# Digital Microscope AD407 Users Manual
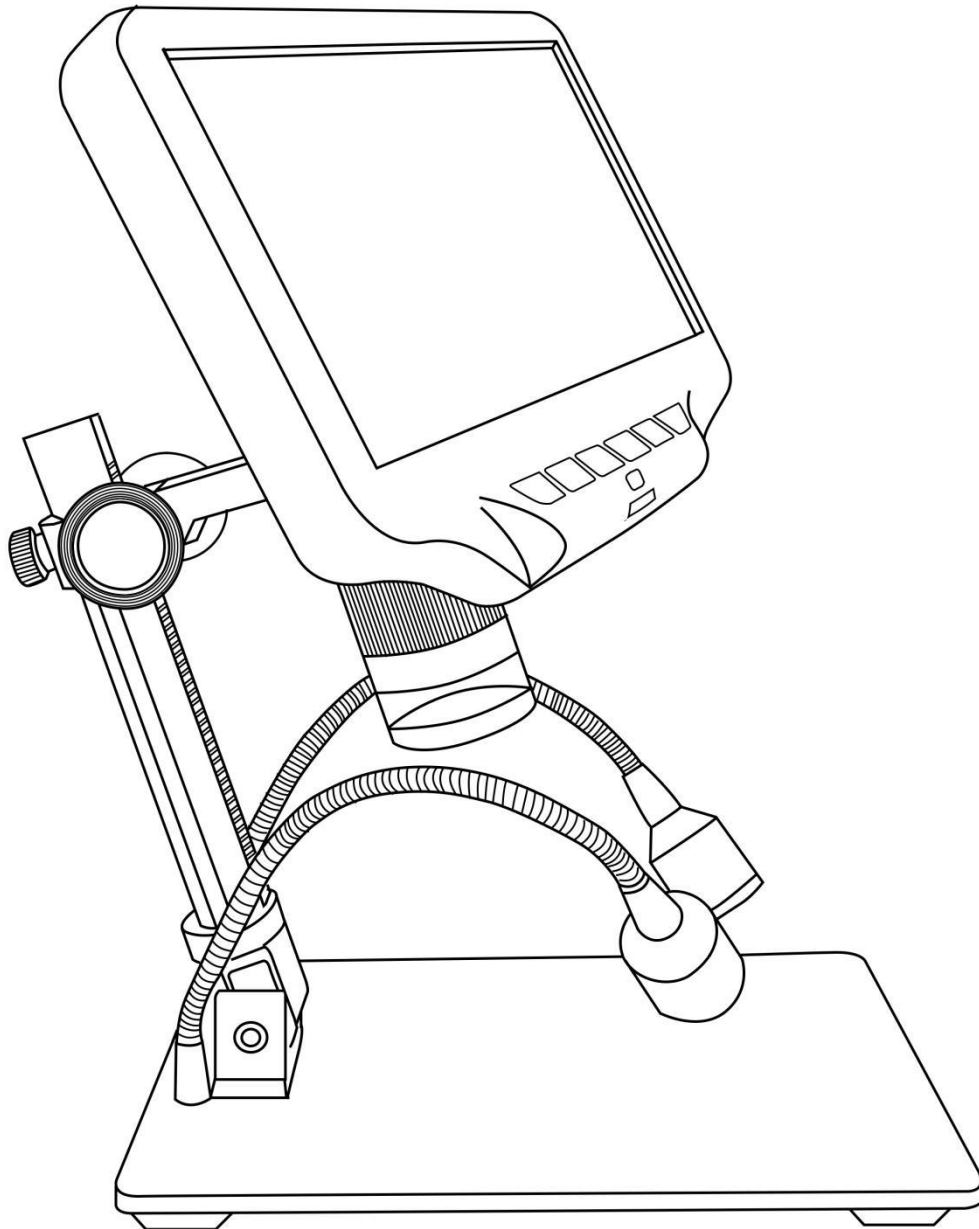
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## Safety and Maintenance

1. This microscope is safe and low-maintenance, as long as common sense is employed.

2. The assembly includes small parts, particularly the thumbscrews used to hold the main device in place. Do NOT allow unsupervised access by infants or toddlers.

3. The microscope is not intended for field use. It is not waterproof, and should not be exposed to extreme temperatures. Treat as you would any other electronic device, such as laptop or tablet.

4. The surface of the lens at the bottom of the main device should be cleaned whenever you start to notice a degradation in image quality. Use a few drops of lens-cleaning fluid on lens tissues or use a microfiber cleaning cloth.

