

Portable Standalone LCD DIGITAL MICROSCOPE

User's
Manual

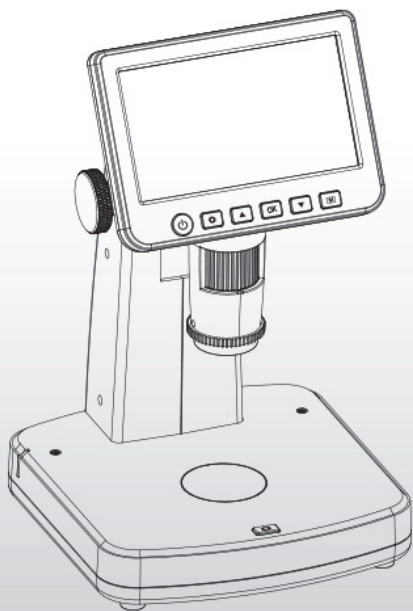


Table of Contents

1. Precaution.....	3
2. Preparation.....	5
● Package Contents.....	5
● Part Names & Functions.....	6
3. key features.....	7
4. Use the Microscope.....	8
● Turn on/off the Microscope.....	8
● Display Icons & Meanings.....	9
● Get Focus & Magnifications.....	10
● Observe Specimen Slice.....	12
● Capture Photo & Video & Playback.....	12
● Delete files.....	13
● Use the Polarizer.....	14
● Download to Computer.....	15
● Preview on Computer.....	15
● Output to TV.....	16
● Charge Battery.....	17
5. Menu Introductions.....	18
● Set Resolution.....	18
● Capture mode.....	19
● Loop recording.....	19
● Date/Time.....	20
● Date Stamp.....	20
● TV out.....	21
● Auto Power Off.....	21
● Language.....	22
● Format SD.....	22
● Default Setting.....	23
6. Specifications.....	24
7. Troubleshooting.....	25

PC Software Introductions.....	26
Install the software	26
Start Microscope.....	27
Software functions.....	28
● Capture Photo.....	28
● Capture Video.....	28
● Timer.....	29
Calibration and Measurement.....	30
● Calibration.....	30
● Measurement.....	34
● Change Calibration.....	35
● Draw and text.....	37
Software Interface Instructions.....	39
● Main Interface Icons.....	39
● Main Menu.....	40
● Options.....	41
● Capture.....	42
● Measurement Interface Instructions.....	43

Welcome

Thank you for purchasing the 5-inch Portable Stand Alone LCD Digital Microscope with polarizer.

Please take a moment to read through this manual. Its contents will help you to get the best use of the smart microscope.

1. Precaution

Before using the LCD Digital Microscope, please ensure that you read and understand the safety precautions described below. Always ensure that the LCD Digital Microscope is operated correctly.

- Never operate LCD Digital Microscope where operation of such devices is restricted. Improper use creates the risk of serious accident.
- Do not try to open the case of LCD Digital Microscope or attempt to modify LCD Digital Microscope in any way. Maintenance and repairs should be performed only by authorized service providers.
- Keep LCD Digital Microscope away from water and other liquids. Do not use LCD Digital Microscope with wet hands. Never use LCD Digital Microscope

in the rain or snow. Moisture creates the danger of fire and electric shock.

- If you notice smoke or a strange odor coming from LCD Digital Microscope, turn the power off immediately. Take LCD Digital Microscope to the nearest authorized service center for repair. Never attempt to repair LCD Digital Microscope on your own.
- LCD Digital Microscope may become slightly warm during use. This does not indicate malfunction.
- If the exterior of the LCD Digital Microscope needs cleaning, wipe it with a soft, dry cloth.

FCC Notice

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.

2. Preparation

■ Package Contents



LCD Digital
Microscope



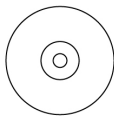
AC adaptor



USB cable



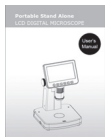
TV cable



CD

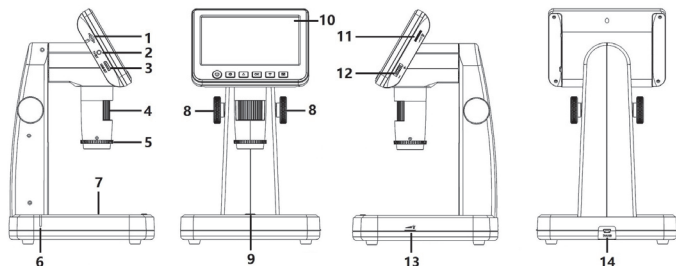


Calibration
Chart

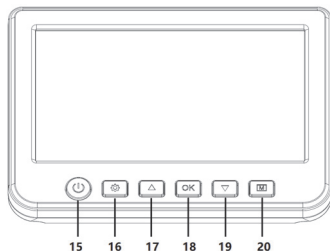


Manual

■ Parts Names & Functions



No.	Functions	No.	Functions
1	Micro-SD card slot	8	Height adjustment
2	Video-out	9	Capture
3	HDMI-out	10	5-inch IPS LCD display
4	Focus tube	11	Dimmer for LEDs in the lens tube
5	Polarizer wheel	12	Digital zoom
6	Charging indicator	13	Dimmer for LEDs in the platform
7	LED light for slice	14	USB/DC-in



