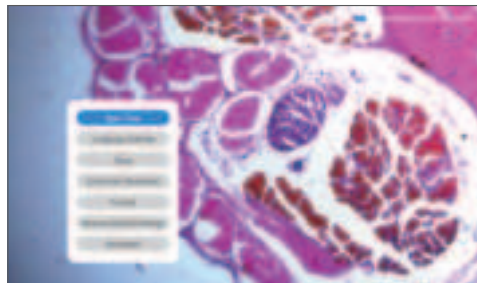
Press the menu button to bring up the three buttons of video album/photo album/settings, select left and right and press the confirmation button to enter the corresponding interface.



Video Album



Photo Album



Settings (microscope-related settings)

APP User Guide:

APP download and installation:

- Scan the QR code below to download the APP (search "Beaver Point" in App store or Google Play to download the APP)



Android

Scan here to download APP



iOS

Install the software according to the operating instructions;

- Turn On The Device

Press and hold the microscope rear power on button for 3 seconds, the lower small light of the button lights up or the bottom illumination lights up, that means the microscope has been turned on.

- Connect microscope to Android/iOS device

After the device is turned on, open the mobile APP. Click to connect to WIFI and find the hotspot of "DDL-M2-XXXXXX";

Tap and connect to the hotspot. If a connection confirmation prompt pops up, please click "Stay connected" (Android version)/click "OK";

After the connection is successful, the return software will display that the device has been successfully connected, which proves that the microscope has successfully connected with your device.



Click to connect to WIFI



Select the corresponding
WIFI name



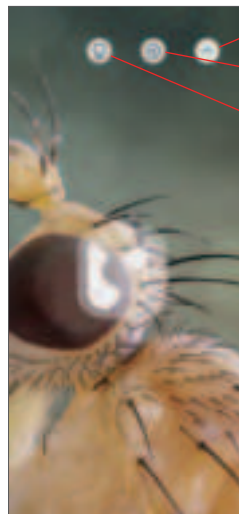
Device successfully connected

(WIFI initial password: 12345678)

- After clicking Live View, you can enter the real-time observation interface. (Note: After the APP is closed, you need to manually disconnect the WIFI to continue the observation.)



Click to watch live



Real-time observation

For Computer Use

Log on to www.beaverlabtech.com or www.dangdangli.com to download and install the software installation package. Installing software according to operating instructions.

Use the usb cable that comes with the microscope to connect the microscope monoblock to the computer host;

Opening the software to select microscope equipment.

Follow the software operating instructions to use it. (Tips: Click on the name bar in the upper right corner to open the connected device and select the resolution)



Computer users can download the Windows version of the software to's official website (www.beaverlabtech.com or www.dangdang li.com)

8 Microscope Troubleshooting

Problem Phenomenon	Reason	Processing Method
Heat during charging	High current during charging, high battery heat, which is normal	Normal state
The app can't connect	①Distance too far ②Equipment without power ③Equipment failure	①Repeat connection in close proximity ②Use after charging the device ③App and device are closed and restarted before use ④Send to repair
App suddenly disconnected	①Distance too far ②Equipment without power ③Equipment failure	①Repeat connection in close proximity ②Use after charging the device ③App and device are closed and restarted before use ④Send to repair
Device cannot be charged	①Charging port is not plugged firmly ②No power access ③Equipment failure	①Replug the interface ②Connect the power ③Send it to repair
The device is not working properly	Internal damage caused by water, collision, etc.	①Send for repair ②Man-made damage, not in the scope of the three packages policy
The device cannot connect to the software side of the computer	①The interface is not inserted tightly ②The data cable is damaged ③Not using the connection cable with data transfer function	①Replug the interface ②Replace the data cable ③Replace the data cable with data transfer function and then connect to use
Lens display image blur	Lens fogging due to radical changes in ambient temperature	Wait for the temperature to equilibrate and the fog to disappear before use
Specimen observation with foreign matter, poor observation	Soiled specimen surface, soiled observation panel	Wiping specimens and viewing panels
Drop, impact resulting in broken and cracked shell	Damage caused by external use	Damage caused by man is not in the scope of responsibility of the three packages

The product cannot be turned off or the button does not work	Crash	Perform a reset operation
Screen black screen does not display, flashing screen, etc.	Malfunction, damage	①Check if it works properly after resetting ②Check if the memory card is working properly after inserting and removing it ③Send for repair
Memory card cannot be read	Bad contact or damaged memory card	①Re-plug the memory card ②Replace the memory card with a new one

Note: It is normal for the APP to exit after plugging

9 Trademark And Legal Notices

”BeaverLAB” is a trademark applied for or registered in mainland China by Beaver Technology (Shenzhen) Co., Ltd. and is used on this merchandise. Without the permission of the trademark owner, no person or organization may use the above trademark mark on goods that are not approved.

This manual is produced and copyrighted by Beaver Technology (Shenzhen) Co., Ltd. and may not be reproduced or distributed in whole or in any part by any organization or individual without permission.

Due to the continuous improvement of product functions, design changes and other reasons, this manual may not match the product you purchased, please refer to the actual product.

FCC WARNING

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.

Microscope Overall Parameters

Product Brand	BeaverLAB
Product Name	Intelligent Microscope M2
Product Model	DDL-M2
Product Color	White/Gray
Chassis Battery Capacity	1800mAh Li-ion battery
Single Cell Capacity	2500mAh Li-ion battery
Material	ABS、PC、Aluminum alloy、LCD、 Electronic component

Intelligent Microscope M2

Product Name: Intelligent Microscope M2

Product Model: DDL-M2

Product Size: 182x122x216mm

FCC ID: 2A6VMDDL-M2

Product Net Weight: About 0.65kg

Input Voltage: DC5V $\pm$ 1A

Wireless Connectivity: Wi-Fi IEEE802.11b/g/n2.4Ghz

Operating Temperature: -10°C ~ 45°C

Certification Information: FCC CE

Address: Room101.102, Building 6, F518 Idea Land, No.1065, Baoyuan Road, Laodong,
Xixiang, Bao'an District, Shenzhen, Guang Dong, China

Service Mailbox: support@beaverlabtech.com

Website Address: www.beaverlabtech.com
www.dangdangli.com