5. The rest of the microscope can be cleaned with a damp cloth.

6. The display on the device is very fragile. Please use with care. Do not drop, press hard or touch the display with sharp objects. The display is not waterproof, please clean it with dry and soft material. Do not press the display when adjusting the angle of the display.
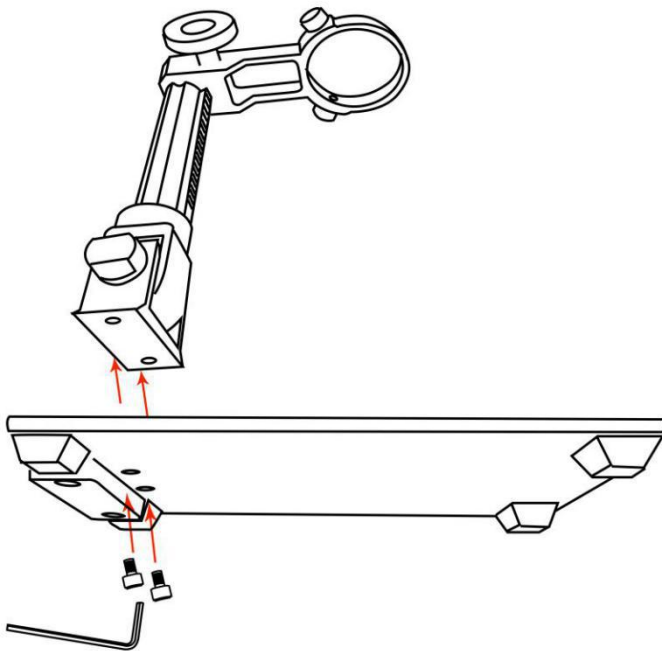
## Basic Parameters

| | |
|---|---|
| Image sensor | 4 Mega Pixels HD Sensor |
| Video output | UHD 2880X2160 24FPS; FHD1920X1080 60FPS/30FPS, HD1280X720 120FPS, |
| Video format | MP4 |
| Magnification Ratio | Up to 270×(HDMI monitor 27 inch) |
| Photo resolution | MAX 4032*3024 (12M 4032*3024) |
| Photo format | JPG |
| Minimum focus distance | 5cm |
| Frame Rate | Max 120f/s (under 600 Lux Brightness& HDP120) |
| Storage | Micro-SD card, up to 32G |
| PC support | No |
| Power source | 5V DC |
| Stand size | 20cm*12cm*19cm |
| Screen size | 7 inch |
| Accessories | Metal Base, Optical Bracket, Power Adapter, Switch Cable, HDMI Cable, Remote, UV filter, Screws*2, Screwdriver, Users Manual |
| Packing data | 1.6KG/32*22*10CM |