- 15. Power on/off
- 16. Setup
- 17. Up
- 18. Confirm
- 19. Down
- 20. Mode
(Photo/Video/Playback)

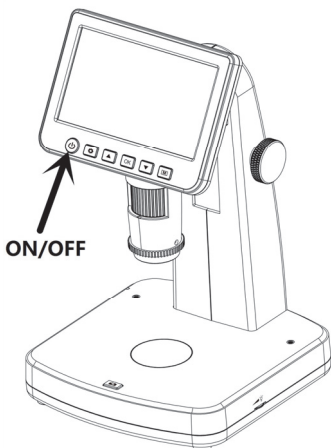
3. Key Features

- Magnification: 10x-300x, up to 1200x by digital zoom
- 5-inch IPS panel, 960x540
- Photo resolution: 12M/10M/8M/5M/3M/2M
- Video resolution: 1080p/720p
- Storage: by Micro-SD card (not included)
- Powered by: built-in rechargeable battery, or power adaptor
- Measurement: by software on computer
- Bundle software: PortableCapture Plus for Windows7/8/10, Mac 10.14 or later. Software available on the included CD and www.cameradownload.net.

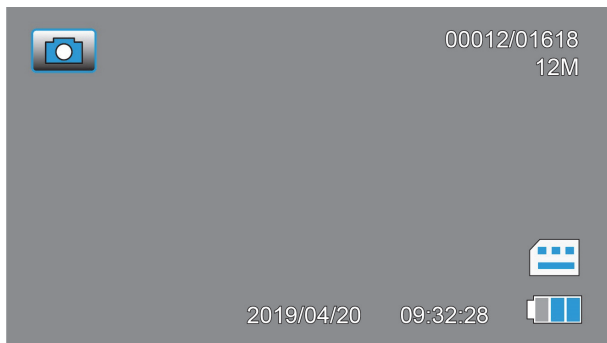
4. Use the Microscope

4.1 Turn on/off the Microscope

Press on/off button to turn on or off the microscope.



4.2 Display Icons & Meanings



Icon	Meaning
	Photo capture mode
	Video capture mode
	Playback mode
001618	Quantity of photos that can be captured
12M	Current resolution
	Micro-SD card inserted
	Battery capacity

Note: The icon displays will be off when there is no key pressed for 10s.

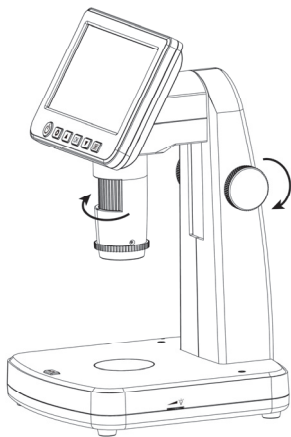
4.3 Get Focus & Magnifications

You can get different magnifications by rotating the height adjustment wheel and focus tube. The lower the lens, the higher the magnification will be.

- **Low magnification**

Rotate the height adjustment wheel to move the lens upward to the top, and then rotate the focus tube toward left to get a fine focus.

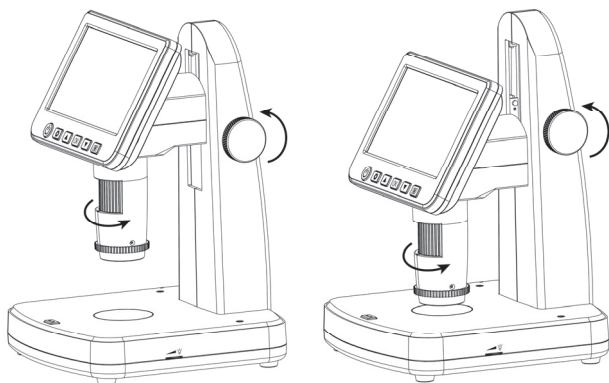
This magnification rate is suitable for getting an overall observation on objects like coins, stamps, jewelry, electronics etc.



- **Medium magnification**

Rotate the height adjustment wheel to move the lens downward to stop at a height (shown as the below left photo), and then rotate the focus tube toward right to get a fine focus.