# What's in the box
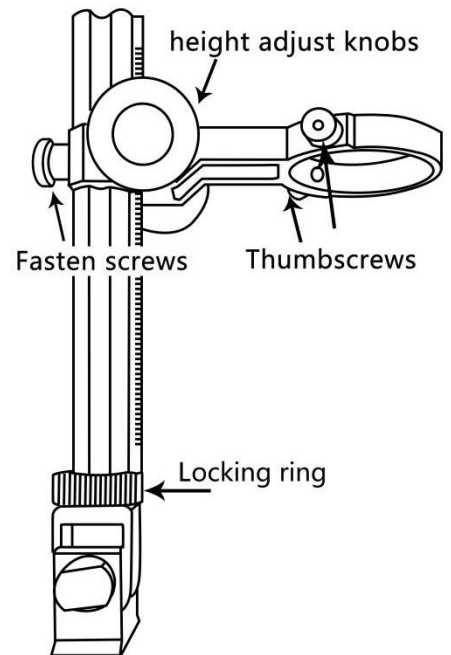


BASE

OPTICAL BRACKET

REMOTE

ADAPTER

OPTICAL STACK

UV Filter

SWITCH CABLE

HDMI CABLE

SCREWS& SCREWDRIVER
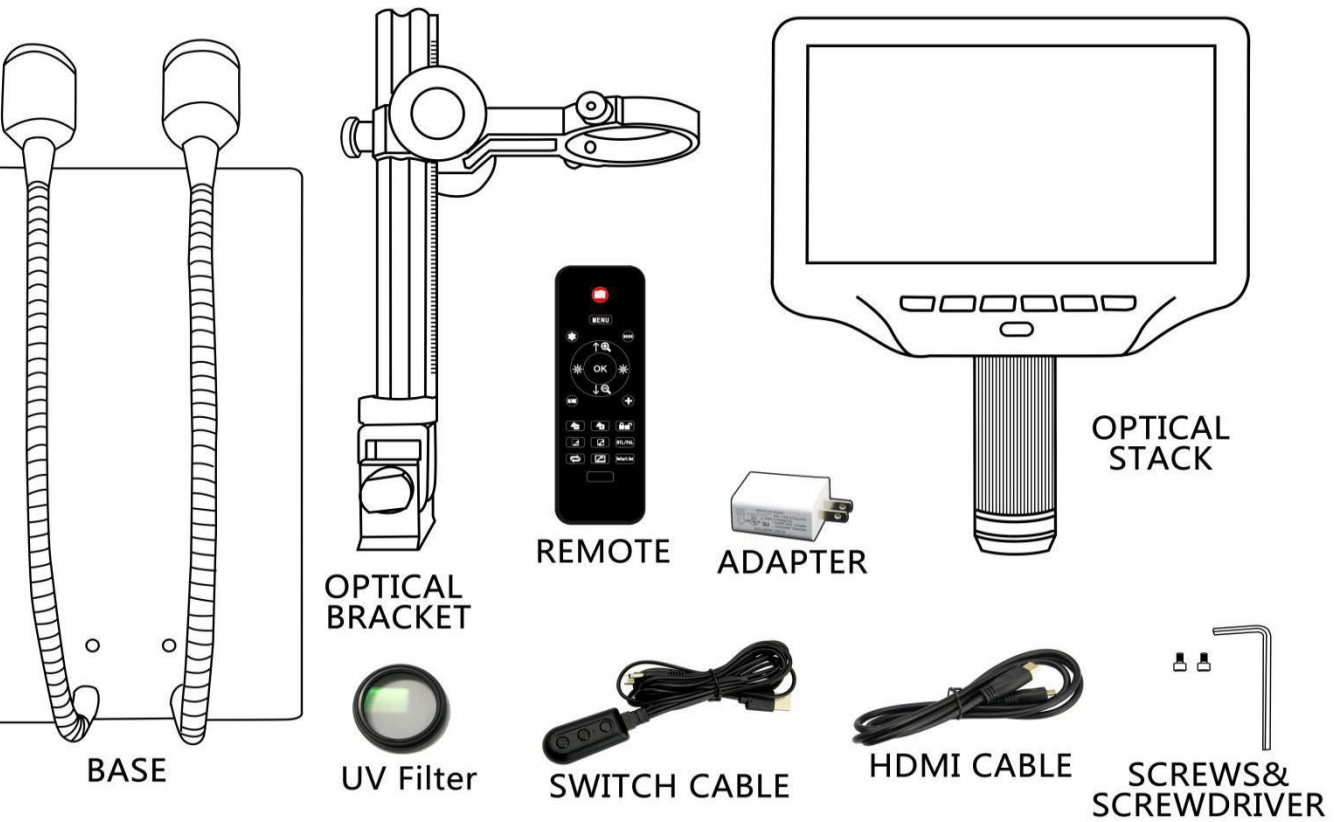
(P1,what's in the box)



(P2, Assembly1)



height adjust knobs

Fasten screws

Thumbscrews

Locking ring

(P3, Assembly2)

## Assembly

1. Screw the optical bracket on to the base (see the left picture above,P2 ).
2. Once you have done so, if the bracket is not aligned over the base, unscrew the locking ring, adjust the bracket's direction, and then turn the locking ring clockwise until it is tight. (After doing so, it will still be possible to hold the base and turn the bracket if sufficient force is applied, but it will not spin freely.)
3. Loosen the small thumbscrews on the optical bracket.
4. Slide the optical stack in to the ring of the optical bracket.
5. Tighten the thumbscrews to hold the optical stack in place.

If done correctly, you should be able to not just turn the focus controller of the optical stack freely, but also freely adjust the monitor, the angel between the base and the optical bracket, while the rest of microscope remains in place. If you have any question or problem for assembly, please contact us as soon as possible, so you won't damage the device during assembly.
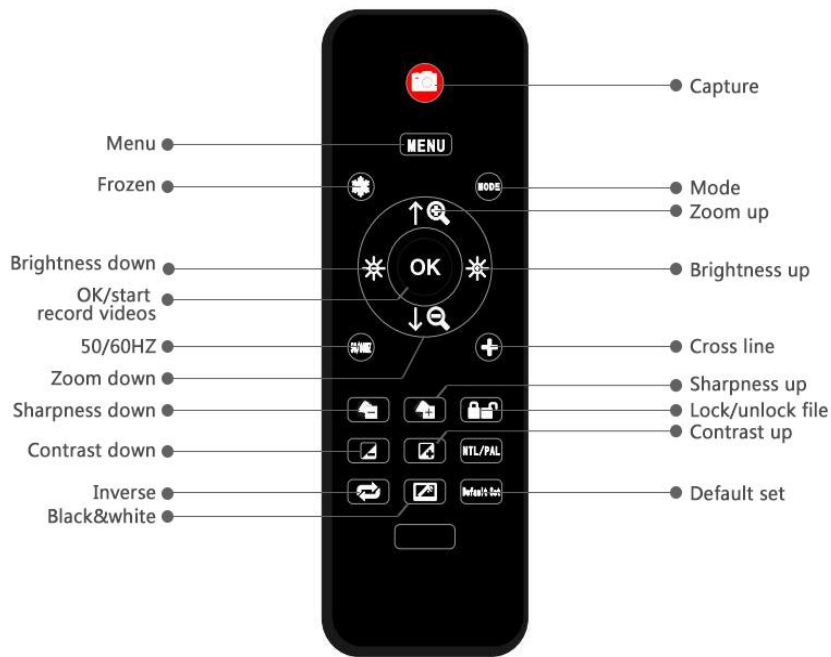
## Buttons
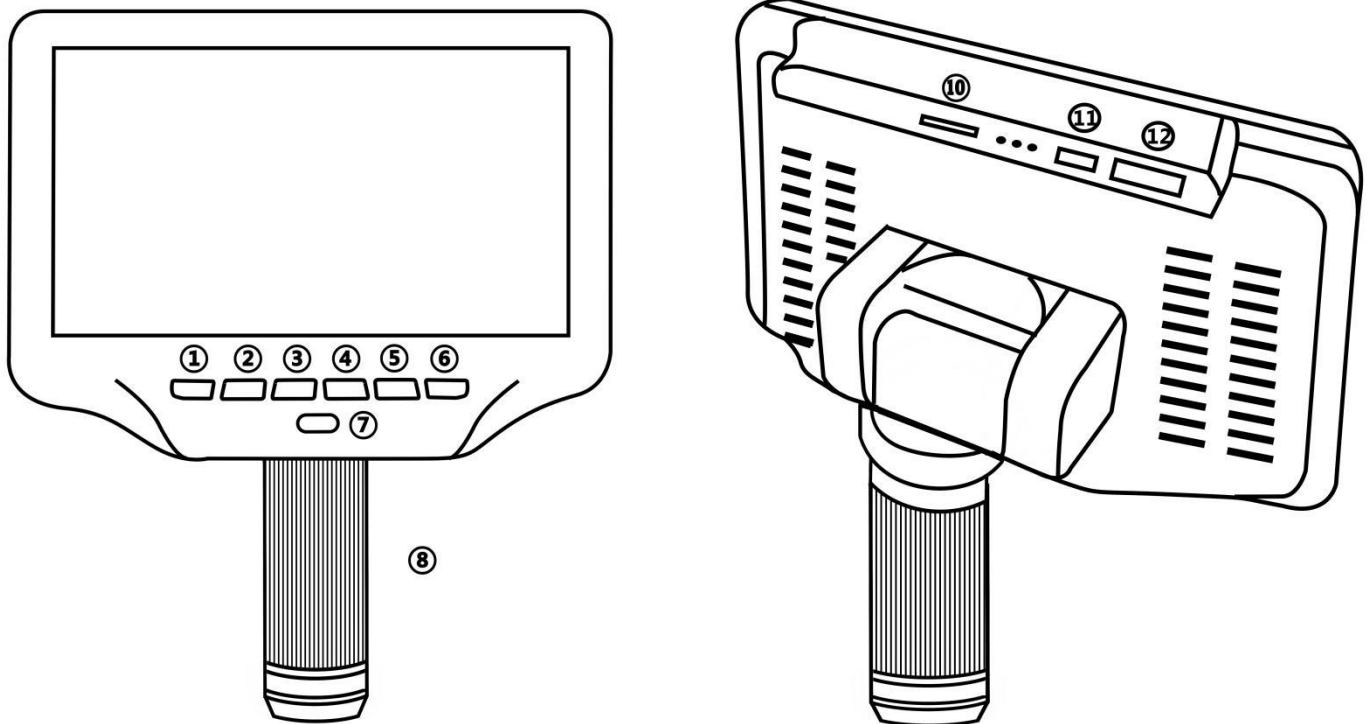


(P4, buttons)