You can stop at any height and then rotate the focus tube to get a fine focus.



- **High magnification**

Rotate the height adjustment wheel to move the lens downward to stop at the lowest height (shown as the below right photo), and then rotate the focus tube toward right to get a fine focus.

This magnification enables you to see the details of an object.

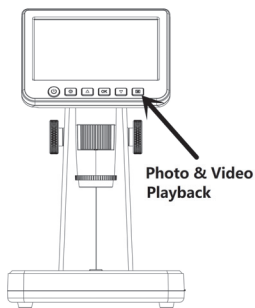
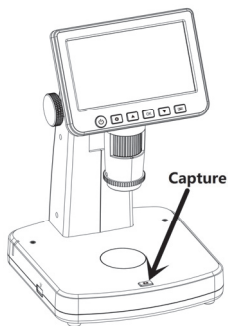
4.4 Observe Specimen Slice

At the High magnification position, turn on the LED at the bottom platform, and put a slice on it, you can see the details of a specimen slice.



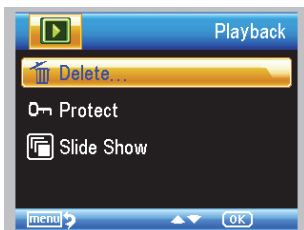
4.5 Capture Photo & Video & Playback

Press Capture button to take a photo or record video. Press Mode button to switch among Photo, Video and Playback.



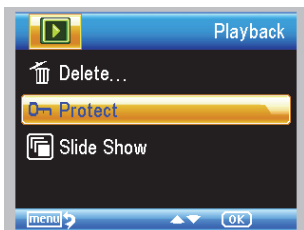
4.6 Delete files

- 1) At play back mode, press  to enter sub-menu as follows, then confirm delete.



- 2) Protect

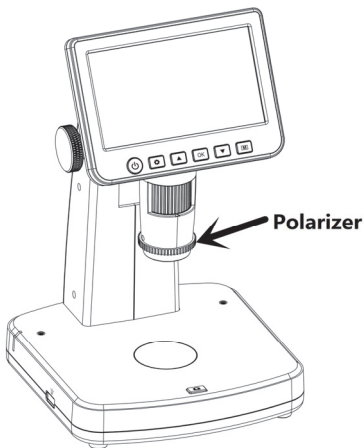
At play back mode, press  to enter sub-menu as follows, then confirm protect pictures from delete.



4.7 Use the Polarizer

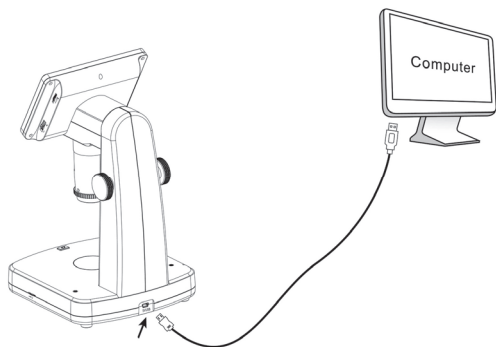
Polarizer, by removing light reflection, is especially useful for observing objects with shiny surface like metal, diamond, jewelry etc.

By rotating the polarizer wheel by 90-degree, you can activate or deactivate polarizing effect.



4.8 Download to Computer

- 1) Connect the microscope to computer by USB cable.
- 2) Choose Mass Storage and then you can view stored photos & videos.



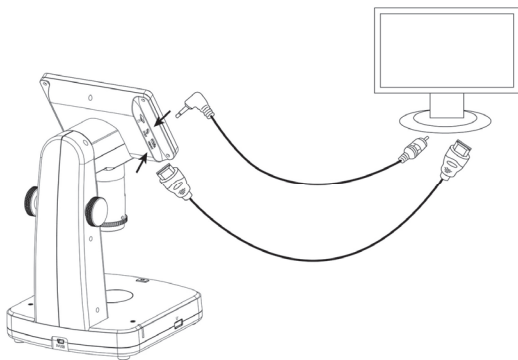
4.9 Preview on Computer

- 1) Take out Micro-SD card from the microscope.
- 2) Connect the microscope to computer by USB cable.
- 3) Choose PC Camera mode
- 4) Start PortableCapture Plus software. Please refer to Part II on how to use the microscope by PortableCapture Plus software.

Note:

When working on computer, the button functions are no longer active, but most of functions are available by PortableCapture Plus software.