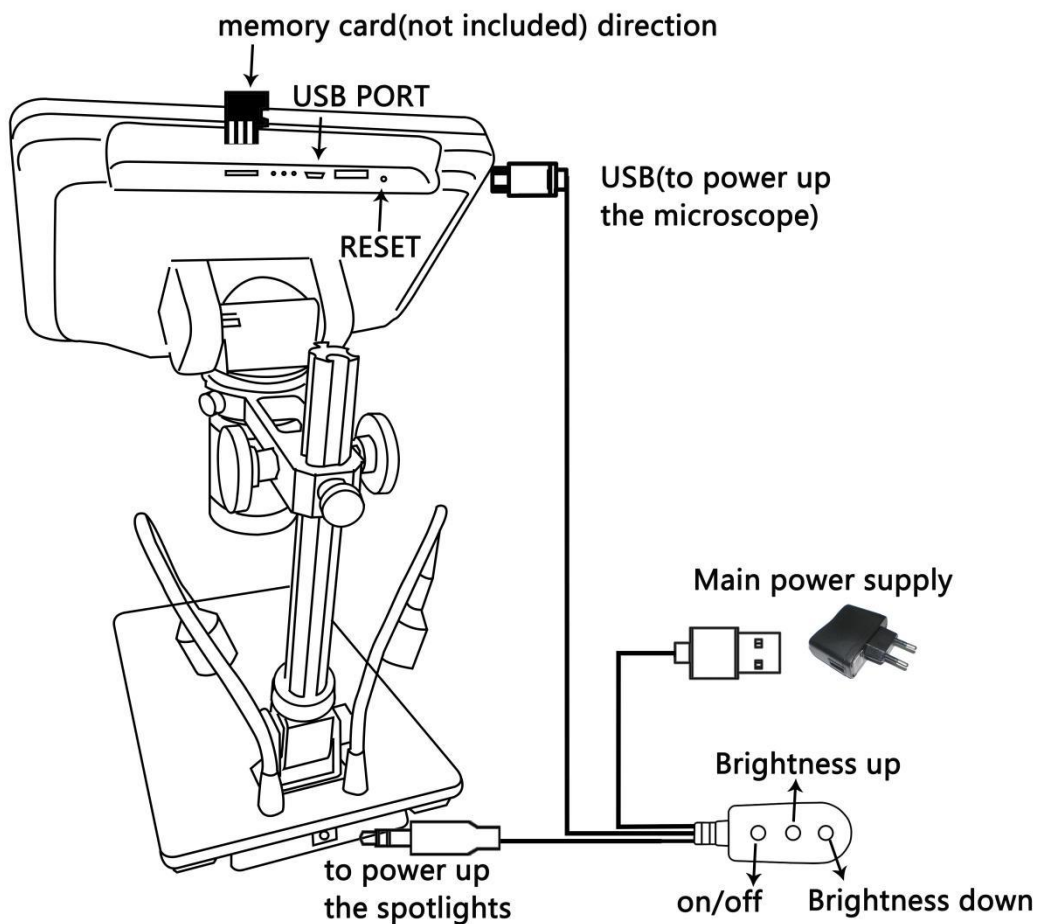① Power on/off
② Mode/menu
③ Up
④ Down
⑤ OK/Start video record
⑥ Picture capture
⑦ Infrared sensor (when you are using the
remote, please point the remote to this so the device would response)
⑧ Focus controller
⑩ Memory card slot
⑪ USB port
⑫ HMDI port

Menu

Frozen

Brightness down

OK/start record videos

50/60HZ

Zoom down

Sharpness down

Contrast down

Inverse

Black&white

Capture

Mode

Zoom up

Brightness up

Cross line

Sharpness up

Lock/unlock file

Contrast up

Default set

(P5, remote buttons)



memory card(not included) direction

USB PORT

USB(to power up the microscope)

RESET

Main power supply

Brightness up

to power up the spotlights

on/off    Brightness down

(P6 connect )

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## Quick start

**Connect**

To use the microscope stand alone, you need to connect the optical stack to the power supply via the switch cable. See the picture(P6) above.

**Switch on**

Then press and hold the Power button (① from the P4 "Buttons") underneath the display until the display turns on. (It may turn on automatically while you connecting cables at the first time, and it's totally fine.)

*Troubleshooting

If the display freezes, locate the "reset " hole on the back of the monitor. Use a narrow object such as an unfolded paperclip to depress the button located inside. This resets all settings to their factory values and restarts the display. It does not erase saved images or video.

## Adjusting the Magnification and Focus

①Use the large knobs on the optical bracket to raise or lower the optical stack to the desired height. The lower the height, the greater the magnification is. But be careful not to let the bottom of the stack contact the object being imaged. (Note that you may need to reposition the spotlights as you move the stack up or down.)Turn the Focus controller( ⑧ from the P4 "Buttons") to focus the image.

②To increase the digital magnification, press and hold the Up button (③ from the P4 "Buttons" ) until the desired digital magnification(up to an additional 3x beyond the optical magnification) is reached. Use the Down (number ④ from the picture "Buttons") button to decrease the digital magnification.

## Using a Micro SD Card to Save Images

By using a Micro SD card (not provided), you can save images and videos to review later or export to a computer or other device .

Insert the Micro SD card in to the TF slot on top back of the monitor. (be careful with the direction. The side which has metal exposed, should face down. See the picture 6 )

Push it in until you hear a click. (If you don't push it in far enough, it will be ejected.)