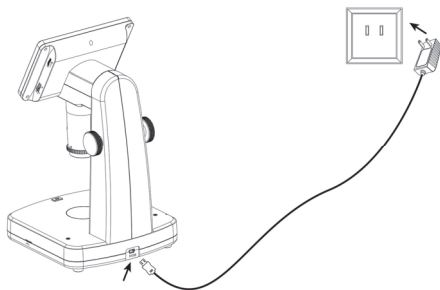
4.10 Output to External Monitor



1. Insert the 1/8-inch plug on the end of the supplied video cable into the microscopes Video port. Or by HDMI.
2. Insert the RCA plug on the video cable into one of your television's yellow video input connectors. Refer to your television's manual for more information on locating these connectors. Or by HDMI.
3. Turn on the television. If necessary, switch your television to the appropriate input channel. Items that you magnify appear on the television screen.

4.11 Charge Battery

Plug the small USB end of the power adaptor into the USB/DC-in port located on the bottom side of the unit. Then plug the other end of the power adaptor into a standard AC outlet. The battery indicator LED at the side of the unit will be in red to show that the battery is charging.



When the battery is finished charging, the battery indicator LED will be in off. Unplug the unit.

5. Screen Menu Introductions

You can press  to enter camera setup, with options as follows.

5.1 Photo Resolution

At photo mode, press , you can choose to select a resolution for photo taken among 12M/10M/8M/5M/3M.



5.2 Video Resolution

At video mode, press , you can choose to select a resolution for video recording between 1080P/720P.



5.3 Capture Mode

At photo mode, press  , you can choose Capture Mode to setup interval capture. For example, setup the microscope to take a photo every 5 seconds.



5.4 Loop Recording

At video mode, Press  to choose to setup the length of each video clip; Off means not to turn on loop recording.



5.5 Date/Time

Press  and scroll down to choose to setup system date and time.



5.6 Date Stamp

At photo mode, press  to choose to setup whether put date and time mark on capture photos and videos.



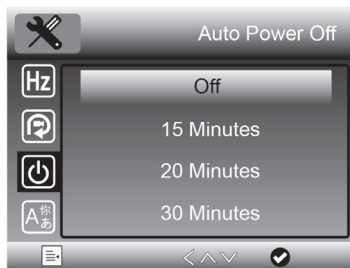
5.7 TV-out Mode

Press , you can choose to select between NTSC and PAL for the TV output of the microscope, make it compatible with that of your TV.



5.8 Auto Power Off

Press  and you can scroll down to choose to select a time for the microscope to power off automatically without key operation.



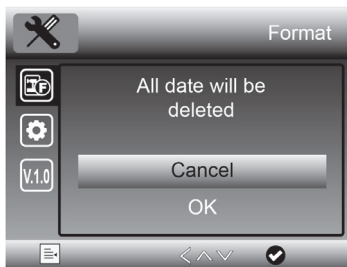
5.9 Language

Press  and you can choose to setup OSD language.



5.10 Format SD

Press  and you can choose to format the inserted Micro-SD card.



5.11 Default Setting

Press , you can choose to reset the microscope configuration to default setting.



6. Specifications

Magnification Ratio: 10x to 300x, up to 1200x by digital

LCD Display: 5-inch IPS, 960x540

Photo resolution: 12M/10M/8M/5M/3M/2M

Video resolution: 1080p/720p

Focus Range: Manual focus from 5mm to 70mm

Polarizer: Switchable polarizer

Storage: By Micro-SD card

Output to external monitor: By HDMI or TV

Powered by: Built-in rechargeable battery & Power adaptor

Light source: LEDs with brightness adjustable

OSD language: English, German, Spanish, French, Russian, Japanese, Chinese etc.

Bundle software: PortableCapture Plus for Win/Mac

Software available on the included CD and
www.cameradownload.net

Product Size: 165(L)x158(W)x267(H)mm

Weight: 660g

7. Troubleshooting

Problems	Solution
The unit does not turn on.	Charge the battery.
The screen is blank.	Ensure that the power is on. Charge the battery. Verify that the item you want to magnify is Positioned correctly under the lens.
Microscope is connected to a television, but no image appears on the television screen.	Ensure that the television is on. Switch to the appropriate video input channel on your television. Ensure that the video/HDMI cable is securely connected to the Microscope Video-out port and plugged into the correct video input on your television.
The battery indicator LED is not in red, even though the power adaptor is connected and plugged into a wall socket. -or- The battery is not charging.	Plugged into the Microscope's DC-in port. Ensure that the outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure that the switch is on.

■ PC Software Introduction

1. Install the Software on PC (Win/Mac)

Insert the driver CD into CD-ROM Drive and then open the CD.