*If you insert the card while the microscope's working, the device would switch off automatically. Press the Power button and hold it until the screen lights up again.

The Mode button(number ② from the picture "Buttons", marked with an "M") can be used to cycle between three modes: video standby (📷), still image (📷), and review (🖼). In video standby mode, there are white color numbers located right to the icon, shows how many time the rest storage of the card would allow you to record video.

To record videos

Press the OK button(⑤) briefly to begin recording. The elapsed time(red color) in the recording will appear at the top left. To stop recording, hit the OK button again. The OK button on the remote has the same function.

To Capture pictures

Press the Picture Capture button(⑥)(Marked with a camera) briefly to capture an image. The picture capture button on the remote has the same function.

**Note: You can't take pictures or videos in Preview mode**

## Reviewing and Managing Images.

To review and manage images on the display, use the Mode button to select review mode. Use the Up and Down buttons to cycle through the pictures and videos.

To play a video, press the OK button to start play. Press the OK button again to pause. Press Mode button to stop playing the current video.

Hit the Mode button again to exit playback mode.

While reviewing a still image or video, the Menu button can be used to provide additional options. Press the Menu button and hold for a while till options show up.

Delete: Delete Current: deleting just the current image/video; Delete All: deleting all unprotected images and videos;

Protect: Lock Current/All: provides protection for the current/all image/video from deleting accidentally, but not from Format function; Unlock Current/All: unlock the current/all image/video.
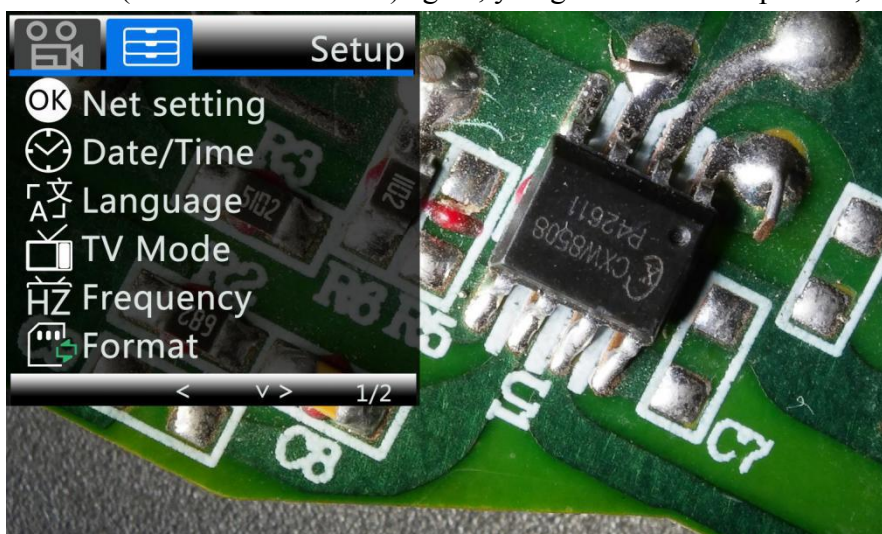
## Settings

In each mode, press the M button and hold it for a while until the Video/Still/Playback Menu shows up on the display(Or you can press MENU button on the remote). Hit M button again, get into the general Setup Menu.

For example, if you are in Video standby mode, and you press MENU, this is the first menu would show, the ''Video menu'':
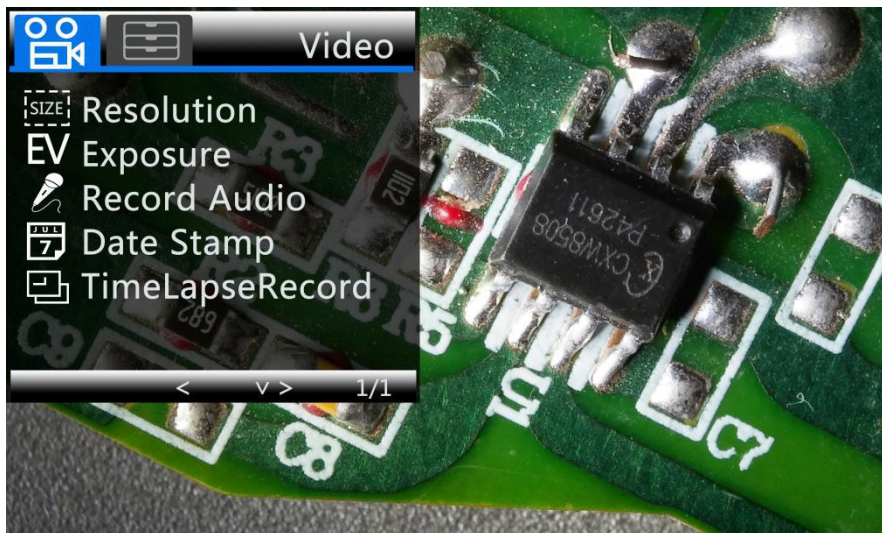


（P7,video menu）

Then, press MENU button (or M on the monitor) again, you get into the Setup menu, like this:
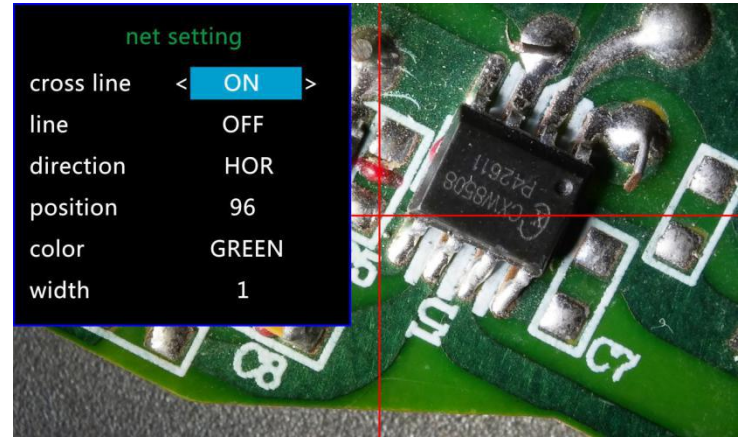


（P8,setup menu）

Netsetting:

Use "Up" and "Down" to select among "cross line"、"line"、"direction"、"position"、"color" and "width". Use "Left" and "Right" **on the remote** to change the settings. Without remote can not change any of the settings of netsetting.

Cross line means ＋ shaped lines that located literally in the middle of the view. when you set the cross line "on", you will see one horizontal and one vertical showing in the middle of the view.
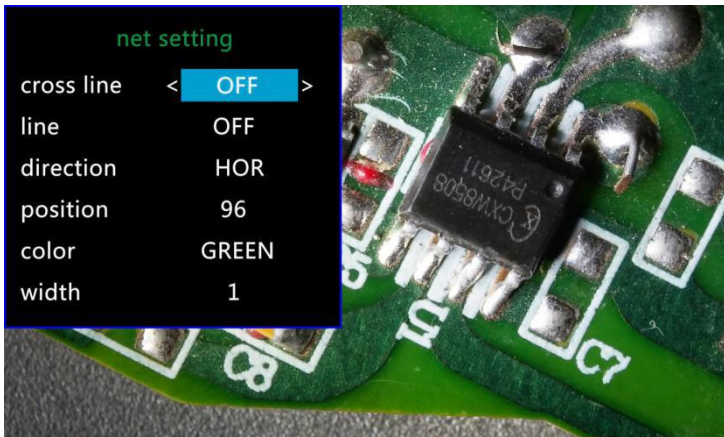


（P9,netsetting original）　　　　　　　　　　　　　　（P10,netsetting cross line on）

When you turn on the "Line", there will be 8 lines showing up automatically. For each one, you could change it's direction between "HOR" and "VER"(stand for "horizontal" and "vertical"), position, color and width.