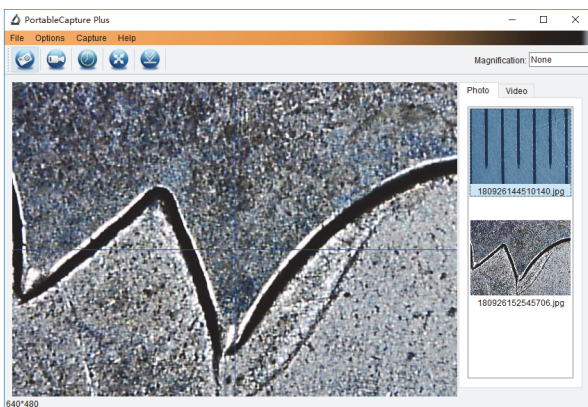
Double click to install **PortableCapture Plus** and the installation wizard will guide you through the whole process.

Note:

The software **PortableCapture Plus** is available on the included CD and www.cameradownload.net.

2. Start Microscope

Connect your Microscope to your PC USB port, start the software by clicking the  icon generated on the desktop after installation and you will see the following screen pop up.



When the Microscope is disconnected from your PC USB port, the following message will pop up.

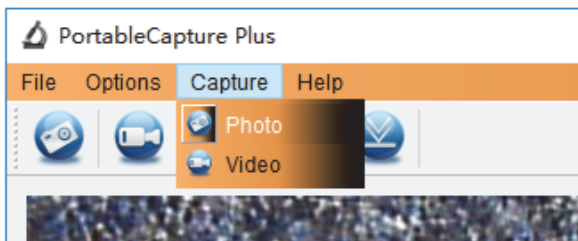
**No Device detected, please
connect your Microscope
directly to your PC USB port.**

3. Software Functions

■ Capture Photo



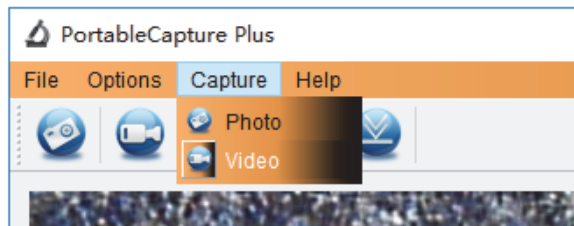
- Click 'Photo' shortcut icon in the main menu bar.
- Click 'Capture > Photo'.



■ Capture Video



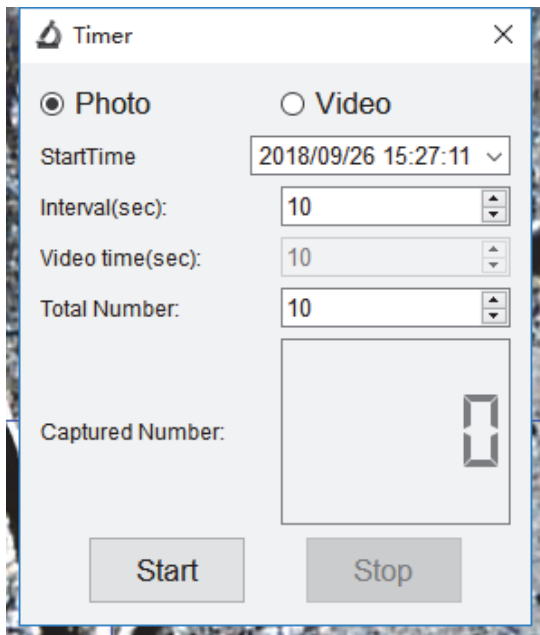
- Click 'Video' shortcut icon in the main menu bar.
- Click 'Capture > Video'.



■ Timer (Photo / Video)



Click 'Timer' shortcut icon in the main menu bar.



* Under Timer photo, you can set the start time, interval time and total picture number.

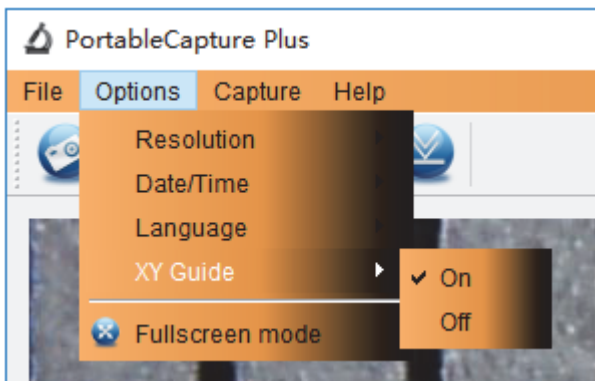
* Under Timer video, you can set the start time, interval time and total video number.

■ Calibration and Measurement

Please make calibration before measurement.

Calibration

Display Crossing from 'Options>Crossing'.



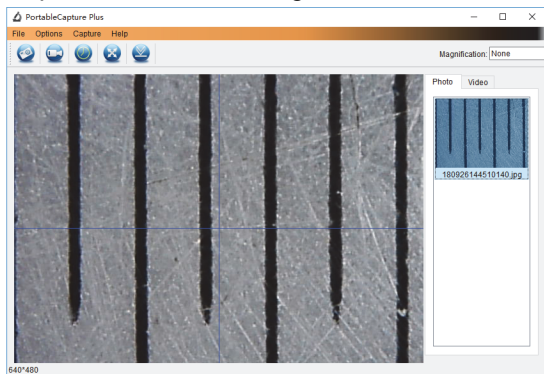
Microscope default at crossing “on”

It's used to check the dial on the calibration ruler.

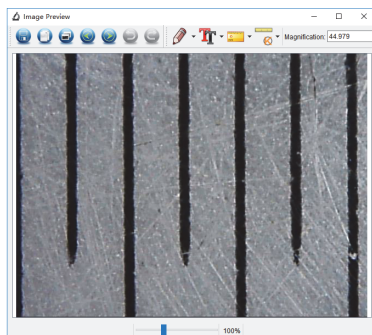
1. Focus microscope on the attached calibration ruler



and then adjust the magnification till the picture is clear. Take a picture for the selected area when the dial is parallel to the crossing as below.

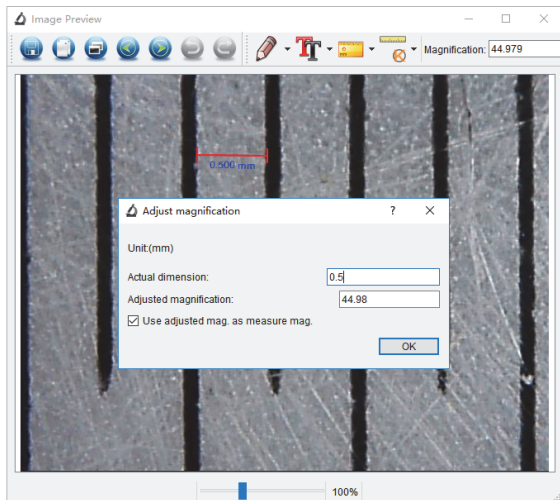


2. Double-click on the picture to enter into measurement interface as below.



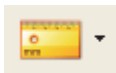


3. Click Calibration icon , and then move mouse to the picture. Click on the beginning and ending points across a known value. Now a dialog will popup as below and you need to enter the exact value of the measurement sample into 'Actual dimension'. Then the software will automatically calibrate the magnification rate. Click 'OK' and the adjusted magnification rate will show in the upper right corner.

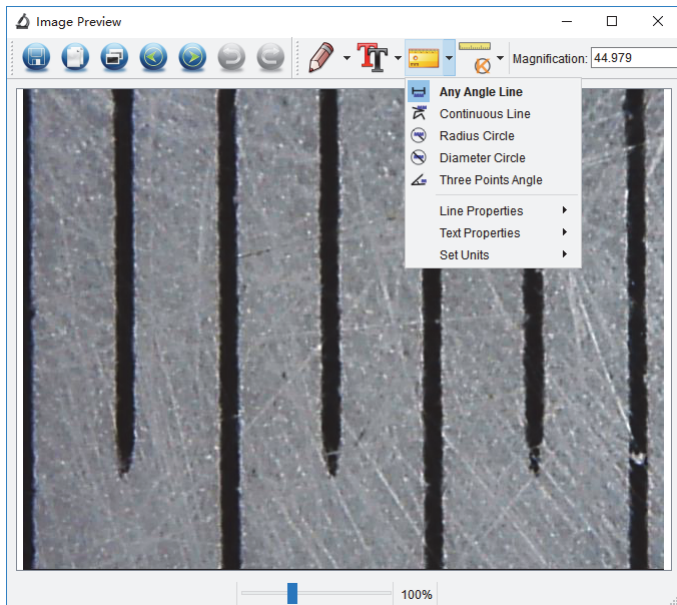


* Remark: The measured line should be paralleled.

4. Now you can use 'Any angle Line' under Measurement



icon to measure the value again. If the value you measure by software is nearly the same as the exact value of the dial means the calibration finish.



Measurement

Double-click on the picture to enter into measurement interface. Under the 'Measurement' icon  , you can choose any desired options to measure.

1. Any Angle Line Measurement

Simply click from one point and drag to the next point, and then release the click.

2. Continuous Line Measurement

The Continuous Line measurement allows you to measure any continuous desired length.

Simply click and drag from one point to other desired points, and then release the click.

3. Radius Circle Measurement

Simply click and extend out to the desired radius, the radius, circumference and area of the circle will show up accordingly.