There are 480 positions on direction "HOR", and 800 positions on direction "VER". So, when you change the direction from "HOR" to "VER", the position would change at the same time, HOR/VER=480/800. For example, you change a line from HOR&160(p11) to a vertical line, the position would become 266(p12).
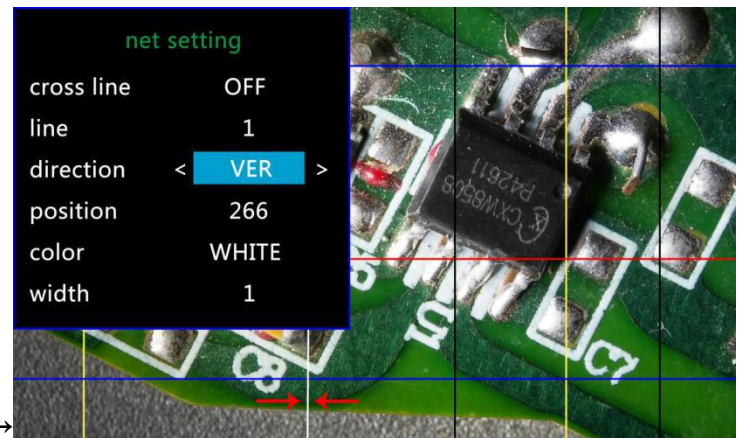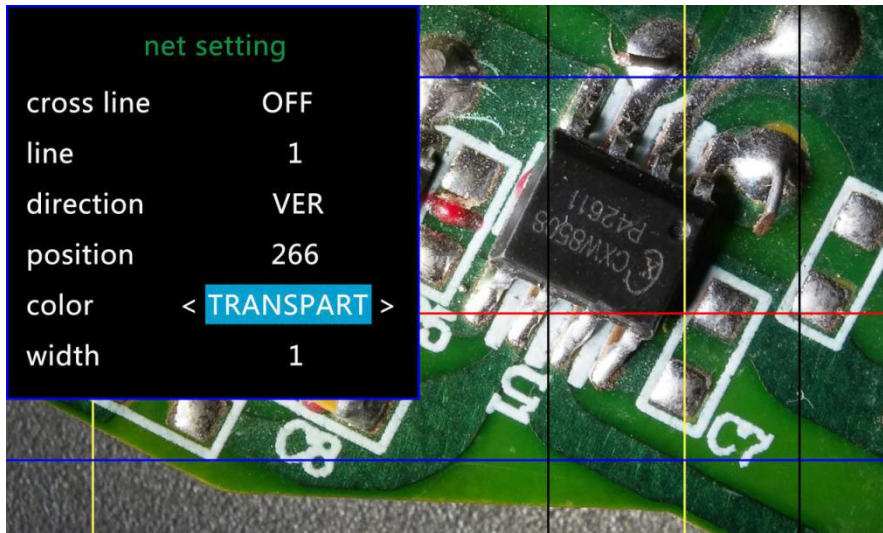


（P11,line 1,HOR&160）　　　　　　　　　　　　　　（P12,Line1,VER&266）

If you don't want that many lines in the view, you could also change the color of the certain lines into "TRANSPARENT".

（P13,Set the color of line 1 to transparent）

Date/Time:

Press "OK" into Date/time setting. Use "Up" and "Down" to select the correct number for year/month/day. Once you finish setting a number, press "OK" on the monitor to the next number. Or, you can use "Left" and "Right" on the remote to get to the one that you want.

Press "MENU" button **on the remote** to exit date/time setting directly. If you don't have the remote, you have to go through all over these settings one by one and then press OK again to exit.
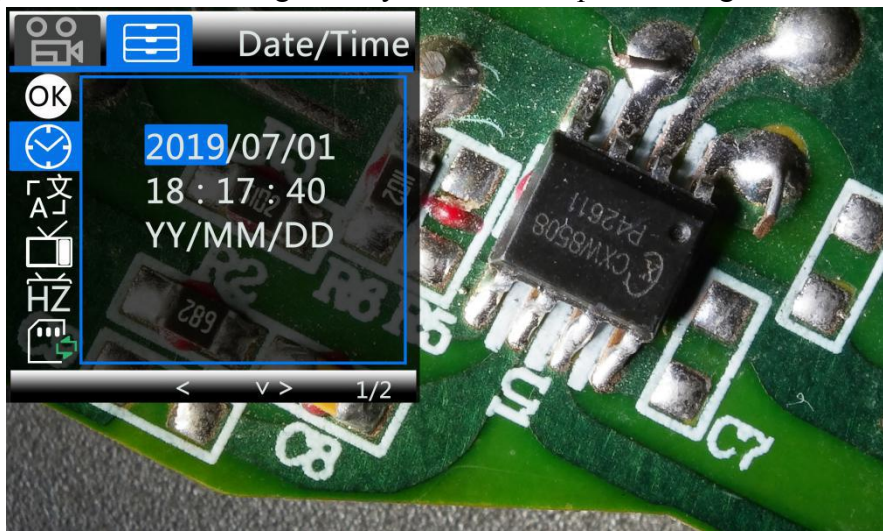

（P14,Date/time setting）

To save settings

After you set everything right, you should turn off the device by pressing ON/OFF button **on the monitor** and hold it until the device switching off.

If you turn off the device by pressing the button on the switch cable, or just simply cut off the power supply, the setting would not be saved.

## Warranty

| Warranty | | |
|---|---|---|
| User's name： | Address： | |
| Phone number： | Post code： | email： |
| Model name： | Purchase date： | |
| Fault feedback： | | |
| Date： | Fault： | |
| Notice： | | |
| Our warranty doesn't cover: | | |
| 1 | If users can not provide the purchase proof or the Warranty. | |
| 2 | If users use it in an improper environment, such as incompatible power supply, high temperature environment etc. | |
| 3 | If the fault caused by accident, oversight, misoperation or natural disasters etc. | |
| 4 | If the fault caused by people who are not belong to authorized organizations of our company during   repacking, repair, dismantle, Or if users repack, repair or dismantle the device not following our advice. | |
| 5 | Out of warranty period. | |