4. Diameter Circle Measurement

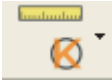
Simply click and extend out to the desired diameter, the diameter, circumference and area of the circle will show up accordingly.

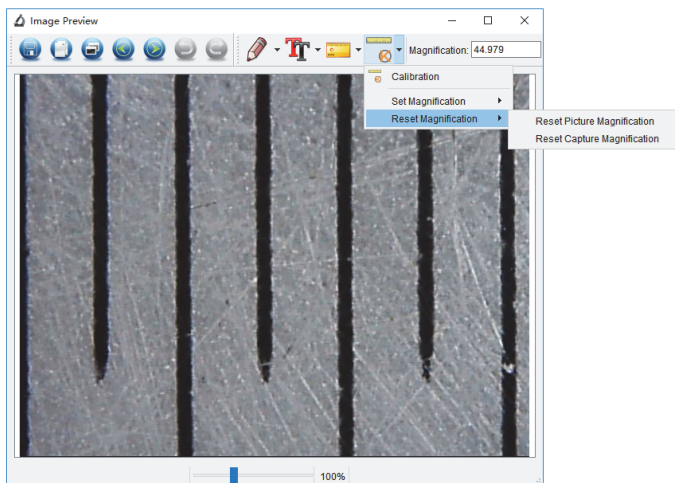
5. Three Points Angle Measurement

Simply define any three points angle and click, the angle value will then display.

Change Calibration

If you need to change the magnification rate and adjust focus to capture picture, please calibrate the magnification rate again.

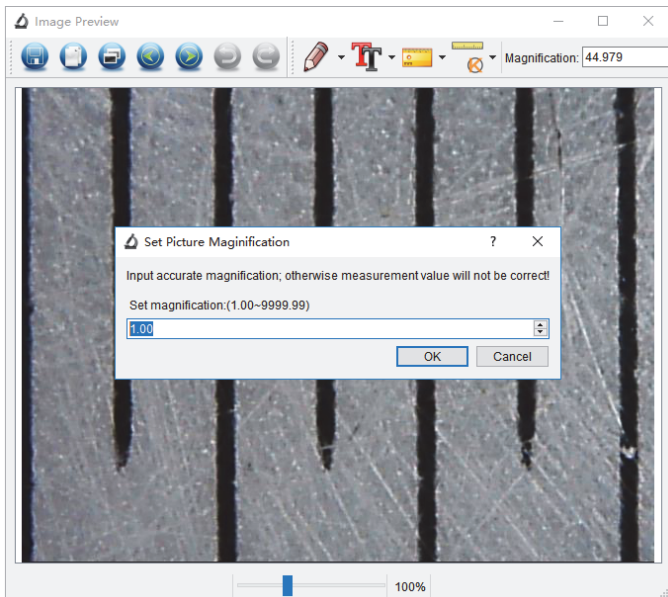
1. Double click to open the picture, Click '  > Reset magnification > Reset picture magnification' as below. And then start calibration again (Calibration details please refer to page24).



2. Change the magnification rate and capture several pictures, click on the picture to enter into measurement

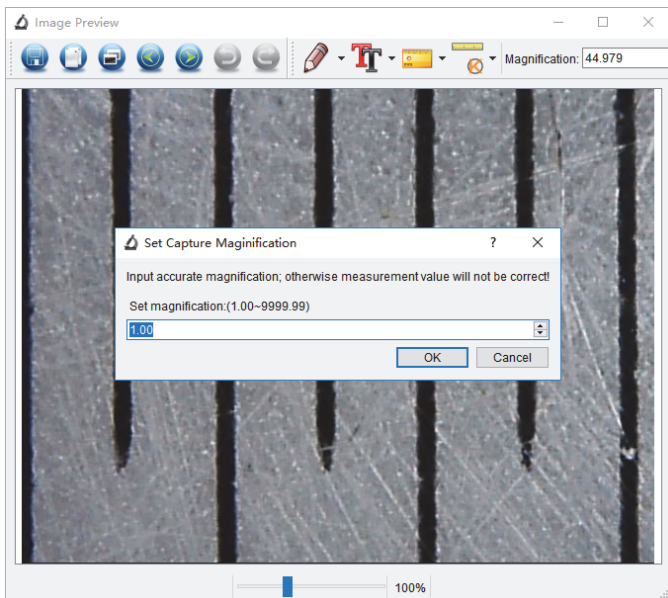


interface. And click 'Set magnification > Set picture magnification', now a dialog will show up as below; enter the magnification rate into the dialog and click 'OK'.



3. If you want to use the same magnification rate to

capture pictures, just click '  > Set magnification > Set capture magnification'. Now all pictures will use the same magnification rate and you can start measurement directly.

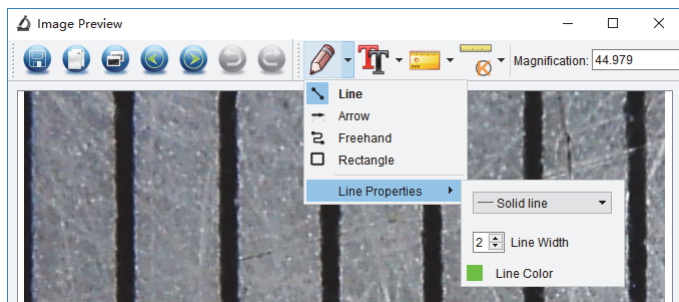


Draw and Text

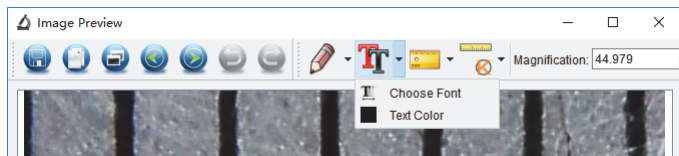
You can draw or add a text on the picture and save for later analysis.



1. Click icon to choose any kinds of drawing under the pull-down manual as below.



2. Click icon and set the font for the text in the popup dialogue as below.



Software Interface Instructions

Main Interface Icons



Capture photo – It's used to capture photo one by one.



Start / Stop record video.



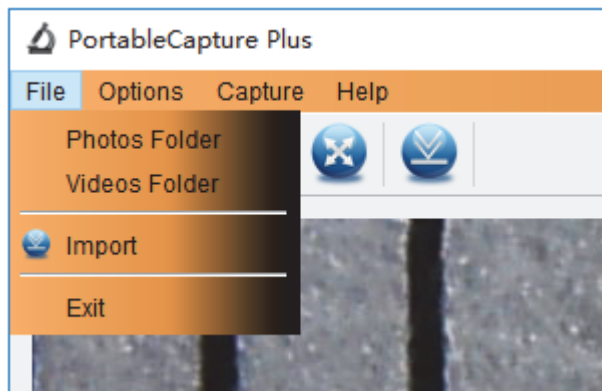
Timer for photo / video – Set the start time, interval time and total photo/video number.



Full screen mode,
Press ESC or double-click to exit.

Main Menu

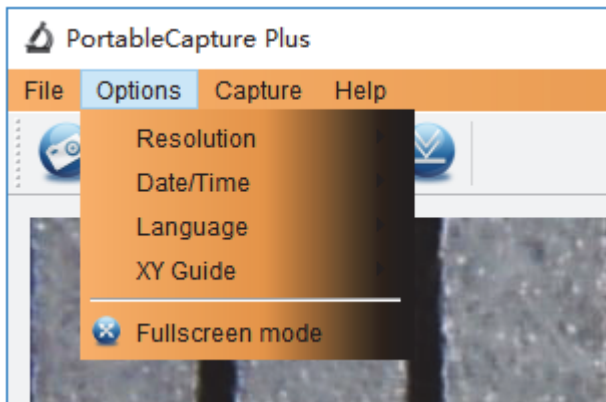
File



Photos Directory: set the directory to store photos taken;

Videos Directory: set the directory to store video taken;

Options



Resolution: change preview size

Date/Time: set to display system date/time on preview window

Language: choose different OSD language

Crossing: display cross on preview window

Full-screen mode: enter into full screen. Click ESC or double click to exit

Capture

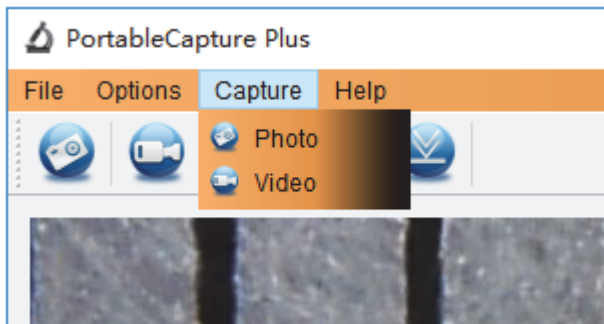


Photo: take a photo

Video: record a video clip

Measurement Interface Instructions



Save as



Redo



Copy to
clipboard



Draw



Copy file



Text note



Previous



Measurement



Next



Calibration



Undo

This symbol on the product or in the instructions means that your electrical and electronic equipment should be disposed at the end of its life separately from your household waste. There are separate collection systems for recycling in the EU.



For more information, please contact the local authority or your retailer where you purchased the product.